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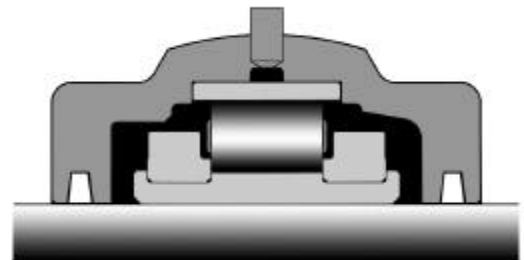
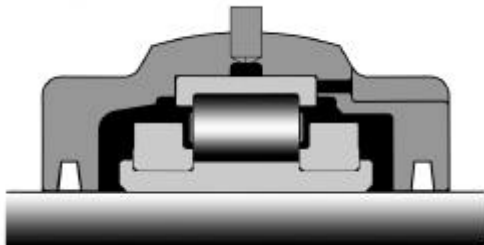
Comparison of Series



01 Series
Medium Duty

02 Series
Heavy Duty

03 Series
Extra Heavy Duty



Fixed (GR) Bearing

Bearings for radial and axial loads. to be fitted in GR cartridges with side screws

Expansion (EX) Bearing

Bearings with grooved inner races for radial loads. To be fitted in EX cartridges without side screws. Special expansion bearings with grooved outer races (EXILOG) must be fitted into GR cartridges with side screws.

Pedestals 'BCP'



	2 Bolt BCP	4 Bolt BCP	4 Bolt BCP	4 Bolt BCP	8 Bolt BCP
01 Series	40mm to 115mm	120mm to 155mm	-	160mm to 560mm	Over 560mm
02 Series	50mm to 100mm	110mm to 150mm	-	160mm to 260mm	Over 260mm
03 Series	-	-	100 to 220mm	240mm to 260mm	Over 260mm



	Flange BCF	Take-up BCT	Rod End BCRE	Hanger BH
01 Series	40mm to 300mm	40mm to 155mm	40mm to 155mm	40mm to 115mm
02 Series	50mm to 300mm	50mm to 150mm	50mm to 150mm	-

Dynamic, Static Axial Ratings and Maximum Speeds*



01 Series

Shaft size range		Bearing rating lb/kN			
inches	mm	Dynamic Cr	Static Cor	Axial Ca	Max rpm
1 ³ / ₁₆ to 1 ¹ / ₂	35 40	14600 65	15100 67	720 3.2	5400
1 ¹ / ₁₆ to 2	45 50	21375 95	23400 104	855 3.8	4630
2 ³ / ₁₆ to 2 ¹ / ₂	60 65	30150 134	35100 156	1620 7.2	3940
2 ¹ / ₁₆ to 3	70 75	37125 165	44100 196	2430 10.8	3310
3 ³ / ₁₆ to 3 ¹ / ₂	80-85 90	51300 228	65025 289	3060 13.6	2790
3 ¹ / ₁₆ to 4	100 105	70875 315	92700 412	4410 19.6	2340
4 ³ / ₁₆ to 4 ¹ / ₂	110 115	67000 298	91600 407	4190 18.6	1970
4 ⁵ / ₁₆ & 5	120-125 130	78200 348	108900 484	5000 22.2	1740
5 ³ / ₁₆ & 5 ¹ / ₂	135 140	86800 386	1220000 542	5810 25.8	1570
5 ⁵ / ₁₆ & 6	150 155	94500 420	138600 616	6620 29.4	1450
6 ³ / ₁₆ & 6 ¹ / ₂	160	106800 475	159300 708	7430 33	1320
6 ⁵ / ₁₆ & 7	170 180	114700 510	178400 793	8190 36.4	1220
7 ⁵ / ₁₆ & 8	190 200	119900 533	198700 883	9230 41	1070
9	220	129800 577	220500 980	11030 49	930
10	240	144000 640	263300 1170	13010 57.8	820
11	260 280	163000 725	299900 1333	15030 66.8	730
12	300	171400 762	327600 1456	17600 78.2	650
13	320	190700 848	369500 1642	20030 89	590
14	340	195900 871	400100 1778	22410 99.6	540
15	360 380	211000 938	434000 1929	24840 110.4	500
16	400	218100 970	467100 2076	26010 115.6	460
17	420	223100 992	500200 2223	27230 121	430
18	440 460	231300 1028	533300 2370	28620 127.2	410
19	480	238900 1062	547400 2433	29840 132.6	380
20	500	247900 1102	583400 2593	31010 137.8	360
21	530	256200 1139	619900 2755	31640 140.6	340
22	560	264500 1176	656100 2916	32040 142.4	330
23	-	283800 1262	703800 3128	32400 144	310
24	600	292400 1300	745000 3311	33030 146.8	300

02 Series

Shaft size range		Bearing rating lb/kN			
inches	mm	Dynamic Cr	Static Cor	Axial Ca	Max rpm
-	-	-	-	-	-
1 ¹ / ₁₆ to 2	50	26200 117	27900 124	1400 6.2	4350
2 ³ / ₁₆ to 2 ¹ / ₂	60 65	37100 165	41900 186	1980 8.8	3680
2 ¹ / ₁₆ to 3	70 75	49200 219	59000 262	2390 10.6	3080
3 ³ / ₁₆ to 3 ¹ / ₂	80-85 90	62600 278	77600 345	4010 17.8	2520
3 ¹ / ₁₆ to 4	100 105	80900 360	102600 456	5630 25	2130
4 ³ / ₁₆ to 4 ¹ / ₂	110 115	100500 447	129800 577	7020 31.2	1820
4 ⁵ / ₁₆ & 5	120-125 130	123300 548	160700 714	8600 38.2	1600
5 ³ / ₁₆ & 5 ¹ / ₂	140	137500 612	182000 809	10220 45.4	1450
5 ⁵ / ₁₆ & 6	150	164200 730	226600 1007	11790 52.4	1320
6 ³ / ₁₆ & 6 ¹ / ₂	160 170	172900 769	232400 1033	13820 61.4	1200
6 ⁵ / ₁₆ & 7	180	190900 849	268000 1191	16020 71.2	1120
7 ⁵ / ₁₆ & 8	190 200	222600 990	327800 1457	18000 80	960
9	220	240000 1067	373700 1661	20210 89.8	850
10	240 260	272800 1213	395100 1756	22230 98.8	750
11	280	306800 1364	482600 2145	25610 113.8	670
12	300	328800 1462	542000 2409	29030 129	610
13	320	350800 1560	590000 2622	32450 144.2	550
14	340 360	388900 1729	661500 2940	35820 159.2	500
15	380	409900 1822	732200 3254	39240 174.4	460
16	400	429200 1908	773600 3438	42390 188.4	430
17	420	452800 2013	833000 3702	45450 202	400
18	440 460	480900 2138	912800 4057	48600 216	380
19	480	506300 2250	994300 4419	51750 230	360
20	500	527800 2346	1074600 4776	54900 244	340
21	530	577100 2565	1155800 5137	58050 258	330
22	560	601800 2675	1250100 5556	61200 272	310
23	-	616500 2740	1315800 5848	64350 286	300
24	600	622900 2769	1348200 5992	67500 300	290

03 Series

Shaft size range		Bearing rating lb/kN			
inches	mm	Dynamic Cr	Static Cor	Axial Ca	Max rpm
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
3 ³ / ₄ & 4	100	139000 618	153900 684	7020 31.2	1820
4 ⁷ / ₁₆ & 4 ¹ / ₂	110 120	140500 625	157100 698	8820 39.2	1640
4 ⁵ / ₁₆ & 5	130	170500 758	191700 852	11030 49	1500
5 ⁷ / ₁₆ & 5 ¹ / ₂	140	204600 910	240500 1069	13230 58.8	1340
5 ⁵ / ₁₆ & 6	150	230000 1023	272900 1213	15620 69.4	1220
6 ³ / ₁₆ & 6 ¹ / ₂	160 170	267900 1191	351900 1564	17820 79.2	1110
6 ⁵ / ₁₆ & 7	180	288800 1284	383400 1704	20030 89	1030
7 ⁵ / ₁₆ & 8	190 200	339200 1508	455000 2022	22410 99.6	880
9	220	371900 1653	486700 2163	24620 109.4	760
10	240 260	414400 1842	574000 2551	29430 130.8	700
11E	280E	480100 2134	727400 3233	34430 153	620
12	300	492700 2190	745200 3312	39240 174.4	560
13	320	587400 2611	853900 3795	44730 198.8	500
14E	340E 360E	624800 2777	988200 4392	48060 213.6	460
15	380 400	691400 3073	1080000 4800	56430 250.8	420
-	-	-	-	-	-
17E	420E 440E	786100 3494	1351400 6006	62060 275.8	360
18	460	834500 3709	1385100 6156	68040 302.4	340
-	-	-	-	-	-
20	500 530	936400 4162	1584200 7041	78080 347	310
-	-	-	-	-	-
22E	560E	1053500 4682	1915000 8511	86090 382.6	280
23E	600E	1096600 4874	2054300 9130	90000 400	270
-	-	-	-	-	-

Axial rating (Ca) which applies to GR bearing only will be reduced by 50% unless an EP (Extreme pressure) grease or oil lubrication is used.
 *Maximum speed (rpm) shown for grease lubrication. For higher speed applications or oil lubrication please consult our technical department.
 If Pa exceeds 1/2Ca, see main Product Catalogue or visit CooperBearings.com

Denotes E Series bearing.

Note: Inch data is shown in the lighter typeface, metric data is shown in the bolder typeface.

Bearing Selection

Selection of Cooper bearings must take into account both radial and axial loads which are considered independently.

Calculating Bearing Loads

The prime consideration in calculating bearing loads is the magnitude and direction of the load or loads. The bearing loads are affected by one or more of the following:

- 1 Weight of components such as shafting, flywheels, sheaves, pulleys, gears, etc.
- 2 Tension resulting from belt or chain drives.
- 3 Tangential, separating and axial loading developed by gears.
- 4 Inertia resulting from acceleration or deceleration.
- 5 Centrifugal forces developed in rotary or out of balance motion.

Selection for Radial Load

Selection for radial load is determined independently from the axial load. Determine the radial load, speed and minimum life required. Generally the shaft size has been predetermined. Selection of the bearing can be made using the following formula:

$$C_r \geq P \times f_n \times f_L \times f_d$$

Where C_r = radial dynamic rating

P = calculated effective radial load

f_n = speed (rpm) factor

f_L = Life (hours) factor

f_d = dynamic or service factor

If high temperatures (above 212°F/100°C) are involved, please refer to notes on page 14

Selection for Axial Load

Selection for axial load is considered independently from the radial load. Determine the axial load applied to the bearing. Knowing the speed and desired shaft size, select a bearing using the following formula:

$$C_a \geq (f_d \times f_{dn} \times P_a) / f_b$$

Where C_a = axial rating

(When $P_a > 0.5C_a$ retaining rings or recessed journal is required

see page 23 or please consult our technical department).

f_d = dynamic or service factor

P_a = calculated axial load

If axial load exceeds 40% of the radial load, please consult our technical department.

f_{dn} = Velocity (dn) factor

(See scale on page 14)

$f_b = 1.0$ when $dn \leq 2,500"/63,500mm$

$f_b = 1.25$ when $dn > 2,500"/63,500mm$

Pedestal Loads

The maximum safe radial load for a pedestal casting is based on the bearing static rating C_{Or} . The full C_{Or} rating can be applied if the angle of the load falls within the shaded area of the sketch.

If the load falls outside the shaded area or is greater than C_{Or} , please consult our technical department.

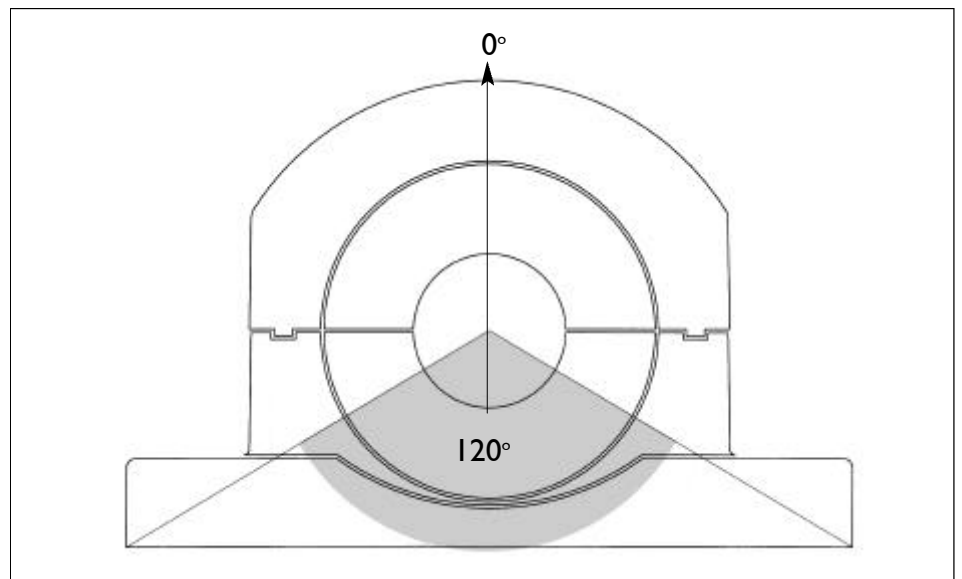
When considering suitability of pedestal castings, the resultant effective radial load must be used. The effective radial load is the resultant of net loads and appropriate dynamic factors, excluding speed and life factors.

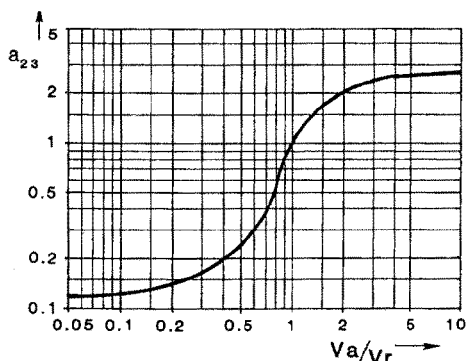
If the axial load exceeds 50% of the axial rating (C_a), please consult our technical department.

For shock and pulsating loads, steel or ductile iron pedestals should be considered. For loads within 45° of the horizontal, the base should be chocked or doweled.

Flange Load

The maximum load on cast iron flanges is 0.26 C_{Or} or 0.25 C_a . Higher loads and shock conditions require ductile iron or steel flanges and high tensile bolts.





The effect of lubrication has been incorporated in the recommendations given. Selection can be made assuming suitable lubrication as specified on page 24. For some applications it may be necessary to consider the following factors in greater detail. In such cases the following revised equation for bearing life applies.

$$L_{na} = a_1 \times a_2 \times a_3 \times L_{10}$$

where L_{na} = adjusted life

a_1 = factor for reliability

a_2 = factor for material

a_3 = factor for operating conditions

For reliability of 90% (L_{10} life) and normal materials and operating conditions

$$a_1 = a_2 = a_3 = 1$$

For reliability greater than 90%, use value a_1 as follows:

Reliability %	95	96	97	98	99
a_1	0.62	0.53	0.44	0.33	0.21

Values of a_2 greater than 1.0 may be obtained by the use of special steels.

V_a = lubricant viscosity in application

V_r = required lubricant viscosity for adequate lubrication at the operating temperature.

For values of V_a/V_r below 1.0, please consult our technical department.

For applications where $C_r/P < 5$ and other critical conditions, the viscosity of the lubricant must be considered, please consult our technical department.

The effect of elevated temperatures is considered below. Factor a_3 is a factor for lubrication and is determined by the ratio V_a/V_r . To obtain advantages from improved steels, adequate lubrication is required; the factors a_2 and a_3 are therefore interdependent and can be replaced by the combined factor a_{23} .

Temperature

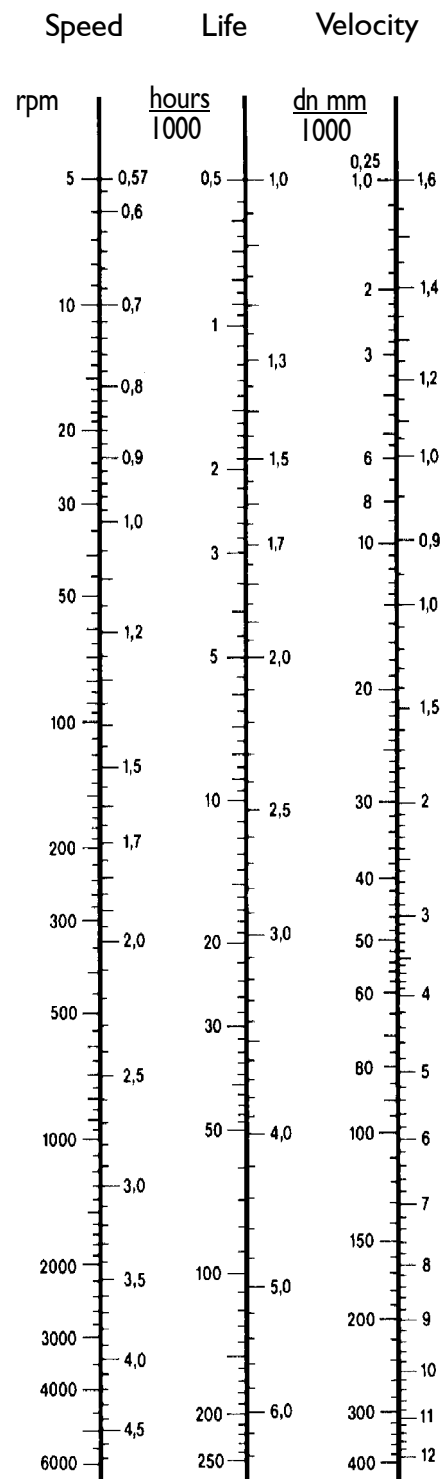
The normal range for standard bearings is 32°F to 212°F (0° to 100°C). Where the temperature rise is mainly from the shaft, increased diametral clearance may be necessary and account taken of axial movement through expansion (EX) bearings.

Above 212°F/100°C, special consideration must be given to material, design, lubrication and seals. Above 250°F/120°C, special heat treatment of the bearing parts is required.

A reduction in radial capacity occurs at temperatures above 300°F(150°C) which can be seen below.

°C	170	200	250
°F	340	390	480
% Reduction	5	15	25

For temperatures above 212°F/ 100°C or below 32°F(10°C), please consult our technical department.

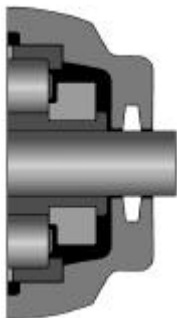


Speed

The product of f_n and f_L should not be less than 1.0.

Velocity

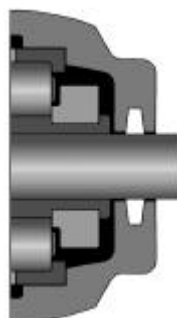
Applies only to axial loads on GR bearings:
 d = bearing bore. n = rpm.



Felt (F)

Made from wool and selected fibres. Felt is the current UK and European standard seal.

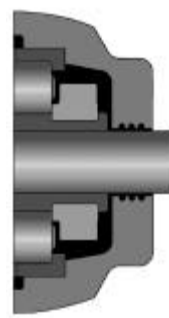
Temperature limits -94°F to +212°F
-70°C to +100°C
Maximum speed 6000dn
150000mm dn
Shaft surface finish 1.6 µm Ra.



High Temperature Packing (HTP)

A PTFE filament yarn impregnated with graphite and lubricated with silicon. A direct replacement for felt in high temperature applications. Also available silicon free.

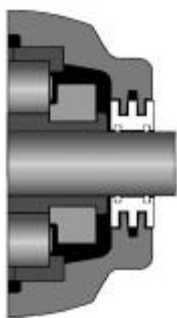
Temperature limits -94°F to +500°F
-70°C to +260°C
Maximum speed 6000dn
150000mm dn
Shaft surface finish 0.8 µm Ra.



Labyrinth Grease Groove (LAB)

Standard seal for bearings over 12"/300mm. Particularly successful on marine applications. Suitable for low or high speed operation.

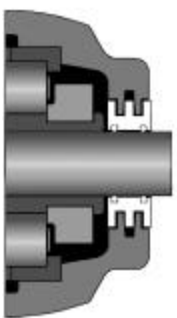
Temperature limits As bearing
Maximum speed As bearing
Shaft surface finish 3.2 µm Ra.



Aluminium Triple Labyrinth (ATL)

Machined aluminium bodied triple labyrinth seal for high speed and general applications. Supplied as standard in USA and Canada.

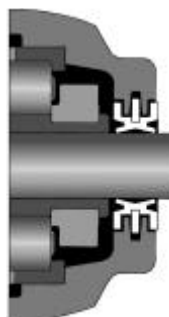
Temperature limits -4°F to +212°F
-20°C to +100°C
Maximum speed Bearing maximum
Shaft surface finish 3.3 µm Ra



Triple Labyrinth with Viton Rubber Cord Insert (TL HT)

Suitable for high speed and high temperature applications.

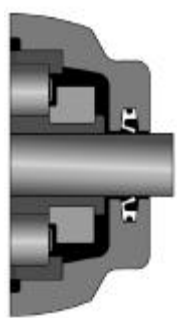
Temperature limits -4°F to +347°F
-20°C to +175°C
Maximum speed Bearing maximum
Shaft surface finish 3.2 µm Ra.



Neoprene Rubber Triple Labyrinth (NTL)

For applications with a maximum speed of 3300rpm for shaft diameters up to 65mm, 2000rpm for shafts from 70mm to 90mm and 1800rpm for shafts up to 105mm. Can be used where an explosive or corrosive atmosphere prevents the use of aluminium.

Temperature limits -4°F to +212°F
-20°C to +100°C
Maximum speed 7000dn
177,000mm dn
Shaft surface finish 3.2 µm Ra.

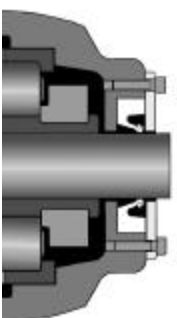


Synthetic Nitrile Rubber Single Lip (SRS)*

For wet but not submerged applications. Can be used to retain bearing lubricant by mounting lip innermost.

* High and low temperature versions also available.

Temperature limits -4°F to +212°F
-20°C to +100°C
Maximum speed 6000dn
150000mm dn
Shaft surface finish 0.8µm Ra.



Single Lip with Spring Loaded Retaining Plate (SRS RP)

Suitable for severe splash or completely submerged applications. Two grades are available, one operates up to 2 meters of fluid the other up to 30 meters.

Temperature limits -4°F to +212°F
-20°C to +100°C
Maximum speed 6000dn
150000mm dn
Shaft surface finish 0.4 µm Ra.

Shaft surface finish shown is the recommended shaft finish for optimum performance.

Preliminary Notes

On simple shaft arrangements with one GR (Fixed) bearing and one or two EX (Expansion) bearings, the GR bearing should be positioned adjacent to the drive. On multiple bearing shaft arrangements please consult our technical department for bearing positions.

The GR (Fixed) bearing locates the shaft axially and should be, where possible, fitted first. EX (Expansion) bearings should be fitted to ensure the rollers will be central on the outer race when the bearing is in the correct running position or offset to allow for expansion. See Stage 2.

Unwrap bearings parts, then unclip cage joint - you generally will have one of three options:

- a) **'U' Clips:** Remove and retain 2 steel clips using a small screwdriver - Diagram 5.
- b) **Spring Plate Joint:** Lift up the jointing plate over locating pins using flat bladed screwdriver-Diagram 5A.
- c) **Pressed Steel Cage:** Insert a small flat bladed screwdriver into one of the slots in the upper tab at the joint. rotate the blade to open the joint, first on one side, then the other. Repeat for the second cage joint. Both joints must be disengaged before separating cage halves. Failure to do this may distort the cage thereby making it unusable. (See note overleaf).

Other types of jointing may be used, for advice please consult our technical department.

Undo clamping ring screws and remove clamping rings from inner race. Remove the preservative from all parts. Handle half cages and rollers with care.

Keep the bearing safe from damage. Lightly oil threads and interfaces, including bores of clamping rings. Complete roller bearings are interchangeable between similar Cooper cartridges, individual parts should not be interchanged.

Cartridges are also interchangeable between standard outer castings except where S1 spherical fit has been specified. Pairing marks must match.

The fixed (GR) bearing has guiding lips on both inner and outer races. In the case of Series 01 and 02 bearings to 300mm and Series 03 to 150mm, rollers are guided by clamping ring faces and the lips of the outer race.

All bearing components (with the exception of pressed steel cages and die cast cages) cartridges and outer castings are marked with matching numbers on each half. Ensure the numbers on each half component are the same and are together when assembled.

Fitting an Outer Race where Radial and or Axial Screws are used

All lipped outer races must be clamped axially. Side screws 'C' are fitted to all GR cartridges but rods are not required for sizes 100mm - 155mm in Series 01 and 02. Clean the outer race seating in the cartridge to remove preservative and lightly oil. Fit the half outer races - See Stage 6.

Stage 1

Clean and inspect the shaft diameter. Refer to the table on page 10 for tolerances. The inner race, before assembly, measures undersize equivalent to the final gap at the

joints. When assembled on the shaft, there should be a gap at each inner race joint.

This gap is a feature of the design to ensure that the half races grip the shaft.

Stage 2

Lightly oil the shaft with thin machine oil, then remove the excess with a clean wiper. Place the inner race at the correct position on the cleaned shaft. Soft packing on the joint faces, or feeler gauges should be used to ensure the joint gaps are approximately equal. Expansion races normally are set centrally with the roller, but in cases of axial expansion, may be offset within +/-10% of the roller length.

Stage 3

Fit the clamping rings with joints approximately 90° to the inner race joint. Discolouration on certain clamping rings is associated with localised heat treatment to increase wear resistance. There should be equal gaps at both joints of the clamping rings and races.

Progressively tighten all clamping screws equally using the correct hexagon key and torque wrench (or key and tube extension if the torque wrench is not available).

Stage 4

Tap down each half of the inner race and clamping rings all round the shaft using a soft faced hammer or, insert a hardwood block between a steel hammer and bearing parts. Re-tighten screws. Repeat until screws are fully tight. The recommended torque values are shown on page 9. Check there is a gap at both joints of the inner race. The total gap varies and is not critical provided the shaft is within the required tolerance. Check that expansion inner races

will be central or correctly offset when all parts are finally positioned.

Stage 5

Coat the roller cage with grease and lightly cover the other parts for protection. Place cage around the inner race and join together as follows:

- 'U' Clips:** Press the 2 jointing clips in place - Diagram 5.
- Spring Plate Joint:** Push the 2 cage halves together until the jointing plates clip over the protruding pins - Diagram 5A (screwdriver not required).
- Pressed Steel Cage:** Ensure the tabs of one end of each cage half can engage into the body of the other cage half. Using even pressure on each side of the joint, push the tabs fully home until the joint locks, repeat with second joint. Check that both sides of the joint are fully home.

Stage 6

Place the half outer race with the lubrication hole in the top half cartridge and the second half race into the lower half cartridge, ensuring the pairing marks match. Ensure the ends of the outer race project from the cartridge joint face by equal amounts. Where there are axial or radial screws, fit as shown in diagram 6: Just enter radial holding screws 'D' where provided, it is important to fit washers. Fit the side rods and screws 'C' where provided and very lightly tighten. Place together the half cartridges and fully tighten the cartridge joint screws 'B'. Progressively and fully tighten the radial screws 'D' and or side screws 'C'.

In some sizes, two cartridge joint screws must be removed to gain access to the side screws. Inject grease to fill the grease passages.

Remove screws 'B' from cartridge joints, separate cartridge taking care the upper half outer race does not fall out of position where radial screws are not fitted.

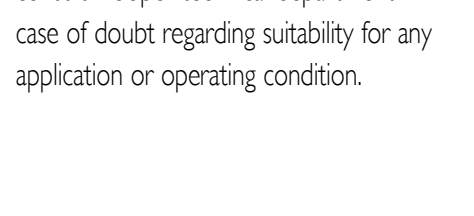
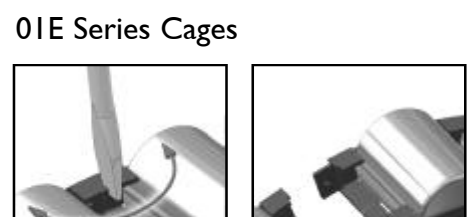
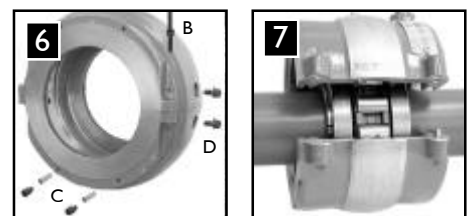
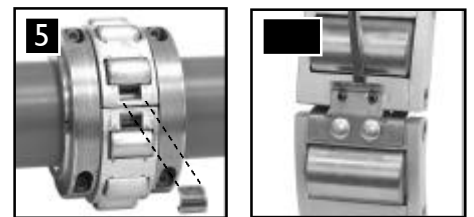
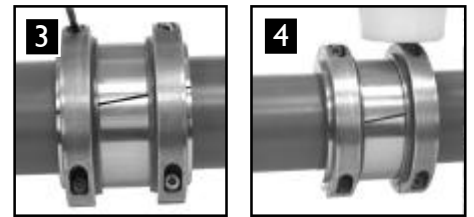
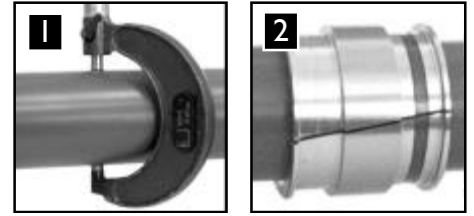
Stage 7

Fit seals into cartridge end bores (or TL seals on the shaft). Felt seals should be soaked in oil before fitting. Coat the inside of the cartridge, cage and rollers and all seals with grease. (See lubrication table on page 10 for quantity). Place the bottom half of the cartridge on top of the bearing and rotate 180° into the pedestal. End bore seals should be left well lubricated on assembly including the bores of the revolving triple labyrinth seals. Blanking plates should be sealed with grease or compound. Add the correct quantity of the remaining grease to the cartridge. Place the top half of the cartridge on top of the bottom half of the cartridge ensuring the pairing marks appear on the same side. Close cartridge and fully tighten joint screws. Lubricate the spherical seating. Anti-scuffing compounds are advantageous. Pedestal bases must be supported to avoid deflection. **To ensure swivel alignment, the shaft should be run for a short period before fully tightening the pedestal cap screws.** Where oil lubrication is to be used, the cartridge joint faces and screws should be treated with sealing compound.

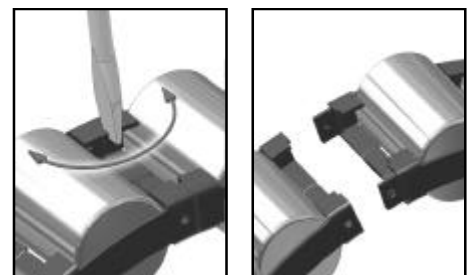
Check List

- The correct shaft size is important.
- Fully tighten clamping ring screws.
- Parts should not be interchanged.
- Lubricate before closing the cartridge.
- Match marks should coincide.
- Lubricate swivel seating.
- Lightly oil threads and interfaces.
- Safeguard rolling surfaces for transit.
- Gap at each inner race joint.

Assembly Procedure



OIE Series Cages



Technical Support

Please consult our Product Catalogue or consult Cooper technical department in case of doubt regarding suitability for any application or operating condition.

Lubrication

Grease lubrication is usually satisfactory up to the normal maximum speeds shown in our Product Catalogue, subject to temperature and axial loads. We recommend (up to 100°C) the use of a good quality lithium based grease with extreme pressure (EP) additives i.e. EP2 or equivalent.

Greases with extreme pressure additives (EP) are advantageous, especially for high radial or axial loads. The permitted axial load on a (GR) fixed bearing is reduced by 50% if an EP grease is not used.

For extreme temperatures, speeds and high loads it is always advisable to obtain recommendations from our technical department. Greases of No2. consistency can generally be used for most applications and are also suitable for most pumped systems.

Procedure

Calculate dN by multiplying the shaft speed by the bore of the bearing in millimetres. e.g 750 rpm x 100mm = 75000dN. Ensure that all bearing parts are clean and apply grease as follows.

For speeds up to dN = 50,000, the roller bearing and cartridge should be packed full on assembly, (full pack weights are given in the table). As the dN value increases, use progressively less grease to coat the bearing parts, from a full coating of the cage and bearing surfaces at dN = 50,000 or less down to a smear about 1mm thick at dN = 200,000 or more. Proportional amounts are shown in the Full Pack Chart.

All cartridge and seals should be well lubricated on assembly including the bores of the triple labyrinth seals and thrust

bearings where fitted. Felt seals should be soaked in oil before fitting. Blanking plates should be sealed with grease or jointing compound. **Never assemble the bearing dry and inject grease after closing the cartridge. Always coat the swivel seatings with oil or grease.**

Lubrication Points

Cooper cartridges are tapped 1/8 or 1/4 NPT according to size and Series. Grease nipples or temporary plugs are fitted as standard. Special lubricators by arrangement. BSP fittings are acceptable, but will screw in further and care must be taken to avoid blocking off the horizontal grease passage. The lubricant is injected through the outer race directly onto the rolling surfaces. Pipework must be flexible to allow the swivel cartridge to function.

Clamping Ring Screw Sizes and Tightening Torques

The tightening torques of the cartridge and pedestal screws are 75% of the value shown.

Routine Greasing

If possible re-grease the bearing as it rotates. The grease charges listed below are for bearings up to 75mm bore; use progressively more grease as the bearing size increases.

Expansion (EX) Bearings

One or two shots (3ml) from a grease gun every 400 operating hours is usually sufficient.

Fixed (GR) Bearings for Thrust

One or two shots (3ml) from a grease gun every two weeks i.e. 100 operating hours according to duty and experience.

Fixed (GR) Bearings used for Location Only

Treat as Expansion (EX) bearings.

For bearings with speeds up to dN=50,000 which are assembled with a full pack grease, re-greasing intervals can be increased to one year, provided the thrust load on the GR bearings is nominal.

Pumped systems should be metered to be equivalent to the above quantities. Clean out and replace the grease after several years or as conditions dictate or determine.

Bearing Sizes in Millimetres

Series 01	40-75	80-90	100-130	135-200	220-300	320-480	500-600	-	-
Series 02	-	50-60	70-100	110-150	160-180	190-260	280-460	480-600	-
Series 03	-	-	-	-	100-150	160-200	220-260	280-320	340-600
Screw Size	M4	M5	M6	M8	M10	M12	M16	M20	M24
Key A/F	3	4	5	6	8	10	14	17	19
Torque Nm	4.5	8.5	15	35	70	120	300	560	950

Bearing Sizes Imperial

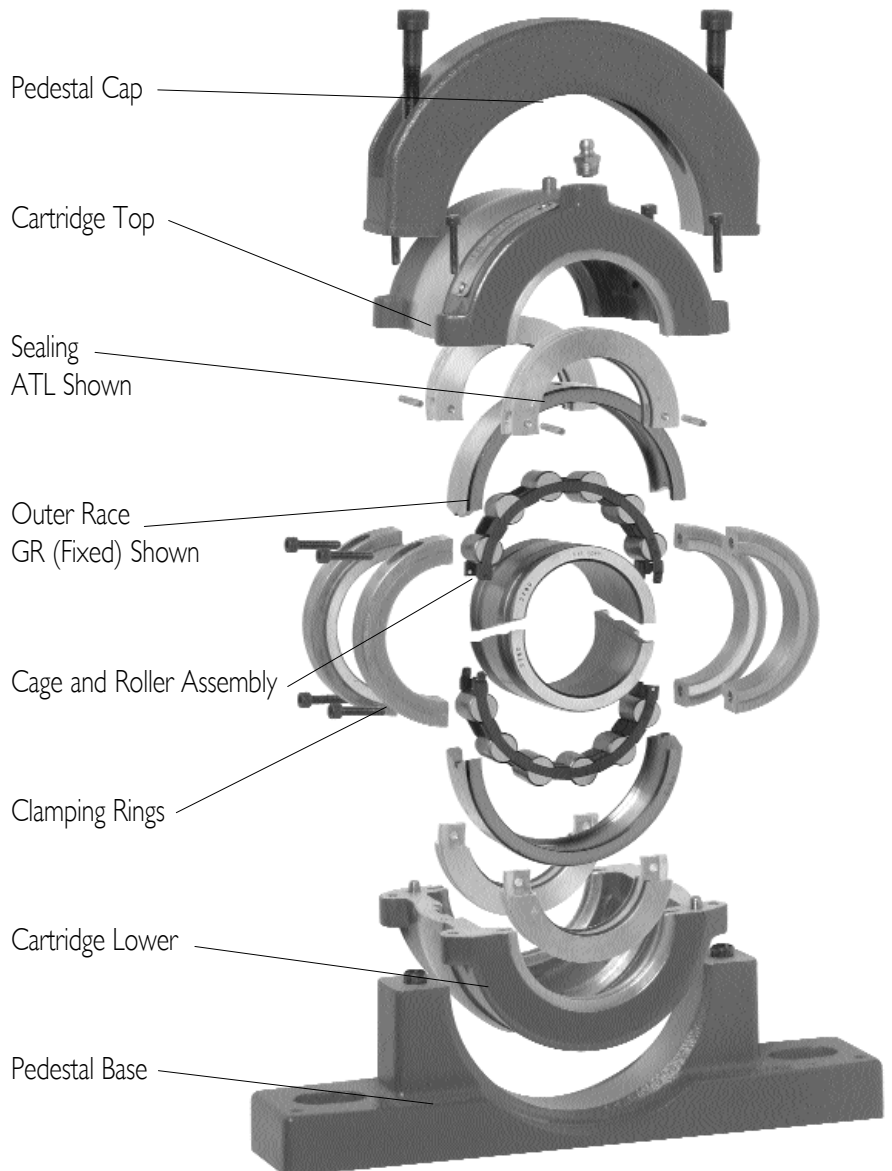
Series 01	1 1/2-3	3 1/4-3 1/2	3 3/4-5	5 1/2-8	9-12	13-19	20-24	-	-
Series 02	-	1 3/4-2 1/2	2 3/4-4	4 1/2-6	6 1/2-7	8-10	11-18	19-24	-
Series 03	-	-	-	-	4-6	6 1/2-8	9-10	11-13	14-23
Torque lbf ft	3.5	6.5	11	26	52	88	220	415	700

Full Pack Chart

dN		Full Pack
Over	to	
-	50,000	100%
50,000	100,000	75%
100,000	150,000	50%
150,000	200,000	33%
200,000	-	25%

Grease Weights

Grease Weights kg		Full Pack Approx		
Bearing Bore inch	Bearing Bore mm	Series 01 kg	Series 02 kg	Series 03 kg
1½	40	0.06	-	-
2	50	0.09	0.15	-
2½	65	0.15	0.21	-
3	75	0.18	0.30	-
3½	90	0.30	0.45	-
4	100	0.36	0.60	1.20
4½	110	0.51	0.90	1.40
5	130	0.60	1.10	1.40
5½	140	0.78	1.40	2.00
6	150	0.90	1.40	2.70
6½	170	1.00	1.40	3.60
7	180	1.10	2.00	4.20
8	200	1.40	2.70	5.40
9	220	1.40	3.60	6.90
10	260	2.00	4.20	8.10
11	280	2.00	4.80	10.00
12	300	2.00	5.40	11.00

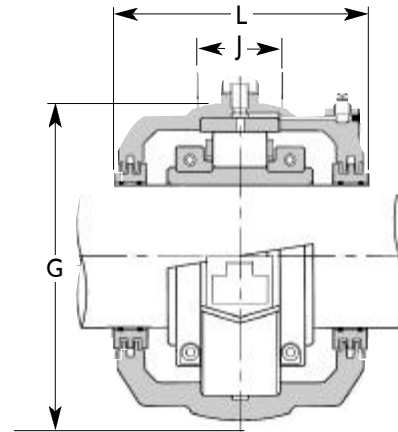
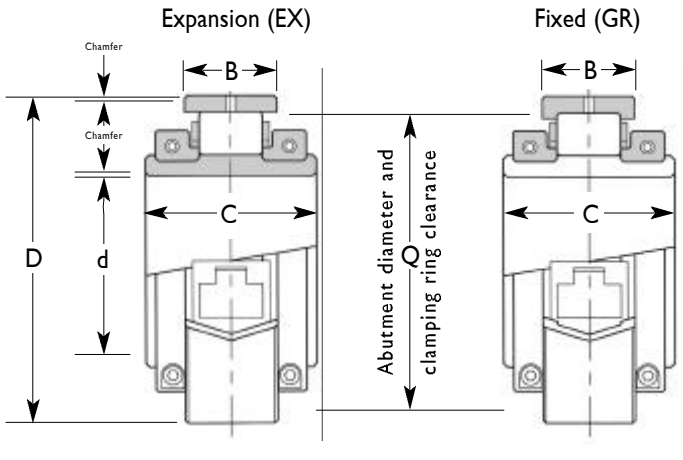


Shaft Tolerance

Diameters	Over to	Surface Texture									
		- 50	80	120	180	250	315	400	500	630	Maximum Roughness
Shafts		Tolerance. µm. (0.001mm)									
Uni-directional loads at speeds up to dn = 100,000	BS4500 d +0 h7	- 25	30	35	40	46	52	57	63	70	3.2 N8
Moderate Loads (C/P > 10)											
Reciprocating loads											
Vibratory duty	d +0 h6	- 16	19	22	25	29	32	36	40	44	1.6 N7
Extra fine clearance bearings											
Speeds over dn = 100,000											
Heavy loads (C/P < 10)											
Geometric Accuracy											
Cylindricity of Shaft Journal	d IT6	16	19	22	25	29	32	36	40	44	- -

Health and Safety at Work

We draw attention to the aspect of safety in the fitting and use of bearings. Damage to equipment and personal injury may result if bearings are not installed according to the instructions given here, or operated outside the limits and load given in the Product Catalogue. Any significant mist from lubricant should be ducted away. All threaded lifting holes are marked with the appropriate size, e.g. M16. Note that all bearings for the UK coal industry have modified specifications excluding aluminium materials.



Lubricating points are tapped 1/8" NPT
All grooved outer races must be clamped axially, provision is made for this in Cooper cartridges.

Roller Bearing

Shaft diameter (d)		References		D	C	B	Q	Wt (lb.) (kg)
inches	mm	Bearing only inches	millimetres					
1 3/16		01 B 103						
1 1/4	35	01 B 104	01 B 35	3.313	1.972	0.938	2.953	2.7
1 7/16	40	01 B 107	01 B 40	84.14	50.1	23.8	75.0	1.2
1 1/2		01 B 108						
1 11/16		01 EB 111						
1 3/4	45	01 EB 112	01 EB 45	3.875	2.192	1.000	3.543	3.3
1 13/16	50	01 EB 115	01 EB 50	98.42	55.7	25.4	90.0	1.5
2		01 EB 200						
2 3/16		01 EB 203						
2 1/4	60	01 EB 204	01 EB 60	4.500	2.192	1.063	4.134	4.0
2 7/16	65	01 EB 207	01 EB 65	114.30	55.7	27.0	105.0	1.8
2 1/2		01 EB 208						
2 11/16		01 EB 211						
2 3/4	70	01 EB 212	01 EB 70	5.250	2.410	1.250	4.882	5.5
2 13/16	75	01 EB 215	01 EB 75	133.35	61.2	31.8	124.0	2.5
3		01 EB 300						
3 3/16		01 EB 303						
3 1/4	80	01 EB 304	01 EB 80	6.000	2.781	1.531	5.591	8.8
3 7/16	85	01 EB 307	01 EB 85	152.40	70.7	38.9	142.0	4.0
3 1/2	90	01 EB 308	01 EB 90					
3 11/16		01 EB 311						
3 3/4	100	01 EB 312	01 EB 100	6.875	3.188	1.781	6.378	13.2
3 15/16	105	01 EB 315	01 EB 105	174.62	81.0	45.3	162.0	6.0
4		01 EB 400						
4 3/16		01 B 403	01 B 110	8.000	3.342	1.844	7.165	22.4
4 7/16	110	01 B 407	01 B 115	203.20	84.9	46.9	182.0	10.2
4 1/2		01 B 408						
4 15/16		01 B 415	01 B 120	8.750	3.531	2.125	7.874	28.2
5	120	01 B 500	01 B 125	222.25	89.7	54.0	200.0	12.8
	125		01 B 130					
	130							
5 3/16		01 B 503	01 B 135	9.500	3.875	2.188	8.504	34.5
5 7/16	135	01 B 507	01 B 140	241.30	98.4	55.6	216.0	15.7
5 1/2		01 B 508						
5 15/16		01 B 515	01 B 150	10.000	3.875	2.188	9.055	36.5
6	150	01 B 600	01 B 155	254.0	98.4	55.6	230.0	16.6

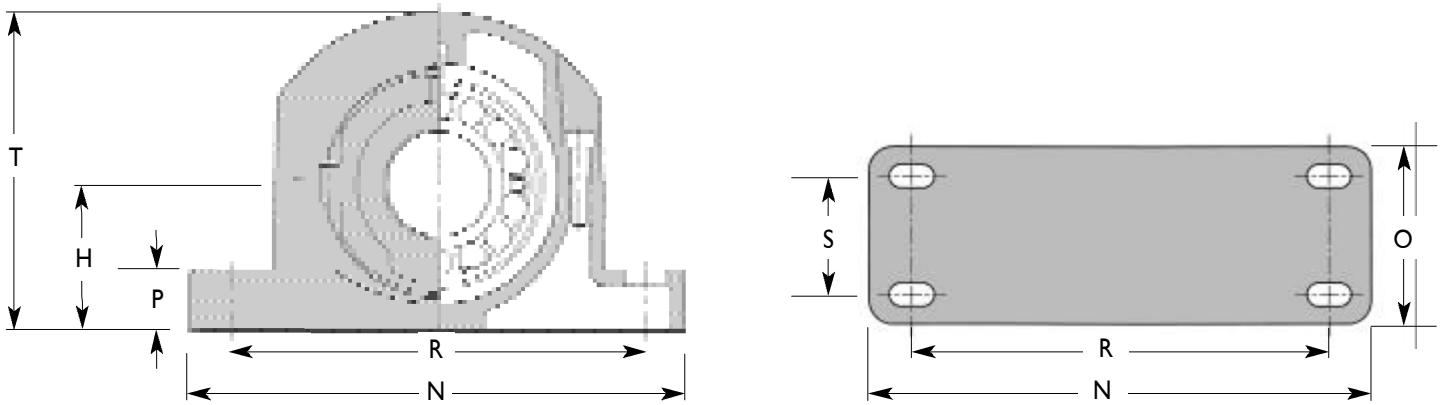
Cartridge Unit

Cartridge, bearing and seals		References		G	J	L	Available axial movement Note (1)	Wt (lb.) (kg)
inches	millimetres	Cartridge housing only	Cartridge housing only					
01 BC 103		01 C 01						
01 BC 104	01 BC 35			3 15/16	1.0	3 3/8	7/32	7.04
01 BC 107	01 BC 40			100.0	25	86	5.56	3.2
01 BC 108								
01 EBC 111		01 C 02						
01 EBC 112	01 EBC 45			4 5/8	1.0	3 3/16	7/32	8.8
01 EBC 115	01 EBC 50			117.48	25	98.0	5.56	4.0
01 EBC 200								
01 EBC 203		01 C 03						
01 EBC 204	01 EBC 60			5 5/16	1 1/4	4 1/16	5/16	11.0
01 EBC 207	01 EBC 65			134.94	32.0	104.0	7.94	5.0
01 EBC 208								
01 EBC 211		01 C 04						
01 EBC 212	01 EBC 70			6 3/16	1 1/2	4 1/2	5/16	17.6
01 EBC 215	01 EBC 75			157.16	38.0	114.0	7.94	8.0
01 EBC 300								
01 EBC 303		01 C 05						
01 EBC 304	01 EBC 80			7	2.0	5 5/16	15/32	24.3
01 EBC 307	01 EBC 85			177.80	50.0	136.0	11.91	11.0
01 EBC 308	01 EBC 90							
01 EBC 311		01 C 06						
01 EBC 312	01 EBC 100			8	2	5 1/4	1/2	30.8
01 EBC 315	01 EBC 105			203.20	50.0	134.0	12.70	14.0
01 EBC 400								
01 BC 403		01 C 07						
01 BC 407	01 BC 110			9 1/8	2 1/2	5 3/8	1/2	48.6
01 BC 408	01 BC 115			231.78	64.0	142.0	12.70	22.1
01 BC 415		01 C 08						
01 BC 500	01 BC 120			10 1/2	3.0	6 1/8	19/32	71.1
	01 BC 125			266.76	76.0	156.0	15.08	32.3
	01 BC 130							
01 BC 503		01 C 09						
01 BC 507	01 BC 135			11	3.0	6 3/8	5/8	80.3
01 BC 508	01 BC 140			279.40	76.0	168.0	16.0	36.5
01 BC 515		01 C 10						
01 BC 600	01 BC 150			11 5/8	3 1/4	6 7/8	9/16	90.2
	01 BC 155			295.28	82.0	174.0	14.29	41.0

Add mm for millimetres and EX for expansion type or GR for fixed type to reference
i.e. 01 B 50mm EX.

Chamfers
Inner race: Sizes to 3 1/2/90mm: 1/16/1.5mm, over 3 1/2/90mm: 3/32/2.5mm
Outer race: Sizes to 4/105mm: 1/32/1.0mm, over 4/105mm: 1/16/1.5mm

(1) Offset from centreline to accommodate axial movement should not exceed half this amount.
(2) Q diameter clears clamp rings.
Note: Inch data is shown in the lighter typeface, metric data is shown in the bolder typeface.



Pedestals

Shaft diameter (d)		References		Pedestal casting only	H	N	*O	P	Bolts	R		S	T	Wt (lb.) (kg)
inches	mm	Pedestals complete inches	millimetres							Min	Max			
1 ³ / ₁₆		01 BCP 103		P01	2 ³ / ₈	9	*2 ³ / ₈	7 ⁷ / ₈	two (3) 1/2 inch M12	6 ³ / ₄	7 ¹ / ₂	-	5 ¹ / ₂	12.5
1 ¹ / ₄	35	01 BCP 104	01 BCP 35											
1 ⁷ / ₁₆	40	01 BCP 107	01 BCP 40											
1 ¹ / ₂		01 BCP 108												
1 ¹¹ / ₁₆		01 EBCP 111		P02	2 ³ / ₄	10 ⁵ / ₈	*2 ³ / ₈	1	two (3) 5/8 inch M16	8	8 ⁷ / ₈	-	6 ¹ / ₄	17.6
1 ³ / ₄	45	01 EBCP 112	01 EBCP 45											
1 ¹⁵ / ₁₆	50	01 EBCP 115	01 EBCP 50											
2		01 EBCP 200												
2 ³ / ₁₆		01 EBCP 203		P03	3 ³ / ₃₂	11	*2 ³ / ₄	1 ¹ / ₄	two (3) 5/8 inch M16	8 ⁷ / ₈	9 ¹ / ₂	-	7	24.2
2 ¹ / ₄	60	01 EBCP 204	01 EBCP 60											
2 ⁷ / ₁₆	65	01 EBCP 207	01 EBCP 65											
2 ¹ / ₂		01 EBCP 208												
2 ¹¹ / ₁₆		01 EBCP 211		P04	3 ³ / ₄	13	*3	1 ¹ / ₂	two (3) 3/4 inch M20	10 ¹ / ₄	11	-	8 ¹ / ₈	35.2
2 ³ / ₄	70	01 EBCP 212	01 EBCP 70											
2 ¹⁵ / ₁₆	75	01 EBCP 215	01 EBCP 75											
3		01 EBCP 300												
3 ³ / ₁₆		01 EBCP 303		P05	4 ¹³ / ₃₂	15	*3 ³⁵ / ₆₄	1 ³ / ₄	two (3) 7/8 inch M24	12 ²⁹ / ₃₂	12 ²⁹ / ₃₂	-	10	61.2
3 ¹ / ₄	80	01 EBCP 304	01 EBCP 80											
3 ⁷ / ₁₆	85	01 EBCP 307	01 EBCP 85											
3 ¹ / ₂	90	01 EBCP 308	01 EBCP 90											
3 ¹¹ / ₁₆		01 EBCP 311		P06	4 ¹⁵ / ₁₆	16 ¹⁷ / ₃₂	*4 ¹ / ₆₄	2	two (3) 7/8 inch M24	13 ¹⁵ / ₃₂	14 ¹³ / ₃₂	-	10 ³ / ₄	79.6
3 ³ / ₄	100	01 EBCP 312	01 EBCP 100											
3 ¹⁵ / ₁₆	105	01 EBCP 315	01 EBCP 105											
4		01 EBCP 400												
4 ³ / ₁₆		01 BCP 403		P07	5 ⁵ / ₈	18 ³ / ₄	*4 ²³ / ₃₂	2 ³ / ₈	two (3) 7/8 inch M24	14 ²³ / ₃₂	16 ⁹ / ₆₄	-	12 ³ / ₈	93.9
4 ⁷ / ₁₆	110	01 BCP 407	01 BCP 110											
4 ¹ / ₂	115	01 BCP 408	01 BCP 115											
4 ¹⁵ / ₁₆		01 BCP 415		P08	6 ³ / ₈	20	7	1 ¹ / ₂	four 7/8 inch M24	17 ¹ / ₄	18 ³ / ₁₆	4 ³ / ₄	14 ³ / ₄	166.3
125	01 BCP 125	01 BCP 125												
130	01 BCP 500	01 BCP 130												
5 ³ / ₁₆		01 BCP 503		P09	7 ⁷ / ₈	22	7	1 ⁵ / ₈	four 7/8 inch M24	18 ¹ / ₂	19 ¹ / ₂	4 ³ / ₄	15 ⁷ / ₈	194.7
5 ⁷ / ₁₆	135	01 BCP 507	01 BCP 135											
5 ¹ / ₂	140	01 BCP 508	01 BCP 140											
5 ¹⁵ / ₁₆		01 BCP 515		P10	7 ⁷ / ₈	22	7	1 ⁵ / ₈	four 7/8 inch M24	19	20	4 ³ / ₄	16 ¹ / ₄	209.0
6	155	01 BCP 600	01 BCP 155											

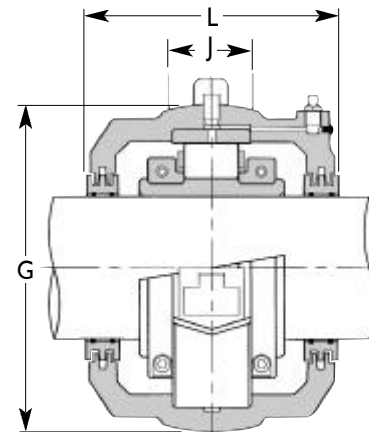
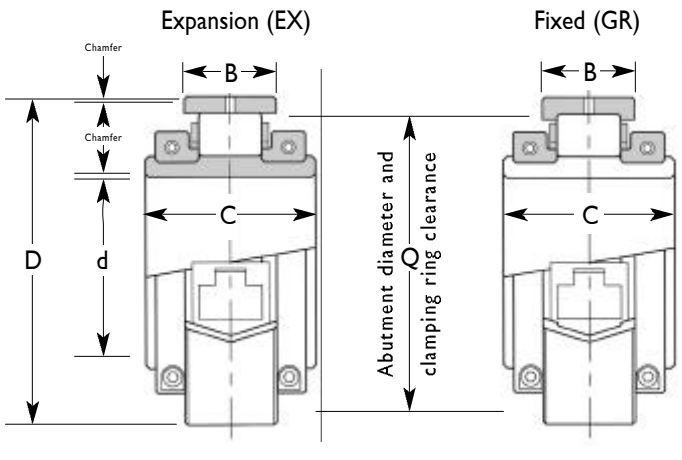
Add mm for millimetres and EX for expansion type or GR for fixed type to reference
i.e. 01 BCP 50mm EX.

(3) These pedestals are furnished in two or four bolt configuration.

Add 2B or 4B suffix when ordering
e.g. 01 EBCP 50mm EX2B

* Dimensions listed apply to two bolt bases only

Note: Inch data is shown in the lighter typeface, metric data is shown in the bolder typeface.



Lubricating points are tapped 1/8" NPT
All grooved outer races must be clamped axially, provision is made for this in Cooper cartridges.

Roller Bearing

Shaft diameter (d)		Reference		D	C	B	Q	Wt (lb.) (kg)
inches	mm	Bearing only inches	millimetres					
1 ¹⁵ / ₁₆	50	02 B 115	02 B 50	4.250	2.656	1.375	3.859	4.5
2		02 B 200		107.95	67.5	35.0	98.0	2
2 ³ / ₁₆		02 B 203						
2 ¹ / ₄	60	02 B 204	02 B 60	5.000	2.844	1.531	4.567	7
2 ⁷ / ₁₆	65	02 B 207	02 B 65	127.00	72.3	38.9	116	3
2 ¹ / ₂		02 B 208						
2 ¹¹ / ₁₆		02 B 211						
2 ³ / ₄	70	02 B 212	02 B 70	5.875	3.250	1.813	5.433	11
2 ¹³ / ₁₆	75	02 B 215	02 B 75	149.22	82.6	46.1	138	5
3		02 B 300						
3 ¹ / ₁₆		02 B 303						
3 ¹ / ₄	80	02 B 304	02 B 80	6.688	3.528	1.906	6.141	16
3 ⁷ / ₁₆	85	02 B 307	02 B 85	169.86	89.7	48.4	156	7
3 ¹ / ₂	90	02 B 308	02 B 90					
3 ¹¹ / ₁₆		02 B 311						
3 ³ / ₄	100	02 B 312	02 B 100	7.625	3.622	2.031	7.008	19.8
3 ¹⁵ / ₁₆	105	02 B 315	02 B 105	193.68	92.11	51.6	178	9
4		02 B 400						
4 ¹ / ₁₆		02 B 403						
4 ⁷ / ₁₆	110	02 B 407	02 B 110	9.000	3.938	2.250	7.953	35.3
4 ¹ / ₂	115	02 B 408	02 B 115	228.60	100.0	57.2	202	16
4 ¹⁵ / ₁₆		02 B 415						
5		02 B 500		10.000	4.500	2.500	8.819	44.1
	125	02 B 120	02 B 120	254.00	114.3	63.5	224	20
	130	02 B 125	02 B 130					
5 ³ / ₁₆		02 B 503						
5 ⁷ / ₁₆	140	02 B 507	02 B 140	10.750	4.625	2.625	9.449	53
5 ¹ / ₂	145	02 B 508	02 B 145	273.05	117.5	66.7	240	24
5 ¹⁵ / ₁₆		02 B 515						
6		02 B 600	02 B 150	11.500	4.875	2.688	10.156	64
	155	02 B 155	02 B 155	292.10	123.8	68.3	258	29

Cartridge Unit

Cartridge, bearing and seals		References		G	J	L	Available axial movement Note (1)	Wt (lb.) (kg)
inches	millimetres	Cartridge housing only						
02 BC 115	02 BC 50	02 C 03		5 ⁵ / ₁₆	1 ¹ / ₄	4 ⁷ / ₁₆	7 ¹ / ₁₆	13
02 BC 200				134.94	32	114	11.1	6
02 BC 203	02 BC 60	02 C 04		6 ³ / ₁₆	1 ¹ / ₂	4 ¹⁵ / ₁₆	1 ⁵ / ₃₂	22
02 BC 204	02 BC 65			157.16	38	126	11.9	10
02 BC 207								
02 BC 208								
02 BC 211	02 BC 70	02 C 05		7	2	5 ¹ / ₂	1 ⁷ / ₃₂	30.9
02 BC 212	02 BC 75			177.80	50	140	13.5	14
02 BC 215								
02 BC 300								
02 BC 303	02 BC 80	02 C 06		8	2	6 ¹ / ₁₆	9 ¹ / ₁₆	37.5
02 BC 304	02 BC 85			203.20	50	154	14.3	17
02 BC 307	02 BC 90							
02 BC 308								
02 BC 311	02 BC 100	02 C 07		9 ¹ / ₁₆	2 ¹ / ₂	5 ³ / ₄	1 ⁷ / ₃₂	43.3
02 BC 312	02 BC 105			231.78	64	146	13.5	21
02 BC 315								
02 BC 400								
02 BC 403	02 BC 110	02 C 08		10 ¹ / ₂	3	6 ³ / ₁₆	1 ⁷ / ₃₂	77.2
02 BC 407	02 BC 115			266.70	76	162	13.5	35
02 BC 408								
02 BC 415	02 BC 120	02 C 10		11 ⁵ / ₁₆	3 ¹ / ₄	7 ¹ / ₄	5 ⁵ / ₁₆	101.4
02 BC 500	02 BC 125			295.28	82	184	15.9	46
02 BC 503	02 BC 130							
02 BC 507	02 BC 135	02 C 30		12 ³ / ₄	3 ¹ / ₂	7 ³ / ₁₆	5 ⁵ / ₁₆	125.7
02 BC 508	02 BC 140			323.85	90	188	15.9	57
02 BC 515	02 BC 150	02 C 31		13 ³ / ₄	13 ³ / ₄	8	5 ⁵ / ₁₆	150
02 BC 600	02 BC 155			336.55	95	204	15.9	68

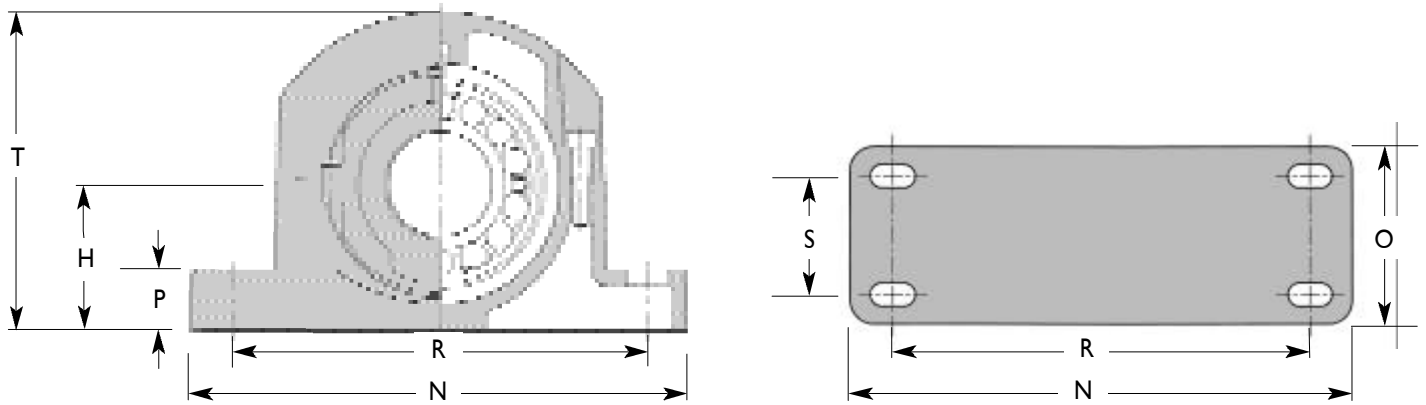
Add mm for millimetres and EX for expansion type or GR for fixed type to reference
i.e. 02 B 100mm EX.

Chamfers

Inner race: Sizes to 3¹/₂/90mm: 1¹/₁₆/1.5mm, over 3¹/₂/90mm: 3¹/₃₂/2.5mm
Outer race: Sizes to 4/105mm: 1¹/₃₂/1.0mm, over 4/105mm: 1¹/₁₆/1.5mm

- (1) Offset from centreline to accommodate axial movement should not exceed half this amount.
- (2) Q diameter clears clamp rings.

Note: Inch data is shown in the lighter typeface, metric data is shown in the bolder typeface.



Pedestals

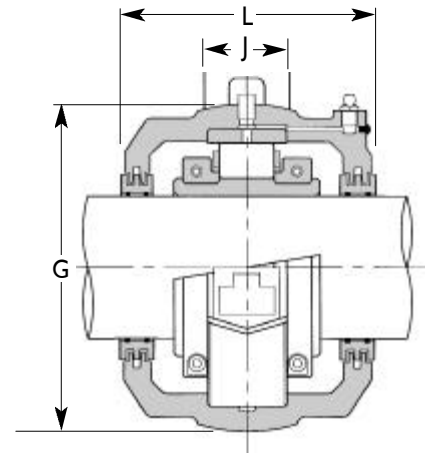
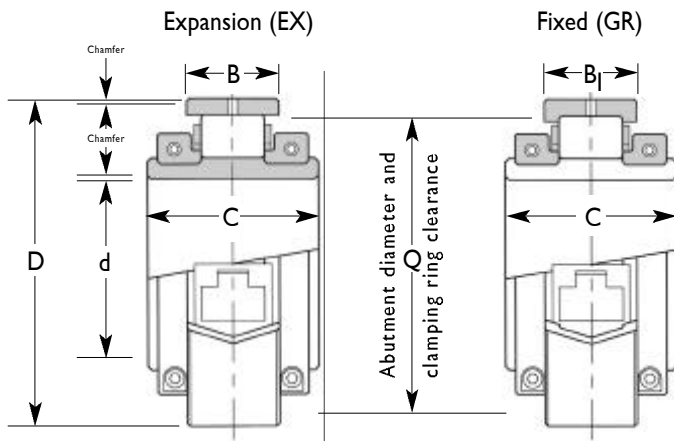
Shaft diameter (d)		References		Pedestal casting only	H	N	*O	P	Bolts	R		S	T	Wt (lb.) (kg)		
inches	mm	Pedestal complete inches	millimetres							Min	Max					
1 ⁵ / ₁₆	50	02 BCP 115	02 BCP 50	P03	3 ⁵ / ₃₂	11	*2 ³ / ₄	1 ¹ / ₄	two (3) 5/8 inch M16	8 ⁷ / ₈	9 ¹ / ₂	-	7	26.4		
2	50	02 BCP 200	02 BCP 50		80	280	70	32		226	242		180	12		
2 ³ / ₁₆	60	02 BCP 203	02 BCP 60	P04	3 ³ / ₄	13	*3	1 ¹ / ₂	two (3) 3/4 inch M20	10 ¹ / ₄	11	-	8 ¹ / ₈	39.6		
2 ¹ / ₄	65	02 BCP 204	02 BCP 65		95	330	76	38		260	280		208	18		
2 ⁷ / ₁₆	65	02 BCP 207	02 BCP 65													
2 ¹ / ₂	65	02 BCP 208	02 BCP 65													
2 ¹ / ₁₆	70	02 BCP 211	02 BCP 70	P05	4 ¹³ / ₃₂	15	*3 ³⁵ / ₆₄	1 ³ / ₄	two (3) 7/8 inch M24	12 ² / ₃₂	12 ²⁹ / ₃₂	-	10	67.8		
2 ¹ / ₄	75	02 BCP 212	02 BCP 75		112	380	90	44		312	328		252	30.8		
2 ⁵ / ₁₆	75	02 BCP 215	02 BCP 75													
3	75	02 BCP 300	02 BCP 75													
3 ³ / ₁₆	80	02 BCP 303	02 BCP 80	P06	4 ¹⁵ / ₁₆	16 ¹⁷ / ₃₂	*4 ¹ / ₆₄	2	two (3) 7/8 inch M24	13 ¹⁵ / ₃₂	14 ¹³ / ₃₂	-	10 ³ / ₄	86.2		
3 ¹ / ₄	85	02 BCP 304	02 BCP 85		125	420	102	52		342	366		272	39.2		
3 ⁷ / ₁₆	90	02 BCP 307	02 BCP 90													
3 ¹ / ₂	90	02 BCP 308	02 BCP 90													
3 ¹ / ₁₆	100	02 BCP 311	02 BCP 100	P07	5 ⁵ / ₈	18 ³ / ₄	*4 ²³ / ₃₂	2 ³ / ₈	two (3) 7/8 inch M24	14 ²³ / ₃₂	16 ⁶ / ₆₄	-	12 ³ / ₈	104.8		
3 ³ / ₄	105	02 BCP 312	02 BCP 105		143	466	120	60		374	410.0		314.0	47.6		
3 ¹⁵ / ₁₆	105	02 BCP 315	02 BCP 105													
4	105	02 BCP 400	02 BCP 105													
4 ¹ / ₁₆	110	02 BCP 403	02 BCP 110	P08	6 ³ / ₈	20	7	1 ¹ / ₂	four 7/8 inch M24	17 ¹ / ₄	18 ³ / ₁₆	4 ³ / ₄	14 ³ / ₄	176		
4 ⁷ / ₁₆	115	02 BCP 407	02 BCP 115		162	508	178	38		438	462		120	372	80	
4 ¹ / ₂	115	02 BCP 408	02 BCP 115													
4 ⁵ / ₁₆	120	02 BCP 415	02 BCP 120	P10	7 ¹ / ₈	22	7	1 ⁵ / ₈	four 7/8 inch M24	19	20	4 ³ / ₄	16 ¹ / ₄	223		
4 ¹ / ₂	125	02 BCP 500	02 BCP 125		181	558	178.0	40		484	508		120.0	415	101.5	
5	130	02 BCP 500	02 BCP 130													
5 ³ / ₁₆	140	02 BCP 503	02 BCP 140	P30	8	24	7	2	four 1 inch M24	21	22	4 ³ / ₄	18	291		
5 ⁷ / ₁₆	145	02 BCP 507	02 BCP 145		203	610	178.0	50		533	559		120.0	460	132.3	
5 ¹ / ₂	145	02 BCP 508	02 BCP 145													
5 ¹⁵ / ₁₆	150	02 BCP 515	02 BCP 150	P31	8 ¹ / ₄	25	8	2	four 1 inch M24	21 ¹ / ₂	22 ¹ / ₂	5	18 ¹ / ₂	340		
6	155	02 BCP 600	02 BCP 155		210	636	204	50		546	572		127	470	154.5	

Add mm for millimetres and EX for expansion type or GR for fixed type to reference
i.e. 02 BCP 100mm GR.

(3) These pedestals are furnished in two or four bolt configuration.

* Dimensions listed apply to two bolt bases only

Note: Inch data is shown in the lighter typeface, metric data is shown in the bolder typeface.



Lubricating points sizes to 4 1/2" are tapped 1/8" NPT.
Over 4 1/2" are tapped 1/4" NPT.
All grooved outer races must be clamped axially, provision is made for this in Cooper cartridges.

Roller Bearing

Shaft diameter (d)		References		D	C	B B ₁	Q	Wt (lb.) (kg)
inches	mm	Bearing only inches	millimetres					
3 5/16 4	100	03 B 315 03 B 400	03 B 100	10.000 254	5.354 136	3.313 84.2	8.622 219	66 30
4 7/16 4 1/2	110 120	03 B 407 03 B 408	03 B 110 03 B 120	10.500 266.70	5.787 147	3.438 87.3	9.134 232	79 36
4 15/16 5	130	03 B 415 03 B 500	03 B 130	11.000 279.40	5.500 140	2.875 73.1 3.313 84.2	9.646 245	80 36
5 7/16 5 1/2	140	03 B 507 03 B 508	03 B 140	12.000 304.80	5.787 147	3.125 79.4 3.563 90.5	10.630 270	97 44
5 15/16 6	150	03 B 515 03 B 600	03 B 150	13.000 330.20	6.299 160	3.188 81.0 3.813 96.9	11.496 292	125 57
6 7/16 6 1/2	160 170	03 B 607 03 B 608	03 B 160 03 B 170	14.000 355.60	6.720 171	4.063 103.2	12.125 308	158 72
6 15/16 7	180	03 B 615 03 B 700	03 B 180	14.750 374.65	7.008 178	3.625 92.1 4.280 108.8	12.835 326	175 79
7 15/16 8	190 200	03 B 715 03 B 800	03 B 190 03 B 200	16.500 419.10	7.520 191	3.844 97.7 4.656 118.3	14.409 366	232 105
9	220	03 B 900	03 B 220	18.500 469.90	8.346 212	4.311 109.6 5.185 131.8	16.141 410	320 145
10	240 260	03 B 1000	03 B 240 03 B 260	19.000 482.60	8.307 211	4.156 105.6 4.906 124.6	16.929 430	330 150

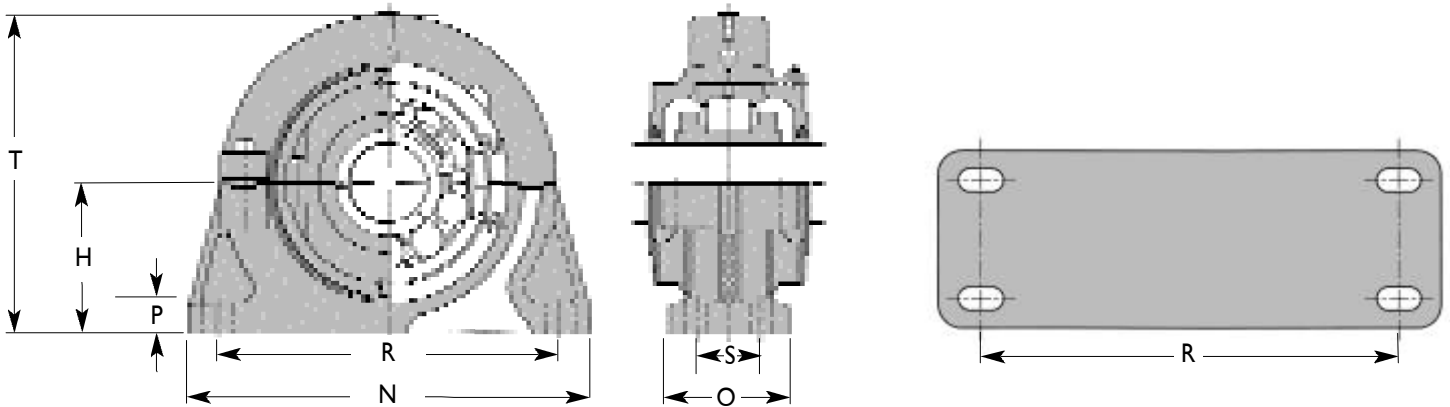
Cartridge Unit

Cartridge, bearing and seals		References		G	J	L	Available axial movement Note (1)	Wt (lb.) (kg)
inches	millimetres	Cartridge housing only						
03 BC 315 03 BC 400	03 BC 100	03 C 54		12 1/8 308.00	3 3/4 95	8 1/8 206	1 5/32 29.4	156 71
03 BC 407 03 BC 408	03 BC 110 03 BC 120	03 C 55		12 3/4 323.85	4 102	8 3/4 222	1 5/32 29.4	181 82
03 BC 415 03 BC 500	03 BC 130	03 C 56		12 3/4 323.85	4 102	8 3/4 222	3/4 19.1	185 84
03 BC 507 03 BC 508	03 BC 140	03 C 57		14 355.60	4 1/4 108	9 1/16 230	3/4 19.1	211 96
03 BC 515 03 BC 600	03 BC 150	03 C 58		15 1/2 393.70	4 1/2 114	10 254	2 1/32 16.7	280 127
03 BC 607 03 BC 608	03 BC 160 03 BC 170	03 C 59		16 5/8 422.30	4 3/4 120	10 9/16 268	1 1/4 31.8	338 153
03 BC 615 03 BC 700	03 BC 180	03 C 60		17 431.80	5 1/4 132	11 3/16 284	2 1/32 16.7	365 166
03 BC 715 03 BC 800	03 BC 190 03 BC 200	03 C 61		19 1/4 489.00	5 3/4 146	11 13/16 300	2 1/32 16.7	472 214
03 BC 900	03 BC 220	03 C 62		21 1/2 546.10	6 1/2 165	13 3/32 334	3/4 19.1	660 300
03 BC 1000	03 BC 240 03 BC 260	03 C 63		22 558.80	6 1/2 165	13 3/32 334	1 9/32 15.1	685 311

Add mm for millimetres and EX for expansion type or GR for fixed type to reference
i.e. 03 B 150mm EX.

Chamfers
Inner race: Sizes to 6/150mm: 3/32/2.5mm,
over 6/150mm: 1/8/3mm
Outer race: 1/8/3mm

(1) Offset from centreline to accommodate axial movement should not exceed half this amount.
(2) Q diameter clears clamp rings.
Note: Inch data is shown in the lighter typeface, metric data is shown in the bolder typeface.



Pedestals - 4 Bolt

Shaft diameter (d)		References		Pedestal casting only	H	N	O	P	Bolts	R		S	T	Wt (lb.) (kg)
inches	mm	Pedestal inches	complete millimetres							Min	Max			
3 ¹⁵ / ₁₆ 4	100	03 BCP 315 03 BCP 400	03 BCP 100	P54	7 ¹⁷ / ₃₂ 191	20 ¹ / ₄ 514	6 152	1 ¹ / ₂ 38	4-7 ¹ / ₈ M24	16 ³ / ₄ 425	17 ³ / ₄ 451	3 ¹ / ₄ 82	16 405	320 145
4 ⁷ / ₁₆ 4 ¹ / ₂	110 120	03 BCP 407 03 BCP 408	03 BCP 110 03 BCP 120	P55	7 ³ / ₄ 197	21 534	6 ¹ / ₂ 166	1 ¹ / ₂ 38	4-1 M24	17 ¹ / ₂ 445	18 ¹ / ₂ 470	3 ¹ / ₂ 88	16 ³ / ₄ 425	370 168
4 ¹⁵ / ₁₆ 5	130	03 BCP 415 03 BCP 500	03 BCP 130	P56	8 203	21 ¹ / ₂ 546	6 ¹ / ₂ 166	1 ⁷ / ₈ 48	4-1 M24	18 457	19 482	3 ³ / ₄ 96	17 ¹ / ₈ 435	400 182
5 ⁷ / ₁₆ 5 ¹ / ₂	140	03 BCP 507 03 BCP 508	03 BCP 140	P57	9 229	24 ¹ / ₂ 622	7 178	2 ¹ / ₈ 54	4-1 ¹ / ₄ M30	19 ¹ / ₂ 495	21 533	4 102	19 485	490 222
5 ¹⁵ / ₁₆ 6	150	03 BCP 515 03 BCP 600	03 BCP 150	P58	10 254	26 ¹ / ₄ 666	8 204	2 ¹ / ₄ 57	4-1 ¹ / ₄ M30	21 ¹ / ₄ 540	22 ³ / ₄ 578	4 ³ / ₄ 120	21 535	665 302
6 ⁷ / ₁₆ 6 ¹ / ₂	160 170	03 BCP 607 03 BCP 608	03 BCP 160 03 BCP 170	P59	10 ¹ / ₂ 267	29 736	9 228	2 ³ / ₈ 60	4-1 ¹ / ₄ M30	24 610	25 ¹ / ₂ 648	5 ¹ / ₂ 140	22 ¹ / ₂ 570	750 340
6 ¹⁵ / ₁₆ 7	180	03 BCP 615 03 BCP 700	03 BCP 180	P60	11 279	30 762	10 254	2 ¹ / ₂ 64	4-1 ¹ / ₄ M30	24 ¹ / ₄ 616	25 ³ / ₄ 654	6 152	22 ⁷ / ₈ 580	848 385
7 ¹⁵ / ₁₆ 8	190 200	03 BCP 715 03 BCP 800	03 BCP 190 03 BCP 200	P61	12 ¹ / ₄ 311	33 838	10 ¹ / ₂ 266	2 ⁵ / ₈ 67	4-1 ¹ / ₂ M36	24 ¹ / ₄ 616	25 ³ / ₄ 654	6 ³ / ₄ 172	25 ³ / ₄ 655	1132 515
9	220	03 BCP 900	03 BCP 220	P62	13 ³ / ₄ 349	17 ¹ / ₂ 952	11 280	3 76	4-1 ³ / ₄ M42	28 ¹ / ₄ 718	29 ³ / ₄ 756	7 178	28 ³ / ₄ 730	1580 715
10	240 260	03 BCP 1000	03 BCP 240 03 BCP 260	P63	15 ¹ / ₂ 394	36 914	16 406	3 76	4-1 ³ / ₄ M42	25 ⁵ / ₈ 651	27 ¹ / ₈ 689	12 304	31 790	1800 815

Add mm for millimetres and EX for expansion type or GR for fixed type to reference
i.e. 03 BCP 200mm EX.

Note: Inch data is shown in the lighter typeface, metric data is shown in the bolder typeface.

Flanges

Flanges provide a simple means of mounting Cooper split roller bearings against a vertical or horizontal face. These housings embody standard swivel cartridges which may be assembled with expansion (EX) or fixed (GR) bearings.

Where shafts terminate at the bearings, cartridge ends may be fitted with blanking plates or in the case of expansion bearings to 90mm, blanking plates with thrust bearings for one way positioning.

The rear face of the flange is recessed for use with a spigot if required. Tolerance f8 on spigot to fit recess N.

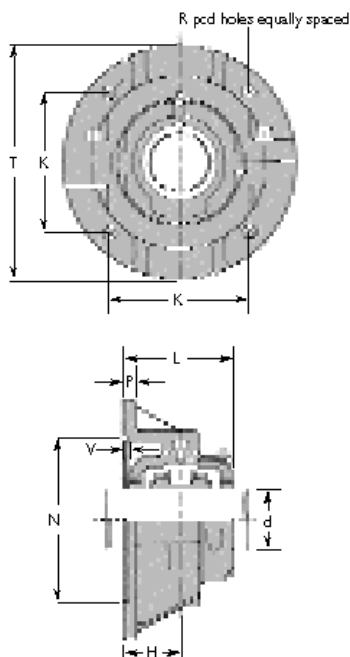
The top halves of both flange and cartridge can be lifted for inspection of rolling surfaces.

Standard cast iron flanges normally have drilled bolt holes with outer surface as cast. Fitting flat washers under the bolt heads is recommended. Cast steel flanges normally have drilled holes and are spot faced.

Flanges over 12"/300mm available on request.

For vertical shafts, bearings and flanges may require modified construction, special seals and lubrication.

Maximum load on cast iron flanges is 0.26 C_{or} or 0.25 C_a. Higher loads at slow speeds and shock conditions require steel or nodular iron flanges and high tensile bolts. The support plate must be adequate. Please consult our technical department.



01 Series Flanges

Shaft diameter (d)		References		Flange outer casting only	T	Bolts	R	K	P	H	Locating Spigot			Wt (lb.) (kg)
inches	mm	Flanges complete inches	Flanges complete millimetres								N	V	L	
1 3/16		01 BCF 103		F01	8	4-1/2	6 7/16	4 9/16	1/2	2	4 11/16	1/8	3 11/16	18
1 1/4	35	01 BCF 104	01 BCF 35											
1 7/16	40	01 BCF 107	01 BCF 40											
1 1/2		01 BCF 108												
1 11/16		01 EBCF 111		F02	8 1/2	4-1/2	7 1/8	5	1/2	2 1/4	5 3/8	1/8	4 1/16	25
1 3/4	45	01 EBCF 112	01 EBCF 45											
1 15/16	50	01 EBCF 115	01 EBCF 50											
2		01 EBCF 200												
2 3/16		01 EBCF 203		F03	10 1/4	4-1/2	8 3/8	6 1/16	5/8	2 5/8	6 9/16	1/8	4 11/16	33
2 1/4	60	01 EBCF 204	01 EBCF 60											
2 1/2	65	01 EBCF 207	01 EBCF 65											
2 1/2		01 EBCF 208												
2 11/16		01 EBCF 211		F04	11 1/4	4-1/2	9 1/16	6 3/4	5/8	2 7/8	7 7/16	1/8	5 1/8	46
2 3/4	70	01 EBCF 212	01 EBCF 70											
2 5/16	75	01 EBCF 215	01 EBCF 75											
3		01 EBCF 300												
3 3/16		01 EBCF 303		F05	13	4-3/8	10 3/4	7 3/8	3/4	3 1/8	8 1/2	1/8	5 13/16	68
3 1/4	80	01 EBCF 304	01 EBCF 80											
3 1/2	85	01 EBCF 307	01 EBCF 85											
3 1/2	90	01 EBCF 308	01 EBCF 90											
3 11/16		01 EBCF 311		F06	14	4-3/8	11 7/8	8 3/8	3/4	3 3/8	9 3/8	1/8	6	82
3 3/4	100	01 EBCF 312	01 EBCF 100											
3 5/16	105	01 EBCF 315	01 EBCF 105											
4		01 EBCF 400												
4 3/16		01 BCF 403		F07	15	4-3/8	13 1/8	9 5/16	7/8	3 5/8	10 7/8	1/8	6 7/16	112
4 7/16	110	01 BCF 407	01 BCF 110											
4 1/2	115	01 BCF 408	01 BCF 115											
4 1/2		01 BCF 408												
4 5/16		01 BCF 415		F08	17	4-7/8	14 3/4	10 7/16	7/8	3 7/8	12 3/8	1/8	6 15/16	158
5	120	01 BCF 500	01 BCF 120											
5	125	01 BCF 500	01 BCF 125											
5	130	01 BCF 500	01 BCF 130											
5 3/16		01 BCF 503		F09	17 1/2	4-7/8	15 1/8	10 11/16	1	3 7/8	12 1/2	1/8	7 3/16	172
5 7/16	135	01 BCF 507	01 BCF 135											
5 7/16	140	01 BCF 507	01 BCF 140											
5 1/2		01 BCF 508												
5 15/16		01 BCF 515		F10	18 1/2	4-1	16 1/4	11 1/2	1	4 1/2	13 5/8	1/8	7 15/16	208
6	150	01 BCF 600	01 BCF 150											
6	155	01 BCF 600	01 BCF 155											
6														
6 7/16		01 BCF 607		F11	19 1/2	4-1	16 3/4	11 7/8	1	4 1/8	13 7/8	1/8	7 15/16	220
6 1/2	160	01 BCF 608	01 BCF 160											
6 1/2														
6 1/2														
6 15/16		01 BCF 615		F12	20	4-1	17 1/4	12 3/16	1 1/8	4 1/4	14 3/8	1/8	8 3/16	232
7	180	01 BCF 700	01 BCF 180											
7														
7														
7 15/16		01 BCF 715		F13	21	4-1	18 5/8	13 3/16	1 1/4	4 1/4	15 3/4	1/8	8 3/16	278
8	200	01 BCF 800	01 BCF 200											
8														
8														
9		01 BCF 900		F14	23	4-1 1/4	20 1/8	14 1/4	1 3/8	4 5/8	17	1/8	8 7/8	326
9	220	01 BCF 900	01 BCF 220											
9														
9														
10		01 BCF 1000		F15	24	4-1 1/4	21 3/8	15 1/16	1 3/8	4 5/8	18 1/4	1/8	9	370
10	240	01 BCF 1000	01 BCF 240											
10														
10														
11		01 BCF 1100		F16	26	4-1 1/4	23	16 1/4	1 1/2	4 7/8	19 7/8	1/8	9 7/16	474
11	260	01 BCF 1100	01 BCF 260											
11	280	01 BCF 1100	01 BCF 280											
11														
12		01 BCF 1200		F17	28	4-1 1/4	24 5/8	17 7/16	1 1/2	5 1/4	21 1/4	1/8	10 1/8	584
12	300	01 BCF 1200	01 BCF 300											
12														
12														

Add mm for millimetres and EX for expansion type or GR for fixed type to reference. i.e. **01 BCF 150mm GR**.

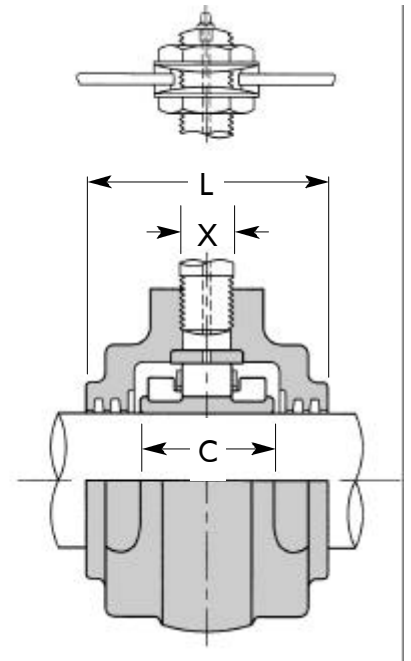
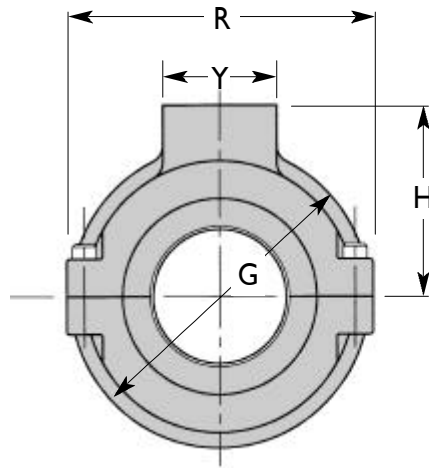
Note: Inch data is shown in the lighter typeface, metric data is shown in the bolder typeface.

Hanger Type

Hanger bearings are a compact means of supporting the shafts of screw conveyors and similar equipment. The hanger comprises of a split roller bearing in a cast iron split housing with a threaded boss to facilitate suspension from the conveyor cross bracing. A swivel fixing at the cross bracing joint is recommended to provide alignment of the bearings.

Double felt or lipped rubber seals are provided, air purge seals are also available. The aspect of sealing should be carefully considered for each application.

Continuous grease feed is sometimes desirable and provision made through hanger rods.



Hanger Bearing

Shaft diameter (d)		References		C	G	L	H	X	Y	R	Wt (lb.) (kg)	
inches	mm	Hanger inches	unit complete millimetres									
1 1/4	40	01 BH 104	01 BH 40	1.972	3 5/16	4 1/4	2 3/8	I	2	4 1/8	9	
1 1/2		01 BH 108		50.1	100	108	66	M30	50	105	4	
1 1/16	50	01 EBH 111	01 EBH 50	2.192	4 5/8	4 1/4	3	I	2	4 3/4	11	
1 3/4		01 EBH 112		55.7	117	108	76	M30	50	121	5	
1 5/16		01 EBH 115										
2		01 EBH 200										
2 3/16	60	01 EBH 203	01 EBH 60	2.192	5 5/16	4 1/4	3 1/4	I	2	5 3/8	13	
2 1/4		01 EBH 204		55.7	135	108	82	M30	50	137	6	
2 7/16		01 EBH 207										
2 1/2		01 EBH 208										
2 1/16	70	01 EBH 211	01 EBH 70	2.410	6 3/16	5 1/8	3 3/8	I	2	6 3/8	18	
2 3/4		01 EBH 212		61.2	157	130	92	M30	50	162	8	
2 5/16		01 EBH 215										
3		01 EBH 300										
3 3/16	80	01 EBH 303	01 EBH 80	2.781	7	5 3/4	4 1/2	1 1/2	3	7 3/8	29	
3 1/4		01 EBH 304		70.7	178	146	114	M36	76	187	13	
3 7/16		01 EBH 307										
3 1/2		01 EBH 308										
3 1/16	100	01 EBH 311	01 EBH 100	3.188	8	6	5	1 1/2	3	7 7/8	37	
3 3/4		01 EBH 312		81	203	152	128	M36	76	200	17	
3 5/16		01 EBH 315										
4		01 EBH 400										
4 3/16	110	01 BH 403	01 BH 110	3.342	9 1/8	6 1/8	5 1/2	1 1/2	3	8 3/4	53	
4 7/16		01 BH 407		84.9	232	156	140	M36	76	222	24	
4 1/2		01 BH 408										
4 5/16	120	01 BH 415	01 BH 120	3.531	10 3/4	6 3/8	6 1/8	1 1/2	3	10 3/4	78	
125		01 BH 500		89.7	276	162	156	M36	76	276	35	
130		01 BH 130										
5 3/16	135	01 BH 503	01 BH 135	3.875	11	6 1/4	6 1/4	1 1/2	3	11	86	
5 7/16		01 BH 507		98.4	280	158	160	M36	76	280	39	
5 1/2		01 BH 508										

Add mm for millimetres and EX for expansion type.
i.e. 01 EBH 90mm EX.

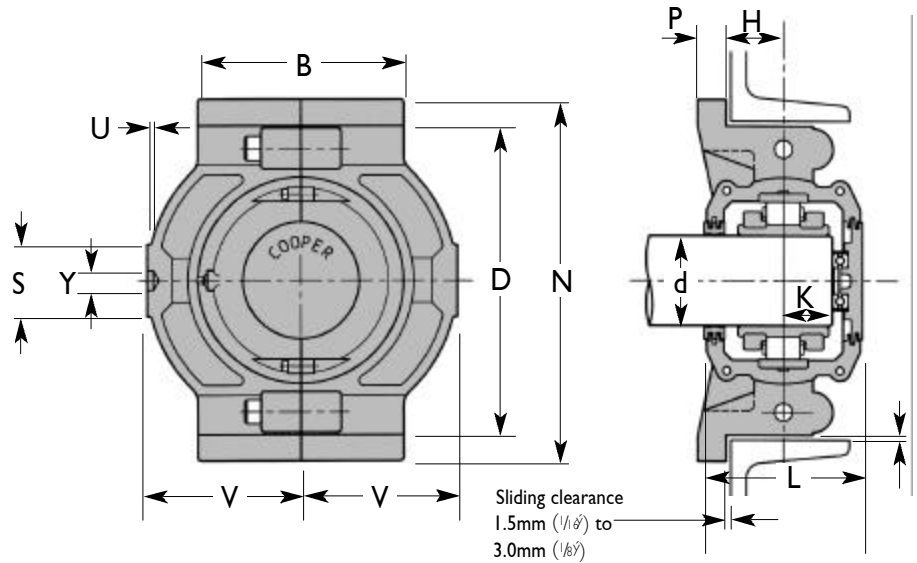
Note: Inch data is shown in the lighter typeface,
metric data is shown in the bolder typeface.

Take-up Push Type

Take-up housings are an efficient means of tensioning the pulleys of conveyors and elevators.

The unit consists of a standard Cooper split roller bearing and swivel cartridge mounted in the spherical bore of the cast iron sliding unit.

The above arrangement is for sizes up to 90mm, for larger sizes use two fixed (GR) bearings.



01 Series Take-up Push Type

Shaft diameter (d)		Take-up complete		Take-up casting only	B	N	D	V	K	P	H	L	S	Y	U	Wt (lb.) (kg)
inches	mm	inches	millimetres													
1 1/4	40	01 BCTP 104	01 BCTP 40	TP01	4	6 3/4	6	3	1 1/16	9/16	1 1/8	3 3/8	1	1/2	3/16	13
1 1/2	102	01 BCTP 108	01 BCTP 108		172	153	76	27	14	29	86	25	13	5	6	
1 11/16	45	01 EBCTP 111	01 EBCTP 45	TP02	4 1/2	8	7	3 1/2	1 1/8	5/8	1 1/8	3 7/8	1 1/8	1/2	3/16	20
1 3/4	50	01 EBCTP 112	01 EBCTP 50		142	204	178	88	29	16	29	29	13	5	9	
1 15/16	2	01 EBCTP 115	01 EBCTP 200													
2 1/16	60	01 EBCTP 203	01 EBCTP 60	TP03	5	9 1/4	8	4	1 3/16	3/4	1 1/4	4	1 1/2	5/8	1/4	26
2 1/4	65	01 EBCTP 204	01 EBCTP 65		128	235	203	102	30	20	32	104	38	16	6	12
2 1/8	216	01 EBCTP 207	01 EBCTP 208													
2 11/16	70	01 EBCTP 211	01 EBCTP 70	TP04	6	10 1/2	9	4 1/2	1 3/8	7/8	1 9/16	4 1/2	1 5/8	5/8	1/4	38
2 3/4	75	01 EBCTP 212	01 EBCTP 75		152	266	229	114	35	22	40	114	41	16	6	17
2 15/16	3	01 EBCTP 215	01 EBCTP 300													
3 1/16	80	01 EBCTP 303	01 EBCTP 80	TP05	7 1/2	12 1/2	11	5 1/2	1 9/16	7/8	1 9/16	5 3/8	2	5/8	1/4	60
3 1/4	85	01 EBCTP 304	01 EBCTP 85		190	318	280	140	40	22	40	136	51	16	6	27
3 3/8	90	01 EBCTP 307	01 EBCTP 90													
3 1/2	01	EBCTP 308														
3 11/16	100	01 EBCTP 311	01 EBCTP 100	TP06	8	13 1/2	12	6	-	7/8	1 11/16	5 1/4	2	3/4	1/4	68
3 3/4	105	01 EBCTP 312	01 EBCTP 105		204	342	305	152	-	22	43	134	51	19	6	31
3 15/16	4	01 EBCTP 315	01 EBCTP 400													
4 1/16	110	01 BCTP 403	01 BCTP 110	TP07	8 1/2	15	13 1/2	6 3/8	-	7/8	1 7/8	5 3/8	2 3/4	3/4	1/4	101
4 1/8	115	01 BCTP 407	01 BCTP 115		216	382	343	162	-	22	48	142	70	19	6	46
4 1/2	01	BCTP 408														
4 5/16	120	01 BCTP 415	01 BCTP 120	TP08	10	16 1/2	15	7 1/2	-	1	2	6 1/8	3	3/4	1/4	143
4 3/8	125	01 BCTP 500	01 BCTP 125		254	420	381	190	-	25	51	156	76	19	6	65
4 1/2	130	01 BCTP 500	01 BCTP 130													
5 1/16	135	01 BCTP 503	01 BCTP 135	TP09	10 1/2	17 1/4	15 3/4	7 3/4	-	1	2 1/8	6 3/8	3	15/16	5/16	176
5 1/8	140	01 BCTP 507	01 BCTP 140		266	438	400	196	-	25	54	168	76	23	8	80
5 1/2	01	BCTP 508														
5 15/16	150	01 BCTP 515	01 BCTP 150	TP10	10 1/2	18 1/4	16 3/4	8	-	1	2 1/4	6 7/8	3 3/8	15/16	5/16	201
5	155	01 BCTP 600	01 BCTP 155		266	464	426	204	-	25	57	174	86	23	8	91

Add mm for millimetres and EX for expansion type or GR for fixed type to reference. i.e. 01 BCTP 150mm GR

Illustrations are typical.

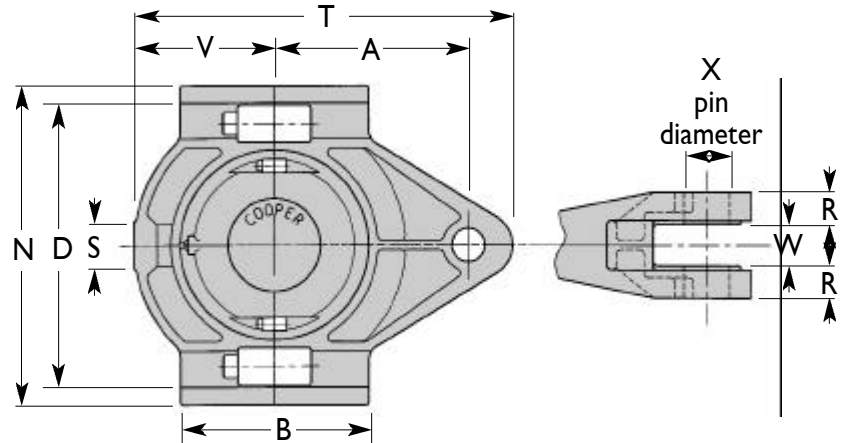
Dimensions should be confirmed before fixing design.

Note: Inch data is shown in the lighter typeface, metric data is shown in the bolder typeface.

Take-up Tension Type

Take-up housings are an efficient means of tensioning the pulleys of conveyors and elevators.

The unit consists of a standard fixed type Cooper split roller bearing and swivel cartridge mounted in the spherical bore of the cast iron sliding unit.



01 Series Take-up Tension Type

Shaft diameter (d)		Take-up complete		Take-up casting only	B	N	D	A	T	X	V	K*	P*	H*	W	R	L*	Wt (lb.) (kg)	
inches	mm	inches	millimetres																
1 1/4	40	01 BCTT 104	01 BCTT 40	TT01	4	6 3/4	6	4 1/2	8 1/2	3/4	3	1 1/16	9/16	1 1/8	1	15/16	3 3/8	15	
1 1/2		01 BCTT 108			102	172	153	114	216	20	76	27	14	29	25	24	86	7	
1 1/16		01 EBCTT 111		TT02	4 1/2	8	7	5	9 1/2	15/16	37/16	1 1/8	5/8	1 1/8	1	1	37/8	22	
1 3/4	45	01 EBCTT 112	01 EBCTT 45		114	204	178	128	242	24	88	29	16	29	25	25	98	10	
1 5/16		01 EBCTT 115	01 EBCTT 50																
2		01 EBCTT 200																	
2 3/16		01 EBCTT 203		TT03	5	9 1/4	8	5 3/4	11	15/16	4	13/16	3/4	1 1/4	13/16	1 1/8	4	29	
2 1/4	60	01 EBCTT 204	01 EBCTT 60		128	235	203	146	280	24	102	30	20	32	30	29	104	13	
2 7/16		01 EBCTT 207	01 EBCTT 65																
2 1/2		01 EBCTT 208																	
2 1/16		01 EBCTT 211		TT04	6	10 1/2	9	6 1/4	12	15/16	4 1/2	13/8	7/8	1 3/8	13/16	1 1/4	4 1/2	42	
2 3/4	70	01 EBCTT 212	01 EBCTT 70		152	266	229	158	305	24	114	35	22	40	30	32	114	19	
2 5/16		01 EBCTT 215	01 EBCTT 75																
3		01 EBCTT 300																	
3 3/16		01 EBCTT 303		TT05	7 1/2	12 1/2	11	7 1/2	41 1/2	13/16	5 1/2	1 9/16	7/8	1 3/8	1 1/2	13/8	5 3/8	66	
3 1/4	80	01 EBCTT 304	01 EBCTT 80		190	318	280	190	368	30	140	40	22	40	38	35	136	30	
3 7/16		01 EBCTT 307	01 EBCTT 85																
3 1/2		01 EBCTT 308	01 EBCTT 90																
3 1/16		01 EBCTT 311		TT06	8	13 1/2	12	8 1/4	16 1/4	13/16	6	-	7/8	1 5/8	1 3/4	1 3/8	5 1/4	75	
3 3/4	100	01 EBCTT 312	01 EBCTT 100		204	342	305	210	414	36	152	-	22	43	44	35	134	34	
3 5/16		01 EBCTT 315	01 EBCTT 105																
4		01 EBCTT 400																	
4 3/16		01 BCTT 403		TT07	8 1/2	15	13 1/2	9	17 1/2	1 11/16	6 3/8	-	7/8	1 7/8	1 3/4	1 5/8	5 9/16	112	
4 7/16	110	01 BCTT 407	01 BCTT 110		216	382	343	228	445	42	162	-	22	48	44	41	142	51	
4 1/2		01 BCTT 408	01 BCTT 115																
4 5/16		01 BCTT 415		TT08	10	16 1/2	15	12 1/4	20	1 11/16	7 1/2	-	1	2	1 3/4	1 3/4	6 1/8	157	
4 3/4	120	01 BCTT 500	01 BCTT 120		254	420	381	260	508	42	190	-	25	51	44	44	156	71	
5		01 BCTT 500	01 BCTT 125																
5 3/16		01 BCTT 503		TT09	10 1/2	17 1/4	15 3/4	10 1/2	20 1/4	1 11/16	7 3/4	-	1	2 1/8	1 3/4	1 7/8	6 5/8	196	
5 7/16	135	01 BCTT 507	01 BCTT 135		266	438	400	266	514	42	196	-	25	54	44	48	168	89	
5 1/2		01 BCTT 508	01 BCTT 140																
5 5/16		01 BCTT 515		TT10	10 1/2	18 1/4	16 3/4	11	21 1/2	1 7/8	8	-	1	2 1/4	1 5/16	2	67/8	220	
6	150	01 BCTT 600	01 BCTT 150		266	464	426	280	546	48	204	-	25	57	50	51	174	100	

Add mm for millimetres and EX for expansion type or GR for fixed type to reference.
i.e. 01 BCTT 150mm GR

Illustrations are typical.

Dimensions should be confirmed before fixing design.

Note: Inch data is shown in the lighter typeface, metric data is shown in the bolder typeface.

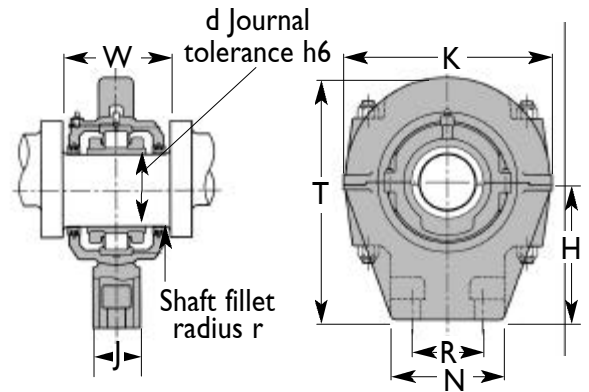
The above arrangement is for sizes up to 90mm, for larger sizes use two fixed (GR) bearings.

* For dimensions K,P, H, and L see diagram on previous page.

Rod End 'T' Type

For solid crankshafts Cooper split roller bearings can be simply applied. Cooper rod ends are specially designed to form connecting units for these and other reciprocating mechanisms. Typical applications include shaker screens and classifiers.

Each rod end consists of a split outer casing which encloses a fixed bearing (GR) in a swivel cartridge. Normally made of cast iron, these housings are available in shoe type and 'T' type and can be modified to suit various rods and attachments.



01 Series Rod End 'T' Type

Shaft diameter (d)		References		Rod end casting only	W	r	N	J	H	K	T	R	Bolts	Wt (lb.) (kg)
inches	mm	Rod end complete												
		inches	millimetres											
1/4 1/2	40	01 BCRET 104 01 BCRET 108	01 BCRET 40	RET01	3 5/8 92	1/8 3.0	3 3/8 86	1 1/8 30	3 76	5 1/2 140	6 152	2 1/4 57	1/2 (1) M12	12 6
1 11/16 1 3/4 1 5/16 2	45 50	01 EBCRET 111 01 EBCRET 112 01 EBCRET 115 01 EBCRET 200	01 EBCRET 45 01 EBCRET 50	RET02	4 1/16 104	1/8 3.0	4 102	1 1/4 32	4 102	6 1/2 166	7 1/2 190	2 3/4 70	3/8 M10	16 8
2 3/16 2 1/4 2 7/16 2 1/2	60 65	01 EBCRET 203 01 EBCRET 204 01 EBCRET 207 01 EBCRET 208	01 EBCRET 60 01 EBCRET 65	RET03	4 7/16 113	3/16 4.5	4 1/2 115	1 7/16 38	3 3/4 95	7 3/4 197	7 3/4 197	3 76	5/8 (1) M16	19 9
2 11/16 2 3/4 2 5/16 3	70 75	01 EBCRET 211 01 EBCRET 212 01 EBCRET 215 01 EBCRET 300	01 EBCRET 70 01 EBCRET 75	RET04	5 126	1/4 6.0	5 128	1 3/4 44	4 1/4 108	8 1/2 216	8 5/8 220	3 1/2 89	5/8 (1) M16	29 13
3 3/16 3 1/4 3 7/16 3 1/2	80 85 90	01 EBCRET 303 01 EBCRET 304 01 EBCRET 307 01 EBCRET 308	01 EBCRET 80 01 EBCRET 85 01 EBCRET 90	RET05	5 13/16 148	1/4 6.0	5 3/4 146	1 7/8 48	5 127	9 7/8 248	10 1/16 256	4 102	3/4 (1) M20	44 20
3 11/16 3 3/4 3 5/16 4	100 105	01 EBCRET 311 01 EBCRET 312 01 EBCRET 315 01 EBCRET 400	01 EBCRET 100 01 EBCRET 105	RET06	5 3/4 146	1/4 6.0	6 3/4 170	3 76	7 7/8 200	12 1/8 308	14 356	4 7/8 124	1 M24	79 36
4 7/16 4 7/16 4 1/2	110 115	01 BCRET 403 01 BCRET 407 01 BCRET 408	01 BCRET 110 01 BCRET 115	RET07/3	6 1/16 154	1/4 6.0	7 1/2 190	3 3/8 86	8 3/4 222	13 1/8 334	15 3/8 390	5 3/8 136	1 1/8 M30	114 52
4 5/16 5	120 125 130	01 BCRET 415 01 BCRET 500	01 BCRET 120 01 BCRET 125 01 BCRET 130	RET08	6 5/8 168	1/4 6.0	7 1/2 190	3 3/8 86	8 3/4 222	14 3/4 375	16 3/4 425	5 3/8 136	1 1/8 M30	143 65
5 3/16 5 7/16 5 1/2	135 140	01 BCRET 503 01 BCRET 507 01 BCRET 508	01 BCRET 135 01 BCRET 140	RET09	7 3/8 187	3/8 9.5	8 204	4 102	11 279	17 3/8 442	19 3/4 502	5 1/2 140	1 1/2 M30	196 89
5 15/16 6	150 155	01 BCRET 515 01 BCRET 600	01 BCRET 150 01 BCRET 155	RET10	7 5/8 193	3/8 9.5	8 204	4 102	11 279	17 3/8 442	19 3/4 502	5 1/2 140	1 1/4 M30	217 99

(1) Holes are tapped in end face.

Illustrations are typical.

Dimensions should be confirmed before fixing design.

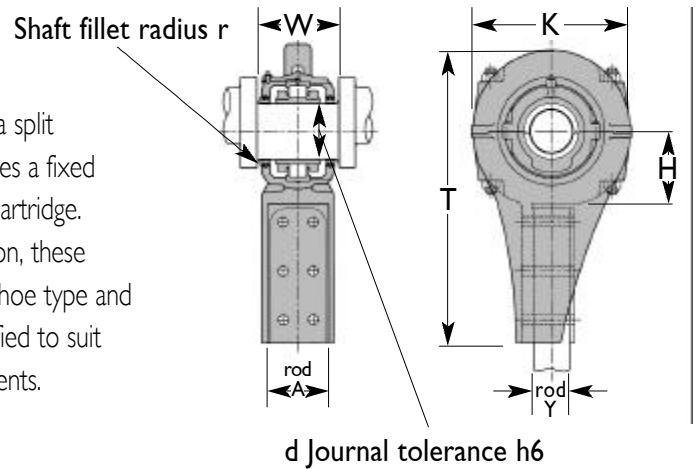
Add mm for millimetres and EX for expansion type or GR for fixed type to reference. i.e. **01 BCRET 150mm GR**.

Note: Inch data is shown in the lighter typeface, metric data is shown in the bolder typeface.

Rod End Shoe Type

For solid crankshafts Cooper split roller bearings can be simply applied. Cooper rod ends are specially designed to form connecting units for these and other reciprocating mechanisms. Typical applications include shaker screens and classifiers.

Each rod end consists of a split outer casing which encloses a fixed bearing (GR) in a swivel cartridge. Normally made of cast iron, these housings are available in shoe type and 'T' type and can be modified to suit various rods and attachments.



01 Series Rod End Shoe Type

Shaft diameter (d)		Rod end complete		Rod end casting only	W	r	A Rod	Y Rod	H	K	T	Wt (lb.) (kg)		
inches	mm	inches	millimetres											
1 1/4	40	01 BCRES 104	01 BCRES 40	RES01	3 5/8	1/8	2 7/16	3/8	2 1/2	6 1/4	10 3/16	10		
1 1/2		01 BCRES 108			92	3.0	62	10	65	160	258	5		
1 11/16	45	01 EBCRES 111	01 EBCRES 45	RES02	4 1/16	1/8	2 7/16	3/8	2 3/4	6 1/2	12 1/8	14		
1 3/4		01 EBCRES 112			104	3.0	62	10	70	166	38	7		
1 5/16		01 EBCRES 115			01 EBCRES 50	RES03/2	4 7/16	3/16	2 7/16	3/8	3 3/8	7 1/2	13	28
2		01 EBCRES 200					113	4.5	62	10	79	190	330	13
2 3/16	60	01 EBCRES 203	01 EBCRES 60	RES04	5	1/4	3 7/16	2	4 1/4	9 3/4	17	48		
2 1/4		01 EBCRES 204			126	6.0	88	50	108	248	432	22		
2 7/16		01 EBCRES 207			01 EBCRES 70	RES05	5 13/16	1/4	3 15/16	2	5 1/4	10 3/8	23 3/4	94
2 1/2		01 EBCRES 208					148	6.0	100	50	133	264	602	43
2 11/16	70	01 EBCRES 211	01 EBCRES 80	RES06	5 3/4	1/4	3 15/16	2 15/16	4 15/16	12 1/8	22 1/2	94		
2 3/4		01 EBCRES 212			146	6.0	100	58	125	308	572	44		
2 5/16		01 EBCRES 215			01 EBCRES 100	RES07	6 1/16	1/4	5	2 5/16	5 7/8	13 15/16	24 3/4	139
3		01 EBCRES 300					154	6.0	126	58	149	354	618	63
3 3/16	80	01 EBCRES 303	01 BCRES 110	RES08	6 5/8	1/4	5	2 5/16	6 1/4	15 3/4	25 3/4	182		
3 1/4		01 EBCRES 304			168	6.0	126	64	158	400	654	83		
3 7/16		01 EBCRES 307			01 BCRES 120	RES09	7 3/8	3/8	6	3	7	17 3/8	27 7/16	214
3 1/2		01 EBCRES 308					187	9.5	152	76	177	442	696	98
5 1/16	135	01 BCRES 503	01 BCRES 135	RES10	7 5/8	3/8	6	3	7	17 3/8	27 7/16	234		
5 1/16		01 BCRES 507			193	9.5	152	76	177	442	696	107		
5 1/2	140	01 BCRES 508	01 BCRES 140											
5 5/16	150	01 BCRES 515	01 BCRES 150	RES10	7 5/8	3/8	6	3	7	17 3/8	27 7/16	234		
6		01 BCRES 600			193	9.5	152	76	177	442	696	107		

Illustrations are typical.

Dimensions should be confirmed before fixing design.

Add mm for millimetres and EX for expansion type or GR for fixed type to reference. i.e. **01 BCRES 150mm GR**.

Note: Inch data is shown in the lighter typeface, metric data is shown in the bolder typeface.

SN Compatible Pedestals



The housings have bolt hole centre distances and base to bearing centreline heights that conform to ISO 113-2. Complete SN assemblies are suitable for dimensional replacement of solid, self aligning ball bearings and, in most cases 222 Series double row spherical bearings, using adaptor sleeves, the Cooper SN compatible pedestal is available for bearings with shaft sizes from 60mm (SN513) to 140mm (SN532). The pedestals use standard Cooper 01 Series bearings and cartridges. This gives the option of using

the comprehensive range of Cooper sealing options suitable for almost any application. The seals remain concentric to the shaft under misalignment conditions.

The use of standard Cooper bearings and cartridges will cause the footprint area and total housing height to differ from compatible SN housings.

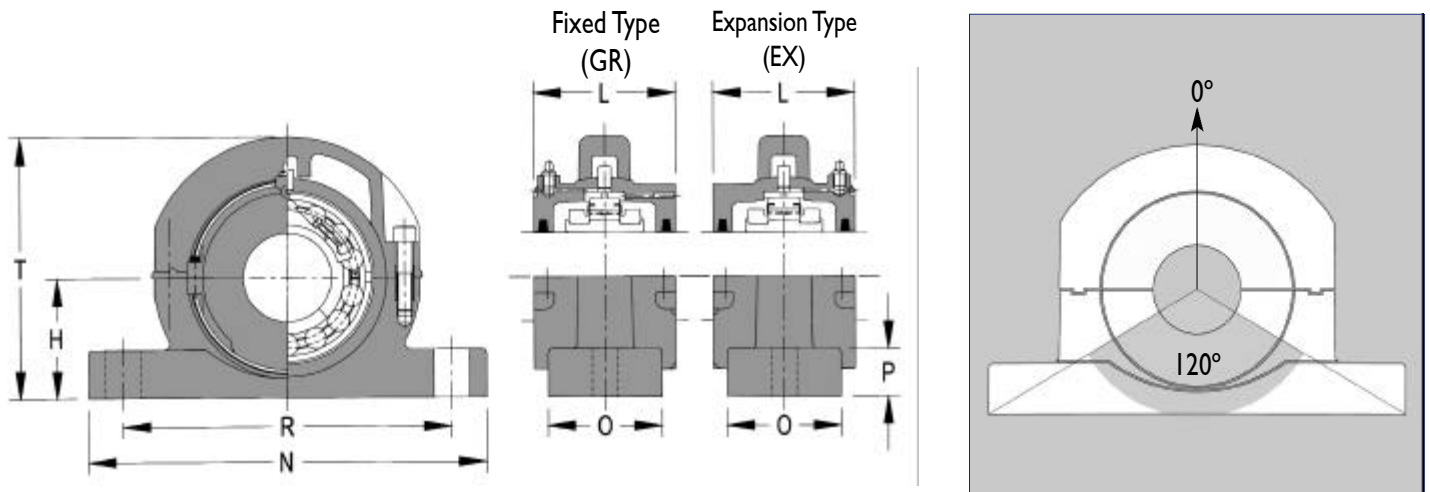
Pedestals are made from grey cast iron. Temperature and vibration mounting points may be specified.

Pedestal Loads

The maximum safe radial load for a pedestal casting is based on the bearing static rating C_{0r} . The full C_{0r} rating can be applied if the angle of the load falls within the shaded area of the diagram below.

If the load falls outside the shaded area or is greater than C_{0r} , please consult our technical department.

When considering suitability of pedestal castings, the resultant effective radial load must be used. The effective radial load is the resultant of net loads and appropriate dynamic factors, excluding speed and life factors.



Shaft Size (mm)	Pedestal Only	SN Reference	Complete Assembly	H	R		Bolt Size	L	N	O	P	T
					Min	Max						
60	SNC513	513	01EBC SNC513 60mm	80	226	242	2 x M16	104	280	70	32	180
65	SNC515	515	01EBC SNC515 65mm	80	226	242	2 x M16	104	280	70	32	180
70	SNC516	516	01EBC SNC516 70mm	95	254	266	2 x M20	114	315	90	38	206
75	SNC517	517	01EBC SNC517 75mm	95	254	266	2 x M20	114	315	90	38	206
80	SNC518	518	01EBC SNC518 80mm	100	284	296	2 x M20	136	345	100	32	240
85	SNC519	519	01EBC SNC519 85mm	112	284	296	2 x M20	136	345	100	44	252
90	SNC520	520	01EBC SNC520 90mm	112	312	328	2 x M24	136	380	90	44	252
100	SNC522	522	01EBC SNC522 100mm	125	342	366	2 x M24	134	420	102	52	271
110	SNC524	524	01BC SNC524 110mm	140	344	356	2 x M24	142	410	120	45	310
115	SNC526	526	01BC SNC526 115mm	150	372	388	2 x M24	142	450	130	50	320
125	SNC528	528	01BC SNC528 125mm	150	414	426	2 x M30	156	500	150	50	360
135	SNC530	530	01BC SNC530 135mm	160	444	456	2 x M30	168	530	160	56	381
140	SNC532	532	01BC SNC532 140mm	170	462	478	2 x M30	168	558	178	41	391

Add EX for Expansion Type or GR for Fixed Type to reference.



Cement

Cooper bearings are used widely throughout the world in the cement industry on applications such as ball mills, clinker breakers, hammer mills, fans and various types of conveyors including scroll conveyors.



Chemical

Typical applications for Cooper in the chemical industry include dryer bearings, ventilation fans and conveyors.

Cooper is renowned for quality sealing which keeps out foreign particles from the bearings thereby providing higher productivity.



Conveying

Cooper offer vast experience to the users of conveyors. No matter what the commodity being conveyed, Cooper can reduce downtime and increase productivity.

Also in the Cooper product range is the tried and trusted hanger bearing used on scroll conveyors.



Fans and Blowers

Cooper offer bearings for all types of fans and blowers for virtually any industrial application.

Specifying Cooper bearings for fans will reduce your maintenance cost, the fans will also be operating again faster when compared to a using a solid bearing in the same location.



Grain Handling

When the grain season arrives, productivity is paramount. By specifying Cooper bearings on grain handling equipment, customers are assured that optimum productivity is attainable.

Cooper is specified on elevators, fans and silo mixing arms.



Marine Propulsion

Cooper bearings are used on propulsion shafts and waterjet drives. Some of the most prestigious vessels afloat have Cooper bearings on their drive line. Cooper is also specified on deck equipment and fans.

Cooper is Lloyd's Register Type Approved.



Steel

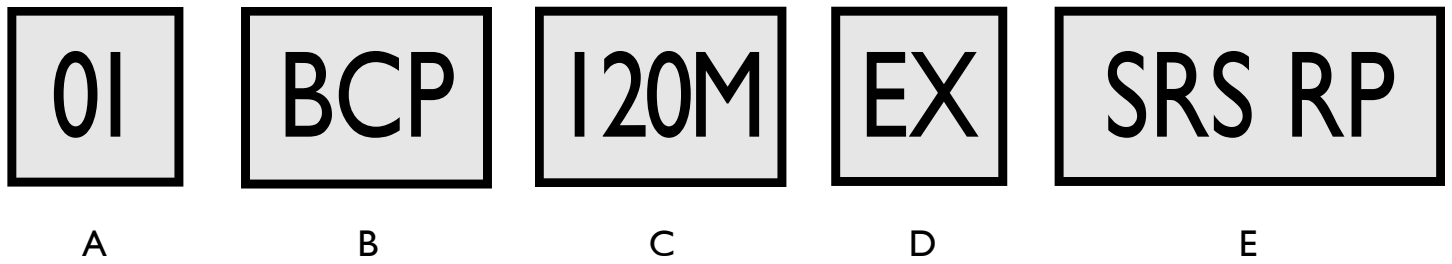
Although standard Cooper bearings are used throughout the steel making industry, it is the split to the shaft watercooled bearings that make a difference on continuous slab caster centre positions.

Cooper has considerable experience in the steel making industry.



Sugar

Specified for use on separators, conveyors, fans and cane crushers. Cooper has an outstanding record in the sugar industry around the world. Cooper sealing copes with extremely hostile conditions and prolongs bearing life.



A - Series Designation

01 Series - Medium Duty
 01E Series - Enhanced Duty (45mm to 105mm)
 02 Series - Heavy Duty
 03 Series - Extra Heavy Duty

B - Configuration Identifier

BCP - Bearing, Cartridge and Pedestal
 BCF - Bearing, Cartridge and Flange
 BCZ - Bearing, Cartridge and Z-Line Pedestal

C - Bore Sizes

Metric

120M shown represents 120mm
 130M would represent 130mm

Imperial

The last two digits represents 16ths of an inch
 For example: 608 = 6 1/2", 104 = 1 1/4"
 Standard size range from 35mm (1 3/16") up to 600mm (24")
 Over 600mm (24") are Made to Order.

D - Bearing Type

EX - Expansion Type
 GR - Fixed Type

E - Seal Type

AT - Aluminium Triple Labyrinth Seal
 LAB - Grease Groove Seal
 SRS RP - SRS Seal with retaining plate.

User Name	Distributor Name
Company	Company
Address	Branch
Fax	Fax
E-mail address	e-mail address
Telephone	Telephone

Shaft diameter	Current bearing
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Current bearing life	Expected bearing life
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Bearing rpm	
or motor speed	and pulley diameters
or motor speed	and gear box ratio
or feet/min	and head pulley diameter

Type of drive	Direct drive		
Coupling type	Flex	Rigid	
Reduction Gear	Yes/no	with Ratio	
Belt Drive	Yes/no	with Pulley Diameter	
Gear Drive	Gear Diameter	Gear Type	Pressure Angle
Dead Weight of Rotating Part	Thrust Load		

Comments

Sketch of Application

