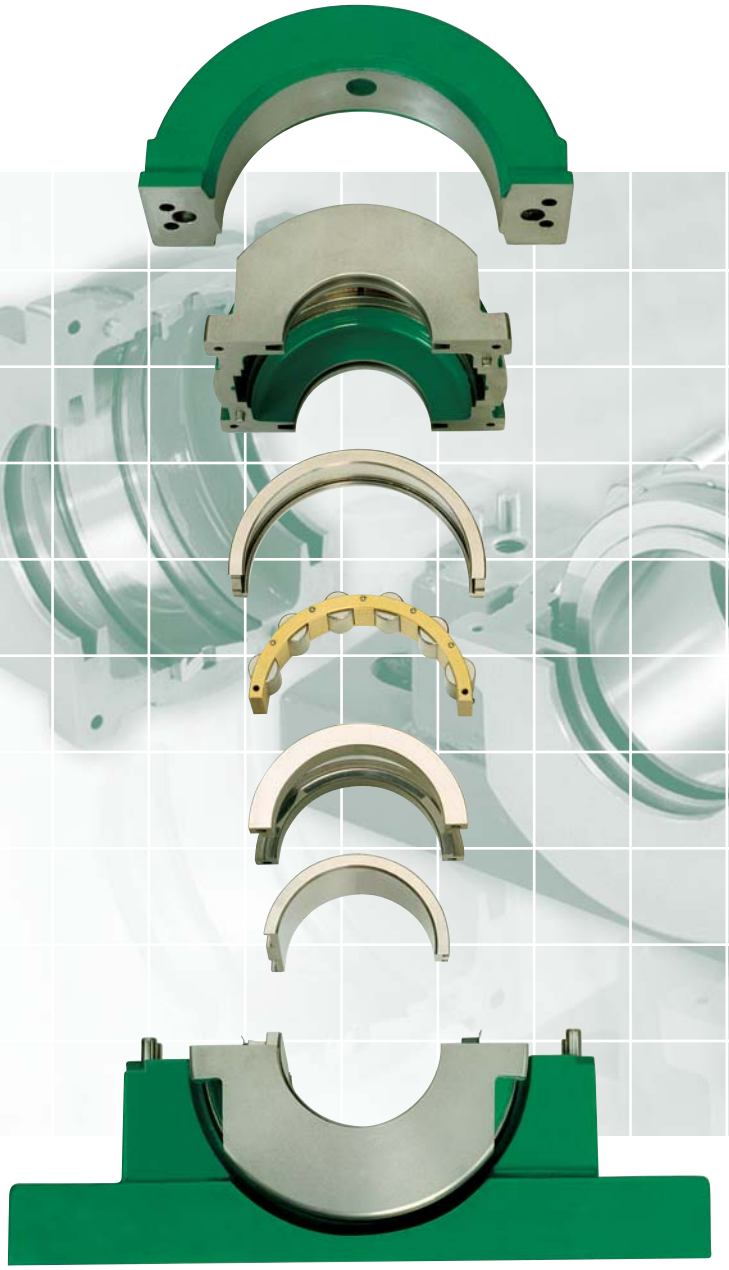
TECHNICAL CATALOG

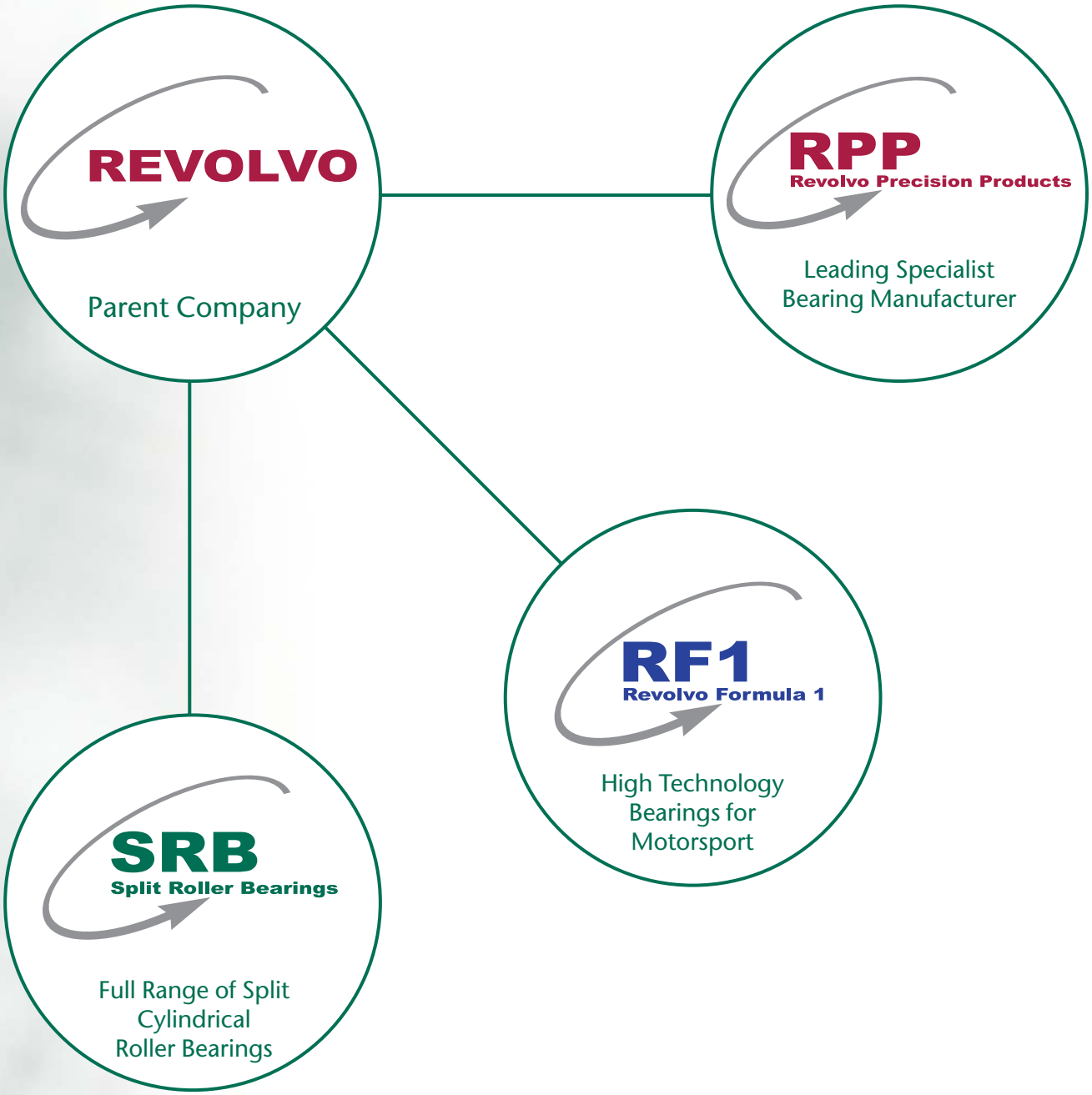
SRB



Catalog Number: WISB222

SRB
Split Roller Bearings

Revolvo Family



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Introduction
Taking the Initiative

In today's demanding industrial environment, specialist technology is, more than ever, key to improved efficiency, productivity and ultimately profitability. SRB, is increasingly seen as a company who routinely challenge technological boundaries.

Rapid response and flexibility are provided from a production facility manufacturing not only split roller bearing assemblies but also cutting edge products for aerospace and motor sport. The unique relationship between manufacturer and distributors combined with innovative cellular manufacturing and modular stocking offer unparalleled availability.

From concept to design, design to production, and then throughout the life cycle of the unit no other split bearing manufacturer works so hard to exceed your expectations.

Performance

SRB products have been designed and developed to maximise service life and minimise maintenance effort.

SRB bearings have machined brass cages with unique single piece clips as standard, rolling elements are profiled to minimise damaging edge stresses and provide optimum rolling contact.

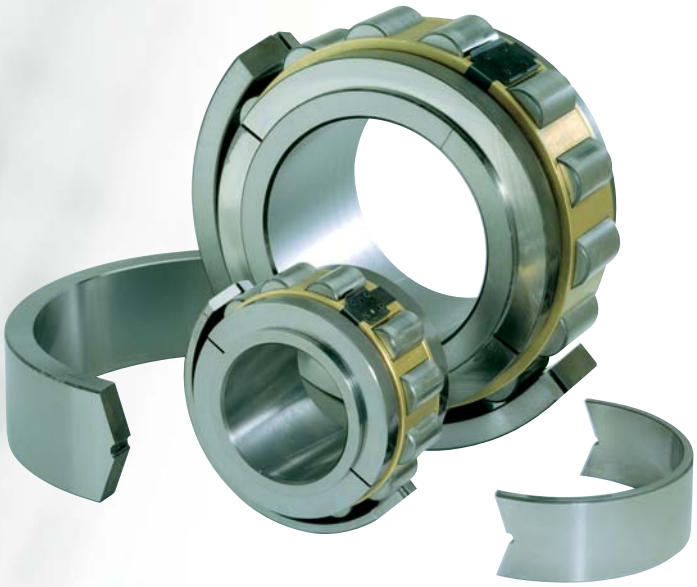
All supports and housings incorporate pry slots and doweled machined joints for easy separation. Supports are manufactured from high strength cast iron and feature double webs and thick sections; product life is thus enhanced due to high rigidity and inherent strength.

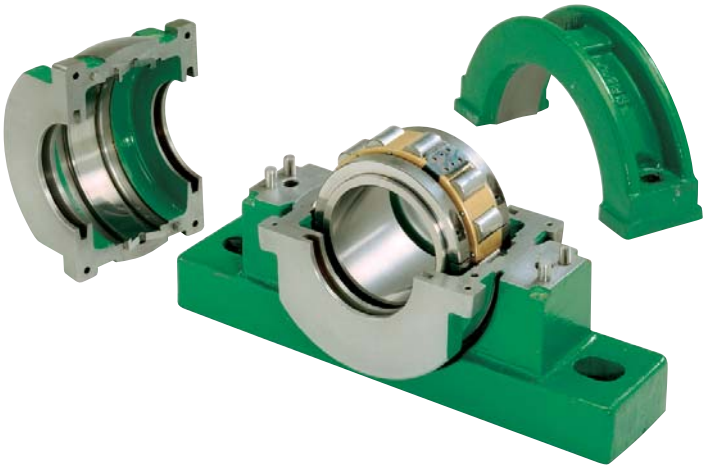
Innovation in application

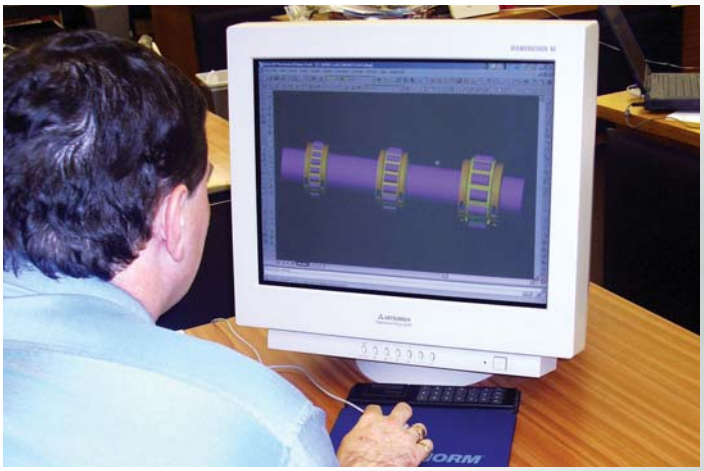
The benefits of totally split-to-the-shaft bearing assemblies are long established, subsequent savings in production and maintenance are well documented.

However, split roller bearings are today being selected for an ever-wider range of applications. Additional features and benefits available from the SRB range allow our products to run faster, take higher loads, at higher temperatures and in increasingly hostile environments.

Optimisation of plant efficiency is the goal of today's maintenance engineer. The application of reliable products offering real savings, derived from increased mean time between failures, which widens periods between planned shutdowns, and the elimination of unplanned downtime are becoming a reality when utilising advanced components accommodating split options.







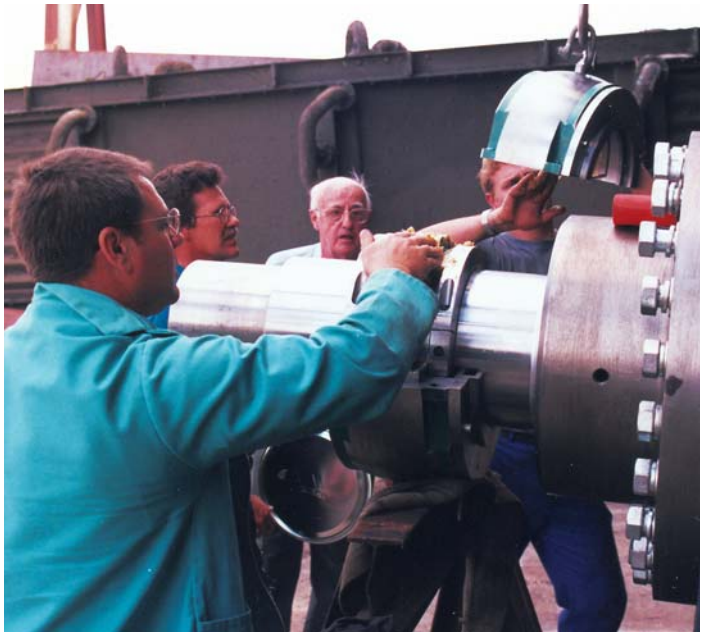
Innovation in Service

Producing products that push the boundaries of performance is only the beginning. SRB recognises that users and specifiers of split roller bearings demand logistical, technical and after sales support.

Experienced application engineering support is available to assist customers with concepts through consultation, commissioning, training, supply and post installation support.

Cellular manufacture, modular stocking, logistical expertise and unique distributor/manufacturer interfaces provide excellent availability of product in the right place at the right time.

A team of design engineers provides bespoke solutions on state of the art CAD systems. Close liaison with our customers allows SRB to continuously refine and improve products, production processes and service procedures. This enables ongoing development allowing SRB to provide a bench mark in technical support.



Advantages of Split Roller Bearings

Split Roller Bearings are essential in applications involving limited access and are highly cost effective where down time due to change-outs results in significant production losses.

Split Roller Bearings are completely split to the shaft. Installation and inspection times are therefore dramatically reduced. Additionally the time saved and costs eliminated by not having to remove ancillary equipment results in even higher potential savings.

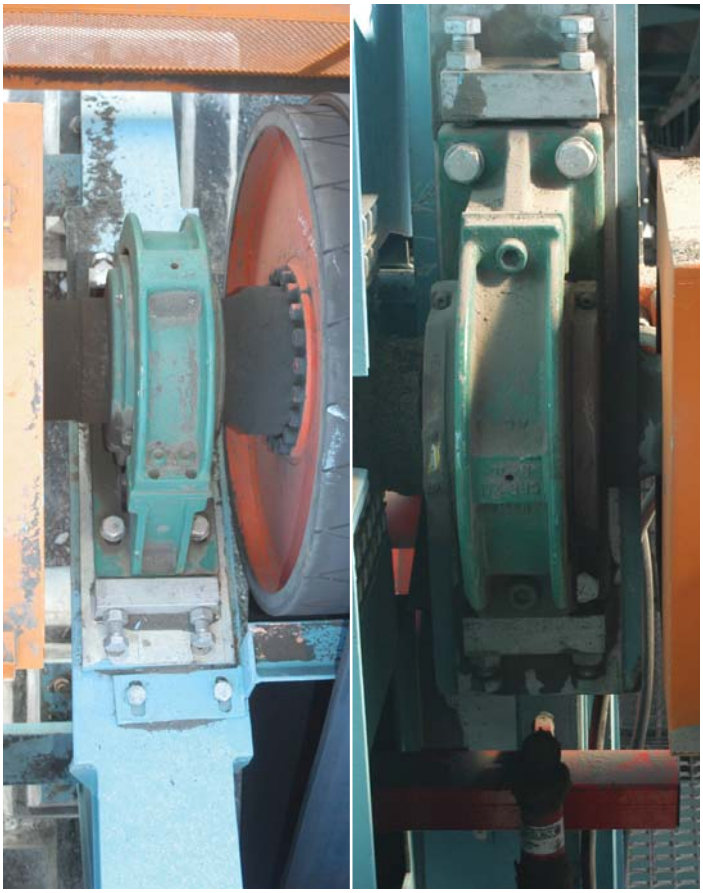
Inspection Simplified

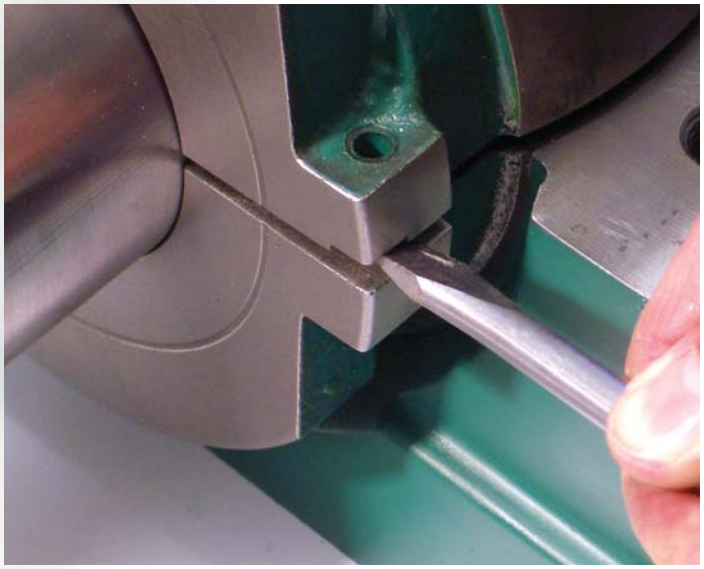
No matter what the size or type of split roller bearing, inspection is straight forward. Simply remove the support cap and the top half of the housing and all bearing parts become visible and accessible.

As a result considerable numbers of man-hours can be saved during planned maintenance, further adding to the potential cost savings available.

Short Term Payback, Long Term Benefits.

Though it would be easy to cite examples where the use of split bearings results in spectacular savings, the truth of the matter is that savings of a significant amount can be made in almost any application. Even modest savings can be enough to justify the use of split bearings. Depending on the application, down times for replacement of split bearings can be a small fraction of those required for solid bearings. This yields savings in both maintenance man-hours and lost production.





When such cost savings are taken into account at the bearing selection stage, the case for SRB split roller bearings becomes irrefutable.

Further Savings

Even in situations where SRB bearings are used to replace other split bearing brands the potential for savings exists. Through the use of machined brass cages as standard, inclusion of profiled rolling elements and the incorporation of high-grade materials for housings and supports, SRB bearings have the capability to extend service life leading to a reduction in bearing consumption.

Applications and Industries

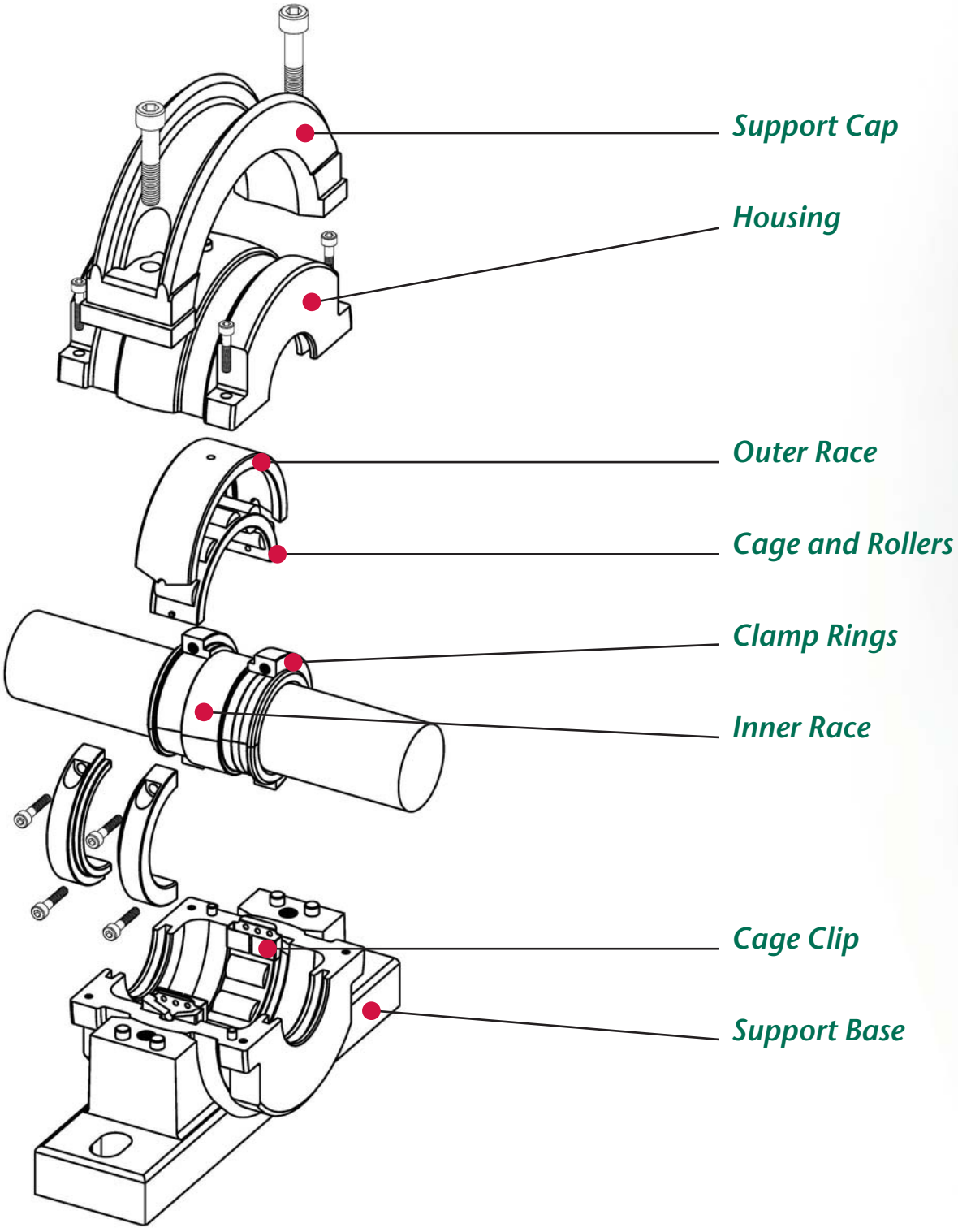
The key benefit of split roller bearings is the savings that can be made in relation to reducing downtime. This is an advantage which can be utilised in any industry. Along with our distributors throughout the world, SRB have a proactive approach to market evolution and are constantly identifying and developing new applications for split roller bearings. SRB continue to service and supply a wide range of Industries and associated applications including:

- Air Movement
- Cement
- Conveyor Systems
- Metal Processing
- Mining
- Power Generation
- Quarrying
- Sugar
- Timber
- Manufacturing

Features and Benefits

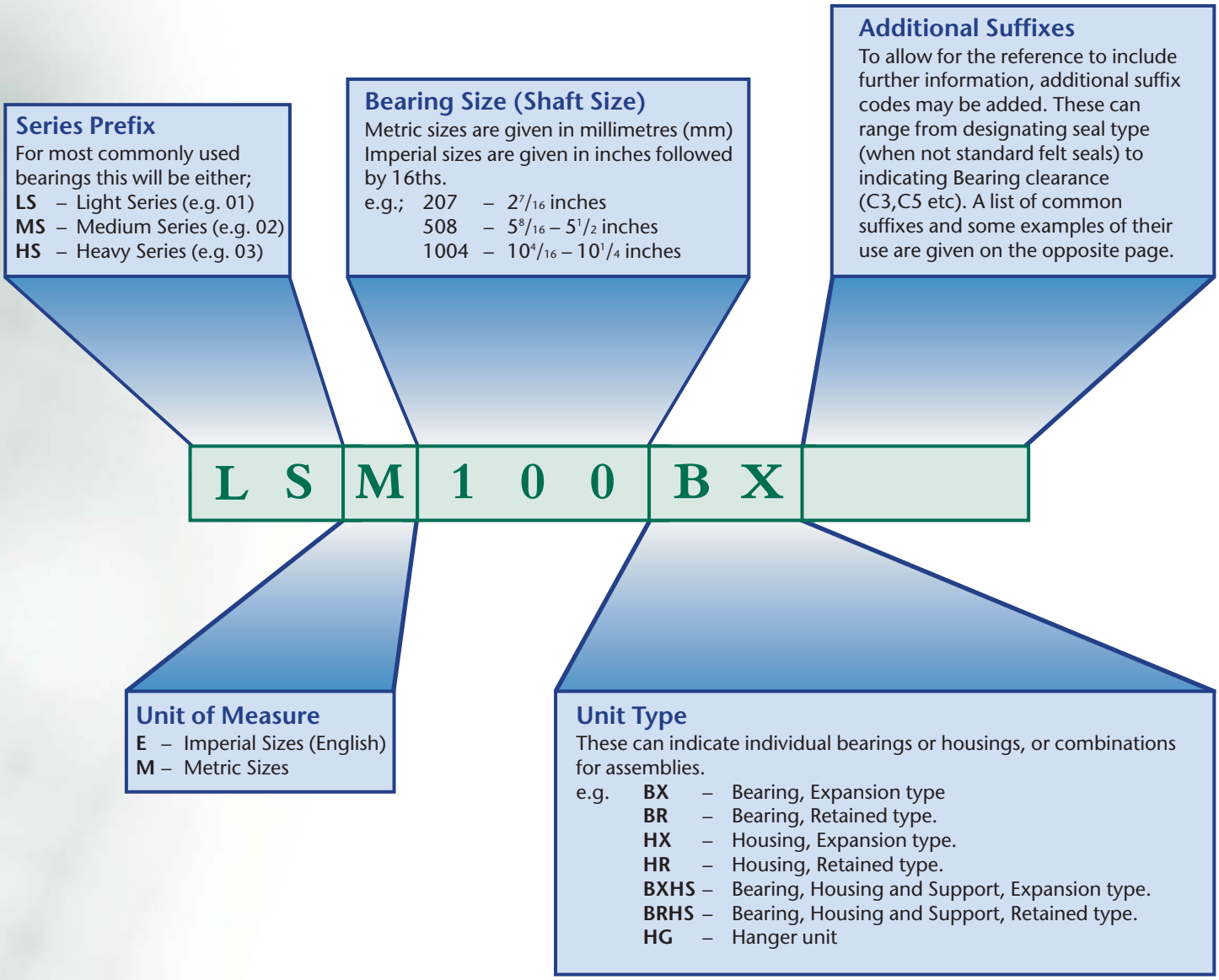
Features	Benefits
All components are totally split to the shaft	Quick and easy installation. Substantial reduction in downtime compared to replacement of solid bearings
Support caps and housing halves are quickly removed	Easy visual inspection to assess the condition of the bearing (during planned maintenance)
Replacement bearing interchangeability with existing housing	Simple and economic bearing replacement
Unit accommodates initial misalignment	Simplifies installation of associated equipment
Machined brass cage as standard	Enhanced ability to accommodate higher speeds and temperatures
Innovative cage clip design	Clips retained on one cage half during assembly and disassembly
250 Grade cast iron to BS EN1561 : 1997	Strength and durability
Profiled rolling elements	Minimises damaging edge stresses

Standard Unit Anatomy



Quick Reference Guide

In order to provide our customers with clear and concise labelling, SRB have endeavoured to keep things simple when creating references. The following should cover the majority of ordering situations, however, as always, your local SRB distributor or SRB Technical Services will be pleased to provide further assistance if required.



Typical Examples

LSM50BR
Light Series 50mm Retained Bearing

LSE108BXH
Light Series 1½ inch Expansion Bearing with Housing

MSM100HR
Medium Series 100mm Retained Housing

MSE200BXHS
Medium Series 2 inch Expansion Bearing with Housing and Support

LSM75BXHG
Light Series 75mm Expansion Bearing in Hanger Unit

Series Prefixes

LSM	Light Series Metric
LSE	Light Series Imperial
MSM	Medium Series Metric
MSE	Medium Series Imperial
HSM	Heavy Series Metric
HSE	Heavy Series Imperial
XSM	Tubular Strander Series Metric
XSE	Tubular Strander Series Imperial
CCM	Water Cooled Series Metric
CCE	Water Cooled Series Imperial

Type References

BX	Expansion Bearing
BR	Retained Bearing
HX	Expansion Housing
HR	Retained Housing
HG	Hanger Housing
BXH	Expansion Bearing with Housing
BRH	Retained Bearing with Housing
BXHG	Expansion Bearing with Hanger
BXHS	Expansion Bearing with Housing and Support
BRHS	Retained Bearing with Housing and Support
BXHF	Expansion Bearing with Housing and Flange
BRHF	Retained Bearing with Housing and Flange
BXHTT	Expansion Bearing with Housing and Tension Type Take Up
BRHTT	Retained Bearing with Housing and Tension Take Up
BXHTP	Expansion Bearing with Housing and Pull Type Take Up
BRHTP	Retained Bearing with Housing and Pull Type Take Up

Examples of Additional Suffixes

AF	Axial Float
AP	Air Purge
ATL	Aluminium Triple Labyrinth
BEM	Base Ends Machined
BL	Brass Label
BOEC	Bolt On End Cover
C2,C3,C5	Bearing Clearance (ISO)
CH	Inner Race bore Chamfer with size eg CH6mm, CH11mm
EC	End Cover
ECTL	End Cover for Triple Labyrinth Bore
ES	Electrical Specification
FC	Full Compliment of rollers
GE	Grease Escape
HTPS	High Temperature Packing Seal
LSR	Laminar Seal Rings
NTL	Nitrile Triple Labyrinth
OB	Overbored with size eg OB160mm
OTL	Overbored Triple Labyrinth Seal
RSS	Nitrile Single Lip Seal
S1,S2,S3	Designation for Tempered Bearings (ISO)
SF0	Swivel fit, Zero clearance.
SLO	Single Lipped Outer
SLUB	Spherical Lubrication
TE	Temperature Probe hole
WSRP	Single Lip Seal with Garter Spring and Retaining Plate
XAR	Extended Antirotation Pin

Light Series

mm	inch	Support	Flange	Take Ups	
35 to 40	1 3/16 to 1 1/2	S01	F01	TT01	TP01
45 to 50	1 11/16 to 2	S02	F02	TT02	TP02
60 to 65	2 3/16 to 2 1/2	S03	F03	TT03	TP03
70 to 75	2 11/16 to 3	S04	F04	TT04	TP04
80 to 90	3 3/16 to 3 1/2	S05	F05	TT05	TP05
100 to 105	3 11/16 to 4	S06	F06	TT06	TP06
110 to 115	4 3/16 to 4 1/2	S07	F07	TT07	TP07
120 to 130	4 11/16 to 5	S08	F08	TT08	TP08
135 to 140	5 3/16 to 5 1/2	S09	F09	TT09	TP09
150 to 155	5 11/16 to 6	S10	F10	TT10	TP10
160	6 7/16 to 6 1/2	S11	F11		
170 to 180	6 11/16 to 7	S12	F12		
190 to 200	7 1/4 to 8	S13	F13		
220 to 230	8 1/2 to 9	S14	F14		
240 to 250	9 1/2 to 10	S15	F15		
260 to 280	10 1/2 to 11	S16	F16		
300	11 1/2 to 12	S17			
320 to 330	12 1/2 to 13	S18			
340 to 350	14	S19			
360 to 380	15	S20			
400	16	S21			
420	17	S22			
440 to 460	18	S23			
480	19	S24			
500	20	S25			
530	21	S26			
560	22	S27			
580	23	S28			
600	24	S29			

Medium Series

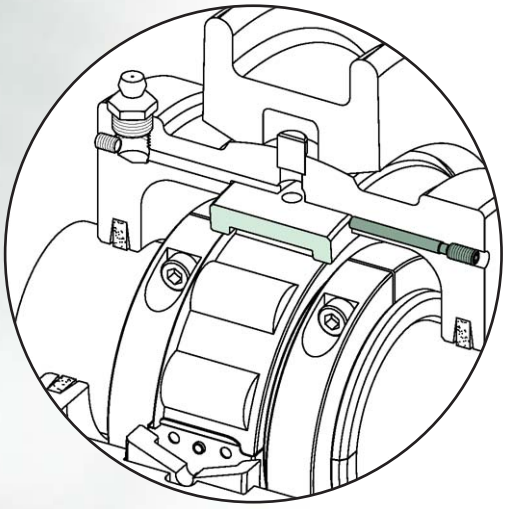
mm	inch	Support	Flange	Take Ups	
45 to 50	1 11/16 to 2	S03	F03	TT03	TP03
60 to 65	2 3/16 to 2 1/2	S04	F04	TT04	TP04
70 to 75	2 11/16 to 3	S05	F05	TT05	TP05
80 to 90	3 3/16 to 3 1/2	S06	F06	TT06	TP06
100 to 105	3 11/16 to 4	S07	F07	TT07	TP07
110 to 115	4 3/16 to 4 1/2	S08	F08	TT08	TP08
120 to 130	4 11/16 to 5	S10	F10	TT09	TP09
135 to 140	5 3/16 to 5 1/2	S30	F30	TT30	TP30
150 to 155	5 11/16 to 6	S31	F31	TT31	TP31
160 to 170	6 7/16 to 6 1/2	S32	F32		
180	6 11/16 to 7	S33	F33		
190 to 200	7 1/4 to 8	S34	F34		
220 to 230	8 1/2 to 9	S35	F35		
240 to 260	9 1/2 to 10	S36	F36		
280	10 1/2 to 11	S37	F37		
300	11 1/2 to 12	S38	F38		
320 to 330	12 1/2 to 13	S39			
340 to 360	14	S40			
380	15	S41			
400	16	S42			
420	17	S43			
440 to 460	18	S44			
480	19	S45			
500	20	S46			
530	21	S47			
560	22	S48			
580	23	S49			
600	24	S50			

Heavy Series

mm	inch	Support	Flange
100 to 105	3 11/16 to 4	S54	F54
110 to 120	4 3/16 to 4 1/2	S55	F55
125 to 130	4 11/16 to 5	S56	F56
135 to 140	5 3/16 to 5 1/2	S57	F57
150 to 155	5 11/16 to 6	S58	F58
160 to 170	6 7/16 to 6 1/2	S59	F59
180	6 11/16 to 7	S60	F60
190 to 200	7 1/4 to 8	S61	F61
220 to 230	8 1/2 to 9	S62	F62
240 to 260	9 1/2 to 10	S63	F63
280	11	S83	F64
300	12	S65	F65
320 to 330	13	S66	
340 to 360	14	S86	
380 to 400	15 to 16	S68	
420 to 440	17	S89	
460	18	S90	
480	19	S94	
500	20	S94	
530	21	S94	
560	22	S94	
580	23	S95	
600	24	S95	

Retained Type Bearings (BR)

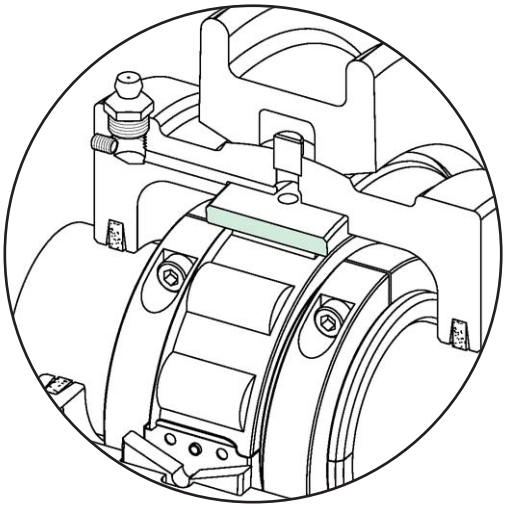
This bearing has integral lips on the outer race to provide a surface for axial load. This axial load is accommodated on the inner race via the hardened clamp rings, which both align the inner race halves and provide roller guidance. In larger bearings the inner race is manufactured with integral ribs for roller guidance and axial load.



This type of bearing will locate the shaft axially as well as provide a means for taking axial load. The retained outer race must be fixed sideways against one of the housing groove shoulders using the pins and screws provided. Only one retained unit should be mounted on any particular shaft. Additional care should be taken when mounting split roller bearing unit on shafts using other, non-split types of bearings (ball, cylindrical and spherical roller etc.) to ensure there are no other locating bearings used.

Expansion Type Bearings (BX)

This bearing is designed for radial loads only. As in the retained type bearing, the rollers are guided on the inner race by the hardened shoulders of the clamping rings.



During expansion or contraction of the shaft, rollers are free to move across the plain outer race offering virtually no resistance to axial movement. Limits for the amount of axial movement are given in the Assembly and Maintenance section.

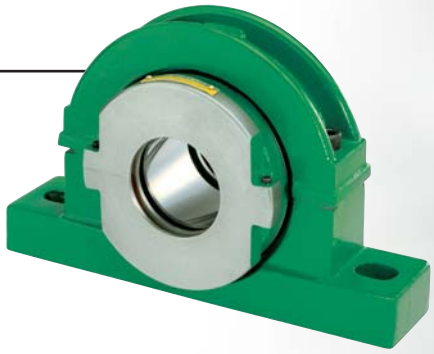
Support Types

Support Units

SRB bearings and housings may be mounted in a variety of support units according to the application and loading constraints. A number of variants are available as standard types with other unit types available on request. SRB can also offer a design and manufacturing facility to produce bespoke units to cover more specialised applications.

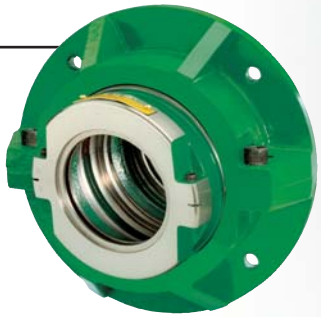
Pillow Block Type

This is by far the most popular method for mounting SRB units. These supports are manufactured from high strength, grade 250 (BS EN1561 :1997) cast iron. This, combined with the robust design, provides a stable, rigid base, allowing the split bearing fitted to give optimum performance.



Flange Units

In applications where bearings need to be mounted against horizontal or vertical faces, SRB flange units provide a simple means of achieving this goal. Again, the use of Grade 250 cast iron ensures a durable unit.



Hanger Units

A compact unit commonly used for supporting screw conveyors or similar equipment.

Take-up Units

These sliding units can be used to effectively tension conveyor and elevator systems. Both pull and push types are available.

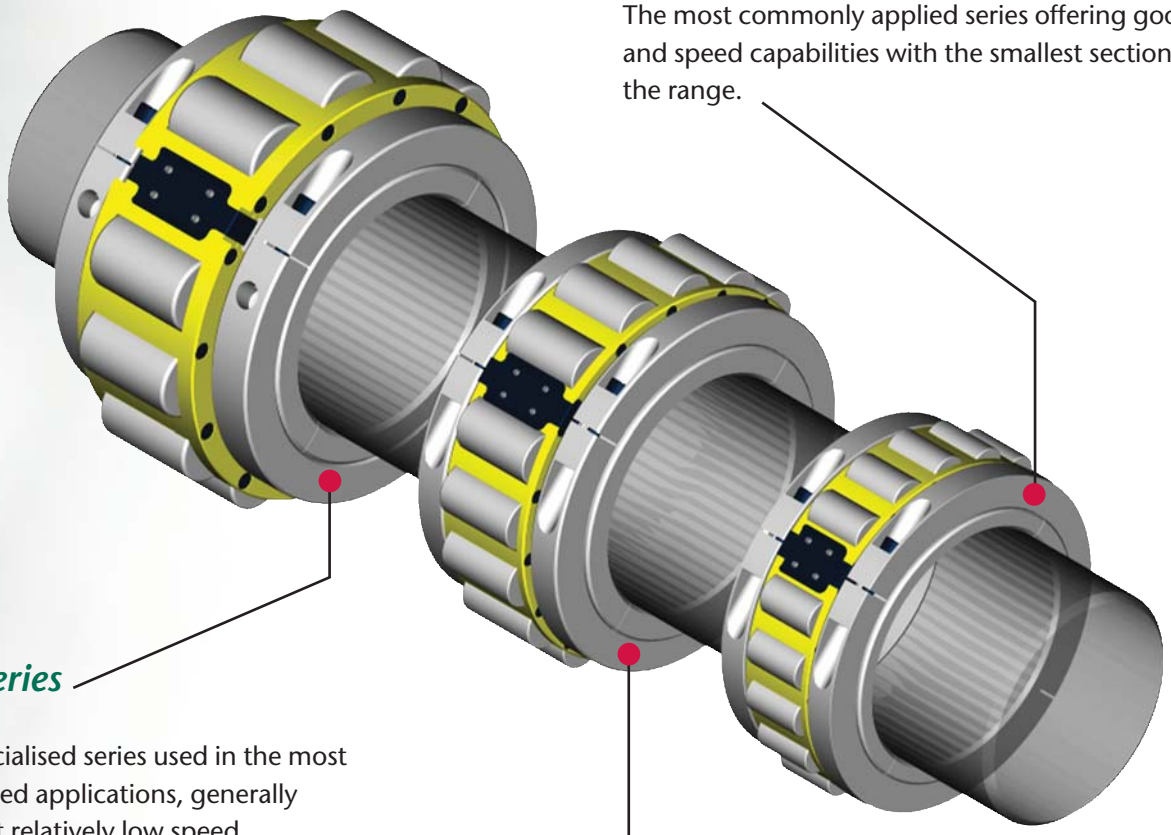
Range Comparison
Bearing Series

Comparison

SRB offers a range of bearing series, providing solutions for a wide range of operating conditions. Light, Medium and Heavy series offer an increasing ability to accommodate higher loads. As the series increases the speed capability reduces.

Light Series:

The most commonly applied series offering good load and speed capabilities with the smallest section within the range.



Heavy Series

A more specialised series used in the most heavily loaded applications, generally operating at relatively low speed.

Medium Series

An increased section offers additional load carrying capacity. This series is typically used in arduous, heavily loaded applications where shock load and vibration may be present.

Bearing Selection

Dynamic Loading

Selection of SRB split roller bearings must take into account the effects of both radial and axial loads. These loads must be considered independently of each other.

Radial Load Considerations

The basic rating life of a bearing can be derived from the formulae laid down in ISO281:1990

$$L_{10} = (C/P)^{10/3} \ (10^6 \text{ Revolutions}) \quad \text{– (i)}$$

In the majority of cases where the speed remains constant then the life can be expressed in hours from the formula

$$L_{10}h = \frac{(10^6) \times L_{10}}{60 \times n} \quad \text{– (ii)}$$

Substituting – (i)

$$L_{10}h = \frac{(10^6) \times}{60 \times n} \left(\frac{C}{P} \right)^{10/3} \quad \text{– (ii)}$$

L_{10} = **Basic Rating Life (90% reliability), 10^6 Revolutions**

$L_{10}h$ = **Basic Rating Life (90% Reliability), Hours**

C = **Bearing Dynamic Capacity, kN**

n = **Speed, min^{-1}**

P = **Equivalent Bearing Load**

This calculation assumes for the load components considered for an individual bearing, that the shaft system is a beam resting on rigid, moment free supports. Elastic deformations in the bearing, housing or machine structure are not taken into account.

Equivalent Load "P"

As previously stated radial and axial loads must be considered separately for split roller bearings. For the calculation of theoretical life only radial loads are considered.

Fr = Radial Loads

The value of Fr is that calculated from standard mechanical formulae, the impact of additional forces resulting from external influences must also be considered.

Load Condition	Factor Fz
Steady	1.0 to 1.3
Light Shock or Out of Balance	1.3 to 2.0
Heavy Shock or Vibration	2.0 to 3.0

Fz = Factor

Under the influence of the above conditions

$$P = F_r \times F_z$$

The required theoretical bearing life is based upon a number of factors, including reliability, accessibility and service considerations. Generally life values should be as follows:

Guide to Life Values	
Machine Used Intermittently	500 to 2,000 hours
Occasional Use	5,000 to 10,000 hours
Normal Operation	20,000 to 50,000 hours
Continuous Operation	75,000 to 100,000 hours
High Reliability	> 100,000 hours

Adjusted Life Calculation

The L10 fatigue life calculation is based upon the rating life of a large number of identical bearings expressed as a number of revolutions operating at a constant speed. This rating life is reached or exceeded by 90% of these before the first evidence of fatigue appears.

The above definition applies to bearings operating under optimum conditions. Variations in operating conditions will lead to changes in the life of these bearings.

ISO281 allows for an adjusted life calculation:

Lhna = a_1 x a_2 x a_3 x L_{10}h

Where

Lhna = Adjusted Life

L_{10}h = Rating Life in Hours

a_1 = Life adjustment factor, failure probability other than 10%

a_2 = Life adjustment factor, material properties

a_3 = Life adjustment factor, operating conditions

a_1 Factor

In cases where a failure rate other than 10% is required, then an a_1 factor as in the table below, should be applied.

Table A1

	Adjustment Factor					
Failure Probability %	10	5	4	3	2	1
Factor a_1	1.00	0.62	0.53	0.44	0.33	0.21

a_2 Factor

This factor takes into account the material properties.

a_3 Factor

The a_3 factor considers all operational parameters that influence fatigue life. The most obvious of these is lubrication. The highest life values are achieved where a state of hydrodynamic lubrication exists, in this state no metal to metal contact occurs.

Decreasing effectiveness of lubricant due to decreasing film thickness or effects of contamination will reduce the a_3 factor.

Due to the interrelationships between materials adjustment factor a_2 and operating adjustment factor a_3, a common factor a_{23} is frequently used.

a_{23} Factor

$a_{23} = a_2 + a_3$

The a_{23} factor can be taken from fig 1:

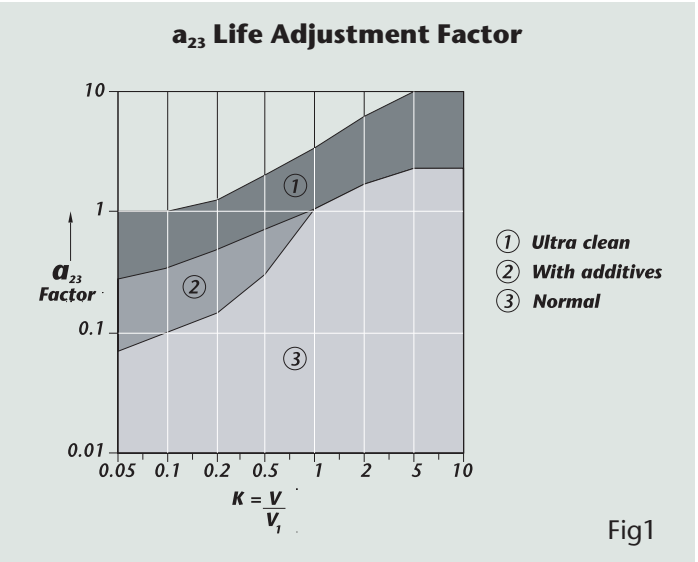
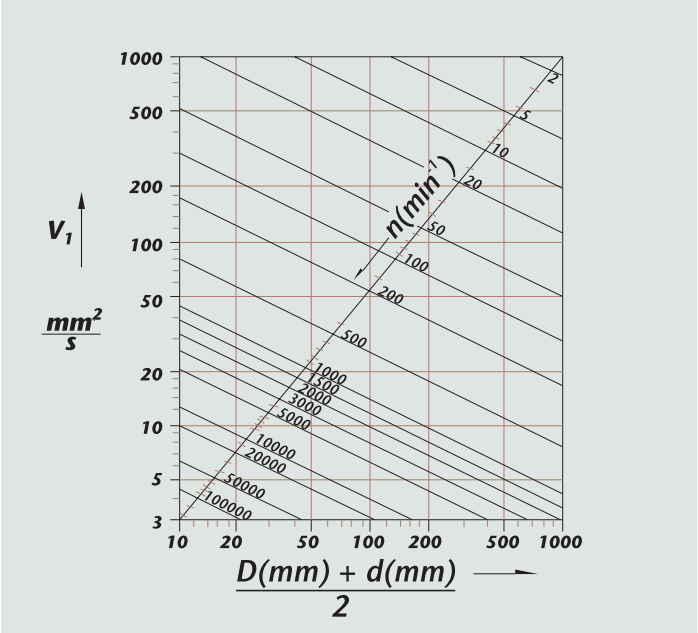


Fig1

V_1 = Rated Viscosity (Depends on bearing size and operating speed)

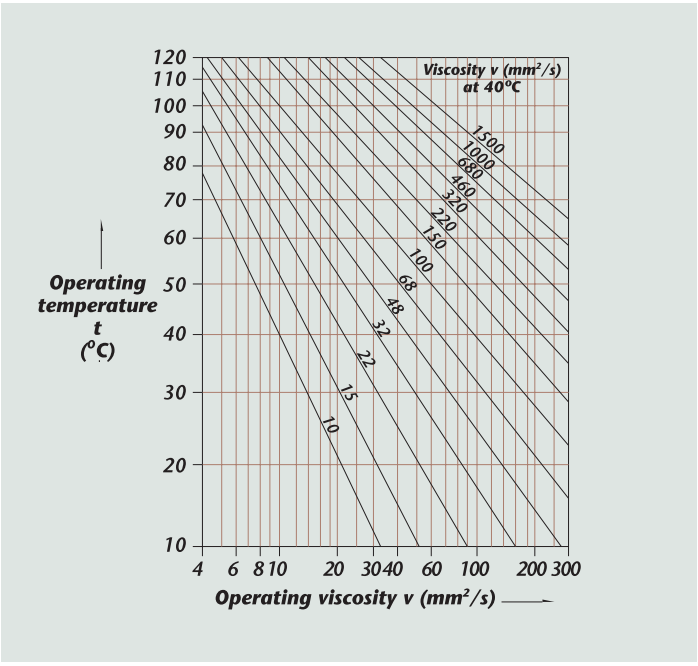
V = Operating Viscosity (Depends on original viscosity and operating temperature)

Values for V and V_1 are obtained from the following graphs:



Where D = Bearing outside diameter
d = Bearing Bore
n – Shaft speed (RPM)

V_1 is then read off the vertical axis.



Using the operating temperature and nominal lubricant viscosity, the value for operating viscosity, V, is read off the horizontal axis.

Static Loading

In situations where bearings rotate slowly (<10 rpm), oscillate slowly, are stationary for prolonged periods, or subject to high shock loads, it is important to check that no permanent deformations occur between rolling elements and raceways at peak load.

The basic static load rating is defined in ISO 76:1987 and refers to the contact stress at the centre of the most heavily loaded rolling element/raceway contact area. For roller bearings this value is 4000 Mpa. This will result in a permanent deformation of 0.0001 of the roller diameter.

The required static load rating can be determined from:

Co = Fs. Po

Co = Basic Static Load Rating
Po = Equivalent Static Load
Fs = Static Safety Factor

Guidelines for the Static Safety Factor Fs can be found in the table below:

Nature of Duty	Requirements for Duty		
	Low	Medium	High
Smooth no Vibration	1.0	1.5	3.0
Normal	1.0	1.5	3.5
Heavy	>2.5	>3.0	>4.0

Bearing Ratings

Light Series

Shaft (d)		Bearings Ratings			
mm	inch	Dynamic C_r (kN/lb)	Static C_{or} (kN/lb)	Axial C_a (kN/lb)	Max RPM
35 40	1 3/16 1 1/2	65 14613	68 15287	3.20 719.38	5400
45 50	1 11/16 2	83 18659	87 19558	3.60 809.30	4630
60 65	2 3/16 2 1/2	103 23155	115 25853	5.40 1213.95	3940
70 75	2 11/16 3	138 31024	161 36194	7.60 1708.53	3310
80 90	3 3/16 3 1/2	187 42039	231 51931	12.40 2787.59	2790
100 105	3 11/16 4	288 64745	366 82280	16.00 3596.90	2340
110 115	4 3/16 4 1/2	316 71040	427 95993	18.60 4181.39	1970
120 130	4 11/16 5	363 81606	496 111505	22.20 4990.69	1740
135 140	5 3/16 5 1/2	422 94869	585 131513	25.80 5799.99	1570
150 155	5 11/16 6	459 103187	664 149273	29.40 6609.30	1450
160	6 7/16 6 1/2	583 131064	792 178049	33.00 7419	1320
170 180	6 11/16 7	524 117800	828 186142	36.40 8183	1220
190 200	7 1/4 8	614 138033	990 222561	41.00 9217	1070
220 230	8 1/2 9	659 148149	1062 238747	49.00 11016	930
240 250	9 1/2 10	696 156467	1182 265724	57.80 12994	820
260 280	10 1/2 11	794 178498	1376 309337	66.80 15017	730
300 305	11 1/2 12	929 208848	1665 374307	78.20 17580	650
320 330	12 1/2 13	920 206824	1674 376330	89.00 20008	590
340 350	14	967 217390	1824 410052	99.60 22391	540
360 380	15	1011 227282	1975 443998	110.40 24819	500
400	16	1054 236949	2125 477719	115.60 25988	460
420	17	1095 246166	2275 511440	121.00 27202	430
440 460	18	1134 254933	2427 545611	127.20 28596	410
480	19	1291 290228	2800 629465	132.60 29810	380
500	20	1336 300345	2974 668582	137.80 30979	360
530	21	1377 309562	3150 708148	140.60 31608	340
560	22	1419 319004	3324 747265	142.40 32013	330
580	23	1591 357671	3759 845057	144.00 32372	310
600	24	1638 368237	3956 889344	146.80 33002	300

Medium Series

Shaft (d)		Bearings Ratings			
mm	inch	Dynamic C_r (kN/lb)	Static C_{or} (kN/lb)	Axial C_a (kN/lb)	Max RPM
45 50	1 11/16 2	121 27202	127 28551	6.20 1394	4350
55 65	2 3/16 2 1/2	168 37768	190 42714	8.80 1978	3680
70 75	2 11/16 3	258 58001	300 67443	10.60 2383	3080
80 90	3 3/16 3 1/2	297 66768	353 79358	17.80 4002	2520
100 105	3 11/16 4	388 87226	491 110381	25.00 5620	2130
110 115	4 3/16 4 1/2	454 102063	592 133087	31.20 7014	1820
120 130	4 11/16 5	525 118025	700 157366	38.20 8588	1600
135 140	5 3/16 5 1/2	600 134885	817 183669	45.40 10206	1450
150 155	5 11/16 6	730 164111	1034 232453	52.40 11780	1320
160 170	6 7/16 6 1/2	842 189289	1175 264151	61.40 13803	1200
180	6 11/16 7	927 208398	1357 305066	71.20 16006	1120
190 200	7 1/4 8	1013 227732	1516 340810	80.00 17985	960
220 230	8 1/2 9	1138 255833	1668 374981	89.80 20188	850
240 260	9 1/2 10	1240 278763	1882 423091	98.80 22211	750
270 280	10 1/2 11	1476 331818	2357 529875	113.80 25583	670
300 305	11 1/2 12	1569 352725	2607 586077	129.00 29000	610
320 330	12 1/2 13	1723 387346	2922 656892	144.20 32417	550
340 360	14	1989 447145	3403 765025	159.20 35790	500
380	15	1800 404656	3202 719838	174.40 39207	460
400	16	2105 473223	3793 852701	188.40 42354	430
420	17	2324 522456	4164 936105	202.00 45411	400
440 460	18	2215 497952	4183 940376	216.00 48559	380
480	19	2445 549658	4594 1032773	230.00 51706	360
500	20	2320 521557	4571 1027602	244.00 54853	340
530	21	2556 574612	5028 1130340	258.00 58001	330
560	22	2683 603163	5436 1222062	272.00 61148	310
580	23	2740 615977	5601 1259155	286.00 64295	300
600	24	2770 622721	5637 1267248	300.00 67443	290

Heavy Series

Shaft (d)		Bearings Ratings			
mm	inch	Dynamic C_r (kN/lb)	Static C_{or} (kN/lb)	Axial C_a (kN/lb)	Max RPM
100 105	3 11/16 4	653 146800	783 176025	31.20 7014	1820
110 120	4 3/16 4 1/2	656 147475	801 180072	39.10 8790	1640
125 130	4 15/16 5	753 169281	974 218964	49.00 11016	1500
135 140	5 3/16 5 1/2	827 185917	1084 243693	58.80 13219	1340
150 155	5 11/16 6	1037 233127	1325 297872	69.40 15602	1220
160 170	6 7/16 6 11/16	1015 228181	1326 298097	79.20 17805	1110
175 180	6 3/4 7	1275 286631	1767 397238	89.00 20008	1030
190 200	7 1/4 8	1423 319903	1958 440176	99.60 22391	880
220 230	8 1/2 9	1665 374307	2455 551906	109.40 24594	760
240 260	9 1/2 10	1694 380826	2519 566294	130.80 29405	700
280	11	1936 435230	3115 700280	153.00 34396	620
300	12	2114 475246	3194 718040	174.40 39207	560
320	13	2718 611031	4093 920143	198.80 44692	500
340 360	14	2686 603837	4421 993881	213.60 48019	460
380 400	15 16	3195 718265	5238 1177550	250.80 56382	420
420 440	17	3187 716466	5813 1306815	275.80 62002	360
460	18	3501 787056	6091 1369312	302.40 67982	340
500 530	20 21	4324 972074	7603 1709223	347.00 78009	310
560	22	4448 999950	8781 1974048	382.60 86012	280
580 600	23 24	4443 998826	8918 2004847	400 89924	270

Axial load ratings (C_a) assume the use of EP additives or oil lubrication, otherwise use 50% of values.

Higher loads and speeds may be permissible. Please contact SRB Technical Services.

Axial Considerations

Axial Load

Bearing selection, on an axial load basis, must be considered independently from the radial load.

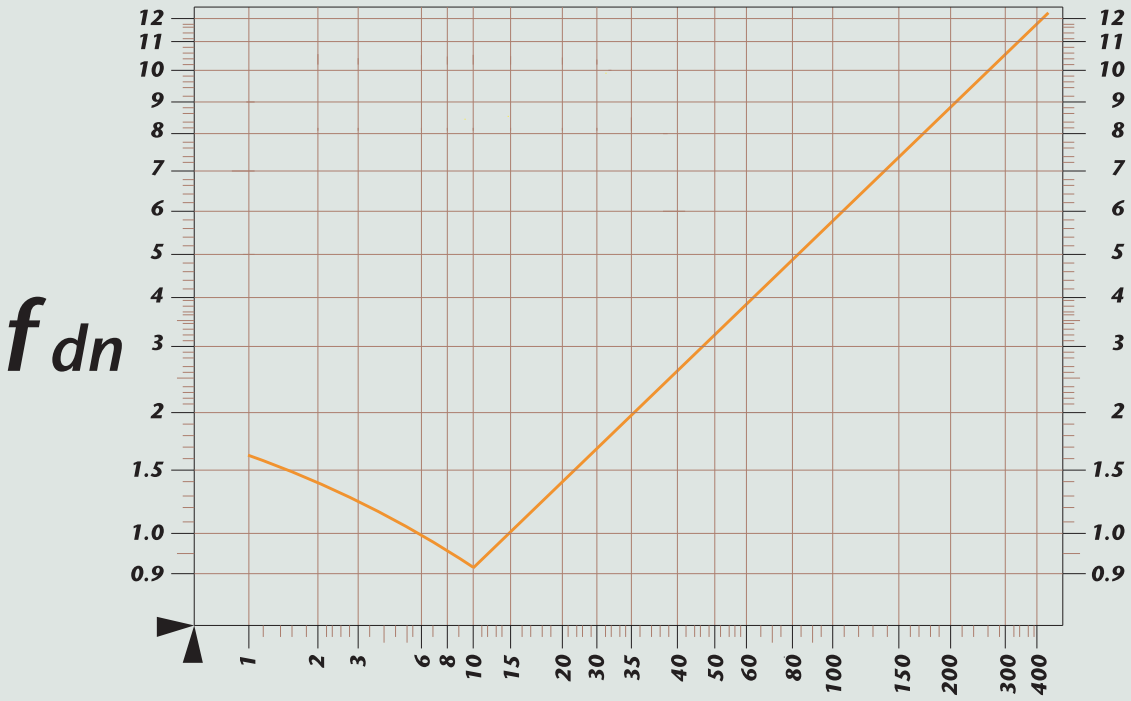
1. Calculate the axial loads acting on the bearing
2. Multiply each load by the appropriate dynamic factor f_z
3. Combine these loads to determine the effective axial load Pa
4. Select a bearing having a Ca value greater than the product of Pa x fdn, d.n is the product of the shaft size in mm and the speed in r.p.m. To determine fdn use the velocity graph below.

Axial Ratings C_a

These ratings are for constant loads with oil or extra pressure greases. If greases without extra pressure additives are applied then the catalogue rating must be decreased by 50%. In instances where bearings operate at over 50% of their catalogue speed rating and over 50% of their axial load ratings (C_a) then recessed shafts should be considered. Please contact our Technical Services Department.

VELOCITY

APPLIES ONLY TO AXIAL LOADS ON BR RETAINED BEARINGS.
BEARING BORE = d
BEARING R.P.M. = n



$$\frac{d(mm) \times n(rpm)}{1000}$$

Bearing Clearance and Temperature Considerations

SRB bearings are manufactured to give an ISO 'CN' clearance as standard. At specific customer request, bearings may be produced with any clearance to suit a particular application. When assessing the requirement for special clearances, it is particularly important to consider the differential temperature between shaft and housing. It should also be noted that an increase in bearing clearance will lead to a small reduction in bearing capacity. Typically a C3 clearance will reduce capacity by 5% and C5 clearance by 10%.

SRB bearings can also be produced as C2. This clearance is smaller than CN and is typically used in applications involving shock or reciprocating loads.

Cleanliness of component parts when fitting will have a direct impact on the running clearance of the bearing. This is of particular importance when fitting new bearings into existing cast iron or refitting bearings after maintenance. Special care must be taken to remove build-ups of aged grease and other contaminants in order to avoid reducing the bearing clearance when fitted.

When selecting bearings for use at elevated temperatures, consideration should also be given to the bearings dimensional stability. SRB bearings are tempered to give stability up to 140°C (284°F). In order to operate at higher temperatures, bearings must be specially heat-treated. This process will lead to a reduction in capacity as a result of the reduced hardness.

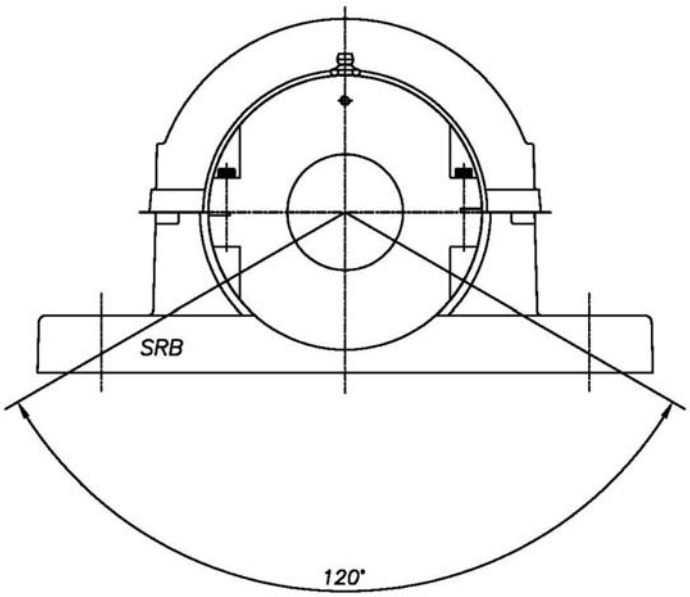
The designations for specially heat-treated bearings are in line with those quoted in ISO standards. The effects of temperature stabilisation are detailed in the table shown.

Operating Temperature	200°C 392°F	250°C 482°F	300°C 572°F
Designation	S1	S2	S3
Reduction in Capacity	10%	25%	40%

Support Loads

Throughout the SRB range, the support units have been designed to provide a rigid and stable base to enable the associated bearing to operate to its full potential. With this in mind, all types of SRB support unit are manufactured from Grade 250 cast iron (BS EN1561:1997) and include strengthening webs and ribs to provide a highly robust unit. In order to compliment the inherent strength, we recommend that careful consideration be given to the siting and mounting of the support unit.

To determine a supports suitability, one should consider the resultant effective load derived in the bearing selection process and the direction of that load. The diagram shown indicates the area in which the full C_{or} rating of the bearing may be applied. Should the direction of the applied load be outside this area it may be necessary to consider alternative designs or materials. SRB Technical Services have a proven track record of innovative solutions and would be happy to provide assistance.



Bearing Frequencies

Condition monitoring is the collection, storage, comparison and evaluation of data taken to establish the running condition of a machine. The data can be made up of several parameters, for example, electric current, pressure, brush wear, vibration and temperature, to name a few. Vibration Analysis is the area of condition monitoring concerned with evaluating and identifying the source of vibration within a system and assessing it's severity and hence proposing the required maintenance action.

The individual components of any bearing will exhibit frequency characteristics which will identify it within a system subject to vibration analysis. For SRB bearings these characteristic frequencies are detailed in the tables opposite. The values given are for a nominal speed of 1 RPM. To obtain the correct frequency required for vibration analysis software, multiply by the speed of rotation in RPM.

For further information on Condition monitoring services please contact SRB Technical.

Bearing Frequencies Table (Hz)

Light Series

mm	inch	Inner Race	Outer Race	Roller	Cage
35 40	1 3/16 1 1/2	5.878	4.122	2.760	0.412
45 50	1 11/16 2	5.852	4.148	2.847	0.415
60 65	2 3/16 2 1/2	6.932	5.068	3.140	0.422
70 75	2 11/16 3	6.902	5.098	3.252	0.425
80 90	3 3/16 3 1/2	8.017	5.983	3.370	0.427
100 105	3 11/16 4	8.089	5.911	3.137	0.422
110 115	4 3/16 4 1/2	9.109	6.891	3.538	0.431
120 130	4 11/16 5	9.100	6.900	3.569	0.431
135 140	5 3/16 5 1/2	9.087	6.913	3.612	0.432
150 155	5 11/16 6	10.159	7.841	3.819	0.436
160	6 7/16 6 1/2	10.162	7.838	3.809	0.435
170 180	6 11/16 7	12.223	9.777	4.442	0.444
190 200	7 1/4 8	12.204	9.796	4.515	0.445
220 230	8 1/2 9	11.064	8.936	4.645	0.447
240 250	9 1/2 10	12.058	9.942	5.152	0.452
260 280	10 1/2 11	12.025	9.975	5.319	0.453
300 305	11 1/2 12	13.087	10.913	5.472	0.455
320 330	12 1/2 13	13.028	10.972	5.795	0.457
340 350	14	14.045	11.955	6.180	0.460
360 380	15	15.058	12.942	6.580	0.462
400	16	16.076	13.924	6.935	0.464
420	17	17.088	14.912	7.319	0.466
440 460	18	18.094	15.906	7.739	0.468
480	19	18.102	15.898	7.684	0.468
500	20	19.115	16.885	8.038	0.469
530	21	20.117	17.883	8.479	0.471
560	22	21.127	18.873	8.841	0.472
580	23	21.140	18.860	8.744	0.472
600	24	22.153	19.847	9.078	0.473

Medium Series

mm	inch	Inner Race	Outer Race	Roller	Cage
45 50	1 11/16 2	5.988	4.012	2.432	0.401
55 65	2 3/16 2 1/2	7.091	4.909	2.659	0.409
70 75	2 11/16 3	7.153	4.847	2.506	0.404
80 90	3 3/16 3 1/2	7.091	4.909	2.659	0.409
100 105	3 11/16 4	8.205	5.795	2.818	0.414
110 115	4 3/16 4 1/2	8.143	5.857	2.981	0.418
120 130	4 11/16 5	8.105	5.895	3.088	0.421
135 140	5 3/16 5 1/2	8.082	5.918	3.157	0.423
150 155	5 11/16 6	9.225	6.775	3.188	0.423
160 170	6 7/16 6 1/2	8.107	5.893	3.083	0.421
180	6 11/16 7	9.192	6.808	3.281	0.425
190 200	7 1/4 8	9.119	6.881	3.505	0.430
220 230	8 1/2 9	9.161	6.839	3.372	0.427
240 260	9 1/2 10	9.082	6.918	3.628	0.432
270 280	10 1/2 11	10.162	7.838	3.808	0.435
300 305	11 1/2 12	11.207	8.793	4.082	0.440
320 330	12 1/2 13	11.170	8.830	4.217	0.442
340 360	14	11.180	8.820	4.178	0.441
380	15	11.037	8.963	4.769	0.448
400	16	12.169	9.831	4.651	0.447
420	17	12.195	9.805	4.548	0.446
440 460	18	13.160	10.840	5.122	0.452
480	19	13.181	10.819	5.031	0.451
500	20	14.153	11.847	5.593	0.456
530	21	14.160	11.840	5.559	0.455
560	22	15.200	12.800	5.793	0.457
580	23	15.203	12.797	5.778	0.457
600	24	15.168	12.832	5.951	0.458

Heavy Series

mm	inch	Inner Race	Outer Race	Roller	Cage
100 105	3 11/16 4	6.073	3.927	2.222	0.393
110 120	4 3/16 4 1/2	5.982	4.018	2.446	0.402
125 130	4 15/16 5	7.114	4.886	2.601	0.407
135 140	5 3/16 5 1/2	7.079	4.921	2.690	0.410
150 155	5 11/16 6	7.190	4.810	2.422	0.401
160 170	6 7/16 6 11/16	7.126	4.874	2.570	0.406
175 180	6 3/4 7	8.243	5.757	2.727	0.411
190 200	7 1/4 8	7.047	4.953	2.779	0.413
220 230	8 1/2 9	8.102	5.898	3.097	0.421
240 260	9 1/2 10	8.056	5.944	3.240	0.425
280	11	9.114	6.886	3.520	0.430
300	12	8.043	5.957	3.280	0.425
320	13	8.105	5.895	3.088	0.421
340 360	14	9.093	6.907	3.591	0.432
380 400	15 16	9.111	6.889	3.530	0.431
420 440	17	11.158	8.842	4.260	0.442
460	18	10.125	7.875	3.938	0.438
500 530	20 21	10.132	7.868	3.911	0.437
560	22	12.159	9.841	4.693	0.447
580 600	23 24	13.208	10.792	4.916	0.450

The above figures are unitary values. For the appropriate frequency, multiply by application RPM.

Shaft Considerations

It is essential that the shaft on to which the bearing is to be mounted has been produced to the correct size and tolerance for the operating conditions. If replacing a bearing in an existing system, the shaft must be checked to establish if any wear or damage has taken place. The table below may be followed for both the manufacture of new shafts and the inspection of existing shafts.

Tolerance units are 0.001 mm / 0.001 inches. All tolerances are +0.000

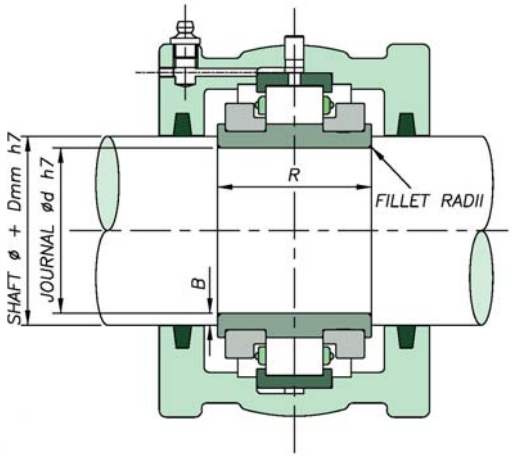
Shaft Dia.	dn<50000 & C/P>10	50000<dn<150000 & C/P>10	50000<dn<150000 & C/P<10	dn>150000	Cylindricity of Shaft
	h9	h8	h7	h6	IT6
0 - 50 mm 0 - 2"	-62 -2.5	-39 -1.5	-25 -1	-16 -0.6	-16 -0.6
50 - 80 mm 2 - 3"	-74 -3	-46 -1.8	-30 -1.2	-19 -0.7	-19 -0.7
80 - 120 mm 3 - 5"	-87 -3.5	-54 -2.1	-35 -1.4	-22 -0.9	-22 -0.9
120 - 180 mm 5 - 7"	-100 -3.9	-63 -2.5	-40 -1.6	-25 -1	-25 -1
180 - 250 mm 7 - 10"	-115 -4.5	-72 -2.8	-46 -1.8	-29 -1.2	-29 -1.2
250 - 315 mm 10 - 12½"	-130 -5.1	-81 -3.2	-52 -2	-32 -1.3	-32 -1.3
315 - 400 mm 12½ - 15½"	-140 -5.5	-89 -3.5	-57 -2.2	-36 -1.4	-36 -1.4
400 - 500 mm 15½ - 19½"	-155 -6.1	-97 -3.8	-63 -2.5	-40 -1.6	-40 -1.6
500 - 600 mm 19½ - 24"	-175 -6.9	-110 -4.3	-70 -2.8	-44 -1.7	-44 -1.7

Recess Mounting

In applications where the resultant axial load exceeds 50% of the Ca rating for the bearing, the shaft design should include either a recess for bearing seating or grooves to accommodate retaining rings. Such an arrangement should also be considered if the unit is subjected to shock loads, fluctuations in temperature over 100°C or the shaft is vertical.

The dimensions for producing an appropriate recess or for governing the position and size of the retaining rings if used are derived from the following table.

Journal Diameter d	Shoulder Diameter 'D' mm	Fillet Radii	Shoulder Height B	Recess Width R	Squareness of Abutment Faces
40 - 90mm 1½" - 3½"	d + 5mm	1.2mm	2.5mm	C + 0.1mm C + 0.3mm	0.1mm
Over 90 - 150mm Over 3½" - 6"	d + 10mm	2.0mm	5.0mm	C + 0.15mm C + 0.40mm	0.1mm
Over 155mm Over 6"	d + 10mm	2.3mm	5.0mm	C + 0.2mm C + 0.5mm	0.1mm

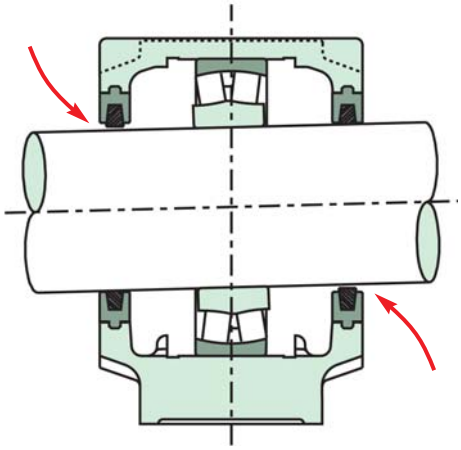


N.B. Width of recesses for standard bearings maybe different from that used for existing products. Please consult SRB Technical Services department for bearings suitable for other recess sizes.

Sealing Arrangements

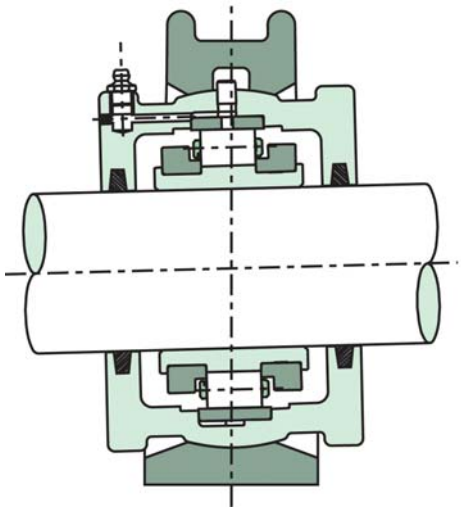
Any bearing, housing and support unit that is not suitably sealed against its surrounding environment is unlikely to achieve its full potential, either in terms of performance or life span. The prevention of ingress of foreign materials and contaminants is of paramount importance and should be considered as early in the selection process as possible.

A wide variety of sealing solutions are available to users of SRB products as "off the shelf" arrangements. This range will cover the vast majority of operating environments found throughout all industries. To cover those situations where a proprietary arrangement is not suitable, SRB Technical Services are able to work closely with designers and end users to develop and manufacture bespoke solutions tailored to specific applications.

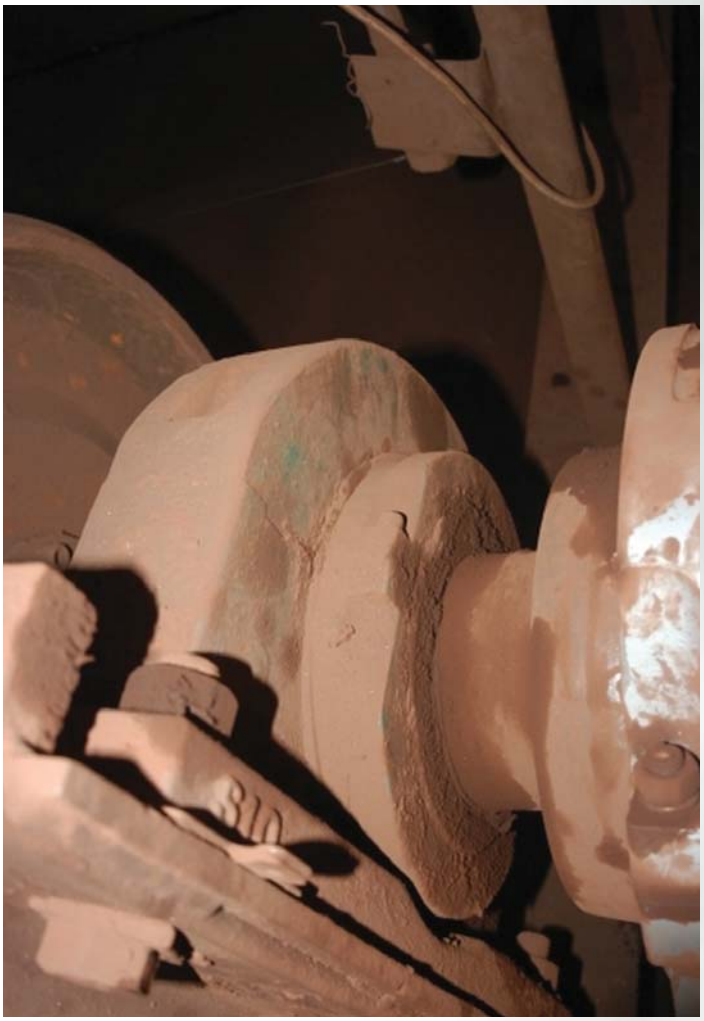


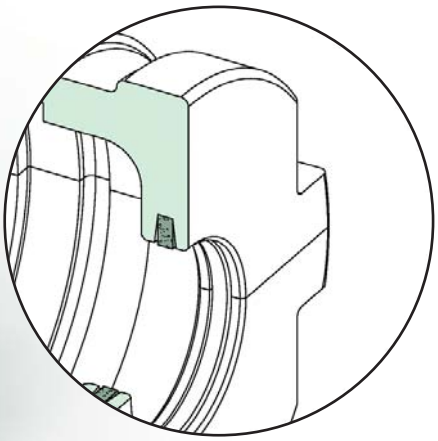
Seal ineffective

SRB units have inherent advantages over traditional solid bearing arrangements when considering sealing. The spherical location between housing and support ensures that whichever type of seal is used, it will always remain concentric to the shaft.



Seal remains concentric

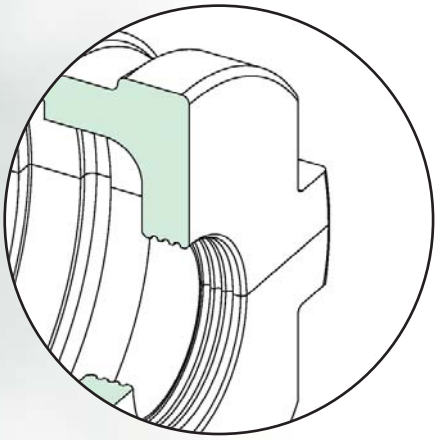




Felt Seal

This type of seal is supplied as standard with all SRB housings up to a bore size of 300mm. Consisting of felt strips made from blended fibres. Seals are supplied dry and need to be soaked in oil prior to fitting.

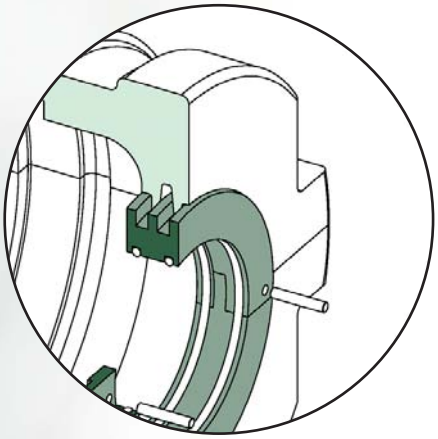
Max Speed	dN(mm) ≤150000
Temp Range	-60ºC to +100ºC
Shaft Finish	1.6µm Ra



Labyrinth Grease Groove

For shaft sizes over 300mm, housings are supplied with a close fitting labyrinth groove machined into the housing. No additional seal is added. For harsh environments, alternative sealing arrangements are available.

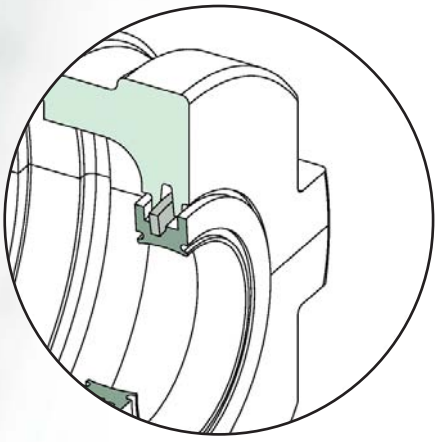
Max Speed	As Bearing
Temp Range	As Bearing
Shaft Finish	3.2µm Ra



Aluminium Triple Labyrinth

A precision machined, non-contacting seal suitable for both high speed and general applications. Once fitted the seal revolves with the shaft. The seal grips the shaft via two split O-rings fitted to the bore of the seal. SRB Triple Labyrinth seals are fitted with high temperature Viton cord as standard.

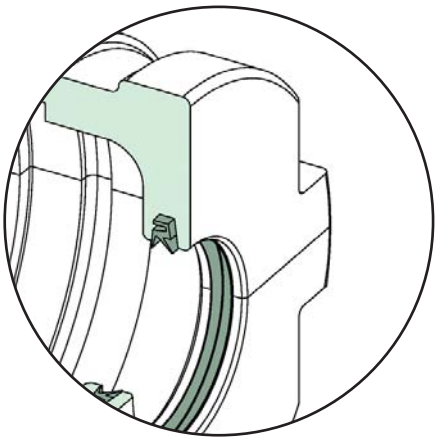
Max Speed	As Bearing
Temp Range	-20ºC to +175ºC
Shaft Finish	3.2µm Ra
Suffix Letters	**ATL**



Neoprene Triple Labyrinth

The seal is moulded from Neoprene rubber and incorporates a steel centre band. This steel pressing has ends which form an interlocking arrangement and hence secure the seal to the shaft. The seal can be used where restrictions prevent the use of Aluminium (e.g. Mining).

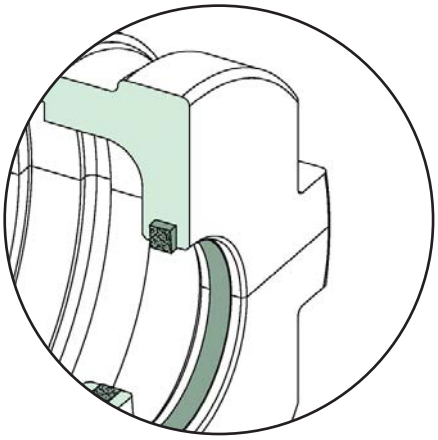
Max Speed	dN(mm) ≤150000
Temp Range	-20ºC to +100ºC
Shaft Finish	3.2µm Ra
Suffix Letters	**NTL**



Nitrile Single Lip

For environments involving moderate liquid splashing but not submersion. Should be avoided where abrasive particles are also present as this can lead to shaft wear in the seal area. High temperature versions are also available.

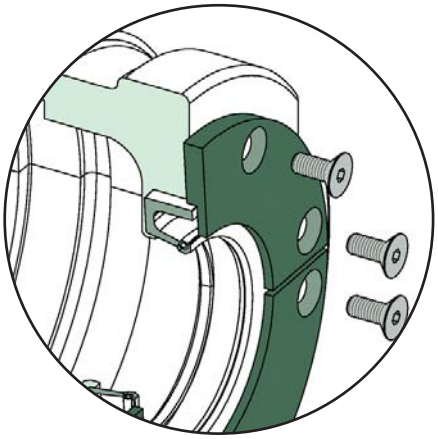
Max Speed	dN(mm) ≤150000
Temp Range	-20ºC to +100ºC
Shaft Finish	3.2µm Ra
Suffix Letters	**RSS (RSSHT for high temperature)**



High Temperature Packing

A self-lubricating seal based around PTFE and graphite. In order to utilise the highest quality materials available, SRB housings for high temperature applications are machined to suit the High Temperature Packing used.

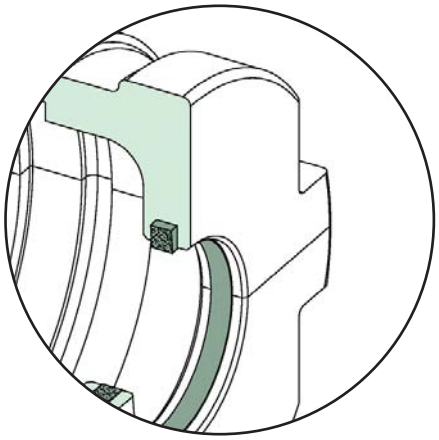
Max Speed	dN(mm) ≤150000
Temp Range	-60ºC to +300ºC
Shaft Finish	1.2µm Ra
Suffix Letters	**HTPS**



Single Lip with Garter Spring and Retaining Plate

A more specialised seal for very wet environments with heavy splash. This type of seal is NOT suitable for continuous submersion without due consideration being given to sealing of the housing joint and any other possible points of liquid entry. Please consult SRB Technical Services for more information.

Max Speed	dN(mm) ≤150000
Temp Range	-20ºC to +100ºC
Shaft Finish	0.8µm Ra
Suffix Letters	**WSRP**



Kevlar Packing Seal

This recent addition to the sealing range has proved highly effective in areas having the potential for fine particle contaminants such as cement or ash. Please consult SRB technical services for more information.

Max Speed	As bearing
Temp Range	-100ºC to +280ºC
Shaft Finish	1.6µm Ra
Suffix Letters	**KPS**

Bearing Lubrication

The function of a lubricant in a rolling element bearing is to prevent metal to metal contact between components, prevent wear and protect against corrosion. Two methods of lubrication are normally employed grease and oil. In the case of SRB Split Bearings grease lubrication is most often employed.

Grease Lubrication

Greases can be used to lubricate SRB split roller bearings under most normal conditions. Grease is the preferred method of lubrication because it can be more easily retained within the bearing enclosure and housing, the latter simplifying sealing arrangements. Greases are essentially oils thickened usually with a metal soap, other ingredients are additives such as rust inhibitors, or extra pressure additives. The oils employed may be mineral or synthetic depending upon the application.

SRB bearings are heat treated to retain dimensional stability up to 140ºC. At temperatures up to 100ºC, standard high quality greases may be used. We suggest good quality lithium soap or complex based greases having extra pressure additives and a penetration number of 3. It is important to note that all values given in this catalogue for axial capacity assume the use of a grease with extra pressure (EP) additives. If EP additives are not present then axial capacity is reduced by 50%

At temperatures exceeding 100ºC care must be taken to ensure that the correct thickener and viscosity of base oil are selected. The performance of grease at such temperatures is dependent on a stable thickener and the temperature/viscosity ratio of the base oil. A stable base oil and soap thickener are important as is the ability of the oil to offer adequate viscosity at an elevated temperature.

In cases of water splash, calcium soap based greases may be used, these are particularly resistant to water wash out.

Care should be taken when mixing greases with different soap thickeners and base oil types. Please contact SRB Technical Services for further advice.

For initial lubrication the bearing should always be well filled with grease. The remaining housing space should be filled as follows.

At low speeds, not exceeding 25% of catalogue speed rating, we suggest that the remaining housing space be fully filled with grease.

At medium speeds, between 25 and 50% of catalogue speed rating, the remaining housing space may be 1/3 to 1/2 filled with grease.

At high speeds, exceeding 50% of catalogue speed rating, the remaining housing space should be left empty.

Re-lubrication

The re-lubrication intervals will be dependent on the prevailing operating conditions.

Greases age and oxidise due to a number of considerations these include load, speed, temperature, cleanliness, presence of water and even airflow through the bearing.

For retained type bearings, initial re-lubrication intervals for guidance purposes would be 2 – 4 weeks with 3 – 6 mls added. For expansion type bearings, initial re-lubrication intervals would be 3 – 4 months with 3 – 6 mls added. More accurate intervals and quantities should be established from observations taken during bearing operation. If re-lubrication can be carried out whilst the bearing is in operation, this will allow for even distribution of the grease. This means of re-lubrication should only be undertaken if it is safe to do so.

Oil Lubrication

SRB split roller bearings are rarely lubricated with oil. In cases where oil is selected as a means of lubrication, then special consideration must be given to the bearing housing design and sealing.

There are three principal methods of oil lubrication:

Oil Sump:

The oil sits in the bearing housing at a level approximately halfway up the bottom dead centre rolling element. Oil circulation around the bearing is then provided via the bearing rotation agitating the oil sump. It is very important to provide a sufficiently dimensioned oil sump as too small a volume will result in increased frequency of oil change and elevated operating temperatures.

Oil Mist:

An oil/air mist is injected into the bearing via nozzles, normally a total oil loss system, this provides extremely high speed capability at high cost.

For further advice on oil selection and oil lubrication systems please consult SRB Technical Services.

Oil Circulation:

Oil is circulated into the bearing housing assembly from an external oil sump. This allows the oil to be cooled and filtered, additionally an external oil sump normally allows for a higher volume of oil. Whilst being a more optimum solution, specialist housing designs must be provided. There is also a cost and space requirement to this system.

Shaft Check

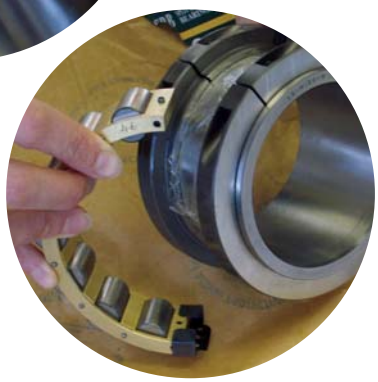
When fitting bearings on both new and existing installations, the shaft need only be raised 1 to 2 millimetres. This should provide sufficient clearance to allow for easy fitting. Prior to the assembly of any bearing components the shaft must be checked for size, roundness and parallelism.

- Check a minimum of three positions along the journal length.
- Check a minimum of three positions around the shaft to establish roundness.
- Shaft tolerances and shaft surface finish are given in the table on page 23.

Fitting the Inner Ring

- Carefully unpack and clean the bearing removing all preservatives.
- Inner race locating clamping rings cannot be removed before the cage has been dismantled.
- Care must be taken that no damage occurs when cage halves are separated.

Please Note:
Spring Clips should always be retained on one cage half.

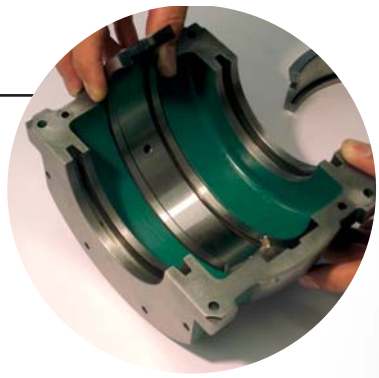


- Clean the shaft and lightly oil the bore of the inner race.
- Place the two inner race halves in approximately the correct position with the joints at the top and bottom. With the joints in that position it will allow easy access to the clamp ring screws later when they are tightened.
- Ensure that the match marks (black band) in the clamp ring groove on one side of the race coincide.

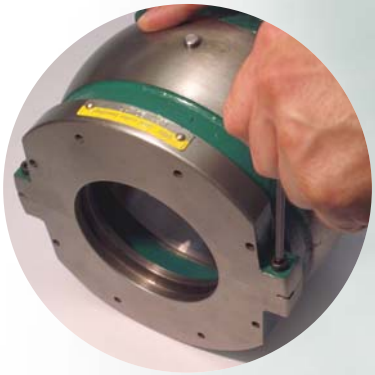
There should be an equal gap at each joint. If there are no gaps do not proceed and contact the SRB Technical Services Department.

- Fit the inner race locating clamping rings. Ensure that the correct clamp ring is fitted in the corresponding groove. To assist in this the clamping rings are intentionally manufactured to different widths on the more popular sizes. In addition, the match-marking groove found on the inner race is repeated on the corresponding clamping ring.
- Make sure that the thrust faces are not damaged when the rings enter the grooves.
- The joints should be at 90° to the inner race joints and the screws should be tightened in such a way that there are four equal gaps.
- Screws should only be finger tight so that the race can be adjusted axially into its final position.

Pre-Assembly of the Outer Race into the Seating Groove in the Housing



- The housing must be cleaned thoroughly removing all preservatives. If reusing an existing housing it is essential that the outer race seating groove is clean and free of any hardened grease deposits or corrosion.
- Lightly oil the seating groove and the outside diameter of the outer race halves.
- Place the race halves of the expansion or retained type into the seating groove and ensure that:
- The match marking numbers on the edge of each race half coincide.
- The lubrication hole in the outer race is in the upper housing half.
- The outer race joints should protrude equally above the housing joint faces.



If a retained bearing is being fitted:

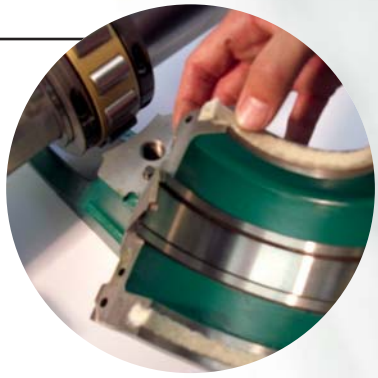
- Pre-assemble the housing halves and fully tighten the joint socket head cap screws.
- Ensure that the joints are closed.
- Fit the pins and screws provided and tighten up evenly to ensure that the outer race is fixed square against the opposite shoulder of the seating groove.

Larger bearings (both retained and expansion) may require outer race retaining screws. If these are required, please ensure that the flat washers are not omitted. Once fitted, ensure that the end of the screw does not protrude above the race track surface.

- Separate the housing halves, these are now ready for final assembly.
- Fit the appropriate seals. The seal grooves in the standard housing are suitable for felt and synthetic rubber. If the bearing is inspected or replaced on an existing installation and the housing is re-used, we advise that new seals are fitted.

Pre-Fitting the Lower Housing Half

On existing installations it is often unnecessary to change the support if a bearing, or bearing and housing has to be replaced. In such cases the support base bolts should not be touched to ensure that the replacement bearing and the old or new housing will be in the same position as previously. In new installations the support base should be positioned with the bolts finger tight. This will allow additional freedom of movement when aligning the inner and outer races.



Retained Bearing

- Slide the pre-assembled bottom half into the support base.
- Line up the inner and outer race roller track by adjusting the inner ring sideways into the final position. The final position should be confirmed by passing one half of the cage and roller assembly between the inner and outer races. The cage half should pass freely round the lower half of the bearing without becoming jammed or trapped.
- Remove the bottom housing half and tighten the clamp ring socket head cap screws and fit the cage as explained below.

Expansion Bearing

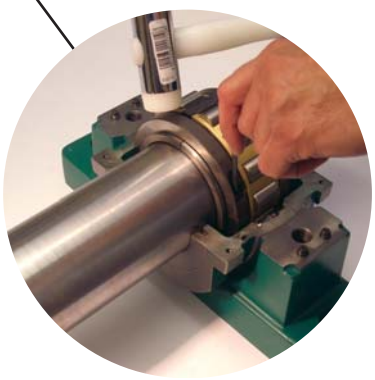
- As in the case of the retained bearing, slide in the pre-assembled bottom housing half.
- Line up the inner ring by adjusting it sideways until it is central with the outer race.
- The clearance between the inner race end faces and inside housing walls should be equal. If cage and rollers are assembled in this position the shaft can expand either side of the centre line by the amount shown in column 1 in the table right.
- When the position of the inner ring is satisfactory, remove the bottom half housing and tighten the clamp ring socket head cap screws and fit the cage as explained below.

A greater degree of expansion allowance can be obtained, but only in one direction. This is achieved by offsetting the inner race with respect to the housing. In this case the total amount of linear movement in service is given in column 2 of the table.

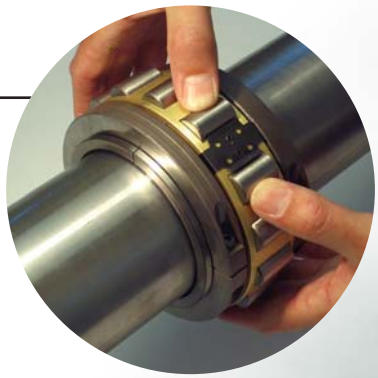
Group	Maximum Expansion if cage and rollers are assembled central 1	Maximum Expansion 2
40 mm 1½"	3 mm	6 mm
50 mm 2"	3 mm	6 mm
60 mm 2½"	3.5 mm	7 mm
70 mm 3"	4 mm	8 mm
80 mm 3½"	5 mm	10 mm
100 mm 4"	5.5 mm	11 mm
110 mm 4½"	8 mm	16 mm
120 mm 5"	8.5 mm	17 mm
140 mm 5½"	9 mm	18 mm
160 mm 6"	9 mm	18 mm

Tightening of the Locating Clamping Ring Screws

- When the inner race is in its final position, tighten all four clamping ring screws equally.
- Use the correct hexagon key and a torque wrench.
- Tap down the locating thrust rings with a nylon mallet to ensure that they are seating down correctly within the grooves.
- Re-tighten and repeat the tapping down until the screws are fully tight.
- Torque values for the various screw sizes are given in the tables at the end of this section. If a screw is lost it must be replaced using a High Tensile Socket Head Cap Screw Grade, 12.9.



Fitting the Cage

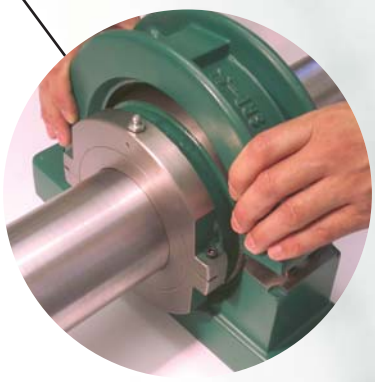


- Grease the inner race roller track and cage.
- Place the cage halves around the inner race ensuring that the match mark numbers on the edge of each cage half are the same and coincide at one joint.
- Press the cage halves into the clip ensuring that the roll pins are fully located.
- Check that the cage assembly runs freely on the inner race.
- Fully pack the cage and roller assembly with the correct type of grease.

Final Fitting of the Housing

- Charge the bottom and upper housing halves with the correct amount of grease. Refer to page 27 for correct types and quantities of grease depending on the application and the speed.
- Lightly oil the spherical diameter of both housing and support and slide the bottom housing half into the support base.
- Lower the shaft with the assembled inner races and cages, until the rollers touch the tracks in the bottom half housing. Make sure that when the rollers in the retained bearing enter the outer race groove they do not damage the lips.
- Revolve the shaft by hand, the rollers should move freely between the thrust shoulders of the inner race and the lips of the retained outer race.
- Fit the upper housing half then tighten the housing joint screws. Check that there is no gap at the joints.

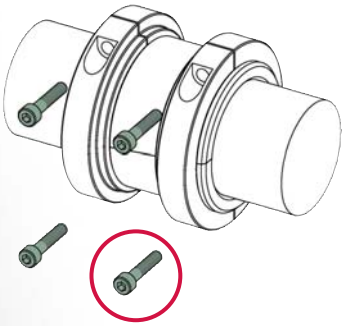
Fitting the Support Cap

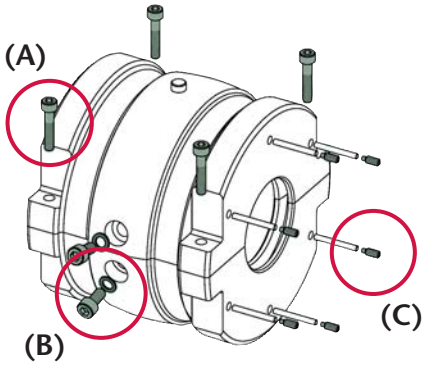


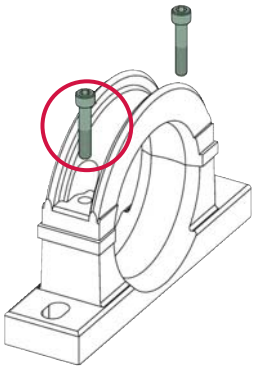
- Place the support cap over the upper housing half and engage the locating dowels at the joint.
- Using a nylon mallet, gently tap the support cap down to close the gap at the joints.
- Fit the bolts and tighten just enough to hold the support joints closed.
- At this point, and only if it is safe to do so, the shaft should be run at low speed and if possible, with low loading. This will allow the spherical locating surfaces to correctly align. If running the shaft under power is not an option, the shaft should be rotated by hand to achieve this goal.
- Tighten the cap bolts fully using a torque wrench. At this point the support base bolts should also be checked and tightened as required. Torque values for housing and support screws are given in the table at the end of this section.

Light Series

Screw Sizes, Key Sizes & Torque Values





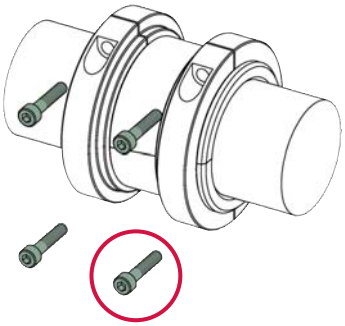


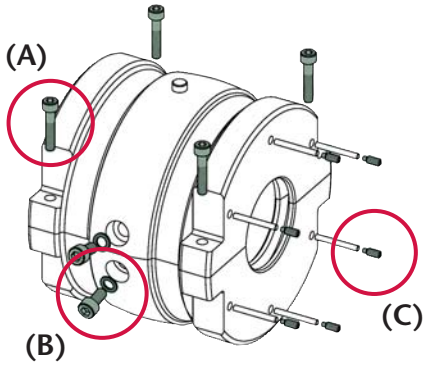
Shaft (d)		Clamping Ring*			Housing									Support		
					Joint (A)			Radial Retainer (B)			Axial Retainers (HR only) (C)					
mm	inch	Screw	Key	Torque Nm (lb.ft)	Screw	Key	Torque Nm (lb.ft)	Screw	Key	Torque Nm (lb.ft)	Screw	Key	Torque Nm (lb.ft)	Screw	Key	Torque Nm (lb.ft)
35 - 40	1 3/16 - 1 1/2	M4	3	5 (3.6)	M4	3	4 (2.6)				M4	2	4 (2.6)	M8	6	27 (20)
45 - 50	1 11/16 - 2	M4	3	5 (3.6)	M4	3	4 (2.6)				M4	2	4 (2.6)	M8	6	27 (20)
60 - 65	2 3/16 - 2 1/2	M4	3	5 (3.6)	M4	3	4 (2.6)				M4	2	4 (2.6)	M10	8	54 (40)
70 - 75	2 11/16 - 3	M4	3	5 (3.6)	M4	3	4 (2.6)				M4	2	4 (2.6)	M12	10	94 (69)
80 - 90	3 3/16 - 3 1/2	M5	4	9 (7)	M5	4	7 (5)				M4	2	4 (2.6)	M16	14	231 (170)
100 - 105	3 11/16 - 4	M6	5	15 (11)	M6	5	11 (8)				M4	2	4 (2.6)	M16	14	231 (170)
110 - 115	4 3/16 - 4 1/2	M6	5	15 (11)	M6	5	11 (8)				M6	3	11 (8)	M20	17	434 (320)
120 - 130	4 11/16 - 5	M6	5	15 (11)	M6	5	11 (08)				M6	3	11 (08)	M20	17	434 (320)
135 - 140	5 3/16 - 5 1/2	M8	6	35 (26)	M8	6	27 (20)				M6	3	11 (08)	M20	17	434 (320)
150 - 155	5 11/16 - 6	M8	6	35 (26)	M8	6	27 (20)				M6	3	11 (08)	M20	17	434 (320)
160	6 7/16 - 6 1/2	M8	6	35 (26)	M8	6	27 (20)				M6	3	11 (08)	M16	14	231 (170)
170 - 180	6 11/16 - 7	M8	6	35 (26)	M8	6	27 (20)				M6	3	11 (08)	M16	14	231 (170)
190 - 200	7 1/4 - 8	M8	6	35 (26)	M8	6	27 (20)	M10	8	54 (40)	M6	3	11 (08)	M16	14	231 (170)
220 - 230	8 1/2 - 9	M10	8	72 (53)	M10	8	54 (40)	M10	8	54 (40)	M6	3	11 (08)	M16	14	231 (170)
240 - 250	9 1/2 - 10	M10	8	72 (53)	M10	8	54 (40)	M10	8	54 (40)	M6	3	11 (08)	M20	17	434 (320)
260 - 280	10 1/2 - 11	M10	8	72 (53)	M10	8	54 (40)	M10	8	54 (40)	M10	5	54 (40)	M20	17	434 (320)
300	11 1/2 - 12	M10	8	72 (53)	M10	8	54 (40)	M10	8	54 (40)	M10	5	54 (40)	M20	17	434 (320)
320 - 330	12 1/2 - 13	M12	10	125 (92)	M12	10	94 (69)	M10	8	54 (40)	M10	5	54 (40)	M20	17	434 (320)
340 - 350	14	M12	10	125 (92)	M12	10	94 (69)	M10	8	54 (40)	M10	5	54 (40)	M20	17	434 (320)
360 - 380	15	M12	10	125 (92)	M12	10	94 (69)	M10	8	54 (40)	M10	5	54 (40)	M20	17	434 (320)
400	16	M12	10	125 (92)	M12	10	94 (69)	M10	8	54 (40)	M10	5	54 (40)	M20	17	434 (320)
420	17	M12	10	125 (92)	M12	10	94 (69)	M12	10	54 (40)	M10	5	54 (40)	M20	17	434 (320)
440 - 460	18	M12	10	125 (92)	M12	10	94 (69)	M12	10	54 (40)	M10	5	54 (40)	M20	17	434 (320)
480	19	M12	10	125 (92)	M12	10	94 (69)	M12	10	54 (40)	M10	5	54 (40)	M20	17	434 (320)
500	20	M16	14	309 (228)	M16	14	231 (170)	M12	10	54 (40)	M10	5	54 (40)	M20	17	434 (320)
530	21	M16	14	309 (228)	M16	14	231 (170)	M12	10	54 (40)	M10	5	54 (40)	M20	17	434 (320)
560	22	M16	14	309 (228)	M16	14	231 (170)	M12	10	54 (40)	M10	5	54 (40)	M20	17	434 (320)
580	23	M16	14	309 (228)	M16	14	231 (170)	M12	10	54 (40)	M10	5	54 (40)	M20	17	434 (320)
600	24	M16	14	309 (228)	M16	14	231 (170)	M12	10	54 (40)	M10	5	54 (40)	M20	17	434 (320)

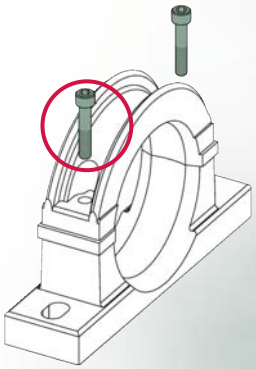
* May be increased by up to 20% for high axial load applications

Medium Series

Screw Sizes, Key Sizes & Torque Values





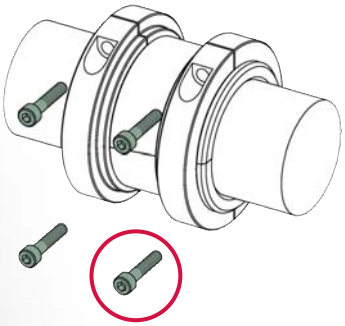


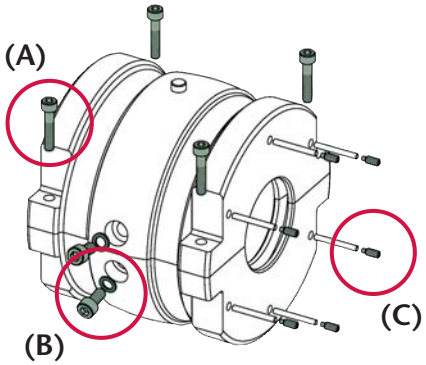
Shaft (d)		Clamping Ring*			Housing									Support		
					Joint (A)			Radial Retainer (B)			Axial Retainers (HR only) (C)					
mm	inch	Screw	Key	Torque Nm (lb.ft)	Screw	Key	Torque Nm (lb.ft)	Screw	Key	Torque Nm (lb.ft)	Screw	Key	Torque Nm (lb.ft)	Screw	Key	Torque Nm (lb.ft)
45 - 50	1 11/16 - 2	M5	4	9 (7)	M5	4	7 (5)				M4	2	4 (2.6)	M10	8	54 (40)
60 - 65	2 3/16 - 2 1/2	M5	4	9 (7)	M5	4	7 (5)				M4	2	4 (2.6)	M12	10	94 (69)
70 - 75	2 11/16 - 3	M6	5	15 (11)	M6	5	11 (08)				M4	2	4 (2.6)	M16	14	231 (170)
80 - 90	3 3/16 - 3 1/2	M6	5	15 (11)	M6	5	11 (08)				M4	2	4 (2.6)	M16	14	231 (170)
100 - 105	3 11/16 - 4	M6	5	15 (11)	M6	5	11 (8)				M4	2	4 (2.6)	M20	17	434 (320)
110 - 115	4 3/16 - 4 1/2	M8	6	35 (26)	M8	6	27 (20)				M6	3	11 (8)	M20	17	434 (320)
120 - 130	4 11/16 - 5	M8	6	35 (26)	M8	6	27 (20)				M6	3	11 (08)	M20	17	434 (320)
135 - 140	5 3/16 - 5 1/2	M8	6	35 (26)	M8	6	27 (20)				M6	3	11 (08)	M20	17	434 (320)
150 - 155	5 11/16 - 6	M8	6	35 (26)	M8	6	27 (20)				M6	3	11 (08)	M20	17	434 (320)
160 - 170	6 7/16 - 6 1/2	M10	8	72 (53)	M10	8	54 (40)				M6	3	11 (08)	M20	17	434 (320)
180	6 11/16 - 7	M10	8	72 (53)	M10	8	54 (40)	M10	8	54 (40)	M6	3	11 (08)	M20	17	434 (320)
190 - 200	7 1/4 - 8	M12	10	125 (92)	M12	10	94 (69)	M10	8	54 (40)	M6	3	11 (08)	M20	17	434 (320)
220 - 230	8 1/2 - 9	M12	10	125 (92)	M12	10	94 (69)	M10	8	54 (40)	M6	3	11 (08)	M20	17	434 (320)
240 - 260	9 1/2 - 10	M12	10	125 (92)	M12	10	94 (69)	M10	8	54 (40)	M10	5	54 (40)	M20	17	434 (320)
280	10 1/2 - 11	M16	14	309 (228)	M16	14	231 (170)	M10	8	54 (40)	M10	5	54 (40)	M20	17	434 (320)
300	11 1/2 - 12	M16	14	309 (228)	M16	14	231 (170)	M10	8	54 (40)	M10	5	54 (40)	M20	17	434 (320)
320 - 330	12 1/2 - 13	M16	14	309 (228)	M16	14	231 (170)	M10	8	54 (40)	M10	5	54 (40)	M20	17	434 (320)
340 - 360	14	M16	14	309 (228)	M16	14	231 (170)	M12	10	54 (40)	M10	5	54 (40)	M20	17	434 (320)
380	15	M16	14	309 (228)	M16	14	231 (170)	M12	10	54 (40)	M10	5	54 (40)	M20	17	434 (320)
400	16	M16	14	309 (228)	M16	14	231 (170)	M12	10	54 (40)	M10	5	54 (40)	M20	17	434 (320)
420	17	M16	14	309 (228)	M16	14	231 (170)	M12	10	54 (40)	M10	5	54 (40)	M20	17	434 (320)
440 - 460	18	M16	14	309 (228)	M16	14	231 (170)	M12	10	54 (40)	M10	5	54 (40)	M20	17	434 (320)
480	19	M20	17	600 (442)	M20	17	434 (320)	M12	10	54 (40)	M10	5	54 (40)	M24	19	760 (560)
500	20	M20	17	600 (442)	M20	17	434 (320)	M12	10	54 (40)	M10	5	54 (40)	M24	19	760 (560)
530	21	M20	17	600 (442)	M20	17	434 (320)	M12	10	54 (40)	M10	5	54 (40)	M24	19	760 (560)
560	22	M20	17	600 (442)	M20	17	434 (320)	M12	10	54 (40)	M10	5	54 (40)	M24	19	760 (560)
580	23	M20	17	600 (442)	M20	17	434 (320)	M12	10	54 (40)	M10	5	54 (40)	M24	19	760 (560)
600	24	M20	17	600 (442)	M20	17	434 (320)	M12	10	54 (40)	M10	5	54 (40)	M24	19	760 (560)

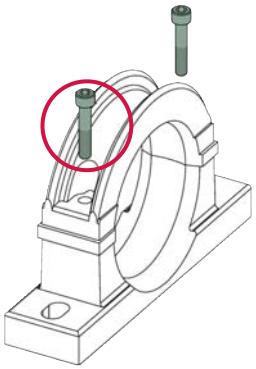
* May be increased by up to 20% for high axial load applications

Heavy Series

Screw Sizes, Key Sizes & Torque Values







Shaft (d)		Clamping Ring*			Housing									Support		
					Joint (A)			Radial Retainer (B)			Axial Retainers (HR only) (C)					
mm	inch	Screw	Key	Torque Nm (lb.ft)	Screw	Key	Torque Nm (lb.ft)	Screw	Key	Torque Nm (lb.ft)	Screw	Key	Torque Nm (lb.ft)	Screw	Key	Torque Nm (lb.ft)
100 - 105	3 11/16 - 4	M10	8	72 (53)	M10	8	54 (40)	M10	8	54 (40)	M6	3	11 (08)	M16	14	231 (170)
110 - 120	4 3/16 - 4 1/2	M10	8	72 (53)	M10	8	54 (40)	M10	8	54 (40)	M6	3	11 (08)	M16	14	231 (170)
125 - 130	4 15/16 - 5	M10	8	72 (53)	M10	8	54 (40)	M10	8	54 (40)	M10	5	54 (40)	M16	14	231 (170)
135 - 140	5 3/16 - 5 1/2	M10	8	72 (53)	M10	8	54 (40)	M10	8	54 (40)	M10	5	54 (40)	M20	17	434 (320)
150 - 155	5 11/16 - 6	M10	8	72 (53)	M10	8	54 (40)	M10	8	54 (40)	M10	5	54 (40)	M20	17	434 (320)
160 - 170	6 7/16 - 6 11/16	M12	10	125 (92)	M12	10	94 (69)	M12	10	94 (69)	M10	5	54 (40)	M20	17	434 (320)
180	6 3/4 - 7	M12	10	125 (92)	M12	10	94 (69)	M12	10	94 (69)	M10	5	54 (40)	M20	17	434 (320)
190 - 200	7 1/4 - 8	M12	10	125 (92)	M12	10	94 (69)	M12	10	94 (69)	M10	5	54 (40)	M20	17	434 (320)
220 - 230	8 1/2 - 9	M16	14	309 (228)	M16	14	231 (170)	M12	10	94 (69)	M10	5	54 (40)	M20	17	434 (320)
240 - 260	9 1/2 - 10	M16	14	309 (228)	M16	14	231 (170)	M12	10	94 (69)	M10	5	54 (40)	M20	17	434 (320)
280	11	M20	17	600 (442)	M20	17	434 (320)	M12	10	94 (69)	M10	5	54 (40)	M20	17	434 (320)
300	12	M20	17	600 (442)	M20	17	434 (320)	M12	10	94 (69)	M10	5	54 (40)	M20	17	434 (320)
320 - 330	13	M20	17	600 (442)	M20	17	434 (320)	M12	10	94 (69)	M10	5	54 (40)	M24	19	760 (560)
340 - 360	14	M24	19	997 (735)	M20	17	434 (320)	M12	10	94 (69)	M10	5	54 (40)	M24	19	760 (560)
380 - 400	15 - 16	M24	19	997 (735)	M20	17	434 (320)	M12	10	94 (69)	M10	5	54 (40)	M24	19	760 (560)
420 - 440	17	M24	19	997 (735)	M20	17	434 (320)	M12	10	94 (69)	M16	14	231 (170)	M24	19	760 (560)
460	18	M24	19	997 (735)	M20	17	434 (320)	M12	10	94 (69)	M16	14	231 (170)	M24	19	760 (560)
480	19	M24	19	997 (735)	M20	17	434 (320)	M12	10	94 (69)	M16	14	231 (170)	M24	19	760 (560)
500	20	M24	19	997 (735)	M20	17	434 (320)	M16	14	231 (170)	M10	5	54 (40)	M24	19	760 (560)
530	21	M24	19	997 (735)	M20	17	434 (320)	M16	14	231 (170)	M10	5	54 (40)	M24	19	760 (560)
560	22	M24	19	997 (735)	M20	17	434 (320)	M12	10	94 (69)	M10	5	54 (40)	M24	19	760 (560)
580	23	M24	19	997 (735)	M20	17	434 (320)	M12	10	94 (69)	M10	5	54 (40)	M24	19	760 (560)
600	24	M24	19	997 (735)	M20	17	434 (320)	M12	10	94 (69)	M10	5	54 (40)	M24	19	760 (560)

* May be increased by up to 20% for high axial load applications

Shipping Weights

Light Series

mm	inch	Bearing Kg/lb	Housing Kg/lb	Support Kg/lb	Comp. Unit
35	1 3/16	1.3	2.5	3	6.8
40	1 1/2	3	6	7	16
45	1 11/16	1.8	3.5	5	10.3
50	2	4	8	11	23
60	2 3/16	2.3	4.4	5.9	12.6
65	2 1/2	5	10	13	28
70	2 11/16	3.3	6.5	9.5	19.3
75	3	7	14	21	42
80	3 3/16	5	9	15	29
90	3 1/2	11	20	33	64
100	3 11/16	7	11	16	34
105	4	15	24	35	74
110	4 3/16	10.5	16	24	50.5
115	4 1/2	23	35	53	111
120	4 11/16	14	24	41	79
130	5	31	53	90	174
135	5 3/16	17	27	49	93
140	5 1/2	37	59	108	204
150	5 11/16	18	31	49	98
155	6	40	68	108	216
160	6 7/16	19	35	65	119
	6 1/2	42	77	143	262
170	6 11/16	23	36	73	132
180	7	51	79	161	291
190	7 1/4	26	45	92	163
200	8	57	99	202	358
220	8 1/2	33	48	117	198
230	9	73	106	257	436
240	9 1/2	42	60	147	249
250	10	92	132	323	547
260	10 1/2	53	73	171	297
280	11	117	161	376	654
300	11 1/2	60	89	199	348
305	12	132	196	438	766
320	12 1/2	72	109	214	395
330	13	158	240	471	869
340	14	79	121	241	441
350		174	266	530	970
360	15	90	130	294	514
380		198	286	647	1131
400	16	96	145	315	556
		211	319	693	1223
420	17	105	155	323	583
		231	341	711	1283
440	18	119	156	377	652
460		262	343	829	1434
480	19	123	167	467	757
		271	367	1027	1665
500	20	139	198	449	786
		306	436	988	1730
530	21	180	220	502	902
		396	484	1104	1984
560	22	185	258	578	1021
		407	568	1272	2247
580	23	190	280	690	1160
		418	616	1518	2552
600	24	240	296	730	1266
		528	651	1606	2785

Medium Series

mm	inch	Bearing Kg/lb	Housing Kg/lb	Support Kg/lb	Comp. Unit
45	1 11/16	2.5	5	5.9	13.4
50	2	6	11	13	30
60	2 3/16	3.7	8	9.5	21.2
65	2 1/2	8	18	21	47
70	2 11/16	5.6	10	15	30.6
75	3	12	22	33	67
80	3 3/16	7	12	16	35
90	3 1/2	15	26	35	76
100	3 11/16	11	13	24	48
105	4	24	29	53	106
110	4 3/16	15.5	20	41	76.5
115	4 1/2	34	44	90	168
120	4 11/16	21	28	49	98
130	5	46	62	108	216
135	5 3/16	25	36	72	133
140	5 1/2	55	79	158	292
150	5 11/16	31	42	80	153
155	6	68	92	176	336
160	6 7/16	40	58	118	216
170	6 1/2	88	128	260	476
180	6 11/16	47	68	138	253
	7	103	150	304	557
190	7 1/4	59	86	192	337
200	8	130	189	422	741
220	8 1/2	69	101	229	399
230	9	152	222	504	878
240	9 1/2	79	108	277	464
260	10	174	238	609	1021
270	10 1/2	87	134	320	541
280	11	191	295	704	1190
300	11 1/2	125	132	372	629
305	12	275	290	818	1383
320	12 1/2	150	176	385	711
330	13	330	387	847	1564
340	14	184	190	477	851
360		405	418	1049	1872
380	15	187	213	490	890
		411	469	1078	1958
400	16	210	258	540	1008
		462	568	1188	2218
420	17	245	269	586	1100
		539	592	1289	2420
440	18	255	270	623	1148
460		561	594	1371	2526
480	19	268	277	690	1235
		590	609	1518	2717
500	20	276	328	745	1349
		607	722	1639	2968
530	21	314	357	899	1570
		691	785	1978	3454
560	22	341	385	960	1686
		750	847	2112	3709
580	23	375	405	1001	1781
		825	891	2202	3918
600	24	390	460	1056	1906
		858	1012	2323	4193

Heavy Series

mm	inch	Bearing Kg/lb	Housing Kg/lb	Support Kg/lb	Comp. Unit
100	3 11/16	35	40	121	196
105	4	77	88	266	431
110	4 3/16	41	45	141	227
120	4 1/2	90	99	310	499
125	4 15/16	42	46	156	244
130	5	92	101	343	536
135	5 3/16	50	51	197	298
140	5 1/2	110	112	433	655
150	5 11/16	59	75	261	395
155	6	130	165	574	869
160	6 7/16	74	87	291	452
170	6 11/16	163	191	640	994
175	6 3/4	83	91	338	512
180	7	183	200	744	1127
190	7 1/4	105	120	454	679
200	8	231	264	999	1494
220	8 1/2	151	164	408	949
230	9	332	361	1395	2088
240	9 1/2	153	174	540	1064
260	10	337	383	1621	2341
280	11	203	201	459	863
		447	442	1010	1899
300	12	242	249	1019	1510
		532	548	2242	3322
320	13	327	300	1116	1743
		719	660	2455	3834
340	14	375	361	1620	2356
360		825	794	3564	5183
380	15	436	433	1538	2407
400	16	959	953	3384	5296
420	17	400	443	1014	1857
440		880	975	2231	4086
460	18	636	274	1513	2423
		1399	603	3329	5331
500	20	700	880	1863	3443
530	21	1540	1936	4099	7575
560	22	675	694	1847	3216
		1485	1527	4063	7075
580	23	700	770	1794	3264
600	24	1540	1694	3947	7181

Pelletiser Drive Problem

Solved by SRB

SRB were invited to supply product on a problem application at a major UK steel producer. A drive to a pelletiser supported on split roller bearings had become a major headache.

Regular bearing failures were being experienced; sometimes bearings lasted no longer than 3 or 4 months.

The latest design of a competitor's split bearing featuring a pressed steel cage was used in an attempt to extend bearing life, however, it quickly became clear that this product was unable to solve the problem.

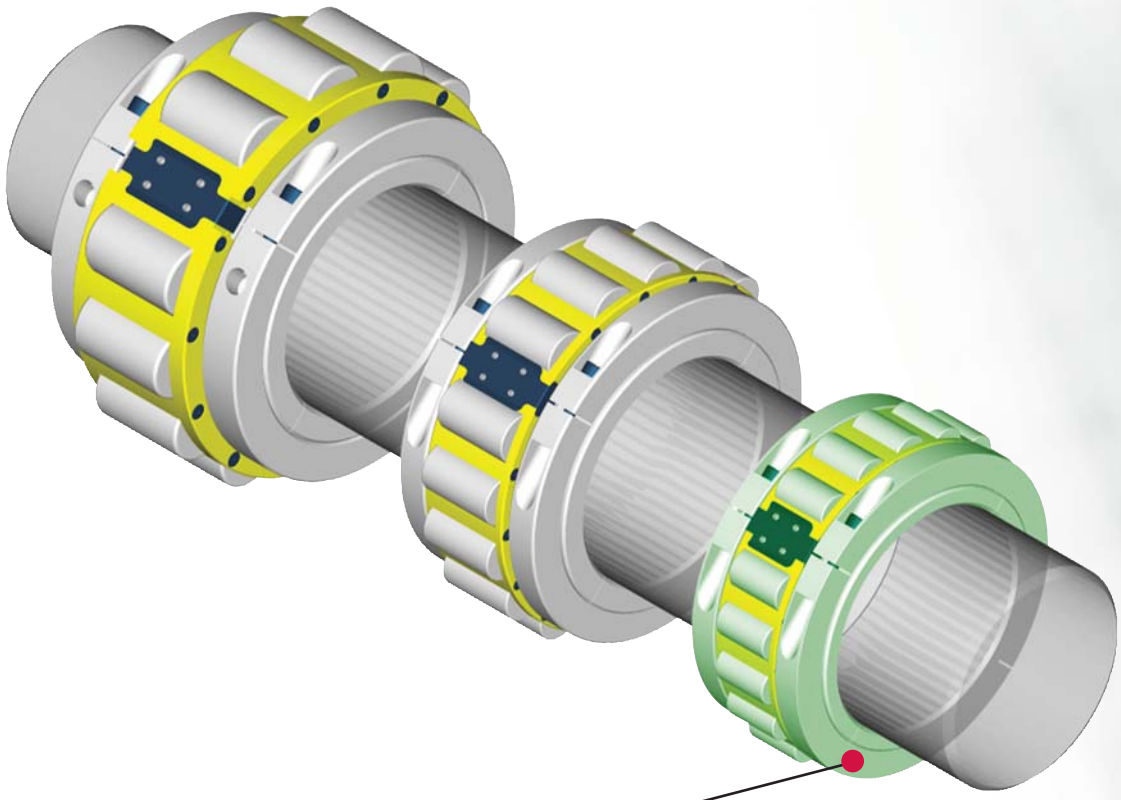
It was agreed that a brass caged SRB bearing should be fitted in a final attempt to solve the problem.

An engineer from SRB supervised the fitting of the bearing and, following a check of all mating components, the SRB bearing was mounted into the competitor's cast iron support.

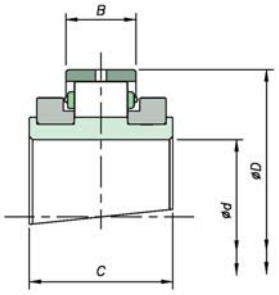
The bearings and housing have now operated for over two years without problems. The success of the SRB product in this application lead to many other opportunities with this customer.

Light Series

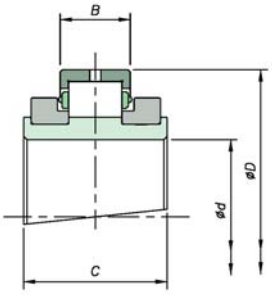
Light Series bearing products are by far the most commonly utilised range within the Split Bearing family. With a wide variety of mounting and sealing solutions available, Light Series bearing units can readily be matched to an ever-increasing range of applications. If a standard catalogue product does not meet your requirements, SRB Technical Services will be happy to provide help and advice on your application.



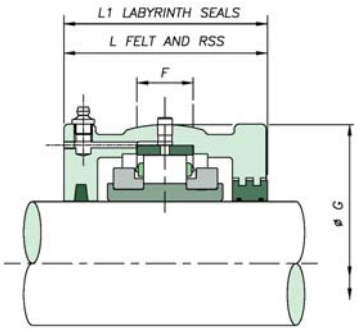
Light Bearing & Housing
40mm to 150mm



Expansion BX

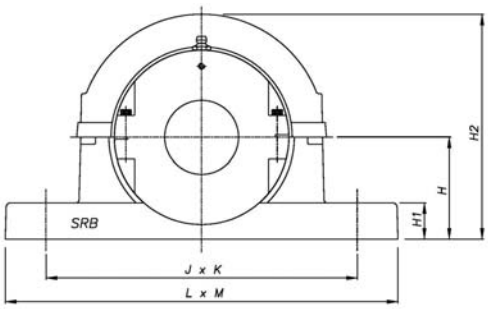


Retained BR



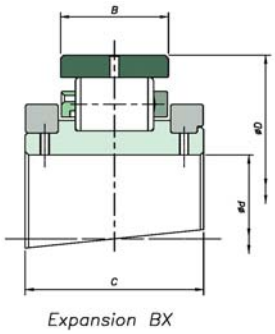
Shaft (d)		Reference		Bearings Ratings							Housing Reference					
mm	inch	Add BR for retained Add BX for expansion e.g. LSM35BR		Dynamic C_r (kN/lb)	Static C_{or} (kN/lb)	Axial C_a (kN/lb)	Max RPM	D	B	C	Add HR for retained Add HX for expansion e.g. LSM35HR	G	F	L	L_1
35 40	$1^3/_{16}$ $1^1/_4$ $1^7/_{16}$ $1^1/_2$	LSM35 LSM40	LSE103 LSE104 LSE107 LSE108	65 14613	68 15287	3.20 719.38	5400	84.14 3.313	23.80 0.937	55.00 2.165	LSM35 LSM40	LSE103 LSE104 LSE107 LSE108	100.00 3.937	25 1.0	84 3.3	86 3.4
45 50	$1^{11}/_{16}$ $1^3/_4$ $1^{15}/_{16}$ 2	LSM45 LSM50	LSE111 LSE112 LSE115 LSE200	83 18659	87 19558	3.60 809.30	4630	98.42 3.875	25.40 1.000	60.00 2.362	LSM45 LSM50	LSE111 LSE112 LSE115 LSE200	117.48 4.625	25 1.0	96 3.8	98 3.9
55 60 65	$2^3/_{16}$ $2^1/_4$ $2^7/_{16}$ $2^1/_2$	LSM55 LSM60 LSM65	LSE203 LSE204 LSE207 LSE208	103 23155	115 25853	5.40 1213.95	3940	114.30 4.500	27.00 1.063	60.00 2.362	LSM55 LSM60 LSM65	LSE203 LSE204 LSE207 LSE208	134.94 5.313	32 1.3	102 4.0	104 4.1
70 75	$2^{11}/_{16}$ $2^3/_4$ $2^{15}/_{16}$ 3	LSM70 LSM75	LSE211 LSE212 LSE215 LSE300	138 31024	161 36194	7.60 1708.53	3310	133.35 5.250	31.80 1.252	65.00 2.559	LSM70 LSM75	LSE211 LSE212 LSE215 LSE300	157.16 6.187	38 1.5	112 4.4	114 4.5
80 85 90	$3^3/_{16}$ $3^1/_4$ $3^7/_{16}$ $3^1/_2$	LSM80 LSM85 LSM90	LSE303 LSE304 LSE307 LSE308	187 42039	231 51931	12.40 2787.59	2790	152.4 6.000	38.90 1.531	75.00 2.953	LSM80 LSM85 LSM90	LSE303 LSE304 LSE307 LSE308	177.80 7.000	50 2.0	134 5.3	136 5.4
100 105	$3^{11}/_{16}$ $3^3/_4$ $3^{15}/_{16}$ 4	LSM100 LSM105	LSE311 LSE312 LSE315 LSE400	288 64745	366 82280	16.00 3596.90	2340	174.62 6.875	45.30 1.783	85.00 3.346	LSM100 LSM105	LSE311 LSE312 LSE315 LSE400	203.20 8.000	50 2.0	132 5.2	134 5.3
110 115	$4^3/_{16}$ $4^1/_4$ $4^7/_{16}$ $4^1/_2$	LSM110 LSM115	LSE403 LSE404 LSE407 LSE408	316 71040	427 95993	18.60 4181.39	1970	203.20 8.000	46.90 1.846	90.00 3.543	LSM110 LSM115	LSE403 LSE404 LSE407 LSE408	231.78 9.125	64 2.5	140 5.5	142 5.6
120 125 130	$4^{11}/_{16}$ $4^3/_4$ $4^{15}/_{16}$ 5	LSM120 LSM125 LSM130	LSE411 LSE412 LSE415 LSE500	363 81606	496 111505	22.20 4990.69	1740	222.25 8.750	54.00 2.126	95.00 3.740	LSM120 LSM125 LSM130	LSE411 LSE412 LSE415 LSE500	266.70 10.500	76 3.0	154 6.1	156 6.1
135 140	$5^3/_{16}$ $5^1/_4$ $5^7/_{16}$ $5^1/_2$	LSM135 LSM140	LSE503 LSE504 LSE507 LSE508	422 94869	585 131513	25.80 5799.99	1570	241.30 9.500	55.60 2.189	98.40 3.874	LSM135 LSM140	LSE503 LSE504 LSE507 LSE508	279.40 11.000	76 3.0	166 6.5	168 6.6
150 155 160A	$5^{11}/_{16}$ $5^3/_4$ $5^{15}/_{16}$ 6	LSM150 LSM155 LSM160A	LSE511 LSE512 LSE515 LSE600	459 103187	664 149273	29.40 6609.30	1450	254.00 10.000	55.60 2.189	98.40 3.874	LSM150 LSM155 LSM160A	LSE511 LSE512 LSE515 LSE600	295.28 11.625	82 3.2	172 6.8	174 6.9

Light Support
S01 - S10

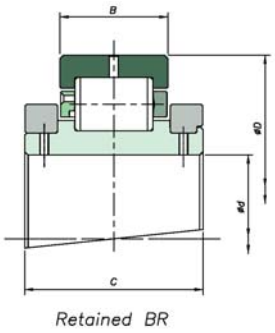


S01 - S10								
Shaft (d) mm	Shaft (d) inch	Support Reference	H	H_1	H_2	J x K	L x M	Bolts
35 40	$1^{3}/_{16}$ $1^{1}/_{4}$ $1^{7}/_{16}$ $1^{1}/_{2}$	S01	60 2.362	22 0.9	138 5.4	180 7.1	228 x 60 9 x 2.4	2 x M12
45 50	$1^{11}/_{16}$ $1^{3}/_{4}$ $1^{15}/_{16}$ 2	S02	70 2.756	25 1.0	158 6.2	214 8.4	270 x 60 10.6 x 2.4	2 x M16
55 60 65	$2^{3}/_{16}$ $2^{1}/_{4}$ $2^{7}/_{16}$ $2^{1}/_{2}$	S03	80 3.150	32 1.3	180 7.1	234 9.2	280 x 70 11 x 2.8	2 x M16
70 75	$2^{11}/_{16}$ $2^{3}/_{4}$ $2^{15}/_{16}$ 3	S04	95 3.740	38 1.5	208 8.2	270 10.6	330 x 76 13 x 3	2 x M20
80 85 90	$3^{3}/_{16}$ $3^{1}/_{4}$ $3^{7}/_{16}$ $3^{1}/_{2}$	S05	112 4.409	44 1.7	252 9.9	320 12.6	380 x 90 15 x 3.5	2 x M24
100 105	$3^{11}/_{16}$ $3^{3}/_{4}$ $3^{15}/_{16}$ 4	S06	125 4.921	52 2.0	272 10.7	354 13.9	420 x 102 16.5 x 4	2 x M24
110 115	$4^{3}/_{16}$ $4^{1}/_{4}$ $4^{7}/_{16}$ $4^{1}/_{2}$	S07	143 5.630	60 2.4	314 12.4	392 15.4	466 x 120 18.3 x 4.7	2 x M24
120 125 130	$4^{11}/_{16}$ $4^{3}/_{4}$ $4^{15}/_{16}$ 5	S08	162 6.378	38 1.5	372 14.6	450 x 120 17.7 x 4.7	508 x 178 20 x 7	4 x M24
135 140	$5^{3}/_{16}$ $5^{1}/_{4}$ $5^{7}/_{16}$ $5^{1}/_{2}$	S09	181 7.126	40 1.6	405 15.9	482 x 120 19 x 4.7	558 x 178 22 x 7	4 x M24
150 155 160A	$5^{11}/_{16}$ $5^{3}/_{4}$ $5^{15}/_{16}$ 6	S10	181 7.126	40 1.6	415 16.3	496 x 120 19.5 x 4.7	558 x 178 22 x 7	4 x M24

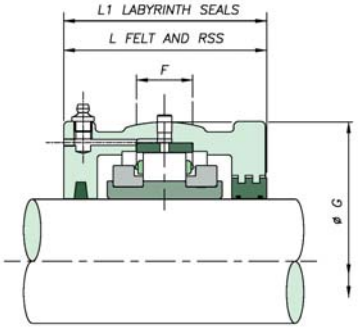
Light Bearing & Housing
160mm to 340mm



Expansion BX



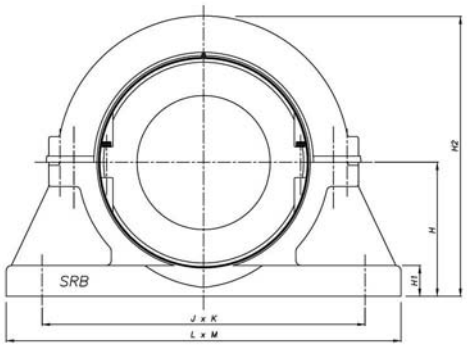
Retained BR



Shaft (d)		Reference		Bearings Ratings						
mm	inch	Add BR for retained Add BX for expansion e.g. LSM35BR		Dynamic C_r (kN/lb)	Static C_{or} (kN/lb)	Axial C_a (kN/lb)	Max RPM	D	B	C
160	6 7/16	LSM160	LSE607	583	792	33.00	1320	273.05	60.30	109.00
170A	6 1/2	LSM170A	LSE608	131064	178049	7419		10.750	2.374	4.291
170	6 11/16	LSM170	LSE611							
175	6 3/4	LSM175	LSE612	524	828	36.40	1220	285.75	55.50	109.00
180	6 15/16	LSM180	LSE615	117800	186142	8183		11.250	2.185	4.291
	7		LSE700							
	7 1/4		LSE704							
190	7 1/2	LSM190	LSE708	614	990	41.00	1070	311.15	60.30	109.00
200	7 15/16	LSM200	LSE715	138033	222561	9217		12.250	2.374	4.291
	8		LSE800							
220	8 1/2	LSM220	LSE808	659	1062	49.00	930	342.90	63.50	115.00
230	8 7/8	LSM230	LSE814	148149	238747	11016		13.500	2.500	4.528
	9		LSE900							
240	9 1/2	LSM240	LSE908	696	1182	57.80	820	374.65	66.70	122.00
250	9 3/4	LSM250	LSE912	156467	265724	12994		14.750	2.626	4.803
	10		LSE1000							
260	10 1/2	LSM260	LSE1008	794	1376	66.80	730	406.40	69.00	128.00
270	10 3/4	LSM270	LSE1012	178498	309337	15017		16.000	2.717	5.039
280	11	LSM280	LSE1100							
300	11 1/2	LSM300	LSE1108	929	1665	78.20	650	438.15	74.60	143.00
305	12	LSM305	LSE1200	208848	374307	17580		17.250	2.937	5.630
320	12 1/2	LSM320	LSE1208	920	1674	89.00	590	463.55	74.60	136.00
330	13	LSM330	LSE1300	206824	376330	20008		18.250	2.937	5.354
340	14	LSM340	LSE1400	967	1824	99.60	540	488.95	74.60	136.00
350		LSM350		217390	410052	22391		19.250	2.937	5.354

Housing Reference					
Add HR for retained Add HX for expansion e.g. LSM35HR		G	F	L	L_1
LSM160	LSE607	311.15	76	172	192
LSM170A	LSE608	12.250	3.0	6.8	7.6
LSM170	LSE611				
LSM175	LSE612	323.85	70	172	200
LSM180	LSE615	12.750	2.8	6.8	7.9
	LSE700				
	LSE704				
LSM190	LSE708	358.78	86	172	200
LSM200	LSE715	14.125	3.4	6.8	7.9
	LSE800				
LSM220	LSE808	387.35	82	178	216
LSM230	LSE814	15.250	3.2	7.0	8.5
	LSE900				
LSM240	LSE908	419.10	90	188	222
LSM250	LSE912	16.500	3.5	7.4	8.7
	LSE1000				
LSM260	LSE1008	454.00	95	204	232
LSM270	LSE1012	17.874	3.7	8.0	9.1
LSM280	LSE1100				
LSM300	LSE1108	489.00	98	216	248
LSM305	LSE1200	19.252	3.9	8.5	9.8
LSM320	LSE1208	520.70	95	260	–
LSM330	LSE1300	20.500	3.7	10.2	
LSM340	LSE1400	546.10	98	260	–
LSM350		21.500	3.9	10.2	

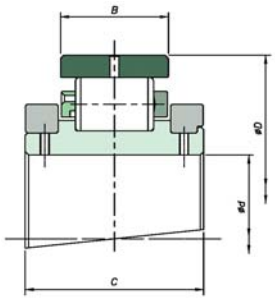
Light Support
S11 - S19



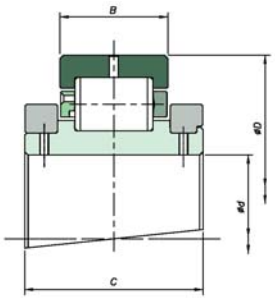
S11 - S19

Shaft (d) mm	Shaft (d) inch	Support Reference	H	H_1	H_2	J x K	L x M	Bolts
160 170A	$6^{7}/_{16}$ $6^{1}/_{2}$	S11	213 8.386	32 1.3	430 16.9	368 x 114 14.5 x 4.5	508 x 178 20 x 7	4 x M24
170 175 180	$6^{11}/_{16}$ $6^{3}/_{4}$ $6^{15}/_{16}$ 7	S12	235 9.252	35 1.4	470 18.5	388 x 128 15.3 x 5	534 x 190 21 x 7.5	4 x M24
190 200	$7^{1}/_{4}$ $7^{1}/_{2}$ $7^{15}/_{16}$ 8	S13	248 9.764	38 1.5	495 19.5	422 x 140 16.6 x 5.5	572 x 204 22.5 x 8	4 x M24
220 230	$8^{1}/_{2}$ $8^{7}/_{8}$ 9	S14	270 10.630	40 1.6	540 21.3	460 x 140 18.1 x 5.5	636 x 216 25 x 8.5	4 x M30
240 250	$9^{1}/_{2}$ $9^{3}/_{4}$ 10	S15	292 11.496	44 1.7	585 23.0	502 x 140 19.8 x 5.5	686 x 228 27 x 9	4 x M30
260 270 280	$10^{1}/_{2}$ $10^{3}/_{4}$ 11	S16	311 12.244	48 1.9	620 24.4	534 x 140 21 x 5.5	724 x 228 28.5 x 9	4 x M30
300 305	$11^{1}/_{2}$ 12	S17	343 13.504	50 2.0	685 27.0	584 x 178 23 x 7	762 x 254 32 x 10	4 x M30
320 330	$12^{1}/_{2}$ 13	S18	368 14.488	54 2.1	735 28.9	622 x 178 24.5 x 7	812 x 254 32 x 10	4 x M36
340 350	14	S19	387 15.236	57 2.2	775 30.5	654 x 166 25.7 x 6.5	850 x 254 33.5 x 10	4 x M36

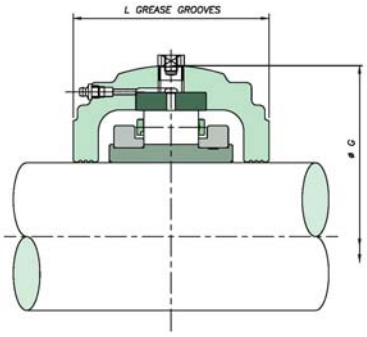
Light Bearing & Housing
360mm to 600mm



Expansion BX

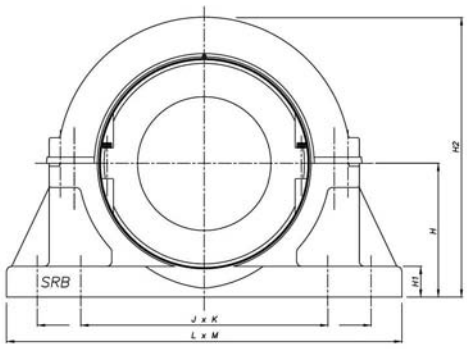


Retained BR



Shaft (d)		Reference		Bearings Ratings						Housing Reference					
mm	inch	Add BR for retained Add BX for expansion e.g. LSM35BR		Dynamic C_r (kN/lb)	Static C_{or} (kN/lb)	Axial C_a (kN/lb)	Max RPM	D	B	C	Add HR for retained Add HX for expansion e.g. LSM35HR		G	F	L	L_1
360 380	15	LSM360 LSM380	LSE1500	1011 227282	1975 443998	110.40 24819	500	520.70 20.500	76.20 3.000	140.00 5.512	LSM360 LSM380	LSE1500	571.50 22.500	98 3.9	260 10.2	–
400	16	LSM400	LSE1600	1054 236949	2125 477719	115.60 25988	460	546.10 21.500	76.20 3.000	140.00 5.512	LSM400	LSE1600	603.30 23.752	102 4.0	280 11.0	–
420	17	LSM420	LSE1700	1095 246166	2275 511440	121.00 27202	430	571.50 22.500	76.20 3.000	140.00 5.512	LSM420	LSE1700	628.70 24.752	102 4.0	292 11.5	–
440 460	18	LSM440 LSM460	LSE1800	1134 254933	2427 545611	127.20 28596	410	596.90 23.500	76.20 3.000	140.00 5.512	LSM440 LSM460	LSE1800	650.90 25.626	108 4.3	304 12.0	–
480	19	LSM480	LSE1900	1291 290228	2800 629465	132.60 29810	380	628.65 24.750	81.00 3.189	144.00 5.669	LSM480	LSE1900	682.60 26.874	108 4.3	304 12.0	–
500	20	LSM500	LSE2000	1336 300345	2974 668582	137.80 30979	360	654.05 25.750	80.20 3.157	168.00 6.614	LSM500	LSE2000	717.60 28.252	114 4.5	304 12.0	–
530	21	LSM530	LSE2100	1377 309562	3150 708148	140.60 31608	340	692.15 27.250	81.00 3.189	168.00 6.614	LSM530	LSE2100	755.70 29.752	114 4.5	330 13.0	–
560	22	LSM560	LSE2200	1419 319004	3324 747265	142.40 32013	330	717.55 28.250	81.00 3.189	168.00 6.614	LSM560	LSE2200	781.10 30.752	114 4.5	336 13.2	–
580	23	LSM580	LSE2300	1591 357671	3759 845057	144.00 32372	310	749.00 29.488	84.10 3.311	172.00 6.772	LSM580	LSE2300	816.00 32.126	120 4.7	342 13.5	–
600	24	LSM600	LSE2400	1638 368237	3956 889344	146.80 33002	300	774.70 30.500	84.10 3.311	172.00 6.772	LSM600	LSE2400	841.40 33.126	120 4.7	342 13.5	–

Light Support
S20 - S29



S20 - S29								
Shaft (d) mm	Shaft (d) inch	Support Reference	H	H_1	H_2	J x K	L x M	Bolts
360 380	15	S20	397 15.630	60 2.4	795 31.3	676 x 166 26.6 x 6.5	902 x 254 35.5 x 10	4 x M36
400	16	S21	432 17.008	67 2.6	865 34.1	724 x 166 28.5 x 6.5	940 x 254 37 x 10	4 x M36
420	17	S22	445 17.520	67 2.6	890 35.0	756 x 166 29.8 x 6.5	966 x 254 38 x 10	4 x M36
440 460	18	S23	464 18.268	70 2.8	925 36.4	788 x 190 31 x 7.5	1042 x 280 41 x 11	4 x M42
480	19	S24	483 19.016	73 2.9	965 38.0	816 x 188 32.1 x 7.4	1092 x 304 43 x 12	4 x M42
500	20	S25	489 19.252	76 3.0	980 38.6	844 x 216 33.2 x 8.5	1092 x 304 43 x 12	4 x M42
530	21	S26	533 20.984	80 3.1	1065 41.9	904 x 206 35.6 x 8.1	1194 x 304 47 x 12	4 x M42
560	22	S27	552 21.732	83 3.3	1110 43.7	936 x 206 36.9 x 8.1	1220 x 304 48 x 12	4 x M42
580	23	S28	578 22.756	83 3.3	1156 45.5	1080 & 877 x 220 42.5 & 34.5 x 8.7	1372 x 304 54 x 12	8 x M36
600	24	S29	597 23.504	90 3.5	1200 47.2	1118 & 908 x 200 44 & 35.7 x 7.9	1372 x 304 54 x 12	8 x M36

Flange Units

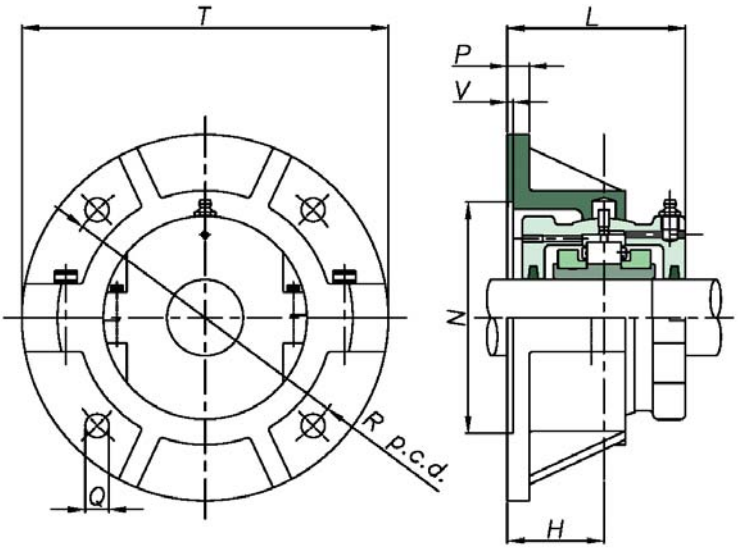
When faced with flat horizontal or vertical faces, flange units offer a simple mounting solution. As with Pillow block supports, Flange units are produced with spherical location to accommodate standard bearing housings and provide easy initial alignment of shaft and equipment.

To facilitate positive location of the flange to the surface, the rear face is recessed (dimensions N & V). This allows for a spigot (Tolerance f8) to be located into the flange.

Bearing inspection is simply a matter of removing the top half of the flange and housing. Bearing replacement may also be achieved in the same manner if required.

When integrating flange units into new applications, it should be noted that a maximum radial load equivalent to $0.26C_{or}$ is permissible. A maximum axial load of $0.25C_{a}$ must also be taken into account for applications with thrust loading. Units for vertically oriented shafts may also need special consideration given to sealing arrangements.

As always, SRB Technical Services will be happy to advise on any application issues.



Light Support
40mm - 300mm Flanges

Light Series 40mm - 300mm Flanges

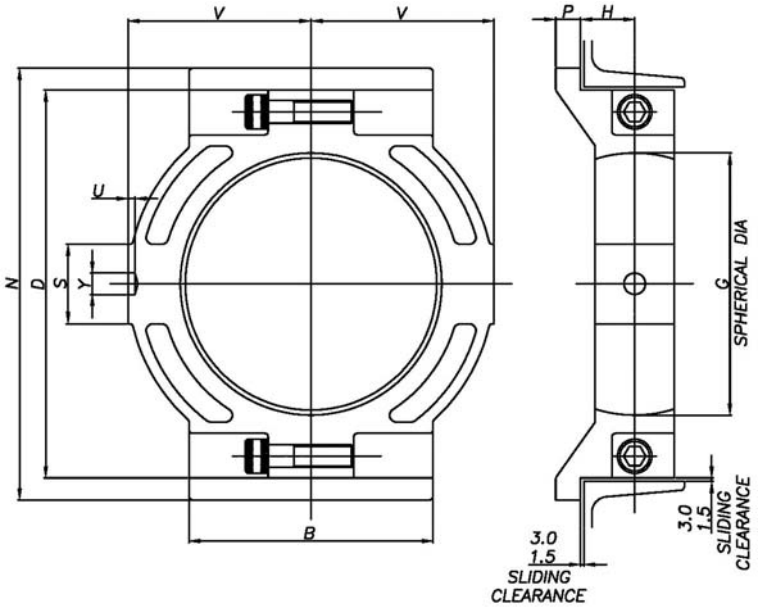
Shaft (d) mm	Shaft (d) inch	Flange Reference	T	Bolts	R	P	H	N	V	L
35 40	1 3/16 1 1/4 1 7/16 1 1/2	F01	204 8.0	4 x M12	164 6.5	13 0.5	51 2.0	119.06 4.687	3 0.1	94 3.7
45 50	1 11/16 1 3/4 1 15/16 2	F02	216 8.5	4 x M12	180 7.1	13 0.5	57 2.2	136.52 5.375	3 0.1	106 4.2
55 60 65	2 3/16 2 1/4 2 7/16 2 1/2	F03	260 10.2	4 x M12	218 8.6	16 0.6	67 2.6	166.96. 571	3 0.1	120 4.7
70 75	2 11/16 2 3/4 2 15/16 3	F04	286 11.3	4 x M12	242 9.5	16 0.6	73 2.9	192.09 7.563	3 0.1	130 5.1
80 85 90	3 3/16 3 1/4 3 7/16 3 1/2	F05	330 13.0	4 x M16	274 10.8	19 0.7	79 3.1	215.98 500	3 0.1	148 5.8
100 105	3 11/16 3 3/4 3 15/16 4	F06	356 14.0	4 x M16	302 11.9	19 0.7	86 3.4	244.47 9.625	3 0.1	154 6.1
110 115	4 3/16 4 1/4 4 7/16 4 1/2	F07	382 15.0	4 x M16	334 13.1	22 0.9	92 3.6	276.22 10.875	3 0.1	164 6.5
120 125 130	4 11/16 4 3/4 4 15/16 5	F08	432 17.0	4 x M24	374 14.7	22 0.9	98 3.9	314.32 12.375	3 0.1	176 6.9
135 140	5 3/16 5 1/4 5 7/16 5 1/2	F09	444 17.5	4 x M24	384 15.1	25 1.0	98 3.9	317.51 2.500	3 0.1	182 7.2
150 155 160A	5 11/16 5 3/4 5 15/16 6	F10	470 18.5	4 x M24	412 16.2	25 1.0	114 4.5	346.07 13.625	3 0.1	202 8.0
160 170A	6 7/16 6 1/2	F11	496 19.5	4 x M24	426 16.8	25 1.0	105 4.1	352.42 13.875	3 0.1	202 8.0
170 175 180	6 11/16 6 3/4 6 15/16 7	F12	508 20.0	4 x M24	438 17.2	29 1.1	108 4.3	365.12 14.375	3 0.1	208 8.2
190 200	7 1/4 7 1/2 7 15/16 8	F13	534 21.0	4 x M24	474 18.7	32 1.3	108 4.3	400.05 15.750	3 0.1	208 8.2
220 230	8 1/2 8 7/8 9	F14	584 23.0	4 x M30	512 20.2	35 1.4	117 4.6	431.81 7.000	3 0.1	226 8.9
240 250	9 1/2 9 3/4 10	F15	610 24.0	4 x M30	542 21.3	35 1.4	117 4.6	463.55 18.250	3 0.1	228 9.0
260 270 280	10 1/2 10 3/4 11	F16	660 26.0	4 x M30	584 23.0	38 1.5	124 4.9	504.82 19.875	3 0.1	240 9.4
300 305	11 1/2 12	F17	712 28.0	4 x M30	626 24.6	38 1.5	133 5.2	539.75 21.250	3 0.1	258 10.2

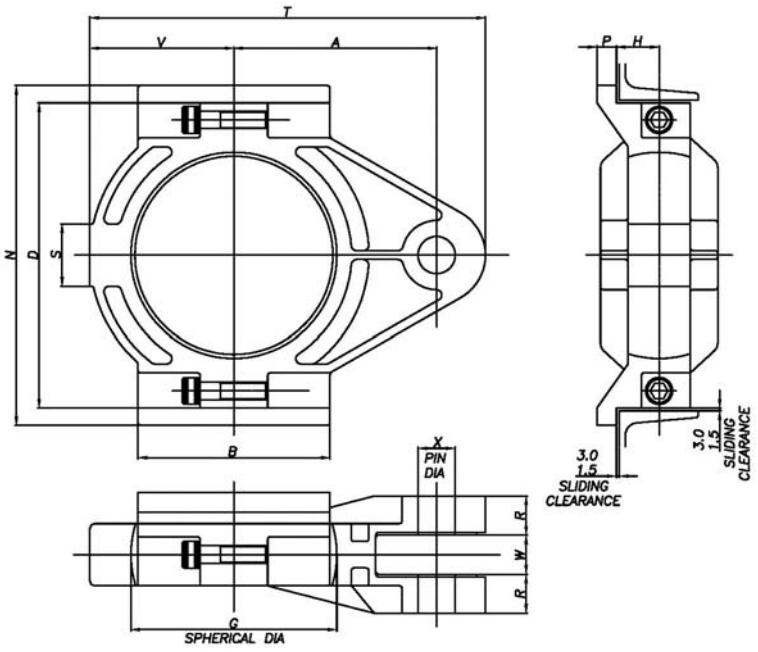
For Bearings and Housings see pages 39 – 44

Tensioning Units

This type of split unit can be found in use on materials handling equipment in many industries. Take up units provide an efficient and readily accessible means of tensioning conveyor systems and large scale drives.

The units consist of either push type or pull type sliding supports into which standard housings and bearings may be mounted. When integrating tensioning units into new applications, it should be noted that a maximum radial load equivalent to $0.3C_{or}$ is permissible. As with all SRB Units, a wide variety of sealing solutions may be applied dependant on the environment and application. Please contact SRB Technical Services for assistance.





Tensioning Units TT/TP

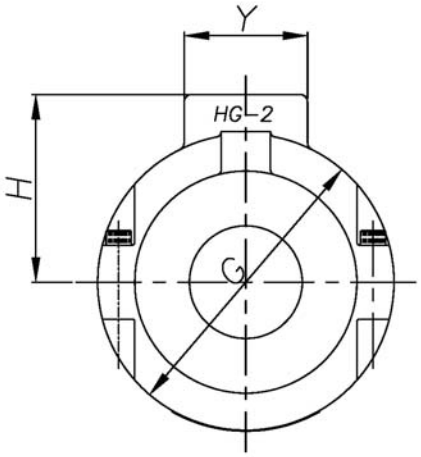
Light Series 40mm to 150mm

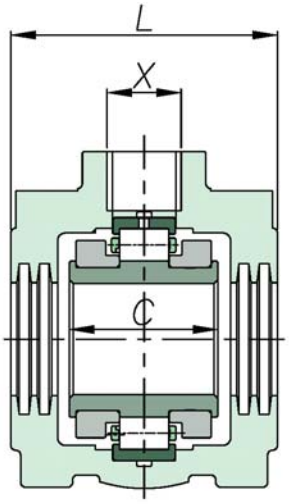
Shaft (d)		Support Reference														
mm	inch	Tension Type	Push Type	B	N	D	V	P	H	L	S	A	T	X	W	R
35 40	1 3/16 1 1/4 1 7/16 1 1/2	TT01	TP01	102 4.0	172 6.8	153 6.0	76 3.0	14 0.6	29 1.1	86 3.4	25 1.0	114 4.5	216 8.5	20 0.8	25 1.0	24 0.9
45 50	1 11/16 1 3/4 1 15/16 2	TT02	TP02	114 4.5	204 8.0	178 7.0	88 3.5	16 0.6	29 1.1	98 3.9	29 1.1	128 5.0	242 9.5	24 0.9	25 1.0	25 1.0
55 60 65	2 3/16 2 1/4 2 7/16 2 1/2	TT03	TP03	128 5.0	235 9.3	203 8.0	102 4.0	20 0.8	32 1.3	104 4.1	38 1.5	146 5.7	280 11.0	24 0.9	30 1.2	29 1.1
70 75	2 11/16 2 3/4 2 15/16 3	TT04	TP04	152 6.0	266 10.5	229 9.0	114 4.5	22 0.9	40 1.6	114 4.5	41 1.6	158 6.2	305 12.0	24 0.9	30 1.2	114 4.5
80 85 90	3 3/16 3 1/4 3 7/16 3 1/2	TT05	TP05	190 7.5	318 12.5	280 11.0	140 5.5	22 0.9	40 1.6	136 5.4	51 2.0	190 7.5	368 14.5	30 1.2	38 1.5	35 1.4
100 105	3 11/16 3 3/4 3 15/16 4	TT06	TP06	204 8.0	342 13.5	305 12.0	152 6.0	22 0.9	43 1.7	134 5.3	51 2.0	210 8.3	414 16.3	36 1.4	44 1.7	35 1.4
110 115	4 3/16 4 1/4 4 7/16 4 1/2	TT07	TP07	216 8.5	382 15.0	343 13.5	162 6.4	22 0.9	48 1.9	142 5.6	70 2.8	228 9.0	445 17.5	42 1.7	44 1.7	41 1.6
120 125 130	4 11/16 4 3/4 4 15/16 5	TT08	TP08	254 10.0	420 16.5	381 15.0	190 7.5	25 1.0	51 2.0	156 6.1	76 3.0	260 10.2	508 20.0	42 1.7	44 1.7	44 1.7
135 140	5 3/16 5 1/4 5 7/16 5 1/2	TT09	TP09	266 10.5	438 17.2	400 15.7	196 7.7	25 1.0	54 2.1	168 6.6	76 3.0	266 10.5	514 20.2	42 1.7	44 1.7	48 1.9
150 155 160A	5 11/16 5 3/4 5 15/16 6	TT10	TP10	266 10.5	464 18.3	426 16.8	204 8.0	25 1.0	57 2.2	174 6.9	86 3.4	280 11.0	546 21.5	48 1.9	50 2.0	51 2.0

Hanger Units

SRB Hanger Units are the optimum solution for the support of screw conveyor shafts. The unit comprises of a cast iron split housing into which standard SRB bearings are fitted. Provision of a drilled and tapped boss in one half of the housing allows for the unit to be mounted from the conveyor cross bracing or any other suitable surface. It is recommended that some form of swivel fixing be incorporated into the mounting arrangement to allow for static alignment.

Due to the arduous conditions often found in screw conveyor applications, correct seal selection is critical. SRB Hanger units are available with many sealing variants, all of which can also be tailored to suit specific applications. When integrating hanging units into new applications, it should be noted that a maximum radial load equivalent to $0.3C_{or}$ is permissible. Please contact SRB Technical Services for further information.





Light Series Hanger Units

Shaft (d) mm	Shaft (d) inch	Reference		C	G	L	H	X	Y
35 40	1 3/16 1 1/4 1 7/16 1 1/2	LSM35HG LSM40HG	LSE103HG LSE104HG LSE107HG LSE108HG	55.0 2.165	100 3.9	108 4.3	66 2.6	M30	50 2.0
45 50	1 11/16 1 3/4 1 15/16 2	LSM45HG LSM50HG	LSE111HG LSE112HG LSE115HG LSE200HG	60.0 2.362	117 4.6	108 4.3	76 3.0	M30	50 2.0
55 60 65	2 3/16 2 1/4 2 7/16 2 1/2	LSM55HG LSM60HG LSM65HG	LSE203HG LSE204HG LSE207HG LSE208HG	60.0 2.362	135 5.3	108 4.3	82 3.2	M30	50 2.0
70 75	2 11/16 2 3/4 2 15/16 3	LSM70HG LSM75HG	LSE211HG LSE212HG LSE215HG LSE300HG	65.0 2.559	157 6.2	130 5.1	92 3.6	M30	50 2.0
80 85 90	3 3/16 3 1/4 3 7/16 3 1/2	LSM80HG LSM85HG LSM90HG	LSE303HG LSE304HG LSE307HG LSE308HG	75.0 2.953	178 7.0	146 5.7	114 4.5	M36	76 3.0
100 105	3 11/16 3 3/4 3 15/16 4	LSM100HG LSM105HG	LSE311HG LSE312HG LSE315HG LSE400HG	85.0 3.346	203 8.0	152 6.0	128 5.0	M36	76 3.0
110 115	4 3/16 4 1/4 4 7/16 4 1/2	LSM110HG LSM115HG	LSE403HG LSE404HG LSE407HG LSE408HG	90.0 3.543	232 9.1	156 6.1	140 5.5	M36	76 3.0

Zambesi Rapid Water Ride

SRB have supplied ground breaking split bearing assemblies to resolve the support problems for the twin ascender screw providing water to the massive Zambesi Rapid Water ride in the Gold Reef City theme park, RSA.

The lower bearings, traditionally of an inefficient plain bearing design, are completely submerged in water. The water also contains sand and silt in suspension as a result of the constant churning. This forms an abrasive solution. In contrast, the upper bearing, though in dry conditions, must accommodate some 16 tonnes of thrust load.

The screw conveyors are 11m long and 2.7m diameter angled 30 degrees and rotating at 27.5 rpm. Together, the twin units are capable of supplying 7 cubic meters of water per second (25,200 tonnes per hour).

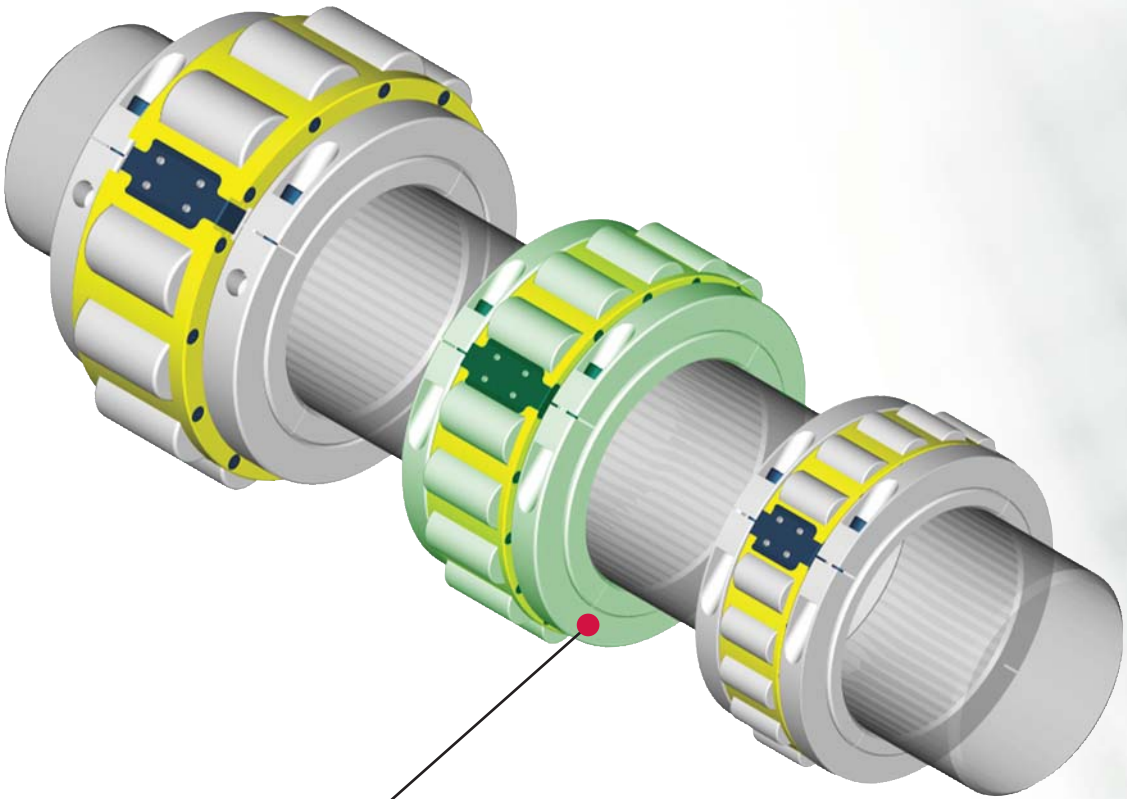
The lower bearing, a Light Series 200mm diameter, features sealing adequate to exclude water and other contaminants from the bearing enclosure. This is achieved via an arrangement of two lip seals with garter springs with a central grease feed. The sealing efficiency and grease purge provides long term reliable operation.

The upper bearing, a Medium Series 250mm diameter, was designed to accommodate the large axial load. The load is carried between the inner race shoulder on one side and the outer race lip on the other. Both shoulders and lips are specially designed to facilitate the generation of an oil film between the sliding surfaces of roller ends and lips, thereby reducing wear and limiting temperature generation.

The bearings operate in an ambient temperature of up to 40°C and have now run problem free for over six years. This illustrates how SRB can design and manufacture units to accept conditions outside of the normal perceived split bearing capabilities.

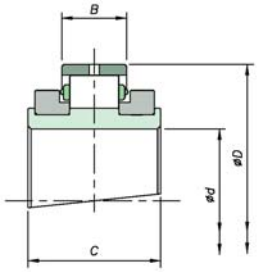
Medium Series Product

Medium Series bearing products can be utilised in applications requiring higher load carrying capacity. Under nominal conditions, Medium Series may also be selected to provide an extended bearing life when compared to Light Series. Medium Series offers the same range of mounting and sealing solutions as Light Series, with the exception of Hanger units. If a standard catalogue product does not meet your requirements, SRB Technical Services will be happy to provide help and advice on your application.

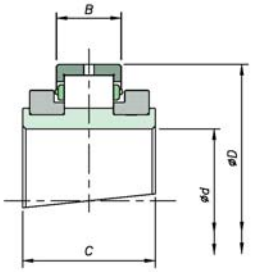


Medium Series

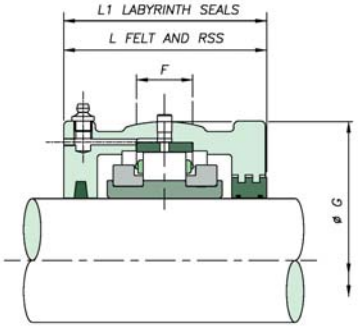
Medium Bearing & Housing 50mm to 150mm



Expansion BX

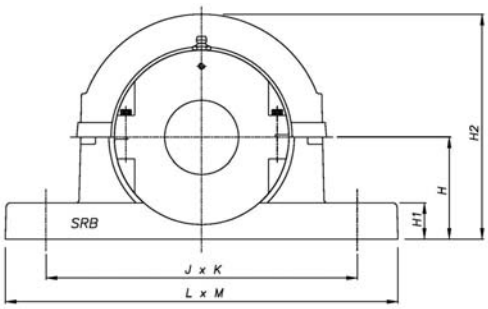


Retained BR



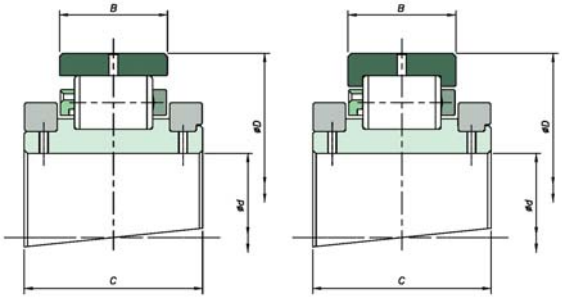
Shaft (d)		Reference		Bearings Ratings							Housing Reference					
mm	inch	Add BR for retained Add BX for expansion e.g. MSM55BR		Dynamic C_r (kN/lb)	Static C_{or} (kN/lb)	Axial C_a (kN/lb)	Max RPM	D	B	C	Add HR for retained Add HX for expansion e.g. MSM55HR	G	F	L	L_1
45 50	$1^{11}/_{16}$ $1^3/_4$ $1^{15}/_{16}$ 2	MSM45 MSM50	MSE111 MSE112 MSE115 MSE200	121 27202	127 28551	6.20 1394	4350	107.95 4.250	35.00 1.378	67.50 2.657	MSM45 MSM50	MSE111 MSE112 MSE115 MSE200	134.94 5.313	32 1.3	112 4.4	114 4.5
55 60 65	$2^3/_{16}$ $2^1/_4$ $2^7/_{16}$ $2^1/_2$	MSM55 MSM60 MSM65	MSE203 MSE204 MSE207 MSE208	168 37768	190 42714	8.80 1978	3680	127.00 5.000	38.90 1.531	72.30 2.846	MSM55 MSM60 MSM65	MSE203 MSE204 MSE207 MSE208	157.16 6.187	38 1.5	124 4.9	126 5.0
70 75	$2^{11}/_{16}$ $2^3/_4$ $2^{15}/_{16}$ 3	MSM70 MSM75	MSE211 MSE212 MSE215 MSE300	258 58001	300 67443	10.60 2383	3080	149.22 5.875	46.10 1.815	82.60 3.252	MSM70 MSM75	MSE211 MSE212 MSE215 MSE300	177.80 7.000	50 2.0	138 5.4	140 5.5
80 85 90	$3^3/_{16}$ $3^1/_4$ $3^7/_{16}$ $3^1/_2$	MSM80 MSM85 MSM90	MSE303 MSE304 MSE307 MSE308	297 66768	353 79358	17.80 4002	2520	169.86 6.687	48.40 1.906	89.70 3.531	MSM80 MSM85 MSM90	MSE303 MSE304 MSE307 MSE308	203.20 8.000	50 2.0	152 6.0	154 6.1
100 105	$3^{11}/_{16}$ $3^3/_4$ $3^{15}/_{16}$ 4	MSM100 MSM105	MSE311 MSE312 MSE315 MSE400	388 87226	491 110381	25.00 5620	2130	193.68 7.625	51.60 2.031	92.10 3.626	MSM100 MSM105	MSE311 MSE312 MSE315 MSE400	231.78 9.125	64 2.5	144 5.7	146 5.7
110 115	$4^3/_{16}$ $4^1/_4$ $4^7/_{16}$ $4^1/_2$	MSM110 MSM115	MSE403 MSE404 MSE407 MSE408	454 102063	592 133087	31.20 7014	1820	228.60 9.000	57.20 2.252	100.00 3.937	MSM110 MSM115	MSE403 MSE404 MSE407 MSE408	266.70 10.500	76 3.0	160 6.3	162 6.4
120 125 130	$4^{11}/_{16}$ $4^3/_4$ $4^{15}/_{16}$ 5	MSM120 MSM125 MSM130	MSE411 MSE412 MSE415 MSE500	525 118025	700 157366	38.20 8588	1600	254.00 10.000	63.50 2.500	114.30 4.500	MSM120 MSM125 MSM130	MSE411 MSE412 MSE415 MSE500	295.28 11.625	82 3.2	182 7.2	184 7.2
135 140	$5^3/_{16}$ $5^1/_4$ $5^7/_{16}$ $5^1/_2$	MSM135 MSM140	MSE503 MSE504 MSE507 MSE508	600 134885	817 183669	45.40 10206	1450	273.05 10.750	66.70 2.626	117.50 4.626	MSM135 MSM140	MSE503 MSE504 MSE507 MSE508	323.85 12.750	90 3.5	186 7.3	188 7.4
150 155 160A	$5^{11}/_{16}$ $5^3/_4$ $5^{15}/_{16}$ 6	MSM150 MSM155 MSM160A	MSE511 MSE512 MSE515 MSE600	730 164111	1034 232453	52.40 11780	1320	292.10 11.500	68.30 2.689	123.80 4.874	MSM150 MSM155 MSM160A	MSE511 MSE512 MSE515 MSE600	336.55 13.250	95 3.7	202 8.0	204 8.0

Medium Support
S03 - S31

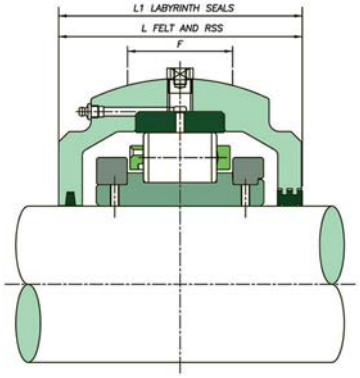


S03 - S31								
Shaft (d) mm	Shaft (d) inch	Support Reference	H	H_1	H_2	J x K	L x M	Bolts
45 50	$1^{11}/_{16}$ $1^{3}/_{4}$ $1^{15}/_{16}$ 2	S03	80 3.150	32 1.3	180 7.1	234 9.2	280 x 70 11 x 2.8	2 x M16
55 60 65	$2^{3}/_{16}$ $2^{1}/_{4}$ $2^{7}/_{16}$ $2^{1}/_{2}$	S04	95 3.740	38 1.5	208 8.2	270 10.6	330 x 76 13 x 3	2 x M20
70 75	$2^{11}/_{16}$ $2^{3}/_{4}$ $2^{15}/_{16}$ 3	S05	112 4.409	44 1.7	252 9.9	320 12.6	380 x 90 15 x 3.5	2 x M24
80 85 90	$3^{3}/_{16}$ $3^{1}/_{4}$ $3^{7}/_{16}$ $3^{1}/_{2}$	S06	125 4.921	52 2.0	272 10.7	354 13.9	420 x 102 16.5 x 4	2 x M24
100 105	$3^{11}/_{16}$ $3^{3}/_{4}$ $3^{15}/_{16}$ 4	S07	143 5.630	60 2.4	314 12.4	392 15.4	466 x 120 18.3 x 4.7	2 x M24
110 115	$4^{3}/_{16}$ $4^{1}/_{4}$ $4^{7}/_{16}$ $4^{1}/_{2}$	S08	162 6.378	38 1.5	372 14.6	450 x 120 17.7 x 4.7	508 x 178 20 x 7	4 x M24
120 125 130	$4^{11}/_{16}$ $4^{3}/_{4}$ $4^{15}/_{16}$ 5	S10	181 7.126	40 1.6	415 16.3	496 x 120 19.5 x 4.7	558 x 178 22 x 7	4 x M24
135 140	$5^{3}/_{16}$ $5^{1}/_{4}$ $5^{7}/_{16}$ $5^{1}/_{2}$	S30	203 7.992	50 2.0	460 18.1	546 x 120 21.5 x 4.7	610 x 178 24 x 7	4 x M24
150 155 160A	$5^{11}/_{16}$ $5^{3}/_{4}$ $5^{15}/_{16}$ 6	S31	210 8.268	50 2.0	470 18.5	558 x 128 22 x 5	636 x 204 25 x 8	4 x M24

Medium Bearing & Housing
160mm to 340mm

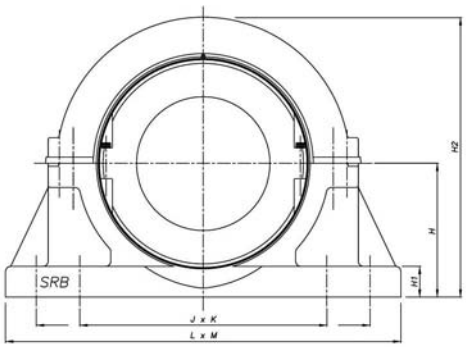


Expansion BX Retained BR



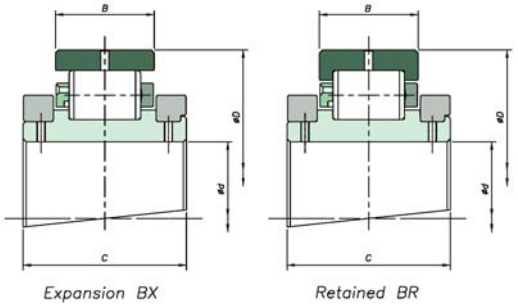
Shaft (d)		Reference		Bearings Ratings							Housing Reference					
mm	inch	Add BR for retained Add BX for expansion e.g. MSM160BR		Dynamic C_r (kN/lb)	Static C_{or} (kN/lb)	Axial C_a (kN/lb)	Max RPM	D	B	C	Add HR for retained Add HX for expansion e.g. MSM160HR		G	F	L	L_1
160	6 7/16	MSM160	MSE607	842	1175	61.40	1200	317.50	83.30	140.00	MSM160	MSE607	368.30	95	206	232
170	6 1/2	MSM170	MSE608	189289	264151	13803		12.500	3.280	5.512	MSM170	MSE608	14.500	3.7	8.1	9.1
	6 11/16		MSE611									MSE611				
175	6 3/4	MSM175	MSE612	927	1357	71.20	1120	330.20	83.30	140.00	MSM175	MSE612	381.00	95	222	242
180	6 15/16	MSM180	MSE615	208398	305066	16006		13.000	3.280	5.512	MSM180	MSE615	15.000	3.7	8.7	9.5
	7		MSE700									MSE700				
	7 1/4		MSE704									MSE704				
190	7 1/2	MSM190	MSE708	1013	1516	80.00	960	368.30	90.50	156.00	MSM190	MSE708	425.50	105	235	258
200	7 15/16	MSM200	MSE715	227732	340810	17985		14.500	3.563	6.142	MSM200	MSE715	16.752	4.1	9.3	10.2
	8		MSE800									MSE800				
220	8 1/2	MSM220	MSE808	1138	1668	89.80	850	393.70	90.50	163.00	MSM220	MSE808	457.20	110	242	274
230	8 7/8	MSM230	MSE814	255833	374981	20188		15.500	3.563	6.417	MSM230	MSE814	18.000	4.3	9.5	10.8
	9		MSE900									MSE900				
240	9 1/2	MSM240	MSE908	1240	1882	98.80	750	431.80	96.80	170.00	MSM240	MSE908	495.30	118	248	280
250	9 3/4	MSM250	MSE912	278763	423091	22211		17.000	3.811	6.693	MSM250	MSE912	19.500	4.6	9.8	11.0
260	10	MSM260	MSE1000								MSM260	MSE1000				
270	10 1/2	MSM270	MSE1008	1476	2357	113.80	670	463.55	101.60	186.00	MSM270	MSE1008	527.10	130	264	300
280	10 3/4	MSM280	MSE1012	331818	529875	25583		18.250	4.000	7.323	MSM280	MSE1012	20.752	5.1	10.4	11.8
	11		MSE1100									MSE1100				
300	11 1/2	MSM300	MSE1108	1569	2607	129.00	610	495.30	103.20	193.00	MSM300	MSE1108	552.50	128	268	306
305	12	MSM305	MSE1200	352725	586077	29000		19.500	4.063	7.598	MSM305	MSE1200	21.752	5.0	10.6	12.0
320	12 1/2	MSM320	MSE1208	1723	2922	144.20	550	527.05	106.40	192.00	MSM320	MSE1208	587.40	128	298	_
330	13	MSM330	MSE1300	387346	656892	32417		20.750	4.189	7.559	MSM330	MSE1300	23.126	5.0	11.7	
340	14	MSM340	MSE1400	1989	3403	159.20	500	565.15	115.90	200.00	MSM340	MSE1400	628.70	146	305	_
360		MSM360		447145	765025	35790		22.250	4.563	7.874	MSM350		24.752	5.7	12.0	

Medium Support
S32 - S40

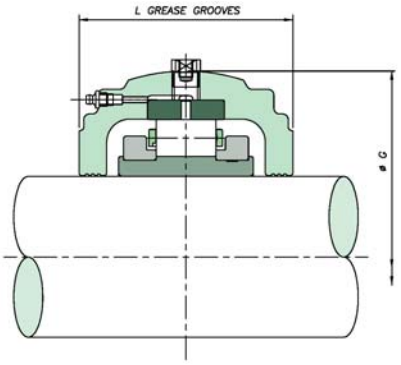


S32 - S40								
Shaft (d) mm	Shaft (d) inch	Support Reference	H	H_1	H_2	J x K	L x M	Bolts
160 170	$6^{7}/_{16}$ $6^{1}/_{2}$	S32	267 10.512	44 1.7	535 21.1	448 x 172 17.6 x 6.8	596 x 242 23.5 x 9.5	4 x M30
175 180	$6^{11}/_{16}$ $6^{3}/_{4}$ $6^{15}/_{16}$ 7	S33	273 10.748	44 1.7	545 21.5	458 x 166 18 x 6.5	636 x 242 25 x 9.5	4 x M30
190 200	$7^{1}/_{4}$ $7^{1}/_{2}$ $7^{15}/_{16}$ 8	S34	305 12.008	50 2.0	610 24.0	508 x 190 20 x 7.5	686 x 266 27 x 10.5	4 x M30
220 230	$8^{1}/_{2}$ $8^{7}/_{8}$ 9	S35	324 12.756	50 2.0	650 25.6	550 x 190 21.7 x 7.5	750 x 280 29.5 x 11	4 x M30
240 250 260	$9^{1}/_{2}$ $9^{3}/_{4}$ 10	S36	356 14.016	54 2.1	710 28.0	596 x 204 23.5 x 8	812 x 292 32 x 11.5	4 x M36
270 280	$10^{1}/_{2}$ $10^{3}/_{4}$ 11	S37	378 14.882	60 2.4	760 29.9	736 & 534 x 254 29 & 21 x 10	914 x 330 36 x 13	8 x M30
300 305	$11^{1}/_{2}$ 12	S38	394 15.512	60 2.4	790 31.1	768 & 566 x 254 30.2 & 22.3 x 10	958 x 330 37.7 x 13	8 x M30
320 330	$12^{1}/_{2}$ 13	S39	419 16.496	64 2.5	840 33.1	812 & 610 x 210 32 & 24 x 8.3	1016 x 292 40 x 11.5	8 x M30
340 360	14	S40	451 17.756	67 2.6	900 35.4	864 & 660 x 280 34 & 26 x 11	1092 x 368 43 x 14.5	8 x M36

Medium Bearing & Housing 380mm to 600mm

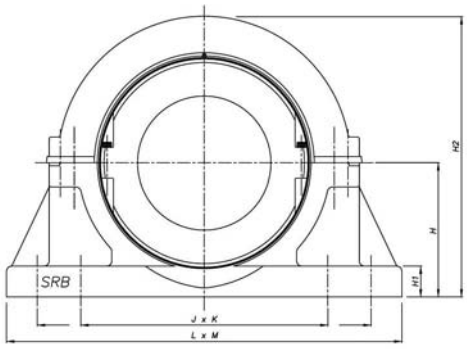


Expansion BX Retained BR



Shaft (d)		Reference		Bearings Ratings						Housing Reference					
mm	inch	Add BR for retained Add BX for expansion e.g. MSM380BR		Dynamic C_r (kN/lb)	Static C_{or} (kN/lb)	Axial C_a (kN/lb)	Max RPM	D	B	C	Add HR for retained Add HX for expansion e.g. MSM380HR		G	F	L	L_1
380	15	MSM380	MSE1500	1800 404656	3202 719838	174.40 39207	460	584.20 23.000	111.10 4.374	200.00 7.874	MSM380	MSE1500	647.70 25.500	146 5.7	305 12.0	–
400	16	MSM400	MSE1600	2105 473223	3793 852701	188.40 42354	430	615.95 24.250	115.90 4.563	200.00 7.874	MSM400	MSE1600	685.80 27.000	146 5.7	324 12.8	–
420	17	MSM420	MSE1700	2324 522456	4164 936105	202.00 45411	400	647.70 25.500	119.10 4.689	200.00 7.874	MSM420	MSE1700	717.60 28.252	146 5.7	350 13.8	–
440 460	18	MSM440 MSM460	MSE1800	2215 497952	4183 940376	216.00 48559	380	666.75 26.250	115.90 4.563	200.00 7.874	MSM440 MSM460	MSE1800	733.40 28.874	146 5.7	350 13.8	–
480	19	MSM480	MSE1900	2445 549658	4594 1032773	230.00 51706	360	698.50 27.500	119.10 4.689	223.00 8.780	MSM480	MSE1900	762.00 30.000	146 5.7	368 14.5	–
500	20	MSM500	MSE2000	2320 521557	4571 1027602	244.00 54853	340	717.55 28.250	115.90 4.563	226.00 8.898	MSM500	MSE2000	787.40 31.000	146 5.7	368 14.5	–
530	21	MSM530	MSE2100	2556 574612	5028 1130340	258.00 58001	330	762.00 30.000	119.10 4.689	229.00 9.016	MSM530	MSE2100	831.90 32.752	150 5.9	368 14.5	–
560	22	MSM560	MSE2200	2683 603163	5436 1222062	272.00 61148	310	793.75 31.250	122.20 4.811	233.00 9.173	MSM560	MSE2200	866.80 34.126	152 6.0	374 14.7	–
580	23	MSM580	MSE2300	2740 615977	5601 1259155	286.00 64295	300	812.80 32.000	119.10 4.689	232.00 9.134	MSM580	MSE2300	883.00 34.764	152 6.0	374 14.7	–
600	24	MSM600	MSE2400	2770 622721	5637 1267248	300.00 67443	290	838.20 33.000	119.10 4.689	214.00 8.425	MSM600	MSE2400	914.40 36.000	152 6.0	388 15.3	–

Medium Support
S41 - S50



S41- S50								
Shaft (d) mm	Shaft (d) inch	Support Reference	H	H_1	H_2	J x K	L x M	Bolts
380	15	S41	464 18.268	67 2.6	925 36.4	886 & 682 x 280 34.9 & 26.9 x 11	1092 x 368 43 x 14.5	8 x M36
400	16	S42	495 19.488	70 2.8	990 39.0	934 & 730 x 280 36.8 & 28.7 x 11	1168 x 368 46 x 14.5	8 x M36
420	17	S43	514 20.236	70 2.8	1030 40.6	972 & 768 x 280 38.3 & 30.2 x 11	1194 x 368 47 x 14.5	8 x M36
440 460	18	S44	533 20.984	73 2.9	1070 42.1	996 & 788 x 280 39.2 & 31 x 11	1244 x 368 49 x 14.5	8 x M36
480	19	S45	552 21.732	76 3.0	1110 43.7	1042 & 812 x 280 41 & 32 x 11	1270 x 368 50 x 14.5	8 x M36
500	20	S46	572 22.520	80 3.1	1145 45.1	1074 & 844 x 280 42.3 & 33.2 x 11	1296 x 368 51 x 14.5	8 x M36
530	21	S47	594 23.386	83 3.3	1180 46.5	1118 & 890 x 280 44 & 35 x 11	1398 x 368 55 x 14.5	8 x M36
560	22	S48	616 24.252	86 3.4	1230 48.4	1158 & 930 x 280 45.6 & 36.6 x 11	1422 x 382 56 x 15	8 x M42
580	23	S49	635 25.000	89 3.5	1270 50.0	1187 & 959 x 280 46.7 & 37.8 x 11	1448 x 382 57 x 15	8 x M42
600	24	S50	673 26.496	92 3.6	1345 53.0	1238 & 1010 x 280 48.7 & 39.8 x 11	1524 x 382 60 x 15	8 x M42

Flange Units

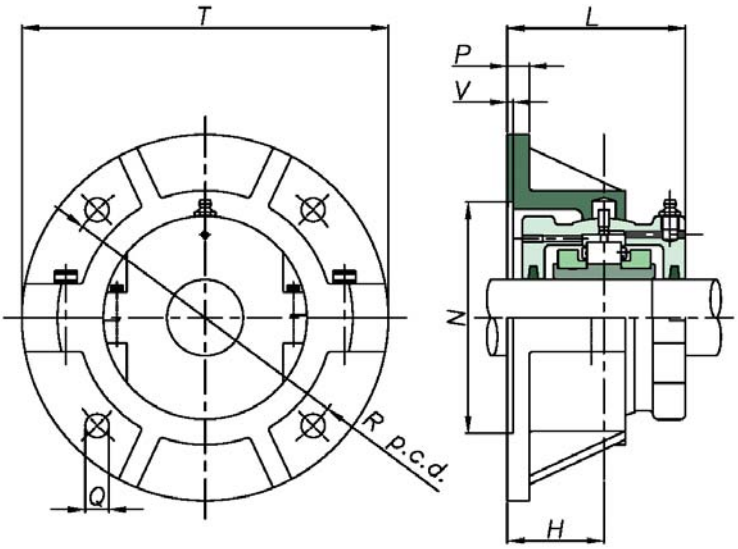
When faced with flat horizontal or vertical faces, flange units offer a simple mounting solution. As with Pillow block supports, Flange units are produced with spherical location to accommodate standard bearing housings and provide easy initial alignment of shaft and equipment.

To facilitate positive location of the flange to the surface, the rear face is recessed (dimensions N & V). This allows for a spigot (Tolerance f8) to be located into the flange.

Bearing inspection is simply a matter of removing the top half of the flange and housing. Bearing replacement may also be achieved in the same manner if required.

When integrating flange units into new applications, it should be noted that a maximum radial load equivalent to $0.26C_{or}$ is permissible. A maximum axial load of $0.25C_{a}$ must also be taken into account for applications with thrust loading. Units for vertically oriented shafts may also need special consideration given to sealing arrangements.

As always, SRB Technical Services will be happy to advise on any application issues.



Medium Support
50mm to 300mm Flanges

Medium Series 50mm to 300mm Flanges

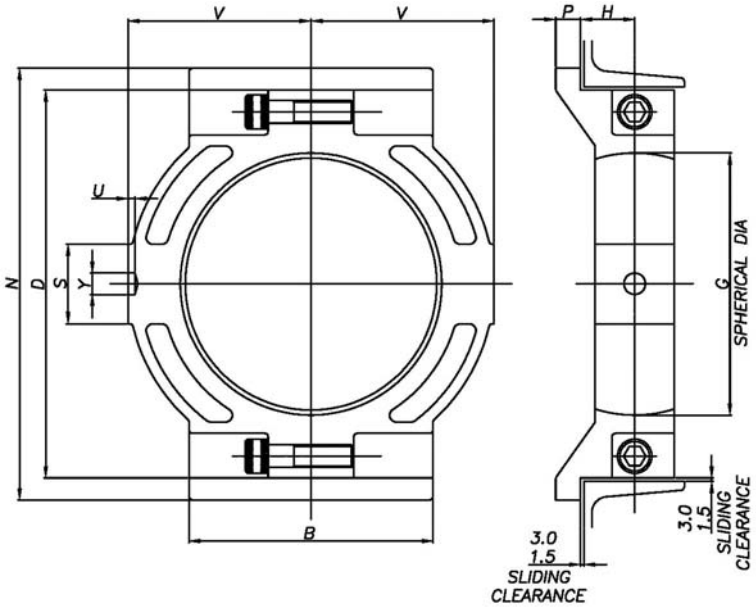
Shaft (d) mm	Shaft (d) inch	Flange Reference	T	Bolts	R	P	H	N	V	L
45 50	1 11/16 1 3/4 1 15/16 2	F03	260 10.2	4 x M12	218 8.6	16 0.6	67 2.6	166.9 6.571	3 0.1	124 4.9
55 60 65	2 3/16 2 1/4 2 7/16 2 1/2	F04	286 11.3	4 x M12	242 9.5	16 0.6	73 2.9	192.09 7.563	3 0.1	136 5.4
70 75	2 11/16 2 3/4 2 15/16 3	F05	330 13.0	4 x M16	274 10.8	19 0.7	79 3.1	215.9 8.500	3 0.1	150 5.9
80 85 90	3 3/16 3 1/4 3 7/16 3 1/2	F06	356 14.0	4 x M16	302 11.9	19 0.7	86 3.4	244.47 9.625	3 0.1	164 6.5
100 105	3 11/16 3 3/4 3 15/16 4	F07	382 15.0	4 x M16	334 13.1	22 0.9	92 3.6	276.22 10.875	3 0.1	166 6.5
110 115	4 3/16 4 1/4 4 7/16 4 1/2	F08	432 17.0	4 x M24	374 14.7	22 0.9	98 3.9	314.32 12.375	3 0.1	180 7.1
120 125 130	4 11/16 4 3/4 4 15/16 5	F10	470 18.5	4 x M24	412 16.2	25 1.0	114 4.5	346.07 13.625	3 0.1	206 8.1
135 140	5 3/16 5 1/4 5 7/16 5 1/2	F30	508 20.0	4 x M24	444 17.5	25 1.0	114 4.5	377.82 14.875	3 0.1	208 8.2
150 155 160A	5 11/16 5 3/4 5 15/16 6	F31	534 21.0	4 x M24	466 18.3	25 1.0	124 4.9	393.70 15.500	3 0.1	226 8.9
160 170	6 7/16 6 1/2	F32	584 23.0	4 x M30	508 20.0	29 1.1	124 4.9	428.62 16.875	5 0.2	240 9.4
175 180	6 11/16 6 3/4 6 15/16 7	F33	596 23.5	4 x M30	524 20.6	32 1.3	130 5.1	444.50 17.500	5 0.2	252 9.9
190 200	7 1/4 7 1/2 7 15/16 8	F34	648 25.5	4 x M30	572 22.5	32 1.3	137 5.4	492.12 19.375	5 0.2	266 10.5
220 230	8 1/2 8 7/8 9	F35	712 28.0	4 x M36	620 24.4	35 1.4	146 5.7	527.05 20.750	5 0.2	284 11.2
240 250 260	9 1/2 9 3/4 10	F36	736 29.0	4 x M36	660 26.0	38 1.5	149 5.9	568.32 22.375	5 0.2	290 11.4
270 280	10 1/2 10 3/4 11	F37	762 30.0	8 x M30	682 26.9	38 1.5	159 6.3	603.25 23.750	5 0.2	310 12.2
300 305	11 1/2 12	F38	788 31.0	8 x M30	708 27.9	41 1.6	162 6.4	628.65 24.750	5 0.2	316 12.4

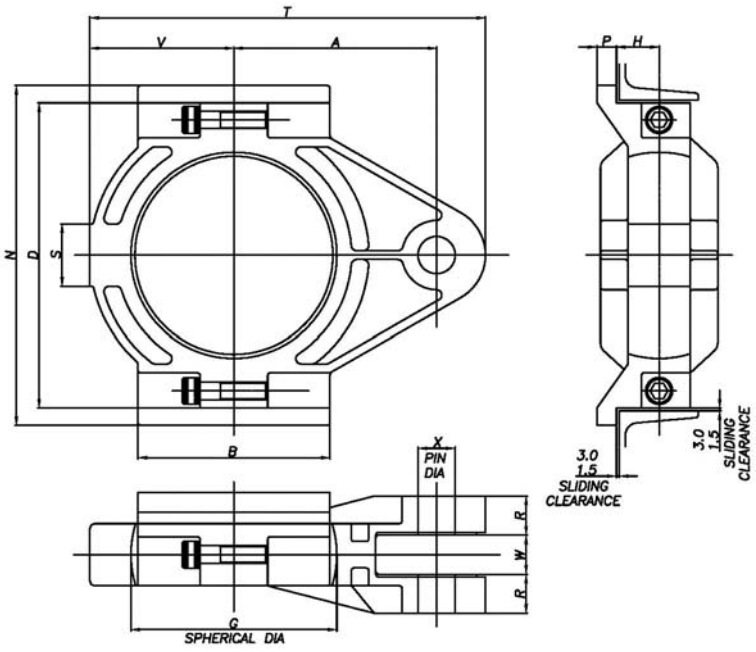
For Bearings and Housings see pages 53 – 58

Tensioning Units

This type of split unit can be found in use on materials handling equipment in many industries. Take up units provide an efficient and readily accessible means of tensioning conveyor systems and large scale drives.

The units consist of either push type or pull type sliding supports into which standard housings and bearings may be mounted. When integrating tensioning units into new applications, it should be noted that a maximum radial load equivalent to $0.3C_{or}$ is permissible. As with all SRB Units, a wide variety of sealing solutions may be applied dependant on the environment and application. Please contact SRB Technical Services for assistance.





Tensioning Units TT/TP

Medium Series 50mm to 150mm Support

Shaft (d)		Support Reference														
mm	inch	Tension Type	Push Type	B	N	D	V	P	H	L	S	A	T	X	W	R
45 50	1 11/16 1 3/4 1 15/16 2	TT03	TP03	128 5.0	235 9.3	203 8.0	102 4.0	20 0.8	32 1.3	108 4.3	38 1.5	146 5.7	280 11.0	24 0.9	30 1.2	29 1.1
55 60 65	2 3/16 2 1/4 2 7/16 2 1/2	TT04	TP04	152 6.0	266 10.5	229 9.0	114 4.5	22 0.9	40 1.6	124 4.9	41 1.6	158 6.2	305 12.0	24 0.9	30 1.2	114 4.5
70 75	2 11/16 2 3/4 2 15/16 3	TT05	TP05	190 7.5	318 12.5	280 11.0	140 5.5	22 0.9	40 1.6	131 5.2	51 2.0	190 7.5	368 14.5	30 1.2	38 1.5	35 1.4
80 85 90	3 3/16 3 1/4 3 7/16 3 1/2	TT06	TP06	204 8.0	342 13.5	305 12.0	152 6.0	22 0.9	43 1.7	141 5.6	51 2.0	210 8.3	414 16.3	36 1.4	44 1.7	35 1.4
100 105	3 11/16 3 3/4 3 15/16 4	TT07	TP07	216 8.5	382 15.0	343 13.5	162 6.4	22 0.9	48 1.9	142 5.6	70 2.8	228 9.0	445 17.5	42 1.7	44 1.7	41 1.6
110 115	4 3/16 4 1/4 4 7/16 4 1/2	TT08	TP08	254 10.0	420 16.5	381 15.0	190 7.5	25 1.0	51 2.0	156 6.1	76 3.0	260 10.2	508 20.0	42 1.7	44 1.7	44 1.7
120 125 130	4 11/16 4 3/4 4 15/16 5	TT10	TP10	266 10.5	464 18.3	426 16.8	204 8.0	25 1.0	57 2.2	173 6.8	86 3.4	280 11.0	546 21.5	48 1.9	50 2.0	51 2.0
135 140	5 3/16 5 1/4 5 7/16 5 1/2	TT30	TP30	280 11.0	502 19.8	464 18.3	222 8.7	25 1.0	60 2.4	178 7.0	92 3.6	298 11.7	584 23.0	48 1.9	50 2.0	54 2.1
150 155 160A	5 11/16 5 3/4 5 15/16 6	TT31	TP31	305 12.0	528 20.8	489 19.3	235 9.3	25 1.0	64 2.5	190 7.5	92 3.6	312 12.3	616 24.3	48 1.9	50 2.0	57 2.2

High Capacity Unit from SRB Reduces Downtime

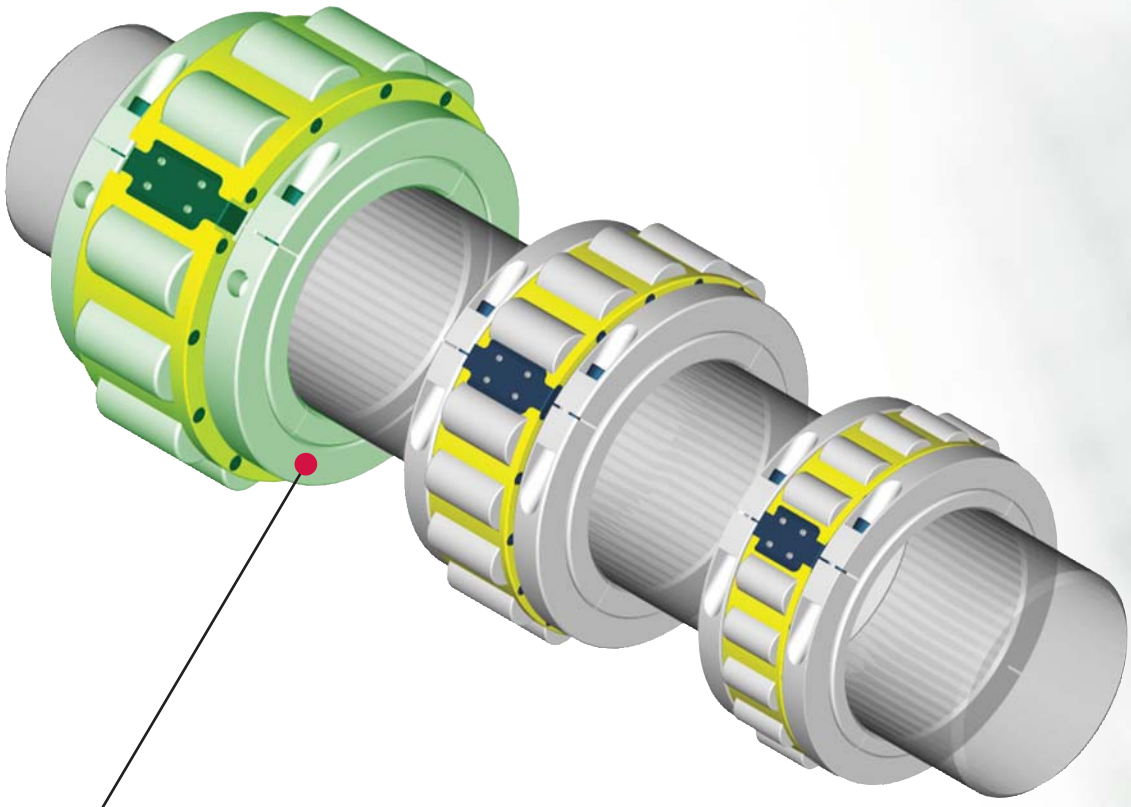
A continuing problem with bearing failure on the raw mill drive pinions at a major Cement manufacturer has been solved by employing SRB's high capacity Heavy Series units. The 13 inch bore bearings originally used were prone to premature failure and a replacement was being fitted every twelve months. The job was taking over two days to complete and causing unnecessary cost and disruption meaning partial plant shutdowns in each instance.

Working closely with the end users engineering staff, SRB were able to provide a solution in the shape of our Heavy Series Units using high quality materials and drawing on years of field experience to improve on existing designs. The SRB units are produced with a machined brass cage as standard rather than the aluminium type found in older designs. A strong, bolt located "H" section clip ensures secure and accurate alignment of the cage halves further improving the performance characteristics.

To date the bearing has been in operation for some three years and is performing as well as when first fitted. The bearing has now been joined on site by numerous others as a result of maintenance staff actively seeking for applications which would benefit by specifying SRB units. As a result of continuing successes in both standard and specialised applications, SRB bearings are now in use at all sites throughout the UK.

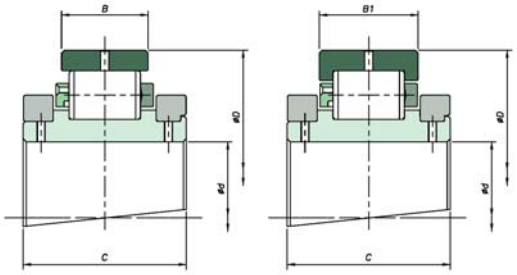
Heavy Series

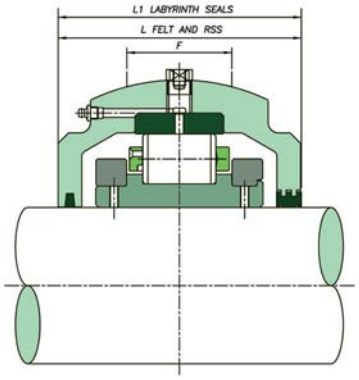
Heavy Series bearing products offer solutions to the most demanding of load conditions. Bearings are supported by robust and durable mountings and can be equipped with a variety of sealing solutions. If a standard catalogue product does not meet your requirements, SRB Technical Services will be happy to provide help and advice on your application.



Heavy Series

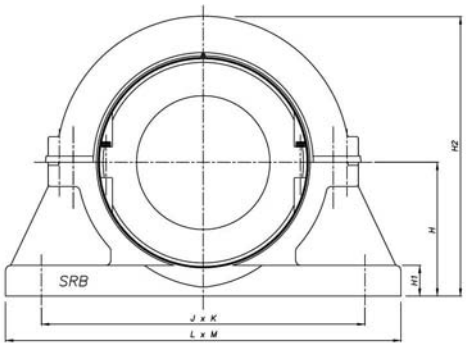
Heavy Bearing & Housing
100mm to 260mm





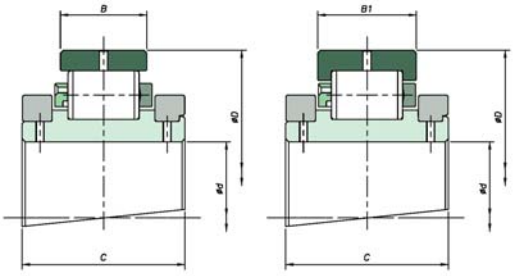
Shaft (d)		Reference		Bearings Ratings							Housing Reference					
mm	inch	Add BR for retained Add BX for expansion e.g. HSM100BR		Dynamic C_r (kN/lb)	Static C_{or} (kN/lb)	Axial C_a (kN/lb)	Max RPM	D	B B_1	C	Add HR for retained Add HX for expansion e.g. HSM100HR	G	F	L	L_1
100 105	$3^{11}/_{16}$ $3^{3}/_{4}$ $3^{15}/_{16}$ 4	HSM100 HSM105	HSE311 HSE312 HSE315 HSE400	653 146800	783 176025	31.20 7014	1820	254.00 10.000	84.20 3.315	136.00 5.354	HSM100 HSM105	HSE311 HSE312 HSE315 HSE400	308.00 12.126	95 3.7	200 7.9	206 8.1
110 115 120	$4^{3}/_{16}$ $4^{1}/_{4}$ $4^{7}/_{16}$ $4^{1}/_{2}$	HSM110 HSM115 HSM120	HSE403 HSE404 HSE407 HSE408	656 147475	801 180072	39.10 8790	1640	266.70 10.500	87.30 3.437	147.00 5.787	HSM110 HSM115 HSM120	HSE403 HSE404 HSE407 HSE408	323.85 12.750	102 4.0	210 8.3	222 8.7
125 130	$4^{15}/_{16}$ 5	HSM125 HSM130	HSE415 HSE500	753 169281	974 218964	49.00 11016	1500	279.40 11.000	73.10 2.878 84.20 3.315	140.00 5.512	HSM125 HSM130	HSE415 HSE500	323.85 12.750	102 4.0	214 8.4	222 8.7
135 140	$5^{3}/_{16}$ $5^{1}/_{4}$ $5^{7}/_{16}$ $5^{1}/_{2}$	HSM135 HSM140	HSE503 HSE504 HSE507 HSE508	827 185917	1084 243693	58.80 13219	1340	304.80 12.000	79.40 3.126 90.50 3.563	147.00 5.787	HSM135 HSM140	HSE503 HSE504 HSE507 HSE508	355.60 14.000	108 4.3	216 8.5	230 9.1
150 155	$5^{11}/_{16}$ $5^{3}/_{4}$ $5^{15}/_{16}$ 6	HSM150 HSM155	HSE511 HSE512 HSE515 HSE600	1037 233127	1325 297872	69.40 15602	1220	330.20 13.000	81.00 3.189 96.90 3.815	160.00 6.299	HSM150 HSM155	HSE511 HSE512 HSE515 HSE600	393.70 15.500	114 4.5	232 9.1	254 10.0
160 170	$6^{7}/_{16}$ $6^{1}/_{2}$ $6^{11}/_{16}$	HSM160 HSM170	HSE607 HSE608 HSE611	1015 228181	1326 298097	79.20 17805	1110	355.60 14.000	103.20 4.063	171.00 6.732	HSM160 HSM170	HSE607 HSE608 HSE611	422.30 16.626	120 4.7	244 9.6	268 10.6
175 180	$6^{3}/_{4}$ $6^{15}/_{16}$ 7	HSM175 HSM180	HSE612 HSE615 HSE700	1275 286631	1767 397238	89.00 20008	1030	374.65 14.750	92.10 3.626 108.80 4.283	178.00 7.008	HSM175 HSM180	HSE612 HSE615 HSE700	431.80 17.000	132 5.2	254 10.0	284 11.2
190 200	$7^{1}/_{4}$ $7^{1}/_{2}$ $7^{15}/_{16}$ 8	HSM190 HSM200	HSE704 HSE708 HSE715 HSE800	1423 319903	1958 440176	99.60 22391	880	419.10 16.500	97.70 3.846 118.30 4.657	191.00 7.520	HSM190 HSM200	HSE704 HSE708 HSE715 HSE800	489.00 19.252	146 5.7	270 10.6	300 11.8
220 230	$8^{1}/_{2}$ $8^{7}/_{8}$ 9	HSM220 HSM230	HSE808 HSE814 HSE900	1665 374307	2455 551906	109.40 24594	760	469.90 18.500	109.60 4.315 131.80 5.189	212.00 8.346	HSM220 HSM230	HSE808 HSE814 HSE900	546.10 21.500	165 6.5	298 11.7	334 13.1
240 260	$9^{1}/_{2}$ $9^{3}/_{4}$ 10	HSM240 HSM260	HSE908 HSE912 HSE1000	1694 380826	2519 566294	130.80 29405	700	482.60 19.000	105.60 4.157 124.60 4.906	211.00 8.307	HSM240 HSM260	HSE908 HSE912 HSE1000	558.80 22.000	165 6.5	298 11.7	334 13.1

Heavy Support
S54 - S63

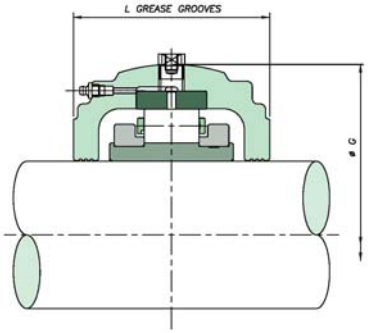


S54 - S63								
Shaft (d) mm	Shaft (d) inch	Support Reference	H	H_1	H_2	J x K	L x M	Bolts
100 105	$3^{11}/_{16}$ $3^{3}/_{4}$ $3^{15}/_{16}$ 4	S54	191 7.520	38 1.5	405 15.9	438 x 82 17.2 x 3.2	514 x 152 20.2 x 6	4 x M24
110 115 120	$4^{3}/_{16}$ $4^{1}/_{4}$ $4^{7}/_{16}$ $4^{1}/_{2}$	S55	197 7.756	38 1.5	425 16.7	458 x 88 18 x 3.5	534 x 166 21 x 6.5	4 x M24
125 130	$4^{15}/_{16}$ 5	S56	203 7.992	48 1.9	435 17.1	470 x 96 18.5 x 3.8	546 x 166 21.5 x 6.5	4 x M24
135 140	$5^{3}/_{16}$ $5^{1}/_{4}$ $5^{7}/_{16}$ $5^{1}/_{2}$	S57	229 9.016	54 2.1	485 19.1	514 x 102 20.2 x 4	622 x 178 24.5 x 7	4 x M30
150 155	$5^{11}/_{16}$ $5^{3}/_{4}$ $5^{15}/_{16}$ 6	S58	254 10.000	57 2.2	535 21.1	558 x 120 22 x 4.7	666 x 204 26.2 x 8	4 x M30
160 170	$6^{7}/_{16}$ $6^{1}/_{2}$ $6^{11}/_{16}$	S59	267 10.512	60 2.4	570 22.4	628 x 140 24.7 x 5.5	736 x 228 29 x 9	4 x M30
175 180	$6^{3}/_{4}$ $6^{15}/_{16}$ 7	S60	279 10.984	64 2.5	580 22.8	636 x 152 25 x 6	762 x 254 30 x 10	4 x M30
190 200	$7^{1}/_{4}$ $7^{1}/_{2}$ $7^{15}/_{16}$ 8	S61	311 12.244	67 2.6	655 25.8	636 x 172 25 x 6.8	838 x 266 33 x 10.5	4 x M36
220 230	$8^{1}/_{2}$ $8^{7}/_{8}$ 9	S62	349 13.740	76 3.0	730 28.7	736 x 178 29 x 7	952 x 280 37.5 x 11	4 x M42
240 260	$9^{1}/_{2}$ $9^{3}/_{4}$ 10	S63	394 15.512	76 3.0	790 31.1	670 x 304 26.4 x 12	914 x 406 36 x 16	4 x M42

Heavy Bearing & Housing
280mm to 600mm

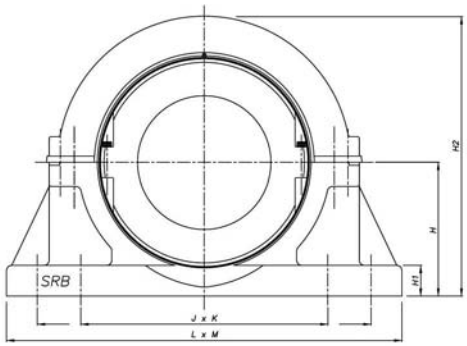


Expansion BX Retained BR



Shaft (d)		Reference		Bearings Ratings						Housing Reference					
mm	inch	Add BR for retained Add BX for expansion e.g. HSM280BR		Dynamic C_r (kN/lb)	Static C_{or} (kN/lb)	Axial C_a (kN/lb)	Max RPM	D	B	C	Add HR for retained Add HX for expansion e.g. HSM280HR		G	F	L	L_1
280	11	HSM280	HSE1100	1936 435230	3115 700280	153.00 34396	620	495.30 19.500	139.70 5.500	244.00 9.606	HSM280	HSE1100	571.50 22.500	165 6.5	356 14.0	356 14.0
300	12	HSM300	HSE1200	2114 475246	3194 718040	174.40 39207	560	558.80 22.000	139.70 5.500	244.00 9.606	HSM300 HSM305	HSE1108 HSE1200	641.40 25.252	165 6.5	346 13.6	370 14.6
320	13	HSM320	HSE1300	2718 611031	4093 920143	198.80 44692	500	622.30 24.500	160.40 6.315	272.00 10.709	HSM320 HSM330	HSE1208 HSE1300	717.60 28.252	170 6.7	368 14.5	_
340 360	14	HSM340 HSM360	HSE1400	2686 603837	4421 993881	213.60 48019	460	615.95 24.250	158.00 6.220	279.00 10.984	HSM340 HSM350	HSE1400	704.90 27.752	196 7.7	432 17.0	_
380 400	15 16	HSM380 HSM400	HSE1500 HSE1600	3195 718265	5238 1177550	250.80 56382	420	685.80 27.000	166.70 6.563	292.00 11.496	HSM380 HSM400	HSE1500 HSE1600	774.70 30.500	202 8.0	400 15.7	_
420 440	17	HSM420 HSM440	HSE1700	3187 716466	5813 1306815	275.80 62002	360	700.00 27.559	160.00 6.299	284.00 11.181	HSM420	HSE1700	788.00 31.024	200 7.9	440 17.3	_
460	18	HSM460	HSE1800	3501 787056	6091 1369312	302.40 67982	340	740.00 29.134	170.00 6.693	294.00 11.575	HSM440 HSM460	HSE1800	840.00 33.071	200 7.9	450 17.7	_
500 530	20 21	HSM500 HSM530	HSE2000 HSE2100	4324 972074	7603 1709223	347.00 78009	310	850.90 33.500	187.40 7.378	300.00 11.811	HSM500 HSM530	HSE2000 HSE2100	958.90 37.752	204 8.0	495 19.5	_
560	22	HSM560	HSE2200	4448 999950	8781 1974048	382.60 86012	280	863.60 34.000	196.90 7.752	310.00 12.205	HSM560	HSE2200	958.90 37.752	204 8.0	490 19.3	_
580 600	23 24	HSM580 HSM600	HSE2300 HSE2400	4443 998826	8918 2004847	400 89924	270	890.00 35.039	184.00 7.244	310.00 12.205	HSM580 HSM600	HSE2300 HSE2400	990.00 38.976	204 8.0	490 19.3	_

Heavy Support
S83 - S95



S83 - S95								
Shaft (d) mm	Shaft (d) inch	Support Reference	H	H_1	H_2	J x K	L x M	Bolts
280	11	S83	368 14.488	70 2.8	785 30.9	742 & 502 x 178 29.2 & 19.8 x 7	940 x 280 37 x 11	8 x M36
300	12	S65	457 17.992	76 3.0	915 36.0	876 & 674 x 330 34.5 & 26.5 x 13	1092 x 420 43 x 16.5	8 x M36
320	13	S66	518 20.394	80 3.1	1035 40.7	978 & 762 x 266 38.5 & 30 x 10.5	1194 x 356 47 x 14	8 x M36
340 360	14	S86	470 18.504	82 3.2	1000 39.4	928 & 660 x 190 36.5 & 26 x 7.5	1220 x 318 48 x 12.5	8 x M42
380 400	15 16	S68	559 22.008	92 3.6	1120 44.1	1036 & 806 x 292 40.8 & 31.7 x 11.5	1270 x 394 50 x 15.5	8 x M42
420 440	17	S89	508 20.000	90 3.5	1075 42.3	990 & 690 x 210 39 & 27.2 x 8.3	1270 x 360 50 x 14.2	8 x M48
460	18	S90	550 21.654	95 3.7	1165 45.9	1080 & 780 x 220 42.5 & 30.7 x 8.7	1370 x 380 53.9 x 15	8 x M48
500 530	20 21	S94	622 24.488	102 4.0	1340 52.8	1270 & 940 x 242 50 & 37 x 9.5	1600 x 406 63 x 16	8 x M56
560	22	S94	622 24.488	102 4.0	1340 52.8	1270 & 940 x 242 50 & 37 x 9.5	1600 x 406 63 x 16	8 x M56
580 600	23 24	S95	622 24.488	102 4.0	1340 52.8	1270 & 940 x 242 50 & 37 x 9.5	1600 x 406 63 x 16	8 x M56

Flange Units

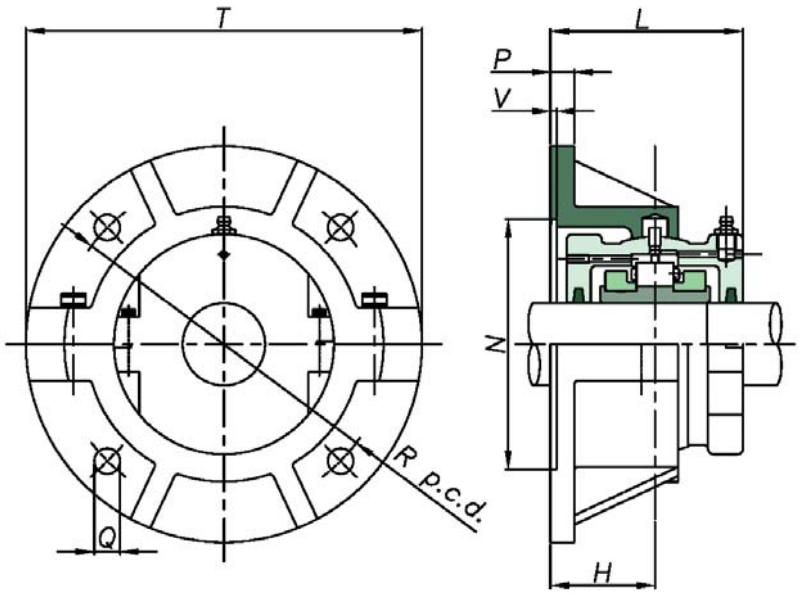
When faced with flat horizontal or vertical faces, flange units offer a simple mounting solution. As with Pillow block supports, Flange units are produced with spherical location to accommodate standard bearing housings and provide easy initial alignment of shaft and equipment.

To facilitate positive location of the flange to the surface, the rear face is recessed (dimensions N & V). This allows for a spigot (Tolerance f8) to be located into the flange.

Bearing inspection is simply a matter of removing the top half of the flange and housing. Bearing replacement may also be achieved in the same manner if required.

When integrating flange units into new applications, it should be noted that a maximum radial load equivalent to $0.26C_{or}$ is permissible. A maximum axial load of $0.25C_a$ must also be taken into account for applications with thrust loading. Units for vertically oriented shafts may also need special consideration given to sealing arrangements.

As always, SRB Technical Services will be happy to advise on any application issues.



Flange Units

Shaft (d) mm	Shaft (d) inch	Flange Reference	T	Bolts	R	P	H	N	V	L
125 130	$4^{15}/_{16}$ 5	F56	530 20.9	4 x M24	460 18.1	34 1.3	122 4.8	390.45 15.372	7 0.3	233 9.2
150 155	$5^{11}/_{16}$ $5^{3}/_{4}$ $5^{15}/_{16}$ 6	F58	648 25.5	4 x M24	574 22.6	44 1.7	137 5.4	495.35 19.502	7 0.3	264 10.4
175 180	$6^{3}/_{4}$ $6^{15}/_{16}$ 7	F60	724 28.5	4 x M24	638 25.1	44 1.7	156 6.1	546.15 21.502	8 0.3	298 11.7
240 250 260	$9^{1}/_{2}$ $9^{3}/_{4}$ 10	F63	890 35.0	4 x M24	796 31.3	48 1.9	181 7.1	692.20 27.252	8 0.3	348 13.7

For Bearings and Housings see pages 65 – 68

Triple Labyrinth Housing and Seal References

Light Series

Shaft (d)		Triple Labyrinth Seal Reference		Housing Reference
mm	inch	mm	inch	Retained Expansion
	1 3/16		103ATL	
35	1 1/4	35MMATL	104 ATL	LS1HRTL
40	1 7/16	40MMATL	107ATL	LS1HXTL
	1 1/2		108ATL	
	1 11/16		111ATL	
45	1 3/4	45MMATL	112ATL	LS2HRTL
50	1 15/16	50MMATL	115ATL	LS2HXTL
	2		200ATL	
55	2 3/16	55MMATL	203ATL	
60	2 1/4	60MMATL	204ATL	LS3HRTL
65	2 7/16	65MMATL	207ATL	LS3HXTL
	2 1/2		208ATL	
	2 11/16		211ATL	
70	2 3/4	70MMATL	212ATL	LS4HRTL
75	2 15/16	75MMATL	215ATL	LS4HXTL
	3		300ATL	
80	3 3/16	80MMATL	303ATL	
85	3 1/4	85MMATL	304ATL	LS5HRTL
90	3 7/16	90MMATL	307ATL	LS5HXTL
	3 1/2		308ATL	
	3 11/16		311ATL	
100	3 3/4	100MMATL	312ATL	LS6HRTL
105	3 15/16	105MMATL	315ATL	LS6HXTL
	4		400ATL	
	4 3/16		403ATL	
110	4 1/4	110MMATL	404ATL	LS7HRTL
115	4 7/16	115MMATL	407ATL	LS7HXTL
	4 1/2		408ATL	
120	4 11/16	120MMATL	411ATL	
125	4 3/4	125MMATL	412ATL	LS8HRTL
130	4 15/16	130MMATL	415ATL	LS8HXTL
	5		500ATL	
	5 3/16		503ATL	
135	5 1/4	135MMATL	504ATL	LS9HRTL
140	5 7/16	140MMATL	507ATL	LS9HXTL
	5 1/2		508ATL	
	5 11/16		511ATL	
150	5 3/4	150MMATL	512ATL	LS10HRTL
155	5 15/16	155MMATL	515ATL	LS10HXTL
	6		600ATL	
160	6 7/16	160MMATL	607ATL	LS11HRTL
	6 1/2		608ATL	LS11HXTL
170	6 11/16	170MMATL	611ATL	
175	6 3/4	175MMATL	612ATL	LS12HRTL
180	6 15/16	180MMATL	615ATL	LS12HXTL
	7		700ATL	
	7 1/4		704ATL	
190	7 1/2	190MMATL	708ATL	LS13HRTL
200	7 15/16	200MMATL	715ATL	LS13HXTL
	8		800ATL	
220	8 1/2	220MMATL	808ATL	LS14HRTL
230	8 7/8	230MMATL	814ATL	LS14HXTL
	9		900ATL	
240	9 1/2	240MMATL	908ATL	LS15HRTL
250	9 3/4	250MMATL	912ATL	LS15HXTL
	10		1000ATL	
260	10 1/2	260MMATL	1008ATL	LS16HRTL
270	10 3/4	270MMATL	1012ATL	LS16HXTL
280	11	280MMATL	1100ATL	
300	11 1/2	300MMATL	1108ATL	LS17HRTL
305	12	305MMATL	1200ATL	LS17HXTL

Medium Series

Shaft (d)		Triple Labyrinth Seal Reference		Housing Reference
mm	inch	mm	inch	Retained Expansion
	1 11/16		111ATL	
45	1 3/4	45MMATL	112ATL	MS3HRTL
50	1 15/16	50MMATL	115ATL	MS3HXTL
	2		200ATL	
55	2 3/16	55MMATL	203ATL	
60	2 1/4	60MMATL	204ATL	MS4HRTL
65	2 7/16	65MMATL	207ATL	MS4HXTL
	2 1/2		208ATL	
	2 11/16		211ATL	
70	2 3/4	70MMATL	212ATL	MS5HRTL
75	2 15/16	75MMATL	215ATL	MS5HXTL
	3		300ATL	
80	3 3/16	80MMATL	303ATL	
85	3 1/4	85MMATL	304ATL	MS6HRTL
90	3 7/16	90MMATL	307ATL	MS6HXTL
	3 1/2		308ATL	
	3 11/16		311ATL	
100	3 3/4	100MMATL	312ATL	MS7HRTL
105	3 15/16	105MMATL	315ATL	MS7HXTL
	4		400ATL	
	4 3/16		403ATL	
110	4 1/4	110MMATL	404ATL	MS8HRTL
115	4 7/16	115MMATL	407ATL	MS8HXTL
	4 1/2		408ATL	
120	4 11/16	120MMATL	411ATL	
125	4 3/4	125MMATL	412ATL	MS10HRTL
130	4 15/16	130MMATL	415ATL	MS10HXTL
	5		500ATL	
	5 3/16		503ATL	
135	5 1/4	135MMATL	504ATL	MS30HRTL
140	5 7/16	140MMATL	507ATL	MS30HXTL
	5 1/2		508ATL	
	5 11/16		511ATL	
150	5 3/4	150MMATL	512ATL	MS31HRTL
155	5 15/16	155MMATL	515ATL	MS31HXTL
	6		600ATL	
	6 7/16		607ATL	
160	6 1/2	160MMATL	608ATL	MS32HRTL
170	6 11/16	170MMATL	611ATL	MS32HXTL
	6 3/4		612ATL	
175	6 15/16	175MMATL	615ATL	MS33HRTL
180	7	180MMATL	700ATL	MS33HXTL
	7 1/4		704ATL	
190	7 1/2	190MMATL	708ATL	MS34HRTL
200	7 15/16	200MMATL	715ATL	MS34HXTL
	8		800ATL	
220	8 1/2	220MMATL	808ATL	MS35HRTL
230	8 7/8	230MMATL	814ATL	MS35HXTL
	9		900ATL	
240	9 1/2	240MMATL	908ATL	MS36HRTL
260	9 3/4	260MMATL	912ATL	MS36HXTL
	10		1000ATL	
270	10 1/2	270MMATL	1008ATL	MS37HRTL
280	10 3/4	280MMATL	1012ATL	MS37HXTL
	11		1100ATL	
300	11 1/2	300MMATL	1108ATL	MS38HRTL
305	12	305MMATL	1200ATL	MS38HXTL

Heavy Series

Shaft (d)		Triple Labyrinth Seal Reference		Housing Reference
mm	inch	mm	inch	Retained Expansion
	3 11/16		311ATL	
100	3 3/4	100MMATL	312ATL	HS6HRTL
105	3 15/16	105MMATL	315ATL	HS6HXTL
	4		400ATL	
110	4 3/16	110MMATL	403ATL	
115	4 1/4	115MMATL	404ATL	HS7HRTL
120	4 7/16	120MMATL	407ATL	HS7HXTL
	4 1/2		408ATL	
	4 11/16		411ATL	
125	4 3/4	125MMATL	412ATL	HS8HRTL
130	4 15/16	130MMATL	415ATL	HS8HXTL
	5		500ATL	
	5 3/16		503ATL	
135	5 1/4	135MMATL	504ATL	HS9HRTL
140	5 7/16	140MMATL	507ATL	HS9HXTL
	5 1/2		508ATL	
	5 11/16		511ATL	
150	5 3/4	150MMATL	512ATL	HS10HRTL
155	5 15/16	155MMATL	515ATL	HS10HXTL
	6		600ATL	
	6 7/16		607ATL	
160	6 1/2	160MMATL	608ATL	HS11HRTL
170	6 11/16	170MMATL	611ATL	HS11HXTL
	6 3/4		612ATL	
175	6 15/16	175MMATL	615ATL	HS12HRTL
180	7	180MMATL	700ATL	HS12HXTL
	7 1/4		704ATL	
190	7 1/2	190MMATL	708ATL	HS13HRTL
200	7 15/16	200MMATL	715ATL	HS13HXTL
	8		800ATL	
220	8 1/2	220MMATL	808ATL	HS14HRTL
230	8 7/8	230MMATL	814ATL	HS14HXTL
	9		900ATL	
240	9 1/2	240MMATL	908ATL	HS15HRTL
260	9 3/4	260MMATL	912ATL	HS15HXTL
	10		1000ATL	
270	10 1/2	270MMATL	1008ATL	HS16HRTL
280	10 3/4	280MMATL	1012ATL	HS16HXTL
	11		1100ATL	
300	11 1/2	300MMATL	1108ATL	HS17HRTL
305	12	305MMATL	1200ATL	HS17HXTL

The most popular sealing solution for split roller bearings after the standard felt seal is the Triple Labyrinth. This none contacting seal offers resistance to contaminant ingress at speeds greater than can be accommodated by other seal types (see page 25).

Specialised Bearings

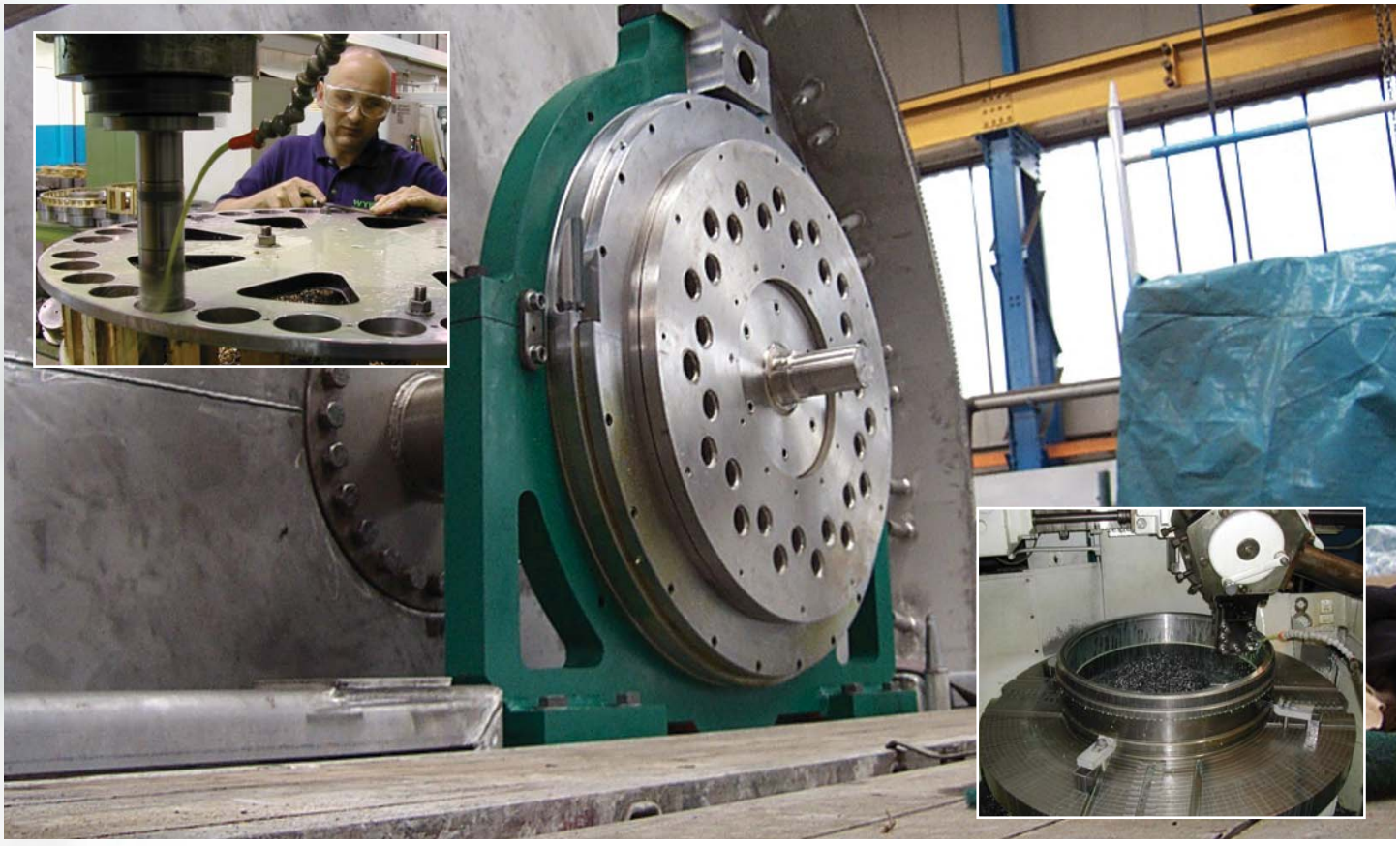
Over the past 10 years, SRB have built a reputation throughout the world for the manufacture of highly specialised bearing units. From thin section, high speed bearings for wire stranding machines to robust, dependable water cooled units for continuous casting, SRB have the capability to provide products at least equal to, and usually far in excess of, the performance of bearings of other manufacture.

The cornerstone of this growing reputation is SRB's willingness to work closely with equipment manufacturers and end users to solve specific application problems. This has led to the development of a number of innovative designs, some of which have now been incorporated into the SRB product range.

With a grinding capacity in excess of 1.4m and turning capacity greater than 1.8m, SRB have ability to produce bearings substantially larger than those listed in the main body of this or other catalogues. With a number of bearings of bore sizes in excess of 700mm in service, SRB have repeatedly demonstrated their ability in this sector.

Continuous casting plant found throughout the steel industry provides one of the most challenging operating environments for any bearing system. SRB, by working in conjunction with a number of OEMs and end-users have established a growing reputation in this field. SRB have introduced a number of design innovations whilst

maintaining the envelope, layout and fitting conditions stipulated by current applications. As a result, a bearing operation life in excess of one million tons of cast steel is not uncommon.



Manufacture of SRB's highly specialised bearing units.

Replacement SRB Split Bearing keeps the Roof on at Ibstock Brick

SRB's recently launched range of interchangeable Split Plummer Block mounted bearings has emphatically proved the value of the new designs by ensuring that one of the two central brick production lines at Ibstock Brick was kept in operation cost effectively. Using the split design as a direct replacement for a failed conventional interference fit SN housed bearing, SRB demonstrated a huge saving in terms of time and cost of replacement.

Engineers took just three hours to complete the replacement whereas the alternative of replacing the original like-for-like would have taken 3–4 working days and required a crane to remove part of the factory roof. In all, the cost would have been approaching £10,000 and required far more logistical planning. As it was, the repair work took just three hours and cost a little over £2,000 fitted, including a James Walker split seal to help prevent liquid contaminants entering the bearing enclosure and causing future failures.

The failed bearing supported one of the main power transmission shafts in one of the two central brick production lines at Ibstock. Until recently, there were only two choices open to maintenance engineers faced with this situation; the first would be to fit another standard bearing and the second to adapt the mounting and shaft positions to accommodate a traditional split roller bearing.

The first option would have required the complete dismantling of a large part of the plant with all the incumbent costs. To fit the second option – a traditional split roller bearing, would also have required a significant amount of work to alter or replace the main support beam in order to accommodate the larger housing dimensions normally associated with a split bearing design. The new 'compact' SRB split plummer block bearing however, is the first split cylindrical roller bearing assembly to be dimensionally interchangeable with standard SN and SD series plummer blocks and therefore could be installed without the major drawbacks associated with the other two options.

Simple inspection is another key advantage of the SRB design. With a solid bearing, specialised vibration analysis maybe required to detect bearing wear. Many are replaced routinely rather than risk downtime due to failure; the top sections of an SRB unit, however, can be simply unbolted and lifted off to provide a rapid visual inspection. Again, this feature can save time and reduce the risk of unplanned or pressurised downtime.

SRB bearings can also compensate for a higher degree of shaft misalignment. Self-aligning ball and spherical roller bearings allow misalignment of the shaft relative to the seal, which results in inefficient sealing performance. The SRB bearing is enclosed by a housing that can swivel within the cast iron support allowing the bearing and seals to remain concentric to the shaft. This feature prevents the characteristic shaft wear and seal damage caused by standard bearings compensating for misalignment within the bearing.

SN/SD Bearings

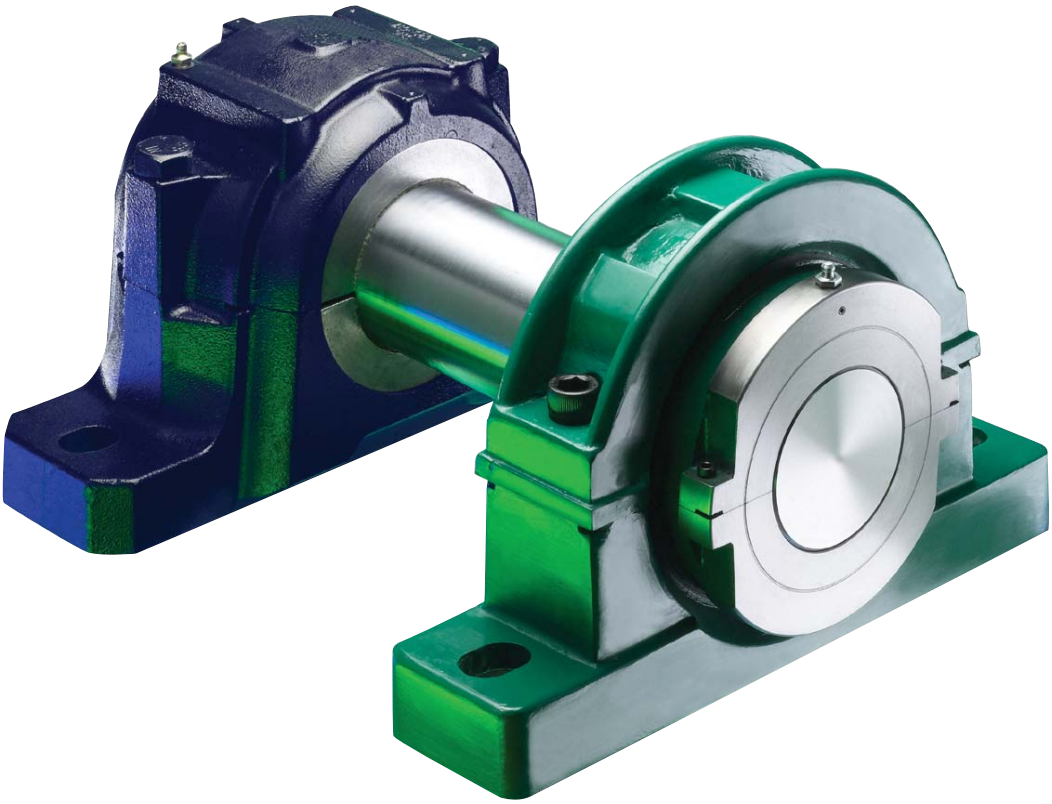
The New compact Split Plummer Block Bearing from SRB is the first split cylindrical roller bearing assembly to be interchangeable with standard SN and SD series plummer blocks, bringing the benefits of a split design to a much wider audience.

Split roller bearings offer dramatically reduced downtime in maintenance and replacement situations, but could not previously be used in many bearing applications because of their dimensional incompatibility with standard plummer block sizes.

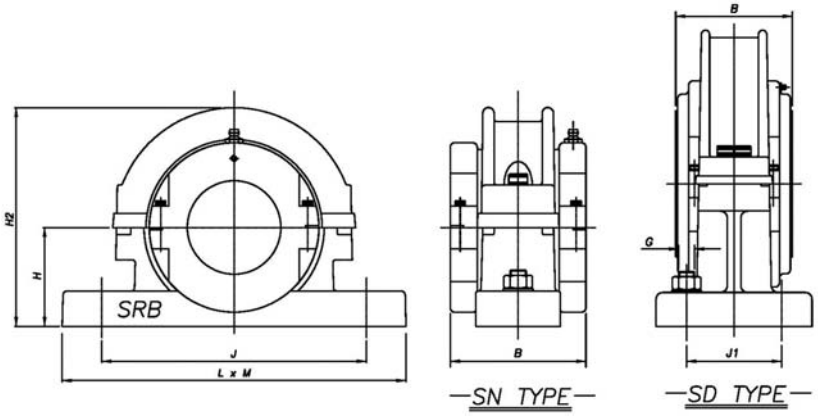
Cast iron plummer blocks accommodating adaptor sleeve mounted spherical roller bearings are amongst the most common types in use, supporting rotating shafts in everything from conveyors and fans to line shafts. Yet their replacement is often time consuming and difficult due to the removal of adjacent equipment. Replacing a typical bearing mounted in a cast iron plummer block can take anything from 6 hours to several days, in contrast, it can take as little as 1–2 hours to replace an SRB bearing unit.

Key benefits of the Split Plummer Block are:

- SRB SN & SD Series supports dimensionally interchangeable with the SN5.. and SD31.. range of plummer blocks.
- Significant reductions in the time required to change trapped bearings.
- Savings in downtime, improved machine availability.
- Simplified mounting procedures, no feeler gauges.
- Improved sealing efficiency, seals remain concentric to the shaft, unlike spherical roller bearings.
- Efficient use of Maintenance Engineering resources.
- Improved reliability, able to accommodate thermal expansion of the shaft within the bearing envelope.

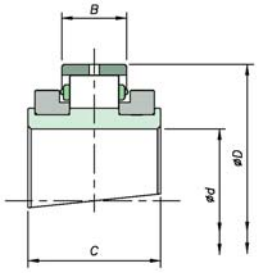


SN/SD Range

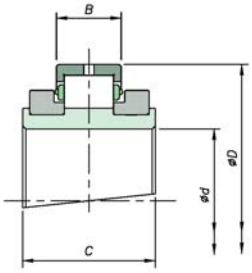


SN SD								
Shaft (d) mm	SRB Reference	SN/SD Reference	H	H_1	H_2	J x K	L x M	G
35 40	SN01	SN 508 SN 509	60	135	84	170	205 x 60	12
50	SN02	SN 511	70	155	96	210	255 x 70	16
60	SN03	SN 513	80	180	102	234	275 x 70	16
65	SN03A	SN 515	80	180	102	234	280 x 70	16
70 75	SN04	SN 516 SN 517	95	208	112	260	315 x 90	20
80	SN05	SN 518	100	230	134	290	345 x 100	20
85	SN05A	SN 519	112	242	134	290	345 x 100	20
90	SN05B	SN 520	112	242	134	320	380 x 110	24
100	SN06	SN 522	125	265	132	350	410 x 120	24
110	SN07	SN 524	140	300	140	350	410 x 120	24
115	SN07A	SN 526	150	310	140	380	445 x 130	24
125	SN08	SN 528	150	354	154	420	500 x 150	30
135	SN09	SN 530	160	369	166	450	530 x 160	30
140	SN09A	SN 532	170	379	166	470	550 x 160	30
150	SD10	SD 3134	170	379	172	430 x 100	510 x 180	24
160	SD11	SD 3136	180	396	172	450 x 110	530 x 190	24
170	SD12	SD 3138	190	417	172	480 x 120	560 x 210	24
180	SD12A	SD 3140	210	437	172	510 x 130	610 x 230	30
200	SD13	SD 3144	220	457	172	540 x 140	640 x 240	30
220	SD14	SD 3148	240	510	176	600 x 150	700 x 260	30
240	SD15	SD 3152	260	545	188	650 x 160	770 x 280	36
260	SD16	SD 3156	280	589	204	670 x 160	790 x 280	36
280	SD16A	SD 3160	300	609	204	710 x 190	830 x 310	36
300	SD17	SD3164	320	662	216	750 x 200	880 x 330	36

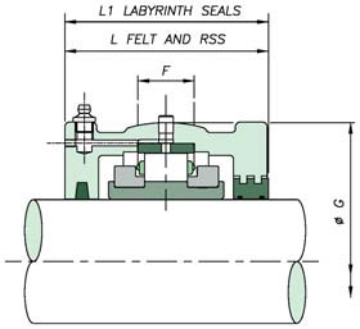
Bearings & Housings



Expansion BX



Retained BR

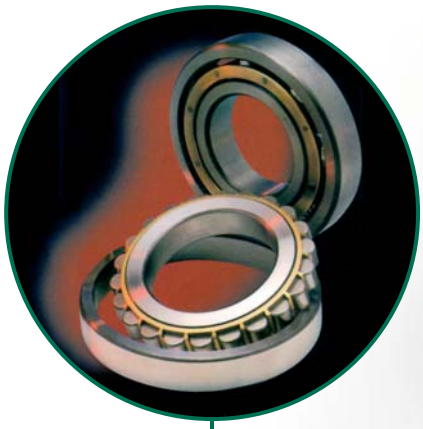


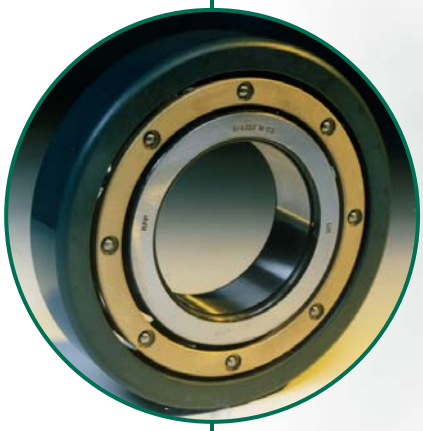
Shaft (d) Reference		Bearings Ratings							Housing Reference				
mm	Add BR for retained Add BX for expansion e.g. LSM35BR	Dynamic C_r (kN/lb)	Static C_{or} (kN/lb)	Axial C_a (kN/lb)	Max RPM	D	B	C	Add HR for retained Add HX for expansion e.g. LSM35HR	G	F	L	L_1
35	LSM35	65	68	3.20	5400	84.14	23.80	55.00	LSM35	100.00	25	84	86
40	LSM40	14613	15287	719.38		3.313	0.937	2.165	LSM40	3.937	1.0	3.3	3.4
50	LSM50	83 18659	87 19558	3.60 809.30	4630	98.42 3.875	25.40 1.000	60.00 2.362	LSM50	117.48 4.625	25 1.0	96 3.8	98 3.9
60	LSM60	103	115	5.40	3940	114.30	27.00	60.00	LSM60	134.94	32	102	104
65	LSM65	23155	25853	1213.95		4.500	1.063	2.362	LSM65	5.313	1.3	4.0	4.1
70	LSM70	138	161	7.60	3310	133.35	31.80	65.00	LSM70	157.16	38	112	114
75	LSM75	31024	36194	1708.53		5.250	1.252	2.559	LSM75	6.187	1.5	4.4	4.5
80 85 90	LSM80 LSM85 LSM90	187 42039	231 51931	12.40 2787.59	2790	152.40 6.000	38.90 1.531	75.00 2.953	LSM80 LSM85 LSM90	177.80 7.000	50 2.0	134 5.3	136 5.4
100	LSM100	288 64745	366 82280	16.00 3596.90	2340	174.62 6.875	45.30 1.783	85.00 3.346	LSM100	203.20 8.000	50 2.0	132 5.2	134 5.3
110	LSM110	316	427	18.60	1970	203.20	46.90	90.00	LSM110	231.78	64	140	142
115	LSM115	71040	95993	4181.39		8.000	1.846	3.543	LSM115	9.125	2.5	5.5	5.6
125	LSM125	363 81606	496 111505	22.20 4990.69	1740	222.25 8.750	54.00 2.126	95.00 3.740	LSM125	266.70 10.500	76 3.0	154 6.1	156 6.1
135	LSM135	422	585	25.80	1570	241.30	55.60	98.40	LSM135	279.40	76	166	168
140	LSM140	94869	131513	5799.99		9.500	2.189	3.874	LSM140	11.000	3.0	6.5	6.6
150	LSM150	459 103187	664 149273	29.40 6609.30	1450	254.00 10.000	55.60 2.189	98.40 3.874	LSM150	295.28 11.625	82 3.2	172 6.8	174 6.9
160	LSM160	583 131064	792 178049	33.00 7419	1320	273.05 10.750	60.30 2.374	109.00 4.291	LSM160	311.15 12.250	76 3.0	172 6.8	192 7.6
170	LSM170	524	828	36.40	1220	285.75	55.50	109.00	LSM170	323.85	70	172	200
180	LSM180	117800	186142	8183		11.250	2.185	4.291	LSM180	12.750	2.8	6.8	7.9
200	LSM200	614 138033	990 222561	41.00 9217	1070	311.15 12.250	60.30 2.374	106.00 4.173	LSM200	358.78 14.125	86 3.4	172 6.8	200 7.9
220	LSM220	659 148149	1062 238747	49.00 11016	930	342.90 13.500	63.50 2.500	115.00 4.528	LSM220	387.35 15.250	82 3.2	178 7.0	216 8.5
240	LSM240	696 156467	1182 265724	57.80 12994	820	374.65 14.750	66.70 2.626	122.00 4.803	LSM240	419.10 16.500	90 3.5	188 7.4	222 8.7
260	LSM260	794	1376	66.80	730	406.40	69.00	128.00	LSM260	454.00	95	204	232
280	LSM280	178498	309337	15017		16.000	2.717	5.039	LSM280	17.874	3.7	8.0	9.1
300	LSM300	929 208848	1665 374307	78.20 17580	650	438.15 17.250	74.60 2.937	143.00 5.630	LSM300	489.00 19.252	98 3.9	216 8.5	248 9.8

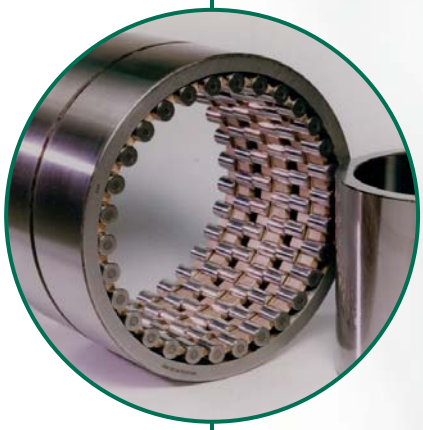
Notes

RPP
Revolvo Precision Products

Leading Specialist
Bearing Manufacturer







RPP is a sister division to SRB and manufacture specialist bearings for all industries.

Bearing Types

Cylindrical Roller Bearings (Single and Multi Track)
Deep Groove Ball Bearings (Single and Multi Track)
Angular Contact Bearings (Single and Multi Track)
Four Point Duplex Bearings
Thrust Bearings (Ball and Roller)

Production Capabilities

Diameter Range - 15mm bore to 1400mm OD

Material Types

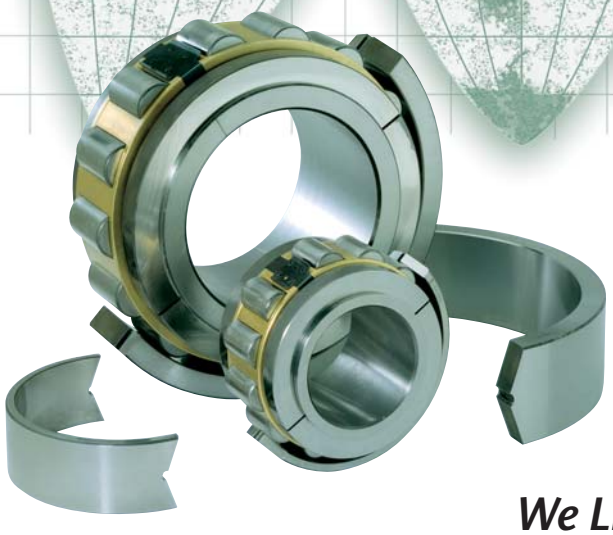
Races	Carbon Chrome Steel - AISI 52100, AMS6444 Stainless Steel - AISI 440C Tool Steel - AISI M50, BG42 Case Hardening Steels
Cages	Brass Bronze Steel Aluminium P.E.E.K.
Rolling Elements	Carbon Chrome - AISI 52100 Stainless Steel - AISI 440C Tool Steel - AISI M50 Silicon Nitride

BSI REGISTERED
FM 73545

Innovation in Supply

The SRB product range and all support services are available through a selected worldwide network of Authorised Distributors.

Selected as the best in their area, SRB Authorised Distributors are technically competent to support all our customers in application engineering, supply, installation and life maintenance of split roller bearings. They have the full support and backing of SRB including a complete design and manufacturing service for special and bespoke applications.



SRB, along with our sister companies RPP and RF1, specialise in bearing solutions and are committed to providing a service that contributes to the optimisation of your plant efficiency.

Our approach of working closely with customers allows us to continuously refine and improve our products, production processes and service procedures.

We Listen, You Benefit.