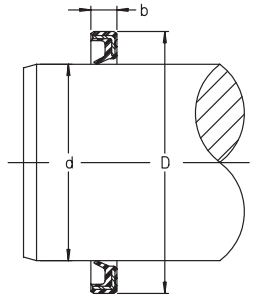
Metric Seals
G SERIES

- Single lip NBR seals
- GR series interchangeable except with steel OD

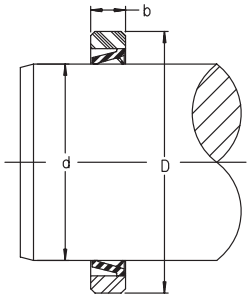


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PART NUMBER	SHAFT DIA. d inch	SHAFT DIA. d mm	OD D inch	OD D mm	WIDTH b inch	WIDTH b mm	WEIGHT lbs	WEIGHT g
G 32x45x4	1.26	32	1.772	45	0.157	4	0.0112	5.1
G 35x42x4	1.378	35	1.654	42	0.157	4	0.0066	3
G 35x45x4	1.378	35	1.772	45	0.157	4	0.0090	4.1
G 37x47x4	1.457	37	1.85	47	0.157	4	0.0088	4
G 38x48x4	1.496	38	1.89	48	0.157	4	0.0097	4.4
G 40x47x4	1.575	40	1.85	47	0.157	4	0.0073	3.3
G 40x50x4	1.575	40	1.969	50	0.157	4	0.0101	4.6
G 40x52x5	1.575	40	2.047	52	0.197	5	0.0106	4.8
G 42x52x4	1.654	42	2.047	52	0.157	4	0.0104	4.7
G 43x53x4	1.693	43	2.087	53	0.157	4	0.0106	4.8
G 45x52x4	1.772	45	2.047	52	0.157	4	0.0084	3.8
G 45x55x4	1.772	45	2.165	55	0.157	4	0.0115	5.2
G 50x58x4	1.969	50	2.283	58	0.157	4	0.0099	4.5
G 50x62x5	1.969	50	2.441	62	0.197	5	0.0229	10.4
G 55x63x5	2.165	55	2.48	63	0.197	5	0.0157	7.1
G 70x78x5	2.756	70	3.071	78	0.197	5	0.0198	9

Metric Seals
SD SERIES

- Double lipped polyurethane seal

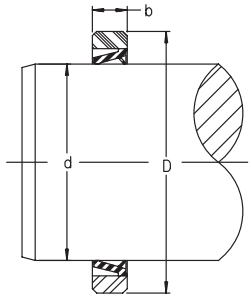


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PART NUMBER	SHAFT d inch	SHAFT d mm	OD D inch	OD D mm	WIDTH b inch	WIDTH b mm	WEIGHT lbs	WEIGHT g
SD 8x15x3	0.315	8	0.591	15	0.118	3	0.001	0.4
SD 9x16x3	0.354	9	0.63	16	0.118	3	0.001	0.42
SD 10x17x3	0.394	10	0.669	17	0.118	3	0.001	0.44
SD 12x18x3	0.472	12	0.709	18	0.118	3	0.001	0.5
SD 12x19x3	0.472	12	0.748	19	0.118	3	0.001	0.6
SD 13x19x3	0.512	13	0.748	19	0.118	3	0.001	0.5
SD 14x20x3	0.551	14	0.787	20	0.118	3	0.001	0.5
SD 14x21x3	0.551	14	0.827	21	0.118	3	0.001	0.6
SD 14x22x3	0.551	14	0.866	22	0.118	3	0.002	0.7
SD 15x21x3	0.591	15	0.827	21	0.118	3	0.001	0.5
SD 15x23x3	0.591	15	0.906	23	0.118	3	0.002	0.7
SD 16x22x3	0.63	16	0.866	22	0.118	3	0.001	0.6
SD 16x24x3	0.63	16	0.945	24	0.118	3	0.002	0.8
SD 16x25x3	0.63	16	0.984	25	0.118	3	0.002	0.9
SD 17x23x3	0.669	17	0.906	23	0.118	3	0.001	0.6
SD 17x25x3	0.669	17	0.984	25	0.118	3	0.002	0.8
SD 18x24x3	0.709	18	0.945	24	0.118	3	0.001	0.6
SD 18x26x4	0.709	18	1.024	26	0.157	4	0.002	1.1
SD 19x27x4	0.748	19	1.063	27	0.157	4	0.002	1.1
SD 20x26x4	0.787	20	1.024	26	0.157	4	0.002	0.8
SD 20x28x4	0.787	20	1.102	28	0.157	4	0.002	1.1
SD 21x29x4	0.827	21	1.142	29	0.157	4	0.003	1.2
SD 22x28x4	0.866	22	1.102	28	0.157	4	0.002	0.9
SD 22x30x4	0.866	22	1.181	30	0.157	4	0.003	1.3
SD 24x32x4	0.945	24	1.26	32	0.157	4	0.003	1.4
SD 25x32x4	0.984	25	1.26	32	0.157	4	0.003	1.2
SD 25x33x4	0.984	25	1.299	33	0.157	4	0.003	1.3
SD 25x35x4	0.984	25	1.378	35	0.157	4	0.004	1.9
SD 26x34x4	1.024	26	1.339	34	0.157	4	0.003	1.4
SD 28x35x4	1.102	28	1.378	35	0.157	4	0.003	1.3
SD 28x37x4	1.102	28	1.457	37	0.157	4	0.004	1.9
SD 29x37x4	1.142	29	1.457	37	0.157	4	0.004	1.6
SD 29x38x4	1.142	29	1.496	38	0.157	4	0.004	1.9
SD 30x37x4	1.181	30	1.457	37	0.157	4	0.003	1.3
SD 30x40x4	1.181	30	1.575	40	0.157	4	0.005	2.1
SD 32x42x4	1.26	32	1.654	42	0.157	4	0.005	2.4
SD 32x45x4	1.26	32	1.772	45	0.157	4	0.008	3.6
SD 35x42x4	1.378	35	1.654	42	0.157	4	0.003	1.5
SD 35x45x4	1.378	35	1.772	45	0.157	4	0.006	2.5
SD 37x47x4	1.457	37	1.85	47	0.157	4	0.006	2.7
SD 38x48x4	1.496	38	1.89	48	0.157	4	0.006	2.8
SD 40x47x4	1.575	40	1.85	47	0.157	4	0.004	1.7
SD 40x50x4	1.575	40	1.969	50	0.157	4	0.006	2.9
SD 40x52x5	1.575	40	2.047	52	0.197	5	0.01	4.5
SD 42x52x4	1.654	42	2.047	52	0.157	4	0.007	3
SD 43x53x4	1.693	43	2.087	53	0.157	4	0.007	3.1

Metric Seals
SD SERIES

- Double lipped polyurethane seal

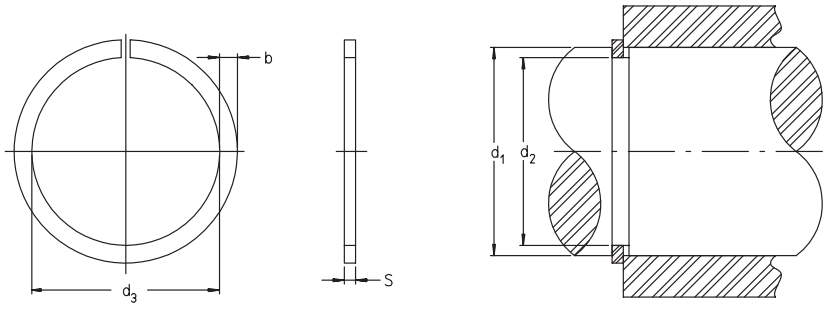


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PART NUMBER	SHAFT d inch	SHAFT d mm	OD D inch	OD D mm	WIDTH b inch	WIDTH b mm	WEIGHT lbs	WEIGHT g
SD 45x52x4	1.772	45	2.047	52	0.157	4	0.004	1.9
SD 45x55x4	1.772	45	2.165	55	0.157	4	0.007	3.2
SD 50x58x4	1.969	50	2.283	58	0.157	4	0.005	2.4
SD 50x62x5	1.969	50	2.441	62	0.197	5	0.012	5.5

Shaft Snap Rings
WR SERIES

- Metric series

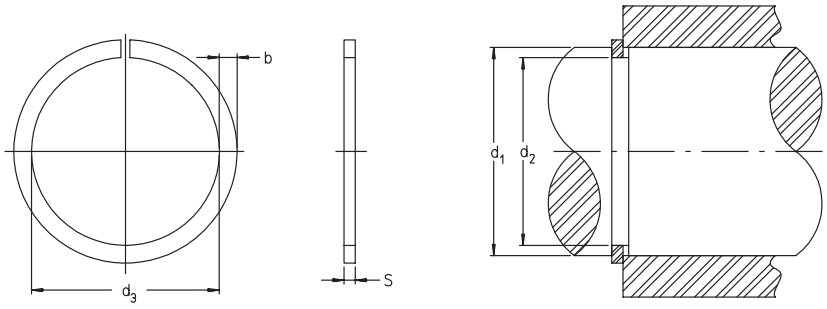


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PART NUMBER	SHAFT DIA. d_1 inch	SHAFT DIA. d_1 mm	ID IN FREE STATE d_3 inch	ID IN FREE STATE d_3 mm	RADIAL SECTION b inch	RADIAL SECTION b mm	WIDTH s inch	WIDTH s mm	GROOVE DIA. d_2 inch	GROOVE DIA. d_2 mm	WEIGHT PER 1000 PIECES lbs	WEIGHT PER 1000 PIECES g	SPEED LIMIT rpm
WR 4	0.158	4	0.146	3.7	0.032	0.8	0.020	0.5	0.150	3.8	0.044	20	275000
WR 5	0.197	5	0.185	4.7	0.039	1	0.020	0.5	0.189	4.8	0.11	50	192000
WR 6	0.236	6	0.221	5.6	0.043	1.1	0.028	0.7	0.224	5.7	0.198	90	141000
WR 7	0.276	7	0.256	6.5	0.047	1.2	0.028	0.7	0.264	6.7	0.265	120	134000
WR 8	0.315	8	0.291	7.4	0.051	1.3	0.039	1	0.299	7.6	0.441	200	108000
WR 9	0.354	9	0.331	8.4	0.051	1.3	0.039	1	0.339	8.6	0.529	240	80000
WR 10	0.394	10	0.370	9.4	0.051	1.3	0.039	1	0.378	9.6	0.551	250	68000
WR 11	0.433	11	0.402	10.2	0.051	1.3	0.039	1	0.413	10.5	0.639	290	64000
WR 12	0.472	12	0.441	11.2	0.051	1.3	0.039	1	0.453	11.5	0.662	300	53000
WR 14	0.551	14	0.516	13.1	0.059	1.5	0.047	1.2	0.532	13.5	1.103	500	45000
WR 15	0.591	15	0.551	14	0.069	1.75	0.047	1.2	0.567	14.4	1.455	660	44000
WR 16	0.630	16	0.591	15	0.069	1.75	0.047	1.2	0.606	15.4	1.521	690	38000
WR 17	0.669	17	0.630	16	0.069	1.75	0.047	1.2	0.646	16.4	1.588	720	34000
WR 18	0.709	18	0.669	17	0.069	1.75	0.047	1.2	0.685	17.4	1.654	750	30000
WR 19	0.748	19	0.705	17.9	0.069	1.75	0.047	1.2	0.724	18.4	1.764	800	29000
WR 20	0.787	20	0.736	18.7	0.069	1.75	0.047	1.2	0.756	19.2	1.852	840	26000
WR 21	0.827	21	0.776	19.7	0.069	1.75	0.047	1.2	0.795	20.2	1.918	870	23000
WR 22	0.866	22	0.815	20.7	0.069	1.75	0.047	1.2	0.835	21.2	2.007	910	21000
WR 24	0.945	24	0.886	22.5	0.069	1.75	0.047	1.2	0.906	23	2.183	990	18000
WR 25	0.984	25	0.925	23.5	0.069	1.75	0.047	1.2	0.945	24	2.205	1000	16000
WR 26	1.024	26	0.965	24.5	0.069	1.75	0.047	1.2	0.984	25	2.426	1100	15000
WR 28	1.102	28	1.043	26.5	0.091	2.3	0.059	1.5	1.063	27	4.653	2110	15000
WR 29	1.142	29	1.083	27.5	0.091	2.3	0.059	1.5	1.102	28	4.851	2200	14000
WR 30	1.181	30	1.122	28.5	0.091	2.3	0.059	1.5	1.142	29	5.138	2330	13000
WR 32	1.260	32	1.189	30.2	0.091	2.3	0.059	1.5	1.213	30.8	5.314	2410	13000
WR 35	1.378	35	1.307	33.2	0.091	2.3	0.059	1.5	1.331	33.8	5.535	2510	11000
WR 37	1.457	37	1.386	35.2	0.091	2.3	0.059	1.5	1.409	35.8	5.998	2720	9200
WR 38	1.496	38	1.425	36.2	0.091	2.3	0.059	1.5	1.449	36.8	6.24	2830	8700
WR 40	1.575	40	1.488	37.8	0.091	2.3	0.059	1.5	1.516	38.5	6.417	2910	8100
WR 42	1.654	42	1.567	39.8	0.091	2.3	0.059	1.5	1.595	40.5	6.836	3100	7000
WR 43	1.693	43	1.606	40.8	0.091	2.3	0.059	1.5	1.634	41.5	7.166	3250	6800
WR 44	1.732	44	1.646	41.8	0.091	2.3	0.059	1.5	1.673	42.5	7.321	3320	6300
WR 45	1.772	45	1.685	42.8	0.091	2.3	0.059	1.5	1.713	43.5	7.475	3390	5800
WR 47	1.850	47	1.764	44.8	0.091	2.3	0.059	1.5	1.791	45.5	7.673	3480	5500
WR 50	1.969	50	1.882	47.8	0.091	2.3	0.059	1.5	1.909	48.5	8.225	3730	4800
WR 52	2.047	52	1.961	49.8	0.091	2.3	0.059	1.5	1.988	50.5	8.644	3920	4300
WR 55	2.165	55	2.071	52.6	0.091	2.3	0.059	1.5	2.106	53.5	9.063	4110	4400
WR 58	2.284	58	2.189	55.6	0.091	2.3	0.059	1.5	2.224	56.5	9.702	4400	3800
WR 60	2.362	60	2.268	57.6	0.091	2.3	0.059	1.5	2.303	58.5	10.03	4550	3500
WR 62	2.441	62	2.347	59.6	0.091	2.3	0.059	1.5	2.382	60.5	10.08	4570	3250
WR 63	2.480	63	2.386	60.6	0.091	2.3	0.059	1.5	2.421	61.5	10.10	4580	3100
WR 65	2.559	65	2.465	62.6	0.091	2.3	0.059	1.5	2.500	63.5	10.23	4640	2850
WR 68	2.677	68	2.575	65.4	0.110	2.8	0.079	2	2.606	66.2	18.94	8590	2950
WR 70	2.756	70	2.654	67.4	0.110	2.8	0.079	2	2.685	68.2	19.21	8710	2750
WR 72	2.835	72	2.732	69.4	0.110	2.8	0.079	2	2.764	70.2	19.40	8800	2550

Shaft Snap Rings
WR SERIES

● Metric series

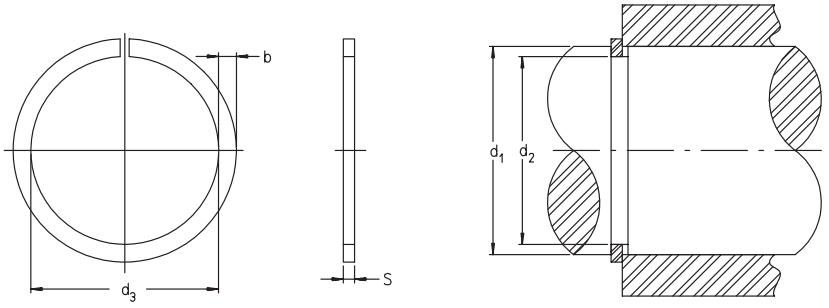


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PART NUMBER	SHAFT DIA. d_1 inch	SHAFT DIA. d_1 mm	ID IN FREE STATE d_3 inch	ID IN FREE STATE d_3 mm	RADIAL SECTION b inch	RADIAL SECTION b mm	WIDTH s inch	WIDTH s mm	GROOVE DIA. d_2 inch	GROOVE DIA. d_2 mm	WEIGHT PER 1000 PIECES lbs	WEIGHT PER 1000 PIECES g	SPEED LIMIT rpm
WR 73	2.874	73	2.772	70.4	0.110	2.8	0.079	2	2.803	71.2	19.63	8900	2500
WR 75	2.953	75	2.850	72.4	0.110	2.8	0.079	2	2.882	73.2	20.55	9320	2300
WR 80	3.150	80	3.047	77.4	0.110	2.8	0.079	2	3.079	78.2	21.32	9670	1950
WR 85	3.347	85	3.228	82	0.134	3.4	0.098	2.5	3.268	83	35.28	16000	2300
WR 90	3.543	90	3.425	87	0.134	3.4	0.098	2.5	3.465	88	35.28	16000	2000
WR 95	3.740	95	3.622	92	0.134	3.4	0.098	2.5	3.661	93	40.13	18200	1750
WR 100	3.937	100	3.819	97	0.134	3.4	0.098	2.5	3.858	98	41.68	18900	1560
WR 105	4.134	105	4.004	101.7	0.134	3.4	0.098	2.5	4.043	102.7	45.64	20700	1390
WR 110	4.331	110	4.197	106.6	0.134	3.4	0.098	2.5	4.240	107.7	46.09	20900	1240
WR 115	4.528	115	4.394	111.6	0.134	3.4	0.098	2.5	4.437	112.7	48.73	22100	1100
WR 120	4.724	120	4.587	116.5	0.134	3.4	0.098	2.5	4.634	117.7	53.14	24100	1000
WR 125	4.921	125	4.780	121.4	0.134	3.4	0.098	2.5	4.831	122.7	55.35	25100	920
WR 130	5.118	130	4.972	126.3	0.134	3.4	0.098	2.5	5.028	127.7	58.65	26600	830
WR 135	5.315	135	5.158	131	0.158	4	0.098	2.5	5.213	132.4	66.59	30200	830
WR 140	5.512	140	5.350	135.9	0.158	4	0.098	2.5	5.409	137.4	68.58	31100	760
WR 145	5.709	145	5.547	140.9	0.158	4	0.098	2.5	5.606	142.4	71.88	32600	690
WR 150	5.906	150	5.740	145.8	0.158	4	0.098	2.5	5.803	147.4	72.32	32800	640
WR 155	6.102	155	5.937	150.8	0.158	4	0.098	2.5	6.000	152.4	76.51	34700	590
WR 160	6.299	160	6.130	155.7	0.158	4	0.098	2.5	6.197	157.4	80.70	36600	545
WR 165	6.496	165	6.327	160.7	0.158	4	0.098	2.5	6.394	162.4	82.47	37400	500
WR 170	6.693	170	6.520	165.6	0.158	4	0.098	2.5	6.591	167.4	84.89	38500	470
WR 175	6.890	175	6.717	170.6	0.158	4	0.098	2.5	6.787	172.4	86.88	39400	430
WR 180	7.087	180	6.898	175.2	0.197	5	0.118	3	6.969	177	135	61200	600
WR 185	7.284	185	7.091	180.1	0.197	5	0.118	3	7.165	182	141	63900	590
WR 190	7.480	190	7.287	185.1	0.197	5	0.118	3	7.362	187	145	65900	550
WR 195	7.677	195	7.484	190.1	0.197	5	0.118	3	7.559	192	149	67500	510
WR 200	7.874	200	7.677	195	0.197	5	0.118	3	7.756	197	151	68400	480
WR 210	8.268	210	8.067	204.9	0.197	5	0.118	3	8.150	207	159	72000	420
WR 220	8.661	220	8.457	214.8	0.197	5	0.118	3	8.543	217	168	76300	380
WR 225	8.858	225	8.654	219.8	0.197	5	0.118	3	8.740	222	172	78000	360
WR 230	9.055	230	8.847	224.7	0.197	5	0.118	3	8.937	227	176	79800	340
WR 240	9.449	240	9.236	234.6	0.197	5	0.118	3	9.331	237	180	81700	310
WR 260	10.236	260	9.937	252.4	0.295	7.5	0.158	4	10.039	255	395	179000	430
WR 265	10.433	265	10.134	257.4	0.295	7.5	0.158	4	10.236	260	408	185200	410
WR 270	10.630	270	10.327	262.3	0.295	7.5	0.158	4	10.433	265	436	197700	380
WR 280	11.024	280	10.717	272.2	0.295	7.5	0.158	4	10.827	275	438	198700	360
WR 285	11.221	285	10.913	277.2	0.295	7.5	0.158	4	11.024	280	440	199500	345
WR 290	11.417	290	11.106	282.1	0.295	7.5	0.158	4	11.221	285	453	205300	320
WR 300	11.811	300	11.500	292.1	0.295	7.5	0.158	4	11.614	295	472	214200	300
WR 305	12.008	305	11.697	297.1	0.295	7.5	0.158	4	11.811	300	484	219400	290
WR 310	12.205	310	11.890	302	0.295	7.5	0.158	4	12.008	305	492	223100	270
WR 320	12.598	320	12.280	311.9	0.295	7.5	0.158	4	12.402	315	497	225300	255
WR 330	12.992	330	12.665	321.7	0.295	7.5	0.158	4	12.795	325	504	228600	240
WR 340	13.386	340	13.055	331.6	0.295	7.5	0.158	4	13.189	335	528	239300	220
WR 350	13.780	350	13.445	341.5	0.295	7.5	0.158	4	13.583	345	554	251200	205

Shaft Snap Rings
WR SERIES

- Metric series



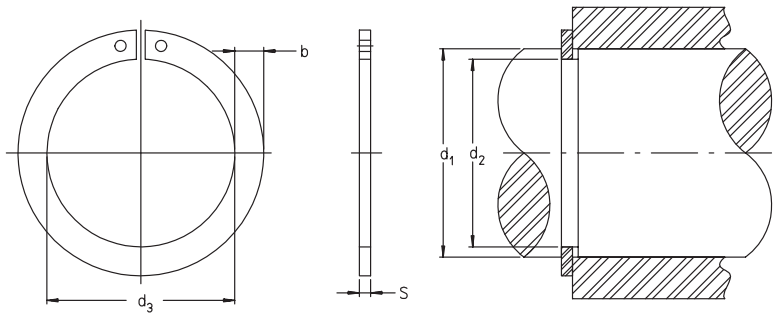
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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PART NUMBER	SHAFT DIA. d_1 inch	SHAFT DIA. d_1 mm	ID IN FREE STATE d_3 inch	ID IN FREE STATE d_3 mm	RADIAL SECTION b inch	RADIAL SECTION b mm	WIDTH s inch	WIDTH s mm	GROOVE DIA. d_2 inch	GROOVE DIA. d_2 mm	WEIGHT PER 1000 PIECES lbs	WEIGHT PER 1000 PIECES g	SPEED LIMIT rpm
WR 360	14.173	360	13.835	351.4	0.295	7.5	0.158	4	13.976	355	558	253100	195
WR 370	14.567	370	14.228	361.4	0.295	7.5	0.158	4	14.370	365	572	259200	180
WR 380	14.961	380	14.614	371.2	0.295	7.5	0.158	4	14.764	375	591	268000	170
WR 390	15.354	390	15.008	381.2	0.295	7.5	0.158	4	15.158	385	604	273900	160
WR 400	15.748	400	15.402	391.2	0.295	7.5	0.158	4	15.551	395	620	281100	145
WR 420	16.535	420	16.142	410	0.472	12	0.177	4.5	16.299	414	1191	540000	267
WR 460	18.110	460	17.697	449.5	0.472	12	0.177	4.5	17.874	454	1301	590000	224

Heavy Duty Shaft Snap Rings

WRE SERIES

- Metric series

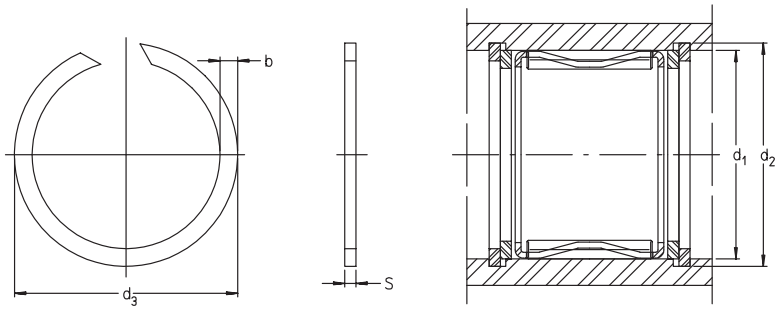


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PART NUMBER	SHAFT DIA. d_1 inch	SHAFT DIA. d_1 mm	FREE ID d_3 inch	FREE ID d_3 mm	RADIAL SECTION b inch	RADIAL SECTION b mm	WIDTH s inch	WIDTH s mm	GROOVE DIA. d_2 inch	GROOVE DIA. d_2 mm	WEIGHT PER 1000 PIECES lbs	WEIGHT PER 1000 PIECES kg	SPEED LIMIT rpm
WRE 42	1.654	42	1.547	39.3	0.142	3.6	0.059	1.5	1.567	39.8	12.57	5.7	7680
WRE 47	1.850	47	1.744	44.3	0.142	3.6	0.059	1.5	1.764	44.8	14.00	6.35	5840
WRE 55	2.165	55	2.039	51.8	0.142	3.6	0.059	1.5	2.079	52.8	16.23	7.36	5660
WRE 62	2.441	62	2.315	58.8	0.142	3.6	0.059	1.5	2.354	59.8	18.21	8.26	4220
WRE 68	2.677	68	2.543	64.6	0.189	4.8	0.079	2	2.591	65.8	35.83	16.25	4710
WRE 75	2.953	75	2.819	71.6	0.189	4.8	0.079	2	2.866	72.8	39.43	17.88	3720
WRE 80	3.150	80	3.016	76.6	0.189	4.8	0.079	2	3.063	77.8	42.01	19.05	3180
WRE 90	3.543	90	3.398	86.3	0.228	5.8	0.098	2.5	3.457	87.8	71.60	32.47	3140
WRE 95	3.740	95	3.595	91.3	0.228	5.8	0.098	2.5	3.654	92.8	75.48	34.23	2760
WRE 100	3.937	100	3.776	95.9	0.228	5.8	0.098	2.5	3.835	97.4	79.56	36.08	2460
WRE 110	4.331	110	4.150	105.4	0.228	5.8	0.098	2.5	4.217	107.1	86.72	39.33	2090
WRE 115	4.528	115	4.347	110.4	0.228	5.8	0.098	2.5	4.413	112.1	90.60	41.09	1880
WRE 125	4.921	125	4.728	120.1	0.295	7.5	0.098	2.5	4.807	122.1	129	58.32	2080
WRE 130	5.118	130	4.917	124.9	0.295	7.5	0.098	2.5	5.004	127.1	133	60.5	1990
WRE 140	5.512	140	5.307	134.8	0.295	7.5	0.098	2.5	5.394	137	143	64.91	1660
WRE 145	5.709	145	5.504	139.8	0.295	7.5	0.098	2.5	5.591	142	148	67.18	1530
WRE 150	5.906	150	5.685	144.4	0.295	7.5	0.098	2.5	5.787	147	153	69.28	1530
WRE 160	6.299	160	6.067	154.1	0.295	7.5	0.098	2.5	6.181	157	163	73.7	1380
WRE 170	6.693	170	6.433	163.4	0.295	7.5	0.098	2.5	6.575	167	172	77.92	1330
WRE 180	7.087	180	6.811	173	0.386	9.8	0.118	3	6.929	176	289	131.09	1350
WRE 190	7.480	190	7.205	183	0.386	9.8	0.118	3	7.323	186	305	138.23	1190
WRE 200	7.874	200	7.579	192.5	0.386	9.8	0.118	3	7.717	196	320	145	1130
WRE 210	8.268	210	7.953	202	0.386	9.8	0.118	3	8.110	206	335	151.78	1080
WRE 220	8.661	220	8.347	212	0.386	9.8	0.118	3	8.504	216	350	158.91	960
WRE 225	8.858	225	8.543	217	0.472	12	0.118	3	8.701	221	443	200.88	1090
WRE 230	9.055	230	8.740	222	0.472	12	0.118	3	8.898	226	453	205.24	1030
WRE 240	9.449	240	9.114	231.5	0.472	12	0.118	3	9.291	236	471	213.54	990
WRE 260	10.236	260	9.823	249.5	0.551	14	0.158	4	10.000	254	792	359.35	950
WRE 270	10.630	270	10.197	259	0.551	14	0.158	4	10.394	264	821	372.25	910
WRE 280	11.024	280	10.591	269	0.551	14	0.158	4	10.787	274	851	385.84	840
WRE 290	11.417	290	10.984	279	0.551	14	0.158	4	11.181	284	881	399.43	770
WRE 300	11.811	300	11.358	288.5	0.551	14	0.158	4	11.575	294	909	412.33	740
WRE 310	12.205	310	11.732	298	0.638	16.2	0.158	4	11.969	304	1093	495.52	810
WRE 320	12.598	320	12.126	308	0.638	16.2	0.158	4	12.362	314	1127	511.24	750
WRE 340	13.386	340	12.894	327.5	0.638	16.2	0.158	4	13.150	334	1195	541.89	680
WRE 360	14.173	360	13.661	347	0.638	16.2	0.158	4	13.937	354	1262	572.55	610
WRE 380	14.961	380	14.370	365	0.638	16.2	0.158	4	14.724	374	1325	600.85	610
WRE 400	15.748	400	15.158	385	0.638	16.2	0.158	4	15.512	394	1433	650	540
WRE 420	16.535	420	15.945	405	0.787	20	0.177	4.5	16.260	413	2051	930	540
WRE 460	18.110	460	17.402	442	0.787	20	0.177	4.5	17.835	453	2229	1011	510

Housing Snap Rings
BR SERIES

- Metric series

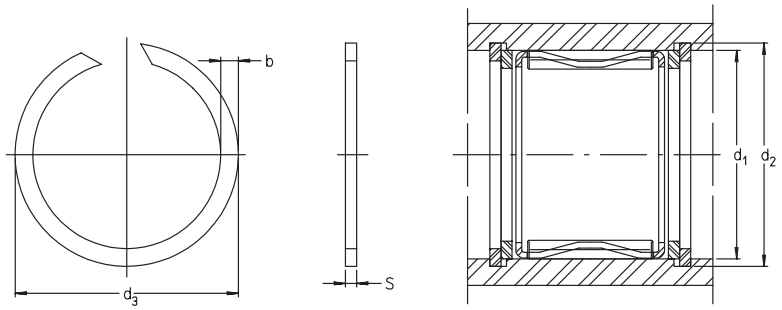


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PART NUMBER	HSG BORE d_1 inch	HSG BORE d_1 mm	SNAP RING OD d_3 min. inch	SNAP RING OD d_3 min. mm	RADIAL SECTION b inch	RADIAL SECTION b mm	WIDTH s inch	WIDTH s mm	GROOVE DIA. d_2 inch	GROOVE DIA. d_2 mm	WEIGHT PER 1000 PIECES lbs	WEIGHT PER 1000 PIECES kg
BR 7	0.276	7	0.295	7.5	0.039	1	0.031	0.8	0.291	7.4	0.198	0.09
BR 8	0.315	8	0.335	8.5	0.039	1	0.031	0.8	0.331	8.4	0.221	0.1
BR 9	0.354	9	0.374	9.5	0.043	1.1	0.031	0.8	0.37	9.4	0.287	0.13
BR 10	0.394	10	0.417	10.6	0.047	1.2	0.031	0.8	0.413	10.5	0.331	0.15
BR 11	0.433	11	0.457	11.6	0.051	1.3	0.039	1	0.453	11.5	0.463	0.21
BR 12	0.472	12	0.5	12.7	0.051	1.3	0.039	1	0.492	12.5	0.551	0.25
BR 13	0.512	13	0.543	13.8	0.051	1.3	0.039	1	0.535	13.6	0.617	0.28
BR 14	0.551	14	0.583	14.8	0.051	1.3	0.039	1	0.575	14.6	0.684	0.31
BR 15	0.591	15	0.622	15.8	0.051	1.3	0.039	1	0.614	15.6	0.75	0.34
BR 16	0.63	16	0.661	16.8	0.069	1.75	0.047	1.2	0.654	16.6	1.169	0.53
BR 17	0.669	17	0.701	17.8	0.069	1.75	0.047	1.2	0.693	17.6	1.213	0.55
BR 18	0.709	18	0.744	18.9	0.069	1.75	0.047	1.2	0.732	18.6	1.499	0.68
BR 19	0.748	19	0.783	19.9	0.069	1.75	0.047	1.2	0.772	19.6	1.588	0.72
BR 20	0.787	20	0.827	21	0.069	1.75	0.047	1.2	0.811	20.6	1.676	0.76
BR 21	0.827	21	0.866	22	0.069	1.75	0.047	1.2	0.85	21.6	1.742	0.79
BR 22	0.866	22	0.906	23	0.069	1.75	0.047	1.2	0.89	22.6	1.786	0.81
BR 23	0.906	23	0.945	24	0.069	1.75	0.047	1.2	0.929	23.6	1.94	0.88
BR 24	0.945	24	0.992	25.2	0.069	1.75	0.047	1.2	0.976	24.8	1.985	0.9
BR 25	0.984	25	1.031	26.2	0.069	1.75	0.047	1.2	1.016	25.8	2.007	0.91
BR 26	1.024	26	1.071	27.2	0.069	1.75	0.047	1.2	1.055	26.8	2.161	0.98
BR 27	1.063	27	1.11	28.2	0.069	1.75	0.047	1.2	1.094	27.8	2.448	1.11
BR 28	1.102	28	1.15	29.2	0.069	1.75	0.047	1.2	1.134	28.8	2.492	1.13
BR 29	1.142	29	1.189	30.2	0.069	1.75	0.047	1.2	1.173	29.8	2.536	1.15
BR 30	1.181	30	1.236	31.4	0.091	2.3	0.059	1.5	1.22	31	4.41	2
BR 31	1.22	31	1.276	32.4	0.091	2.3	0.059	1.5	1.26	32	4.476	2.03
BR 32	1.26	32	1.315	33.4	0.091	2.3	0.059	1.5	1.299	33	4.653	2.11
BR 33	1.299	33	1.354	34.4	0.091	2.3	0.059	1.5	1.339	34	4.983	2.26
BR 34	1.339	34	1.394	35.4	0.091	2.3	0.059	1.5	1.378	35	5.16	2.34
BR 35	1.378	35	1.433	36.4	0.091	2.3	0.059	1.5	1.417	36	5.204	2.36
BR 37	1.457	37	1.528	38.8	0.091	2.3	0.059	1.5	1.504	38.2	5.579	2.53
BR 38	1.496	38	1.567	39.8	0.091	2.3	0.059	1.5	1.543	39.2	5.755	2.61
BR 39	1.535	39	1.606	40.8	0.091	2.3	0.059	1.5	1.583	40.2	5.887	2.67
BR 40	1.575	40	1.646	41.8	0.091	2.3	0.059	1.5	1.622	41.2	6.174	2.8
BR 42	1.654	42	1.724	43.8	0.091	2.3	0.059	1.5	1.701	43.2	6.439	2.92
BR 43	1.693	43	1.764	44.8	0.091	2.3	0.059	1.5	1.74	44.2	6.681	3.03
BR 44	1.732	44	1.803	45.8	0.091	2.3	0.059	1.5	1.78	45.2	6.858	3.11
BR 45	1.772	45	1.843	46.8	0.091	2.3	0.059	1.5	1.819	46.2	7.166	3.25
BR 46	1.811	46	1.882	47.8	0.091	2.3	0.059	1.5	1.858	47.2	7.232	3.28
BR 47	1.85	47	1.921	48.8	0.091	2.3	0.059	1.5	1.898	48.2	7.254	3.29
BR 48	1.89	48	1.961	49.8	0.091	2.3	0.059	1.5	1.937	49.2	7.607	3.45
BR 50	1.969	50	2.039	51.8	0.091	2.3	0.059	1.5	2.016	51.2	7.872	3.57
BR 52	2.047	52	2.138	54.3	0.091	2.3	0.059	1.5	2.106	53.5	7.894	3.58
BR 53	2.087	53	2.177	55.3	0.091	2.3	0.059	1.5	2.146	54.5	8.423	3.82
BR 55	2.165	55	2.256	57.3	0.091	2.3	0.059	1.5	2.224	56.5	8.666	3.93
BR 57	2.244	57	2.335	59.3	0.091	2.3	0.059	1.5	2.303	58.5	9.085	4.12

Housing Snap Rings
BR SERIES

- Metric series

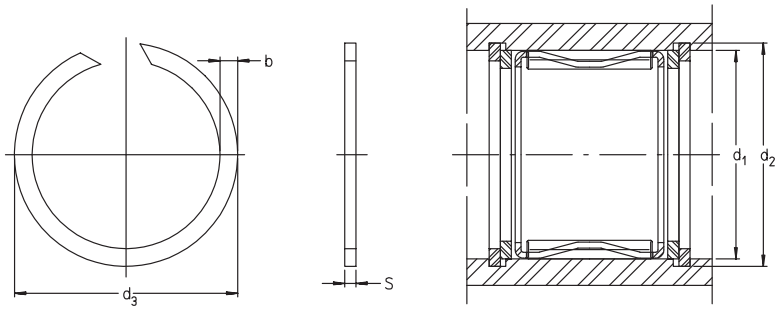


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PART NUMBER	HSG BORE d_1 inch	HSG BORE d_1 mm	SNAP RING OD d_3 min. inch	SNAP RING OD d_3 min. mm	RADIAL SECTION b inch	RADIAL SECTION b mm	WIDTH s inch	WIDTH s mm	GROOVE DIA. d_2 inch	GROOVE DIA. d_2 mm	WEIGHT PER 1000 PIECES lbs	WEIGHT PER 1000 PIECES kg
BR 58	2.283	58	2.374	60.3	0.091	2.3	0.059	1.5	2.343	59.5	9.107	4.13
BR 60	2.362	60	2.453	62.3	0.091	2.3	0.059	1.5	2.421	61.5	9.437	4.28
BR 62	2.441	62	2.531	64.3	0.091	2.3	0.059	1.5	2.5	63.5	9.746	4.42
BR 63	2.48	63	2.571	65.3	0.091	2.3	0.059	1.5	2.539	64.5	9.923	4.5
BR 65	2.559	65	2.65	67.3	0.091	2.3	0.059	1.5	2.618	66.5	10.408	4.72
BR 68	2.677	68	2.768	70.3	0.091	2.3	0.059	1.5	2.736	69.5	10.805	4.9
BR 70	2.756	70	2.846	72.3	0.091	2.3	0.059	1.5	2.815	71.5	10.871	4.93
BR 72	2.835	72	2.937	74.6	0.11	2.8	0.079	2	2.906	73.8	18.72	8.49
BR 73	2.874	73	2.976	75.6	0.11	2.8	0.079	2	2.945	74.8	18.787	8.52
BR 74	2.913	74	3.016	76.6	0.11	2.8	0.079	2	2.984	75.8	18.963	8.6
BR 76	2.992	76	3.094	78.6	0.11	2.8	0.079	2	3.063	77.8	19.602	8.89
BR 78	3.071	78	3.173	80.6	0.11	2.8	0.079	2	3.142	79.8	19.955	9.05
BR 79	3.11	79	3.213	81.6	0.11	2.8	0.079	2	3.181	80.8	19.999	9.07
BR 80	3.15	80	3.252	82.6	0.11	2.8	0.079	2	3.22	81.8	20.33	9.22
BR 81	3.189	81	3.291	83.6	0.11	2.8	0.079	2	3.26	82.8	20.529	9.31
BR 82	3.228	82	3.331	84.6	0.11	2.8	0.079	2	3.299	83.8	20.837	9.45
BR 83	3.268	83	3.37	85.6	0.11	2.8	0.079	2	3.339	84.8	21.234	9.63
BR 86	3.386	86	3.488	88.6	0.11	2.8	0.079	2	3.457	87.8	21.852	9.91
BR 88	3.465	88	3.583	91	0.134	3.4	0.098	2.5	3.543	90	33.957	15.4
BR 90	3.543	90	3.661	93	0.134	3.4	0.098	2.5	3.622	92	34.398	15.6
BR 92	3.622	92	3.74	95	0.134	3.4	0.098	2.5	3.701	94	36.603	16.6
BR 93	3.661	93	3.78	96	0.134	3.4	0.098	2.5	3.74	95	37.044	16.8
BR 95	3.74	95	3.858	98	0.134	3.4	0.098	2.5	3.819	97	37.265	16.9
BR 97	3.819	97	3.937	100	0.134	3.4	0.098	2.5	3.898	99	37.706	17.1
BR 98	3.858	98	3.976	101	0.134	3.4	0.098	2.5	3.937	100	38.588	17.5
BR 100	3.937	100	4.067	103.3	0.134	3.4	0.098	2.5	4.028	102.3	39.47	17.9
BR 102	4.016	102	4.146	105.3	0.134	3.4	0.098	2.5	4.106	104.3	40.572	18.4
BR 103	4.055	103	4.185	106.3	0.134	3.4	0.098	2.5	4.146	105.3	40.793	18.5
BR 105	4.134	105	4.264	108.3	0.134	3.4	0.098	2.5	4.224	107.3	41.234	18.7
BR 107	4.213	107	4.343	110.3	0.134	3.4	0.098	2.5	4.303	109.3	42.116	19.1
BR 108	4.252	108	4.382	111.3	0.134	3.4	0.098	2.5	4.343	110.3	42.557	19.3
BR 110	4.331	110	4.465	113.4	0.134	3.4	0.098	2.5	4.421	112.3	43.659	19.8
BR 112	4.409	112	4.543	115.4	0.134	3.4	0.098	2.5	4.5	114.3	44.762	20.3
BR 113	4.449	113	4.583	116.4	0.134	3.4	0.098	2.5	4.539	115.3	45.203	20.5
BR 115	4.528	115	4.661	118.4	0.134	3.4	0.098	2.5	4.618	117.3	45.423	20.6
BR 117	4.606	117	4.74	120.4	0.134	3.4	0.098	2.5	4.697	119.3	45.864	20.8
BR 118	4.646	118	4.78	121.4	0.134	3.4	0.098	2.5	4.736	120.3	46.526	21.1
BR 120	4.724	120	4.866	123.6	0.134	3.4	0.098	2.5	4.815	122.3	47.187	21.4
BR 123	4.843	123	4.984	126.6	0.134	3.4	0.098	2.5	4.933	125.3	48.51	22
BR 125	4.921	125	5.063	128.6	0.134	3.4	0.098	2.5	5.012	127.3	49.613	22.5
BR 127	5	127	5.142	130.6	0.134	3.4	0.098	2.5	5.091	129.3	50.715	23
BR 130	5.118	130	5.264	133.7	0.134	3.4	0.098	2.5	5.209	132.3	51.597	23.4
BR 133	5.236	133	5.382	136.7	0.134	3.4	0.098	2.5	5.327	135.3	53.802	24.4
BR 135	5.315	135	5.461	138.7	0.134	3.4	0.098	2.5	5.406	137.3	55.125	25
BR 137	5.394	137	5.539	140.7	0.134	3.4	0.098	2.5	5.484	139.3	55.787	25.3

Housing Snap Rings
BR SERIES

- Metric series

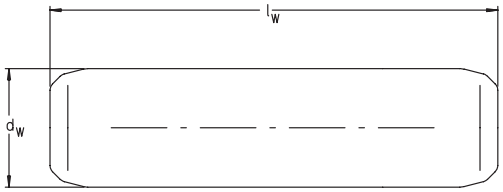


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PART NUMBER	HSG BORE d_1 inch	HSG BORE d_1 mm	SNAP RING OD d_3 min. inch	SNAP RING OD d_3 min. mm	RADIAL SECTION b inch	RADIAL SECTION b mm	WIDTH s inch	WIDTH s mm	GROOVE DIA. d_2 inch	GROOVE DIA. d_2 mm	WEIGHT PER 1000 PIECES lbs	WEIGHT PER 1000 PIECES kg
BR 140	5.512	140	5.673	144.1	0.157	4	0.098	2.5	5.614	142.6	64.607	29.3
BR 143	5.63	143	5.791	147.1	0.157	4	0.098	2.5	5.732	145.6	66.371	30.1
BR 150	5.906	150	6.071	154.2	0.157	4	0.098	2.5	6.008	152.6	70.34	31.9
BR 153	6.024	153	6.189	157.2	0.157	4	0.098	2.5	6.126	155.6	71.883	32.6
BR 160	6.299	160	6.469	164.3	0.157	4	0.098	2.5	6.402	162.6	75.852	34.4
BR 163	6.417	163	6.587	167.3	0.157	4	0.098	2.5	6.52	165.6	76.293	34.6
BR 165	6.496	165	6.665	169.3	0.157	4	0.098	2.5	6.598	167.6	76.955	34.9
BR 170	6.693	170	6.866	174.4	0.157	4	0.098	2.5	6.795	172.6	79.821	36.2
BR 173	6.811	173	6.984	177.4	0.157	4	0.098	2.5	6.913	175.6	81.806	37.1
BR 175	6.89	175	7.063	179.4	0.157	4	0.098	2.5	6.992	177.6	82.247	37.3
BR 180	7.087	180	7.264	184.5	0.157	4	0.098	2.5	7.189	182.6	84.452	38.3
BR 183	7.205	183	7.382	187.5	0.157	4	0.098	2.5	7.307	185.6	90.405	41
BR 190	7.48	190	7.673	194.9	0.197	5	0.118	3	7.598	193	135.167	61.3
BR 195	7.677	195	7.87	199.9	0.197	5	0.118	3	7.795	198	135.828	61.6
BR 200	7.874	200	8.071	205	0.197	5	0.118	3	7.992	203	142.223	64.5
BR 205	8.071	205	8.268	210	0.197	5	0.118	3	8.189	208	146.412	66.4
BR 220	8.661	220	8.866	225.2	0.197	5	0.118	3	8.78	223	159.642	72.4
BR 230	9.055	230	9.264	235.3	0.197	5	0.118	3	9.173	233	165.816	75.2
BR 250	9.843	250	10.059	255.5	0.197	5	0.118	3	9.961	253	185.661	84.2
BR 270	10.63	270	10.933	277.7	0.295	7.5	0.157	4	10.827	275	383.67	174
BR 280	11.024	280	11.331	287.8	0.295	7.5	0.157	4	11.22	285	405.72	184
BR 300	11.811	300	12.122	307.9	0.295	7.5	0.157	4	12.008	305	432.18	196
BR 320	12.598	320	12.921	328.2	0.295	7.5	0.157	4	12.795	325	447.615	203
BR 325	12.795	325	13.118	333.2	0.295	7.5	0.157	4	12.992	330	454.23	206
BR 355	13.976	355	14.311	363.5	0.295	7.5	0.157	4	14.173	360	509.355	231
BR 375	14.764	375	15.102	383.6	0.295	7.5	0.157	4	14.961	380	529.2	240
BR 385	15.157	385	15.5	393.7	0.295	7.5	0.157	4	15.354	390	546.84	248
BR 395	15.551	395	15.898	403.8	0.295	7.5	0.157	4	15.748	400	566.685	257
BR 400	15.748	400	16.098	408.9	0.295	7.5	0.157	4	15.945	405	573.3	260
BR 420	16.535	420	16.894	429.1	0.295	7.5	0.157	4	16.732	425	610.785	277
BR 440	17.323	440	17.689	449.3	0.295	7.5	0.157	4	17.52	445	648.27	294

Needle Rollers

- Round and flat end

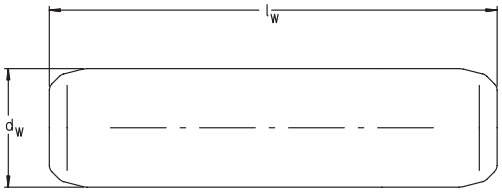


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PART NUMBER	DIAMETER d_w inch	DIAMETER d_w mm	LENGTH l_w inch	LENGTH l_w mm	WEIGHT PER 1000 lbs	WEIGHT PER 1000 Kg
NRB 1x5.8	0.0394	1	0.2283	5.8	0.075	0.034
NRB 1x6.8	0.0394	1	0.2677	6.8	0.093	0.042
NRB 1x7.8	0.0394	1	0.3071	7.8	0.104	0.047
NRB 1x9.8	0.0394	1	0.3858	9.8	0.13	0.059
NRA 1.191x22	0.0469	1.191	0.8661	22	0.415	0.188
NRB 1.5x5.8	0.0591	1.5	0.2283	5.8	0.176	0.08
NRB 1.5x6.8	0.0591	1.5	0.2677	6.8	0.207	0.094
NRB 1.5x7.8	0.0591	1.5	0.3071	7.8	0.238	0.108
NRB1.5x8.3	0.0591	1.5	0.3268	8.3	0.265	0.12
NRB 1.5x9.8	0.0591	1.5	0.3858	9.8	0.3	0.136
NRB 1.5x11.8	0.0591	1.5	0.4646	11.8	0.362	0.164
NRB 1.5x13.8	0.0591	1.5	0.5433	13.8	0.421	0.191
NRBS 1.585x19.3	0.0624	1.585	0.7205	18.3	0.628	0.285
NRB 1.587x9.65	0.0625	1.587	0.3799	9.65	0.331	0.15
NRB 1.588x7.10	0.0625	1.588	0.2795	7.1	0.245	0.111
NRB 1.588x8	0.0625	1.588	0.315	8	0.276	0.125
NRB 1.588x14.4	0.0625	1.588	0.5669	14.4	0.496	0.225
NRBS 1.588x25.0	0.0625	1.588	0.9843	25	0.862	0.391
NRBS 1.588x27.1	0.0625	1.588	1.0669	27.1	0.935	0.424
NRB 1.664x10.6	0.0655	1.664	0.4173	10.6	0.401	0.182
NRBS 1.811x10.8	0.0713	1.811	0.4252	10.8	0.485	0.22
NRB 1.984x3.60	0.0781	1.984	0.1417	3.6	0.194	0.088
NRB 1.984x4.20	0.0781	1.984	0.1654	4.2	0.218	0.099
NRB 1.984x6.8	0.0781	1.984	0.2677	6.8	0.366	0.166
NRKS 1.984x9.27	0.0781	1.984	0.365	9.27	0.485	0.22
NRAS 1.984x19.0	0.0781	1.984	0.748	19	0.97	0.44
NRB 2x4.0	0.0787	2	0.1575	4	0.218	0.099
NRB 2x6.3	0.0787	2	0.248	6.3	0.309	0.14
NRB 2x7.8	0.0787	2	0.3071	7.8	0.419	0.19
NRB2x8.8	0.0787	2	0.3465	8.8	0.467	0.212
NRB 2x9.8	0.0787	2	0.3858	9.8	0.529	0.24
NRB 2x11.8	0.0787	2	0.4646	11.8	0.639	0.29
NRB 2x13.8	0.0787	2	0.5433	13.8	0.75	0.34
NRB 2x15.8	0.0787	2	0.622	15.8	0.86	0.39
NRB 2x17.8	0.0787	2	0.7008	17.8	0.97	0.44
NRB 2x19.8	0.0787	2	0.7795	19.8	1.08	0.49
NRB 2x21.8	0.0787	2	0.8583	21.8	1.191	0.54
NRB 2x22.55	0.0787	2	0.8878	22.55	1.235	0.56
NRA 2x23.8	0.0787	2	0.937	23.8	1.303	0.591
NRB 2.286x15.0	0.09	2.286	0.5906	15	1.058	0.48
NRB 2.398x14.3	0.0944	2.398	0.563	14.3	1.125	0.51
NRKS 2.40x9.91	0.0945	2.4	0.3902	9.91	0.781	0.354
NRB 2.5x6.8	0.0984	2.5	0.2677	6.8	0.582	0.264
NRB 2.5x7.8	0.0984	2.5	0.3071	7.8	0.662	0.3
NRB 2.5x9.8	0.0984	2.5	0.3858	9.8	0.838	0.38
NRB2.5x10.8	0.0984	2.5	0.4252	10.8	0.924	0.419

Needle Rollers

- Round and flat end

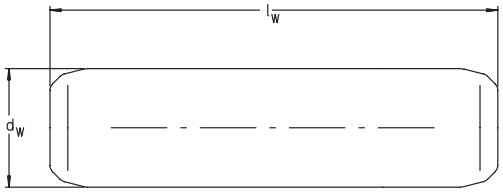


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PART NUMBER	DIAMETER d_w inch	DIAMETER d_w mm	LENGTH l_w inch	LENGTH l_w mm	WEIGHT PER 1000 lbs	WEIGHT PER 1000 Kg
NRB 2.5x11.8	0.0984	2.5	0.4646	11.8	0.992	0.45
NRB 2.5x13.8	0.0984	2.5	0.5433	13.8	1.169	0.53
NRB 2.5x15.8	0.0984	2.5	0.622	15.8	1.345	0.61
NRB 2.5x17.8	0.0984	2.5	0.7008	17.8	1.521	0.69
NRB 2.5x19.8	0.0984	2.5	0.7795	19.8	1.676	0.76
NRB 2.5x21.8	0.0984	2.5	0.8583	21.8	1.852	0.84
NRB 2.5x23.8	0.0984	2.5	0.937	23.8	2.029	0.92
NRB 2.5x26.55	0.0984	2.5	1.0453	26.55	2.271	1.03
NRA 2.5x27.8	0.0984	2.5	1.0945	27.8	2.377	1.078
NRA 2.779x12.70	0.1094	2.779	0.5	12.7	1.343	0.609
NRB 3x6.3	0.1181	3	0.248	6.3	8.319	3.773
NRA 3x8.8	0.1181	3	0.3465	8.8	1.058	0.48
NRB 3x9.8	0.1181	3	0.3858	9.8	1.191	0.54
NRB 3x10.8	0.1181	3	0.4252	10.8	1.33	0.603
NRB 3x11.8	0.1181	3	0.4646	11.8	1.433	0.65
NRB 3x13.8	0.1181	3	0.5433	13.8	1.676	0.76
NRB 3x15.8	0.1181	3	0.622	15.8	1.918	0.87
NRA 3x16.2	0.1181	3	0.6378	16.2	1.996	0.905
NRB 3x17.8	0.1181	3	0.7008	17.8	2.183	0.99
NRB 3x19.8	0.1181	3	0.7795	19.8	2.426	1.1
NRB 3x21.8	0.1181	3	0.8583	21.8	2.668	1.21
NRB 3x23.8	0.1181	3	0.937	23.8	2.911	1.32
NRB 3x25.8	0.1181	3	1.0157	25.8	3.153	1.43
NRB 3x27.8	0.1181	3	1.0945	27.8	3.396	1.54
NRB 3x29.8	0.1181	3	1.1732	29.8	3.55	1.61
NRAS 3.175x7	0.125	3.175	0.2756	7	0.966	0.438
NRA 3.175x19.05	0.125	3.175	0.75	19.05	2.628	1.192
NRA 3.175x21.60	0.125	3.175	0.8504	21.6	2.979	1.351
NRB 3.5x11.8	0.1378	3.5	0.4646	11.8	2.007	0.91
NRB 3.5x13.8	0.1378	3.5	0.5433	13.8	2.315	1.05
NRB 3.5x15.8	0.1378	3.5	0.622	15.8	2.624	1.19
NRB 3.5x17.8	0.1378	3.5	0.7008	17.8	2.977	1.35
NRB 3.5x19.8	0.1378	3.5	0.7795	19.8	3.33	1.51
NRB 3.5x21.8	0.1378	3.5	0.8583	21.8	3.682	1.67
NRB 3.5x23.8	0.1378	3.5	0.937	23.8	4.079	1.85
NRB 3.5x25.8	0.1378	3.5	1.0157	25.8	4.322	1.96
NRB 3.5x27.8	0.1378	3.5	1.0945	27.8	4.631	2.1
NRB 3.5x29.8	0.1378	3.5	1.1732	29.8	4.961	2.25
NRB 3.5x34.8	0.1378	3.5	1.3701	34.8	5.843	2.65
NRA 3.616x17.8	0.1424	3.616	0.7008	17.8	2.205	1
NRBS 3.967x5.97	0.1562	3.967	0.235	5.97	1.286	0.583
NRBS 3.967x14.1	0.1562	3.967	0.5551	14.1	2.867	1.3
NRAS 3.967x16.6	0.1562	3.967	0.6559	16.66	3.588	1.627
NRAS 3.967x22.8	0.1562	3.967	0.9	22.86	4.922	2.232
NRB 4x5.5	0.1575	4	0.2165	5.5	1.191	0.54
NRB 4x11.8	0.1575	4	0.4646	11.8	2.558	1.16

Needle Rollers

● Round and flat end



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PART NUMBER	DIAMETER d_w inch	DIAMETER d_w mm	LENGTH l_w inch	LENGTH l_w mm	WEIGHT PER 1000 lbs	WEIGHT PER 1000 Kg
NRB 4x13.8	0.1575	4	0.5433	13.8	2.999	1.36
NRB 4x15.8	0.1575	4	0.622	15.8	3.418	1.55
NRB 4x17.8	0.1575	4	0.7008	17.8	3.859	1.75
NRB 4x19.8	0.1575	4	0.7795	19.8	4.3	1.95
NRB 4x21.8	0.1575	4	0.8583	21.8	4.719	2.14
NRB 4x23.8	0.1575	4	0.937	23.8	5.138	2.33
NRB 4x25.8	0.1575	4	1.0157	25.8	5.579	2.53
NRB 4x27.8	0.1575	4	1.0945	27.8	5.777	2.62
NRB 4x29.8	0.1575	4	1.1732	29.8	6.505	2.95
NRB 4x34.8	0.1575	4	1.3701	34.8	7.497	3.4
NRB 4x39.8	0.1575	4	1.5669	39.8	8.6	3.9
NRB 4.5x27.8	0.1772	4.5	1.0945	27.8	7.651	3.47
NRB 4.5x29.8	0.1772	4.5	1.1732	29.8	8.256	3.744
NRB 4.5x49.8	0.1772	4.5	1.9606	49.8	13.715	6.22
NRC 4.762x22.35	0.1875	4.762	0.8799	22.35	6.935	3.145
NRB 4.763x14.80	0.1875	4.763	0.5827	14.8	4.593	2.083
NRB 4.76x26	0.1875	4.763	1.0236	26	8.07	3.66
NRB 5x15.8	0.1969	5	0.622	15.8	5.358	2.43
NRB 5x19.8	0.1969	5	0.7795	19.8	6.681	3.03
NRB 5x21.8	0.1969	5	0.8583	21.8	7.409	3.36
NRB 5x23.8	0.1969	5	0.937	23.8	7.894	3.58
NRB 5x25.8	0.1969	5	1.0157	25.8	8.776	3.98
NRB 5x27.8	0.1969	5	1.0945	27.8	9.217	4.18
NRB 5x29.8	0.1969	5	1.1732	29.8	10.143	4.6
NRB 5x34.8	0.1969	5	1.3701	34.8	11.907	5.4
NRB 5x39.8	0.1969	5	1.5669	39.8	13.561	6.15
NRB 5x49.8	0.1969	5	1.9606	49.8	16.538	7.5
NRB 5.542x13.66	0.2182	5.542	0.5378	13.66	5.74	2.603
NRAS 5.905x25.4	0.2325	5.905	1	25.4	12.116	5.495
NRB 6x14.0	0.2362	6	0.5512	14	6.895	3.127
NRB 6x17.8	0.2362	6	0.7008	17.8	8.71	3.95
NRB 6x21.8	0.2362	6	0.8583	21.8	10.65	4.83
NRB 6x23.8	0.2362	6	0.937	23.8	11.642	5.28
NRB 6x25.8	0.2362	6	1.0157	25.8	12.613	5.72
NRA 6x34.8	0.2362	6	1.3701	34.8	17.139	7.773
NRB 6x39.8	0.2362	6	1.5669	39.8	19.47	8.83

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GAR..UK	ELGES METRIC DIN648 SERIES E FORM A MAINTENANCE FREE EXTERNAL THREAD	440
GIKFR..PW	ELGES METRIC DIN648 SERIES K MAINTENANCE FREE INTERNAL THREAD	441
GIPFR..PW	ELGES METRIC DIN648 SERIES K MAINTENANCE FREE INTERNAL FINE PITCH THREAD	441
GAKFR..PW	ELGES METRIC DIN 648 SERIES K MAINTENANCE FREE EXTERNAL THREAD	442

Elges is a registered trademark of INA USA Corporation
Permaglide is a registered trademark and a product of KOLBENSCHMIDT AG, Neckarsulm, also produced in Greensburg, Indiana, USA.

P10, P11 Maintenance–free

Structure

Permaglide P10 is a maintenance free bearing material which consists of three layers: steel backing, bronze layer and sliding layer. A 0.2 to 0.35 mm thick porous bronze layer (tin bronze or tin/lead bronze) is sintered onto the steel backing. In a rolling operation the pores of the bronze are completely filled with a mixture of polytetrafluoroethylene (PTFE) and lead (Pb). On top of the bronze layer there is a 0.01 to 0.03 mm thick sliding layer of polytetrafluoroethylene (PTFE) and lead (Pb). The steel backing and the sintered bronze skeleton give a very high compressive strength and provide good thermal conductivity for bearings manufactured from the Permaglide P10 material. The O.D., faces and butt joint of the plain bearings are coated with a tin flash for protection against corrosion.

Permaglide P11 also consists of three layers. It has a bronze backing instead of a steel backing. The structure of the porous bronze layer and the sliding layer is the same as the P10 material. The bronze backing gives the plain bearings of this material high corrosion resistance and good thermal conductivity.

Characteristics

- High pv value; values permissible in dry running:
  pv = 1.8 N/mm^2 x m/s (51390 psi x fpm) in continuous operation
  pv = 3.6 N/mm^2 x m/s (102780 psi x fpm) for short periods.
- High load carrying capacity; permissible static contact pressure 250 N/mm^2 (36258 psi)
- Sliding velocity up to 2 m/s (390 fpm)
- Good sliding properties (stick–slip virtually eliminated)
- Low coefficient of friction (0.03 to 0.25)
- Suitable for temperatures from
  –200 C to +280 C (–328 F to +536 F)
- Well suited for rotating and oscillating motion
- Low wear
- No welding tendency with metals
- Good embedding properties for dirt and foreign matter
- No absorption of water and therefore no swelling
- Chemically resistant because of suitable electro–plating on steel backing, faces and butt joint faces
- Electrically conductive, no electrostatic charging; advantageous for use with flammable and explosive media
- Low mass
- Minimum space requirement

P20, P21, P22 Low Maintenance

Structure

The low maintenance plain bearing materials P20, P21 and P22 consist of three layers: steel backing, bronze layer and a sliding layer. A 0.2 to 0.35 mm thick porous bronze layer (tin bronze or tin/lead bronze) is sintered onto the steel backing. The sliding layer consists of a mixture of polyvinylidenefluoride (PVDF), polytetrafluoroethylene (PTFE) and lead (Pb). In a rolling operation the pores of the bronze are completely filled with the mixture. The sliding layer on top of the bronze layer is a mixture of PVDF, PTFE and Pb. In P20 the sliding layer is 0.05 to 0.1 mm thick. The O.D., faces and butt joint of the plain bearings are coated with a tin flash for protection against corrosion.

P21 and P22 materials are structurally the same as P20 although their sliding layer is thicker. The sliding layer is between 0.15 and 0.4 mm thick making further machining of the bearing surface possible. For example, bearings already installed can be fine turned or reamed in order to correct misalignment of the housing bores or to provide bearings with a small radial internal clearance.

- P20 is ready for assembly and has lubrication pockets.
- P21 has a machining allowance and lubrication pockets.
- P22 has a machining allowance and is without lubrication pockets.

Characteristics

- pv value up to 3 N/mm^2 x m/s (85650 psi x fpm)
- High load carrying capacity; permissible static contact pressure 250 N/mm^2 (36258 psi)
- Sliding velocity up to 3 m/s (590 fpm)
- Low coefficient of friction (0.02 to 0.2)
- Suitable for temperatures from –40 C to +110 C (–40 F to +230 F), for short periods up to + 140 C (+ 284 F)
- Well suited for rotating and oscillating motion
- Low maintenance because of long relubrication intervals
- Low wear
- Good embedding properties for dirt and foreign matter
- Low sensitivity to edge loading
- No absorption of water

General Information
ELGES SPHERICAL PLAIN BEARINGS AND ROD ENDS

PRODUCT DESCRIPTION

Elges Spherical Plain Bearings

- Available as inch and metric series
- Available as steel on steel sliding for high shock load capacity
- Available as chrome on PTFE for maintenance free operation
- Many series available with seals for excluding contamination
- For operation in difficult applications for rolling bearings such as hydraulic cylinders, construction equipment, dredging and others

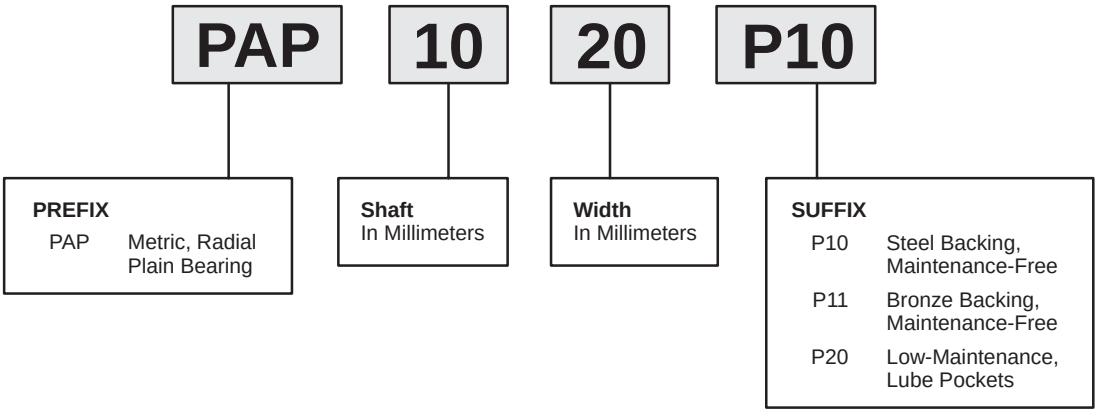
Elges Rod Ends

- Available as popular metric series
- Allows adjustments in equipment by self aligning and with threaded adapter lengths
- Available with weldable ends for hydraulic cylinders
- Available as standard duty and maintenance free designs
- Many series available with seals for excluding contamination

Part Number Identification
PERMAGLIDE® PLAIN BEARINGS

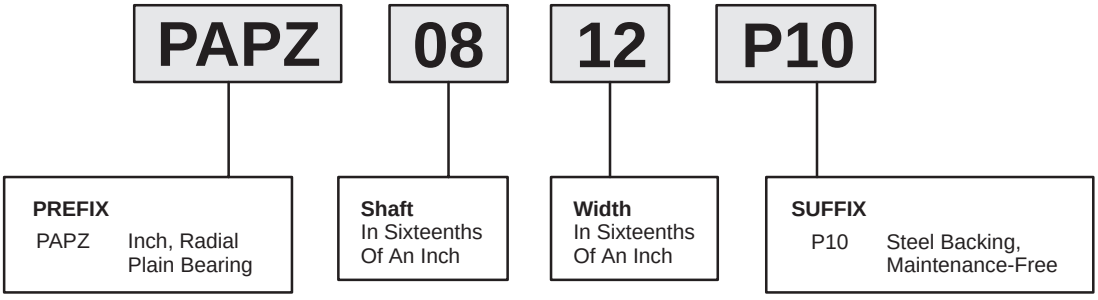
PERMAGLIDE PLAIN BEARINGS

PAP



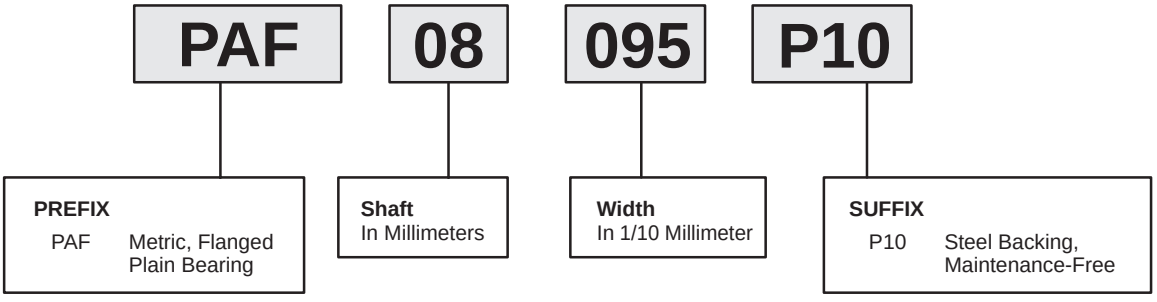
PERMAGLIDE PLAIN BEARINGS

PAPZ



PERMAGLIDE FLANGED PLAIN BEARINGS

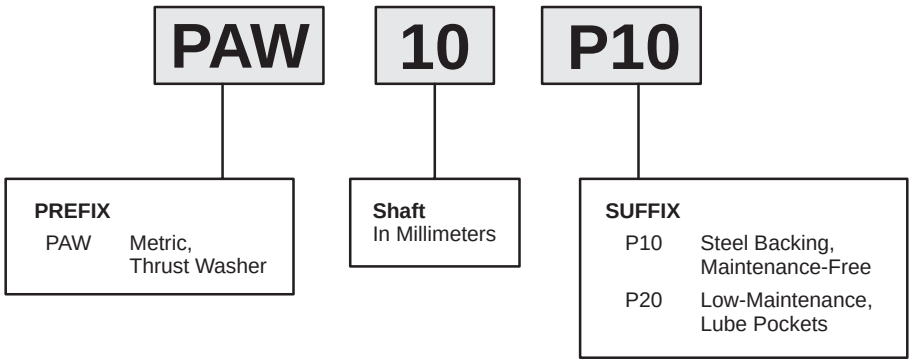
PAF



Part Number Identification
PERMAGLIDE® PLAIN BEARINGS

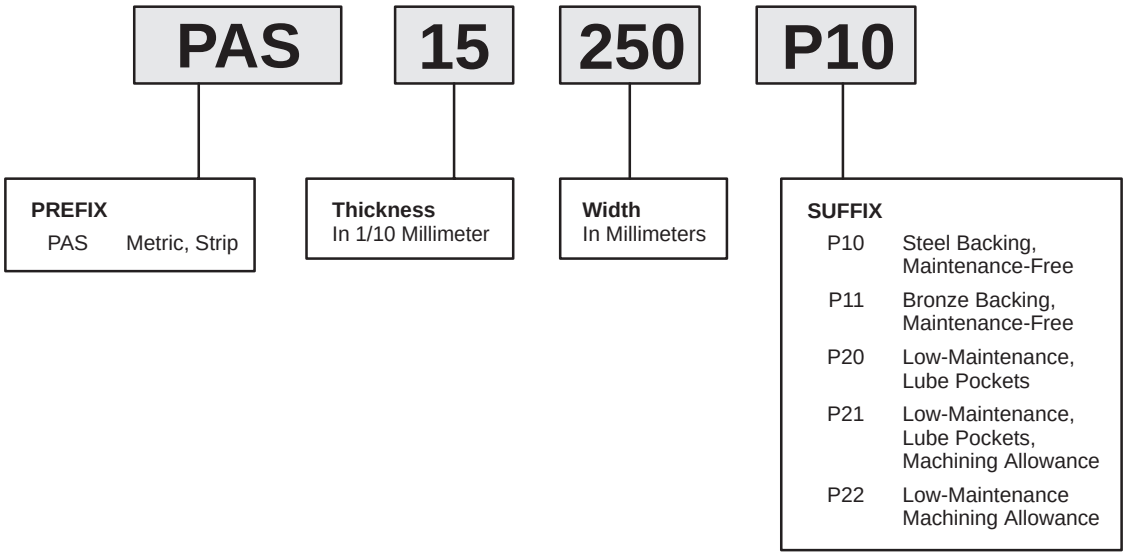
PERMAGLIDE THRUST WASHERS

PAW



PERMAGLIDE STRIPS

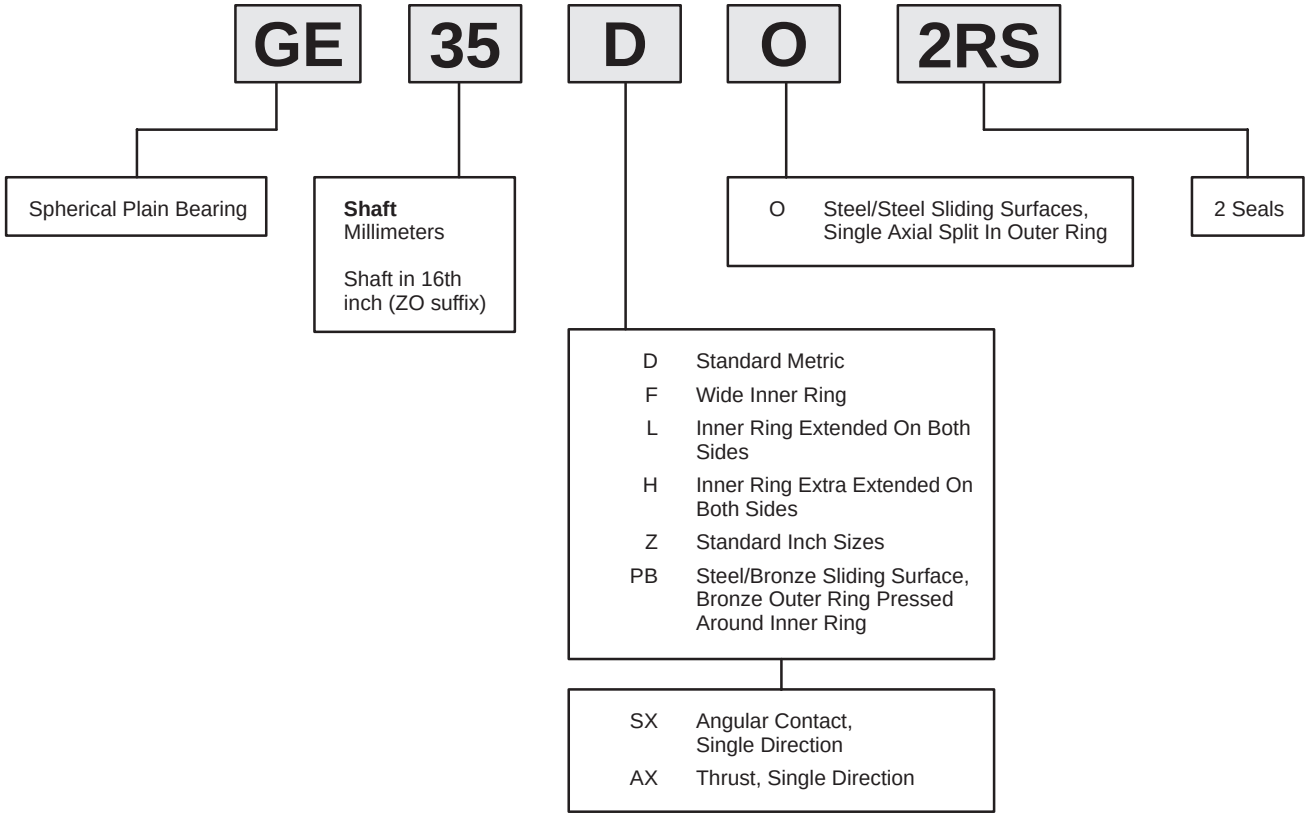
PAS



Part Number Identification
ELGES SPHERICAL PLAIN BEARINGS AND ROD ENDS

ELGES SPHERICAL PLAIN BEARINGS MAINTENANCE REQUIRED

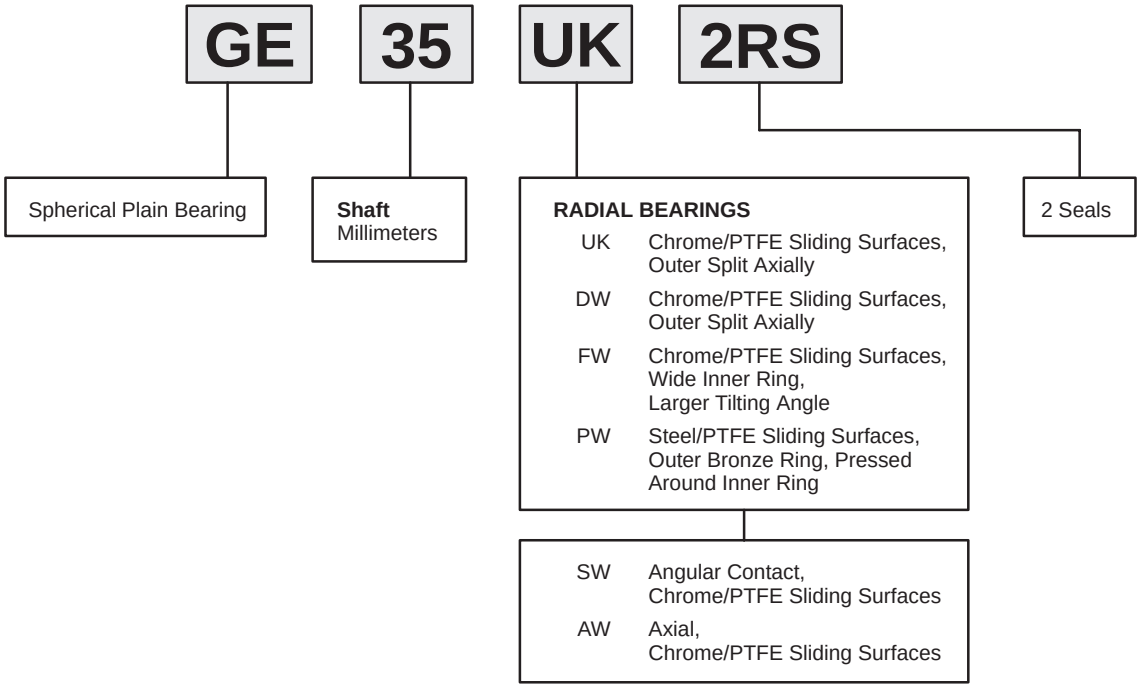
GE



Part Number Identification
ELGES SPHERICAL PLAIN BEARINGS AND ROD ENDS

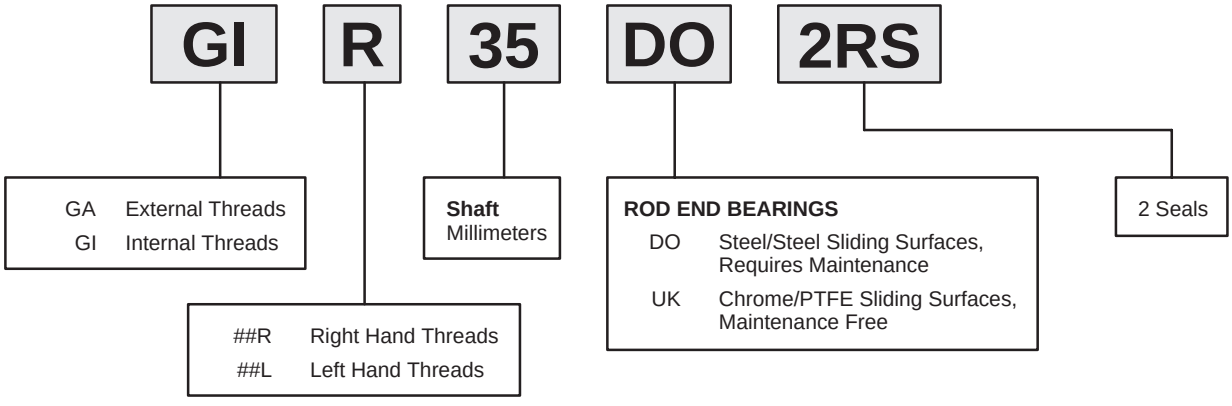
ELGES SPHERICAL PLAIN BEARINGS MAINTENANCE-FREE

GE



ELGES ROD ENDS DIN648 SERIES E

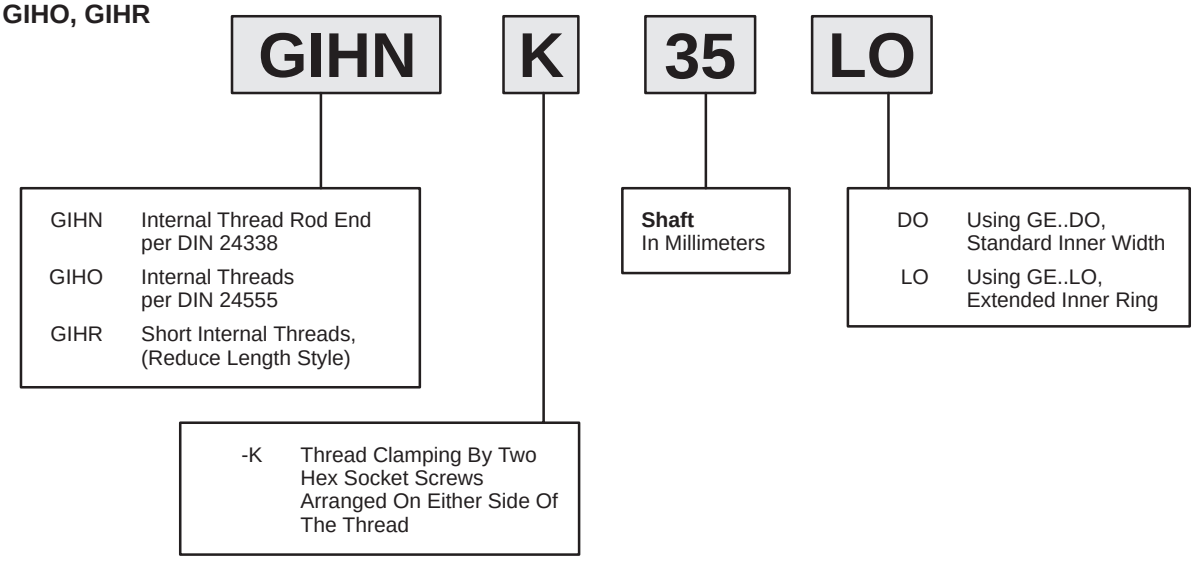
GI, GA



Part Number Identification
ELGES SPHERICAL PLAIN BEARINGS AND ROD ENDS

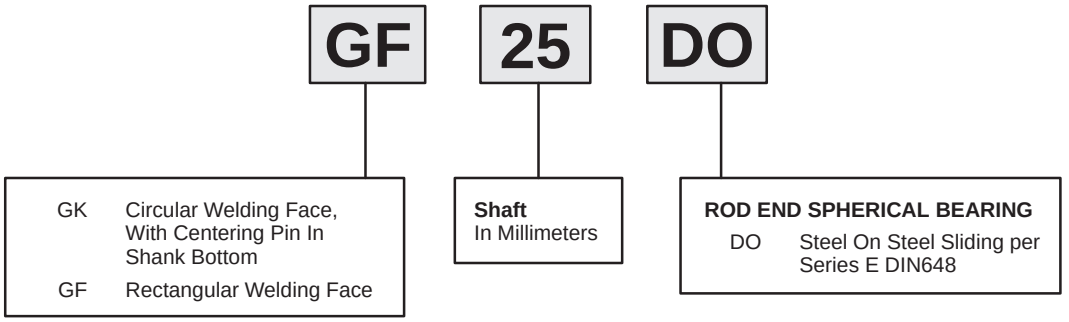
ELGES HYDRAULIC ROD ENDS

GIHN, GIHO, GIHR



ELGES HYDRAULIC ROD ENDS

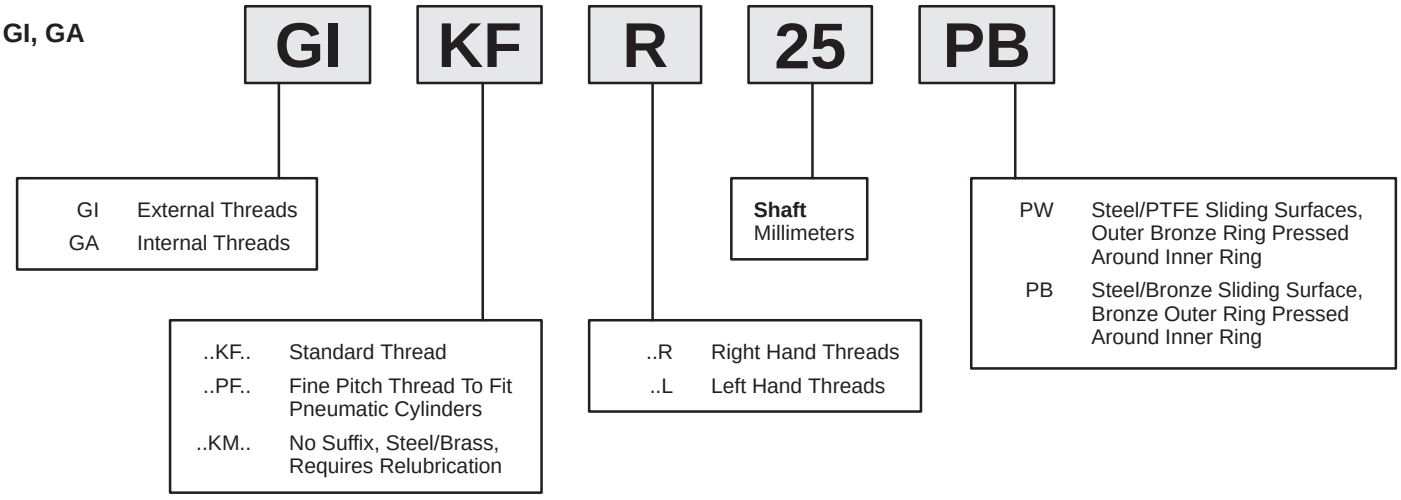
GK, GF



Part Number Identification
ELGES SPHERICAL PLAIN BEARINGS AND ROD ENDS

ELGES ROD ENDS
DIN648 SERIES K

GI, GA



Interchange
Metric Plain Bearings
PAP..P10 SERIES

- Maintenance free

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

PERMAGLIDE			GARLOCK		
PAP	0203	P10	MB	0203	DU
PAP	0205	P10	MB	0205	DU
PAP	0303	P10	MB	0303	DU
PAP	0304	P10		NONE	
PAP	0305	P10	MB	0305	DU
PAP	0306	P10	MB	0306	DU
PAP	0403	P10	MB	0403	DU
PAP	0404	P10	MB	0404	DU
PAP	0406	P10	MB	0406	DU
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PAP	0505	P10	MB	0505	DU
PAP	0508	P10	MB	0508	DU
PAP	0510	P10	MB	0510	DU
PAP	0606	P10	MB	0606	DU
PAP	0608	P10	MB	0608	DU
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PAP	1820	P10	MB	1820	DU
PAP	1825	P10	MB	1825	DU
PAP	2010	P10	MB	2010	DU

PERMAGLIDE			GARLOCK		
PAP	2015	P10	MB	2015	DU
PAP	2020	P10	MB	2020	DU
PAP	2025	P10	MB	2025	DU
PAP	2030	P10	MB	2030	DU
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PAP	2830	P10	MB	2830	DU
PAP	3015	P10	MB	3015	DU
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PERMAGLIDE			GARLOCK		
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PAP	7580	P10	MB	7580	DU
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PAP	8060	P10	MB	8060	DU
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PAP	220100	P10	MB	220100	DU
PAP	250100	P10	MB	250100	DU
PAP	300100	P10	MB	300100	DU

Permaglide is a registered trademark and a product of KOLBENSCHMIDT AG, Neckarsulm, also produced in Greensburg, Indiana, USA. All other products and company names are trademarks or registered trademarks of their respective companies.

Interchange
Inch Plain Bearings
PAPZ..P10 SERIES

- Maintenance free

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

PERMAGLIDE			GARLOCK		
PAPZ	0303	P10	03	DU	03
PAPZ	0304	P10	03	DU	04
PAPZ	0306	P10	03	DU	06
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PAPZ	0406	P10	04	DU	06
PAPZ	0408	P10		NONE	
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PAPZ	0603	P10	06	DU	03
PAPZ	0604	P10	06	DU	04
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PAPZ	0806	P10	08	DU	06
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PAPZ	1816	P10	18	DU	16
PAPZ	2012	P10	20	DU	12
PAPZ	2016	P10	20	DU	16

PERMAGLIDE			GARLOCK		
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PAPZ	2432	P10	24	DU	32
PAPZ	2616	P10	26	DU	16
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PAPZ	3224	P10	32	DU	24
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Interchange
Metric Thrust Washers
PAW..P10 SERIES

- Maintenance free

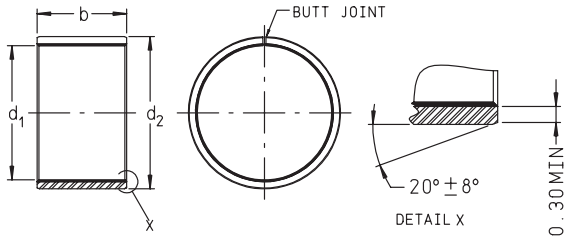
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

PERMAGLIDE			GARLOCK		
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PAW	14	P10	WC	12	DU
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PAW	32	P10	WC	30	DU
PAW	38	P10	WC	35	DU
PAW	42	P10	WC	40	DU
PAW	48	P10	WC	45	DU
PAW	52	P10	WC	50	DU
PAW	62	P10	NONE		

Permaglide Plain Bearings

PAPZ...P10 SERIES

- Inch dimensions
- Maintenance free
- Steel backing



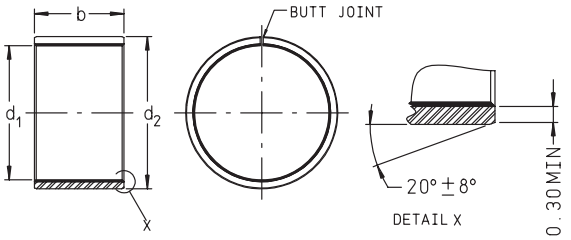
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

PART NUMBER	SHAFT d_1 inch	SHAFT d_1 mm	OD d_2 inch	OD d_2 mm	LENGTH b inch	LENGTH b mm	WEIGHT lbs	WEIGHT g
PAPZ 0303 P10	3/16	4.763	1/4	6.350	3/16	4.763	0.0011	0.5
PAPZ 0304 P10	3/16	4.763	1/4	6.350	1/4	6.350	0.0015	0.7
PAPZ 0306 P10	3/16	4.763	1/4	6.350	3/8	9.525	0.0022	1.0
PAPZ 0404 P10	1/4	6.350	5/16	7.938	1/4	6.350	0.0018	0.8
PAPZ 0406 P10	1/4	6.350	5/16	7.938	3/8	9.525	0.0029	1.3
PAPZ 0408 P10	1/4	6.350	5/16	7.938	1/2	12.700	0.0037	1.7
PAPZ 0506 P10	5/16	7.938	3/8	9.525	3/8	9.525	0.0035	1.6
PAPZ 0603 P10	3/8	9.525	15/32	11.906	3/16	4.763	0.0031	1.4
PAPZ 0604 P10	3/8	9.525	15/32	11.906	1/4	6.350	0.0042	1.9
PAPZ 0606 P10	3/8	9.525	15/32	11.906	3/8	9.525	0.0064	2.9
PAPZ 0608 P10	3/8	9.525	15/32	11.906	1/2	12.700	0.0084	3.8
PAPZ 0610 P10	3/8	9.525	15/32	11.906	5/8	15.875	0.0106	4.8
PAPZ 0612 P10	3/8	9.525	15/32	11.906	3/4	19.050	0.0128	5.8
PAPZ 0706 P10	7/16	11.113	17/32	13.494	3/8	9.525	0.0073	3.3
PAPZ 0708 P10	7/16	11.113	17/32	13.494	1/2	12.700	0.0097	4.4
PAPZ 0710 P10	7/16	11.113	17/32	13.494	5/8	15.875	0.0121	5.5
PAPZ 0712 P10	7/16	11.113	17/32	13.494	3/4	19.050	0.0145	6.6
PAPZ 0804 P10	1/2	12.700	19/32	15.081	1/4	6.350	0.0055	2.5
PAPZ 0806 P10	1/2	12.700	19/32	15.081	3/8	9.525	0.0081	3.7
PAPZ 0808 P10	1/2	12.700	19/32	15.081	1/2	12.700	0.0110	5.0
PAPZ 0810 P10	1/2	12.700	19/32	15.081	5/8	15.875	0.0137	6.2
PAPZ 0812 P10	1/2	12.700	19/32	15.081	3/4	19.050	0.0165	7.5
PAPZ 0814 P10	1/2	12.700	19/32	15.081	7/8	22.225	0.0192	8.7
PAPZ 0908 P10	9/16	14.288	21/32	16.669	1/2	12.700	0.0121	5.5
PAPZ 0912 P10	9/16	14.288	21/32	16.669	3/4	19.050	0.0183	8.3
PAPZ 1004 P10	5/8	15.875	23/32	18.256	1/4	6.350	0.0066	3.0
PAPZ 1008 P10	5/8	15.875	23/32	18.256	1/2	12.700	0.0134	6.1
PAPZ 1010 P10	5/8	15.875	23/32	18.256	5/8	15.875	0.0167	7.6
PAPZ 1012 P10	5/8	15.875	23/32	18.256	3/4	19.050	0.0203	9.2
PAPZ 1014 P10	5/8	15.875	23/32	18.256	7/8	22.225	0.0236	10.7
PAPZ 1204 P10	3/4	19.050	7/8	22.225	1/4	6.350	0.0108	4.9
PAPZ 1206 P10	3/4	19.050	7/8	22.225	3/8	9.525	0.0165	7.5
PAPZ 1208 P10	3/4	19.050	7/8	22.225	1/2	12.700	0.0218	9.9
PAPZ 1210 P10	3/4	19.050	7/8	22.225	5/8	15.875	0.0271	12.3
PAPZ 1212 P10	3/4	19.050	7/8	22.225	3/4	19.050	0.0326	14.8
PAPZ 1216 P10	3/4	19.050	7/8	22.225	1	25.400	0.0434	19.7
PAPZ 1412 P10	7/8	22.225	1	25.400	3/4	19.050	0.0377	17.1
PAPZ 1416 P10	7/8	22.225	1	25.400	1	25.400	0.0502	22.8
PAPZ 1608 P10	1	25.400	1-1/8	28.575	1/2	12.700	0.0284	12.9
PAPZ 1612 P10	1	25.400	1-1/8	28.575	3/4	19.050	0.0425	19.3
PAPZ 1616 P10	1	25.400	1-1/8	28.575	1	25.400	0.0568	25.8
PAPZ 1620 P10	1	25.400	1-1/8	28.575	1-1/4	31.750	0.0709	32.2
PAPZ 1624 P10	1	25.400	1-1/8	28.575	1-1/2	38.100	0.0852	38.7
PAPZ 1808 P10	1-1/8	28.575	1-9/32	32.544	1/2	12.700	0.0403	18.3
PAPZ 1812 P10	1-1/8	28.575	1-9/32	32.544	3/4	19.050	0.0604	27.4
PAPZ 1816 P10	1-1/8	28.575	1-9/32	32.544	1	25.400	0.0804	36.5

Permaglide Plain Bearings

PAPZ...P10 SERIES

- Inch dimensions
- Maintenance free
- Steel backing



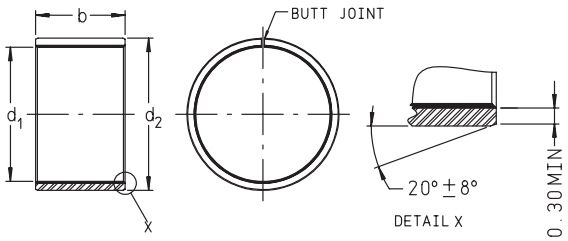
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

PART NUMBER	SHAFT d_1 inch	SHAFT d_1 mm	OD d_2 inch	OD d_2 mm	LENGTH b inch	LENGTH b mm	WEIGHT lbs	WEIGHT g
PAPZ 2012 P10	1-1/4	31.750	1-13/32	35.719	3/4	19.050	0.0665	30.2
PAPZ 2016 P10	1-1/4	31.750	1-13/32	35.719	1	25.400	0.0888	40.3
PAPZ 2020 P10	1-1/4	31.750	1-13/32	35.719	1-1/4	31.750	0.1111	50.4
PAPZ 2210 P10	1-3/8	34.925	1-17/32	38.894	5/8	15.875	0.0607	27.6
PAPZ 2216 P10	1-3/8	34.925	1-17/32	38.894	1	25.400	0.0972	44.1
PAPZ 2228 P10	1-3/8	34.925	1-17/32	38.894	1-3/4	44.450	0.1696	77.0
PAPZ 2416 P10	1-1/2	38.100	1-21/32	42.069	1	25.400	0.1057	48.0
PAPZ 2420 P10	1-1/2	38.100	1-21/32	42.069	1-1/4	31.750	0.1322	60.0
PAPZ 2424 P10	1-1/2	38.100	1-21/32	42.069	1-1/2	38.100	0.1586	72.0
PAPZ 2432 P10	1-1/2	38.100	1-21/32	42.069	2	50.800	0.2115	96.0
PAPZ 2616 P10	1-5/8	41.275	1-25/32	45.244	1	25.400	0.1145	52.0
PAPZ 2624 P10	1-5/8	41.275	1-25/32	45.244	1-1/2	38.100	0.1718	78.0
PAPZ 2816 P10	1-3/4	44.450	1-15/16	49.213	1	25.400	0.1476	67.0
PAPZ 2824 P10	1-3/4	44.450	1-15/16	49.213	1-1/2	38.100	0.2225	101.0
PAPZ 2832 P10	1-3/4	44.450	1-15/16	49.213	2	50.800	0.2952	134.0
PAPZ 3216 P10	2	50.800	2-3/16	55.563	1	25.400	0.1674	76.0
PAPZ 3224 P10	2	50.800	2-3/16	55.563	1-1/2	38.100	0.2511	114.0
PAPZ 3232 P10	2	50.800	2-3/16	55.563	2	50.800	0.3370	153.0
PAPZ 3240 P10	2	50.800	2-3/16	55.563	2-1/2	63.500	0.4207	191.0

Permaglide Plain Bearings

PAP...P10 SERIES

- Metric dimensions
- Maintenance free
- Steel backing
- Recommended Mounting Tolerances:
  Shaft – ID<5:h6, 5 ± ID<80:f7, 80 ± ID:h8
  Housing bore – OD ± 5.5:H6, 5.5<OD:H7



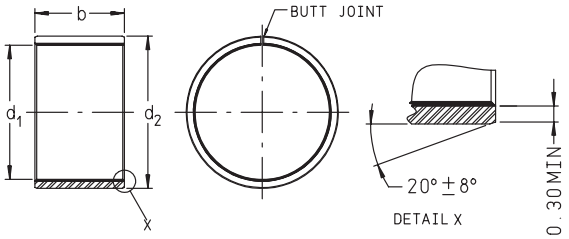
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PART NUMBER	SHAFT d_1 inch	SHAFT d_1 mm	OD d_2 inch	OD d_2 mm	LENGTH b inch	LENGTH b mm	WEIGHT lbs	WEIGHT g
PAP 0203 P10	0.079	2	0.138	3.5	0.118	3	0.0004	0.20
PAP 0205 P10	0.079	2	0.138	3.5	0.197	5	0.0007	0.30
PAP 0303 P10	0.118	3	0.177	4.5	0.118	3	0.0004	0.19
PAP 0304 P10	0.118	3	0.177	4.5	0.157	4	0.0004	0.20
PAP 0305 P10	0.118	3	0.177	4.5	0.197	5	0.0007	0.32
PAP 0306 P10	0.118	3	0.177	4.5	0.236	6	0.0009	0.39
PAP 0403 P10	0.157	4	0.217	5.5	0.118	3	0.0005	0.24
PAP 0404 P10	0.157	4	0.217	5.5	0.157	4	0.0007	0.33
PAP 0406 P10	0.157	4	0.217	5.5	0.236	6	0.0013	0.60
PAP 0410 P10	0.157	4	0.217	5.5	0.394	10	0.0019	0.84
PAP 0505 P10	0.197	5	0.276	7	0.197	5	0.0016	0.71
PAP 0508 P10	0.197	5	0.276	7	0.315	8	0.0025	1.14
PAP 0510 P10	0.197	5	0.276	7	0.394	10	0.0031	1.43
PAP 0606 P10	0.236	6	0.315	8	0.236	6	0.0020	0.90
PAP 0608 P10	0.236	6	0.315	8	0.315	8	0.0031	1.40
PAP 0610 P10	0.236	6	0.315	8	0.394	10	0.0037	1.67
PAP 0710 P10	0.276	7	0.354	9	0.394	10	0.0040	1.80
PAP 0808 P10	0.315	8	0.394	10	0.315	8	0.0038	1.72
PAP 0810 P10	0.315	8	0.394	10	0.394	10	0.0046	2.10
PAP 0812 P10	0.315	8	0.394	10	0.472	12	0.0055	2.50
PAP 1008 P10	0.394	10	0.472	12	0.315	8	0.0044	2.00
PAP 1010 P10	0.394	10	0.472	12	0.394	10	0.0055	2.50
PAP 1012 P10	0.394	10	0.472	12	0.472	12	0.0064	2.90
PAP 1015 P10	0.394	10	0.472	12	0.591	15	0.0084	3.80
PAP 1020 P10	0.394	10	0.472	12	0.787	20	0.0116	5.28
PAP 1208 P10	0.472	12	0.551	14	0.315	8	0.0044	2.00
PAP 1210 P10	0.472	12	0.551	14	0.394	10	0.0066	3.00
PAP 1212 P10	0.472	12	0.551	14	0.472	12	0.0082	3.74
PAP 1215 P10	0.472	12	0.551	14	0.591	15	0.0103	4.68
PAP 1220 P10	0.472	12	0.551	14	0.787	20	0.0134	6.10
PAP 1225 P10	0.472	12	0.551	14	0.984	25	0.0167	7.60
PAP 1310 P10	0.512	13	0.591	15	0.394	10	0.0070	3.20
PAP 1410 P10	0.551	14	0.630	16	0.394	10	0.0077	3.50
PAP 1412 P10	0.551	14	0.630	16	0.472	12	0.0095	4.32
PAP 1415 P10	0.551	14	0.630	16	0.591	15	0.0119	5.40
PAP 1420 P10	0.551	14	0.630	16	0.787	20	0.0156	7.10
PAP 1425 P10	0.551	14	0.630	16	0.984	25	0.0194	8.80
PAP 1510 P10	0.591	15	0.669	17	0.394	10	0.0081	3.70
PAP 1512 P10	0.591	15	0.669	17	0.472	12	0.0099	4.50
PAP 1515 P10	0.591	15	0.669	17	0.591	15	0.0125	5.70
PAP 1520 P10	0.591	15	0.669	17	0.787	20	0.0167	7.60
PAP 1525 P10	0.591	15	0.669	17	0.984	25	0.0207	9.40
PAP 1610 P10	0.630	16	0.709	18	0.394	10	0.0088	4.00
PAP 1612 P10	0.630	16	0.709	18	0.472	12	0.0106	4.80
PAP 1615 P10	0.630	16	0.709	18	0.591	15	0.0134	6.10
PAP 1620 P10	0.630	16	0.709	18	0.787	20	0.0178	8.10

Permaglide Plain Bearings

PAP...P10 SERIES

- Metric dimensions
- Maintenance free
- Steel backing
- Recommended Mounting Tolerances:
  Shaft – ID<5:h6, 5 ± ID<80:f7, 80 ± ID:h8
  Housing bore – OD ± 5.5:H6, 5.5<OD:H7



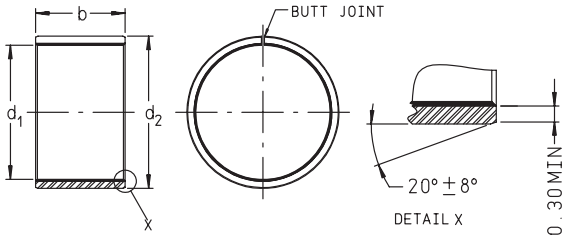
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PART NUMBER	SHAFT d_1 inch	SHAFT d_1 mm	OD d_2 inch	OD d_2 mm	LENGTH b inch	LENGTH b mm	WEIGHT lbs	WEIGHT g
PAP 1625 P10	0.630	16	0.709	18	0.984	25	0.0222	10.10
PAP 1815 P10	0.709	18	0.787	20	0.591	15	0.0147	6.70
PAP 1820 P10	0.709	18	0.787	20	0.787	20	0.0196	8.90
PAP 1825 P10	0.709	18	0.787	20	0.984	25	0.0244	11.10
PAP 2010 P10	0.787	20	0.906	23	0.394	10	0.0169	7.70
PAP 2015 P10	0.787	20	0.906	23	0.591	15	0.0256	11.64
PAP 2020 P10	0.787	20	0.906	23	0.787	20	0.0332	15.10
PAP 2025 P10	0.787	20	0.906	23	0.984	25	0.0420	19.10
PAP 2030 P10	0.787	20	0.906	23	1.181	30	0.0506	23.00
PAP 2215 P10	0.866	22	0.984	25	0.591	15	0.0280	12.72
PAP 2220 P10	0.866	22	0.984	25	0.787	20	0.0365	16.60
PAP 2225 P10	0.866	22	0.984	25	0.984	25	0.0464	21.10
PAP 2230 P10	0.866	22	0.984	25	1.181	30	0.0554	25.20
PAP 2415 P10	0.945	24	1.063	27	0.591	15	0.0297	13.50
PAP 2420 P10	0.945	24	1.063	27	0.787	20	0.0394	17.90
PAP 2425 P10	0.945	24	1.063	27	0.984	25	0.0502	22.80
PAP 2430 P10	0.945	24	1.063	27	1.181	30	0.0596	27.10
PAP 2515 P10	0.984	25	1.102	28	0.591	15	0.0312	14.20
PAP 2520 P10	0.984	25	1.102	28	0.787	20	0.0418	19.00
PAP 2525 P10	0.984	25	1.102	28	0.984	25	0.0526	23.92
PAP 2530 P10	0.984	25	1.102	28	1.181	30	0.0625	28.40
PAP 2540 P10	0.984	25	1.102	28	1.575	40	0.0836	38.00
PAP 2550 P10	0.984	25	1.102	28	1.969	50	0.1049	47.70
PAP 2820 P10	1.102	28	1.260	32	0.787	20	0.0634	28.80
PAP 2830 P10	1.102	28	1.260	32	1.181	30	0.0968	44.00
PAP 3015 P10	1.181	30	1.339	34	0.591	15	0.0504	22.90
PAP 3020 P10	1.181	30	1.339	34	0.787	20	0.0680	30.90
PAP 3025 P10	1.181	30	1.339	34	0.984	25	0.0847	38.52
PAP 3030 P10	1.181	30	1.339	34	1.181	30	0.1014	46.10
PAP 3040 P10	1.181	30	1.339	34	1.575	40	0.1386	63.00
PAP 3230 P10	1.260	32	1.417	36	1.181	30	0.1076	48.90
PAP 3240 P10	1.260	32	1.417	36	1.575	40	0.1437	65.30
PAP 3520 P10	1.378	35	1.535	39	0.787	20	0.0779	35.40
PAP 3530 P10	1.378	35	1.535	39	1.181	30	0.1159	52.70
PAP 3540 P10	1.378	35	1.535	39	1.575	40	0.1558	70.80
PAP 3550 P10	1.378	35	1.535	39	1.969	50	0.1954	88.80
PAP 4020 P10	1.575	40	1.732	44	0.787	20	0.0880	40.00
PAP 4030 P10	1.575	40	1.732	44	1.181	30	0.1324	60.20
PAP 4040 P10	1.575	40	1.732	44	1.575	40	0.1782	81.00
PAP 4050 P10	1.575	40	1.732	44	1.969	50	0.2222	101.00
PAP 4530 P10	1.772	45	1.969	50	1.181	30	0.1896	86.20
PAP 4540 P10	1.772	45	1.969	50	1.575	40	0.2486	113.00
PAP 4550 P10	1.772	45	1.969	50	1.969	50	0.3157	143.50
PAP 5020 P10	1.969	50	2.165	55	0.787	20	0.1391	63.21
PAP 5030 P10	1.969	50	2.165	55	1.181	30	0.2090	95.00
PAP 5040 P10	1.969	50	2.165	55	1.575	40	0.2783	126.50

Permaglide Plain Bearings

PAP...P10 SERIES

- Metric dimensions
- Maintenance free
- Steel backing
- Recommended Mounting Tolerances:
  Shaft – ID<5:h6, 5 ± ID<80:f7, 80 ± ID:h8
  Housing bore – OD ± 5.5:H6, 5.5<OD:H7



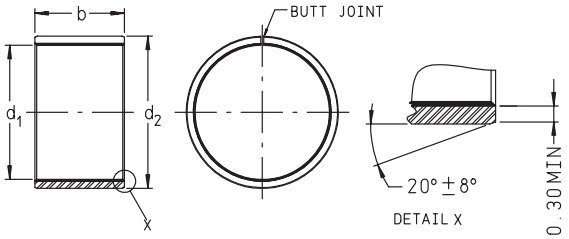
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PART NUMBER	SHAFT d_1 inch	SHAFT d_1 mm	OD d_2 inch	OD d_2 mm	LENGTH b inch	LENGTH b mm	WEIGHT lbs	WEIGHT g
PAP 5060 P10	1.969	50	2.165	55	2.362	60	0.4136	188.00
PAP 5540 P10	2.165	55	2.362	60	1.575	40	0.3029	137.70
PAP 5560 P10	2.165	55	2.362	60	2.362	60	0.4554	207.00
PAP 6030 P10	2.362	60	2.559	65	1.181	30	0.2486	113.00
PAP 6040 P10	2.362	60	2.559	65	1.575	40	0.3293	149.70
PAP 6060 P10	2.362	60	2.559	65	2.362	60	0.4963	225.60
PAP 6070 P10	2.362	60	2.559	65	2.756	70	0.5819	264.50
PAP 6550 P10	2.559	65	2.756	70	1.969	50	0.4495	204.30
PAP 6560 P10	2.559	65	2.756	70	2.362	60	0.5368	244.00
PAP 6570 P10	2.559	65	2.756	70	2.756	70	0.6248	284.00
PAP 7040 P10	2.756	70	2.953	75	1.575	40	0.3828	174.00
PAP 7050 P10	2.756	70	2.953	75	1.969	50	0.4785	217.50
PAP 7070 P10	2.756	70	2.953	75	2.756	70	0.6710	305.00
PAP 7540 P10	2.953	75	3.150	80	1.575	40	0.4114	187.00
PAP 7550 P10	2.953	75	3.150	80	1.969	50	0.5133	233.30
PAP 7560 P10	2.953	75	3.150	80	2.362	60	0.6159	279.96
PAP 7580 P10	2.953	75	3.150	80	3.150	80	0.8230	374.10
PAP 8040 P10	3.150	80	3.346	85	1.575	40	0.4334	197.00
PAP 8060 P10	3.150	80	3.346	85	2.362	60	0.6534	297.00
PAP 8080 P10	3.150	80	3.346	85	3.150	80	0.8681	394.60
PAP 80100 P10	3.150	80	3.346	85	3.937	100	1.0824	492.00
PAP 8560 P10	3.346	85	3.543	90	2.362	60	0.6886	313.00
PAP 85100 P10	3.346	85	3.543	90	3.937	100	1.1550	525.00
PAP 9050 P10	3.543	90	3.740	95	1.969	50	0.6094	277.00
PAP 9060 P10	3.543	90	3.740	95	2.362	60	0.7326	333.00
PAP 90100 P10	3.543	90	3.740	95	3.937	100	1.2122	551.00
PAP 9560 P10	3.740	95	3.937	100	2.362	60	0.7722	351.00
PAP 95100 P10	3.740	95	3.937	100	3.937	100	1.2826	583.00
PAP 10060 P10	3.937	100	4.134	105	2.362	60	0.8536	388.00
PAP 100115 P10	3.937	100	4.134	105	4.528	115	1.6324	742.00
PAP 10560 P10	4.134	105	4.331	110	2.362	60	0.8140	370.00
PAP 105115 P10	4.134	105	4.331	110	4.528	115	1.5664	712.00
PAP 11060 P10	4.331	110	4.528	115	2.362	60	0.9020	410.00
PAP 110115 P10	4.331	110	4.528	115	4.528	115	1.7050	775.00
PAP 11550 P10	4.528	115	4.724	120	1.969	50	0.7700	350.00
PAP 11560 P10	4.528	115	4.724	120	2.362	60	0.8800	400.00
PAP 11570 P10	4.528	115	4.724	120	2.756	70	0.9900	450.00
PAP 12060 P10	4.724	120	4.921	125	2.362	60	0.9570	435.00
PAP 120100 P10	4.724	120	4.921	125	3.937	100	1.6060	730.00
PAP 125100 P10	4.921	125	5.118	130	3.937	100	1.6720	760.00
PAP 13060 P10	5.118	130	5.315	135	2.362	60	1.0340	470.00
PAP 130100 P10	5.118	130	5.315	135	3.937	100	1.7490	795.00
PAP 13560 P10	5.315	135	5.512	140	2.362	60	1.0780	490.00
PAP 13580 P10	5.315	135	5.512	140	3.150	80	1.4344	652.00
PAP 14060 P10	5.512	140	5.709	145	2.362	60	1.1330	515.00
PAP 140100 P10	5.512	140	5.709	145	3.937	100	1.8810	855.00

Permaglide Plain Bearings

PAP...P10 SERIES

- Metric dimensions
- Maintenance free
- Steel backing
- Recommended Mounting Tolerances:
  Shaft – ID<5:h6, 5 ± ID<80:f7, 80 ± ID:h8
  Housing bore – OD ± 5.5:H6, 5.5<OD:H7



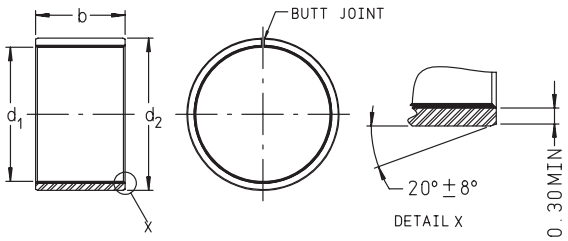
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

PART NUMBER	SHAFT d_1 inch	SHAFT d_1 mm	OD d_2 inch	OD d_2 mm	LENGTH b inch	LENGTH b mm	WEIGHT lbs	WEIGHT g
PAP 15060 P10	5.906	150	6.102	155	2.362	60	1.2100	550.00
PAP 15080 P10	5.906	150	6.102	155	3.150	80	1.6060	730.00
PAP 150100 P10	5.906	150	6.102	155	3.937	100	2.0130	915.00
PAP 16080 P10	6.299	160	6.496	165	3.150	80	1.7072	776.00
PAP 160100 P10	6.299	160	6.496	165	3.937	100	2.1340	970.00
PAP 180100 P10	7.087	180	7.283	185	3.937	100	2.4200	1,100.00
PAP 200100 P10	7.874	200	8.071	205	3.937	100	2.6840	1,220.00
PAP 220100 P10	8.661	220	8.858	225	3.937	100	2.9040	1,320.00
PAP 250100 P10	9.843	250	10.039	255	3.937	100	3.2890	1,495.00
PAP 300100 P10	11.811	300	12.008	305	3.937	100	3.8720	1,760.00

Permaglide Plain Bearings

PAP...P11 SERIES

- Metric dimensions
- Maintenance free
- Bronze backing
- Recommended Mounting Tolerances:
  Shaft – ID<80:f7, 80 ± ID:h8
  Housing bore – H7



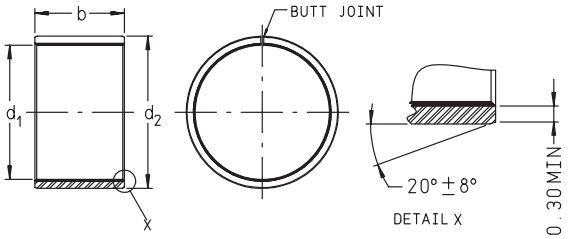
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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PART NUMBER	SHAFT d_1 inch	SHAFT d_1 mm	OD d_2 inch	OD d_2 mm	LENGTH b inch	LENGTH b mm	WEIGHT lbs	WEIGHT g
PAP 0406 P11	0.157	4	0.236	6	0.236	6	0.0018	0.8
PAP 0505 P11	0.197	5	0.276	7	0.197	5	0.0018	0.8
PAP 0606 P11	0.236	6	0.315	8	0.236	6	0.0024	1.1
PAP 0610 P11	0.236	6	0.315	8	0.394	10	0.0042	1.9
PAP 0808 P11	0.315	8	0.394	10	0.315	8	0.0040	1.8
PAP 0810 P11	0.315	8	0.394	10	0.394	10	0.0048	2.2
PAP 0812 P11	0.315	8	0.394	10	0.472	12	0.0059	2.7
PAP 1005 P11	0.394	10	0.472	12	0.197	5	0.0031	1.4
PAP 1010 P11	0.394	10	0.472	12	0.394	10	0.0059	2.7
PAP 1015 P11	0.394	10	0.472	12	0.591	15	0.0092	4.2
PAP 1020 P11	0.394	10	0.472	12	0.787	20	0.0123	5.6
PAP 1210 P11	0.472	12	0.551	14	0.394	10	0.0073	3.3
PAP 1212 P11	0.472	12	0.551	14	0.472	12	0.0090	4.1
PAP 1215 P11	0.472	12	0.551	14	0.591	15	0.0114	5.2
PAP 1220 P11	0.472	12	0.551	14	0.787	20	0.0152	6.9
PAP 1225 P11	0.472	12	0.551	14	0.984	25	0.0191	8.7
PAP 1415 P11	0.551	14	0.630	16	0.591	15	0.0132	6.0
PAP 1515 P11	0.591	15	0.669	17	0.591	15	0.0150	6.8
PAP 1525 P11	0.591	15	0.669	17	0.984	25	0.0227	10.3
PAP 1615 P11	0.630	16	0.709	18	0.591	15	0.0147	6.7
PAP 1625 P11	0.630	16	0.709	18	0.984	25	0.0242	11.0
PAP 1825 P11	0.709	18	0.787	20	0.984	25	0.0268	12.2
PAP 2015 P11	0.787	20	0.906	23	0.591	15	0.0293	13.3
PAP 2020 P11	0.787	20	0.906	23	0.787	20	0.0374	17.0
PAP 2025 P11	0.787	20	0.906	23	0.984	25	0.0469	21.3
PAP 2030 P11	0.787	20	0.906	23	1.181	30	0.0561	25.5
PAP 2215 P11	0.866	22	0.984	25	0.591	15	0.0345	15.7
PAP 2220 P11	0.866	22	0.984	25	0.787	20	0.0460	20.9
PAP 2225 P11	0.866	22	0.984	25	0.984	25	0.0583	26.5
PAP 2430 P11	0.945	24	1.063	27	1.181	30	0.0750	34.1
PAP 2525 P11	0.984	25	1.102	28	0.984	25	0.0647	29.4
PAP 2530 P11	0.984	25	1.102	28	1.181	30	0.0777	35.3
PAP 2830 P11	1.102	28	1.260	32	1.181	30	0.1012	46.0
PAP 3020 P11	1.181	30	1.339	34	0.787	20	0.0810	36.8
PAP 3030 P11	1.181	30	1.339	34	1.181	30	0.1214	55.2
PAP 3040 P11	1.181	30	1.339	34	1.575	40	0.1628	74.0
PAP 3520 P11	1.378	35	1.535	39	0.787	20	0.0972	44.2
PAP 3530 P11	1.378	35	1.535	39	1.181	30	0.1459	66.3
PAP 4050 P11	1.575	40	1.732	44	1.969	50	0.2609	118.6
PAP 4550 P11	1.772	45	1.969	50	1.969	50	0.4090	185.9
PAP 5030 P11	1.969	50	2.165	55	1.181	30	0.2955	134.3
PAP 5040 P11	1.969	50	2.165	55	1.575	40	0.3938	179.0
PAP 5060 P11	1.969	50	2.165	55	2.362	60	0.5920	269.1
PAP 5540 P11	2.165	55	2.362	60	1.575	40	0.3412	155.1
PAP 6040 P11	2.362	60	2.559	65	1.575	40	0.3705	168.4
PAP 6050 P11	2.362	60	2.559	65	1.969	50	0.4631	210.5

Permaglide Plain Bearings

PAP...P11 SERIES

- Metric dimensions
- Maintenance free
- Bronze backing
- Recommended Mounting Tolerances:
  Shaft – ID<80:f7, 80 ± ID:h8
  Housing bore – H7



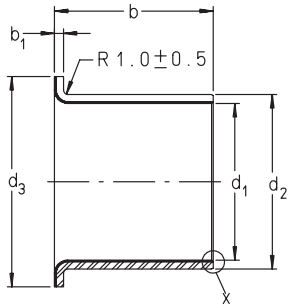
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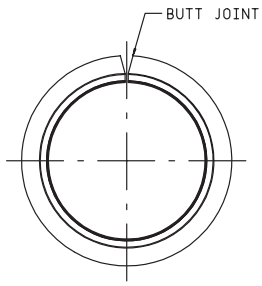
PART NUMBER	SHAFT d_1 inch	SHAFT d_1 mm	OD d_2 inch	OD d_2 mm	LENGTH b inch	LENGTH b mm	WEIGHT lbs	WEIGHT g
PAP 6060 P11	2.362	60	2.559	65	2.362	60	0.5557	252.6
PAP 6070 P11	2.362	60	2.559	65	2.756	70	0.6483	294.7
PAP 7050 P11	2.756	70	2.953	75	1.969	50	0.5379	244.5
PAP 7070 P11	2.756	70	2.953	75	2.756	70	0.7531	342.3
PAP 8060 P11	3.150	80	3.346	85	2.362	60	0.7313	332.4
PAP 80100 P11	3.150	80	3.346	85	3.937	100	1.2188	554.0
PAP 9060 P11	3.543	90	3.740	95	2.362	60	0.7766	353.0
PAP 90100 P11	3.543	90	3.740	95	3.937	100	1.2936	588.0
PAP 9560 P11	3.740	95	3.937	100	2.362	60	0.9460	430.0
PAP 10060 P11	3.937	100	4.134	105	2.362	60	0.9064	412.0
PAP 100115 P11	3.937	100	4.134	105	4.528	115	1.7380	790.0

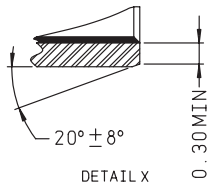
Permaglide Flanged Plain Bearings

PAF...P10 SERIES

- Maintenance free
- Steel backing
- Recommended Mounting Tolerances:
  Shaft – f7
  Housing bore – H7







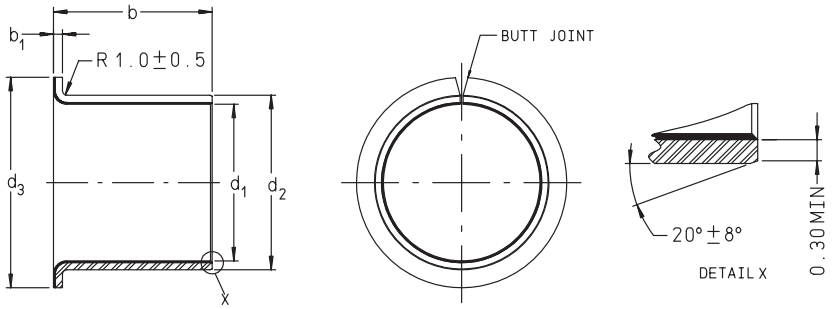
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PART NUMBER	SHAFT d_1 inch	SHAFT d_1 mm	OD d_2 inch	OD d_2 mm	FLANGE WALL b_1 inch	FLANGE WALL b_1 mm	LENGTH b inch	LENGTH b mm	FLANGE DIA. d3 inch	FLANGE DIA. d3 mm	WEIGHT lbs	WEIGHT g
PAF 06040 P10	0.236	6	0.315	8	0.039	1	0.157	4	0.472	12	0.0019	0.9
PAF 06070 P10	0.236	6	0.315	8	0.039	1	0.276	7	0.472	12	0.0035	1.6
PAF 06080 P10	0.236	6	0.315	8	0.039	1	0.315	8	0.472	12	0.0037	1.7
PAF 08055 P10	0.315	8	0.394	10	0.039	1	0.217	5.5	0.591	15	0.0037	1.7
PAF 08075 P10	0.315	8	0.394	10	0.039	1	0.295	7.5	0.591	15	0.0046	2.1
PAF 08095 P10	0.315	8	0.394	10	0.039	1	0.374	9.5	0.591	15	0.0056	2.5
PAF 10070 P10	0.394	10	0.472	12	0.039	1	0.276	7	0.709	18	0.0055	2.5
PAF 10090 P10	0.394	10	0.472	12	0.039	1	0.354	9	0.709	18	0.0064	2.9
PAF 10120 P10	0.394	10	0.472	12	0.039	1	0.472	12	0.709	18	0.0084	3.8
PAF 10170 P10	0.394	10	0.472	12	0.039	1	0.669	17	0.709	18	0.0118	5.4
PAF 12070 P10	0.472	12	0.551	14	0.039	1	0.276	7	0.787	20	0.0066	3.0
PAF 12090 P10	0.472	12	0.551	14	0.039	1	0.354	9	0.787	20	0.0082	3.7
PAF 12120 P10	0.472	12	0.551	14	0.039	1	0.472	12	0.787	20	0.0103	4.7
PAF 12170 P10	0.472	12	0.551	14	0.039	1	0.669	17	0.787	20	0.0134	6.1
PAF 14120 P10	0.551	14	0.630	16	0.039	1	0.472	12	0.866	22	0.0118	5.4
PAF 14170 P10	0.551	14	0.630	16	0.039	1	0.669	17	0.866	22	0.0156	7.1
PAF 15090 P10	0.591	15	0.669	17	0.039	1	0.354	9	0.906	23	0.0097	4.4
PAF 15120 P10	0.591	15	0.669	17	0.039	1	0.472	12	0.906	23	0.0126	5.7
PAF 15170 P10	0.591	15	0.669	17	0.039	1	0.669	17	0.906	23	0.0170	7.7
PAF 16120 P10	0.630	16	0.709	18	0.039	1	0.472	12	0.945	24	0.0132	6.0
PAF 16170 P10	0.630	16	0.709	18	0.039	1	0.669	17	0.945	24	0.0183	8.3
PAF 18120 P10	0.709	18	0.787	20	0.039	1	0.472	12	1.024	26	0.0147	6.7
PAF 18170 P10	0.709	18	0.787	20	0.039	1	0.669	17	1.024	26	0.0196	8.9
PAF 18220 P10	0.709	18	0.787	20	0.039	1	0.866	22	1.024	26	0.0244	11.1
PAF 20115 P10	0.787	20	0.906	23	0.059	1.5	0.453	11.5	1.181	30	0.0255	11.6
PAF 20165 P10	0.787	20	0.906	23	0.059	1.5	0.650	16.5	1.181	30	0.0332	15.1
PAF 20215 P10	0.787	20	0.906	23	0.059	1.5	0.846	21.5	1.181	30	0.0420	19.1
PAF 25115 P10	0.984	25	1.102	28	0.059	1.5	0.453	11.5	1.378	35	0.0312	14.2
PAF 25165 P10	0.984	25	1.102	28	0.059	1.5	0.650	16.5	1.378	35	0.0418	19.0
PAF 25215 P10	0.984	25	1.102	28	0.059	1.5	0.846	21.5	1.378	35	0.0526	23.9
PAF 30160 P10	1.181	30	1.339	34	0.079	2	0.630	16	1.654	42	0.0680	30.9
PAF 30260 P10	1.181	30	1.339	34	0.079	2	1.024	26	1.654	42	0.1014	46.1
PAF 35160 P10	1.378	35	1.535	39	0.079	2	0.630	16	1.850	47	0.0779	35.4
PAF 35260 P10	1.378	35	1.535	39	0.079	2	1.024	26	1.850	47	0.1159	52.7
PAF 40260 P10	1.575	40	1.732	44	0.079	2	1.024	26	2.087	53	0.1320	60.0

Permaglide Flanged Plain Bearings

PAF...P11 SERIES

- Maintenance free
- Bronze backing
- Recommended Mounting Tolerances:
  Shaft – f7
  Housing bore – H7

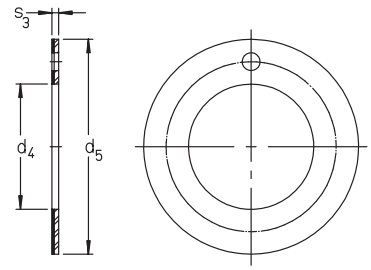


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PART NUMBER	SHAFT d_1 inch	SHAFT d_1 mm	OD d_2 inch	OD d_2 mm	FLANGE WALL b_1 inch	FLANGE WALL b_1 mm	LENGTH b inch	LENGTH b mm	FLANGE DIA. d_3 inch	FLANGE DIA. d_3 mm	WEIGHT lbs	WEIGHT g
PAF 06080 P11	0.236	6	0.315	8	0.039	1	0.315	8	0.472	12	0.0037	1.7
PAF 08055 P11	0.315	8	0.394	10	0.039	1	0.217	5.5	0.591	15	0.0037	1.7
PAF 08095 P11	0.315	8	0.394	10	0.039	1	0.374	9.5	0.591	15	0.0056	2.5
PAF 10070 P11	0.394	10	0.472	12	0.039	1	0.276	7	0.709	18	0.0055	2.5
PAF 10120 P11	0.394	10	0.472	12	0.039	1	0.472	12	0.709	18	0.0084	3.8
PAF 10170 P11	0.394	10	0.472	12	0.039	1	0.669	17	0.709	18	0.0118	5.4
PAF 12070 P11	0.472	12	0.551	14	0.039	1	0.276	7	0.787	20	0.0066	3.0
PAF 12090 P11	0.472	12	0.551	14	0.039	1	0.354	9	0.787	20	0.0082	3.7
PAF 12120 P11	0.472	12	0.551	14	0.039	1	0.472	12	0.787	20	0.0103	4.7
PAF 15120 P11	0.591	15	0.669	17	0.039	1	0.472	12	0.906	23	0.0126	5.7
PAF 15170 P11	0.591	15	0.669	17	0.039	1	0.669	17	0.906	23	0.0170	7.7
PAF 16120 P11	0.630	16	0.709	18	0.039	1	0.472	12	0.945	24	0.0132	6.0
PAF 18100 P11	0.709	18	0.787	20	0.039	1	0.394	10	1.024	26	0.0110	5.0
PAF 18220 P11	0.709	18	0.787	20	0.039	1	0.866	22	1.024	26	0.0244	11.1
PAF 20115 P11	0.787	20	0.906	23	0.059	1.5	0.453	11.5	1.181	30	0.0256	11.6
PAF 20165 P11	0.787	20	0.906	23	0.059	1.5	0.650	16.5	1.181	30	0.0333	15.1
PAF 25215 P11	0.984	25	1.102	28	0.059	1.5	0.846	21.5	1.378	35	0.0526	23.9
PAF 30160 P11	1.181	30	1.339	34	0.079	2	0.630	16	1.654	42	0.0681	30.9
PAF 30260 P11	1.181	30	1.339	34	0.079	2	1.024	26	1.654	42	0.1015	46.1
PAF 35260 P11	1.378	35	1.535	39	0.079	2	1.024	26	1.850	47	0.1161	52.7
PAF 40260 P11	1.575	40	1.732	44	0.079	2	1.024	26	2.087	53	0.1300	59.0

Permaglide Thrust Washers
PAW...P10 SERIES

- Maintenance free
- Steel backing

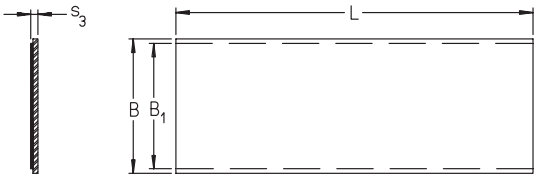


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PART NUMBER	SHAFT d_4 inch	SHAFT d_4 mm	OD d_5 inch	OD d_5 mm	WALL s_3 inch	WALL s_3 mm	WEIGHT lbs	WEIGHT g
PAW 10 P10	0.394	10	0.787	20	0.059	1.5	0.0057	2.6
PAW 12 P10	0.472	12	0.945	24	0.059.	1.5	0.0084	3.8
PAW 14 P10	0.551	14	1.024	26	0.059	1.5	0.0088	4.0
PAW 16 P10	0.630	16	1.181	30	0.059	1.5	0.0121	5.5
PAW 18 P10	0.709	18	1.260	32	0.059	1.5	0.0132	6.0
PAW 20 P10	0.787	20	1.417	36	0.059	1.5	0.0176	8.0
PAW 22 P10	0.866	22	1.496	38	0.059	1.5	0.0187	8.5
PAW 26 P10	1.024	26	1.732	44	0.059	1.5	0.0244	11.1
PAW 28 P10	1.102	28	1.890	48	0.059	1.5	0.0293	13.3
PAW 32 P10	1.260	32	2.126	54	0.059	1.5	0.0359	16.3
PAW 38 P10	1.496	38	2.441	62	0.059	1.5	0.0462	21.0
PAW 42 P10	1.654	42	2.598	66	0.059	1.5	0.0484	22.0
PAW 48 P10	1.890	48	2.913	74	0.079	2	0.0810	36.8
PAW 52 P10	2.047	52	3.071	78	0.079	2	0.0854	38.8
PAW 62 P10	2.441	62	3.543	90	0.079	2	0.1074	48.8

Permaglide Strips
PAS...P10 SERIES

- Maintenance free
- Steel backing

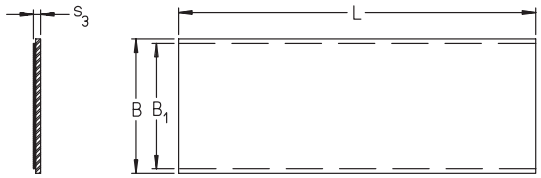


For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

PART NUMBER	WALL s_3 inch	WALL s_3 mm	WIDTH B inch	WIDTH B mm	USABLE WIDTH B_1 inch	USABLE WIDTH B_1 mm	LENGTH L inch	LENGTH L mm	WEIGHT lbs	WEIGHT g
PAS 05180 P10	0.020	0.5	7.087	180	6.614	168	19.685	500	0.726	330
PAS 07180 P10	0.030	0.75	7.087	180	6.614	168	19.685	500	1.093	497
PAS 10250 P10	0.039	1	9.843	250	9.370	238	19.685	500	2.066	939
PAS 15250 P10	0.059	1.5	9.843	250	9.370	238	19.685	500	3.126	1421
PAS 20250 P10	0.079	2	9.843	250	9.370	238	19.685	500	4.211	1914
PAS 25250 P10	0.098	2.5	9.843	250	9.370	238	19.685	500	5.262	2392
PAS 30250 P10	0.120	3.06	9.843	250	9.370	238	19.685	500	6.468	2940

Permaglide Strips
PAS...P11 SERIES

- Maintenance free
- Bronze backing



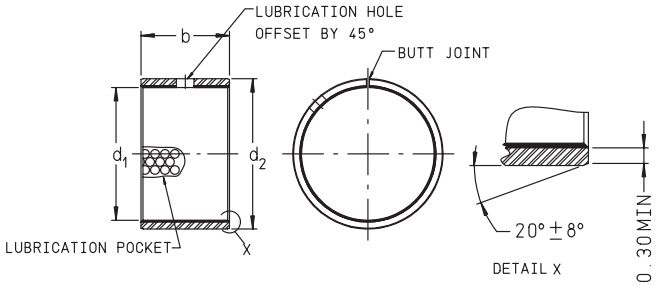
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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PART NUMBER	WALL s_3 inch	WALL s_3 mm	WIDTH B inch	WIDTH B mm	USABLE WIDTH B_1 inch	USABLE WIDTH B_1 mm	LENGTH L inch	LENGTH L mm	WEIGHT lbs	WEIGHT g
PAS 10160 P11	0.039	1	6.299	160	5.827	148	19.685	500	1.459	663
PAS 15180 P11	0.059	1.5	7.087	180	6.614	168	19.685	500	2.488	1131
PAS 20180 P11	0.079	2	7.087	180	6.614	168	19.685	500	3.351	1523
PAS 25180 P11	0.098	2.5	7.087	180	6.614	168	19.685	500	4.213	1915

Permaglide Plain Bearings

PAP...P20 SERIES

- Low maintenance
- Steel backing
- Recommended Mounting Tolerances:
  Shaft – h8
  Housing bore – H7

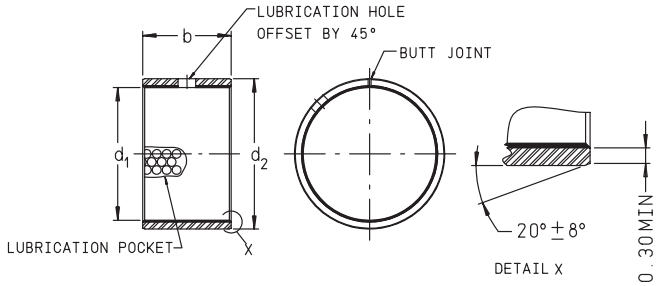


For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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PART NUMBER	SHAFT d_1 inch	SHAFT d_1 mm	OD d_2 inch	OD d_2 mm	LENGTH b inch	LENGTH b mm	WEIGHT lbs	WEIGHT g
PAP 0808 P20	0.315	8	0.394	10	0.315	8	0.0035	1.60
PAP 0810 P20	0.315	8	0.394	10	0.394	10	0.0044	2.00
PAP 0812 P20	0.315	8	0.394	10	0.472	12	0.0053	2.40
PAP 1008 P20	0.394	10	0.472	12	0.315	8	0.0040	1.80
PAP 1010 P20	0.394	10	0.472	12	0.394	10	0.0051	2.30
PAP 1015 P20	0.394	10	0.472	12	0.591	15	0.0077	3.50
PAP 1210 P20	0.472	12	0.551	14	0.394	10	0.0066	3.00
PAP 1212 P20	0.472	12	0.551	14	0.472	12	0.0077	3.50
PAP 1215 P20	0.472	12	0.551	14	0.591	15	0.0097	4.40
PAP 1220 P20	0.472	12	0.551	14	0.787	20	0.0132	6.00
PAP 1420 P20	0.551	14	0.630	16	0.787	20	0.0147	6.70
PAP 1510 P20	0.591	15	0.669	17	0.394	10	0.0077	3.50
PAP 1515 P20	0.591	15	0.669	17	0.591	15	0.0117	5.30
PAP 1525 P20	0.591	15	0.669	17	0.984	25	0.0194	8.80
PAP 1612 P20	0.630	16	0.709	18	0.472	12	0.0099	4.50
PAP 1615 P20	0.630	16	0.709	18	0.591	15	0.0123	5.60
PAP 1620 P20	0.630	16	0.709	18	0.787	20	0.0165	7.50
PAP 1815 P20	0.709	18	0.787	20	0.591	15	0.0139	6.30
PAP 1820 P20	0.709	18	0.787	20	0.787	20	0.0187	8.50
PAP 2015 P20	0.787	20	0.906	23	0.591	15	0.0231	10.50
PAP 2020 P20	0.787	20	0.906	23	0.787	20	0.0308	14.00
PAP 2025 P20	0.787	20	0.906	23	0.984	25	0.0385	17.50
PAP 2030 P20	0.787	20	0.906	23	1.181	30	0.0506	23.00
PAP 2220 P20	0.866	22	0.984	25	0.787	20	0.0339	15.40
PAP 2420 P20	0.945	24	1.063	27	0.787	20	0.0396	18.00
PAP 2515 P20	0.984	25	1.102	28	0.591	15	0.0312	14.20
PAP 2520 P20	0.984	25	1.102	28	0.787	20	0.0418	19.00
PAP 2525 P20	0.984	25	1.102	28	0.984	25	0.0484	22.00
PAP 2530 P20	0.984	25	1.102	28	1.181	30	0.0581	26.40
PAP 2830 P20	1.102	28	1.260	32	1.181	30	0.0880	40.00
PAP 3020 P20	1.181	30	1.339	34	0.787	20	0.0629	28.60
PAP 3025 P20	1.181	30	1.339	34	0.984	25	0.0788	35.80
PAP 3030 P20	1.181	30	1.339	34	1.181	30	0.0944	42.90
PAP 3040 P20	1.181	30	1.339	34	1.575	40	0.1258	57.20
PAP 3230 P20	1.260	32	1.417	36	1.181	30	0.1056	48.00
PAP 3520 P20	1.378	35	1.535	39	0.787	20	0.0717	32.60
PAP 3530 P20	1.378	35	1.535	39	1.181	30	0.1078	49.00
PAP 3550 P20	1.378	35	1.535	39	1.969	50	0.1936	88.00
PAP 4020 P20	1.575	40	1.732	44	0.787	20	0.0821	37.30
PAP 4030 P20	1.575	40	1.732	44	1.181	30	0.1232	56.00
PAP 4040 P20	1.575	40	1.732	44	1.575	40	0.1643	74.70
PAP 4050 P20	1.575	40	1.732	44	1.969	50	0.2053	93.30
PAP 4550 P20	1.772	45	1.969	50	1.969	50	0.2922	132.80
PAP 5025 P20	1.969	50	2.165	55	0.984	25	0.1716	78.00
PAP 5040 P20	1.969	50	2.165	55	1.575	40	0.2587	117.60
PAP 5060 P20	1.969	50	2.165	55	2.362	60	0.3881	176.40

Permaglide Plain Bearings
PAP...P20 SERIES

- Low maintenance
- Steel backing
- Recommended Mounting Tolerances:
  Shaft – h8
  Housing bore – H7



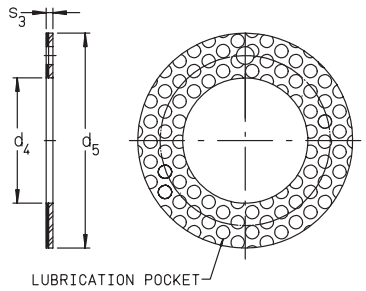
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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PART NUMBER	SHAFT d_1 inch	SHAFT d_1 mm	OD d_2 inch	OD d_2 mm	LENGTH b inch	LENGTH b mm	WEIGHT lbs	WEIGHT g
PAP 5540 P20	2.165	55	2.362	60	1.575	40	0.3014	137.00
PAP 6030 P20	2.362	60	2.559	65	1.181	30	0.2297	104.40
PAP 6040 P20	2.362	60	2.559	65	1.575	40	0.3062	139.20
PAP 6060 P20	2.362	60	2.559	65	2.362	60	0.4594	208.80
PAP 7050 P20	2.756	70	2.953	75	1.969	50	0.4440	201.80
PAP 7070 P20	2.756	70	2.953	75	2.756	70	0.6666	303.00
PAP 7540 P20	2.953	75	3.150	80	1.575	40	0.4048	184.00
PAP 7580 P20	2.953	75	3.150	80	3.150	80	0.8140	370.00
PAP 8040 P20	3.150	80	3.346	85	1.575	40	0.4041	183.70
PAP 8060 P20	3.150	80	3.346	85	2.362	60	0.6072	276.00
PAP 8080 P20	3.150	80	3.346	85	3.150	80	0.8083	367.40
PAP 9060 P20	3.543	90	3.740	95	2.362	60	0.6809	309.50
PAP 10050 P20	3.937	100	4.134	105	1.969	50	0.6279	285.40
PAP 10060 P20	3.937	100	4.134	105	2.362	60	0.7535	342.50

Permaglide Thrust Washers

PAW...P20 SERIES

- Low maintenance
- Steel backing

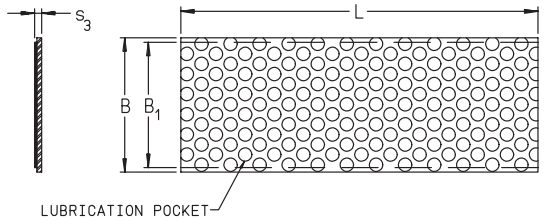


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PART NUMBER	SHAFT d_4 inch	SHAFT d_4 mm	OD d_5 inch	OD d_5 mm	WALL s_3 inch	WALL s_3 mm	WEIGHT lbs	WEIGHT g
PAW 12 P20	0.472	12	0.945	24	0.020	1.5	0.0077	3.5
PAW 14 P20	0.551	14	1.024	26	0.059	1.5	0.0081	3.7
PAW 18 P20	0.709	18	1.260	32	0.059	1.5	0.0123	5.6
PAW 20 P20	0.787	20	1.417	36	0.059	1.5	0.0163	7.4
PAW 22 P20	0.866	22	1.496	38	0.059	1.5	0.0174	7.9
PAW 26 P20	1.023	26	1.732	44	0.059	1.5	0.0227	10.3
PAW 28 P20	1.1024	28	1.890	48	0.059	1.5	0.0273	12.4
PAW 32 P20	1.260	32	2.126	54	0.059	1.5	0.0334	15.2
PAW 38 P20	1.496	38	2.441	62	0.059	1.5	0.0429	19.5
PAW 42 P20	1.654	42	2.598	66	0.059	1.5	0.0458	20.8
PAW 48 P20	1.890	48	2.913	74	0.079	2.0	0.0768	34.9
PAW 52 P20	2.047	52	3.071	78	0.079	2.0	0.0794	36.1

Permaglide Strips
PAS...P20 SERIES

- Low maintenance
- Steel backing

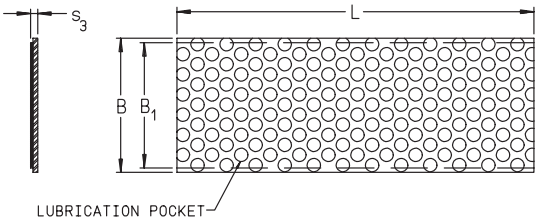


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PART NUMBER	WALL s_3 inch	WALL s_3 mm	WIDTH B inch	WIDTH B mm	USABLE WIDTH B_1 inch	USABLE WIDTH B_1 mm	LENGTH L inch	LENGTH L mm	WEIGHT lbs	WEIGHT g
PAS 10180 P20	0.039	0.99	7.087	180	6.614	168	19.685	500	1.408	640
PAS 15180 P20	0.058	1.48	7.087	180	6.614	168	19.685	500	2.092	951
PAS 20180 P20	0.078	1.97	7.087	180	6.614	168	19.685	500	2.818	1281
PAS 25180 P20	0.097	2.46	7.087	180	6.614	168	19.685	500	3.524	1602

Permaglide Strips
PAS...P21 SERIES

- Low maintenance
- Steel backing
- Machining allowance with lubrication pockets

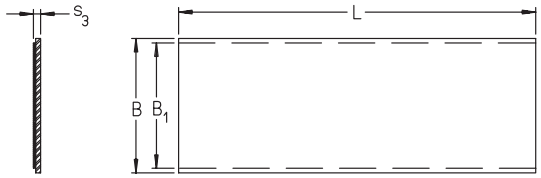


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PART NUMBER	WALL s_3 inch	WALL s_3 mm	WIDTH B inch	WIDTH B mm	USABLE WIDTH B_1 inch	USABLE WIDTH B_1 mm	LENGTH L inch	LENGTH L mm	WEIGHT lbs	WEIGHT g
PAS 10180 P21	0.044	1.11	7.087	180	6.614	168	19.685	500	1.564	711
PAS 15180 P21	0.063	1.61	7.087	180	6.614	168	19.685	500	2.178	990
PAS 20180 P21	0.083	2.11	7.087	180	6.614	168	19.685	500	2.904	1320
PAS 25180 P21	0.104	2.63	7.087	180	6.614	168	19.685	500	3.610	1641

Permaglide Strips
PAS...P22 SERIES

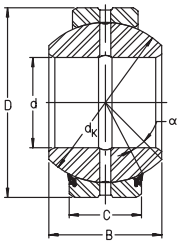
- Low maintenance
- Steel backing
- Machining allowance without lubrication pockets



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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PART NUMBER	WALL s_3 inch	WALL s_3 mm	WIDTH B inch	WIDTH B mm	USABLE WIDTH B_1 inch	USABLE WIDTH B_1 mm	LENGTH L inch	LENGTH L mm	WEIGHT lbs	WEIGHT g
PAS 10180 P22	0.044	1.11	7.087	180	6.614	168	19.685	500	1.564	711
PAS 15180 P22	0.063	1.61	7.087	180	6.614	168	19.685	500	2.178	990
PAS 20180 P22	0.083	2.11	7.087	180	6.614	168	19.685	500	2.904	1320
PAS 25180 P22	0.104	2.63	7.087	180	6.614	168	19.685	500	3.610	1641

Elges
Radial Spherical Plain Bearings
GE..DO, GE..DO-2RS SERIES

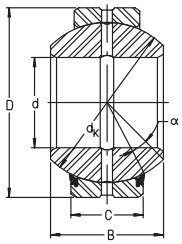


- Sliding contact surfaces: steel/steel
- Hardened inner and outer ring
- GE..DO 6-300 outer ring with single axial split
- GE..DO 320-1000 outer ring double split axially shipped with retaining rings

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PART NUMBER	SHAFT d inch	SHAFT d mm	OD D inch	OD D mm	WIDTH B inch	WIDTH B mm	WIDTH C inch	WIDTH C mm	BALL DIA. d_K inch	BALL DIA. d_K mm	ANGLE alpha deg	WEIGHT lbs	WEIGHT kg	DYN. CAP. x1000 lbf	DYN. CAP. kN	STAT. CAP. x1000 lbf	STAT. CAP. kN
GE6DO	0.236	6	0.551	14	0.236	6	0.157	4	0.394	10	13	0.009	0.004	0.760	3.4	3.80	17
GE8DO	0.315	8	0.63	16	0.315	8	0.197	5	0.512	13	15	0.015	0.007	1.240	5.5	6.20	27.5
GE10DO	0.394	10	0.748	19	0.354	9	0.236	6	0.63	16	12	0.024	0.011	1.830	8.15	9.10	40.5
GE12DO	0.472	12	0.866	22	0.394	10	0.276	7	0.709	18	11	0.035	0.016	2.430	10.8	12.10	54
GE15DO	0.591	15	1.024	26	0.472	12	0.354	9	0.866	22	8	0.055	0.025	3.800	17	19.10	85
GE16DO	0.63	16	1.181	30	0.551	14	0.394	10	0.984	25	10	0.084	0.038	4.750	21.2	23.80	106
GE17DO	0.669	17	1.181	30	0.551	14	0.394	10	0.984	25	10	0.090	0.041	4.750	21.2	23.80	106
GE17DO2RS	0.669	17	1.181	30	0.551	14	0.394	10	0.984	25	10	0.090	0.041	4.75	21.2	23.80	106
GE20DO	0.787	20	1.378	35	0.63	16	0.472	12	1.142	29	9	0.135	0.061	6.700	30	33	146
GE20DO2RS	0.787	20	1.378	35	0.63	16	0.472	12	1.142	29	9	0.135	0.061	6.70	30	33.00	146
GE25DO	0.984	25	1.654	42	0.787	20	0.63	16	1.398	35.5	7	0.243	0.110	10.80	48	54	240
GE25DO2RS	0.984	25	1.654	42	0.787	20	0.63	16	1.398	35.5	7	0.243	0.110	10.80	48	54	240
GE30DO	1.181	30	1.85	47	0.866	22	0.709	18	1.602	40.7	6	0.309	0.140	13.90	62	70	310
GE30DO2RS	1.181	30	1.85	47	0.866	22	0.709	18	1.602	40.7	6	0.309	0.140	13.90	62	70	310
GE35DO	1.378	35	2.165	55	0.984	25	0.787	20	1.85	47	6	0.485	0.220	18.00	80	90	400
GE35DO2RS	1.378	35	2.165	55	0.984	25	0.787	20	1.85	47	6	0.485	0.220	18.00	80	90	400
GE40DO	1.575	40	2.441	62	1.102	28	0.866	22	2.087	53	7	0.662	0.300	22.50	100	112	500
GE40DO2RS	1.575	40	2.441	62	1.102	28	0.866	22	2.087	53	7	0.662	0.300	22.50	100	112	500
GE45DO	1.772	45	2.677	68	1.26	32	0.984	25	2.362	60	7	0.882	0.400	28.50	127	144	640
GE45DO2RS	1.772	45	2.677	68	1.26	32	0.984	25	2.362	60	7	0.882	0.400	28.50	127	144	640
GE50DO	1.969	50	2.953	75	1.378	35	1.102	28	2.598	66	6	1.191	0.540	35	156	175	780
GE50DO2RS	1.969	50	2.953	75	1.378	35	1.102	28	2.598	66	6	1.191	0.540	35	156	175	780
GE60DO	2.362	60	3.543	90	1.732	44	1.417	36	3.15	80	6	2.205	1.000	55	245	275	1220
GE60DO2RS	2.362	60	3.543	90	1.732	44	1.417	36	3.15	80	6	2.205	1.000	55	245	275	1220
GE70DO	2.756	70	4.134	105	1.929	49	1.575	40	3.622	92	6	3.308	1.500	71	315	350	1560
GE70DO2RS	2.756	70	4.134	105	1.929	49	1.575	40	3.622	92	6	3.308	1.500	71	315	350	1560
GE80D2RS	3.15	80	4.724	120	2.165	55	1.772	45	4.134	105	6	4.851	2.200	90	400	450	2000
GE80DO	3.15	80	4.724	120	2.165	55	1.772	45	4.134	105	6	4.851	2.200	90	400	450	2000
GE90DO	3.543	90	5.118	130	2.362	60	1.969	50	4.528	115	5	5.95	2.700	110	490	550	2450
GE90DO2RS	3.543	90	5.118	130	2.362	60	1.969	50	4.528	115	5	5.954	2.700	110	490	550	2450
GE100DO	3.937	100	5.906	150	2.756	70	2.165	55	5.118	130	7	9.48	4.300	137	610	690	3050
GE100DO2RS	3.937	100	5.906	150	2.756	70	2.165	55	5.118	130	7	9.482	4.300	137	610	690	3050
GE110DO	4.331	110	6.299	160	2.756	70	2.165	55	5.512	140	6	10.36	4.700	147	655	730	3250
GE110DO2RS	4.331	110	6.299	160	2.756	70	2.165	55	5.512	140	6	10.36	4.70	147	655	730	3250
GE120DO	4.724	120	7.087	180	3.346	85	2.756	70	6.299	160	6	17.64	8.00	214	950	1070	4750
GE120DO2RS	4.724	120	7.087	180	3.346	85	2.756	70	6.299	160	6	17.64	8.00	214	950	1070	4750
GE140DO	5.512	140	8.268	210	3.543	90	2.756	70	7.087	180	7	24.26	11.00	243	1080	1210	5400
GE140DO2RS	5.512	140	8.268	210	3.543	90	2.756	70	7.087	180	7	24.26	11.00	243	1080	1210	5400
GE160DO	6.299	160	9.055	230	4.134	105	3.15	80	7.874	200	8	29.77	13.50	310	1370	1530	6800
GE160DO2RS	6.299	160	9.055	230	4.134	105	3.15	80	7.874	200	8	29.77	13.50	310	1370	1530	6800
GE180DO	7.087	180	10.236	260	4.134	105	3.15	80	8.858	225	6	40.79	18.50	345	1530	1720	7650
GE180DO2RS	7.087	180	10.236	260	4.134	105	3.15	80	8.858	225	6	40.79	18.50	345	1530	1720	7650
GE200DO	7.874	200	11.417	290	5.118	130	3.937	100	9.843	250	7	61.74	28	475	2120	2380	10600
GE200DO2RS	7.874	200	11.417	290	5.118	130	3.937	100	9.843	250	7	61.74	28.00	475	2120	2380	10600
GE220DO2RS	8.661	220	12.598	320	5.315	135	3.937	100	10.827	275	8	78.28	35.50	520	2320	2600	11600
GE240DO2RS	9.449	240	13.386	340	5.512	140	3.937	100	11.811	300	8	88.20	40	570	2550	2850	12700

Elges
Radial Spherical Plain Bearings
GE..DO, GE..DO-2RS SERIES

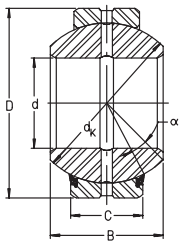


- Sliding contact surfaces: steel/steel
- Hardened inner and outer ring
- GE..DO 6-300 outer ring with single axial split
- GE..DO 320-1000 outer ring double split axially shipped with retaining rings

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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PART NUMBER	SHAFT d inch	SHAFT d mm	OD D inch	OD D mm	WIDTH B inch	WIDTH B mm	WIDTH C inch	WIDTH C mm	BALL DIA. d_K inch	BALL DIA. d_K mm	ANGLE alpha deg	WEIGHT lbs	WEIGHT kg	DYN. CAP. x1000 lbf	DYN. CAP. kN	STAT. CAP. x1000 lbf	STAT. CAP. kN
GE260DO2RS	10.236	260	14.567	370	5.906	150	4.331	110	12.795	325	7	110	50	690	3050	3450	15300
GE280DO2RS	11.024	280	15.748	400	6.102	155	4.724	120	13.78	350	6	141	64	800	3550	4050	18000
GE300DO2RS	11.811	300	16.929	430	6.496	165	4.724	120	14.764	375	7	165	75	850	3800	4250	19000
GE320DO	12.598	320	17.323	440	6.299	160	5.315	135	14.961	380	4	170	77	990	4400	4950	22000
GE340DO	13.386	340	18.11	460	6.299	160	5.315	135	15.748	400	3.8	181	82	1,050	4650	5200	23200
GE360DO	14.173	360	18.898	480	6.299	160	5.315	135	16.535	420	3.6	194	88	1,080	4800	5400	24000
GE380DO	14.961	380	20.472	520	7.48	190	6.299	160	17.717	450	4.1	280	127	1,420	6300	7100	31500
GE400DO	15.748	400	21.26	540	7.48	190	6.299	160	18.504	470	3.9	291	132	1,470	6550	7300	32500
GE420DO	16.535	420	22.047	560	7.48	190	6.299	160	19.291	490	3.7	320	145	1,530	6800	7800	34500
GE440DO	17.323	440	23.622	600	8.583	218	7.283	185	20.472	520	3.9	419	190	1,940	8650	9500	42300
GE460DO	18.11	460	24.409	620	8.583	218	7.283	185	21.26	540	3.7	441	200	2,020	9000	10100	45000
GE480DO	18.898	480	25.591	650	9.055	230	7.677	195	22.244	565	3.8	523	237	2,200	9800	11000	49000
GE500DO	19.685	500	26.378	670	9.055	230	7.677	195	23.031	585	3.6	538	244	2,290	10200	11500	51000
GE530DO	20.866	530	27.953	710	9.567	243	8.071	205	24.409	620	3.7	639	290	2,550	11400	12800	57000
GE560DO	22.047	560	29.528	750	10.157	258	8.465	215	25.787	655	4	750	340	2,850	12700	14400	64000
GE600DO	23.622	600	31.496	800	10.709	272	9.055	230	27.559	700	3.6	902	409	3,300	14600	16500	73500
GE630DO	24.803	630	33.465	850	11.811	300	10.236	260	29.134	740	3.3	1160	526	3,950	17600	19800	88000
GE670DO	26.378	670	35.433	900	12.126	308	10.236	260	30.906	785	337	1314	596	4,250	19000	21400	95000
GE710DO	27.953	710	37.402	950	12.795	325	10.827	275	32.677	830	3.7	1528	693	4,750	21200	15870	70600
GE750DO	29.528	750	39.37	1000	13.189	335	11.024	280	34.449	875	3.8	1729	784	5,100	22800	25600	114000
GE800DO	31.496	800	41.732	1060	13.976	355	11.811	300	36.614	930	3.6	2040	925	5,800	26000	29000	129000
GE850DO	33.465	850	44.094	1120	14.37	365	12.205	310	38.78	985	3.4	2326	1055	6,400	28500	32100	143000
GE900DO	35.433	900	46.457	1180	14.764	375	12.598	320	40.945	1040	3.2	2624	1190	7,000	31000	35100	156000
GE950DO	37.402	950	49.213	1250	15.748	400	13.386	340	43.307	1100	3.3	3140	1424	8,000	35500	39600	176000
GE1000DO	39.37	1000	51.969	1320	17.244	438	14.567	370	45.669	1160	3.5	3870	1755	9,100	40500	45900	204000

Elges
Radial Spherical Plain Bearings
GE..FO, GE..FO-2RS SERIES



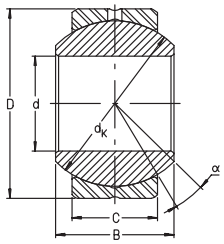
- Sliding contact surfaces: steel/steel
- Hardened inner and outer ring
- Wide inner ring with increased tilting angle
- Outer ring with single (axial) split

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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PART NUMBER	SHAFT d inch	SHAFT d mm	OD D inch	OD D mm	WIDTH B inch	WIDTH B mm	WIDTH C inch	WIDTH C mm	BALL DIA. d_K inch	BALL DIA. d_K mm	ANGLE alpha deg	WEIGHT lbs	WEIGHT kg	DYN. CAP. x1000 lbf	DYN. CAP. kN	STAT. CAP. x1000 lbf	STAT. CAP. kN
GE6FO	0.236	6	0.630	16	0.354	9	0.197	5	0.512	13	21	0.018	0.008	1.24	5.5	6.20	27.5
GE8FO	0.315	8	0.748	19	0.433	11	0.236	6	0.630	16	21	0.031	0.014	1.83	8.15	9.10	40.5
GE10FO	0.394	10	0.866	22	0.472	12	0.276	7	0.709	18	18	0.044	0.020	2.43	10.8	12.10	54
GE12FO	0.472	12	1.024	26	0.591	15	0.354	9	0.866	22	18	0.075	0.034	3.80	17	19.10	85
GE15FO2RS	0.591	15	1.181	30	0.630	16	0.394	10	0.984	25	16	0.101	0.046	4.75	21.2	23.80	106
GE17FO2RS	0.669	17	1.378	35	0.787	20	0.472	12	1.142	29	19	0.172	0.078	6.70	30	33	146
GE20FO2RS	0.787	20	1.654	42	0.984	25	0.630	16	1.398	35.5	17	0.331	0.150	10.80	48	54	240
GE25FO2RS	1.378	25	1.850	47	1.102	28	0.709	18	1.602	40.7	17	0.419	0.190	13.90	62	70	310
GE30FO2RS	1.181	30	2.165	55	1.260	32	0.787	20	1.850	47	17	0.639	0.290	18.00	80	90	400
GE35FO2RS	1.378	35	2.441	62	1.378	35	0.866	22	2.087	53	16	0.860	0.390	22.50	100	112	500
GE40FO2RS	1.575	40	2.677	68	1.575	40	0.984	25	2.362	60	17	1.147	0.520	28.50	127	144	640
GE45FO2RS	1.772	45	2.953	75	1.693	43	1.102	28	2.598	66	15	1.499	0.680	35	156	175	780
GE50FO2RS	1.969	50	3.543	90	2.205	56	1.417	36	3.150	80	17	3.087	1.400	55	245	275	1220
GE60FO2RS	2.362	60	4.134	105	2.480	63	1.575	40	3.622	92	17	4.410	2.000	71	315	350	1560
GE70FO2RS	2.756	70	4.724	120	2.756	70	1.772	45	4.134	105	16	6.395	2.900	90	400	450	2000
GE80FO2RS	3.150	80	5.118	130	2.953	75	1.969	50	4.528	115	14	7.718	3.500	110	490	550	2450
GE90FO2RS	3.543	90	5.906	150	3.347	85	2.165	55	5.118	130	15	11.907	5.400	137	610	690	3050
GE100FO2RS	3.937	100	6.299	160	3.347	85	2.165	55	5.512	140	14	13.010	5.900	147	655	730	3250
GE110FO2RS	4.331	110	7.087	180	3.937	100	2.756	70	6.299	160	12	21.389	9.700	214	950	1070	4750
GE120FO2RS	4.724	120	8.268	210	4.528	115	2.756	70	7.087	180	16	33.075	15	243	1080	1210	5400
GE140FO2RS	5.512	140	9.055	230	5.118	130	3.150	80	7.874	200	16	40.793	19	310	1370	1530	6800
GE160FO2RS	6.299	160	10.236	260	5.315	135	3.150	80	8.858	225	16	55.125	25	345	1530	1720	7650
GE180FO2RS	7.087	180	11.417	290	6.102	155	3.937	100	9.843	250	14	78.278	36	475	2120	2380	10600
GE200FO2RS	7.874	200	12.598	320	6.496	165	3.937	100	10.827	275	15	99.225	45	520	2320	2600	11600
GE220FO2RS	8.661	220	13.386	340	6.890	175	3.937	100	11.811	300	16	112.455	51	570	2550	2850	12700
GE240FO2RS	9.449	240	14.567	370	7.480	190	4.331	110	12.795	325	15	141.120	64	690	3050	3450	15300
GE260FO2RS	10.236	260	15.748	400	8.071	205	4.724	120	13.780	350	15	178.605	81	800	3550	4050	18000
GE280FO2RS	11.024	280	16.929	430	8.268	210	4.724	120	14.764	375	15	207.270	94	850	3800	4250	19000

Elges
Radial Spherical Plain Bearings
GE..PB SERIES

- DIN 648, dimension series K
- Sliding contact surfaces: steel/bronze

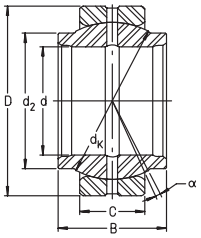


For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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PART NUMBER	d inch	d mm	D inch	D mm	B inch	B mm	C inch	C mm	d_k inch	d_k mm	ALPHA deg	C lbf	C kN	C_0 lbf	C_0 kN	WGT. lbs	WGT kg
GE5PB	0.197	5	0.512	13	0.315	8	0.236	6	0.438	11.112	13	730	3.25	1,910	8.5	0.013	0.006
GE6PB	0.236	6	0.630	16	0.354	9	0.266	6.75	0.500	12.7	13	970	4.3	2,430	10.8	0.022	0.01
GE8PB	0.315	8	0.748	19	0.472	12	0.354	9	0.625	15.875	14	1,620	7.2	4,050	18	0.04	0.018
GE10PB	0.394	10	0.866	22	0.551	14	0.413	10.5	0.750	19.05	13	2,250	10	5,600	25	0.06	0.027
GE12PB	0.472	12	1.024	26	0.630	16	0.472	12	0.875	22.225	13	3,000	13.4	7,500	33.5	0.095	0.043
GE14PB	0.551	14	1.102	28	0.748	19	0.532	13.5	1.000	25.4	16	3,800	17	9,700	43	0.121	0.055
GE16PB	0.630	16	1.260	32	0.827	21	0.591	15	1.125	28.575	15	4,850	21.6	12,100	54	0.176	0.08
GE18PB	0.709	18	1.378	35	0.906	23	0.650	16.5	1.250	31.75	15	5,800	26	14,700	65.5	0.221	0.1
GE20PB	0.787	20	1.575	40	0.984	25	0.709	18	1.375	34.925	14	7,100	31.5	18,000	80	0.331	0.15
GE22PB	0.866	22	1.654	42	1.102	28	0.787	20	1.500	38.1	15	8,500	38	21,700	96.5	0.397	0.18
GE25PB	0.984	25	1.850	47	1.221	31	0.866	22	1.687	42.85	15	10,700	47.5	26,500	118	0.529	0.24
GE30PB	1.181	30	2.165	55	1.457	37	0.984	25	2.000	50.8	17	14,400	64	36,000	160	0.838	0.38

Elges
Radial Spherical Plain Bearings
GE..LO SERIES

- DIN 648, dimension series EW – ISO 6124/2
- Sliding contact surfaces: steel/steel



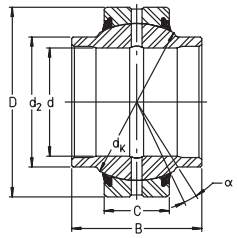
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PART NUMBER	d inch	d mm	D inch	D mm	B inch	B mm	C inch	C mm
GE12LO	0.472	12	0.866	22	0.472	12	0.276	7
GE16LO	0.630	16	1.102	28	0.630	16	0.354	9
GE20LO	0.787	20	1.378	35	0.787	20	0.472	12
GE25LO	0.984	25	1.654	42	0.984	25	0.630	16
GE32LO	1.260	32	2.047	52	1.260	32	0.709	18
GE40LO	1.575	40	2.441	62	1.575	40	0.866	22
GE50LO	1.969	50	2.953	75	1.969	50	1.102	28
GE63LO	2.480	63	3.740	95	2.480	63	1.417	36
GE70LO	2.756	70	4.134	105	2.756	70	1.575	40
GE80LO	3.150	80	4.724	120	3.150	80	1.772	45
GE90LO	3.543	90	5.118	130	3.543	90	1.969	50
GE100LO	3.937	100	5.906	150	3.937	100	2.165	55
GE110LO	4.331	110	6.299	160	4.331	110	2.165	55
GE125LO	4.921	125	7.087	180	4.921	125	2.756	70
GE160LO	6.299	160	9.055	230	6.299	160	3.150	80
GE200LO	7.874	200	11.417	290	7.874	200	3.937	100
GE250LO	9.843	250	15.748	400	9.843	250	4.724	120
GE320LO	12.598	320	20.472	520	12.598	320	6.299	160

CONTINUED FROM ABOVE

PART NUMBER	d_k inch	d_k mm	d_2 inch	d_2 mm	WGT. lbs	WGT kg	ALPHA deg	C lbf	C kN	C_0 lbf	C_0 kN
GE12LO	0.709	18	0.610	15.5	0.044	0.02	4	2,430	10.8	12,100	54
GE16LO	0.906	23	0.787	20	0.066	0.03	4	3,950	17.6	19,800	88
GE20LO	1.142	29	0.984	25	0.154	0.07	4	6,700	30	33,000	146
GE25LO	1.398	35.5	1.181	30	0.265	0.12	4	10,800	48	54,000	240
GE32LO	1.732	44	1.496	38	0.441	0.2	4	15,100	67	75,000	335
GE40LO	2.087	53	1.811	46	0.75	0.34	4	22,500	100	112,000	500
GE50LO	2.598	66	2.244	57	1.235	0.56	4	35,000	156	175,000	780
GE63LO	3.268	83	2.815	71.5	2.646	1.2	4	57,000	255	285,000	1270
GE70LO	3.622	92	3.110	79	3.749	1.7	4	71,000	315	350,000	1560
GE80LO	4.134	105	3.583	91	5.292	2.4	4	90,000	400	450,000	2000
GE90LO	4.528	115	3.898	99	7.056	3.2	4	110,000	490	550,000	2450
GE100LO	5.118	130	4.449	113	10.58	4.8	4	137,000	610	690,000	3050
GE110LO	5.512	140	4.882	124	12.79	5.8	4	147,000	655	730,000	3250
GE125LO	6.299	160	5.433	138	18.74	8.5	4	214,000	950	1,070,000	4750
GE160LO	7.874	200	6.969	177	36.38	16.5	4	310,000	1370	1,530,000	6800
GE200LO	9.843	250	8.701	221	70.56	32	4	475,000	2120	2,380,000	10600
GE250LO	13.780	350	12.480	317	218.30	99	4	800,000	3550	4,050,000	18000
GE320LO	17.717	450	15.945	405	529.20	240	4	1,370,000	6100	6,900,000	30500

Elges
Radial Spherical Plain Bearings
GE..HO-2RS SERIES



- Sliding contact surfaces: steel/steel
- Hardened inner and outer ring
- Extended inner ring for clevis mount
- Outer ring with single (axial) split

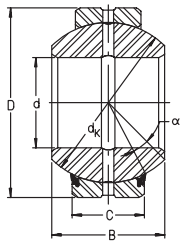
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PART NUMBER	d inch	d mm	D inch	D mm	B inch	B mm	C inch	C mm
GE17HO2RS	0.669	17	1.181	30	0.827	21	0.394	10
GE20HO2RS	0.787	20	1.378	35	0.945	24	0.472	12
GE25HO2RS	0.984	25	1.654	42	1.142	29	0.630	16
GE30HO2RS	1.181	30	1.850	47	1.181	30	0.709	18
GE35HO2RS	1.378	35	2.165	55	1.378	35	0.787	20
GE40HO2RS	1.575	40	2.441	62	1.496	38	0.866	22
GE45HO2RS	1.772	45	2.677	68	1.575	40	0.984	25
GE50HO2RS	1.969	50	2.953	75	1.693	43	1.102	28
GE60HO2RS	2.362	60	3.543	90	2.126	54	1.417	36
GE70HO2RS	2.756	70	4.134	105	2.559	65	1.575	40
GE80HO2RS	3.150	80	4.724	120	2.913	74	1.772	45

CONTINUED FROM ABOVE

PART NUMBER	d_k inch	d_k mm	d_2 inch	d_2 mm	ALPHA deg	WGT. lbs	WGT kg	C lbf	C kN	C_0 lbf	C_0 kN
GE17HO2RS	0.984	25	0.827	21	3	0.088	0.04	4,750	21.2	23,800	106
GE20HO2RS	1.142	29	0.945	24	3	0.126	0.057	6,700	30	33,000	146
GE25HO2RS	1.398	35.5	1.142	29	3	0.221	0.1	10,800	48	54,000	240
GE30HO2RS	1.602	40.7	1.347	34.2	3	0.309	0.14	13,900	62	70,000	310
GE35HO2RS	1.850	47	1.575	40	3	0.529	0.24	18,000	80	90,000	400
GE40HO2RS	2.087	53	1.772	45	3	0.639	0.29	22,500	100	112,000	500
GE45HO2RS	2.362	60	2.028	51.5	3	0.948	0.43	28,500	127	144,000	640
GE50HO2RS	2.598	66	2.224	56.5	3	1.191	0.54	35,000	156	175,000	780
GE60HO2RS	3.150	80	2.665	67.7	3	2.426	1.1	55,000	245	275,000	1220
GE70HO2RS	3.622	92	3.071	78	3	3.528	1.6	71,000	315	350,000	1560
GE80HO2RS	4.134	105	3.543	90	3	5.292	2.4	90,000	400	450,000	2000

Elges
Radial Spherical Plain Bearings
GE..ZO SERIES

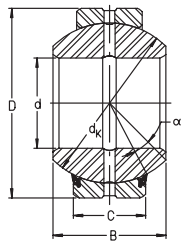


- Inch series
- Sliding contact surfaces: steel/steel
- Hardened inner and outer ring
- Outer ring with single (axial) split

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

PART NUMBER	SHAFT d inch	SHAFT d mm	OD D inch	OD D mm	WIDTH B inch	WIDTH B mm	WIDTH C inch	WIDTH C mm	BALL DIA. d_K inch	BALL DIA. d_K mm	ANGLE alpha deg	WGT lbs	WGT . kg	DYN. CAP. x1000 lbf	DYN CAP. kN	STAT. CAP. x1000 lbf	STAT. CAP. kN
GE12ZO	0.500	12.700	0.875	22.225	0.437	11.100	0.375	9.525	0.719	18.263	14	0.044	0.020	3.1	13.7	15.5	59
GE15ZO	0.625	15.875	1.063	26.988	0.547	13.894	0.469	11.913	0.899	22.835	14	0.079	0.036	5.0	22.0	25.0	110
GE19ZO	0.750	19.050	1.250	31.750	0.656	16.662	0.562	14.275	1.080	27.432	14	0.126	0.057	7.10	31.50	35	157
GE22ZO	0.875	22.225	1.438	36.513	0.765	19.431	0.656	16.662	1.258	31.953	14	0.193	0.088	9.60	42.50	48	213
GE25ZO	1.000	25.400	1.625	41.275	0.875	22.225	0.750	19.050	1.437	36.500	13	0.276	0.125	12.50	56	63	280
GE31ZO	1.250	31.750	2.000	50.800	1.093	27.762	0.937	23.800	1.795	45.593	13	0.516	0.234	19.50	87	98	435
GE34ZO	1.375	34.925	2.188	55.563	1.187	30.150	1.031	26.187	1.937	49.200	13	0.770	0.349	23.20	103	116	520
GE38ZO	1.500	38.100	2.438	61.913	1.312	33.325	1.125	28.575	2.155	54.737	13	0.934	0.424	28.00	125	141	630
GE44ZO	1.750	44.450	2.813	71.438	1.531	38.887	1.313	33.338	2.515	63.881	13	1.430	0.649	38.50	170	192	850
GE50ZO	2.000	50.800	3.188	80.963	1.750	44.450	1.500	38.100	2.875	73.025	12	2.070	0.939	50	223	250	1110
GE57ZO	2.250	57.150	3.563	90.488	1.969	50.013	1.688	42.863	3.235	82.169	12	2.920	1.324	63	280	315	1410
GE63ZO	2.500	63.500	3.938	100.013	2.187	55.550	1.875	47.625	3.590	91.186	12	4.090	1.855	78	345	390	1740
GE69ZO	2.750	69.850	4.375	111.125	2.406	61.112	2.063	52.388	3.950	100.330	12	5.380	2.440	95	420	475	2100
GE76ZO	3.000	76.200	4.750	120.650	2.625	66.675	2.250	57.150	4.312	109.525	12	6.870	3.116	113	500	560	2500
GE82ZO	3.250	82.550	5.125	130.175	2.844	72.238	2.438	61.913	4.675	118.745	12	8.630	3.914	132	590	660	2950
GE88ZO	3.500	88.900	5.500	139.700	3.062	77.775	2.625	66.675	5.040	128.016	11	10.650	4.830	154	680	770	3400
GE95ZO	3.750	95.250	5.875	149.225	3.281	83.337	2.813	71.438	5.390	136.906	11	12.950	5.873	176	780	880	3900
GE101ZO	4.000	101.600	6.250	158.750	3.500	88.900	3.000	76.200	5.750	146.050	11	15.590	7.070	200	890	1000	4450
GE114ZO	4.500	114.300	7.000	177.800	3.937	100.000	3.375	85.725	6.475	164.465	7	21.920	9.941	255	1130	1270	5600
GE127ZO	5.000	127.000	7.750	196.850	4.375	111.125	3.750	95.250	7.190	182.626	7	29.710	13.474	315	1390	1560	7000
GE152ZO	6.000	152.400	8.750	222.250	4.750	120.650	4.125	104.775	8.156	207.162	7	38.770	17.583	390	1740	1950	8700

Elges
Radial Spherical Plain Bearings
GE..ZO-2RS SERIES



- Inch series, sealed
- Sliding contact surfaces: steel/steel
- Hardened inner and outer ring
- Outer ring with single (axial) split

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

PART NUMBER	SHAFT d inch	SHAFT d mm	OD D inch	OD D mm	WIDTH B inch	WIDTH B mm	WIDTH C inch	WIDTH C mm
GE19ZO 2RS	0.750	19.050	1.250	31.750	0.656	16.662	0.562	14.275
GE22ZO 2RS	0.875	22.225	1.438	36.513	0.765	19.431	0.656	16.662
GE25ZO 2RS	1.000	25.400	1.625	41.275	0.875	22.225	0.750	19.050
GE31ZO 2RS	1.250	31.750	2.000	50.800	1.093	27.762	0.937	23.800
GE34ZO 2RS	1.375	34.925	2.188	55.563	1.187	30.150	1.031	26.187
GE38ZO 2RS	1.500	38.100	2.438	61.913	1.312	33.325	1.125	28.575
GE44ZO 2RS	1.750	44.450	2.813	71.438	1.531	38.887	1.313	33.338
GE50ZO 2RS	2.000	50.800	3.188	80.963	1.750	44.450	1.500	38.100
GE57ZO 2RS	2.250	57.150	3.563	90.488	1.969	50.013	1.688	42.863
GE63ZO 2RS	2.500	63.500	3.938	100.013	2.187	55.550	1.875	47.625
GE69ZO 2RS	2.750	69.850	4.375	111.125	2.406	61.112	2.063	52.388
GE76ZO 2RS	3.000	76.200	4.750	120.650	2.625	66.675	2.250	57.150
GE82ZO 2RS	3.250	82.550	5.125	130.175	2.844	72.238	2.438	61.913
GE88ZO 2RS	3.500	88.900	5.500	139.700	3.062	77.775	2.625	66.675
GE95ZO 2RS	3.750	95.250	5.875	149.225	3.281	83.337	2.813	71.438
GE101ZO 2RS	4.000	101.600	6.250	158.750	3.500	88.900	3.000	76.200
GE114ZO 2RS	4.500	114.300	7.000	177.800	3.937	100.000	3.375	85.725
GE127ZO 2RS	5.000	127.000	7.750	196.850	4.375	111.125	3.750	95.250
GE152ZO 2RS	6.000	152.400	8.750	222.250	4.750	120.650	4.125	104.775

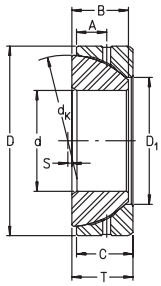
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PART NUMBER	BALL DIA. d_K inch	BALL DIA. d_K mm	ANGLE alpha deg	WGT lbs	WGT kg	DYN. CAP. x1000 lbf	DYN. CAP. kN	STAT. CAP. x1000 lbf	STAT. CAP. kN
GE19ZO 2RS	1.080	27.4	7	0.126	0.057	7.10	31.50	35	157
GE22ZO 2RS	1.258	32.0	7	0.193	0.088	9.60	42.50	48	213
GE25ZO 2RS	1.437	36.5	7	0.276	0.125	12.50	56	63	280
GE31ZO 2RS	1.795	45.6	7	0.516	0.234	19.50	87	98	435
GE34ZO 2RS	1.937	49.2	7	0.770	0.349	23.20	103	116	520
GE38ZO 2RS	2.155	54.7	7	0.934	0.424	28.00	125	141	630
GE44ZO 2RS	2.515	63.9	7	1.430	0.649	38.50	170	192	850
GE50ZO 2RS	2.875	73.0	7	2.070	0.939	50	223	250	1110
GE57ZO 2RS	3.235	82.2	7	2.920	1.324	63	280	315	1410
GE63ZO 2RS	3.590	91.2	7	4.090	1.855	78	345	390	1740
GE69ZO 2RS	3.950	100.3	7	5.380	2.440	95	420	475	2100
GE76ZO 2RS	4.312	109.5	7	6.870	3.116	113	500	560	2500
GE82ZO 2RS	4.675	118.7	7	8.630	3.914	132	590	660	2950
GE88ZO 2RS	5.040	128.0	7	10.650	4.830	154	680	770	3400
GE95ZO 2RS	5.390	136.9	7	12.950	5.873	176	780	880	3900
GE101ZO 2RS	5.750	146.1	7	15.590	7.070	200	890	1000	4450
GE114ZO 2RS	6.475	164.5	7	21.920	9.941	255	1130	1270	5600
GE127ZO 2RS	7.190	182.6	7	29.710	13.474	315	1390	1560	7000
GE152ZO 2RS	8.156	207.2	7	38.770	17.583	390	1740	1950	8700

Elges Angular Contact Spherical Plain Bearings

GE..SX SERIES

- Sliding contact surfaces: steel/steel



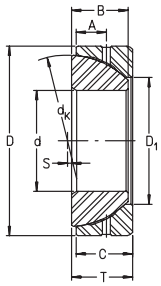
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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PART NUMBER	d inch	d mm	D inch	D mm	T inch	T mm	WGT. lbs	WGT kg	C lbf	C kN	C_0 lbf	C_0 kN	d_k inch	d_k mm
GE25SX	0.984	25	1.850	47	0.591	15	0.287	0.13	10,700	47.5	53,000	236	1.673	42.5
GE28SX	1.102	28	2.047	52	0.630	16	0.375	0.17	13,500	60	67,000	300	1.850	47
GE30SX	1.181	30	2.165	55	0.669	17	0.463	0.21	14,200	63	71,000	315	1.969	50
GE35SX	1.378	35	2.441	62	0.709	18	0.595	0.27	17,200	76.5	88,000	390	2.205	56
GE40SX	1.575	40	2.677	68	0.748	19	0.706	0.32	20,200	90	101,000	450	2.362	60
GE45SX	1.772	45	2.953	75	0.787	20	0.904	0.41	23,800	106	119,000	530	2.598	66
GE50SX	1.969	50	3.150	80	0.787	20	0.992	0.45	26,500	118	132,000	585	2.913	74
GE55SX	2.165	55	3.543	90	0.906	23	1.477	0.67	33,000	146	165,000	735	3.150	80
GE60SX	2.362	60	3.740	95	0.906	23	1.588	0.72	36,000	160	180,000	800	3.386	86
GE65SX	2.559	65	3.937	100	0.906	23	1.676	0.76	39,000	173	194,000	865	3.622	92
GE70SX	2.756	70	4.331	110	0.984	25	2.205	1	47,000	208	234,000	1040	4.016	102
GE80SX	3.150	80	4.921	125	1.102	28	3.308	1.5	56,000	250	280,000	1250	4.528	115
GE90SX	3.543	90	5.512	140	1.260	32	4.631	2.1	72,000	320	360,000	1600	5.118	130
GE100SX	3.937	100	5.906	150	1.260	32	5.072	2.3	78,000	345	395,000	1760	5.512	140
GE110SX	4.331	110	6.693	170	1.496	38	7.938	3.6	107,000	475	530,000	2360	6.299	160
GE120SX	4.724	120	7.087	180	1.496	38	8.600	3.9	115,000	510	570,000	2550	6.693	170
GE130SX	5.118	130	7.874	200	1.772	45	13.010	5.9	144,000	640	720,000	3200	7.480	190
GE140SX	5.512	140	8.268	210	1.772	45	13.892	6.3	153,000	680	780,000	3450	7.874	200
GE150SX	5.906	150	8.858	225	1.890	48	16.979	7.7	175,000	780	880,000	3900	8.386	213
GE160SX	6.299	160	9.449	240	2.008	51	20.727	9.4	202,000	900	1,010,000	4500	8.858	225
GE170SX	6.693	170	10.236	260	2.244	57	26.460	12	247,000	1100	1,240,000	5500	9.843	250
GE180SX	7.087	180	11.024	280	2.520	64	37.485	17	295,000	1320	1,510,000	6700	10.236	260
GE190SX	7.480	190	11.417	290	2.520	64	39.690	18	310,000	1370	1,560,000	6950	10.827	275
GE200SX	7.874	200	12.205	310	2.756	70	49.613	22.5	350,000	1560	1,750,000	7800	11.417	290

Elges Angular Contact Spherical Plain Bearings

GE..SX SERIES

- Sliding contact surfaces: steel/steel



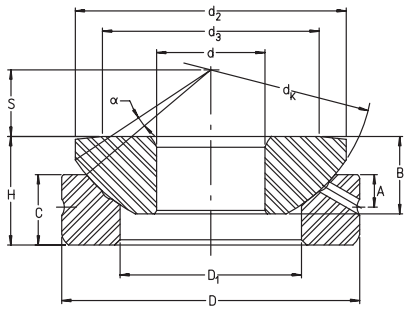
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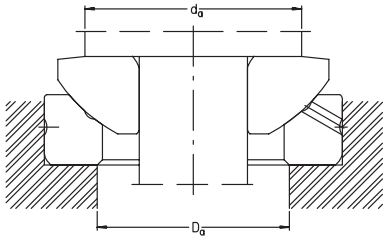
D_1 inch	D_1 mm	B inch	B mm	C inch	C mm	s inch	s mm	A inch	A mm	PART NUMBER
1.236	31.4	0.551	14	0.551	14	0.039	1	0.295	7.5	GE25SX
1.406	35.7	0.591	15	0.591	15	0.039	1	0.315	8	GE28SX
1.421	36.1	0.630	16	0.630	16	0.079	2	0.335	8.5	GE30SX
1.669	42.4	0.669	17	0.669	17	0.079	2	0.354	9	GE35SX
1.843	46.8	0.709	18	0.709	18	0.059	1.5	0.374	9.5	GE40SX
2.083	52.9	0.748	19	0.748	19	0.059	1.5	0.394	10	GE45SX
2.327	59.1	0.748	19	0.748	19	0.158	4	0.394	10	GE50SX
2.441	62	0.866	22	0.866	22	0.158	4	0.453	11.5	GE55SX
2.681	68.1	0.866	22	0.866	22	0.197	5	0.453	11.5	GE60SX
2.976	75.6	0.866	22	0.866	22	0.197	5	0.453	11.5	GE65SX
3.236	82.2	0.945	24	0.945	24	0.276	7	0.492	12.5	GE70SX
3.563	90.5	1.063	27	1.063	27	0.394	10	0.571	14.5	GE80SX
4.067	103.3	1.181	30	1.181	30	0.433	11	0.630	16	GE90SX
4.500	114.3	1.181	30	1.181	30	0.472	12	0.630	16	GE100SX
4.953	125.8	1.417	36	1.417	36	0.591	15	0.748	19	GE110SX
5.331	135.4	1.417	36	1.417	36	0.669	17	0.748	19	GE120SX
5.827	148	1.654	42	1.654	42	0.787	20	0.886	22.5	GE130SX
6.323	160.6	1.654	42	1.654	42	0.787	20	0.886	22.5	GE140SX
6.728	170.9	1.772	45	1.772	45	0.827	21	0.945	24	GE150SX
7.142	181.4	1.890	48	1.890	48	0.827	21	1.004	25.5	GE160SX
7.650	194.3	2.126	54	2.126	54	1.063	27	1.122	28.5	GE170SX
8.091	205.5	2.402	61	2.402	61	0.827	21	1.260	32	GE180SX
8.339	211.8	2.402	61	2.402	61	1.142	29	1.260	32	GE190SX
9.024	229.2	2.598	66	2.598	66	1.024	26	1.378	35	GE200SX

Elges Axial Spherical Plain Bearings

GE..AX SERIES

- Sliding contact surfaces: steel/steel





For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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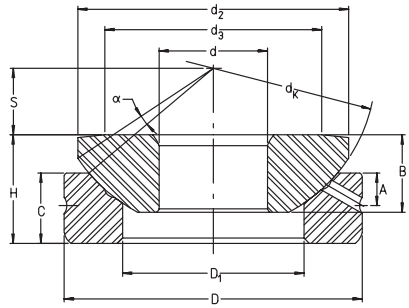
PART NUMBER	d inch	d mm	D inch	D mm	H inch	H mm	WGT. lbs	WGT kg	C lbf	C kN	C_0 lbf	C_0 kN	d_k inch	d_k mm	d_2 inch	d_2 mm
GE10AX	0.394	10	1.181	30	0.374	9.5	0.088	0.04	5,400	24	27,000	120	1.260	32	1.083	27.5
GE12AX	0.472	12	1.378	35	0.512	13	0.154	0.07	7,300	32.5	36,500	163	1.457	37	1.260	32
GE15AX	0.591	15	1.654	42	0.591	15	0.265	0.12	11,700	52	58,000	260	1.772	45	1.532	38.9
GE17AX	0.669	17	1.850	47	0.630	16	0.353	0.16	13,200	58.5	67,000	300	1.969	50	1.709	43.4
GE20AX	0.787	20	2.165	55	0.787	20	0.551	0.25	16,900	75	84,000	375	2.362	60	1.969	50
GE25AX	0.984	25	2.441	62	0.886	22.5	0.838	0.38	29,000	129	144,000	640	2.598	66	2.264	57.5
GE30AX	1.181	30	2.953	75	1.024	26	1.433	0.65	38,000	170	191,000	850	3.150	80	2.717	69
GE35AX	1.378	35	3.543	90	1.102	28	2.205	1	58,000	260	290,000	1290	3.858	98	3.307	84
GE40AX	1.575	40	4.134	105	1.260	32	3.528	1.6	84,000	375	420,000	1860	4.488	114	3.858	98
GE45AX	1.772	45	4.724	120	1.437	36.5	5.292	2.4	110,000	490	550,000	2450	5.118	130	4.409	112
GE50AX	1.969	50	5.118	130	1.673	42.5	7.277	3.3	147,000	655	730,000	3250	5.512	140	4.823	122.5
GE60AX	2.362	60	5.906	150	1.772	45	9.92	4.5	165,000	735	820,000	3650	6.299	160	5.512	140
GE70AX	2.756	70	6.299	160	1.969	50	12.13	5.5	180,000	800	910,000	4050	6.693	170	5.886	149.5
GE80AX	3.150	80	7.087	180	1.969	50	15.44	7	234,000	1040	1,170,000	5200	7.638	194	6.614	168
GE100AX	3.937	100	8.268	210	2.323	59	23.15	10.5	270,000	1200	1,350,000	6000	8.661	220	7.697	195.5
GE120AX	4.724	120	9.055	230	2.520	64	28.67	13	280,000	1250	1,390,000	6200	9.646	245	8.425	214
GE140AX	5.512	140	10.236	260	2.835	72	39.69	18	365,000	1630	1,830,000	8150	10.709	272	9.606	244
GE160AX	6.299	160	11.417	290	3.032	77	50.72	23	425,000	1900	2,140,000	9500	12.205	310	10.709	272
GE180AX	7.087	180	12.598	320	3.386	86	68.36	31	475,000	2120	2,380,000	10600	13.189	335	11.811	300
GE200AX	7.874	200	13.386	340	3.425	87	74.97	34	530,000	2360	2,650,000	11800	14.095	358	12.638	321

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PART NUMBER	d_3 inch	d_3 mm	D_1 inch	D_1 mm	B inch	B mm	C inch	C mm	s inch	s mm	A inch	A mm	ALPHA deg	d_a max. inch	d_a max. mm	D_a min. inch	D_a min. mm
GE10AX	0.827	21	0.650	16.5	0.311	7.9	0.236	6	0.276	7	0.118	3	10	0.827	21	0.728	18.5
GE12AX	0.945	24	0.768	19.5	0.366	9.3	0.354	9	0.315	8	0.158	4	9	0.945	24	0.847	21.5
GE15AX	1.142	29	0.945	24	0.421	10.7	0.433	11	0.394	10	0.197	5	7	1.142	29	1.024	26
GE17AX	1.339	34	1.102	28	0.453	11.5	0.453	11.5	0.433	11	0.197	5	6	1.339	34	1.201	30.5
GE20AX	1.575	40	1.319	33.5	0.563	14.3	0.512	13	0.492	12.5	0.236	6	6	1.575	40	1.496	38
GE25AX	1.772	45	1.358	34.5	0.630	16	0.669	17	0.551	14	0.236	6	7	1.772	45	1.535	39
GE30AX	2.205	56	1.732	44	0.709	18	0.768	19.5	0.689	17.5	0.315	8	6	2.205	56	1.929	49
GE35AX	2.598	66	2.047	52	0.866	22	0.787	20	0.866	22	0.315	8	6	2.598	66	2.244	57
GE40AX	3.071	78	2.323	59	1.063	27	0.866	22	0.965	24.5	0.354	9	6	3.071	78	2.520	64
GE45AX	3.504	89	2.677	68	1.221	31	0.984	25	1.083	27.5	0.433	11	6	3.504	89	2.913	74
GE50AX	3.858	98	2.717	69	1.319	33.5	1.260	32	1.181	30	0.394	10	5	3.858	98	2.953	75
GE60AX	4.252	108	3.386	86	1.457	37	1.299	33	1.378	35	0.492	12.5	7	4.252	108	3.622	92
GE70AX	4.764	121	3.740	95	1.575	40	1.417	36	1.378	35	0.532	13.5	6	4.764	121	4.016	102
GE80AX	5.118	130	4.252	108	1.654	42	1.417	36	1.673	42.5	0.571	14.5	6	5.118	130	4.528	115
GE100AX	6.102	155	5.236	133	1.969	50	1.654	42	1.772	45	0.591	15	7	6.102	155	5.551	141
GE120AX	6.693	170	6.063	154	2.047	52	1.772	45	2.067	52.5	0.650	16.5	8	6.693	170	6.378	162
GE140AX	7.795	198	6.929	176	2.402	61	1.969	50	2.067	52.5	0.906	23	6	7.795	198	7.362	187
GE160AX	8.386	213	7.835	199	2.559	65	2.047	52	2.559	65	0.906	23	7	8.386	213	8.307	211
GE180AX	9.449	240	8.819	224	2.756	70	2.362	60	2.658	67.5	1.024	26	8	9.449	240	9.291	236
GE200AX	10.433	265	9.685	246	2.913	74	2.362	60	2.756	70	1.063	27	8	10.433	265	10.197	259

Elges
Thrust Spherical Plain Bearings
GE..ZSX SERIES

- Inch series
- Sliding contact surfaces: steel/steel
- Hardened housing and shaft locating washers



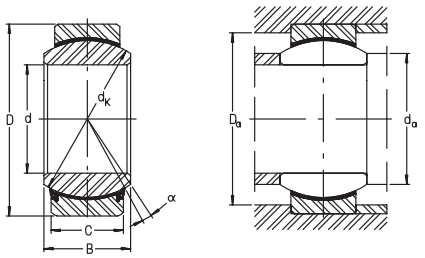
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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PART NUMBER	SHAFT d inch	SHAFT d mm	OD D inch	OD D mm	TOTAL WIDTH T inch	TOTAL WIDTH T mm	WIDTH B inch	WIDTH B mm	WIDTH C inch	WIDTH C mm
GE12ZSX	0.500	12.700	0.875	22.225	0.300	7.620	0.270	6.858	0.190	4.826
GE15ZSX	0.625	15.875	1.063	26.988	0.370	9.398	0.340	8.636	0.250	6.350
GE19ZSX	0.750	19.050	1.250	31.750	0.440	11.176	0.410	10.414	0.310	7.874
GE22ZSX	0.875	22.225	1.438	36.513	0.520	13.208	0.480	12.192	0.380	9.652
GE25ZSX	1.000	25.400	1.625	41.275	0.600	15.240	0.550	13.970	0.440	11.176
GE31ZSX	1.250	31.750	2.000	50.800	0.740	18.796	0.700	17.780	0.550	13.970
GE34ZSX	1.375	34.925	2.188	55.563	0.840	21.336	0.770	19.558	0.600	15.240
GE38ZSX	1.500	38.100	2.438	61.913	0.910	23.114	0.840	21.336	0.660	16.764
GE44ZSX	1.750	44.450	2.813	71.438	1.070	27.178	0.980	24.892	0.790	20.066
GE50ZSX	2.000	50.800	3.188	80.963	1.230	31.242	1.130	28.702	0.920	23.368
GE57ZSX	2.250	57.150	3.563	90.488	1.390	35.306	1.270	32.258	1.050	26.670
GE63ZSX	2.500	63.500	3.938	100.013	1.540	39.116	1.420	36.068	1.180	29.972
GE69ZSX	2.750	69.850	4.375	111.125	1.700	43.180	1.560	39.624	1.275	32.385
GE76ZSX	3.000	76.200	4.750	120.650	1.860	47.244	1.710	43.434	1.406	35.712
GE82ZSX	3.250	82.550	5.125	130.175	2.030	51.562	1.860	47.244	1.545	39.243
GE88ZSX	3.500	88.900	5.500	139.700	2.180	55.372	2.000	50.800	1.675	42.545
GE95ZSX	3.750	95.250	5.875	149.225	2.340	59.436	2.150	54.610	1.805	45.847
GE101ZSX	4.000	101.600	6.250	158.750	2.500	63.500	2.300	58.420	1.935	49.149
GE114ZSX	4.500	114.300	7.000	177.800	2.800	71.120	2.590	65.786	2.195	55.753
GE127ZSX	5.000	127.000	7.750	196.850	3.130	79.502	2.880	73.152	2.455	62.357
GE152ZSX	6.000	152.400	8.750	222.250	3.375	85.725	3.100	78.740	2.615	66.421

PART NUMBER	BALL DIA. d_K inch	BALL DIA. d_K mm	WEIGHT lbs	WEIGHT kg	DYN. CAP. x1000 lbf	DYN. CAP. kN	STAT. CAP. x1000 lbf	STAT. CAP. kN
GE12ZSX	0.719	18.263	0.029	0.013	1.68	7.50	8.40	37.50
GE15ZSX	0.899	22.835	0.056	0.025	2.75	12.30	13.90	62
GE19ZSX	1.080	27.432	0.083	0.038	4.15	18.40	20.60	92
GE22ZSX	1.258	31.953	0.110	0.050	5.90	26.00	29.50	131
GE25ZSX	1.437	36.500	0.188	0.085	7.80	34.50	39	173
GE31ZSX	1.795	45.593	0.351	0.159	12.20	54	61	270
GE34ZSX	1.937	49.200	0.470	0.213	14.30	64	72	320
GE38ZSX	2.155	54.737	0.662	0.300	17.50	78	88	390
GE44ZSX	2.515	63.881	1.010	0.458	24.50	109	122	540
GE50ZSX	2.875	73.025	1.480	0.671	32.50	145	163	730
GE57ZSX	3.235	82.169	2.090	0.948	42	186	209	930
GE63ZSX	3.590	91.186	2.490	1.129	52	232	260	1160
GE69ZSX	3.950	100.330	3.860	1.751	62	275	310	1380
GE76ZSX	4.312	109.525	6.670	3.025	75	330	375	1660
GE82ZSX	4.675	118.745	6.360	2.884	89	395	445	1980
GE88ZSX	5.040	128.016	7.870	3.569	104	465	520	2310
GE95ZSX	5.390	136.906	9.590	4.349	120	530	600	2650
GE101ZSX	5.750	146.050	11.56	5.243	137	610	690	3050
GE114ZSX	6.475	164.465	17.12	7.764	175	780	880	3900
GE127ZSX	7.190	182.626	24.40	11.07	218	970	1090	4850
GE152ZSX	8.156	207.162	38.34	17.39	265	1170	1310	5800

Elges
Radial Spherical Plain Bearings
GE..UK SERIES
GE..UK-2RS SERIES

- DIN 648, dimension series E – ISO 6124/1
- Sliding contact surfaces: hard chromium/PTFE
- Sliding contact surfaces available with: corrosion resistant steel/PTFE – suffix W1

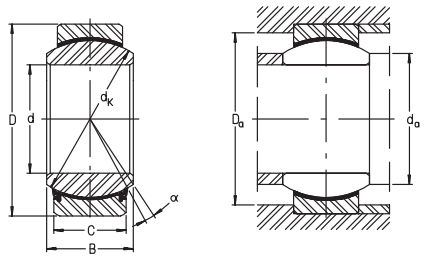


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PART NUMBER	d inch	d mm	D inch	D mm	B inch	B mm	C inch	C mm	WGT. lbs	WGT kg
GE6UK	0.236	6	0.551	14	0.236	6	0.158	4	0.009	0.004
GE8UK	0.315	8	0.630	16	0.315	8	0.197	5	0.015	0.007
GE10UK	0.394	10	0.748	19	0.354	9	0.236	6	0.024	0.011
GE12UK	0.472	12	0.866	22	0.394	10	0.276	7	0.035	0.016
GE15UK	0.591	15	1.024	26	0.472	12	0.354	9	0.055	0.025
GE17UK	0.669	17	1.181	30	0.551	14	0.394	10	0.084	0.038
GE20UK	0.787	20	1.378	35	0.630	16	0.472	12	0.135	0.061
GE25UK	0.984	25	1.654	42	0.787	20	0.630	16	0.243	0.11
GE30UK	1.181	30	1.850	47	0.866	22	0.709	18	0.309	0.14
GE17UK2RS	0.669	17	1.181	30	0.551	14	0.394	10	0.084	0.038
GE20UK2RS	0.787	20	1.378	35	0.630	16	0.472	12	0.135	0.061
GE25UK2RS	0.984	25	1.654	42	0.787	20	0.630	16	0.243	0.11
GE30UK2RS	1.181	30	1.850	47	0.866	22	0.709	18	0.309	0.14
GE35UK2RS	1.378	35	2.165	55	0.984	25	0.787	20	0.485	0.22
GE40UK2RS	1.575	40	2.441	62	1.102	28	0.866	22	0.662	0.3
GE45UK2RS	1.772	45	2.677	68	1.260	32	0.984	25	0.882	0.4
GE50UK2RS	1.969	50	2.953	75	1.378	35	1.102	28	1.191	0.54
GE60UK2RS	2.362	60	3.543	90	1.732	44	1.417	36	2.205	1
GE70UK2RS	2.756	70	4.134	105	1.929	49	1.575	40	3.308	1.5
GE80UK2RS	3.150	80	4.724	120	2.165	55	1.772	45	4.851	2.2
GE90UK2RS	3.543	90	5.118	130	2.362	60	1.969	50	5.954	2.7
GE100UK2RS	3.937	100	5.906	150	2.756	70	2.165	55	9.482	4.3
GE110UK2RS	4.331	110	6.299	160	2.756	70	2.165	55	10.36	4.7
GE120UK2RS	4.724	120	7.087	180	3.347	85	2.756	70	17.64	8
GE140UK2RS	5.512	140	8.268	210	3.543	90	2.756	70	24.26	11
GE160UK2RS	6.299	160	9.055	230	4.134	105	3.150	80	29.77	13.5
GE180UK2RS	7.087	180	10.236	260	4.134	105	3.150	80	40.79	18.5
GE200UK2RS	7.874	200	11.417	290	5.118	130	3.937	100	61.74	28
GE220UK2RS	8.661	220	12.598	320	5.315	135	3.937	100	78.28	35.5
GE240UK2RS	9.449	240	13.386	340	5.512	140	3.937	100	88.20	40
GE260UK2RS	10.236	260	14.567	370	5.906	150	4.331	110	110.25	50
GE280UK2RS	11.024	280	15.748	400	6.102	155	4.724	120	141.12	64
GE300UK2RS	11.811	300	16.929	430	6.496	165	4.724	120	165.38	75

Elges
Radial Spherical Plain Bearings
GE..UK SERIES
GE..UK-2RS SERIES

- DIN 648, dimension series E – ISO 6124/1
- Sliding contact surfaces: hard chromium/PTFE
- Sliding contact surfaces available with: corrosion resistant steel/PTFE – suffix W1

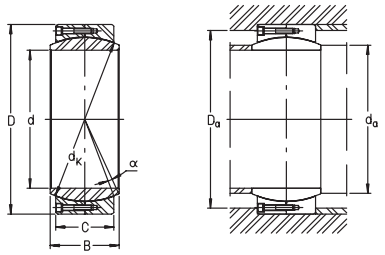


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C lbf	C kN	C_0 lbf	C_0 kN	d_k inch	d_k mm	ALPHA deg	d_a max. inch	d_a max. mm	D_a min. inch	D_a min. mm	PART NUMBER
810	3.6	2,020	9	0.394	10	13	0.315	8	0.378	9.6	GE6UK
1,320	5.85	3,300	14.6	0.512	13	15	0.402	10.2	0.492	12.5	GE8UK
1,950	8.65	4,850	21.6	0.630	16	12	0.520	13.2	0.610	15.5	GE10UK
2,550	11.4	6,400	28.5	0.709	18	11	0.587	14.9	0.689	17.5	GE12UK
3,950	17.6	9,900	44	0.866	22	8	0.724	18.4	0.827	21	GE15UK
5,000	22.4	12,600	56	0.984	25	10	0.815	20.7	0.945	24	GE17UK
7,100	31.5	17,500	78	1.142	29	9	0.949	24.1	1.083	27.5	GE20UK
11,500	51	28,500	127	1.398	35.5	7	1.154	29.3	1.299	33	GE25UK
14,700	65.5	37,500	166	1.602	40.7	6	1.347	34.2	1.496	38	GE30UK
6,700	30	13,500	60	0.984	25	10	0.815	20.7	0.945	24	GE17UK2RS
9,300	41.5	18,700	83	1.142	29	9	0.949	24.1	1.083	27.5	GE20UK2RS
15,300	68	31,000	137	1.398	35.5	7	1.154	29.3	1.299	33	GE25UK2RS
19,800	88	39,500	176	1.602	40.7	6	1.347	34.2	1.496	38	GE30UK2RS
25,000	112	50,000	224	1.850	47	6	1.563	39.7	1.752	44.5	GE35UK2RS
31,500	140	63,000	280	2.087	53	7	1.772	45	2.008	51	GE40UK2RS
40,500	180	81,000	360	2.362	60	7	1.996	50.7	2.244	57	GE45UK2RS
49,500	220	99,000	440	2.598	66	6	2.201	55.9	2.480	63	GE50UK2RS
78,000	345	156,000	695	3.150	80	6	2.630	66.8	2.953	75	GE60UK2RS
99,000	440	198,000	880	3.622	92	6	3.063	77.8	3.425	87	GE70UK2RS
128,000	570	255,000	1140	4.134	105	6	3.520	89.4	3.898	99	GE80UK2RS
156,000	695	310,000	1370	4.528	115	5	3.862	98.1	4.252	108	GE90UK2RS
194,000	865	390,000	1730	5.118	130	7	4.311	109.5	4.843	123	GE100UK2RS
209,000	930	420,000	1860	5.512	140	6	4.772	121.2	5.276	134	GE110UK2RS
300,000	1340	610,000	2700	6.299	160	6	5.335	135.5	5.906	150	GE120UK2RS
335,000	1500	670,000	3000	7.087	180	7	6.134	155.8	6.811	173	GE140UK2RS
435,000	1930	850,000	3800	7.874	200	8	6.701	170.2	7.520	191	GE160UK2RS
485,000	2160	970,000	4300	8.858	225	6	7.831	198.9	8.622	219	GE180UK2RS
670,000	3000	1,350,000	6000	9.843	250	7	8.406	213.5	9.409	239	GE200UK2RS
750,000	3350	1,470,000	6550	10.827	275	8	9.429	239.5	10.512	267	GE220UK2RS
810,000	3600	1,620,000	7200	11.811	300	8	10.445	265.3	11.614	295	GE240UK2RS
970,000	4300	1,940,000	8650	12.795	325	7	11.350	288.3	12.559	319	GE260UK2RS
1,120,000	5000	2,250,000	10000	13.780	350	6	12.354	313.8	13.465	342	GE280UK2RS
1,210,000	5400	2,430,000	10800	14.764	375	7	13.256	336.7	14.567	370	GE300UK2RS

Elges
Radial Spherical Plain Bearings
GE..DW SERIES

- DIN 648, dimension series C – ISO 6124/3
- Sliding contact surfaces: hard chromium/PTFE

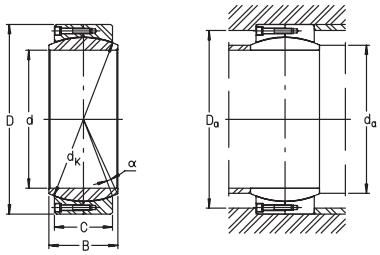


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PART NUMBER	d inch	d mm	D inch	D mm	B inch	B mm	C inch	C mm	WGT. lbs	WGT kg
GE320DW	12.598	320	17.323	440	6.299	160	5.315	135	167.58	76
GE340DW	13.386	340	18.110	460	6.299	160	5.315	135	176.40	80
GE360DW	14.173	360	18.898	480	6.299	160	5.315	135	189.63	86
GE380DW	14.961	380	20.472	520	7.480	190	6.299	160	275.63	125
GE400DW	15.748	400	21.260	540	7.480	190	6.299	160	286.65	130
GE420DW	16.535	420	22.047	560	7.480	190	6.299	160	315.32	143
GE440DW	17.323	440	23.622	600	8.583	218	7.284	185	414.54	188
GE460DW	18.110	460	24.409	620	8.583	218	7.284	185	438.80	199
GE480DW	18.898	480	25.591	650	9.055	230	7.677	195	520.38	236
GE500DW	19.685	500	26.378	670	9.055	230	7.677	195	535.82	243
GE530DW	20.866	530	27.953	710	9.567	243	8.071	205	635.04	288
GE560DW	22.047	560	29.528	750	10.158	258	8.465	215	745.29	338
GE600DW	23.622	600	31.496	800	10.709	272	9.055	230	897.44	407

Elges
Radial Spherical Plain Bearings
GE..DW SERIES

- DIN 648, dimension series C – ISO 6124/3
- Sliding contact surfaces: hard chromium/PTFE

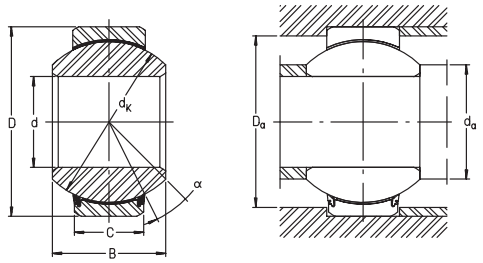


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C x1000 lbf	C kN	C_0 x1000 lbf	C_0 kN	d_k inch	d_k mm	ALPHA deg	d_a max. inch	d_a max. mm	D_a min. inch	D_a min. mm	PART NUMBER
1730	7695	3450	15390	14.961	380	4	13.567	344.6	14.213	361	GE320DW
1820	8100	3650	16200	15.748	400	3.8	14.433	366.6	15.039	382	GE340DW
1910	8505	3800	17010	16.535	420	3.6	15.287	388.3	15.866	403	GE360DW
2430	10800	4850	21600	17.717	450	4.1	16.059	407.9	16.772	426	GE380DW
2550	11280	5100	22560	18.504	470	3.9	16.921	429.8	17.598	447	GE400DW
2650	11760	5300	23520	19.291	490	3.7	17.780	451.6	18.465	469	GE420DW
3250	14430	6500	28860	20.472	520	3.9	18.583	472	19.331	491	GE440DW
3350	14985	6700	29970	21.260	540	3.7	19.449	494	20.197	513	GE460DW
3700	16525	7400	33050	22.244	565	3.8	20.315	516	21.102	536	GE480DW
3850	17110	7700	34220	23.032	585	3.6	21.173	537.8	21.929	557	GE500DW
4300	19065	6300	28130	24.409	620	3.7	22.453	570.3	23.268	591	GE530DW
4750	21125	9500	42250	25.787	655	4	23.701	602	24.567	624	GE560DW
5400	24150	10900	48300	27.559	700	3.6	25.390	644.9	26.260	667	GE600DW

Elges
Radial Spherical Plain Bearings
GE..FW, GE..FW-2RS SERIES

- Metric
- DIN 648, dimension series G – ISO 6124/1
- Sliding contact surfaces: hard chromium/PTFE
- Matching dimensions with series GE..FO

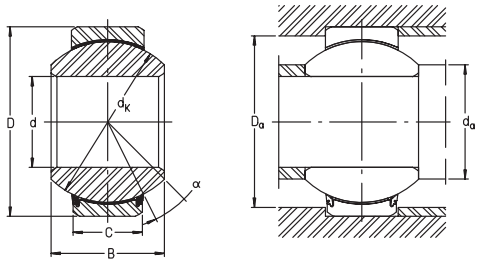


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PART NUMBER	d inch	d mm	D inch	D mm	B inch	B mm	C inch	C mm	WGT. lbs	WGT kg
GE6FW	0.236	6	0.630	16	0.354	9	0.197	5	0.018	0.008
GE8FW	0.315	8	0.748	19	0.433	11	0.236	6	0.031	0.014
GE10FW	0.394	10	0.866	22	0.472	12	0.276	7	0.044	0.02
GE12FW	0.472	12	1.024	26	0.591	15	0.354	9	0.075	0.034
GE15FW	0.591	15	1.181	30	0.630	16	0.394	10	0.101	0.046
GE17FW	0.669	17	1.378	35	0.787	20	0.472	12	0.172	0.078
GE20FW	0.787	20	1.654	42	0.984	25	0.630	16	0.331	0.15
GE25FW	0.984	25	1.850	47	1.102	28	0.709	18	0.419	0.19
GE30FW2RS	1.181	30	2.165	55	1.260	32	0.787	20	0.639	0.29
GE35FW2RS	1.378	35	2.441	62	1.378	35	0.866	22	0.86	0.39
GE40FW2RS	1.575	40	2.677	68	1.575	40	0.984	25	1.147	0.52
GE45FW2RS	1.772	45	2.953	75	1.693	43	1.102	28	1.499	0.68
GE50FW2RS	1.969	50	3.543	90	2.205	56	1.417	36	3.087	1.4
GE60FW2RS	2.362	60	4.134	105	2.480	63	1.575	40	4.41	2
GE70FW2RS	2.756	70	4.724	120	2.756	70	1.772	45	6.395	2.9
GE80FW2RS	3.150	80	5.118	130	2.953	75	1.969	50	7.718	3.5
GE90FW2RS	3.543	90	5.906	150	3.347	85	2.165	55	11.91	5.4
GE100FW2RS	3.937	100	6.299	160	3.347	85	2.165	55	13.01	5.9
GE110FW2RS	4.331	110	7.087	180	3.937	100	2.756	70	21.39	9.7
GE120FW2RS	4.724	120	8.268	210	4.528	115	2.756	70	33.08	15
GE140FW2RS	5.512	140	9.055	230	5.118	130	3.150	80	40.79	18.5
GE160FW2RS	6.299	160	10.236	260	5.315	135	3.150	80	55.13	25
GE180FW2RS	7.087	180	11.417	290	6.102	155	3.937	100	78.28	35.5
GE200FW2RS	7.874	200	12.598	320	6.496	165	3.937	100	99.23	45
GE220FW2RS	8.661	220	13.386	340	6.890	175	3.937	100	112.46	51
GE240FW2RS	9.449	240	14.567	370	7.480	190	4.331	110	141.12	64
GE260FW2RS	10.236	260	15.748	400	8.071	205	4.724	120	178.61	81
GE280FW2RS	11.024	280	16.929	430	8.268	210	4.724	120	207.27	94

Elges
Radial Spherical Plain Bearings
GE..FW, GE..FW-2RS SERIES

- Metric
- DIN 648, dimension series G – ISO 6124/1
- Sliding contact surfaces: hard chromium/PTFE
- Matching dimensions with series GE..UK

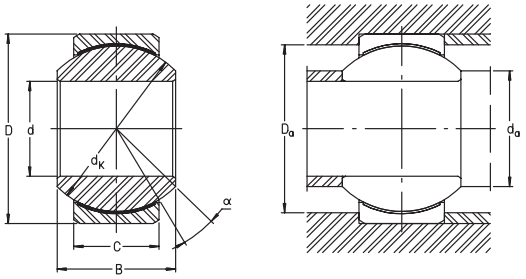


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C lbf	C kN	C_0 lbf	C_0 kN	d_k inch	d_k mm	ALPHA deg	d_a max. inch	d_a max. mm	D_a min. inch	D_a min. mm	PART NUMBER
1,320	5.85	3,300	14.6	0.512	13	21	0.366	9.3	0.492	12.5	GE6FW
1,950	8.65	4,850	21.6	0.630	16	21	0.457	11.6	0.610	15.5	GE8FW
2,550	11.4	6,400	28.5	0.709	18	18	0.528	13.4	0.689	17.5	GE10FW
3,950	17.6	9,900	44	0.866	22	18	0.630	16	0.827	21	GE12FW
5,000	22.4	12,600	56	0.984	25	16	0.756	19.2	0.945	24	GE15FW
7,100	31.5	17,500	78	1.142	29	19	0.827	21	1.083	27.5	GE17FW
11,500	51	28,500	127	1.398	35.5	17	0.992	25.2	1.299	33	GE20FW
14,700	65.5	37,500	166	1.602	40.7	17	1.161	29.5	1.496	38	GE25FW
25,000	112	50,000	224	1.850	47	17	1.354	34.4	1.752	44.5	GE30FW2RS
31,500	140	63,000	280	2.087	53	16	1.563	39.7	2.008	51	GE35FW2RS
40,500	180	81,000	360	2.362	60	17	1.760	44.7	2.244	57	GE40FW2RS
49,500	220	99,000	440	2.598	66	15	1.969	50	2.480	63	GE45FW2RS
78,000	345	156,000	695	3.150	80	17	2.248	57.1	2.953	75	GE50FW2RS
99,000	440	198,000	880	3.622	92	17	2.638	67	3.425	87	GE60FW2RS
128,000	570	255,000	1140	4.134	105	16	3.079	78.2	3.898	99	GE70FW2RS
156,000	695	310,000	1370	4.528	115	14	3.429	87.1	4.252	108	GE80FW2RS
194,000	865	390,000	1730	5.118	130	15	3.870	98.3	4.843	123	GE90FW2RS
209,000	930	420,000	1860	5.512	140	14	4.378	111.2	5.276	134	GE100FW2RS
300,000	1340	610,000	2700	6.299	160	12	4.913	124.8	5.906	150	GE110FW2RS
335,000	1500	670,000	3000	7.087	180	16	5.449	138.4	6.811	173	GE120FW2RS
435,000	1930	850,000	3800	7.874	200	16	5.980	151.9	7.520	191	GE140FW2RS
485,000	2160	970,000	4300	8.858	225	16	7.087	180	8.622	219	GE160FW2RS
670,000	3000	1,350,000	6000	9.843	250	14	7.721	196.1	9.409	239	GE180FW2RS
750,000	3350	1,470,000	6550	10.827	275	15	8.661	220	10.512	267	GE200FW2RS
810,000	3600	1,620,000	7200	11.811	300	16	9.591	243.6	11.614	295	GE220FW2RS
970,000	4300	1,940,000	8650	12.795	325	15	10.378	263.6	12.559	319	GE240FW2RS
1,120,000	5000	2,250,000	10000	13.780	350	15	11.165	283.6	13.465	342	GE260FW2RS
1,210,000	5400	2,430,000	10800	14.764	375	15	12.228	310.6	14.567	370	GE280FW2RS

Elges
Radial Spherical Plain Bearings
GE..PW SERIES

- Metric
- DIN 648, dimension series K
- Maintenance free
- Sliding contact surfaces: steel/PTFE

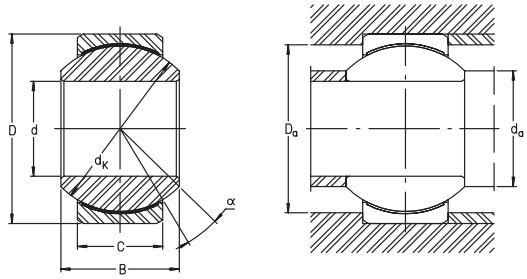


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PART NUMBER	d inch	d mm	D inch	D mm	B inch	B mm	C inch	C mm	WGT. lbs	WGT kg
GE5PW	0.197	5	0.512	13	0.315	8	0.236	6	0.013	0.006
GE6PW	0.236	6	0.630	16	0.354	9	0.266	6.75	0.022	0.01
GE8PW	0.315	8	0.748	19	0.472	12	0.354	9	0.04	0.018
GE10PW	0.394	10	0.866	22	0.551	14	0.413	10.5	0.06	0.027
GE12PW	0.472	12	1.024	26	0.630	16	0.472	12	0.095	0.043
GE14PW	0.551	14	1.102	28	0.748	19	0.532	13.5	0.121	0.055
GE16PW	0.630	16	1.260	32	0.827	21	0.591	15	0.176	0.08
GE18PW	0.709	18	1.378	35	0.906	23	0.650	16.5	0.221	0.1
GE20PW	0.787	20	1.575	40	0.984	25	0.709	18	0.331	0.15
GE22PW	0.866	22	1.654	42	1.102	28	0.787	20	0.397	0.18
GE25PW	0.984	25	1.850	47	1.221	31	0.866	22	0.529	0.24
GE30PW	1.181	30	2.165	55	1.457	37	0.984	25	0.838	0.38

Elges
Radial Spherical Plain Bearings
GE..PW SERIES

- Metric
- DIN 648, dimension series K
- Maintenance free
- Sliding contact surfaces: steel/PTFE



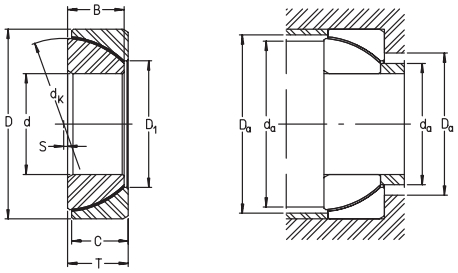
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C lbf	C kN	C_0 lbf	C_0 kN	d_k inch	d_k mm	ALPHA deg	d_a max. inch	d_a max. mm	D_a min. inch	D_a min. mm	PART NUMBER
1,350	6	3,350	15	0.438	11.112	13	0.303	7.7	0.386	9.8	GE5PW
1,720	7.65	4,350	19.3	0.500	12.7	13	0.350	8.9	0.453	11.5	GE6PW
2,900	12.9	7,200	32	0.625	15.875	14	0.406	10.3	0.551	14	GE8PW
4,050	18	10,100	45	0.750	19.05	13	0.508	12.9	0.669	17	GE10PW
5,400	24	13,500	60	0.875	22.225	13	0.606	15.4	0.768	19.5	GE12PW
7,000	31	17,200	76.5	1.000	25.4	16	0.661	16.8	0.886	22.5	GE14PW
8,800	39	21,700	96.5	1.125	28.575	15	0.760	19.3	1.004	25.5	GE16PW
10,700	47.5	26,500	118	1.250	31.75	15	0.858	21.8	1.122	28.5	GE18PW
12,800	57	31,500	140	1.375	34.925	14	0.957	24.3	1.240	31.5	GE20PW
15,300	68	38,000	170	1.500	38.1	15	1.016	25.8	1.339	34	GE22PW
19,100	85	47,500	212	1.687	42.85	15	1.161	29.5	1.516	38.5	GE25PW
25,500	114	64,000	285	2.000	50.8	17	1.370	34.8	1.811	46	GE30PW

Elges Angular Contact Spherical Plain Bearings

GE..SW SERIES

- Sliding contact surfaces: hard chromium/PTFE



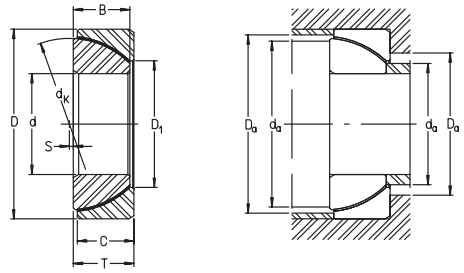
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PART NUMBER	d inch	d mm	D inch	D mm	T inch	T mm	WGT. lbs	WGT kg	C lbf	C kN	C_0 lbf	C_0 kN	d_k inch	d_k mm	D_1 inch	D_1 mm
GE25SW	0.984	25	1.850	47	0.591	15	0.309	0.14	16,000	71	31,500	140	1.673	42.5	1.236	31.4
GE28SW	1.102	28	2.047	52	0.630	16	0.397	0.18	20,200	90	40,500	180	1.850	47	1.406	35.7
GE30SW	1.181	30	2.165	55	0.669	17	0.485	0.22	21,400	95	42,500	190	1.969	50	1.421	36.1
GE32SW	1.260	32	2.284	58	0.669	17	0.529	0.24	22,900	102	46,000	204	2.087	53	1.547	39.3
GE35SW	1.378	35	2.441	62	0.709	18	0.617	0.28	26,000	116	52,000	232	2.205	56	1.669	42.4
GE40SW	1.575	40	2.677	68	0.748	19	0.75	0.34	30,000	134	61,000	270	2.362	60	1.843	46.8
GE45SW	1.772	45	2.953	75	0.787	20	0.948	0.43	36,000	160	72,000	320	2.598	66	2.083	52.9
GE50SW	1.969	50	3.150	80	0.787	20	1.036	0.47	39,500	176	80,000	355	2.913	74	2.327	59.1
GE55SW	2.165	55	3.543	90	0.906	23	1.544	0.7	49,500	220	99,000	440	3.150	80	2.441	62
GE60SW	2.362	60	3.740	95	0.906	23	1.654	0.75	54,000	240	108,000	480	3.386	86	2.681	68.1
GE65SW	2.559	65	3.937	100	0.906	23	1.764	0.8	58,000	260	117,000	520	3.622	92	2.976	75.6
GE70SW	2.756	70	4.331	110	0.984	25	2.205	1	71,000	315	142,000	630	4.016	102	3.236	82.2
GE80SW	3.150	80	4.921	125	1.142	29	3.528	1.6	84,000	375	169,000	750	4.528	115	3.563	90.5
GE90SW	3.543	90	5.512	140	1.260	32	4.851	2.2	108,000	480	217,000	965	5.118	130	4.067	103.3
GE100SW	3.937	100	5.906	150	1.260	32	5.292	2.4	117,000	520	234,000	1040	5.512	140	4.500	114.3
GE110SW	4.331	110	6.693	170	1.496	38	8.16	3.7	160,000	710	320,000	1430	6.299	160	4.953	125.8
GE120SW	4.724	120	7.087	180	1.496	38	8.82	4	172,000	765	345,000	1530	6.693	170	5.331	135.4
GE130SW	5.118	130	7.874	200	1.772	45	13.23	6	217,000	965	435,000	1930	7.480	190	5.827	148
GE140SW	5.512	140	8.268	210	1.772	45	14.11	6.4	229,000	1020	460,000	2040	7.874	200	6.323	160.6
GE150SW	5.906	150	8.858	225	1.890	48	17.42	7.9	265,000	1180	530,000	2360	8.386	213	6.728	170.9
GE160SW	6.299	160	9.449	240	2.008	51	21.17	9.6	300,000	1340	610,000	2700	8.858	225	7.142	181.4
GE170SW	6.693	170	10.236	260	2.244	57	28.67	13	375,000	1660	750,000	3350	9.843	250	7.650	194.3
GE180SW	7.087	180	11.024	280	2.520	64	38.59	17.5	450,000	2000	900,000	4000	10.236	260	8.091	205.5
GE190SW	7.480	190	11.417	290	2.520	64	39.69	18	470,000	2080	930,000	4150	10.827	275	8.339	211.8
GE200SW	7.874	200	12.205	310	2.756	70	50.72	23	530,000	2360	1,070,000	4750	11.417	290	9.024	229.2

Elges Angular Contact Spherical Plain Bearings

GE..SW SERIES

- Sliding contact surfaces: hard chromium/PTFE



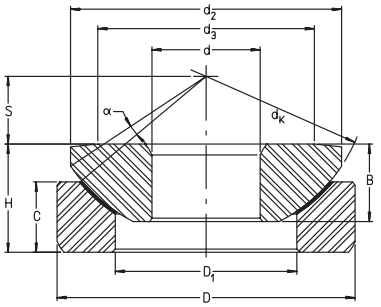
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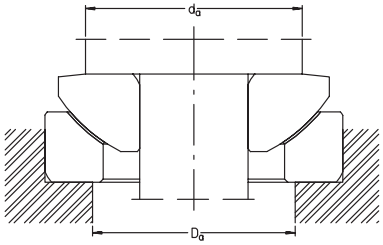
B inch	B mm	C inch	C mm	s inch	s mm	d_a max. inch	d_a max. mm	d_b max. inch	d_b max. mm	D_a min. inch	D_a min. mm	D_b min. inch	D_b min. mm	PART NUMBER
0.551	14	0.551	14	0.039	1	1.185	30.1	1.555	39.5	1.339	34	1.693	43	GE25SW
0.591	15	0.591	15	0.039	1	1.354	34.4	1.654	42	1.575	40	1.870	47.5	GE28SW
0.630	16	0.630	16	0.079	2	1.362	34.6	1.772	45	1.595	40.5	1.988	50.5	GE30SW
0.630	16	0.630	16	0.098	2.5	1.492	37.9	1.870	47.5	1.732	44	2.126	54	GE32SW
0.669	17	0.669	17	0.079	2	1.618	41.1	1.969	50	1.850	47	2.244	57	GE35SW
0.709	18	0.709	18	0.059	1.5	1.791	45.5	2.126	54	2.047	52	2.402	61	GE40SW
0.748	19	0.748	19	0.059	1.5	2.035	51.7	2.362	60	2.284	58	2.638	67	GE45SW
0.748	19	0.748	19	0.158	4	2.280	57.9	2.638	67	2.559	65	2.953	75	GE50SW
0.866	22	0.866	22	0.158	4	2.390	60.7	2.795	71	2.756	70	3.189	81	GE55SW
0.866	22	0.866	22	0.197	5	2.634	66.9	3.032	77	2.992	76	3.425	87	GE60SW
0.866	22	0.866	22	0.197	5	2.929	74.4	3.268	83	3.307	84	3.661	93	GE65SW
0.945	24	0.945	24	0.276	7	3.185	80.9	3.622	92	3.543	90	4.095	104	GE70SW
1.063	27	1.063	27	0.394	10	3.465	88	4.095	104	3.898	99	4.606	117	GE80SW
1.181	30	1.181	30	0.433	11	3.969	100.8	4.646	118	4.409	112	5.197	132	GE90SW
1.181	30	1.181	30	0.472	12	4.409	112	5.039	128	4.843	123	5.630	143	GE100SW
1.417	36	1.417	36	0.591	15	4.850	123.2	5.748	146	5.315	135	6.378	162	GE110SW
1.417	36	1.417	36	0.669	17	5.232	132.9	6.102	155	5.709	145	6.772	172	GE120SW
1.654	42	1.654	42	0.787	20	5.665	143.9	6.850	174	6.221	158	7.559	192	GE130SW
1.654	42	1.654	42	0.787	20	6.177	156.9	7.244	184	6.732	171	7.953	202	GE140SW
1.772	45	1.772	45	0.827	21	6.579	167.1	7.638	194	7.244	184	8.504	216	GE150SW
1.890	48	1.890	48	0.827	21	6.996	177.7	8.110	206	7.677	195	8.976	228	GE160SW
2.126	54	2.126	54	1.063	27	7.496	190.4	8.976	228	8.189	208	9.961	253	GE170SW
2.402	61	2.402	61	0.827	21	7.941	201.7	9.449	240	8.661	220	10.354	263	GE180SW
2.402	61	2.402	61	1.142	29	8.185	207.9	9.921	252	8.898	226	10.945	278	GE190SW
2.598	66	2.598	66	1.024	26	8.823	224.1	10.551	268	9.606	244	11.535	293	GE200SW

Elges Axial Spherical Plain Bearings

GE..AW SERIES

- Sliding contact surfaces: hard chromium/PTFE





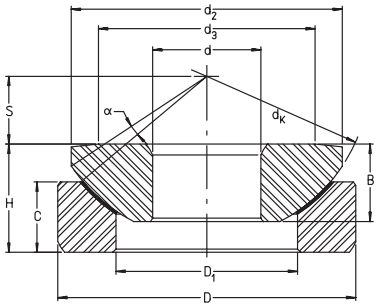
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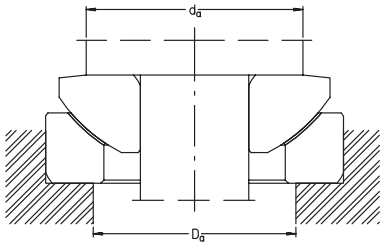
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	inch	mm	inch	mm	inch	mm	lbs	kg	lbf	kN	lbf	kN	inch	mm	inch	mm
GE10AW	0.394	10	1.181	30	0.374	9.5	0.088	0.04	8.1	36	16.2	72	1.260	32	1.083	27.5
GE12AW	0.472	12	1.378	35	0.512	13	0.154	0.07	11	49	22	98	1.457	37	1.260	32
GE15AW	0.591	15	1.654	42	0.591	15	0.265	0.12	17.5	78	35	156	1.772	45	1.532	38.9
GE17AW	0.669	17	1.850	47	0.630	16	0.353	0.16	19.8	88	39.5	176	1.969	50	1.709	43.4
GE20AW	0.787	20	2.165	55	0.787	20	0.551	0.25	25	112	50	224	2.362	60	1.969	50
GE25AW	0.984	25	2.441	62	0.886	22.5	0.838	0.38	43.5	193	88	390	2.598	66	2.264	57.5
GE30AW	1.181	30	2.953	75	1.024	26	1.433	0.65	57	255	115	510	3.150	80	2.717	69
GE35AW	1.378	35	3.543	90	1.102	28	2.205	1	88	390	175	780	3.858	98	3.307	84
GE40AW	1.575	40	4.134	105	1.260	32	3.528	1.6	126	560	250	1120	4.488	114	3.858	98
GE45AW	1.772	45	4.724	120	1.437	36.5	5.292	2.4	165	735	330	1460	5.118	130	4.409	112
GE50AW	1.969	50	5.118	130	1.673	42.5	7.277	3.3	220	980	440	1960	5.512	140	4.823	122.5
GE60AW	2.362	60	5.906	150	1.772	45	9.923	4.5	247	1100	495	2200	6.299	160	5.512	140
GE70AW	2.756	70	6.299	160	1.969	50	12.13	5.5	270	1200	540	2400	6.693	170	5.886	149.5
GE80AW	3.150	80	7.087	180	1.969	50	15.44	7	350	1560	700	3100	7.638	194	6.614	168
GE100AW	3.937	100	8.268	210	2.323	59	23.15	10.5	405	1800	810	3600	8.661	220	7.697	195.5
GE120AW	4.724	120	9.055	230	2.520	64	28.67	13	420	1860	840	3750	9.646	245	8.425	214
GE140AW	5.512	140	10.236	260	2.835	72	39.69	18	550	2450	1100	4900	10.709	272	9.606	244
GE160AW	6.299	160	11.417	290	3.032	77	50.72	23	640	2850	1280	5700	12.205	310	10.709	272
GE180AW	7.087	180	12.598	320	3.386	86	68.36	31	720	3200	1440	6400	13.189	335	11.811	300
GE200AW	7.874	200	13.386	340	3.425	87	74.97	34	800	3550	1600	7100	14.095	358	12.638	321
GE220AW	8.661	220	14.567	370	3.819	97	98.12	44.5	990	4400	1980	8800	15.276	388	13.780	350
GE240AW	9.449	240	15.748	400	4.055	103	121.28	55	1170	5200	2340	10400	16.535	420	15.039	382
GE260AW	10.236	260	16.929	430	4.528	115	152.15	69	1210	5400	2430	10800	17.677	449	16.102	409
GE280AW	11.024	280	18.110	460	4.331	110	180.81	82	1910	8500	3800	17000	18.898	480	17.520	445
GE300AW	11.811	300	18.898	480	4.331	110	191.84	87	1940	8650	3900	17300	19.291	490	18.110	460
GE320AW	12.598	320	20.472	520	4.567	116	240.35	109	2380	10600	4750	21200	21.260	540	19.685	500
GE340AW	13.386	340	21.260	540	4.567	116	251.37	114	2650	11800	5300	23600	21.654	550	20.079	510
GE360AW	14.173	360	22.047	560	4.921	125	284.45	129	2850	12700	5700	25500	22.638	575	21.063	535

Elges Axial Spherical Plain Bearings

GE..AW SERIES

- Sliding contact surfaces: hard chromium/PTFE





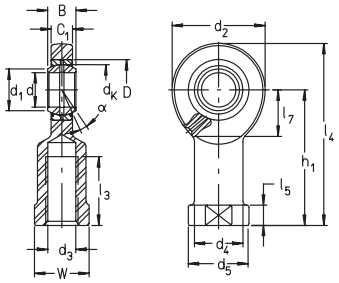
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

d_3 inch	d_3 mm	D_1 inch	D_1 mm	B inch	B mm	C inch	C mm	s inch	s mm	ALPHA deg	d_a inch	d_a mm	D_a min. inch	D_a min. mm	PART NUMBER
0.827	21	0.650	16.5	0.311	7.9	0.236	6	0.276	7	10	0.827	21	0.728	18.5	GE10AW
0.945	24	0.768	19.5	0.366	9.3	0.354	9	0.315	8	9	0.945	24	0.847	21.5	GE12AW
1.142	29	0.945	24	0.421	10.7	0.433	11	0.394	10	7	1.142	29	1.024	26	GE15AW
1.339	34	1.102	28	0.453	11.5	0.453	11.5	0.433	11	6	1.339	34	1.201	30.5	GE17AW
1.575	40	1.319	33.5	0.563	14.3	0.512	13	0.492	12.5	6	1.575	40	1.496	38	GE20AW
1.772	45	1.358	34.5	0.630	16	0.669	17	0.551	14	7	1.772	45	1.535	39	GE25AW
2.205	56	1.732	44	0.709	18	0.768	19.5	0.689	17.5	6	2.205	56	1.929	49	GE30AW
2.598	66	2.047	52	0.866	22	0.787	20	0.866	22	6	2.598	66	2.244	57	GE35AW
3.071	78	2.323	59	1.063	27	0.866	22	0.965	24.5	6	3.071	78	2.520	64	GE40AW
3.504	89	2.677	68	1.221	31	0.984	25	1.083	27.5	6	3.504	89	2.913	74	GE45AW
3.858	98	2.717	69	1.319	33.5	1.260	32	1.181	30	5	3.858	98	2.953	75	GE50AW
4.252	108	3.386	86	1.457	37	1.299	33	1.378	35	7	4.252	108	3.622	92	GE60AW
4.764	121	3.740	95	1.575	40	1.417	36	1.378	35	6	4.764	121	4.016	102	GE70AW
5.118	130	4.252	108	1.654	42	1.417	36	1.673	42.5	6	5.118	130	4.528	115	GE80AW
6.102	155	5.236	133	1.969	50	1.654	42	1.772	45	7	6.102	155	5.551	141	GE100AW
6.693	170	6.063	154	2.047	52	1.772	45	2.067	52.5	8	6.693	170	6.378	162	GE120AW
7.795	198	6.929	176	2.402	61	1.969	50	2.067	52.5	6	7.795	198	7.362	187	GE140AW
8.386	213	7.835	199	2.559	65	2.047	52	2.559	65	7	8.386	213	8.307	211	GE160AW
9.449	240	8.819	224	2.756	70	2.362	60	2.658	67.5	8	9.449	240	9.291	236	GE180AW
10.433	265	9.685	246	2.913	74	2.362	60	2.756	70	8	10.433	265	10.197	259	GE200AW
11.378	289	10.433	265	3.228	82	2.638	67	2.953	75	7	11.378	289	10.984	279	GE220AW
12.362	314	11.575	294	3.425	87	2.874	73	3.051	77.5	6	12.362	314	12.165	309	GE240AW
13.228	336	12.480	317	3.740	95	3.150	80	3.248	82.5	7	13.228	336	13.071	332	GE260AW
14.409	366	13.268	337	3.937	100	3.347	85	3.150	80	4	14.409	366	13.976	355	GE280AW
15.276	388	14.016	356	3.937	100	3.543	90	3.150	80	3.5	15.276	388	14.764	375	GE300AW
15.945	405	14.961	380	4.134	105	3.583	91	3.740	95	4	15.945	405	15.827	402	GE320AW
17.008	432	14.961	380	4.134	105	3.583	91	3.740	95	4	17.008	432	15.827	402	GE340AW
17.795	452	15.748	400	4.528	115	3.740	95	3.740	95	4	17.795	452	16.614	422	GE360AW

Elges Rod Ends

GIR..DO, GIR..DO-2RS SERIES

- Metric
- DIN 648, dimension series E Form B – ISO 6126
- Sliding contact surfaces: steel/steel
- Left hand thread is available on shank, order by replacing “R” with “L”
- Internal thread



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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PART NUMBER	d inch	d mm	D inch	D mm	B inch	B mm	C lbf	C kN	C_0 lbf	C_0 kN	WGT. lbs	WGT kg	d_k inch	d_k mm	d_1 inch	d_1 mm	d_2 inch	d_2 mm	d_3
GIR6DO	0.236	6	0.551	14	0.236	6	760	3.4	1830	8.15	0.046	0.021	0.394	10	0.315	8	0.827	21	M6
GIR8DO	0.315	8	0.630	16	0.315	8	1240	5.5	2900	12.9	0.086	0.039	0.512	13	0.402	10.2	0.945	24	M8
GIR10DO	0.394	10	0.748	19	0.354	9	1830	8.15	3950	17.6	0.135	0.061	0.630	16	0.520	13.2	1.142	29	M10
GIR12DO	0.472	12	0.866	22	0.394	10	2430	10.8	5500	24.5	0.212	0.096	0.709	18	0.587	14.9	1.339	34	M12
GIR15DO	0.591	15	1.024	26	0.472	12	3800	17	8100	36	0.397	0.18	0.866	22	0.724	18.4	1.575	40	M14
GIR17DO	0.669	17	1.181	30	0.551	14	4750	21.2	10100	45	0.485	0.22	0.984	25	0.815	20.7	1.811	46	M16
GIR20DO	0.787	20	1.378	35	0.630	16	6700	30	13500	60	0.772	0.35	1.142	29	0.949	24.1	2.087	53	M20X1.5
GIR25DO2RS	0.984	25	1.654	42	0.787	20	10600	47	18700	83	1.411	0.64	1.398	35.5	1.154	29.3	2.520	64	M24X2
GIR30DO2RS	1.181	30	1.850	47	0.866	22	13900	62	24700	110	2.051	0.93	1.602	40.7	1.347	34.2	2.874	73	M30X2
GIR35DO2RS	1.378	35	2.165	55	0.984	25	18000	80	33000	146	2.867	1.3	1.850	47	1.563	39.7	3.228	82	M36X3
GIR40DO2RS	1.575	40	2.441	62	1.102	28	22500	100	40500	180	4.41	2	2.087	53	1.772	45	3.622	92	M39X3
GIR45DO2RS	1.772	45	2.677	68	1.260	32	28500	127	54000	240	5.513	2.5	2.362	60	1.996	50.7	4.016	102	M42X3
GIR50DO2RS	1.969	50	2.953	75	1.378	35	35000	156	65000	290	7.718	3.5	2.598	66	2.201	55.9	4.409	112	M45X3
GIR60DO2RS	2.362	60	3.543	90	1.732	44	55000	245	101000	450	12.13	5.5	3.150	80	2.630	66.8	5.315	135	M52X3
GIR70DO2RS	2.756	70	4.134	105	1.929	49	71000	315	137000	610	18.96	8.6	3.622	92	3.063	77.8	6.299	160	M56X4
GIR80DO2RS	3.150	80	4.724	120	2.165	55	90000	400	169000	750	26.46	12	4.134	105	3.520	89.4	7.087	180	M64X4

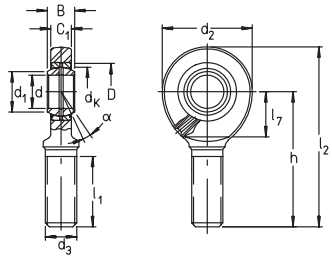
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PART NUMBER	d_4 inch	d_4 mm	h_1 inch	h_1 mm	C_1 inch	C_1 mm	ALPHA deg	l_3 inch	l_3 mm	l_4 inch	l_4 mm	l_5 inch	l_5 mm	l_7 inch	l_7 mm	d_5 inch	d_5 mm	W inch	W mm
GIR6DO	0.394	10	1.181	30	0.173	4.4	13	0.433	11	1.595	40.5	0.197	5	0.472	12	0.512	13	0.433	11
GIR8DO	0.492	12.5	1.417	36	0.236	6	15	0.591	15	1.890	48	0.197	5	0.551	14	0.630	16	0.551	14
GIR10DO	0.591	15	1.693	43	0.276	7	12	0.787	20	2.264	57.5	0.256	6.5	0.591	15	0.748	19	0.669	17
GIR12DO	0.689	17.5	1.969	50	0.315	8	11	0.906	23	2.638	67	0.256	6.5	0.709	18	0.866	22	0.748	19
GIR15DO	0.827	21	2.402	61	0.394	10	8	1.181	30	3.189	81	0.315	8	0.787	20	1.024	26	0.866	22
GIR17DO	0.945	24	2.638	67	0.433	11	10	1.339	34	3.543	90	0.394	10	0.906	23	1.181	30	1.063	27
GIR20DO	1.083	27.5	3.032	77	0.512	13	9	1.575	40	4.075	103.5	0.394	10	1.063	27	1.378	35	1.260	32
GIR25DO2RS	1.319	33.5	3.701	94	0.669	17	7	1.890	48	4.961	126	0.472	12	1.260	32	1.654	42	1.417	36
GIR30DO2RS	1.575	40	4.331	110	0.748	19	6	2.205	56	5.768	146.5	0.591	15	1.457	37	1.969	50	1.614	41
GIR35DO2RS	1.850	47	4.921	125	0.827	21	6	2.362	60	6.535	166	0.591	15	1.654	42	2.284	58	1.969	50
GIR40DO2RS	2.047	52	5.591	142	0.906	23	7	2.559	65	7.402	188	0.709	18	1.890	48	2.559	65	2.165	55
GIR45DO2RS	2.284	58	5.709	145	1.063	27	7	2.559	65	7.717	196	0.787	20	2.047	52	2.756	70	2.362	60
GIR50DO2RS	2.441	62	6.299	160	1.181	30	6	2.677	68	8.504	216	0.787	20	2.362	60	2.953	75	2.559	65
GIR60DO2RS	2.756	70	6.890	175	1.496	38	6	2.756	70	9.547	242.5	0.787	20	2.953	75	3.465	88	2.953	75
GIR70DO2RS	3.150	80	7.874	200	1.654	42	6	3.150	80	11.024	280	0.787	20	3.425	87	3.858	98	3.347	85
GIR80DO2RS	3.740	95	9.055	230	1.850	47	6	3.347	85	12.598	320	0.984	25	3.937	100	4.331	110	3.937	100

Elges Rod Ends

GAR..DO, GAR..DO-2RS SERIES

- Metric
- DIN 648, dimension series E Form A – ISO 6126
- Sliding contact surfaces: steel/steel
- Left hand thread is available on shank, order by replacing “R” with “L”
- External thread



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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PART NUMBER	d inch	d mm	D inch	D mm	B inch	B mm	C lbf	C kN	C_0 lbf	C_0 kN	WGT. lbs	WGT kg	d_k inch	d_k mm	d_1 inch	d_1 mm
GAR6DO	0.236	6	0.551	14	0.236	6	760	3.4	1830	8.15	0.037	0.017	0.394	10	0.315	8
GAR8DO	0.315	8	0.630	16	0.315	8	1240	5.5	2900	12.9	0.064	0.029	0.512	13	0.402	10.2
GAR10DO	0.394	10	0.748	19	0.354	9	1830	8.15	3950	17.6	0.112	0.051	0.630	16	0.520	13.2
GAR12DO	0.472	12	0.866	22	0.394	10	2430	10.8	5500	24.5	0.19	0.086	0.709	18	0.587	14.9
GAR15DO	0.591	15	1.024	26	0.472	12	3800	17	8100	36	0.309	0.14	0.866	22	0.724	18.4
GAR17DO	0.669	17	1.181	30	0.551	14	4750	21.2	10100	45	0.419	0.19	0.984	25	0.815	20.7
GAR20DO2RS	0.787	20	1.378	35	0.630	16	6700	30	13500	60	0.684	0.31	1.142	29	0.949	24.1
GAR25DO2RS	0.984	25	1.654	42	0.787	20	10800	48	18700	83	1.235	0.56	1.398	35.5	1.154	29.3
GAR30DO2RS	1.181	30	1.850	47	0.866	22	13900	62	24700	110	1.962	0.89	1.602	40.7	1.347	34.2
GAR35DO2RS	1.378	35	2.165	55	0.984	25	18000	80	33000	146	3.087	1.4	1.850	47	1.563	39.7
GAR40DO2RS	1.575	40	2.441	62	1.102	28	22500	100	40500	180	3.969	1.8	2.087	53	1.772	45
GAR45DO2RS	1.772	45	2.677	68	1.260	32	28500	127	54000	240	5.733	2.6	2.362	60	1.996	50.7
GAR50DO2RS	1.969	50	2.953	75	1.378	35	35000	156	65000	290	7.497	3.4	2.598	66	2.201	55.9
GAR60DO2RS	2.362	60	3.543	90	1.732	44	55000	245	101000	450	13.01	5.9	3.150	80	2.630	66.8
GAR70DO2RS	2.756	70	4.134	105	1.929	49	71000	315	137000	610	18.08	8.2	3.622	92	3.063	77.8
GAR80DO2RS	3.150	80	4.724	120	2.165	55	90000	400	169000	750	26.46	12	4.134	105	3.520	89.4

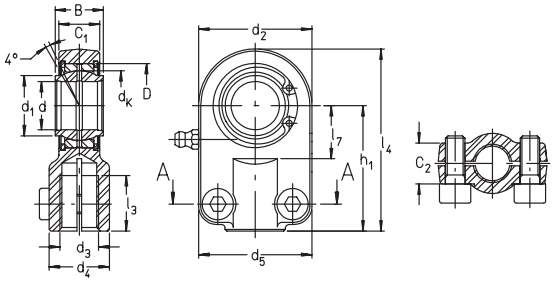
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PART NUMBER	d_2 inch	d_2 mm	d_3	h inch	h mm	C_1 inch	C_1 mm	ALPHA deg	l_1 inch	l_1 mm	l_2 inch	l_2 mm	l_7 inch	l_7 mm
GAR6DO	0.827	21	M6	1.417	36	0.173	4.4	13	0.709	18	1.8307	46.5	0.472	12
GAR8DO	0.945	24	M8	1.654	42	0.236	6	15	0.866	22	2.126	54	0.551	14
GAR10DO	1.142	29	M10	1.890	48	0.276	7	12	1.024	26	2.4606	62.5	0.591	15
GAR12DO	1.339	34	M12	2.126	54	0.315	8	11	1.102	28	2.7953	71	0.709	18
GAR15DO	1.575	40	M14	2.480	63	0.394	10	8	1.339	34	3.2677	83	0.787	20
GAR17DO	1.811	46	M16	2.717	69	0.433	11	10	1.417	36	3.622	92	0.906	23
GAR20DO2RS	2.087	53	M20X1.5	3.071	78	0.512	13	9	1.693	43	4.1142	104.5	1.063	27
GAR25DO2RS	2.520	64	M24X2	3.701	94	0.669	17	7	2.087	53	16.7717	426	1.260	32
GAR30DO2RS	2.874	73	M30X2	4.331	110	0.748	19	6	2.559	65	5.7677	146.5	1.457	37
GAR35DO2RS	3.228	82	M36X3	5.512	140	0.827	21	6	3.228	82	7.126	181	1.654	42
GAR40DO2RS	3.622	92	M39X3	5.906	150	0.906	23	7	3.386	86	7.7165	196	1.890	48
GAR45DO2RS	4.016	102	M42X3	6.417	163	1.063	27	7	3.701	94	8.4252	214	2.047	52
GAR50DO2RS	4.409	112	M45X3	7.284	185	1.181	30	6	4.213	107	9.4882	241	2.362	60
GAR60DO2RS	5.315	135	M52X3	8.268	210	1.496	38	6	4.528	115	10.9252	277.5	2.953	75
GAR70DO2RS	6.299	160	M56X4	9.252	235	1.654	42	6	4.921	125	12.4016	315	3.307	84
GAR80DO2RS	7.087	180	M64X4	10.630	270	1.850	47	6	5.512	140	14.1732	360	3.937	100

Elges Hydraulic Rod Ends

GIHNK..LO SERIES

- DIN 24338 – ISO 6982 series
- Sliding contact surfaces: steel/steel
- With thread clamping screws



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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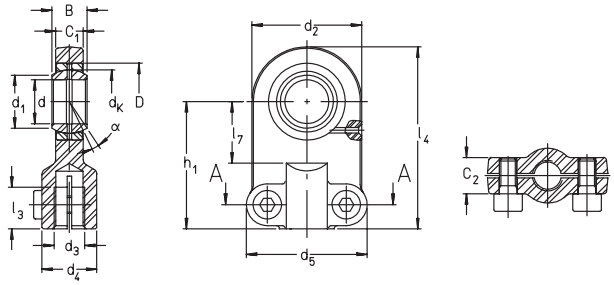
PART NUMBER	d inch	d mm	D inch	D mm	B inch	B mm	C lbf	C kN	C_0 lbf	C_0 kN	WGT. lbs	WGT kg	d_k inch	d_k mm	d_1 inch	d_1 mm	d_2 inch	d_2 mm	d_3
GIHNK 12 LO	0.472	12	0.866	22	0.472	12	2,430	10.8	5,500	24.5	0.221	0.1	0.709	18	0.610	15.5	1.260	32	M12X1.25
GIHNK 16 LO	0.630	16	1.102	28	0.630	16	3,950	17.6	8,200	36.5	0.441	0.2	0.906	23	0.787	20	1.575	40	M14X1.5
GIHNK 20 LO	0.787	20	1.378	35	0.787	20	6,700	30	10,800	48	0.882	0.4	1.142	29	0.984	25	1.850	47	M16X1.5
GIHNK 25 LO	0.984	25	1.654	42	0.984	25	10,800	48	17,500	78	1.455	0.66	1.398	35.5	1.201	30.5	2.284	58	M20X1.5
GIHNK 32 LO	1.260	32	2.047	52	1.260	32	15,100	67	25,500	114	2.646	1.2	1.732	44	1.496	38	2.756	70	M27X2
GIHNK 40 LO	1.575	40	2.441	62	1.575	40	22,500	100	46,000	204	4.631	2.1	2.087	53	1.811	46	3.504	89	M33X2
GIHNK 50 LO	1.969	50	2.953	75	1.969	50	35,000	156	70,000	310	9.702	4.4	2.598	66	2.244	57	4.252	108	M42X2
GIHNK 63 LO	2.480	63	3.740	95	2.480	63	57,000	255	97,000	430	16.76	7.6	3.268	83	2.815	71.5	5.197	132	M48X2
GIHNK 70 LO	2.756	70	4.134	105	2.756	70	71,000	315	121,000	540	20.95	9.5	3.622	92	3.110	79	6.102	155	M56X2
GIHNK 80 LO	3.150	80	4.724	120	3.150	80	90,000	400	156,000	695	31.97	14.5	4.134	105	3.583	91	6.614	168	M64X3
GIHNK 90 LO	3.543	90	5.118	130	3.543	90	110,000	490	169,000	750	37.49	17	4.528	115	3.898	99	7.284	185	M72X3
GIHNK 100 LO	3.937	100	5.906	150	3.937	100	137,000	610	238,000	1060	61.74	28	5.118	130	4.449	113	8.268	210	M80X3
GIHNK 110 LO	4.331	110	6.299	160	4.331	110	147,000	655	270,000	1200	70.56	32	5.512	140	4.882	124	9.252	235	M90X3
GIHNK 125 LO	4.921	125	7.087	180	4.921	125	214,000	950	320,000	1430	94.82	43	6.299	160	5.433	138	10.315	262	M100X3
GIHNK 160 LO	6.299	160	9.055	230	6.299	160	310,000	1370	495,000	2200	176.40	80	7.874	200	6.969	177	12.835	326	M125X4
GIHNK 200 LO	7.874	200	11.417	290	7.874	200	475,000	2120	820,000	3650	363.83	165	9.843	250	8.701	221	16.457	418	M160X4

CONTINUED FROM ABOVE

PART NUMBER	d_4 inch	d_4 mm	h_1 inch	h_1 mm	C_1 inch	C_1 mm	ALPHA deg	l_3 inch	l_3 mm	l_4 inch	l_4 mm	l_7 inch	l_7 mm	d_5 inch	d_5 mm	C_2 inch	C_2 mm	CLAMP BOLT	TORQUE Nm
GIHNK 12 LO	0.650	16.5	1.496	38	0.417	10.6	4	0.669	17	2.126	54	0.551	14	1.260	32	0.417	10.6	M5X12	8
GIHNK 16 LO	0.827	21	1.732	44	0.512	13	4	0.709	18	2.520	64	0.709	18	1.575	40	0.512	13	M6X16	13
GIHNK 20 LO	0.984	25	2.047	52	0.669	17	4	0.906	23	2.961	75.2	0.866	22	1.850	47	0.669	17	M8X20	32
GIHNK 25 LO	1.181	30	2.559	65	0.827	21	4	1.142	29	3.701	94	1.063	27	2.126	54	0.669	17	M8X20	32
GIHNK 32 LO	1.496	38	3.150	80	1.063	27	4	1.457	37	4.528	115	1.260	32	2.598	66	0.866	22	M10X25	64
GIHNK 40 LO	1.850	47	3.819	97	1.260	32	4	1.811	46	5.571	141.5	1.614	41	3.150	80	1.024	26	M10X25	64
GIHNK 50 LO	2.284	58	4.724	120	1.575	40	4	2.244	57	6.850	174	1.969	50	3.780	96	1.260	32	M12X30	110
GIHNK 63 LO	2.756	70	5.512	140	2.047	52	4	2.520	64	8.307	211	2.441	62	4.488	114	1.496	38	M12X35	80
GIHNK 70 LO	3.150	80	6.299	160	2.244	57	4	2.992	76	9.646	245	2.756	70	5.315	135	1.654	42	M16X40	195
GIHNK 80 LO	3.543	90	7.087	180	2.598	66	4	3.386	86	10.630	270	3.071	78	5.827	148	1.890	48	M16X45	195
GIHNK 90 LO	3.937	100	7.677	195	2.835	72	4	3.583	91	11.654	296	3.347	85	6.299	160	2.047	52	M16X50	195
GIHNK 100 LO	4.331	110	8.268	210	3.307	84	4	3.780	96	12.677	322	3.858	98	7.008	178	2.441	62	M20X60	385
GIHNK 110 LO	4.921	125	9.252	235	3.465	88	4	4.173	106	14.331	364	4.134	105	7.480	190	2.441	62	M20X60	385
GIHNK 125 LO	5.315	135	10.236	260	4.016	102	4	4.449	113	15.945	405	4.724	120	7.874	200	2.835	72	M20X70	385
GIHNK 160 LO	6.496	165	12.205	310	5.118	130	4	4.961	126	19.213	488	5.906	150	9.843	250	3.228	82	M24X80	660
GIHNK 200 LO	8.465	215	15.354	390	6.378	162	4	6.339	161	24.409	620	7.677	195	12.598	320	4.016	102	M30X100	1350

Elges Hydraulic Rod Ends
GIHOK..DO SERIES

- DIN 24 555 series
- Spherical plain bearing to DIN 648
- Sliding contact surfaces: steel/steel
- With thread clamping screws



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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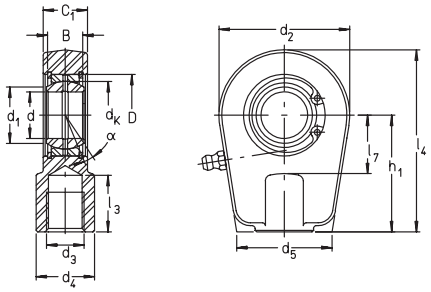
PART NUMBER	d inch	d mm	D inch	D mm	B inch	B mm	C lbf	C kN	C_0 lbf	C_0 kN	WGT. lbs	WGT kg	d_k inch	d_k mm	d_1 inch	d_1 mm	d_2 inch	d_2 mm	d_3
GIHO K 12 DO	0.472	12	0.866	22	0.394	10	2430	10.8	3800	17	0.331	0.15	0.709	18	0.591	15	1.260	32	M10X1.25
GIHO K 16 DO	0.630	16	1.181	30	0.551	14	4750	21.1	6400	28.5	0.551	0.25	0.984	25	0.787	20	1.654	42	M12X1.25
GIHO K 20 DO	0.787	20	1.378	35	0.630	16	6700	30	9600	42.5	0.948	0.43	1.142	29	0.945	24	1.969	50	M14X1.5
GIHO K 25 DO	0.984	25	1.654	42	0.787	20	10800	48	21800	97	1.61	0.73	1.398	35.5	1.142	29	1.654	42	M16X1.5
GIHO K 30 DO	1.181	30	1.850	47	0.866	22	13900	62	24300	108	2.867	1.3	1.602	40.7	1.339	34	2.992	76	M20X1.5
GIHO K 40 DO	1.575	40	2.441	62	1.102	28	22500	100	35000	156	5.072	2.3	2.087	53	1.772	45	3.780	96	M27X2
GIHO K 50 DO	1.969	50	2.953	75	1.378	35	35000	156	55000	245	9.702	4.4	2.598	66	2.165	55	4.567	116	M33X2

CONTINUED FROM ABOVE

PART NUMBER	d_4 inch	d_4 mm	h_1 inch	h_1 mm	C_1 inch	C_1 mm	ALPHA deg	l_3 inch	l_3 mm	l_4 inch	l_4 mm	l_7 inch	l_7 mm	d_5 inch	d_5 mm	C_2 inch	C_2 mm	CLAMP BOLT	TORQUE Nm
GIHO K 12 DO	0.669	17	1.654	42	0.315	8	3	0.591	15	2.284	58	0.709	18	1.575	40	0.512	13	M6	9.5
GIHO K 16 DO	0.827	21	1.890	48	0.433	11	3	0.669	17	2.717	69	0.866	22	1.772	45	0.512	13	M6	9.5
GIHO K 20 DO	0.984	25	2.284	58	0.512	13	3	0.748	19	3.268	83	1.102	28	2.165	55	0.669	17	M8	23
GIHO K 25 DO	1.181	30	2.677	68	0.669	17	3	0.906	23	3.898	99	1.339	34	2.441	62			M8	23
GIHO K 30 DO	1.417	36	3.347	85	0.748	19	3	1.142	29	4.843	123	1.496	38	3.150	80			M10	46
GIHO K 40 DO	1.772	45	4.134	105	0.906	23	3	1.457	37	6.024	153	1.890	48	3.543	90			M10	46
GIHO K 50 DO	2.165	55	5.118	130	1.181	30	3	1.811	46	7.402	188	2.441	62	4.134	105			M12	80

Elges Hydraulic Rod Ends
GIHR..DO SERIES

- Sliding contact surfaces: steel/steel
- Rod ends with clamping threaded socket are prefix GIRH-K and the bolts and tightening torques are shown.



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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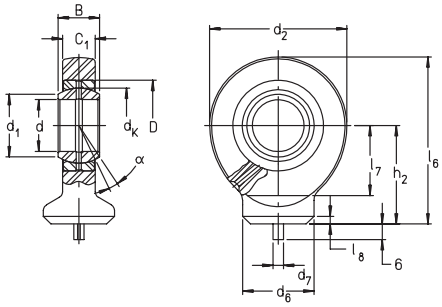
PART NUMBER	d	d	D	D	B	B	C	C	C_0	C_0	WGT.	WGT	d_k	d_k	d_1	d_1	d_2	d_2
	inch	mm	inch	mm	inch	mm	lbf	kN	lbf	kN	lbs	kg	inch	mm	inch	mm	inch	mm
GIHR 20 DO	0.787	20	1.378	35	0.630	16	6700	30	16200	72	0.948	0.43	1.142	29	0.949	24.1	2.205	56
GIHR 25 DO	0.984	25	1.654	42	0.787	20	10800	48	16200	72	1.058	0.48	1.398	35.5	1.154	29.3	2.205	56
GIHR 30 DO	1.181	30	1.850	47	0.866	22	13900	62	23800	106	1.632	0.74	1.602	40.7	1.347	34.2	2.520	64
GIHR 35 DO	1.378	35	2.165	55	0.984	25	18000	80	34500	153	2.646	1.2	1.850	47	1.563	39.7	3.071	78
GIHR 40 DO	1.575	40	2.441	62	1.102	28	22500	100	56000	250	4.41	2	2.087	53	1.772	45	3.701	94
GIHR 50 DO	1.969	50	2.953	75	1.378	35	35000	156	82000	365	8.379	3.8	2.598	66	2.201	55.9	4.567	116
GIHR 60 DO	2.362	60	3.543	90	1.732	44	55000	245	90000	400	11.91	5.4	3.150	80	2.630	66.8	5.118	130
GIHR 70 DO	2.756	70	4.134	105	1.929	49	71000	315	121000	540	18.74	8.5	3.622	92	3.063	77.8	6.063	154
GIHR 80 DO	3.150	80	4.724	120	2.165	55	90000	400	151000	670	26.46	12	4.134	105	3.520	89.4	6.929	176
GIHR 90 DO	3.543	90	5.118	130	2.362	60	110000	490	220000	980	47.41	21.5	4.528	115	3.862	98.1	8.110	206
GIHR 100 DO	3.937	100	5.906	150	2.756	70	137000	610	250000	1120	60.64	27.5	5.118	130	4.311	109.5	9.055	230
GIHR 110 DO	4.331	110	6.299	160	2.756	70	147000	655	380000	1700	89.30	40.5	5.512	140	4.772	121.2	10.433	265
GIHR 120 DO	4.724	120	7.087	180	3.347	85	214000	950	650000	2900	167.58	76	6.299	160	5.335	135.5	13.386	340

CONTINUED FROM ABOVE

PART NUMBER	d_3	d_4	d_4	h_1	h_1	ALPHA	l_3	l_3	l_4	l_4	l_7	l_7	d_5	d_5	C_1	C_1	GIHR-K BOLTS	GIHR-K TORQUE
		inch	mm	inch	mm	deg	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm		Nm
GIHR 20 DO	M16X1.5	0.984	25	1.969	50	9	0.669	17	3.0709	78	0.984	25	1.614	41	0.748	19	M8X20	32
GIHR 25 DO	M16X1.5	0.984	25	1.969	50	7	0.669	17	3.071	78	0.984	25	1.614	41	0.906	23	M8X25	32
GIHR 30 DO	M22X1.5	1.260	32	2.362	60	6	0.906	23	3.622	92	1.181	30	1.811	46	1.102	28	M8X25	32
GIHR 35 DO	M28X1.5	1.575	40	2.756	70	6	1.142	29	4.291	109	1.496	38	2.284	58	1.181	30	M10X30	64
GIHR 40 DO	M35X1.5	1.929	49	3.347	85	7	1.417	36	5.197	132	1.772	45	2.598	66	1.378	35	M10X35	64
GIHR 50 DO	M45X1.5	2.402	61	4.134	105	6	1.811	46	6.417	163	2.165	55	3.465	88	1.575	40	M12X35	110
GIHR 60 DO	M58X1.5	2.953	75	5.118	130	6	2.323	59	7.874	200	2.559	65	3.543	90	1.969	50	M10X45	46
GIHR 70 DO	M65X1.5	3.386	86	5.906	150	6	2.598	66	9.134	232	2.953	75	3.937	100	2.165	55	M12X50	80
GIHR 80 DO	M80X2	4.016	102	6.693	170	6	3.189	81	10.433	265	3.150	80	4.921	125	2.362	60	M16X50	195
GIHR 90 DO	M100X2	4.882	124	8.268	210	5	3.976	101	12.717	323	3.543	90	5.748	146	2.559	65	M16X60	195
GIHR 100 DO	M110X2	5.433	138	9.252	235	7	4.370	111	14.173	360	4.134	105	6.535	166	2.756	70	M20X60	385
GIHR 110 DO	M120X3	5.984	152	10.433	265	6	4.921	125	16.043	407.5	4.528	115	7.480	190	3.150	80	M20X70	385
GIHR 120 DO	M130X3	6.772	172	12.205	310	6	5.315	135	19.291	490	5.512	140	8.543	217	3.543	90	M24X80	660

Elges Hydraulic Rod Ends
GK..DO SERIES

- DIN 648, dimension series E
- Sliding contact surfaces: steel/steel



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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PART NUMBER	d inch	d mm	D inch	D mm	B inch	B mm	C lbf	C kN	C_0 lbf	C_0 kN	WGT. lbs	WGT kg	d_k inch	d_k mm	d_1 inch	d_1 mm
GK 10 DO	0.394	10	0.748	19	0.354	9	1,830	8.15	3,500	15.6	0.09	0.041	0.630	16	0.520	13.2
GK 12 DO	0.472	12	0.866	22	0.394	10	2,430	10.8	4,850	21.6	0.146	0.066	0.709	18	0.587	14.9
GK 15 DO	0.591	15	1.024	26	0.472	12	3,800	17	7,200	32	0.265	0.12	0.866	22	0.724	18.4
GK 17 DO	0.669	17	1.181	30	0.551	14	4,750	21.2	9,000	40	0.353	0.16	0.984	25	0.815	20.7
GK 20 DO	0.787	20	1.378	35	0.630	16	6,700	30	14,600	65	0.507	0.23	1.142	29	0.949	24.1
GK 25 DO	0.984	25	1.654	42	0.787	20	10,800	48	16,200	72	0.948	0.43	1.398	35.5	1.154	29.3
GK 30 DO	1.181	30	1.850	47	0.866	22	13,900	62	21,400	95	1.411	0.64	1.602	40.7	1.347	34.2
GK 35 DO	1.378	35	2.165	55	0.984	25	18,000	80	28,000	125	2.117	0.96	1.850	47	1.563	39.7
GK 40 DO	1.575	40	2.441	62	1.102	28	22,500	100	35,000	156	2.867	1.3	2.087	53	1.772	45
GK 45 DO	1.772	45	2.677	68	1.260	32	28,500	127	47,000	208	3.969	1.8	2.362	60	1.996	50.7
GK 50 DO	1.969	50	2.953	75	1.378	35	35,000	156	56,000	250	5.513	2.5	2.598	66	2.201	55.9
GK 60 DO	2.362	60	3.543	90	1.732	44	55,000	245	88,000	390	8.6	3.9	3.150	80	2.630	66.8
GK 70 DO	2.756	70	4.134	105	1.929	49	71,000	315	115,000	510	14.553	6.6	3.622	92	3.063	77.8
GK 80 DO	3.150	80	4.724	120	2.165	55	90,000	400	139,000	620	19.184	8.7	4.134	105	3.520	89.4

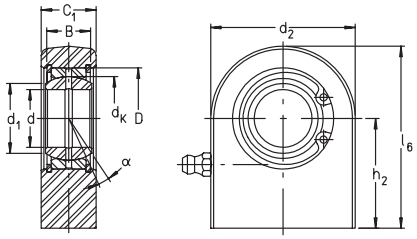
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PART NUMBER	d_2 inch	d_2 mm	d_6 inch	d_6 mm	h_2 inch	h_2 mm	C_1 inch	C_1 mm	ALPHA deg	l_6 inch	l_6 mm	l_7 inch	l_7 mm	l_8 inch	l_8 mm	d_7 inch	d_7 mm
GK 10 DO	1.142	29	0.591	15	0.945	24	0.276	7	12	1.516	38.5	0.591	15	0.079	2	0.118	3
GK 12 DO	1.339	34	0.689	17.5	1.063	27	0.315	8	11	1.732	44	0.709	18	0.079	2	0.118	3
GK 15 DO	1.575	40	0.827	21	1.221	31	0.394	10	8	2.008	51	0.787	20	0.098	2.5	0.158	4
GK 17 DO	1.811	46	0.945	24	1.378	35	0.433	11	10	2.284	58	0.906	23	0.118	3	0.158	4
GK 20 DO	2.087	53	1.083	27.5	1.496	38	0.512	13	9	2.539	64.5	1.063	27	0.118	3	0.158	4
GK 25 DO	2.520	64	1.319	33.5	1.772	45	0.669	17	7	3.032	77	1.260	32	0.158	4	0.158	4
GK 30 DO	2.874	73	1.575	40	2.008	51	0.748	19	6	3.445	87.5	1.457	37	0.158	4	0.158	4
GK 35 DO	3.228	82	1.850	47	2.402	61	0.827	21	6	4.016	102	1.654	42	0.158	4	0.158	4
GK 40 DO	3.622	92	2.047	52	2.717	69	0.906	23	7	4.528	115	1.890	48	0.197	5	0.158	4
GK 45 DO	4.016	102	2.284	58	3.032	77	1.063	27	7	5.039	128	2.047	52	0.197	5	0.236	6
GK 50 DO	4.409	112	2.441	62	3.465	88	1.181	30	6	5.669	144	2.362	60	0.236	6	0.236	6
GK 60 DO	5.315	135	2.756	70	3.937	100	1.496	38	6	6.595	167.5	2.953	75	0.315	8	0.236	6
GK 70 DO	6.299	160	3.150	80	4.528	115	1.654	42	6	7.677	195	3.425	87	0.394	10	0.236	6
GK 80 DO	7.087	180	3.740	95	5.551	141	1.850	47	6	9.095	231	3.937	100	0.394	10	0.236	6

Elges Hydraulic Rod Ends

GF..DO SERIES

- Sliding contact surfaces: steel/steel
- With rectangular face for welding
- Uses spherical bearing to DIN 648, series E



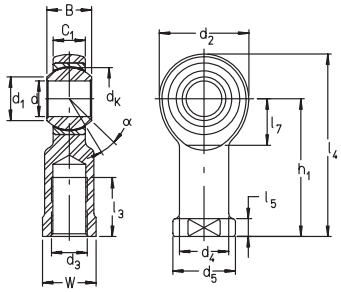
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

PART NUMBER	d inch	d mm	D inch	D mm	B inch	B mm	C lbf	C kN	C_0 lbf	C_0 kN	WGT. lbs	WGT kg	d_k inch	d_k mm
GF 20 DO	0.787	20	1.378	35	0.630	16	6,700	30	15,100	67	0.772	0.35	1.142	29
GF 25 DO	0.984	25	1.654	42	0.787	20	10,800	48	15,600	69.5	1.169	0.53	1.398	35.5
GF 30 DO	1.181	30	1.850	47	0.866	22	13,900	62	26,500	118	1.918	0.87	1.602	40.7
GF 35 DO	1.378	35	2.165	55	0.984	25	18,000	80	44,000	196	3.308	1.5	1.850	47
GF 40 DO	1.575	40	2.441	62	1.102	28	22,500	100	67,000	300	5.292	2.4	2.087	53
GF 45 DO	1.772	45	2.677	68	1.260	32	28,500	127	85,000	380	7.497	3.4	2.362	60
GF 50 DO	1.969	50	2.953	75	1.378	35	35,000	156	99,000	440	9.702	4.4	2.598	66
GF 60 DO	2.362	60	3.543	90	1.732	44	55,000	245	128,000	570	15.656	7.1	3.150	80
GF 70 DO	2.756	70	4.134	105	1.929	49	71,000	315	156,000	695	23.153	10.5	3.622	92
GF 80 DO	3.150	80	0.787	20	2.165	55	90,000	400	175,000	780	33.075	15	4.134	105
GF 90 DO	3.543	90	5.118	130	2.362	60	110,000	490	300,000	1340	51.818	23.5	4.528	115
GF 100 DO	3.937	100	5.906	150	2.756	70	137,000	610	335,000	1500	69.458	31.5	5.118	130
GF 110 DO	4.331	110	6.299	160	2.756	70	147,000	655	485,000	2160	105.84	48	5.512	140
GF 120 DO	4.724	120	7.087	180	3.347	85	214,000	950	730,000	3250	174.195	79	6.299	160

CONTINUED FROM ABOVE

PART NUMBER	d_1 inch	d_1 mm	d_2 inch	d_2 mm	h_2 inch	h_2 mm	C_1 nom. inch	C_1 nom. mm	C_1 max. inch	C_1 max. mm	ALPHA deg	l_6 inch	l_6 mm
GF 20 DO	0.949	24.10	1.969	50	1.496	38	0.748	19	0.787	20	9	2.480	63
GF 25 DO	1.154	29.30	2.165	55	1.772	45	0.906	23	0.945	24	7	2.854	72.5
GF 30 DO	1.347	34.20	2.559	65	2.008	51	1.102	28	1.142	29	6	3.287	83.5
GF 35 DO	1.563	39.70	3.268	83	2.402	61	1.181	30	1.221	31	6	4.035	102.5
GF 40 DO	1.772	45.00	3.937	100	2.717	69	1.378	35	1.437	36.5	7	4.685	119
GF 45 DO	1.996	50.70	4.331	110	3.032	77	1.575	40	1.634	41.5	7	5.197	132
GF 50 DO	2.201	55.90	4.843	123	3.465	88	1.575	40	1.634	41.5	6	5.886	149.5
GF 60 DO	2.630	66.80	5.512	140	3.937	100	1.969	50	2.067	52.5	6	6.693	170
GF 70 DO	3.063	77.80	6.457	164	4.528	115	2.165	55	2.284	58	6	7.756	197
GF 80 DO	3.520	89.40	7.087	180	5.551	141	2.362	60	2.480	63	6	9.095	231
GF 90 DO	3.862	98.10	8.898	226	5.906	150	2.559	65	2.717	69	5	10.354	263
GF 100 DO	4.311	109.50	9.843	250	6.693	170	2.756	70	2.913	74	7	11.614	295
GF 110 DO	4.772	121.20	11.614	295	7.284	185	3.150	80	3.347	85	6	13.091	332.5
GF 120 DO	5.335	135.50	14.173	360	8.268	210	3.543	90	3.740	95	6	15.354	390

Elges Rod Ends
GIKMR.. SERIES



- DIN 648, dimension series K – ISO 6126
- Sliding contact surfaces: steel/brass
- Internal thread type
- Left hand thread is available on shank, order by replacing “R” with “L”
- Relubricate with funnel type grease nipple

- **Replaced by GIKFR..PB series**

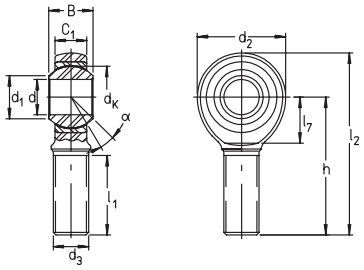
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

PART NUMBER	d inch	d mm	B inch	B mm	C lbf	C kN	C_0 lbf	C_0 kN	WGT. lbs	WGT kg	d_k inch	d_k mm	d_1 inch	d_1 mm	d_2 inch	d_2 mm	d_3
GIKMR 5	0.197	5	0.315	8	730	3.25	1,280	5.7	0.035	0.016	0.438	11.112	0.303	7.7	0.709	18	M5
GIKMR 6	0.236	6	0.354	9	970	4.3	1,620	7.2	0.049	0.022	0.500	12.7	0.350	8.9	0.787	20	M6
GIKMR 8	0.315	8	0.472	12	1,620	7.2	2,600	11.6	0.104	0.047	0.625	15.875	0.406	10.3	0.945	24	M8
GIKMR 10	0.394	10	0.551	14	2,250	10	3,250	14.5	0.17	0.077	0.750	19.05	0.508	12.9	1.102	28	M10
GIKMR 12	0.472	12	0.630	16	3,000	13.4	3,800	17	0.221	0.1	0.875	22.225	0.606	15.4	1.260	32	M12

CONTINUED FROM ABOVE

PART NUMBER	d_4 inch	d_4 mm	d_5 inch	d_5 mm	h_1 inch	h_1 mm	C_1 inch	C_1 mm	W inch	W mm	ALPHA deg	l_3 inch	l_3 mm	l_4 inch	l_4 mm	l_5 inch	l_5 mm	l_7 inch	l_7 mm
GIKMR 5	0.335	8.5	0.433	11	1.063	27	0.236	6	0.354	9	13	0.394	10	1.417	36	0.158	4	0.394	10
GIKMR 6	0.394	10	0.512	13	1.181	30	0.266	6.75	0.433	11	13	0.472	12	1.575	40	0.197	5	0.433	11
GIKMR 8	0.492	12.5	0.630	16	1.417	36	0.354	9	0.512	13	13	0.630	16	1.890	48	0.197	5	0.512	13
GIKMR 10	0.591	15	0.748	19	1.693	43	0.413	10.5	0.669	17	13	0.787	20	2.244	57	0.256	6.5	0.591	15
GIKMR 12	0.689	17.5	0.866	22	1.969	50	0.472	12	0.748	19	13	0.866	22	2.598	66	0.256	6.5	0.669	17

Elges Rod Ends
GAKMR SERIES



- DIN 648, dimension series K – ISO 6126
- Sliding contact surfaces: steel/brass
- External thread
- Left hand thread is available on shank, order by replacing “R” with “L”
- Relubricate with funnel type grease nipple

- **Replaced by GAKFR..PB series**

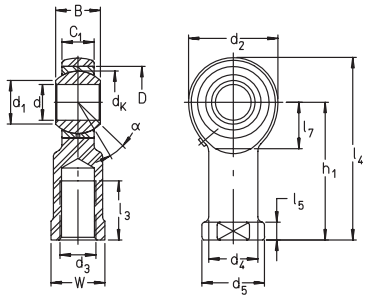
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For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

PART NUMBER	d inch	d mm	B inch	B mm	C lbf	C kN	C_0 lbf	C_0 kN	WGT. lbs	WGT kg	d_k inch	d_k mm
GAKMR 5	0.197	5	0.315	8	730	3.25	700	3.1	0.029	0.013	0.438	11.112
GAKMR 6	0.236	6	0.354	9	970	4.3	990	4.4	0.044	0.02	0.500	12.7
GAKMR 8	0.315	8	0.472	12	1,620	7.2	1,800	8	0.084	0.038	0.625	15.875
GAKMR 10	0.394	10	0.551	14	2,250	10	2,900	12.9	0.121	0.055	0.750	19.05
GAKMR 12	0.472	12	0.630	16	3,000	13.4	3,800	17	0.187	0.085	0.875	22.225

CONTINUED FROM ABOVE

PART NUMBER	d_1 inch	d_1 mm	d_2 inch	d_2 mm	d_3	h inch	h mm	C_1 inch	C_1 mm	ALPHA deg	l_1 inch	l_1 mm	l_2 inch	l_2 mm
GAKMR 5	0.303	7.7	0.709	18	M5	1.299	33	0.236	6	13	0.748	19	1.654	42
GAKMR 6	0.350	8.9	0.787	20	M6	1.417	36	0.266	6.75	13	0.827	21	1.811	46
GAKMR 8	0.406	10.3	0.945	24	M8	1.654	42	0.354	9	13	0.984	25	2.126	54
GAKMR 10	0.508	12.9	1.102	28	M10	1.890	48	0.413	10.5	13	1.102	28	2.441	62
GAKMR 12	0.606	15.4	1.260	32	M12	2.126	54	0.472	12	13	1.260	32	2.756	70

Elges Rod Ends
GIKFR..PB SERIES



- DIN 648, dimension series K – ISO 6126
- Sliding contact surfaces: steel/bronze
- Internal thread type
- Left hand thread is available on shank, order by replacing “R” with “L”
- Relubricate with funnel type grease nipple

- **Replaces GIKMR.. series**

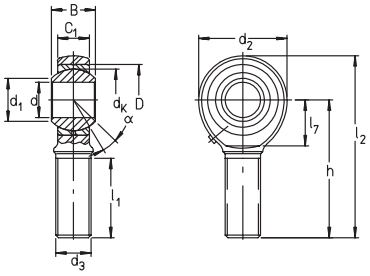
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PART NUMBER	d inch	d mm	D inch	D mm	B inch	B mm	C lbf	C kN	C_0 lbf	C_0 kN	WGT. lbs	WGT kg	d_k inch	d_k mm	d_1 inch	d_1 mm	d_2 inch	d_2 mm	d_3
GIKFR 5 PB	0.197	5	0.512	13	0.315	8	730	3.25	1,280	5.7	0.035	0.016	0.4375	11.112	0.303	7.7	0.709	18	M5
GIKFR 6 PB	0.236	6	0.630	16	0.354	9	970	4.3	1,620	7.2	0.049	0.022	0.5	12.7	0.350	8.9	0.787	20	M6
GIKFR 8 PB	0.315	8	0.354	9	0.472	12	1,620	7.2	2,600	11.6	0.104	0.047	0.625	15.875	0.406	10.3	0.945	24	M8
GIKFR 10 PB	0.394	10	0.866	22	0.551	14	2,250	10	3,250	14.5	0.17	0.077	0.75	19.05	0.508	12.9	1.102	28	M10
GIKFR 12 PB	0.472	12	1.024	26	0.630	16	3,000	13.4	3,800	17	0.221	0.1	0.875	22.225	0.606	15.4	1.260	32	M12
GIKFR 14 PB	0.551	14	1.102	28	0.748	19	3,800	17	5,400	24	0.353	0.16	1	25.4	0.661	16.8	1.417	36	M14
GIKFR 16 PB	0.630	16	1.260	32	0.827	21	4,850	21.6	6,400	28.5	0.485	0.22	1.125	28.575	0.760	19.3	1.654	42	M16
GIKFR 18 PB	0.709	18	1.378	35	0.906	23	5,800	26	9,600	42.5	0.706	0.32	1.25	31.75	0.858	21.8	1.811	46	M18X1.5
GIKFR 20 PB	0.787	20	1.575	40	0.984	25	7,100	31.5	9,600	42.5	0.926	0.42	1.375	34.925	0.957	24.3	1.969	50	M20X1.5
GIKFR 22 PB	0.866	22	1.654	42	1.102	28	6,300	28	12,800	57	1.191	0.54	1.5	38.1	1.016	25.8	2.126	54	M22X1.5
GIKFR 25 PB	0.984	25	1.850	47	1.221	31	10,700	47.5	15,300	68	1.61	0.73	1.687	42.85	1.161	29.5	2.362	60	M24X2
GIKFR 30 PB	1.181	30	2.165	55	1.457	37	14,400	64	19,800	88	2.426	1.1	2	50.8	1.370	34.8	2.756	70	M30X2

CONTINUED FROM ABOVE

PART NUMBER	d_4 inch	d_4 mm	h_1 inch	h_1 mm	C_1 inch	C_1 mm	ALPHA deg	l_3 inch	l_3 mm	l_4 inch	l_4 mm	l_5 inch	l_5 mm	l_7 inch	l_7 mm	d_5 inch	d_5 mm	W inch	W mm
GIKFR 5 PB	0.335	8.5	1.063	27	0.236	6	13	0.394	10	1.417	36	0.158	4	0.394	10	0.433	11	0.354	9
GIKFR 6 PB	0.394	10	1.181	30	0.266	6.75	13	0.472	12	1.575	40	0.197	5	0.433	11	0.512	13	0.433	11
GIKFR 8 PB	0.492	12.5	1.417	36	0.354	9	14	0.630	16	1.890	48	0.197	5	0.512	13	0.630	16	0.551	14
GIKFR 10 PB	0.591	15	1.693	43	0.413	10.5	13	0.787	20	2.244	57	0.256	6.5	0.591	15	0.748	19	0.669	17
GIKFR 12 PB	0.689	17.5	1.969	50	0.472	12	13	0.866	22	2.598	66	0.256	6.5	0.669	17	0.866	22	0.748	19
GIKFR 14 PB	0.827	21	2.244	57	0.532	13.5	16	0.984	25	2.953	75	0.315	8	0.709	18	1.024	26	0.866	22
GIKFR 16 PB	0.866	22	2.520	64	0.591	15	15	1.102	28	3.347	85	0.315	8	0.906	23	1.102	28	0.866	22
GIKFR 18 PB	0.984	25	2.795	71	0.650	16.5	15	1.260	32	3.701	94	0.394	10	0.984	25	1.221	31	1.063	27
GIKFR 20 PB	1.083	27.5	3.032	77	0.709	18	14	1.299	33	4.016	102	0.394	10	1.024	26	1.378	35	1.181	30
GIKFR 22 PB	1.181	30	3.307	84	0.787	20	15	1.457	37	4.370	111	0.472	12	1.142	29	1.496	38	1.260	32
GIKFR 25 PB	1.319	33.5	3.701	94	0.866	22	15	1.654	42	4.882	124	0.472	12	1.260	32	1.654	42	1.417	36
GIKFR 30 PB	1.575	40	4.331	110	0.984	25	17	2.008	51	5.709	145	0.591	15	1.457	37	1.969	50	1.614	41

Elges Rod Ends
GAKFR..PB SERIES



- DIN 648, dimension series K – ISO 6126
- Sliding contact surfaces: steel/bronze
- External thread
- Left hand thread is available on shank, order by replacing “R” with “L”
- Relubricate with funnel type grease nipple

- **Replaces GAKMR.. series**

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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PART NUMBER	d inch	d mm	D inch	D mm	B inch	B mm	C lbf	C kN	C_0 lbf	C_0 kN	WGT. lbs	WGT kg	d_k inch	d_k mm
GAKFR 5 PB	0.197	5	0.512	13	0.315	8	730	3.25	700	3.1	0.029	0.013	0.4375	11.112
GAKFR 6 PB	0.236	6	0.630	16	0.354	9	970	4.3	990	4.4	0.044	0.02	0.5	12.7
GAKFR 8 PB	0.315	8	0.354	9	0.472	12	1620	7.2	1800	8	0.084	0.038	0.625	15.875
GAKFR 10 PB	0.394	10	0.866	22	0.551	14	2250	10	2900	12.9	0.121	0.055	0.75	19.05
GAKFR 12 PB	0.472	12	1.024	26	0.630	16	3000	13.4	3800	17	0.187	0.085	0.875	22.225
GAKFR 14 PB	0.551	14	1.102	28	0.748	19	3800	17	5400	24	0.309	0.14	1	25.4
GAKFR 16 PB	0.630	16	1.260	32	0.827	21	4850	21.6	6400	28.5	0.463	0.21	1.125	28.575
GAKFR 18 PB	0.709	18	1.378	35	0.906	23	5800	26	9600	42.5	0.617	0.28	1.25	31.75
GAKFR 20 PB	0.787	20	1.575	40	0.984	25	7100	31.5	9600	42.5	0.838	0.38	1.375	34.925
GAKFR 22 PB	0.866	22	1.654	42	1.102	28	8500	38	12800	57	1.058	0.48	1.5	38.1
GAKFR 25 PB	0.984	25	1.850	47	1.221	31	10700	47.5	15300	68	1.411	0.64	1.687	42.85
GAKFR 30 PB	1.181	30	2.165	55	1.457	37	14400	64	19800	88	2.426	1.1	2	50.8

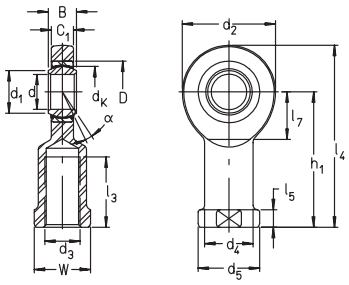
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PART NUMBER	d_1 inch	d_1 mm	d_2 inch	d_2 mm	d_3	h inch	h mm	C_1 inch	C_1 mm	ALPHA deg	l_1 inch	l_1 mm	l_2 inch	l_2 mm	l_7 inch	l_7 mm
GAKFR 5 PB	0.303	7.7	0.709	18	M5	1.299	33	0.236	6	13	0.748	19	1.654	42		
GAKFR 6 PB	0.350	8.9	0.787	20	M6	1.417	36	0.266	6.75	13	0.827	21	1.811	46		
GAKFR 8 PB	0.406	10.3	0.945	24	M8	1.654	42	0.354	9	14	0.984	25	2.126	54		
GAKFR 10 PB	0.508	12.9	1.102	28	M10	1.890	48	0.413	10.5	13	1.102	28	2.441	62		
GAKFR 12 PB	0.606	15.4	1.260	32	M12	2.126	54	0.472	12	13	1.260	32	2.756	70		
GAKFR 14 PB	0.661	16.8	1.417	36	M14	2.362	60	0.532	13.5	16	1.417	36	3.071	78	0.709	18
GAKFR 16 PB	0.760	19.3	1.654	42	M16	2.598	66	0.591	15	15	1.457	37	3.425	87	0.906	23
GAKFR 18 PB	0.858	21.8	1.811	46	M18X1.5	2.835	72	0.650	16.5	15	1.614	41	3.740	95	0.984	25
GAKFR 20 PB	0.957	24.3	1.969	50	M20X1.5	3.071	78	0.709	18	14	1.772	45	4.055	103	1.024	26
GAKFR 22 PB	1.016	25.8	2.126	54	M22X1.5	3.307	84	0.787	20	15	1.890	48	4.370	111	1.142	29
GAKFR 25 PB	1.161	29.5	2.362	60	M24X2	3.701	94	0.866	22	15	2.165	55	4.882	124	1.260	32
GAKFR 30 PB	1.370	34.8	2.756	70	M30X2	4.331	110	0.984	25	17	2.598	66	5.709	145	1.457	37

Elges Rod Ends, Maintenance Free

GIR..UK, GIR..UK-2RS SERIES

- DIN 648, dimension series E – ISO 6126
- Sliding contact surfaces: hard chrome/PTFE
- Internal thread
- Left hand thread is available on shank, order by replacing “R” with “L”



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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PART NUMBER	d inch	d mm	D inch	D mm	B inch	B mm	C lbf	C kN	C_0 lbf	C_0 kN	WGT. lbs	WGT kg	d_k inch	d_k mm	d_1 inch	d_1 mm	d_2 inch	d_2 mm
GIR 6 UK	0.236	6	0.551	14	0.236	6	810	3.6	1,830	8.15	0.046	0.021	0.394	10	0.315	8	0.827	21
GIR 8 UK	0.315	8	0.630	16	0.315	8	1,320	5.85	2,900	12.9	0.086	0.039	0.512	13	0.402	10.2	0.945	24
GIR 10 UK	0.394	10	0.748	19	0.354	9	1,950	8.65	3,950	17.6	0.135	0.061	0.630	16	0.520	13.2	1.142	29
GIR 12 UK	0.472	12	0.866	22	0.394	10	2,550	11.4	5,500	24.5	2.117	0.96	0.709	18	0.587	14.9	1.339	34
GIR 15 UK	0.591	15	1.024	26	0.472	12	3,950	17.6	8,100	36	0.397	0.18	0.866	22	0.724	18.4	1.575	40
GIR 17 UK	0.669	17	1.181	30	0.551	14	5,000	22.4	10,100	45	0.485	0.22	0.984	25	0.815	20.7	1.811	46
GIR 20 UK	0.787	20	1.378	35	0.630	16	7,100	31.5	13,500	60	0.772	0.35	1.142	29	0.949	24.1	2.087	53
GIR 25 UK	0.984	25	1.654	42	0.787	20	11,500	51	18,700	83	1.411	0.64	1.398	35.5	1.154	29.3	2.520	64
GIR 30 UK	1.181	30	1.850	47	0.866	22	15,000	66.5	24,700	110	2.051	0.93	1.602	40.7	1.347	34.2	2.874	73
GIR 35 UK2RS	1.378	35	2.165	55	0.984	25	25,000	112	33,000	146	2.867	1.3	1.850	47	1.563	39.7	3.228	82
GIR 40 UK2RS	1.575	40	2.441	62	1.102	28	31,500	140	40,500	180	4.41	2	2.087	53	1.772	45	3.622	92
GIR 45 UK2RS	1.772	45	2.677	68	1.260	32	40,500	180	54,000	240	5.513	2.5	2.362	60	1.996	50.7	4.016	102
GIR 50 UK2RS	1.969	50	2.953	75	1.378	35	49,500	220	65,000	290	7.718	3.5	2.598	66	2.201	55.9	4.409	112
GIR 60 UK2RS	2.362	60	3.543	90	1.732	44	78,000	345	101,000	450	12.128	5.5	3.150	80	2.630	66.8	5.315	135
GIR 70 UK2RS	2.756	70	4.134	105	1.929	49	99,000	440	137,000	610	18.963	8.6	3.622	92	3.063	77.8	6.299	160
GIR 80 UK2RS	3.150	80	4.724	120	2.165	55	128,000	570	169,000	750	26.46	12	4.134	105	3.520	89.4	7.087	180

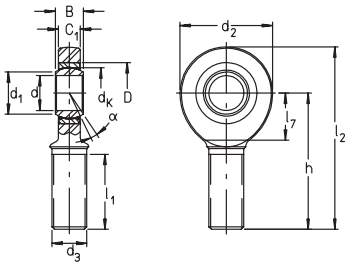
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PART NUMBER	d_3	d_4 inch	d_4 mm	h_1 inch	h_1 mm	C_1 inch	C_1 mm	ALPHA deg	l_3 inch	l_3 mm	l_4 inch	l_4 mm	l_7 inch	l_7 mm	d_5 inch	d_5 mm	W inch	W mm
GIR 6 UK	M6	0.394	10	1.181	30	0.173	4.4	13	0.433	11	1.595	40.5	0.472	12	0.512	13	0.433	11
GIR 8 UK	M8	0.492	12.5	1.417	36	0.236	6	15	0.591	15	1.890	48	0.551	14	0.630	16	0.551	14
GIR 10 UK	M10	0.591	15	1.693	43	0.276	7	12	0.787	20	2.264	57.5	0.591	15	0.748	19	0.669	17
GIR 12 UK	M12	0.689	17.5	1.969	50	0.315	8	11	0.906	23	2.638	67	0.709	18	0.866	22	0.748	19
GIR 15 UK	M14	0.827	21	2.402	61	0.394	10	8	1.181	30	3.189	81	0.787	20	1.024	26	0.866	22
GIR 17 UK	M16	0.945	24	2.638	67	0.433	11	10	1.339	34	3.543	90	0.906	23	1.181	30	1.063	27
GIR 20 UK	M20X1.5	1.083	27.5	3.032	77	0.512	13	9	1.575	40	4.075	103.5	1.063	27	1.378	35	1.260	32
GIR 25 UK	M24X2	1.319	33.5	3.701	94	0.669	17	7	1.890	48	4.961	126	1.260	32	1.654	42	1.417	36
GIR 30 UK	M30X2	1.575	40	4.331	110	0.748	19	6	2.205	56	5.768	146.5	1.457	37	1.969	50	1.614	41
GIR 35 UK2RS	M36X3	1.850	47	4.921	125	0.827	21	6	2.362	60	6.535	166	1.654	42	2.284	58	1.969	50
GIR 40 UK2RS	M39X3	2.047	52	5.591	142	0.906	23	7	2.559	65	7.402	188	1.890	48	2.559	65	2.165	55
GIR 45 UK2RS	M42X3	2.284	58	5.709	145	1.063	27	7	2.559	65	7.717	196	2.047	52	2.756	70	2.362	60
GIR 50 UK2RS	M45X3	2.441	62	6.299	160	1.181	30	6	2.677	68	8.504	216	2.362	60	2.953	75	2.559	65
GIR 60 UK2RS	M52X3	2.756	70	6.890	175	1.496	38	6	2.756	70	9.547	242.5	2.953	75	3.465	88	2.953	75
GIR 70 UK2RS	M56X4	3.150	80	7.874	200	1.654	42	6	3.150	80	11.024	280	3.425	87	3.858	98	3.347	85
GIR 80 UK2RS	M64X4	3.740	95	9.055	230	1.850	47	6	3.347	85	12.598	320	3.937	100	4.331	110	3.937	100

Elges Rod Ends, Maintenance Free

GAR..UK, GAR..UK-2RS SERIES

- DIN 648, dimension series E Form A – ISO 6126
- Sliding contact surfaces: hard chromium/PTFE
- External thread
- Left hand thread is available on shank, order by replacing “R” with “L”



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

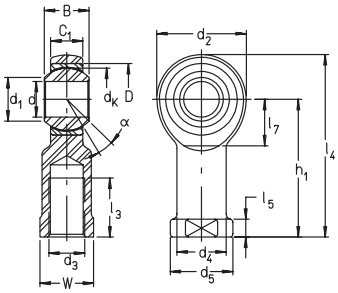
PART NUMBER	d inch	d mm	D inch	D mm	B inch	B mm	C lbf	C kN	C_0 lbf	C_0 kN	WGT. lbs	WGT kg	d_k inch	d_k mm
GAR 6 UK	0.236	6	0.551	14	0.236	6	810	3.6	1,830	8.15	0.037	0.017	0.394	10
GAR 8 UK	0.315	8	0.630	16	0.315	8	1,320	5.85	2,900	12.9	0.064	0.029	0.512	13
GAR 10 UK	0.394	10	0.748	19	0.354	9	1,950	8.65	3,950	17.6	0.112	0.051	0.630	16
GAR 12 UK	0.472	12	0.866	22	0.394	10	2,550	11.4	5,500	24.5	0.19	0.086	0.709	18
GAR 15 UK	0.591	15	1.024	26	0.472	12	3,950	17.6	8,100	36	0.309	0.14	0.866	22
GAR 17 UK	0.669	17	1.181	30	0.551	14	5,000	22.4	10,100	45	0.419	0.19	0.984	25
GAR 20 UK	0.787	20	1.378	35	0.630	16	7,100	31.5	13,500	60	0.684	0.31	1.142	29
GAR 25 UK	0.984	25	1.654	42	0.787	20	11,500	51	18,700	83	1.235	0.56	1.398	35.5
GAR 30 UK	1.181	30	1.850	47	0.866	22	14,700	65.5	24,700	110	1.962	0.89	1.602	40.7
GAR 35 UK2RS	1.378	35	2.165	55	0.984	25	25,000	112	33,000	146	3.087	1.4	1.850	47
GAR 40 UK2RS	1.575	40	2.441	62	1.102	28	31,500	140	40,500	180	3.969	1.8	2.087	53
GAR 45 UK2RS	1.772	45	2.677	68	1.260	32	40,500	180	54,000	240	5.733	2.6	2.362	60
GAR 50 UK2RS	1.969	50	2.953	75	1.378	35	49,500	220	65,000	290	7.497	3.4	2.598	66
GAR 60 UK2RS	2.362	60	3.543	90	1.732	44	78,000	345	101,000	450	13.01	5.9	3.150	80
GAR 70 UK2RS	2.756	70	4.134	105	1.929	49	99,000	440	137,000	610	18.081	8.2	3.622	92
GAR 80 UK2RS	3.150	80	4.724	120	2.165	55	128,000	570	169,000	750	26.46	12	4.134	105

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PART NUMBER	d_1 inch	d_1 mm	d_2 inch	d_2 mm	d_3	h inch	h mm	C_1 inch	C_1 mm	ALPHA deg	l_1 inch	l_1 mm	l_2 inch	l_2 mm	l_7 inch	l_7 mm
GAR 6 UK	0.315	8	0.827	21	M6	1.417	36	0.173	4.4	13	0.709	18	1.831	46.5	0.472	12
GAR 8 UK	0.402	10.2	0.945	24	M8	1.654	42	0.236	6	15	0.866	22	2.126	54	0.551	14
GAR 10 UK	0.520	13.2	1.142	29	M10	1.890	48	0.276	7	12	1.024	26	2.461	62.5	0.591	15
GAR 12 UK	0.587	14.9	1.339	34	M12	2.126	54	0.315	8	11	1.102	28	2.795	71	0.709	18
GAR 15 UK	0.724	18.4	1.575	40	M14	2.480	63	0.394	10	8	1.339	34	3.268	83	0.787	20
GAR 17 UK	0.815	20.7	1.811	46	M16	2.717	69	0.433	11	10	1.417	36	3.622	92	0.906	23
GAR 20 UK	0.949	24.1	2.087	53	M20X1.5	3.071	78	0.512	13	9	1.693	43	4.114	104.5	1.063	27
GAR 25 UK	1.154	29.3	2.520	64	M24X2	3.701	94	0.669	17	7	2.087	53	4.961	126	1.260	32
GAR 30 UK	1.347	34.2	2.874	73	M30X2	4.331	110	0.748	19	6	2.559	65	5.768	146.5	1.457	37
GAR 35 UK2RS	1.563	39.7	3.228	82	M36X3	5.512	140	0.827	21	6	3.228	82	7.126	181	1.654	42
GAR 40 UK2RS	1.772	45	3.622	92	M39X3	5.906	150	0.906	23	7	3.386	86	7.717	196	1.890	48
GAR 45 UK2RS	1.996	50.7	4.016	102	M42X3	6.417	163	1.063	27	7	3.701	94	8.425	214	2.047	52
GAR 50 UK2RS	2.201	55.9	4.409	112	M45X3	7.284	185	1.181	30	6	4.213	107	9.488	241	2.362	60
GAR 60 UK2RS	2.630	66.8	5.315	135	M52X3	8.268	210	1.496	38	6	4.528	115	10.925	277.5	2.953	75
GAR 70 UK2RS	3.063	77.8	6.299	160	M56X4	9.252	235	1.654	42	6	4.921	125	12.402	315	3.307	84
GAR 80 UK2RS	3.520	89.4	7.087	180	M64X4	10.630	270	1.850	47	6	5.512	140	14.173	360	3.937	100

Elges Rod Ends, Maintenance Free

GIKFR..PW, GIPFR..PW SERIES



- DIN 648, dimension series K – ISO 6126
- Sliding contact surfaces: steel/PTFE Foil
- Internal thread
- Left hand thread is available on shank, order by replacing “R” with “L”
- GIPFR series has fine pitch threads to fit hydraulic cylinders to DIN 24335

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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PART NUMBER	d inch	d mm	D inch	D mm	B inch	B mm	C lbf	C kN	C_0 lbf	C_0 kN	WGT. lbs	WGT kg	d_k inch	d_k mm	d_1 inch	d_1 mm	d_2 inch	d_2 mm	d_3
GIKFR 5 PW	0.197	5	0.512	13	0.315	8	1,350	6	1,280	5.7	0.035	0.016	0.438	11.112	0.303	7.7	0.709	18	M5
GIPFR 5 PW	0.197	5	0.512	13	0.315	8	1,350	6	1,280	5.7	0.035	0.016	0.438	11.112	0.303	7.7	0.709	18	M4
GIKFR 6 PW	0.236	6	0.630	16	0.354	9	1,720	7.65	1,620	7.2	0.049	0.022	0.500	12.7	0.350	8.9	0.787	20	M6
GIKFR 8 PW	0.315	8	0.748	19	0.472	12	2,900	12.9	2,600	11.6	0.104	0.047	0.625	15.875	0.406	10.3	0.945	24	M8
GIKFR 10 PW	0.394	10	0.866	22	0.551	14	4,050	18	3,250	14.5	0.17	0.077	0.750	19.05	0.508	12.9	1.102	28	M10
GIPFR 10 PW	0.394	10	0.866	22	0.551	14	4,050	18	3,250	14.5	0.17	0.077	0.750	19.05	0.508	12.9	1.102	28	M10X1.25
GIKFR 12 PW	0.472	12	1.024	26	0.630	16	5,400	24	3,800	17	0.221	0.1	0.875	22.225	0.606	15.4	1.260	32	M12
GIPFR 12 PW	0.472	12	1.024	26	0.630	16	5,400	24	3,800	17	0.221	0.1	0.875	22.225	0.606	15.4	1.260	32	M12X1.25
GIKFR 14 PW	0.551	14	1.102	28	0.748	19	7,000	31	5,400	24	0.353	0.16	1.000	25.4	0.661	16.8	1.417	36	M14
GIKFR 16 PW	0.630	16	1.260	32	0.827	21	8,800	39	6,400	28.5	0.485	0.22	1.125	28.575	0.760	19.3	1.654	42	M16
GIPFR 16 PW	0.630	16	1.260	32	0.827	21	8,800	39	6,400	28.5	0.485	0.22	1.125	28.575	0.760	19.3	1.654	42	M16X1.5
GIKFR 18 PW	0.709	18	1.378	35	0.906	23	10,700	47.5	9,600	42.5	0.706	0.32	1.250	31.75	0.858	21.8	1.811	46	M18X1.5
GIKFR 20 PW	0.787	20	1.575	40	0.984	25	12,800	57	9,600	42.5	0.926	0.42	1.375	34.925	0.957	24.3	1.969	50	M20X1.5
GIKFR 22 PW	0.866	22	1.654	42	1.102	28	15,300	68	12,800	57	1.191	0.54	1.500	38.1	1.016	25.8	2.126	54	M22X1.5
GIKFR 25 PW	0.984	25	1.850	47	1.221	31	19,100	85	15,300	68	1.61	0.73	1.687	42.85	1.161	29.5	2.362	60	M24X2
GIKFR 30 PW	1.181	30	2.165	55	1.457	37	25,500	114	19,800	88	2.426	1.1	2.000	50.8	1.370	34.8	2.756	70	M30X2
GIPFR 30 PW	1.181	30	2.165	55	1.457	37	25,500	114	19,800	88	2.426	1.1	2.000	50.8	1.370	34.8	2.756	70	M27X2

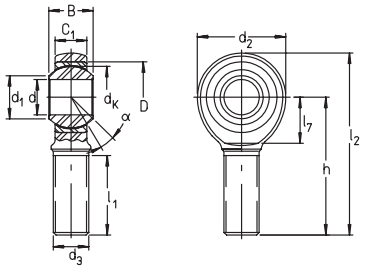
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PART NUMBER	d_4 inch	d_4 mm	h_1 inch	h_1 mm	C_1 inch	C_1 mm	ALPHA deg	l_3 inch	l_3 mm	l_4 inch	l_4 mm	l_5 inch	l_5 mm	l_7 inch	l_7 mm	d_5 inch	d_5 mm	W inch	W mm
GIKFR 5 PW	0.335	8.5	1.063	27	0.236	6	13	0.394	10	1.417	36	0.158	4	0.394	10	0.433	11	0.354	9
GIPFR 5 PW	0.335	8.5	1.063	27	0.236	6	13	0.394	10	1.417	36	0.158	4	0.394	10	0.433	11	0.354	9
GIKFR 6 PW	0.394	10	1.181	30	0.266	6.75	13	0.472	12	1.575	40	0.197	5	0.433	11	0.512	13	0.433	11
GIKFR 8 PW	0.492	12.5	1.417	36	0.354	9	14	0.630	16	1.890	48	0.197	5	0.512	13	0.630	16	0.551	14
GIKFR 10 PW	0.591	15	1.693	43	0.413	10.5	13	0.787	20	2.244	57	0.256	6.5	0.591	15	0.748	19	0.669	17
GIPFR 10 PW	0.591	15	1.693	43	0.413	10.5	13	0.787	20	2.244	57	0.256	6.5	0.591	15	0.748	19	0.669	17
GIKFR 12 PW	0.689	17.5	1.969	50	0.472	12	13	0.866	22	2.598	66	0.256	6.5	0.669	17	0.866	22	0.748	19
GIPFR 12 PW	0.689	17.5	1.969	50	0.472	12	13	0.866	22	2.598	66	0.256	6.5	0.669	17	0.866	22	0.748	19
GIKFR 14 PW	0.827	21	2.244	57	0.532	13.5	16	0.984	25	2.953	75	0.315	8	0.709	18	1.024	26	0.866	22
GIKFR 16 PW	0.866	22	2.520	64	0.591	15	15	1.102	28	3.347	85	0.315	8	0.906	23	1.102	28	0.866	22
GIPFR 16 PW	0.866	22	2.520	64	0.591	15	15	1.102	28	3.347	85	0.315	8	0.906	23	1.102	28	0.866	22
GIKFR 18 PW	0.984	25	2.795	71	0.650	16.5	15	1.260	32	3.701	94	0.394	10	0.984	25	1.221	31	1.063	27
GIKFR 20 PW	1.083	27.5	3.032	77	0.709	18	14	1.299	33	4.016	102	0.394	10	1.024	26	1.378	35	1.181	30
GIKFR 22 PW	1.181	30	3.307	84	0.787	20	15	1.457	37	4.370	111	0.472	12	1.142	29	1.496	38	1.260	32
GIKFR 25 PW	1.319	33.5	3.701	94	0.866	22	15	1.654	42	4.882	124	0.472	12	1.260	32	1.654	42	1.417	36
GIKFR 30 PW	1.575	40	4.331	110	0.984	25	17	2.008	51	5.709	145	0.591	15	1.457	37	1.969	50	1.614	41
GIPFR 30 PW	1.575	40	4.331	110	0.984	25	17	2.008	51	5.709	145	0.591	15	1.457	37	1.969	50	1.614	41

Elges Rod Ends, Maintenance Free

GAKFR..PW SERIES

- DIN 648, dimension series K – ISO 6126
- Sliding contact surfaces: steel/PTFE
- External thread
- Left hand thread is available on shank, order by replacing “R” with “L”



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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PART NUMBER	d inch	d mm	D inch	D mm	B inch	B mm	C lbf	C kN	C_0 lbf	C_0 kN	WGT. lbs	WGT kg	d_k inch	d_k mm
GAKFR 5 PW	0.1969	5	0.5118	13	0.315	8	1350	6	700	3.1	0.029	0.013	0.4375	11.112
GAKFR 6 PW	0.2362	6	0.6299	16	0.3543	9	1720	7.65	990	4.4	0.044	0.02	0.5	12.7
GAKFR 8 PW	0.315	8	0.748	19	0.4724	12	2900	12.9	1800	8	0.084	0.038	0.625	15.875
GAKFR 10 PW	0.3937	10	0.8661	22	0.5512	14	4050	18	2900	12.9	0.121	0.055	0.75	19.05
GAKFR 12 PW	0.4724	12	1.0236	26	0.6299	16	5400	24	3800	17	0.187	0.085	0.875	22.225
GAKFR 14 PW	0.5512	14	1.1024	28	0.748	19	7000	31	4700	21	0.309	0.14	1	25.4
GAKFR 16 PW	0.6299	16	1.2598	32	0.8268	21	8800	39	6400	28.5	0.463	0.21	1.125	28.575
GAKFR 18 PW	0.7087	18	1.378	35	0.9055	23	10700	47.5	9600	42.5	0.617	0.28	1.25	31.75
GAKFR 20 PW	0.7874	20	1.5748	40	0.9843	25	12800	57	9600	42.5	0.838	0.38	1.375	34.925
GAKFR 22 PW	0.8661	22	1.6535	42	1.1024	28	15300	68	12800	57	1.058	0.48	1.5	38.1
GAKFR 25 PW	0.9843	25	1.8504	47	1.2205	31	19100	85	15300	68	1.411	0.64	1.687	42.85
GAKFR 30 PW	1.1811	30	2.1654	55	1.4567	37	25500	114	19800	88	2.426	1.1	2	50.8

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PART NUMBER	d_1 inch	d_1 mm	d_2 inch	d_2 mm	d_3	h inch	h mm	C_1 inch	C_1 mm	ALPHA deg	l_1 inch	l_1 mm	l_2 inch	l_2 mm	l_7 inch	l_7 mm
GAKFR 5 PW	0.3031	7.7	0.7087	18	M5	1.2992	33	0.2362	6	13	0.748	19	1.6535	42		
GAKFR 6 PW	0.3504	8.9	0.7874	20	M6	1.4173	36	0.2657	6.75	13	0.8268	21	1.811	46		
GAKFR 8 PW	0.4055	10.3	0.9449	24	M8	1.6535	42	0.3543	9	14	0.9843	25	2.126	54		
GAKFR 10 PW	0.5079	12.9	1.1024	28	M10	1.8898	48	0.4134	10.5	13	1.1024	28	2.4409	62		
GAKFR 12 PW	0.6063	15.4	1.2598	32	M12	2.126	54	0.4724	12	13	1.2598	32	2.7559	70		
GAKFR 14 PW	0.6614	16.8	1.4173	36	M14	2.3622	60	0.5315	13.5	16	1.4173	36	3.0709	78	0.7087	18
GAKFR 16 PW	0.7598	19.3	1.6535	42	M16	2.5984	66	0.5906	15	15	1.4567	37	3.4252	87	0.9055	23
GAKFR 18 PW	0.8583	21.8	1.811	46	M18X1.5	2.8346	72	0.6496	16.5	15	1.6142	41	3.7402	95	0.9843	25
GAKFR 20 PW	0.9567	24.3	1.9685	50	M20X1.5	3.0709	78	0.7087	18	14	1.7717	45	4.0551	103	1.0236	26
GAKFR 22 PW	1.0157	25.8	2.126	54	M22X1.5	3.3071	84	0.7874	20	15	1.8898	48	4.3701	111	1.1417	29
GAKFR 25 PW	1.1614	29.5	2.3622	60	M24X2	3.7008	94	0.8661	22	15	2.1654	55	4.8819	124	1.2598	32
GAKFR 30 PW	1.3701	34.8	2.7559	70	M30X2	4.3307	110	0.9843	25	17	2.5984	66	5.7087	145	1.4567	37

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INTRODUCTION

Many years of field experience have contributed to the optimization of INA products and systems for linear movement to meet the high demands of modern machine design; they have the following advantages:

- Very low and uniform resistance to displacement, giving improved positioning and running accuracy;
- The negative influences due to shock loading which occur in conventional rolling element guidance systems as the elements enter the load zone are reduced in INA guidance systems by means of special design features.

INA linear guidance systems have extremely high precision and operate virtually wear-free due to their rolling motion so that their high accuracy is maintained throughout the operating life.

A wide range of linear guidance systems are available, each designed for maximum rigidity. By selecting the optimum type of guidance and preloading of linear bearings, virtually any rigidity requirement can be fulfilled.

INA linear products have an extremely high load carrying capacity due to their optimum use of available space and manufacturing quality. Guidance systems for almost all load carrying requirements can be produced from the comprehensive product range.

INA Linear Roller Bearing And Guideway Assemblies Series RUE

INA linear recirculating roller bearing and guideway assemblies of series RUE are high accuracy, ready-to-assemble linear guidance units which can take high loads. They have a full complement rolling element system which is preloaded as standard and allows high running and positioning accuracy.

The basic static and dynamic load ratings of RUE assemblies are nearly twice that of comparable ball and guideway assemblies.

The rigidity of recirculating roller bearing and guideway assemblies is considerably higher than that of ball bearing and guideway assemblies. While some competitors argue that the rigidity can be improved by means of high preloads on the recirculating ball system, this is entirely at the expense of the life.

The linear recirculating roller bearing and guideway assembly also has a high crash safety.

The carriage is sealed on all sides. As opposed to the competition, the whole body of the guideways is ground which provides optimum sealing.

When these assemblies are used in machine tools, brass closing plugs are particularly advantageous.

The RUE unit is interchangeable with the ball bearing and guideway assemblies of the same section height produced by our competitors but they have considerably higher load ratings and rigidity. Due to the technical advantages of the roller system, the next smallest RUE unit can often be used compared to ball bearing and guideway assemblies.

The carriage can be fixed from above or below with 6 screws. The guideway has twice as many screws as the guideways produced by the competitors. Recirculating roller bearing and guideway assemblies may be combined with the damping carriage RUDS to counteract vibration, giving the benefits of both a sliding and a rolling guidance system. Plastic deformation of the rolling elements no longer occurs as the smaller damping gap and the increased surface area of the damping carriage reduce the specific contact load considerably.

Linear Recirculating Ball Bearing And Guideway Assemblies Series KUSE

Six-track linear recirculating ball bearing and guideway assemblies of series KUSE have the highest load rating of any recirculating ball bearing guidance system with the same envelope dimensions, and allow very high accelerations and velocities. Linear ball bearing and guideway assemblies of series KUSE should be classified between the traditional linear ball bearing and linear roller bearing guideway assemblies.

Linear ball bearing and guideway assemblies of series KUSE derive their high load carrying capacity from the six tracks of preloaded balls. They can take loads from all directions and moments about all axes. The low friction characteristics of this new linear recirculating ball system allows very high accelerations and velocities.

Linear Ball Bearing And Guideway Assemblies Series KUVS

INA linear guidance systems with recirculating ball bearing units, series KUVS, are four row linear guidance systems. Two of the main features of these assemblies are wide support distances and adjustable bearing clearance.

Linear recirculating ball bearing units of series KUVS have a high load carrying capacity in spite of their small boundary dimensions. They run on guideways of series TKVD with raceways on one or both sides. These units can be screwed into a carriage KWVK..AL which can form a four row linear ball bearing and guideway assembly when combined with the TKVD guideways.

INA Linear Ball Bearing And Guideway Assemblies Series KUE

INA linear ball bearing and guideway assemblies are ready-to-assemble linear guidance systems. They consist of one or more carriages on a guideway TKD. Linear ball bearing and guideway assemblies of series KUE have a four point contact recirculating ball system.

Due to their special features, INA linear recirculating ball bearing and guideway assemblies can meet the demands of modern guidance designs:

- Accuracy
  INA linear ball bearing and guideway assemblies are extremely accurate rolling bearings. They are clearance-free and operate with extremely low friction and completely free from stick-slip.
- High load carrying capacity and rigidity
  INA linear ball bearing and guideway assemblies have an extremely high load carrying capacity and rigidity for their dimensions.
- Load directions
  INA recirculating linear ball bearings can take loads in all perpendicular directions and moments about all axes. They need only one guideway for fixing: counterstay designs are therefore superfluous.
- Low section height
  INA linear ball bearing and guideway assemblies have an extremely low section height. This allows a very compact design of guidance system.

In addition, KUE assemblies have the following important features:

- High running and positioning accuracy (clearance-free)
- High reliability
- Easy mounting
  INA linear ball bearing and guideway assemblies are supplied ready for assembly. This allows economical designs of guidance systems.
- Interchangeability
  The components of a linear ball bearing and guideway assembly can be interchanged within the same preload and accuracy class.

INA Track Roller Linear Guidance System Series LF

Due to its modern and innovative design, the INA track roller linear guidance system offers the following advantages:

- Straightforward modular design
  The modular construction of the INA track roller linear guidance system allows individual guidance elements to be combined as required. Depending on the requirements, complete units may be used or variants may be produced with single guideways on the inside or outside combined with different rollers.
- Robust, wear-resistant, reliable system
  Vertical and horizontal motion can be achieved even in contaminated environments. Reliable operation and a long operating life are ensured, together with low maintenance requirements.
- High load carrying capacity
  Loads can be taken from all directions and moments about all axes. Depending on the load case, different guidance elements with differing high load carrying capacities are available to the user.
- High accuracy
  Due to the production process, the guideways have a high accuracy, providing clearance-free and low-friction operation. LF systems can be used in any mounting position.
- Unlimited stroke at high traverse speeds
  The INA track roller linear guidance system allows linear motion of any length and speeds up to 10 m/s.
- Straightforward assembly
  INA track roller linear guidance systems are supplied ready for mounting. The user has the option, depending on the guideway type, of fixing from above or below. The premounted carriage can be set clearance-free. The system can be matched to the customer's specific requirements.
- High wear resistance due to the optimized profile of the track rollers and the rolled precision steel shafts hardened to HRC 60
- Long life
- The load carrying capacity can be considerably increased if required by adding more track rollers
- Relubrication facility
- The individual components are easily interchangeable
- Systems have low mass due to the use of anodized aluminium components
- Systems are also available in corrosion resistant and black anodized versions
- There are many potential applications in almost all areas
- The standard version is readily available from stock
- The track rollers are lubricated for life
- Various sealing options and accessories are available

INA Linear Ball Bearings
Series KH

INA linear ball bearings of series KH are linear recirculating ball bearing units of very small radial section height. They consist of a drawn and hardened outer cup and a plastic cage. The outer cup, cage and balls form a closed linear bearing which is ready to assemble. These units are suitable for applications where long travel distances, low space requirements and predominantly maintenance-free operation are required.

Linear ball bearings of series KH have the following advantages:

- Optimum price/performance ratio
- Very small radial section height
- Axial location is not required
- Double lip contact sealing rings on KH...P and KH...PP
- Optimum sealing
- Lubricant is retained in the bearing
- Relubrication via slots in the ball recirculation channel
- Long operating life
- Operating temperature up to 120°C
  Cage: polyamide 66-GK
  Sealing rings: polyester elastomer

INA ball bearings are superior bearings not only in terms of their resistance to temperature but also in their other features such as:

- Smooth running
- Load carrying capacity
- Rigidity

Good rigidity is achieved in all directions due to the uniform spacing of the rows.

INA Linear Ball Bearings
Series KN/KS MAX^3

INA linear ball bearings of series KN, KNO, KS and KSO are linear recirculating ball bearing units which can compensate for misalignments due to their special design.

Linear ball bearings of this series consist of a cage and several load plates. The high-strength plastic cage guides the balls. The hardened load plates have a ground profile on the raceway side.

The KN/KS series offer:

- Ground races for smoothest operation
- Self aligning in any housing
- Completely interchangable with other standard makes
- Lower noise level
- Lighter weight
- Wiper seals float with the bearing
- Linear ball bearings KNO..PP with all-around sealing have additional reinforced longitudinal seals
- Cost effective bearings for round shaft rails

In addition, the KS offers:

- Larger load capability due to increased number of ball rows
- Greater misalignment capability
- Longer bearing life due to the internal lubrication resevoirs

INA Linear Ball Bearings
Series KB

INA linear ball bearings of series KB consist of a hardened and ground outer ring and a cage in which the balls are guided. The balls in the return zones are held in place by spring elements. This ensures that even heavily loaded or preloaded bearings have a uniform, low resistance to displacement.

INA linear ball bearings of closed (KB), adjustable (KBS) and open version (KBO) have 4 to 6 rows of balls to support the load and are used where high precision and load carrying capacity are required.

Linear ball bearings of series KBS have a split outer ring which allows the operating clearance to be adjusted.

Linear ball bearings of series KBO have a segment cut out of the outer ring:
they are suitable for applications with shafts with continuous support.

Linear ball bearings of series KB, KBS and KBO can be relubricated.

The ground outside diameter on the linear ball bearings series KB are suitable as raceways for rolling bearings so that bearing units for linear and rotary motion can be created.

The special recirculation design provides a uniform, low resistance to displacement with extremely smooth running even in highly loaded and preloaded linear ball bearings.

Bearings of series KB are completely interchangeable with the bearings of our competitors.

INA Shafts
Series W, WH, WZ

INA shafts of series W, WH and WZ are suitable for guidance systems with closed, protected linear bearing units and are used in a wide range of applications in the construction of equipment and automatic machinery.

- INA shafts are surface hardened, precision ground and made from high grade steels.
- High material quality
- High surface hardness and surface quality
- High dimensional and geometrical accuracy ensure excellent running characteristics.
- Steel shafts are available in standard lengths ex stock and can be cut to the customer's requirements. They can be produced with various end configurations and other machined features.
- Special versions are available in other materials, e.g. corrosion-resistant steel.
- Shafts of 5 mm diameter are available in lengths up to about 3700 mm and shafts of 6 mm diameter and above in lengths up to about 4000 mm.
- INA can supply composite shafts where the length required exceeds the maximum single piece length.
- Special versions are available on request with other tolerances and special surface coatings and as unhardened shafts.

Shafts and support rails of series TSCW, TSNW, TSSW, TSUW, TSWW and TSWWA complete the INA linear range and remove the need for expensive, time consuming customer designs.

Support rails have the following advantages:

- They prevent flexing of the shaft
- They ensure correct functioning of the linear guidance system
- Low section height
- High rigidity

INA Linear Ball Bearings
Series KBZ

Linear ball bearings of series KBZ and KBZ..OP consist of a hardened and ground solid outer ring and a retainer. The outer ring is machined from high-carbon bearing steel. The retainer is manufactured from a high strength engineered resin. Series KBZ..OP have a segment removed from the outer ring for applications with supported shafts.

Series KNZ/KX MAX[3]

Linear ball bearings of series KNZ.. and KX.. consist of a precision molded retainer of a high strength engineered resin and hardened and ground bearing races. Series KNZ..OP.. and KXO.. bearings have a segment removed for applications requiring supported shafts.

The KNZ/KX series offer:

- Ground races for smoothest operation.
- Self Aligning in any housing.
- Completely interchangeable with other standard makes.
- Lower noise level.
- Lighter weight.
- Wiper seals float with the bearing.
- Cost effective bearings for round shaft rails.

In addition, the KX offers:

- Larger load capability due to increased number of ball rows
- Greater misalignment capability
- Longer bearing life due to the internal lubrication reservoirs

Linear Recirculating Ball Bearing And Guideway Assemblies
Series KUVE

The four-row linear recirculating ball bearing and guideway assembly KUVE comprises a total of six carriage cross-sections. The four rows of balls are preloaded. The unit has a high load carrying capacity; it can take loads from all directions and moments about all axes.

The special design of the recirculating ball system ensures low resistance to displacement and allows high velocities and accelerations.

Linear Modular Units
Series MLF

The linear modular unit MLF allows small to medium loads to be moved with a high positional accuracy at speeds up to 7.5m/s[1)] and with a maximum acceleration of 40m/s^2 [1)]. When combined with a suitable control drive, a high repeatability can be achieved, usually within ±0.08 mm.

The profiled support rails, which have high bending and torsional rigidity, allow the unit to operate without supports, even on longer modular units.

All the aluminium components are anodized.

A corrosion resistant execution is also available: suffix VA.

Design

- Profiled support rail LFS..M consisting of an anodized aluminium rail with hardened and ground steel rods inlaid on both sides. T-grooves provide various installation possibilities.
- Compact carriage in an enclosed design with integral toothed belt tensioner on both sides, lubrication and wiper unit. The carriage can be set clearance-free by means of two eccentric bolts.
- Return units with integral brush wipers and ball bearings which are lubricated for life.

Linear Modular Units
Series MKUE

INA linear ball bearing and guideway assemblies are used in the linear modular units series MKUE. They are preloaded and operate virtually free from stick-slip.

The guidance accuracy of MKUE linear modular units is increased by machining the guideway seating surfaces on the support rail.

The INA linear modular unit with recirculating ball guidance system allows medium to high loads to be moved quickly and with a very high guidance accuracy.

The drive is via either a toothed belt or a ball screw.

Maximum traverse speeds are:

Toothed belt drive 3 m/s
Ball screw drive 1.73m/s

When the toothed belt drive is combined with a suitable control drive, a high repeatability can be achieved, usually within ±0.08 mm.

The profiled support rails, which have high bending and torsional rigidity, allow the unit to operate without supports, even on longer units.

All the aluminium components are anodized.

Design

- Profiled support rail made from anodized aluminium with integral ball bearing and guideway assembly KUE. T-grooves provide various installation possibilities.

Linear Modular Unit MKUE 25 ZR..N

- Carriage with two T-grooves (with threaded holes if required) and integral belt tensioners on both ends
- Return unit with ball bearing lubricated for life.

Linear Modular Unit MKUE 25 KGT

- Carriage with threaded holes
- Preloaded double nut for leads of 5 and 10 mm. Accuracy 50 µm/300 mm
- INA axial angular contact ball bearings series ZKLF are used for the spindle bearing arrangements: the bearings are greased for life
- Bellows are used to protect the ball screw spindle and the KUE system.

[1)] These values are reduced when bellows are used.

INA Linear Roller Bearings
Series RUS

INA linear roller bearings are manufactured in several basic types and meet the highest technical demands. Linear recirculating roller bearing systems are suitable for linear guidance systems in machine tools where high guidance and positioning accuracy with long strokes are required.

Linear roller bearings have the following advantages:

- Very high accuracy
- Increased compressive rigidity
- High load carrying capacity
- High functional reliability
- Very low frictional values compared to other linear guidance systems
- Very smooth running due to the special design of the supporting elements with compensation for bounce

Due to their robustness, linear roller bearings of series PR are also suitable for use at high temperatures as well as for extremely high velocities and accelerations.

With INA linear roller bearings of series RUSV..KS, there is no need for a separate adjusting gib. This gives advantages including:

- Fewer components
- Low section height
- Quicker, simpler mounting

INA also supplies a setting device for exact, repeatable, quick and straightforward adjustment of preload in linear roller bearings.

INA Adjusting Gibs
Series VUS and VUSZ

INA Adjusting Gibs of series VUS and VUSZ are used for height adjustment or preloading of linear roller bearings. They consist of two ground wedges which are guided together by a central key. A plate fixed on one end face supports the adjusting screw and the locking screw. Lubrication ducts in the adjusting gibs allow for the lubrication of the linear bearings through the rolling element return zone in their supporting face.

INA Planetary Roller Screws Series RGT

The most significant advantage of these units over ball screws is the increased number of contact points per unit volume which provides a high load carrying capacity. The specific contact load of a roller screw drive is lower and the life longer compared to ball screw drives with the same dimensions.

Compared to the more widespread ball screw drives, planetary roller screws have greater rigidity, lower axial clearance and higher limiting speeds which are about three times those of ball screw drives. RGT units are very compact and robust, require only a small amount of space, and large ball screw drives can be replaced by small RGT units. Straightforward mounting and dismantling allow the nut to be mounted where access is difficult.

- Low sensitivity to shock loading
- High functional reliability under extreme conditions
- Extremely high displacement speeds
- Low internal friction — no stick-slip, high efficiency (up to 93%).

Excellent positioning and repeat accuracy throughout the operating life. Extremely accurate positioning is possible (2 µm) due to the small lead (1 mm) with very small advance movement. At high displacement speeds, a high positioning accuracy can be achieved with a large lead.

Special machining operations (e.g. shortening a spindle) can be quickly carried out.

The optimum solution for a particular application can be achieved with special setting of the nut e.g. reduction of the frictional moment.

INA planetary roller screws, Series RGT, basically consist of a screw (shaft) and a roller nut. Several planetary rollers are arranged parallel to the axis between the screw and the roller nut.

Roller Nut

The roller nut can be supplied split or as one piece. The two halves of the split roller nut **(9)**, see next page, are held together by the key **(7)**. During installation of the planetary roller screw the roller nut is preloaded. A shim **(8)** is used to control the preload. The one-piece roller nut cannot be preloaded.

Internally geared rings **(4)** are situated in the ends of the roller nut engaging with the external gearing provided at each end of the planetary rollers **(5)**. The spacing of the planetary rollers, is provided by the carrier plates **(3)** which also function as labyrinth seal. The plates are retained by the snap rings **(2)**.

Planetary Rollers

The planetary rollers **(5)** have a journal at each end which are guided by the holes of the carrier plates. The geared ends of the planetary rollers mesh with the internally geared rings in the nut. The planetary rollers have a single-start thread with a crowned flank. This allows the stresses created by the thread meshing to be distributed on larger ellipses which also reduce the harmful edge stresses. The planetary rollers rotate slip-free in the roller nut. They have no axial movement relative to the roller nut as the axial travel increments at the points of contact between both elements are equal.

Screw Shaft

Screws are manufactured from surface hardened, case hardening steel. The thread angle is 90 degrees. Screws in standard design are available with a nominal diameter d_0 from 5 mm to 20 mm. The standard ends configuration prescribes a straight journal on the floating side and provision for lock nut and driving system on the locating side. The screws are available in different lengths. Strokes from 25 mm to 1200 mm are possible, depending on the nominal diameter.

Screws with a nominal diameter d_0 between 24 and 63 mm are special designs. Their dimensions are pre-determined by the following dimension tables. The largest possible screw diameter d_0 is 250 mm.

All screws are available with custom tailored ends configuration.

Special Request Variations

INA planetary roller screws are available upon request in the following special designs:

- One-piece roller nut (not preloaded, higher load ratings, small axial clearance)
- Roller nut with flanges, middle or side flange

INA Planetary roller screws are also available upon request with:

- Left hand thread
- Inch pitch thread
- Hollow shaft

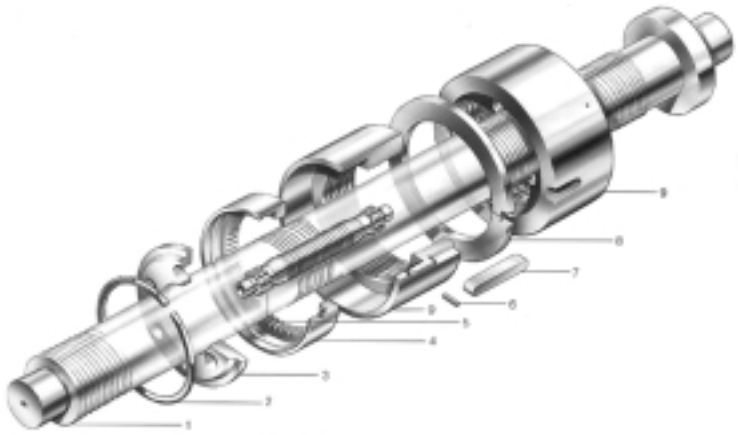
If aggressive media is acting on the planetary roller screw, corrosion resistant material should be chosen. Contact INA for details.

Wipers

If planetary roller screws are subject to heavy contamination, the roller nut can be equipped with wiper seals upon request.

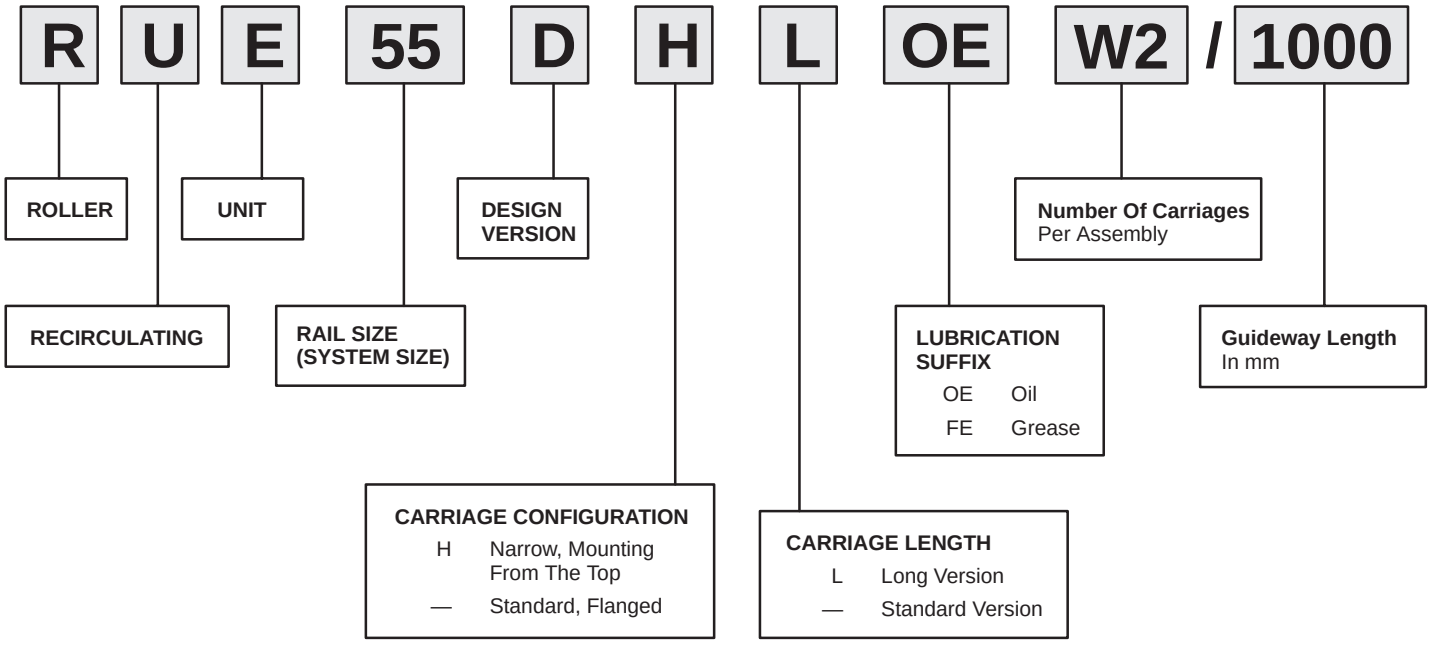
DESIGN OF THE INA PLANETARY ROLLER SCREW WITH SPLIT ROLLER NUT

1	SCREW (SHAFT)
2	SNAP RING
3	CARRIER PLATE
4	INTERNALLY GEARED RING
5	PLANETARY ROLLER
6	LOCATING PIN
7	KEY
8	SHIM
9	ROLLER NUT



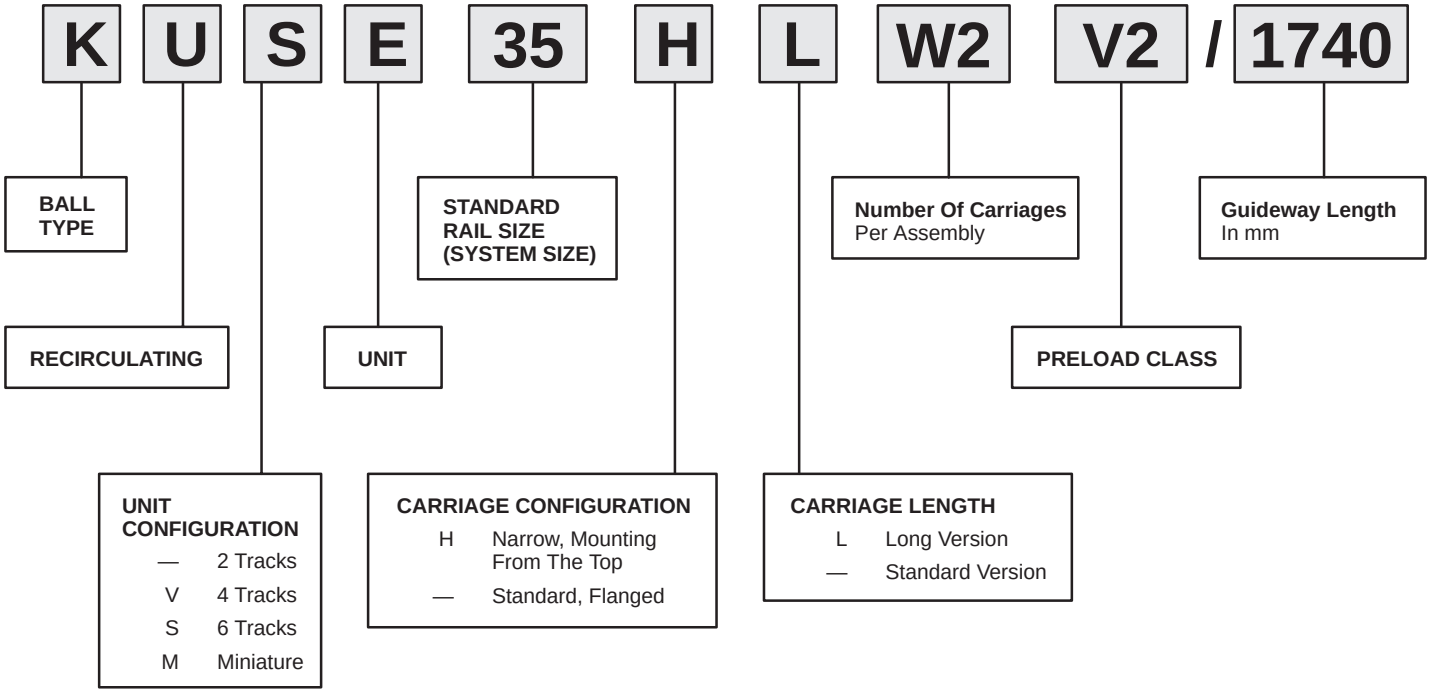
Part Number Identification
LINEAR

LINEAR RECIRCULATING ROLLER BEARING & GUIDEWAY ASSEMBLY



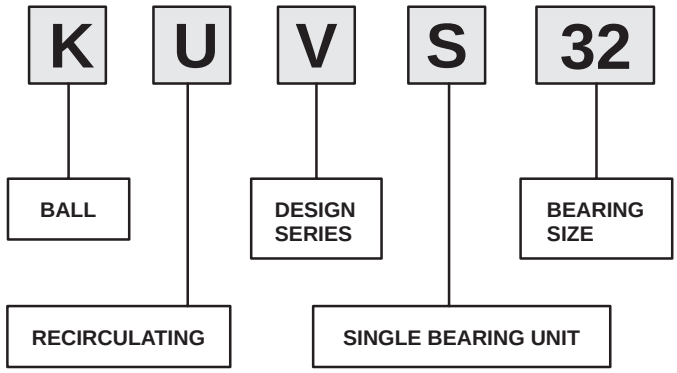
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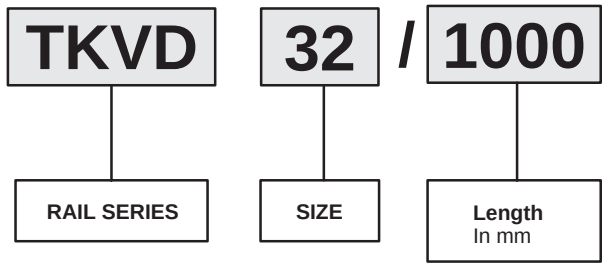
LINEAR RECIRCULATING ROLLER BEARING & GUIDEWAY ASSEMBLY



Part Number Identification
LINEAR

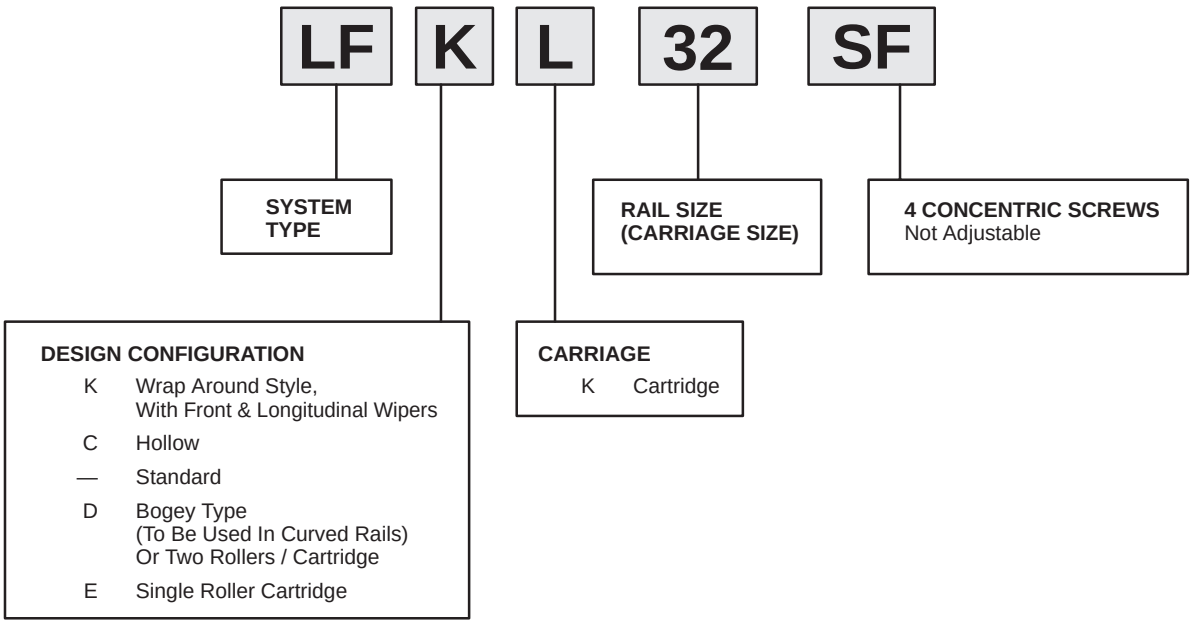
LINEAR GUIDANCE SYSTEMS

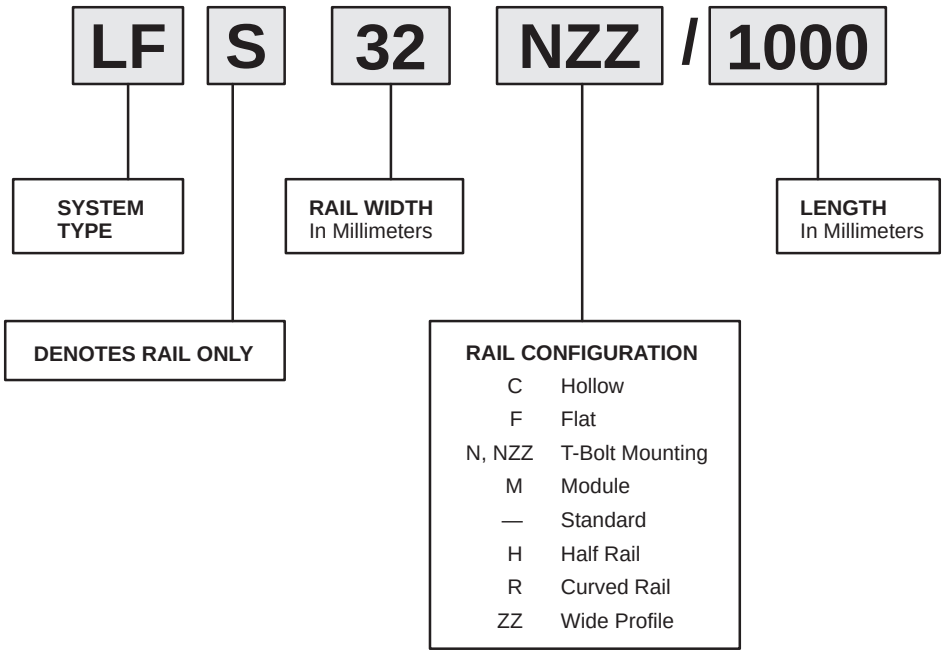




Part Number Identification
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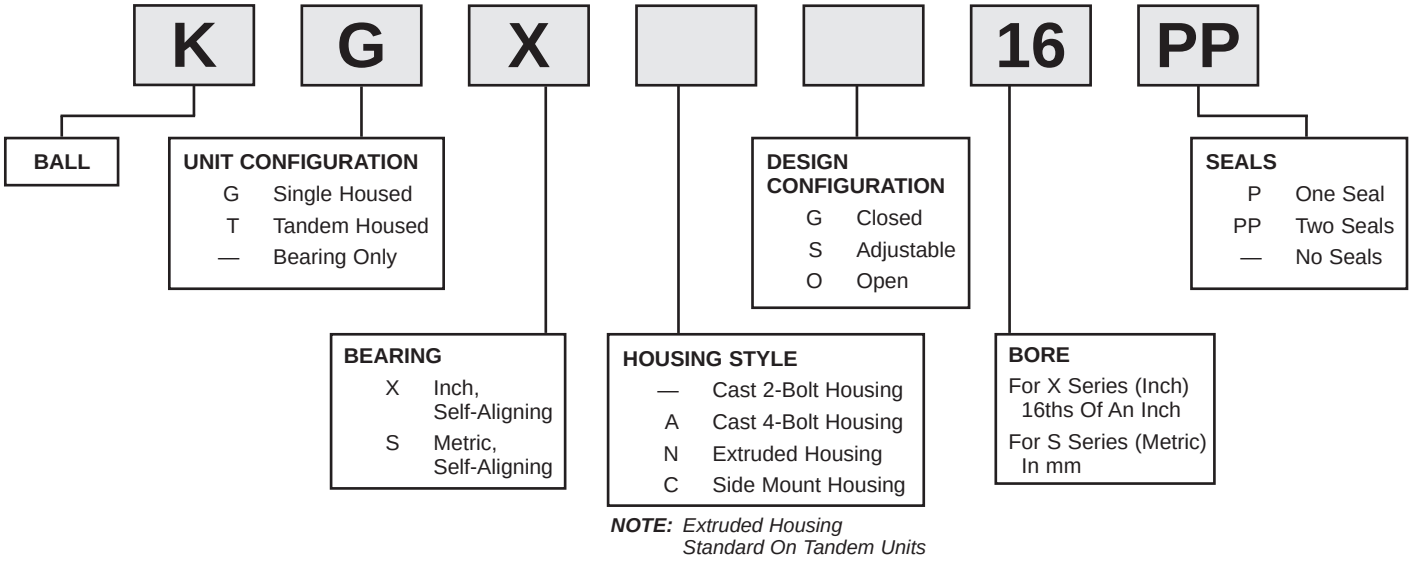
LF CARRIAGES & RAILS





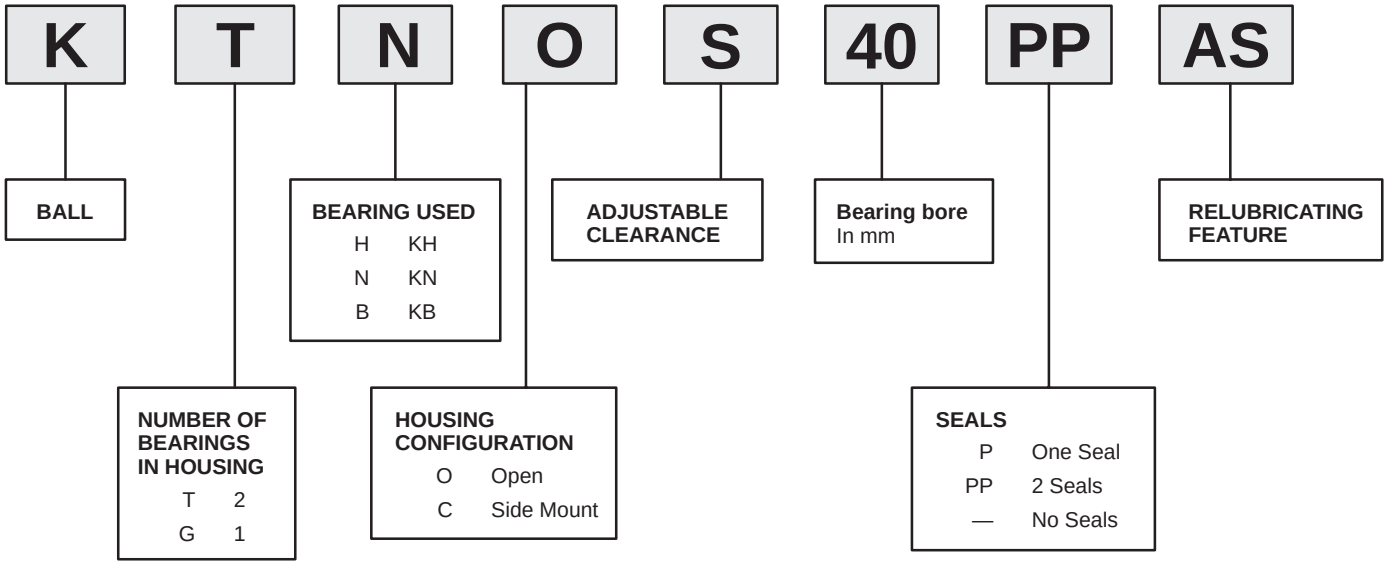
Part Number Identification
LINEAR

MAX³ INCH & METRIC BEARINGS & HOUSING UNITS



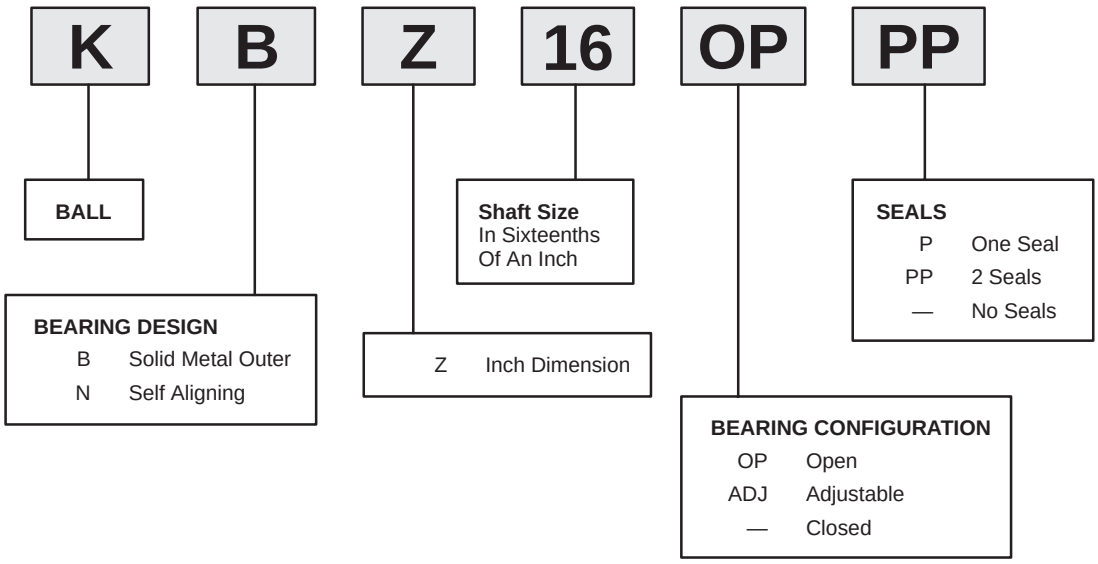
NOTE: *Extruded Housing Standard On Tandem Units*

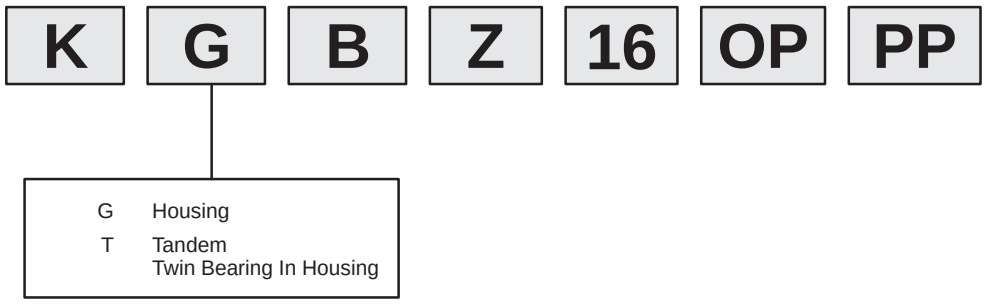
METRIC HOUSING UNITS



Part Number Identification
LINEAR

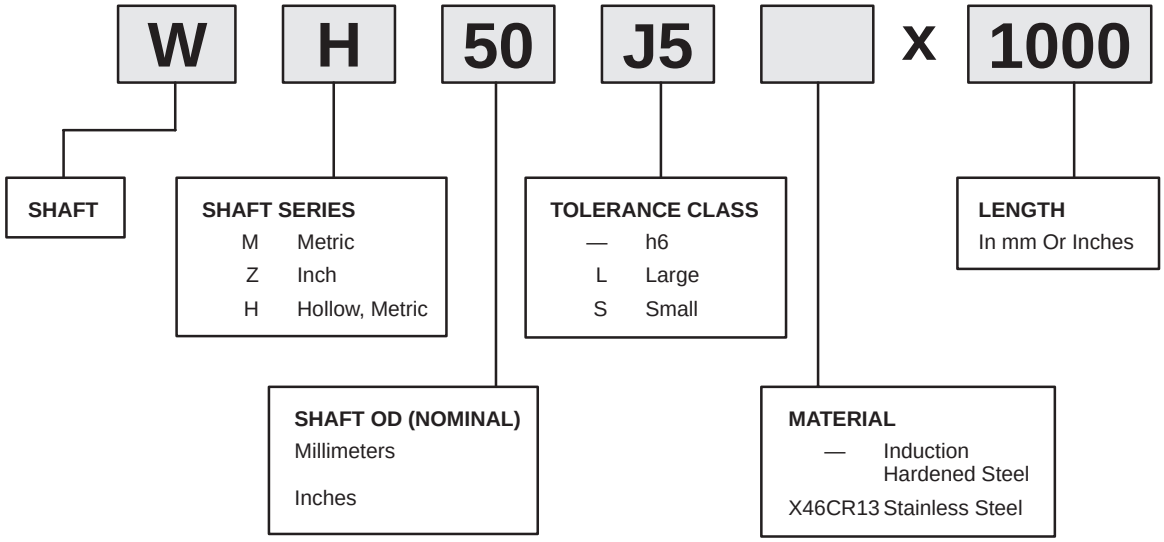
INCH BEARINGS & HOUSING UNITS



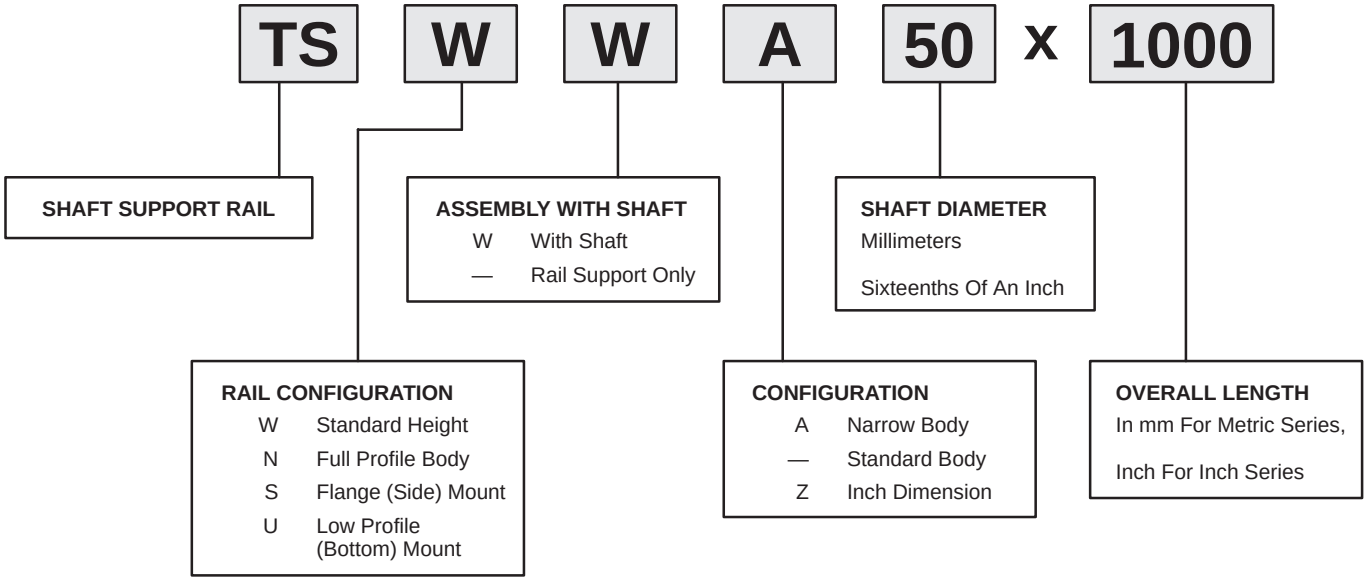


Part Number Identification
LINEAR

SHAFTS (METRIC & INCH)

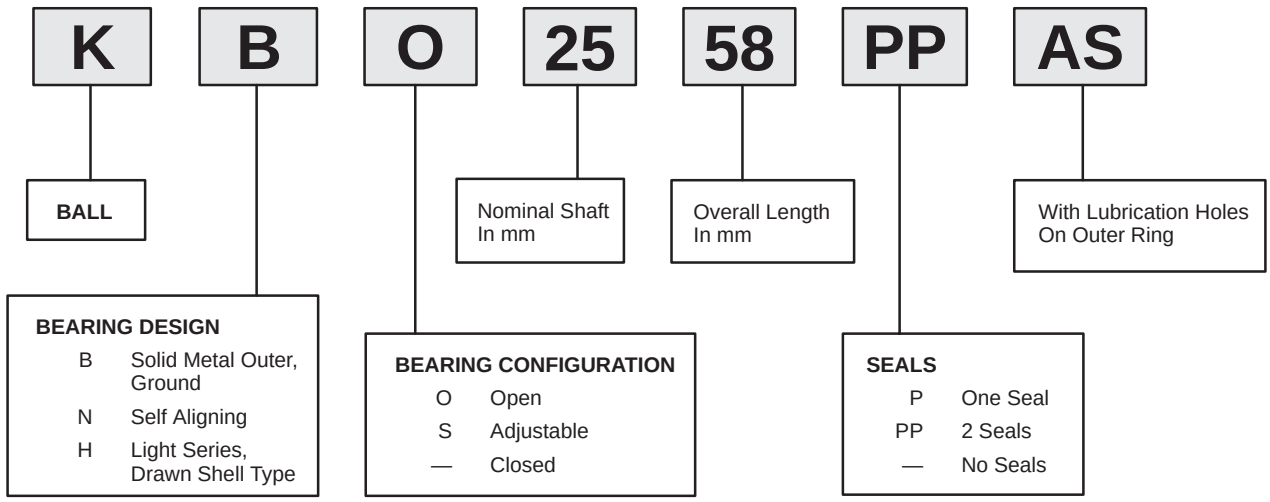


SUPPORT RAILS (METRIC & INCH)

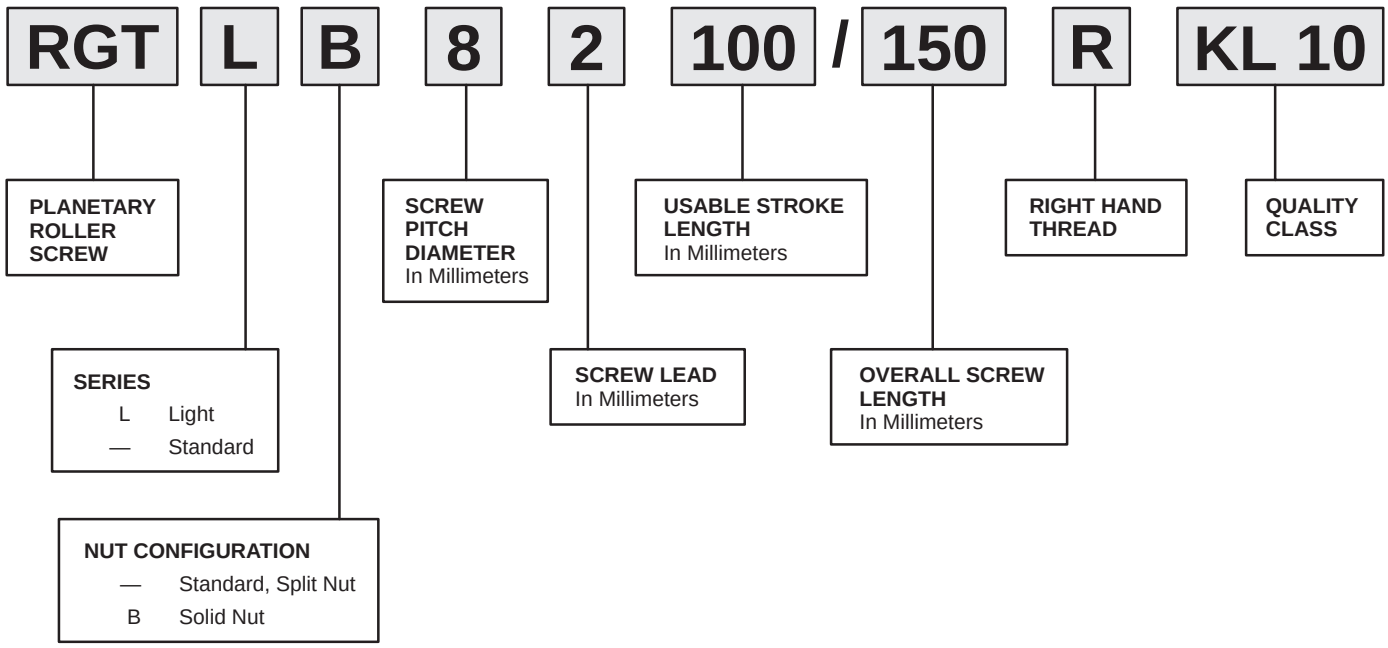


Part Number Identification
LINEAR

METRIC BALL BUSHINGS

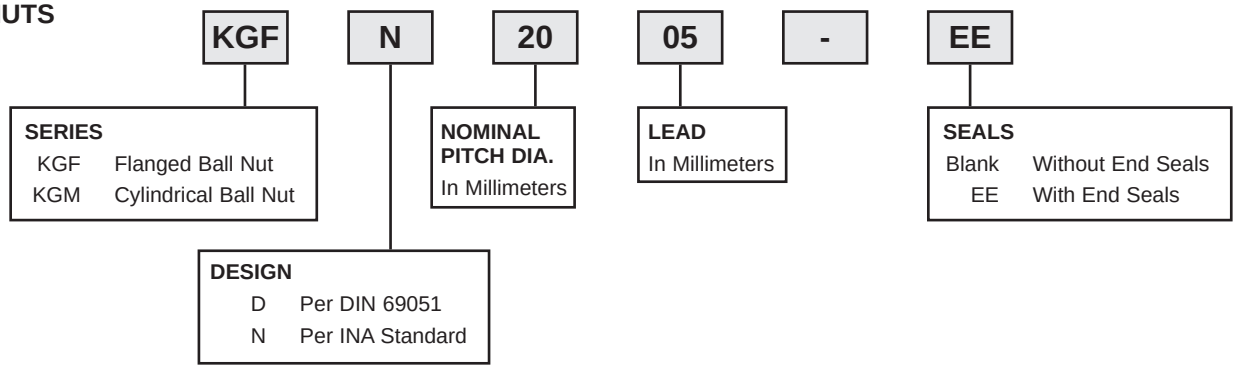


PLANETARY ROLLER SCREWS

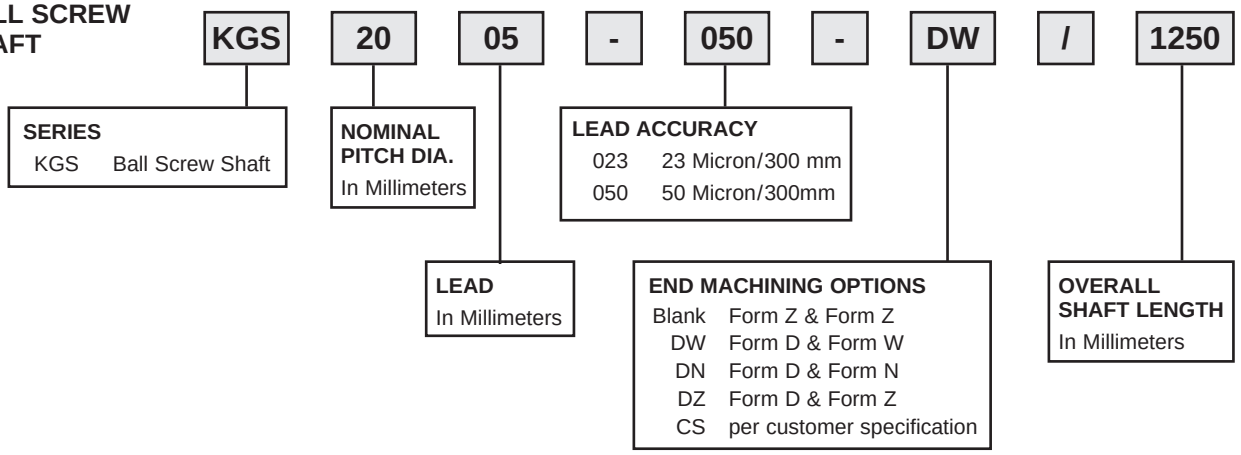


Part Number Identification
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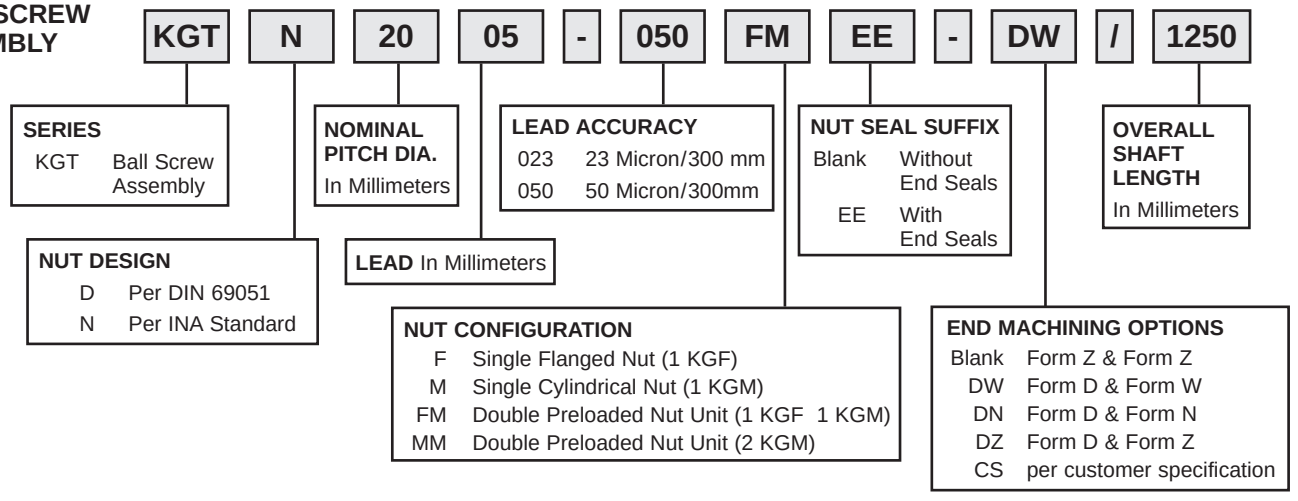
BALL NUTS



BALL SCREW SHAFT



BALL SCREW ASSEMBLY



Part Number Identification
LINEAR
COMPONENT / FAMILY

LFS, LFS..C, M, TS..W, LFL, LFCL, LFR..

COMPONENT	FAMILY					
	LFS	**LFS..C,M**	**TS.W**	**LFL**	**LFCL**	**LFR..**
Cap wiper	—	—	—	—	—	AB LFR
Lube & wiper unit	—	—	AB..W	AB/AB..LFL	—	AB..W
Side plates	—	—	—	ABAL	—	—
End stops	PAH	—	—	—	—	—
End plate	—	ANS LFS	—	—	—	—
End Cover	—	KA LFS..C,M,CH	—	—	KA LFS..CL	—
Cover strip	—	NAD	—	—	—	—
Measuring system	LMS	LMS	LMS	—	—	—

RUE, KUSE, KUVE, KUVS, KUE, KUME

COMPONENT	FAMILY					
	RUE	**KUSE**	**KUVE**	**KUVS**	**KUE**	**KUME**
Cap wiper	—	—	—	—	—	AB LFR
Closing plugs (plastic)	KA..TN	KA..TN	KA..TN	KA..TN	KA..TN	KA..TN
Closing plugs (brass)	KA..M	KA..M	—	—	KA..M	—
Mounting rail	MSX	MKSD	MKVD	—	MKD	MKMD
Hydraulic mounting device	MVH	—	—	—	—	—
Cover strip	ABDU	ADBSE	—	—	—	—
Sheet steel wiper	APLU	APLSE	APLVE	—	APLE	—
Spring loaded scraper	—	AB KOL KWSE	—	—	—	—
Braking element	RUKS..D	—	—	—	—	—
Lube adapter plate	BPLU	BLSE	—	—	BPLE	—
Grease lube adapter	—	SMAD KFE	SMAD KFE	—	SMAD KFE	—
Oil lube adapter	—	SMAD KOE	SMAD KOE	—	SMAD KOE	—
Lube metering unit	SMDE	—	—	—	—	—
Damping carriage	RUDS	—	—	—	—	—
Bellows	—	FBALG	—	—	FBALG	—

Linear Recirculating Roller Bearing And Guideway Assemblies

RUE..D, RUE..DL, RUE 65 L SERIES

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

Linear roller bearing and guideway assembly Grease Lubrication PART NUMBER	Linear roller bearing and guideway assembly Oil Lubrication PART NUMBER	CARRIAGE [1] PART NUMBER	CARRIAGE MASS kg	GUIDEWAY PART NUMBER	GUIDEWAY MASS kg/m	GUIDEWAY Closing Plugs [2]	COVERING STRIP	L [3] mm	H mm	A mm	C [4] mm
RUE 35 D FE	RUE 35 D OE	RWU 35 D	2.0	TSX 35 D	5.9	KA 15	ADB 18	2960	48	100	120
RUE 35 D L FE	RUE 35 D L OE	RWU 35 D L	2.7	TSX 35 D	5.9	KA 15	ADB 18	2960	48	100	143
RUE 45 D FE	RUE 45 D OE	RWU 45 D	3.3	TSX 45 D	9.4	KA 20	ADB 23	2940	60	120	141
RUE 45 D L FE	RUE 45 D L OE	RWU 45 D L	4.4	TSX 45 D	9.4	KA 20	ADB 23	2940	60	120	175
RUE 55 D FE	RUE 55 D OE	RWU 55 D	5.6	TSX 55 D	13.3	KA 24	ADB 27	2520	70	140	170
RUE 55 D L FE	RUE 55 D L OE	RWU 55 D L	7.5	TSX 55 D	13.3	KA 24	ADB 27	2520	70	140	210
RUE 65 D L FE	RUE 65 D L OE	RWU 65 D L	14.4	TSX 65 D	21.5	KA 26	ADB 29	2520	90	170	252.8

RUE..D FE has lubrication nipple to DIN 71 412-A M8 ± 1.
RUE..D OE has connector with union nut similar to DIN 3 871-A.
RUE 25 available on request.
RUE..U: Linear roller bearing and guideway assembly with guideway for fixing from below, available on request.

1) Suffix FE for grease lubrication, suffix OE for oil lubrication.

2) Closing plugs KA..TN are included with the delivery.

3) Maximum length L of single-piece guideways, longer guideways are supplied as multi-piece guideways and are marked accordingly.

4) Minimum covered length for sealing the lubrication connections.

5) Dimensions C_5 and C_6 are dependent on the guideway length L.

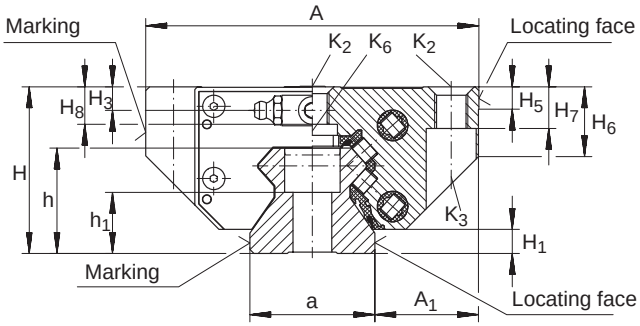
6) Position of the lubrication hole in the adjacent construction.

7) Maximum diameter of the lubrication hole in the adjacent construction.

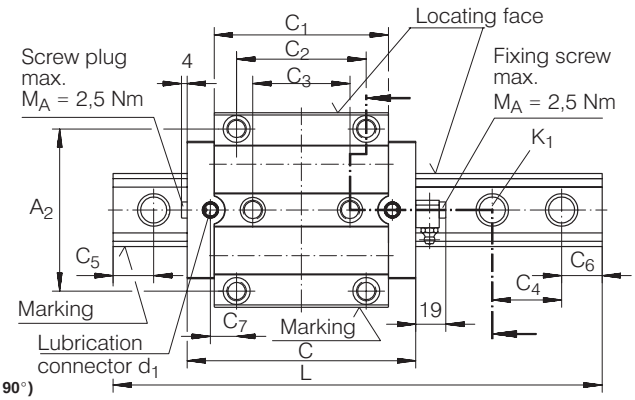
8) Maximum length of fixing screw: H_8 +3 mm.

9) If there is a possibility of settling, the fixing screws should be secured against rotation.

DIAMETERS AND TIGHTENING TORQUES FOR THREADS AND SCREWS [9]								
PART NUMBER	K_1 For screws to DIN 912-12.9		K_2 For screws to DIN 912-12.9		K_3 Through holes for screws to DIN 912-12.9		K_6 Through holes for screws to DIN 7 984-8.8	
		Nm max.		Nm max.		Nm max.		Nm max.
RUE 35 D	M8	41	M10	41	M8	41	M8	24
RUE 35 D L	M8	41	M10	41	M8	41	M8	24
RUE 45 D	M12	140	M12	83	M10	83	M10	48
RUE 45 D L	M12	140	M12	83	M10	83	M10	48
RUE 55 D	M14	220	M14	140	M12	140	M12	83
RUE 55 D L	M14	220	M14	140	M12	140	M12	83
RUE 65 L	M16	340	M16	220	M14	220	M14	130



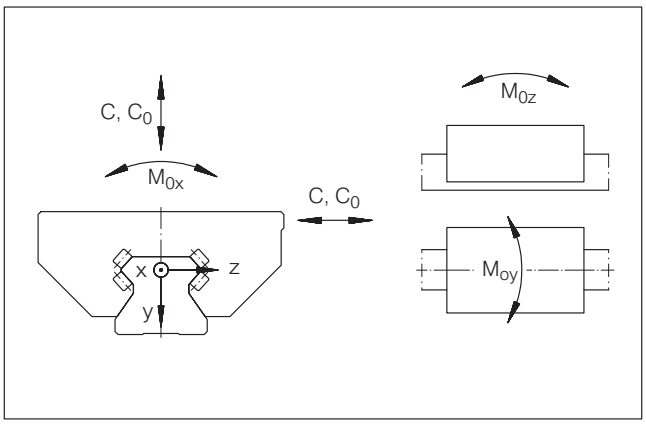
RUE..D



RUE..D
(View rotated through 90°)

A_1	A_2	a $^{-0.005}_{-0.035}$	C_1	C_2	C_3	C_4	C_5 5) min.	C_5 5) max.	C_6 5) min.	C_6 5) max.	C_7 6)	d_1 7) max.	H_1	H_3	H_5	H_6	H_7	H_8 8)	h	h_1
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
33	82	34	91.4	62	52	40	20	31	20	31	14.3	6	6.5	6.6	8	20	12	11.1	30	19
33	82	34	114.4	62	52	40	20	31	20	31	25.8	6	6.5	6.6	8	20	12	11.1	30	19
37.5	100	45	107.5	80	60	52.5	20	41	20	41	16.2	6	8.5	8.5	8	26	15	13.5	38	22
37.5	100	45	141.7	80	60	52.5	20	41	20	41	33.3	6	8.5	8.5	8	26	15	13.5	38	22
43.5	116	53	130.8	95	70	60	20	47	20	47	21.2	6	11	10	12	31	18	15.5	45	28
43.5	116	53	170.5	95	70	60	20	47	20	47	41	6	11	10	12	31	18	15.5	45	28
53.5	142	63	207.6	110	82	75	20	61	20	61	49	6	11	10.2	15	39.2	23	23	53.8	30.3

LOAD CARRYING CAPACITY TABLE					
PART NUMBER	BASIC LOAD RATINGS		MOMENT RATINGS		
	C kN	C_0 kN	M_{0x} Nm	M_{0y} Nm	M_{0z} Nm
RUE 35 D	59	134	990	2140	1925
RUE 35 D L	70	169	1255	3370	3035
RUE 45 D	92	205	1805	3870	3485
RUE 45 D L	115	275	2410	6770	6095
RUE 55 D	135	305	3130	7035	6335
RUE 55 D L	167	405	4120	12010	10815
RUE 65 D L	270	640	7600	24000	21500



Load directions

Linear Recirculating Roller Bearing And Guideway Assemblies
RUE..D H, RUE..D HL SERIES

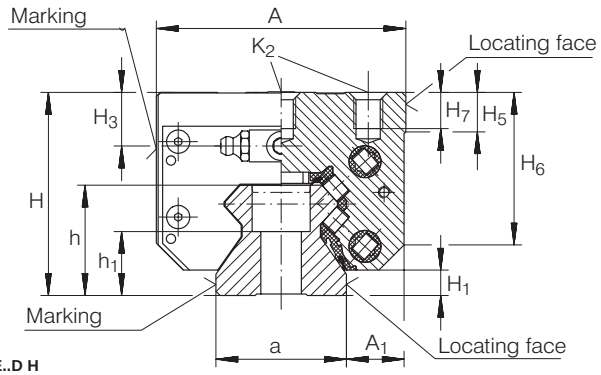
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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Linear roller bearing and guideway assembly Grease Lubrication PART NUMBER	Linear roller bearing and guideway assembly Oil Lubrication PART NUMBER	CARRIAGE [1] PART NUMBER	CARRIAGE MASS kg	GUIDEWAY PART NUMBER	GUIDEWAY MASS kg/m	GUIDEWAY Closing Plugs [2]	COVERING STRIP	L [3] mm	H mm	A mm	C [4] mm
RUE 35 D H FE	RUE 35 D H OE	RWU 35 D H	1.7	TSX 35 D	5.9	KA 15	ADB 18	2960	55	70	120
RUE 35 D HL FE	RUE 35 D HL OE	RWU 35 D HL	2.4	TSX 35 D	5.9	KA 15	ADB 18	2960	55	70	143
RUE 45 D H FE	RUE 45 D H OE	RWU 45 D H	3.1	TSX 45 D	9.4	KA 20	ADB 23	2940	70	86	141
RUE 45 D HL FE	RUE 45 D HL OE	RWU 45 D HL	4.0	TSX 45 D	9.4	KA 20	ADB 23	2940	70	86	175
RUE 55 D H FE	RUE 55 D H OE	RWU 55 D H	5.3	TSX 55 D	13.3	KA 24	ADB 24	2520	80	100	170
RUE 55 D HL FE	RUE 55 D HL OE	RWU 55 D HL	6.7	TSX 55 D	13.3	KA 24	ADB 24	2520	80	100	210
RUE 65 D HL FE	RUE 65 D HL OE	RWU 65 D HL	13.6	TSX 65 D	21.5	KA 26	ADB 26	2 520	100	126	252.8

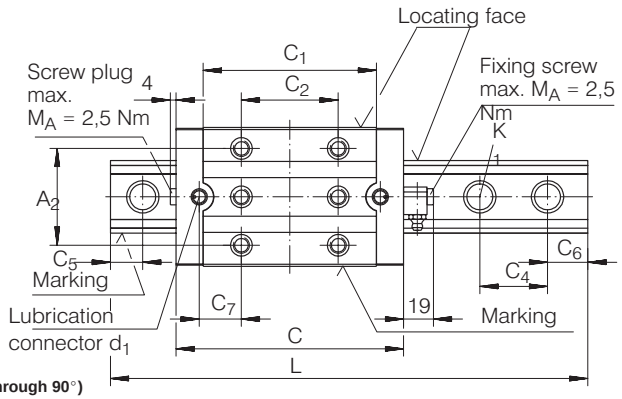
RUE..D H FE has lubrication nipple to DIN 71 412-A M8 ± 1.
RUE..D H OE has connector with union nut similar to DIN 3 871-A.
RUE..DU: Linear roller bearing and guideway assembly with guideway for fixing from below, available on request.

1) Suffix FE for grease lubrication, suffix OE for oil lubrication.
2) Closing plugs KA..TN are included with the delivery.
3) Maximum length L of single-piece guideways, longer guideways are supplied as multi-piece guideways and are marked accordingly.
4) Minimum covered length for sealing the lubrication connections.
5) Dimensions C_5 and C_6 are dependent on the guideway length L.
6) Position of the lubrication hole in the adjacent construction.
7) Maximum diameter of the lubrication hole in the adjacent construction.
8) If there is a possibility of settling, the fixing screws should be secured against rotation.

DIAMETERS AND TIGHTENING TORQUES FOR THREADS AND SCREWS [8]				
PART NUMBER	K_1 For screws to DIN 912-12.9		K_2 For screws to DIN 912-12.9	
		Nm max.		Nm max.
RUE 35 D H	M8	41	M8	41
RUE 35 D HL	M8	41	M8	41
RUE 45 D H	M12	140	M10	83
RUE 45 D HL	M12	140	M10	83
RUE 55 D H	M14	220	M12	140
RUE 55 D HL	M14	220	M12	140
RUE 65 D HL	M16	340	M14	220



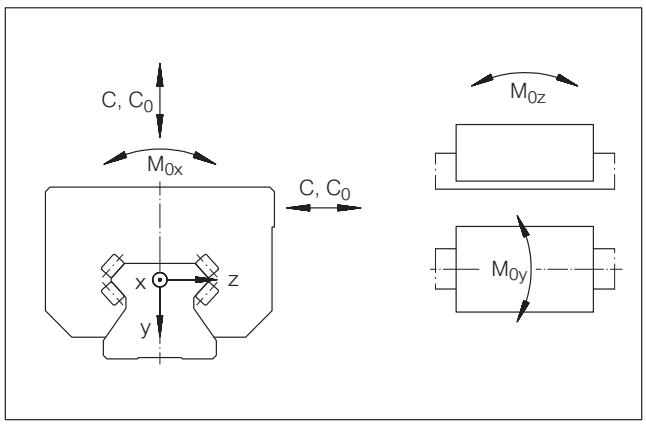
RUE..D H



RUE..D H
(View rotated through 90°)

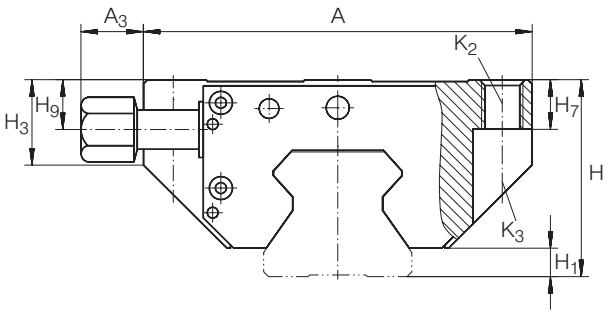
A_1	A_2	a $^{-0.005}_{-0.035}$	C_1	C_2	C_4	C_5 5) min.	C_5 5) max.	C_6 5) min.	C_6 5) max.	C_7 6)	d_1 7) max.	H_1	H_3	H_5	H_6	H_7	h	h_1
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
18	50	34	91.4	50	40	20	31	20	31	20.3	6	6.5	13.6	10.8	41	10	30	19
18	50	34	114.4	72	40	20	31	20	31	20.8	6	6.5	13.6	10.8	41	10	30	19
20.5	60	45	107.5	60	52.5	20	41	20	41	26.2	6	8.5	18.5	13.7	52	12.5	38	22
20.5	60	45	141.7	80	52.5	20	41	20	41	33.3	6	8.5	18.5	13.7	52	12.5	38	22
23.5	75	53	130.8	75	60	20	47	20	47	31.2	6	11	20	16	61	15	45	28
23.5	75	53	170.5	95	60	20	47	20	47	41	6	11	20	16	61	15	45	28
31.5	76	63	207.6	120	75	20	61	20	61	43.8	6	11	20.2	15	71.2	20	53.8	30.3

LOAD CARRYING CAPACITY TABLE					
PART NUMBER	BASIC LOAD RATINGS		MOMENT RATINGS		
	C kN	C_0 kN	M_{0x} Nm	M_{0y} Nm	M_{0z} Nm
RUE 35 D H	59	134	990	2140	1925
RUE 35 D HL	70	169	1255	3370	3035
RUE 45 D H	92	205	1805	3870	3485
RUE 45 D HL	115	275	2410	6770	6095
RUE 55 D H	135	305	3130	7035	6335
RUE 55 D HL	167	405	4120	12010	10815
RUE 65 D HL	270	640	7600	24000	21500



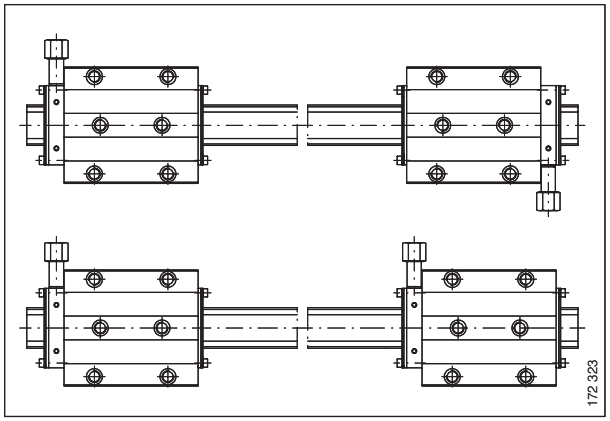
Load directions

Locking Element
RUKS..D SERIES

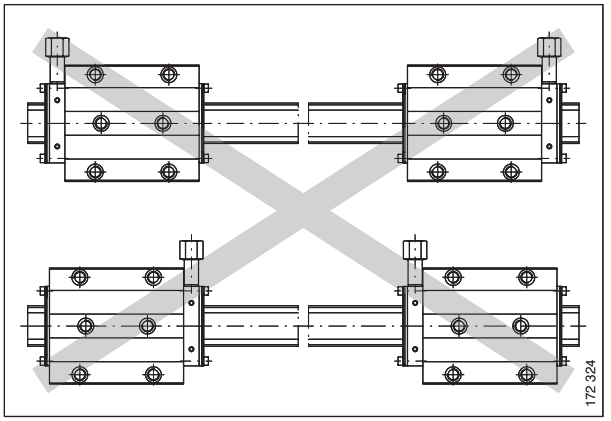


For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

PART NUMBER	MASS	A	H	C	A_2	A_3	C_1	C_2	C_3	C_7
	kg	mm	mm	mm	mm	mm	mm	mm	mm	mm
RUKS 35 D S	2.8	98	48	135	82	24.5	113	62	52	32
RUKS 35 D O	2.8	98	48	135	82	–	113	62	52	32
RUKS 35 DH S	2.8	68	55	135	50	34.5	113	50	–	38
RUKS 35 DH O	2.8	68	55	135	50	–	113	50	–	38
RUKS 45 D S	4.5	118	60	156	100	22	134	80	60	33.5
RUKS 45 D O	4.5	118	60	156	100	–	134	80	60	33.5
RUKS 45 DH S	4.5	84	70	156	60	39	134	60	–	43.5
RUKS 45 DH O	4.5	84	70	156	60	–	134	60	–	43.5
RUKS 55 D S	7.6	138	70	185	116	18.5	163	95	70	40.5
RUKS 55 D O	7.6	138	70	185	116	–	163	95	70	40.5
RUKS 55 DH S	7.6	98	80	185	75	38.5	163	75	–	50.5
RUKS 55 DH O	7.6	98	80	185	75	–	163	75	–	50.5

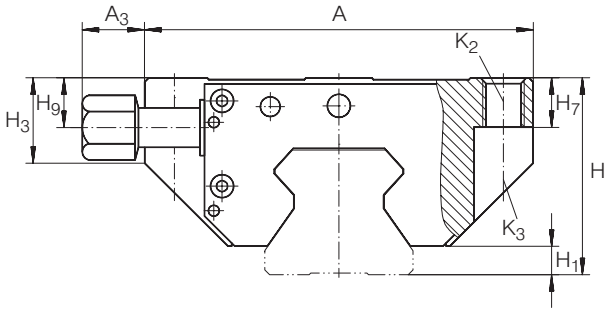


Position of oil connector, possible combinations



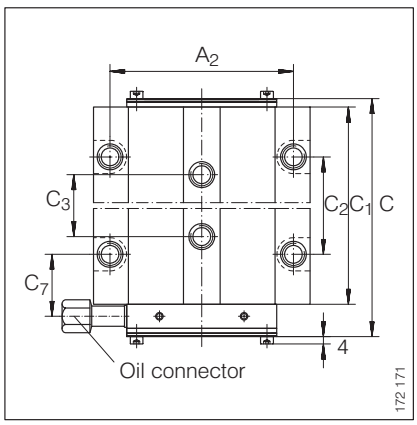
Position of oil connector, impermissible combinations

Locking Element
RUKS..D SERIES

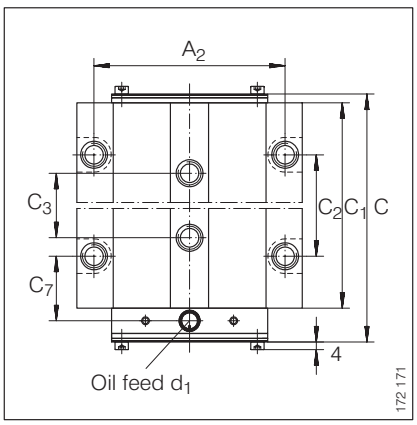


For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

d_1 max. mm	H_1 mm	H_3 mm	H_7 mm	H_9 mm	Suitable for guideway	K_2 For screws to DIN 912-12.9	K_2 max. Nm	K_3 Through hole for screws to DIN 912-12.9	K_3 max. Nm	PART NUMBER
6	6.5	21	12	13.2	TSX 35 D	M10	41	M8	41	RUKS 35 D S
6	6.5	21	12	–	TSX 35 D	M10	41	M8	41	RUKS 35 D O
6	6.5	42	10	20.2	TSX 35 D	M8	41	–	–	RUKS 35 DH S
6	6.5	42	10	–	TSX 35 D	M8	41	–	–	RUKS 35 DH O
6	8,5	27	15	15.6	TSX 45 D	M12	83	M10	83	RUKS 45 D S
6	8.5	27	15	–	TSX 45 D	M12	83	M10	83	RUKS 45 D O
6	8.5	53	10	25.6	TSX 45 D	M10	83	–	–	RUKS 45 DH S
6	8.5	53	10	–	TSX 45 D	M10	83	–	–	RUKS 45 DH O
6	11	32	18	18.8	TSX 55 D	M14	140	M12	140	RUKS 55 D S
6	11	32	18	–	TSX 55 D	M14	140	M12	140	RUKS 55 D O
6	11	62	15	28.8	TSX 55 D	M12	140	–	–	RUKS 55 DH S
6	11	62	15	–	TSX 55 D	M12	140	–	–	RUKS 55 DH O

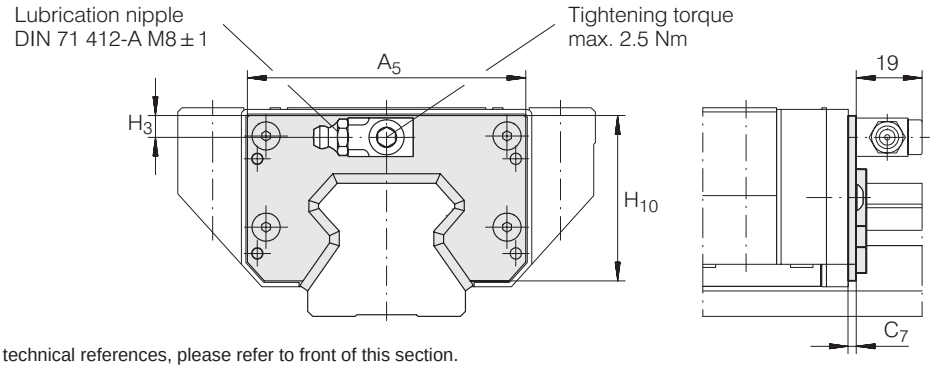


RUKS..D S



RUKS..D O

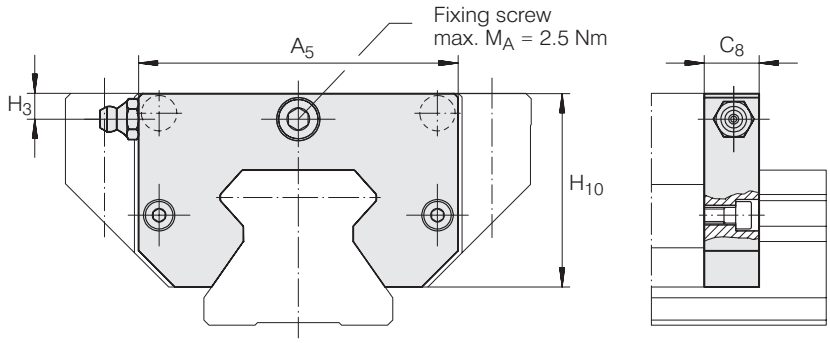
Sheet Steel Wiper
APLU SERIES



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

PART NUMBER	MASS g	A_5 mm	H_3 mm	H_{10} mm	C_7 mm	Suitable for linear recirculating roller bearing and guideway assembly	
APLU 35 D	60	66.7	6.6	39.7	6.5	RUE 35 D	RUE 35 D L
			13.6			RUE 35 D H	RUE 35 D HL
APLU 45 D	75	81.5	8.5	49.3	6.5	RUE 45 D	RUE 45 D L
			18.5			RUE 45 D H	RUE 45 D HL
APLU 55 D	90	94.8	10	56.8	7.5	RUE 55 D	RUE 55 D L
			20			RUE 55 D H	RUE 55 D HL
APLU 65 D	105	120.3	10.2	76.2	6.3	–	RUE 65 D L
			20.2			–	RUE 65 D HL

Lubrication Adapter Plate
BPLU SERIES



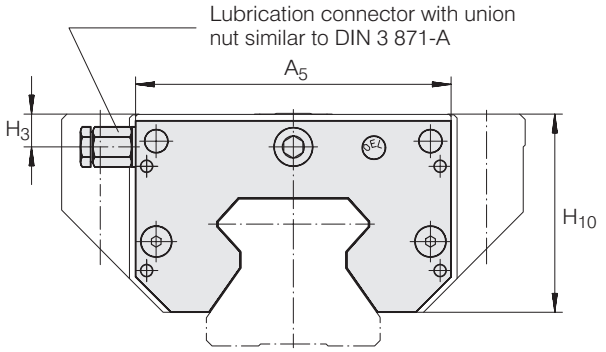
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

PART NUMBER GREASE LUBRICATION	PART NUMBER OIL LUBRICATION	MASS g	A_5 mm	H_3 mm	H_{10} mm	C_8 mm	Suitable for linear recirculating roller bearing and guideway assembly	
BPLU 35 D FE	BPLU 35 D OE	95	66.7	7.5	39.7	14	RUE 35 D	RUE 35 D L
				11.5			RUE 35 D H	RUE 35 D HL
BPLU 45 D FE	BPLU 45 D OE	120	81.5	8	49.3	14	RUE 45 D	RUE 45 D L
				15			RUE 45 D H	RUE 45 D HL
BPLU 55 D FE	BPLU 55 D OE	150	94.8	10	56.8	14	RUE 55 D	RUE 55 D L
				20			RUE 55 D H	RUE 55 D HL
BPLU 65 D FE	BPLU 65 D OE	190	120.8	10.2	76.2	14	–	RUE 65 D L
				20.2			–	RUE 65 D HL

BPLU..D FE has lubrication nipple to DIN 71 412-A M8 ± 1.
BPLU..D OE has connector with union nut similar to DIN 3 871-A.
The lubrication nipple or connector can be replaced by a screw plug M8 ± 1.

In series RUE..D H and RUE..D HL, the lubrication nipple protrudes about 9 mm from the side of the carriage.

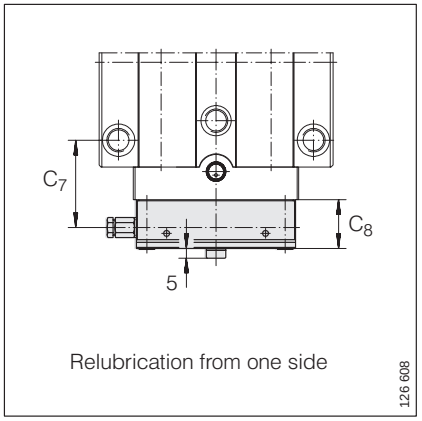
Minimal Quantity Lubricant Metering Unit
SMDE SERIES



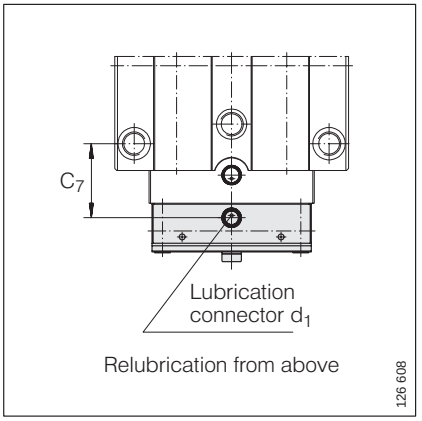
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

PART NUMBER	MASS	A_5	H_3	H_{10}	C_7 with RUE..D RUE..D H	C_7 with RUE..L RUE..D HL	C_8	d_1 max	Suitable for linear recirculating roller bearing and guideway assembly	
	g	mm	mm	mm	mm	mm	mm	mm		
SMDE 35 D S	170	66.9	6.6	41.1	44	55.5	25	–	RUE 35 D	RUE 35 D L
SMDE 35 D O	170	66.9	–	41.1	37.2	48.7	25	6	RUE 35 D	RUE 35 D L
SMDE 35 D HS	200	66.9	13.6	48.1	50	50.5	25	–	RUE 35 D H	RUE 35 D HL
SMDE 35 D HO	200	66.9	–	48.1	43.2	43.7	25	6	RUE 35 D H	RUE 35 D HL
SMDE 45 D S	200	81.7	8.5	51.2	44.8	61.8	25	–	RUE 45 D	RUE 45 D L
SMDE 45 D O	200	81.7	–	51.2	38	55	25	6	RUE 45 D	RUE 45 D L
SMDE 45 D HS	260	81.7	18.5	61.2	54.8	61.8	25	–	RUE 45 D H	RUE 45 D HL
SMDE 45 D HO	260	81.7	–	61.2	48	55	25	6	RUE 45 D H	RUE 45 D HL
SMDE 55 D S	240	95	10	58.9	51.5	71.5	25	–	RUE 55 D	RUE 55 D L
SMDE 55 D O	240	95	–	58.9	44.7	64.7	25	6	RUE 55 D	RUE 55 D L
SMDE 55 D HS	340	95	20	68.9	61.5	71.5	25	–	RUE 55 D H	RUE 55 D HL
SMDE 55 D HO	340	95	–	68.9	54.7	64.7	25	6	RUE 55 D H	RUE 55 D HL
SMDE 65 D S	500	121	10.2	78.5	–	85	25	–	–	RUE 65 D L
SMDE 65 D O	500	121	10.2	78.5	–	78.2	25	6	–	RUE 65 D L
SMDE 65 D HS	500	121	20.2	88.5	–	80	25	–	–	RUE 65 D HL
SMDE 65 D HO	500	121	20.2	88.5	–	73.2	25	6	–	RUE 65 D HL

In series RUE..D H and RUE..D HL, the lubrication connector protrudes about 9 mm from the side of the carriage.

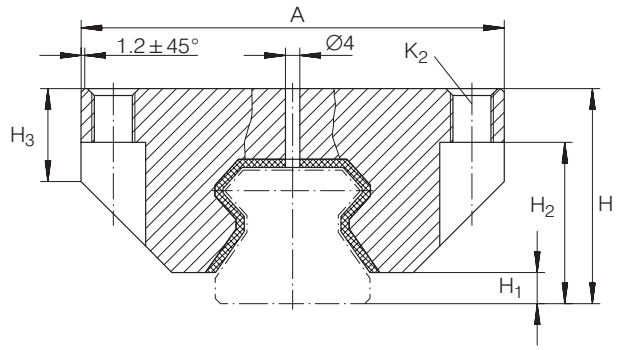


SMDE..D S



SMDE..D O

Damping Carriage
RUDS SERIES



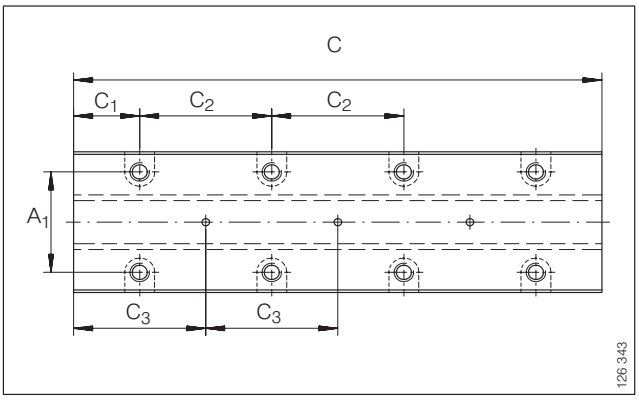
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

PART NUMBER	MASS kg/100 mm	A mm	H mm	H_1 mm	H_2 mm	H_3 m	A_1 mm	C_1 mm	C_2 mm	C_3 mm	K_2 [2]	[3]	Suitable for linear recirculating roller bearing and guideway assembly	
RUDS 35 D	2.1	98	48	6.5	36	21	82	37.5	75	75	M10	M8	RUE 35 D	RUE 35 D L
RUDS 35 D H	1.8	68	55	6.5	–	42	50	37.5	75	75	M8	–	RUE 35 D H	RUE 35 D HL
RUDS 45 D	3.6	118	60	8.5	45	27	100	37.5	75	75	M12	M10	RUE 45 D	RUE 45 D L
RUDS 45 D H	3	84	70	8.5	–	53	60	37.5	75	75	M10	–	RUE 45 D H	RUE 45 D HL
RUDS 55 D	4.4	138	70	11	52	32	116	37.5	75	75	M14	M12	RUE 55 D	RUE 55 D L
RUDS 55 D H	3.7	98	80	11	–	62	75	37.5	75	75	M12	–	RUE 55 D H	RUE 55 D HL
RUDS 65 D	5	168	90	11	67	40.2	142	37.5	75	75	M16	M14	–	RUE 65 D L
RUDS 65 D H	4.6	124	100	11	–	72.2	76	37.5	75	75	M16	–	–	RUE 65 D HL

[1] Standard lengths:
C = 150 mm, not RUDS 65
C = 225 mm, not RUDS 65
C = 300 mm,

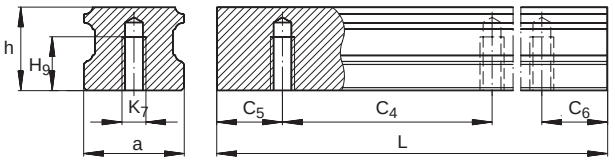
[2] For screws to DIN 912-12.9,
thread length for RUDS..D H: at least 1.25 · K_2

[3] K_2 as through hole for screws to DIN 912-12.9,



RUDS (View rotated through 90°)

Linear Recirculating Ball Bearing And Guideway Assemblies
KUSE SERIES



Guideway TKSD..U for mounting from below, suffix U (example: KUSE..U)

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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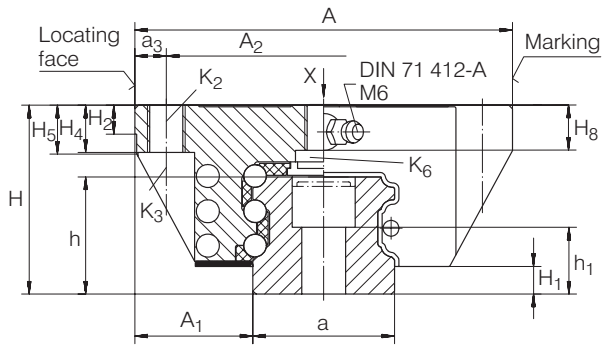
DIMENSION TABLE · Dimensions in mm

UNIT	CARRIAGE		GUIDEWAY				DIMENSIONS				MOUNTING DIMENSIONS			
PART NUMBER	PART NUMBER	MASS kg	PART NUMBER	MASS kg/m	CLOSING PLUGS	COVERING STRIP	L[1]	H	A	C[2]	A_1	A_2	a −0.005 −0.03	a_3
KUSE 20	KWSE 20	0.43	TKSD 20	2.3	KA 10 TN	ADB 13	1,980	30	63	71	21.5	53	20	5
KUSE 25	KWSE 25	0.6	TKSD 25	3.1	KA 11 TN	ADB 13	1,980	36	70	81.5	23.5	57	23	6.5
KUSE 30	KWSE 30	1.2	TKSD 30	4.4	KA 15 TN	ADB 18	2,000	42	90	91.2	31	72	28	9
KUSE 35	KWSE 35	1.5	TKSD 35	6.5	KA 15 TN	ADB 18	2,960	48	100	106.7	33	82	34	9
KUSE 45	KWSE 45	3.15	TKSD 45	11.3	KA 20 TN	ADB 23	2,940	60	120	136.5	37.5	100	45	10
KUSE 55	KWSE 55	4.9	TKSD 55	15.7	KA 24 TN	ADB 23	2,520	70	140	158	43.5	116	53	12

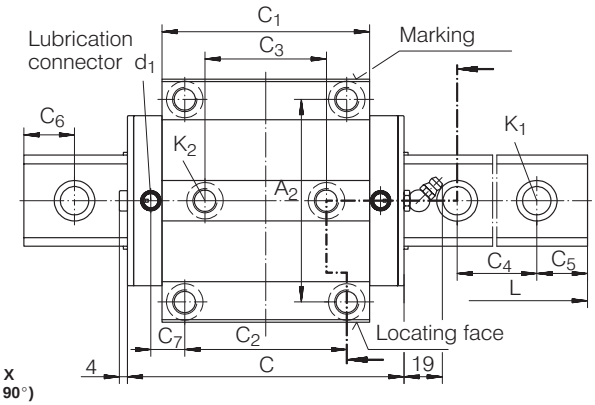
1) Maximum length L of single piece guideway;
longer guideways are supplied as multi-piece guideways and are marked accordingly.
2) Minimum covered length for sealing the lubrication connections.
3) Dimensions C_5 and C_6 are dependent on the guideway length L.
4) Position of the lubrication hole in the adjacent construction.
5) Maximum diameter of the lubrication hole in the adjacent construction.
6) When mounting from above: maximum length of fixing screw for the central fixing holes H_8 +3 mm.
7) If there is a possibility of settling, the fixing screws should be secured against rotation.

DIAMETERS AND TIGHTENING TORQUES FOR THREADS AND SCREWS[7])

PART NUMBER	K_1 for screws to DIN 912-12.9		K_2 for screws to DIN 912-12.9		K_3 Through holes for screws to DIN 912-12.9		K_6 Through holes for screws to DIN 7 984-8.8		K_7 for screws to DIN 912-12.9	
		Nm max.		Nm max.		Nm max.		Nm max.		Nm max.
KUSE 20	M5	10	M6	10	M5	10	M5	5.8	M6	17
KUSE 25	M6	17	M8	24	M6	17	M6	10	M6	17
KUSE 30	M8	41	M10	41	M8	41	M8	24	M8	41
KUSE 35	M8	41	M10	41	M8	41	M8	24	M8	41
KUSE 45	M12	140	M12	83	M10	83	M10	48	M12	140
KUSE 55	M14	220	M14	140	M12	140	M12	83	M14	220

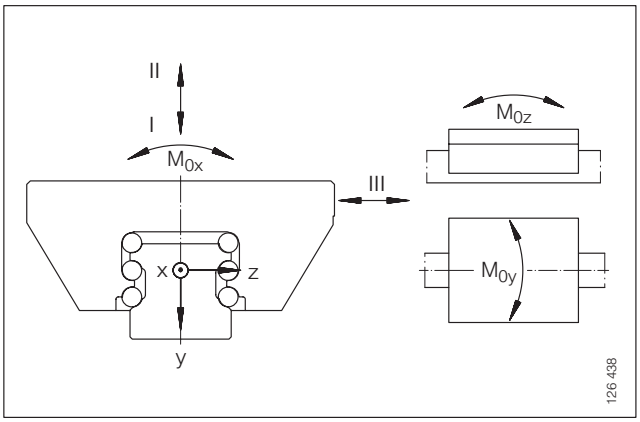


KUSE



KUSE, plan view X (rotated through 90°)

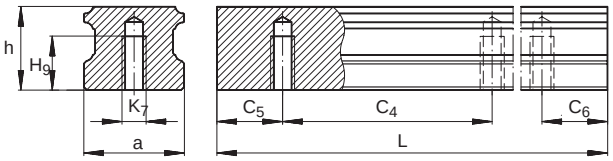
C_1	C_2	C_3	C_4	C_5[3]		C_6[3]		C_7[4]	d_1[5]	H_1	H_2	H_4	H_5	H_8[6]	H_9	h	h_1
				min.	max.	min.	max.		max.								
52	40	35	60	20	53	20	53	9.8	3	4.6	5	10	10.4	7.2	10	18	10.3
60.5	45	40	60	20	53	20	53	12.8	3	5.2	5	10	9.5	9.5	12	21.7	12.7
67.2	52	44	80	20	71	20	71	12.6	4.5	5.5	6	12	11.9	10	15	25	14
77.7	62	52	80	20	71	20	71	11.7	4.5	6.6	6.5	13	13	12	15	29.7	18.7
102.5	80	60	105	20	94	20	94	15.8	6	8.6	9	15	15.5	15	20	37.2	21.2
117.7	95	70	120	20	107	20	107	19.2	6	10.8	12	18	18.6	17	22	44	27



Load directions

LOAD CARRYING CAPACITY TABLE									
PART NUMBER	BASIC LOAD RATINGS						MOMENT RATINGS		
	LOAD DIRECTION I: COMPRESSIVE LOAD		LOAD DIRECTION II: TENSILE LOAD		LOAD DIRECTION III: LATERAL LOAD				
	C kN	C_0 kN	C kN	C_0 kN	C kN	C_0 kN	M_{0x} Nm	M_{0y} Nm	M_{0z} Nm
KUSE 20	22	52	17.5	33.5	16.3	36	358	333	303
KUSE 25	28	67	22.9	43	21.3	46	535	486	442
KUSE 30	40	80	33	60	30.5	64	896	762	694
KUSE 35	55	102	45	79	42	85	1,454	1,173	1,069
KUSE 45	80	174	65	117	59	126	2,794	2,237	2,037
KUSE 55	102	230	81	147	75	157	4,114	3,141	2,861

Linear Recirculating Ball Bearing And Guideway Assemblies
KUSE..L SERIES



Guideway TKSD..U for mounting from below, suffix U (example: KUSE..U)

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

UNIT	Carriage		GUIDEWAY				DIMENSIONS				MOUNTING DIMENSIONS			
PART NUMBER	PART NUMBER	MASS kg	PART NUMBER	MASS kg/m	CLOSING PLUGS	COVERING STRIP	$L^{1)}$	H	A	$C^{2)}$	A_1	A_2	a −0.005 −0.03	a_3
KUSE 20 L	KWSE 20 L	0.6	TKSD 20	2.3	KA 10 TN	ADB 13	1,980	30	63	90.8	21.5	53	20	5
KUSE 25 L	KWSE 25 L	0.82	TKSD 25	3.1	KA 11 TN	ADB 13	1,980	36	70	104	23.5	57	23	6.5
KUSE 30 L	KWSE 30 L	1.6	TKSD 30	4.4	KA 15 TN	ADB 18	2,000	42	90	118.7	31	72	28	9
KUSE 35 L	KWSE 35 L	2.1	TKSD 35	6.5	KA 15 TN	ADB 18	2,960	48	100	138.4	33	82	34	9
KUSE 45 L	KWSE 45 L	4.2	TKSD 45	11.3	KA 20 TN	ADB 23	2,940	60	120	172.2	37.5	100	45	10
KUSE 55 L	KWSE 55 L	6.6	TKSD 55	15.7	KA 24 TN	ADB 23	2,520	70	140	198	43.5	116	53	12

1) Maximum length L of single piece guideway;
longer guideways are supplied as multi-piece guideways and are marked accordingly.

2) Minimum covered length for sealing the lubrication connections.

3) Dimensions C_5 and C_6 are dependent on the guideway length L.

4) Position of the lubrication hole in the adjacent construction.

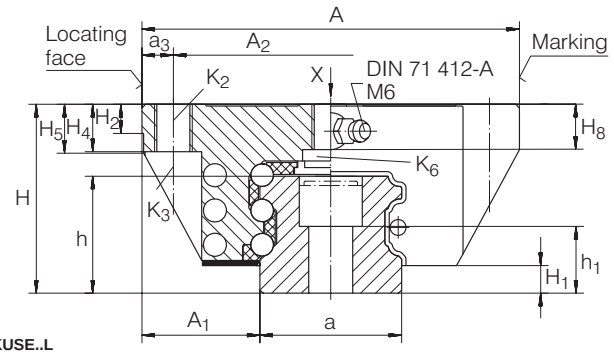
5) Maximum diameter of the lubrication hole in the adjacent construction.

6) When mounting from above: maximum length of fixing screw for the central fixing holes H_8 +3 mm.

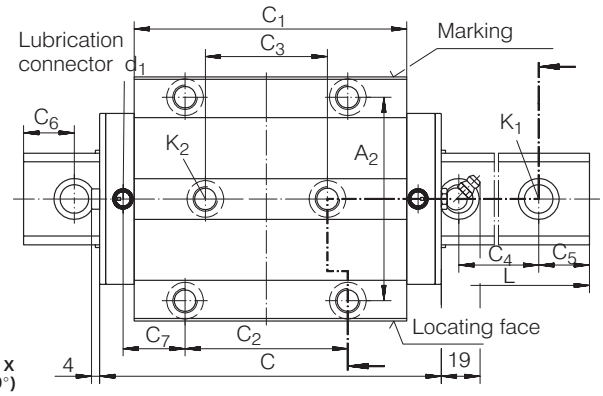
7) If there is a possibility of settling, the fixing screws should be secured against rotation.

DIAMETERS AND TIGHTENING TORQUES FOR THREADS AND SCREWS7)

PART NUMBER	K_1 for screws to DIN 912-12.9		K_2 for screws to DIN 912–12.9		K_3 Through holes for screws to DIN 912-12.9		K_6 Through holes for screws to DIN 7 984-8.8		K_7 for screws to DIN 912-12.9	
		Nm max.		Nm max.		Nm max.		Nm max.		Nm max.
KUSE 20 L	M5	10	M6	10	M5	10	M5	5.8	M6	17
KUSE 25 L	M6	17	M8	24	M6	17	M6	10	M6	17
KUSE 30 L	M8	41	M10	41	M8	41	M8	24	M8	41
KUSE 35 L	M8	41	M10	41	M8	41	M8	24	M8	41
KUSE 45 L	M12	140	M12	83	M10	83	M10	48	M12	140
KUSE 55 L	M14	220	M14	140	M12	140	M12	83	M14	220

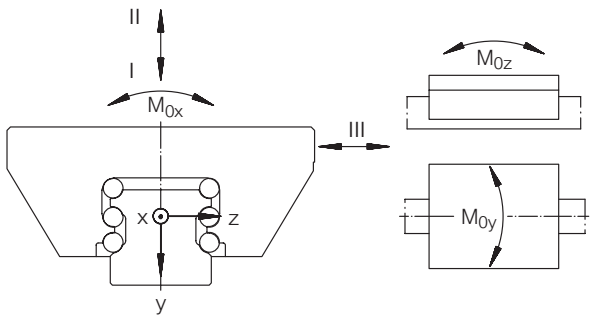


KUSE..L



KUSE..L, plan view X (rotated through 90°)

C_1	C_2	C_3	C_4	C_5[3]		C_6[3]		C_7[4]	d_1[5]	H_1	H_2	H_4	H_5	H_8[6]	H_9	h	h_1
				min.	max.	min	max.		max.								
71.8	40	35	60	20	53	20	53	19.7	3	4.6	5	10	10.4	7.2	10	18	10.3
83	45	40	60	20	53	20	53	24	3	5.2	5	10	9.5	9.5	12	21.7	12.7
94.7	52	44	80	20	71	20	71	26.3	4.5	5.5	6	12	11.9	10	15	25	14
109.4	62	52	80	20	71	20	71	27.5	4.5	6.6	6.5	13	13	12	15	29.7	18.7
138.2	80	60	105	20	94	20	94	33.6	6	8.6	9	15	15.5	15	20	37.2	21.2
157.7	95	70	120	20	107	20	107	39.2	6	10.8	12	18	18.6	17	22	44	27



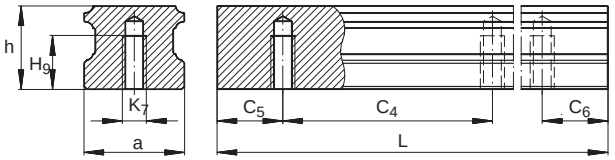
126 438

Load directions

LOAD CARRYING CAPACITY TABLE									
PART NUMBER	BASIC LOAD RATINGS						MOMENT RATINGS		
	LOAD DIRECTION I: COMPRESSIVE LOAD		LOAD DIRECTION II: TENSILE LOAD		LOAD DIRECTION III: LATERAL LOAD				
	C kN	C_0 kN	C kN	C_0 kN	C kN	C_0 kN	M_{0x} Nm	M_{0y} Nm	M_{0z} Nm
KUSE 20 L	28	72	22.2	46.5	18.9	50	494	619	564.6
KUSE 25 L	35.3	93.7	28.9	59.8	24.7	64	736	903	823
KUSE 30 L	51	113	42.4	84.3	36.5	90	1,265	1,478	1,346
KUSE 35 L	70	145	57.3	112.4	49.5	120	2,054	2,275	2,072
KUSE 45 L	98	236	79.3	159	69	170	3,792	4,011	3,654
KUSE 55 L	125.4	312	100.6	199.4	87	214	5,584	5,633	5,132

Linear Recirculating Ball Bearing And Guideway Assemblies

KUSE..H SERIES



Guideway TKSD..U for mounting from below, suffix U (example: KUSE..U)

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

UNIT	CARRIAGE		GUIDEWAY				DIMENSIONS				MOUNTING DIMENSIONS			
PART NUMBER	PART NUMBER	MASS kg	PART NUMBER	Mass kg/m	CLOSING PLUGS	COVERING STRIP	L[1]	H	A	C[2]	A_1	A_2	a −0.005 −0.03	a_3
KUSE 20 H	KWSE 20 H	0.32	TKSD 20	2.3	KA 10 TN	ADB 13	1,980	30	44	71	12	32	20	6
KUSE 25 H	KWSE 25 H	0.5	TKSD 25	3.1	KA 11 TN	ADB 13	1,980	40	48	81.5	12.5	35	23	6.5
KUSE 30 H	KWSE 30 H	0.9	TKSD 30	4.4	KA 15 TN	ADB 18	2,000	45	60	91.2	16	40	28	10
KUSE 35 H	KWSE 35 H	1.3	TKSD 35	6.5	KA 15 TN	ADB 18	2,960	55	70	106.7	18	50	34	10
KUSE 45 H	KWSE 45 H	2.75	TKSD 45	11.3	KA 20 TN	ADB 23	2,940	70	86	136.5	20.5	60	45	13
KUSE 55 H	KWSE 55 H	4.5	TKSD 55	15.7	KA 24 TN	ADB 23	2,520	80	100	158	23.5	75	53	12.5

1) Maximum length L of single piece guideway;
longer guideways are supplied as multi-piece guideways and are marked accordingly.

2) Minimum covered length for sealing the lubrication connections.

3) Dimensions C_5 and C_6 are dependent on the guideway length L.

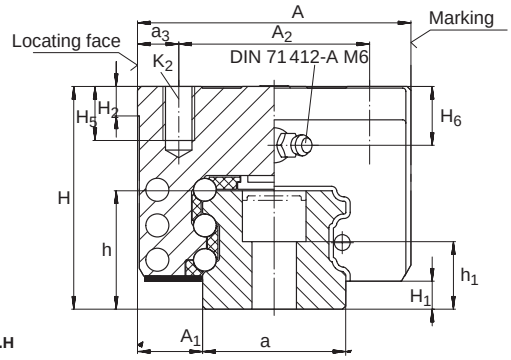
4) Position of the lubrication hole in the adjacent construction.

5) Maximum diameter of the lubrication hole in the adjacent construction.

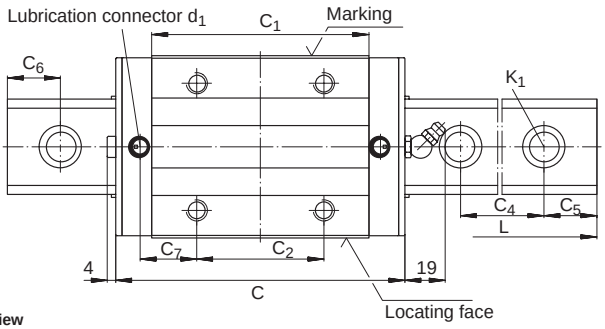
6) If there is a possibility of settling, the fixing screws should be secured against rotation.

DIAMETERS AND TIGHTENING TORQUES FOR THREADS AND SCREWS[6]

PART NUMBER	K_1 for screws to DIN 912-12.9		K_2 for screws to DIN 912-12.9		K_7 for screws to DIN 912-12.9	
		Nm max.		Nm max.		Nm max.
KUSE 20 H	M5	10	M5	10	M6	17
KUSE 25 H	M6	17	M6	17	M6	17
KUSE 30 H	M8	41	M8	41	M8	41
KUSE 35 H	M8	41	M8	41	M8	41
KUSE 45 H	M12	140	M10	83	M12	140
KUSE 55 H	M14	220	M12	140	M14	220

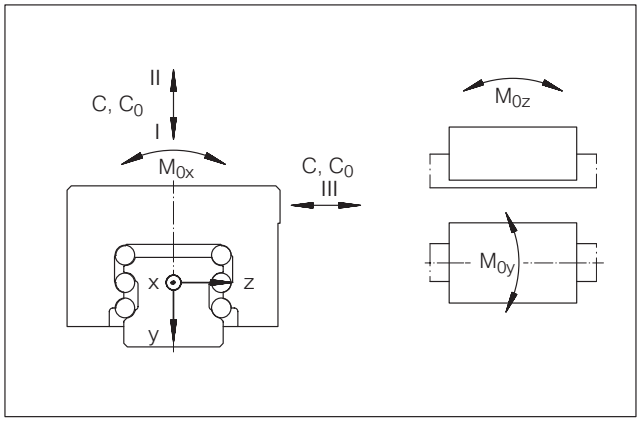


KUSE..H



KUSE..H, plan view (rotated through 90°)

C_1	C_2	C_4	C_5[3]		C_6[3]		C_7[4]	d_1[5]	H_1	H_2	H_5	H_6	H_9	h	h_1
			min.	max.	min.	max.		max.							
52	36	60	20	53	20	53	11.8	3	4.6	5	6.25	5.8	10	18	10.3
60.5	35	60	20	53	20	53	17.8	3	5.2	5	10	10	12	21.7	12.7
67.2	40	80	20	71	20	71	18.6	4.5	5.5	6	11	9.5	15	25	14
77.7	50	80	20	71	20	71	17.7	4.5	6.6	6.5	14	14.2	15	29.7	18.7
102.5	60	105	20	94	20	94	25.8	6	8.6	9	17	18.5	20	37.2	21.2
117.7	75	120	20	107	20	107	29.2	6	10.8	12	19	20	22	44	27

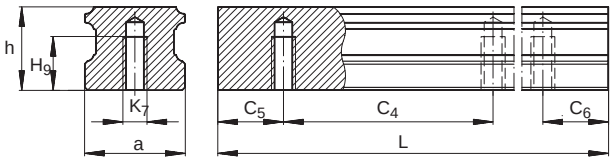


Load directions

LOAD CARRYING CAPACITY TABLE									
PART NUMBER	BASIC LOAD RATINGS						MOMENT RATINGS		
	LOAD DIRECTION I: COMPRESSIVE LOAD		LOAD DIRECTION II: TENSILE LOAD		LOAD DIRECTION III: LATERAL LOAD				
	C kN	C_0 kN	C kN	C_0 kN	C kN	C_0 kN	M_{0x} Nm	M_{0y} Nm	M_{0z} Nm
KUSE 20 H	22	52	17.5	33.5	16.3	36	358	333	303
KUSE 25 H	28	67	22.9	43	21.3	46	535	486	442
KUSE 30 H	40	80	33	60	30.5	64	896	762	694
KUSE 35 H	55	102	45	79	42	85	1,454	1,173	1,069
KUSE 45 H	80	174	65	117	59	126	2,794	2,237	2,037
KUSE 55 H	102	230	81	147	75	157	4,114	3,141	2,861

Linear Recirculating Ball Bearing And Guideway Assemblies

KUSE..HL SERIES



Guideway TKSD..U for mounting from below, suffix U (example: KUSE..U)

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

UNIT	CARRIAGE		GUIDEWAY				DIMENSIONS				MOUNTING DIMENSIONS			
PART NUMBER	PART NUMBER	MASS kg	PART NUMBER	MASS kg/m	CLOSING PLUGS	COVERING STRIP	$L^{1)}$	H	A	$C^{2)}$	A_1	A_2	a −0.05 −0.03	a_3
KUSE 20 HL	KWSE 20 HL	0.44	TKSD 20	2.3	KA 10 TN	ADB 13	1,980	30	44	90.8	12	32	20	6
KUSE 25 HL	KWSE 25 HL	0.7	TKSD 25	3.15	KA 11 TN	ADB 13	1,980	40	48	104	12.5	35	23	6.5
KUSE 30 HL	KWSE 30 HL	1.2	TKSD 30	4.4	KA 15 TN	ADB 18	2,000	45	60	118.7	16	40	28	10
KUSE 35 HL	KWSE 35 HL	1.8	TKSD 35	6.5	KA 15 TN	ADB 18	2,960	55	70	138.4	18	50	34	10
KUSE 45 HL	KWSE 45 HL	3.7	TKSD 45	11.3	KA 20 TN	ADB 23	2,940	70	86	172.2	20.5	60	45	13
KUSE 55 HL	KWSE 55 HL	5.9	TKSD 55	15.7	KA 24 TN	ADB 23	2,520	80	100	198	23.5	75	53	12.5

1) Maximum length L of single piece guideway;
longer guideways are supplied as multi-piece guideways and are marked accordingly.

2) Minimum covered length for sealing the lubrication connections.

3) Dimensions C_5 and C_6 are dependent on the guideway length L.

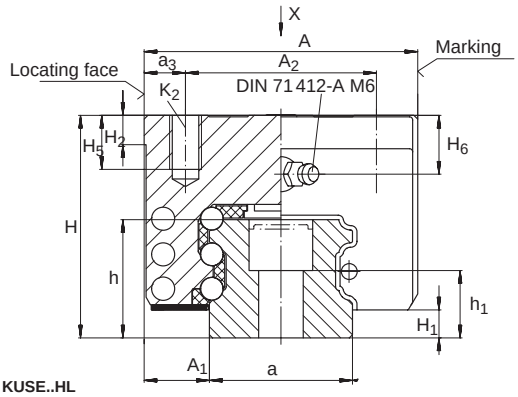
4) Position of the lubrication hole in the adjacent construction.

5) Maximum diameter of the lubrication hole in the adjacent construction.

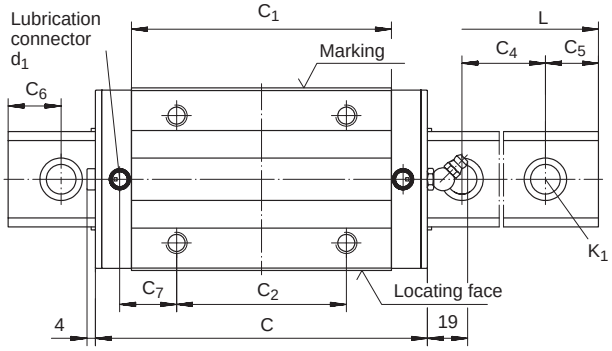
6) If there is a possibility of settling, the fixing screws should be secured against rotation.

DIAMETERS AND TIGHTENING TORQUES FOR THREADS AND SCREWS[6)]

PART NUMBER	K_1 for screws to DIN 912-12.9		K_2 for screws to DIN 912-12.9		K_7 for screws to DIN 912-12.9	
		Nm max.		Nm max.		Nm max.
KUSE 20 HL	M5	10	M5	10	M6	17
KUSE 25 HL	M6	17	M6	17	M6	17
KUSE 30 HL	M8	41	M8	41	M8	41
KUSE 35 HL	M8	41	M8	41	M8	41
KUSE 45 HL	M12	140	M10	83	M12	140
KUSE 55 HL	M14	220	M12	140	M14	220

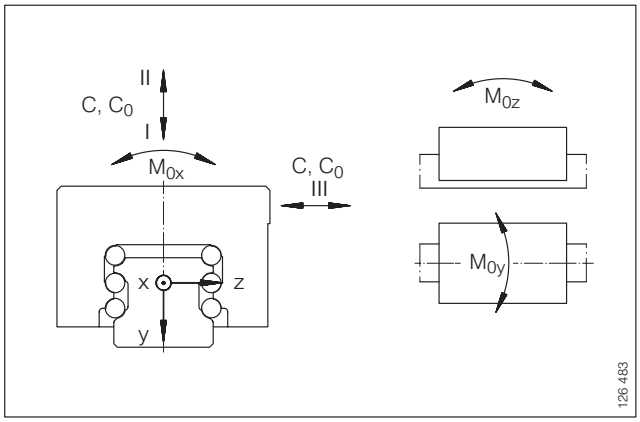


KUSE..HL



KUSE..HL, plan view X (rotated through 90°)

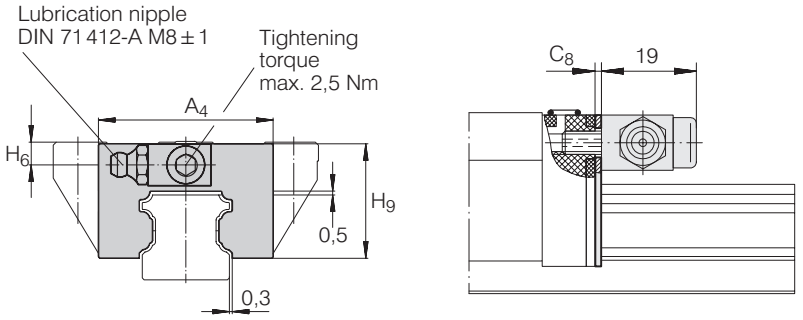
C_1	C_2	C_4	C_5 [3]		C_6 [3]		C_7 [4]	d_1 [5]	H_1	H_2	H_5	H_6	H_9	h	h_1
			min	max.	min.	max.		max.							
71.8	50	60	20	53	20	53	14.7	3	4.6	5	6.25	5.8	10	18	10.3
83	50	60	20	53	20	53	21.5	3	5.2	5	10	10	12	21.7	12.7
94.7	60	80	20	71	20	71	22.3	4.5	5.5	6	11	9.5	15	25	14
109.4	72	80	20	71	20	71	22.5	4.5	6.6	6.5	14	14.2	15	29.7	18.7
138.2	80	105	20	94	20	94	33.6	6	8.6	9	17	18.5	20	37.2	21.2
157.7	95	120	20	107	20	107	39.2	6	10.8	12	19	20	22	44	27



Load directions

LOAD CARRYING CAPACITY TABLE									
PART NUMBER	BASIC LOAD RATINGS						MOMENT RATINGS		
	LOAD DIRECTION I: COMPRESSIVE LOAD		LOAD DIRECTION II: TENSILE LOAD		LOAD DIRECTION III: LATERAL LOAD				
	C kN	C_0 kN	C kN	C_0 kN	C kN	C_0 kN	M_{0x} Nm	M_{0y} Nm	M_{0z} Nm
KUSE 20 HL	28	72	22.2	46.5	18.9	50	494	619	564
KUSE 25 HL	35.3	93.7	28.9	59.8	24.7	64	736	903	823
KUSE 30 HL	51	113	42.4	84.3	36.5	90	1,265	1,478	1,346
KUSE 35 HL	70	145	57.3	112.4	49.5	120	2,054	2,275	2,072
KUSE 45 HL	98	236	79.3	159	69	170	3,792	4,011	3,654
KUSE 55 HL	125.4	312	100.6	199.4	87	214	5,584	5,633	5,132

Sheet Steel Wiper
APLSE SERIES



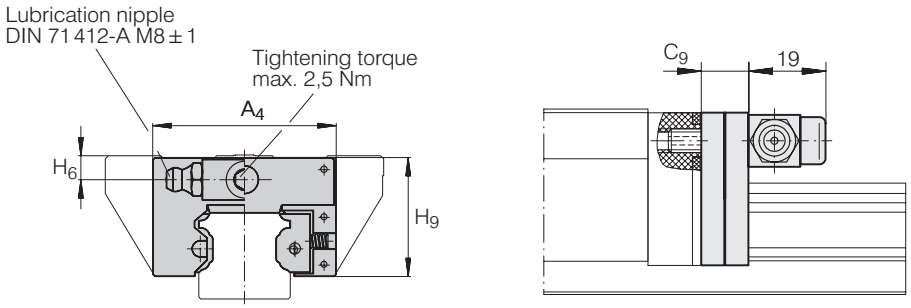
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

PART NUMBER	MASS	DIMENSIONS				SUITABLE FOR LINEAR RECIRCULATING BALL BEARING AND GUIDEWAY ASSEMBLY	
	g	A_4	H_9	C_8	H_6		
APLSE 20	26	42.8	24.9	0.8	5.8	KUSE 20	KUSE 20 L
					5.8	KUSE 20 H	KUSE 20 HL
APLSE 25	27	46	30.1	0.8	6	KUSE 25	KUSE 25 L
					10	KUSE 25 H	KUSE 25 HL
APLSE 30	31	58	35.8	0.8	6.5	KUSE 30	KUSE 30 L
					9.5	KUSE 30 H	KUSE 30 HL
APLSe 35	34	68	40.7	0.8	7.2	KUSE 35	KUSE 35 L
					14.2	KUSE 35 H	KUSE 35 HL
APLSE 45	40	84	50.7	0.8	8.5	KUSE 45	KUSE 45 L
					8.5	KUSE 45 H	KUSE 45 HL
APLSE 55	46	96.4	58.5	0.8	10	KUSE 55	KUSE 55 L
					20	KUSE 55 H	KUSE 55 HL

When fitting the wiper, it must be ensured that the gap between the guideway and the sheet steel wiper is of the correct size (see figure above).

Collector Wiper
AB KOL KWSE SERIES



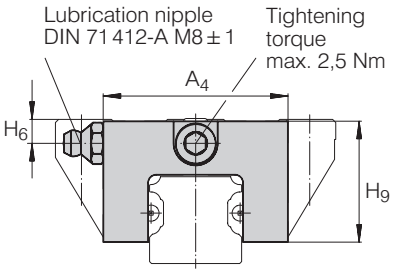
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

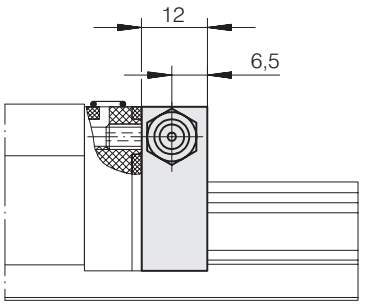
DIMENSION TABLE · Dimensions in mm

PART NUMBER	MASS	DIMENSIONS				SUITABLE FOR LINEAR RECIRCULATING BALL BEARING AND GUIDEWAY ASSEMBLY	
	g	A_4	H_9	C_9	H_6		
AB KOL KWSE 20	46	42.8	24.9	9	5.8	KUSE 20	KUSE 20 L
					5.8	KUSE 20 H	KUSE 20 HL
AB KOL KWSE 25	51	46	30.1	9	6	KUSE 25	KUSE 25 L
					10	KUSE 25 H	KUSE 25 HL
AB KOL KWSE 30	69	58	35.8	9	6.5	KUSE 30	KUSE 30 L
					9.5	KUSE 30 H	KUSE 30 HL
AB KOL KWSE 35	82	68	40.7	9	7.2	KUSE 35	KUSE 35 L
					14.2	KUSE 35 H	KUSE 35 HL
AB KOL KWSE 45	109	84	50.7	11	8.5	KUSE 45	KUSE 45 L
					18.5	KUSE 45 H	KUSE 45 HL
AB KOL KWSE 55	136	96.4	58.5	11	10	KUSE 55	KUSE 55 L
					20	KUSE 55 H	KUSE 55 HL

If the collector wiper AB KOL KWSE is used,
the covering strip ADBSE or closing plugs KA..M must be used.

Lubrication Adapter Plate
BPLSE SERIES





For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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DIMENSION TABLE · Dimensions in mm

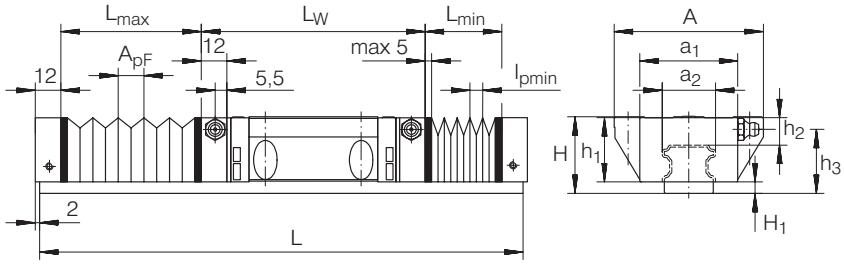
PART NUMBER	Mass	DIMENSIONS			SUITABLE FOR LINEAR RECIRCULATING BALL BEARING AND GUIDEWAY ASSEMBLY	
	g	A_4	H_9	H_6		
BPLSE 20	29	42.8	24.9	5.8	KUSE 20	KUSE 20 L
				5.8	KUSE 20 H	KUSE 20 HL
BPLSE 25	35	46	30.1	6	KUSE 25	KUSE 25 L
				10	KUSE 25 H	KUSE 25 HL
BPLSE 30	52	58	35.8	6.5	KUSE 30	KUSE 30 L
				9.5	KUSE 30 H	KUSE 30 HL
BPLSE 35	67	68	40.7	7.2	KUSE 35	KUSE 35 L
				14.2	KUSE 35 H	KUSE 35 HL
BPLSE 45	98	84	50.7	8.5	KUSE 45	KUSE 45 L
				18.5	KUSE 45 H	KUSE 45 HL
BPLSE 55	128	96.4	58.5	10	KUSE 55	KUSE 55 L
				20	KUSE 55 H	KUSE 55 HL

The lubrication nipple to DIN 71412-A M8 ± 1 can be replaced by a screw plug M8 ± 1.

Note:

In series KUSE..H and KUSE..HL. the lubrication nipple protrudes about 9 mm from the side of the carriage.

Bellows
FBALG KWSE SERIES



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

Dimension table · Dimensions in mm

PART NUMBER	DIMENSIONS										SUITABLE FOR LINEAR RECIRCULATING BALL BEARING AND GUIDEWAY ASSEMBLY	
	A	a_1 [1]	a_2	H	H_1	h_1	h_2	h_3	A_{pF} [2]	$l_{p\,min}$ [3]		
FBALG KWSE 20	63	42.8	21	30	4.8	24.9	11	24.2	14.5	2.5	KUSE 20	KUSE 20 L
	44			30							KUSE 20 H	KUSE 20 HL
FBALG KWSE 25	70	46	24	36	5.4	30.1	11	30	14.5	2.5	KUSE 25	KUSE 25 L
	48			40							KUSE 25 H	KUSE 25 HL
FBALG KWSE 30	90	58	29	42	5.7	35.8	14	35.5	18	2.5	KUSE 30	KUSE 30 L
	60			45							KUSE 30 H	KUSE 30 HL
FBALG KWSE 35	100	68	35	48	6.8	40.7	16	40.8	22.5	2.5	KUSE 35	KUSE 35 L
	70			55							KUSE 35 H	KUSE 35 HL
FBALG KWSE 45	120	84	46	60	8.8	50.7	19	51.5	27	2.5	KUSE 45	KUSE 45 L
	86			70							KUSE 45 H	KUSE 45 HL
FBALG KWSE 55	140	96.4	56	70	11	58.5	21	60	31.5	2.5	KUSE 55	KUSE 55 L
	100			80							KUSE 55 H	KUSE 55 HL

[1] Maximum width of bellows in end gauge.
[2] Expansion per pleat.
[3] Compression per pleat.

Four-Row
Linear Recirculating Ball Bearing
And Guideway Assembly
KUVE, KUVE..L, KUVE..N SERIES

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

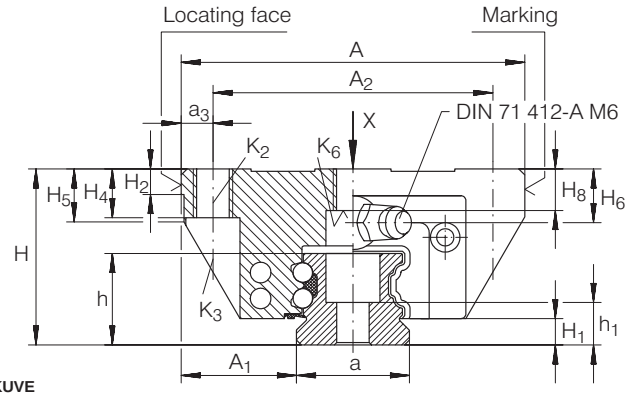
DIMENSION TABLE • Dimensions in mm

UNIT	CARRIAGE		GUIDEWAYS			DIMENSIONS				MOUNTING DIMENSIONS			
PART NUMBER	PART NUMBER	MASS kg	PART NUMBER	MASS kg/m	CLOSING PLUGS	L[1)]	H	A	C	A_1	A_2	a -0.005 -0.03	a_3
KUVE 15	KWVE 15	0.25	TKVD 15	1.5	KA 08 TN A	1200	24	47	55.6	16	38	15	4.5
KUVE 20	KWVE 20	0.58	TKVD 20	2.2	KA 10 TN A	1980	30	63	69.8	21.5	53	20	5
KUVE 20 L	KWVE 20 L	0.8	TKVD 20	2.2	KA 10 TN A	1980	30	63	87.3	21.5	53	20	5
KUVE 20 N	KWVE 20 N	0.47	TKVD 20	2.2	KA 10 TN A	1980	27	63	69.8	21.5	53	20	5
KUVE 25	KWVE 25	0.71	TKVD 25	2.7	KA 11 TN A	1980	36	70	81.7	23.5	57	23	6.5
KUVE 25 L	KWVE 25 L	1	TKVD 25	2.7	KA 11 TN A	1980	36	70	107.5	23.5	57	23	6.5
KUVE 25 N	KWVE 25 N	0.57	TKVD 25	2.7	KA 11 TN A	1980	31	70	81.7	23.5	57	23	6.5
KUVE 30	KWVE 30	1.4	TKVD 30	4.3	KA 15 TN A	2000	42	90	97.6	31	72	28	9
KUVE 30 L	KWVE 30 L	1.83	TKVD 30	4.3	KA 15 TN A	2000	42	90	122.6	31	72	28	9
KUVE 30 N	KWVE 30 N	1.12	TKVD 30	4.3	KA 15 TN A	2000	38	90	97.6	31	72	28	9
KUVE 35	KWVE 35	2.02	TKVD 35	5.7	KA 15 TN A	2960	48	100	110.4	33	82	34	9
KUVE 35 L	KWVE 35 L	2.71	TKVD 35	5.7	KA 15 TN A	2960	48	100	140.2	33	82	34	9
KUVE 35 N	KWVE 35 N	1.62	TKVD 35	5.7	KA 15 TN A	2960	44	100	110.4	33	82	34	9
KUVE 45	KWVE 45	3.75	TKVD 45	9.2	KA 20 TN A	2940	60	120	139	37.5	100	45	10
KUVE 45 L	KWVE 45 L	4.7	TKVD 45	9.2	KA 20 TN A	2940	60	120	167.5	37.5	100	45	10
KUVE 45 N	KWVE 45 N	3	TKVD 45	9.2	KA 20 TN A	2940	52	120	139	37.5	100	45	10

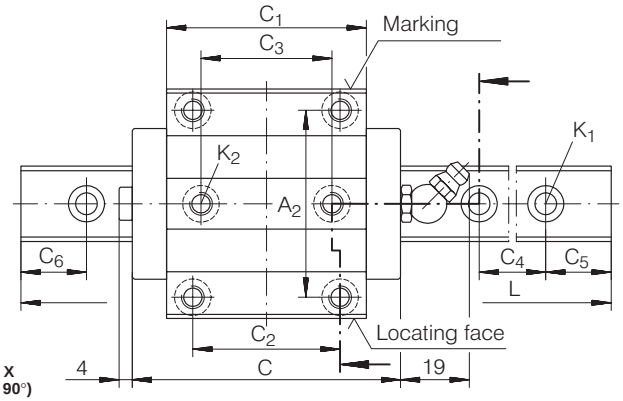
1) Maximum length L of single piece guideway;
longer guideways are supplied as multi-piece guideways and are marked accordingly.
2) Dimensions C_5 and C_5 are dependent on the guideway length L; see page NO TAG for calculation method.
3) When mounting from above: maximum length of fixing screw for the central fixing holes H_8 +3mm.
4) If there is a possibility of settling, the fixing screws should be secured against rotation.

DIAMETERS AND TIGHTENING TORQUES FOR THREADS AND SCREWS[4)]

PART NUMBER	K_1 For screws to DIN 912-12.9		K_2 For screws to DIN 912-12.9		K_3 Through holes for screws to DIN 912-12.9		K_6 Through holes for screws to DIN 7 984-8.8		K_6 Through holes for screws to DIN 912-12.9	
		Nm max.		Nm max.		Nm max.		Nm max.		Nm max.
KUVE 15	M4	5	M5	5.8	M4	5	M4	2.8	–	–
KUVE 20	M5	10	M6	10	M5	10	–	–	M5	10
KUVE 20 L	M5	10	M6	10	M5	10	–	–	M5	10
KUVE 20 N	M5	10	M6	10	M5	10	M5	5.8	–	–
KUVE 25	M6	17	M8	24	M6	17	–	–	M6	17
KUVE 25 L	M6	17	M8	24	M6	17	–	–	M6	17
KUVE 25 N	M6	17	M8	24	M6	17	M6	10	–	–
KUVE 30	M8	41	M10	41	M8	41	M8	24	–	–
KUVE 30 L	M8	41	M10	41	M8	41	M8	24	–	–
KUVE 30 N	M8	41	M10	41	M8	41	M8	24	–	–
KUVE 35	M8	41	M10	41	M8	41	–	–	M8	41
KUVE 35 L	M8	41	M10	41	M8	41	–	–	M8	41
KUVE 35 N	M8	41	M10	41	M8	41	M8	24	–	–
KUVE 45	M12	140	M12	83	M10	83	–	–	M10	83
KUVE 45 L	M12	140	M12	83	M10	83	–	–	M10	83
KUVE 45 N	M12	140	M12	83	M10	83	M10	48	–	–



KUVE



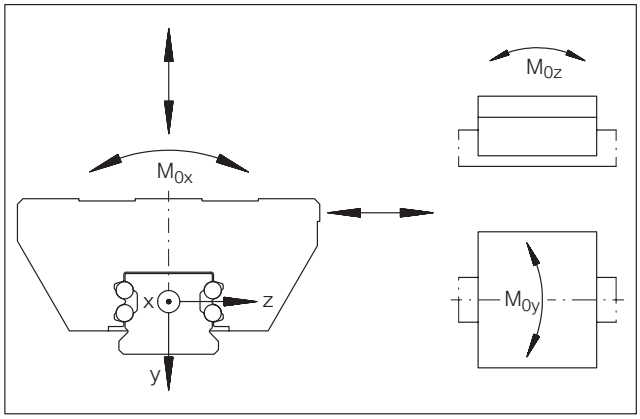
KUVE, plan view X
(rotated through 90°)

DIMENSION TABLE • Dimensions in mm

MOUNTING DIMENSIONS															
C_1	C_2	C_3	C_4	C_5 [2] min.	C_5 [2] max.	C_6 [2] min.	C_6 [2] max.	H_1	H_2	H_4	H_5	H_6	H_8 [3]	h	h_1
39.8	30	26	60	20	53	20	53	4.5	4.5	7.6	7.6	4	5.8	15.1	8.2
50.4	40	35	60	20	53	20	53	4.8	5	10	11	4.8	7.5	17	9.1
67.9	40	35	60	20	53	20	53	4.8	5	10	11	4.8	7.5	17	9.1
50.4	40	35	60	20	53	20	53	4.8	5	8	8.6	4.8	6	17	9.1
60.7	45	40	60	20	53	20	53	5.4	5	10	10,9	4.8	10	18.7	8.7
86.5	45	40	60	20	53	20	53	5.4	5	10	10.9	4.8	10	18.7	8.7
60.7	45	40	60	20	53	20	53	5.4	5	10	9.3	4.8	8	18.7	8.7
72	52	44	80	20	71	20	71	6.2	6	12	13.8	4.8	12	23.5	11.5
97	52	44	80	20	71	20	71	6.2	6	12	13.8	4.8	12	23.5	11.5
72	52	44	80	20	71	20	71	6.2	6	12	9.8	4.8	9	23.5	11.5
80	62	52	80	20	71	20	71	7	6.5	13	14.3	4.8	12	27	15
109.8	62	52	80	20	71	20	71	7	6.5	13	14.3	4.8	12	27	15
80	62	52	80	20	71	20	71	7	6.5	13	10.3	4.8	11.7	27	15
102.5	80	60	105	20	94	20	94	10	9	15	19.8	4.8	15	34.2	16.2
131.1	80	60	105	20	94	20	94	10	9	15	19.8	4.8	15	34.2	16.2
102.5	80	60	105	20	94	20	94	10	9	15	17.2	4.8	11	34.2	16.2

LOAD CARRYING CAPACITY TABLE

PART NUMBER	BASIC LOAD RATINGS		MOMENT RATINGS		
	C kN	C_0 kN	M_{0x} Nm	M_{0y} Nm	M_{0z} Nm
KUVE 15	7.2	14.5	150	100	100
KUVE 20	13.1	27	332	240	240
KUVE 20 L	16.2	36.5	452	430	430
KUVE 20 N	13.1	27	332	240	240
KUVE 25	17.9	37	510	395	395
KUVE 25 L	23.4	54	745	825	825
KUVE 25 N	17.9	37	510	395	395
KUVE 30	27.5	55	970	700	700
KUVE 30 L	34.5	74	1310	1240	1240
KUVE 30 N	27.5	55	970	700	700
KUVE 35	38	72	1465	1020	1020
KUVE 35 L	47.5	100	2025	1890	1890
KUVE 35 N	38	72	1465	1020	1020
KUVE 45	69	141	3610	2485	2485
KUVE 45 L	82	181	4635	4000	4000
KUVE 45 N	69	141	3610	2485	2485



Load directions

Four-Row
Linear Recirculating Ball Bearing
And Guideway Assembly
KUVE..S, KUVE..SN, KUVE..H SERIES

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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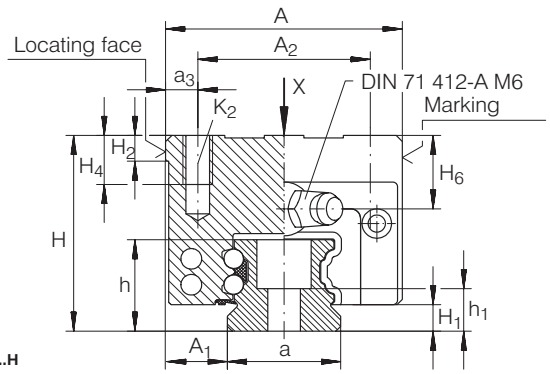
DIMENSION TABLE • Dimensions in mm

UNIT	CARRIAGE		GUIDEWAYS			DIMENSIONS				MOUNTING DIMENSIONS			
PART NUMBER	PART NUMBER	MASS kg	PART NUMBER	MASS kg/m	CLOSING PLUGS	L[1)]	H	A	C	A_1	A_2	a -0.005 -0.03	a_3
KUVE 15 S	KWVE 15 S	0.19	TKVD 15	1.5	KA 08 TN A	1200	24	34	55.6	9.5	26	15	4
KUVE 15 H	KWVE 15 H	0.23	TKVD 15	1.5	KA 08 TN A	1200	28	34	55.6	9.5	26	15	4
KUVE 20 S	KWVE 20 S	0.46	TKVD 20	2.2	KA 10 TN A	1980	30	44	69.8	12	32	20	6
KUVE 20 SN	KWVE 20 SN	0.36	TKVD 20	2.2	KA 10 TN A	1980	27	44	69.8	12	32	20	6
KUVE 25 S	KWVE 25 S	0.56	TKVD 25	2.7	KA 11 TN A	1980	36	48	81.7	12.5	35	23	6.5
KUVE 25 SN	KWVE 25 SN	0.45	TKVD 25	2.7	KA 11 TN A	1980	31	48	81.7	12.5	35	23	6.5
KUVE 25 H	KWVE 25 H	0.65	TKVD 25	2.7	KA 11 TN A	1980	40	48	81.7	12.5	35	23	6.5
KUVE 30 S	KWVE 30 S	1.09	TKVD 30	4.3	KA 15 TN A	2000	42	60	97.6	16	40	28	10
KUVE 30 SN	KWVE 30 SN	0.87	TKVD 30	4.3	KA 15 TN A	2000	38	60	97.6	16	40	28	10
KUVE 30 H	KWVE 30 H	1.27	TKVD 30	4.3	KA 15 TN A	2000	45	60	97.6	16	40	28	10
KUVE 35 S	KWVE 35 S	1.6	TKVD 35	5.7	KA 15 TN A	2960	48	70	110.4	18	50	34	10
KUVE 35 SN	KWVE 35 SN	1.27	TKVD 35	5.7	KA 15 TN A	2960	44	70	110.4	18	50	34	10
KUVE 35 H	KWVE 35 H	1.84	TKVD 35	5.7	KA 15 TN A	2960	55	70	110.4	18	50	34	10
KUVE 45 S	KWVE 45 S	2.8	TKVD 45	9.2	KA 20 TN A	2940	60	86	139	20.5	60	45	13
KUVE 45 SN	KWVE 45 SN	2.3	TKVD 45	9.2	KA 20 TN A	2940	52	86	139	20.5	60	45	13
KUVE 45 H	KWVE 45 H	3.5	TKVD 45	9.2	KA 20 TN A	2940	70	86	139	20.5	60	45	13

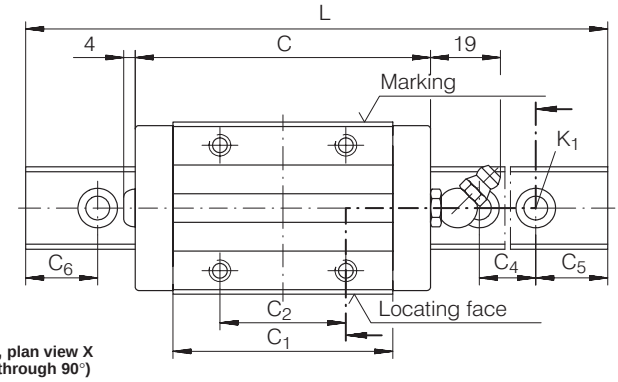
1) Maximum length L of single piece guideway;
longer guideways are supplied as multi-piece guideways and are marked accordingly.
2) Dimensions C_5 and C_5 are dependent on the guideway length L; see page NO TAG for calculation method.
3) When mounting from above: maximum length of fixing screw for the central fixing holes H_8 +3mm.
4) If there is a possibility of settling, the fixing screws should be secured against rotation.

DIAMETERS AND TIGHTENING TORQUES FOR THREADS AND SCREWS[4)]

PART NUMBER	K_1 for screws to DIN 912-12.9		K_2 for screws to DIN 912-12.9	
		Nm max.		Nm max.
KUVE 15 S	M4	5	M4	5
KUVE 15 H	M4	5	M4	5
KUVE 20 S	M5	10	M5	10
KUVE 20 SN	M5	10	M5	10
KUVE 25 S	M6	17	M6	17
KUVE 25 SN	M6	17	M6	17
KUVE 25 H	M6	17	M6	17
KUVE 30 S	M8	41	M8	41
KUVE 30 SN	M8	41	M8	41
KUVE 30 H	M8	41	M8	41
KUVE 35 S	M8	41	M8	41
KUVE 35 SN	M8	41	M8	41
KUVE 35 H	M8	41	M8	41
KUVE 45 S	M12	140	M10	83
KUVE 45 SN	M12	140	M10	83
KUVE 45 H	M12	140	M10	83



KUVE..H



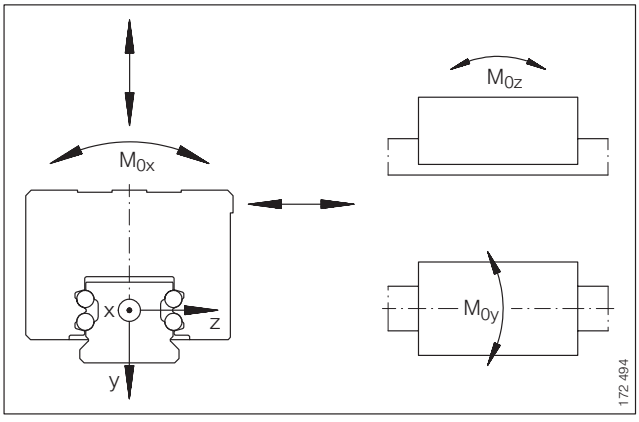
KUVE..H, plan view X (rotated through 90°)

DIMENSION TABLE • Dimensions in mm

MOUNTING DIMENSIONS												
C_1	C_2	C_4	C_5 [2] min.	C_5 [2] max.	C_6 [2] min.	C_6 [2] max.	H_1	H_2	H_4	H_6	h	h_1
39.8	26	60	20	53	20	53	4.5	4.5	6	4	15.1	8.2
39.8	26	60	20	53	20	53	4.5	4.5	6	8	15.1	8.2
50.4	36	60	20	53	20	53	4.8	5	7.5	8	17	9.1
50.4	36	60	20	53	20	53	4.8	5	7.5	5	17	9.1
60.7	35	60	20	53	20	53	5.4	5	10	11	18.7	8.7
60.7	35	60	20	53	20	53	5.4	5	8	6	18.7	8.7
60.7	35	60	20	53	20	53	5.4	5	10	15	18.7	8.7
72	40	80	20	71	20	71	6.2	6	13.5	11.25	23.5	11.5
72	40	80	20	71	20	71	6.2	6	11	7.25	23.5	11.5
72	40	80	20	71	20	71	6.2	6	13.5	14.25	23.5	11.5
80	50	80	20	71	20	71	7	6.5	13.5	12.3	27	15
80	50	80	20	71	20	71	7	6.5	13.5	8.3	27	15
80	50	80	20	71	20	71	7	6.5	13.5	19.3	27	15
102.5	60	105	20	94	20	94	10	9	17	16.5	34.2	16.2
102.5	60	105	20	94	20	94	10	9	16.5	8.5	34.2	16.2
102.5	60	105	20	94	20	94	10	9	17	26.5	34.2	16.2

LOAD CARRYING CAPACITY TABLE

PART NUMBER	BASIC LOAD RATINGS		MOMENT RATINGS		
	C kN	C_0 kN	M_{0x} Nm	M_{0y} Nm	M_{0z} Nm
KUVE 15 S	7.2	14.5	150	100	100
KUVE 15 H	7.2	14.5	150	100	100
KUVE 20 S	13.1	27	332	240	240
KUVE 20 SN	13.1	27	332	240	240
KUVE 25 S	17.9	37	510	395	395
KUVE 25 SN	17.9	37	510	395	395
KUVE 25 H	17.9	37	510	395	395
KUVE 30 S	27.5	55	970	700	700
KUVE 30 SN	27,5	55	970	700	700
KUVE 30 H	27,5	55	970	700	700
KUVE 35 S	38	72	1465	1020	1020
KUVE 35 SN	38	72	1465	1020	1020
KUVE 35 H	38	72	1465	1020	1020
KUVE 45 S	69	141	3610	2485	2485
KUVE 45 SN	69	141	3610	2485	2485
KUVE 45 H	69	141	3610	2485	2485



Load directions

Four-row Linear Recirculating Ball Bearing And Guideway Assembly

KUVE..W, KUVE..WL SERIES

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

UNIT	CARRIAGE		GUIDEWAY			DIMENSIONS				MOUNTING DIMENSIONS			
PART NUMBER	PART NUMBER	MASS kg	PART NUMBER	MASS kg/m	CLOSING PLUGS	L[1]	H	A	C	A_1	A_2	A_4	A_5
KUVE 20 W	KWVE 20 W	0.56	TKVD 20 W	5	KA 08..A	1,500	27	80	69.8	19	70	24	9
KUVE 25 WL	KWVE 25 WL	1.46	TKVD 25 W	9.4	KA 11..A	1,980	35	120	107.8	25.5	107	40	14.5
KUVE 30 W	KWVE 30 W	1.95	TKVD 30 W	13.6	KA 15..A	2,000	42	142	97.6	31	124	50	15
KUVE 35 WL	KWVE 35 WL	4.11	TKVD 35 W	17.4	KA 15..A	2,960	50	162	140.2	36	144	60	15

1) Maximum length L of single piece guideway;
longer guideways are supplied as multi-piece guideways and are marked accordingly.

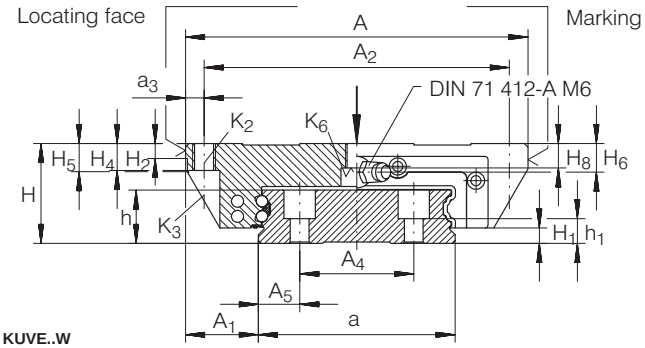
2) Dimensions C_5 and C_6 are dependent on the guideway length L.

3) When mounting from above: maximum length of fixing screw for the central fixing holes H_8 +3 mm.

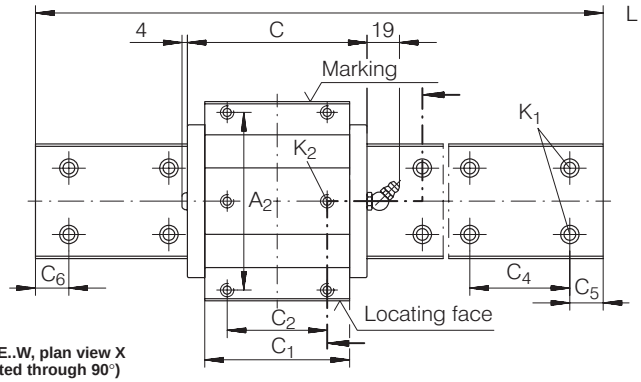
4) If there is a possibility of settling, the fixing screws should be secured against rotation.

DIAMETERS AND TIGHTENING TORQUES FOR THREADS AND SCREWS[5])

PART NUMBER	K_1 for screws to DIN 912-12.9		K_2 for screws to DIN 912-12.9		K_3 for screws to DIN 912-12.9		K_6 for screws to DIN 7984–8.8		K_6 for screws to DIN 912-12.9	
		Nm max.		Nm max.		Nm max.		Nm max.		Nm max.
KUVE 20 W	M4	5	M6	10	M5	10	M5	5.8	–	–
KUVE 25 WL	M6	17	M8	24	M6	17	–	–	M6	17
KUVE 30 W	M8	41	M10	41	M8	41	M8	24	–	–
KUVE 35 WL	M8	41	M10	41	M8	41	–	–	M8	41



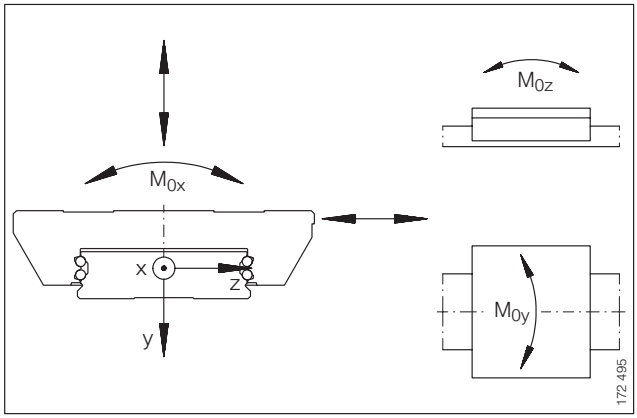
KUVE..W



KUVE..W, plan view X (rotated through 90°)

a −0.005 −0.030	a_3	C_1	C_2	C_4	C_5 [2] min.	C_5 [2] max.	C_6 [2] min.	C_6 [2] max.	H_1	H_2	H_4	H_5	H_6	H_8 [3]	h	h_1
42	5	50.4	40	60	20	53	20	53	4.6	5	10	10.6	5	6	17	10
69	6.5	86.5	60	80	20	71	20	71	5.2	5	10	9.9	10	10	18.7	8.7
80	9	72	52	80	20	71	20	71	6	6	12	13.8	11.25	12	23.5	11.5
90	9	109.8	80	80	20	71	20	71	6.8	6.5	13	16.3	14.3	13	27	15

LOAD CARRYING CAPACITY TABLE					
PART NUMBER	BASIC LOAD RATINGS		MOMENT RATINGS		
	C kN	C_0 kN	M_{0x} Nm	M_{0y} Nm	M_{0z} Nm
KUVE 20 W	13.1	26.9	687	240	240
KUVE 25 WL	23.4	54	2,225	825	825
KUVE 30 W	27.5	55	2,660	700	700
KUVE 35 WL	47.5	100	5,550	1,890	1,890



Load directions

Linear Recirculating Ball Bearing And Guideway Assemblies
KUE SERIES

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

UNIT	CARRIAGE		GUIDEWAY		DIMENSIONS				MOUNTING DIMENSIONS			
PART NUMBER	PART NUMBER	MASS kg	PART NUMBER	MASS kg/m	L[1]	H	A	C	A_1	A_2	a −0,004 −0,05	a_3
KUE 15	KWE 15	0.17	TKD 15	1.5	1,200	24	47	54.5	16	38	15	4.5
KUE 20	KWE 20	0.45	TKD 20	2.2	1,980	30	63	70.5	21.5	53	20	5
KUE 25	KWE 25	0.65	TKD 25	2.8	1,980	36	70	80.7	23.5	57	23	6.5
KUE 30	KWE 30	1.2	TKD 30	4.2	2,000	42	90	93	31	72	28	9
KUE 35	KWE 35	1.7	TKD 35	5.6	2,960	48	100	106.4	33	82	34	9

1) Maximum length L of single piece guideway; longer guideways are supplied as multi-piece guideways.

2) Dimensions C_5 and C_6 are dependent on the guideway length L.

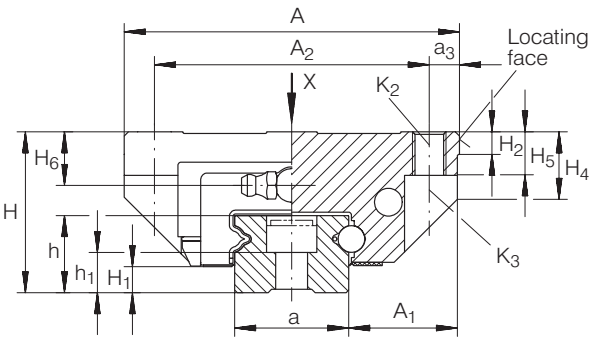
3) Lubrication nipple with tapered head to DIN 71 412, except for KUE 15 (drive fit lubrication nipple).

4) A drive fit lubrication nipple and closing plug are supplied loose with the carriage.

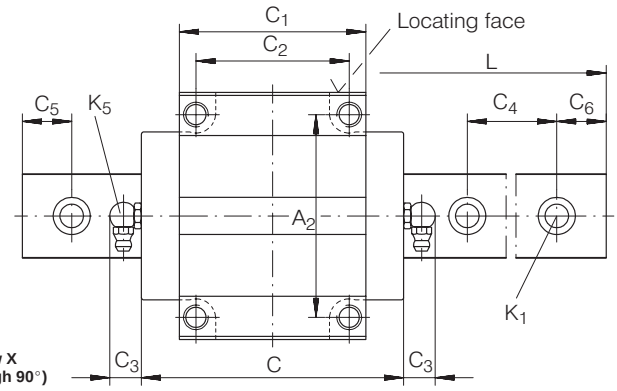
5) If there is a possibility of settling, the fixing screws should be secured against rotation.

DIAMETERS AND TIGHTENING TORQUES FOR THREADS AND SCREWS[5])

PART NUMBER	K_1 for screws to DIN 912-12.9		K_2 for screws to DIN 912-12.9		K_3 Through holes for screws to DIN 912-12.9		K_5[3]) Lubrication connector
		Nm max.		Nm max.		Nm max.	
KUE 15	M4	5	M5	5.8	M4	5	NIP A1[4])
KUE 20	M5	10	M6	10	M5	10	NIP KE M6
KUE 25	M6	17	M8	24	M6	17	NIP KE M6
KUE 30	M8	41	M10	41	M8	41	NIP KE M6
KuE 35	M8	41	M10	41	M8	41	NIP KE M6



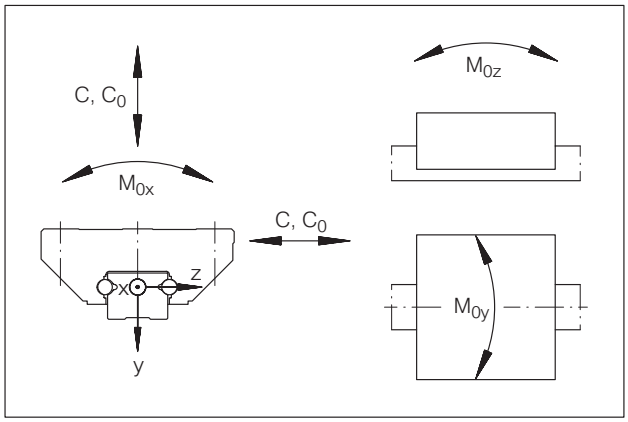
KUE



KUE, plan view X
(rotated through 90°)

															ACCESSORIES
C_1	C_2	C_3	C_4	C_5 [2]		C_6 [2]		H_1	H_2	H_4	H_5	H_6	h	h_1	CLOSING PLUGS
				min.	max.	min.	max.								
38.6	30	1.5	60	20	53	20	53	4.8	4.5	7.5	7	4	15	7.7	KA 08 TN
49.3	40	14	60	20	53	20	53	5	5	11.6	10	6.5	16.5	8.3	KA 10 TN
56.5	45	14	60	20	53	20	53	6.5	5	11.5	10	10	18	8.7	KA 11 TN
65.7	52	14	80	20	71	20	71	7	6	14.6	10	13	21.5	10	KA 15 TN
75.5	62	14	80	20	71	20	71	8	6.5	20.1	13	16	23	11.5	KA 15 TN

LOAD CARRYING CAPACITY TABLE					
PART NUMBER	BASIC LOAD RATINGS		MOMENT RATINGS		
	dyn. C kN	stat. C_0 kN	M_{0x} Nm	M_{0y} Nm	M_{0z} Nm
KUE 15	6,5	9.2	73	56	56
KUE 20	13.3	18	190	154	154
KUE 25	16.2	20.9	253	185	185
KUE 30	22.5	29.7	437	335	335
KUE 35	28	37	658	450	450



Load directions

Linear Recirculating Ball Bearing And Guideway Assemblies
KUE..H SERIES

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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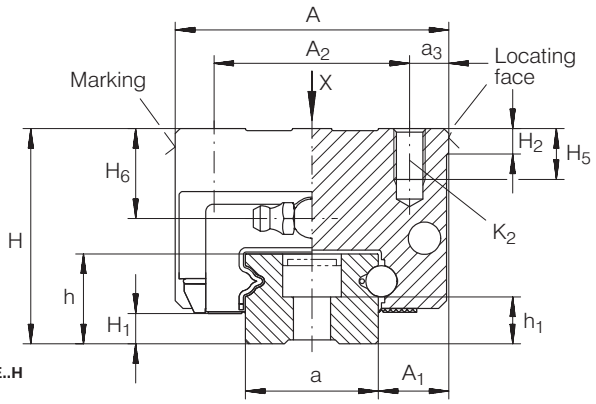
DIMENSION TABLE · Dimensions in mm

Unit	CARRIAGE		GUIDEWAY		DIMENSIONS				MOUNTING DIMENSIONS			
PART NUMBER	PART NUMBER	MASS kg	PART NUMBER	MASS kg/m	$L^{1)}$	H	A	C	A_1	A_2	a $^{-0.004}_{-0.05}$	a_3
KUE 15 H	KWE 15 H	0.17	TKD 15	1.5	1,200	28	34	54.5	9.5	26	15	4
KUE 20 H	KWE 20 H	0.35	TKD 20	2.2	1,980	30	44	70.5	12	32	20	6
KUE 25 H	KWE 25 H	0.55	TKD 25	2.8	1,980	40	48	80.7	12.5	35	23	6.5
KUE 30 H	KWE 30 H	0.9	TKD 30	4.2	2,000	45	60	93	16	40	28	10
KUE 35 H	KWE 35 H	1.46	TKD 35	5.6	2,960	55	70	106.4	18	50	34	10

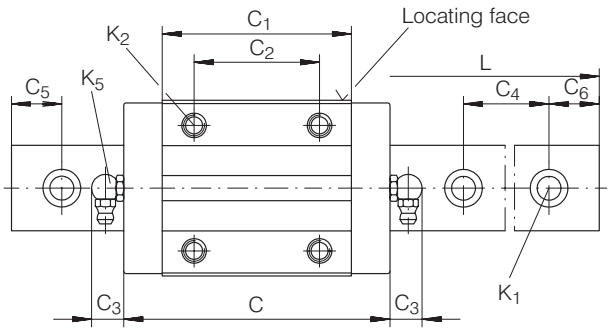
1) Maximum length L of single piece guideway; longer guideways are supplied as multi-piece guideways.
2) Dimensions C_5 and C_6 are dependent on the guideway length L.
3) Maximum length of fixing screw.
4) Lubrication nipple with tapered head to DIN 71 412, except for KUE 15 H (drive fit lubrication nipple).
5) A drive fit lubrication nipple and closing plug are supplied loose with the carriage.
6) If there is a possibility of settling, the fixing screws should be secured against rotation.

DIAMETERS AND TIGHTENINGTORQUES FOR THREADS AND SCREWS[6)]

PART NUMBER	K_1 for screws to DIN 912-12.9		K_2 for screws to DIN 912-12.9		K_5[4)] Lubrication connector
		Nm max.		Nm max.	
KUE 15 H	M4	5	M4	5	NIP A1[5)]
KUE 20 H	M5	10	M5	10	NIP KE M6
KUE 25 H	M6	17	M6	17	NIP KE M6
KUE 30 H	M8	41	M8	41	NIP KE M6
KuE 35 H	M8	41	M8	41	NIP KE M6



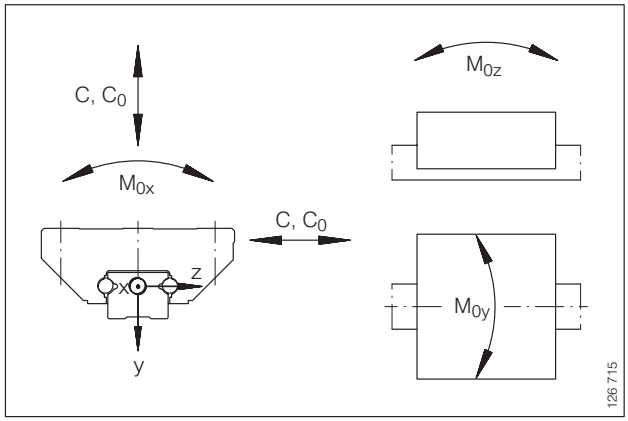
KUE..H



KUE, plan view X
(rotated through 90°)

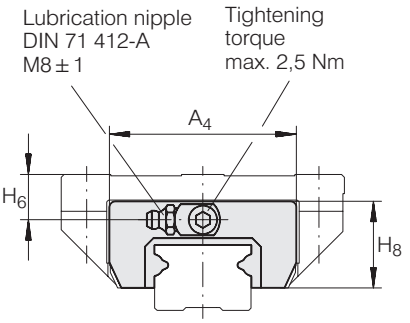
														ACCESSORIES
C_1	C_2	C_3	C_4	C_5[2]		C_6[2]		H_1	H_2	H_5[3]	H_6	h	h_1	CLOSING PLUGS
				min.	max.	min.	max.							
38.6	26	1.5	60	20	53	20	53	4.8	4.5	5	8	15	7.7	KA 08 TN
49.3	36	14	60	20	53	20	53	5	5	6.25	6.5	16.5	8.3	KA 10 TN
56.5	35	14	60	20	53	20	53	6.5	5	8	14	18	8.7	KA 11 TN
65.7	40	14	80	20	71	20	71	7	6	10	16	21.5	10	KA 15 TN
75.5	50	14	80	20	71	20	71	8	6.5	12	23	23	11.5	KA 15 TN

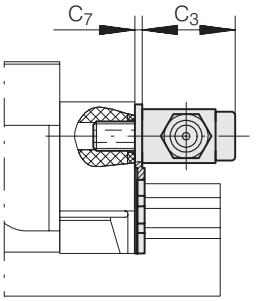
LOAD CARRYING CAPACITY TABLE					
PART NUMBER	BASIC LOAD RATINGS		MOMENT RATINGS		
	dyn. C kN	stat. C_0 kN	M_{0x} Nm	M_{0y} Nm	M_{0z} Nm
KUE 15 H	6.5	9.2	73	56	56
KUE 20 H	13.3	18	190	154	154
KUE 25 H	16.2	20.9	253	185	185
KUE 30 H	22.5	29.7	437	335	335
KUE 35 H	28	37	658	450	450



Load directions

Sheet Steel Wiper
APLE SERIES





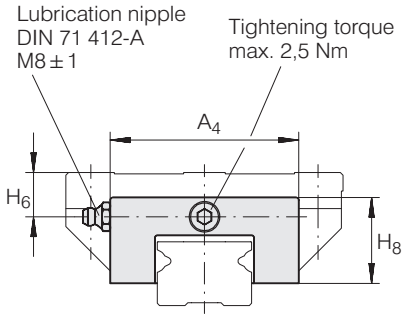
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

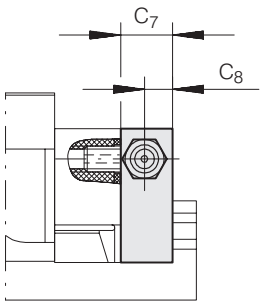
DIMENSION TABLE · Dimensions in mm

PART NUMBER	MASS	DIMENSIONS					SUITABLE FOR LINEAR RECIRCULATING BALL BEARING AND GUIDEWAY ASSEMBLY
		A_4	H_8	C_3	C_7	H_6	
	g						
APLE 20	35	40	24	19	1.2	6.5	KUE 20
						6.5	KUE 20 H
APLE 25	39	44	25.3	19	1.2	10	KUE 25
						14	KUE 25 H
APLE 30	43	55	28	19	1.2	13	KUE 30
						16	KUE 30 H
APLE 35	47	66	30.5	19	1.5	16	KUE 35
						23	KUE 35 H

[1]) When fitting the sheet steel wiper, it must be ensured that there is an even gap of ca. 0.1 mm between the guideway and the wiper.

Lubrication Adapter Plate
BPLE SERIES





For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

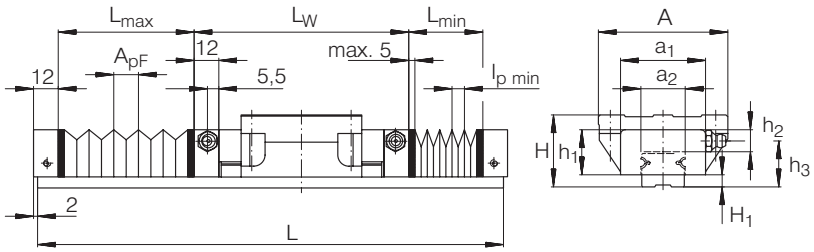
DIMENSION TABLE · Dimensions in mm

PART NUMBER	MASS	DIMENSIONS					SUITABLE FOR LINEAR RECIRCULATING BALL BEARING AND GUIDEWAY ASSEMBLY
	g	A_4	H_8	C_7	C_8	H_6	
BPLE 20	25	42	23.5	12	6.5	6.5	KUE 20
						6.5	KUE 20 H
BPLE 25	34	46.5	26	12	6.5	10	KUE 25
						14	KUE 25 H
BPLE 30	44	58	28	12	6.5	13	KUE 30
						16	KUE 30 H
BPLE 35	54	68	31	12	6.5	16	KUE 35
						23	KUE 35 H

The lubrication nipple to DIN 71 412-A M8 ± 1
can be replaced by a screw plug M8 ± 1.

Note:
In series KUE..H. the lubrication nipple protrudes about 9 mm
from the side of the carriage.

Bellows
FBALG KWE SERIES



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

PART NUMBER	DIMENSIONS										SUITABLE FOR LINEAR RECIRCULATING BALL BEARING AND GUIDEWAY ASSEMBLY
	A	a_1 [1)]	a_2	H	H_1	h_1	h_2	h_3	A_{pF} [2)]	$l_{p\ min}$ [3)]	
FBALG KWE 20	63	42	21	30	5.5	23.5	12	23.5	13	2.5	KUE 20
	44	42	21	30	5.5	23.5	12	23.5	13	2.5	KUE 20 H
FBALG KWE 25	70	46.5	24	36	6.5	26	14	26	13	2.5	KUE 25
	48	46.5	24	40	6.5	26	14	26	13	2.5	KUE 25 H
FBALG KWE 30	90	58	29	42	7.5	28	13.5	29	15.5	2.5	KUE 30
	60	58	29	45	7.5	28	13.5	29	15.5	2.5	KUE 30 H
FBALG KWE 35	100	68	35	48	8	31	15.5	32	19	2.5	KUE 35
	70	68	35	55	8	31	15.5	32	19	2.5	KUE 35 H

1) Maximum width of bellows in end gauge.
2) Expansion per pleat.
3) Compression per pleat.

Linear Ball Bearing Units
KUVS SERIES
Guideways
TKVD SERIES

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

LINEAR RECIRCULATING BALL BEARING UNITS		GUIDEWAYS			DIMENSIONS						MOUNTING DIMENSIONS				
PART NUMBER	MASS kg	PART NUMBER	MASS kg/m	CLOSING PLUGS	H	A	C	h	a	L[3])	A_1	A_2	A_3	A_4	A_5
KUVS 32	0.025	TKVD 32	2.3	KA 8 TN	11	51.6	47	10	31.8	2,000	9.9	5.5	40.6	18	6.9
KUVS 42	0.085	TKVD 42	5.54	KA 8 TN	19	75	71	18	42	2,000	16.5	10	55	24	9
KUVS 42	0.085	TKVD 14	1.45	KA 8 TN	15	30	71	14	13.5	1,500	16.5	10	16.2	6	–
KUVS 69	0.2	TKVD 69	12.42	KA 11 TN	25	114	96	24	69	2,000	22.5	13	88	40	14.5
KUVS 69	0.2	TKVD 19	2.66	KA 11 TN	20	42	96	19	19.5	2,000	22.5	13	22.2	8	–

1) For two linear ball bearing units with TKVD 32, TKVD 42 and TKVD 69 and for one linear ball bearing unit with TKVD 14 and TKVD 19.

2) The usable load carrying capacity is influenced by the connections between the guidance elements and the adjacent construction.

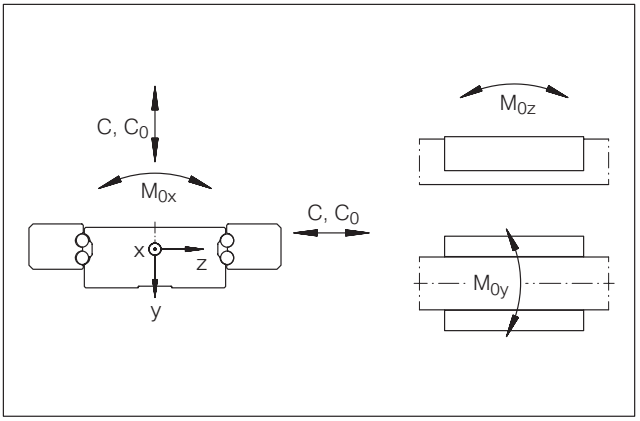
3) Maximum length L of a single piece guideway; longer guideways are supplied as multi-piece guideways and are marked accordingly.

4) Dimensions C_5 and C_6 are dependent on the length of the guideway;

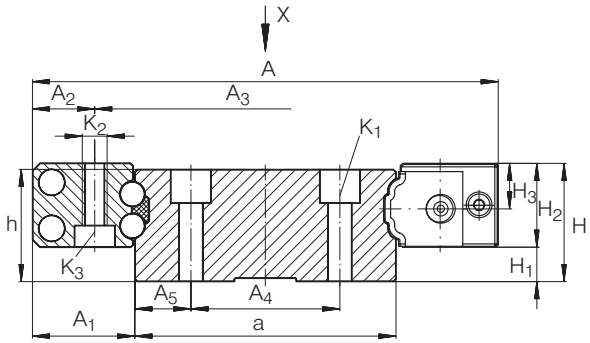
5) If there is a possibility of settling, the fixing screws should be secured against rotation.

DIAMETERS AND TIGHTENING TORQUES FOR THREADS AND SCREWS[5])

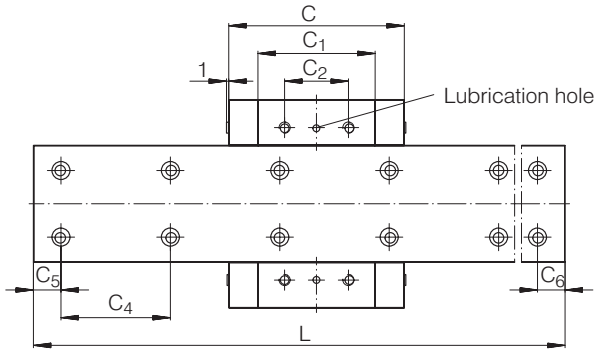
PART NUMBER	K_1 for screws to DIN 912-12.9		K_2 for screws to DIN 912-12.9		K_3 for screws to DIN 912-12.9	
		Nm max.		Nm max.		Nm max.
KUVS 32	M3	2.5	M3	1.5	–	–
KUVS 42	M3	2.5	M4	3	M3	2.5
KUVS 69	M5	10	M6	10	M5	10
KUVS 69	M5	10	M6	10	M5	10



Load directions

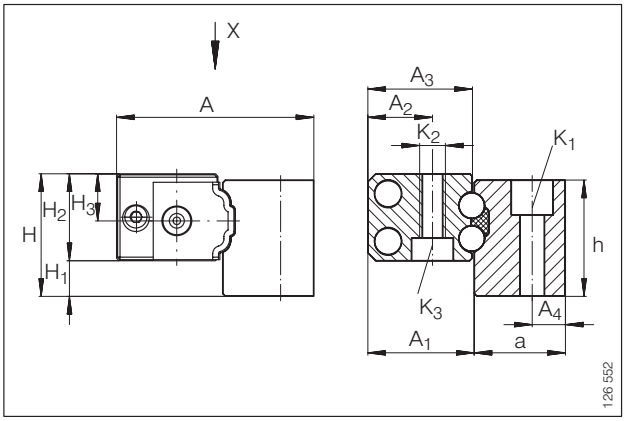


Two KUVS with TKVD 32, TKVD 42 and TKVD 69

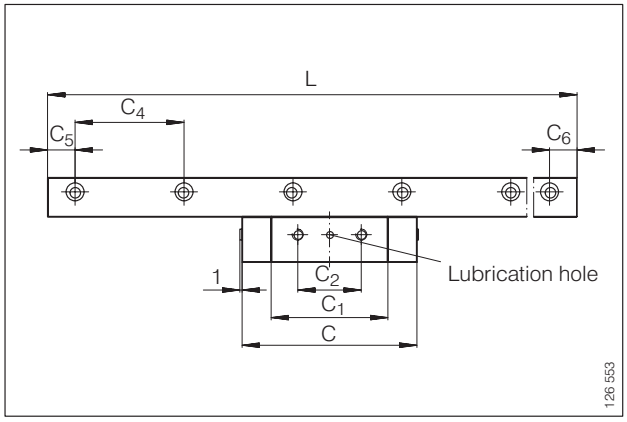


Plan view X (rotated through 90°)

											LOAD CARRYING CAPACITY[1)2)]				
											BASIC LOAD RATINGS		MOMENT RATINGS		
C_1	C_2	C_4	C_5[4)]		C_6[4)]		H_1	H_2	H_3		C	C_0	M_{0x}	M_{0y}	M_{0z}
			min.	max.	min.	max.					kN	kN	Nm	Nm	Nm
29.8	15	40	5	35	5	35	0.5	10.5	6		5.7	10.6	203	51	51
48.5	20	60	5	55	5	55	5.5	13.5	7.3		13.5	26	648	211	211
48.5	20	60	5	55	5	55	1.5	13.5	7.3		6.75	13	–	–	–
64	35	60	7	53	7	53	7.5	17.5	9.5		26	46.5	1,872	492	492
64	35	60	7	53	7	53	2.5	17.5	9.5		13	23.25	–	–	–



KUVS with TKVD 14. TKVD 19 (end view and cross section)



Plan view X (rotated through 90°)

Carriages
KWVK..AL SERIES
Guideways
TKVD SERIES

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

CARRIAGES		GUIDEWAYS			DIMENSIONS						MOUNTING DIMENSIONS							
PART NUMBER	MASS kg	PART NUMBER	MASS kg/m	CLOSING PLUGS	H	A	C	h	a	L[2]	A_1	A_2	A_3	A_4	A_5	A_6	A_7	A_8
KWVK 32 AL	0.17	TKVD 32	2.3	KA 8 TN	26	62	50	10	31.8	2,000	15.1	10.7	40.6	18	6.9	51.6	–	–
KWVK 42 AL	0.45	TKVD 42	5.54	KA 8 TN	35	87	75	18	42	2,000	22.5	16	55	24	9	75	31	25
KWVK 69 AL	1.1	TKVD 69	12.42	KA 11 TN	47	130	100	24	69	2,000	30.5	21	88	40	14.5	114	42.5	45

[1]) The usable load carrying capacity is influenced by the connections between the guidance elements and the adjacent construction.

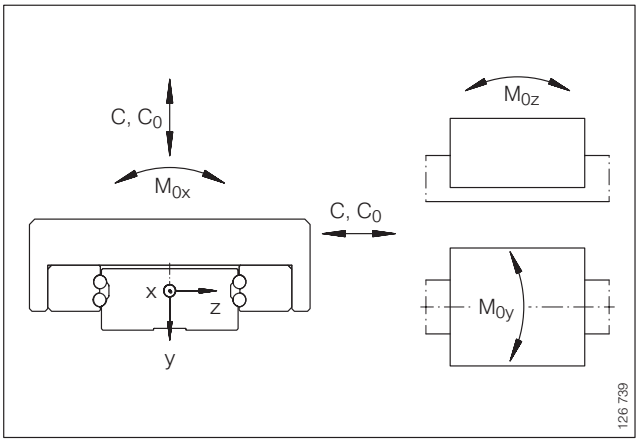
[2]) Maximum length L of a single piece guideway; longer guideways are supplied as multi-piece guideways and are marked accordingly.

[3]) Dimensions C_5 and C_6 are dependent on the length of the guideway.

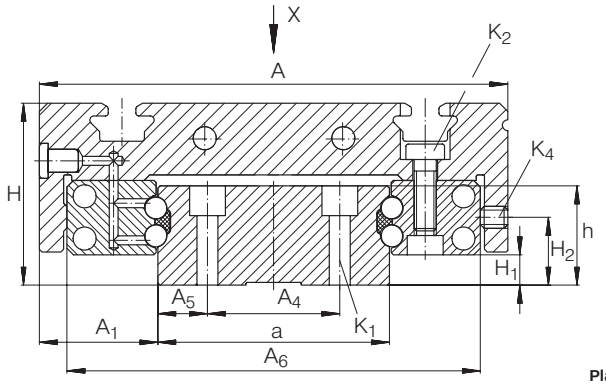
[4]) If there is a possibility of settling, the fixing screws should be secured against rotation.

DIAMETERS AND TIGHTENING TORQUES FOR THREADS AND SCREWS[4])

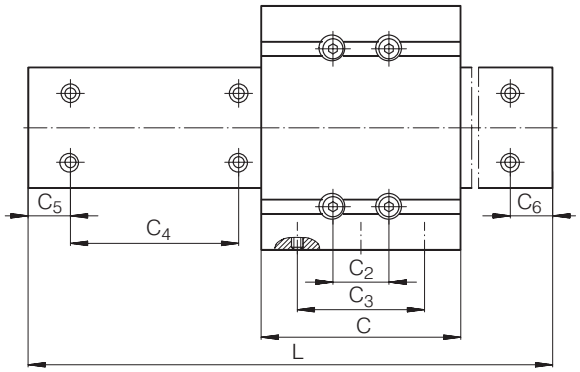
PART NUMBER	K_1 for screws to DIN 912-12.9		K_2 for screws to DIN 7 984-8.8		K_4 for screws to DIN 913
		Nm max.		Nm max.	
KWVK 32 AL	M3	2.5	M3	0.6	M3
KWVK 42 AL	M3	2.5	M4	2.1	M4
KWVK 69 AL	M5	10	M6	4.8	M6



Load directions

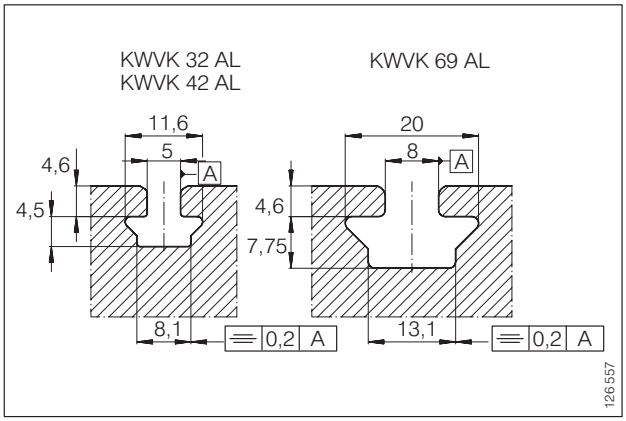


KWVK..AL on TKVD



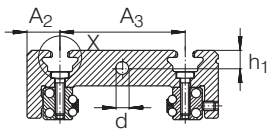
Plan view X
(rotated through 90°)

											LOAD CARRYING CAPACITY[1]				
											BASIC LOAD RATINGS		MOMENT RATINGS		
C_2	C_3	C_4	C_5[3]		C_6[3]		d	H_1	H_2	h_1	C	C_0	M_{0x}	M_{0y}	M_{0z}
			min.	max.	min.	max.					kN	kN	kN	kN	kN
15	25	40	5	35	5	35	4.2	0.5	6	7.5	5.7	10.6	203	51	51
20	40	60	5	55	5	55	4.2	5.5	12	8	13.5	26	648	211	211
35	55	60	7	53	7	53	4.2	7.5	17	11	26	46.5	1872	412	492

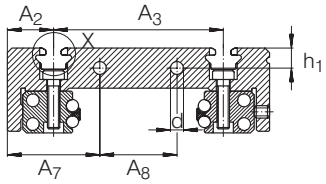


Detail X

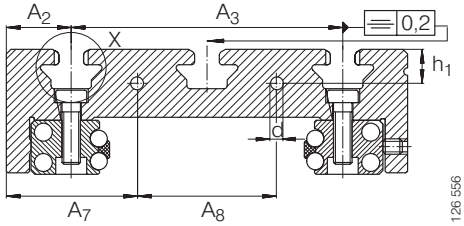
KWVK 32 AL



KWVK 42 AL



KWVK 69 AL



Cross-section of carriages KWVK..AL

Miniature Linear Recirculating Ball Bearing And Guideway Assemblies
KUME SERIES

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

UNIT	CARRIAGE		GUIDEWAY		CLOSING PLUG	DIMENSIONS				MOUNTING DIMENSIONS			
PART NUMBER	PART NUMBER	MASS kg	PART NUMBER	MASS kg/m		L[1]	H	A	C	A_1	A_2	a $^{-0.005}_{-0.05}$	a_3
KUME 9	KWME 9	0.016	TKMD 9	0.31	–	280	10	20	29.15	5.5	15	9	2.5
KUME 12	KWME 12	0.036	TKMD 12	0.56	–	470	13	27	34.3	7.5	20	12	3.5
KUME 15	KWME 15	0.06	TKMD 15	1.1	KA 8 TN	1200	16	32	42	8.5	25	15	3.5

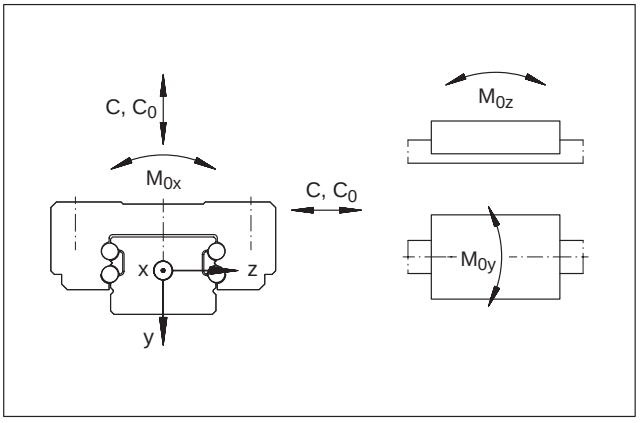
[1]) Maximum length L of single piece guideway;
longer guideways are supplied as multi-piece guideways and are marked accordingly.

[2]) Dimensions C_5 and C_6 are dependent on the guideway length.

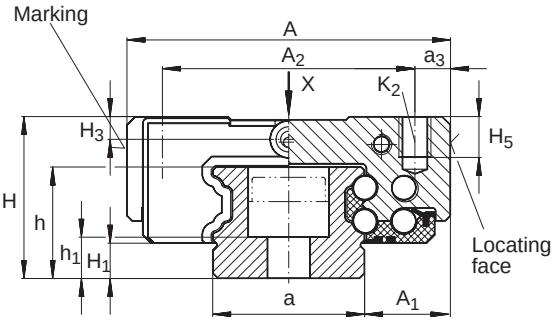
[3]) If there is a possibility of settling, the fixing screws should be secured against rotation.

DIAMETERS AND TIGHTENING TORQUES FOR THREADS AND SCREWS[3])

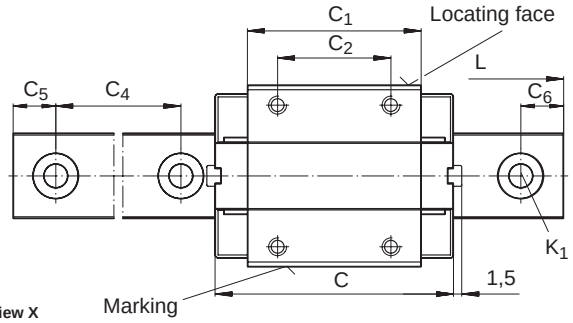
PART NUMBER	K_1 for screws to DIN 912-12.9		K_2 for screws to DIN 912-12.9	
		Nm max.		Nm max.
KUME 9	M2	1	M2	0.5
KUME 12	M3	2.5	M3	1.5
KUME 15	M3	2.5	M3	1.5



Load directions

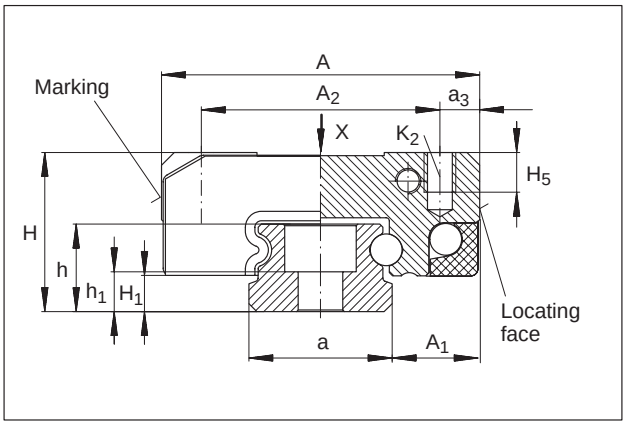


KUME 15

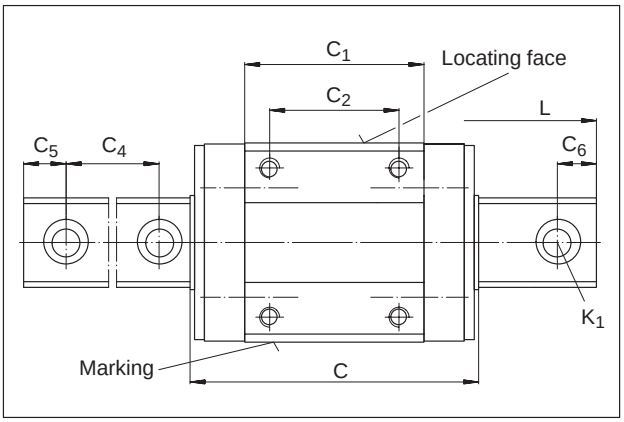


KUME 15, plan view X (rotated through 90°)

											LOAD CARRYING CAPACITY				
											BASIC LOAD RATINGS		MOMENT RATINGS		
C_1	C_2	C_4	C_5 [2]		C_6 [2]		H_1	H_5	h	h_1	C	C_0	M_{0x}	M_{0y}	M_{0z}
			min.	max.	min.	max.					N	N	Nm	Nm	Nm
18.35	13	20	5	15	5	15	2.25	2.5	5.5	2.5	1,340	2,060	8.8	5.8	5.8
22	15	25	5	20	5	20	3.05	3.5	7.5	3	2,150	3,200	20.8	11.3	11.3
30.6	20	40	6	34	6	34	3.5	4.0	11	4.1	3,750	6,800	65	33	33

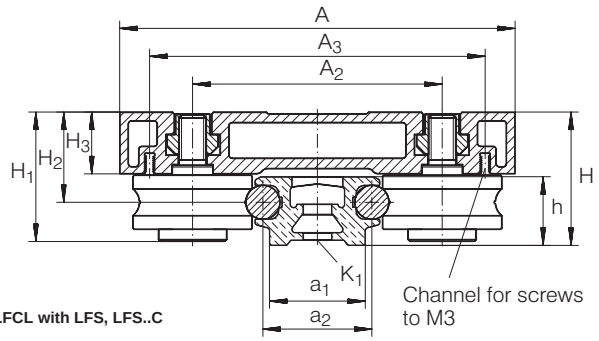


KUME 9, KUME 12



KUME 9, KUME 12, plan view X (rotated through 90°)

Track Roller Linear Guidance Systems With Hollow Section Carriage
LFCL SERIES
And Guideways
LFS,LFS..C,LFS..CE,LFS..N SERIES



LFCL with LFS, LFS..C

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

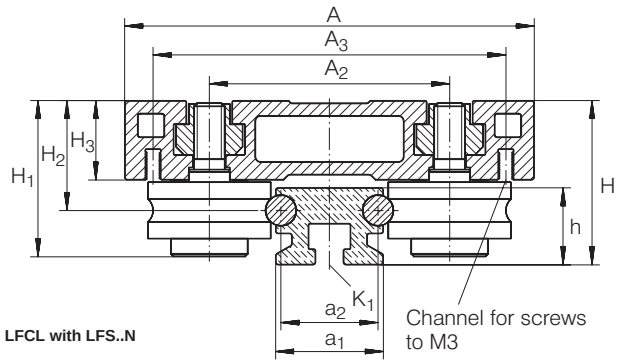
CARRIAGE[1]	MASS	CONTAINS TRACK ROLLER	GUIDEWAYS	MASS	DIMENSIONS						MOUNTING DIMENSIONS		
					CARRIAGE			GUIDEWAY					
					H	A	C	h	a	L[2]	A_1	A_2	A_3
	≈g			≈g/m									
LFCL 25	440	LFR 50/8 KDD	LFS 25	1,100	32	80	110	15	25	2,000	47	47	69
LFCL 25	440	LFR 50/8 KDD	LFS 25 N	1,000	32	80	110	15	25	2,000	47	47	69
LFCL 42	1,000	LFR 5201 KDD	LFS 42 C[1])	2,200	39	116	150	20	42	8,000	73	73	98.5
LFCL 42	1,000	LFR 5201 KDD	LFS 42 CE[1])	2,200	39	116	150	20	42	8,000	73	73	98.5
LFCL 86[7])	2,200	LFR 5301 KDD	LFS 86 C[1])	4,400	59	190	235	34	86	8,000	124	124	151.5

Corrosion-resistant executions: LFCL..VA, LFS..VA. Guideway without holes: LFS..OL.

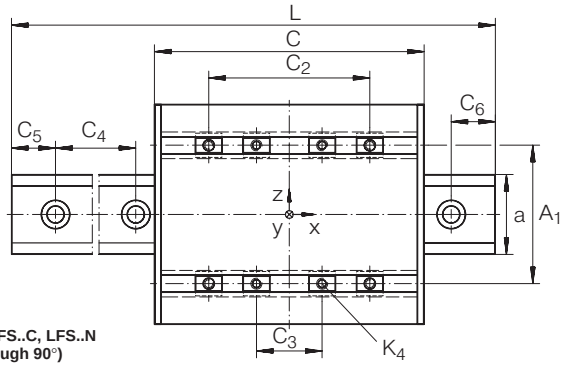
1) The shape of the hollow sections is dependent on the size.
2) Maximum length of single-piece guideways, longer guideways are supplied as multi-piece guideways and are marked accordingly.
3) Dimensions C_5 and C_6 are dependent on the guideway length L.
4) For screws to DIN 912-8.8, washers to DIN 433 are required for maximum loading.
5) Recommended distance between screws.
6) For screws to DIN 931/933-8.8, special washers are included in the delivery.
7) Additional T-groove in center of carriage.
8) Load carrying capacity table is not valid for LFCL..VA and LFS..VA.

LOAD CARRYING CAPACITY TABLE[8])

PART NUMBER	LOADS				MOMENTS					
	$F_{y\,max}$ N	$F_{0y\,max}$ N	$F_{z\,max}$ N	$F_{0z\,max}$ N	$M_{x\,max}$ Nm	$M_{0x\,max}$ Nm	$M_{y\,max}$ Nm	$M_{0y\,max}$ Nm	$M_{z\,max}$ Nm	$M_{0z\,max}$ Nm
LFCL 25 with LFS 25	850	1,400	1,000	1,000	9	15	26	26	22	36
LFCL 25 with LFS 25 N	850	1,400	1,000	1,000	9	15	26	26	22	36
LFCL 42 with LFS 42 C	1,500	2,500	3,000	3,000	27	42	127	127	63	106
LFCL 42 with LFS 42 CE	1,500	2,500	3,500	3,500	27	42	148	148	63	106
LFCL 86 with LFS 86 C	2,400	4,000	4,500	4,500	74	124	360	360	192	320



LFCL with LFS..N



LFCL with LFS, LFS..C, LFS..N (view rotated through 90°)

a_1	a_2	C_2	C_3		C_4	C_5[3]		C_6[3]		H_1	H_2	H_3	K_1[4]	K_4	MAXIMUM LENGTH OF MOUNTING SCREW FOR K_4
			min.	max.		min.	max.	min.	max.						
21	19	52	13	26	62.5	10	54	10	54	30.5	21.5	15.4	M5	M6	10
21	19	52	13	26	62.5[5]	–	–	–	–	30.5	21.5	15.4	M5[6]	M6	10
28	32	85	15	55	125	12	113	12	113	38.1	26.4	18	M8	M8	12
28	32	85	15	55	62.5	12	51	12	51	38.1	26.4	18	M8	M8	12
71	76	155	18	119	250	17	235	17	235	48.4	33.9	23.4	M12	M10	14

Track Roller Linear Guidance Systems With Open Carriage
LFL..SF SERIES
And Guideways
LFS, LFS..C, LFS..CE, LFS..N, LFS..NZZ, LFS..F, LFS..FE SERIES

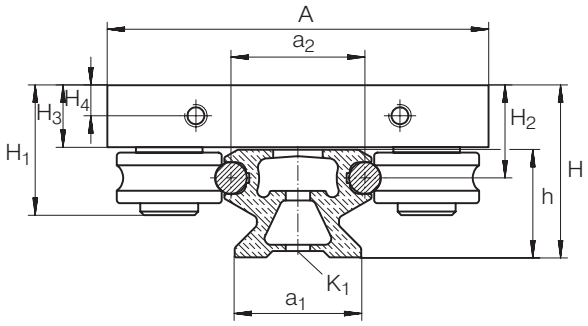
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

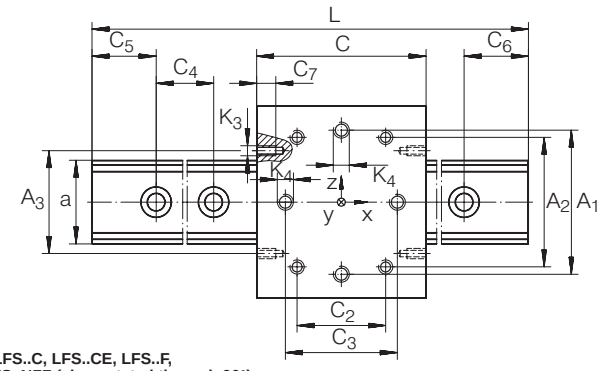
CARRIAGE	MASS	CONTAINS TRACK ROLLER	GUIDEWAYS	MASS	DIMENSIONS						MOUNTING DIMENSIONS				
					CARRIAGE			GUIDEWAY							
					H	A	C	h	a	$L^{1)}$	A_1	A_2	A_3	a_1	a_2
	≈ g			≈ g/m							± 0.2				
LFL 20 SF	160	LFR 50/5 KDD-4	LFS 20	600	22	55	50	12.2	20	2,000	40	34	–[8)]	17	16
LFL 32 SF	400	LFR 50/8 KDD	LFS 32 C	1,100	35.5	80	90	20	32	6,000	59	54	56	24	26
LFL 32 SF	400	LFR 50/8 KDD	LFS 32 CE	1,100	35.5	80	90	20	32	6,000	59	54	56	24	26
LFL 32 SF	400	LFR 50/8 KDD	LFS 32 F	1,000	25.5	80	90	10	32	4,000	59	54	56	–	26
LFL 32 SF	400	LFR 50/8 KDD	LFS 32 N	1,400	35.5	80	90	20	32	6,000	59	54	56	24	26
LFL 52 SF	1,000	LFR 5201 KDD	LFS 52 C	3,000	54.3	120	100	34	52	8,000	90	83	65	40	42
LFL 52 SF	1,000	LFR 5201 KDD	LFS 52 CE	3,000	54.3	120	100	34	52	8,000	90	83	65	40	42
LFL 52 SF	1,000	LFR 5201 KDD	LFS 52 F	3,000	44.2	120	100	18	52	4,000	90	83	65	–	42
LFL 52 SF	1,000	LFR 5201 KDD	LFS 52 NZZ	3,900	54.3	120	100	34	52	8,000	90	83	65	46.5	42
LFL 52 E SF	1,900	LFR 5301 KDD	LFS 52 CE	3,000	60.4	135	150	34	52	8,000	105	90	65	40	42
LFL 52 E SF	1,900	LFR 5301 KDD	LFS 52 FE	3,000	44.2	135	150	18	52	4,000	105	90	65	40	42
LFL 52 SF	1,000	LFR 5201 KDD	LFS 52	4,400	54.3	120	100	34	52	8,000	90	83	65	40	42
LFL 52 SF	1,000	LFR 5201 KDD	LFS 52 E	4,400	54.3	120	100	34	52	8,000	90	83	65	40	42

LOAD CARRYING CAPACITY TABLE[7)]

PART NUMBER	LOADS				MOMENTS					
	$F_{y\,max}$ N	$F_{0y\,max}$ N	$F_{z\,max}$ N	$F_{0z\,max}$ N	$M_{x\,max}$ Nm	$M_{0x\,max}$ Nm	$M_{y\,max}$ Nm	$M_{0y\,max}$ Nm	$M_{z\,max}$ Nm	$M_{0z\,max}$ Nm
LFL 20 SF with LFS 20	400	660	700	700	4	6	8.6	8.6	4.8	8
LFL 32 SF with LFS 32 C	850	1,400	930	930	11	18	27	27	26	43
LFL 32 SF with LFS 32 CE	850	1,400	1,300	1,300	11	18	39	39	26	43
LFL 32 SF with LFS 32 F	850	1,400	1,000	1,000	11	18	30	30	26	43
LFL 32 SF with LFS 32 N	850	1,400	1,000	1,000	11	18	30	30	26	43
LFL 52 SF with LFS 52 C	1,500	2,500	2,000	2,000	33	52	60	60	47	78
LFL 52 SF with LFS 52 CE	1,500	2,500	3,500	3,500	33	52	105	105	47	78
LFL 52 SF with LFS 52 F	1,500	2,500	2,500	2,500	33	52	75	75	47	78
LFL 52 SF with LFS 52 NZZ	1,500	2,500	2,500	2,500	33	52	75	75	47	78
LFL 52 E SF with LFS 52 CE	2,400	4,000	4,000	4,000	51	84	208	208	126	210
LFL 52 E SF with LFS 52 FE	2,400	4,000	4,000	4,000	51	84	208	208	126	210



LFL..SF with LFS, LFS..C, LFS..CE



LFL..SF with LFS, LFS..C, LFS..CE, LFS..F, LFS..FE, LFS..N, LFS..NZZ (view rotated through 90°)

C_2	C_3 ±0.2	C_4	C_5[2] min.	C_5[2] max.	C_6[2] min.	C_6[2] max.	C_7	H_1 max.	H_2	H_3	H_4	K_1[3]	K_3	K_4	M_A[4] STANDARD Nm	M_A[4] CORROSION-RESISTANT Nm
24	38	62.5	9	54	9	54	–	20.5	13	9	–	M4	M3[8])	M5	2.5	2.5
60	70	125	11	116	11	116	7	31.9	20.4	14	7	M6	M6	M8	15	12
60	70	62.5	11	52	11	52	7	31.9	20.4	14	7	M6	M6	M8	15	12
60	70	125	11	116	11	116	7	31.9	20.4	14	7	M6[9])	M6	M8	15	12
60	70	125[5])	–	–	–	–	7	31.9	20.4	14	7	M6[6])	M6	M8	15	12
60	70	250	17	235	17	235	12	46.3	29.2	19.5	9.75	M10	M6	M10	40	23
60	70	125	17	110	17	110	12	46.3	29.2	19.5	9.75	M10	M6	M10	40	23
60	70	250	17	235	17	235	12	46.3	29.2	19.5	9.75	M10[9])	M6	M10	40	23
60	70	250[5])	–	–	–	–	12	46.3	29.2	19.5	9.75	M10[6])	M6	M10	40	23
105	110	125	17	110	17	110	12	53.7	35.2	24	12	M10	M6	M10	40	23
105	110	125	17	110	17	110	12	53.7	35.2	24	12	M10	M6	M10	40	23
60	70	250	17	235	17	235	12	53.5	29.2	19.5	9.75	M10	M6	M10	40	23
60	70	125	17	110	17	110	12	53.5	29.2	19.5	9.75	M10	M6	M10	40	23

Corrosion-resistant executions: LFL..VA, LFS..VA. Guideway without holes: LFS..OL.

1) Maximum length of single-piece guideways, longer guideways are supplied as multi-piece guideways and are marked accordingly.

2) Dimensions C_5 and C_6 are dependent on the guideway length L.

3) For screws to DIN 912-8.8, washers to DIN 433 are required for maximum loading.

4) Tightening torque for LFZ and LFE, bolts LFZ are supplied tightened to M_A.

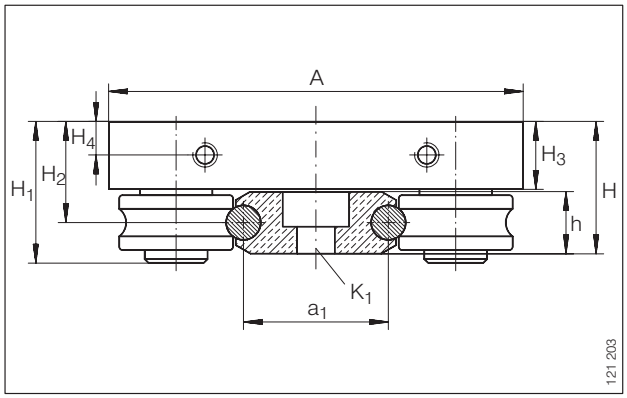
5) Recommended distance between screws.

6) For screws to DIN 931/933-8.8, special washers are included in the delivery.

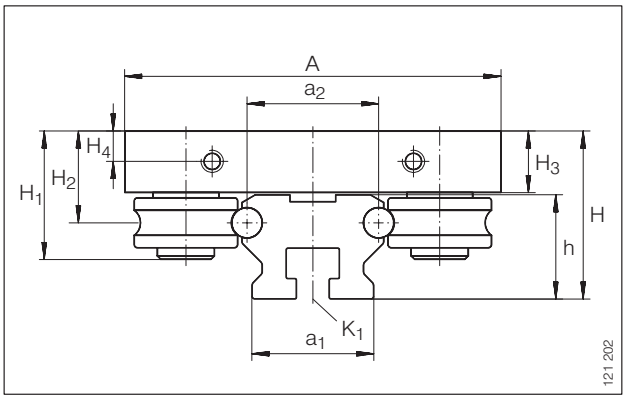
7) Load carrying capacity table is not valid for LFL..VA and LFS..VA.

8) Holes for mounting from below for AB LFL 20.

9) Countersink depth for screws to DIN 6 912.

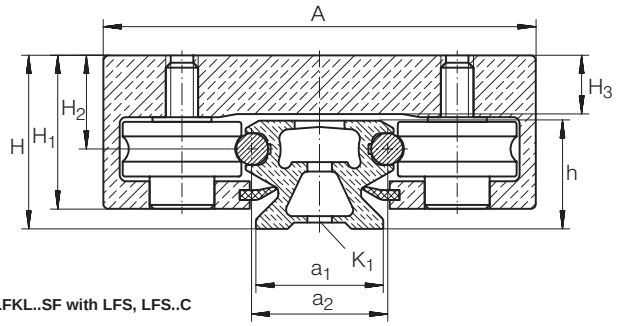


LFL..SF with LFS..F, LFS..FE



LFL..SF with LFS..N, LFS..NZZ

Track Roller Linear Guidance Systems With Compact Carriage
LFKL..SF SERIES
And Guideways
LFS, LFS..C, LFS..CE, LFS..CEE, LFS..F, LFS..FE, LFS..N, LFS..NZZ SERIES



LFKL..SF with LFS, LFS..C

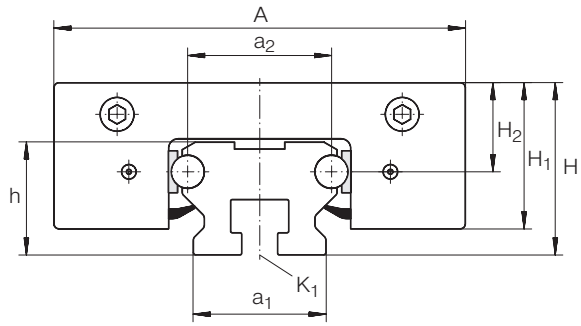
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

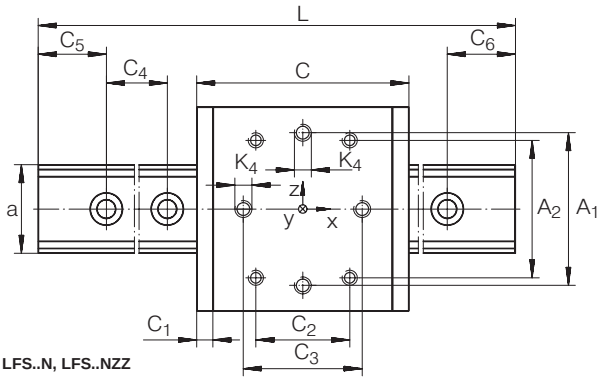
CARRIAGE	MASS	CONTAINS TRACK ROLLER	GUIDEWAYS	MASS	DIMENSIONS						MOUNTING DIMENSIONS			
					CARRIAGE			GUIDEWAY						
					H	A	C	h	a	L[1)]	A_1	A_2	a_1	a_2
	≈ g			≈ g/m										
LFKL 20 SF[5)]	200	LFR 50/5 KDD-4	LFS 20	600	22	56	69	12.2	20	2,000	39	34	17	16
LFKL 25 SF[5)]	300	LFR 50/5 KDD	LFS 25	1,100	25	65	85	15	25	2,000	50	40	21	19
LFKL 25 SF[5)]	300	LFR 50/5 KDD	LFS 25 N	1,000	25	65	85	15	25	2,000	50	40	21	19
LFKL 32 SF	700	LFR 50/8 KDD	LFS 32 C	1,100	35.5	86	112	20	32	6,000	59	54	24	26
LFKL 32 SF	700	LFR 50/8 KDD	LFS 32 CE	1,100	35.5	86	112	20	32	6,000	59	54	24	26
LFKL 32 SF	700	LFR 50/8 KDD	LFS 32 F	1,000	25.5	86	112	10	32	4,000	59	54	–	26
LFKL 32 SF	700	LFR 50/8 KDD	LFS 32 N	1,400	35.5	86	112	20	32	6,000	59	54	24	26
LFKL 52 SF	1,500	LFR 5201 KDD	LFS 52 C	3,000	54.3	130	136	34	52	8,000	90	83	40	42
LFKL 52 SF	1,500	LFR 5201 KDD	LFS 52 CE	3,000	54.3	130	136	34	52	8,000	90	83	40	42
LFKL 52 SF	1,500	LFR 5201 KDD	LFS 52 F	3,000	38.2	130	136	18	52	4,000	90	83	–	42
LFKL 52 SF	1,500	LFR 5201 KDD	LFS 52 NZZ	3,900	54.3	130	136	34	52	8,000	90	83	46.5	42
LFKL 52 E SF	2,900	LFR 5301 KDD	LFS 52 CE	3,000	60.4	145	186	34	52	8,000	105	90	40	42
LFKL 52 E SF	2,900	LFR 5301 KDD	LFS 52 FE	3,000	38.2	145	186	18	52	4,000	105	90	–	42
LFKL 52 EE SF	3,900	LFR 5302 KDD	LFS 52 CEE	4,300	60.4	155	205	34	52	8,000	115	95.3	40	42

LOAD CARRYING CAPACITY TABLE[8)]

PART NUMBER	LOADS				MOMENTS					
	$F_{y\,max}$ N	$F_{0y\,max}$ N	$F_{z\,max}$ N	$F_{0z\,max}$ N	$M_{x\,max}$ Nm	$M_{0x\,max}$ Nm	$M_{y\,max}$ Nm	$M_{0y\,max}$ Nm	$M_{z\,max}$ Nm	$M_{0z\,max}$ Nm
LFKL 20 SF with LFS 20	400	660	700	700	4	6	12	12	6.8	11.4
LFKL 25 SF with LFS 25	400	660	700	700	4	6	16	16	9	15
LFKL 25 SF with LFS 25 N	400	660	700	700	4	6	16	16	9	15
LFKL 32 SF with LFS 32 C	850	1,400	930	930	11	18	27	27	26	43
LFKL 32 SF with LFS 32 CE	850	1,400	1,300	1,300	11	18	39	39	26	43
LFKL 32 SF with LFS 32 F	850	1,400	1,000	1,000	11	18	30	30	26	43
LFKL 32 SF with LFS 32 N	850	1,400	1,000	1,000	11	18	30	30	26	43
LFKL 52 SF with LFS 52 C	1,500	2,500	2,000	2,000	33	52	60	60	47	78
LFKL 52 SF with LFS 52 CE	1,500	2,500	3,500	3,500	33	52	105	105	47	78
LFKL 52 SF with LFS 52 F	1,500	2,500	2,500	2,500	33	52	75	75	47	78
LFKL 52 SF with LFS 52 NZZ	1,500	2,500	2,500	2,500	33	52	75	75	47	78
LFKL 52 E SF with LFS 52 CE	2,400	4,000	4,000	4,000	51	84	208	208	126	210
LFKL 52 E SF with LFS 52 FE	2,400	4,000	4,500	4,500	51	84	236	236	126	210
LFKL 52 EE SF with LFS 52 CEE	4,800	8,000	6,500	6,500	101	166	390	390	288	480



LFKL..SF with LFS..N



LFKL..SF with LFS, LFS..C, LFS..N, LFS..NZZ
(view rotated through 90°)

C_1	C_2	C_3	C_4	C_5[2]		C_6[3]		H_1	H_2	H_3	K_1[3]	K_4	M_A[4]	
				min.	max.	min.	max.						STANDARD Nm	CORROSION-RESISTANT Nm
5	34	49	62.5	9	54	9	54	20.5	13	8.7	M4	M5	2.5	2.5
5	45	60	62.5	10	54	10	54	23.5	14.4	9	M5	M5	2.5	2.5
5	45	60	62.5[6]	–	–	–	–	23.5	14.4	9	M5[7]	M5	2.5	2.5
7	60	70	125	11	116	11	116	32	20.5	14	M6	M8	15	12
7	60	70	62.5	11	52	11	52	32	20.5	14	M6	M8	15	12
7	60	70	125	11	116	11	116	32	20.5	14	M6[8]	M8	15	12
7	60	70	125[6]	–	–	–	–	32	20.5	14	M6[7]	M8	15	12
10	60	70	250	17	235	17	235	46.1	29.2	19.4	M10	M10	40	23
10	60	70	125	17	110	17	110	46.1	29.2	19.4	M10	M10	40	23
10	60	70	250	17	235	17	235	46.1	29.2	19.4	M10	M10	40	23
10	60	70	250[6]	–	–	–	–	46.1	29.2	19.4	M10[7]	M10	40	23
10	105	110	125	17	110	17	110	53.8	35.3	24	M10	M10	40	23
10	105	110	125	17	110	17	110	53.8	35.3	24	M10[8]	M10	40	23
10	120	140	62.5	17	49	17	49	55	35.3	24	M10	M12	70	39

Corrosion-resistant executions: LFKL..VA, LFS..VA.
Guideway without holes: LFS..OL.

1) Maximum length of single-piece guideways, longer guideways are supplied as multi-piece guideways and are marked accordingly.

2) Dimensions C_5 and C_6 are dependent on the guideway length L

3) For screws to DIN 912-8.8, washers to DIN 433 are required for maximum loading; for guideways LFS..F and LFS..FE, countersink depth for screws to DIN 6 912.

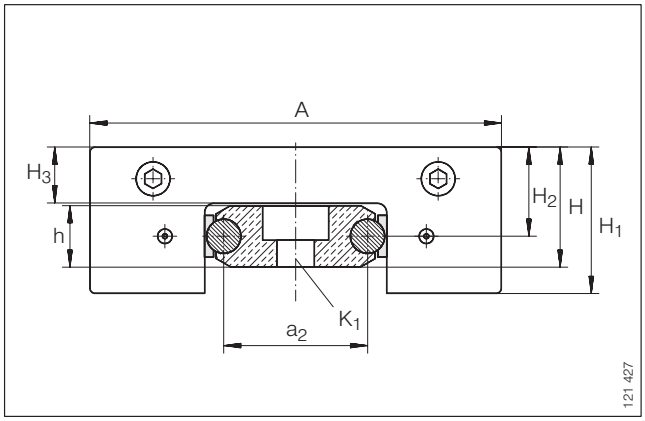
4) Tightening torque for track roller bolts, concentric bolts supplied tightened to M_A.

5) Without lubricating nipples, relubrication possible via end face holes.

6) Recommended distance between screws.

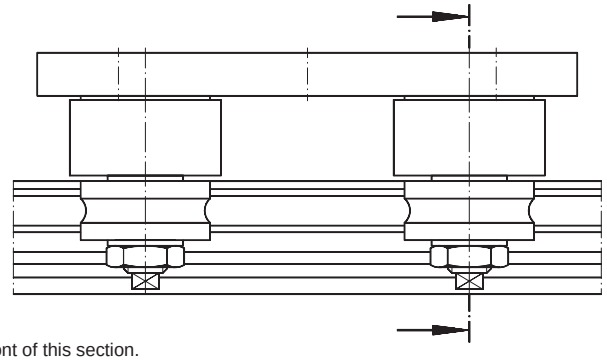
7) For screws to DIN 931/933-8.8, special washers are included in the delivery.

8) Load carrying capacity table is not valid for LFKL..VA and LFS..VA.



LFKL..SF with LFS..F

Track Roller Linear Guidance Systems With Bogie Carriage
LFDL SERIES
And Guideways
LFS..R SERIES



LFDL with LFS..R

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

CARRIAGE	MASS	CONTAINS TRACK ROLLER	GUIDEWAYS	MASS	DIMENSIONS					
			CURVED ELEMENT		CARRIAGE			GUIDEWAY		
					H	A	C	h	a	β
	≈ g			≈ g						
LFDL 32	1,500	LFR 50/8 KDD	LFS 32 R-100/ 90	500	43.5	80	100	20	32	90●
LFDL 32	1,500	LFR 50/8 KDD	LFS 32 R-100/180	1,000	43.5	80	100	20	32	180●
LFDL 32	1,500	LFR 50/8 KDD	LFS 32 R-100/360	2,000	43.5	80	100	20	32	360●
LFDL 32	1,500	LFR 50/8 KDD	LFS 32 R-300/ 90	1,700	43.5	80	100	20	32	90●
LFDL 32	1,500	LFR 50/8 KDD	LFS 32 R-300/180	3,400	43.5	80	100	20	32	180●
LFDL 32	1,500	LFR 50/8 KDD	LFS 32 R-300/360	6,800	43.5	80	100	20	32	360●
LFDL 32	1,500	LFR 50/8 KDD	LFS 32 R-500/ 90	2,900	43.5	80	100	20	32	90●
LFDL 32	1 500	LFR 50/8 KDD	LFS 32 R-500/180	5,800	43.5	80	100	20	32	180●
LFDL 32	1 500	LFR 50/8 KDD	LFS 32 R-500/360	11,600	43.5	80	100	20	32	360●
LFDL 52	1,500	LFR 5201 KDD	LFS 52 R-150/ 90	2,000	66.1	120	150	34	52	90●
LFDL 52	2,500	LFR 5201 KDD	LFS 52 R-150/180	4,000	66.1	120	150	34	52	180●
LFDL 52	2,500	LFR 5201 KDD	LFS 52 R-150/360	8,000	66.1	120	150	34	52	360●
LFDL 52	2,500	LFR 5201 KDD	LFS 52 R-300/ 90	4,500	66.1	120	150	34	52	90●
LFDL 52	2,500	LFR 5201 KDD	LFS 52 R-300/180	9,000	66.1	120	150	34	52	180●
LFDL 52	2,500	LFR 5201 KDD	LFS 52 R-300/360	18,000	66.1	120	150	34	52	360●
LFDL 52	2,500	LFR 5201 KDD	LFS 52 R-500/ 90	7,800	66.1	120	150	34	52	90●
LFDL 52	2,500	LFR 5201 KDD	LFS 52 R-500/180	15,600	66.1	120	150	34	52	180●
LFDL 52	2,500	LFR 5201 KDD	LFS 52 R-500/360	31,200	66.1	120	150	34	52	360●

Corrosion-resistant executions: LFDL..VA, LFS..R VA. Guideway without holes: LFS..R OL.

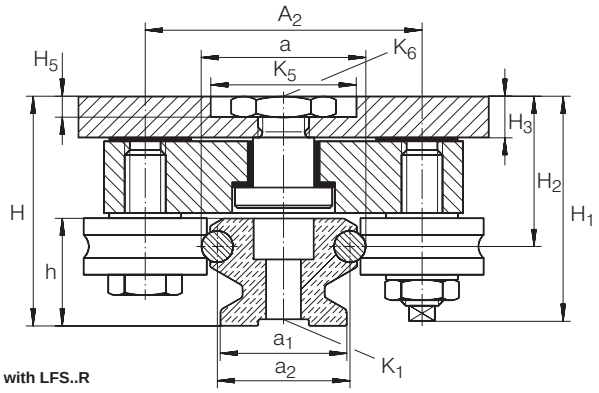
1) For screws to DIN 912-8.8.

2) Number of holes on reference circle r_1.

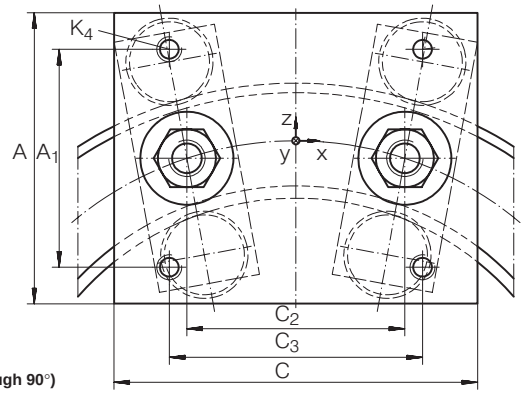
3) Tightening torque for bolts LFZ and LFE, bolts LFZ are supplied tightened to M_A.

LOAD CARRYING CAPACITY TABLE

PART NUMBER	LOADS				MOMENTS					
	$F_{y\,max}$ N	$F_{0y\,max}$ N	$F_{z\,max}$ N	$F_{0z\,max}$ N	$M_{x\,max}$ Nm	$M_{0x\,max}$ Nm	$M_{y\,max}$ Nm	$M_{0y\,max}$ Nm	$M_{z\,max}$ Nm	$M_{0z\,max}$ Nm
LFDL 32 with LFS 32 R-100/ 90	850	1,400	1,000	1,000	11	18	13	13	11	18
LFDL 32 with LFS 32 R-100/180	850	1,400	1,000	1,000	11	18	13	13	11	18
LFDL 32 with LFS 32 R-300/ 90	850	1,400	1,000	1,000	11	18	13	13	11	18
LFDL 32 with LFS 32 R-300/180	850	1,400	1,000	1,000	11	18	13	13	11	18
LFDL 32 with LFS 32 R-500/ 90	850	1,400	1,000	1,000	11	18	13	13	11	18
LFDL 32 with LFS 32 R-500/180	850	1,400	1,000	1,000	11	18	13	13	11	18
LFDL 52 with LFS 52 R-150/ 90	1,500	2,500	2,500	2,500	31	31	41	41	25	25
LFDL 52 with LFS 52 R-150/180	1,500	2,500	2,500	2,500	31	31	41	41	25	25
LFDL 52 with LFS 52 R-300/ 90	1,500	2,500	2,500	2,500	31	31	41	41	25	25
LFDL 52 with LFS 52 R-300/180	1,500	2,500	2,500	2,500	31	31	41	41	25	25
LFDL 52 with LFS 52 R-500/ 90	1,500	2,500	2,500	2,500	31	31	41	41	25	25
LFDL 52 with LFS 52 R-500/180	1,500	2,500	2,500	2,500	31	31	41	41	25	25



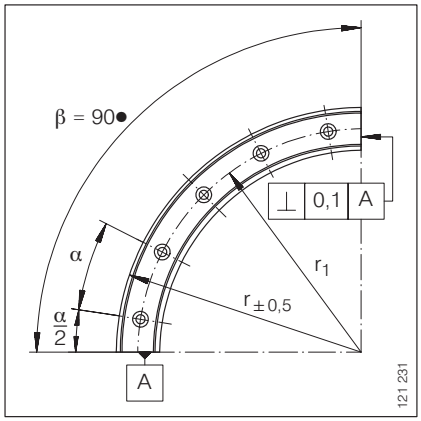
LFDL with LFS..R



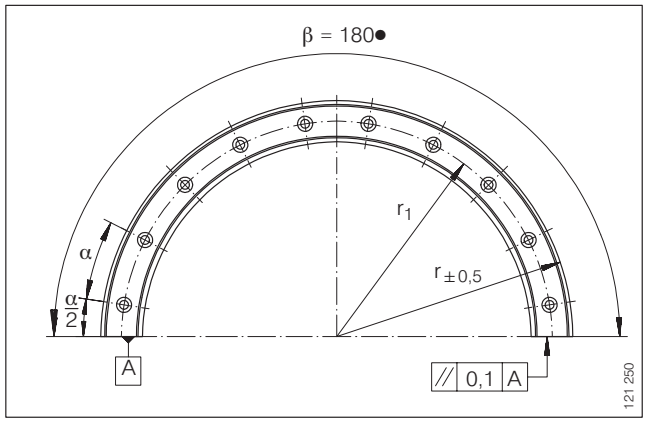
LFDL with LFS..R
(view rotated through 90°)

MOUNTING DIMENSIONS

A_1	A_2	a_1	a_2	C_2	C_3	H_1	H_2	H_3	H_5	K_1[1]	K_4	K_5	K_6	x[2]	r_1	α	$\alpha/2$	M_A[3] STANDARD Nm	M_A[3] CORROSION RESISTANT Nm
60	54	24	26	60	70	43	29.2	9	5	M6	M8	30	M10	3	84	30	15	15	12
60	54	24	26	60	70	43	29.2	9	5	M6	M8	30	M10	6	84	30	15	15	12
60	54	24	26	60	70	43	29.2	9	5	M6	M8	30	M10	12	84	30	–	15	12
60	54	24	26	60	70	43	29.2	9	5	M6	M8	30	M10	4	284	22.5	11.25	15	12
60	54	24	26	60	70	43	29.2	9	5	M6	M8	30	M10	8	284	22.5	11.25	15	12
60	54	24	26	60	70	43	29.2	9	5	M6	M8	30	M10	12	284	22.5	–	15	12
60	54	24	26	60	70	43	29.2	9	5	M6	M8	30	M10	5	484	18	9	15	12
60	54	24	26	60	70	43	29.2	9	5	M6	M8	30	M10	10	484	18	9	15	12
60	54	24	26	60	70	43	29.2	9	5	M6	M8	30	M10	12	484	18	–	15	12
90	83	40	42	76	90	65.3	41	11	6	M10	M10	34	M12	3	124	30	15	40	23
90	83	40	42	76	90	65.3	41	11	6	M10	M10	34	M12	6	124	30	15	40	23
90	83	40	42	76	90	65.3	41	11	6	M10	M10	34	M12	12	124	30	–	40	23
90	83	40	42	76	90	65.3	41	11	6	M10	M10	34	M12	4	274	22.5	11.25	40	23
90	83	40	42	76	90	65.3	41	11	6	M10	M10	34	M12	8	274	22.5	11.25	40	23
90	83	40	42	76	90	65.3	41	11	6	M10	M10	34	M12	12	274	22.5	–	40	23
90	83	40	42	76	90	65.3	41	11	6	M10	M10	34	M12	5	474	18	9	40	23
90	83	40	42	76	90	65.3	41	11	6	M10	M10	34	M12	10	474	18	9	40	23
90	83	40	42	76	90	65.3	41	11	6	M10	M10	34	M12	12	474	18	–	40	23

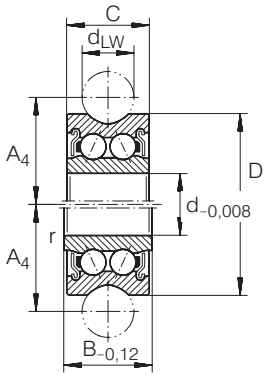


LFS..R-../90



LFS..R-../180

Track Rollers
LFR SERIES



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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DIMENSION TABLE – TRACK ROLLER · Dimensions in mm

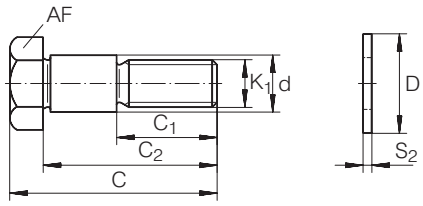
PART NUMBER		MASS	DIMENSIONS							BASIC LOAD RATINGS AS TRACK ROLLER			
			A_4	B	C	D	d	d_{LW}	r to DIN 620	dyn. C_w (10^5m) N	stat. C_{0w} N	F_{rperm} N	F_{0rperm} N
		≈ g											
LFR 50/5	KDD-4	10	9	8	7	16	5	4	0.2	1,200	860	1,300	1,780
LFR 50/5	KDD	10	10.5	8	7	17	5	6	0.2	1,270	890	1,300	1,780
LFR 50/8	KDD	20	14	–	11	24	8	6	0.3	3,670	2,280	1,300	4,560
LFR 5201	KDD	80	20.65	–	15.9	35	12	10	0.6	8,500	5,100	5,100	10,200
LFR 5301	KDD	100	24	–	19	42	12	10	0.6	13,000	7,700	7,500	14,200
LFR 5201-12	KDD	80	21.75	–	15.9	35	12	12	0.6	8,400	5,000	5,100	10,000
LFR 5302	KDD	170	26.65	–	19	47	15	10	1	16,200	9 200	6 200	18 400
LFR 5204-16	KDD	230	31.5	22.6	20.6	52	20	16	1	16,800	9,500	12,100	16,600
LFR 5206-20	KDD	250	41	25.8	23.8	72	25	20	1	24,500	16,600	20,700	33,200
LFR 5206-25	KDD	250	43.5	25.8	23.8	72	25	25	1	29,200	16,400	23,100	32,800
LFR 5207-30	KDD	660	51	29	27	80	30	30	1	38,000	20,800	21,400	36,200
LFR 5208-40	KDD	1,360	62.5	38	36	98	40	40	1.1	54,800	29,000	55,000	58,000

Track rollers LFR with an outside diameter of 52 mm or greater can be relubricated through the inner ring.

Track rollers in corrosion-resistant execution: LFR..NPP VA.

[1]) Available on request.

Bolts
LFZ SERIES



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE – CONCENTRIC BOLTS · Dimensions in mm

PART NUMBER	MASS ≈ g	DIMENSIONS								SUITABLE FOR TRACK ROLLER
		C	C_1	C_2	D	d	K_1	S_2	AF	
LFZ 5[1)]	10	19.5	9.5	16	–[1)]	5	M4	–[1)]	3[2)]	LFR 50/5..-4
LFZ 5[1)]	10	19.5	9.5	16	–[1)]	5	M4	–[1)]	3[2)]	LFR 50/5
LFZ 8	20	28.3	14	24.3	14	8	M8	1	13	LFR 50/8
LFZ 12	40	43	22	36	21	12	M10	1.8	17	LFR 5201
LFZ 12/M12	60	50.8	24	43.8	19	12	M12	1.8	17	LFR 5301
LFZ 15	60	50.8	26	43.8	21	15	M12	1.8	19	LFR 5302

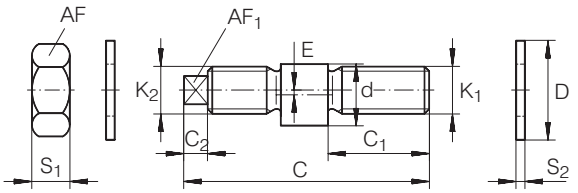
Concentric bolts in corrosion-resistant execution: LFZ..VA.

Washers included in the delivery.

1) No washers required.

2) Hexagonal socket. Outside diameter of head 10 mm.

Bolts
LFE SERIES



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

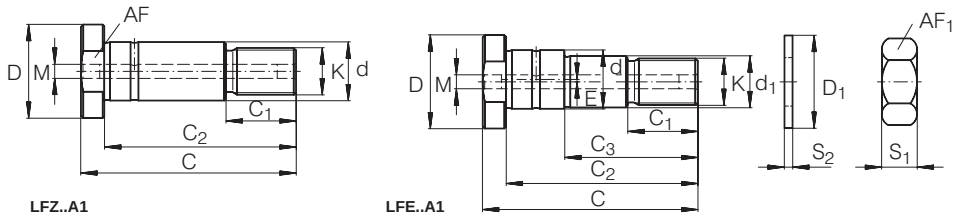
DIMENSION TABLE – ECCENTRIC BOLTS · Dimensions in mm

PART NUMBER	MASS ≈ g	DIMENSIONS												SUITABLE FOR TRACK ROLLER
		C	C_2	C_1	D	d	E	K_1	K_2	S_1	S_2	AF	AF_1	
LFE 5-0.5[1])	10	20.5	–	9	–[1])	5	0.5	M4	M4	2.9	–[1])	7	2[2])	LFR 50/5..-4
LFE 5-0.5[1])	10	20.5	–	9	–[1])	5	0.5	M4	M4	2.9	–[1])	7	2[2])	LFR 50/5
LFE 8-1	20	33.2	3.5	13.7	14	8	1	M8	M8 × 0.75	4	1	13	5	LFR 50/8
LFE 12-1	40	50	5	19.5	21	12	1	M10	M10	8	1.8	17	6	LFR 5201
LFE 12-1/M12	60	57	5	24	19	12	1	M12	M12	6.5	1.8	17	6	LFR 5301
LFE 15-1	60	57	5	24	21	15	1	M12	M12	6.5	1.8	19	6	LFR 5302

Eccentric bolts in corrosion-resistant execution: LFE..VA.
The nut and washer are included in the delivery.

[1]) No washers required.
[2]) Hexagonal socket.

Bolts
LFZ..A1, LFE..A1 SERIES



LFZ..A1 LFE..A1

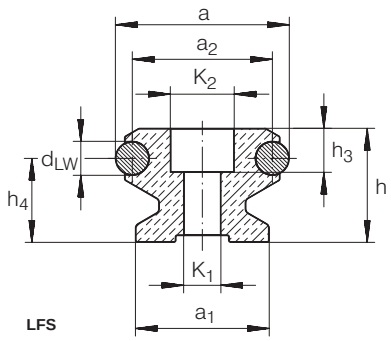
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

PART NUMBER	MASS	DIMENSIONS														SUITABLE FOR TRACK ROLLER
	g	d	C	C_1	C_2	C_3	D	D_1	d_1 h9	E	K	M	S_1	S_2	AF	AF_1	
LFZ 12× 45 A1	40	12	50	16	45	–	20	21	–	–	M10×1.5	–	8	2	17	17	LFR 5201-12 KDD
LFE 12× 45 A1	40	12	50	16	45	30	20	21	10	0.75	M10×1.5	–	8	2	17	17	LFR 5201-12 KDD
LFZ 20× 67 A1	200	20	75	23	67	–	30	30	–	–	M16×1.5	5.9	13	3	27	24	LFR 5204-16 KDD
LFE 20× 67 A1	200	20	75	23	67	45	30	30	17	1	M16×1.5	5.9	13	3	27	24	LFR 5204-16 KDD
LFZ 25× 82 A1	400	25	92	30	82	–	40	37	–	–	M20×1.5	5.9	16	3	36	30	LFR 5206-20, 25 KDD
LFE 25× 82 A1	400	25	92	30	82	57	40	37	22	1	M20×1.5	5.9	16	3	36	30	LFR 5206-20 25 KDD
LFZ 30× 95 A1	620	30	107	32	95	–	45	44	–	–	M24×1.5	5.9	19	4	41	36	LFR 5207-30 KDD
LFE 30× 95 A1	620	30	107	32	95	67	45	44	27	1	M24×1.5	5.9	19	4	41	36	LFR 5207-30 KDD
LFZ 40×107 A1	1,100	40	117	42	107	–	55	56	36	–	M30×1.5	5.9	24	4	46	46	LFR 5208-40
LFE 40×107 A1	1,100	40	117	42	107	72	55	56	36	1	M30×1.5	5.9	24	4	46	46	LFR 5208-40

Bolts LFZ 40..A1 and LFE 40..A1 suitable for track roller LFR 5208 are available on request.
Bolts in corrosion-resistant execution: suffix VA.
The nut and washer are included in the delivery.

Guideways
LFS, LFS..C..,LFS..F.. SERIES



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

PART NUMBER	MASS	DIMENSIONS			MOUNTING DIMENSIONS							
		a	h	L[1]	a_1	a_2	C_4	C_5[2]		C_6[2]		d_{LW}
	≈g/m							min.	max.	min.	max.	
LFS 20	600	20	12.2	2,000	17	16	62.5	9	54	9	54	4
LFS 25	1,100	25	15	2,000	21	19	62.5	10	54	10	54	6
LFS 32	1,600	32	20	6,000	24	26	125	11	116	11	116	6
LFS 32 E	1,600	32	20	6,000	24	26	62.5	11	52	11	52	6
LFS 32 C[4]	1,100	32	20	6,000	24	26	125	11	116	11	116	6
LFS 32 CE[4]	1,100	32	20	6,000	24	26	62.5	11	52	11	52	6
LFS 32 F	1,000	32	10	4,000	–	26	125	11	116	11	116	6
LFS 42 C[4]	2,200	42	20	8,000	28	32	125	12	113	12	113	10
LFS 42 CE[4]	2,200	42	20	8,000	28	32	62.5	12	51	12	51	10
LFS 42 F	1,000	42	15	4,000	–	32	125	12	51	12	51	10
LFS 52	4,400	52	34	8,000	40	42	250	17	235	17	235	10
LFS 52 E	4,400	52	34	8,000	40	42	125	17	110	17	110	10
LFS 52 EE	4,400	52	34	8,000	40	42	62.5	17	49	17	49	10
LFS 52 C[4]	3,000	52	34	8,000	40	42	250	17	235	17	235	10
LFS 52 CE[4]	3,000	52	34	8,000	40	42	125	17	110	17	110	10
LFS 52 CEE[4]	3,000	52	34	8,000	40	42	62.5	17	49	17	49	10
LFS 52 F	3,000	52	18	4,000	–	42	250	17	235	17	235	10
LFS 52 FE	3,000	52	18	4,000	–	42	125	17	110	17	110	10
LFS 86 C[4]	4,400	86	34	8,000	71	76	250	17	235	17	235	10
LFS 86 CE[4]	4,400	86	34	8,000	71	76	125	17	110	17	110	10

Guideway in corrosion-resistant execution: LFS..VA.
Guideways LFS, LFS..C and LFS..F available without holes: LFS..OL, LFS..C OL, LFS..F OL.

1) Maximum length of single-piece guideways,
longer guideways are supplied as multi-piece guideways and are marked accordingly.

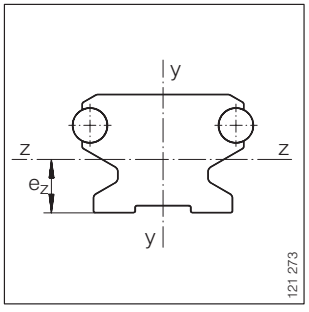
2) Dimensions C_5 and C_6 are dependent on the guideway length L.

3) For maximum loading F_z or F_{0z}, washers to DIN 433 are required.

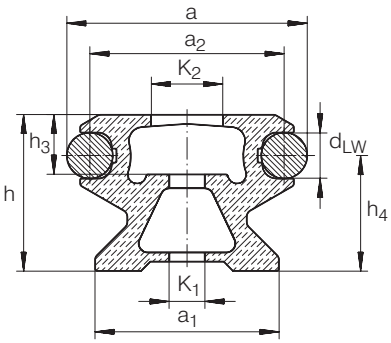
4) The shape of the hollow sections is dependent on the size.

5) Countersink depth for screws to DIN 6 912.

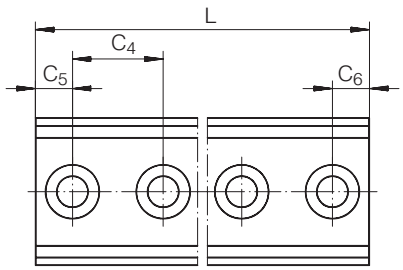
6) If washers to DIN 433 are used, screws to DIN 6 912 are recommended.



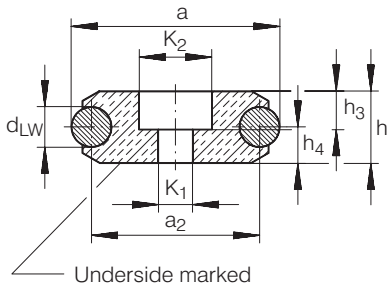
Neutral axes



LFS..C



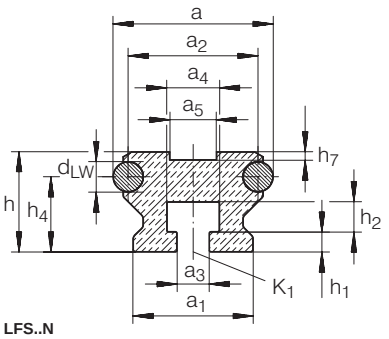
LFS, LFS..C, LFS..F
(view rotated through 90°)



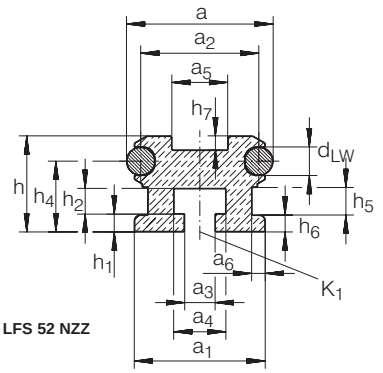
LFS..F

				MODULUS OF ELASTICITY	SURFACE DATA					
					CROSS-SECTIONAL AREA	NEUTRAL AXIS				
						y-y		z-z		
h_4	h_3	K_1[3])	K_2			I_y	W_y	e_z	I_z	W_z
				N/mm²	mm²	mm⁴	mm³	mm	mm⁴	mm³
9	4.6	4.5	8	72,000	165	3,065	362	6.4	2,053	324
10.6	6.5	5.5	10	72,000	237	6,390	608	7.5	4,510	600
15	8	6.6	12	72,000	440	20,100	1,440	10.4	14,100	1,360
15	8	6.6	12	72,000	440	20,100	1,440	10.4	14,100	1,360
15	8	6.5	12	72,000	261	18,305	1,165	10.1	10,072	995
15	8	6.5	12	72,000	261	18,305	1,165	10.1	10,072	995
5	6.5[5])	6.5	12	72,000	230	11,300	810	5	2,190	438
12.6	8[6])	9	15	72,000	358	33,929	1,858	10.1	14,052	1,391
12.6	8[6])	9	15	72,000	358	33,929	1,858	10.1	14,052	1,391
7.5	7[5])	9	15	72,000	370	29,280	1,864	7.5	16,200	2,160
25.1	13	11	19	72,000	1,170	138,624	5,878	17.8	113,037	6,350
25.1	13	11	19	72,000	1,170	138,624	5,878	17.8	113,037	6,350
25.1	15	11	19	72,000	1,170	138,624	5,878	17.8	113,037	6,350
25.1	13	11	19	72,000	649	113,821	4,896	17.1	74,878	4,378
25.1	13	11	19	72,000	649	113,821	4,896	17.1	74,878	4,378
25.1	13	11	19	72,000	649	113,821	4,896	17.1	74,878	4,378
9	10[5])	11	19	72,000	670	84,000	3,610	9	19,900	2,211
9	10[5])	11	19	72,000	670	84,000	3,610	9	19,900	2,211
25.1	13[6])	13	21	72,000	1,185	613,720	16,587	17.5	155,160	8,866
25.1	13[6])	13	21	72,000	1,185	613,720	16,587	17.5	155,160	8,866

Guideways
LFS..N, LFS..NZZ, LFS..M, LFS..ZZ SERIES



LFS..N



LFS 52 NZZ

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

PART NUMBER	MASS	DIMENSIONS			MOUNTING DIMENSIONS											
	≈ g/m	a	h	L[1]	a_1	a_2	a_3[2]	a_4	a_5	a_6	a_7	C_4[3]	d_{LW}	h_1	h_2	h_3
LFS 25 N	1,000	25	15	2,000	21	19	5.5	8.2	–	–	–	62.5	6	3	5	–
LFS 25 M	3,500	25	46	2,000	56	19	–	26.5	5.2	30	–	–	6	–	22	–
LFS 32 N	1,400	32	20	6,000	24	26	6.5	10.5	10.5	–	–	125	6	4	6	–
LFS 32 M	6,400	32	66.5	6,000	75	26	–	–	10.2	43	–	–	6	–	25	–
LFS 52 NZZ	3,900	52	34	8,000	46.5	42	11	18.5	18.5	4.7	–	250	10	6.4	9	–
LFS 52 M	11,200	52	98.6	8,000	112	42	18	44	10.2	80	52	–	10	–	25	–
LFS 120 ZZ	7,900	120	25	6,000	100	110	–	–	18	68	28	250[5]	10	–	–	13

Guideway in corrosion-resistant execution: LFS..VA.

Guideway LFS 120 NZZ available without holes: LFS 120 NZZ OL.

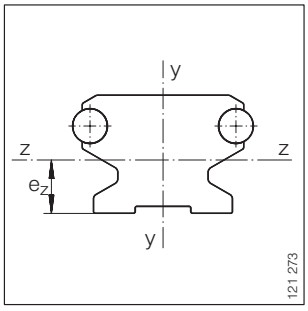
1) Maximum length of single-piece guideways, longer guideways are supplied as multi-piece guideways and are marked accordingly.

2) For screws to DIN 931/933-8.8, special washers are included in the delivery for guideways LFS..N and LFS 52 NZZ.

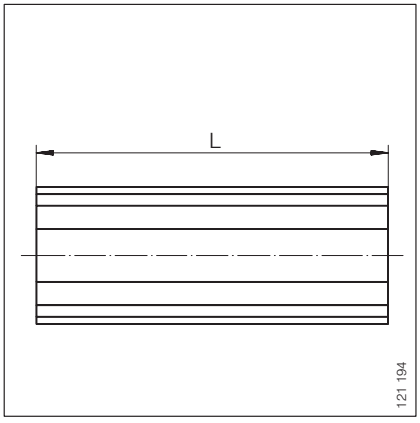
3) Recommended distance between screws.

4) Core hole M8 centrally, distance from bottom edge of guideway: 57.5 mm.

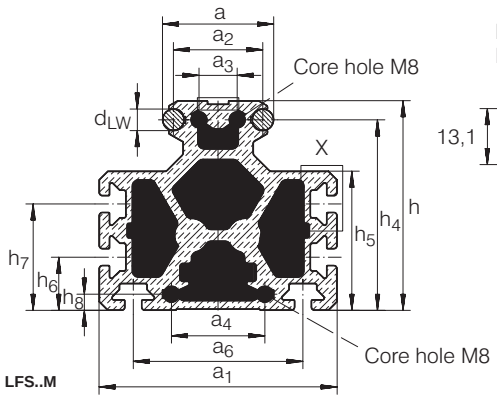
5) $C_{5\,min}$, $C_{6\,min}$ = 17 mm, $C_{5\,max}$, $C_{6\,max}$ = 235 mm.



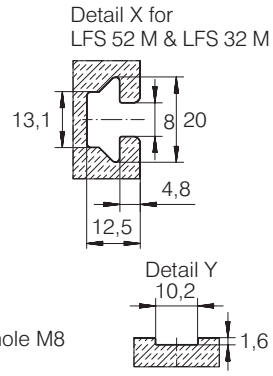
Neutral axes

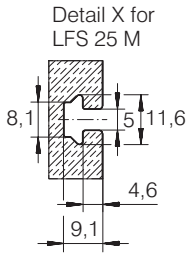


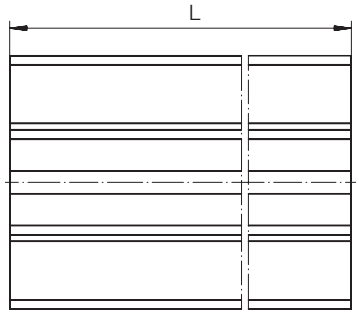
LFS..N, LFS 52 NZZ
(view rotated through 90°)



LFS..M

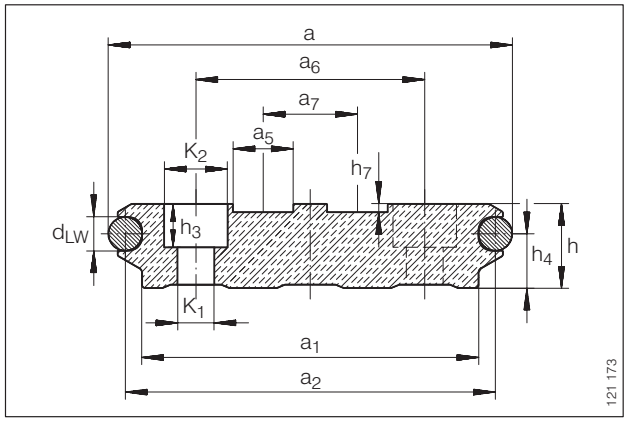




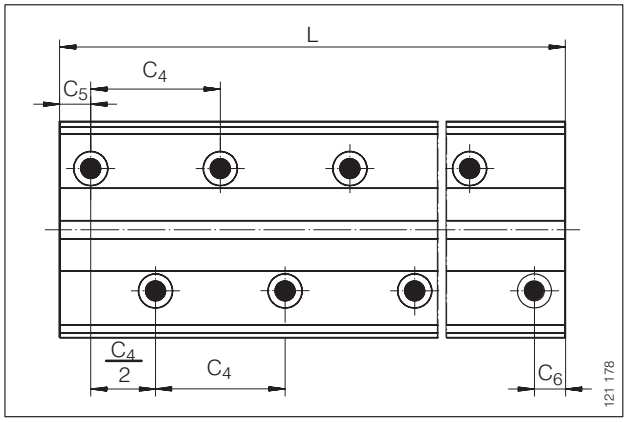


LFS..M (view rotated through 90°)

							MODULUS OF ELASTICITY	SURFACE DATA					
								CROSS-SECTIONAL AREA	NEUTRAL AXIS				
									y-y		z-z		
h_4	h_5	h_6	h_7	h_8	K_1	K_2			I_y	W_y	e_z	I_z	W_z
							N/mm²	mm²	mm⁴	mm³	mm	mm⁴	mm³
10.6	–	–	–	–	M5	–	72,000	192	5,980	570	8	4,420	530
41.6	31.5	–	1.6	–	–	–	72,000	1,156	314,429	11,230	19.4	186,693	9,623
15	–	–	1.6	–	M6	–	72,000	360	19,600	1,400	11.1	12,600	1,135
61	47	–	1.6	–	–	–	72,000	2,206	1,000,234	26,672	36.8	762,105	20,707
25.1	10	6	5	–	M10	–	72,000	994	170,350	7,327	16.8	82,786	4,927.
89.7	65.4	–	1.8	7.5	–	–	72,000	3,691	3,717,250	66,380	42.6	3,014,470	55,462
16.1	–	–	2.5	7.5	∅ 11	∅ 19	72,000	2,468	2,330,980	40,751	12.5	117,074	9,365



LFS 120 ZZ



LFS 120 ZZ[5])
(view rotated through 90●)

Guideways
LFS..CH, LFS..FH SERIES

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

PART NUMBER	MASS	DIMENSIONS			MOUNTING DIMENSIONS							
		a	h	L[1)]	a_1	a_2	a_6	C_4	C_5[2)]		C_6[2)]	
	≈ g/m								min.	max.	min.	max.
LFS 32 CH	900	26	20	4,000	24	23	13	125	11	116	11	116
LFS 32 CHE	900	26	20	4,000	24	23	13	62.5	11	52	11	52
LFS 32 FH	800	26	10	4,000	–	23	13	125	11	116	11	116
LFS 32 FHE	800	26	10	4,000	–	23	13	62.5	11	52	11	52
LFS 52 CH	2,100	42	34	8,000	36	37	21	250	17	235	17	235
LFS 52 CHE	2,100	42	34	8,000	36	37	21	125	17	110	17	110
LFS 52 CHEE	2,100	42	34	8,000	36	37	21	62.5	17	49	17	49
LFS 52 FH	2,300	42	18	8,000	–	37	21	250	17	235	17	235
LFS 52 FHE	2,300	42	18	8,000	–	37	21	125	17	110	17	110
LFS 52 FHEE	2,300	42	18	8,000	–	37	21	62.5	17	49	17	49

Guideway in corrosion-resistant execution: LFS..VA.

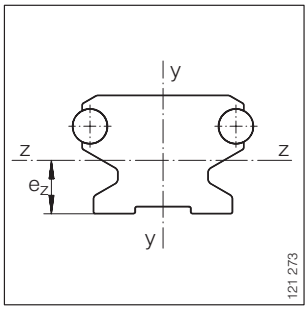
Guideways LFS..CH and LFS..FH available without holes: LFS..CH OL, LFS..FH OL.

1) Maximum length of single-piece guideways, longer guideways are supplied as multi-piece guideways and are marked accordingly.

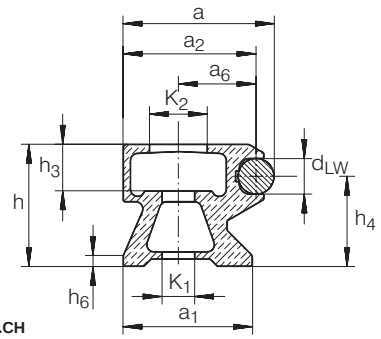
2) Dimensions C_5 and C_6 are dependent on the guideway length L.

3) For screws to DIN 912-8.8, washers to DIN 433 are required for maximum loading.

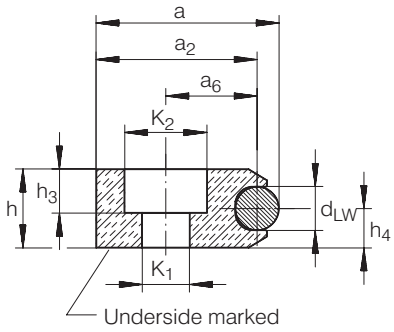
4) Countersink depth for screws to DIN 6 912.



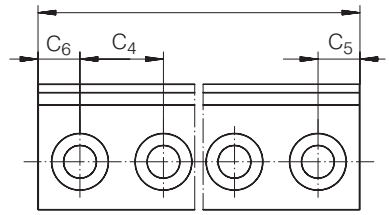
Neutral axes



LFS..CH



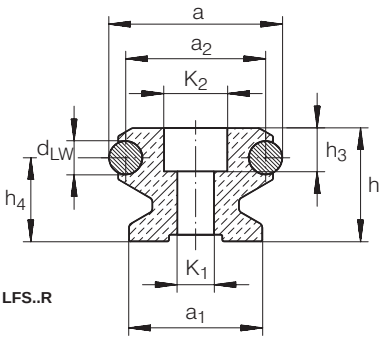
LFS..FH



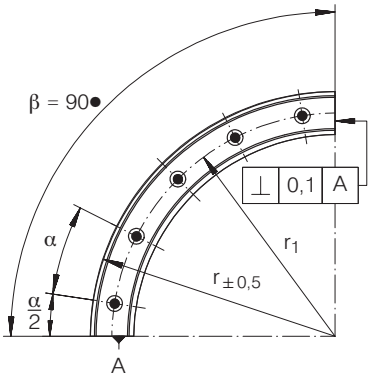
LFS..CH, LFS..FH
view rotated through 90°)

						MODULUS OF ELASTICITY	SURFACE DATA					
							CROSS-SECTIONAL AREA	NEUTRAL AXIS				
								y-y		z-z		
d_{LW}	h_3	h_4	h_6	K_1 [3]	K_2	N/mm²	mm²	I_y mm⁴	W_y mm³	e_z mm	I_z mm⁴	W_z mm³
6	8	15	2	6.5	12	72,000	220	12,374	1,267	11.4	9,118	799
6	8	15	2	6.5	12	72,000	220	12,374	1,267	11.4	9,118	799
6	6.5	5	–	6.5	12	72,000	216	8,681	790	5	1,897	379
6	6.5	5	–	6.5	12	72,000	216	8,681	790	5	1,897	379
10	13	25.1	3	11	19	72,000	555	75,367	4,558	16	62,469	3,904
10	13	25.1	8	11	19	72,000	555	75,367	4,558	16	62,469	3,904
10	13	25.1	8	11	19	72,000	555	75,367	4,558	16	62,469	3,904
10	10 [4]	9	–	11	19	72,000	629	66,642	3,765	9	17,798	1,977
10	10 [4]	9	–	11	19	72,000	629	66,642	3,765	9	17,798	1,977
10	10 [4]	9	–	11	19	72,000	629	66,642	3,765	9	17,798	1,977

Curved Guideways
LFS..R SERIES



LFS..R



LFS..R

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

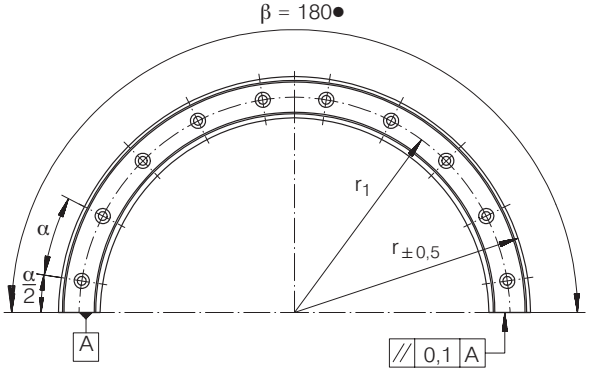
DIMENSION TABLE · Dimensions in mm

PART NUMBER	MASS	DIMENSIONS														
CURVED ELEMENT	g	a	h	β	a_1	a_2	d_{LW}	h_3	h_4	K_1 1)	K_2	x 2)	r	r_1	α	$^{\alpha}/_{2}$
LFS 32 R 100/ 90	500	32	20	90●	24	26	6	6.5	15	6.5	12	3	100	84	30	15
LFS 32 R 100/180	1,000	32	20	180●	24	26	6	6.5	15	6.5	12	6	100	84	30	15
LFS 32 R 100/360	2,000	32	20	360●	24	26	6	6.5	15	6.5	12	12	100	84	30	–
LFS 32 R 300/ 90	1,700	32	20	90●	24	26	6	6.5	15	6.5	12	4	300	284	22.5	11.25
LFS 32 R 300/180	3,400	32	20	180●	24	26	6	6.5	15	6.5	12	8	300	284	22.5	11.25
LFS 32 R 300/360	6,800	32	20	360●	24	26	6	6.5	15	6.5	12	12	300	284	22.5	–
LFS 32 R 500/ 90	2,900	32	20	90●	24	26	6	6.5	15	6.5	12	5	500	484	18	9
LFS 32 R 500/180	5,800	32	20	180●	24	26	6	6.5	15	6.5	12	10	500	484	18	9
LFS 32 R 500/360	11,600	32	20	360●	24	26	6	6.5	15	6.5	12	12	500	484	18	–
LFS 52 R 150/ 90	2,000	52	34	90●	40	42	10	13	25.1	11	19	3	150	124	30	15
LFS 52 R 150/180	4,000	52	34	180●	40	42	10	13	25.1	11	19	6	150	124	30	15
LFS 52 R 150/360	8,000	52	34	360●	40	42	10	13	25.1	11	19	12	150	124	30	–
LFS 52 R 300/ 90	4,500	52	34	90●	40	42	10	13	25.1	11	19	4	300	274	22.5	11.25
LFS 52 R 300/180	9,000	52	34	180●	40	42	10	13	25.1	11	19	8	300	274	22.5	11.25
LFS 52 R 300/360	9,000	52	34	360●	40	42	10	13	25.1	11	19	12	300	274	22.5	–
LFS 52 R 500/ 90	7,800	52	34	90●	40	42	10	13	25.1	11	19	5	500	474	18	9
LFS 52 R 500/180	15,600	52	34	180●	40	42	10	13	25.1	11	19	10	500	474	18	9
LFS 52 R 500/360	15,600	52	34	360●	40	42	10	13	25.1	11	19	12	500	474	18	–

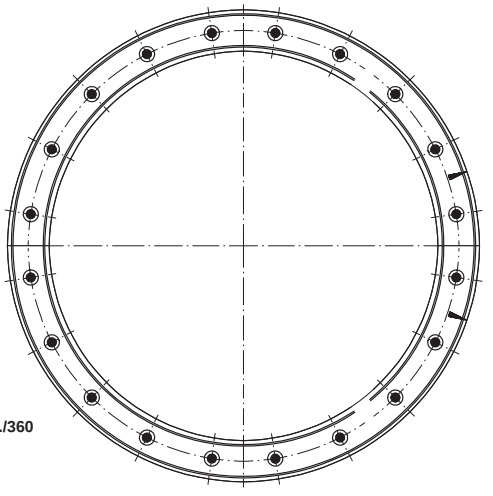
Guideway LFS..R in corrosion-resistant execution: LFS..R VA.
Guideway LFS..R without holes: LFS..R OL.

1) For screws to DIN 912-8.8.

2) Number of holes on curved section r_1.

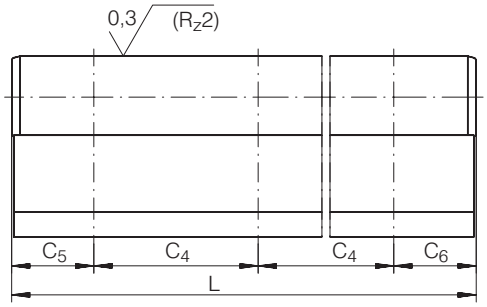


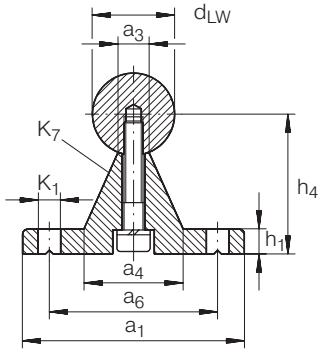
LFS..R../180



LFS..R../360

Shaft And Support Rail Units
TSNW SERIES





For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

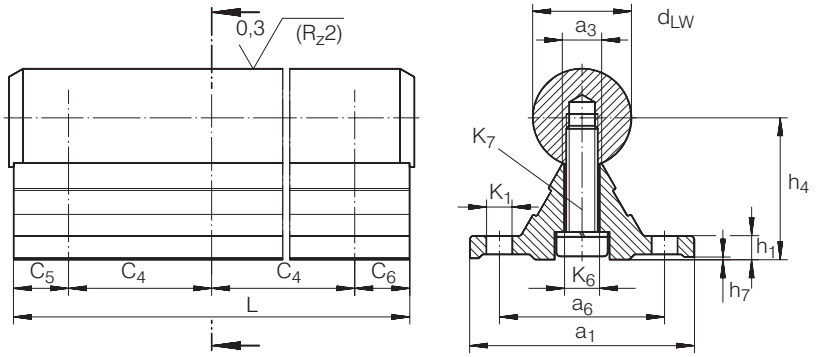
SHAFT DIAMETER d_{LW} h6	PART NUMBER	MASS kg/m	DIMENSIONS a_1	h_4[1] ±0.02	L[2] ±3	MOUNTING DIMENSIONS a_3	a_4	a_6	C_4	C_5/C_6[3] min.	C_5/C_6[3] max.	h_1	K_1[4]	K_7 DIN 6 912
12	TSNW 12	1.67	40	22	6,000	5.4	15	29	75	20	69	5	4.5	M4 ×20
16	TSNW 16	2.95	45	26	6,000	7	19	33	100	20	93	5	5.5	M5 ×20
20	TSNW 20	3.95	52	32	6,000	8.1	23	37	100	20	92	6	6.6	M6 ×25
25	TSNW 25	5.6	57	36	6,000	10.3	26	42	120	20	110	6	6.6	M8 ×30
30	TSNW 30	7.88	69	42	6,000	11	29	51	150	20	139	7	9	M10 ×35
40	TSNW 40	12.83	73	50	6,000	15	36	55	200	20	189	8	9	M10 ×40
50	TSNW 50	19.38	84	60	6,000	19	40	63	200	20	188	9	11	M12 ×45

1) With reference to the nominal shaft diameter, measured while clamped.
2) Maximum length of single-piece units, longer units are supplied as several pieces. Depending on the length of the shaft and support rail unit, the support rail is composed of several pieces.
3) Dimensions C_5 and C_6 are dependent on the length of the shaft and support rail unit.
4) For fixing screws to DIN 6 912 and spring washers to DIN 7 980.

Shaft And Support Rail Units

TSNW..G4 $d \leqq 25$mm,

TSNW..G5 $d > 25$mm SERIES



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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DIMENSION TABLE · Dimensions in mm

SHAFT DIAMETER d_{LW} h6	PART NUMBER	MASS	DIMENSIONS			MOUNTING DIMENSIONS										
		kg/m	a_1	h_4 [1]	L [2] ±2	a_3	a_6	C_4	C_5/C_6 [3] min.	C_5/C_6 [3] max.	h_1	h_7	K_1 [4]	K_6	K_7 DIN 6 912	ACCURACY CLASS [5]
12	TSNW 12 G4	1.6	40	$22^{\pm 0.1}$	4,000	5	29	75	20	69	5	0.2	4.5	4.5	M4 ×18	G4 0.03
16	TSNW 16 G4	2.5	45	$26^{\pm 0.1}$	4,000	6.8	33	100	20	93	5	0.2	5.5	5.5	M5 ×20	G4 0.03
20	TSNW 20 G4	3.8	52	$32^{\pm 0.1}$	4,000	7.8	37	100	20	92	6	0.2	6.6	6.6	M6 ×25	G4 0.03
25	TSNW 25 G4	5.3	57	$36^{\pm 0.1}$	4,000	9.8	42	120	20	110	6	0.3	6.6	9	M8 ×30	G4 0.03
30	TSNW 30 G5	7.5	69	$42^{\pm 0.15}$	4,000	11	51	150	20	139	7	0.3	9	11	M10×35	G5 0.04
40	TSNW 40 G5	12.4	73	$50^{\pm 0.15}$	4,000	14.5	55	200	20	189	8	0.3	9	11	M10×40	G5 0.04
50	TSNW 50 G5	18.9	84	$60^{\pm 0.15}$	4,000	18.5	63	200	20	188	9	0.3	11	13.5	M12×45	G5 0.05

1) With reference to the nominal shaft diameter, measured while clamped.

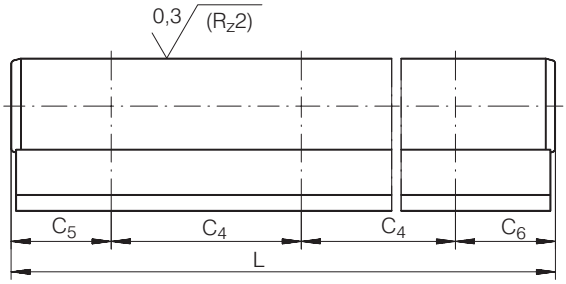
2) Maximum length of single-piece units, the shaft protrudes beyond the support rail by about 2.5 mm at each end; longer units are supplied as several pieces.

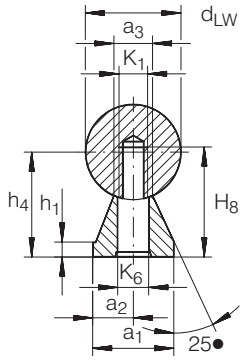
3) Dimensions C_5 and C_6 are dependent on the length of the shaft and support rail unit.

4) For fixing screws to DIN 6 912 and spring washers to DIN 7 980.

5) Value for the maximum variation of dimension h_4, measured on the same rail over a distance of 1 000 mm.

Shaft And Support Rail Units
TSUW SERIES





For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

SHAFT DIAMETER d_{LW}	PART NUMBER	MASS	DIMENSIONS			MOUNTING DIMENSIONS								
			a_1	h_4[1]	L[2]	a_2[3]	a_3	C_4	C_5/C_6[4]	C_5/C_6[4]	h_1	K_1	K_6	H_8
h6		kg/m		±0.02	±3				min.	max.				
12	TSUW 12	1.1	11	14.5	6,000	5.5	5.4	75	20	70	3	M4	4.5	16
16	TSUW 16	1.88	14	18	6,000	7	7	75	20	70	3	M5	5.5	19
20	TSUW 20	2.92	17	22	6,000	8.5	8.1	75	20	69	3	M6	6.6	23
25	TSUW 25	4.42	21	26	6,000	10.5	10.3	75	20	68	3	M8	9	28.5
30	TSUW 30	6.22	23	30	6,000	11.5	11	100	20	92	3	M10	11	32
40	TSUW 40	11.03	30	39	6,000	15	15	100	20	91	4	M12	13.5	39.5
50	TSUW 50	16.98	35	46	6,000	17.5	19	100	20	90	5	M14	15.5	46

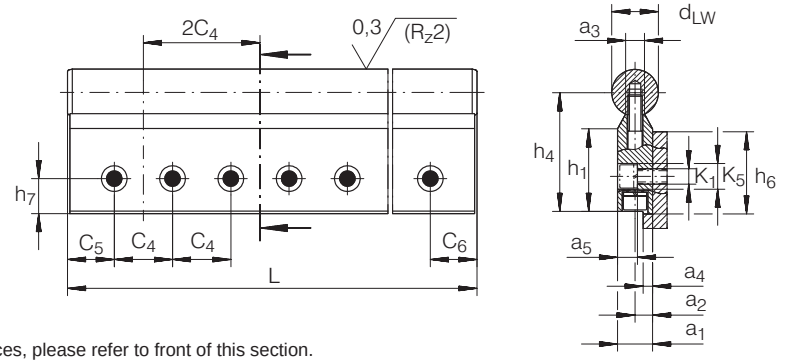
1) With reference to the nominal shaft diameter, measured while clamped.

2) Maximum length of single-piece units (TSUW 12: L = 1600 ±1.2 mm), longer units are supplied as several pieces.
Depending on the length of the shaft and support rail unit, the support rail is composed of several pieces.

3) Available on request with a_2 ±0.02.

4) Dimensions C_5 and C_6 are dependent on the length of the shaft and support rail unit.

Shaft and Support Rail Units
TSSW SERIES



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DIMENSION TABLE · Dimensions in mm

SHAFT DIAMETER D_{LW}	PART NUMBER	MASS	DIMENSIONS			MOUNTING DIMENSIONS											
			a_1	h_4[1]	L[2]	a_2[1]	a_3	a_4	a_5[3]	C_4	C_5/C_6[4]	C_5/C_6[4]	h_1	h_6	h_7	K_1[3]	K_5[3]
h6		kg/m		±0.01	±3	±0.012					min.	max.			±0.15		
20	TSSW 20	4.12	15	52	6,000	7.5	8.1	4	8.5	50	20	42	36.5	30	15	6.6	11
25	TSSW 25	5.98	20	62	6,000	10	10.3	5.5	11	60	20	50	38.5	36	18	9	15
30	TSSW 30	8.68	25	72	6,000	12.5	11	7	13.5	75	20	64	43	42	21	11	18
40	TSSW 40	14.3	30	88	6,000	15	15	8.5	16	100	20	88	53	50	25	13.5	20
50	TSSW 50	21.47	35	105	6,000	17.5	19	9	18.5	100	20	86	64.5	60	30	15.5	24

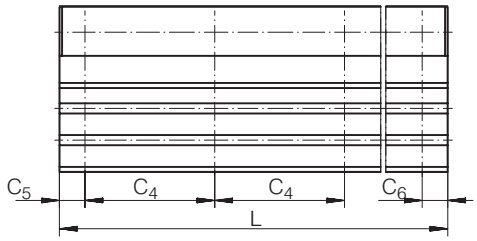
1) With reference to the nominal shaft diameter, measured while clamped.

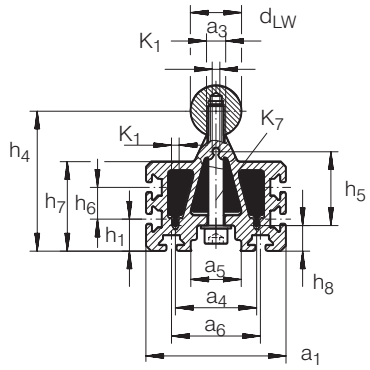
2) Maximum length of single-piece units, longer units are supplied as several pieces.
Depending on the length of the shaft and support rail unit, the support rail is composed of several pieces.

3) For fixing screws to DIN 912-8.8 and spring washers to DIN 7 980.

4) Dimensions C_5 and C_6 are dependent on the length of the shaft and support rail unit

Shaft And Support Rail Units
TSMW SERIES





For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

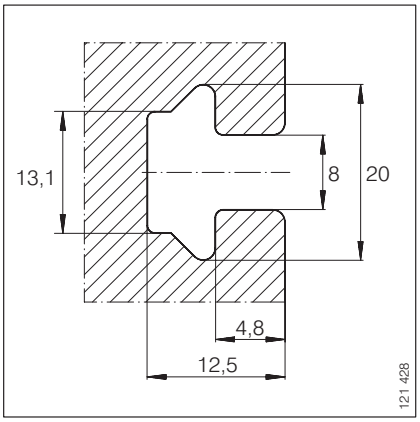
SHAFT DIAMETER d_{LW} h6	PART NUMBER	MASS kg/m	DIMENSIONS																
			a_1	h_4[1]	L[2] ±3	a_3	a_4	a_5	a_6	C_4	C_5/C_6[4] min.	C_5/C_6[4] max.	h_1	h_5	h_6	h_7	h_8	K_1	K_7
20	TSMW 20	6.3	65	65	6,000	7.8	30	14	40	75	20	42	25	29	–	44	18	4.65	M6
25	TSMW 25	8.9	75	75	6,000	10	40	18	45	75	20	50	25	34	–	47	18	4.65	M8
30	TSMW 30	12.3	90	90	6,000	11	50	32	60	100	20	64	25	43	–	57	20	5.5	M10
40	TSMW 40[3])	20.3	110	110	6,000	14.5	64	40	70	100	20	88	25	58	25	70	20	5.5	M12

[1]) With reference to the nominal shaft diameter, measured while clamped.

[2]) Maximum length of single-piece units, longer units are supplied as several pieces.
Shaft and support rail units up to the maximum length are supplied with a single-piece support rail.

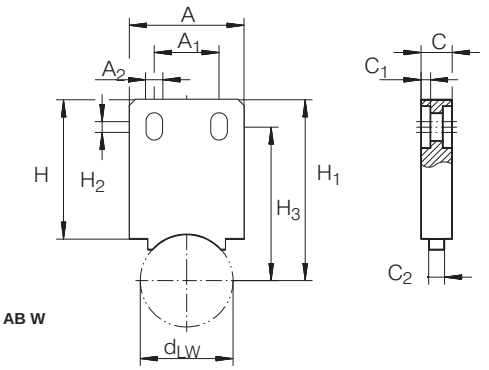
[3]) Available on request.

[4]) Dimensions C_5 and C_6 are dependent on the length of the shaft and support rail unit



T-grooves

Lubrication And Wiper Units
AB W SERIES
Cap Wipers
AB LFR, AB LFL SERIES



AB W

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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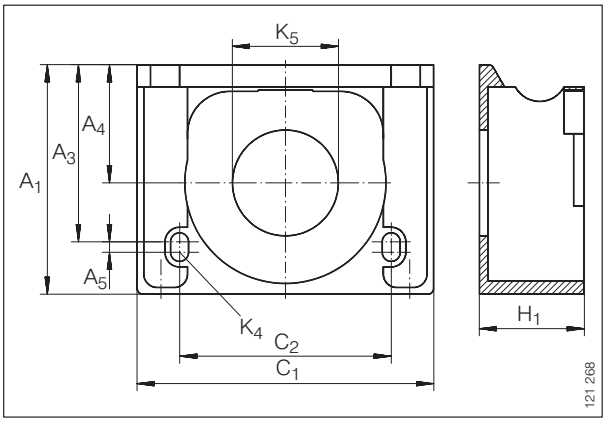
DIMENSION TABLE · Dimensions in mm

PART NUMBER	MASS	DIMENSIONS											SUITABLE FOR TRACK ROLLER LFR
		d_{Lw}	A	C	H	A_1	A_2	C_1	C_2	H_1	H_2	H_3	
	kg					±0.1							
AB W 10	0.03	10	22.5	10	45	10	4.5	3	5	49	4	40.3	LFR 5201-10 KDD
AB W 12	0.03	12	22.5	10	45	10	4.5	3	5	51	4	42.3	LFR 5201-12 KDD
AB W 16	0.03	16	22.5	10	45	10	4.5	3	5	52	4	43.3	LFR 5204-16 KDD
AB W 20	0.03	20	22.5	10	45	10	4.5	3	5	54	4	45.3	LFR 5206-20 KDD
AB W 25	0.03	25	37	10	45	21	5.5	3	5	54	3.5	45.3	LFR 5206-25 KDD
AB W 30	0.03	30	37	10	45	21	5.5	3	5	59	3.5	50.3	LFR 5207-30 KDD
AB W 40	0.03	40	37	10	45	21	5.5	3	5	71	3.5	62.3	LFR 5208-40 KDD

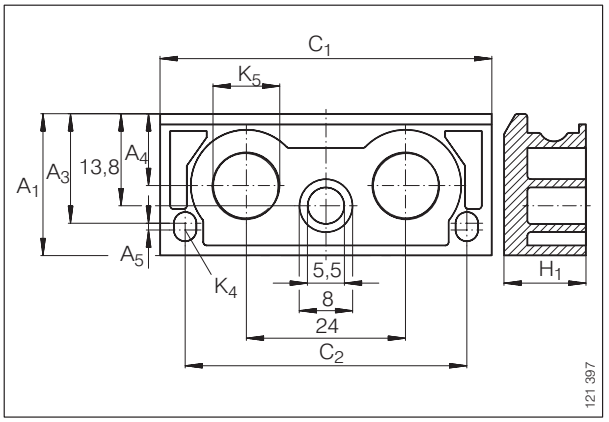
DIMENSION TABLE · Dimensions in mm

PART NUMBER	MASS	DIMENSIONS									SUITABLE FOR	
		A_1	A_3	A_4	A_5	C_1	C_2	H_1	K_4	K_5	TRACK ROLLER	CARRIAGE
	≈ g						±0.1			+0.1		
AB LFL 20	9	21.3	16.5	10.8	1	50	42.5	11.5	M3	10	LFR 50/..4	LFL 20
AB LFL 20	9	21.3	16.5	10.8	1	50	42.5	11.5	M3	10	LFR 50/5	–
AB LFR 50/8	20	31.6	25.9	15.6	2	51	28.5	15	M3	15	LFR 50/8	LFCL 25
AB LFR 5201	20	43.3	33.4	22.3	2	56	40	21.3	M3	20	LFR 5201	–
AB LFR 5201-LFCL	20	43.3	33.4	22.3	2	56	40	19.8	M3	20	–	LFCL 42
AB LFR 5301	30	50	38.7	26	2	76	46	25	M3	20	LFR 5301	LFCL 86
AB LFR 5302[1])	–	–	–	–	–	–	–	–	–	–	LFR 5302	–

[1]) Please consult INA engineering service.

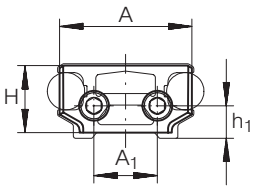


AB LFR

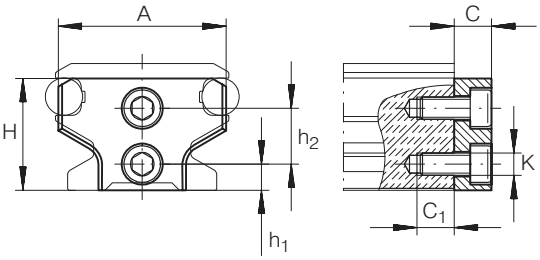


AB LFL 20

End Plates
ANS LFS SERIES



ANS LFS 42 C
ANS LFS 120

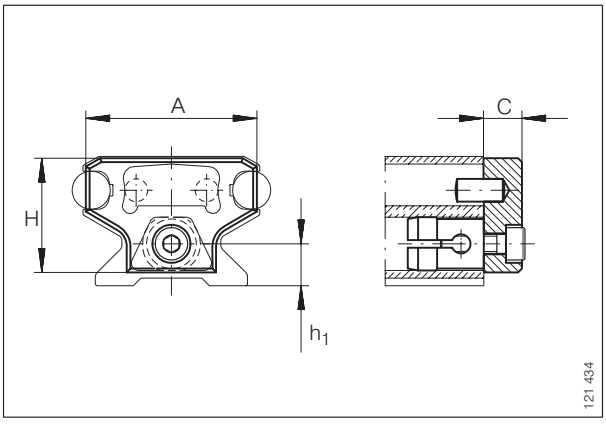


ANS LFS 25
ANS LFS 32
ANS LFS 52

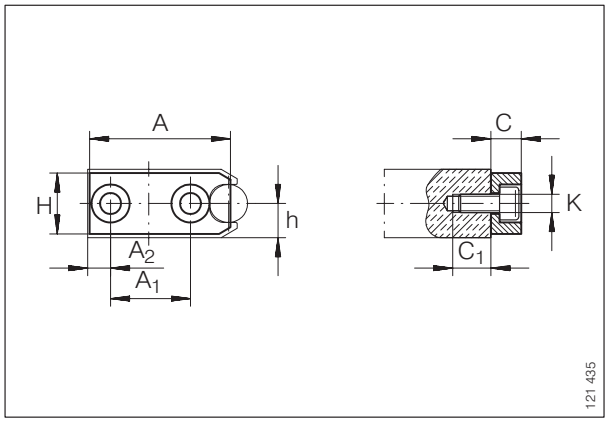
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

PART NUMBER	DIMENSIONS									SUITABLE FOR GUIDEWAY
	A	A_1	A_2	C	C_1	H	h_1	h_2	K	
ANS LFS 20	14.5	–	–	6	12	11	6.2	–	M5	LFS 20
ANS LFS 25	20	–	–	5	7	14	4	7	M3	LFS 25
ANS LFS 32	30	–	–	6	7	20	5	10	M4	LFS 32
ANS LFS 32 F	26	11	–	6	7	9	5	–	M4	LFS 32 F
ANS LFS 32 FH	22	9	9	6	7	9	5	–	M3	LFS 32 FH
ANS LFS 32 N	26	11	–	6	7	9	15	–	M4	LFS 32 N
ANS LFS 42 C	35.5	17	–	8	7	18	8	–	M4	LFS 42 C
ANS LFS 52	45	–	–	10	10	30	7	15	M6	LFS 52
ANS LFS 52 F	42	21	–	8	10	16	9	–	M5	LFS 52 F
ANS LFS 52 FH	37	6.5	21	8	10	16	9	–	M5	LFS 52 FH
ANS LFS 52 NZZ	42	21	–	8	10	16	24	–	M4	LFS 52 NZZ
ANS LFS 86C	80	54	–	8	10	30	17.5	–	M5	LFS 86 C
ANS LFS 120	114	80	–	5	10	16	8	–	M6	LFS 120

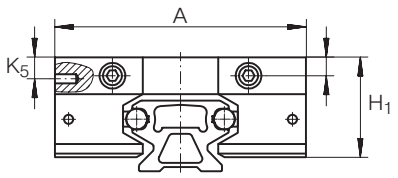


ANS LFS 52 C

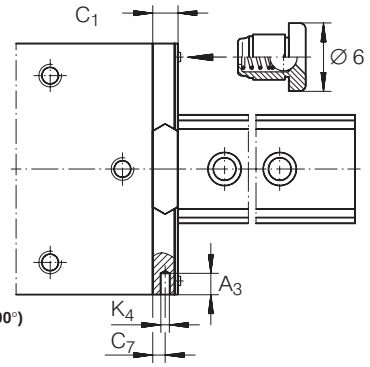


ANS LFS..FH

Lubrication And Wiper Units
AB SERIES
Side Plates
ABAL SERIES



AB



AB
(view rotated through 90°)

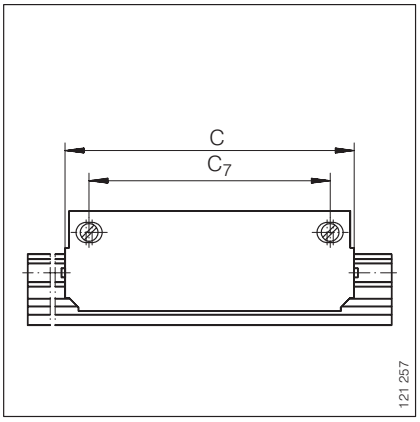
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

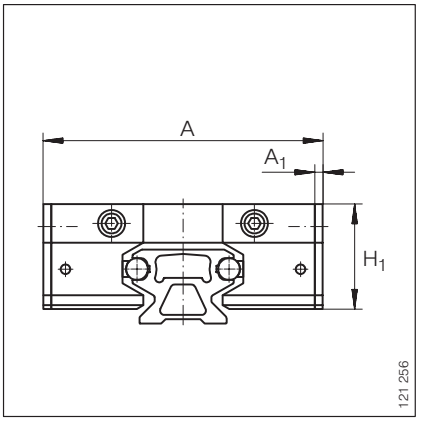
PART NUMBER	MASS ≈ g	DIMENSIONS								SUITABLE FOR TRACK ROLLER
		A	A_3	C_1	C_7	H_1	H_4	H_5	K_4 for screws to DIN 7 972	
AB 32	30	80	6	11	5	32	7	7	St 2.9	LFL 32
AB 32	30	80	6	11	5	32	7	7	St 2.9	LFDL 32
AB 52	100	120	20	18	8.5	49.5	9.5	15	St 4.8	LFL 52
AB 52	100	120	20	18	8.5	49.5	9.5	15	St 4.8	LFDL 52
AB 52/1	130	135	20	18	8.5	55	12	20.6	St 4.8	LFL 52 E

DIMENSION TABLE · Dimensions in mm

PART NUMBER	MASS ≈ g	DIMENSIONS					SUITABLE FOR CARRIAGE
		A	A_1	C	C_7	H_1	
ABAL 32	30	86	3	112	100	32	LFL 32
ABAL 52	40	130	5	136	117	49.5	LFL 52
ABAL 52/1	50	145	5	186	167	55	LFL 52 E

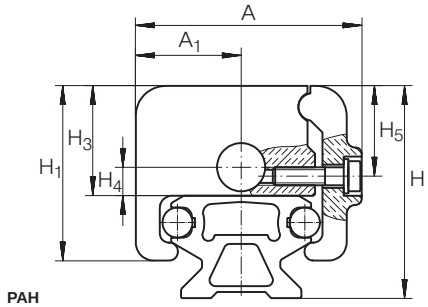


ABAL

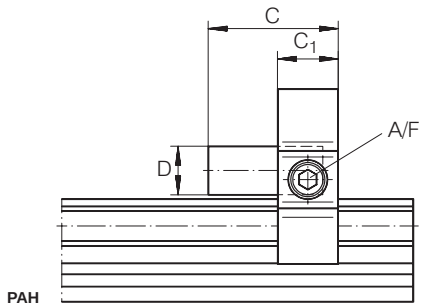


ABAL

End Stops
PAH, PASTP SERIES



PAH



PAH

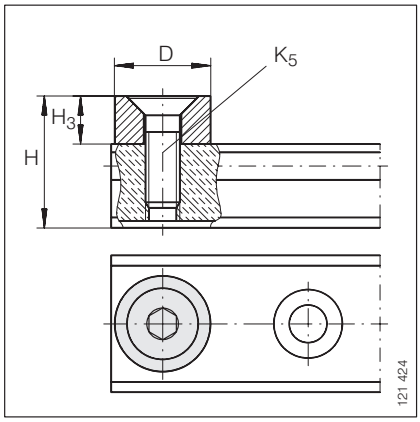
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For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

PART NUMBER	MASS ≈ g	DIMENSIONS											SUITABLE FOR GUIDEWAY
		A	A_1	C	C_1	D	H	H_1	H_3	H_4	H_5	A/F	
PAH 32	50	46	21	30	15	10	39	32	19	7	14	5	LFS 32 C, N
PAH 52	170	75	35	43	20	16	70.5	58	36.5	9.5	30	6	LFS 52 C, NZZ

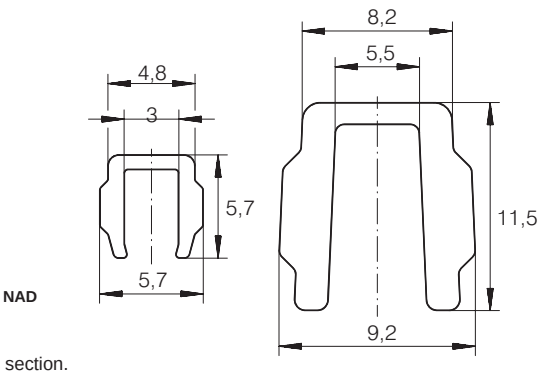
DIMENSION TABLE · Dimensions in mm

PART NUMBER	MASS ≈ g	DIMENSIONS				SUITABLE FOR GUIDEWAY
		D	H_3	K_5	H	
PASTP 20	8	20	7	M5	22.2	LFS 20
PASTP 25	8	20	7	M5	25	LFS 25
PASTP 32	10	16	11	M6	31	LFS 32
PASTP 42	10	16	11	M6	31	LFS 42 C
PASTP 52	10	20	11	M8	45	LFS 52
PASTP 86	10	20	11	M8	45	LFS 86 C



PASTP

Groove Strips
NAD SERIES
End Covers
KA LFS..C, KA LFS..M SERIES



NAD

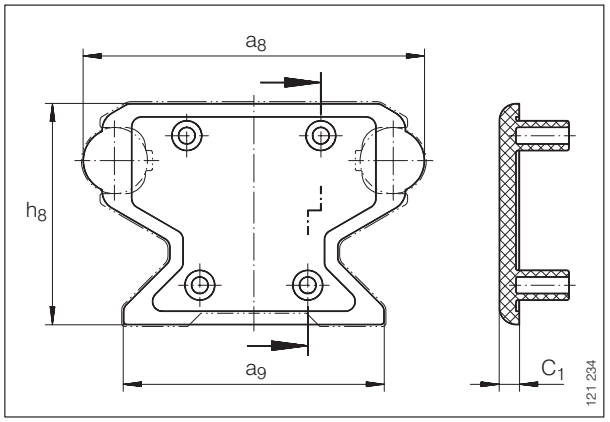
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DIMENSION TABLE · Dimensions in mm

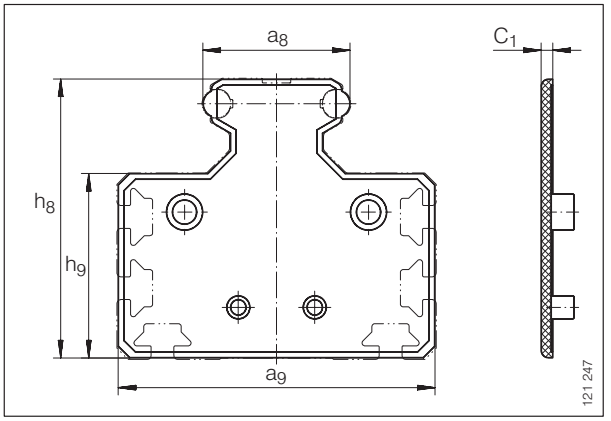
PART NUMBER	MASS ≈ g/m	SUITABLE FOR GUIDEWAY
NAD 5× 5,7	12	LFS 25 M
NAD 8×11,5	27	LFS 32 M
NAD 8×11,5	27	LFS 52 M

DIMENSION TABLE · Dimensions in mm

PART NUMBER	MASS ≈ g	DIMENSIONS					SUITABLE FOR GUIDEWAY
		a_8	a_9	c_1	h_8	h_9	
KA LFS 25 M	10	24.4	55.4	3	45.4	30.9	LFS 25 M
KA LFS 32 C	10	31.4	23.4	3	19.4	–	LFS 32 C
KA LFS 32 M	12	31.4	74.4	3	59.9	46.4	LFS 32 M
KA LFS 42 C	12	41.4	27.4	3	19.4	–	LFS 42 C
KA LFS 52 C	13	51.6	39.4	3	33.4	–	LFS 52 C
KA LFS 52 M	15	51.6	111.4	4	98	64.8	LFS 52 M
KA LFS 86 C	15	85.6	70.4	4	33.4	–	LFS 86 C

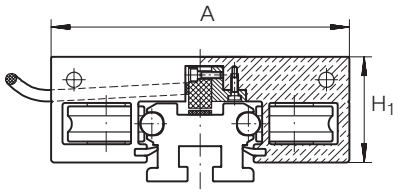


KA LFS..C

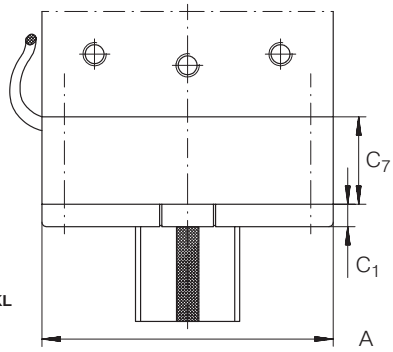


KA LFS..M

Adapter
ABTKO LFKL SERIES



ABTKO LFKL



ABTKO LFKL

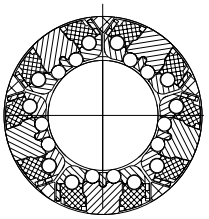
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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DIMENSION TABLE · Dimensions in mm

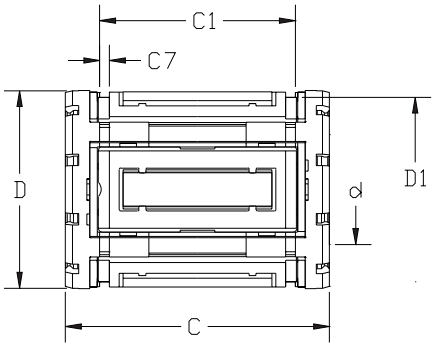
PART NUMBER	MASS ≈ g	DIMENSIONS				SUITABLE FOR CARRIAGE
		A	H_1	C_7	C_1	
ABTKO LFKL 32	200	86	32	39	7	LFKL 32
ABTKO LFKL 52	400	130	46.1	39	10	LFKL 52
ABTKO LFKL 52 E	500	145	53.8	39	10	LFKL 52 E
ABTKO LFKL 52 EE	500	155	55	39	10	LFKL 52 EE

Self-Aligning Linear Ball Bearings
KX, KX..PP,
KXO, KXO..PP SERIES

- MAX³ Maximum Performance
- Closed and open
- With gap seal or contact seal on both sides



KX, KX..PP

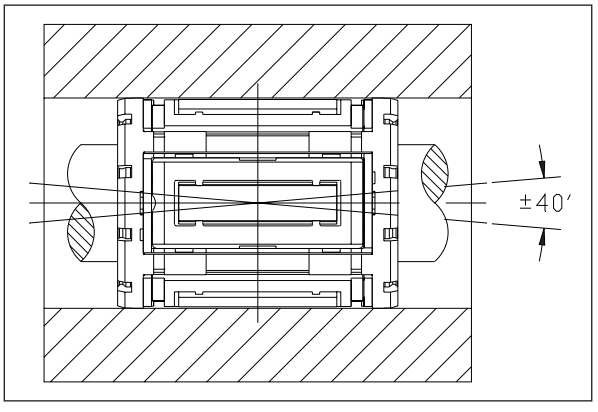


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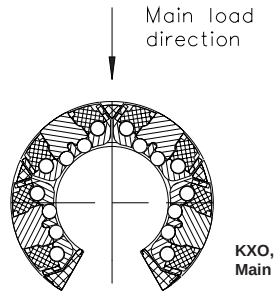
DIMENSION TABLE • Inch Dimensions

SHAFT DIAMETER	PART NUMBER[1]	WEIGHT	DIMENSIONS		
			d	D	C
		lbs			
1/2	KX 08	0.0430	$0.500_{-0.005}$	0.875	$1.250_{-0.020}$
	KXO 08	0.0317	$0.500_{-0.005}$	0.875	$1.250_{-0.020}$
5/8	KX 10	0.0875	$0.625_{-0.005}$	1.125	$1.500_{-0.020}$
	KXO 10	0.0719	$0.625_{-0.005}$	1.125	$1.500_{-0.020}$
3/4	KX 12	0.1155	$0.750_{-0.005}$	1.250	$1.625_{-0.020}$
	KXO 12	0.0948	$0.750_{-0.005}$	1.250	$1.625_{-0.020}$
1	KX 16	0.2425	$1.000_{-0.005}$	1.563	$2.250_{-0.020}$
	KXO 16	0.1962	$1.000_{-0.005}$	1.563	$2.250_{-0.020}$
1 1/4	KX 20	0.4861	$1.250_{-0.006}$	2.000	$2.625_{-0.025}$
	KXO 20	0.3933	$1.250_{-0.006}$	2.000	$2.625_{-0.025}$
1 1/2	KX 24	0.7749	$1.500_{-0.006}$	2.375	$3.000_{-0.030}$
	KXO 24	0.6283	$1.500_{-0.006}$	2.375	$3.000_{-0.030}$
2	KX 32	1.5139	$2.000_{-0.008}$	3.000	$4.000_{-0.040}$
	KXO 32	1.2269	$2.000_{-0.008}$	3.000	$4.000_{-0.040}$

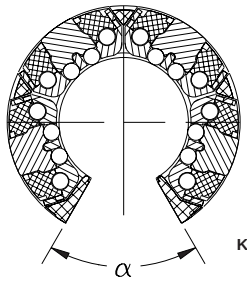
1) Linear ball bearings sealed on both sides: suffix “PP”.
2) Load ratings apply only for hardened (670 to 840 HV) and ground shaft raceways.
3) Load rating in main load direction.
4) Load ratings to ISO/C 14 728-1 (maximum values).



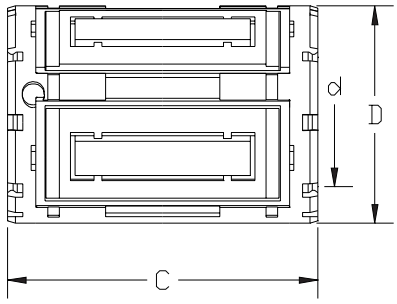
Misalignment compensation ±40'



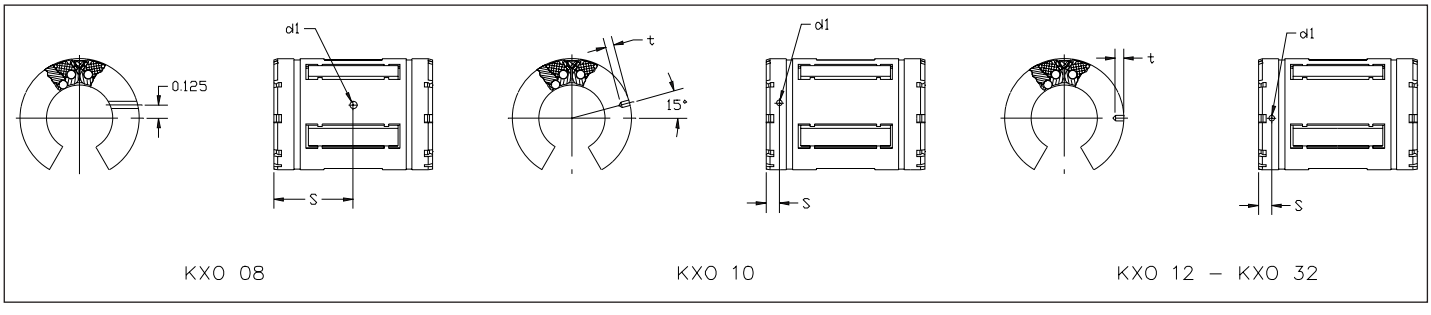
KXO, KXO..PP
Main load direction[4)]



KXO, KXO..PP



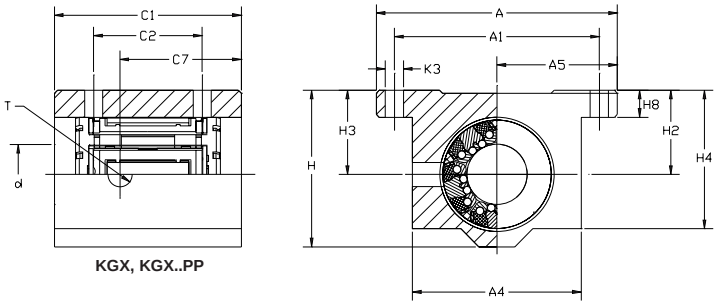
DIMENSION TABLE • Inch Dimensions											
MOUNTING DIMENSION							NUMBER OF BALL ROWS	LOAD RATINGS[2)4)]		ACCESSORIES	SHAFT DIAMETER
D_1	C_7	C_1	α deg.	d_1	t	S		DYN. C_0 lbf	STAT. C_0 lbf	SUITABLE SNAP RINGS TO N1400	
0.821	0.046	$1.032_{-0.020}$	-	-	-	-	6	275	200	$^1/_2$ x .035	$^1/_2$
-	-	$1.032_{-0.020}$	60	0.136	-	0.625	4	260[3)]	190[3)]	$^1/_2$ x .035	
1.059	0.056	$1.112_{-0.020}$	-	-	-	-	10	290	260	$^5/_8$ x .035	$^5/_8$
-	-	$1.112_{-0.020}$	60	0.105	0.039	0.125	8	290[3)]	260[3)]	$^5/_8$ x .035	
1.176	0.056	$1.272_{-0.020}$	-	-	-	-	10	430	370	$^3/_4$ x .042	$^3/_4$
-	-	$1.272_{-0.020}$	60	0.136	0.059	0.125	8	430[3)]	370[3)]	$^3/_4$ x .042	
1.469	0.068	$1.886_{-0.020}$	-	-	-	-	10	810	720	1 x .042	1
-	-	$1.886_{-0.020}$	64	0.136	0.047	0.125	8	810[3)]	720[3)]	1 x .042	
1.886	0.068	$2.011_{-0.025}$	-	-	-	-	10	1490	1190	$1^1/_4$ x .050	$1^1/_4$
-	-	$2.011_{-0.025}$	64	0.201	0.090	0.188	8	1490[3)]	1190[3)]	$1^1/_4$ x .050	
2.239	0.086	$2.422_{-0.030}$	-	-	-	-	10	2090	1550	$1^1/_2$ x .050	$1^1/_2$
-	-	$2.422_{-0.030}$	64	0.201	0.090	0.188	8	2090[3)]	1550[3)]	$1^1/_2$ x .050	
2.838	0.103	$3.206_{-0.040}$	-	-	-	-	10	3500	2750	2 x .062	2
-	-	$3.206_{-0.040}$	60	0.265	0.090	0.312	8	3500[3)]	2750[3)]	2 x .062	



Location holes

Self-Aligning Mounted Units
KGX, KGX..PP,
KGXO, KGXO..PP SERIES

- MAX³ Maximum Performance
- Closed and open
- Linear ball bearing with gap seal or contact seal on both sides



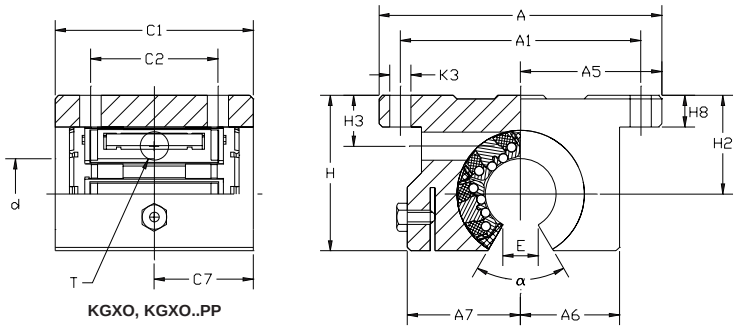
KGX, KGX..PP

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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DIMENSION TABLE • Inch Dimensions

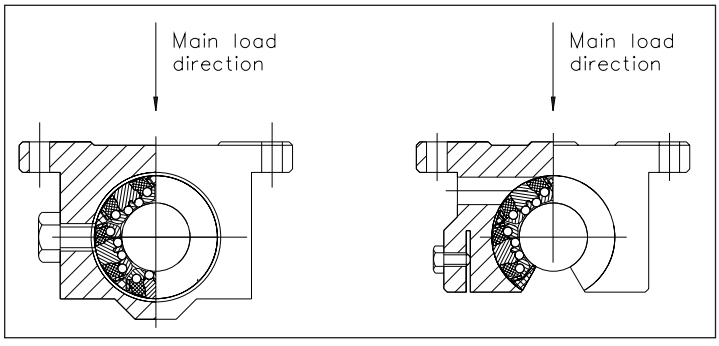
SHAFT DIAMETER	PART NUMBER[1]	WEIGHT	d	DIMENSIONS			MOUNTING DIMENSIONS			
				A	C_1	H	A_4	A_5 ±0.001	A_6	A_7
		lbs								
1/2	KGX 08	0.249	0.500	2.000	1.688	1.250	1.375	1.000	-	-
	KGXO 08	0.216	0.500	2.000	1.500	1.100	-	1.000	0.688	0.905
5/8	KGX 10	0.464	0.625	2.500	1.938	1.625	1.750	1.250	-	-
	KGXO 10	0.395	0.625	2.500	1.750	1.375	-	1.250	0.875	1.095
3/4	KGX 12	0.581	0.750	2.750	2.063	1.750	1.875	1.375	-	-
	KGXO 12	0.495	0.750	2.750	1.875	1.535	-	1.375	0.937	1.161
1	KGX 16	1.213	1.000	3.250	2.813	2.188	2.375	1.625	-	-
	KGXO 16	1.053	1.000	3.250	2.625	1.975	-	1.625	1.188	1.457
1 1/4	KGX 20	2.430	1.250	4.000	3.625	2.813	3.000	2.000	-	-
	KGXO 20	2.104	1.250	4.000	3.375	2.458	-	2.000	1.500	1.831
1 1/2	KGX 24	3.573	1.500	4.750	4.000	3.250	3.500	2.375	-	-
	KGXO 24	3.154	1.500	4.750	3.750	2.910	-	2.375	1.750	2.087
2	KGX 32	7.196	2.000	6.000	5.000	4.063	4.500	3.000	-	-
	KGXO 32	6.306	2.000	6.000	4.750	3.660	-	3.000	2.250	2.638

1) Linear ball bearings sealed on both sides: suffix “PP”.
2) Load ratings apply only for hardened (670 to 840 HV) and ground shaft raceways.
3) Load rating in main load direction.
4) Load ratings to ISO/C 14 728-1 (maximum values).



KGXO, KGXO..PP

DIMENSION TABLE • Inch Dimensions													
MOUNTING DIMENSIONS											LOAD RATINGS[2)4)]		SHAFT DIAMETER
C_7	H_2 ±0.001	H_3	H_4	H_8	T	E	α deg.	A_1 ±0.01	C_2 ±0.01	K_3	dyn. C lbf	stat. C_0 lbf	
0.844	0.687	0.690	1.125	0.250	NIP A1	-	-	1.688	1.000	0.156	275	200	1/2
0.520	0.687	0.370	-	0.250	NIP A1	0.313	60	1.688	1.000	0.156	260[3)]	190[3)]	
1.260	0.875	0.700	1.437	0.281	1/4-28	-	-	2.125	1.125	0.188	290	260	5/8
0.875	0.875	0.450	-	0.281	1/4-28	0.375	60	2.125	1.130	0.188	290[3)]	260[3)]	
1.340	0.937	0.937	1.563	0.313	1/4-28	-	-	2.375	1.250	0.188	430	370	3/4
0.937	0.937	0.510	-	0.313	1/4-28	0.438	60	2.375	1.250	0.188	430[3)]	370[3)]	
1.950	1.187	1.187	1.938	0.375	1/4-28	-	-	2.875	1.750	0.218	810	720	1
1.312	1.187	0.730	-	0.375	1/4-28	0.563	60	2.875	1.750	0.218	810[3)]	720[3)]	
2.430	1.500	1.500	2.500	0.437	1/4-28	-	-	3.500	2.000	0.218	1490	1190	11/4
1.688	1.500	0.800	-	0.437	1/4-28	0.625	60	3.500	2.000	0.218	1490[3)]	1190[3)]	
2.750	1.750	1.750	2.875	0.500	1/4-28	-	-	4.125	2.500	0.281	2090	1550	11/2
1.875	1.750	0.840	-	0.500	1/4-28	0.750	60	4.125	2.500	0.281	2090[3)]	1550[3)]	
3.420	2.125	2.125	3.625	0.625	1/4-28	-	-	5.250	3.250	0.406	3500	2750	2
2.375	2.125	1.100	-	0.625	1/4-28	1.000	60	5.250	3.250	0.406	3500[3)]	2750[3)]	

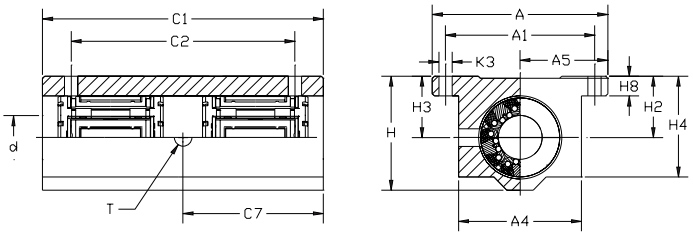


KGX, KGX..PP, KGXO, KGXO..PP
Main load direction[4)]

Self-Aligning Tandem Mounted Units

KTX, KTX..PP, KTXO, KTXO..PP SERIES

- MAX³ Maximum Performance
- Closed and open
- Linear ball bearing with gap seal or contact seal on both sides



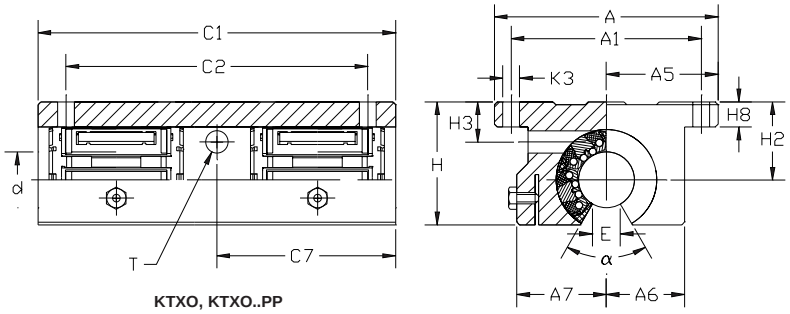
KTX, KTX..PP

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

DIMENSION TABLE • Inch Dimensions

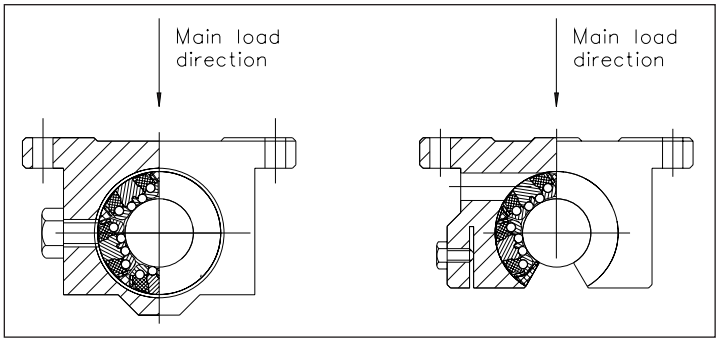
SHAFT DIAMETER	PART NUMBER[1]	WEIGHT	d	DIMENSIONS			MOUNTING DIMENSIONS			
				A	C_1	H	A_4	A_5 ±0.001	A_6	A_7
		lbs								
1/2	KTX 08	0.443	0.500	2.000	3.50	1.250	1.375	1.000	-	-
	KTXO 08	0.369	0.500	2.000	3.50	1.100	-	1.000	0.688	0.905
5/8	KTX 10	1.065	0.625	2.500	4.00	1.625	1.750	1.250	-	-
	KTXO 10	0.887	0.625	2.500	4.00	1.375	-	1.250	0.875	1.095
3/4	KTX 12	1.253	0.750	2.750	4.50	1.750	1.875	1.375	-	-
	KTXO 12	1.071	0.750	2.750	4.50	1.535	-	1.375	0.937	1.161
1	KTX 16	2.597	1.000	3.250	6.00	2.188	2.375	1.625	-	-
	KTXO 16	2.228	1.000	3.250	6.00	1.975	-	1.625	1.188	1.457
1 1/4	KTX 20	5.529	1.250	4.000	7.50	2.813	3.000	2.000	-	-
	KTXO 20	4.774	1.250	4.000	7.50	2.485	-	2.000	1.500	1.831
1 1/2	KTX 24	8.316	1.500	4.750	9.00	3.250	3.500	2.375	-	-
	KTXO 24	7.378	1.500	4.750	9.00	2.910	-	2.375	1.750	2.087

1) Linear ball bearings sealed on both sides: suffix “PP”.
2) Load ratings apply only for hardened (670 to 840 HV) and ground shaft raceways.
3) Load rating in main load direction.
4) Load ratings to ISO/C 14 728-1 (maximum values).



KTXO, KTXO..PP

DIMENSION TABLE • Inch Dimensions													
MOUNTING DIMENSIONS											LOAD RATINGS[2)4)]		SHAFT DIAMETER
C_7	H_2 ±0.001	H_3	H_4	H_8	T	E	α deg.	A_1 ±0.01	C_2 ±0.01	K_3	dyn. C lbf	stat. C lbf	
1.750	0.687	0.687	1.125	0.250	NIP A1	-	-	1.688	2.500	0.156	550	400	1/2
1.750	0.687	0.370	-	0.250	NIP A1	0.313	60	1.688	2.500	0.156	520[3)]	380[3)]	
2.000	0.875	0.875	1.437	0.281	1/4-28	-	-	2.125	3.000	0.188	580	520	5/8
2.000	0.875	0.450	-	0.281	1/4-28	0.375	60	2.125	3.000	0.188	580[3)]	520[3)]	
2.250	0.937	0.937	1.563	0.313	1/4-28	-	-	2.375	3.500	0.188	860	740	3/4
2.250	0.937	0.510	-	0.313	1/4-28	0.438	60	2.375	3.500	0.188	860[3)]	740[3)]	
3.000	1.187	1.187	1.938	0.375	1/4-28	-	-	2.875	4.500	0.218	1620	1440	1
3.000	1.187	0.730	-	0.375	1/4-28	0.563	60	2.875	4.500	0.218	1620[3)]	1440[3)]	
3.750	1.500	1.500	2.500	0.437	1/4-28	-	-	3.500	5.500	0.218	3000	2380	11/4
3.750	1.500	0.800	-	0.437	1/4-28	0.625	60	3.500	5.500	0.218	3000[3)]	2380[3)]	
4.500	1.750	1.750	2.875	0.500	1/4-28	-	-	4.125	6.500	0.281	4200	3100	11/2
4.500	1.750	0.800	-	0.500	1/4-28	0.750	60	4.125	6.500	0.281	4200[3)]	3100[3)]	

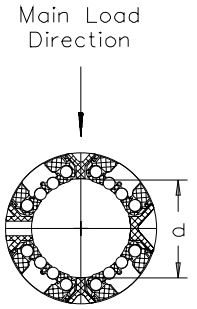


KTX, KTX..PP, KTXO, KTXO..PP
Main load direction[4)]

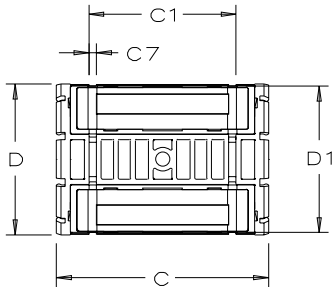
Self-Aligning Linear Ball Bearings

KS, KS..PP,
KSO, KSO..PP SERIES

- MAX3 Maximum Performance
- Light range - metric sizes
- Closed and open designs
- Gap seals or contact seals on both sides



KS, KS..PP

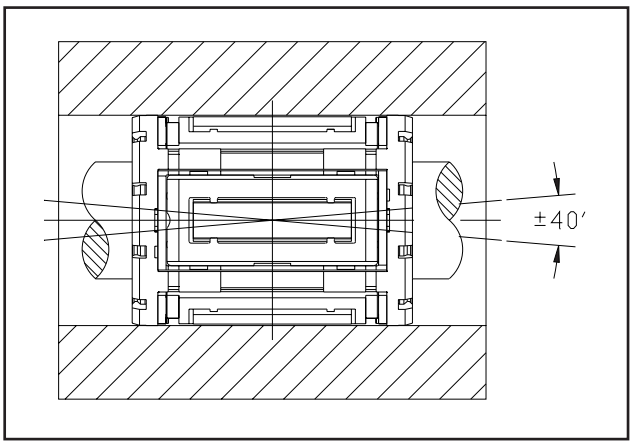


For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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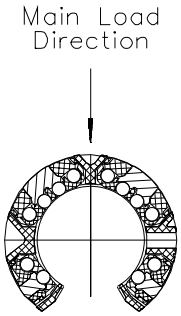
DIMENSION TABLE • Dimensions in mm

SHAFT DIAMETER d	PART NUMBER[1]	MASS ≈kg	DIMENSIONS			MOUNTING DIMENSIONS	
			d	D	C	A_6[2]	C_1 H13
12	KS 12	0.018	12	22	32	-	22.6
	KSO 12	0.013	12	22	32	7.6	-
16	KS 16	0.028	16	26	36	-	24.6
	KSO 16	0.019	16	26	36	10.1	-
20	KS 20	0.051	20	32	45	-	31.2
	KSO 20	0.038	20	32	45	10	-
25	KS 25	0.102	25	40	58	-	43.7
	KSO 25	0.075	25	40	58	12.5	-
30	KS 30	0.172	30	47	68	-	51.7
	KSO 30	0.135	30	47	68	14.3	-
40	KS 40	0.335	40	62	80	-	60.3
	KSO 40	0.259	40	62	80	18.2	-
50	KS 50	0.589	50	75	100	-	77.3
	KSO 50	0.454	50	75	100	22.7	-

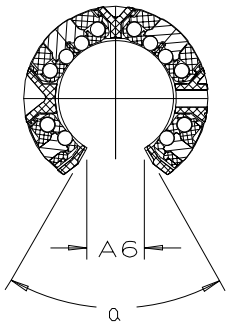
1) Linear ball bearings sealed on both sides: suffix “PP”.
2) Dimension A_6 on diameter d.
3) Hole arrangement symmetrical with bearing width C.
4) The basic load ratings apply only for hardened (670 to 840 HV) and ground shaft raceways. Basic load ratings in accordance with DIN 636-1.
5) Basic load rating in main load direction.

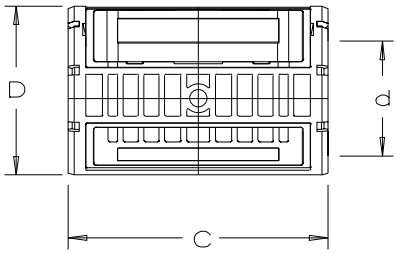


Compensation of misalignment ±40'

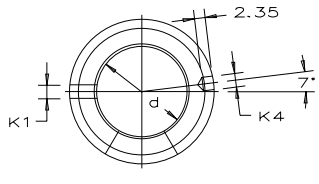


KSO, KSO..PP

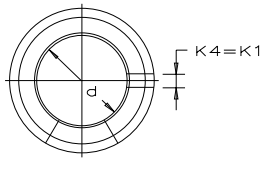




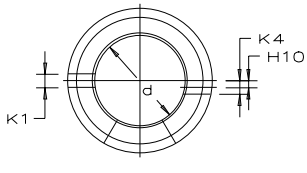
DIMENSION TABLE • Dimensions in mm										
MOUNTING DIMENSIONS						BALL ROWS	BASIC LOAD RATINGS 4)5)		ACCESSORIES	
C_7	D_1	H_{10}	K_1 3)	K_4 3)	α DEGREES	QUANTITY	dyn. C_{max} N	stat. C_{0max} N	SUITABLE SNAP RING TO DIN 471	SHAFT DIAMETER d
1.3	21	-	3	-	-	8	900	810	22x1.2	12
-	-	-	3	3	78	6	900	810	-	
1.3	25	-	3	-	-	8	1,430	1,160	27x1.2	16
-	-	-	3	3	78	6	1,430	1,160	-	
1.6	30.7	-	3	-	-	8	2,200	1,730	33x1.5	20
-	-	-	3	3	60	6	2,200	1,730	-	
1.85	38	-	3.5	-	-	8	3,950	3,250	42x1.75	25
-	-	1.5	3.5	3	60	6	3,950	3,250	-	
1.85	44.7	-	3.5	-	-	8	5,900	4,500	48x1.75	30
-	-	2	3.5	3	57	6	5,900	4,500	-	
2.15	59.4	-	3.5	-	-	8	10,200	7,200	63x2	40
-	-	1.5	3.5	3	54	6	10,200	7,200	-	
2.65	71.4	-	4.5	-	-	8	15,100	10,400	75x2.5	50
-	-	2.5	4.5	5	54	6	15,100	10,400	-	



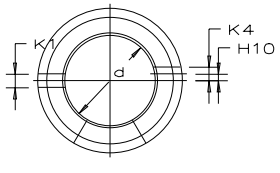
KS 12
KSO 12



KS 16,20
KSO 16,20



KS 25
KSO 25

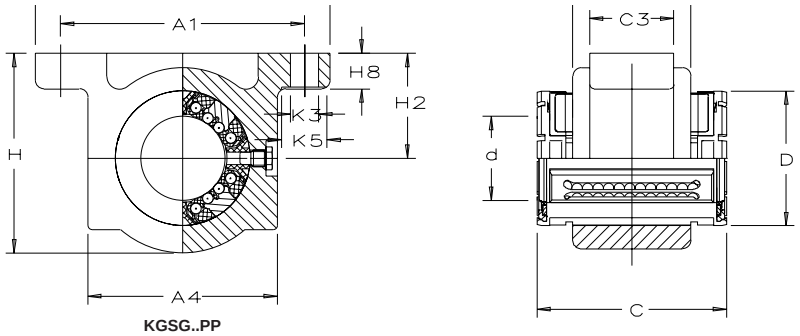


KS 30,40,50
KSO 30,40,50

Fixing holes

Linear Ball Bearings
KGSG..PP, KGSS..PP, KGSO..PP SERIES

- MAX³ Maximum Performance
- Closed and open designs
- Contact seals on both sides



KGSG..PP

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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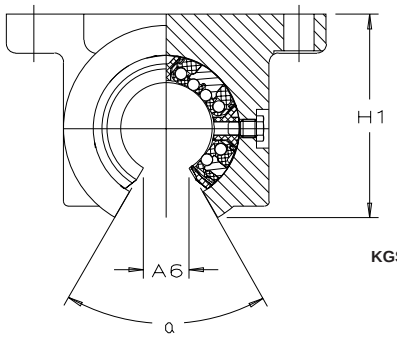
DIMENSION TABLE • Dimensions in mm

SHAFT DIAMETER	PART NUMBER	MASS	DIMENSIONS				MOUNTING DIMENSIONS		
			d	A	C	H	A_1	A_4	A_6 [1]
d		≈kg					±0.15		
12	KGSG 12 PP	0.08	12	52	32	35.8	42	31.6	-
	KGSS 12 PP	0.08	12	52	32	35.8	42	31.6	-
	KGSO 12 PP	0.07	12	52	32	-	42	31.6	7.6
16	KGSG 16 PP	0.13	16	56	36	37.5	46	35	-
	KGSS 16 PP	0.13	16	56	36	37.5	46	35	-
	KGSO 16 PP	0.12	16	56	36	-	46	35	10.1
20	KGSG 20 PP	0.27	20	70	45	47.5	58	45	-
	KGSS 20 PP	0.27	20	70	45	47.5	58	45	-
	KGSO 20 PP	0.23	20	70	45	-	58	45	10
25	KGSG 25 PP	0.51	25	80	58	57.5	68	55	-
	KGSS 25 PP	0.51	25	80	58	57.5	68	55	-
	KGSO 25 PP	0.44	25	80	58	-	68	55	12.5
30	KGSG 30 PP	0.83	30	88	68	66.5	76	63	-
	KGSS 30 PP	0.83	30	88	68	66.5	76	63	-
	KGSO 30 PP	0.73	30	88	68	-	76	63	13.6
40	KGSG 40 PP	1.21	40	108	80	83.5	94	77	-
	KGSS 40 PP	1.21	40	108	80	83.5	94	77	-
	KGSO 40 PP	1.05	40	108	80	-	94	77	18.2
50	KGSG 50 PP	2.53	50	135	100	98	116	96	-
	KGSS 50 PP	2.53	50	135	100	98	116	96	-
	KGSO 50 PP	1.98	50	135	100	-	116	96	22.7

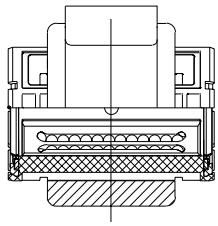
[1] Dimensions A_6 on diameter d.

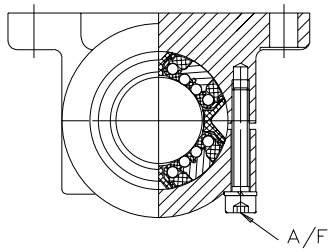
[2] For fixing screws to EN ISO 4762-8.8.
If there is a possibility of settling, the fixing screws should be secured against rotation.

[3] The basic load ratings apply only to hardened (670 to 840 HV) and ground shaft raceways.
Basic load ratings in accordance with DIN 636-1.



KGSO..PP

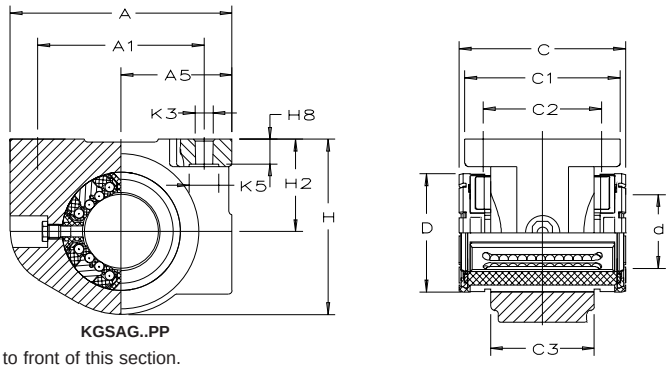




DIMENSION TABLE • Dimensions in mm													
MOUNTING DIMENSIONS										BALL ROWS QUANTITY	BASIC LOAD RATINGS[3]		SHAFT DIAMETER
C_1	C_3	D	H_1	H_2 ±0.015	H_8	K_3[2]	K_5[2]	α Degrees	A/F		dyn. C_{max} N	stat. C_{0max} N	
20	12	22	-	20	6	5.5	10	-	-	8	900	810	12
20	12	22	-	20	6	5.5	10	-	2	8	900	810	
20	12	22	32.3	20	6	5.5	10	78	-	6	900	810	
22	15	26	-	20	6	5.5	10	-	-	8	1,430	1,160	16
22	15	26	-	20	6	5.5	10	-	2	8	1,430	1,160	
22	15	26	33.6	20	6	5.5	10	78	-	6	1,430	1,160	
28	20	32	-	25	8	6.6	11	-	-	8	2,200	1,730	20
28	20	32	-	25	8	6.6	11	-	3	8	2,200	1,730	
28	20	32	44.5	25	8	6.6	11	60	-	6	2,200	1,730	
40	28	40	-	30	10	6.6	11	-	-	8	3,950	3,250	25
40	28	40	-	30	10	6.6	11	-	3	8	3,950	3,250	
40	28	40	53.8	30	10	6.6	11	60	-	6	3,950	3,250	
48	32	47	-	35	10	6.6	11	-	-	8	5,900	4,500	30
48	32	47	-	35	10	6.6	11	-	4	8	5,900	4,500	
48	32	47	63.1	35	10	6.6	11	54	-	6	5,900	4,500	
56	40	62	-	45	12	9	15	-	-	8	10,200	7,200	40
56	40	62	-	45	12	9	15	-	4	8	10,200	7,200	
56	40	62	79.3	45	12	9	15	54	-	6	10,200	7,200	
72	52	75	-	50	14	11	18	-	-	8	15,100	10,400	50
72	52	75	-	50	14	11	18	-	5	8	15,100	10,400	
72	52	75	92.8	50	14	11	18	54	-	6	15,100	10,400	

Linear Ball Bearing Units
KGSAG..PP, KGSAS..PP, KGSAO..PP SERIES

- MAX³ Maximum Performance
- Closed and open designs
- Contact seals on both sides



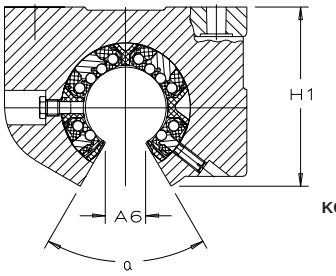
KGSAG..PP

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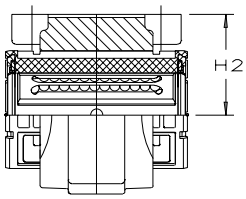
DIMENSION TABLE • Dimensions in mm

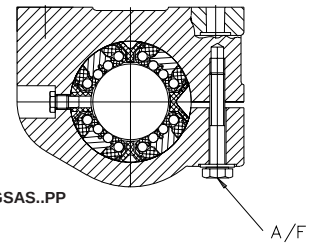
SHAFT DIAMETER d	PART NUMBER	MASS ≈kg	DIMENSIONS				MOUNTING DIMENSIONS		
			d	A	C	H	A_1 ±0.15	A_5	A_6 1)
12	KGSAG 12 PP	0.06	12	42	32	34	32	21	-
	KGSAS 12 PP	0.06	12	42	32	34	32	21	-
	KGSAO 12 PP	0.05	12	42	32	-	32	21	7.6
16	KGSAG 16 PP	0.11	16	50	36	41	40	25	-
	KGSAS 16 PP	0.11	16	50	36	41	40	25	-
	KGSAO 16 PP	0.1	16	50	36	-	40	25	10.1
20	KGSAG 20 PP	0.17	20	60	45	47.5	45	30	-
	KGSAS 20 PP	0.17	20	60	45	47.5	45	30	-
	KGSAO 20 PP	0.15	20	60	45	-	45	30	10
25	KGSAG 25 PP	0.34	25	74	58	60	60	37	-
	KGSAS 25 PP	0.34	25	74	58	60	60	37	-
	KGSAO 25 PP	0.3	25	74	58	-	60	37	12.5
30	KGSAG 30 PP	0.54	30	84	68	67	68	42	-
	KGSAS 30 PP	0.54	30	84	68	67	68	42	-
	KGSAO 30 PP	0.48	30	84	68	-	68	42	13.6
40	KGSAG 40 PP	0.98	40	108	80	87	86	54	-
	KGSAS 40 PP	0.98	40	108	80	87	86	54	-
	KGSAO 40 PP	0.84	40	108	80	-	86	54	18.2
50	KGSAG 50 PP	1.63	50	130	100	98	108	65	-
	KGSAS 50 PP	1.63	50	130	100	98	108	65	-
	KGSAO 50 PP	1.17	50	130	100	-	108	65	22.7

1) Dimensions A_6 on diameter d.
2) For fixing screws to EN ISO 4762-8.8.
If there is a possibility of settling, the fixing screws should be secured against rotation.
3) The basic load ratings apply only to hardened (670 to 840 HV) and ground shaft raceways.
Basic load ratings in accordance with DIN 636-1.



KGSAO..PP





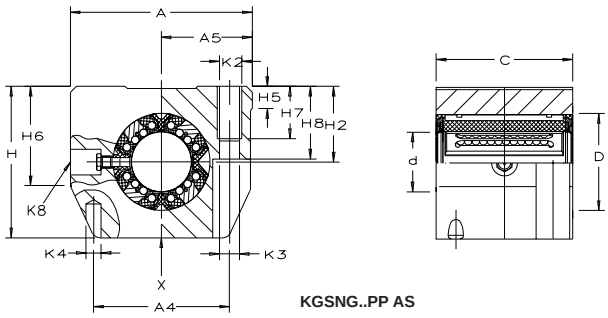
KGSAS..PP

DIMENSION TABLE • Dimensions in mm

MOUNTING DIMENSIONS											BALL ROWS	BASIC LOAD RATINGS[3]		SHAFT DIAMETER
C_1	C_2 ±0.015	C_3	D h5	H_1	H_2 ±0.01	H_8 -0.5	K_3[2]	K_5[2]	α Degrees	A/F	QUANTITY	dyn. C_{max} N	stat. C_{0max} N	d
32	23	20	22	-	18	4.8	4.7	8	-	-	8	900	810	12
32	23	20	22	-	18	4.8	4.7	8	-	7	8	900	810	
32	23	20	22	30.4	18	4.8	4.7	8	78	-	6	900	810	
35	26	22	26	-	22	5.4	4.7	8	-	-	8	1,430	1,160	16
35	26	22	26	-	22	5.4	4.7	8	-	7	8	1,430	1,160	
35	26	22	26	36.8	22	5.4	4.7	8	78	-	6	1,430	1,160	
42	32	28	32	-	25	6.7	4.7	8	-	-	8	2,200	1,730	20
42	32	28	32	-	25	6.7	4.7	8	-	7	8	2,200	1,730	
42	32	28	32	44.5	25	6.7	4.7	8	60	-	6	2,200	1,730	
54	40	40	40	-	30	7.8	5.7	10	-	-	8	3,950	3,250	25
54	40	40	40	-	30	7.8	5.7	10	-	8	8	3,950	3,250	
54	40	40	40	56	30	7.8	5.7	10	60	-	6	3,950	3,250	
60	45	48	47	-	35	8.7	6.8	11	-	-	8	5,900	4,500	30
60	45	48	47	-	35	8.7	6.8	11	-	10	8	5,900	4,500	
60	45	48	47	63.5	35	8.7	6.8	11	54	-	6	5,900	4,500	
78	58	56	62	-	45	11	9.2	15	-	-	8	10,200	7,200	40
78	58	56	62	-	45	11	9.2	15	-	13	8	10,200	7,200	
78	58	56	62	82.4	45	11	9.2	15	54	-	6	10,200	7,200	
70	50	72	75	-	50	12.5	9.2	15	-	-	8	15,100	10,400	50
70	50	72	75	-	50	12.5	9.2	15	-	13	8	15,100	10,400	
70	50	72	75	92.8	50	12.5	9.2	15	54	-	6	15,100	10,400	

Linear Ball Bearing Units
KGSNG..PP AS, KGSNS..PP AS SERIES

- MAX³ Maximum Performance
- Light range - metric sizes
- Sealed, greased with relubrication facility



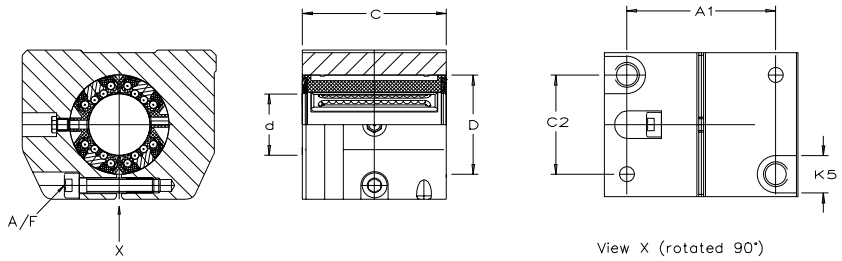
KGSNG..PP AS

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

DIMENSION TABLE • Dimensions in mm

SHAFT DIAMETER	PART NUMBER	MASS ≈kg	DIMENSIONS				MOUNTING DIMENSIONS				
d			d	A	C	H	A_1 ±0.15	A_4	A_5 ±0.01	C_2[1] ±0.15	D
12	KGSNG 12 PP AS	0.1	12	43	32	35	32	34	21.5	23	22
	KGSNS 12 PP AS	0.1	12	43	32	35	32	34	21.5	23	22
16	KGSNG 16 PP AS	0.17	16	53	37	42	40	40	26.5	26	26
	KGSNS 16 PP AS	0.17	16	53	37	42	40	40	26.5	26	26
20	KGSNG 20 PP AS	0.27	20	60	45	50	45	44	30	32	32
	KGSNS 20 PP AS	0.27	20	60	45	50	45	44	30	32	32
25	KGSNG 25 PP AS	0.56	25	78	58	60	60	59.4	39	40	40
	KGSNS 25 PP AS	0.56	25	78	58	60	60	59.4	39	40	40
30	KGSNG 30 PP AS	0.83	30	87	68	70	68	63	43.5	45	47
	KGSNS 30 PP AS	0.83	30	87	68	70	68	63	43.5	45	47
40	KGSNG 40 PP AS	1.55	40	108	80	90	86	76	54	58	62
	KGSNS 40 PP AS	1.55	40	108	80	90	86	76	54	58	62
50	KGSNG 50 PP AS	2.7	50	132	100	105	108	90	66	50	75
	KGSNS 50 PP AS	2.7	50	132	100	105	108	90	66	50	75

1) Dimension C_2 and lubrication hole symmetrical with bearing width C.
2) For fixing screws to EN ISO 4762-8.8.
If there is a possibility of settling, the fixing screws should be secured against rotation.
3) Centring for dowel hole.
4) The basic load ratings apply only to hardened (670 to 840

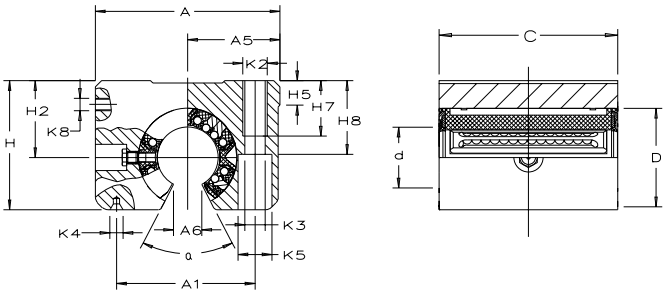


KGSNS..PP AS

DIMENSION TABLE • Dimensions in mm														
MOUNTING DIMENSIONS											BALL ROWS QUANTITY	BASIC LOAD RATINGS[3]		SHAFT DIAMETER
H_2 +0.008 -0.016	H_5	H_6	H_7	H_8	K_2	K_3[2]	K_4[3]	K_5[2]	K_8[1]	A/F		dyn. C_{max} N	stat. C_{0max} N	d
18	5.4	25.3	11	16.5	M 5	4.3	4	8	NIP 4 MZ	-	8	900	810	12
18	5.4	25.3	11	16.5	M 5	4.3	4	8	NIP 4 MZ	2.5	8	900	810	
22	6.9	28	13	21	M 6	5.3	4	10	NIP 4 MZ	-	8	1,430	1,160	16
22	6.9	28	13	21	M 6	5.3	4	10	NIP 4 MZ	3	8	1,430	1,160	
25	7.4	32.8	18	24	M 8	6.6	5	11	NIP 4 MZ	-	8	2,200	1,730	20
25	7.4	32.8	18	24	M 8	6.6	5	11	NIP 4 MZ	4	8	2,200	1,730	
30	8.3	40	22	29	M10	8.4	6	15	NIP 5 MZ	-	8	3,950	3,250	25
30	8.3	40	22	29	M10	8.4	6	15	NIP 5 MZ	5	8	3,950	3,250	
35	9.3	44.7	22	34	M10	8.4	6	15	NIP 5 MZ	-	8	5,900	4,500	30
35	9.3	44.7	22	34	M10	8.4	6	15	NIP 5 MZ	5	8	5,900	4,500	
45	11.7	55.9	26	44	M12	10.5	8	18	NIP 5 MZ	-	8	10,200	7,200	40
45	11.7	55.9	26	44	M12	10.5	8	18	NIP 5 MZ	6	8	10,200	7,200	
50	10.6	60	35	49	M16	13.5	10	20	NIP 6 MZ	-	8	15,100	10,400	50
50	10.6	60	35	49	M16	13.5	10	20	NIP 6 MZ	8	8	15,100	10,400	

Linear Ball Bearing Units
KGSNO..PP AS, KGSNOS..PP AS SERIES

- MAX³ Maximum Performance
- Light range - metric sizes
- Sealed, greased with relubrication facility



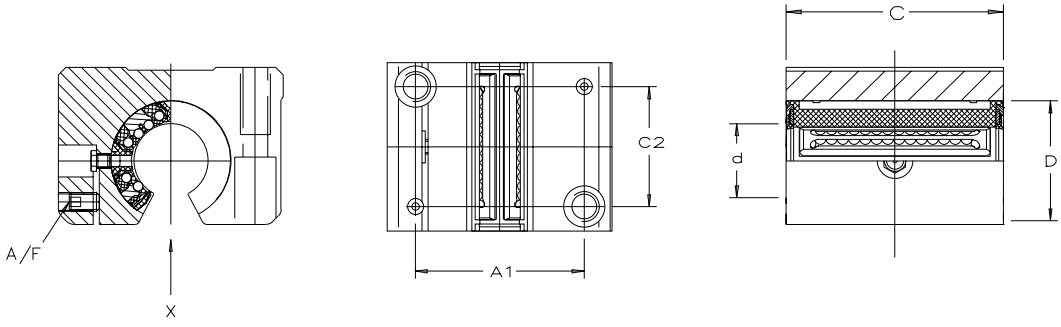
KGSNO..PP AS

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

DIMENSION TABLE • Dimensions in mm

SHAFT DIAMETER d	PART NUMBER	MASS ≈kg	DIMENSIONS d	A	C	H	MOUNTING DIMENSIONS A_1 ±0.15	A_5 ±0.01	A_6 1)	C_2 2) ±0.15	D
12	KGSNO 12 PP AS	0.09	12	43	32	28	32	21.5	7.6	23	22
	KGSNOS 12 PP AS	0.09	12	43	32	28	32	21.5	7.6	23	22
16	KGSNO 16 PP AS	0.15	16	53	37	35	40	26.5	8.9	26	26
	KGSNOS 16 PP AS	0.15	16	53	37	35	40	26.5	8.9	26	26
20	KGSNO 20 PP AS	0.25	20	60	45	42	45	30	9.2	32	32
	KGSNOS 20 PP AS	0.25	20	60	45	42	45	30	9.2	32	32
25	KGSNO 25 PP AS	0.52	25	78	58	51	60	39	11.9	40	40
	KGSNOS 25 PP AS	0.52	25	78	58	51	60	39	11.9	40	40
30	KGSNO 30 PP AS	0.76	30	87	68	60	68	43.5	14.3	45	47
	KGSNOS 30 PP AS	0.76	30	87	68	60	68	43.5	14.3	45	47
40	KGSNO 40 PP AS	1.4	40	108	80	77	86	54	18.8	58	62
	KGSNOS 40 PP AS	1.4	40	108	80	77	86	54	18.8	58	62
50	KGSNO 50 PP AS	2.4	50	132	100	88	108	66	22.7	50	75
	KGSNOS 50 PP AS	2.4	50	132	100	88	108	66	22.7	50	75

1) Dimension A_6 on diameter C.
2) Dimension C_2 and lurication hole symmetrical with bearings width C.
3) For fixing screws to EN ISO 4762-8.8.
If there is a possibility of settling, the fixing screws should be secured against rotation.
4) The basic load ratings apply only to hardened (670 to 840 HV) and ground shaft raceways.
5) Centring hole to DIN 332, type A.



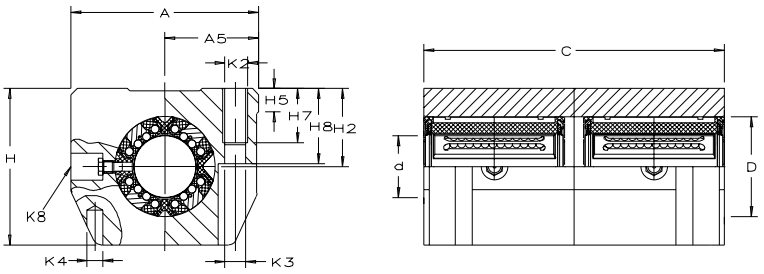
KGSNOS..PP AS

View X (rotated 90°)

DIMENSION TABLE • Dimensions in mm														
MOUNTING DIMENSIONS											BALL ROWS QUANTITY	BASIC LOAD RATINGS[3]		SHAFT DIAMETER
H_2 +0.008 -0.016	H_5	H_7	H_8	K_2	K_3[3]	K_4[5]	K_5[3]	K_8[2]	A/F	α Degrees		dyn. C_{max} N	stat. C_{0max} N	d
18	6.1	11	16.5	M 5	4.3	1.6 x 3.35	8	NIP 4 MZ	-	78	6	900	810	12
18	6.1	11	16.5	M 5	4.3	1.6 x 3.35	8	NIP 4 MZ	2.5	78	6	900	810	
22	7.5	13	21	M 6	5.3	1.6 x 3.35	10	NIP 4 MZ	-	68	6	1,430	1,160	16
22	7.5	13	21	M 6	5.3	1.6 x 3.35	10	NIP 4 MZ	2.5	68	6	1,430	1,160	
25	8	18	24	M 8	6.6	2 x 4.25	11	NIP 4 MZ	-	55	6	2,200	1,730	20
25	8	18	24	M 8	6.6	2 x 4.25	11	NIP 4 MZ	2.5	55	6	2,200	1,730	
30	8.8	22	29	M10	8.4	2.5 x 5.3	15	NIP 5 MZ	-	57	6	3,950	3,250	25
30	8.8	22	29	M10	8.4	2.5 x 5.3	15	NIP 5 MZ	3	57	6	3,950	3,250	
35	9.7	22	34	M10	8.4	2.5 x 5.3	15	NIP 5 MZ	-	57	6	5,900	4,500	30
35	9.7	22	34	M10	8.4	2.5 x 5.3	15	NIP 5 MZ	3	57	6	5,900	4,500	
45	12.4	26	44	M12	10.5	3.15 x 6.7	18	NIP 5 MZ	-	56	6	10,200	7,200	40
45	12.4	26	44	M12	10.5	3.15 x 6.7	18	NIP 5 MZ	4	56	6	10,200	7,200	
50	11.1	35	49	M16	13.5	4 x 8.5	20	NIP 6 MZ	-	54	6	15,100	10,400	50
50	11.1	35	49	M16	13.5	4 x 8.5	20	NIP 6 MZ	5	54	6	15,100	10,400	

Linear Ball Bearing Units
KTSG..PP AS, KTSS..PP AS SERIES

- MAX³ Maximum Performance
- Closed and open designs
- Contact seals on both sides



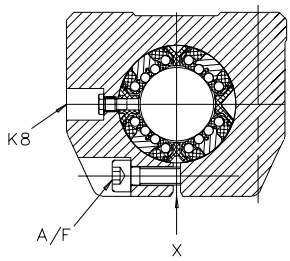
KTSG..PP AS

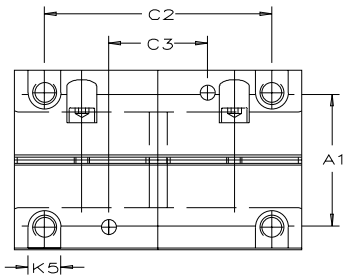
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

DIMENSION TABLE • Dimensions in mm

SHAFT DIAMETER d	PART NUMBER	MASS ≈kg	DIMENSIONS				MOUNTING DIMENSIONS				
			d	A	C	H	A_1 ±0.15	A_5 ±0.01	C_2 [1] ±0.15	C_3 [1]	D
12	KTSG 12 PP AS	0.21	12	43	70	35	32	21.5	56	24	22
	KTSS 12 PP AS	0.21	12	43	70	35	32	21.5	56	24	22
16	KTSG 16 PP AS	0.38	16	53	78	42	40	26.5	64	26	26
	KTSS 16 PP AS	0.38	16	53	78	42	40	26.5	64	26	26
20	KTSG 20 PP AS	0.55	20	60	96	50	45	30	76	33	32
	KTSS 20 PP AS	0.55	20	60	96	50	45	30	76	33	32
25	KTSG 25 PP AS	1.13	25	78	122	60	60	39	94	44	40
	KTSS 25 PP AS	1.13	25	78	122	60	60	39	94	44	40
30	KTSG 30 PP AS	1.78	30	87	142	70	68	43.5	106	54	47
	KTSS 30 PP AS	1.78	30	87	142	70	68	43.5	106	54	47

[1] Dimensions and lubrication hole symmetrical with bearing width C.
[2] For fixing screws to EN ISO 4762-8.8.
If there is a possibility of settling, the fixing screws should be secured against rotation.
[3] Centring for dowel hole.
[4] Lubrication nipple.
[5] The basic load ratings apply only to hardened (670 to 840 HV) and ground shaft raceways.
Basic load ratings in accordance with DIN 636-1.





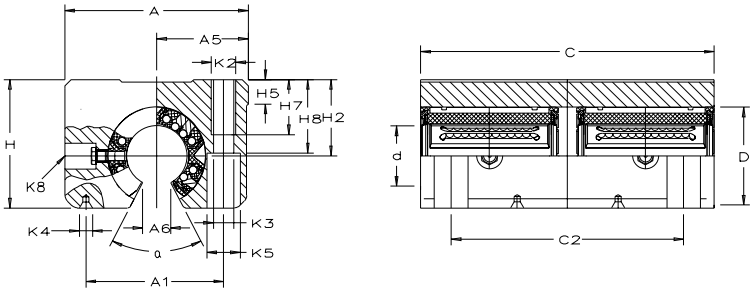
View X (rotated 90°)

KTSS..PP AS
(same dimensions as KTSG..PP AS)

DIMENSION TABLE • Dimensions in mm														
MOUNTING DIMENSIONS											BALL ROWS QUANTITY	BASIC LOAD RATINGS[3]		SHAFT DIAMETER
H_2 +0.008 -0.016	H_5	H_6	H_7	H_8	K_2	K_3[2]	K_4[3]	K_5[2]	K_8[4]	A/F		dyn. C_{max} N	stat. C_{0max} N	d
18	6	25.3	11	16.5	M 5	4.3	4	8	NIP 4 MZ	-	8	1,460	1,620	12
18	6	25.3	11	16.5	M 5	4.3	4	8	NIP 4 MZ	2.5	8	1,460	1,620	
22	7.5	28	13	21	M 6	5.3	4	10	NIP 4 MZ	-	8	2,330	2,320	16
22	7.5	28	13	21	M 6	5.3	4	10	NIP 4 MZ	3	8	2,330	2,320	
25	8	32.8	18	24	M 8	6.6	5	11	NIP 4 MZ	-	8	3,650	3,450	20
25	8	32.8	18	24	M 8	6.6	5	11	NIP 4 MZ	4	8	3,650	3,450	
30	9	40	22	29	M10	8.4	6	15	NIP 5 MZ	-	8	6,400	6,500	25
30	9	40	22	29	M10	8.4	6	15	NIP 5 MZ	5	8	6,400	6,500	
35	10	44.7	22	34	M10	8.4	6	15	NIP 5 MZ	-	8	9,600	9,000	30
35	10	44.7	22	34	M10	8.4	6	15	NIP 5 MZ	5	8	9,600	9,000	

Linear Ball Bearing Units
KTSO..PP AS, KTSOS..PP AS SERIES

- MAX³ Maximum Performance
- Open design
- Contact seals on both sides



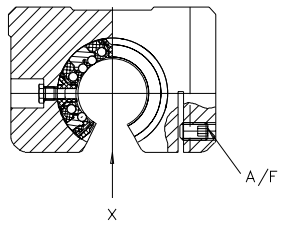
KTSO..PP AS

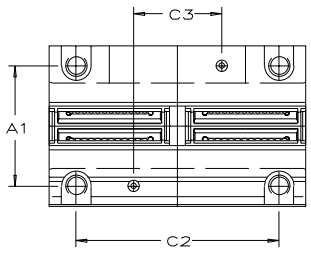
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

DIMENSION TABLE • Dimensions in mm

SHAFT DIAMETER d	PART NUMBER	MASS ≈kg	DIMENSIONS				MOUNTING DIMENSIONS					
			d	A	C	H	A_1 ±0.15	A_5 ±0.01	A_6 1)	C_2 2) ±0.15	C_3 2)	D
12	KTSO 12 PP AS	0.118	12	43	70	28	32	21.5	6.5	56	24	22
	KTSOS 12 PP AS	0.18	12	43	70	28	32	21.5	6.5	56	24	22
16	KTSO 16 PP AS	0.34	16	53	78	35	40	26.5	8.9	64	26	26
	KTSOS 16 PP AS	0.34	16	53	78	35	40	26.5	8.9	64	26	26
20	KTSO 20 PP AS	0.51	20	60	96	42	45	30	9.2	76	33	32
	KTSOS 20 PP AS	0.51	20	60	96	42	45	30	9.2	76	33	32
25	KTSO 25 PP AS	1.03	25	78	122	51	60	39	11.9	94	44	40
	KTSOS 25 PP AS	1.03	25	78	122	51	60	39	11.9	94	44	40
30	KTSO 30 PP AS	1.8	30	87	142	60	68	43.5	14.3	106	54	47
	KTSOS 30 PP AS	1.8	30	87	142	60	68	43.5	14.3	106	54	47

1) Dimensions A_6 on diameter d.
2) Dimensions and lubrication hole symmetrical with bearing width C.
3) For fixing screws to EN ISO 4762-8.8.
If there is a possibility of settling, the fixing screws should be secured against rotation.
4) Lubrication nipple.
5) The basic load ratings apply only to hardened (670 to 840 HV) and ground shaft raceways.
Basic load ratings in accordance with DIN 636-1.
6) Centring hole to DIN 332, type A.





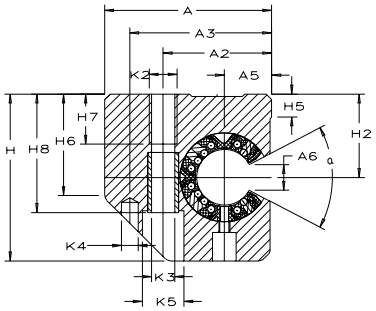
View X (rotated 90°)

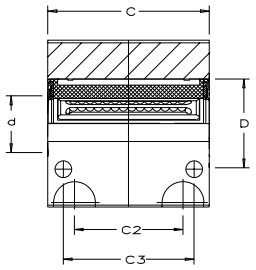
KTSOS..PP AS
(Same dimensions as KTSO..PP AS)

DIMENSION TABLE • Dimensions in mm														
MOUNTING DIMENSIONS											BALL ROWS QUANTITY	BASIC LOAD RATINGS[3]		SHAFT DIAMETER
H_2 +0.008 -0.016	H_5	H_7	H_8	K_2	K_3[3]	K_4[6]	K_5[3]	K_8[4]	A/F	α Degrees		dyn. C_{max} N	stat. C_{0max} N	d
18	6.1	11	16.5	M 5	4.3	1.6 x 3.35	8	NIP 4 MZ	-	66	6	1,460	1,620	12
18	6.1	11	16.5	M 5	4.3	1.6 x 3.35	8	NIP 4 MZ	2.5	66	6	1,460	1,620	
22	7.5	13	21	M 6	5.3	1.6 x 3.35	10	NIP 4 MZ	-	68	6	2,330	2,320	16
22	7.5	13	21	M 6	5.3	1.6 x 3.35	10	NIP 4 MZ	2.5	68	6	2,330	2,320	
25	8	18	24	M 8	6.6	2.0 x 4.25	11	NIP 4 MZ	-	55	6	3,650	3,450	20
25	8	18	24	M 8	6.6	2.0 x 4.25	11	NIP 4 MZ	2.5	55	6	3,650	3,450	
30	8.8	22	29	M10	8.4	2.5 x 5.3	15	NIP 5 MZ	-	57	6	6,400	6,500	25
30	8.8	22	29	M10	8.4	2.5 x 5.3	15	NIP 5 MZ	3	57	6	6,400	6,500	
35	9.7	22	34	M10	8.4	2.5 x 5.3	15	NIP 5 MZ	-	57	6	9,600	9,000	30
35	9.7	22	34	M10	8.4	2.5 x 5.3	15	NIP 5 MZ	3	57	6	9,600	9,000	

Linear Ball Bearing Units
KGSC..PP AS, KGSCS..PP AS SERIES

- MAX³ Maximum Performance
- Light range - metric sizes
- Sealed, greased with relubrication facility





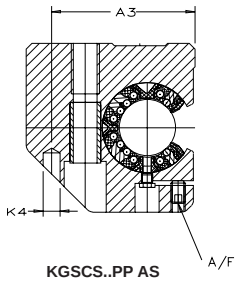
KGSC..PP AS

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

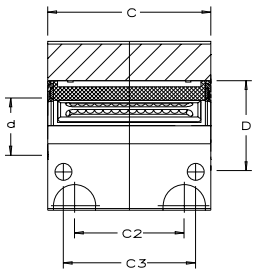
DIMENSION TABLE • Dimensions in mm

SHAFT DIAMETER d	PART NUMBER	MASS ≈kg	DIMENSIONS					MOUNTING DIMENSIONS				
			d	A	C	H	A_2 ±0.15	A_3	A_5 ±0.01	A_6 1)	C_2 2) ±0.15	C_3 2)
20	KGSC 20 PP AS	0.35	20	60	47	60	39	51	17	9.2	30	36
	KGSCS 20 PP AS	0.35	20	60	47	60	39	51	17	9.2	30	36
25	KGSC 25 PP AS	0.68	25	75	58	72	49	64	21	12	36	45
	KGSCS 25 PP AS	0.68	25	75	58	72	49	64	21	12	36	45
30	KGSC 30 PP AS	1	30	86	68	82	59	76	25	14.3	42	52
	KGSCS 30 PP AS	1	30	86	68	82	59	76	25	14.3	42	52
40	KGSC 40 PP AS	1.8	40	110	80	100	75	97	32	18.8	48	60
	KGSCS 40 PP AS	1.8	40	110	80	100	75	97	32	18.8	48	60
50	KGSC 50 PP AS	2.9	50	127	100	115	88	109	38	22.7	62	80
	KGSCS 50 PP AS	2.9	50	127	100	115	88	109	38	22.7	62	80

1) Dimension A_6 on diameter d.
2) Dimension C_2 and lubrication hole symmetrical with bearing width C.
3) Centring for dowel hole.
4) For fixing screws to EN ISO 4762-8.8.
If there is a possibility of settling, the fixing screws should be secured against rotation.
5) The basic load ratings apply only to hardened (670 to 840 HV) and ground shaft raceways.



KGSCS..PP AS



DIMENSION TABLE • Dimensions in mm															
MOUNTING DIMENSIONS													BALL ROWS	BASIC LOAD RATINGS[3]		SHAFT DIAMETER
D	H_2 +0.008 -0.016	H_5	H_6	H_7	H_8	K_2	K_3[3]	K_4[4]	K_5[3]	K_8[2]	A/F	α Degrees	QUANTITY	dyn. C_{max} N	stat. C_{0max} N	d
32	30	8.3	37.5	18	42.6	M10	8.4	6	15	NIP 4 MZ	-	55	6	2,200	1,730	20
32	30	8.3	37.5	18	42.6	M10	8.4	6	15	NIP 4 MZ	2.5	55	6	2,200	1,730	
40	35	8.2	45	22	50.6	M12	10.5	8	18	NIP 5 MZ	-	57	6	3,950	3,250	25
40	35	8.2	45	22	50.6	M12	10.5	8	18	NIP 5 MZ	3	57	6	3,950	3,250	
47	40	9	52	29	55.6	M16	13.5	10	20	NIP 5 MZ	-	57	6	5,900	4,500	30
47	40	9	52	29	55.6	M16	13.5	10	20	NIP 5 MZ	3	57	6	5,900	4,500	
62	45	9.5	60	36	67.6	M20	15.5	12	24	NIP 5 MZ	-	56	6	10,200	7,200	40
62	45	9.5	60	36	67.6	M20	15.5	12	24	NIP 5 MZ	4	56	6	10,200	7,200	
75	50	8.6	70	36	78.8	M20	17.5	12	26	NIP 6 MZ	-	54	6	15,100	10,400	50
75	50	8.6	70	36	78.8	M20	17.5	12	26	NIP 6 MZ	5	54	6	15,100	10,400	

Linear Ball Bearing Units
KTFS..PP AS SERIES

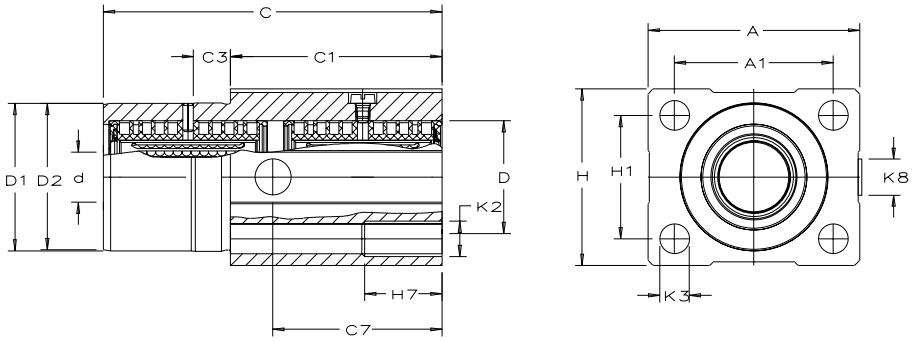
- MAX3 Maximum Performance
- Light range - metric sizes
- Sealed, greased with relubrication facility

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

DIMENSION TABLE • Dimensions in mm

SHAFT DIAMETER d	PART NUMBER	MASS ≈kg	DIMENSIONS				MOUNTING DIMENSIONS				
			d	A	C	H	A_1 ±0.15	C_1	C_3	C_7	D
12	KTFS 12 PP AS	0.2	12	41	70	34	32	40	10	35	22
16	KTFS 16 PP AS	0.3	16	50	78	40	38	50	10	39	26
20	KTFS 20 PP AS	0.5	20	60	96	50	45	60	10	48	32
25	KTFS 25 PP AS	1	25	74	122	60	56	73	10	61	40
30	KTFS 30 PP AS	1.4	30	84	142	70	64	82	10	71	47

1) Recommendation: locating bore D_1 H7.
2) The basic load ratings apply only to hardened (670 to 840 HV) and ground shaft raceways.

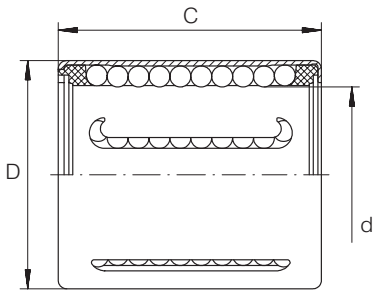


KTFS..PP AS

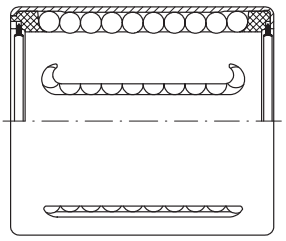
DIMENSION TABLE • Dimensions in mm										
MOUNTING DIMENSIONS							BALL ROWS QUANTITY	BASIC LOAD RATINGS[3]		SHAFT DIAMETER
D_1[1] g7	D_2 -0.1 -0.3	H_1 ±0.15	H_7	K_2	K_3	K_8		dyn. C_{max} N	stat. C_{0max} N	d
30	30	24	13	M 6	5.3	M8x1	8	1,460	1,620	12
35	35	28	18	M 8	6.6	M8x1	8	2,330	2,320	16
42	42	35	22	M10	8.4	M8x1	8	3,650	3,450	20
52	52	42	26	M12	10.5	M8x1	8	6,400	6,500	25
61	61	50	35	M16	13.5	M8x1	8	9,600	9,000	30

Linear Ball Bearings
KH SERIES

- Compact Range
- With Relubrication Facility



KH



KH..PP

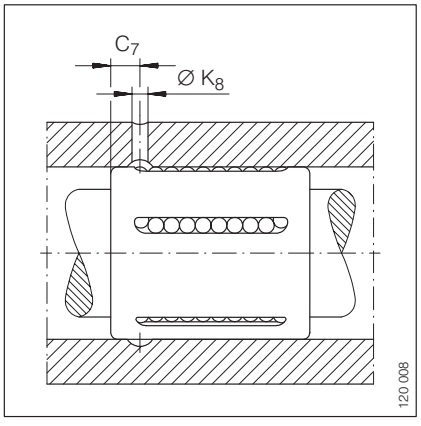
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

SHAFT DIA.	PART NUMBER[1]	MASS	DIMENSIONS			MOUNTING DIMENSIONS		BASIC LOAD RATINGS[2]			
			d	D	C	C_7	K_8	dyn. C_{min} N	stat. $C_{0\,min}$ N	dyn. C_{max} N	stat. $C_{0\,max}$ N
		g									
6	KH 0622	7	6	12	22	4	2	340	239	390	340
8	KH 0824	12	8	15	24	6	2	410	280	475	400
10	KH 1026	14.5	10	17	26	6	2.5	510	370	590	520
12	KH 1228	18.5	12	19	28	6	2.5	670	510	800	740
14	KH 1428	20.5	14	21	28	6	2.5	690	520	830	760
16	KH 1630	27.5	16	24	30	7	2.5	890	620	1,060	910
20	KH 2030	32.5	20	28	30	7	2.5	1,110	790	1,170	1,010
25	KH 2540	66	25	35	40	8	2.5	2,280	1,670	2,420	2,130
30	KH 3050	95	30	40	50	8	2.5	3,300	2,700	3,300	3,100
40	KH 4060	182	40	52	60	9	2.5	5,300	4,450	5,300	4,950
50	KH 5070	252	50	62	70	9	2.5	6,800	6,300	6,800	7,000

[1] Linear ball bearings sealed on both sides: suffix “PP”.

[2] The basic load ratings are only valid for hardened (670 to 840 HV) and ground shaft raceways.



Linear Ball Bearing And Housing Units

KGHK..B PP AS SERIES

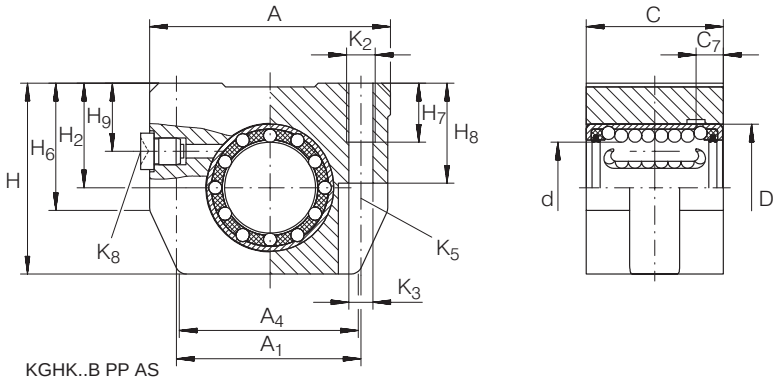
- Compact Range
- Sealed, Greased, With Relubrication Facility

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

SHAFT DIAMETER	PART NUMBER	MASS	DIMENSIONS				MOUNTING DIMENSIONS		
			d	A	C	H	A_1	A_4	C_7
		kg					±0.15		
6	KGHK 06 B PP AS	0.04	6	32	22	27	23	25	4
8	KGHK 08 B PP AS	0.05	8	32	24	27	23	25	5
10	KGHK 10 B PP AS	0.07	10	40	26	33	29	32	5
12	KGHK 12 B PP AS	0.08	12	40	28	33	29	32	5.5
14	KGHK 14 B PP AS	0.1	14	43	28	36.5	34	34	5.5
16	KGHK 16 B PP AS	0.11	16	43	30	36.5	34	34	6
20	KGHK 20 B PP AS	0.15	20	53	30	42.5	40	40	6
25	KGHK 25 B PP AS	0.27	25	60	40	52.5	48	44	8
30	KGHK 30 B PP AS	0.4	30	67	50	60	53	49.5	9
40	KGHK 40 B PP AS	0.75	40	87	60	73.5	69	63	10
50	KGHK 50 B PP AS	1.25	50	103	70	92	82	74	12

1) For fixing screws to DIN 912-8.8 and spring washer to DIN 7 980.
2) Lubrication nipple.
3) The basic load ratings are only valid for hardened (670 to 840 HV) and ground shaft raceways.



KGHK..B PP AS

D	H_2 +0.010 −0.014	H_6	H_7	H_8	H_9	K_2	K_3[1]	K_5[1]	K_8[2]	BASIC LOAD RATINGS[3] dyn. C N	BASIC LOAD RATINGS[3] stat. C_0 N	SHAFT DIAMETER
12	13	19.5	9	13	9	M4	3.4	M3	NIP A1	340	239	6
15	14	19.5	9	13	9	M4	3.4	M3	NIP A1	410	280	8
17	16	24	11	16	11	M5	4.3	M4	NIP A1	510	370	10
19	17	24	11	16	11	M5	4.3	M4	NIP A1	670	510	12
21	18	26.8	11	18	13	M5	4.3	M4	NIP A1	690	520	14
24	19	26.8	11	18	13	M5	4.3	M4	NIP A1	890	620	16
28	23	28.5	13	22	15	M6	5.3	M5	NIP A2	1,110	790	20
35	27	35.5	18	26	17.5	M8	6.6	M6	NIP A2	2,280	1,670	25
40	30	41.5	18	29	18	M8	6.6	M6	NIP A2	3,300	2,700	30
52	39	48	22	38	23	M10	8.4	M8	NIP A2	5,300	4,450	40
62	47	61	26	46	28	M12	10.5	M10	NIP A2	6,800	6,300	50

Linear Ball Bearing And Housing Units

KTHK..B PP AS SERIES

- Compact Range
- Sealed, Greased, With Relubrication Facility

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

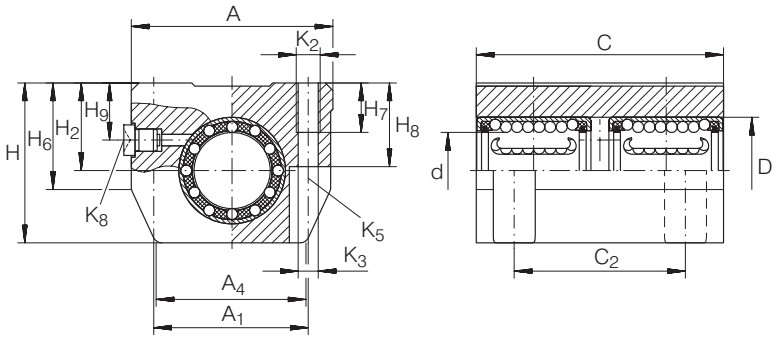
SHAFT DIAMETER	PART NUMBER	MASS	DIMENSIONS				MOUNTING DIMENSIONS		
			d	A	C	H	A_1	A_4	C_2[1]
		kg					±0.15		±0.15
12	KTHK 12 B PP AS	0.17	12	40	60	33	29	32	35
16	KTHK 16 B PP AS	0.23	16	43	65	36.5	34	34	40
20	KTHK 20 B PP AS	0.32	20	53	65	42.5	40	40	45
25	KTHK 25 B PP AS	0.58	25	60	85	52.5	48	44	55
30	KTHK 30 B PP AS	0.85	30	67	105	60	53	49.6	70
40	KTHK 40 B PP AS	1.6	40	87	125	73.5	69	63	85
50	KTHK 50 B PP AS	2.7	50	103	145	92	82	74	100

[1]) Dimension C_2 and lubrication hole centered on bearing width C.

[2]) For fixing screws to DIN 912-8.8 and spring washer to DIN 7 980.

[3]) Lubrication nipple.

[4]) The basic load ratings are only valid for hardened (670 to 840 HV) and ground shaft raceways and uniform loading on both the linear ball bearings.



KTHK..B PP AS

										BASIC LOAD RATINGS[4]		SHAFT DIAMETER
D	H_2 +0.010 −0.014	H_6	H_7	H_8	H_9	K_2	K_3[2]	K_5[2]	K_8[3]	dyn. C N	stat. C_0 N	
19	17	24	11	16	11	M5	4.3	M4	NIP A1	1,090	1,020	12
24	19	26.8	11	18	13	M5	4.3	M4	NIP A1	1,440	1,240	16
28	23	28.5	13	22	15	M6	5.3	M5	NIP A2	1,800	1,580	20
35	27	35.5	18	26	17.5	M8	6.6	M6	NIP A2	3,700	3,350	25
40	30	41.5	18	29	18	M8	6.6	M6	NIP A2	5,400	5,400	30
52	39	48	22	38	22	M10	8.4	M8	NIP A2	8,600	8,900	40
62	47	61	26	46	26	M12	10.5	M10	NIP M8x1	11,000	12,600	50

Linear Ball Bearing And Housing Units

KGHW..PP SERIES

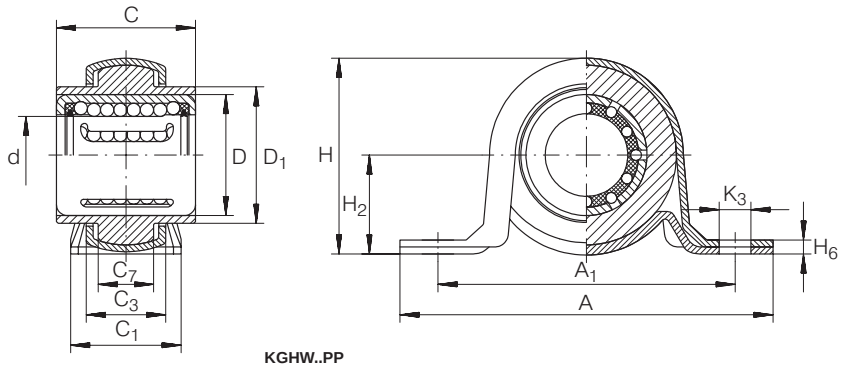
- Adjusting Range
- Sealed, Greased

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

SHAFT DIAMETER	PART NUMBER	MASS	DIMENSIONS			
			d	A	C	H
		kg		±0.5		
16	KGHW 16 PP	0.2	16	85.7	30	43.2
20	KGHW 20 PP	0.25	20	85.7	30	43.2
25	KGHW 25 PP	0.39	25	108	40	56.5

1) The basic load ratings are only valid for hardened (670 to 840 HV) and ground shaft raceways.



KGHW..PP

MOUNTING DIMENSIONS									BASIC LOAD RATINGS[1]		SHAFT DIAMETER
A_1 ±0.25	C_1	C_3	C_7	D	D_1	H_2 ±0.2	H_6	K_3	dyn. C N	stat. C_0 N	
68.3	25.4	18.8	13.2	24	32	22.2	3	9.5	890	620	16
68.3	25.4	18.8	13.2	28	32	22.2	3	9.5	1,110	790	20
86	32	23.5	14.5	35	39.5	28.6	4	11.5	2,280	1,670	25

Linear Ball Bearing And Housing Units

KGHWT..PP SERIES

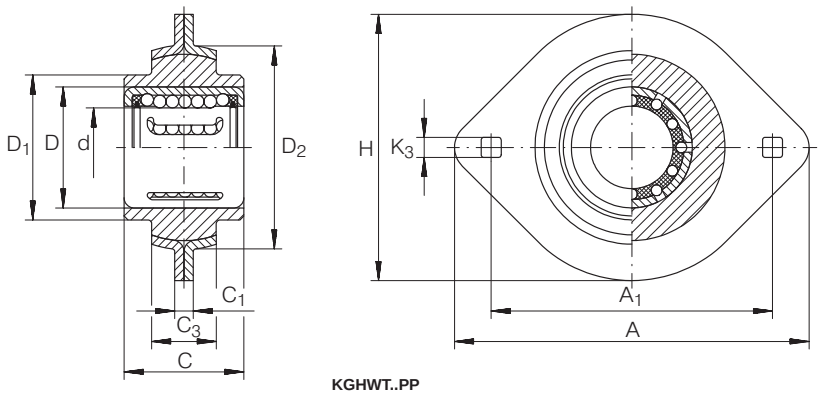
- Adjusting Range
- Sealed, Greased

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

SHAFT DIAMETER	PART NUMBER	MASS	DIMENSIONS			
			d	A	C	H
		kg				
16	KGHWT 16 PP	0.19	16	81	30	58.7
20	KGHWT 20 PP	0.18	20	81	30	58.7
25	KGHWT 25 PP	0.28	25	90.5	40	66

1) The basic load ratings are only valid for hardened (670 to 840 HV) and ground shaft raceways.

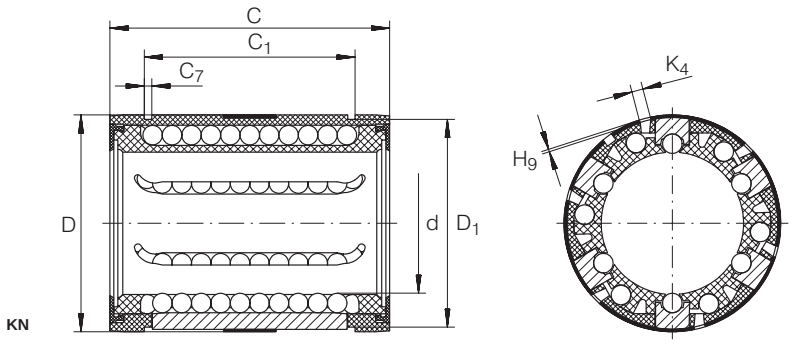


KGHWT..PP

MOUNTING DIMENSIONS							BASIC LOAD RATINGS[1]		SHAFT DIAMETER
A_1 ±0.15	C_1 ±0.5	C_3 +1	D	D_1	D_2	K_3	dyn. C N	stat. C_0 N	
63.5	4	14	24	30	44	7	890	620	16
63.5	4	14	28	32	44	7	1,110	790	20
71.5	4.4	16	35	40	51	8.7	2,280	1,670	25

Linear Ball Bearings
KN, KNO SERIES

- Light Range
- With Relubrication Facility

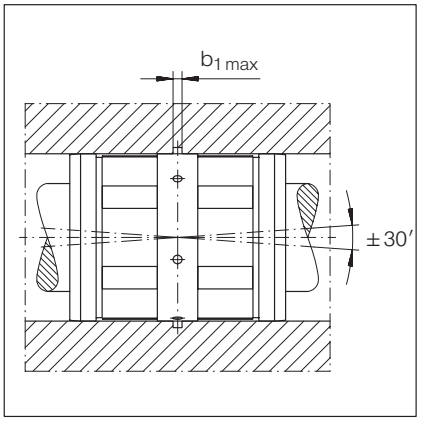


For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

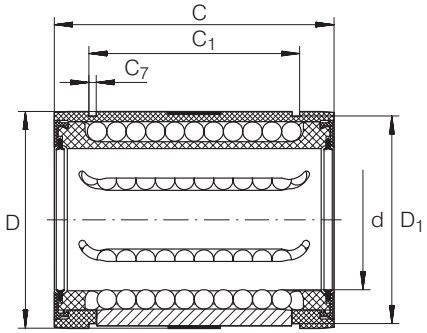
DIMENSION TABLE · Dimensions in mm

SHAFT DIAMETER	PART NUMBER		MASS	DIMENSIONS			MOUNTING DIMENSIONS			
				d	D	C	A_6 [2]	C_1 H13	C_7	D_1
			kg							
12	KN 1232		0.02	12	22	32	–	22.6	1.3	21
		KNO 1232	0.02	12	22	32	6.5	–	–	–
16	KN 1636		0.03	16	26	36	–	24.6	1.3	25
		KNO 1636	0.02	16	26	36	9	–	–	–
20	KN 2045		0.06	20	32	45	–	31.2	1.6	30.7
		KNO 2045	0.05	20	32	45	9	–	–	–
25	KN 2558		0.13	25	40	58	–	43.7	1.85	38
		KNO 2558	0.11	25	40	58	11.5	–	–	–
30	KN 3068		0.19	30	47	68	–	51.7	1.85	44.7
		KNO 3068	0.16	30	47	68	14	–	–	–
40	KN 4080		0.35	40	62	80	–	60.3	2.15	59.4
		KNO 4080	0.3	40	62	80	19	–	–	–
50	KN 50100		0.56	50	75	100	–	77.3	2.65	71.4
		KNO 50100	0.47	50	75	100	22.5	–	–	–

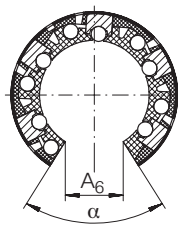
1) Linear ball bearings sealed on both sides: suffix “PP”.
2) Dimension A_6 on diameter d.
3) Hole position centered on bearing width C.
4) The basic load ratings are only valid for hardened (670 to 840 HV) and ground shaft raceways.
5) Basic load rating in main load direction.



Misalignment compensation ±30′

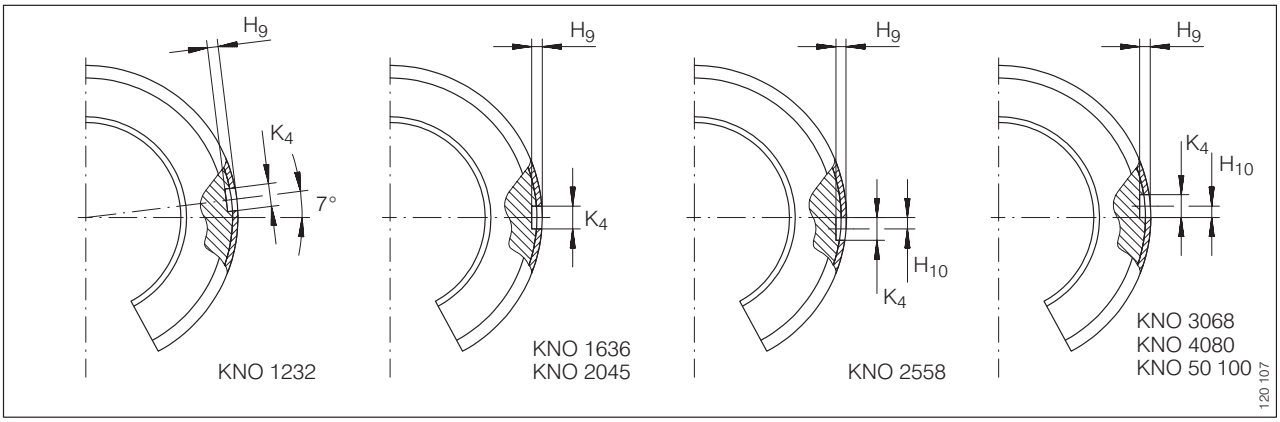


KN..PP



KNO, KNO..PP

										ACCESSORIES	
				MOUNTING DIMENSION	BALL ROWS	BASIC LOAD RATINGS[4]				SUITABLE CIRCLIPS TO DIN 471	SHAFT DIAMETER
H_9	H_{10}	K_4[3]	α Grad	$b_{1\ max.}$	NUMBER	dyn. C_{min} N	stat. $C_{0\ min}$ N	dyn. C_{max} N	stat. $C_{0\ max}$ N		
0.7	–	3	–	1.5	5	730	510	870	740	22×1.2	12
0.7	–	3	66	1.5	4	–	–	840[5]	640[5]	–	
0.7	–	3	–	1.5	5	870	620	1,040	910	26×1.2	16
0.7	–	3	68	1.5	4	–	–	1,000[5]	750[5]	–	
0.9	–	3	–	2.5	6	1,730	1,230	1,830	1,570	32×1.5	20
0.9	–	3	55	2.5	5	–	–	1,740[5]	1,240[5]	–	
1.4	–	3	–	2.5	6	3,100	2,220	3,250	2,850	42×1.75	25
1.4	1.5	3	57	2.5	5	–	–	3,100[5]	2,260[5]	–	
2.2	–	3	–	2.5	6	3,750	2,850	3,950	3,650	48×1.75	30
2.2	2	3	57	2.5	5	–	–	3,750[5]	2,850[5]	–	
2.2	–	3	–	3	6	6,900	4,900	7,300	6,300	63×2	40
2.2	1.5	3	56	3	5	–	–	6,900[5]	4,900[5]	–	
2.3	–	5	–	3	6	10,000	7,200	10,600	9,200	75×2.5	50
2.3	2.5	5	54	3	5	–	–	10,000[5]	7,200[5]	–	

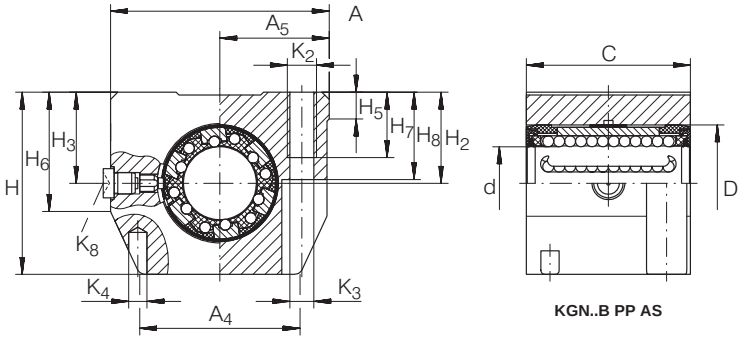


Fixing holes

Linear Ball Bearing And Housing Units

KGN..B PP AS, KGNS..B PP AS SERIES

- Light range
- Sealed, Greased, With Relubrication Facility



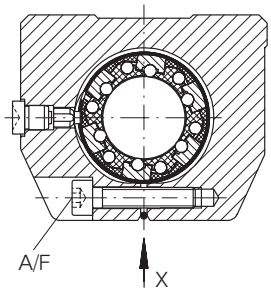
KGN..B PP AS

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

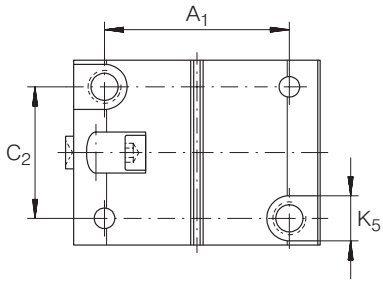
DIMENSION TABLE · Dimensions in mm

SHAFT DIAMETER	PART NUMBER	MASS	Dimensions				MOUNTING DIMENSIONS				
			d	A	C	H	A_1	A_4	A_5	C_2 [1]	D
		kg							±0.01		
12	KGN 12 B PP AS	0.1	12	43	32	35	$32^{\pm 0.15}$	34	21.5	$23^{\pm 0.15}$	22
	KGNS 12 B PP AS	0.1	12	43	32	35	$32^{\pm 0.15}$	34	21.5	$23^{\pm 0.15}$	22
16	KGN 16 B PP AS	0.17	16	53	37	42	$40^{\pm 0.15}$	40	26.5	$26^{\pm 0.15}$	26
	KGNS 16 B PP AS	0.17	16	53	37	42	$40^{\pm 0.15}$	40	26.5	$26^{\pm 0.15}$	26
20	KGN 20 B PP AS	0.27	20	60	45	50	$45^{\pm 0.15}$	44	30	$32^{\pm 0.15}$	32
	KGNS 20 B PP AS	0.27	20	60	45	50	$45^{\pm 0.15}$	44	30	$32^{\pm 0.15}$	32
25	KGN 25 B PP AS	0.56	25	78	58	60	$60^{\pm 0.15}$	59.5	39	$40^{\pm 0.15}$	40
	KGNS 25 B PP AS	0.56	25	78	58	60	$60^{\pm 0.15}$	59.5	39	$40^{\pm 0.15}$	40
30	KGN 30 B PP AS	0.83	30	87	68	70	$68^{\pm 0.15}$	63	43.5	$45^{\pm 0.15}$	47
	KGNS 30 B PP AS	0.83	30	87	68	70	$68^{\pm 0.15}$	63	43.5	$45^{\pm 0.15}$	47
40	KGN 40 B PP AS	1.55	40	108	80	90	$86^{\pm 0.15}$	76	54	$58^{\pm 0.15}$	62
	KGNS 40 B PP AS	1.55	40	108	80	90	$86^{\pm 0.15}$	76	54	$58^{\pm 0.15}$	62
50	KGN 50 B PP AS	2.7	50	132	100	105	$108^{\pm 0.2}$	90	66	$50^{\pm 0.2}$	75
	KGNS 50 B PP AS	2.7	50	132	100	105	$108^{\pm 0.2}$	90	66	$50^{\pm 0.2}$	75

1) Dimension C_2 and lubrication hole centered on bearing width C.
2) For fixing screws to DIN 912-8.8 and spring washer to DIN 7 980.
3) Centring for dowel hole.
4) Lubrication nipple.
5) The basic load ratings are only valid for hardened (670 to 840 HV) and ground shaft raceways.



KGNS..B PP AS



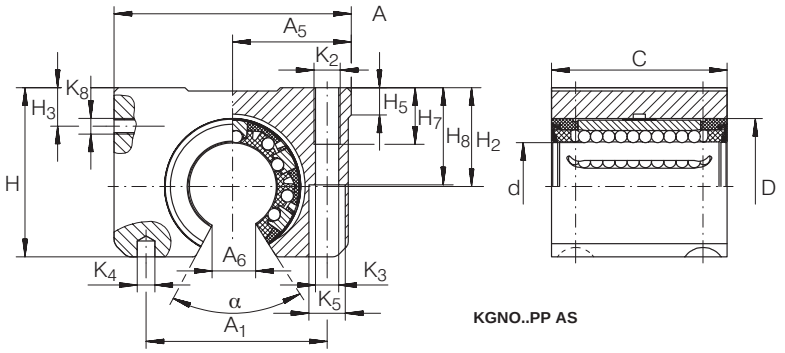
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												BALL ROWS	BASIC LOAD RATINGS[5]		SHAFT DIAMETER
H_2 +0.008 −0.016	H_3	H_5	H_6	H_7	H_8	K_2	K_3[2]	K_4[3]	K_5[2]	K_8[1][4]	A/F	NUMBER	dyn. C N	stat. C_0 N	
18	18	6	25.5	11	16.5	M5	4.3	4	8	NIP A1	–	5	780	560	12
18	18	6	25.5	11	16.5	M5	4.3	4	8	NIP A1	2.5	5	780	560	
22	22	7	28	13	21	M6	5.3	4	10	NIP A1	–	5	1,000	750	16
22	22	7	28	13	21	M6	5.3	4	10	NIP A1	3	5	1,000	750	
25	25	7.5	33	18	24	M8	6.6	5	11	NIP A1	–	6	1,740	1,240	20
25	25	7.5	33	18	24	M8	6.6	5	11	NIP A1	4	6	1,740	1,240	
30	30	8.5	40	22	29	M10	8.4	6	15	NIP A2	–	6	3,100	2,230	25
30	30	8.5	40	22	29	M10	8.4	6	15	NIP A2	5	6	3,100	2,230	
35	35	9.5	44.5	22	34	M10	8.4	6	15	NIP A2	–	6	3,800	2,900	30
35	35	9.5	44.5	22	34	M10	8.4	6	15	NIP A2	5	6	3,800	2,900	
45	45	11	56	26	44	M12	10.5	8	18	NIP A2	–	6	6,900	4,950	40
45	45	11	56	26	44	M12	10.5	8	18	NIP A2	6	6	6,900	4,950	
50	50	11	60	35	49	M16	13.5	10	20	NIP A2	–	6	10,100	7,300	50
50	50	11	60	35	49	M16	13.5	10	20	NIP A2	8	6	10,100	7,300	

Linear Ball Bearing And Housing Units

KGNO..PP AS, KGNOS..PP AS SERIES

- Light Range
- Sealed, Greased, With Relubrication Facility



KGNO..PP AS

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

SHAFT DIAMETER	PART NUMBER	MASS	DIMENSIONS				MOUNTING DIMENSIONS					
		kg	d	A	C	H	A_1	A_5 ±0.01	A_6 [1]	C_2 [2]	D	H_2 +0.008 −0.016
12	KGNO 12 PP AS	0.09	12	43	32	28	$32^{\pm 0.15}$	21.5	6.5	$23^{\pm 0.15}$	22	18
	KGNOS 12 PP AS	0.09	12	43	32	28	$32^{\pm 0.15}$	21.5	6.5	$23^{\pm 0.15}$	22	18
16	KGNO 16 PP AS	0.15	16	53	37	35	$40^{\pm 0.15}$	26.5	9	$26^{\pm 0.15}$	26	22
	KGNOS 16 PP AS	0.15	16	53	37	35	$40^{\pm 0.15}$	26.5	9	$26^{\pm 0.15}$	26	22
20	KGNO 20 PP AS	0,25	20	60	45	42	$45^{\pm 0,15}$	30	9	$32^{\pm 0,15}$	32	25
	KGNOS 20 PP AS	0.25	20	60	45	42	$45^{\pm 0.15}$	30	9	$32^{\pm 0.15}$	32	25
25	KGNO 25 PP AS	0.52	25	78	58	51	$60^{\pm 0.15}$	39	11.5	$40^{\pm 0.15}$	40	30
	KGNOS 25 PP AS	0.52	25	78	58	51	$60^{\pm 0.15}$	39	11.5	$40^{\pm 0.15}$	40	30
30	KGNO 30 PP AS	0.76	30	87	68	60	$68^{\pm 0.15}$	43.5	14	$45^{\pm 0.15}$	47	35
	KGNOS 30 PP AS	0.76	30	87	68	60	$68^{\pm 0.15}$	43.5	14	$45^{\pm 0.15}$	47	35
40	KGNO 40 PP AS	1.4	40	108	80	77	$86^{\pm 0.15}$	54	19	$58^{\pm 0.15}$	62	45
	KGNOS 40 PP AS	1.4	40	108	80	77	$86^{\pm 0.15}$	54	19	$58^{\pm 0.15}$	62	45
50	KGNO 50 PP AS	2.4	50	132	100	88	$108^{\pm 0.2}$	66	22.5	$50^{\pm 0.2}$	75	50
	KGNOS 50 PP AS	2.4	50	132	100	88	$108^{\pm 0.2}$	66	22.5	$50^{\pm 0.2}$	75	50

In the interim, linear ball bearing and housing units KGNO..PP AS and KGNOS..PP AS with profile grooves will still be supplied.

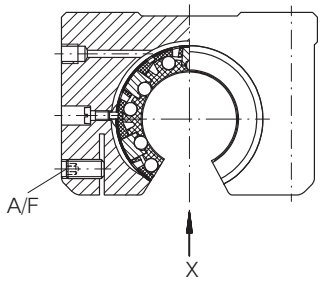
1) Dimension A_6 on diameter d.

2) Dimension C_2 and lubrication hole centered on bearing width C.

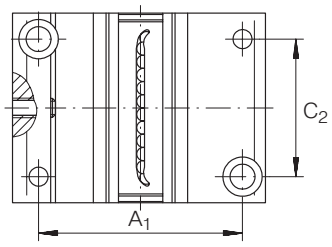
3) For fixing screws to DIN 912-8.8 and spring washer to DIN 7 980.

4) Centring for dowel hole.

5) The basic load ratings are only valid for hardened (670 to 840 HV) and ground shaft raceways.



KGNOS..PP AS



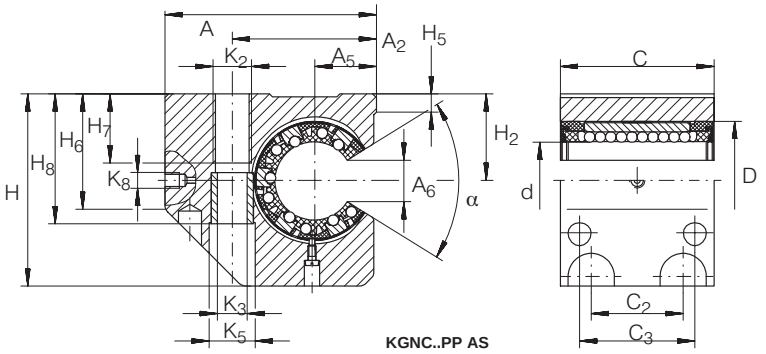
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											BALL ROWS	BASIC LOAD RATINGS[5]		SHAFT DIAMETER
H_3	H_5	H_7	H_8	K_2	K_3[3]	K_4[4]	K_5[3]	K_8[2]	A/F	α Grad	NUMBER	dyn. C N	stat. C_0 N	
8	6	11	16.5	M5	4.3	4	8	M6	–	66	4	840	640	12
8	6	11	16.5	M5	4.3	4	8	M6	2.5	66	4	840	640	
10	7.5	13	21	M6	5.3	4	10	M6	–	68	4	1,000	750	16
10	7.5	13	21	M6	5.3	4	10	M6	2.5	68	4	1,000	750	
11	8	18	24	M8	6.6	5	11	M6	–	55	5	1,740	1,240	20
11	8	18	24	M8	6.6	5	11	M6	2.5	55	5	1,740	1,240	
12.5	9	22	29	M10	8.4	6	15	M8×1	–	57	5	3,100	2,260	25
12.5	9	22	29	M10	8.4	6	15	M8×1	3	57	5	3,100	2,260	
14	9.5	22	34	M10	8.4	6	15	M8×1	–	57	5	3,750	2,850	30
14	9.5	22	34	M10	8.4	6	15	M8×1	3	57	5	3,750	2,850	
17.5	12	26	44	M12	10.5	8	18	M8×1	–	56	5	6,900	4,900	40
17.5	12	26	44	M12	10.5	8	18	M8×1	4	56	5	6,900	4,900	
17.5	12	35	49	M16	13.5	10	20	M8×1	–	54	5	10,000	7,200	50
17.5	12	35	49	M16	13.5	10	20	M8×1	5	54	5	10,000	7,200	

Linear Ball Bearing And Housing Units

KGNC..PP AS, KGNCS..PP AS SERIES

- Light Range
- Sealed, Greased,With Relubrication Facility



KGNC..PP AS

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

SHAFT DIAMETER	PART NUMBER	MASS	DIMENSIONS				MOUNTING DIMENSIONS						
			d	A	C	H	A_2	A_3	A_5	A_6 [1]	C_2 [2]	C_3 [2]	D
		kg					±0.15		±0.01		±0.15		
20	KGNC 20 PP AS	0.35	20	60	47	60	39	51	17	9	30	36	32
	KGNCS 20 PP AS	0.35	20	60	47	60	39	51	17	9	30	36	32
25	KGNC 25 PP AS	0.68	25	75	58	72	49	64	21	11.5	36	45	40
	KGNCS 25 PP AS	0.68	25	75	58	72	49	64	21	11.5	36	45	40
30	KGNC 30 PP AS	1	30	86	68	82	59	76	25	14	42	52	47
	KGNCS 30 PP AS	1	30	86	68	82	59	76	25	14	42	52	47
40	KGNC 40 PP AS	1.8	40	110	80	100	75	97	32	19	48	60	62
	KGNCS 40 PP AS	1.8	40	110	80	100	75	97	32	19	48	60	62
50	KGNC 50 PP AS	2.9	50	127	100	115	88	109	38	22.5	62	80	75
	KGNCS 50 PP AS	2.9	50	127	100	115	88	109	38	22.5	62	80	75

In the interim, linear ball bearing and housing units KGNC..PP AS and KGNCS..PP AS with profile grooves will still be supplied.

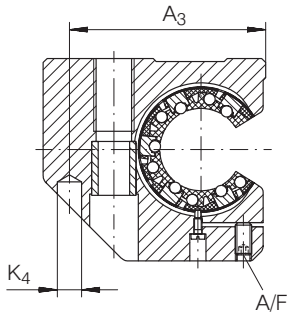
1) Dimension A_6 on diameter d.

2) Dimension $C_{2,}$ C_3 and lubrication hole centered on bearing width C.

3) Centring for dowel hole.

4) For fixing screws to DIN 912-8.8 and spring washer to DIN 7 980.

5) The basic load ratings are only valid for hardened (670 to 840 HV) and ground shaft raceways.



KGNCS..PP AS

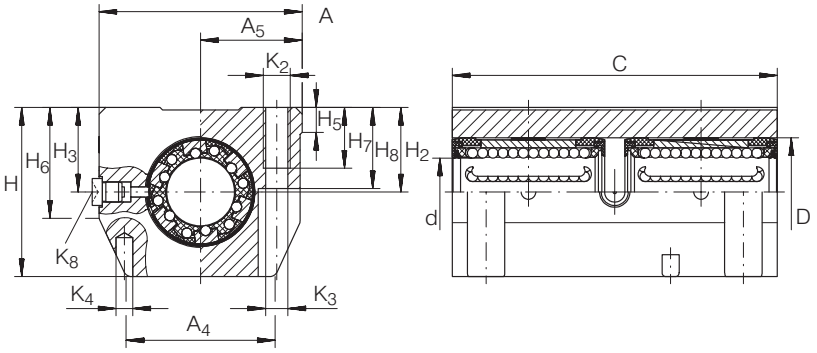
												BALL ROWS	BASIC LOAD RATINGS[5]		SHAFT DIAMETER
H_2 +0.008 −0.016	H_5	H_6	H_7	H_8	K_2	K_3[3]	K_4[4]	K_5[3]	K_8[2]	A/F	α Grad	NUMBER	dyn. C N	stat. C_0 N	
30	8	37.5	18	42.5	M10	8.4	6	15	M6	–	55	5	1,740	1,240	20
30	8	37.5	18	42.5	M10	8.4	6	15	M6	2.5	55	5	1,740	1,240	
35	8	45	22	50.5	M12	10.5	8	18	M8×1	–	57	5	3,100	2,269	25
35	8	45	22	50.5	M12	10.5	8	18	M8×1	3	57	5	3,100	2,260	
40	9	52	29	55.5	M16	13.5	10	20	M8×1	–	57	5	3,750	2,850	30
40	9	52	29	55.5	M16	13.5	10	20	M8×1	3	57	5	3,750	2,850	
45	9	60	36	67.5	M20	15.5	12	24	M8×1	–	56	5	6,900	4,900	40
45	9	60	36	67.5	M20	15.5	12	24	M8×1	4	56	5	6,900	4,900	
50	9	70	36	79	M20	17.5	12	26	M8×1	–	54	5	10,000	7,200	50
50	9	70	36	79	M20	17.5	12	26	M8×1	5	54	5	10,000	7,200	

Linear Ball Bearing And Housing Units

KTN..B PP AS,

KTNS..B PP AS SERIES

- Light Range
- Sealed, Greased, With Relubrication Facility



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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DIMENSION TABLE · Dimensions in mm

SHAFT DIAMETER	PART NUMBER	MASS	DIMENSIONS				MOUNTING DIMENSIONS					
			d	A	C	H	A_1	A_4	A_5 ±0.01	C_2 [1]	C_3 [1]	D
		kg										
12	KTN 12 B PP AS	0.21	12	43	70	35	$32^{\pm 0.15}$	34	21.5	$56^{\pm 0.15}$	24	22
	KTNS 12 B PP AS	0.21	12	43	70	35	$32^{\pm 0.15}$	34	21.5	$56^{\pm 0.15}$	24	22
16	KTN 16 B PP AS	0.35	16	53	78	42	$40^{\pm 0.15}$	40	26.5	$64^{\pm 0.15}$	26	26
	KTNS 16 B PP AS	0.35	16	53	78	42	$40^{\pm 0.15}$	40	26.5	$64^{\pm 0.15}$	26	26
20	KTN 20 B PP AS	0.56	20	60	96	50	$45^{\pm 0.15}$	44	30	$76^{\pm 0.15}$	33	32
	KTNS 20 B PP AS	0.56	20	60	96	50	$45^{\pm 0.15}$	44	30	$76^{\pm 0.15}$	33	32
25	KTN 25 B PP AS	1.15	25	78	122	60	$60^{\pm 0.15}$	59.5	39	$94^{\pm 0.2}$	44	40
	KTNS 25 B PP AS	1.15	25	78	122	60	$60^{\pm 0.15}$	59.5	39	$94^{\pm 0.2}$	44	40
30	KTN 30 B PP AS	1.7	30	87	142	70	$68^{\pm 0.15}$	63	43.5	$106^{\pm 0.2}$	54	47
	KTNS 30 B PP AS	1.7	30	87	142	70	$68^{\pm 0.15}$	63	43.5	$106^{\pm 0.2}$	54	47

In the interim, linear ball bearing and housing units KTN..B PP AS and KTNS..B PP AS with profile grooves will still be supplied.

1) Dimension C_2, C_3 and lubrication hole centered on bearing width C.

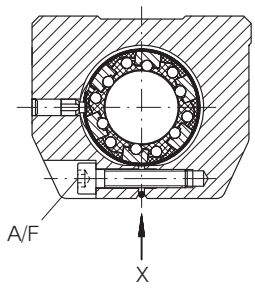
2) For fixing screws to DIN 912-8.8 and spring washer to DIN 7 980.

3) Centring for dowel hole.

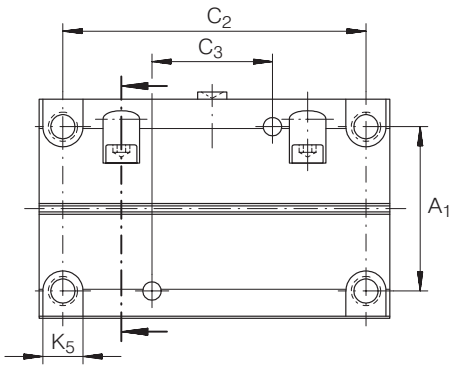
4) Lubrication nipple.

5) The basic load ratings are only valid for hardened (670 to 840 HV) and ground shaft raceways.

584



KTNS..B PP AS



View X (rotated through 90°)

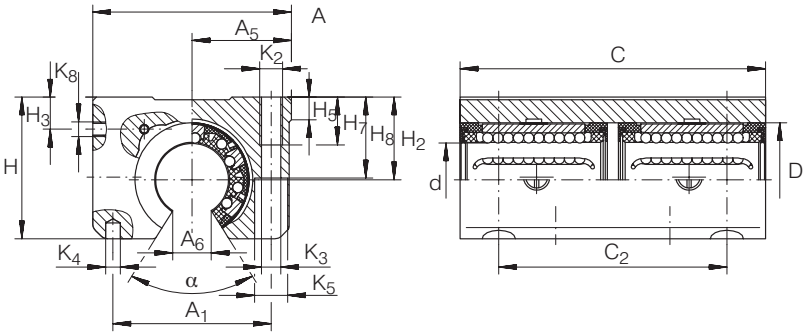
												BALL ROWS	BASIC LOAD RATINGS[5]		SHAFT DIAMETER
H_2 +0.008 −0.016	H_3	H_5	H_6	H_7	H_8	K_2	K_3[2]	K_4[3]	K_5[2]	K_8[4]	A/F	NUMBER	dyn. C N	stat. C_0 N	
18	18	6	25.6	11	16.5	M5	4.3	4	8	NIP A1	–	5	1,270	1,110	12
18	18	6	25.6	11	16.5	M5	4.3	4	8	NIP A1	2.5	5	1,270	1,110	
22	22	7	28	13	21	M6	5.3	4	10	NIP A1	–	5	1,620	1,500	16
22	22	7	28	13	21	M6	5.3	4	10	NIP A1	3	5	1,620	1,500	
25	25	7.5	33	18	24	M8	6.6	5	11	NIP A1	–	6	2,850	2,480	20
25	25	7.5	33	18	24	M8	6.6	5	11	NIP A1	4	6	2,850	2,480	
30	30	8.5	40	22	29	M10	8.4	6	15	NIP A2	–	6	5,000	4,450	25
30	30	8.5	40	22	29	M10	8.4	6	15	NIP A2	5	6	5,000	4,450	
35	35	9.5	44.5	22	34	M10	8.4	6	15	NIP A2	–	6	6,100	5,800	30
35	35	9.5	44.5	22	34	M10	8.4	6	15	NIP A2	5	6	6,100	5,800	

Linear Ball Bearing And Housing Units

KTNO..PP AS,

KTNOS..PP AS SERIES

- Light Range
- Sealed, Greased, With Relubrication Facility



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

SHAFT DIAMETER	PART NUMBER	MASS	DIMENSIONS				MOUNTING DIMENSIONS						
			d	A	C	H	A_1	A_5 ±0.01	A_6 1)	C_2 2)	C_3 2)	D	H_2 +0.008 −0.016
		kg											
12	KTNO 12 PP AS	0.19	12	43	70	28	$32^{\pm 0.15}$	21.5	6.5	$56^{\pm 0.15}$	24	22	18
	KTNOS 12 PP AS	0.19	12	43	70	28	$32^{\pm 0.15}$	21.5	6.5	$56^{\pm 0.15}$	24	22	18
16	KTNO 16 PP AS	0.31	16	53	78	35	$40^{\pm 0.15}$	26.5	9	$64^{\pm 0.15}$	26	26	22
	KTNOS 16 PP AS	0.31	16	53	78	35	$40^{\pm 0.15}$	26.5	9	$64^{\pm 0.15}$	26	26	22
20	KTNO 20 PP AS	0.52	20	60	96	42	$45^{\pm 0.15}$	30	9	$76^{\pm 0.15}$	33	32	25
	KTNOS 20 PP AS	0.52	20	60	96	42	$45^{\pm 0.15}$	30	9	$76^{\pm 0.15}$	33	32	25
25	KTNO 25 PP AS	1.06	25	78	122	51	$60^{\pm 0.15}$	39	11.5	$94^{\pm 0.2}$	44	40	30
	KTNOS 25 PP AS	1.06	25	78	122	51	$60^{\pm 0.15}$	39	11.5	$94^{\pm 0.2}$	44	40	30
30	KTNO 30 PP AS	1.55	30	87	142	60	$68^{\pm 0.15}$	43.5	14	$106^{\pm 0.2}$	54	47	35
	KTNOS 30 PP AS	1.55	30	87	142	60	$68^{\pm 0.15}$	43.5	14	$106^{\pm 0.2}$	54	47	35

In the interim. linear ball bearing and housing units KTNO..PP AS and KTNOS..PP AS with profile grooves will still be supplied.

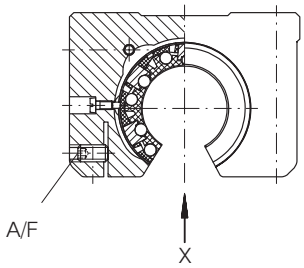
1) Dimension A_6 on diameter d.

2) Dimension C_2, C_3 and lubrication hole centered on bearing width C.

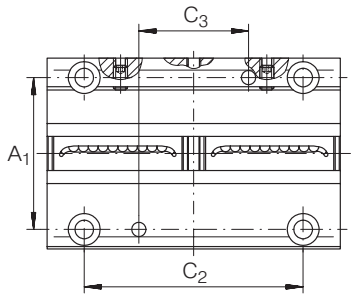
3) For fixing screws to DIN 912-8.8 and spring washer to DIN 7 980.

4) Centring for dowel hole.

5) The basic load ratings are only valid for hardened (670 to 840 HV) and ground shaft raceways.



KTNOS..PP AS



View X (rotated through 90°)

											BALL ROWS	BASIC LOAD RATINGS[5]		SHAFT DIAMETER
H_3	H_5	H_7	H_8	K_2	K_3[3]	K_4[4]	K_5[3]	K_8[2]	A/F	α Grad	NUMBER	dyn. C N	stat. C_0 N	
8	6	11	16.5	M5	4.3	4	8	M6	–	66	4	1,370	1,270	12
8	6	11	16.5	M5	4.3	4	8	M6	2.5	66	4	1,370	1,270	
10	7.5	13	21	M6	5.3	4	10	M6	–	68	4	1,620	1,500	16
10	7.5	13	21	M6	5.3	4	10	M6	2.5	68	4	1,620	1,500	
11	8	18	24	M8	6.6	5	11	M6	–	55	5	2,850	2,480	20
11	8	18	24	M8	6.6	5	11	M6	2.5	55	5	2,850	2,480	
12.5	9	22	29	M10	8.4	6	15	M8×1	–	57	5	5,100	4,550	25
12.5	9	22	29	M10	8.4	6	15	M8×1	3	57	5	5,100	4,550	
14	9.5	22	34	M10	8.4	6	15	M8×1	–	57	5	6,100	5,700	30
14	9.5	22	34	M10	8.4	6	15	M8×1	3	57	5	6,100	5,700	

Linear Ball Bearing And Housing Units

KTFN..PP AS SERIES

- Light Range
- Sealed, Greased, With Relubrication Facility

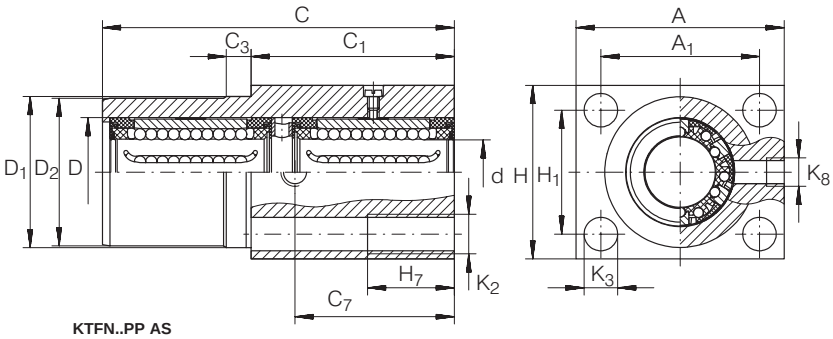
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

SHAFT DIAMETER	PART NUMBER	MASS	DIMENSIONS				MOUNTING DIMENSIONS			
			d	A	C	H	A_1	C_1	C_3	C_7
		kg					±0.15			
12	KTFN 12 PP AS	0.2	12	42	70	34	32	46	10	35
16	KTFN 16 PP AS	0.3	16	50	78	40	38	50	10	39
20	KTFN 20 PP AS	0.5	20	60	96	50	45	60	10	48
25	KTFN 25 PP AS	1	25	74	122	60	56	73	10	61
30	KTFN 30 PP AS	1.4	30	84	142	70	64	82	10	71

1) Recommended tolerance for housing bore: D_1 H7.

2) The basic load ratings are only valid for hardened (670 to 840 HV) and ground shaft raceways.

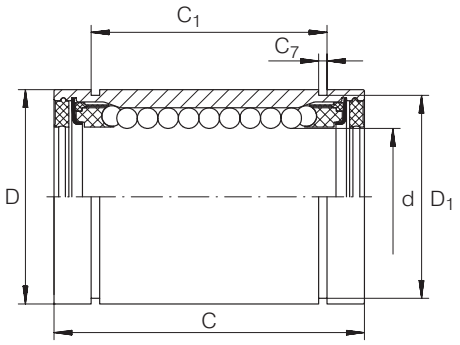


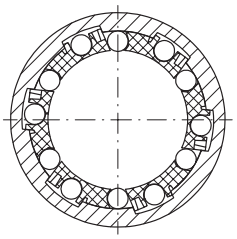
KTFN..PP AS

D	D_1[1] g7	D_2 −0.1 −0.3	H_1 ±0.15	H_7	K_2	K_3	K_8	BALL ROWS NUMBER	BASIC LOAD RATINGS[2] dyn. C N	BASIC LOAD RATINGS[2] stat. C_0 N	SHAFT DIAMETER
22	30	30	24	13	M6	5.3	M8 × 1	5	1,270	1,110	12
26	35	35	28	18	M8	6.6	M8 × 1	5	1,620	1,500	16
32	42	42	35	22	M10	8.4	M8 × 1	6	2,850	2,480	20
40	52	52	42	26	M12	10.5	M8 × 1	6	5,000	4,450	25
47	61	61	50	35	M16	13.5	M8 × 1	6	6,100	5,800	30

Linear Ball Bearings
KB, KBS, KBO SERIES

- Heavy Range





For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

SHAFT DIAMETER	PART NUMBER			MASS	DIMENSIONS			MOUNTING DIMENSIONS	
					d Deviations[2]	D[2]	C	A_6[3]	C_1
				kg		h5	h12		H13
12	KB 1232		–	0.04		22	32	–	22.6
	–	KBS 1232	–	0.04	$12^{+0.008}$	22	32	–	22.6
	–	–	KBO 1232	0.03		22	32	7.7	22.6
16	KB 1636	–	–	0.05		26	36	–	24.6
	–	KBS 1636	–	0.05	$16^{+0.009}_{-0.001}$	26	36	–	24.6
	–	–	KBO 1636	0.04		26	36	10.1	24.6
20	KB 2045	–	–	0.09		32	45	–	31.2
	–	KBS 2045	–	0.09	$20^{+0.009}_{-0.001}$	32	45	–	31.2
	–	–	KBO 2045	0.07		32	45	10	31.2
25	KB 2558	–	–	0.19		40	58	–	43.7
	–	KBS 2558	–	0.19	$25^{+0.011}_{-0.001}$	40	58	–	43.7
	–	–	KBO 2558	0.15		40	58	12.5	43.7
30	KB 3068	–	–	0.3		47	68	–	51.7
	–	KBS 3068	–	0.3	$30^{+0.011}_{-0.001}$	47	68	–	51.7
	–	–	KBO 3068	0.24		47	68	13.6	51.7
40	KB 4080	–	–	0.6		62	80	–	60.3
	–	KBS 4080	–	0.6	$40^{+0.013}_{-0.002}$	62	80	–	60.3
	–	–	KBO 4080	0.52		62	80	18.2	60.3
50	KB 50100	–	–	1		75	100	–	77.3
	–	KBS 50100	–	1	$50^{+0.013}_{-0.002}$	75	100	–	77.3
	–	–	KBO 50100	0.85		75	100	22.7	77.3

1) Linear ball bearings sealed on both sides: suffix “PP”.
Linear ball bearings with relubrication facility: suffix “AS”.

2) The tolerances are valid for series KB.

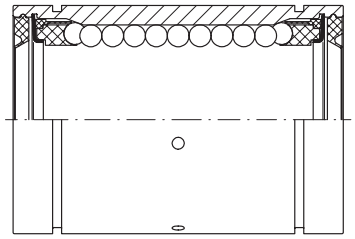
3) Dimension A_6 on diameter d.

4) Groove dimensions suitable for circlips to DIN 471.

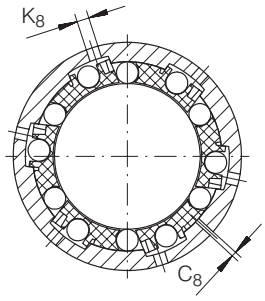
5) Bore position centered on bearing width C.

6) The basic load ratings are only valid for hardened (670 to 840 HV) and ground shaft raceways.

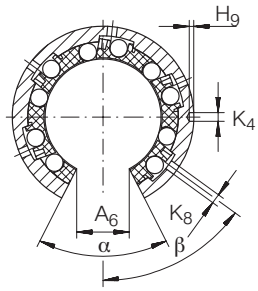
7) Basic load rating in main load direction.



KB..PP AS



KBS..AS, KBS..PP AS



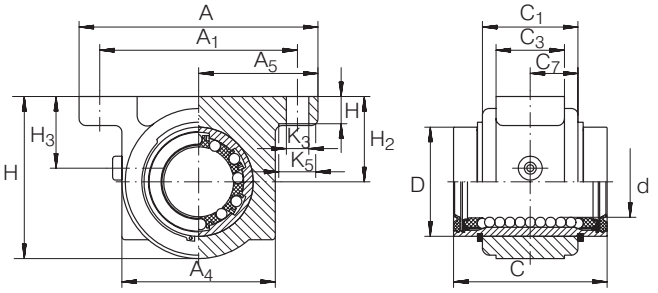
KBO..AS, KBO..PP AS

								BALL ROWS	BASIC LOAD RATINGS[6]				SHAFT DIAMETER
C_7[4]	C_8	D_1[4]	H_9	K_4[5]	K_8	α Grad	β Grad	NUMBER	dyn. C_{min} N	stat. $C_{0\,min}$ N	dyn. C_{max} N	stat. $C_{0\,max}$ N	
1.3	–	21	–	–	1.5	–	–	5	540	385	640	570	12
1.3	1	21	–	–	1.5	–	–	5	540	385	640	570	
1.3	–	21	1.2	2.2	1.5	78	64	4	–	–	600[7]	445[7]	
1.3	–	24.9	–	–	2	–	–	5	710	530	840	780	16
1.3	1	24.9	–	–	2	–	–	5	710	530	840	780	
1.3	–	24.9	1.2	2.2	2	78	64	4	–	–	800[7]	620[7]	
1.6	–	30.3	–	–	2	–	–	6	1,570	1,230	1,660	1,570	20
1.6	1	30.3	–	–	2	–	–	6	1,570	1,230	1,660	1,570	
1.6	–	30.3	1.2	2.2	2	60	52	5	–	–	1,600[7]	1,280[7]	
1.85	–	37.5	–	–	2.5	–	–	6	2,800	2,220	2,950	2,850	25
1.85	1	37.5	–	–	2.5	–	–	6	2,800	2,220	2,950	2,850	
1.85	–	37.5	1.5	3	2.5	60	53	5	–	–	2,850[7]	2,330[7]	
1.85	–	44.5	–	–	2.5	–	–	6	3,600	2,850	3,800	3,600	30
1.85	1	44.5	–	–	2.5	–	–	6	3,600	2,850	3,800	3,600	
1.85	–	44.5	1.5	3	2.5	54	55	5	–	–	3,700[7]	3,000[7]	
2.15	–	59	–	–	3	–	–	6	6,000	4,400	6,400	5,600	40
2.15	1	59	–	–	3	–	–	6	6,000	4,400	6,400	5,600	
2.15	–	59	1.5	3	3	54	54	5	–	–	6,100[7]	4,600[7]	
2.65	–	72	–	–	4	–	–	6	8,700	6,300	9,200	8,000	50
2.65	1	72	–	–	4	–	–	6	8,700	6,300	9,200	8,000	
2.65	–	72	1.5	3	4	54	54	5	–	–	8,900[7]	6,600[7]	

Linear Ball Bearing And Housing Units

KGB..PP AS, KGBS..PP AS, KGBO..PP AS SERIES

- Heavy Range
- Sealed, Greased, With Relubrication Facility



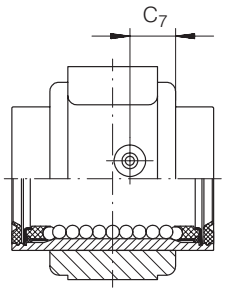
KGB..PP AS

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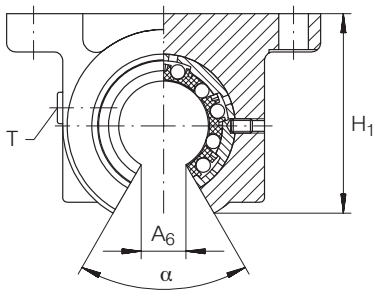
DIMENSION TABLE · Dimensions in mm

SHAFT DIAMETER	PART NUMBER			MASS	DIMENSIONS				MOUNTING DIMENSIONS		
					d Deviations[1]	A	C h12	H	A_1	A_4	A_5
				kg							
12	KGB 1232 PP AS	–	–	0.1		52	32	35.8	$42^{\pm 0.15}$	31.6	$26^{\pm 0.02}$
	–	KGBS 1232 PP AS	–	0.1	$12^{+0.008}$	52	32	35.8	$42^{\pm 0.15}$	31.6	$26^{\pm 0.02}$
	–	–	KGBO 1232 PP AS	0.09		52	32	–	$42^{\pm 0.15}$	31.6	$26^{\pm 0.02}$
16	KGB 1636 PP AS	–	–	0.14		56	36	37.5	$46^{\pm 0.15}$	35	$28^{\pm 0.02}$
	–	KGBS 1636 PP AS	–	0.14	$16^{+0.009}_{-0.001}$	56	36	37.5	$46^{\pm 0.15}$	35	$28^{\pm 0.02}$
	–	–	KGBO 1636 PP AS	0.12		56	36	–	$46^{\pm 0.15}$	35	$28^{\pm 0.02}$
20	KGB 2045 PP AS	–	–	0.3		70	45	48	$58^{\pm 0.15}$	46	$35^{\pm 0.02}$
	–	KGBS 2045 PP AS	–	0.3	$20^{+0.009}_{-0.001}$	70	45	48	$58^{\pm 0.15}$	46	$35^{\pm 0.02}$
	–	–	KGBO 2045 PP AS	0.25		70	45	–	$58^{\pm 0.15}$	46	$35^{\pm 0.02}$
25	KGB 2558 PP AS	–	–	0.58		80	58	58	$68^{\pm 0.15}$	56	$40^{\pm 0.02}$
	–	KGBS 2558 PP AS	–	0.58	$25^{+0.011}_{-0.001}$	80	58	58	$68^{\pm 0.15}$	56	$40^{\pm 0.02}$
	–	–	KGBO 2558 PP AS	0.49		80	58	–	$68^{\pm 0.15}$	56	$40^{\pm 0.02}$
30	KGB 3068 PP AS	–	–	0.9		88	68	67	$76^{\pm 0.2}$	64	$44^{\pm 0.02}$
	–	KGBS 3068 PP AS	–	0.9	$30^{+0.011}_{-0.001}$	88	68	67	$76^{\pm 0.2}$	64	$44^{\pm 0.02}$
	–	–	KGBO 3068 PP AS	0.78		88	68	–	$76^{\pm 0.2}$	64	$44^{\pm 0.02}$
40	KGB 4080 PP AS	–	–	1.43		108	80	83.5	$94^{\pm 0.2}$	77	$54^{\pm 0.02}$
	–	KGBS 4080 PP AS	–	1.43	$40^{+0.013}_{-0.002}$	108	80	83.5	$94^{\pm 0.2}$	77	$54^{\pm 0.02}$
	–	–	KGBO 4080 PP AS	1.28		108	80	–	$94^{\pm 0.2}$	77	$54^{\pm 0.02}$
50	KGB 50100 PP AS	–	–	2.78		135	100	98	$116^{\pm 0.2}$	96	$67.5^{\pm 0.05}$
	–	KGBS 50100 PP AS	–	2.78	$50^{+0.013}_{-0.002}$	135	100	98	$116^{\pm 0.2}$	96	$67.5^{\pm 0.05}$
	–	–	KGBO 50100 PP AS	2.46		135	100	–	$116^{\pm 0.2}$	96	$67.5^{\pm 0.05}$

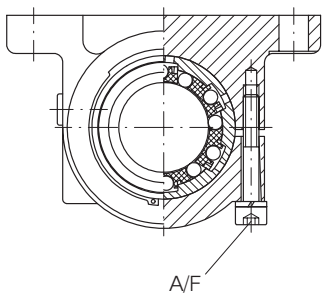
[1]) The tolerances are valid for series KGB..PP AS only.
[2]) Dimension A_6 on diameter d.
[3]) For fixing screws to DIN 912-8.8 and spring washer to DIN 7 980.
[5]) The basic load ratings are only valid for hardened (670 to 840 HV) and ground shaft raceways.



KGBO..PP AS



KGBO, KGBO..PP AS



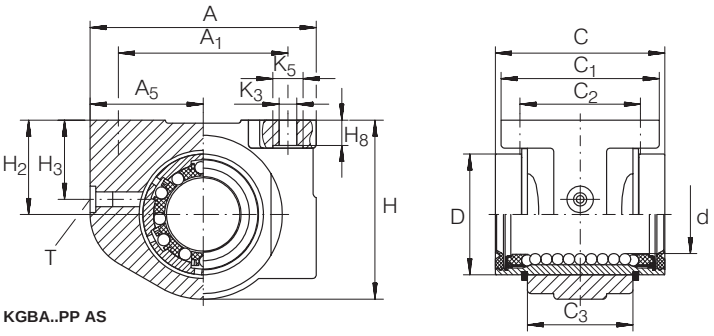
KGBS, KGBS..PP AS

A_6[2]	C_1	C_3	C_7	D[1] h5	H_1	H_2 ±0.015	H_3	H_8	K_3[3]	K_5[3]	α Grad	A/F	INA LUBRICATION NIPPLE[4] T	BALL ROWS NUMBER	BASIC LOAD RATINGS[5] dyn. C N	BASIC LOAD RATINGS[5] stat. C_0 N	SHAFT DIAMETER
–	20	12	10	22	–	20	15	6	5.5	10	–	–	NIP A1	5	540	385	12
–	20	12	10	22	–	20	15	6	5.5	10	–	2	NIP A1	5	540	385	12
7.7	20	12	7	22	32	20	15	6	5.5	10	78	–	NIP A1	4	600	445	
–	22	15	11	26	–	20	15	6	5.5	10	–	–	NIP A1	5	710	530	16
–	22	15	11	26	–	20	15	6	5.5	10	–	2	NIP A1	5	710	530	
10.1	22	15	7	26	33.5	20	15	6	5.5	10	78	–	NIP A1	4	800	620	
–	28	20	14	32	–	25	21	8	6.6	11	–	–	NIP A1	6	1,570	1,230	20
–	28	20	14	32	–	25	21	8	6.6	11	–	3	NIP A1	6	1,570	1,230	
10	28	20	10	32	45	25	21	8	6.6	11	60	–	NIP A1	5	1,600	1,280	
–	40	28	20	40	–	30	23	10	6.6	11	–	–	NIP A1	6	2,800	2,220	25
–	40	28	20	40	–	30	23	10	6.6	11	–	3	NIP A1	6	2,800	2,220	
12.5	40	28	15	40	54.5	30	23	10	6.6	11	60	–	NIP A1	5	2,850	2,330	
–	48	32	24	47	–	35	25	10	6.6	11	–	–	NIP A2	6	3,600	2,850	30
–	48	32	24	47	–	35	25	10	6.6	11	–	4	NIP A2	6	3,600	2,850	
13.6	48	32	19	47	63.5	35	25	10	6.6	11	54	–	NIP A2	5	3,700	3,000	
–	56	40	28	62	–	45	30	12	9	15	–	–	NIP A2	6	6,000	4,400	40
–	56	40	28	62	–	45	30	12	9	15	–	4	NIP A2	6	6,000	4,400	
18.2	56	40	23	62	79.5	45	30	12	9	15	54	–	NIP A2	5	6,100	4,600	
–	72	52	36	75	–	50	34	14	11	18	–	–	NIP A2	6	8,700	6,300	50
–	72	52	36	75	–	50	34	14	11	18	–	5	NIP A2	6	8,700	6,300	
22.7	72	52	28	75	93	50	34	14	11	18	54	–	NIP A2	5	8,900	6,600	

Linear Ball Bearing And Housing Units

KGBA..PP AS, KGBAS..PP AS, KGBAO..PP AS SERIES

- Heavy Range
- Sealed, Greased, With Relubrication Facility



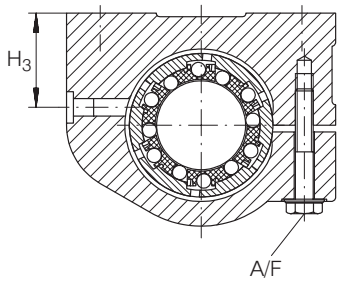
KGBA..PP AS

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

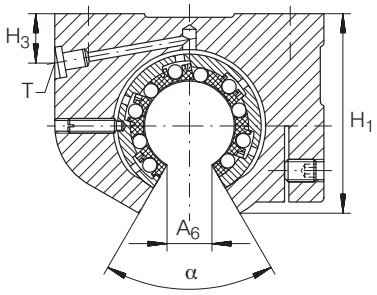
DIMENSION TABLE · Dimensions in mm

SHAFT DIAMETER	PART NUMBER			MASS	DIMENSIONS				MOUNTING DIMENSIONS	
					d Deviations[1]	A	C	H	A_1	A_5
				kg			h12			
12	KGBA 1232 PP AS	–	–	0.08		42	32	34	$32^{\pm 0.15}$	$21^{\pm 0.01}$
	–	KGBAS 1232 PP AS	–	0.08	$12^{+0.008}$	42	32	34	$32^{\pm 0.15}$	$21^{\pm 0.01}$
	–	–	KGBAO 1232 PP AS	0.07		42	32	–	$32^{\pm 0.15}$	$21^{\pm 0.01}$
16	KGBA 1636 PP AS	–	–	0.12		50	36	41	$40^{\pm 0.15}$	$25^{\pm 0.01}$
	–	KGBAS 1636 PP AS	–	0.12	$16^{+0.009}_{-0.001}$	50	36	41	$40^{\pm 0.15}$	$25^{\pm 0.01}$
	–	–	KGBAO 1636 PP AS	0.1		50	36	–	$40^{\pm 0.15}$	$25^{\pm 0.01}$
20	KGBA 2045 PP AS	–	–	0.2		60	45	47.5	$45^{\pm 0.15}$	$30^{\pm 0.01}$
	–	KGBAS 2045 PP AS	–	0.2	$20^{+0.009}_{-0.001}$	60	45	47.5	$45^{\pm 0.15}$	$30^{\pm 0.01}$
	–	–	KGBAO 2045 PP AS	0.17		60	45	–	$45^{\pm 0.15}$	$30^{\pm 0.01}$
25	KGBA 2558 PP AS	–	–	0.41		74	58	60	$60^{\pm 0.2}$	$37^{\pm 0.01}$
	–	KGBAS 2558 PP AS	–	0.41	$25^{+0.011}_{-0.001}$	74	58	60	$60^{\pm 0.2}$	$37^{\pm 0.01}$
	–	–	KGBAO 2558 PP AS	0.35		74	58	–	$60^{\pm 0.2}$	$37^{\pm 0.01}$
30	KGBA 3068 PP AS	–	–	0.61		84	68	67	$68^{\pm 0.2}$	$42^{\pm 0.01}$
	–	KGBAS 3068 PP AS	–	0.61	$30^{+0.011}_{-0.001}$	84	68	67	$68^{\pm 0.2}$	$42^{\pm 0.01}$
	–	–	KGBAO 3068 PP AS	0.53		84	68	–	$68^{\pm 0.2}$	$42^{\pm 0.01}$
40	KGBA 4080 PP AS	–	–	1.2		108	80	87	$86^{\pm 0.2}$	$54^{\pm 0.015}$
	–	KGBAS 4080 PP AS	–	1.2	$40^{+0.013}_{-0.002}$	108	80	87	$86^{\pm 0.2}$	$54^{\pm 0.015}$
	–	–	KGBAO 4080 PP AS	1.07		108	80	–	$86^{\pm 0.2}$	$54^{\pm 0.015}$
50	KGBA 50100 PP AS	–	–	1.88		130	100	98	$108^{\pm 0.2}$	$65^{\pm 0.015}$
	–	KGBAS 50100 PP AS	–	1.88	$50^{+0.013}_{-0.002}$	130	100	98	$108^{\pm 0.2}$	$65^{\pm 0.015}$
	–	–	KGBAO 50100 PP AS	1.65		130	100	–	$108^{\pm 0.2}$	$65^{\pm 0.015}$

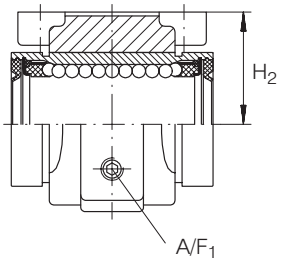
[1]) The tolerances are valid for series KGBA..PP AS only.
[2]) Dimension A_6 on diameter d.
[3]) For fixing screws to DIN 912-8.8 and spring washer to DIN 7 980.
[5]) The basic load ratings are only valid for hardened (670 to 840 HV) and ground shaft raceways.



KGBAS.PP AS



KGBAO..PP AS



KGBAO..PP AS

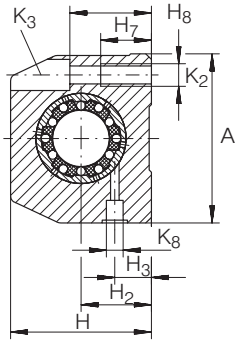
															INA LUBRICATION NIPPLE	BALL ROWS	BASIC LOAD RATINGS[5]		SHAFT DIAMETER
A_6[2]	C_1	C_2	C_3	D[1] h5	H_1	H_2[1]	H_3	H_8 −0.5	K_3[3]	K_5[3]	α Grad	A/F	A/F_1		T	NUMBER	dyn. C N	stat. C_0 N	
–	32	$23^{\pm 0,15}$	20	22	–	$18^{\pm 0,01}$	15	4,8	4,7	8	–	–	–		NIP A1	5	540	385	12
–	32	$23^{\pm 0.15}$	20	22	–	$18^{\pm 0.01}$	15	4.8	4.7	8	–	7	–		NIP A1	5	540	385	12
7.7	32	$23^{\pm 0.15}$	20	22	30.5	$18^{\pm 0.01}$	7.8	4.8	4.7	8	78	–	2		NIP A1	4	600	445	
–	35	$26^{\pm 0.15}$	22	26	–	$22^{\pm 0.01}$	15	5.4	4.7	8	–	–	–		NIP A1	5	710	530	16
–	35	$26^{\pm 0.15}$	22	26	–	$22^{\pm 0.01}$	15	5.4	4.7	8	–	7	–		NIP A1	5	710	530	
10.1	35	$26^{\pm 0.15}$	22	26	37	$22^{\pm 0.01}$	10	5.4	4.7	8	78	–	2.5		NIP A1	4	800	620	
–	42	$32^{\pm 0.15}$	28	32	–	$25^{\pm 0.01}$	21	6.7	4.7	8	–	–	–		NIP A1	6	1,570	1,230	20
–	42	$32^{\pm 0.15}$	28	32	–	$25^{\pm 0.01}$	21	6.7	4.7	8	–	7	–		NIP A1	6	1,570	1,230	
10	42	$32^{\pm 0.15}$	28	32	44.5	$25^{\pm 0.01}$	11	6.7	4.7	8	60	–	2.5		NIP A1	5	1,600	1,280	
–	54	$40^{\pm 0.2}$	40	40	–	$30^{\pm 0.01}$	23	7.8	5.7	10	–	–	–		NIP A1	6	2,800	2,220	25
–	54	$40^{\pm 0.2}$	40	40	–	$30^{\pm 0.01}$	23	7.8	5.7	10	–	8	–		NIP A1	6	2,800	2,220	
12.5	54	$40^{\pm 0.2}$	40	40	56	$30^{\pm 0.01}$	13	7.8	5.7	10	60	–	3		NIP A1	5	2,850	2,330	
–	60	$45^{\pm 0.2}$	48	47	–	$35^{\pm 0.01}$	25	8.7	6.8	11	–	–	–		NIP A2	6	3,600	2,850	30
–	60	$45^{\pm 0.2}$	48	47	–	$35^{\pm 0.01}$	25	8.7	6.8	11	–	10	–		NIP A2	6	3,600	2,850	
13.6	60	$45^{\pm 0.2}$	48	47	63.5	$35^{\pm 0.01}$	14	8.7	6.8	11	54	–	3		NIP A2	5	3,700	3,000	
–	78	$58^{\pm 0.2}$	56	62	–	$45^{\pm 0.01}$	30	11	9.2	15	–	–	–		NIP A2	6	6,000	4,400	40
–	78	$58^{\pm 0.2}$	56	62	–	$45^{\pm 0.01}$	30	11	9.2	15	–	13	–		NIP A2	6	6,000	4,400	
18.2	78	$58^{\pm 0.2}$	56	62	82.5	$45^{\pm 0.01}$	18	11	9.2	15	54	–	4		NIP A2	5	6,100	4,600	
–	70	$50^{\pm 0.2}$	72	75	–	$50^{\pm 0.015}$	34	12.5	9.2	15	–	–	–		NIP A2	6	8,700	6,300	50
–	70	$50^{\pm 0.2}$	72	75	–	$50^{\pm 0.015}$	34	12.5	9.2	15	–	13	–		NIP A2	6	8,700	6,300	
22.7	70	$50^{\pm 0.2}$	72	75	93	$50^{\pm 0.015}$	19	12.5	9.2	15	54	–	4		NIP A2	5	8,900	6,600	

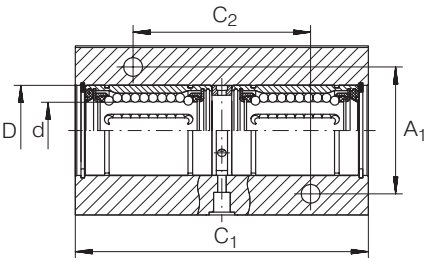
Linear Ball Bearing And Housing Units

KTB..B PP AS,

KTBO..PP AS SERIES

- Heavy Range
- Sealed, Greased, With Relubrication Facility





KTB..B PP AS

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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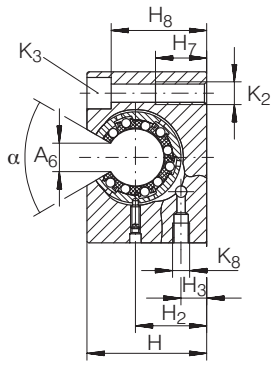
DIMENSION TABLE · Dimensions in mm

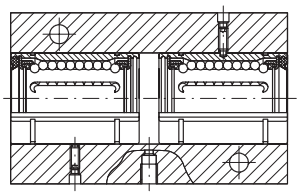
SHAFT DIAMETER	PART NUMBER		MASS	DIMENSIONS			MOUNTING DIMENSIONS				
			kg	d Deviations[1]	A	H	A_1	A_6[2]	C_1	C_2	D
12	KTB 12 B PP AS	–	0.31	$12^{+0.008}$	43	35	$30^{\pm 0.15}$	–	76	$40^{\pm 0.15}$	22
	–	KTBO 12 PP AS	0.26		42	30	$30^{\pm 0.15}$	7.7	76	$40^{\pm 0.15}$	22
16	KTB 16 B PP AS	–	0.46	$16^{+0.009}_{-0.001}$	53	42	$36^{\pm 0.15}$	–	84	$45^{\pm 0.15}$	26
	–	KTBO 16 PP AS	0.36		50	35	$36^{\pm 0.15}$	10.1	84	$45^{\pm 0.15}$	26
20	KTB 20 B PP AS	–	0.8	$20^{+0.009}_{-0.001}$	60	50	$45^{\pm 0.15}$	–	104	$55^{\pm 0.15}$	32
	–	KTBO 20 PP AS	0.62		60	42	$45^{\pm 0.15}$	10	104	$55^{\pm 0.15}$	32
25	KTB 25 B PP AS	–	1.49	$25^{+0.011}_{-0.001}$	78	60	$54^{\pm 0.15}$	–	130	$70^{\pm 0.2}$	40
	–	KTBO 25 PP AS	1.18		74	51	$54^{\pm 0.15}$	12.5	130	$70^{\pm 0.2}$	40
30	KTB 30 B PP AS	–	2.3	$30^{+0.011}_{-0.001}$	87	70	$62^{\pm 0.15}$	–	152	$85^{\pm 0.2}$	47
	–	KTBO 30 PP AS	1.84		84	60	$62^{\pm 0.15}$	13.6	152	$85^{\pm 0.2}$	47

1) The tolerances are valid for series KTB..B PP AS only.

2) Dimension A_6 on diameter d.

3) The basic load ratings are only valid for hardened (670 to 840 HV) and ground shaft raceways and uniform loading on both the linear ball bearings.





KTBO..PP AS

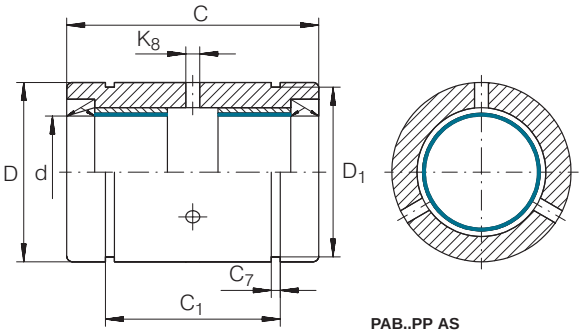
							K_3 FOR FIXING SCREWS		BASIC LOAD RATINGS[3]		SHAFT DIAMETER
H_2 ±0.015	H_3	H_7	H_8	K_2	K_8	α Grad	DIN 912	DIN 6 912	dyn. C N	stat. C_0 N	
18	10	13	28	M6	NIP A1	–	M5	–	880	770	12
18	6	13	24.5	M6	M6	78	–	M5	980	890	
22	12	13	35	M6	NIP A1	–	M5	–	1,150	1,060	16
22	8	13	29.5	M6	M6	78	–	M5	1,290	1,240	
25	13	18	37	M8	NIP A1	–	M6	–	2,550	2,450	20
25	9	18	35.5	M8	M6	60	–	M6	2,600	2,550	
30	15	22	49	M10	NIP A2	–	M8	–	4,550	4,450	25
30	9	22	43	M10	M8×1	60	–	M8	4,650	4,650	
35	16	26	52	M12	NIP A2	–	M10	–	5,900	5,700	30
35	11	26	50.5	M12	M8×1	54	–	M10	6,000	6,000	

Permaglide® Linear Plain Bearings

PAB..PP AS,

PABO..PP AS SERIES

- Plain Bearing Range
- Sealed, Greased, With Relubrication Facility



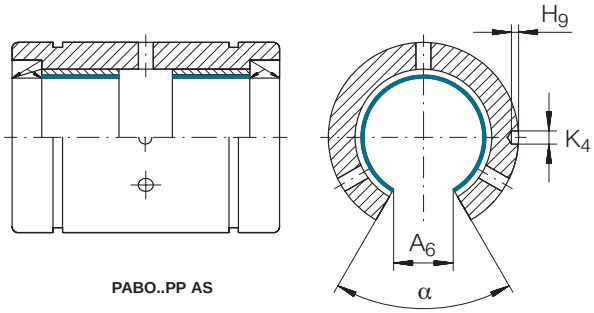
PAB..PP AS

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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DIMENSION TABLE · Dimensions in mm

SHAFT DIAMETER	PART NUMBER		MASS	DIMENSIONS		
				d	D[1]	C
			kg		h7	h12
12	PAB 1232 PP AS		0.026	12	22	32
		PABO 1232 PP AS	0.021	12	22	32
16	PAB 1636 PP AS		0.034	16	26	36
		PABO 1636 PP AS	0.028	16	26	36
20	PAB 2045 PP AS		0.068	20	32	45
		PABO 2045 PP AS	0.058	20	32	45
25	PAB 2558 PP AS		0.132	25	40	58
		PABO 2558 PP AS	0.113	25	40	58
30	PAB 3068 PP AS		0.169	30	47	68
		PABO 3068 PP AS	0.143	30	47	68
40	PAB 4080 PP AS		0.426	40	62	80
		PABO 4080 PP AS	0.362	40	62	80
50	PAB 50100 PP AS		0.773	50	75	100
		PABO 50100 PP AS	0.657	50	75	100

1) The tolerances are valid for series PAB..PP AS only.
2) Bores and grooves centered on bearing width C.
3) Groove dimensions suitable for circlips to DIN 471.
4) Dimension A_6 on diameter d.
5) The basic static load ratings stated here are not valid if the above elements are fitted in housings – as shown on the following pages.



PABO..PP AS

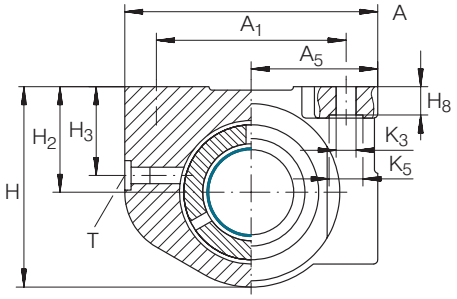
MOUNTING DIMENSIONS								BASIC LOAD RATINGS[5]	SHAFT DIAMETER
C_1[2] H13	C_7[3] H13	D_1	A_6[4]	H_9	K_4[3]	K_8[3] H13	α Grad	stat. C_0 N	
22.6	1.3	21	–	–	–	2.5	–	60,000	12
22.6	1.3	21	7.7	1.2	2.2	2.5	78	60,000	
24.6	1.3	24.9	–	–	–	2.5	–	96,000	16
24.6	1.3	24.9	10.1	1.2	2.2	2.5	78	96,000	
31.2	1.6	30.3	–	–	–	2.5	–	150,000	20
31.2	1.6	30.3	10	1.2	2.2	2.5	60	150,000	
43.7	1.85	37.5	–	–	–	2.5	–	250,000	25
43.7	1.85	37.5	12.5	1.5	3	2.5	60	250,000	
51.7	1.85	44.5	–	–	–	3	–	375,000	30
51.7	1.85	44.5	13.6	1.5	3	3	54	375 000	
60.3	2.15	59	–	–	–	3	–	600,000	40
60.3	2.15	59	18.2	1.5	3	3	54	600,000	
77.3	2.65	72	–	–	–	4	–	1,000,000	50
77.3	2.65	72	22.7	1.5	3	4	54	1,000,000	

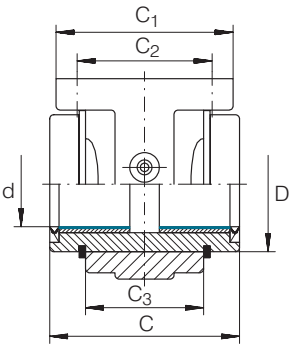
Permaglide® Linear Plain Bearing Units

PAGBA..PP AS,

PAGBAO..PP AS SERIES

- Plain Bearing Range
- Sealed, Greased, With Relubrication Facility





PAGBA..PP AS

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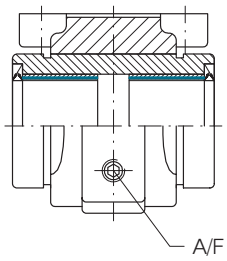
DIMENSION TABLE · Dimensions in mm

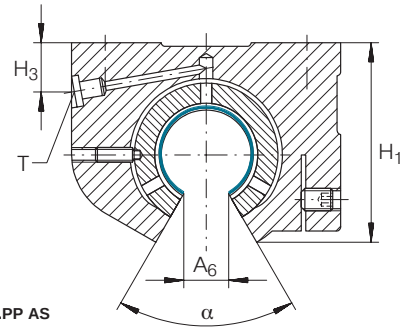
SHAFT DIAMETER	PART NUMBER		MASS	DIMENSIONS				MOUNTING DIMENSIONS		
				d	A	C	H	A_1	A_5	A_6 [1]
			kg			h12				
12	PAGBA 1232 PP AS	–	0.07	12	42	32	34	$32^{\pm 0.15}$	$21^{\pm 0.01}$	–
	–	PAGBAO 1232 PP AS	0.06	12	42	32	–	$32^{\pm 0.15}$	21	7.7
16	PAGBA 1636 PP AS	–	0.1	16	50	36	41	$40^{\pm 0.15}$	$25^{\pm 0.01}$	–
	–	PAGBAO 1636 PP AS	0.09	16	50	36	–	$40^{\pm 0.15}$	25	10.1
20	PAGBA 2045 PP AS	–	0.18	20	60	45	47.5	$45^{\pm 0.15}$	$30^{\pm 0.01}$	–
	–	PAGBAO 2045 PP AS	0.16	20	60	45	–	$45^{\pm 0.15}$	30	10
25	PAGBA 2558 PP AS	–	0.35	25	74	58	60	$60^{\pm 0.2}$	$37^{\pm 0.01}$	–
	–	PAGBAO 2558 PP AS	0.31	25	74	58	–	$60^{\pm 0.2}$	37	12.5
30	PAGBA 3068 PP AS	–	0.48	30	84	68	67	$68^{\pm 0.2}$	$42^{\pm 0.01}$	–
	–	PAGBAO 3068 PP AS	0.43	30	84	68	–	$68^{\pm 0.2}$	42	13.6
40	PAGBA 4080 PP AS	–	1.07	40	108	80	87	$86^{\pm 0.2}$	$54^{\pm 0.015}$	–
	–	PAGBAO 4080 PP AS	0.91	40	108	80	–	$86^{\pm 0.2}$	54	18.2
50	PAGBA 50100 PP AS	–	1.65	50	130	100	98	$108^{\pm 0.2}$	$65^{\pm 0.015}$	–
	–	PAGBAO 50100 PP AS	1.46	50	130	100	–	$108^{\pm 0.2}$	65	22.7

1) Dimension A_6 on diameter d.

2) The tolerances are valid for series PAGBA..PP AS only.

3) For fixing screws to DIN 912-8.8 and spring washer to DIN 7 980.

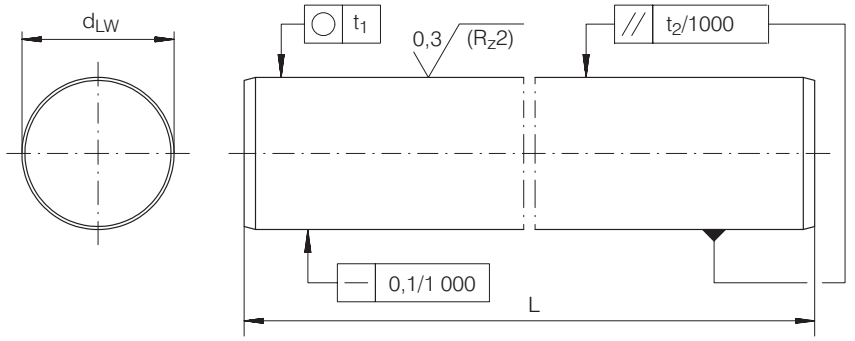




PAGBAO..PP AS

C_1	C_2	C_3	$D^{2)}$ h7	H_1	H_2	H_3	H_8 −0.5	$K_3^{3)}$	$K_5^{3)}$	A/F	α Grad	INA LUBRICATION NIPPLE[4)] T	SHAFT DIAMETER
32	$23^{\pm 0.15}$	20	22	–	$18^{\pm 0.01}$	15	4.8	4.7	8	–	–	NIP A1	12
32	$23^{\pm 0.15}$	20	22	30.5	18	7.8	4.8	4.7	8	2	78	NIP A1	
35	$26^{\pm 0.15}$	22	26	–	$22^{\pm 0.01}$	15	5.4	4.7	8	–	–	NIP A1	16
35	$26^{\pm 0.15}$	22	26	36.8	22	10	5.4	4.7	8	2.5	78	NIP A1	
42	$32^{\pm 0.15}$	28	32	–	$25^{\pm 0.01}$	21	6.7	4.7	8	–	–	NIP A1	20
42	$32^{\pm 0.15}$	28	32	44.5	25	11	6.7	4.7	8	2.5	60	NIP A1	
54	$40^{\pm 0.2}$	40	40	–	$30^{\pm 0.01}$	23	7.8	5.7	10	–	–	NIP A1	25
54	$40^{\pm 0.2}$	40	40	56	30	13	7.8	5.7	10	3	60	NIP A1	
60	$45^{\pm 0.2}$	48	47	–	$35^{\pm 0.01}$	25	8.7	6.8	11	–	–	NIP A2	30
60	$45^{\pm 0.2}$	48	47	63.5	35	14	8.7	6.8	11	3	54	NIP A2	
78	$58^{\pm 0.2}$	56	62	–	$45^{\pm 0.01}$	30	11	9.2	15	–	–	NIP A2	40
78	$58^{\pm 0.2}$	56	62	82.4	45	18	11	9.2	15	4	54	NIP A2	
70	$50^{\pm 0.2}$	72	75	–	$50^{\pm 0.015}$	34	12.5	9.2	15	–	–	NIP A2	50
70	$50^{\pm 0.2}$	72	75	92.8	50	19	12.5	9.2	15	4	54	NIP A2	

Shafts
W SERIES



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

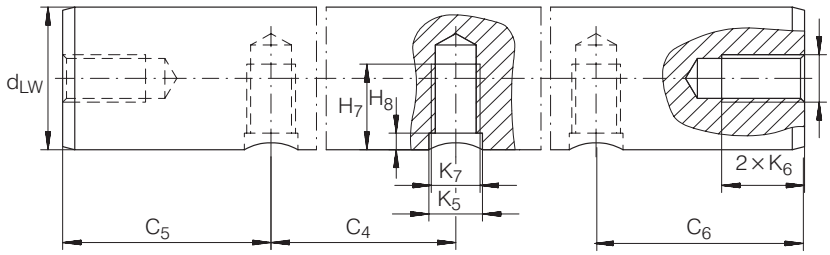
DIMENSION TABLE · Dimensions in mm

SHAFT DIAMETER d_{LW}	PART NUMBER	MASS kg/m	LENGTH L_{max}	TOLERANCES IN µm			ROUNDNESS t_1 µm	PARALLELISM t_2[2] µm	SURFACE HARDNESS DEPTH RHT[3] min.
				STANDARD TOLERANCE	SPECIAL TOLERANCES[1]				
				h6	j5	f7			
5	W 5	0.15	3,600	0–8	–	–	4	5	0.4
6	W 6	0.22	4,000	0–8	–	–	4	5	0.4
8	W 8	0.39	4,000	0–9	–	–	4	6	0.4
10	W 10	0.61	6,000	0–9	–	–	4	6	0.4
12	W 12	0.89	6,000	0–11	+5–3	–16–34	5	8	0.6
14	W 14	1.21	6,000	0–11	+5–3	–16–34	5	8	0.6
15	W 15	1.37	6,000	0–11	–	–16–34	5	8	0.6
16	W 16	1.57	6,000	0–11	+5–3	–16–34	5	8	0.6
18	W 18	1.98	6,000	0–11	–	–16–34	5	8	0.6
20	W 20	2.45	6,000	0–13	+5–4	–20–41	6	9	0.9
24	W 24	3.55	6,000	0–13	–	–	6	9	0.9
25	W 25	3.83	6,000	0–13	+5–4	–20–41	6	9	0.9
30	W 30	5.51	6,000	0–13	+5–4	–20–41	6	9	0.9
32	W 32	6.3	6,000	0–16	–	–25–50	7	11	1.5
40	W 40	9.8	6,000	0–16	+6–5	–	7	11	1.5
50	W 50	15.3	6,000	0–16	+6–5	–	7	11	1.5
60	W 60	22.1	6,000	0–19	–	–	8	13	2.2
80	W 80	39.2	6,000	0–19	–	–	8	13	2.2

[1]) Only for shafts made from quenched and tempered steel.
[2]) Measured diameter variation.
[3]) According to DIN 6 773, Part 3.

Recommended Threaded Holes

Recommended threaded holes for shafts W

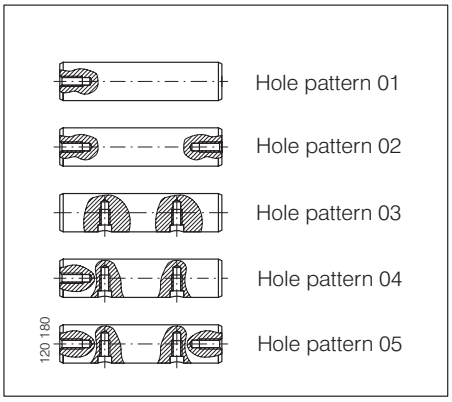


For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

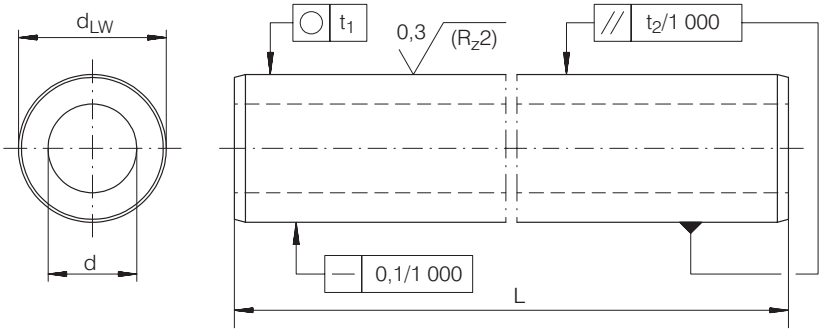
PART NUMBER[1)]	AXIAL THREAD										RADIAL THREAD								
											DIMENSIONS								
	K_6										C_4			C_{5min}, C_{6min}[2)] HOLE PATTERN		H_7	H_8	K_5	K_7
														03	04–05				
W 5																			
W 6																			
W 8	M3																		
W 10	M3	M4																	
W 12		M4	M5								75		120	10		8	2	5	M4
W 14		M4	M5	M6															
W 15			M5	M6	M8														
W 16			M5	M6	M8						75	100	150	10		9	2,5	6	M5
W 18				M6	M8	M10													
W 20													150	10		9	2.5	6	M5
				M6	M8	M10					75	100	150	15		11	3	7	M6
W 24					M8	M10	M12												
W 25													150	15	$3 \times K_6 + K_7$	11	3	7	M6
					M8	M10	M12				75	120	200	15		15	3	9	M8
W 30													150	15		11	3	7	M6
						M10	M12	M16			100	150	200	20		17	3.5	11	M10
W 32						M10	M12	M16											
W 40						M10	M12	M16			150	200	300	20		19	4	11	M10
						M10	M12	M16			100			20		21	4	13	M12
W 50													150	20		19	4	11	M10
							M12	M16	M20			200	300	20		21	4	13	M12
							M12	M16	M20		100			20		25	4	15	M14
W 60								M16	M20	M24									
W 80								M16	M20	M24									

[2)] The dimensions C_5 and C_6 are dependent on the length of the shaft.
The axial threaded holes should be taken into consideration when using hole patterns 04 and 05.



Shafts
WH SERIES

- Hollow shafts



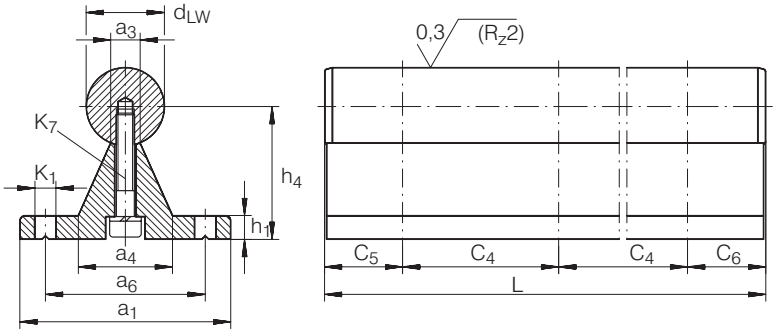
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

SHAFT DIAMETER d_{LW}	PART NUMBER	MASS kg/m	Length L	INSIDE DIAMETER d[1)]	TOLERANCES IN MM D h7	ROUNDNESS t_1 µm	PARALLELISM t_2[2)] µm	SURFACE HARDNESS DEPTH Rht[3)] min.
20	WH 20	1.25	6,000	14	0–21	6	9	0.9
25	WH 25	2.35	6,000	15.6	0–21	6	9	0.9
30	WH 30	3.5	6,000	18.2	0–21	6	9	0.9
40	WH 40	4.99	6,000	28.1	0–25	7	11	1.5
50	WH 50	9.97	6,000	29.7	0–25	7	11	1.5
60	WH 60	14.2	6,000	36	0–30	8	13	2.2
80	WH 80	19.5	6,000	56.9	0–30	8	13	2.2

1) Wall thickness tolerance of initial material: ±4%.
2) Measured diameter variation.
3) According to DIN 6 773. Part 3.

Shaft And Support Rail Units
TSWW, TSNW SERIES



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

SHAFT DIAMETER d_{LW}	PART NUMBER	MASS	DIMENSIONS			MOUNTING DIMENSIONS								
			a_1	h_4[1]	L[2]	a_3	a_4	a_6	C_4	C_5/C_6[3]	C_5/C_6[3]	h_1	K_1[4]	K_7
h6		kg/m		±0.02	±3					min.	max.			DIN 6 912
12	TSWW 12	1.67	40	22	6,000	6	19.5	29	120	20	114	5	4.5	M4 ×20
	TSNW 12	1.67	40	22	6,000	5.4	15	29	75	20	69	5	4.5	M4 ×20
16	TSWW 16	3.15	54	32	6,000	7.5	24.2	41	150	20	143	6	5.5	M5 ×30
	TSNW 16	2.95	45	26	6,000	7	19	33	100	20	93	5	5.5	M5 ×20
20	TSWW 20	4.03	54	34.02	6,000	7.5	24.2	41	150	20	143	6	5.5	M5 ×30
	TSNW 20	3.95	52	32	6,000	8.1	23	37	100	20	92	6	6.6	M6 ×25
25	TSWW 25	5.9	65	39.66	6,000	10	29.8	51	150	20	142	6	6.6	M6 ×35
	TSNW 25	5.6	57	36	6,000	10.3	26	42	120	20	110	6	6.6	M8 ×30
30	TSWW 30	7.58	65	42.19	6,000	10	29.8	51	150	20	142	6	6.6	M6 ×35
	TSNW 30	7.88	69	42	6,000	11	29	51	150	20	139	7	9	M10 ×35
40	TSWW 40	14.25	85	60	6,000	17	46	65	150	20	139	10	9	M10 ×50
	TSNW 40	12.83	73	50	6,000	15	36	55	200	20	189	8	9	M10 ×40
50	TSWW 50	19.75	85	65.05	6,000	17	46	65	150	20	139	10	9	M10 ×50
	TSNW 50	19.38	84	60	6,000	19	40	63	200	20	188	9	11	M12 ×45

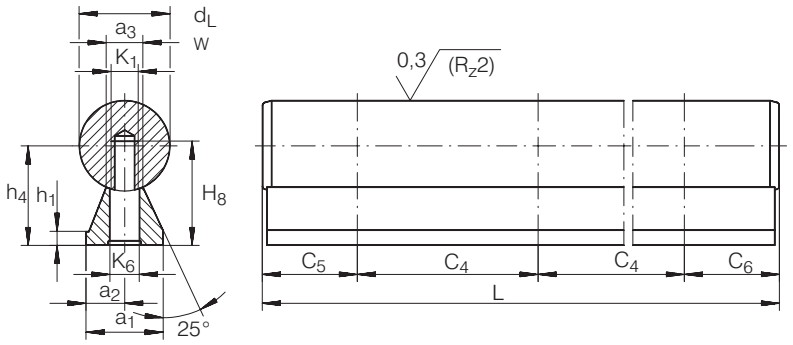
1) With reference to the nominal shaft diameter. measured while clamped.

2) Maximum length of single piece shaft and support rail units:
Depending on the length of the shaft and support rail unit,
the rail is composed of several individual sections.

3) The dimensions C_5 and C_6 are dependent on the length of the shaft and support rail unit.

4) TSWW: for fixing screws to DIN 912 or DIN 933 (TSWW 12, DIN 6 912)
and spring washer or washer to DIN 7 980 or DIN 125.
TSNW: for fixing screws to DIN 6 912 and spring washer to DIN 7 980.

Shaft And Support Rail Unit
TSUW SERIES



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

SHAFT DIAMETER d_{LW}	PART NUMBER	MASS	DIMENSIONS			MOUNTING DIMENSIONS								
			a_1	h_4[1]	L[2]	a_2[3]	a_3	C_4	C_5/C_6[4]	C_5/C_6[4]	h_1	K_1	K_6	H_8
h6		kg/m		±0.02	±3				min.	max.				
12	TSUW 12	1.1	11	14.5	6,000	5.5	5.4	75	20	70	3	M4	4.5	16
16	TSUW 16	1.88	14	18	6,000	7	7	75	20	70	3	M5	5.5	19
20	TSUW 20	2.92	17	22	6,000	8.5	8.1	75	20	69	3	M6	6.6	23
25	TSUW 25	4.42	21	26	6,000	10.5	10.3	75	20	68	3	M8	9	28.5
30	TSUW 30	6.22	23	30	6,000	11.5	11	100	20	92	3	M10	11	32
40	TSUW 40	11.03	30	39	6,000	15	15	100	20	91	4	M12	13.5	39.5
50	TSUW 50	16.98	35	46	6,000	17.5	19	100	20	90	5	M14	15.5	46

1) With reference to the nominal shaft diameter, measured while clamped.

2) Maximum length of single piece shaft and support rail units (TSUW 12: L = 1,600 ±1.2 mm);
Depending on the length of the shaft and support rail unit,
the rail is composed of several individual sections.

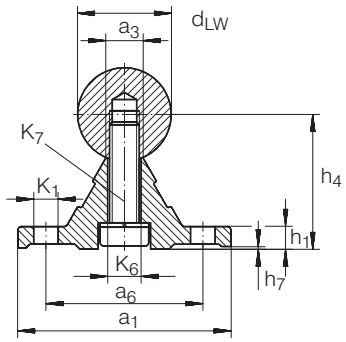
3) Available on request with a_2 ±0.02.

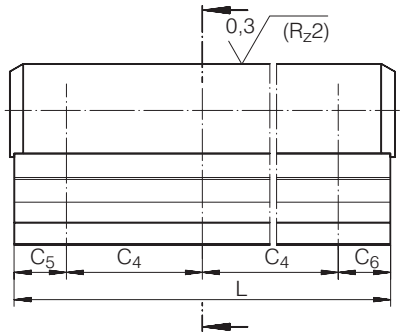
4) The dimensions C_5 and C_6 are dependent on the length of the shaft and support rail unit.

Shaft And Support Rail Units

TSNW..G4 d ≦ 25 mm,

TSNW..G5 d > 25 mm SERIES





For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

SHAFT DIAMETER d_{LW}	PART NUMBER	MASS	DIMENSIONS			MOUNTING DIMENSIONS										
			a_1	h_4 [1]	L [2]	a_3	a_6	C_4	C_5/C_6 [3]	C_5/C_6 [3]	h_1	h_7	K_1 [4]	K_6	K_7	ACCURACY CLASS [5]
h6		kg/m			±2				min.	max.					DIN 6 912	
12	TSNW 12 G4	1.6	40	$22^{\pm 0.1}$	4,000	5	29	75	20	69	5	0.2	4.5	4.5	M4 ×18	G4 0.03
16	TSNW 16 G4	2.5	45	$26^{\pm 0.1}$	4,000	6.8	33	100	20	93	5	0.2	5.5	5.5	M5 ×20	G4 0.03
20	TSNW 20 G4	3.8	52	$32^{\pm 0.1}$	4,000	7.8	37	100	20	92	6	0.2	6.6	6.6	M6 ×25	G4 0.03
25	TSNW 25 G4	5.3	57	$36^{\pm 0.1}$	4,000	9.8	42	120	20	110	6	0.3	6.6	9	M8 ×30	G4 0.03
30	TSNW 30 G5	7.5	69	$42^{\pm 0.15}$	4,000	11	51	150	20	139	7	0.3	9	11	M10×35	G5 0.04
40	TSNW 40 G5	12.4	73	$50^{\pm 0.15}$	4,000	14.5	55	200	20	189	8	0.3	9	11	M10×40	G5 0.04
50	TSNW 50 G5	18.9	84	$60^{\pm 0.15}$	4,000	18.5	63	200	20	188	9	0.3	11	13.5	M12×45	G5 0.05

1) With reference to the nominal shaft diameter, measured while clamped.

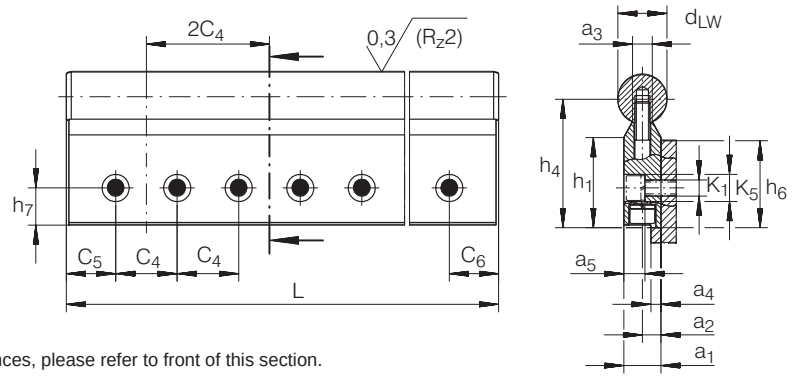
2) Maximum length of single piece shaft and support rail units:
the shaft is longer than the support rail by 2.5 mm at each end.

3) The dimensions C_5 and C_6 are dependent on the length of the shaft and support rail unit.

4) For fixing screws to DIN 6 912 and spring washer to DIN 7 980.

5) Maximum variation of dimension h_4, measured on the same rail over a distance of 1,000 mm.

Shaft And Support Rail Unit
TSSW SERIES



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

SHAFT DIAMETER d_{LW}	PART NUMBER	MASS	DIMENSIONS			MOUNTING DIMENSIONS											
			a_1	h_4[1]	L[2]	a_2[1]	a_3	a_4	a_5[3]	C_4	C_5/C_6[4]	C_5/C_6[4]	h_1	h_6	h_7	K_1[3]	K_5[3]
h6		kg/m		±0.01	±3	±0.012					min.	max.			±0.15		
20	TSSW 20	4.12	15	52	6,000	7.5	8.1	4	8.5	50	20	42	36.5	30	15	6.6	11
25	TSSW 25	5.98	20	62	6,000	10	10.3	5.5	11	60	20	50	38.5	36	18	9	15
30	TSSW 30	8.68	25	72	6,000	12.5	11	7	13.5	75	20	64	43	42	21	11	18
40	TSSW 40	14.3	30	88	6,000	15	15	8.5	16	100	20	88	53	50	25	13.5	20
50	TSSW 50	21.47	35	105	6,000	17.5	19	9	18.5	100	20	86	64.5	60	30	15.5	24

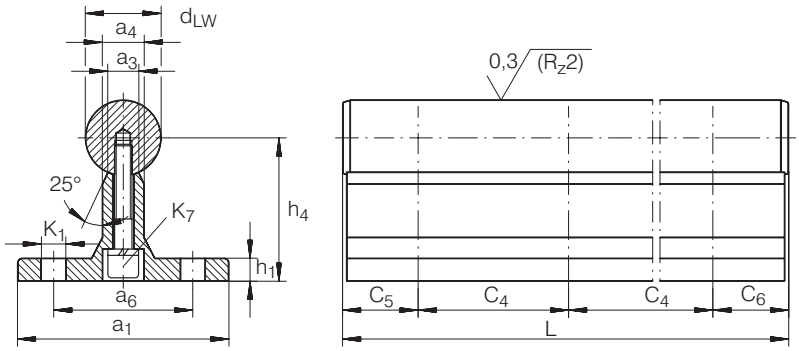
1) With reference to the nominal shaft diameter, measured while clamped.

2) Maximum length of single piece shaft and support rail units.
Depending on the length of the shaft and support rail unit, the rail is composed of several individual sections.

3) For fixing screws to DIN 912-8.8 and spring washer to DIN 7 980.

4) The dimensions C_5 and C_6 are dependent on the length of the shaft and support rail unit.

Shaft And Support Rail Unit
TSWWA SERIES



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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DIMENSION TABLE · Dimensions in mm

SHAFT DIAMETER d_{LW}	PART NUMBER	MASS	DIMENSIONS			MOUNTING DIMENSIONS							
			a_1	h_4[1]	L[2]	a_3	a_4	a_6	C_4	C_5/C_6[3]	C_5/C_6[3]	h_1	K_1[4]
h6		kg/m		±0.02	±3					min.	max.		
12	TSWWA 12	1.93	43	28	6,000	5.4	9	29	75	20	69	5	4.5
16	TSWWA 16	2.8	48	30	6,000	7	10	33	100	20	93	5	5.5
20	TSWWA 20	4.12	56	38	6,000	8.1	11	37	100	20	92	6	6.6
25	TSWWA 25	5.83	60	42	6,000	10.3	14	42	120	20	110	6	6.6
30	TSWWA 30	8.5	74	53	6,000	11	14	51	150	20	139	8	9
40	TSWWA 40	13.33	78	60	6,000	15	18	55	200	20	189	8	9
50	TSWWA 50	20.33	90	75	6,000	19	22	63	200	20	188	10	11

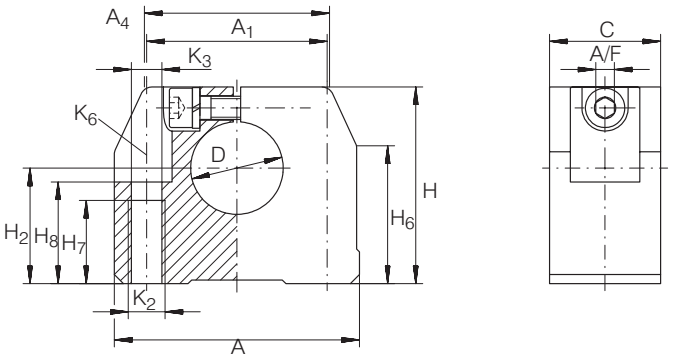
1) With reference to the nominal shaft diameter, measured while clamped.

2) Maximum length of single piece shaft and support rail units.
Depending on the length of the shaft and support rail unit, the rail is composed of several individual sections.

3) The dimensions C_5 and C_6 are dependent on the length of the shaft and support rail unit.

4) For fixing screws to DIN 912 or DIN 933
and spring washer or washer to DIN 7 980 or DIN 125.

Shaft Support Blocks
GWH..B SERIES



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

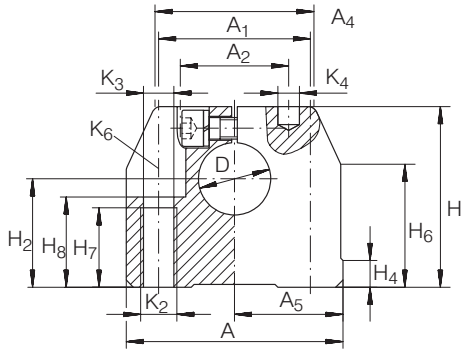
DIMENSION TABLE · Dimensions in mm

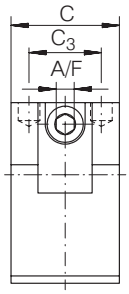
SHAFT DIAMETER	PART NUMBER	MASS	DIMENSIONS				MOUNTING DIMENSIONS									
			D	A	C	H	A_1	A_4	H_2	H_6	H_7	H_8	K_2	K_3[1)]	K_6[1)]	A/F
		kg	H8				±0.15		±0.01							
6	GWH 06 B	0.03	6	32	16	27	22	25	15	19.5	11	13	M5	4.3	M4	2.5
8	GWH 08 B	0.03	8	32	16	27	22	25	16	19.5	11	13	M5	4.3	M4	2.5
10	GWH 10 B	0.05	10	40	18	33	27	32	18	24	13	16	M6	5.3	M5	3
12	GWH 12 B	0.05	12	40	18	33	27	32	19	24	13	16	M6	5.3	M5	3
14	GWH 14 B	0.07	14	43	20	36.5	32	34	20	25.5	13	18	M6	5.3	M5	3
16	GWH 16 B	0.07	16	43	20	36.5	32	34	22	25.5	13	18	M6	5.3	M5	3
20	GWH 20 B	0.12	20	53	24	42.5	39	40	25	28	18	22	M8	6.6	M6	4
25	GWH 25 B	0.17	25	60	28	52.5	44	44	31	33	22	26	M10	8.4	M8	5
30	GWH 30 B	0.22	30	67	30	60	49	49.5	34	41.5	22	29	M10	8.4	M8	5
40	GWH 40 B	0.48	40	87	40	79.5	66	63	42	44.5	26	38	M12	10.5	M10	6
50	GWH 50 B	0.82	50	103	50	92	80	74	50	61	34	46	M16	13.5	M12	8

In the interim, shaft support blocks GWH..B with profile grooves will still be supplied.

[1)] For fixing screws to DIN 912-8.8 and spring washer to DIN 7980.

Shaft Support Blocks
GWN..B SERIES





For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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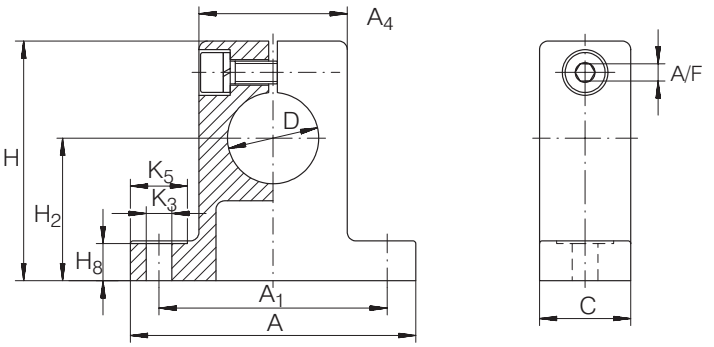
DIMENSION TABLE · Dimensions in mm

SHAFT DIAMETER	PART NUMBER	MASS	DIMENSIONS				MOUNTING DIMENSIONS													
			D	A	C	H	A_1	A_2	A_4	A_5	C_3	H_2	H_4	H_6	H_7	H_8	K_2	K_3	K_4	K_6 [1]	A/F
		kg	H8							±0.01		±0.01									
12	GWN 12 B	0.06	12	43	20	35	$30^{\pm 0.15}$	20	34	21.5	13	20	5.5	26.5	13	16.5	M6	5.3	4	M5	3
16	GWN 16 B	0.1	16	53	24	42	$38^{\pm 0.15}$	26	40	26.5	16	25	7	29.5	18	21	M8	6.6	5	M6	4
20	GWN 20 B	0.17	20	60	30	50	$42^{\pm 0.15}$	30	44	30	20	30	7.5	34	22	25	M10	8.4	6	M8	5
25	GWN 25 B	0.33	25	78	38	60	$56^{\pm 0.15}$	40	59.5	39	25	35	8.5	41.5	26	30	M12	10.5	8	M10	6
30	GWN 30 B	0.45	30	87	40	70	$64^{\pm 0.15}$	45	63	43.5	26	40	9.5	46	26	34	M12	10.5	8	M10	6
40	GWN 40 B	0.85	40	108	48	90	$82^{\pm 0.15}$	65	76	54	32	50	11	57.5	34	44	M16	13.5	10	M12	8
50	GWN 50 B	1.4	50	132	58	105	$100^{\pm 0.2}$	70	90	66	36	60	11	62	43	49	M20	17.5	12	M16	10

In the interim, shaft support blocks GWN..B with profile grooves will still be supplied.

[1]) For fixing screws to DIN 912-8.8 and spring washer to DIN 7 980.

Shaft Support Blocks
GW, GWA SERIES



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

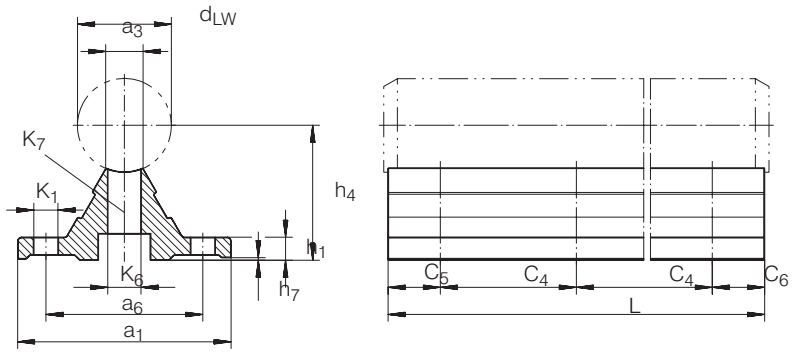
DIMENSION TABLE · Dimensions in mm

SHAFT DIAMETER	PART NUMBER	MASS	DIMENSIONS				MOUNTING DIMENSIONS						
			D	A	C	H	A_1	A_4	H_2 ±0.015	H_8	K_3[1)]	K_5[1)]	A/F
		kg											
10	GW 10	0.03	10	37	11	30	$28^{\pm 0.15}$	18	17	5	3.4	8	2.5
	GWA 10	0.03	10	37	11	30	$28^{\pm 0.15}$	18	17	5	4.5	9	2.5
12	GW 12	0.04	12	42	12	35	$32^{\pm 0.15}$	20	20	5.5	4.5	10	3
	GWA 12	0.04	12	42	12	35	$32^{\pm 0.15}$	20	20	5.5	5.5	11	3
14	GW 14	0.06	14	46	14	38	$36^{\pm 0.15}$	23	22	6	4.5	10	3
	GWA 14	0.06	14	46	14	38	$36^{\pm 0.15}$	23	22	6	5.5	11	3
16	GW 16	0.08	16	50	16	42	$40^{\pm 0.15}$	26	25	6.5	4.5	10	3
	GWA 16	0.08	16	50	16	42	$40^{\pm 0.15}$	26	25	6.5	5.5	11	3
20	GW 20	0.15	20	60	20	50	$45^{\pm 0.15}$	32	30	7.5	4.5	10	3
	GWA 20	0.15	20	60	20	50	$45^{\pm 0.15}$	32	30	8	5.5	11	3
25	GW 25	0.26	25	74	25	58	$60^{\pm 0.15}$	38	35	8.5	5.5	11	4
	GWA 25	0.26	25	74	25	58	$60^{\pm 0.15}$	38	35	9	6.6	13	4
30	GW 30	0.38	30	84	28	68	$68^{\pm 0.2}$	45	40	9.5	6.6	13	5
	GWA 30	0.38	30	84	28	68	$68^{\pm 0.2}$	45	40	10	9	18	5
40	GW 40	0.67	40	108	32	86	$86^{\pm 0.2}$	56	50	12	9	18	6
	GWA 40	0.67	40	108	32	86	$86^{\pm 0.2}$	56	50	12	11	22	6
50	GW 50	1.38	50	130	40	100	$108^{\pm 0.2}$	80	60	14	9	18	6
	GWA 50	1.38	50	130	40	100	$108^{\pm 0.2}$	80	60	14	11	22	6

[1)] For fixing screws to DIN 912-8.8 and spring washer to DIN 7 980.

Support Rails

TSN..G G4 d ≦ 25 mm,
TSN..G G5 d > 25 mm,
TSN..G4 d ≦ 25 mm,
TSN..G5 d > 25 mm SERIES



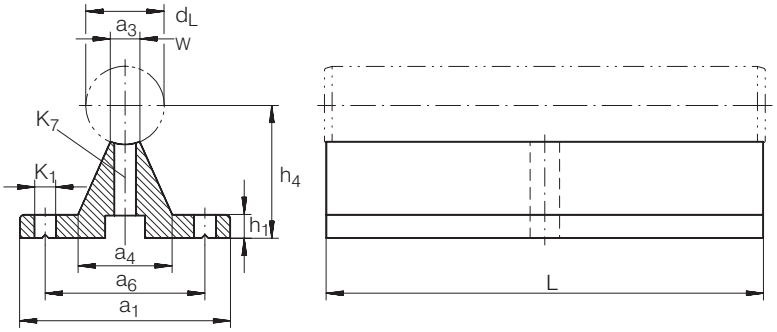
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

SHAFT DIAMETER d_{LW}	PART NUMBER	MASS	DIMENSIONS			MOUNTING DIMENSIONS										
			a_1	h_4 [1]	L [2]	a_3	a_6	C_4	C_5/C_6 [3]		h_1	h_7	K_1 [4]	K_6	K_7	ACCURACY CLASS [5]
h6		kg/m			±2				min.	max.					DIN 6912	
12	TSN 12 G G4	0.72	40	$22^{\pm 0.1}$	4,000	5	29	75	20	69	5	0.2	4.5	4.5	M4 ×18	G4 0.03
	TSN 12 G4	0.72	40	$22^{\pm 0.1}$	4,000	5	–	–	–	–	5	0.2	–	–	M4 ×18	G4 0.03
16	TSN 16 G G4	0.88	45	$26^{\pm 0.1}$	4,000	6.8	33	100	20	93	5	0.2	5.5	5.5	M5 ×20	G4 0.03
	TSN 16 G4	0.93	45	$26^{\pm 0.1}$	4,000	6.8	–	–	–	–	5	0.2	–	–	M5 ×20	G4 0.03
20	TSN 20 G G4	1.28	52	$32^{\pm 0.1}$	4,000	7.8	37	100	20	92	6	0.2	6.6	6.6	M6 ×25	G4 0.03
	TSN 20 G4	1.35	52	$32^{\pm 0.1}$	4,000	7.8	–	–	–	–	6	0.2	–	–	M6 ×25	G4 0.03
25	TSN 25 G G4	1.43	57	$36^{\pm 0.1}$	4,000	9.8	42	120	20	110	6	0.3	6.6	9	M8 ×30	G4 0.03
	TSN 25 G4	1.47	57	$36^{\pm 0.1}$	4,000	9.8	–	–	–	–	6	0.3	–	–	M8 ×30	G4 0.03
30	TSN 30 G G5	1.9	69	$42^{\pm 0.15}$	4,000	11	51	150	20	119	7	0.3	9	11	M10×35	G5 0.04
	TSN 30 G5	1.99	69	$42^{\pm 0.15}$	4,000	11	–	–	–	–	7	0.3	–	–	M10×35	G5 0.04
40	TSN 40 G G5	2.53	73	$50^{\pm 0.15}$	4,000	14.5	55	200	20	189	8	0.3	9	11	M10×40	G5 0.04
	TSN 40 G5	2.6	73	$50^{\pm 0.15}$	4,000	14.5	–	–	–	–	8	0.3	–	–	M10×40	G5 0.04
50	TSN 50 G G5	3.46	84	$60^{\pm 0.15}$	4,000	18.5	63	200	20	188	9	0.3	11	13.5	M12×45	G5 0.05
	TSN 50 G5	3.6	84	$60^{\pm 0.15}$	4,000	18.5	–	–	–	–	9	0.3	–	–	M12×45	G5 0.05

1) With reference to the nominal shaft diameter, measured while clamped.
2) Maximum length of support rail.
3) The dimensions C_5 and C_6 are dependent on the length of the shaft and support rail unit.
4) For fixing screws to DIN 6 912 and spring washer to DIN 7 980.
5) Maximum variation of dimension h_4, measured on the same rail over a distance of 1,000 mm.

Support Rails
TSN..G SERIES



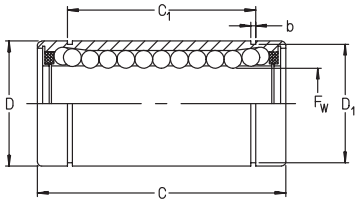
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

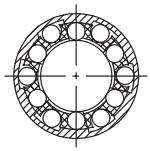
DIMENSION TABLE · Dimensions in mm

SHAFT DIAMETER d_{LW} h6	PART NUMBER	MASS kg	DIMENSIONS		MOUNTING DIMENSIONS					
			a_1	h_4 [1]	a_3	a_6	L	h_1	K_1 [2]	K_7 DIN 6 912
12	TSN 1250 G	0.04	40	$22^{\pm 0.02}$	5.4	29	50	5	4.5	M4 ×20
16	TSN 1660 G	0.07	45	$26^{\pm 0.02}$	7	33	60	5	5.5	M5 ×20
20	TSN 2070 G	0.1	52	$32^{\pm 0.02}$	8.1	37	70	6	6.6	M6 ×25
25	TSN 2580 G	0.15	57	$36^{\pm 0.02}$	10.3	42	80	6	6.6	M8 ×30
30	TSN 3090 G	0.19	69	$42^{\pm 0.02}$	11	51	90	7	9	M10×35
40	TSN 40120 G	0.3	73	$50^{\pm 0.02}$	15	55	120	8	9	M10×40
50	TSN 50150 G	0.6	84	$60^{\pm 0.02}$	19	63	150	9	11	M12×45

[1] With reference to the nominal shaft diameter, measured while clamped.
[2] For fixing screws to DIN 6 912 and spring washer to DIN 7 980.

Linear Ball Bearings
KBZ..(PP) SERIES



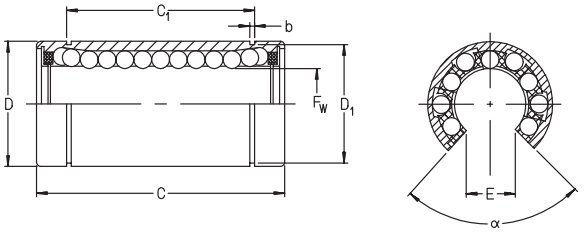


For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

PART NUMBER576	SEAL SUFFIX	SHAFT DIA. inch	WGT. lbs.	F_w inch	D inch	C inch	D_1 inch	b inch	C_1 inch	NO. BALL ROWS	LOAD RATINGS dyn. lbf.
KBZ 04	PP	1/4	0.02	0.250	0.500	0.750	0.469	0.039	0.511	4	48
KBZ 06	PP	3/8	0.03	0.375	0.625	0.875	0.588	0.039	0.636	4	54
KBZ 08	PP	1/2	0.08	0.500	0.875	1.250	0.821	0.046	0.963	4	158
KBZ 10	PP	5/8	0.17	0.625	1.125	1.500	1.059	0.056	1.104	4	231
KBZ 12	PP	3/4	0.21	0.750	1.250	1.625	1.176	0.056	1.166	5	287
KBZ 16	PP	1	0.66	1.000	1.563	2.250	1.469	0.068	1.755	6	417
KBZ 20	PP	1–1/4	0.97	1.250	2.000	2.625	1.886	0.068	2.005	6	668
KBZ 24	PP	1–1/2	1.48	1.500	2.375	3.000	2.239	0.086	2.412	6	972
KBZ 32	PP	2	2.51	2.000	3.000	4.000	2.838	0.103	3.192	6	1800

The dynamic load rating is based on a travel life expectancy of 2×10^6 inches.

Linear Ball Bearings
KBZ..OP (PP) SERIES

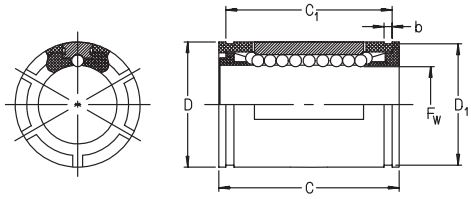


For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

PART NUMBER	SEAL SUFFIX	SHAFT DIA. inch	WGT. lbs.	F_w Nom. Dim. inch	D Nom. Dim. inch	C Nom. Dim. inch	D_1 inch	b inch	C_1 Nom. Dim. inch	E inch	a deg	NO. BALL ROWS	LOAD RATINGS dyn. lbf.
KBZ 08 OP	PP	1/2	0.06	0.500	0.875	1.250	0.821	0.046	0.963	0.313	80	3	158
KBZ 10 OP	PP	5/8	0.13	0.625	1.125	1.500	1.059	0.056	1.104	0.375	80	3	231
KBZ 12 OP	PP	3/4	0.17	0.750	1.250	1.625	1.176	0.056	1.166	0.438	60	4	259
KBZ 16 OP	PP	1	0.37	1.000	1.563	2.250	1.469	0.068	1.755	0.563	50	5	346
KBZ 20 OP	PP	1–1/4	1.26	1.250	2.000	2.625	1.886	0.068	2.005	0.625	50	5	555
KBZ 24 OP	PP	1–1/2	1.26	1.500	2.375	3.000	2.239	0.086	2.412	0.750	50	5	817
KBZ 32 OP	PP	2	2.16	2.000	3.000	4.000	2.838	0.103	3.192	1.000	50	5	1490

The dynamic load rating is based on a travel life expectancy of 2×10^6 inches.

Self Aligning Linear Ball Bearings
KNZ..(PP) SERIES

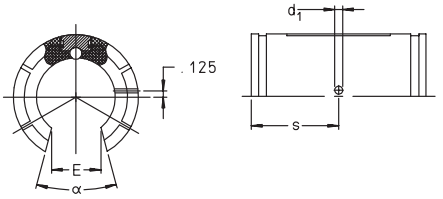


For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

PART NUMBER	SEAL SUFFIX	SHAFT DIA. inch	WGT. lbs.	F_w inch	D inch	C inch	D_1 inch	b inch	C_1 inch	NO. BALL ROWS	LOAD RATINGS dyn. lbf.	LOAD RATINGS stat. lbf.
KNZ 04	PP	1/4	0.008	0.250	0.500	0.750	0.469	0.039	0.515	4	50	30
KNZ 06	PP	3/8	0.013	0.375	0.625	0.875	0.588	0.039	0.703	4	80	40
KNZ 08	PP	1/2	0.042	0.500	0.875	1.250	0.821	0.046	1.032	4	200	110
KNZ 10	PP	5/8	0.101	0.625	1.125	1.500	1.059	0.056	1.112	5	340	190
KNZ 12	PP	3/4	0.123	0.750	1.250	1.625	1.176	0.056	1.272	6	480	270
KNZ 16	PP	1	0.265	1.000	1.563	2.250	1.469	0.068	1.886	6	840	490
KNZ 20	PP	1–1/4	0.485	1.250	2.000	2.625	1.886	0.068	2.011	6	1270	710
KNZ 24	PP	1–1/2	0.750	1.500	2.375	3.000	2.239	0.086	2.422	6	1600	850
KNZ 32	PP	2	1.400	2.000	3.000	4.000	2.838	0.103	3.206	6	2600	1460

The dynamic load rating is based on a travel life expectancy of 2×10^6 inches.

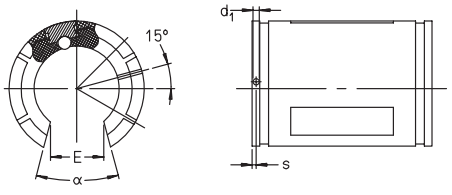
Self Aligning Linear Ball Bearings
KNZ..OP (PP) SERIES



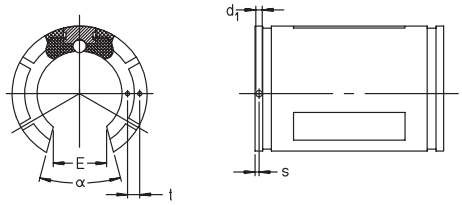
KNZ 08 OP

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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PART NUMBER	SEAL SUFFIX	SHAFT DIA. inch	WGT. lbs.	F_w inch	D inch	C inch	D_1 inch	b inch	C_1 inch	C_2 inch	E inch	a deg	d_1 inch	t inch	s inch	NO. BALL ROWS	LOAD RTGS. dyn. lbf.	LOAD RTGS. stat. lbf.
KNZ 08 OP	PP	1/2	0.033	0.500	0.875	1.250	0.821	0.046	1.032	0.063	0.313	30	0.136	—	0.625	3	200	110
KNZ 10 OP	PP	5/8	0.082	0.625	1.125	1.500	1.059	0.056	1.112	0.125	0.375	30	0.105	0.039	0.125	4	390	230
KNZ 12 OP	PP	3/4	0.101	0.750	1.250	1.625	1.176	0.056	1.272	0.125	0.438	30	0.136	0.059	0.125	5	480	280
KNZ 16 OP	PP	1	0.220	1.000	1.563	2.250	1.469	0.068	1.886	0.125	0.563	30	0.136	0.047	0.125	5	870	500
KNZ 20 OP	PP	1–1/4	0.400	1.250	2.000	2.625	1.886	0.068	2.011	0.188	0.625	30	0.201	0.090	0.188	5	1300	730
KNZ 24 OP	PP	1–1/2	0.620	1.500	2.375	3.000	2.239	0.086	2.422	0.188	0.750	30	0.201	0.090	0.188	5	1630	870
KNZ 32 OP	PP	2	1.158	2.000	3.000	4.000	2.838	0.103	3.206	0.312	1.000	30	0.265	—	0.312	5	2650	1490

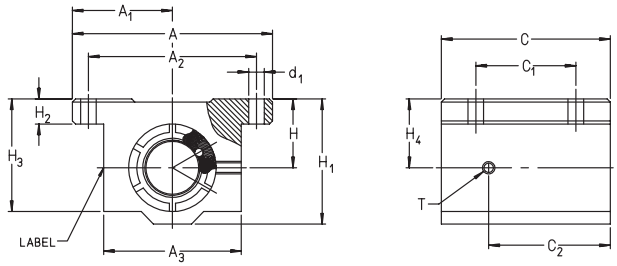


KNZ 10 OP



KNZ 12-32 OP

Self Aligning Mounted Units
KGNZ..PP SERIES

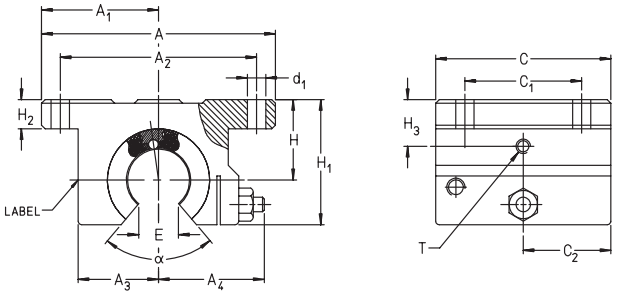


For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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PART NUMBER	SEAL SUFFIX	SHAFT DIA. inch	WGT. lbs.	d inch	A inch	C inch	A_1 ±.001 inch	H ±.001 inch	A_3 inch	H_1 inch	H_2 inch
KGNZ 04	PP	1/4	0.1	0.25	1.63	1.188	0.813	0.437	1.000	0.813	0.188
KGNZ 06	PP	3/8	0.14	0.375	1.75	1.313	0.875	0.500	1.125	0.938	0.188
KGNZ 08	PP	1/2	0.29	0.500	2.00	1.688	1.000	0.687	1.375	1.250	0.250
KGNZ 10	PP	5/8	0.53	0.625	2.50	1.938	1.250	0.875	1.750	1.625	0.281
KGNZ 12	PP	3/4	0.64	0.750	2.75	2.063	1.375	0.937	1.875	1.750	0.313
KGNZ 16	PP	1	1.36	1.000	3.25	2.813	1.625	1.187	2.375	2.188	0.375
KGNZ 20	PP	1–1/4	2.86	1.250	4.00	3.625	2.000	1.500	3.000	2.813	0.437
KGNZ 24	PP	1–1/2	4.19	1.500	4.75	4.000	2.375	1.750	3.500	3.250	0.500
KGNZ 32	PP	2	7.92	2.000	6.00	5.000	3.000	2.125	4.500	4.063	0.625

PART NUMBER	SEAL SUFFIX	SHAFT DIA. inch	H_3 inch	C_2 inch	H_4 inch	T inch	A_2 ±.01 inch	C_1 ±.01 inch	d_1 inch	DYN. LOAD C lbf	STAT. LOAD C_0 lbf
KGNZ 04	PP	1/4	0.750	0.590	0.437	NIP A1	1.312	0.750	0.156	50	30
KGNZ 06	PP	3/8	0.875	0.660	0.500	NIP A1	1.437	0.875	0.156	80	40
KGNZ 08	PP	1/2	1.125	0.844	0.690	NIP A1	1.688	1.000	0.156	200	110
KGNZ 10	PP	5/8	1.437	1.260	0.700	1/4–28	2.125	1.125	0.188	340	190
KGNZ 12	PP	3/4	1.563	1.340	0.937	1/4–28	2.375	1.250	0.188	480	270
KGNZ 16	PP	1	1.938	1.950	1.187	1/4–28	2.875	1.750	0.218	840	490
KGNZ 20	PP	1–1/4	2.500	2.430	1.500	1/4–28	3.500	2.000	0.218	1270	710
KGNZ 24	PP	1–1/2	2.875	2.750	1.750	1/4–28	4.125	2.500	0.281	1600	850
KGNZ 32	PP	2	3.625	3.420	2.125	1/4–28	5.250	3.250	0.406	2600	1460

Self Aligning Mounted Units
KGNZ..OP PP SERIES

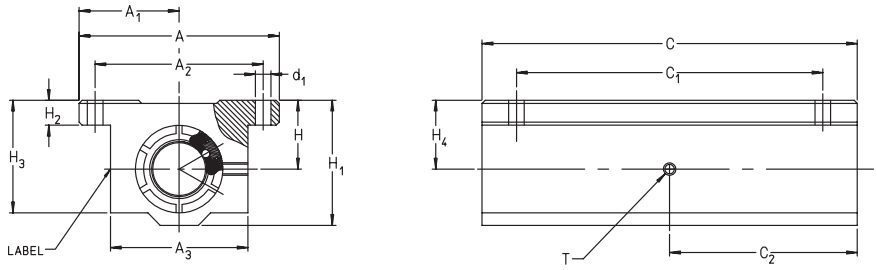


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PART NUMBER	SEAL SUFFIX	SHAFT DIA. inch	WGT. lbs.	d inch	A inch	C inch	A_1 ±.001 inch	H ±.001 inch	A_3 inch	A_4 inch	H_1 inch	H_2 inch
KGNZ OP 08	PP	1/2	0.22	0.500	2.000	1.500	1.000	0.687	0.688	0.905	1.100	0.250
KGNZ OP 10	PP	5/8	0.41	0.625	2.500	1.750	1.250	0.875	0.875	1.095	1.375	0.281
KGNZ OP 12	PP	3/4	0.52	0.750	2.750	1.875	1.375	0.937	0.937	1.161	1.535	0.313
KGNZ OP 16	PP	1	1.17	1.000	3.250	2.625	1.625	1.187	1.188	1.457	1.975	0.375
KGNZ OP 20	PP	1–1/4	2.38	1.250	4.000	3.375	2.000	1.500	1.500	1.831	2.485	0.437
KGNZ OP 24	PP	1–1/2	3.57	1.500	4.750	3.750	2.375	1.750	1.750	2.087	2.910	0.500
KGNZ OP 32	PP	2	6.38	2.000	6.000	4.750	3.000	2.125	2.250	2.638	3.660	0.625

PART NUMBER	SEAL SUFFIX	SHAFT DIA. inch	H_3 inch	C_2 inch	T inch	E inch	∝ deg	A_2 ±.01 inch	C_1 ±.01 inch	d_1 inch	DYN. LOAD C lbf	STAT. LOAD C_0 lbf
KGNZ OP 08	PP	1/2	0.370	0.520	NIP A1	0.313	30	1.688	1.00	0.156	200	110
KGNZ OP 10	PP	5/8	0.450	0.875	1/4-28	0.375	30	2.125	1.13	0.188	390	230
KGNZ OP 12	PP	3/4	0.510	0.937	1/4-28	0.438	30	2.375	1.25	0.188	480	280
KGNZ OP 16	PP	1	0.730	1.312	1/4-28	0.563	30	2.875	1.75	0.218	870	500
KGNZ OP 20	PP	1–1/4	0.800	1.688	1/4-28	0.625	30	3.500	2.00	0.218	1300	730
KGNZ OP 24	PP	1–1/2	0.840	1.875	1/4-28	0.750	30	4.125	2.50	0.281	1630	870
KGNZ OP 32	PP	2	1.100	2.375	1/4-28	1.000	30	5.250	3.25	0.406	2650	1490

Self Aligning
Tandem Mounted Units
KTNZ..PP SERIES

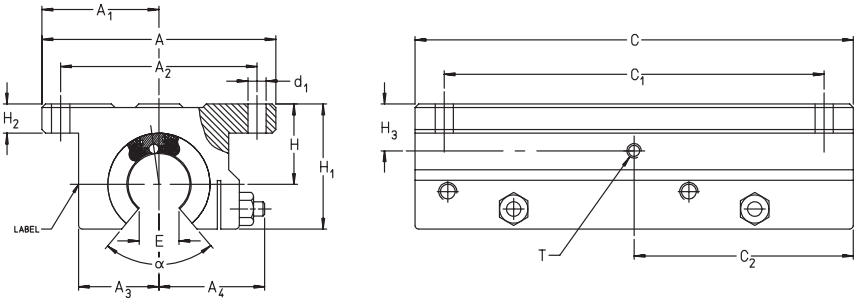


For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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PART NUMBER	SEAL SUFFIX	SHAFT DIA. inch	WGT. lbs.	d inch	A inch	C inch	A_1 ±.001 inch	H ±.001 inch	A_3 inch	H_1 inch	H_2 inch
KTNZ 04	PP	1/4	0.21	0.250	1.63	2.50	0.813	0.437	1.000	0.813	0.188
KTNZ 06	PP	3/8	0.27	0.375	1.75	2.75	0.875	0.500	1.125	0.938	0.188
KTNZ 08	PP	1/2	0.51	0.500	2.00	3.50	1.000	0.687	1.375	1.250	0.250
KTNZ 10	PP	5/8	0.97	0.625	2.50	4.00	1.250	0.875	1.750	1.625	0.281
KTNZ 12	PP	3/4	1.25	0.750	2.75	4.50	1.375	0.937	1.875	1.750	0.313
KTNZ 16	PP	1	2.58	1.000	3.25	6.00	1.625	1.187	2.375	2.188	0.375
KTNZ 20	PP	1–1/4	4.94	1.250	4.00	7.50	2.000	1.500	3.000	2.813	0.437
KTNZ 24	PP	1–1/2	7.73	1.500	4.75	9.00	2.375	1.750	3.500	3.250	0.500

PART NUMBER	SEAL SUFFIX	SHAFT DIA. inch	H_3 inch	C_2 inch	H_4 inch	T inch	A_2 ±.01 inch	C_1 ±.01 inch	d_1 inch	DYN. LOAD C lbf	STAT. LOAD C_0 lbf
KTNZ 04	PP	1/4	0.750	1.250	0.437	NIP A1	1.312	2.000	0.156	80	60
KTNZ 06	PP	3/8	0.875	1.375	0.500	NIP A1	1.437	2.250	0.156	130	80
KTNZ 08	PP	1/2	1.125	1.750	0.687	NIP A1	1.688	2.500	0.156	320	220
KTNZ 10	PP	5/8	1.437	2.000	0.875	1/4-28	2.125	3.000	0.188	550	380
KTNZ 12	PP	3/4	1.563	2.250	0.937	1/4-28	2.375	3.500	0.188	780	540
KTNZ 16	PP	1	1.938	3.000	1.187	1/4-28	2.875	4.500	0.218	1360	980
KTNZ 20	PP	1–1/4	2.500	3.750	1.500	1/4-28	3.500	5.500	0.218	2060	1420
KTNZ 24	PP	1–1/2	2.875	4.500	1.750	1/4-28	4.125	6.500	0.281	2600	1700

Self Aligning
Tandem Mounted Units
KTNZ..OP PP SERIES

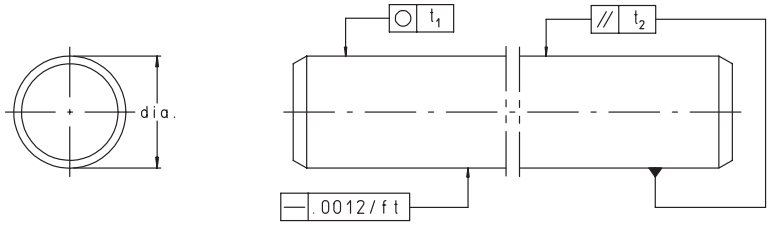


For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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PART NUMBER	SEAL SUFFIX	SHAFT DIA. inch	WGT. lbs.	d inch	A inch	C inch	A_1 ±.001 inch	H ±.001 inch	A_3 inch	A_4 inch	H_1 inch	H_2 inch
KTNZ 08 OP	PP	1/2	0.49	0.500	2.000	3.50	1.000	0.687	0.688	0.905	1.100	0.250
KTNZ 10 OP	PP	5/8	0.90	0.625	2.500	4.00	1.250	0.875	0.875	1.095	1.375	0.281
KTNZ 12 OP	PP	3/4	1.15	0.750	2.750	4.50	1.375	0.937	0.937	1.161	1.535	0.313
KTNZ 16 OP	PP	1	2.38	1.000	3.250	6.00	1.625	1.187	1.188	1.457	1.975	0.375
KTNZ 20 OP	PP	1–1/4	4.61	1.250	4.000	7.50	2.000	1.500	1.500	1.831	2.485	0.437
KTNZ 24 OP	PP	1–1/2	7.28	1.500	4.750	9.00	2.375	1.750	1.750	2.087	2.910	0.500

PART NUMBER	SEAL SUFFIX	SHAFT DIA. inch	H_3 inch	C_2 inch	T inch	E inch	∝ deg	A_2 ±.01 inch	C_1 ±.01 inch	d_1 inch	DYN. LOAD C lbf	STAT. LOAD C_0 lbf
KTNZ 08 OP	PP	1/2	0.370	1.75	NIP A1	0.313	30	1.688	2.50	0.156	320	220
KTNZ 10 OP	PP	5/8	0.450	2.00	1/4–28	0.375	30	2.125	3.00	0.188	630	460
KTNZ 12 OP	PP	3/4	0.510	2.25	1/4–28	0.438	30	2.375	3.50	0.188	780	560
KTNZ 16 OP	PP	1	0.730	3.00	1/4–28	0.563	30	2.875	4.50	0.218	1410	1000
KTNZ 20 OP	PP	1–1/4	0.800	3.75	1/4–28	0.625	30	3.500	5.50	0.218	2110	1460
KTNZ 24 OP	PP	1–1/2	0.800	4.50	1/4–28	0.750	30	4.125	6.50	0.281	2650	1740

Precision Ground Shafts
WZ, WZ..X46CR13 SERIES

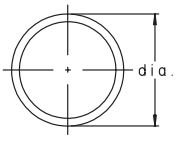


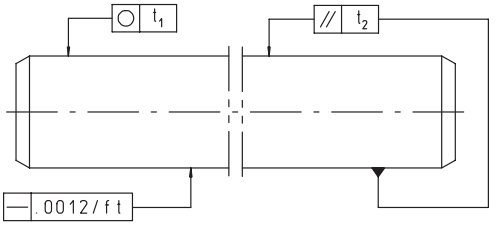
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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PART NUMBER STANDARD "L" CLASS	PART NUMBER STANDARD "S" CLASS	PART NUMBER STAINLESS STEEL	SHAFT DIA. nom inch	ROUNDNESS t_1 inch	TAPER t_2 [1] inch	HARDNESS DEPTH min inch	SURFACE FINISHING max
WZ1/4″L	WZ1/4″S	—	1/4	0.0002	0.0002	0.016	RMS 12
WZ3/8″L	WZ3/8″S	WZ3/8″X46CR13L	3/8	0.0002	0.0002	0.016	RMS 12
WZ1/2″L	WZ1/2″S	WZ1/2″X46CR13L	1/2	0.0002	0.0002	0.024	RMS 12
WZ5/8″L	WZ5/8″S	WZ5/8″X46CR13L	5/8	0.0002	0.0003	0.024	RMS 12
WZ3/4″L	WZ3/4″S	WZ3/4″X46CR13L	3/4	0.0002	0.0004	0.035	RMS 12
WZ1″L	WZ1″S	WZ1″X46CR13L	1	0.0002	0.0004	0.035	RMS 12
WZ1–1/8″L	—	—	1-1/8	0.0002	0.0004	0.035	RMS 12
WZ1–1/4″L	WZ1–1/4″S	—	1-1/4	0.0002	0.0004	0.059	RMS 12
WZ1–1/2″L	WZ1–1/2″S	WZ1–1/2″X46CR13L	1-1/2	0.0002	0.0004	0.059	RMS 12
WZ2″L	WZ2″S	—	2	0.0003	0.0004	0.087	RMS 12

1) Measurement of diameter difference

Precision Ground Shafts
WZ..PDT, WZ..X46CR13 PDT SERIES

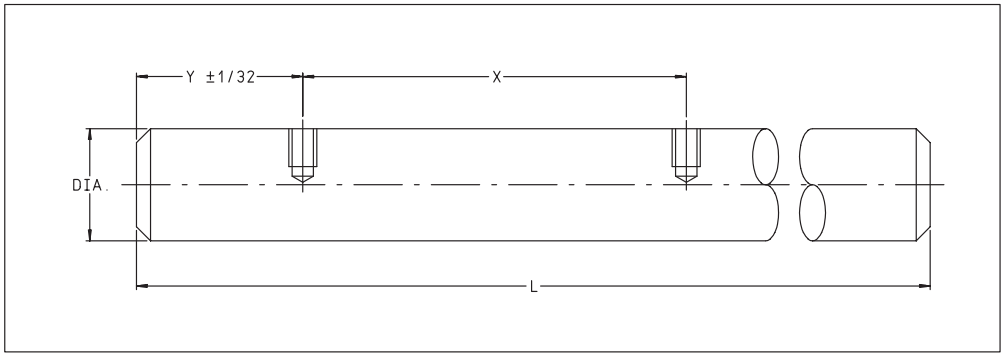




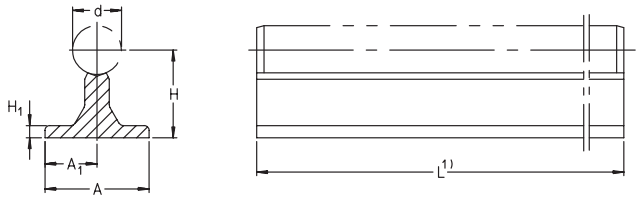
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PART NUMBER STANDARD	PART NUMBER STAINLESS STEEL	SHAFT DIA. nom inch	HOLE SPACING X	THREAD SIZE d
WZ1/2″PDT	WZ1/2″X46CR13PDT	1/2	4	6–32
WZ5/8″PDT	—	5/8	4	8–32
WZ3/4″PDT	WZ0–3/4″X46CR13PDT	3/4	6	10–32
WZ1″PDT	WZ1–0/0″X46CR13PDT	1	6	1/4–20
WZ1–1/4″PDT	—	1-1/4	6	5/16–18
WZ1–1/2″PDT	WZ1–1/2″X46CR13PDT	1-1/2	8	3/8–16
WZ2″PDT	—	2	8	1/2–13

Please specify distance from shaft end to first hole with order



Shaft Support Rails
TSWZ SERIES

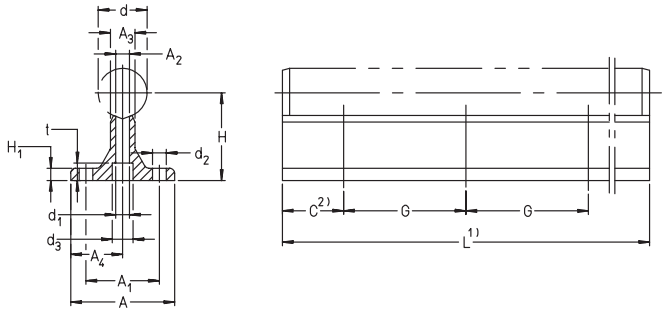


For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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PART NUMBER	SHAFT DIA. inch	WGT. lbsft	A inch	H 2) ± .002 inch	H_1 inch	A_1 3) ± .002 inch
TSWZ 08	1/2	0.60	1.50	1.125	0.188	0.750
TSWZ 10	5/8	0.78	1.63	1.125	0.250	0.813
TSWZ 12	3/4	1.01	1.75	1.500	0.250	0.875
TSWZ 16	1	1.37	2.13	1.750	0.250	1.063
TSWZ 20	1-1/4	1.98	2.50	2.125	0.313	1.250
TSWZ 24	1-1/2	3.03	3.00	2.500	0.375	1.500
TSWZ 32	2	4.80	3.75	3.250	0.500	1.875

1) Maximum length L = 48 inches
2) With reference to the nominal shaft diameter, measured while clamped.

Shaft Support Rails
TSWZ..PD SERIES

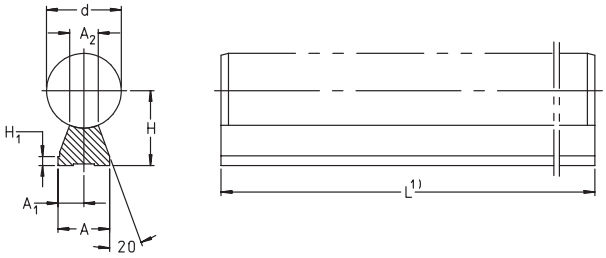


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PART NUMBER	SHAFT DIA. inch	WGT. lbs.	A inch	H 3) inch	H_1 inch	A_2 inch	A_3 inch	A_1 inch	d_3 inch	t inch	d_1 inch	d_2 inch	A_4 inch	G inch
TSWZ 08 PD	1/2	0.60	1.50	1.125	0.188	0.208	0.250	0.750	0.281	0.150	0.169	0.169	1.000	4
TSWZ 10 PD	5/8	0.78	1.63	1.125	0.250	0.251	0.313	0.813	0.312	0.180	0.193	0.193	1.125	4
TSWZ 12 PD	3/4	1.01	1.75	1.500	0.250	0.294	0.375	0.875	0.375	0.220	0.221	0.221	1.250	6
TSWZ 16 PD	1	1.37	2.13	1.750	0.250	0.379	0.500	1.063	0.437	0.272	0.281	0.281	1.500	6
TSWZ 20 PD	1-1/4	1.98	2.50	2.125	0.313	0.465	0.563	1.250	0.531	0.325	0.343	0.343	1.875	6
TSWZ 24 PD	1-1/2	3.03	3.00	2.500	0.375	0.550	0.688	1.500	0.625	0.390	0.406	0.343	2.250	8
TSWZ 32 PD	2	4.80	3.75	3.250	0.500	0.721	0.875	1.875	0.812	0.540	0.531	0.406	2.750	8

1) Maximum length L = 48 inches
2) The dimension C is dependent on the length of the support rail. It should always be equal at both ends.
3) With reference to the nominal shaft diameter, measured while clamped.

Shaft Support Rails
TSUZ SERIES

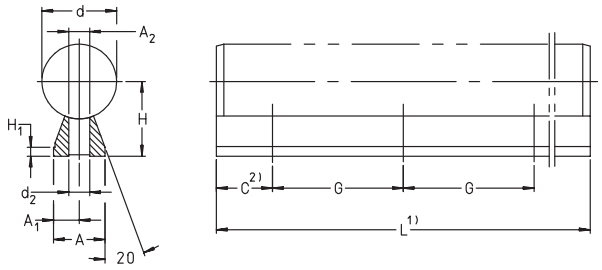


For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

PART NUMBER	SHAFT DIA. inch	WGT. lbsft	d inch	A inch	H 2) ± .002 inch	H_1 inch	A_1 3) ± .002 inch	A_2 inch
TSUZ 08	1/2	0.11	0.50	0.37	0.562	0.120	0.185	0.216
TSUZ 10	5/8	0.17	0.63	0.45	0.687	0.120	0.225	0.269
TSUZ 12	3/4	0.20	0.75	0.51	0.750	0.120	0.225	0.317
TSUZ 16	1	0.35	1.00	0.69	1.000	0.120	0.345	0.422
TSUZ 20	1-1/4	0.44	1.25	0.78	1.187	0.200	0.390	0.523
TSUZ 24	1-1/2	0.58	1.50	0.93	1.375	0.200	0.465	0.625
TSUZ 32	2	0.89	2.00	1.18	1.750	0.250	0.590	0.824

1) Maximum length L = 48 inches.
2) With reference to the nominal shaft diameter, measured while clamped.

Shaft Support Rails
TSUZ..PD SERIES



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

PART NUMBER	SHAFT DIA. inch	WGT. lbs/ft	d inch	A inch	H_3 inch	H_1 inch	A_1 4) inch	A_2 inch	d_2 inch	G inch
TSUZ 08 PD	1/2	0.11	0.50	0.37	0.562	0.120	0.185	0.216	0.169	4
TSUZ 10 PD	5/8	0.17	0.63	0.45	0.687	0.120	0.225	0.269	0.193	4
TSUZ 12 PD	3/4	0.20	0.75	0.51	0.750	0.120	0.255	0.317	0.221	6
TSUZ 16 PD	1	0.35	1.00	0.69	1.000	0.120	0.345	0.422	0.281	6
TSUZ 20 PD	1-1/4	0.44	1.25	0.78	1.187	0.200	0.390	0.523	0.343	6
TSUZ 24 PD	1-1/2	0.58	1.50	0.93	1.375	0.200	0.465	0.623	0.406	8
TSUZ 32 PD	2	0.89	2.00	1.18	1.750	0.250	0.590	0.824	0.531	8

1) Maximum length L = 48 inches.
2) The dimension C is dependent on the length of the support rail. It should always be equal at both ends.
3) With reference to the nominal shaft diameter, measured while clamped.

Unitized Compact System
MLFZ SERIES
Rail, Integral Design Carriage

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

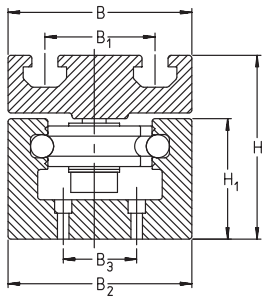
DIMENSION TABLE – Dimensions in mm

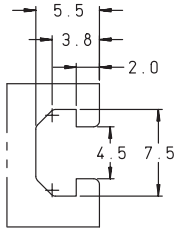
PART NUMBER	B	B_1	B_2	B_3	D_1	H	H_1	H_2	H_3	H_4	H_5	K_1	L	L_1	L_3	L_4	L_5	O	T
MLFZ 20 MI	31.75	19	31.75	19	–	31.8	20.8	–	–	–	–	#6-32	63.5	–	–	–	–	–	–
MLFZ 28 ZR	44.45	31.75	44.45	31.8	26	44.5	33.5	12.7	19.05	9.53	19.05	–	114.3	60	33.88	25.4	8.46	6-32	1.19

PART NUMBER	WEIGHTS			ALLOWABLE LOADS N				ALLOWABLE MOMENTS Nm						MOMENT OF INERTIA		BELT TYPE
	Go g	G100 g	Gc g	Fy	Foy	Fz	Foz	Mx	Mox	My	Moy	Mz	Moz	Iy mm^4	Iz mm^4	
MLFZ 20 MI	185	121	105	350	350	300	650	2	2.9	3.5	5.8	5.9	5.9	11950	31880	–
MLFZ 28 ZR	720	215	192	350	350	300	650	3.3	4.9	3.5	5.8	5.9	5.9	62300	159900	16T5

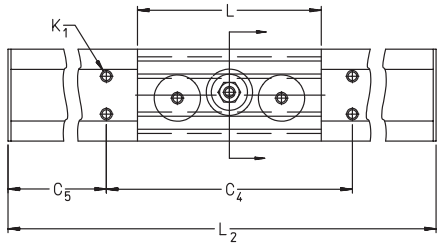
1. For maximum lengths please contact factory.
2. Custom carriages can be provided to suit individual requirements.
3. Load ratings valid for fully supported elements.
4. Load ratings not valid for corrosion resistant series.

MLFZ 20

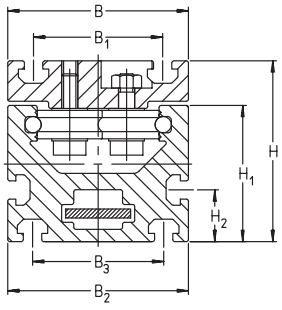


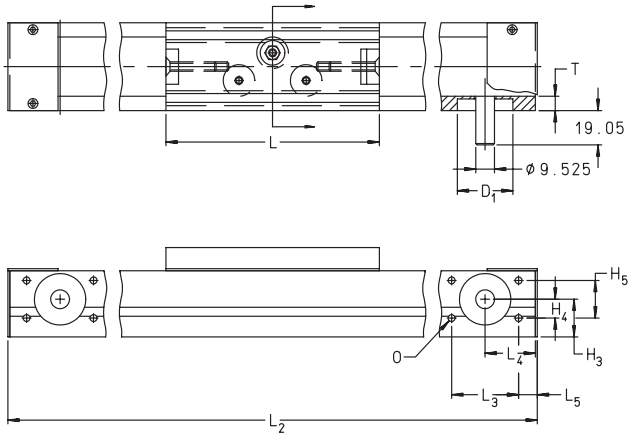


T-NUT DETAIL



MLFZ 28





Beam Rail
LFSB SERIES
Standard Carriage
LFL SERIES

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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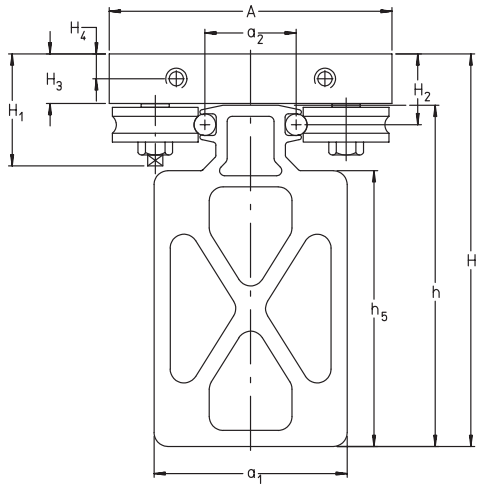
DIMENSION TABLE – Dimensions in mm

PART NUMBER RAIL	WEIGHT	PART NUMBER CARRIAGE	WEIGHT	DIMENSIONS						LOAD CALCULATIONS								
				CARRIAGE			RAIL			LOAD CURVE 3)	ALLOWABLE LOADS		ALLOWABLE MOMENTS			MOMENT OF INERTIA		
				H	A	C	h	a	L 2)		Fy	Fz	Mx	My	Mz	Iy	Iz	
	g/m		g								N	N	Nm	Nm	Nm	mm^4	mm^4	
LFSB 32	9970	LFL 90-80	400	135.6	80	90	120.2	32	4000	2	850	1000	11	30	26	1.485×10^6	4.72×10^6	
LFSB 52	18600	LFL 100-120	1000	177.4	120	100	157.2	52	4000	3	1500	2500	33	75	47	5.25×10^6	15.9×10^6	
LFSB 52	18600	LFL 150-155	1900	183.4	135	150	157.2	52	4000	4	2400	4500	51	105	126	5.25×10^6	15.9×10^6	

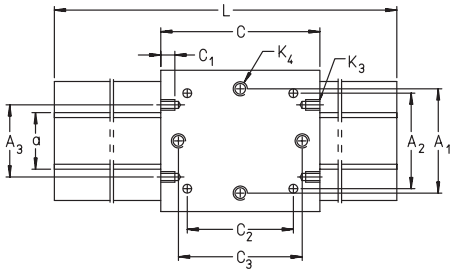
MOUNTING DIMENSIONS – Dimensions in mm

PART NUMBER RAIL	WEIGHT g/m	PART NUMBER CARRIAGE	A_1	A_2	A_3	a_1	a_2	C_1	C_2	C_3	H_1	H_2	H_3	H_4	h_5	K_3	K_4
LFSB 32	9970	LFL 90-80	59	54	56	63.5	26	7	60	70	35	20.4	14	7	101.6	M6	M8
LFSB 52	18600	LFL 100-120	90	83	65	88.9	42	12	60	70	53.5	29.2	19.5	9.75	127	M6	M10
LFSB 52	18600	LFL 150-135	105	90	65	88.9	42	12	105	110	59	35.2	24	12	127	M6	M10

1. The beam rail is designed as a rigid, light weight beam, suitable for end mounting.
2. Contact factory for longer lengths.
3. Not valid for corrosion resistant series.



LFSB with LFL



TOP VIEW

Beam Rail
LFSB SERIES
Enclosed, Sealed Carriage
LFKL SERIES

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

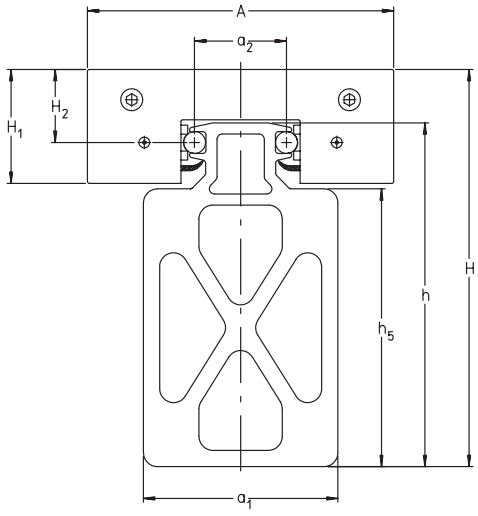
DIMENSION TABLE – Dimensions in mm

PART NUMBER RAIL	WEIGHT	PART NUMBER CARRIAGE	WEIGHT	DIMENSIONS						LOAD CALCULATIONS								
				CARRIAGE			RAIL			LOAD CURVE 4)	ALLOWABLE LOADS		ALLOWABLE MOMENTS			MOMENT OF INERTIA		
				H	A	C	h	a	L 2)		Fy	Fz	Mx	My	Mz	Iy	Iz
	g/m		g								N	N	Nm	Nm	Nm	mm^4	mm^4
LFSB 32	9970	LFKL 112-86	700	135.7	86	112	120.2	32	4000	2	850	1000	11	30	26	1.485×10^6	4.72×10^6
LFSB 52	18600	LFKL 136-130	1500	177.2	130	136	157.2	52	4000	3	1500	2500	33	75	47	5.25×10^6	15.9×10^6
LFSB 52	18600	LFKL 186-145	2900	183.5	145	186	157.2	52	4000	4	2400	4500	51	105	126	5.25×10^6	15.9×10^6
LFSB 52	18600	LFKL 205-155	3900	183.5	155	205	157.2	52	4000	5	4800	8000	101	480	288	5.25×10^6	15.9×10^6

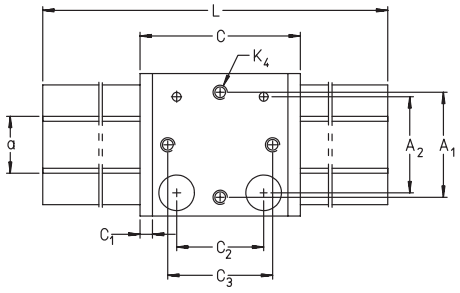
MOUNTING DIMENSIONS – Dimensions in mm

PART NUMBER RAIL	WEIGHT g/m	PART NUMBER CARRIAGE	A_1	A_2	a_1	a_2	C_1	C_2	C_3	H_1	H_2	H_3	h_5	K_4	K_5
LFSB 32	1000	LFKL 112-86	59	54	63.5	26	7	60	70	32	20.3	14	101.6	M8	18
LFSB 52	3000	LFKL 136-130	90	83	88.9	42	10	60	70	46.1	29	19.5	127	M10	30
LFSB 52	3000	LFKL 186-145	105	90	88.9	42	10	105	110	53.8	35.3	24	127	M10	30
LFSB 52	3000	LFKL 205-155	115	95	112	42	10	120	140	55	35.3	24	127	M12	34

1. Rail end support mounting holes can be provided to suit individual requirements.
2. Enclosed carriages are provided with felt shaft wipers with provision for lubrication, and a running bottom sealing element.
3. Contact factory for longer lengths.
4. Not valid for corrosion resistant series.



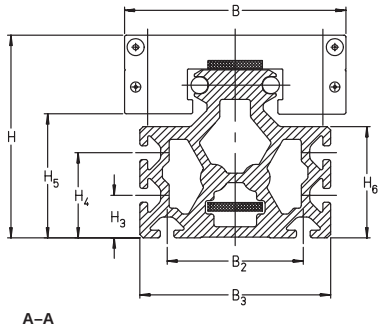
LFSB with LFKL



TOP VIEW

Linear Modular Unit With Track Roller Guidance System And Toothed Belt Drive

MLF..ZR SERIES



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

PART NUMBER	DIMENSIONS																			
	L	B	H	L_1 ±0.1	B_1 ±0.1	O	H_1	H_2	B_2	B_3	H_3	H_4	H_5	H_6	L_3	O_1	D	D_1 G7	D_2	T ±0.1
MLF 32 086 ZR	155	86	82	50	59	M8	40	81.5	43	75	25	–	50	47	80	M6	80	70	61	2.3
MLF 52 130 ZR	200	130	119	55	90	M10	57.7	117.75	80	112	25	50	72.8	65.4	115.4	M8	115	95	76	3.5
MLF 52 145 ZR	245	145	125	80	105	M10	57.7	117.75	80	112	25	50	71.2	65.4	115.4	M8	115	95	76	3.5
MLF 52 155 ZR	260	155	125	90	115	M12	57.7	117.75	80	112	25	50	70	65.4	115.4	M8	115	95	76	3.5

TOOTHED BELT / GEAR WHEELS

	TOOTHED BELT TYPE	PERMISSIBLE TOOTHED BELT DRIVE FORCE N	MASS kg/m	DISPLACEMENT mm/rev.	MASS MOMENT OF INERTIA OF BOTH GEAR WHEELS $kg \cdot m^2$
MLF 32 086 ZR	20 AT 5	640	0.068	175	$2.2 \cdot 10^{-4}$
MLF 52 130 ZR	32 AT 10	1750	0.2	270	$12.6 \cdot 10^{-4}$
MLF 52 145 ZR	32 AT 10	1750	0.2	270	$12.6 \cdot 10^{-4}$
MLF 52 155 ZR	32 AT 10	1750	0.2	270	$12.6 \cdot 10^{-4}$

1) When using standard brush wipers:
L_2=Stroke+L+2xS
The additional factor S represents a security which is dependent on the specific application and must be at least 85 mm;
Stroke in mm
When using bellows: L_2=Stroke x 1.4+L+2xS
The factor of 1.4 accounts for the compressed length of the bellows.
Maximum length of profiled support rail L_2=6000 mm (longer profiled support rails available on request)

2) Total weight $G_{tot} = G_0 + \frac{G_{100} \times (\text{Stroke} + 2xS)}{100}$ [kg]

When using bellows:

Total weight $G_{tot} = G_0 + \frac{G_{100} \times \text{Stroke} \times 1.4}{100}$ [kg]

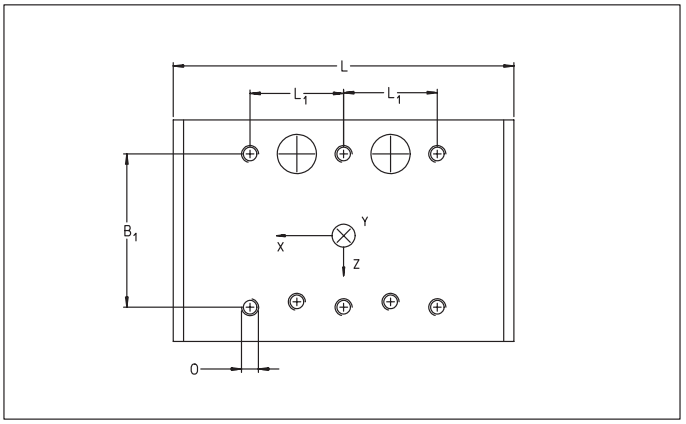
3) G_0 =weight of unit for stroke length 0

4) G_{100} =weight of unit per 100 mm stroke of the carriage

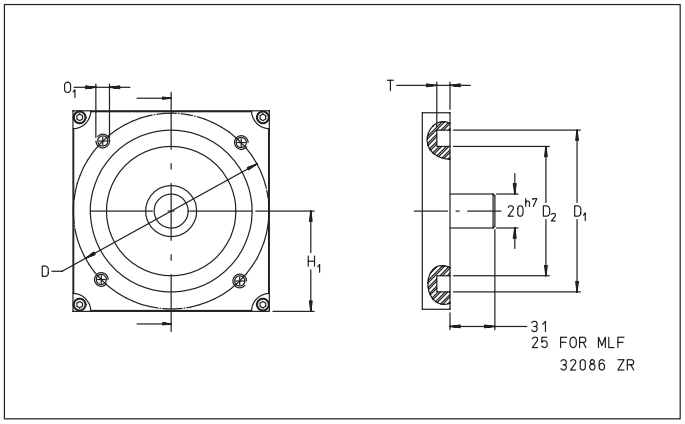
5) G_{LFKL} =weight of moving mass of the carriage

6) Values for individual loads and with complete support for underside of the unit. These must be reduced for combined loading.

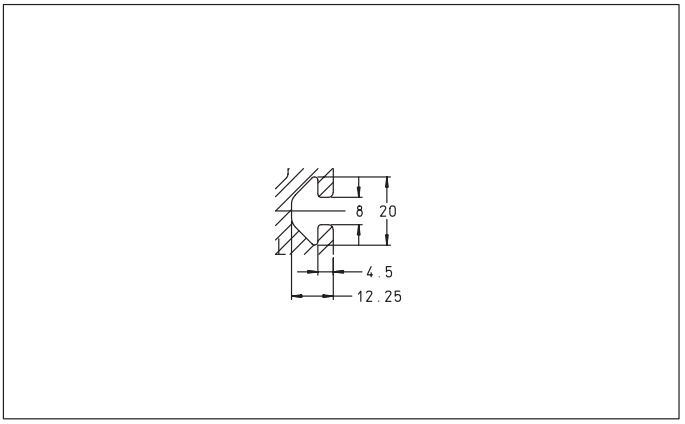
Mounting dimensions



Carriage

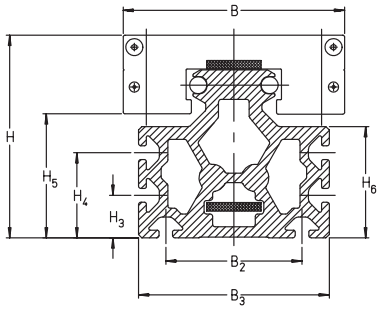


Coupling/Coupling Housing



T–grooves

Linear Modular Unit With Track Roller Guidance System And Toothed Belt Drive
MLF..ZR SERIES

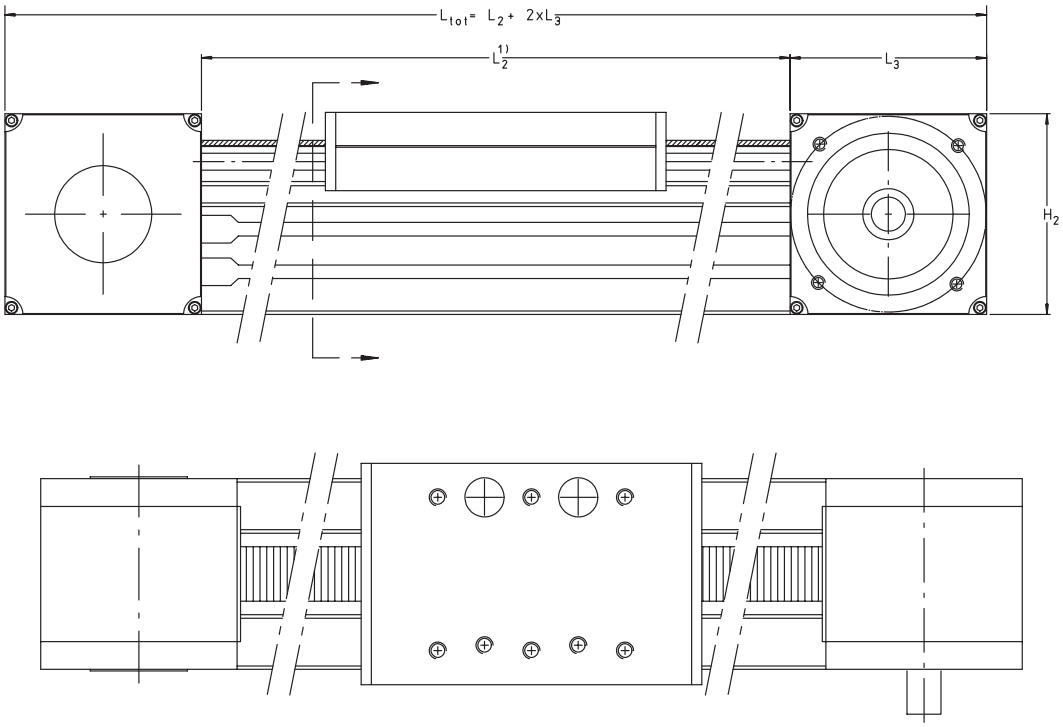


A–A

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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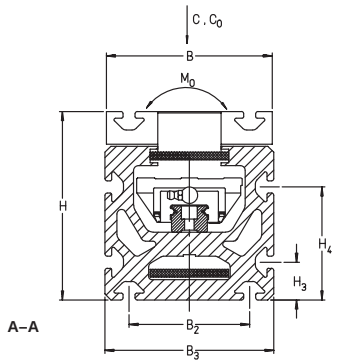
MASS[2]			PERMISSIBLE LOADS[6]				PERMISSIBLE MOMENTS[6]						GEOMETRICAL MOMENTS OF INERTIA cm^4	
G_0[3] kg	G_{100}[4] kg	G_{LFKL}[5] kg	F_{yperm} N	F_{oyperm} N	F_{zperm} N	F_{ozperm} N	M_{xperm} Nm	M_{oxperm} Nm	M_{yperm} Nm	M_{oyperm} Nm	M_{zperm} Nm	M_{ozperm} Nm	Iy	Iz
4.8	0.6	0.8	850	1400	1000	1000	11	18	30	30	26	43	100	76
12	1.28	2	1500	2500	3500	3500	33	52	105	105	47	78	392	304
13.9	1.28	3.2	2400	4000	4500	4500	51	84	236	236	126	210	392	304
15.7	1.28	5	4800	7900	8000	8000	101	166	480	480	288	474	392	304

MLF 52130 ZR AR



Linear Modular Unit With Recirculating Ball Bearing Guidance System And Toothed Belt Drive

MKUE..ZR..N SERIES



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

PART NUMBER	DIMENSIONS															
	L	B	H	B_1 ±0.2	H_1	H_2	L_1 ±0.1	H_3	H_4	B_2	B_3	O	D	D_1 G7	D_2	T ±0.1
MKUE 25 ZR..N	250	110	125	80	57.7	115.5	263	25	75	80	112	M8	115	95	76	3.5

TOOTHED BELT / GEAR WHEELS

	TOOTHED BELT TYPE	PERMISSIBLE TOOTHED BELT DRIVE FORCE N	MASS kg/m	DISPLACEMENT mm/rev.	MASS MOMENT OF INERTIA OF BOTH GEAR WHEELS $kg \cdot m^2$
MKUE 25 ZR..N	50 AT 10	1880	0.315	250	$30.6 \cdot 10^{-4}$

1) L_2=Stroke+L_1+2xS
The additional factor S represents a security which is dependent on the specific application and must be at least 85 mm;
Stroke in mm
Maximum length of profiled support rail L_2=4000 mm (longer profiled support rails available on request)

2) Total weight $G_{tot} = G_0 + \frac{G_{100} \times (\text{Stroke} + 2xS)}{100}$ [kg]

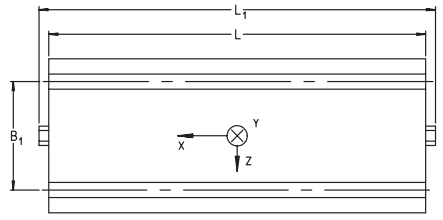
3) G_0 =weight of unit for stroke length 0

4) G_{100} =weight of unit per 100 mm stroke of the carriage

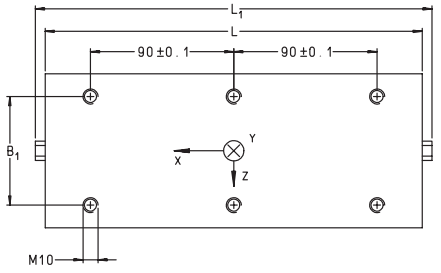
5) G_{MKWE}=weight of moving mass of the carriage

6) Values with complete support for underside of the unit

Mounting dimensions

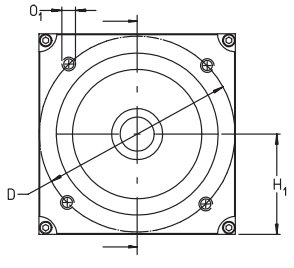


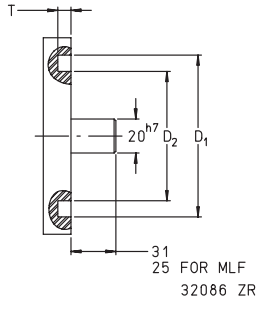
STANDARD CARRIAGE WITH T-GROOVES



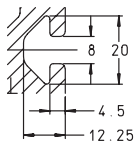
(CARRIAGE AVAILABLE WITH HOLES)

Carriage





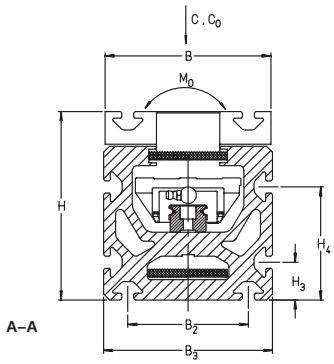
Coupling/Coupling Housing



T–grooves

Linear Modular Unit With Recirculating Ball Bearing Guidance System And Toothed Belt Drive

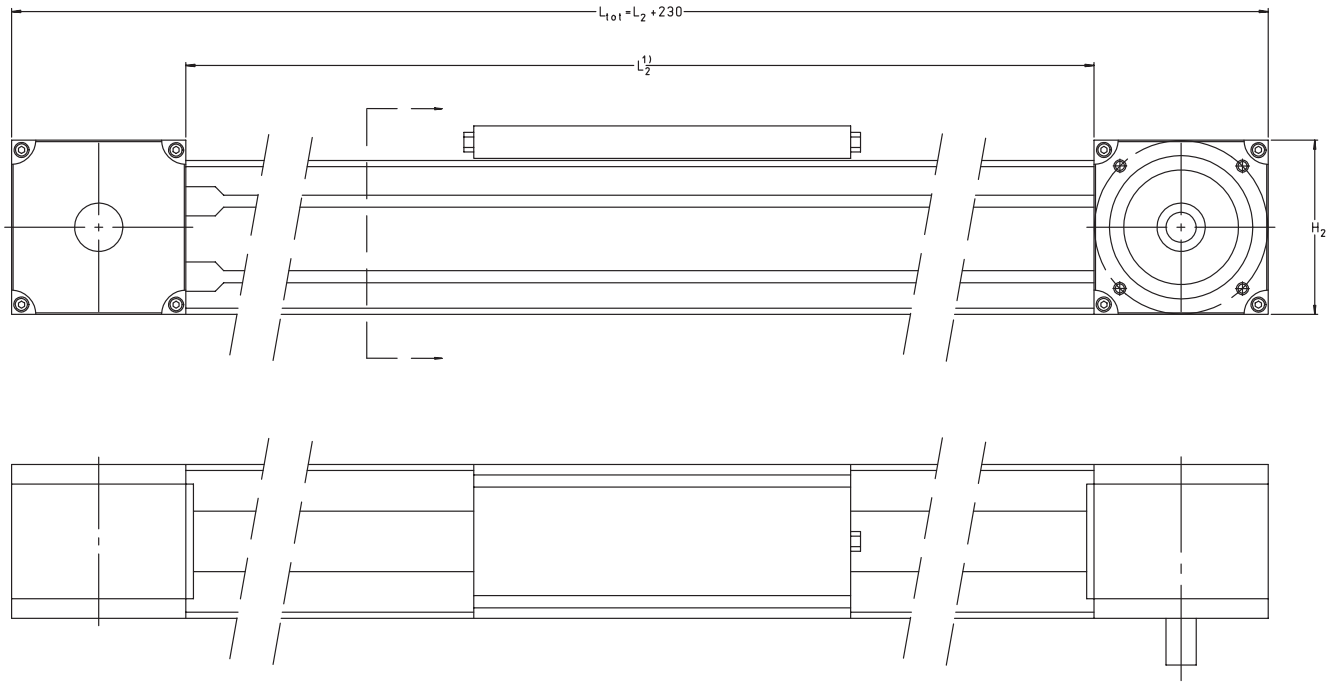
MKUE..ZR..N SERIES



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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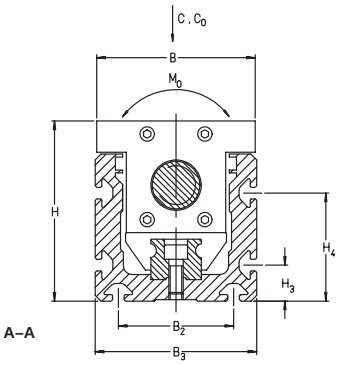
MASS[2]			BASIC LOAD RATINGS[6]		PERMISSIBLE STATIC MOMENT[6]	GEOMETRICAL MOMENTS OF INERTIA cm^4	
G_O[3] kg	G_{100}[4] kg	G_{MKWE}[5] kg	C kN	C_0 kN	M_0 STATIC Nm	Iy	Iz
16.2	1.66	3,8	26.3	41.8	411	733	517

MKUE 25 ZR AR N



Linear Modular Unit With Recirculating Ball Bearing Guidance System And Ball Screw Drive

MKUE..KGT SERIES



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

PART NUMBER	SPINDLE	DIMENSIONS													
	$d_0 \times P$ 7)	L	B	H	L_1 ±0.1	B_1 ±0.1	O	d ∅h6	H_1	H_2	L_3	L_4	H_3	H_4	B_2
MKUE 25 KGT 5	32X5	200	110	125	55	80	M10	19	80	124.5	39	67	25	75	80
MKUE 25 KGT 10	32X10	200	110	125	55	80	M10	19	80	124.5	39	67	25	75	80
MKUE 25 KGT 40	32X40	200	110	125	55	80	M10	19	80	124.5	39	67	25	75	80

1) L_2=Stroke × 1.2 + L +2×S
S=spindle lead P;stroke in mm
Maximum length of profiled Support rail L_2 = 4000 mm (longer profiled support rails available on request).
Modular units with a stroke length over 1200 mm can be fitted with movable spindle supports.

2) Total weight $G_{tot} = G_0 + \frac{G_{100} \text{ x Stroke x } 1.2}{100}$ [kg]

3) G_0 = weight of unit for stroke length 0

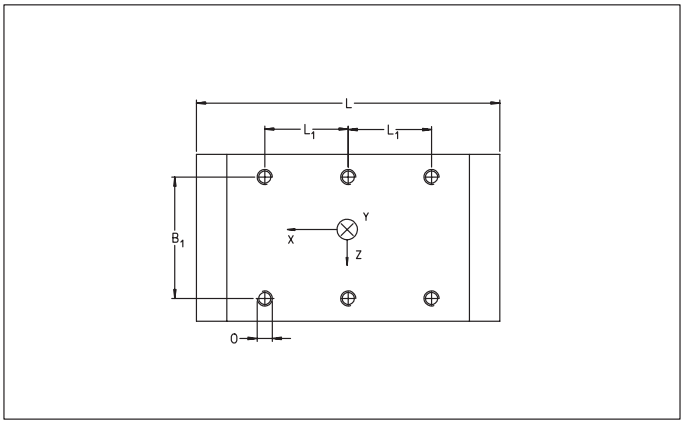
4) G_{100} = wieght of unit per 100 mm stroke of the carriage

5) G_{MKWE}= weight of moving mass of the carriage

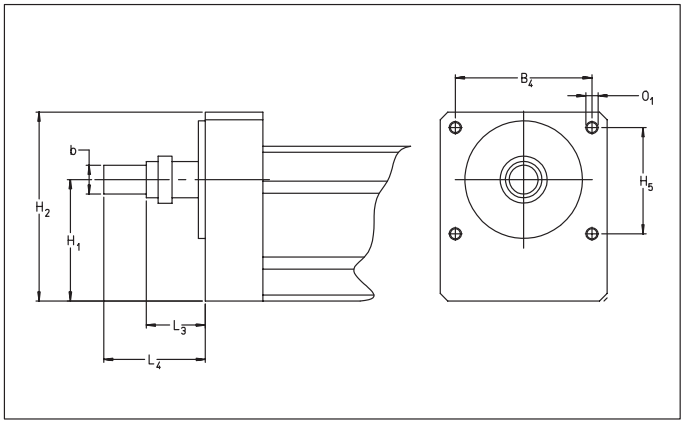
6) Values with complete support for underside of the unit

7) $d_0 \times P$ = nominal spindle diameter×spindle lead

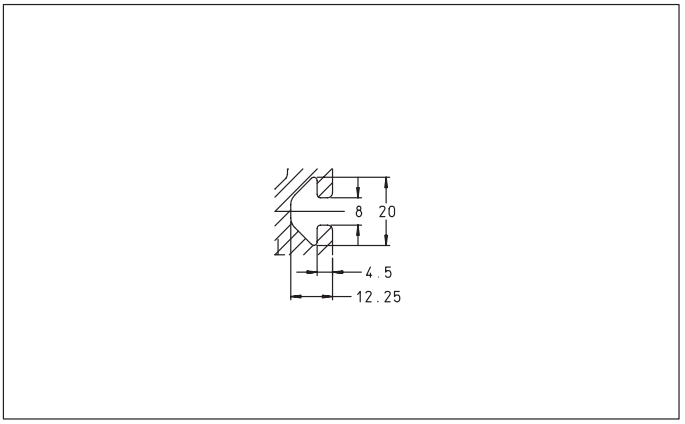
Mounting dimensions



Carriage



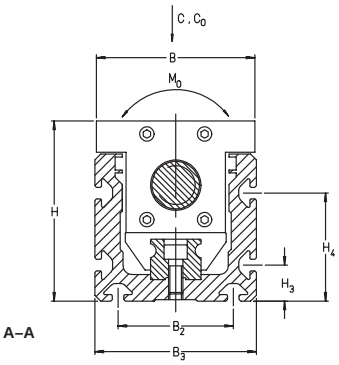
Coupling/Coupling Housing



T–grooves

Linear Modular Unit With Recirculating Ball Bearing Guidance System And Ball Screw Drive

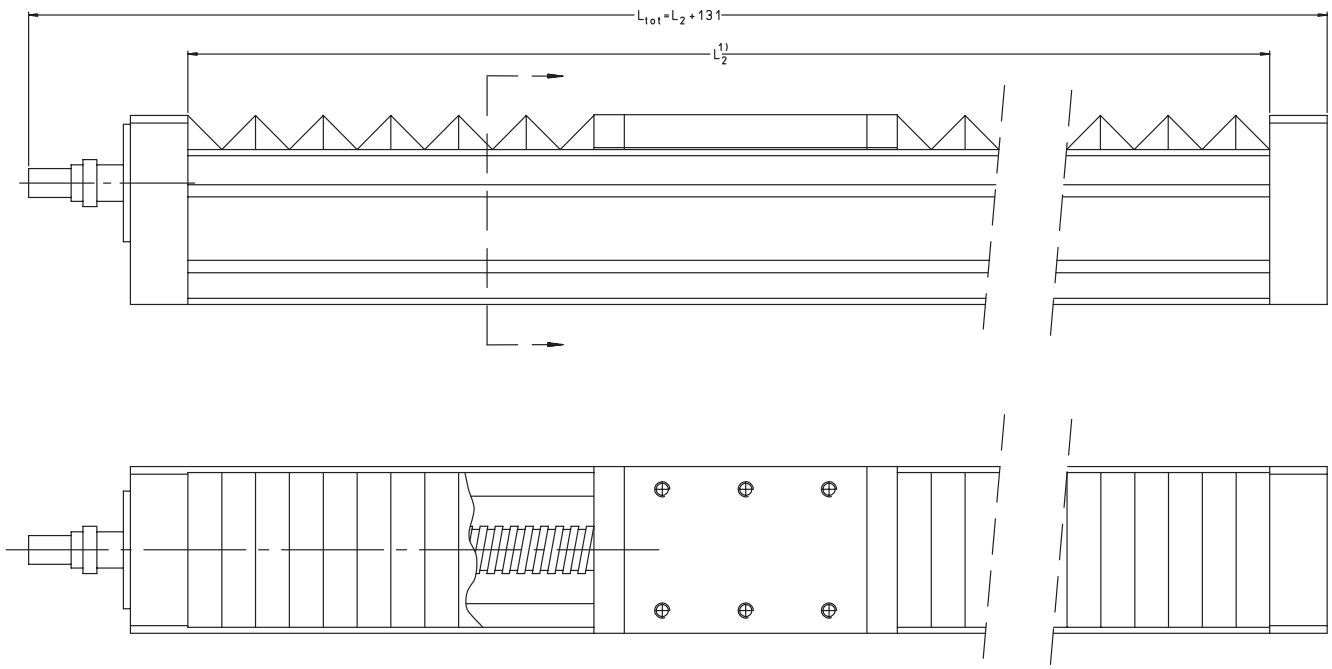
MKUE..KGT SERIES



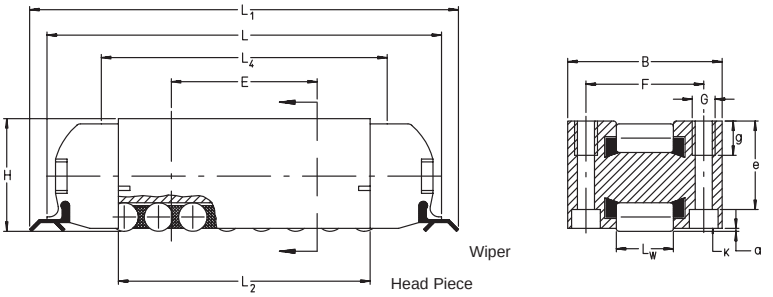
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

				MASS[2]			BASIC LOAD RATINGS[6]		PERMISSIBLE STATIC MOMENT[6]	GEOMETRICAL MOMENTS OF INERTIA cm^4	
B_3	H_5	B_4	O_1	G_O[3] kg	G_{100}[4] kg	G_{MKWE}[5] kg	C kN	C_0 kN	M_0 STATIC Nm	Iy	Iz
112	70	90	M8	17.4	2	4.3	26.3	41.8	411	717	408
112	70	90	M8	17.4	2	4.3	26.3	41.8	411	717	408
112	70	90	M8	17.4	2	4.3	26.3	41.8	411	717	408

MKUE 25 KGT 10



Linear Roller Bearings
RUS, RUS..KS SERIES



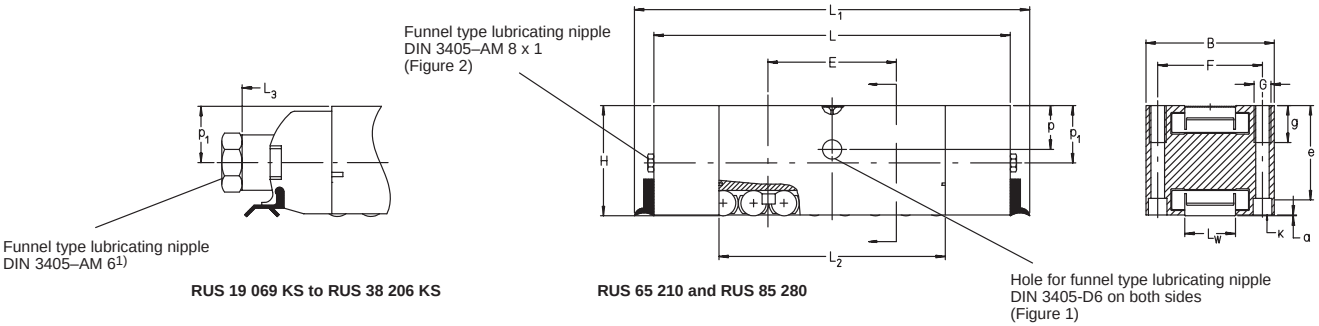
RUS 19 069 to RUS 38 206

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

PART NUMBER		MASS	DIMENSIONS							
			H	L	B	L_1	L_2	L_3	L_W	a
		kg								
RUS 19 069		0.16	19	69	27	75	44	–	10	0.2
	RUS 19 069 KS	0.19	19	–	27	–	44	76	10	0.2
RUS 19 105		0.27	19	105	27	111	78.5	–	10	0.2
	RUS 19 105 KS	0.29	19	–	27	–	78.5	112	10	0.2
RUS 26 086		0.41	26	86	40	92	53	–	14	0.2
	RUS 26 086 KS	0.49	26	–	40	–	53	92	14	0.2
RUS 26 102		0.53	26	102	40	108	69	–	14	0.2
	RUS 26 102 KS	0.61	26	–	40	–	69	108	14	0.2
RUS 26 126		0.70	26	126	40	132	93	–	14	0.2
	RUS 26 126 KS	0.78	26	–	40	–	93	132	14	0.2
RUS 38 134		1.27	38	133	52	133	85	–	20	0.2
	RUS 38 134 KS	1.53	38	–	52	–	85	136	20	0.2
RUS 38 206		2.28	38	206	52	206	158	–	20	0.2
	RUS 38 206 KS	2.53	38	–	52	–	158	209	20	0.2
RUS 65 210		7.5	65	211	76	234	134	–	30	0.5
RUS 85 280*)		16	85	281	104	303	185	–	40	0.5

1) If the lubricating nipple is replaced by tube or pipe connections, the thread length must not exceed 6 mm.
2) Minimum length to be supported
3) UG guideway for RUS 85 280 available on request
*) Available on request



RUS 19 069 KS to RUS 38 206 KS **RUS 65 210 and RUS 85 280**

BASIC LOAD RATINGS		MOUNTING DIMENSIONS								K FOR FIXING SCREWS TO DIN 912	MATCHING ADJUSTING GIBS	MATCHING GUIDEWAYS
dyn. C N	stat. C_0 N	L_4[2)]	E ±0.1	F ±0.1	G	e	g	p	p_1			
42,000	33,000	50	25.5	20.6	M4	15.5	6	–	–	M3	VUS 19 069	UG 6628 UV 5323 UFA 3210 UFK 3210 UFB 4710
42,000	33,000	50	25.5	20.6	M4	15.5	6	–	10	M3	VUS 19 069	
68,000	61,000	85	50	20.6	M4	15.5	6	–	–	M3	VUS 19 105	
68,000	61,000	85	50	20.6	M4	15.5	6	–	10	M3	VUS 19 105	
76,000	56,000	63	28	30	M6	21	10	–	–	M4	VUS 26 086	UG 9741 UV 7532 UFA 4710 UFK 4710 UFB 6412
76,000	56,000	63	28	30	M6	21	10	–	13.5	M4	VUS 26 086	
95,000	75,000	79	44	30	M6	21	10	–	–	M4	VUS 26 102	
95,000	75,000	79	44	30	M6	21	10	–	13.5	M4	VUS 26 102	
122,000	103,000	103	68	30	M6	21	10	–	–	M4	VUS 26 126	
122,000	103,000	103	68	30	M6	21	10	–	13.5	M4	VUS 26 126	
179,000	133,000	100	51	41	M8	31	14	–	–	M6	VUS 38 134	UG 12 553 UV 9542 UFA 6412 UFK 6412 UFB 7812
179,000	133,000	100	51	41	M8	31	14	–	19.5	M6	VUS 38 134	
305,000	265,000	172	102	41	M8	31	14	–	–	M6	VUS 38 206	
305,000	265,000	172	102	41	M8	31	14	–	19.5	M6	VUS 38 206	
465,000	345,000	–	76	62	M10	55	22	26	34	M8	VUS 65 210	UG 16 260 UV 13 863 UFA 8815 UFK 8815 UFB 10 615
840,000	620,000	–	101.5	82.5	M14	73	30	33	45	M10	VUS 85 280	UG....[3)] UV 16 977 UFA 11 518 UFK 11 518 UFB 14 0185

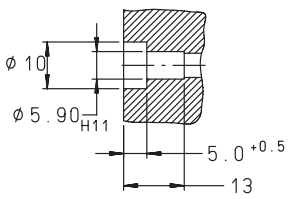


Figure 1

Lubrication holes are provided on both sides for funnel type grease nipples DIN 3405-D6 (supplied with the bearing) or either tube or pipe connection. If no lubrication connection is to be provided the holes should be plugged with the lubricating nipples.

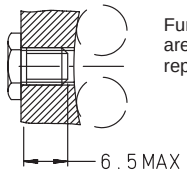
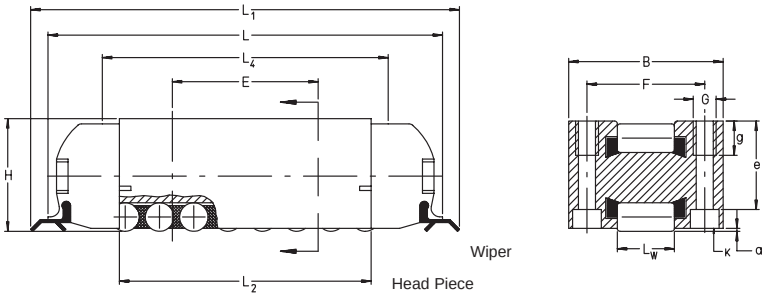


Figure 2

Funnel type lubricating nipples DIN 3405-AM 8x1 are mounted in the head pieces. They can be replaced by tube or pipe connections.

Linear Roller Bearings
RUSZ, RUSZ..KS SERIES



RUS 19 069 to RUS 38 206

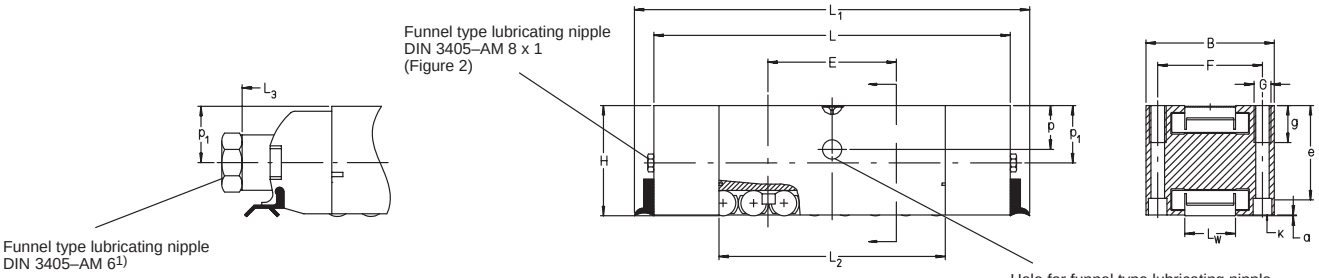
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

PART NUMBER	DIMENSIONS							
	H	L	B	L_1	L_2	L_3	L_W	a
RUSZ 12044	19.05	69	25.4	75	44	–	10	0.2
RUSZ 18059	28.57	94	38.1	100	60	–	14	0.2
RUSZ 24084	38.1	133	50.8	133	85	–	20	0.2
RUSZ 12044 KS	19.05	69	25.4	75	44	76	10	0.2
RUSZ 18059 KS	28.57	94	38.1	100	60	132	14	0.2
RUSZ 24084 KS	38.1	133	50.8	133	85	136	20	0.2

1) If the lubricating nipple is replaced by tube or pipe connections, the thread length must not exceed 6 mm.

2) Minimum length to be supported



RUS 19 069 KS to RUS 38 206 KS **RUS 65 210 and RUS 85 280**

BASIC LOAD RATINGS		MOUNTING DIMENSIONS								K FOR FIXING SCREWS TO DIN 912	MATCHING ADJUSTING GIBS	MATCHING GUIDEWAYS
dyn. C N	stat. C_0 N	L_4 2)	E ±0.1	F ±0.1	G	e	g	p	p_1			
42000	33000	50	25.5	20.6	–	15.5	–	–	–	M3x22	VUSZ 12044	UG6628 UV5323 UFA/UFK3210 UFB4710
86000	65000	71	38	31	–	23.6	–	–	–	M4x30	VUSZ 18059	UG9745 UV7532 UFA/UFK4710 UFB6412
179000	133000	100	51	41	–	32.1	–	–	–	M5x45	VUSZ 24084	UG12553 UV9542 UFA/UFK6412 UFB7812
42000	33000	50	25.5	20.6	–	15.5	–	–	–	M3x22	VUSZ 12044	UG6628 UV5323 UFA/UFK3210 UFB4710
86000	65000	71	38	31	–	23.6	–	–	–	M4x30	VUSZ 18059	UG9745 UV7532 UFA/UFK4710 UFB6412
179000	133000	100	51	41	–	32.1	–	–	–	M5x45	VUSZ 24084	UG12553 UV9542 UFA/UFK6412 UFB7812

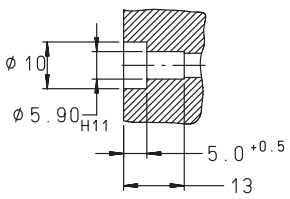


Figure 1

Lubrication holes are provided on both sides for funnel type grease nipples DIN 3405-D6 (supplied with the bearing) or either tube or pipe connection. If no lubrication connection is to be provided the holes should be plugged with the lubricating nipples.

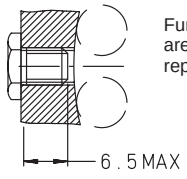
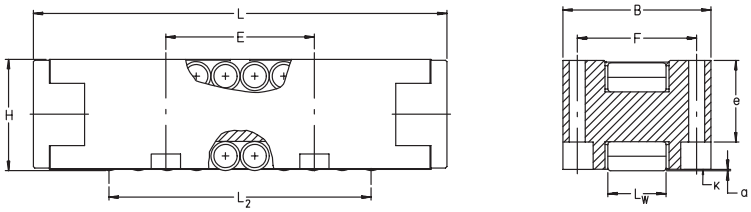


Figure 2

Funnel type lubricating nipples DIN 3405-AM 8x1 are mounted in the head pieces. They can be replaced by tube or pipe connections.

Linear Roller Bearings
PR SERIES



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

PART NUMBER	MASS	DIMENSIONS					
		H	L	B	L_2	L_W	a
	kg						
PR 14 032	0.095	14.285	51	22.23	31	9	0.2
PR 14 044	0.2	19.05	69	25.4	42	10	0.35
PR 14 061	0.65	28.57	96	38.1	58.5	16	0.35
PR 14 089	1.75	38.1	142	50.8	90	20	0.4
PR 14 135	5.65	57.15	196	76.2	126	30	0.5
PR 14 182	13.25	76.2	264	101.6	167	40	0.6

1) UG guideway for PR 14 182 available on request

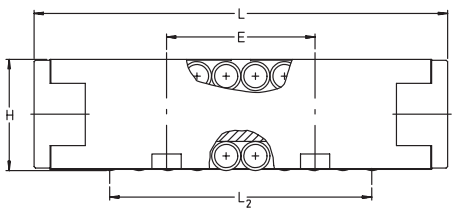
2) Not available from stock. Please check delivery time.

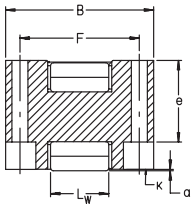
Ordering examples:

Linear roller bearing PR 14 061
with a tolerance for the nominal height H of –10 to –15 µm:
PR 14 061 –10 –15

Linear roller bearing PR 14 135
with a tolerance for the nominal height H of –10 to –20 µm:
PR 14 135 –10 –20

Linear Roller Bearings
PR SERIES

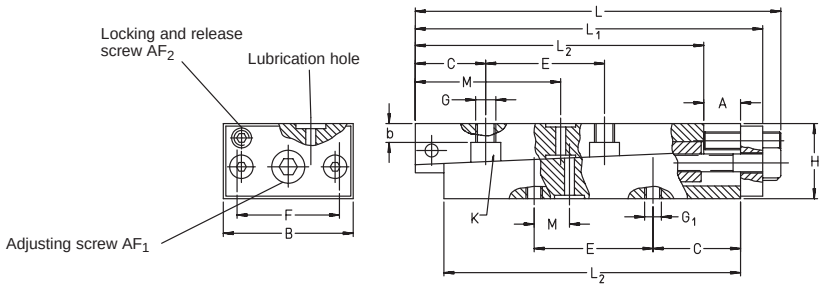




For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

BASIC LOAD RATINGS		MOUNTING DIMENSIONS			K FOR FIXING SCREWS TO DIN 912	MATCHING ADJUSTING GIBS	MATCHING GUIDEWAYS	
dyn. C N	stat. C_0 N	E ±0.1	F ±0.1	e				
21,700	17,600	19	17.1	10	M2.5	–	UG 6628 UV 5323	UFA 3210 UFK 3210
44,000	37,500	25.5	20.6	14	M3	VUSZ 12 044	UG 6628 UV 5323	UFA 3210 UFK 3210 UFB 4710
107,000	86,000	38	31	20.8	M4	VUSZ 18 059	UG 9741 UV 7532	UFA 4710 UFK 4710 UFB 6412
205,000	171,000	51	41	28	M5	VUSZ 24 084	UG 12 553 UV 9542	UFA 6412 UFK 6412 UFB 7812
435,000	345,000	76.2	62	42	M6	VUSZ 36 135 2)	UG 16 260 UV 13 863	UFA 8815 UFK 8815 UFB 10 615
790,000	620,000	101.6	82.5	56	M8	VUSZ 48 182 2)	UG....1) UV 16 977	UFA 11 518 UFK 11 518 UFB 14 018

Adjusting Gibs
VUS, METRIC SIZES SERIES
VUSZ, INCH SIZES SERIES



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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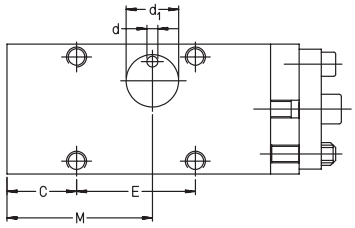
DIMENSION TABLE · Dimensions in mm

PART NUMBER	MASS	DIMENSIONS			MOUNTING DIMENSIONS					
		B	H	L	L_1	L_2	E	F	b	C
	kg		min.	max.	max.		±0.1	±0.1		
VUS 19 069	0.24	26.5	16	78	73	62	25.5	20.6	4	16.5
VUS 19 105	0.32	26.5	16	123	119	100	50	20.6	3.5	25
VUS 26 086	0.6	39.5	25	97	89	75	28	30	6	20.5
VUS 26 102	0.71	39.5	25	113	105	91	44	30	6	20.5
VUS 26 126	0.9	39.5	25	137	129	115	68	30	6	20.5
VUS 38 134	1.47	51.5	30	141	131	115	51	41	7	28
VUS 38 206	2.1	51.5	25	250	240	200	102	41	5	49

DIMENSION TABLE · Dimensions in mm

PART NUMBER	MASS	DIMENSIONS			MOUNTING DIMENSIONS					
		B	H	L	L_1	L_2	E	F	b	C
	kg		min.	max.	max.		±0.1	±0.1		
VUSZ 12 044	0.19	25	16	78	73	62	25.5	19[1)]	4	16.5
VUSZ 18 059	0.63	37.6	25	107	99	85	38	31	6	20.5
VUSZ 24 084	1.38	50	30	141	131	115	51	41	7	28

1) Distance between the mounting holes in the top wedge of the gib; deviates from the bottom wedge



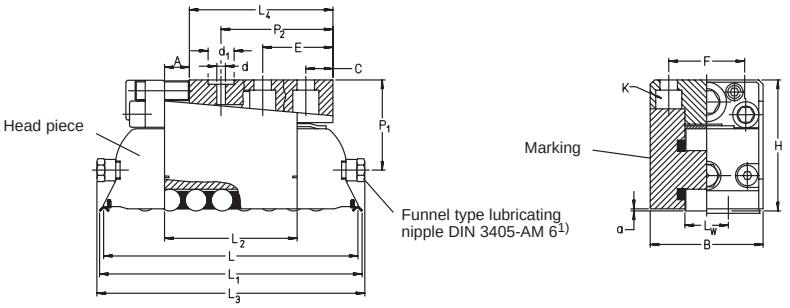
Top View

DIMENSION TABLE · Dimensions in mm										
					G_1, K FOR FIXING SCREW TO DIN 912	HEIGHT CHANGE		ADJUSTING SCREW	LOCKING AND RELEASE SCREW	MATCHING LINEAR ROLLER BEARINGS
M	d	d_1	A max.	G		ΔH max.	PER SCREW ROTATION	AF_1	AF_2	
16.5	3.5	12	7	M 4	M 3	0.35	0.035	3	2	RUS 19 069
29	3.5	12	15	M 4	M 3	0.5	0.023	3	2.5	RUS 19 105
19.5	5	16	8	M 6	M 4	0.4	0.05	6	3	RUS 26 086
27.5	5	16	8	M 6	M 4	0.4	0.05	6	3	RUS 26 102
39.5	5	16	8	M 6	M 4	0.4	0.05	6	3	RUS 26 126
30.5	5	22	8	M 8	M 6	0.4	0.062	8	4	RUS 38 134
61	5	22	30	–	M 6	1	0.05	8	5	RUS 38 206

DIMENSION TABLE · Dimensions in mm										
					G_1, K FOR FIXING SCREW TO DIN 912	HEIGHT CHANGE		ADJUSTING SCREW	LOCKING AND RELEASE SCREW	MATCHING LINEAR ROLLER BEARINGS
M	d	d_1	A max.	G		ΔH max.	PER SCREW ROTATION	AF_1	AF_2	
16.5	3.5	12	7	–	M 3	0.35	0.035	3	2	PR 14 044
20	5	16	8	–	M 4	0.4	0.05	6	3	PR 14 061
30.5	5	22	8	–	M 5	0.4	0.062	8	4	PR 14 089

Linear Roller Bearings With Integral Adjusting Gib

RUSV..KS SERIES

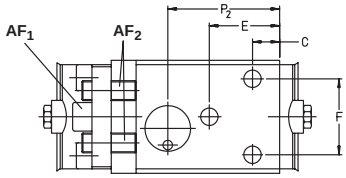


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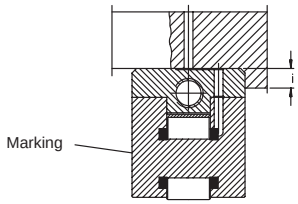
DIMENSION TABLE · Dimensions in mm

PART NUMBER	MASS	DIMENSIONS										BASIC LOAD RATINGS	
		H	L	B	L_W	a	L_1 ≈	L_2	L_3	L_4	d_1	dyn. C N	stat. C_0 N
	kg												
RUSV 30 069 KS	0.32	30	69	27	10	0.3	75	43.5	82	45	12	42,000	33,000
RUSV 30 105 KS	0.46	30	105	27	10	0.3	111	78.5	117	79	12	68,000	61,000
RUSV 42 086 KS	0.81	42	86	40	14	0.3	92	52.4	98	54	16	76,000	56,000
RUSV 42 102 KS	0.99	42	102	40	14	0.3	108	68.4	114	70	16	95,000	75,000
RUSV 42 126 KS	1.26	42	126	40	14	0.3	132	92.4	138	94	16	122,000	103,000
RUSV 60 134 KS	2.25	60	134	52	20	0.3	133	85	143	86	22	179,000	133,000
RUSV 60 206 KS	3.47	60	206	52	20	0.3	206	158	216	159	22	305,000	265,000

1) If the lubricating nipple is replaced by tube or pipe connections, the thread length must not exceed 6mm.



TOP VIEW



DIMENSION TABLE · Dimensions in mm

MOUNTING DIMENSIONS									ADJUSTING SCREW	LOCKING AND RELEASE SCREW	HEIGHT CHANGE			MATCHING LINEAR ROLLER BEARINGS	MATCHING GUIDEWAY
C	E	F	i	P_1	P_2	P_3	d	K	AF_1	AF_2	A max.	ΔH max.	PER SCREW ROTATION		
5	25	19	4	21	33	9	2.5	M 4	3	2	7	0.37	0.035	RUS 19 069 KS	UG 6628
5	45	19	4	21	53	9	2.5	M 4	3	2	7	0.37	0.023	RUS 19 105 KS	UV 5323
															UFA 3210
															UFK 3210
															UFB 4710
8	23	26	6	29.5	38	14.5	3	M 6	6	3	10	0.52	0.05	RUS 26 086 KS	UG 9741
8	38	26	6	29.5	53	14.5	3	M 6	6	3	10	0.52	0.05	RUS 26 102 KS	UV 7532
8	58	26	6	29.5	73	14.5	3	M 6	6	3	10	0.52	0.05	RUS 26 126 KS	UFA 4710
															UFK 4710
															UFB 6412
10	45	35	8	41.5	65	18	4	M 8	8	4	15	0.78	0.062	RUS 38 134 KS	UG 12 553
10	115	35	8	41.5	145	18	4	M 8	8	4	15	0.78	0.05	RUS 38 206 KS	UV 9542
															UFA 6412
															UFK 6412
															UFB 7812

Planetary Roller Screw
RGT SERIES

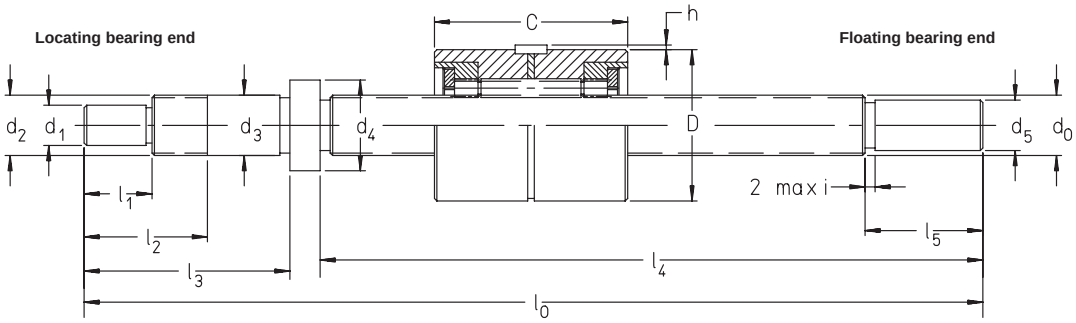
- Split roller nut, preloaded
- Standard ends configuration

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DIMENSION TABLE · Dimensions in mm

NOMINAL DIAMETER	PART NUMBER	PITCH	STROKE	MASS	DIMENSIONS – SCREW SHAFT										
d_0	d_0	P	H	kg	d_1 ISO h6	d_2	d_3 –0.005	d_4	d_5 ISO h6	l_0	l_1	l_2	l_3	l_4	l_5
5	RGT 5.	1.	25	0.084	5	M6X0.5	6	10	4	113	11	22	34	75	14
	RGT 5.	1.	50	0.088	5	M6X0.5	6	10	4	138	11	22	34	100	14
	RGT 5.	1.	75	0.092	5	M6X0.5	6	10	4	163	11	22	34	125	14
	RGT 5.	1.	100	0.096	5	M6X0.5	6	10	4	188	11	22	34	150	14
8	RGT 8.	1.	25	0.11	5	M6X0.5	6	10	6	120	11	22	34	82	16
	RGT 8.	1.	50	0.121	5	M6X0.5	6	10	6	145	11	22	34	107	16
	RGT 8.	1.	100	0.141	5	M6X0.5	6	10	6	195	11	22	34	157	16
	RGT 8.	1.	150	0.16	5	M6X0.5	6	10	6	245	11	22	34	207	16
	RGT 8.	1.	200	0.18	5	M6X0.5	6	10	6	295	11	22	34	257	16
	RGT 8.	2.	25	0.11	5	M6X0.5	6	10	6	120	11	22	34	82	16
	RGT 8.	2.	50	0.121	5	M6X0.5	6	10	6	145	11	22	34	107	16
	RGT 8.	2.	100	0.141	5	M6X0.5	6	10	6	195	11	22	34	157	16
	RGT 8.	2.	150	0.16	5	M6X0.5	6	10	6	245	11	22	34	207	16
	RGT 8.	2.	200	0.18	5	M6X0.5	6	10	6	295	11	22	34	257	16
	RGT 8.	4.	25	0.11	5	M6X0.5	6	10	6	120	11	22	34	82	16
	RGT 8.	4.	50	0.121	5	M6X0.5	6	10	6	145	11	22	34	107	16
	RGT 8.	4.	100	0.141	5	M6X0.5	6	10	6	195	11	22	34	157	16
	RGT 8.	4.	150	0.16	5	M6X0.5	6	10	6	245	11	22	34	207	16
	RGT 8.	4.	200	0.18	5	M6X0.5	6	10	6	295	11	22	34	257	16
	RGT 8.	5.	25	0.11	5	M6X0.5	6	10	6	120	11	22	34	82	16
	RGT 8.	5.	50	0.121	5	M6X0.5	6	10	6	145	11	22	34	107	16
	RGT 8.	5.	100	0.141	5	M6X0.5	6	10	6	195	11	22	34	157	16
	RGT 8.	5.	150	0.16	5	M6X0.5	6	10	6	245	11	22	34	207	16
	RGT 8.	5.	200	0.18	5	M6X0.5	6	10	6	295	11	22	34	257	16

1) Limiting speed of the planetary roller screw. Critical speed n_{max} and limiting speed of the rolling bearings should be considered.



NUT			KEY TO DIN 6885	LOAD RATINGS		SPRINGS RATIO	LIMITING SPEED[1]	LOCATING BEARING	FLOATING BEARING	SEAL	LOCK NUT
D ISO g6	h	C h12		dyn. C N	stat. C_0 N	C_K $N^{2/3}$ / µm	$n_{g\ grease}$ rpm				
19	1.3	31	3X3X10	5,300	5,400	27	6,000	ZKLN0624.2RS	HK0408TN	G4X8X2	ZM06
19	1.3	31	3X3X10	5,300	5,400	27	6,000	ZKLN0624.2RS	HK0408TN	G4X8X2	ZM06
19	1.3	31	3X3X10	5,300	5,400	27	6,000	ZKLN0624.2RS	HK0408TN	G4X8X2	ZM06
19	1.3	31	3X3X10	5,300	5,400	27	6,000	ZKLN0624.2RS	HK0408TN	G4X8X2	ZM06
21	1.3	31	3X3X10	3,100	3,950	31	5,800	ZKLN0624.2RS	NK6/10TN	G6X12X2	ZM06
21	1.3	31	3X3X10	3,100	3,950	31	5,800	ZKLN0624.2RS	NK6/10TN	G6X12X2	ZM06
21	1.3	31	3X3X10	3,100	3,950	31	5,800	ZKLN0624.2RS	NK6/10TN	G6X12X2	ZM06
21	1.3	31	3X3X10	3,100	3,950	31	5,800	ZKLN0624.2RS	NK6/10TN	G6X12X2	ZM06
21	1.3	31	3X3X10	3,100	3,950	31	5,800	ZKLN0624.2RS	NK6/10TN	G6X12X2	ZM06
21	1.3	31	3X3X10	6,200	4,550	21	5,800	ZKLN0624.2RS	NK6/10TN	G6X12X2	ZM06
21	1.3	31	3X3X10	6,200	4,550	21	5,800	ZKLN0624.2RS	NK6/10TN	G6X12X2	ZM06
21	1.3	31	3X3X10	6,200	4,550	21	5,800	ZKLN0624.2RS	NK6/10TN	G6X12X2	ZM06
21	1.3	31	3X3X10	6,200	4,550	21	5,800	ZKLN0624.2RS	NK6/10TN	G6X12X2	ZM06
21	1.3	31	3X3X10	6,200	4,550	21	5,800	ZKLN0624.2RS	NK6/10TN	G6X12X2	ZM06
21	1.3	31	3X3X10	12,200	4,800	15	5,800	ZKLN0624.2RS	NK6/10TN	G6X12X2	ZM06
21	1.3	31	3X3X10	12,200	4,800	15	5,800	ZKLN0624.2RS	NK6/10TN	G6X12X2	ZM06
21	1.3	31	3X3X10	12,200	4,800	15	5,800	ZKLN0624.2RS	NK6/10TN	G6X12X2	ZM06
21	1.3	31	3X3X10	12,200	4,800	15	5,800	ZKLN0624.2RS	NK6/10TN	G6X12X2	ZM06
21	1.3	31	3X3X10	12,200	4,800	15	5,800	ZKLN0624.2RS	NK6/10TN	G6X12X2	ZM06
21	1.3	31	3X3X10	15,200	4,800	13	5,800	ZKLN0624.2RS	NK6/10TN	G6X12X2	ZM06
21	1.3	31	3X3X10	15,200	4,800	13	5,800	ZKLN0624.2RS	NK6/10TN	G6X12X2	ZM06
21	1.3	31	3X3X10	15,200	4,800	13	5,800	ZKLN0624.2RS	NK6/10TN	G6X12X2	ZM06
21	1.3	31	3X3X10	15,200	4,800	13	5,800	ZKLN0624.2RS	NK6/10TN	G6X12X2	ZM06
21	1.3	31	3X3X10	15,200	4,800	13	5,800	ZKLN0624.2RS	NK6/10TN	G6X12X2	ZM06

Planetary Roller Screw
RGT SERIES

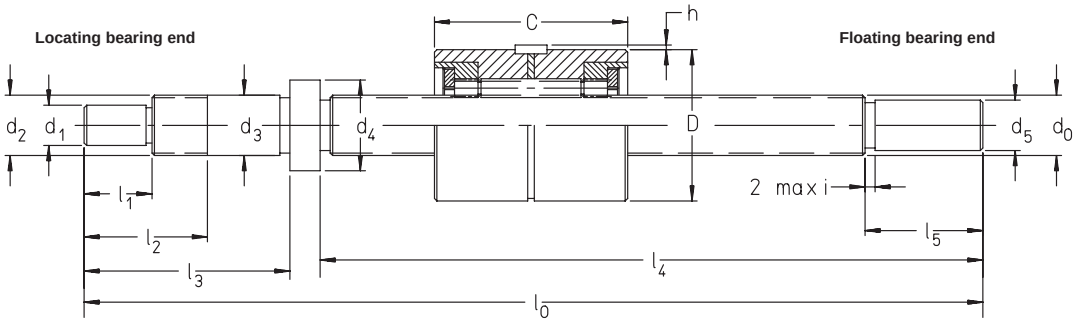
- Split roller nut, preloaded
- Standard ends configuration

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DIMENSION TABLE (Contd.) · Dimensions in mm

NOMINAL DIAMETER	PART NUMBER	PITCH	STROKE	MASS	DIMENSIONS – SCREW SHAFT										
d_0	d_0	P	H	kg	d_1 ISO h6	d_2	d_3 –0.005	d_4	d_5 ISO h6	l_0	l_1	l_2	l_3	l_4	l_5
12	RGT 12.	1.	100	0.293	10	M12X1	12	18	10	220	20	33	53	161	20
	RGT 12.	1.	200	0.382	10	M12X1	12	18	10	320	20	33	53	261	20
	RGT 12.	1.	300	0.47	10	M12X1	12	18	10	420	20	33	53	361	20
	RGT 12.	1.	400	0.559	10	M12X1	12	18	10	520	20	33	53	461	20
	RGT 12.	1.	500	0.648	10	M12X1	12	18	10	620	20	33	53	561	20
	RGT 12.	2.	100	0.293	10	M12X1	12	18	10	220	20	33	53	161	20
	RGT 12.	2.	200	0.382	10	M12X1	12	18	10	320	20	33	53	261	20
	RGT 12.	2.	300	0.47	10	M12X1	12	18	10	420	20	33	53	361	20
	RGT 12.	2.	400	0.559	10	M12X1	12	18	10	520	20	33	53	461	20
	RGT 12.	2.	500	0.648	10	M12X1	12	18	10	620	20	33	53	561	20
	RGT 12.	4.	100	0.293	10	M12X1	12	18	10	220	20	33	53	161	20
	RGT 12.	4.	200	0.382	10	M12X1	12	18	10	320	20	33	53	261	20
	RGT 12.	4.	300	0.47	10	M12X1	12	18	10	420	20	33	53	361	20
	RGT 12.	4.	400	0.559	10	M12X1	12	18	10	520	20	33	53	461	20
	RGT 12.	4.	500	0.648	10	M12X1	12	18	10	620	20	33	53	561	20
	RGT 12.	5.	100	0.293	10	M12X1	12	18	10	220	20	33	53	161	20
	RGT 12.	5.	200	0.382	10	M12X1	12	18	10	320	20	33	53	261	20
	RGT 12.	5.	300	0.47	10	M12X1	12	18	10	420	20	33	53	361	20
	RGT 12.	5.	400	0.559	10	M12X1	12	18	10	520	20	33	53	461	20
	RGT 12.	5.	500	0.648	10	M12X1	12	18	10	620	20	33	53	561	20

1) Limiting speed of the planetary roller screw. Critical speed n_{max} and limiting speed of the rolling bearings should be considered.



NUT			KEY TO DIN 6885	LOAD RATINGS		SPRING RATIO	LIMITING SPEED[1)]	LOCATING BEARING		FLOATING BEARING	SEAL	LOCK NUT
D ISO g6	h	C h12		dyn. C N	stat. C_0 N	C_K $N^{2/3}/\mu m$	$n_{g\ grease}$ rpm					
32	1.7	31	4X4X14	3,700	6,400	38	5,600	ZKLN1242.2RS	ZKLF1255.2RS	NK10/12TN	G10X17X3	ZM12
32	1.7	31	4X4X14	3,700	6,400	38	5,600	ZKLN1242.2RS	ZKLF1255.2RS	NK10/12TN	G10X17X3	ZM12
32	1.7	31	4X4X14	3,700	6,400	38	5,600	ZKLN1242.2RS	ZKLF1255.2RS	NK10/12TN	G10X17X3	ZM12
32	1.7	31	4X4X14	3,700	6,400	38	5,600	ZKLN1242.2RS	ZKLF1255.2RS	NK10/12TN	G10X17X3	ZM12
32	1.7	31	4X4X14	3,700	6,400	38	5,600	ZKLN1242.2RS	ZKLF1255.2RS	NK10/12TN	G10X17X3	ZM12
26	2	31	4X4X14	4,900	5,000	27	5,600	ZKLN1242.2RS	ZKLF1255.2RS	NK10/12TN	G10X17X3	ZM12
26	2	31	4X4X14	4,900	5,000	27	5,600	ZKLN1242.2RS	ZKLF1255.2RS	NK10/12TN	G10X17X3	ZM12
26	2	31	4X4X14	4,900	5,000	27	5,600	ZKLN1242.2RS	ZKLF1255.2RS	NK10/12TN	G10X17X3	ZM12
26	2	31	4X4X14	4,900	5,000	27	5,600	ZKLN1242.2RS	ZKLF1255.2RS	NK10/12TN	G10X17X3	ZM12
26	2	31	4X4X14	4,900	5,000	27	5,600	ZKLN1242.2RS	ZKLF1255.2RS	NK10/12TN	G10X17X3	ZM12
26	2	31	4X4X14	9,700	5,500	19	5,600	ZKLN1242.2RS	ZKLF1255.2RS	NK10/12TN	G10X17X3	ZM12
26	2	31	4X4X14	9,700	5,500	19	5,600	ZKLN1242.2RS	ZKLF1255.2RS	NK10/12TN	G10X17X3	ZM12
26	2	31	4X4X14	9,700	5,500	19	5,600	ZKLN1242.2RS	ZKLF1255.2RS	NK10/12TN	G10X17X3	ZM12
26	2	31	4X4X14	9,700	5,500	19	5,600	ZKLN1242.2RS	ZKLF1255.2RS	NK10/12TN	G10X17X3	ZM12
26	2	31	4X4X14	9,700	5,500	19	5,600	ZKLN1242.2RS	ZKLF1255.2RS	NK10/12TN	G10X17X3	ZM12
26	2	31	4X4X14	12,100	5,500	17	5,600	ZKLN1242.2RS	ZKLF1255.2RS	NK10/12TN	G10X17X3	ZM12
26	2	31	4X4X14	12,100	5,500	17	5,600	ZKLN1242.2RS	ZKLF1255.2RS	NK10/12TN	G10X17X3	ZM12
26	2	31	4X4X14	12,100	5,500	17	5,600	ZKLN1242.2RS	ZKLF1255.2RS	NK10/12TN	G10X17X3	ZM12
26	2	31	4X4X14	12,100	5,500	17	5,600	ZKLN1242.2RS	ZKLF1255.2RS	NK10/12TN	G10X17X3	ZM12
26	2	31	4X4X14	12,100	5,500	17	5,600	ZKLN1242.2RS	ZKLF1255.2RS	NK10/12TN	G10X17X3	ZM12

Planetary Roller Screw
RGT SERIES

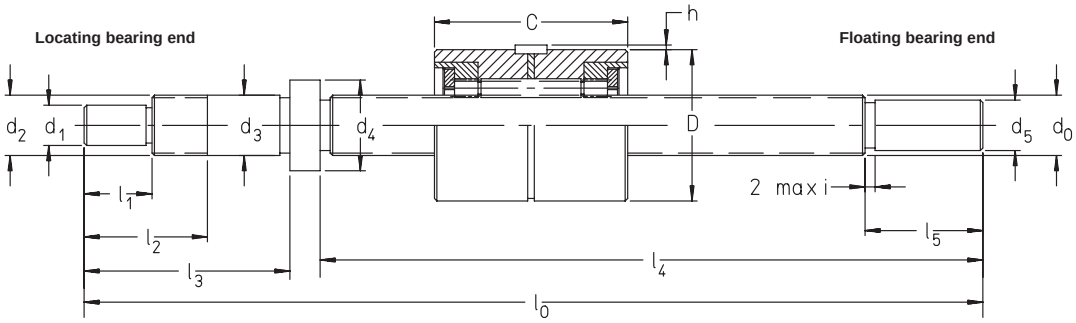
- Split roller nut, preloaded
- Standard ends configuration

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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DIMENSION TABLE (Contd.) · Dimensions in mm

NOMINAL DIAMETER d_0	PART NUMBER d_0	PITCH P	STROKE H	MASS kg	DIMENSIONS – SCREW SHAFT										
					d_1 ISO h6	d_2	d_3 –0.005	d_4	d_5 ISO h6	l_0	l_1	l_2	l_3	l_4	l_5
15	RGT 15.	2.	100	0.501	12	M15X1	15	22	12	224	20	31	53	165	20
	RGT 15.	2.	200	0.64	12	M15X1	15	22	12	324	20	31	53	265	20
	RGT 15.	2.	300	0.779	12	M15X1	15	22	12	424	20	31	53	365	20
	RGT 15.	2.	400	0.917	12	M15X1	15	22	12	524	20	31	53	465	20
	RGT 15.	2.	500	1.056	12	M15X1	15	22	12	624	20	31	53	565	20
	RGT 15.	2.	600	1.195	12	M15X1	15	22	12	724	20	31	53	665	20
	RGT 15.	4.	100	0.501	12	M15X1	15	22	12	224	20	31	53	165	20
	RGT 15.	4.	200	0.64	12	M15X1	15	22	12	324	20	31	53	265	20
	RGT 15.	4.	300	0.779	12	M15X1	15	22	12	424	20	31	53	365	20
	RGT 15.	4.	400	0.917	12	M15X1	15	22	12	524	20	31	53	465	20
	RGT 15.	4.	500	1.056	12	M15X1	15	22	12	624	20	31	53	565	20
	RGT 15.	4.	600	1.195	12	M15X1	15	22	12	724	20	31	53	665	20
	RGT 15.	5.	100	0.501	12	M15X1	15	22	12	224	20	31	53	165	20
	RGT 15.	5.	200	0.64	12	M15X1	15	22	12	324	20	31	53	265	20
	RGT 15.	5.	300	0.779	12	M15X1	15	22	12	424	20	31	53	365	20
	RGT 15.	5.	400	0.917	12	M15X1	15	22	12	524	20	31	53	465	20
	RGT 15.	5.	500	1.056	12	M15X1	15	22	12	624	20	31	53	565	20
	RGT 15.	5.	600	1.195	12	M15X1	15	22	12	724	20	31	53	665	20

1) Limiting speed of the planetary roller screw. Critical speed n_{max} and limiting speed of the rolling bearings should be considered.



NUT			KEY TO DIN 6885	BASIC LOAD RATINGS		SPRING RATIO	LIMITING SPEED[1]	LOCATING BEARING		FLOATING BEARING	SEAL	LOCK NUT
D ISO g6	h	C h12		dyn. C N	stat. C_0 N	C_K $N^{2/3}/\mu m$	$n_{g\ grease}$ rpm					
34	1.7	35	4X4X14	6,100	8,000	34	5,500	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
34	1.7	35	4X4X14	6,100	8,000	34	5,500	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
34	1.7	35	4X4X14	6,100	8,000	34	5,500	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
34	1.7	35	4X4X14	6,100	8,000	34	5,500	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
34	1.7	35	4X4X14	6,100	8,000	34	5,500	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
34	1.7	35	4X4X14	6,100	8,000	34	5,500	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
34	1.7	35	4X4X14	12,200	8,900	24	5,500	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
34	1.7	35	4X4X14	12,200	8,900	24	5,500	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
34	1.7	35	4X4X14	12,200	8,900	24	5,500	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
34	1.7	35	4X4X14	12,200	8,900	24	5,500	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
34	1.7	35	4X4X14	12,200	8,900	24	5,500	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
34	1.7	35	4X4X14	12,200	8,900	24	5,500	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
34	1.7	35	4X4X14	15,200	9,100	21	5,500	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
34	1.7	35	4X4X14	15,200	9,100	21	5,500	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
34	1.7	35	4X4X14	15,200	9,100	21	5,500	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
34	1.7	35	4X4X14	15,200	9,100	21	5,500	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
34	1.7	35	4X4X14	15,200	9,100	21	5,500	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
34	1.7	35	4X4X14	15,200	9,100	21	5,500	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15

Planetary Roller Screw
RGT SERIES

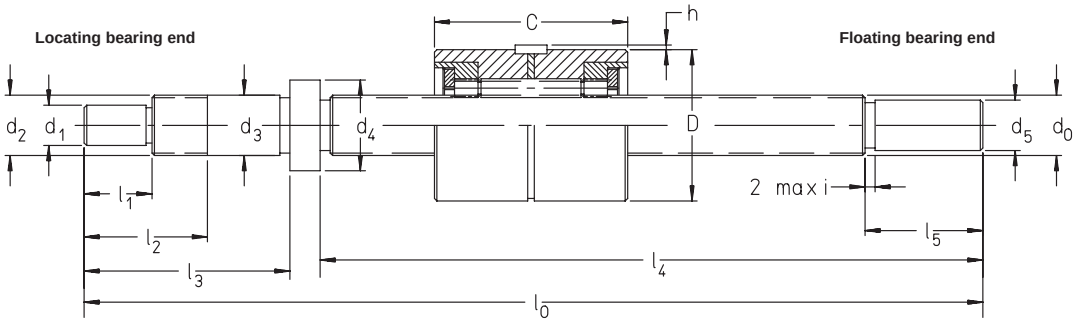
- Split roller nut, preloaded
- Standard ends configuration

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE (Contd.) · Dimensions in mm

NOMINAL DIAMETER	PART NUMBER	PITCH	STROKE	MASS	DIMENSIONS – SCREW SHAFT										
d_0	d_0	P	H	kg	d_1 ISO h6	d_2	d_3 –0.005	d_4	d_5 ISO h6	l_0	l_1	l_2	l_3	l_4	l_5
20	RGT 20.	2.	400	1.713	12	M15X1	15	22	12	546	20	31	53	487	20
	RGT 20.	2.	500	1.96	12	M15X1	15	22	12	646	20	31	53	587	20
	RGT 20.	2.	600	2.207	12	M15X1	15	22	12	746	20	31	53	687	20
	RGT 20.	2.	800	2.7	12	M15X1	15	22	12	946	20	31	53	887	20
	RGT 20.	2.	1000	3.193	12	M15X1	15	22	12	1146	20	31	53	1087	20
	RGT 20.	2.	1200	3.686	12	M15X1	15	22	12	1346	20	31	53	1287	20
	RGT 20.	4.	400	1.713	12	M15X1	15	22	12	546	20	31	53	487	20
	RGT 20.	4.	500	1.96	12	M15X1	15	22	12	646	20	31	53	587	20
	RGT 20.	4.	600	2.207	12	M15X1	15	22	12	746	20	31	53	687	20
	RGT 20.	4.	800	2.7	12	M15X1	15	22	12	946	20	31	53	887	20
	RGT 20.	4.	1000	3.193	12	M15X1	15	22	12	1146	20	31	53	1087	20
	RGT 20.	4.	1200	3.686	12	M15X1	15	22	12	1346	20	31	53	1287	20
	RGT 20.	5.	400	1.713	12	M15X1	15	22	12	546	20	31	53	487	20
	RGT 20.	5.	500	1.96	12	M15X1	15	22	12	646	20	31	53	587	20
	RGT 20.	5.	600	2.207	12	M15X1	15	22	12	746	20	31	53	687	20
	RGT 20.	5.	800	2.7	12	M15X1	15	22	12	946	20	31	53	887	20
	RGT 20.	5.	1000	3.193	12	M15X1	15	22	12	1146	20	31	53	1087	20
	RGT 20.	5.	1200	3.686	12	M15X1	15	22	12	1346	20	31	53	1287	20
	RGT 20.	6.	400	1.713	12	M15X1	15	22	12	546	20	31	53	487	20
	RGT 20.	6.	500	1.96	12	M15X1	15	22	12	646	20	31	53	587	20
	RGT 20.	6.	600	2.207	12	M15X1	15	22	12	746	20	31	53	687	20
	RGT 20.	6.	800	2.7	12	M15X1	15	22	12	946	20	31	53	887	20
	RGT 20.	6.	1000	3.193	12	M15X1	15	22	12	1146	20	31	53	1087	20
	RGT 20.	6.	1200	3.686	12	M15X1	15	22	12	1346	20	31	53	1287	20

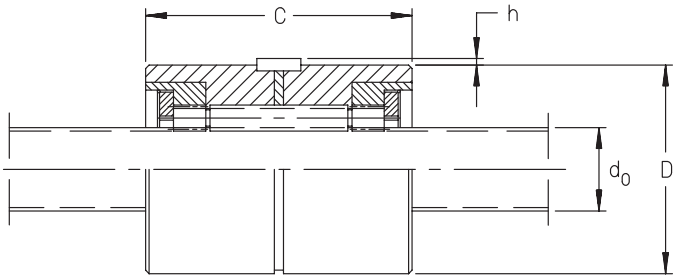
1) Limiting speed of the planetary roller screw. Critical speed n_{max} and limiting speed of the rolling bearings should be considered.



NUT			KEY TO DIN 6885	LOAD RATINGS		SPRING RATIO	LIMITING SPEED[1]	LOCATING BEARING		FLOATING BEARING	SEAL	LOCK NUT
D ISO g6	h	C h12		dyn. C N	stat. C_0 N	C_K $N^{2/3}/\mu m$	$n_{g\ grease}$ rpm					
42	1.7	55	4X4X18	10,900	21,800	61	5,200	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
42	1.7	55	4X4X18	10,900	21,800	61	5,200	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
42	1.7	55	4X4X18	10,900	21,800	61	5,200	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
42	1.7	55	4X4X18	10,900	21,800	61	5,200	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
42	1.7	55	4X4X18	10,900	21,800	61	5,200	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
42	1.7	55	4X4X18	10,900	21,800	61	5,200	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
42	1.7	55	4X4X18	21,700	25,000	42	5,200	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
42	1.7	55	4X4X18	21,700	25,000	42	5,200	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
42	1.7	55	4X4X18	21,700	25,000	42	5,200	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
42	1.7	55	4X4X18	21,700	25,000	42	5,200	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
42	1.7	55	4X4X18	21,700	25,000	42	5,200	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
42	1.7	55	4X4X18	21,700	25,000	42	5,200	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
42	1.7	55	4X4X18	27,000	26,000	38	5,200	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
42	1.7	55	4X4X18	27,000	26,000	38	5,200	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
42	1.7	55	4X4X18	27,000	26,000	38	5,200	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
42	1.7	55	4X4X18	27,000	26,000	38	5,200	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
42	1.7	55	4X4X18	27,000	26,000	38	5,200	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
42	1.7	55	4X4X18	27,000	26,000	38	5,200	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
42	1.7	55	4X4X18	32,500	26,500	34	5,200	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
42	1.7	55	4X4X18	32,500	26,500	34	5,200	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
42	1.7	55	4X4X18	32,500	26,500	34	5,200	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
42	1.7	55	4X4X18	32,500	26,500	34	5,200	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
42	1.7	55	4X4X18	32,500	26,500	34	5,200	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15
42	1.7	55	4X4X18	32,500	26,500	34	5,200	ZKLN1545.2RS	ZKLF1560.2RS	NK12/12TN	G12X19X3	ZM15

Planetary Roller Screw
RGT SERIES

- Split roller nut, preloaded
- Special ends configuration*)



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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DIMENSION TABLE · Dimensions in mm

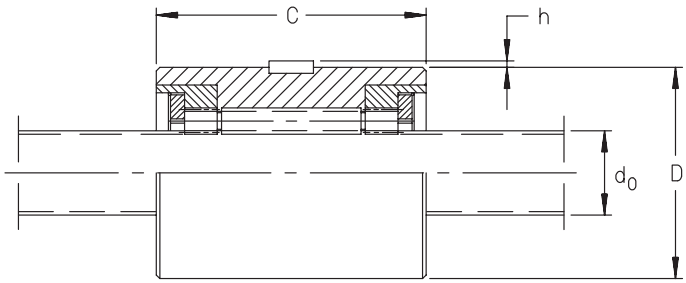
NOMINAL DIAMETER	PART NUMBER	PITCH	NUT DIMENSIONS			KEY TO DIN 6885	SPRING RATIO	LIMITING SPEED[1]	LOAD RATINGS	
			D	h	C		C_K	$n_{g\ grease}$	dyn.	stat.
d_0	d_0	P	ISO g6		h12		$N^{2/3}$ / µm	rpm	C N	C_0 N
24	RGT 24.	2	48	1.7	55	4X4X18	75	5,000	13,200	32,000
	RGT 24.	4	48	1.7	55	4X4X18	52	5,000	26,000	37,500
	RGT 24.	5	48	1.7	55	4X4X18	46	5,000	32,500	39,000
	RGT 24.	6	48	1.7	55	4X4X18	42	5,000	39,000	40,000
27	RGT 27.	2	55	1.7	55	4X4X18	76	4,900	13,400	35,000
	RGT 27.	4	55	1.7	55	4X4X18	53	4,900	26,500	41,500
	RGT 27.	5	55	1.7	55	4X4X18	47	4,900	33,000	43,000
	RGT 27.	6	55	1.7	55	4X4X18	43	4,900	39,500	44,500
	RGT 27.	8	55	1.7	55	4X4X18	37	4,900	53,000	45,500
30	RGT 30.	2	62	1.7	55	5X5X22	78	4,700	13,500	38,000
	RGT 30.	4	62	1.7	55	5X5X22	54	4,700	27,000	45,000
	RGT 30.	5	62	1.7	55	5X5X22	48	4,700	33,500	47,000
	RGT 30.	6	62	1.7	55	5X5X22	44	4,700	40,000	48,500
	RGT 30.	8	62	1.7	55	5X5X22	38	4,700	53,000	50,000
36	RGT 36.	2	75	1.7	68	5X5X22	108	4,400	18,300	65,000
	RGT 36.	4	75	1.7	68	5X5X22	74	4,400	36,000	78,000
	RGT 36.	5	75	1.7	68	5X5X22	65	4,400	45,000	82,000
	RGT 36.	6	75	1.7	68	5X5X22	59	4,400	54,000	85,000
	RGT 36.	8	75	1.7	68	5X5X22	51	4,400	72,000	89,000
39	RGT 39.	2	80	1.7	72	5X5X25	117	4,200	19,800	76,000
	RGT 39.	4	80	1.7	72	5X5X25	80	4,200	39,500	92,000
	RGT 39.	5	80	1.7	72	5X5X25	71	4,200	49,000	97,000
	RGT 39.	10	80	1.7	72	5X5X25	56	4,200	97,000	109,000
48	RGT 48.	5	96	2.7	95	6X6X40	91	3,800	62,000	155,000
	RGT 48.	10	96	2.7	95	6X6X40	63	3,800	124,000	178,000
63	RGT 63.	5	118	3.5	115	8X7X45	116	3,000	78,000	250,000
	RGT 63.	10	118	3.5	115	8X7X45	80	3,000	155,000	295,000

1) Limiting speed of the planetary roller screw. Critical speed n_{max} and limiting speed of the rolling bearings should be considered.

*) Available on request.

Planetary Roller Screw
RGT SERIES

- One–piece roller nut, not preloaded
- Special ends configuration*)



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE · Dimensions in mm

NOMINAL DIAMETER	PART NUMBER	PITCH	NUT DIMENSIONS			KEY TO DIN 6885	SPRING RATIO	LIMITING SPEED[1]	LOAD RATINGS	
			D	h	C		C_K	$n_{g\ grease}$	dyn.	stat.
d_0	d_0	P	ISO g6		h12		$N^{2/3}$ / µm	rpm	C N	C_0 N
24	RGT 24.	2	48	1.7	55	4X4X18	124	5,000	22,400	69,000
	RGT 24.	4	48	1.7	55	4X4X18	86	5,000	44,500	80,000
	RGT 24.	5	48	1.7	55	4X4X18	64	5,000	55,000	83,000
	RGT 24.	6	48	1.7	55	4X4X18	69	5,000	66,000	85,000
27	RGT 27.	2	55	1.7	55	4X4X18	127	4,900	22,700	75,000
	RGT 27.	4	55	1.7	55	4X4X18	87	4,900	45,000	88,000
	RGT 27.	5	55	1.7	55	4X4X18	78	4,900	56,000	92,000
	RGT 27.	6	55	1.7	55	4X4X18	71	4,900	67,000	94,000
	RGT 27.	8	55	1.7	55	4X4X18	61	4,900	89,000	98,000
30	RGT 30.	2	62	1.7	55	5X5X22	130	4,700	23,000	81,000
	RGT 30.	4	62	1.7	55	5X5X22	89	4,700	45,500	96,000
	RGT 30.	5	62	1.7	55	5X5X22	79	4,700	57,000	100,000
	RGT 30.	6	62	1.7	55	5X5X22	72	4,700	68,000	103,000
	RGT 30.	8	62	1.7	55	5X5X22	62	4,700	90,000	107,000
36	RGT 36.	2	75	1.7	68	5X5X22	176	4,400	31,000	136,000
	RGT 36.	4	75	1.7	68	5X5X22	121	4,400	61,000	165,000
	RGT 36.	5	75	1.7	68	5X5X22	107	4,400	76,000	173,000
	RGT 36.	6	75	1.7	68	5X5X22	97	4,400	91,000	179,000
	RGT 36.	8	75	1.7	68	5X5X22	84	4,400	121,000	188,000
39	RGT 39.	2	80	1.7	72	5X5X25	191	4,200	33,000	159,000
	RGT 39.	4	80	1.7	72	5X5X25	131	4,200	66,000	193,000
	RGT 39.	5	80	1.7	72	5X5X25	116	4,200	82,000	203,000
	RGT 39.	10	80	1.7	72	5X5X25	91	4,200	163,000	228,000
48	RGT 48.	5	96	2.7	95	6X6X40	148	3,800	104,000	320,000
	RGT 48.	10	96	2.7	95	6X6X40	103	3,800	206,000	370,000
63	RGT 63.	5	118	3.5	115	8X7X45	188	3,000	129,000	520,000
	RGT 63.	10	118	3.5	115	8X7X45	129	3,000	255,000	610,000

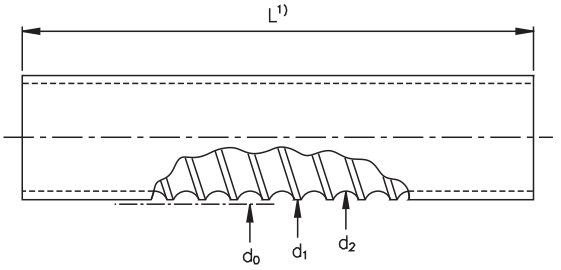
1) Limiting speed of the planetary roller screw. Critical speed n_{max} and limiting speed of the rolling bearings should be considered.

*) Available on request.

Rolled Ball Screws

SERIES KGS

- Metric dimensions
- High strength steel Cf53 (SAE1055)
- Induction hardened to 60 HRC
- Gothic arch thread form

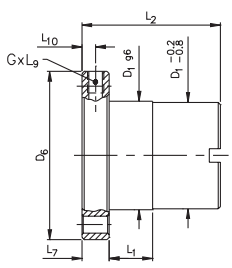


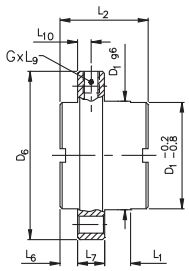
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

NOMINAL PITCH DIAMETER d_0	DESIGNATION	ACCURACY CLASS (µm/300 mm)	d_0 mm	Lead P mm	d_1 mm	d_2 mm	NUMBER OF STARTS	L_{max} 1) mm	MASS (kg/m)
16	KGS 1605	23 / 50	16	5	15.5	12.9	1	5600	1.26
	KGS 1610	23 / 50	16	10	15.4	13.0	2	5600	1.26
20	KGS 2005	23 / 50	20	5	19.5	16.9	1	5600	2.04
	KGS 2020	23 / 50	20	20	19.5	16.9	4	5600	2.07
	KGS 2050	23 / 50	20	50	19.1	16.5	5	5600	2.04
25	KGS 2505	23 / 50	25	5	24.5	21.9	1	5600	3.33
	KGS 2510	23 / 50	25	10	24.5	21.9	1	5600	3.33
	KGS 2520	23 / 50	25	20	24.6	22.0	4	5600	3.33
	KGS 2525	23 / 50	25	25	24.5	22.0	5	5600	3.33
	KGS 2550	23 / 50	25	50	24.5	21.5	5	5600	3.33
32	KGS 3205	23 / 50	32	5	31.5	28.9	1	5600	5.61
	KGS 3210	23 / 50	32	10	31.7	27.3	1	5600	5.60
	KGS 3220	23 / 50	32	20	31.7	27.9	2	5600	5.61
	KGS 3240	23 / 50	32	40	30.9	28.3	4	5600	5.61
40	KGS 4005	23 / 50	40	5	39.5	36.9	1	5600	9.03
	KGS 4010	23 / 50	40	10	39.5	34.1	2	5600	8.33
	KGS 4020	23 / 50	40	20	39.7	35.9	2	5600	9.01
	KGS 4040	23 / 50	40	40	38.9	36.3	4	5600	9.01
50	KGS 5010	50	50	10	49.5	44.1	1	5600	13.48
	KGS 5020	50	50	20	49.5	44.1	2	5600	13.50
63	KGS 6310	50	63	10	62.5	57.1	1	5600	22.04
	KGS 6320	50	63	20	62.5	57.1	2	5600	22.03

Flanged Ball Nuts
SERIES KGF

- Metric dimensions
- Flange mounting
- Optimized internal ball return systems
- Buna contact seals
- Threaded lubrication port
- 3000 rpm speed limit

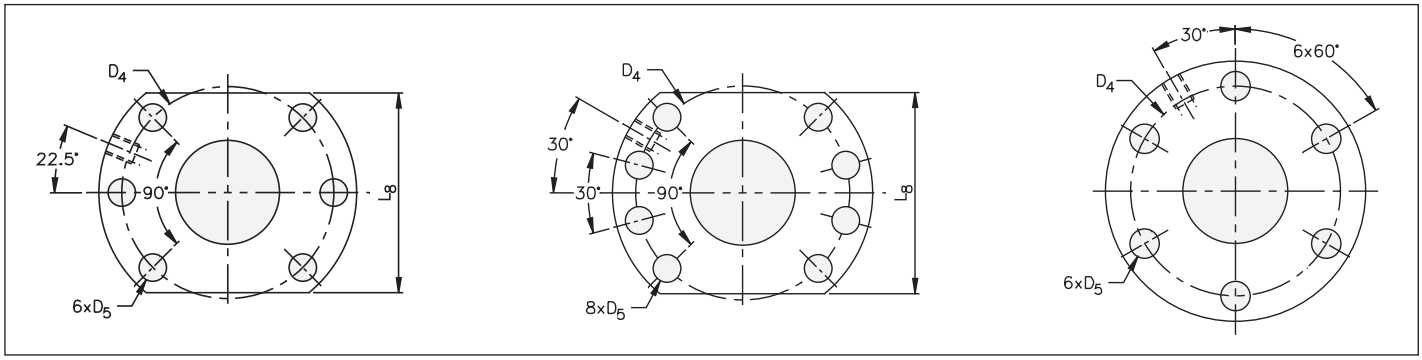




For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

NOMINAL PITCH DIAMETER d_0	DESIGNATION d_0 LEAD	SEAL SUFFIX	FORM	HOLE PATTERN	D_1 mm	D_4 mm	D_5 mm	D_6 mm	L_1 mm	L_2 mm	L_6 mm	L_7 mm	L_8 mm	L_9 mm	L_{10} mm	LUBE HOLE G	AXIAL BACKLASH MAX	LOAD RATINGS DYN C (kN)	LOAD RATINGS STAT C (kN)
16	KGF D 16 05	EE	E	1	28	38	5.5	48	10	42	-	10	40	10	5	M6	0.08	12.0	12.7
	KGF D 16 10	EE	E	1	28	38	5.5	48	10	55	-	10	40	10	5	M6	0.08	23.0	26.0
20	KGF N 20 05	EE	E	3	32	45	7	55	8	44	-	12	-	8	6	M6	0.08	14.0	17.0
	KGF N 20 20	EE	S	3	35	50	7	62	4	30	8	10	-	8	5	M6	0.08	12.0	19.2
	KGF N 20 50	EE	S	3	35	50	7	62	10	56	9	10	-	8	5	M6	0.15	18.0	22.0
25	KGF D 25 05	EE	E	1	40	51	6.6	62	10	42	-	10	48	10	5	M6	0.08	15.0	22.4
	KGF D 25 10	EE	E	1	40	51	6.6	62	16	55	-	10	48	10	5	M6	0.08	17.5	25.0
	KGF D 25 20	EE	S	1	40	51	6.6	62	4	35	10.5	10	48	8	5	M6	0.15	19.0	23.5
	KGF D 25 25	EE	S	1	40	51	6.6	62	9	35	8	10	-[1]	8	5	M6	0.08	21.0	31.0
	KGF D 25 50	EE	S	1	40	51	6.6	62	10	58	10.5	10	48	8	5	M6	0.15	22.5	29.0
32	KGF N 32 05	EE	E	3	45	58	7	70	10	59	-	16	-	8	8	M6	0.08	24.0	49.0
	KGF N 32 10	EE	E	3	53	68	7	80	10	73	-	16	-	8	8	M8x1	0.08	44.0	53.0
	KGF D 32 20	EE	E	1	53	65	9	80	16	80	-	12	62	10	6	M6	0.08	42.5	61.0
	KGF N 32 40	EE	S	3	53	68	7	80	14	45	7.5	16	-	10	8	M6	0.08	17.0	32.0
40	KGF D 40 05	EE	E	2	63	78	9	93	10	57	-	14	70	10	7	M6	0.08	26.0	63.5
	KGF D 40 10	EE	E	2	63	78	9	95	16	71	-	14	70	10	7	M8x1	0.08	50.0	70.0
	KGF D 40 20	EE	E	2	63	78	9	93	16	80	-	14	70	10	7	M8x1	0.08	44.5	77.0
	KGF D 40 40	EE	S	2	63	78	9	93	16	85	7.5	14	-[1]	10	7	M8x1	0.08	42.0	93.0
50	KGF D 50 10	EE	E	2	75	93	11	110	16	95	-	16	85	10	8	M8x1	0.08	78.0	153.0
	KGF D 50 20	EE	E	2	85	103	11	125	22	95	-	18	95	10	9	M8x1	0.08	82.0	137.0
63	KGF D 63 10	EE	E	2	90	108	11	125	16	97	-	18	95	10	9	M8x1	0.08	86.0	200.0
	KGF D 63 20	EE	E	2	95	115	13.5	135	25	99	-	20	100	10	10	M8x1	0.08	85.0	170.0

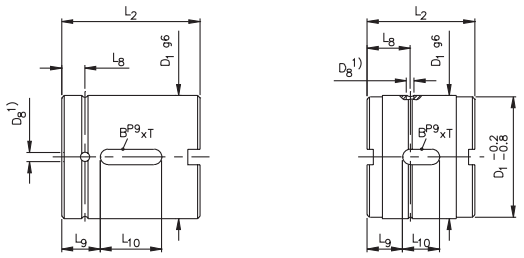
Notes
1) Round flange.



Hole pattern 1 | Hole pattern 2 | Hole Pattern 3

Cylindrical Ball Nuts
SERIES KGM

- Metric dimensions
- Cylindrical mounting
- Optimized internal ball return systems
- Buna contact seals
- Radial lubrication hole and groove
- 3000 rpm speed limit



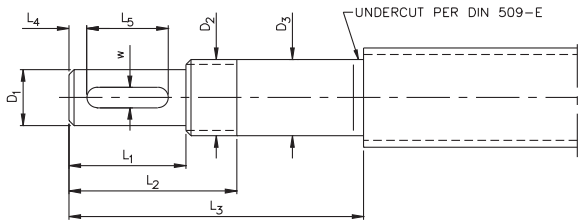
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

NOMINAL PITCH DIAMETER d_0	DESIGNATION d_0 LEAD	SEAL SUFFIX	FORM	D_1 mm	D_8 1) mm	L_2 mm	L_8 mm	L_9 mm	L_{10} mm	BxT	AXIAL BACKLASH MAX	LOAD RATINGS DYN C (kN)	LOAD RATINGS STAT C (kN)
16	KGM D 16 05	EE	E	28	3	34	7	7	20	5x2	0.08	12.5	12.7
	KGM D 16 10	EE	E	28	3	50	7	15	20	5x2	0.08	23.0	26.0
20	KGM N 20 05	EE	E	32	3	34	7	7	20	5x2	0.08	14.0	17.0
	KGM N 20 20	EE	S	35	1.5	30	11.5	9	12	5x3	0.08	12.0	19.2
	KGM N 20 50	EE	S	35	1.5	56	16	18	20	5x3	0.15	18.0	22.0
25	KGM D 25 05	EE	E	40	3	34	7	7	20	5x2	0.08	15.0	22.4
	KGM D 25 10	EE	E	40	3	45	7.5	12.5	20	5x2	0.08	17.5	25.0
	KGM D 25 20	EE	S	40	1.5	35	14	11.5	12	5x3	0.15	19.0	23.5
	KGM D 25 25	EE	S	40	1.5	35	11.5	11	13	5x3	0.08	21.0	31.0
	KGM D 25 50	EE	S	40	1.5	58	17	19	20	5x3	0.15	22.5	29.0
32	KGM N 32 05	EE	E	45	3	45	7.5	8	30	6x2.5	0.08	24.0	49.0
	KGM N 32 10	EE	E	53	4	60	10	15	30	6x2.5	0.08	44.0	53.0
	KGM N 32 20	EE	E	53	3	70	7.5	20	30	6x2.5	0.08	42.5	61.0
	KGM N 32 40	EE	S	53 2)	1.5	45	13	10	25	6x4	0.08	17.0	32.0
40	KGM D 40 05	EE	E	63	3	45	7.5	8	30	6x2.5	0.08	26.0	63.5
	KGM D 40 10	EE	E	63	4	60	10	15	30	6x2.5	0.08	50.0	70.0
	KGM D 40 20	EE	E	63	3	70	7.5	20	30	6x2.5	0.08	44.5	77.0
	KGM D 40 40	EE	S	63	1.5	85	15	27.5	30	6x3.5	0.08	42.0	93.0
50	KGM D 50 10	EE	E	75	4	82	11	23	36	6x2,5	0.08	78.0	153.0
	KGM N 50 20	EE	E	85	4	82	10	23	36	6x2,5	0.08	82.0	137.0
63	KGM D 63 10	EE	E	90	4	82	11	23	36	6x2.5	0.08	86.0	200.0
	KGM D 63 20	EE	E	95	4	82	10	23	36	6x2.5	0.08	85.0	170.0

Notes
1) Position of lubrication hole not defined on circumference.
2) D1 -0.2/-0.8 is D1 -1/-1.5

Standard Screw Ends
FORM D

- "Fixed" drive end support configuration
- Designed for INA ballscrew support bearings and locknuts
- Locknut threads to 6g tolerance class
- Standard metric keyways

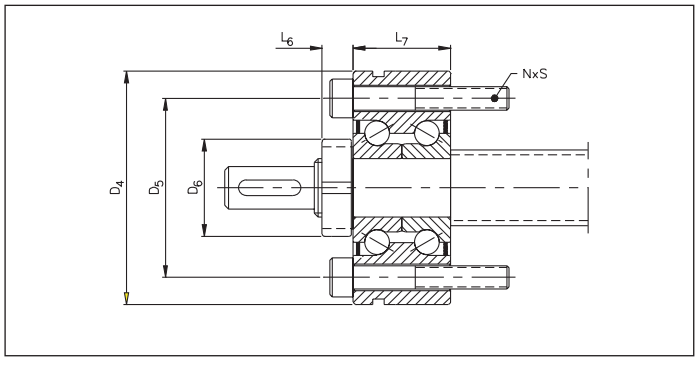


For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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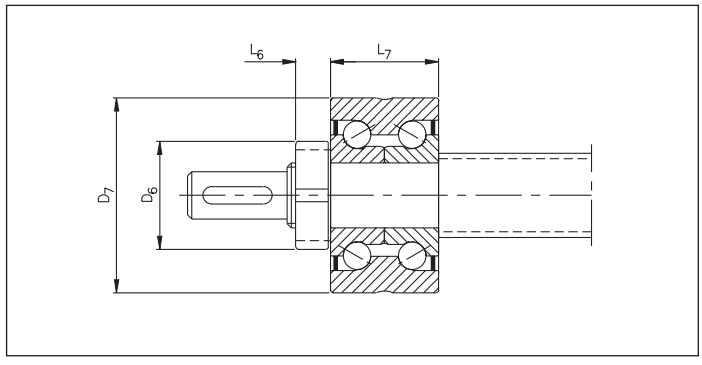
NOMINAL PITCH DIAMETER d_0	D_1^{k6} mm	D_2 mm	D_3^{k6} mm	L_1 mm	L_2 mm	L_3 mm	L_4 mm	KEYWAY TO DIN 6885 w x depth x L_6
16	9	M12x1	12	20	30	55	2.5	3 x 1.8 x 16
20	11	M15x1	15	23	33	58	3.5	4 x 2.5 x 16
25	14	M20x1	20	30	42	70	4	5 x 3 x 22
32	19	M25x1.5	25	40	54	82	6	6 x 3.5 x 28
40	24	M30x1.5	30	50	64	92	7	8 x 4 x 36

NOMINAL PITCH DIAMETER d_0	D_4 mm	D_5 mm	D_6 mm	D_7 mm	L_6 mm	L_7 mm	N x S mm	BEARING		LOCKNUT	MAX. AXIAL LOAD (kN)
16	55	42	22	42	8	25	3 x M6	ZKLF 1255.2RS	ZKLN 1242.2RS	ZM12	12
20	60	46	25	45	8	25	3 x M6	ZKLF 1560.2RS	ZKLN 1545.2RS	ZM15	14
25	68	53	32	52	10	28	4 x M6	ZKLF 2068.2RS	ZKLN 2052.2RS	ZM20	16
32	75	58	38	57	12	28	4 x M6	ZKLF 2575.2RS	ZKLN 2557.2RS	ZM25	20
40	80	63	45	62	12	28	6 x M6	ZKLF 3080.2RS	ZKLN 3062.2RS	ZM30	22

Notes
Bearings and locknut must be ordered separately. For more information, see INA publication ZAE.



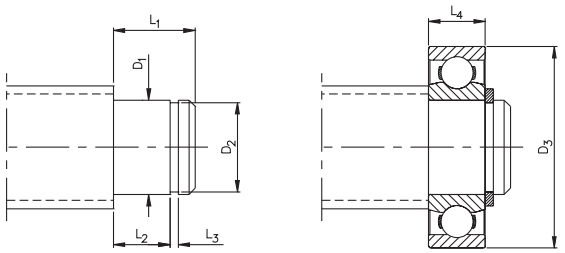
Form D with 2KLF and 2M



Form D with 2KLN and 2M

Standard Screw Ends
FORM W AND N AND Z

- Radial end support configurations W & N
- Designed for INA bearings and retaining rings
- Form Z - cut and chamfer only



Form W

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

Form W

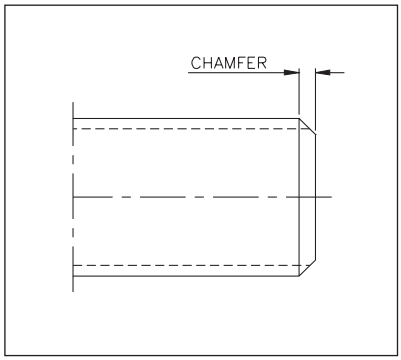
NOMINAL PITCH DIAMETER d_0	D_1^{k6} mm	D_2 mm	D_3 mm	L_1 mm	L_2 mm	L_3 mm	L_4 mm	BEARING	SHAFT RING PER DIN 471
16	12	11.5	28	12	8	1.1	8	6001 2RS	12x1
20	15	14.2	32	13	9	1.3	9	6002 2RS	15x1
25	20	18.8	42	16	12	1.3	12	6004 2RS	20x1.2
32	25	23.7	52	20	15	1.3	15	6205 2RS	25x1.2
40	30	28.6	62	21	16	1.6	16	6206 2RS	30x1.5
50	40	38.5	80	25	18	1.85	18	6208 2RS	40x1.75
63	55	52	100	29	21	2.15	21	6211 2RS	55x2

Notes
Bearings must be ordered separately. For more information, see INA publication 517.
Shaft rings not included.

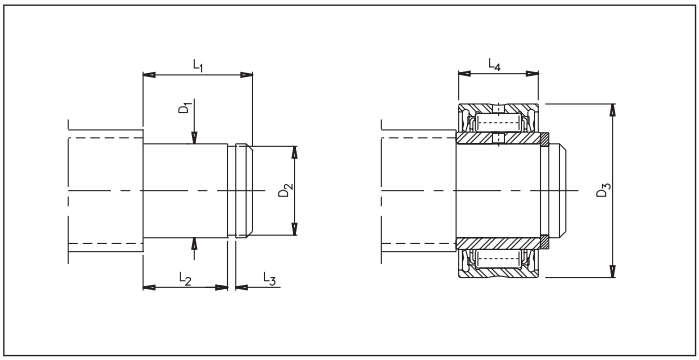
Form N

NOMINAL PITCH DIAMETER d_0	D_1^{k6} mm	D_2 mm	D_3 mm	L_1 mm	L_2 mm	L_3 mm	L_4 mm	INA NEEDLE ROLLER BEARING	INA SNAP RING
16	12	11.5	24	18	14	1.1	13	NA 4901 2RS	WR 12
20	15	14.4	28	18	14	1.3	13	NA 4902 2RS	WR 15
25	20	19.2	37	22	18	1.3	17	NA 4904 2RS	WR 20
32	25	24	42	23	18	1.3	17	NA 4905 2RS	WR 25
40	30	29	47	23	18	1.6	17	NA 4906 2RS	WR 30
50	40	38.5	62	30	23	1.6	22	NA 4908 2RS	WR 40
63	50	48.5	62	30.5	23	1.6	22	NA 4910 2RS	WR 50

Notes
Bearings must be ordered separately. For more information, see INA publication 517.
Shaft rings not included.



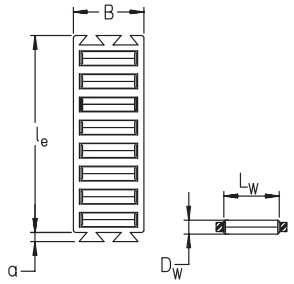
Form Z



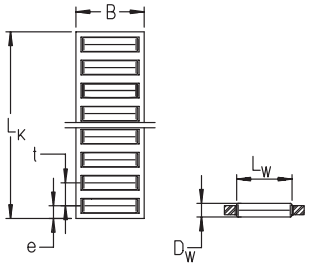
Form N

INA-HYDREL
Flat Cage Assemblies
FF, H, BF, HR SERIES

- Single row



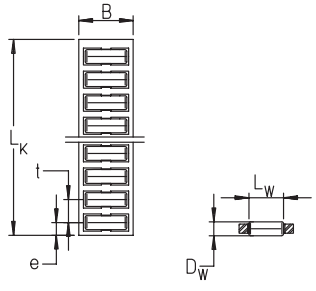
FF SERIES



H, BF SERIES

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

PART NUMBER				WGT.	B	D_w	L_w	t	e	a	L_k max.	l_3	Z_e ROLLERS PER CAGE	DYN. LOAD PER 10 ROLLERS C	STAT. LOAD PER 10 ROLLERS C_0
				g/L_K=1000 mm	mm	mm	mm	mm	mm	mm	mm	mm	Number	N	N
FF2010	–	–	–	46	10	2	6.8	–	–	2	–	32	7	11800	28000
–	H10	–	–	63	10	2	6.8	4.5	3.5	–	3000	–	–	11800	28000
FF2515	–	–	–	84	15	2.5	9.8	–	–	2.5	–	45	8	21200	52000
–	H15	–	–	120	15	2.5	9.8	5	3.5	–	3000	–	–	21200	52000
FF3020	–	–	–	148	20	3	13.8	–	–	3	–	60	9	35500	88000
–	H20	–	–	202	20	3	13.8	6	4.5	–	3000	–	–	35500	88000
–	–	BF3020	–	342	20	3	15.8	6	4.5	–	2000	–	–	39500	102000
FF3525	–	–	–	221	25	3.5	17.8	–	–	3	–	75	10	53000	132000
–	H25	–	–	294	25	3.5	17.8	7	5	–	3000	–	–	53000	132000
–	–	BF5015	–	375	15	5	11.8	8	5.5	–	2000	–	–	60000	123000
–	–	BF5023	–	530	23	5	19.8	8	5.5	–	2000	–	–	91000	211000
–	–	BF5032	–	722	32	5	27.8	8	5.5	–	2000	–	–	119000	300000
–	–	–	HR50	105	10.5	5	5	10	6.5	–	3000	–	–	30000	51000
–	–	BF7028	–	875	28	7	24	11	7.5	–	2000	–	–	165000	365000
–	–	BF7035	–	1080	35	7	30	11	7.5	–	2000	–	–	197000	455000
–	–	–	HR70	295	17	7	10	13	8.5	–	3000	–	–	82000	148000
–	–	–	HR100	598	24	10	14	17	10	–	3000	–	–	169000	295000
–	–	BF12022	–	1220	22	12	18	16	10	–	2000	–	–	260000	460000
–	–	BF12040	–	1970	40	12	36	16	10	–	2000	–	–	455000	930000

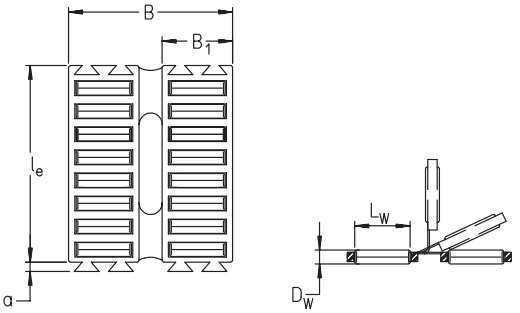


HR SERIES

Products and company names are trademarks or registered trademarks of their respective companies.

INA-HYDREL
Flat Cage Assemblies
FF..ZW, H..ZW, HR..ZW SERIES

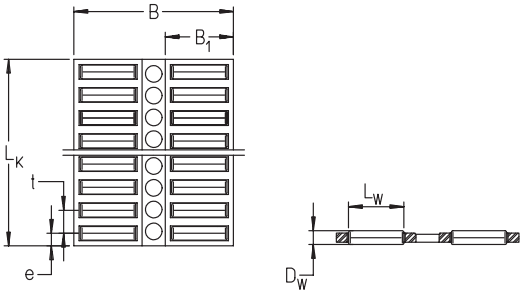
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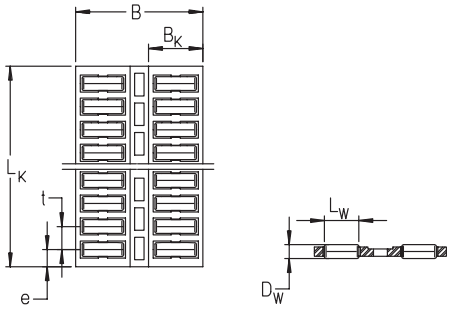
FF..ZW SERIES

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

PART NUMBER			WGT.	B	B_1	D_w	L_w	t	e	a	L_k max.	l_3	Z_e ROLLERS PER CAGE	DYN. LOAD PER 10 ROLLERS C	STAT. LOAD PER 10 ROLLERS C_0
			g/L_K=1000 mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Number	N	N
FF 2025 ZWA	–	–	94	25	10	2	6.8	–	–	2	–	32	7	20200	56000
–	H 24 ZW	–	138	24	10.5	2	6.8	4.5	3.5	–	3000	–	–	20200	56000
FF 2535 ZW	–	–	182	35	15	2.5	9.8	–	–	2.4	–	45	8	36500	103000
–	H 34 ZW	–	239	33.5	14.3	2.5	9.8	5.5	4	–	3000	–	–	36500	103000
FF 3045 ZW	–	–	315	45	20	3	13.8	–	–	3	–	60	9	61000	177000
–	H 44 ZW	–	408	44	19	3	13.8	6	4.5	–	3000	–	–	61000	177000
FF 3555 ZW	–	–	464	55	25	3.5	17.8	–	–	3.2	–	75	10	90000	265000
–	H 55 ZW	–	598	55	24	3.5	17.8	7	5	–	3000	–	–	90000	265000
–	–	HR 50 ZW	215	24	10.5	5	5	10	6.5	–	3000	–	–	51000	101000
–	–	HR 70 ZW	602	40	17	7	10	13	8.5	–	3000	–	–	141000	295000
–	–	HR 100 ZW	1233	55	24	10	14	17	10	–	3000	–	–	290000	590000



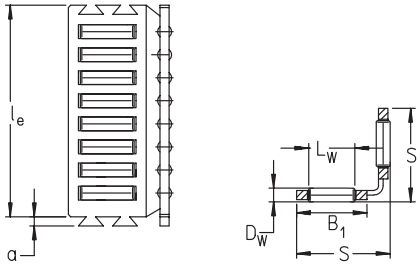
H..ZW SERIES



HR..ZW SERIES

INA-HYDREL
Angled Flat Cage Assemblies
FFW, HW, HRW SERIES

- Double row with 90° bend

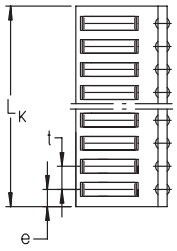


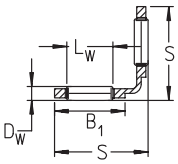
FFW SERIES

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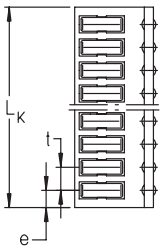
PART NUMBER			WGT.	S	B_1	D_w	L_w	t	e	a	L_k max.	l_3	Z_e ROLLERS PER CAGE	DYN. LOAD PER 10 ROLLERS C	STAT. LOAD PER 10 ROLLERS C_0
			g/L_K=1000 mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Number	N	N
	HW10	–	219	10	8	2	4.8	4	3	–	1000	–	–	10700	27400
FFW 2025 ZWA	–	–	94	15	10	2	6.8	–	–	2	–	32	7	14300	40000
–	HW15	–	138	15	10.5	2	6.8	4.5	3.5	–	3000	–	–	14300	40000
FFW 2535	–	–	182	20.5	15	2.5	9.8	–	–	2.4	–	45	8	25500	73000
–	HW20	–	239	20	14.3	2.5	9.8	5.5	4	–	3000	–	–	25500	73000
FFW 3045	–	–	315	26	20	3	13.8	–	–	3	–	60	9	43000	125000
–	HW25	–	408	25	19	3	13.8	6	4.5	–	3000	–	–	43000	125000
FFW 3555	–	–	464	31.5	25	3.5	17.8	–	–	3.2	–	75	10	64000	187000
–	HW30	–	598	30	24	3.5	17.8	7	5	–	3000	–	–	64000	187000
–	–	HRW 50	215	15.5	10.5	5	5	10	6.5	–	3000	–	–	36500	72000
–	–	HRW 70	602	25	17	7	10	13	8.5	–	3000	–	–	99000	209000
–	–	HRW100	1233	34	24	10	14	17	10	–	3000	–	–	205000	415000

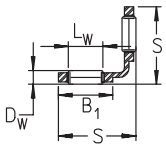
The basic load ratings are valid for the condition that the two sections of the cage are symmetrical to the load direction (see diagram below).



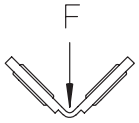


HW SERIES





HRW SERIES



LOAD DIRECTION

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General Information
THIN SECTION, SLEWING RINGS & OTHER PRODUCTS

PRODUCT DESCRIPTION

INA Thin Section Bearings

- Inch size series of constant cross section bearings (radial cross section is equal to axial cross section).
- Available in conrad radial, angular contact and four point contact designs.

INA Radial Ball Bearings, Type C

- Radial ball bearings (type C) are single row ball bearings. The depth of the raceway groove is about 25% of the ball diameter and includes a snap cage.

Four Point Contact Ball Bearings, Type X

- Four point contact ball bearings (type X) are single row angular contact ball bearings which can support axial loads in both directions.
- The raceways have a Gothic arch on the inner and outer ring with a contact angle of 30°. A snap cage keeps the balls apart.
- Four point contact ball bearings support moment loads as well as combined loads or pure radial and axial loads.

Angular Contact Ball Bearings, Type E

- Angular contact ball bearings of type E are self-retaining and have a contact angle α of 30°.
- The outer ring has one shoulder of larger diameter, which allows an optimum number of balls to be inserted in the bearing.

INA Slewing Rings

- Available with an outside diameter up to 1200 mm for nearly all applications.
- INA slewing rings include:
  - closing plug and safety dowel in one bearing ring
  - plastic spacers or plastic cages
  - seals
  - initial greasing
  - lubricating nipples
- Bearings are available with gear teeth on the outer ring or inner ring or without gear teeth (shown in the designation by A, I and U respectively).
- The bearing rings have through holes or threaded holes for mounting screws.
- Slewing rings can be used at operating temperatures from –25°C to +80°C.

Four Point Contact Bearings, Series V

- INA four point contact bearings can safely support medium axial, radial and tilting moment loads.
- Due to their more straightforward design, bearings of series VL.20 and VS.20 are suitable where the accuracy requirements are not so high.
- The permissible circumferential speed is 4 m/s or 5.2 m/s for short periods of time.

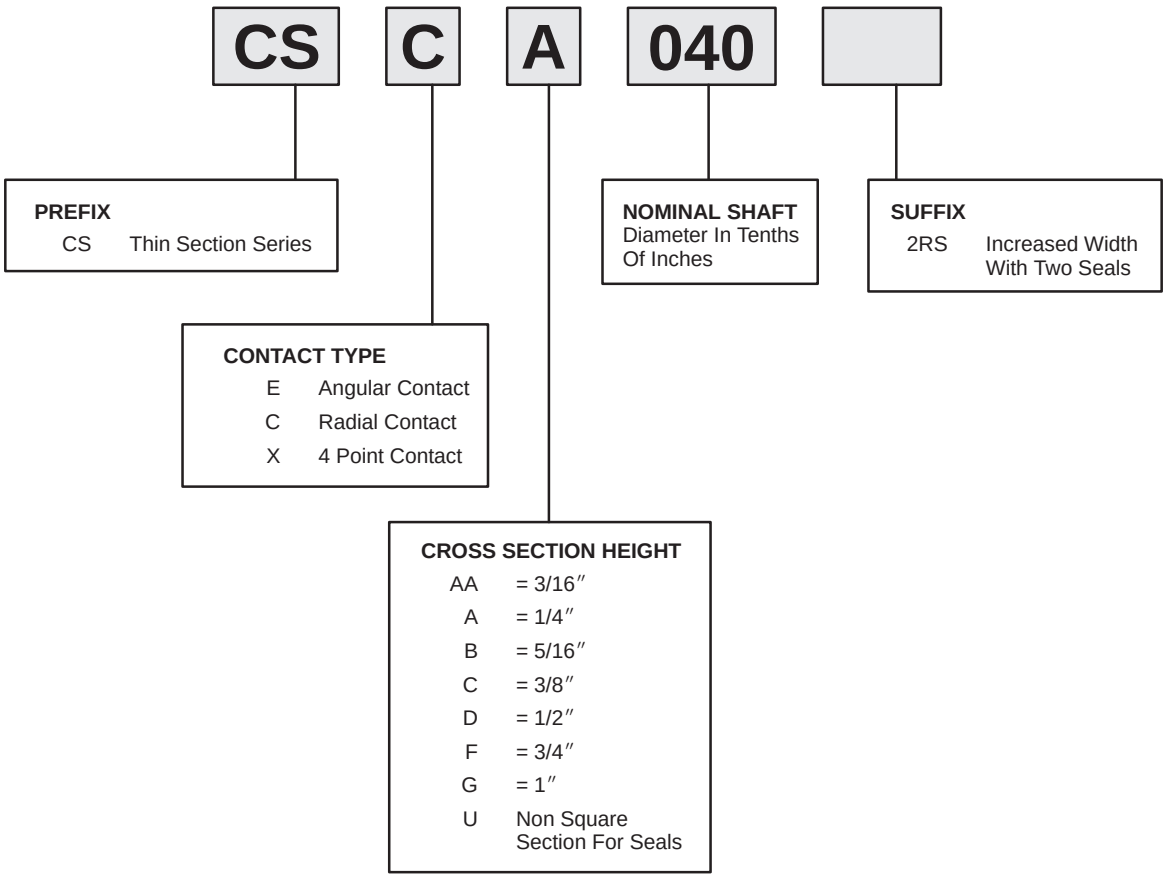
Crossed Roller Bearings, Series X

- INA crossed roller bearings are preloaded as standard.
- They are used when higher accuracy and rigidity of the bearing arrangement are required.
- They are suitable for applications where high radial forces and medium axial and tilting moment loads act on the bearing arrangement.
- The permissible circumferential speed is 2 m/s or 2.6 m/s for short periods of time.

Part Number Identification
THIN SECTION, SLEWING RINGS & OTHER PRODUCTS

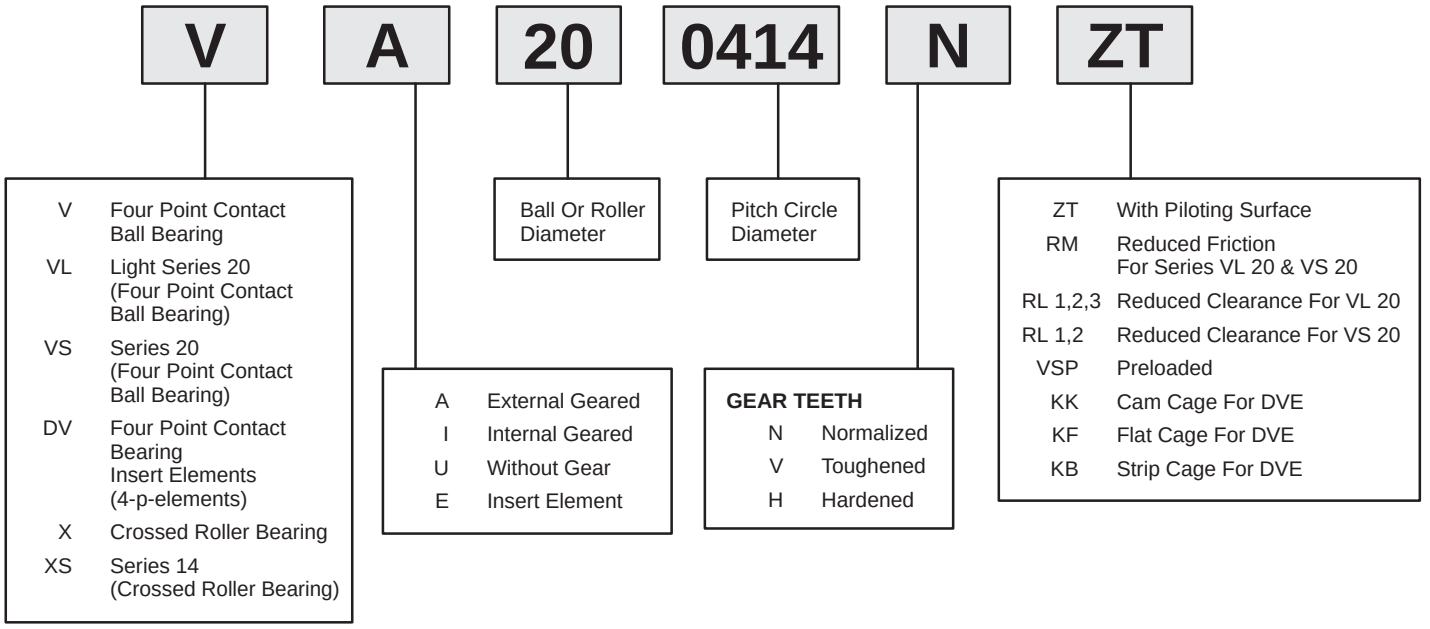
THIN SECTION BALL BEARINGS
INCH SERIES

CS



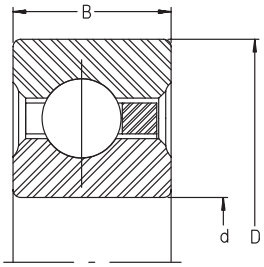
Part Number Identification
THIN SECTION, SLEWING RINGS & OTHER PRODUCTS

SLEWING RINGS



Thin Section
Conrad Ball Bearings
CSC SERIES

- Symmetric cross section thin section ball bearings
- Conrad type for radial loads
- Inch series

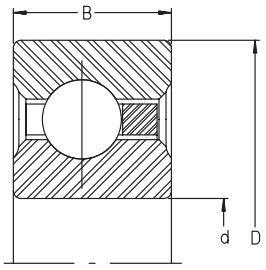


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PART NUMBER	SHAFT d inch	SHAFT d mm	OD D inch	OD D mm	WIDTH B inch	WIDTH B mm	DYNAMIC CAPACITY lbf	DYNAMIC CAPACITY N	WEIGHT lbs	WEIGHT kg
CSCA010	1	25.4	1.375	34.925	0.1875	4.763	140	620	0.026	0.012
CSCA015	1.5	38.1	1.875	47.625	0.1875	4.763	190	850	0.039	0.018
CSCA020	2	50.8	2.5	63.5	0.25	6.35	310	1380	0.1	0.045
CSCA025	2.5	63.5	3	76.2	0.25	6.35	360	1600	0.13	0.059
CSCA030	3	76.2	3.5	88.9	0.25	6.35	400	1780	0.15	0.068
CSCA035	3.5	88.9	4	101.6	0.25	6.35	430	1910	0.18	0.082
CSCA040	4	101.6	4.5	114.3	0.25	6.35	480	2140	0.19	0.086
CSCA042	4.25	107.95	4.75	120.65	0.25	6.35	500	2220	0.2	0.091
CSCA045	4.5	114.3	5	127	0.25	6.35	510	2270	0.22	0.1
CSCA047	4.75	120.65	5.25	133.35	0.25	6.35	530	2360	0.23	0.104
CSCA050	5	127	5.5	139.7	0.25	6.35	540	2400	0.24	0.109
CSCA055	5.5	139.7	6	152.4	0.25	6.35	580	2580	0.25	0.113
CSCA060	6	152.4	6.5	165.1	0.25	6.35	610	2710	0.28	0.127
CSCA065	6.5	165.1	7	177.8	0.25	6.35	640	2850	0.3	0.136
CSCA070	7	177.8	7.5	190.5	0.25	6.35	680	3020	0.31	0.141
CSCA075	7.5	190.5	8	203.2	0.25	6.35	710	3160	0.34	0.154
CSCA080	8	203.2	8.5	215.9	0.25	6.35	740	3290	0.38	0.172
CSCA090	9	228.6	9.5	241.3	0.25	6.35	800	3560	0.44	0.2
CSCA100	10	254	10.5	266.7	0.25	6.35	860	3830	0.5	0.227
CSCA110	11	279.4	11.5	292.1	0.25	6.35	910	4050	0.52	0.236
CSCA120	12	304.8	12.5	317.5	0.25	6.35	970	4310	0.56	0.254
CSCB020	2	50.8	2.625	66.675	0.3125	7.938	440	1960	0.16	0.073
CSCB025	2.5	63.5	3.125	79.375	0.3125	7.938	510	2270	0.2	0.091
CSCB030	3	76.2	3.625	92.075	0.3125	7.938	560	2490	0.24	0.109
CSCB035	3.5	88.9	4.125	104.775	0.3125	7.938	610	2710	0.27	0.122
CSCB040	4	101.6	4.625	117.475	0.3125	7.938	680	3020	0.3	0.136
CSCB042	4.25	107.95	4.875	123.825	0.3125	7.938	690	3070	0.31	0.141
CSCB045	4.5	114.3	5.125	130.175	0.3125	7.938	720	3200	0.33	0.15
CSCB050	5	127	5.625	142.875	0.3125	7.938	770	3420	0.38	0.172
CSCB055	5.5	139.7	6.125	155.575	0.3125	7.938	820	3650	0.41	0.186
CSCB060	6	152.4	6.625	168.275	0.3125	7.938	870	3870	0.44	0.2
CSCB065	6.5	165.1	7.125	180.975	0.3125	7.938	910	4050	0.47	0.213
CSCB080	8	203.2	8.625	219.075	0.3125	7.938	1040	4630	0.57	0.259
CSCC040	4	101.6	4.75	120.65	0.375	9.525	860	3830	0.45	0.204
CSCC042	4.25	107.95	5	127	0.375	9.525	900	4000	0.47	0.213
CSCC045	4.5	114.3	5.25	133.35	0.375	9.525	920	4090	0.48	0.218
CSCC047	4.75	120.65	5.5	139.7	0.375	9.525	950	4230	0.5	0.227
CSCC050	5	127	5.75	146.05	0.375	9.525	990	4400	0.58	0.263
CSCC055	5.5	139.7	6.25	158.75	0.375	9.525	1050	4670	0.59	0.268
CSCC060	6	152.4	6.75	171.45	0.375	9.525	1100	4890	0.63	0.286
CSCC065	6.5	165.1	7.25	184.15	0.375	9.525	1150	5120	0.68	0.308
CSCC070	7	177.8	7.75	196.85	0.375	9.525	1210	5380	0.73	0.331
CSCC075	7.5	190.5	8.25	209.55	0.375	9.525	1260	5600	0.78	0.354
CSCC080	8	203.2	8.75	222.25	0.375	9.525	1320	5870	0.84	0.381
CSCC090	9	228.6	9.75	247.65	0.375	9.525	1440	6410	0.94	0.426
CSCC100	10	254	10.75	273.05	0.375	9.525	1490	6630	1.06	0.481

Thin Section
Conrad Ball Bearings
CSC SERIES

- Symmetric cross section thin section ball bearings
- Conrad type for radial loads
- Inch series

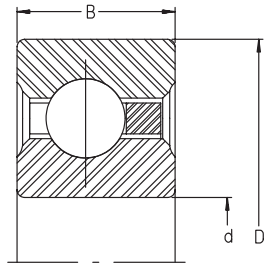


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PART NUMBER	SHAFT d inch	SHAFT d mm	OD D inch	OD D mm	WIDTH B inch	WIDTH B mm	DYNAMIC CAPACITY lbf	DYNAMIC CAPACITY N	WEIGHT lbs	WEIGHT kg
CSCC110	11	279.4	11.75	298.45	0.375	9.525	1610	7160	1.16	0.526
CSCC120	12	304.8	12.75	323.85	0.375	9.525	1720	7650	1.25	0.567
CSCD040	4	101.6	5	127	0.5	12.7	1330	5920	0.78	0.354
CSCD042	4.25	107.95	5.25	133.35	0.5	12.7	1390	6180	0.88	0.399
CSCD045	4.5	114.3	5.5	139.7	0.5	12.7	1450	6450	0.88	0.399
CSCD047	4.75	120.65	5.75	146.05	0.5	12.7	1460	6490	0.94	0.426
CSCD050	5	127	6	152.4	0.5	12.7	1510	6720	1	0.454
CSCD055	5.5	139.7	6.5	165.1	0.5	12.7	1630	7250	1.06	0.481
CSCD060	6	152.4	7	177.8	0.5	12.7	1700	7560	1.16	0.526
CSCD065	6.5	165.1	7.5	190.5	0.5	12.7	1820	8100	1.22	0.553
CSCD070	7	177.8	8	203.2	0.5	12.7	1880	8360	1.31	0.594
CSCD075	7.5	190.5	8.5	215.9	0.5	12.7	2000	8900	1.41	0.639
CSCD080	8	203.2	9	228.6	0.5	12.7	2060	9160	1.53	0.694
CSCD090	9	228.6	10	254	0.5	12.7	2240	9960	1.72	0.78
CSCD100	10	254	11	279.4	0.5	12.7	2360	10500	1.88	0.853
CSCD110	11	279.4	12	304.8	0.5	12.7	2540	11300	2.06	0.934
CSCD120	12	304.8	13	330.2	0.5	12.7	2660	11830	2.25	1.02
CSCF040	4	101.6	5.5	139.7	0.75	19.05	2680	11920	1.9	0.862
CSCF042	4.25	107.95	5.75	146.05	0.75	19.05	2750	12230	2	0.907
CSCF045	4.5	114.3	6	152.4	0.75	19.05	2820	12540	2.1	0.952
CSCF047	4.75	120.65	6.25	158.75	0.75	19.05	2950	13120	2.2	0.998
CSCF050	5	127	6.5	165.1	0.75	19.05	3020	13430	2.3	1.043
CSCF055	5.5	139.7	7	177.8	0.75	19.05	3220	14320	2.5	1.134
CSCF060	6	152.4	7.5	190.5	0.75	19.05	3350	14900	2.7	1.224
CSCF065	6.5	165.1	8	203.2	0.75	19.05	3550	15790	2.9	1.315
CSCF075	7.5	190.5	9	228.6	0.75	19.05	3820	16990	3.4	1.542
CSCF080	8	203.2	9.5	241.3	0.75	19.05	4020	17880	3.5	1.587
CSCF090	9	228.6	10.5	266.7	0.75	19.05	4290	19080	3.9	1.769
CSCF100	10	254	11.5	292.1	0.75	19.05	4630	20590	4.3	1.95
CSCF110	11	279.4	12.5	317.5	0.75	19.05	4890	21750	4.8	2.177
CSCF120	12	304.8	13.5	342.9	0.75	19.05	5160	22950	5.2	2.358
CSCF140	14	355.6	15.5	393.7	0.75	19.05	5700	25350	6	2.721
CSCG042	4.25	107.95	6.25	158.75	1	25.4	4430	19700	3.8	1.723
CSCG047	4.75	120.65	6.75	171.45	1	25.4	4870	21660	4.1	1.859
CSCG050	5	127	7	177.8	1	25.4	5020	22330	4.3	1.95
CSCG055	5.5	139.7	7.5	190.5	1	25.4	5240	23310	4.7	2.132
CSCG060	6	152.4	8	203.2	1	25.4	5610	24950	5.1	2.313
CSCG065	6.5	165.1	8.5	215.9	1	25.4	5760	25620	5.4	2.449
CSCG070	7	177.8	9	228.6	1	25.4	6120	27220	5.8	2.63
CSCG075	7.5	190.5	9.5	241.3	1	25.4	6270	27890	6.1	2.766
CSCG080	8	203.2	10	254	1	25.4	6640	29530	6.5	2.948
CSCG090	9	228.6	11	279.4	1	25.4	7080	31490	7.2	3.265
CSCG100	10	254	12	304.8	1	25.4	7530	33490	7.9	3.583
CSCG110	11	279.4	13	330.2	1	25.4	8040	35760	8.6	3.9
CSCG120	12	304.8	14	355.6	1	25.4	8490	37760	9.3	4.218
CSCG140	14	355.6	16	406.4	1	25.4	9300	41370	10.8	4.898

Thin Section
Conrad Ball Bearings
CSC SERIES

- Symmetric cross section thin section ball bearings
- Conrad type for radial loads
- Inch series



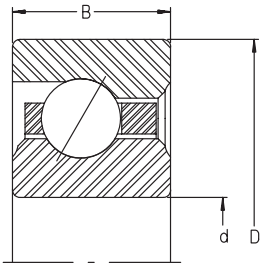
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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PART NUMBER	SHAFT d inch	SHAFT d mm	OD D inch	OD D mm	WIDTH B inch	WIDTH B mm	DYNAMIC CAPACITY lbf	DYNAMIC CAPACITY N	WEIGHT lbs	WEIGHT kg
CSCG160	16	406.4	18	457.2	1	25.4	10100	44920	12.3	5.578
CSCG180	18	457.2	20	508	1	25.4	10900	48480	13.7	6.213
CSCG200	20	508	22	558.8	1	25.4	11700	52040	18.8	8.526
CSCG250	25	635	27	685.8	1	25.4	13400	59600	19.5	8.844
CSCG300	30	762	32	812.8	1	25.4	15100	67160	23.3	10.567

Thin Section Angular Contact Ball Bearings

CSE SERIES

- Symmetric cross section angular contact ball bearings
- Inch series



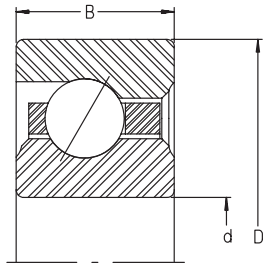
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PART NUMBER	SHAFT d inch	SHAFT d mm	OD D inch	OD D mm	WIDTH B inch	WIDTH B mm	DYNAMIC CAPACITY lbf	DYNAMIC CAPACITY N	WEIGHT lbs	WEIGHT kg
CSEA010	1	25.4	1.375	34.93	0.1875	4.76	150	670	0.025	0.011
CSEA015	1.5	38.1	1.875	47.63	0.1875	4.76	200	890	0.038	0.017
CSEA020	2	50.8	2.5	63.5	0.25	6.35	320	1420	0.1	0.045
CSEA025	2.5	63.5	3	76.2	0.25	6.35	380	1690	0.12	0.054
CSEA030	3	76.2	3.5	88.9	0.25	6.35	420	1870	0.14	0.063
CSEA035	3.5	88.9	4	101.6	0.25	6.35	460	2050	0.17	0.077
CSEA040	4	101.6	4.5	114.3	0.25	6.35	500	2220	0.19	0.086
CSEA045	4.25	107.95	4.75	120.65	0.25	6.35	510	2270	0.2	0.091
CSEA050	4.5	114.3	5	127	0.25	6.35	530	2360	0.21	0.095
CSEA047	4.75	120.65	5.25	133.35	0.25	6.35	560	2490	0.22	0.1
CSEA050	5	127	5.5	139.7	0.25	6.35	570	2540	0.23	0.104
CSEA060	6	152.4	6.5	165.1	0.25	6.35	640	2850	0.28	0.127
CSEA065	6.5	165.1	7	177.8	0.25	6.35	680	3020	0.3	0.136
CSEA075	7.5	190.5	8	203.2	0.25	6.35	740	3290	0.34	0.154
CSEA100	10	254	10.5	266.7	0.25	6.35	890	3960	0.45	0.204
CSEB020	2	50.8	2.625	66.68	0.3125	7.94	460	2050	0.15	0.068
CSEB025	2.5	63.5	3.125	79.38	0.3125	7.94	530	2360	0.19	0.086
CSEB030	3	76.2	3.625	92.08	0.3125	7.94	600	2670	0.22	0.1
CSEB035	3.5	88.9	4.125	104.78	0.3125	7.94	650	2890	0.27	0.122
CSEB040	4	101.6	4.625	117.48	0.3125	7.94	710	3160	0.3	0.136
CSEB042	4.25	107.95	4.875	123.83	0.3125	7.94	730	3250	0.31	0.141
CSEB060	6	152.4	6.625	168.28	0.3125	7.94	910	4050	0.44	0.2
CSEB065	6.5	165.1	7.125	180.98	0.3125	7.94	960	4270	0.47	0.213
CSEB090	9	228.6	9.625	244.48	0.3125	7.94	1180	5250	0.64	0.29
CSEC040	4	101.6	4.75	120.65	0.375	9.53	930	4140	0.44	0.2
CSEC040	4.5	114.3	5.25	133.35	0.375	9.53	1010	4490	0.49	0.222
CSEC047	4.75	120.65	5.5	139.7	0.375	9.53	1050	4670	0.51	0.231
CSEC050	5	127	5.75	146.05	0.375	9.53	1080	4800	0.54	0.245
CSEC055	5.5	139.7	6.25	158.75	0.375	9.53	1140	5070	0.58	0.263
CSEC060	6	152.4	6.75	171.45	0.375	9.53	1210	5380	0.64	0.29
CSEC070	7	177.8	7.75	196.85	0.375	9.53	1320	5870	0.74	0.336
CSEC075	7.5	190.5	8.25	209.55	0.375	9.53	1380	6140	0.78	0.354
CSEC110	11	279.4	11.75	298.45	0.375	9.53	1780	7920	1.14	0.517
CSED040	4	101.6	5	127	0.5	12.7	1390	6180	0.8	0.363
CSED042	4.25	107.95	5.25	133.35	0.5	12.7	1450	6450	0.84	0.381
CSED045	4.5	114.3	5.5	139.7	0.5	12.7	1510	6720	0.88	0.399
CSED047	4.75	120.65	5.75	146.05	0.5	12.7	1570	6980	0.93	0.422
CSED050	5	127	6	152.4	0.5	12.7	1630	7250	0.98	0.444
CSED055	5.5	139.7	6.5	165.1	0.5	12.7	1700	7560	1.06	0.481
CSED060	6	152.4	7	177.8	0.5	12.7	1820	8100	1.15	0.522
CSED065	6.5	165.1	7.5	190.5	0.5	12.7	1880	8360	1.24	0.562
CSED070	7	177.8	8	203.2	0.5	12.7	2000	8900	1.33	0.603
CDED075	7.5	190.5	8.5	215.9	0.5	12.7	2060	9160	1.42	0.644
CSED080	8	203.2	9	228.6	0.5	12.7	2180	9700	1.52	0.689
CSED090	9	228.6	10	254	0.5	12.7	2300	10230	1.69	0.766
CSEF047	4.75	120.65	6.25	158.75	0.75	19.05	3150	14010	2.26	1.025

Thin Section Angular Contact Ball Bearings

CSE SERIES

- Symmetric cross section angular contact ball bearings
- Inch series

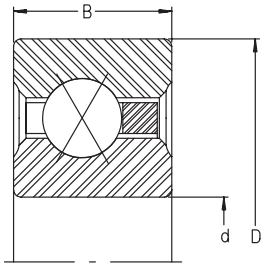


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PART NUMBER	SHAFT d inch	SHAFT d mm	OD D inch	OD D mm	WIDTH B inch	WIDTH B mm	DYNAMIC CAPACITY lbf	DYNAMIC CAPACITY N	WEIGHT lbs	WEIGHT kg
CSEF055	5.5	139.7	7	177.8	0.75	19.05	3420	15210	2.59	1.175
CSEF060	6	152.4	7.5	190.5	0.75	19.05	3620	16100	2.72	1.234
CSEF065	6.5	165.1	8	203.2	0.75	19.05	3750	16680	2.94	1.333
CSEF075	7.5	190.5	9	228.6	0.75	19.05	4090	18190	3.39	1.537
CSEF080	8	203.2	9.5	241.3	0.75	19.05	4290	19080	3.61	1.637
CSEF090	9	228.6	10.5	266.7	0.75	19.05	4630	20590	3.95	1.791
CSEF100	10	254	11.5	292.1	0.75	19.05	4890	21750	4.4	1.995
CSEF120	12	304.8	13.5	342.9	0.75	19.05	5500	24460	5.2	2.358
CSEG042	4.25	107.95	6.25	158.75	1	25.4	4360	19390	3.83	1.737
CSEG060	6	152.4	8	203.2	1	25.4	5830	25930	5.07	2.299
CSEG065	6.5	165.1	8.5	215.9	1	25.4	6120	27220	5.41	2.454
CSEG075	7.5	190.5	9.5	241.3	1	25.4	6640	29530	6.2	2.812
CSEG080	8	203.2	10	254	1	25.4	6940	30870	6.54	2.966
CSEG090	9	228.6	11	279.4	1	25.4	7450	33140	7.22	3.274
CSEG120	12	304.8	14	355.6	1	25.4	8860	39410	9.47	4.295
CSEG140	14	355.6	16	406.4	1	25.4	9740	43320	10.9	4.943
CSEG160	16	406.4	18	457.2	1	25.4	10600	47150	12.4	5.624
CSEG180	18	457.2	20	508	1	25.4	11400	50710	13.8	6.259
CSEG200	20	508	22	558.8	1	25.4	12300	54710	15.2	6.893
CSEG250	25	635	27	685.8	1	25.4	14100	62720	18.8	8.526
CSEG300	30	762	32	812.8	1	25.4	15900	70720	22.5	10.204

Thin Section
4 Point Contact Ball Bearings
CSX SERIES

- Symmetric cross section 4 point contact ball bearings
- Inch series

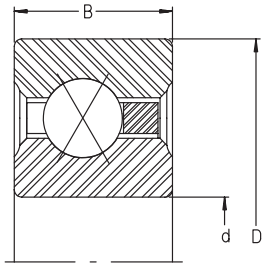


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PART NUMBER	SHAFT d inch	SHAFT d mm	OD D inch	OD D mm	WIDTH B inch	WIDTH B mm	DYNAMIC CAPACITY lbf	DYNAMIC CAPACITY N	WEIGHT lbs	WEIGHT kg
CSXA010	1	25.4	1.375	34.925	0.1875	4.763	140	620	0.026	0.012
CSXA015	1.5	38.1	1.875	47.625	0.1875	4.763	190	850	0.039	0.018
CSXA020	2	50.8	2.5	63.5	0.25	6.35	310	1380	0.1	0.045
CSXA025	2.5	63.5	3	76.2	0.25	6.35	360	1600	0.13	0.059
CSXA030	3	76.2	3.5	88.9	0.25	6.35	400	1780	0.15	0.068
CSXA035	3.5	88.9	4	101.6	0.25	6.35	430	1910	0.18	0.082
CSXA040	4	101.6	4.5	114.3	0.25	6.35	480	2140	0.19	0.086
CSXA042	4.25	107.95	4.75	120.65	0.25	6.35	500	2220	0.2	0.091
CSXA045	4.5	114.3	5	127	0.25	6.35	510	2270	0.22	0.1
CSXA047	4.75	120.65	5.25	133.35	0.25	6.35	530	2360	0.23	0.104
CSXA050	5	127	5.5	139.7	0.25	6.35	540	2400	0.24	0.109
CSXA055	5.5	139.7	6	152.4	0.25	6.35	580	2580	0.25	0.113
CSXA060	6	152.4	6.5	165.1	0.25	6.35	610	2710	0.28	0.127
CSXA065	6.5	165.1	7	177.8	0.25	6.35	640	2850	0.3	0.136
CSXA070	7	177.8	7.5	190.5	0.25	6.35	680	3020	0.31	0.141
CSXA120	12	304.8	12.5	317.5	0.25	6.35	970	4310	0.56	0.254
CSXB020	2	50.8	2.625	66.675	0.3125	7.938	440	1960	0.16	0.073
CSXB025	2.5	63.5	3.125	79.375	0.3125	7.938	510	2270	0.19	0.086
CSXB030	3	76.2	3.625	92.075	0.3125	7.938	560	2490	0.24	0.109
CSXB035	3.5	88.9	4.125	104.775	0.3125	7.938	610	2710	0.27	0.122
CSXB040	4	101.6	4.625	117.475	0.3125	7.938	680	3020	0.3	0.136
CSXB042	4.25	107.95	4.875	123.825	0.3125	7.938	690	3070	0.31	0.141
CSXB045	4.5	114.3	5.125	130.175	0.3125	7.938	720	3200	0.33	0.15
CSXB055	5.5	139.7	6.125	155.575	0.3125	7.938	820	3650	0.41	0.186
CSXB060	6	152.4	6.625	168.275	0.3125	7.938	870	3870	0.44	0.2
CSXB065	6.5	165.1	7.125	180.975	0.3125	7.938	910	4050	0.47	0.213
CSXB070	7	177.8	7.625	193.675	0.3125	7.938	960	4270	0.5	0.227
CSXB075	7.5	190.5	8.125	206.375	0.3125	7.938	1000	4450	0.53	0.24
CSXB080	8	203.2	8.625	219.075	0.3125	7.938	1040	4630	0.57	0.259
CSXB090	9	228.6	9.625	244.475	0.3125	7.938	1130	5030	0.66	0.299
CSXB160	16	406.4	16.625	422.275	0.3125	7.938	1630	7300	1.2	0.544
CSXC040	4	101.6	4.75	120.65	0.375	9.525	860	3830	0.45	0.204
CSXC045	4.5	114.3	5.25	133.35	0.375	9.525	920	4090	0.48	0.218
CSXC050	5	127	5.75	146.05	0.375	9.525	990	4400	0.58	0.263
CSXC055	5.5	139.7	6.25	158.75	0.375	9.525	1050	4670	0.59	0.268
CSXC060	6	152.4	6.75	171.45	0.375	9.525	1100	4890	0.63	0.286
CSXC065	6.5	165.1	7.25	184.15	0.375	9.525	1150	5100	0.68	0.308
CSXC070	7	177.8	7.75	196.85	0.375	9.525	1210	5400	0.73	0.331
CSXC080	8	203.2	8.75	222.25	0.375	9.525	1320	5900	0.84	0.381
CSXC090	9	228.6	9.75	247.65	0.375	9.525	1440	6400	0.94	0.426
CSXC100	10	254	10.75	273.05	0.375	9.525	1490	6600	1.06	0.481
CSXC110	11	279.4	11.75	298.45	0.375	9.525	1610	7200	1.16	0.526
CSXC120	12	304.8	12.75	323.85	0.375	9.525	1720	7700	1.25	0.567
CSXC160	16	406.4	16.75	425.45	0.375	9.525	2070	9200	1.73	0.785
CSXD040	4	101.6	5	127	0.5	12.7	1330	5900	0.78	0.354
CSXD042	4.25	107.95	5.25	133.35	0.5	12.7	1390	6200	0.83	0.376

Thin Section
4 Point Contact Ball Bearings
CSX SERIES

- Symmetric cross section 4 point contact ball bearings
- Inch series



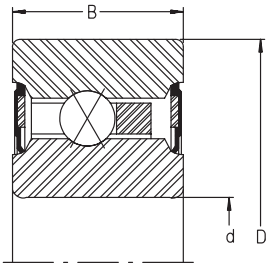
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PART NUMBER	SHAFT d inch	SHAFT d mm	OD D inch	OD D mm	WIDTH B inch	WIDTH B mm	DYNAMIC CAPACITY lbf	DYNAMIC CAPACITY N	WEIGHT lbs	WEIGHT kg
CSXD045	4.5	114.3	5.5	139.7	0.5	12.7	1450	6400	0.88	0.399
CSXD050	5	127	6	152.4	0.5	12.7	1510	6700	1	0.454
CSXD055	5.5	139.7	6.5	165.1	0.5	12.7	1630	7300	1.06	0.481
CSXD060	6	152.4	7	177.8	0.5	12.7	1700	7600	1.16	0.526
CSXD065	6.5	165.1	7.5	190.5	0.5	12.7	1820	8100	1.22	0.553
CSXD070	7	177.8	8	203.2	0.5	12.7	1880	8400	1.31	0.594
CSXD075	7.5	190.5	8.5	215.9	0.5	12.7	2000	8900	1.41	0.639
CSXD080	8	203.2	9	228.6	0.5	12.7	2060	9200	1.53	0.694
CSXD090	9	228.6	10	254	0.5	12.7	2240	10000	1.72	0.78
CSXD100	10	254	11	279.4	0.5	12.7	2360	10500	1.88	0.853
CSXD110	11	279.4	12	304.8	0.5	12.7	2540	11300	2.06	0.934
CSXD120	12	304.8	13	330.2	0.5	12.7	2660	11800	2.25	1.02
CSXD140	14	355.6	15	381	0.5	12.7	2970	13200	2.73	1.238
CSXD180	18	457.2	19	482.6	0.5	12.7	3450	15300	3.48	1.578
CSXD250	25	635	26	660.4	0.5	12.7	4300	19100	4.79	2.172
CSXF040	4	101.6	5.5	139.7	0.75	19.05	2680	11900	1.9	0.862
CSXF045	4.5	114.3	6	152.4	0.75	19.05	2820	12500	2.1	0.952
CSXF047	4.75	120.65	6.25	158.75	0.75	19.05	2950	13100	2.2	0.998
CSXF050	5	127	6.5	165.1	0.75	19.05	3020	13400	2.3	1.043
CSXF055	5.5	139.7	7	177.8	0.75	19.05	3220	14300	2.5	1.134
CSXF060	6	152.4	7.5	190.5	0.75	19.05	3350	14900	2.7	1.224
CSXF065	6.5	165.1	8	203.2	0.75	19.05	3550	15800	2.9	1.315
CSXF075	7.5	190.5	9	228.6	0.75	19.05	3820	17000	3.4	1.542
CSXF080	8	203.2	9.5	241.3	0.75	19.05	4020	17900	3.5	1.587
CSXF090	9	228.6	10.5	266.7	0.75	19.05	4290	19100	3.9	1.769
CSXF100	10	254	11.5	292.1	0.75	19.05	4630	20600	4.3	1.95
CSXF110	11	279.4	12.5	317.5	0.75	19.05	4890	21800	4.8	2.177
CSXF120	12	304.8	13.5	342.9	0.75	19.05	5160	23000	5.2	2.358
CSXF140	14	355.6	15.5	393.7	0.75	19.05	5700	25400	6	2.721
CSXG045	4.5	114.3	6.5	165.1	1	25.4	4650	20700	4	1.814
CSXG050	5	127	7	177.8	1	25.4	5020	22300	4.3	1.95
CSXG060	6	152.4	8	203.2	1	25.4	5610	25000	5.1	2.313
CSXG070	7	177.8	9	228.6	1	25.4	6120	27200	5.8	2.63
CSXG075	7.5	190.5	9.5	241.3	1	25.4	6270	27900	6.1	2.766
CSXG080	8	203.2	10	254	1	25.4	6640	29500	6.5	2.948
CSXG090	9	228.6	11	279.4	1	25.4	7080	31500	7.2	3.265
CSXG100	10	254	12	304.8	1	25.4	7530	33500	7.9	3.583
CSXG110	11	279.4	13	330.2	1	25.4	8040	35800	8.6	3.9
CSXG120	12	304.8	14	355.6	1	25.4	8490	37800	9.3	4.218
CSXG140	14	355.6	16	406.4	1	25.4	9300	41400	10.8	4.898
CSXG160	16	406.4	18	457.2	1	25.4	10100	44900	12.3	5.578
CSXG180	18	457.2	20	508	1	25.4	10900	48500	13.7	6.213
CSXG200	20	508	22	558.8	1	25.4	11700	52000	18.8	8.526
CSXG250	25	635	27	685.8	1	25.4	13400	59600	19.5	8.844
CSXG300	30	762	32	812.8	1	25.4	15100	67200	23.3	10.567
CSXG350	35	889	37	939.8	1	25.4	16700	74300	27.1	12.29

Thin Section, 4 Point Contact Ball Bearings With Seals

CSXU SERIES

- Inch series



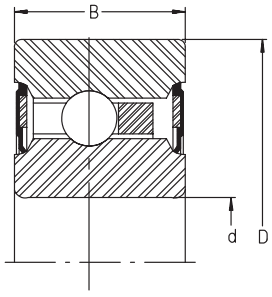
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PART NUMBER	SHAFT d inch	SHAFT d mm	OD D inch	OD D mm	WIDTH B inch	WIDTH B mm	DYNAMIC CAPACITY lbf	DYNAMIC CAPACITY N	WEIGHT lbs	WEIGHT kg
CSXU0402RS	4	101.6	4.75	120.65	0.5	12.7	860	3820	0.55	0.250
CSXU0452RS	4.5	114.3	5.25	133.35	0.5	12.7	920	4090	0.61	0.277
CSXU0502RS	5	127	5.75	146.05	0.5	12.7	990	4400	0.68	0.308
CSXU0652RS	6.5	165.1	7.25	184.15	0.5	12.7	1100	4890	0.87	0.395
CSXU0752RS	7.5	190.5	8.25	209.55	0.5	12.7	1210	5380	0.99	0.449
CSXU0802RS	8	203.2	8.75	222.25	0.5	12.7	1320	5870	1.06	0.481
CSXU0902RS	9	228.6	9.75	247.65	0.5	12.7	1440	6410	1.18	0.535
CSXU1002RS	10	254	10.75	273.05	0.5	12.7	1490	6630	1.31	0.594
CSXU1102RS	11	279.4	11.75	298.45	0.5	12.7	1610	7160	1.43	0.649

Thin Section, Conrad Ball Bearings With Seals

CSCU SERIES

- Inch series

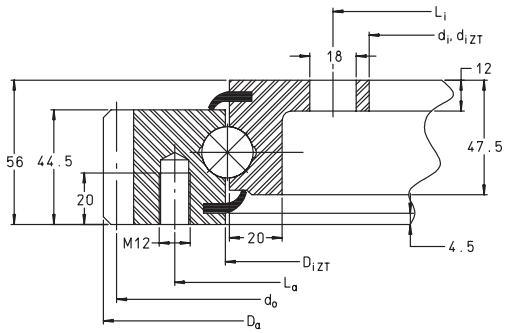


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PART NUMBER	SHAFT d inch	SHAFT d mm	OD D inch	OD D mm	WIDTH B inch	WIDTH B mm	DYNAMIC CAPACITY lbf	DYNAMIC CAPACITY N	WEIGHT lbs	WEIGHT kg
CSCU0402RS	4	101.6	4.75	120.65	0.5	12.7	860	3820	0.55	0.250
CSCU0452RS	4.5	114.3	5.25	133.35	0.5	12.7	920	4090	0.61	0.277
CSCU0502RS	5	127	5.75	146.05	0.5	12.7	990	4400	0.68	0.308
CSCU0652RS	6.5	165.1	7.25	184.15	0.5	12.7	1100	4890	0.87	0.395
CSCU0752RS	7.5	190.5	8.25	209.55	0.5	12.7	1210	5380	0.99	0.449
CSCU0802RS	8	203.2	8.75	222.25	0.5	12.7	1320	5870	1.06	0.481
CSCU0902RS	9	228.6	9.75	247.65	0.5	12.7	1440	6410	1.18	0.535
CSCU1002RS	10	254	10.75	273.05	0.5	12.7	1490	6630	1.31	0.594
CSCU1102RS	11	279.4	11.75	298.45	0.5	12.7	1610	7160	1.43	0.649

Slewing Ring Bearings
VLA SERIES

- Light series 20
- With external gear teeth – metric module
- Four point contact ball type



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

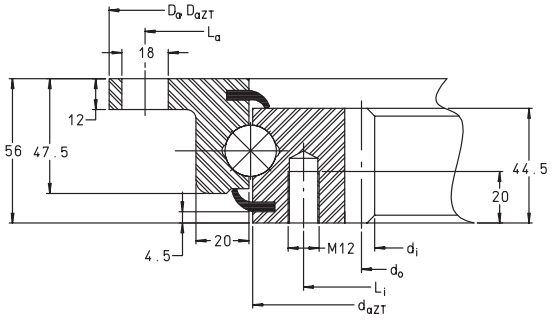
PART NUMBER	d_i inch	d_i mm	$d_{i\,ZT}$ mm	D_a inch	D_a mm	$D_{i\,ZT}$ mm	WGT. lbs	WGT. kg	L_a inch	L_a mm	n_a	L_i inch	L_i mm	n_i
VLA20 0414 N	11.969	304	306	19.815	503.3	417	65.0	29.5	17.913	455	10	13.071	332	12
VLA20 0544 N	17.087	434	436	25.209	640.3	547	91.5	41.5	23.032	585	14	18.189	462	14
VLA20 0644 N	21.024	534	536	29.224	742.3	647	106.9	48.5	26.969	685	16	22.126	562	16
VLA20 0744 N	24.961	634	636	32.996	838.1	747	120.2	54.5	30.906	785	18	26.063	662	16
VLA20 0844 N	28.898	734	736	37.406	950.1	847	144.4	65.5	34.843	885	18	30.000	762	18
VLA20 0944 N	32.835	834	836	41.185	1046.1	947	157.7	71.5	38.780	985	20	33.937	862	20
VLA20 1094 N	38.740	984	986	47.169	1198.1	1097	184.1	83.5	44.685	1135	22	39.843	1012	20

CONTINUED FROM ABOVE

PART NUMBER	RAD. LOAD LIMIT lbf	RAD. LOAD LIMIT kN	d_0 inch	d_0 mm	m	z	$F_{z\,norm}$ lbf	$F_{z\,norm}$ kN	$F_{z\,max}$ lbf	$F_{z\,max}$ kN	AXIAL DYN. CAP. lbf	AXIAL DYN. CAP. kN	AXIAL STAT. CAP. lbf	AXIAL STAT. CAP. kN	RAD. DYN. CAP. lbf.	RAD. DYN. CAP. kN	RAD. STAT. CAP. lbf	RAD. STAT. CAP. kN
VLA20 0414 N	9300	41.3	19.5	495	5	99	3600	15.9	5300	23.6	38000	169	66000	295	25000	111	24700	110
VLA20 0544 N	13000	57.8	24.8	630	6	105	4800	21.3	7100	31.5	42500	188	87000	385	27500	123	32500	145
VLA20 0644 N	14900	66.1	28.8	732	6	122	4800	21.3	7100	31.5	45000	200	102000	455	29500	131	38500	171
VLA20 0744 N	16700	74.3	32.6	828	6	138	4800	21.3	7100	31.5	47500	211	119000	530	31000	138	44500	198
VLA20 0844 N	16700	74.3	36.9	936	8	117	6400	28.3	9400	42	50000	222	135000	600	32500	145	50000	224
VLA20 0944 N	18600	82.6	40.6	1032	8	129	6400	28.3	9400	42	52000	231	151000	670	34000	151	56000	250
VLA20 1094 N	20400	90.9	46.6	1184	8	148	6400	28.3	9400	42	55000	244	173000	770	36000	160	65000	290

Slewing Ring Bearings
VLI SERIES

- Light series 20
- With internal gear teeth – metric module
- Four point contact ball type



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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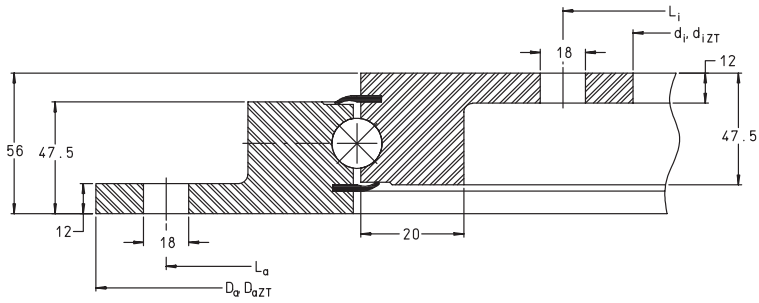
PART NUMBER	d_i inch	d_i mm	D_a inch	D_a mm	$D_{a\,ZT}$ mm	$d_{a\,ZT}$ mm	WGT. lbs	WGT. kg	L_a inch	L_a mm	n_a	L_i inch	L_i mm	n_i
VLI200414N	12.795	325	20.394	518	516	411	60.6	27.5	19.291	490	8	14.764	375	12
VLI200544N	17.480	444	25.512	648	646	541	83.8	38	24.409	620	10	19.882	505	16
VLI200644N	21.496	546	29.449	748	746	641	99.2	45	28.347	720	12	23.819	605	18
VLI200744N	25.512	648	33.386	848	846	741	113.6	51.5	32.284	820	12	27.756	705	20
VLI200844N	28.976	736	37.323	948	946	841	135.6	61.5	36.221	920	14	31.693	805	20
VLI200944N	33.071	840	41.260	1048	1046	941	148.8	67.5	40.158	1020	16	35.630	905	22
VLI201094N	38.740	984	47.165	1198	1196	1091	179.7	81.5	46.063	1170	16	41.535	1055	24

CONTINUED FROM ABOVE

PART NUMBER	MAX. RAD. LOAD LIMIT lbf	MAX. RAD. LOAD LIMIT kN	d_0 inch	d_0 mm	m	z	$F_{z\,norm}$ TOOTH FORCE lbf	$F_{z\,norm}$ TOOTH FORCE kN	$F_{z\,max}$ TOOTH FORCE lbf	$F_{z\,max}$ TOOTH FORCE kN	AXIAL DYN. CAP. lbf	AXIAL DYN. CAP. kN	AXIAL STAT. CAP. lbf	AXIAL STAT. CAP. kN	RAD. DYN. CAP. lbf.	RAD. DYN. CAP. kN	RAD. STAT. CAP. lbf	RAD. STAT. CAP. kN
VLI200414N	11,200	49.6	13.189	335	5	67	4,000	17.7	5,900	26.2	38,000	169	66,000	295	25,000	111	24,700	110
VLI200544N	14,900	66.1	17.953	456	6	76	5,300	23.7	7,900	35	42,500	188	87,000	385	27,500	123	32,500	145
VLI200644N	16,700	74.3	21.969	558	6	93	5,300	23.7	7,900	35	45,000	200	102,000	455	29,500	131	38,500	171
VLI200744N	18,600	82.6	25.984	660	6	110	5,300	23.7	7,900	35	47,500	211	119,000	530	31,000	138	44,500	198
VLI200844N	18,600	82.6	29.606	752	8	94	7,100	31.4	10,500	46.7	50,000	222	135,000	600	32,500	145	50,000	224
VLI200944N	20,400	90.9	33.701	856	8	107	7,100	31.4	10,500	46.7	52,000	231	151,000	670	34,000	151	56,000	250
VLI201094N	22,300	99.1	39.370	1000	8	125	7,100	31.4	10,500	46.7	55,000	244	173,000	770	36,000	160	65,000	290

Slewing Ring Bearings
VLU SERIES

- Light series 20
- Without gear teeth
- Four point contact ball type



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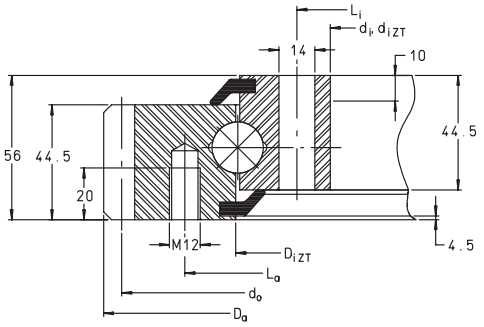
PART NUMBER	d_i inch	d_i mm	$d_{i\,ZT}$ mm	D_a inch	D_a mm	$D_{a\,ZT}$ mm	WGT. lbs	WGT. kg	L_a inch	L_a mm	n_a
VLU20 0414	11.969	304	306	20.394	518	516	51.8	23.5	19.291	490	8
VLU20 0544	17.087	434	436	25.512	648	646	68.4	31	24.409	620	10
VLU20 0644	21.024	534	536	29.449	748	746	80.5	36.5	28.347	720	12
VLU20 0744	24.961	634	636	33.386	848	846	93.7	42.5	32.284	820	12
VLU20 0844	28.898	734	736	37.323	948	946	105.8	48	36.221	920	14
VLU20 0944	32.835	834	836	41.260	1048	1046	119.1	54	40.158	1020	16
VLU20 1094	38.740	984	986	47.165	1198	1196	137.8	62.5	46.063	1170	16

CONTINUED FROM ABOVE

PART NUMBER	L_i inch	L_i mm	n_i	$F_{r\,max}$ lbf	$F_{r\,max}$ kN	AXIAL DYN. CAP. lbf	AXIAL DYN. CAP. kN	AXIAL STAT. CAP. lbf	AXIAL STAT. CAP. kN	RAD. DYN. CAP. lbf.	RAD. DYN. CAP. kN	RAD. STAT. CAP. lbf	RAD. STAT. CAP. kN
VLU20 0414	13.071	332	12	12,400	55	38,000	169	66,000	295	25,000	111	24,700	110
VLU20 0544	18.189	462	14	16,300	72.5	42,500	188	87,000	385	27,500	123	32,500	145
VLU20 0644	22.126	562	16	19,200	85.5	45,000	200	102,000	455	29,500	131	38,500	171
VLU20 0744	26.063	662	16	21,000	93.6	47,500	211	119,000	530	31,000	138	44,500	198
VLU20 0844	30.000	762	18	24,600	109.2	50,000	222	135,000	600	32,500	145	50,000	224
VLU20 0944	33.937	862	20	28,000	124.8	52,000	231	151,000	670	34,000	151	56,000	250
VLU20 1094	39.843	1012	20	28,000	124.8	55,000	244	173,000	770	36,000	160	65,000	290

Slewing Ring Bearings
VSA SERIES

- Standard series 20
- With external gear teeth – metric module
- four point contact ball type



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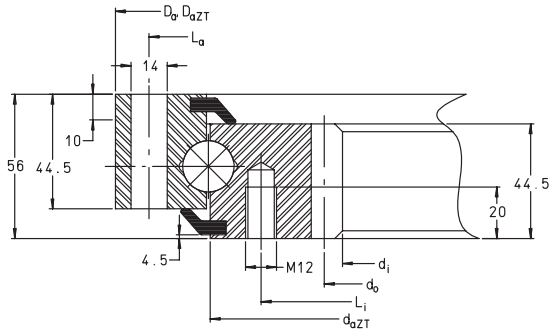
PART NUMBER	d_i inch	d_i mm	$d_{i\,ZT}$ mm	D_a inch	D_a mm	$D_{i\,ZT}$ mm	WGT. lbs	WGT. kg	L_a inch	L_a mm	n_a	L_i inch	L_i mm	n_i	RAD. LOAD LIMIT lbf	RAD. LOAD LIMIT kN
VSA20 0414N	13.465	342	344	19.815	503.3	417	68.4	31	17.913	455	20	14.488	368	24	18,600	82.6
VSA20 0544N	18.583	472	474	25.209	640.3	547	94.8	43	23.032	585	28	19.606	498	32	26,000	115.6
VSA20 0644N	22.520	572	574	29.224	742.3	647	114.7	52	26.969	685	32	23.543	598	36	29,500	132.2
VSA20 0744N	26.457	672	674	32.996	838.1	747	130.1	59	30.906	785	36	27.480	698	40	33,500	148.7
VSA20 0844N	30.394	772	774	37.406	950.1	847	156.6	71	34.843	885	36	31.417	798	40	33,500	148.7
VSA20 0944N	34.331	872	874	41.185	1046.1	947	169.8	77	38.780	985	40	35.354	898	44	37,000	165.2
VSA20 1094N	40.236	1022	1024	47.169	1198.1	1097	200.7	91	44.685	1135	44	41.260	1048	48	41,000	181.7

CONTINUED FROM ABOVE

PART NUMBER	d_0 inch	d_0 mm	m	z	$F_{z\,norm}$ TOOTH FORCE lbf	$F_{z\,norm}$ TOOTH FORCE kN	$F_{z\,max}$ TOOTH FORCE lbf	$F_{z\,max}$ TOOTH FORCE kN	AXIAL DYN. CAP. lbf	AXIAL DYN. CAP. kN	AXIAL STAT. CAP. lbf	AXIAL STAT. CAP. kN	RAD. DYN. CAP. lbf.	RAD. DYN. CAP. kN	RAD. STAT. CAP. lbf	RAD. STAT. CAP. kN
VSA20 0414N	19.488	495	5	99	3,600	15.9	5,300	23.6	38,000	169	126,000	560	25,000	111	56,000	248
VSA20 0544N	24.803	630	6	105	4,800	21.3	7,100	31.5	42,500	188	166,000	740	27,500	123	73,000	325
VSA20 0644N	28.819	732	6	122	4,800	21.3	7,100	31.5	45,000	200	198,000	880	29,500	131	87,000	385
VSA20 0744N	32.598	828	6	138	4,800	21.3	7,100	31.5	47,500	211	227,000	1010	31,000	138	100,000	445
VSA20 0844N	36.850	936	8	117	6,400	28.3	9,400	42	50,000	222	260,000	1150	32,500	145	115,000	510
VSA20 0944N	40.630	1032	8	129	6,400	28.3	9,400	42	52,000	231	290,000	1280	34,000	151	128,000	570
VSA20 1094N	46.614	1184	8	148	6,400	28.3	9,400	42	55,000	244	335,000	1490	36,000	160	148,000	660

Slewing Ring Bearings
VSI SERIES

- Standard series 20
- With internal gear teeth – metric module
- Four point contact ball type



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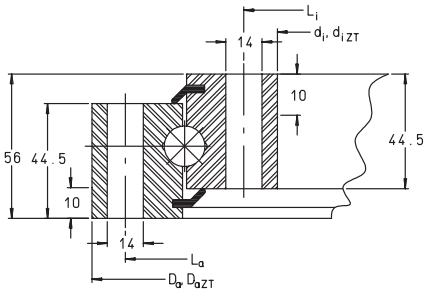
PART NUMBER	d_i inch	d_i mm	D_a inch	D_a mm	$D_{a\,ZT}$ mm	$d_{a\,ZT}$ mm	WGT. lbs	WGT. kg	L_a inch	L_a mm	n_a	L_i inch	L_i mm	n_i	MAX. RAD. LOAD LIMIT lbf	MAX. RAD. LOAD LIMIT kN
VSI20 0414 N	9.252	235	19.134	486	484	411	68.4	31	18.110	460	24	14.764	375	24	22,300	99.1
VSI20 0544 N	17.480	444	24.252	616	614	541	92.6	42	23.228	590	32	19.882	505	32	29,500	132.2
VSI20 0644 N	21.496	546	28.189	716	714	641	110.3	50	27.165	690	36	23.819	605	36	33,500	148.7
VSI20 0744 N	25.512	648	32.126	816	814	741	127.9	58	31.102	790	40	27.756	705	40	37,000	165.2
VSI20 0844 N	28.976	736	36.063	916	914	841	152.1	69	35.039	890	40	31.693	805	40	37,000	165.2
VSI20 0944 N	37.008	940	40.000	1016	1014	941	167.6	76	38.976	990	44	35.630	905	44	41,000	181.7
VSI20 1094 N	38.740	984	45.906	1166	1164	1091	200.7	91	44.882	1140	48	41.535	1055	48	44,500	198.2

CONTINUED FROM ABOVE

PART NUMBER	d_0 inch	d_0 mm	m	z	$F_{z\,norm}$ TOOTH FORCE lbf	$F_{z\,norm}$ TOOTH FORCE kN	$F_{z\,max}$ TOOTH FORCE lbf	$F_{z\,max}$ TOOTH FORCE kN	AXIAL DYN. CAP. lbf	AXIAL DYN. CAP. kN	AXIAL STAT. CAP. lbf	AXIAL STAT. CAP. kN	RAD. DYN. CAP. lbf.	RAD. DYN. CAP. kN	RAD. STAT. CAP. lbf	RAD. STAT. CAP. kN
VSI20 0414 N	13.189	335	5	67	4,000	17.7	5,900	26.2	38,000	169	126,000	560	25,000	111	56,000	248
VSI20 0544 N	17.953	456	6	76	5,300	23.7	7,900	35	42,500	188	166,000	740	27,500	123	73,000	325
VSI20 0644 N	21.969	558	6	93	5,300	23.7	7,900	35	45,000	200	198,000	880	29,500	131	64,000	285
VSI20 0744 N	25.984	660	6	110	5,300	23.7	7,900	35	47,500	211	227,000	1010	31,000	138	100,000	445
VSI20 0844 N	29.606	752	8	94	7,100	31.4	10,500	46.7	50,000	222	260,000	1150	32,500	145	115,000	510
VSI20 0944 N	33.701	856	8	107	7,100	31.4	10,500	46.7	52,000	231	290,000	1280	34,000	151	128,000	570
VSI20 1094 N	39.370	1000	8	125	7,100	31.4	10,500	46.7	55,000	244	335,000	1490	36,000	160	148,000	660

Slewing Ring Bearings
VSU SERIES

- Standard series 20
- Without gear teeth
- Four point contact ball type



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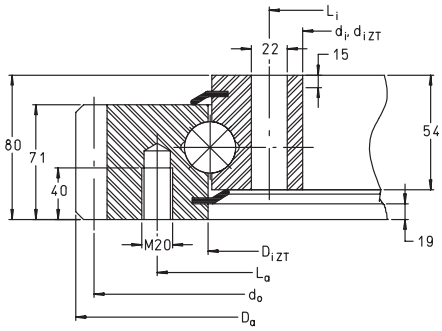
PART NUMBER	d_i inch	d_i mm	$d_{i\,ZT}$ mm	D_a inch	D_a mm	$D_{a\,ZT}$ mm	WGT. lbs	WGT. kg	L_a inch	L_a mm	n_a
VSU20 0414	13.465	342	344	19.134	486	484	63.9	29	18.110	460	24
VSU20 0544	18.583	472	474	24.252	616	614	81.6	37	23.228	590	32
VSU20 0644	22.520	572	574	28.189	716	714	97.0	44	27.165	690	36
VSU20 0744	26.457	672	674	32.126	816	814	114.7	52	31.102	790	40
VSU20 0844	30.394	772	774	36.063	916	914	132.3	60	35.039	890	40
VSU20 0944	34.331	872	874	40.000	1016	1014	147.7	67	38.976	990	44
VSU20 1094	40.236	1022	1024	45.906	1166	1164	169.8	77	44.882	1140	48

CONTINUED FROM ABOVE

PART NUMBER	L_i inch	L_i mm	n_i	$F_{r\,max}$ lbf	$F_{r\,max}$ kN	AXIAL DYN. CAP. lbf	AXIAL DYN. CAP. kN	AXIAL STAT. CAP. lbf	AXIAL STAT. CAP. kN	RAD. DYN. CAP. lbf.	RAD. DYN. CAP. kN	RAD. STAT. CAP. lbf	RAD. STAT. CAP. kN
VSU20 0414	14.488	368	24	22,300	99.1	38,000	169	126,000	560	25,000	111	56,000	248
VSU20 0544	19.606	498	32	29,500	132.2	42,500	188	166,000	740	27,500	123	73,000	325
VSU20 0644	23.543	598	36	33,500	148.7	45,000	200	198,000	880	29,500	131	87,000	385
VSU20 0744	27.480	698	40	37,000	165.2	47,500	211	227,000	1010	31,000	138	100,000	445
VSU20 0844	31.417	798	40	37,000	165.2	50,000	222	260,000	1150	32,500	145	115,000	510
VSU20 0944	35.354	898	44	41,000	181.7	52,000	231	290,000	1280	34,000	151	128,000	570
VSU20 1094	41.260	1048	48	44,500	198.2	55,000	244	335,000	1490	36,000	160	148,000	660

Slewing Ring Bearings
VSA SERIES

- With external gear teeth – metric module
- Four point contact ball type



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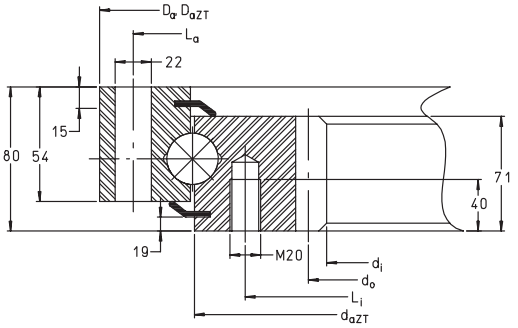
PART NUMBER	d_i inch	d_i mm	$d_{i\,ZT}$ mm	D_a inch	D_a mm	$D_{i\,ZT}$ mm	WGT. lbs	WGT. kg	L_a inch	L_a mm	n_a	L_i inch	L_i mm	n_i	RAD. LOAD LIMIT lbf	RAD. LOAD LIMIT kN
VSA25 0755 N	25.787	655	657	35.354	898	755	282.2	128	32.126	816	24	27.362	695	24	65,000	290.4
VSA25 0855 N	29.724	755	757	39.252	997	855	319.7	145	36.063	916	28	31.299	795	28	76,000	338.8
VSA25 0955 N	33.661	855	857	43.150	1096	955	341.8	155	40.000	1016	30	35.236	895	30	82,000	363
VSA25 1055 N	37.598	955	957	47.165	1198	1055	377.1	171	43.937	1116	30	39.173	995	30	82,000	363

CONTINUED FROM ABOVE

PART NUMBER	d_0 inch	d_0 mm	m	z	$F_{z\,norm}$ TOOTH FORCE lbf	$F_{z\,norm}$ TOOTH FORCE kN	$F_{z\,max}$ TOOTH FORCE lbf	$F_{z\,max}$ TOOTH FORCE kN	AXIAL DYN. CAP. lbf	AXIAL DYN. CAP. kN	AXIAL STAT. CAP. lbf	AXIAL STAT. CAP. kN	RAD. DYN. CAP. lbf.	RAD. DYN. CAP. kN	RAD. STAT. CAP. lbf	RAD. STAT. CAP. kN
VSA25 0755 N	34.724	882	9	98	12,400	55.1	18,000	80.2	103,000	460	510,000	2250	67,000	300	227,000	1010
VSA25 0855 N	38.622	981	9	109	12,400	55.1	18,000	80.2	109,000	485	570,000	2550	71,000	315	260,000	1150
VSA25 0955 N	42.520	1080	9	120	12,400	55.1	18,000	80.2	112,000	500	640,000	2850	74,000	330	290,000	1280
VSA25 1055 N	46.457	1180	10	118	13,800	61.2	20,000	89	117,000	520	710,000	3150	76,000	340	315,000	1410

Slewing Ring Bearings
VSI SERIES

- With internal gear teeth – metric module
- Four point contact ball type



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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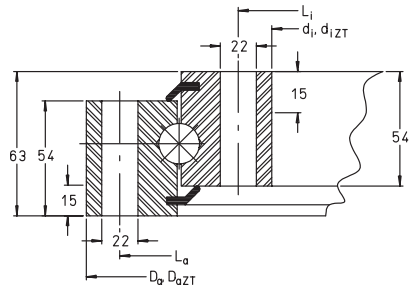
PART NUMBER	d_i inch	d_i mm	D_a inch	D_a mm	$D_{a\,ZT}$ mm	$d_{a\,ZT}$ mm	WGT. lbs	WGT. kg	L_a inch	L_a mm	L_i inch	L_i mm	n_a	MAX. RAD. LOAD LIMIT lbf	MAX. RAD. LOAD LIMIT kN
VSI25 0755 N	24.016	610	33.661	855	853	755	262.4	119	32.087	815	27.323	694	24	65,000	290.4
VSI25 0855 N	27.953	710	37.598	955	953	855	302.1	137	36.024	915	31.260	794	28	76,000	338.8
VSI25 0955 N	31.890	810	41.535	1055	1053	955	328.5	149	39.961	1015	35.197	894	30	82,000	363.3
VSI25 1055 N	35.827	910	45.472	1155	1153	1055	363.8	165	43.898	1115	39.134	994	30	82,000	363.3

CONTINUED FROM ABOVE

PART NUMBER	d_0 inch	d_0 mm	m	z	$F_{z\,norm}$ TOOTH FORCE lbf	$F_{z\,norm}$ TOOTH FORCE kN	$F_{z\,max}$ TOOTH FORCE lbf	$F_{z\,max}$ TOOTH FORCE kN	AXIAL DYN. CAP. lbf	AXIAL DYN. CAP. kN	AXIAL STAT. CAP. lbf	AXIAL STAT. CAP. kN	RAD. DYN. CAP. lbf.	RAD. DYN. CAP. kN	RAD. STAT. CAP. lbf	RAD. STAT. CAP. kN
VSI25 0755 N	24.803	630	10	63	15,300	68	22,200	98.9	103,000	460	510,000	2250	67,000	300	227,000	1010
VSI25 0855 N	28.740	730	10	73	15,300	68	22,200	98.9	109,000	485	570,000	2550	71,000	315	260,000	1150
VSI25 0955 N	32.677	830	10	83	15,300	68	22,200	98.9	112,000	500	640,000	2850	74,000	330	290,000	1280
VSI25 1055 N	36.614	930	10	93	15,300	68	22,200	98.9	117,000	520	710,000	3150	76,000	340	315,000	1410

Slewing Ring Bearings
VSU SERIES

- Without gear teeth
- Four point contact ball type
- 25mm ball series



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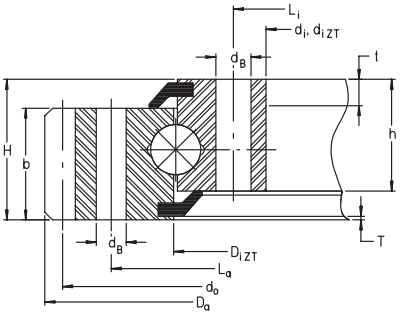
PART NUMBER	d_i inch	d_i mm	$d_{i\,ZT}$ mm	D_a inch	D_a mm	$D_{a\,ZT}$ mm	D_i inch	D_i mm	d_a inch	d_a mm	WGT. lbs	WGT. kg	L_a inch	L_a mm	n_a
VSU25 0755	25.787	655	657	33.661	855	853	29.646	753	29.803	757	198.5	90	32.087	815	24
VSU25 0855	29.724	755	757	37.598	955	953	33.583	853	33.740	857	222.7	101	36.024	915	28
VSU25 0955	33.661	855	857	41.535	1055	1053	37.520	953	37.677	957	253.6	115	39.961	1015	30
VSU25 1055	37.598	955	957	45.472	1155	1153	41.457	1053	41.614	1057	282.2	128	43.898	1115	30

CONTINUED FROM ABOVE

PART NUMBER	L_i inch	L_i mm	n_B	$F_{r\,max}$ lbf	$F_{r\,max}$ kN	AXIAL DYN. CAP. lbf	AXIAL DYN. CAP. kN	AXIAL STAT. CAP. lbf	AXIAL STAT. CAP. kN	RAD. DYN. CAP. lbf.	RAD. DYN. CAP. kN	RAD. STAT. CAP. lbf	RAD. STAT. CAP. kN
VSU25 0755	27.362	695	24	65,000	290.4	103,000	460	510,000	2250	67,000	300	227,000	1010
VSU25 0855	31.299	795	28	76,000	338.8	109,000	485	570,000	2550	71,000	315	260,000	1150
VSU25 0955	35.236	895	30	82,000	363.3	112,000	500	640,000	2850	74,000	330	290,000	1280
VSU25 1055	39.173	995	30	82,000	363.3	117,000	520	710,000	3150	76,000	340	315,000	1410

Slewing Ring Bearings
VA SERIES

- With external gear teeth – metric module
- Four point contact ball type
- Tables and drawing do not give details of each part
- Contact Engineering Department for aid in design



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PART NUMBER	PART NUMBER	d_i inch	d_i mm	$d_{i\,ZT}$ mm	D_a inch	D_a mm	$D_{i\,ZT}$ mm	H inch	H mm	h inch	h mm	T inch	T mm
VA 140188V	F153515.1	5.315	135		10.211	259.36		1.378	35	1.1811	30	0.1575	4
VA 160235N		6.7323	171	173	12.5433	318.6	236	1.5748	40	1.378	35	0.0866	2.2
VA 160302N	F150431	9.4488	240		15.1181	384		1.2598	32	1.1811	30	0.1575	4
VA 250309N		9.252	235	237	16.0787	408.4	310	2.3622	60	2.0669	52.5	0.1181	3
VA 300475N		15.0394	382	384	23.5512	598.2	475	2.5591	65	2.3622	60	0.0984	2.5
VA 220596N		20.0787	510	512	28.0394	712.2	597	2.1654	55	1.8898	48	0.0984	2.5
VA 300685N		22.7165	577	579	32.6732	829.9	685	2.6772	68	2.4016	61	0.0984	2.5
VA 300980N	F97110	34.252	870		45.0394	1144		3.937	100	3.5433	90	0.5118	13

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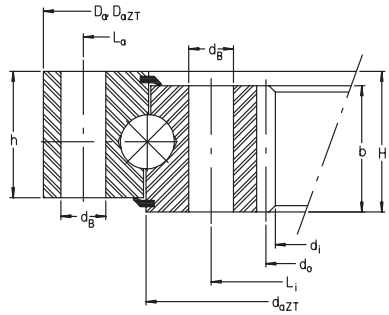
PART NUMBER	PART NUMBER	t inch	t mm	RAD. LOAD LIMIT lbf	RAD. LOAD LIMIT kN	d_0 inch	d_0 mm	m	z	b inch	b mm	$F_{z\,norm}$ TOOTH FORCE lbf	$F_{z\,norm}$ TOOTH FORCE kN	$F_{z\,max}$ TOOTH FORCE lbf	$F_{z\,max}$ TOOTH FORCE kN	WGT. lbs	WGT. kg
VA 140188V	F153515.1	0.3937	10	10100	44.8	9.7638	248	4	62	1.0236	26	2340	10.4	3450	15.3	16.538	7.5
VA 160235N		0.2362	6	11200	49.6	12.2835	312	4	78	1.378	35	2470	11	3600	16.1	28.665	13
VA 160302N	F150431	0.7087	18	18600	82.6	14.8031	376	4	94	1.1811	30	2470	11	3600	16.1	29.988	13.6
VA 250309N		0.315	8	22300	99.1	15.748	400	5	80	2.0669	52.5	2900	12.9	4250	18.8	65.048	29.5
VA 300475N		0.3543	9	45500	201.6	23.1496	588	6	98	2.3622	60	5600	24.8	8100	36.1	141.12	64
VA 220596N		0.315	8	42000	187.2	27.6378	702	6	117	1.8898	48	5600	24.8	8100	36.1	136.71	62
VA 300685N		0.3937	10	65000	290.4	32.126	816	8	102	2.4016	61	7400	33.1	10800	48.2	246.96	112
VA 300980N	F97110	0.3937	10	98000	435.6	44.1732	1122	11	102	2.6772	68	14500	64.5	21100	93.8	507.15	230

CONTINUED FROM ABOVE

PART NUMBER	PART NUMBER	L_a inch	L_a mm	n_a	L_i inch	L_i mm	n_i	d_B inch	d_B mm	AXIAL DYN. CAP. lbf	AXIAL DYN. CAP. kN	AXIAL STAT. CAP. lbf	AXIAL STAT. CAP. kN	RAD. DYN. CAP. lbf.	RAD. DYN. CAP. kN	RAD. STAT. CAP. lbf	RAD. STAT. CAP. kN
VA 140188V	F153515.1	8.7402	222	16	6.063	154	16			26500	118	92000	410	17300	77	41500	185
VA 160235N		10.8268	275	12	7.6772	195	12	0.5118	13	34500	153	78000	345	22700	101	35000	156
VA 160302N	F150431	13.5039	343	20	10.315	262	20			38000	168	100000	445	24700	110	45000	200
VA 250309N		14.1339	359	24	10.1969	259	24	0.5118	13	73000	325	146000	650	48500	215	66000	295
VA 300475N		21.2598	540	36	16.1417	410	36	0.6299	16	105000	465	290000	1280	69000	305	128000	570
VA 220596N		25.5906	650	24	21.3386	542	24	0.7087	18	79000	350	270000	1210	51000	228	124000	550
VA 300685N		29.6457	753	24	24.2913	617	24	0.8661	22	119000	530	485000	2160	79000	350	218000	970
VA 300980N	F97110	41.3386	1050	26	35.8268	910	36	0.8661	22	137000	610	690000	3090	90000	400	315000	1390

Slewing Ring Bearings
VI SERIES

- With internal gear teeth – metric module
- Four point contact ball type
- Tables and drawing do not give details of each part
- Contact Engineering Department for aid in design



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PART NUMBER	PART NUMBER	d_i inch	d_i mm	D_a inch	D_a mm	$D_{a\,ZT}$ mm	$d_{a\,ZT}$ mm	H inch	H mm	h inch	h mm	WGT. lbs	WGT. kg
VI 160288 N		8.504	216	13.386	340	338	287	1.535	39	1.339	34	26.5	12
VI 140326 V	F79832	9.843	250	15.039	382			2.323	59			39.7	18
VI 160420 N		13.071	332	19.134	486	484	419	1.535	39	1.339	34	52.9	24
VI 250489 N		15.118	384	22.126	562	560	488	2.165	55	1.969	50	94.8	43
VI 200575 N		18.189	462	25.866	657	655	574	2.165	55	1.693	43	121.3	55
VI 250635 N		19.843	504	28.425	722	720	634	2.323	59	2.047	52	154.4	70
VI 300720 N		22.992	584	31.969	812	810	720	2.677	68	2.402	61	220.5	100
VI 200897 N		30.551	776	38.425	976	974	896	2.362	60	1.693	43	198.5	90

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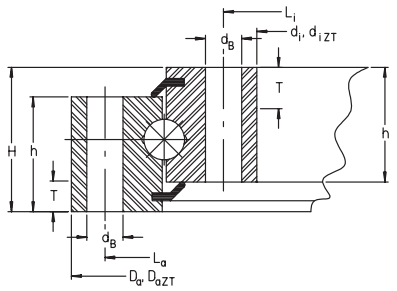
PART NUMBER	PART NUMBER	L_a inch	L_a mm	n_a	L_i inch	L_i mm	n_i	d_B inch	d_B mm	MAX. RAD. LOAD LIMIT lbf	MAX. RAD. LOAD LIMIT kN	d_0 inch	d_0 mm	m	z
VI 160288 N		12.756	324	20	9.921	252	20	0.354	9	7,900	35	8.819	224	4	56
VI 140326 V	F79832	14.252	362	8	11.417	290	8			5,000	22.4	10.059	255.5	3.5	73
VI 160420 N		18.189	462	16	14.882	378	16	0.551	14	14,900	66.1	13.386	340	4	85
VI 250489 N		21.181	538	40	17.323	440	40	0.551	14	37,000	165.2	15.591	396	6	66
VI 200575 N		24.606	625	16	20.669	525	16	0.709	18	28,000	124.8	18.661	474	6	79
VI 250635 N		27.165	690	24	22.835	580	24	0.709	18	42,000	187.2	20.472	520	8	65
VI 300720 N		30.709	780	40	25.984	660	40	0.709	18	70,000	312	23.622	600	8	75
VI 200897 N		37.165	944	32	33.465	850	32	0.709	18	56,000	249.6	31.181	792	8	99

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PART NUMBER	PART NUMBER	b inch	b mm	$F_{z\,norm}$ TOOTH FORCE lbf	$F_{z\,norm}$ TOOTH FORCE kN	$F_{z\,max}$ TOOTH FORCE lbf	$F_{z\,max}$ TOOTH FORCE kN	AXIAL DYN. CAP. lbf	AXIAL DYN. CAP. kN	AXIAL STAT. CAP. lbf	AXIAL STAT. CAP. kN	RAD. DYN. CAP. lbf.	RAD. DYN. CAP. kN	RAD. STAT. CAP. lbf	RAD. STAT. CAP. kN
VI 160288 N		1.339	34	2,750	12.3	4,000	17.8	37,000	165	94,000	420	24,300	108	42,500	190
VI 140326 V	F79832	1.575	40	2,430	10.8	3,600	16.1	18,700	83	46,500	206	17,500	78	20,900	93
VI 160420 N		1.339	34	2,750	12.3	4,000	17.8	43,000	191	139,000	620	28,000	125	62,000	275
VI 250489 N		1.969	50	6,200	27.6	9,000	40.1	89,000	395	232,000	1030	57,000	255	105,000	465
VI 200575 N		1.890	48	6,200	27.6	9,000	40.1	66,000	295	255,000	1140	43,500	193	115,000	510
VI 250635 N		2.047	52	9,000	39.9	13,000	58	98,000	435	300,000	1340	64,000	285	135,000	600
VI 300720 N		2.402	61	10,500	46.8	15,300	68	121,000	540	435,000	1940	80,000	355	196,000	870
VI 200897 N		2.087	53	9,100	40.6	13,300	59.1	79,000	350	405,000	1810	51,000	228	175,000	780

Slewing Ring Bearings
VU SERIES

- Without gear teeth
- Four point contact ball type
- Tables and drawing do not give details of each part
- Contact Engineering Department for aid in design



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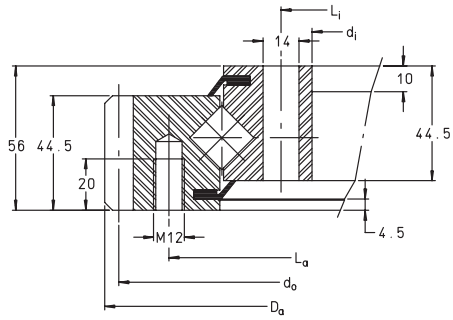
PART NUMBER	PART NUMBER	d_i	d_i	$d_{i\,ZT}$	D_a	D_a	$D_{a\,ZT}$	H	H	h	h	L_a	L_a	n_a	L_i	L_i	n_i
		inch	mm	mm	inch	mm	mm	inch	mm	inch	mm	inch	mm		inch	mm	
VU200405		13.228	336	338	18.661	474	472	1.811	46	1.614	41	17.717	450	30	14.173	360	30
VU250433		13.543	344	346	20.551	522	520	2.165	55	1.969	50	19.291	490	20	14.803	376	20
VU300574		18.425	468	470	26.772	680	879	2.677	68	2.402	61	25.197	640	20	20.000	508	20
VU360680		23.032	585	567	31.299	795	793	3.110	79	2.835	72	29.724	755	30	23.819	605	30
VU400785		26.378	670	672	35.433	900	898	3.504	89	3.110	79	33.858	860	36	27.953	710	36
VU360980		34.252	870	872	42.913	1090	1088	3.110	79	2.835	72	41.339	1050	44	35.827	910	44
VU201125		41.575	1056	1058	47.008	1194	1192	2.205	56	1.811	46	46.063	1170	80	42.520	1080	80
VU140179		4.902	124.5	126.5	9.213	234	232	1.378	35	1.181	30	8.425	214	12	5.689	144.5	12
VU200220		5.433	138	140	11.890	302	300	1.811	46	1.614	41	10.630	270	10	6.693	170	10
VU130225	F151733	7.874	200	237.6	11.417	290	–	0.945	24	0.945	24	10.630	270	6	–	–	–
VU200260		7.520	191		12.953	329	327	1.811	46	1.614	41	12.008	305	20	8.465	215	20
VU140325		10.630	270	272	14.961	380	378	1.378	35	1.181	30	14.173	360	24	11.417	290	24
VU250380		10.827	275	277	19.095	485	483	2.165	55	1.969	50	17.835	453	16	12.087	307	16

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PART NUMBER	PART NUMBER	WGT.	WGT.	d_b	d_b	$F_{r\,max}$	$F_{r\,max}$	AXIAL DYN. CAP.	AXIAL DYN. CAP.	AXIAL STAT. CAP.	AXIAL STAT. CAP.	RADIAL DYN. CAP.	RADIAL DYN. CAP.	RADIAL STAT. CAP.	RADIAL STAT. CAP.
		lbs	kg	inch	mm	lbf	kN	lbf	kN	lbf	kN	lbf	kN	lbf	kN
VU200405		55.1	25	0.551	14	28,000	123.9	58,000	260	182,000	810	38,000	169	81,000	360
VU250433		90.4	41	0.709	18	35,000	156	83,000	370	205,000	910	55,000	243	92,000	410
VU300574		180.8	82	0.866	22	54,000	242	111,000	495	345,000	1540	73,000	325	155,000	690
VU360680		264.6	120	0.866	22	82,000	363	144,000	640	510,000	2260	93,000	415	229,000	1020
VU400785		341.8	155	0.866	22	98,000	435.6	171,000	760	700,000	3100	111,000	495	315,000	1390
VU360980		357.2	162	0.866	22	120,000	532.4	164,000	730	730,000	3250	108,000	480	330,000	1470
VU201125		156.6	71	0.551	14	74,000	330.4	85,000	380	500,000	2240	56,000	248	227,000	1010
VU140179		15.4	7	0.433	11	7,600	33.6	26,000	115	57,000	255	16,900	75	25,500	114
VU200220		35.3	16	0.709	18	17,500	78	45,000	201	98,000	435	29,500	132	44,500	197
VU130225	F151733	13.2	6			4,450	19.8	11,000	49	19,600	87	10,300	46	8,900	39.5
VU200260		33.1	15	0.551	14	18,600	82.6	49,000	217	117,000	520	32,000	143	52,000	233
VU140325		26.5	12	0.433	11	15,100	67.2	33,000	146	103,000	460	21,400	95	47,000	208
VU250380		97.0	44	0.709	18	28,000	124.8	79,000	350	180,000	800	52,000	230	81,000	360

Slewing Ring Bearings
XSA SERIES

- With external metric module gear teeth
- Crossed roller type
- 14mm roller diameter



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

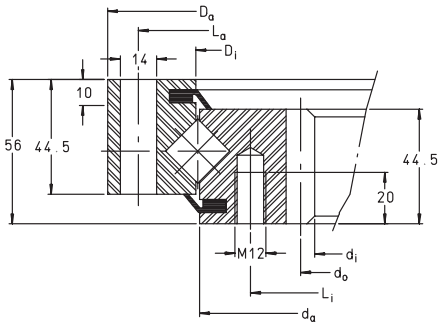
PART NUMBER	d_i inch	d_i mm	D_a inch	D_a mm	L_a inch	L_a mm	n_a	L_i inch	L_i mm	n_i	WGT. lbs	WGT. kg
XSA14 0414N	13.543	344	19.815	503.3	17.913	455	20	14.488	368	24	70.6	32
XSA14 0544N	18.661	474	25.209	640.3	23.032	585	28	19.606	498	32	97.0	44
XSA14 0644N	22.598	574	29.224	742.3	26.969	685	32	23.543	598	36	114.7	52
XSA14 0744N	26.535	674	32.996	838.1	30.906	785	36	27.480	698	40	130.1	59
XSA14 0844N	30.472	774	37.406	950.1	34.843	885	36	31.417	798	40	156.6	71
XSA14 0944N	34.409	874	41.185	1046.1	38.780	985	40	35.354	898	44	169.8	77
XSA14 1094N	40.315	1024	47.169	1198.1	44.685	1135	44	41.260	1048	48	200.7	91

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PART NUMBER	RAD. LOAD LIMIT lbf	RAD. LOAD LIMIT kN	d_0 inch	d_0 mm	m	z	AXIAL DYN. CAP. lbf	AXIAL DYN. CAP. kN	AXIAL STAT. CAP. lbf	AXIAL STAT. CAP. kN	RAD. DYN. CAP. lbf.	RAD. DYN. CAP. kN	RAD. STAT. CAP. lbf	RAD. STAT. CAP. kN
XSA14 0414N	18,600	82.6	19.488	495	5	99	51,000	229	117,000	520	33,000	146	56,000	250
XSA14 0544N	26,000	115.6	24.803	630	6	105	61,000	270	153,000	680	38,000	170	74,000	330
XSA14 0644N	29,500	132.2	28.819	732	6	122	65,000	290	180,000	800	41,500	185	89,000	395
XSA14 0744N	33,500	148.7	32.598	828	6	138	71,000	315	209,000	930	45,000	200	102,000	455
XSA14 0844N	33,500	148.7	36.850	936	8	117	76,000	340	236,000	1050	48,500	215	115,000	510
XSA14 0944N	37,000	165.2	40.630	1032	8	129	81,000	360	265,000	1170	51,000	227	130,000	580
XSA14 1094N	41,000	181.7	46.614	1184	8	148	88,000	390	305,000	1360	55,000	246	151,000	670

Slewing Ring Bearings
XSI SERIES

- With internal metric module gear teeth
- Crossed roller type
- 14mm roller diameter



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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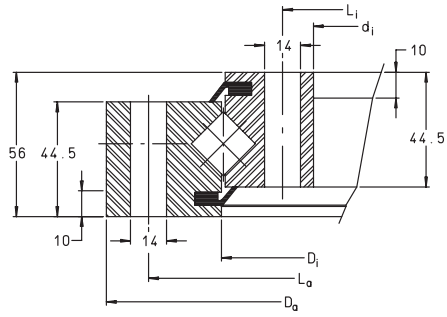
PART NUMBER	d_i inch	d_i mm	D_a inch	D_a mm	D_i inch	D_i mm	d_a inch	d_a mm	WGT. lbs	WGT. kg	L_a inch	L_a mm	n_a	L_i inch	L_i mm	n_i
XSI14 0414 N	12.795	325	19.055	484	16.339	415	16.181	411	68.355	31	18.110	460	24	14.764	375	24
XSI14 0544 N	17.480	444	24.173	614	21.457	545	21.299	541	94.815	43	23.228	590	32	19.882	505	32
XSI14 0644 N	21.496	546	28.110	714	25.394	645	25.236	641	110.25	50	27.165	690	36	23.819	605	36
XSI14 0744 N	25.512	648	32.047	814	29.331	745	29.173	741	127.89	58	31.102	790	40	27.756	705	40
XSI14 0844 N	28.976	736	35.984	914	33.268	845	33.110	841	152.145	69	35.039	890	40	31.693	805	40
XSI14 0944 N	33.071	840	39.921	1014	37.205	945	37.047	941	167.58	76	38.976	990	44	35.630	905	44
XSI14 1094 N	38.740	984	45.827	1164	43.110	1095	42.953	1091	200.655	91	44.882	1140	48	41.535	1055	48

CONTINUED FROM ABOVE

PART NUMBER	RAD. LOAD LIMIT lbf	RAD. LOAD LIMIT kN	d_0 inch	d_0 mm	m	z	AXIAL DYN. CAP. lbf	AXIAL DYN. CAP. kN	AXIAL STAT. CAP. lbf	AXIAL STAT. CAP. kN	RAD. DYN. CAP. lbf.	RAD. DYN. CAP. kN	RAD. STAT. CAP. lbf	RAD. STAT. CAP. kN
XSI14 0414 N	22,300	99.1	13.189	335	5	67	51,000	229	117,000	520	33,000	146	56,000	250
XSI14 0544 N	29,500	132.2	17.953	456	6	76	61,000	270	153,000	680	38,000	170	74,000	330
XSI14 0644 N	33,500	148.7	21.969	558	6	93	65,000	290	180,000	800	41,500	185	89,000	395
XSI14 0744 N	37,000	165.2	25.984	660	6	110	71,000	315	209,000	930	45,000	200	102,000	455
XSI14 0844 N	37,000	165.2	29.606	752	8	94	76,000	340	236,000	1050	48,500	215	115,000	510
XSI14 0944 N	41,000	181.7	33.701	856	8	107	81,000	360	265,000	1170	51,000	227	130,000	580
XSI14 1094 N	44,500	198.2	39.370	1000	8	125	88,000	390	305,000	1360	55,000	246	151,000	670

Slewing Ring Bearings
XSU SERIES

- Without gear teeth
- Crossed roller type
- 14mm roller diameter



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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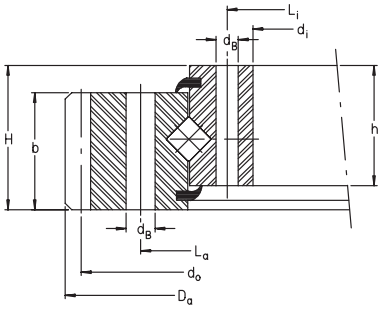
PART NUMBER	d_i inch	d_i mm	D_a inch	D_a mm	D_i inch	d_a mm	L_a inch	L_a mm	n_a	L_i inch	L_i mm	n_i
XSU 140414	13.543	344	19.055	484	415	413	18.110	460	24	14.488	368	24
XSU 140544	18.661	474	24.173	614	545	543	23.228	590	32	19.606	498	32
XSU 140644	22.598	574	28.110	714	645	643	27.165	690	36	23.543	598	36
XSU 140744	26.535	674	32.047	814	745	743	31.102	790	40	27.480	698	40
XSU 140844	30.472	774	35.984	914	845	843	35.039	890	40	31.417	798	40
XSU 140944	34.409	874	39.921	1014	945	943	38.976	990	44	35.354	898	44
XSU 141094	40.315	1024	45.827	1164	1095	1093	44.882	1140	48	41.260	1048	48

CONTINUED FROM ABOVE

PART NUMBER	WGT. lbs	WGT. kg	$F_{r\ max}$ lbf	$F_{r\ max}$ kN	AXIAL DYN. CAP. lbf	AXIAL DYN. CAP. kN	AXIAL STAT. CAP. lbf	AXIAL STAT. CAP. kN	RAD. DYN. CAP. lbf.	RAD. DYN. CAP. kN	RAD. STAT. CAP. lbf	RAD. STAT. CAP. kN
XSU 140414	61.7	28	22,300	99.1	51,000	229	117,000	520	33,000	146	56,000	250
XSU 140544	83.8	38	29,500	132.2	61,000	270	153,000	680	38,000	170	74,000	330
XSU 140644	97.0	44	33,500	148.7	65,000	290	180,000	800	41,500	185	89,000	395
XSU 140744	114.7	52	37,000	165.2	71,000	315	209,000	930	45,000	200	102,000	455
XSU 140844	132.3	60	37,000	165.2	76,000	340	236,000	1050	48,500	215	115,000	510
XSU 140944	147.7	67	41,000	181.7	81,000	360	265,000	1170	51,000	227	130,000	580
XSU 141094	169.8	77	44,500	198.2	88,000	390	305,000	1360	55,000	246	151,000	670

Slewing Ring Bearings
XA SERIES

- With external metric module gear teeth
- Crossed roller type
- Sealed
- Tables and drawing do not give details of each part
- Contact Engineering Department for aid in design



FOR REFERENCE ONLY. SHAPE MAY DIFFER

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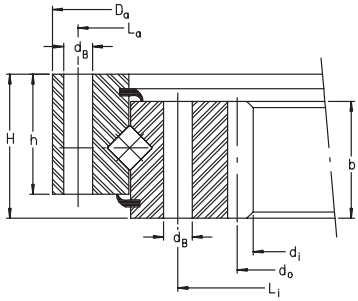
PART NUMBER	PART NUMBER	d_i inch	d_i mm	D_a inch	D_a mm	H inch	H mm	h inch	h mm	WGT. lbs	WGT. kg	L_a inch	L_a mm	n_a	L_i inch	L_i mm	n_i	d_B inch	d_B mm
XA 120235 N		6.732	171	12.551	318.8	1.575	40	1.378	35	29.3	13.3	10.827	275	12	7.677	195	12	0.512	13
XA 180309 N		9.252	235	16.079	408.4	2.362	60	2.067	52.5	66.2	30	14.134	359	24	10.197	259	24	0.512	13
XA 200352 H	F98937	14.724	374	18.189	462	2.323	59	2.126	54	77.2	35	16.024	407	24	11.732	298	24	0.551	14
XA 160407 N		13.189	335	19.815	503.3	1.969	50	1.772	45	72.8	33	17.913	455	30	14.134	359	30	0.512	13
XA 240574 N	F151682	18.898	480	27.362	695	3.032	77	2.520	64	185.2	84	25.197	640	18	20.000	508	18	0.709	18
XA 200720 N		24.803	630	33.240	844.3	2.323	59	2.047	52	191.8	87	30.709	780	30	26.063	662	30	0.709	18
XA 200810 N	F97948	28.740	730	37.953	964	3.543	90	2.953	75	348.4	158	34.252	870	24	30.000	762	24	–	–
XA 280995 N		34.724	882	45.591	1158	3.268	83	2.874	73	467.5	212	42.047	1068	40	36.299	922	40	0.866	22

CONTINUED FROM ABOVE

PART NUMBER	PART NUMBER	RAD. LOAD LIMIT lbf	RAD. LOAD LIMIT kN	d_0 inch	d_0 mm	m	z	b inch	b mm	AXIAL DYN. CAP. lbf	AXIAL DYN. CAP. kN	AXIAL STAT. CAP. lbf	AXIAL STAT. CAP. kN	RAD. DYN. CAP. lbf.	RAD. DYN. CAP. kN	RAD. STAT. CAP. lbf	RAD. STAT. CAP. kN
XA 120235 N		11,200	49.6	12.284	312	4	78	1.378	35	30,500	135	53,000	235	19,300	86	26,000	115
XA 180309 N		22,300	99.1	15.748	400	5	80	2.067	52.5	61,000	270	99,000	440	38,500	172	48,500	215
XA 200352 H	F98937	22,300	99.1	17.717	450	6	75	1.181	30	75,000	335	162,000	720	48,000	214	80,000	355
XA 160407 N		28,000	123.9	19.488	495	5	99	1.772	45	61,000	270	124,000	550	38,500	172	61,000	270
XA 240574 N	F151682	31,500	140.4	26.969	685	5	137	1.654	42	128,000	570	280,000	1250	81,000	360	137,000	610
XA 200720 N		53,000	234	32.835	834	6	139	2.047	52	112,000	500	285,000	1260	71,000	315	139,000	620
XA 200810 N	F97948	42,000	187.2	37.165	944	8	118	2.874	73	119,000	530	320,000	1420	75,000	335	148,000	660
XA 280995 N		109,000	484	44.882	1140	10	114	2.874	73	209,000	930	510,000	2280	133,000	590	275,000	1220

Slewing Ring Bearings
XI SERIES

- With internal metric module gear teeth
- Crossed roller type
- Sealed
- Tables and drawing do not give details of each part
- Contact Engineering Department for aid in design



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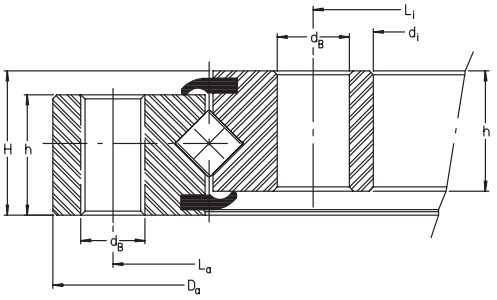
PART NUMBER	d_i inch	d_i mm	D_a inch	D_a mm	H inch	H mm	h inch	h mm	WGT. lbs	WGT. kg	L_a inch	L_a mm	n_a	L_i inch	L_i mm	n_i	d_B inch	d_B mm
XI 120288 N	8.504	216	13.386	340	1.496	38	1.299	33	26.5	12	12.756	324	20	9.921	252	20	0.354	9
XI 120321 V	10.126	257.2	15.079	383	1.496	38	1.299	33	33.1	15	14.055	357	20	11.299	287	20	–	–
XI 120420 N	13.071	332	19.134	486	1.535	39	1.339	34	50.7	23	18.189	462	16	14.882	378	16	0.551	14
XI 160489 N	15.118	384	22.126	562	1.772	45	1.575	40	77.2	35	21.181	538	40	17.323	440	40	0.551	14
XI 180635 N	19.843	504	28.425	722	2.126	54	1.850	47	147.7	67	27.165	690	24	22.835	580	24	0.709	18
XI 200720 N	22.992	584	31.969	812	2.284	58	2.008	51	185.2	84	30.709	780	40	25.984	660	40	0.709	18
XI 180865 N	28.976	736	33.543	852	2.126	54	1.850	47	205.1	93	36.221	920	20	31.890	810	20	0.709	18
XI 201100 N	37.402	950	47.244	1200	2.756	70	2.126	54	330.8	150	45.669	1160	30	40.945	1040	30	0.866	22

CONTINUED FROM ABOVE

PART NUMBER	RAD. LOAD LIMIT lbf	RAD. LOAD LIMIT kN	d_0 inch	d_0 mm	m	z	b inch	b mm	AXIAL DYN. CAP. lbf	AXIAL DYN. CAP. kN	AXIAL STAT. CAP. lbf	AXIAL STAT. CAP. kN	RAD. DYN. CAP. lbf.	RAD. DYN. CAP. kN	RAD. STAT. CAP. lbf	RAD. STAT. CAP. kN
XI 120288 N	7,900	35	8.819	224	4	56	1.339	34	33,500	150	65,000	290	21,400	95	31,500	141
XI 120321 V	12,600	56	10.276	261	3	87	1.339	34	36,500	163	72,000	320	23,400	104	35,500	157
XI 120420 N	14,900	66.1	13.386	340	4	85	1.339	34	42,500	189	94,000	420	27,000	120	46,500	206
XI 160489 N	29,000	130	15.591	396	6	66	1.575	40	67,000	300	119,000	530	43,000	192	58,000	260
XI 180635 N	42,000	187.2	20.472	520	8	65	1.850	47	91,000	405	202,000	900	58,000	260	99,000	440
XI 200720 N	58,000	260	23.622	600	8	75	2.008	51	112,000	500	238,000	1060	71,000	315	117,000	520
XI 180865 N	35,000	156	29.606	752	8	94	1.850	47	108,000	480	275,000	1230	69,000	305	135,000	600
XI 201100 N	82,000	363	38.189	970	10	97	2.362	60	142,000	630	360,000	1610	90,000	400	178,000	790

Slewing Ring Bearings
XU SERIES

- Without gear teeth
- Crossed roller type
- Tables and drawing do not give details of each part
- Contact Engineering Department for aid in design



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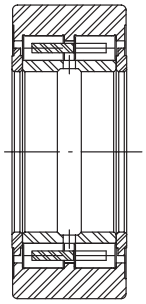
PART NUMBER	PART NUMBER	d_i	d_i	D_a	D_a	H	H	h	h	L_a	L_a	n_a	L_i	L_i	n_i
		inch	mm	inch	mm	inch	mm	inch	mm	inch	mm		inch	mm	
XU 050077	F152053.1	1.575	40	4.409	112	0.866	22	0.827	21	3.819	97	6	2.205	56	6
XU 060094	F151798.1	2.244	57	5.512	140	1.024	26	0.984	25	4.724	120	6	2.756	70	6
XU 060111	F98565	3.000	76.2	5.740	145.79	0.625	15.87	–	–	5.240	133.1	8	3.500	88.9	8
XU 080120	F151799.1	2.717	69	6.693	170	1.181	30	1.142	29	5.827	148	6	3.543	90	6
XU 080149	F98865	4.000	101.6	7.750	196.85	0.875	22.22	0.875	22.22	7.000	177.8	16	4.559	115.8	16
XU 120179		4.902	124.5	9.213	234	1.378	35	1.181	30	8.425	214	12	5.689	144.5	12
XU120222	F152473	5.512	140	11.811	300	1.417	36	1.181	30	10.630	270	12	6.693	170	12
XU160260		7.520	191	12.953	329	1.811	46	1.614	41	12.008	305	20	8.465	215	20
XU080264	F151264	8.500	215.9	12.250	311.15	1.000	25.4	1.000	25.4	11.626	295.3	12	9.126	231.8	12
XU160405		13.228	336	18.661	474	1.811	46	1.614	41	17.717	450	30	14.173	360	30
XU080430	F154119	14.961	380	18.898	480	1.024	26	1.024	26	18.189	462	20	15.669	398	20
XU300515		15.118	384	25.433	646	3.386	86	3.110	79	23.543	598	18	17.008	432	18
XU280680		22.244	565	31.299	795	3.110	79	2.835	72	29.724	755	30	23.819	605	30
XU300785		26.378	670	35.433	900	3.386	86	3.110	79	33.858	860	36	27.953	710	36
XU260980		34.252	870	42.913	1090	3.110	79	2.717	69	41.339	1050	44	35.827	910	44

CONTINUED FROM ABOVE

PART NUMBER	PART NUMBER	WGT.	WGT.	d_B	d_B	$F_{r\ max}$	$F_{r\ max}$	AXIAL DYN. CAP.	AXIAL DYN. CAP.	AXIAL STAT. CAP.	AXIAL STAT. CAP.	RAD. DYN. CAP.	RAD. DYN. CAP.	RAD. STAT. CAP.	RAD. STAT. CAP.
		lbs	kg	inch	mm	lbf	kN	lbf	kN	lbf	kN	lbf.	kN	lbf	kN
XU 050077	F152053.1	3.087	1.4	0.260	6.6	1,300	5.8	5,000	22.4	6,500	29	3,200	14.3	3,200	14.2
XU 060094	F151798.1	5.292	2.4	0.354	9	2,070	9.2	7,300	32.5	8,400	37.5	4,650	20.7	4,150	18.4
XU 060111	F98565	2.646	1.2	0.236	6	1,730	7.7	8,100	36	10,000	44.5	5,100	22.8	4,850	21.5
XU 080120	F151799.1	88.20	40	0.354	9	2,360	10.5	12,600	56	11,900	53	8,000	35.5	5,800	26
XU 080149	F98865	7.94	3.6	0.272	6.9	3,450	15.4	14,200	63	14,800	66	9,000	40	7,300	32.5
XU 120179		15.44	7	0.433	11	7,600	33.6	26,500	118	40,000	179	16,900	75	19,800	88
XU120222	F152473	26.5	12	0.709	18	14,700	65.5	30,000	133	62,000	275	19,100	85	29,500	131
XU160260		35.3	16	0.551	14	18,600	82.6	47,500	212	79,000	350	30,500	135	39,000	173
XU080264	F151264	15.2	6.9	0.343	8.7	4,700	21	19,100	85	26,500	117	12,100	54	12,800	57
XU160405		55.1	25	0.551	14	28,000	123.9	61,000	270	124,000	550	38,500	172	61,000	270
XU080430	F154119	26.5	12	0.354	9	7,900	35	24,700	110	63,000	280	15,700	70	31,000	138
XU300515		253.6	115	1.024	26	70,000	313.2	162,000	720	310,000	1370	102,000	455	151,000	670
XU280680		264.6	120	0.866	22	82,000	363	169,000	750	350,000	1560	108,000	480	171,000	760
XU300785		341.8	155	0.866	22	98,000	435.6	202,000	900	470,000	2090	128,000	570	232,000	1030
XU260980		348.4	158	0.866	22	120,000	532.4	189,000	840	490,000	2180	119,000	530	241,000	1070

Rolling Mill Backing Bearing
WGTR SERIES

This is a special category for which drawings, application data and specifications are available upon request.

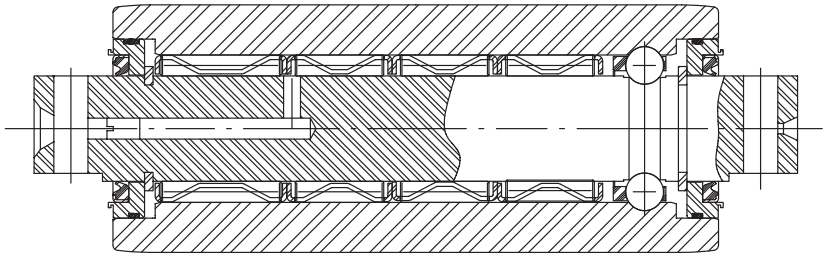


For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572.

PART NUMBER
WGTR 25 x 55 x 31.2
WGTR x 36 x 80 x 40
WGTR x 55 x 120 x 52
WGTR x 55 x 120 x 64
WGTR x 70 x 160 x 75
WGTR x 70 x 160 x 90
WGTR x 100 x 225 x 96
WGTR x 100 x 225 x 120
WGTR x 130300.02 x 150
WGTR x 130 x300.02 x 172.65
WGTR x 180 x 406.04 x 171.04
WGTR x 180 x 406.4 x 224
WGTR x 200 x 460 x 171
WGTR x 200 x 460 x 241

Tensioner – Leveler Backup Rollers
RLB SERIES

This is a special category for which drawings, application data and specifications are available upon request.

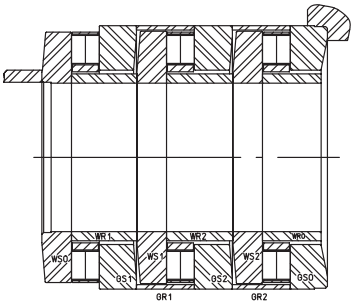


For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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Tandem Cylindrical Roller Thrust Bearing

TAR SERIES

This is a special category for which drawings, application data and specifications are available upon request.



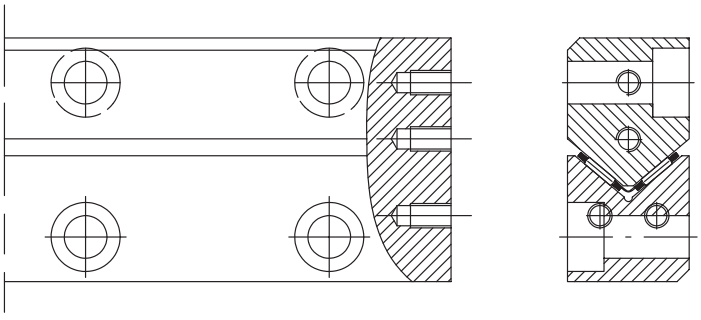
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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HYDREL/EGIS Guideways

M & V SERIES

- Standard quality: Q10

This is a special category for which drawings, application data and specifications are available upon request.

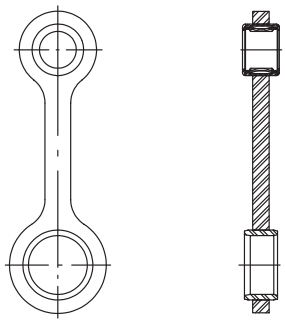


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Connecting Rods

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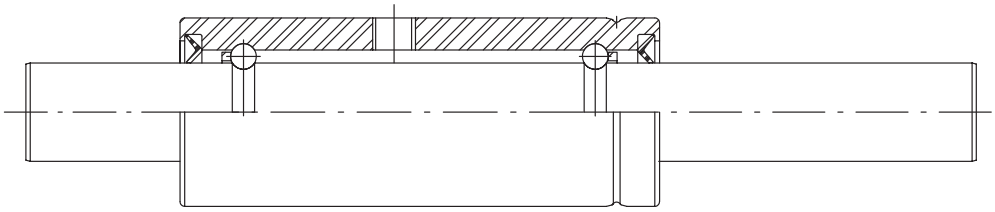


For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.
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Rotor Bearings

RTL SERIES

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