





Cam Followers

Unmounted bearing assembly consisting of hardened precision ground inner and outer raceways with either full complement or separated (cage) needle, ball, tapered or cylindrical rolling elements constructed with an integral stud or precision ground bore. Cam follower bearings provide an antifriction solution for translating rotation to linear motion or supporting either pure radial or combination thrust loads depending on the rolling elements types.

Bearing Configurations

Cylindrical, Crowned, V-Groove Or Flanged

Mounting Styles

Eccentric Or Concentric Stud Or Yoke

Outer Roller Diameter Range

1/2" To 10" And 13 mm To 90 mm

Materials

Bearing Quality Steel, Stainless

Cam Follower Selection Guide

			SIZE RANGE		
		Product Series	Material / Finish	Inch	Metric
CAMROL		CF	Black Oxide Finish Bearing Steel	1/2 - 10	
		CYR		3/4 - 10	
		CFH		1/2 - 7	
		BCF		1/2 - 4	
		BCYR		3/4 - 4	
		MCF			16 - 90
		MCFR			13 - 90
		MCYR			5 - 50
		MCYRR			5 - 50
Heavy-Duty		CFD	Black Oxide Finish Bearing Steel	1 1/4 - 6	
		CYRD		1 1/4 - 6	
		MCFD			35 - 80
		MCYRD			15 - 50

* For estimating purpose only, individually sizes may vary and are subject to change without notification

McGill CAMROL Cam Followers are available in 400 series stainless steel components for improved resistance to both external and internal corrosion.

CRES CAMROL bearings are dimensionally interchangeable with standard CAMROL[®] bearings and easily identifiable with "CR" designation.



Inch Cam Follower Bearings **McGILL**

Cam Follower Bearings



DESIGN CHARACTERISTICS					FEATURES							Page No.
Radial Load	Thrust Load	Precision	High Speed	Relative Base Cost *	Crowned OD	Eccentric Stud	Lubrication Holes	Seal	Hex Hole	Slotted Face	Jam Nuts	
				\$	O	O	S	O	O	S	-	B-15
				\$	O	-	S	O	-	-	-	B-39
				\$\$	O	-	S	O	O	S	-	B-15
				\$	O	O	S	O	O	S	-	B-45
				\$	O	-	S	O	-	-	-	B-57
				\$	S	O	S	O	O	S	S	B-69
				\$	S	O	S	O	O	S	S	B-69
				\$	S	-	S	O	O	-	S	B-91
				\$	S	-	S	O	-	-	S	B-91
				\$\$	O	O	O	S	S	-	-	B-103
				\$\$	O	-	O	S	-	-	-	B-107
				\$\$	S	O	S	-	O	S	S	B-111
				\$\$	S	-	S	-	-	-	-	B-115

Circular Track / Misalignment

Load Sharing / Adjustment To Track

Relubrication To Help Promote Bearing Operating Life

Contamination Barrier

Blind Hole Mounting

Allows The Use Of A Lube Fitting When Lubrication From The Flange Side Of Bearing

Accessories Included

O = Optional

S = Standard

○ = Not Recommended



Poor ← → Best

Cam Follower Selection Guide

			SIZE RANGE		
		Product Series	Material / Finish	Inch	Metric
Special Duty		SDCF	Black Oxide Finish Bearing Steel	1 - 4	
		SDMCF			25 - 100
TRAKROL		PCF	Black Oxide Finish Bearing Steel	1 1/2 - 9	
		PCYR		3 - 6	
		FCF		1 1/2 - 9	
		FCYR		3 - 6	
		VCF		2 1/2 - 8 1/2	
		VCYR		3 1/2 - 7 1/2	

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Inch Cam Follower Bearings **McGILL**

Cam Follower Bearings



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Radial Load	Thrust Load	Precision	High Speed	Relative Base Cost *	Crowned OD	Eccentric Stud	Lubrication Hole	Seal	Hex Hole	Slotted Face	Jam Nuts	
				\$\$\$	O	O	-	S	S	-	S	B-123
				\$\$\$	O	O	-	S	S	-	S	B-125
				\$\$	O	O	-	S	-	-	O	B-131
				\$\$	O	-	-	S	S	-	-	B-133
				\$\$\$	-	O	-	S	S	-	O	B-135
				\$\$	-	-	-	S	-	-	-	B-137
				\$\$	-	O	-	S	S	-	O	B-139
				\$\$	-	-	-	S	-	-	-	B-141

Circular Track / Misalignment

Load Sharing / Adjustment To Track

Relubrication And Promote Bearing Life

Contamination Barrier

Blind Hole Mounting

Allows The Use Of A Lube Fitting When Lubrication From The Flange Side Of Bearing

Accessories Included

O = Optional

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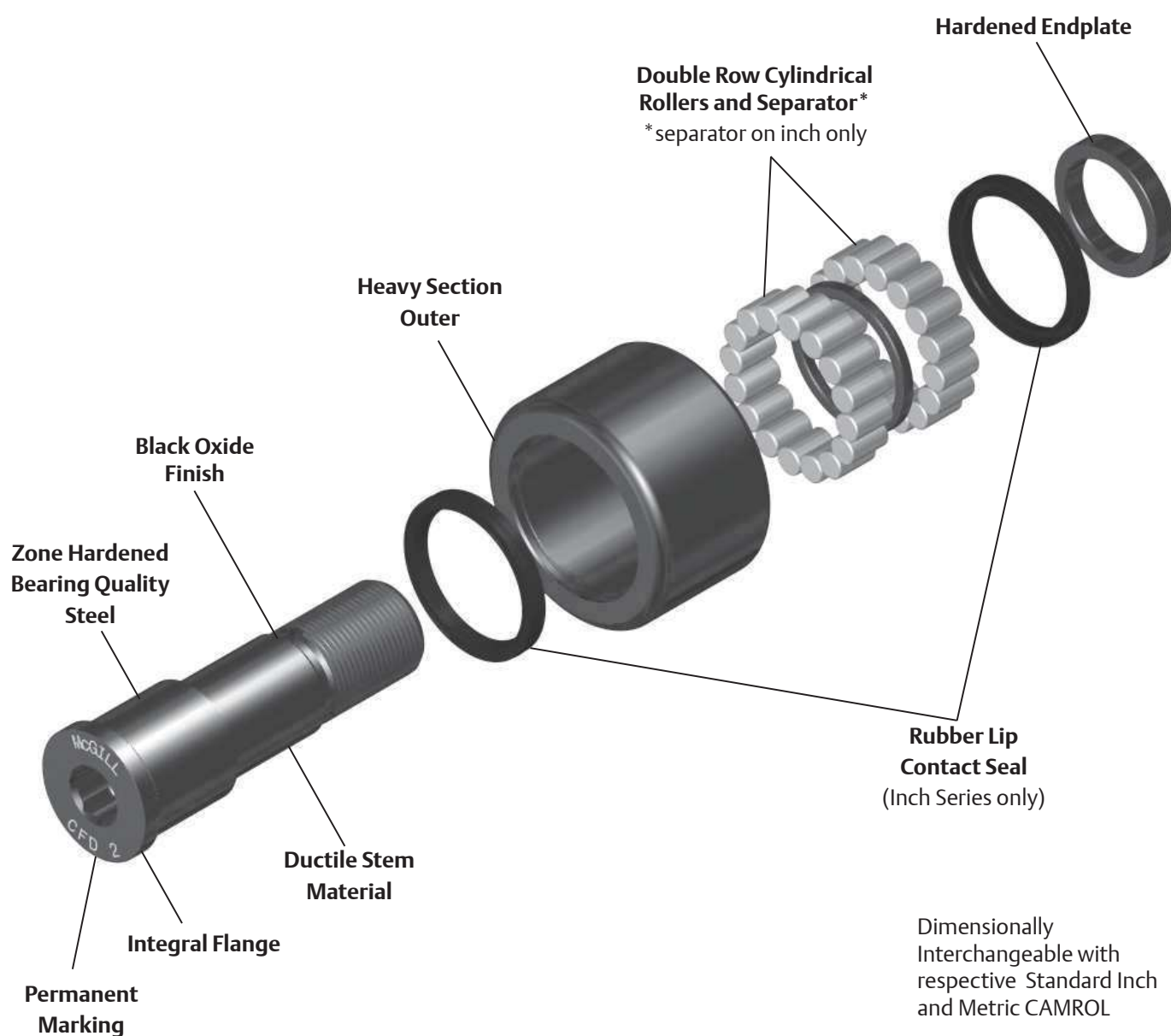
Poor ← → **Best**

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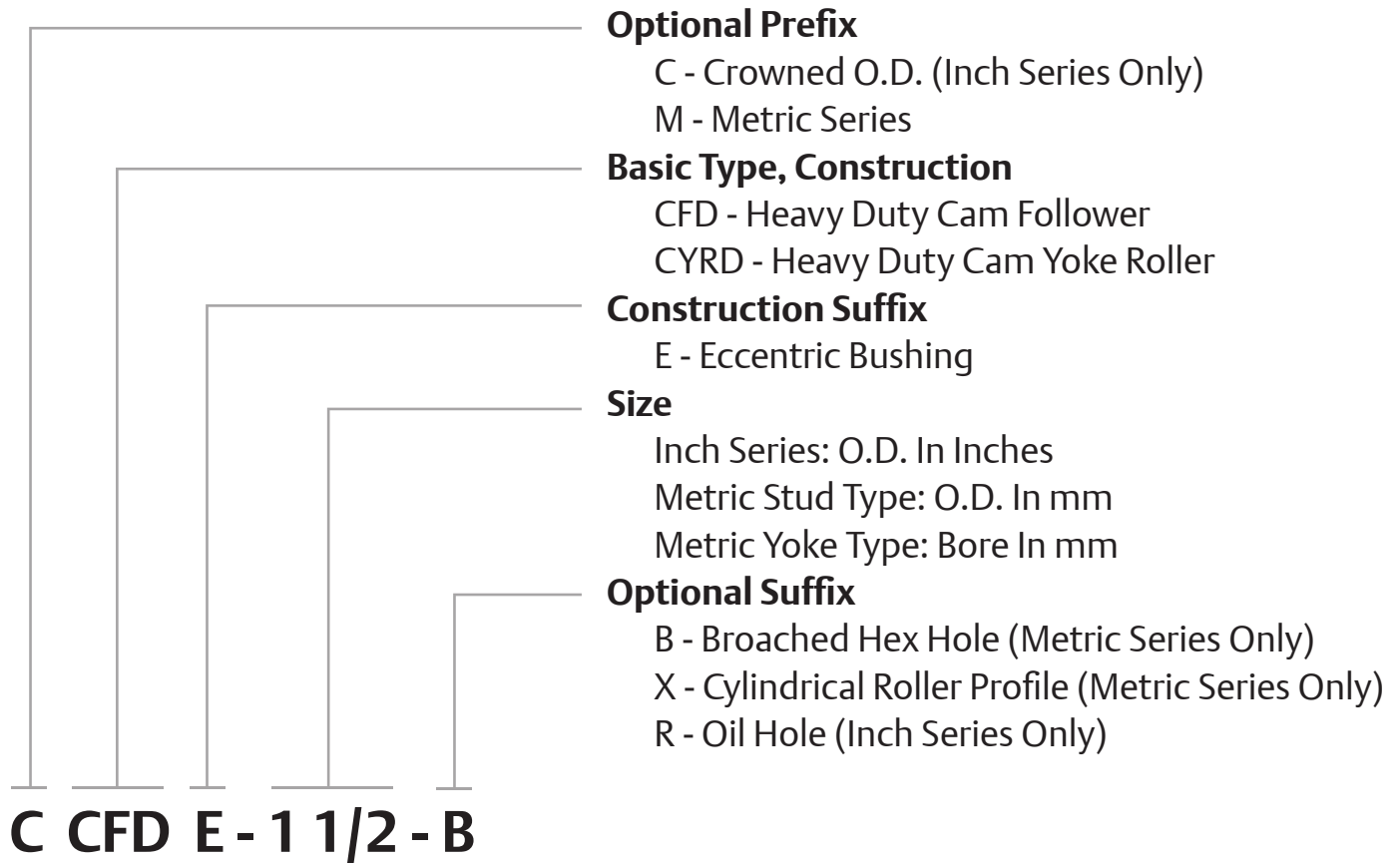
McGILL® Heavy Duty CAMROL Bearings

Heavy-Duty Inch and Metric CAMROL®

McGill Heavy-Duty CAMROL bearings are full complement cylindrical roller bearings featuring black oxide treated bearing steel, available in two basic mounting styles (stud or yoke) for use mechanical automation or linear motion applications. Our standard integral flange construction of stud version bearings helps maintain bearing integrity throughout the life. The inch series utilizes a rubber lip seal to provide a barrier for contamination and lubricant retention. Within the following section you can learn more about how these features and others can be applied to your application.

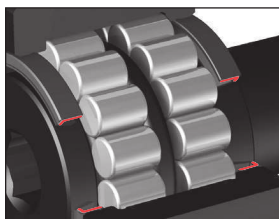


Cam Follower Inch and Metric Nomenclature



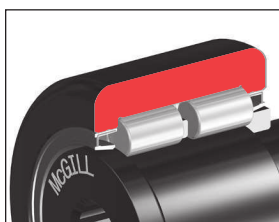
McGILL® Heavy Duty CAMROL Bearings

Features and Benefits



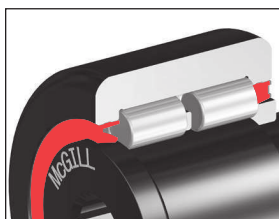
Double Row Full Complement Needle Rollers

The roller diameter to length ratio of Cylindrical rollers provides an end face and increases surface area to help support incidental thrust loads.



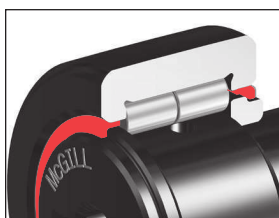
Heavy Section Outer

The heavy section outer helps support radial loading and provide proper rolling element support.



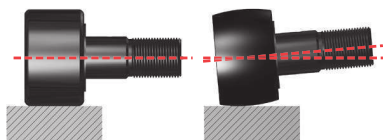
Rubber Lip Seals - Inch Series

Heavy-Duty CAMROL® Bearings have rubber lip seals to help keep contamination out and lubricant in. The seals are mounted inward to improve grease retention. Inch Only, removed as option- NS



Metallic Shields - Metric Series

The metric series Heavy-Duty bearings metallic side shields providing a barriers to help retain grease and keep out contaminants. Metric Only, removed as option – NS

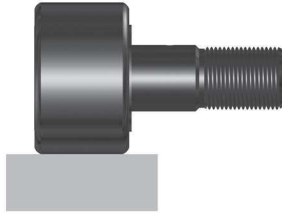


Crowned Outside Diameter (OD)

A crown on the OD of a cam follower bearing can increase bearing life versus a standard cylindrical cam follower. The crown achieves this performance by helping to distribute the stress on the outer ring and rolling elements resulting from misalignment due to mounting inaccuracy or stud deflection. The crown also helps reduce outer skidding in turntable or rotary applications. Not all applications may see the benefit of a crowned OD, consult Application Engineering for guidance for your application. Crowned OD is an option for Inch Series. Crowned OD is standard for Metric Series.

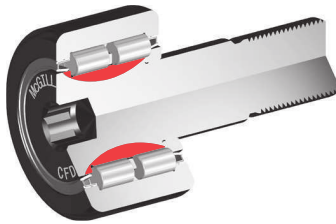


Features and Benefits continued



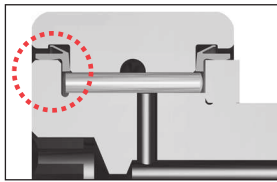
Cylindrical Outside Diameter (OD)

The cylindrical OD can improve performance in certain applications such as improved track capacity by maximizing the contact area with the track. Cylindrical OD is standard for Inch Series. Cylindrical OD is an option for Metric Series.



Zone Hardened Raceways

Heat treatment used to precisely harden working surfaces of the raceway and flange. The hardened surfaces provide support for the rolling element contact stresses, while keeping the core of the inner ductile to help absorb shock loads.



Integral Flange

The integral flange helps maintain bearing integrity throughout the bearing life. Zone hardened to provide wear resistance from incidental contact with the outer or rollers, and provides a sealing surface for rubber lipped seal.



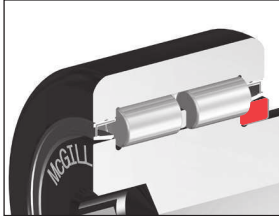
Hex Hole (Broached)

The hex hole can aid in the installation and removal of stud type cam followers by increasing the holding power over a standard screw driver slot.

* Standard on inch, option on Metric.

McGILL® Heavy Duty CAMROL Bearings

Features and Benefits continued



Hardened Endplate

Similar to the flange, the endplate must provide a contact surface for the seal and resist wear from incidental contact with the outer or rollers.

Factory Grease Fill

The cam follower and cam yoke roller bearings are factory lubricated with a medium temperature grease. Contact Application Engineering when application conditions require special lubricants.



Lubrication Reservoir

The inch series heavy-Duty bearings incorporate a spacer, resulting in an increased lubricant reservoir. Inch only



Black Oxide Finish

Bearings have a black oxide finish on all external surfaces.

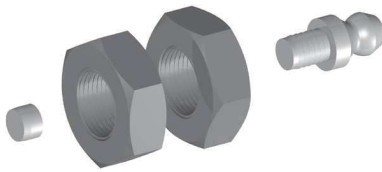


Options



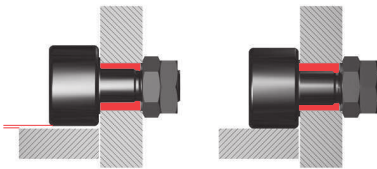
Permanent Marking

Part number permanently marked on bearing face, helps bearing identification after years of service.



Installation Accessory Pack - Metric Series Stud Type

All McGill Metric Cam followers include (2) oil hole plug to help provide proper lubrication path to the rolling elements and prevent contamination from entering the bearing through a unused oil hole. Metric only, Inch as -OH option,



Eccentric Stud

Eccentric stud option provides a means of adjusting the radial position of the bearing, which can improve the load sharing of inline bearing combinations. Cam follower load sharing helps reduce operation costs by reducing premature failures due to overloaded bearings, the need of precise mounting hole location tolerances and providing ability to realign bearing due to track wear.

McGILL® Heavy Duty CAMROL Bearings

Additional Options



BHT

Broached (Hex) hole at threaded end of cam follower stud.



THT

Threaded axial lubrication hole at threaded end of cam follower stud.



THF

Threaded axial lubrication hole at flanged end of cam follower stud. Available with all screw driver slot cam followers or broached cam followers over 3".



THB

Threaded axial oil hole on both ends of cam follower stud. Available with all screw driver slot cam followers or broached cam followers over 3".



ALG

Annular lubrication groove at cam follower stem radial lubrication hole.

Custom Capabilities

- *Customer specified factory grease fill*
- *Grease fitting installed*
- *Stud or thread length modifications*
- *Roller diameter variations or tolerances*
- *Cam followers grouped or matched diameter tolerance / run out sets*
- *Custom engineered to order designs*

McGILL® Heavy Duty CAMROL Bearings



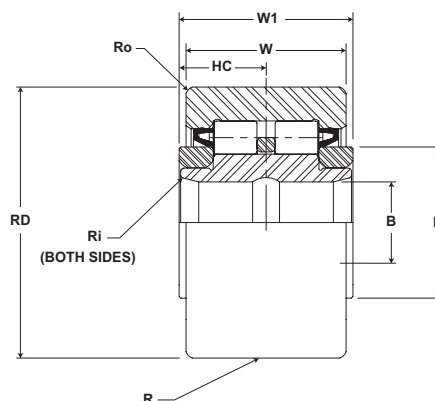
Basic Construction Type: Yoke Type Crowned / Cylindrical Outside Diameter

Rolling Elements: Full Complement Cylindrical Roller

Bearing Material: Bearing Quality Steel

Seal Type: Rubber Lip Seal

Lubrication: Lithium Soap Grease NLGI #2



CYRD

Part No.	RD		W		B		W1		R	Track Roller Dynamic Rating	Track Roller Static Rating
With Seals	Roller Diameter		Roller Width		Bore Diameter		Overall Width		Crown Prefix CCYRD-XX	lb/N	lb/N
	Inch mm		Inch mm		Inch mm		Inch mm		Radius		
	Nom.	Tol.	Nom.	Tol.	Nom.	Tol.	Nom.	Tol.	Radius		
CYRD 1 1/4	1.250 31.75	+0/- .001 +0/- .03	.750 9.05	+0/- .001 +0/- .03	.375 9.53	+ .0002/- .0004 + .0005/- .0010	.8125 20.6	+0.005/-0.01 +0.13/-0.25	Cylindrical	3,300 14,680	2,400 10,680
CCYRD 1 1/4									14 356		
CYRD 1 3/8	1.375 34.93	+0/- .001 +0/- .03	.750 9.05	+0/- .001 +0/- .05	.375 9.53	+ .0002/- .0004 + .0005/- .0010	.8125 20.6	+0.005/-0.01 +0.13/-0.25	Cylindrical	3,600 16,000	2,400 10,680
CCYRD 1 3/8									14 356		
CYRD 1 1/2	1.500 38.10	+0/- .001 +0/- .03	.875 2.23	+0/- .001 +0/- .07	.438 1.11	+ .0002/- .0004 + .0005/- .0010	.9375 23.8	+0.005/-0.01 +0.13/-0.25	Cylindrical	5,000 22,240	4,100 18,240
CCYRD 1 1/2									20 508		
CYRD 1 5/8	1.625 41.28	+0/- .001 +0/- .03	.875 2.23	+0/- .001 +0/- .09	.438 1.11	+ .0002/- .0004 + .0005/- .0010	.9375 23.8	+0.005/-0.01 +0.13/-0.25	Cylindrical	5,400 24,020	4,100 18,240
CCYRD 1 5/8									20 508		
CYRD 1 3/4	1.750 44.45	+0/- .001 +0/- .03	1.000 25.40	+0/- .001 +0/- .11	.500 2.70	+ .0002/- .0004 + .0005/- .0010	1.0625 27.0	+0.005/-0.01 +0.13/-0.25	Cylindrical	6,650 29,580	6,100 27,130
CCYRD 1 3/4									20 508		
CYRD 1 7/8	1.875 47.63	+0/- .001 +0/- .03	1.000 25.40	+0/- .001 +0/- .13	.500 2.70	+ .0002/- .0004 + .0005/- .0010	1.0625 27.0	+0.005/-0.01 +0.13/-0.25	Cylindrical	7,100 31,580	6,100 27,130
CCYRD 1 7/8									20 508		
CYRD 2	2.000 50.80	+0/- .001 +0/- .03	1.250 31.75	+0/- .001 +0/- .15	.625 5.88	+ .0002/- .0004 + .0005/- .0010	1.3125 33.3	+0.005/-0.01 +0.13/-0.25	Cylindrical	9,500 42,260	8,300 36,920
CCYRD 2									24 610		
CYRD 2 1/4	2.250 57.15	+0/- .001 +0/- .03	1.250 31.75	+0/- .001 +0/- .17	.625 5.88	+ .0002/- .0004 + .0005/- .0010	1.3125 33.3	+0.005/-0.01 +0.13/-0.25	Cylindrical	10,500 46,700	8,300 36,920
CCYRD 2 1/4									24 610		

Metric dimensions for reference only.

Not all parts are available from stock. Please contact customer service for availability (800) 626-2120.

For more information on bearing capabilities outside of our standard offering, please contact Application Engineering (800) 626-2093.

Heavy Duty CAMROL Bearings **MCGILL®**



CYRD

	Part No.	HC	E	Ri	Ro	Recommended Shaft Diameters						WT
	With Seals	Hole Center	Min. Clamping Diameter	Outer Corner Radius	Inner Corner Radius	Push Fit		Drive Fit		Press Fit		Bearing Weight
		Inch mm	Inch mm	Inch mm	Inch mm	Inch mm		Inch mm		Inch mm		lb kg
		(Ref)	(Ref)	(Ref)	(Ref)	Nom	Tol	Nom	Tol	Nom	Tol	
CYRD 1 1/4		.31 7.9	.98 5.0	.03 0.8	.03 0.8	.3745 9.512	±.0002 ±.005	.3751 9.53	±.0002 ±.005	.3753 9.53	±.0002 ±.005	.21 .09
CCYRD 1 1/4												
CYRD 1 3/8		.31 7.9	.98 5.0	.03 0.8	.05 1.2	.3745 9.512	±.0002 ±.005	.3751 9.53	±.0002 ±.005	.3753 9.53	±.0002 ±.005	.26 .12
CCYRD 1 3/8												
CYRD 1 1/2		.38 9.5	1.09 27.8	.04 1.0	.06 1.6	.4370 1.100	±.0002 ±.005	.4376 11.12	±.0002 ±.005	.4378 11.12	±.0002 ±.005	.35 .16
CCYRD 1 1/2												
CYRD 1 5/8		.38 9.5	1.09 27.8	.04 1.0	.06 1.6	.4370 1.100	±.0002 ±.005	.4376 11.12	±.0002 ±.005	.4378 11.12	±.0002 ±.005	.43 .19
CCYRD 1 5/8												
CYRD 1 3/4		.44 1.1	1.25 31.8	.05 1.3	.06 1.6	.4995 2.687	±.0002 ±.005	.5001 12.70	±.0002 ±.005	.5005 12.71	±.0002 ±.005	.57 .26
CCYRD 1 3/4												
CYRD 1 7/8		.44 1.1	1.25 31.8	.05 1.3	.06 1.6	.4995 2.687	±.0002 ±.005	.5001 12.70	±.0002 ±.005	.5005 12.71	±.0002 ±.005	.66 .29
CCYRD 1 7/8												
CYRD 2		.50 2.7	1.41 35.7	.06 1.5	.09 2.4	.6245 5.862	±.0002 ±.005	.6251 15.88	±.0002 ±.005	.6255 15.89	±.0002 ±.005	.88 .39
CCYRD 2												
CYRD 2 1/4		.50 2.7	1.41 35.7	.06 1.5	.09 2.4	.6245 5.862	±.0002 ±.005	.6251 15.88	±.0002 ±.005	.6255 15.89	±.0002 ±.005	1.18 .54
CCYRD 2 1/4												

McGILL® Heavy Duty CAMROL Bearings



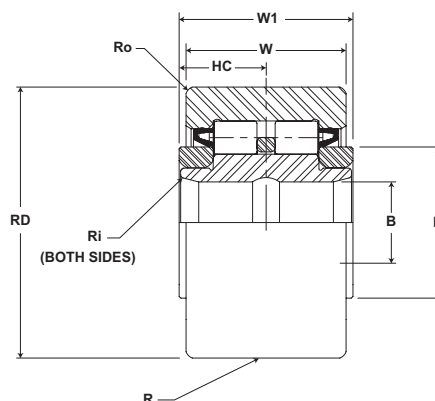
Basic Construction Type: Yoke Type Crowned / Cylindrical Outside Diameter

Rolling Elements: Full Complement Cylindrical Roller

Bearing Material: Bearing Quality Steel

Seal Type: Rubber Lip Seal

Lubrication: Lithium Soap Grease NLGI #2



CYRD

Part No.	RD		W		B		W1		R	Track Roller Dynamic Rating	Track Roller Static Rating
With Seals	Roller Diameter		Roller Width		Bore Diameter		Overall Width		Crown Prefix CCYRD-XX		
	Inch mm		Inch mm		Inch mm		Inch mm		Radius		
	Nom.	Tol.	Nom.	Tol.	Nom.	Tol.	Nom.	Tol.		lb/N	lb/N
CYRD 2 1/2	2.500	+0/- .001	1.500	+0/- .001	.750	+.0002/- .0004	1.5625	+0.005/-0.01	Cylindrical	14,000 62,270	10,400 46,260
CCYRD 2 1/2	63.50	+0/- .03	38.10	+0/- .19	9.05	+.0005/- .0010	39.7	+0.13/-0.25	30 762		
CYRD 2 3/4	2.750	+0/- .001	1.500	+0/- .001	.750	+.0002/- .0004	1.5625	+0.005/-0.01	Cylindrical	15,000 66,720	10,400 46,260
CCYRD 2 3/4	69.85	+0/- .03	38.10	+0/- .21	9.05	+.0005/- .0010	39.7	+0.13/-0.25	30 762		
CYRD 3	3.000	+0/- .001	1.750	+0/- .001	1.000	+.0001/- .0005	1.8125	+0.005/-0.01	Cylindrical	18,300 81,400	18,100 80,510
CCYRD 3	76.20	+0/- .03	44.45	+0/- .23	25.40	+.0003/- .0013	46.0	+0.13/-0.25	30 762		
CYRD 3 1/4	3.250	+0/- .001	1.750	+0/- .001	1.000	+.0001/- .0005	1.8125	+0.005/-0.01	Cylindrical	20,300 90,290	18,100 80,510
CCYRD 3 1/4	82.55	+0/- .03	44.45	+0/- .25	25.40	+.0003/- .0013	46.0	+0.13/-0.25	30 762		
CYRD 3 1/2	3.500	+0/- .001	2.000	+0/- .001	1.125	+.0001/- .0005	2.0625	+0.005/-0.01	Cylindrical	23,700 105,420	21,500 95,630
CCYRD 3 1/2	88.90	+0/- .03	50.80	+0/- .27	28.58	+.0003/- .0013	52.4	+0.13/-0.25	30 762		
CYRD 4	4.000	+0/- .001	2.250	+0/- .001	1.250	+.0001/- .0005	2.3125	+0.005/-0.01	Cylindrical	32,500 144,560	22,800 101,410
CCYRD 4	101.60	+0/- .03	57.15	+0/- .29	31.75	+.0003/- .0013	58.7	+0.13/-0.25	30 762		
CYRD 5	5.000	+0/- .001	2.750	+0/- .001	1.750	+.0001/- .0005	2.875	+0.005/-0.01	Cylindrical	50,500 224,620	50,800 225,960
CCYRD 5	127.00	+0/- .03	69.85	+0/- .31	44.45	+.0003/- .0013	73.0	+0.13/-0.25	48 1,219		
CYRD 6	6.000	+0/- .001	3.250	+0/- .001	2.250	+.0001/- .0005	3.375	+0.005/-0.01	Cylindrical	71,500 318,030	86,100 382,970
CCYRD 6	152.40	+0/- .03	82.55	+0/- .33	57.15	+.0003/- .0013	85.7	+0.13/-0.25	56 1,422		

Metric dimensions for reference only.

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For more information on bearing capabilities outside of our standard offering, please contact Application Engineering (800) 626-2093.

Heavy Duty CAMROL Bearings **M^cGILL**

Cam Follower
Bearings



CYRD

	Part No.	HC	E	Ri	Ro	Recommended Shaft Diameters						WT
	With Seals	Hole Center	Min. Clamping Diameter	Outer Corner Radius	Inner Corner Radius	Push Fit		Drive Fit		Press Fit		Bearing Weight
		Inch mm	Inch mm	Inch mm	Inch mm	Inch mm		Inch mm		Inch mm		lb kg
		(Ref)	(Ref)	(Ref)	(Ref)	Nom	Tol	Nom	Tol	Nom	Tol	
CYRD 2 1/2		.56 4.3	1.69 42.9	.07 1.8	.09 2.4	.7495 9.037	±.0002 ±.005	.7501 19.05	±.0002 ±.005	.7505 19.06	±.0002 ±.005	1.74 .79
CCYRD 2 1/2												
CYRD 2 3/4		.56 4.3	1.69 42.9	.07 1.8	.09 2.4	.7495 9.037	±.0002 ±.005	.7501 19.05	±.0002 ±.005	.7505 19.06	±.0002 ±.005	2.17 .98
CCYRD 2 3/4												
CYRD 3		.63 5.9	2.13 54.0	.08 2.0	.13 3.2	.9994 5.385	±.0002 ±.005	1.002 25.5	±.0002 ±.005	1.006 25.55	±.0002 ±.005	3.08 1.39
CCYRD 3												
CYRD 3 1/4		.63 5.9	2.13 54.0	.08 2.0	.13 3.2	.9994 5.385	±.0002 ±.005	1.002 25.5	±.0002 ±.005	1.006 25.55	±.0002 ±.005	3.62 1.64
CCYRD 3 1/4												
CYRD 3 1/2		.69 7.5	2.44 61.9	.09 2.3	.13 3.2	1.1244 28.560	±.0002 ±.005	1.1252 28.58	±.0002 ±.005	1.1256 28.59	±.0002 ±.005	4.41 2.00
CCYRD 3 1/2												
CYRD 4		.75 9.1	2.80 71.0	.10 2.5	.13 3.2	1.2494 31.735	±.0002 ±.005	1.2502 31.76	±.0002 ±.005	1.2506 31.77	±.0002 ±.005	6.57 2.98
CCYRD 4												
CYRD 5		.88 2.2	3.56 90.5	.11 2.8	.13 3.2	1.7494 44.435	±.0002 ±.005	1.7502 44.46	±.0002 ±.005	1.7506 44.47	±.0002 ±.005	12.33 5.59
CCYRD 5												
CYRD 6		1.00 25.4	4.47 113.5	.12 3.0	.13 3.2	2.2494 57.135	±.0002 ±.005	2.2502 57.16	±.0002 ±.005	2.2506 57.17	±.0002 ±.005	20.47 9.29
CCYRD 6												