
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

				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.

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
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Poor ⟷ Best

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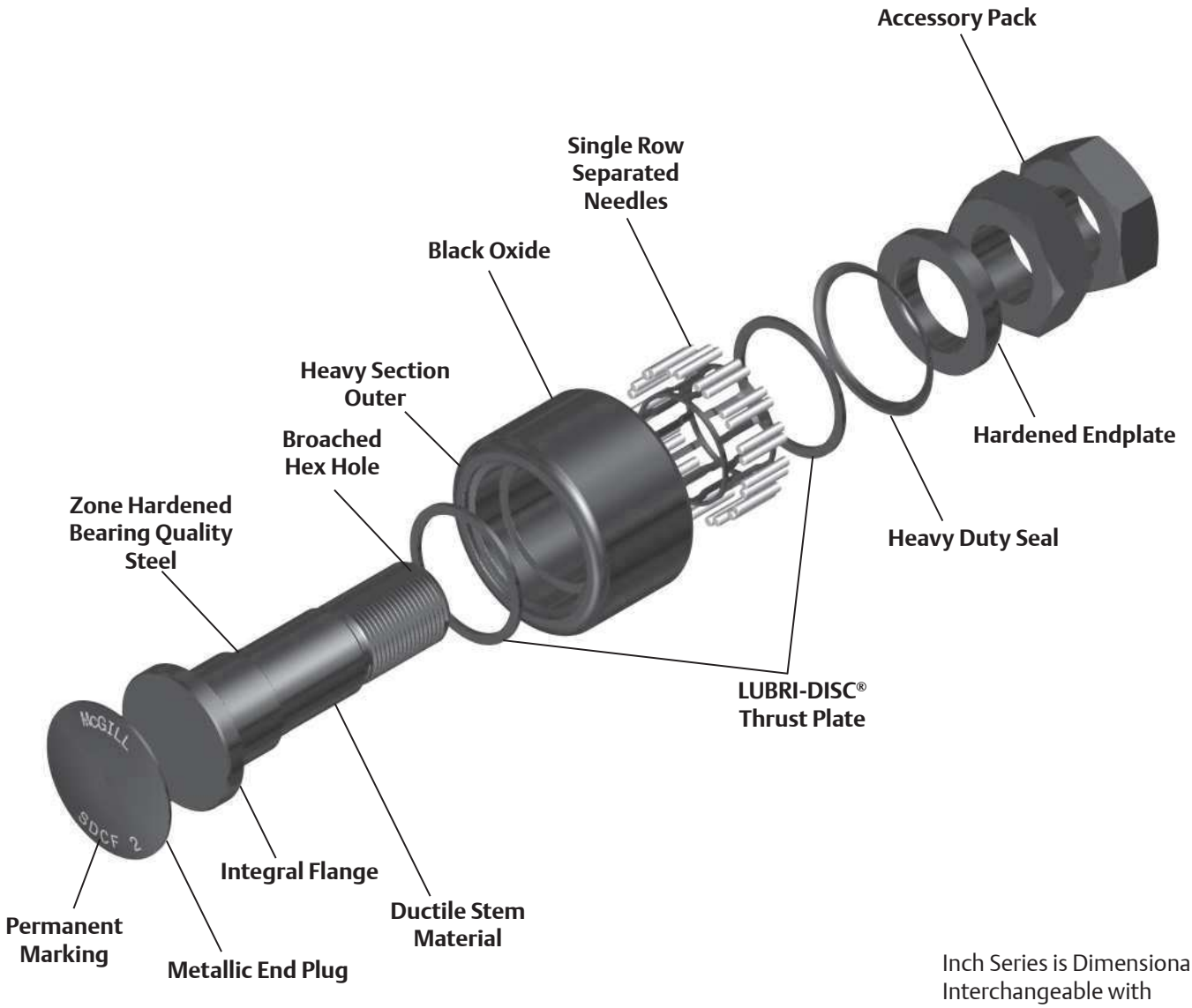
McGILL® *Special Duty CAMROL Bearings*

McGill Special Duty Cam Followers

Special-Duty CAMROL bearings are available feature black oxide treated bearing steel in both inch and metric sizes for your motion control needs. Designed for severe applications, bearings thick section outer race, together with a caged (retainer) needle roller set provides the basic foundation for a cam follower suited for severe duty. Integral flange construction, on stud version bearings help maintain bearing integrity throughout the service life. A metallic face plug seal provides a wear resistant seal while the heavy duty seal provides a barrier for contaminate entry to support reduced maintenance applications. Within the following section you can learn more about these feature and how the can be applied to your tough application.



Inch Series is Dimensionally Interchangeable with Standard INCH CAMROL Factory Filled Synthetic Grease.

Special Duty Cam Follower Nomenclature

Series Identifier
SD - Special Duty

Basic Type
CF - Cam Follower
MCF - Metric Cam Follower

Optional Prefix
E - Eccentric Bushing

Size
CF - O.D. In Inches
MCF - O.D. In mm

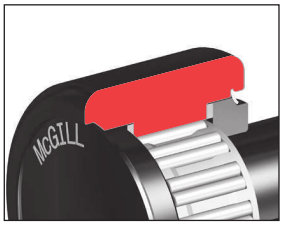
SD CF E - 1 1/2

McGILL® *Special Duty CAMROL Bearings*

Features and Benefits

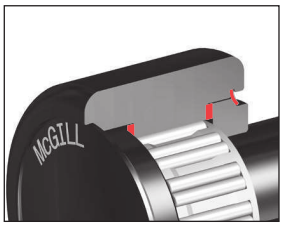
Retainer Type

The retainer (cage) option provides heat-treated steel cage for improved durability and wear resistance. The needle separation produces larger lubrication reservoir and helps achieve higher bearing speeds. The cages are designed with two rollers per pockets to help improve static and dynamic load ratings.



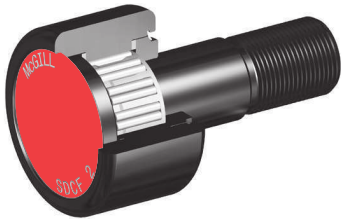
Heavy Section Outer

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



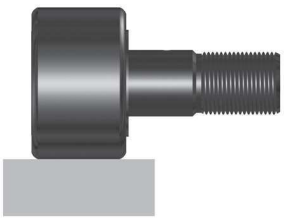
LUBRI-DISC® Seal

The CAMROL standard for seals, the LUBRI-DISC seal helps keep contaminants out and lubrication in the bearing, with an integral back plate to separate the metal to metal contact between the outer ring and endplate(s) or flange. The back plate feature reduces friction resulting in lower operating temperatures which can extend grease life and allowing for higher operating speeds. The seal also includes vents to help prevent seal blowout during relubrication, while the outer raceway is machined with a reservoir for additional lubricant capacity. The LUBRI-DISC seal option has a good balance of sealing, lubricant capacity, and low drag operation essential to a precision cam follower suited for most industrial applications.



End Plug Seal

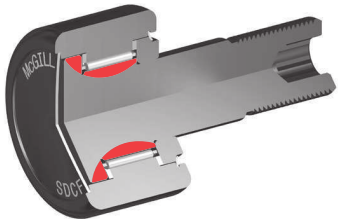
Metallic Plug seal helps keep contamination out of the bearing and resistant to weld spatter, abrasive contaminants and washout. The plug installed into the outer encapsulates the flange side of the bearing resulting in a large grease reservoir and wear resistant bearing seal.



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.

Features and Benefits continued

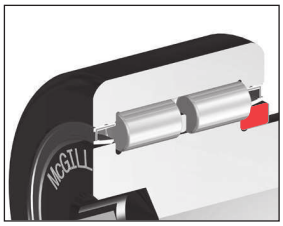


Zone Hardened Raceways

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.

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 or milled slot.

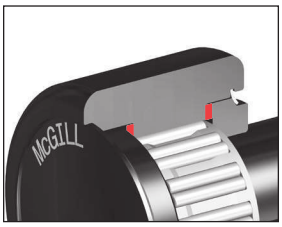


Hardened Endplate

Similar to the flange, the endplate must provide a seal surface for the LUBRI-DISC seal and resist wear from incidental contact with the outer or rollers. The hardened and ground endplate provides a sealing surface with LUBRI-DISC® seal option.

McGILL® *Special Duty CAMROL Bearings*

Features and Benefits



LUBRI-DISC® Thrust Washer

Utilizing the LUBRI-DISC properties as a back plate to separate the metal to metal contact between the outer ring and endplate(s) or flange. The back plate feature reduces friction resulting in lower operating temperatures which can extend grease life and allowing for higher operating speeds.

Factory Grease Fill

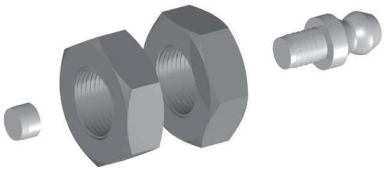
The cam follower and cam yoke roller bearings are factory lubricated with synthetic grease. Contact Application Engineering when application conditions require special lubricants

Black Oxide Finish

Bearings have a black oxide finish on all external surfaces.

Permanent Marking

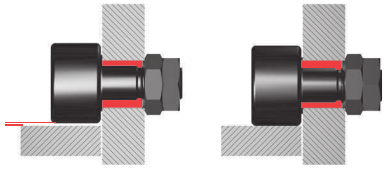
Part number permanently marked on bearing face, helps bearing identification after years of service.



Installation Accessory Pack

All McGill stud type special duty Cam followers include (2) jam nuts to ensure proper thread type (Metric/ Inch), grease fitting and 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.

Options



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.

Custom Capabilities

- *Customer specified factory grease fill*
- *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® *Special Duty CAMROL Bearings*

Basic Construction Type: Stud Type Crowned / Cylindrical Outside Diameter

Rolling Elements: Retained (Caged) Needle Roller

Bearing Material: Bearing Quality Steel

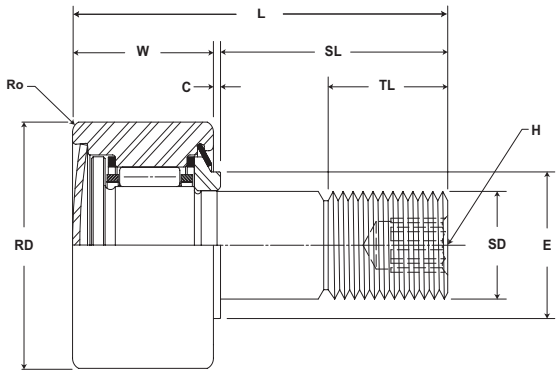
Seal Type: Metal Extension Plug and LUBRI-DISC® Seal

Lubrication: Synthetic Grease NLGI #2

System Configuration: Concentric / Eccentric

Mounting Feature: Hex Hole on Thread Face

Dimensional Interchange: Standard CAMROL Bearing



SDCF

Part No.	RD		W		SD		SL	C	TL	L	Track Roller Dynamic Rating	Track Roller Static Rating
With LUBRI-DISC Seals	Roller Diameter		Roller Width		Stud Diameter		Stud Length	Endplate Extension	Minimum Thread Length	Length Overall		
	inch mm		inch mm		inch mm		inch mm		inch mm		lb/N	lb/N
	Nom.	Tol.	Nom.	Tol.	Nom.	Tol.	(Ref)	(Ref)	(Ref)	(Ref)		
SDCF 1	1.000 25.40	+0 / -0.001 +0 / - 0.03	.6250 15.875	+0 / -0.010 +0 / - 0.25	.4375 11.113	+0.001 /-0 +0.03 / - 0	1.00 25.4	.03 .8	.50 12.7	1.09 27.8	1,280 5,693	1,450 6,450
SDCF 1 1/4	1.250 31.75	+0 / -0.001 +0 / - 0.03	.7500 19.050	+0 / -0.010 +0 / - 0.25	.5000 12.700	+0.001 /-0 +0.03 / - 0	1.25 31.8	.03 .8	.63 15.9	1.28 32.5	1,630 7,250	2,050 9,118
SDCF 1 1/2	1.500 38.10	+0 / -0.001 +0 / - 0.03	.8750 22.225	+0 / -0.010 +0 / - 0.25	.6250 15.875	+0.001 /-0 +0.03 / - 0	1.50 38.1	.03 .8	.75 19.1	1.53 38.9	2,450 10,898	3,570 15,879
SDCF 1 3/4	1.750 44.45	+0 / -0.001 +0 / - 0.03	1.0000 25.400	+0 / -0.010 +0 / - 0.25	.7500 19.050	+0.001 /-0 +0.03 / - 0	1.75 44.5	.03 .8	.88 22.2	1.78 45.2	3,000 13,344	4,450 19,794
SDCF 2	2.000 50.80	+0 / -0.001 +0 / - 0.03	1.2500 31.750	+0 / -0.010 +0 / - 0.25	.8750 22.225	+0.001 /-0 +0.03 / - 0	2.00 50.8	.03 .8	2.00 50.8	2.16 54.8	4,000 17,792	6,700 29,802
SDCF 2 1/2	2.500 63.50	+0 / -0.001 +0 / - 0.03	1.5000 38.100	+0 / -0.010 +0 / - 0.25	1.0000 25.400	+0.001 /-0 +0.03 / - 0	2.25 57.2	.03 .8	2.25 57.2	2.53 64.3	5,930 26,377	10,400 46,259
SDCF 3	3.000 76.20	+0 / -0.001 +0 / - 0.03	1.7500 44.450	+0 / -0.010 +0 / - 0.25	1.2500 31.750	+0.001 /-0 +0.03 / - 0	2.50 63.5	.03 .8	2.50 63.5	3.03 77.0	10,500 46,704	19,700 87,626
SDCF 4	4.000 101.60	+0 / -0.001 +0 / - 0.03	2.2500 57.150	+0 / -0.010 +0 / - 0.25	1.5000 38.100	+0.001 /-0 +0.03 / - 0	3.50 88.9	.03 .8	3.50 88.9	3.78 96.0	12,700 56,490	23,200 103,194

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.

SDCF

Part No. With LUBRI-DISC Seals	H Hex Hole inch mm (Ref)	E Min. Clamping Diameter inch mm (Ref)	Ro Outer Corner Radius inch mm (Ref)	Housing Bore Diameter inch mm Nom.	Housing Bore Diameter inch mm Tol.	Thread Type	Clamping Torque in-lb	Limiting Speed RPM	WT Bearing Weight lb kg
SDCF 1	.25 6.4	.59 15.1	.03 .8	.44 11.1	+.0002/-.0003 +.0005/-.0008	7/16-20	250 28	12,500	.16 .07
SDCF 1 1/4	.25 6.4	.83 21.0	.03 .8	.50 12.7	+.0002/-.0003 +.0005/-.0008	1/2-20	350 40	8,100	.29 .13
SDCF 1 1/2	.31 7.9	.95 24.2	.06 1.6	.63 15.9	+.0002/-.0003 +.0005/-.0008	5/8-18	650 73	6,300	.49 .22
SDCF 1 3/4	.31 7.9	1.11 28.2	.06 1.6	.75 19.1	+.0002/-.0003 +.0005/-.0008	3/4-16	1,250 141	5,000	.80 .36
SDCF 2	.44 11.1	1.28 32.5	.09 2.4	.88 22.2	+.0002/-.0003 +.0005/-.0008	7/8-14	1,500 170	3,900	1.30 .59
SDCF 2 1/2	.50 12.7	1.56 39.7	.09 2.4	.00 25.4	+.0002/-.0003 +.0005/-.0008	1-14	2,250 254	3,100	2.33 1.06
SDCF 3	.75 19.1	2.14 54.4	.13 3.2	.25 31.8	+.0002/-.0003 +.0005/-.0008	1 1/4-12	3,450 390	2,200	3.87 1.76
SDCF 4	.75 19.1	2.63 66.7	.13 3.2	.50 38.1	+.0002/-.0003 +.0005/-.0008	1 1/2-12	5,000 565	1,900	8.89 4.03