
CF 2
McGILL

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

McGILL® *Inch Cam Follower Bearings*

Cam Follower Selection Guide

		Product Series	Material / Finish	Size Range: Inch	Size Range: 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.

Design Characteristics					Features							
Radial Load	Thrust Load	Precision	High Speed	Relative Base Cost *	Crowned OD	Eccentric Stud	Lubrication Holes	Seal	Hex Hole	Slotted Face	Jam Nuts	Page No.
●	○	●	◒	$	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

McGILL® Inch Cam Follower Bearings

Cam Follower Selection Guide

		Product Series	Material / Finish	Size Range: Inch	Size Range: 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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◒	○	●	◒	$$$	O	O	-	S	S	-	S	B-123
◒	○	●	◒	$$$	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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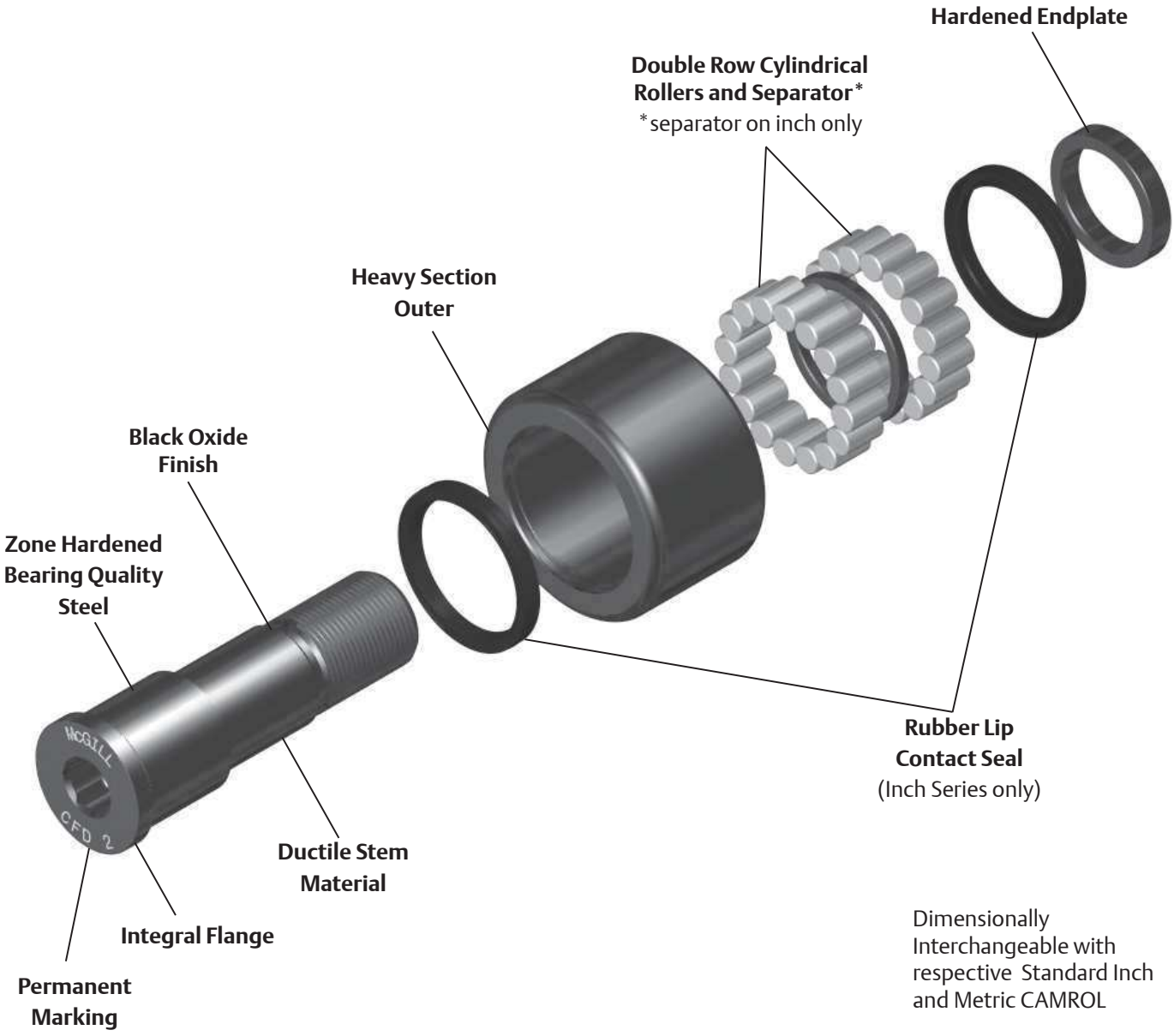
○ = Not Recommended
◒ ◒ ◒ ◒ ●
Poor ⟷ Best

* For estimating purpose only, individual costs may vary and are subject to change without notification

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.



Dimensionally Interchangeable with respective Standard Inch and Metric CAMROL

Cam Follower Inch and Metric Nomenclature

Optional Prefix
- C - Crowned O.D. (Inch Series Only)
- M - Metric Series

Basic Type, Construction
- CFD - Heavy Duty Cam Follower
- CYRD - Heavy Duty Cam Yoke Roller

Construction Suffix
- E - Eccentric Bushing

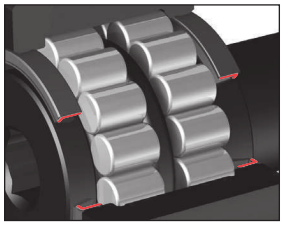
Size
- Inch Series: O.D. In Inches
- Metric Stud Type: O.D. In mm
- Metric Yoke Type: Bore In mm

Optional Suffix
- B - Broached Hex Hole (Metric Series Only)
- X - Cylindrical Roller Profile (Metric Series Only)
- R - Oil Hole (Inch Series Only)

C CFD E - 1 1/2 - B

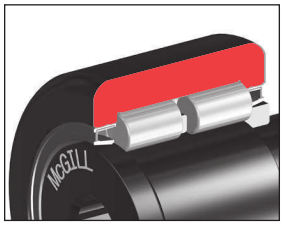
McGILL® *Heavy Duty CAMROL Bearings*

Features and Benefits



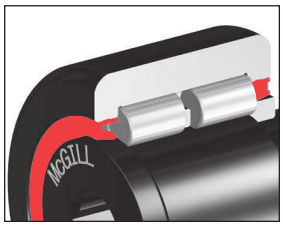
Double Row Full Complement Needle Rollers

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



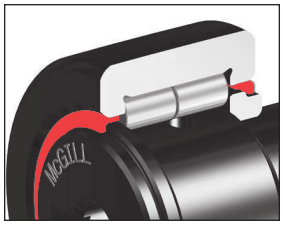
Heavy Section Outer

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



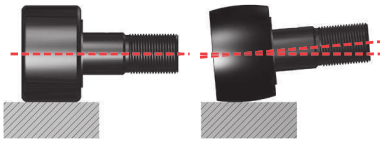
Rubber Lip Seals - Inch Series

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



Metallic Shields - Metric Series

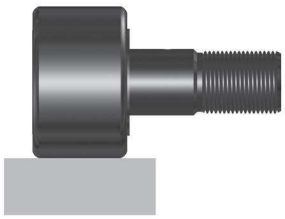
The metric series Heavy-Duty bearings metallic side shields providing a barriers to help retain grease and keep out containments. Metric Only, removed as option – NS



Crowned Outside Diameter (OD)

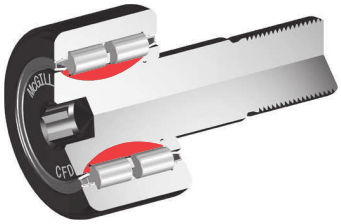
A crown on the OD of a cam follower bearing can increase bearing life versus a standard cylindrical cam follower. The crown achieves this performance by helping to distribute the stress on the outer ring and rolling elements resulting from misalignment due to mounting inaccuracy or stud deflection. The 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



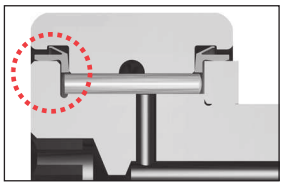
Cylindrical Outside Diameter (OD)

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 and 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.



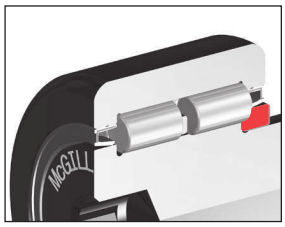
Integral Flange

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 aide 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.

Features and Benefits continued

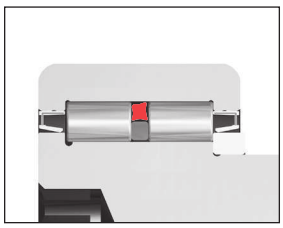


Hardened Endplate

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

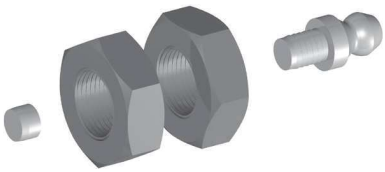
Black Oxide Finish

Bearings have a black oxide finish on all external surfaces.

Options

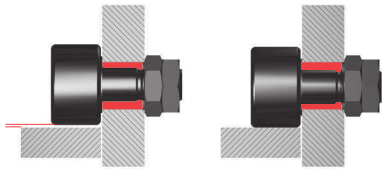
Permanent Marking

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.

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: Stud Type Crowned / Cylindrical Outside Diameter

Rolling Elements: Full Complement Cylindrical Roller

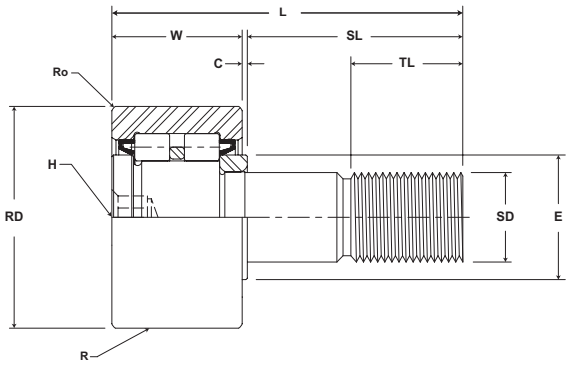
Bearing Material: Bearing Quality Steel

Seal Type: LUBRI-DISC

Lubrication: Lithium Soap Grease NLGI #2

System Configuration: Concentric / Eccentric / Heavy Stud

Mounting Feature: Slot / Hex Hole



CFD

Part No.	RD		W		SD		SL	C	TL	L	R	Track Roller Dynamic Rating	Track Roller Static Rating
With Seals	Roller Diameter		Roller Width		Stud Diameter		Stud Length	Endplate Extension	Minimum Thread Length	Length Overall	Crown Prefix CCFD		
	inch mm		inch mm		inch mm		inch mm		inch mm		inch mm	lb/N	lb/N
	Nom.	Tol.	Nom.	Tol.	Nom.	Tol.	(Ref)	(Ref)	(Ref)	(Ref)	Radius		
CFD 1 1/4	1.250 31.75	+0/-.001 +0/-.03	.750 19.05	+0/-.001 +0/-.03	.500 12.70	+0/-.001 +0/-.03	1.25 31.8	.03 .8	.63 15.9	2.03 51.6	Cylindrical	3,300 14,680	2,400 10,680
CCFD 1 1/4											14 356		
CFD 1 3/8	1.375 34.93	+0/-.001 +0/-.03	.750 19.05	+0/-.001 +0/-.03	.500 12.70	+0/-.001 +0/-.03	1.25 31.8	.03 .8	.63 15.9	2.03 51.6	Cylindrical	3,600 16,000	2,400 10,680
CCFD 1 3/8											14 356		
CFD 1 1/2	1.500 38.10	+0/-.001 +0/-.03	.875 22.23	+0/-.001 +0/-.03	.625 15.88	+0/-.001 +0/-.03	1.50 38.1	.03 .8	.75 19.1	2.41 61.1	Cylindrical	5,000 22,240	4,100 18,240
CCFD 1 1/2											20 508		
CFD 1 5/8	1.625 41.28	+0/-.001 +0/-.03	.875 22.23	+0/-.001 +0/-.03	.625 15.88	+0/-.001 +0/-.03	1.50 38.1	.03 .8	.75 19.1	2.41 61.1	Cylindrical	5,400 24,020	4,100 18,240
CCFD 1 5/8											20 508		
CFD 1 3/4	1.750 44.45	+0/-.001 +0/-.03	1.000 25.40	+0/-.001 +0/-.03	.750 19.05	+0/-.001 +0/-.03	1.75 44.5	.03 .8	.88 22.2	2.78 70.6	Cylindrical	6,650 29,580	6,100 27,130
CCFD 1 3/4											20 508		
CFD 1 7/8	1.875 47.63	+0/-.001 +0/-.03	1.000 25.40	+0/-.001 +0/-.03	.750 19.05	+0/-.001 +0/-.03	1.75 44.5	.03 .8	.88 22.2	2.78 70.6	Cylindrical	7,100 31,580	6,100 27,130
CCFD 1 7/8											20 508		
CFD 2	2.000 50.80	+0/-.001 +0/-.03	1.250 31.75	+0/-.001 +0/-.03	.875 22.23	+0/-.001 +0/-.03	2.00 50.8	.03 .8	1.00 25.4	3.28 83.3	Cylindrical	9,500 42,260	8,300 36,920
CCFD 2											24 610		
CFD 2 1/4	2.250 57.15	+0/-.001 +0/-.03	1.250 31.75	+0/-.001 +0/-.03	.875 22.23	+0/-.001 +0/-.03	2.00 50.8	.03 .8	1.00 25.4	3.28 83.3	Cylindrical	10,500 46,700	8,300 36,920
CCFD 2 1/4											24 610		

Clamping torque is based on dry threads. If threads are lubricated, use half of value shown.

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.

CFD

Part No. With Seals	H Hex Hole inch mm Size	E Min. Clamping Diameter inch mm (Ref)	Ro Corner inch mm (Ref)	Housing Bore Diameter inch mm Nom.	Housing Bore Diameter inch mm Tol.	Thread Type	Clamping Torque in-lb Nm	WT Bearing Weight lb kg
CFD 1 1/4	.25 6.4	.98 25.0	.03 .8	.5003 12.708	+.0002/-.0003 +.0005/-.0008	1/2-20	350 40	.29 .13
CCFD 1 1/4			N/A					
CFD 1 3/8	.25 6.4	.98 25.0	.05 1.2	.5003 12.708	+.0002/-.0003 +.0005/-.0012	1/2-20	350 40	.35 .16
CCFD 1 3/8			N/A					
CFD 1 1/2	.312 7.9	1.09 27.8	.06 1.6	.6253 15.883	+.0002/-.0003 +.0005/-.0016	5/8-18	650 73	.50 .22
CCFD 1 1/2			N/A					
CFD 1 5/8	.312 7.9	1.09 27.8	.06 1.6	.6253 15.883	+.0002/-.0003 +.0005/-.0020	5/8-18	650 73	.58 .26
CCFD 1 5/8			N/A					
CFD 1 3/4	.312 7.9	1.25 31.8	.06 1.6	.7503 19.058	+.0002/-.0003 +.0005/-.0024	3/4-16	1,250 141	.81 .37
CCFD 1 3/4			N/A					
CFD 1 7/8	.312 7.9	1.25 31.8	.06 1.6	.7503 19.058	+.0002/-.0003 +.0005/-.0028	3/4-16	1,250 141	.91 .41
CCFD 1 7/8			N/A					
CFD 2	.437 11.1	1.41 35.7	.09 2.4	.8753 22.233	+.0002/-.0003 +.0005/-.0032	7/8-14	1,500 170	1.29 .59
CCFD 2			N/A					
CFD 2 1/4	.437 11.1	1.41 35.7	.09 2.4	.8753 22.233	+.0002/-.0003 +.0005/-.0036	7/8-14	1,500 170	1.59 .72
CCFD 2 1/4			N/A					

Clamping torque is based on dry threads. If threads are lubricated, use half of value shown.

McGILL® *Heavy Duty CAMROL Bearings*

Basic Construction Type: Stud Type Crowned / Cylindrical Outside Diameter

Rolling Elements: Full Complement Cylindrical Roller

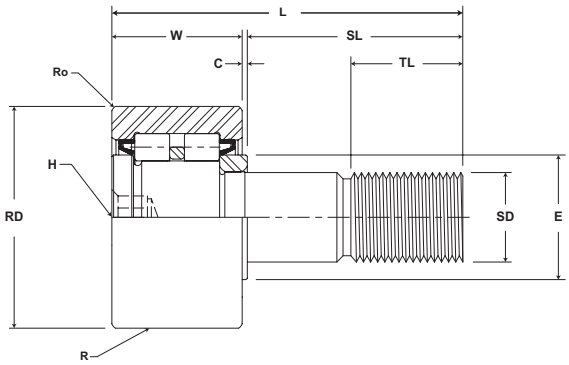
Bearing Material: Bearing Quality Steel

Seal Type: LUBRI-DISC®

Lubrication: Lithium Soap Grease NLGI #2

System Configuration: Concentric / Eccentric / Heavy Stud

Mounting Feature: Slot / Hex Hole



CFD

Part No.	RD		W		SD		SL	C	TL	L	R	Track Roller Dynamic Rating	Track Roller Static Rating
With Seals	Roller Diameter		Roller Width		Stud Diameter		Stud Length	Endplate Extension	Minimum Thread Length	Length Overall	Crown Prefix CCFD		
	inch mm		inch mm		inch mm		inch mm		inch mm		inch mm	lb/N	lb/N
	Nom.	Tol.	Nom.	Tol.	Nom.	Tol.	(Ref)	(Ref)	(Ref)	(Ref)	Radius		
CFD 2 1/2	2.500 63.50	+0/-.001 +0/-.03	1.500 38.10	+0/-.001 +0/-.03	1.000 25.40	+0/-.001 +0/-.03	2.25 57.2	.03 .8	1.125 28.6	3.78 96.0	Cylindrical	14,000 62,270	10,400 46,260
CCFD 2 1/2											30 762		
CFD 2 3/4	2.750 69.85	+0/-.001 +0/-.03	1.500 38.10	+0/-.001 +0/-.03	1.000 25.40	+0/-.001 +0/-.03	2.25 57.2	.03 .8	1.125 28.6	3.78 96.0	Cylindrical	15,000 66,720	10,400 46,260
CCFD 2 3/4											30 762		
CFD 3	3.000 76.20	+0/-.001 +0/-.03	1.750 44.45	+0/-.001 +0/-.03	1.250 31.75	+0/-.001 +0/-.03	2.50 63.5	.03 .8	1.25 31.7	4.28 108.7	Cylindrical	18,300 81,400	18,100 80,510
CCFD 3											30 762		
CFD 3 1/4	3.250 82.55	+0/-.001 +0/-.03	1.750 44.45	+0/-.001 +0/-.03	1.250 31.75	+0/-.001 +0/-.03	2.50 63.5	.03 .8	1.25 31.7	4.28 108.7	Cylindrical	20,300 90,290	18,100 80,510
CCFD 3 1/4											30 762		
CFD 3 1/2	3.500 88.90	+0/-.001 +0/-.03	2.000 50.80	+0/-.001 +0/-.03	1.375 34.93	+0/-.001 +0/-.03	2.75 69.9	.03 .8	1.375 34.9	4.78 121.4	Cylindrical	23,700 105,420	21,500 95,630
CCFD 3 1/2											30 762		
CFD 4	4.000 101.60	+0/-.001 +0/-.03	2.250 57.15	+0/-.001 +0/-.03	1.500 38.10	+0/-.001 +0/-.03	3.50 88.9	.03 .8	1.50 38.1	5.78 146.8	Cylindrical	32,500 144,560	22,800 101,410
CCFD 4											30 762		
CFD 5	5.000 127.00	+0/-.001 +0/-.03	2.750 69.85	+0/-.001 +0/-.03	2.000 50.80	+0/-.001 +0/-.03	5.06 128.6	.06 1.6	2.00 50.4	7.88 200.0	Cylindrical	50,500 224,620	50,800 225,960
CCFD 5											48 1,219		
CFD 6	6.000 152.40	+0/-.001 +0/-.03	3.250 82.55	+0/-.001 +0/-.03	2.500 63.50	+0/-.001 +0/-.03	6.00 152.4	.06 1.6	2.50 63.5	9.31 236.5	Cylindrical	71,500 318,030	86,100 382,970
CCFD 6											30 762		

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.

CFD

Part No.	H	E	Ro	Housing Bore Diameter		Thread Type	Clamping Torque	WT
With Seals	Hex Hole	Min. Clamping Diameter	Corner					Bearing Weight
	inch mm		inch mm	inch mm			in-lb Nm	lb kg
	Size	(Ref)	(Ref)	Nom.	Tol.			
CFD 2 1/2	.50 12.7	1.69 42.9	.09 2.4	1.0003 25.408	+.0002/-.0003 +.0005/-.0040	1-14	2,250 254	2.38 1.08
CCFD 2 1/2			N/A					
CFD 2 3/4	.50 12.7	1.69 42.9	.09 2.4	1.0003 25.408	+.0002/-.0003 +.0005/-.0044	1-14	2,250 254	2.93 1.33
CCFD 2 3/4			N/A					
CFD 3	.75 19.1	2.13 54.0	.13 3.2	1.2503 31.758	+.0002/-.0003 +.0005/-.0048	1 1/4-12	3,450 390	4.20 1.91
CCFD 3			N/A					
CFD 3 1/4	.75 19.1	2.13 54.0	.13 3.2	1.2503 31.758	+.0002/-.0003 +.0005/-.0052	1 1/4-12	3,450 390	4.52 2.05
CCFD 3 1/4			N/A					
CFD 3 1/2	.75 19.1	2.44 61.9	.13 3.2	1.3753 34.933	+.0002/-.0003 +.0005/-.0056	1 3/8-12	4,200 475	5.99 2.72
CCFD 3 1/2			N/A					
CFD 4	.75 19.1	2.80 71.0	.13 3.2	1.5003 38.108	+.0002/-.0003 +.0005/-.0060	1 1/2-12	5,000 565	8.97 4.07
CCFD 4			N/A					
CFD 5	.875 22.2	3.56 90.5	.13 3.2	2.0003 50.808	+.0002/-.0003 +.0005/-.0064	2-12	5,000 565	18.37 8.33
CCFD 5			N/A					
CFD 6	1.00 25.4	4.47 113.5	.13 3.2	2.5003 63.508	+.0002/-.0003 +.0005/-.0068	2 1/2-12	5,000 565	31.99 14.51
CCFD 6			N/A					

Clamping torque is based on dry threads. If threads are lubricated, use half of value shown.