

LINKAGES



Rod Ends and Spherical Plain Bearings



**BTL-UK Ltd - Ashford
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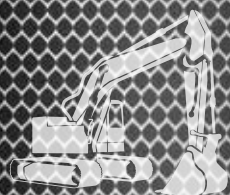
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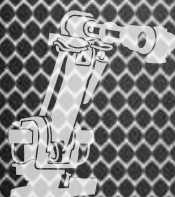
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**BTL-UK Ltd - Consett UK
Manufacturing Centre**

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About us

From UK origins, more than 100 years ago, the **DUNLOP** brand name has established itself with an enviable reputation for high quality products.

This catalogue illustrates our standard range of products manufactured for commercial applications, 40% of our total production is for specialist items to suit individual customer requirements, so please do not hesitate to contact us to discuss your own application.

These products are now at the forefront of a highly competitive and specialist industry, covering a vast spectrum of applications such as automotive, agricultural, construction, industrial, medical and recreational.

Quality

The reputable standard of our products is the result of a consistently pursued quality policy influencing every area of our company. Not only from the arrival of raw materials through to the delivery of the finished products, but also from the receipt of your enquiry through to invoicing. Our staff are experts in their field and will assist in every way possible to meet your full requirements, deadlines and expectations.

Our products are manufactured to internationally recognised standards and tolerances using top quality materials and workmanship.

We are a UKAS approved manufacturer and international distributor to ISO 9001:2008 and ISO 14001:2004.

Facility

Our headquarters based in Ashford, Kent, UK, extends to over 66,000 square feet (6,131 square meters), comprising of administration, warehousing and production facilities. Our stock range of products is now one of the largest found anywhere in Europe and covers more than 100 product lines and over 50,000 individual components.

Our manufacturing capacity consists of some of the latest hi-tech multi-head CNC machine tools, 6 spindle auto lathes, pneumatic presses and many purpose built auto-loading machines, giving us high volume precision component capabilities.

Environment

As a leading manufacturer we take our environmental responsibility very seriously. We are a socially responsible manufacturer, promoting waste recycling, energy efficiency and supporting local businesses wherever possible to help reduce our impact on the environment.

Our factory aims to eliminate pollution releases and promote high standards of energy and waste management. Standard product ranges are designed for maximum energy efficiency and are Trivalent plated, that is kind to both the human body and the environment. This level of environmental commitment remains ahead of the industry trend. We are UKAS approved to ISO 14001:2004.

Customer Commitment

Our entire product range is backed with a comprehensive line of support services, including on-going product application research and development, full technical and customer service support, the latest in lean manufacturing techniques and scheduling, state of the art production machinery and quality control procedures, with an intense focus on the requirements and expectation of our customers.



“ We are proud to be a European manufacturer, it is a privilege to supply our products to many of the World’s most prestigious companies and brand names. ”

Ray Mifsud, Managing Director

“ Our commitment to our staff, our customers and the environment is of paramount importance to our company, we will continue to develop our organisational skills to further enhance our companies potential, to engage in sustainable practices and anticipate the needs and expectations of our customers. ”

Ray Mifsud, Managing Director



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“We are proud to be a European manufacturer; it is a privilege to supply our products to some of the world’s most prestigious original equipment manufacturers in the Agricultural, Automotive, Construction, Industrial and Motor Sport sectors”.

“Our distributor network is vital to the continued global growth of the DUNLOP brand and our valued distributor partners form the perfect link between manufacturer and end user”.

“Our commitment to our staff, our customers and the environment is of paramount importance to our company, we will continue to develop our organisational skills to further enhance our company’s potential, to engage in sustainable practices and anticipate the needs and expectations of our customers”.

“At Dunlop BTL we love our products”.

Ray Mifsud, *Managing Director*.


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Application

There are several factors that need to be addressed to ensure the maximum performance and safe working of all **DUNLOP** rod ends, spherical bearings, ball joints and clevises.

- Rod ends and ball joints should where possible be mounted vertically, i.e. the housing member to the top, this will give maximum efficiency and life of the product.
- Cyclic motion in contaminated conditions can lead to premature failure, every effort should be taken to keep the unit clean, nylon and PTFE raced products have self-cleaning tendencies which can prove beneficial in contaminated environments.
- When mounting ball studs the hex should be properly tightened and flush to its mating surface. Adequate countersinks, counter bores or washers may be necessary to achieve acceptable assembly.
- Self-locking nuts or washers should be used in applications involving vibration and shock loads.
- It is recommended that separate stops should be mounted into the assembly to eliminate the possibility of over articulation of the rod end or ball joint over a maximum cone angle of 55°.
- Clamping forces can cause distortion of the ball and lead to a loss in internal tolerance, maximum torque values are shown below.
- All applications vary and so will product life, samples can be supplied for testing to help determine the suitability in actual operating conditions.
- Products listed in this catalogue are made to commercial standards, if you have any questions concerning a particular product or application please consult with our sales and engineering staff.

Bore Size Metric (mm)	Bore Size Imperial (inches)	Clamping Torque (Newton Metres) Bronze	Clamping Torque (Newton Metres) Steel
3		N/A	1.5
	0.1250	N/A	1.5
	0.1900	1.6	5.6
5		1.6	5.6
6		2.2	19.6
	0.2500	2.5	22.5
	0.3125	6.8	28.0
8		6.8	28.0
	0.3750	9.5	56.4
10		10.6	65.0
	0.4375	13.5	79.0
12		14.0	93.0
	0.5000	14.7	104.0
14		15.8	167.0
	0.6250	18.0	203.0
16		18.0	203.0
18		19.0	234.0
	0.7500	20.3	259.0
20		21.0	272.0

Materials

DUNLOP rod ends, spherical bearings, ball joints and clevises are available in a wide range of materials, steel, stainless steel and aluminium housings, nylon, PTFE and bronze races and steel, stainless steel and Bronze balls. Please refer to table below.

Housings

- Steel 230M07PB is used for all general purpose applications and are zinc plated and white-blue passivate (silver/clear finish) that conforms with RoHS directives on banned substances and ELV 2000/53/EC and are trivalent. Other plating colours and options are available, please refer to our 'Plating options section on page 14.
- Alloy steel, gives extreme load carrying capacity, extended wear life and high shock load resistance.
- Stainless steel 303L offers excellent corrosion resistance, other stainless steel materials such as 304 and 316 are available to order, please discuss with our sales or engineering departments.
- Aluminium A6026 also has corrosion resistance and weight reduction for lighter applications.

Races

- Nylon races are glass fibre reinforced and are suitable for extended high cycling use in heavy applications, also excellent in damp or wet environments.
- PTFE races provide zero backlash, smooth movement and can withstand extreme temperature conditions -200°C to + 260°C, and are suitable for use in high cycling use in heavy applications.
- Bronze design races SAE660 are suitable for low speed high duty loading, general purpose applications.

Spherical balls

- Steel 100Cr6 spherical balls are produced from high quality bearing steel and are heat treated and hardened to HRC 58-62 and electroless nickel plated.
- Stainless steel 440C spherical balls offer excellent corrosion resistance.
- Alloy steel, gives extreme load carrying capacity, extended wear life and high shock load resistance.
- Bronze SAE660 spherical balls are suitable for applications that require the pin or shaft fitted through the bore to rotate.

We reserve the right to vary the materials shown in the interest of product replacement or improvement.

Product Series	Housing Material	Housing Plating	Race Material	Ball/Ball Stud material	Ball Plating
MP / FP	230M07PB	ZINC WHITE/BLUE PASSIVATE	GR-NYLON	100CR6	ELECTROLESS NICKEL
MP-SS / FP-SS	303L	NOT PLATED	GR-NYLON	440C	NOT PLATED
MB / FB	230M07PB	ZINC WHITE/BLUE PASSIVATE	SAE660	100CR6	ELECTROLESS NICKEL
MB-SS / FB-SS	303L	NOT PLATED	SAE660	440C	NOT PLATED
MH / FH	230M07PB	ZINC WHITE/BLUE PASSIVATE	POLYURETHANE	230M07PB	NITROTEC
MH-SS / FH-SS	303L	NOT PLATED	POLYURETHANE	440C	NOT PLATED
MS / FS	230M07PB	ZINC WHITE/BLUE PASSIVATE	230M07PB / PTFE FABRIC	100CR6	ELECTROLESS NICKEL
MS-SS / FS-SS	303L	NOT PLATED	304L / PTFE FABRIC	440C	NOT PLATED
MSX / FSX	708M40	ZINC WHITE/BLUE PASSIVATE	230M07PB / PTFE MESH	100Cr6	ELECTROLESS NICKEL
MSX-MS / FSX-MS	17-4PH	N/A	17-4PH	440C	N/A
MX / FX	817M40	PHOSPHATED	N/A	100Cr6	PHOSPHATED

Product Series	Housing Material	Housing Plating	Race Material	Ball/Ball Stud material	Ball Plating
RM	230M07PB	ZINC WHITE/BLUE PASSIVATE	NYLON 66	100CR6	ELECTROLESS NICKEL
RM-SS	303L	NOT PLATED	NYLON 66	440C	NOT PLATED
GAR / GIR	080M46	ZINC WHITE/BLUE PASSIVATE	080M46 / PTFE FABRIC	100CR6	ELECTROLESS NICKEL
DB	230M07PB	ZINC WHITE/BLUE PASSIVATE	GR-NYLON	100CR6	ELECTROLESS NICKEL
AL	A6026	BLACK ANODISED	GR-NYLON	100CR6	ELECTROLESS NICKEL
SP	230M07PB	CHEMI-BLACKED	GR-NYLON	100CR6	ELECTROLESS NICKEL
SPH	230M07PB	ZINC WHITE/BLUE PASSIVATE	GRILAMID	230M07PB	NITROTEC
GE-ES	100CR6	MANGANESE PHOSPHATED	N/A	100CR6	MANGANESE PHOSPHATED
GEZ-ES	100CR6	MANGANESE PHOSPHATED	N/A	100CR6	MANGANESE PHOSPHATED
GE-UK	100CR6	NOT PLATED	PTFE FABRIC	100CR6	ELECTROLESS NICKEL
GE-FW	100CR6	NOT PLATED	PTFE FABRIC	100CR6	ELECTROLESS NICKEL
COM	100CR6	NOT PLATED	PTFE FABRIC	100CR6	ELECTROLESS NICKEL
SX	100CR6	PHOSPHATED	N/A	100CR6	PHOSPHATED
A	230M07PB	ZINC WHITE/BLUE PASSIVATE	NYLON 6	230M07PB	ZINC WHITE/BLUE PASSIVATE
BL	DIE CAST ZINC ALLOY	NOT PLATED	N/A	100CR6 / 535C	ZINC WHITE/BLUE PASSIVATE
BM	NYLON 12	NOT PLATED	N/A	230M07PB	ZINC WHITE/BLUE PASSIVATE
C	230M07PB	ZINC WHITE/BLUE PASSIVATE	N/A	212A42	ZINC WHITE/BLUE PASSIVATE
D	230M07PB	ZINC WHITE/BLUE PASSIVATE	N/A	230M07PB	ZINC WHITE/BLUE PASSIVATE
F	230M07PB	ZINC WHITE/BLUE PASSIVATE	N/A	230M07PB	ZINC WHITE/BLUE PASSIVATE
I	230M07PB	ZINC WHITE/BLUE PASSIVATE	NYLON 6	230M07PB	ZINC WHITE/BLUE PASSIVATE
P	230M07PB	ZINC WHITE/BLUE PASSIVATE	N/A	230M07PB	ZINC WHITE/BLUE PASSIVATE
Q	230M07PB	ZINC WHITE/BLUE PASSIVATE	N/A	230M07PB	ZINC WHITE/BLUE PASSIVATE
M	NYLON PA6.6	NOT PLATED	N/A	230M07PB	ZINC WHITE/BLUE PASSIVATE
G	080M46	ZINC WHITE/BLUE PASSIVATE	N/A	N/A	N/A

Load Capacity

Rod ends and spherical bearings

- The static load ratings listed are based on the yield strength of the race material and define the maximum gradually applied load.
- Radial load which the rod end or spherical bearing assembly can withstand, without significant permanent deformation.

- The steel housing provides a backup so that the product can sustain loading in excess of the listed values without collapsing.
- For highly stressed cyclic applications or those involving impact loads a safety factor of two or three should be applied to arrive at a safe working load.
- Although rod ends and spherical bearings are not recommended for use in applications involving axial loads, the construction is such that they can sustain axial loads up to 15% of the actual applied radial static load ratings without distress, but should not exceed 25% of the listed values.
- For extended life the recommended normally applied loads should be 25% - 50% of the static load ratings.
- All load ratings listed are presented for design guidance only and do not imply or constitute a warranty claim of any type.
- All applications vary and so will product life, samples can be supplied for testing to help determine the suitability in actual operating conditions.

Studs

- In applications using studded rod ends or spherical bearings the capacity of the product is limited by that of the stud to withstand sheer loading.
- Table below lists the expected minimum load capacities based on the use of studs made from carbon steel, please consult our sales and engineering departments where the applied loads exceed 50% of the listed values.

Ball joints

- The capacities listed are based on either the maximum tensile strength of the female body or the maximum shear strength of the ball stud, whichever is the lower. Suitable safety factors should be applied depending on the nature of the loading. Pull out force is the minimum required, when applied axially along the stud to cause complete disengagement of the stud from the housing.

Bore Size Metric (mm)	Bore Size Imperial (inches)	Ultimate Radial Loads (Newton)
	0.1900	1,200
5		1,200
6		1,930
	0.2500	1,930
	0.3125	3,190
8		3,190
	0.3750	4,240
10		4,240
	0.4375	5,720
12		5,720
	0.5000	7,200
14		7,200
	0.6250	9,000
16		9,000

Temperature ranges

- The operating temperature range of rod ends and spherical bearings with a GR-nylon or nylon 66 race is limited by the thermal characteristics of the race material, this is -35°C to +170°C and -30°C to +120°C respectively. However in temperatures in excess of 80°C there may be a loss of load carrying capacity, e.g at 170°C an applied load equal to 20% of the static load rating can result in a compression set of .025mm.
- For application requiring extreme temperature ranges we recommend our liner, rod ends and spherical bearings can safely operate within a temperature range of -200°C to +260°C.
- Ball joints are generally temperature limited by the type of lubricant employed.

Specification

- Metric rod ends and spherical bearings are based on DIN 648.
- Imperial rod ends and spherical bearings are based on SAEJ1120.
- Metric ball joints are based on DIN71802 and DIN 71803.
- Imperial ball joints are based on SAEJ490.
- Metric clevises are based on DIN71752
- Imperial clevises are based on DIN71802
- All items are manufactured to commercial standards and tolerances, these tolerances are shown below.

Dimension	Metric (mm)	Imperial (inches)
Rod end bearings:		
Bore (Steel)	+0.064 - 0.013	+0.0025 - 0.0005
Bore (Bronze)	+0.038 - 0.013	+0.0015 - 0.0005
W	+0.000 - 0.0150	+0.000 - 0.0050
H	+0.050 - 0.050	+0.0030 - 0.0030
D	+0.130 - 0.130	+0.0050 - 0.0050
L1	+0.000 - 1.000	+0.0000 - 0.0620
L2	+0.250 - 0.250	+0.0320 - 0.0320
O	+0.050 - 0.050	+0.0030 - 0.0030
A	+0.130 - 0.130	+0.0050 - 0.0050
B	+0.250 - 0.250	+0.0320 - 0.0320
C	+0.050 - 0.050	+0.0030 - 0.0030
K	+0.130 - 0.130	+0.0050 - 0.0050
Spherical bearings:		
Bore (Steel)	+0.064 - 0.013	+0.0025 - 0.0005
Bore (Bronze)	+0.038 - 0.013	+0.0015 - 0.0005
D	+0.000 - 0.130	+0.0000 - 0.0050
H	+0.000 - 0.100	+0.0050 - 0.0050
W	+0.000 - 0.150	+0.0050 - 0.0050
Ball joints:		
Ball Ø	+0.064 - 0.013	+0.0025 - 0.0005

Table continued from over page:

Dimension	Metric (mm)	Imperial (inches)
L1	+0.000 - 1.000	+0.0000 - 0.0620
L2	+0.250 - 0.250	+0.0320 - 0.0320
STUD A/F	+0.130 - 0.130	+0.0050 - 0.0050
A	+0.130 - 0.130	+0.0050 - 0.0050
B	+0.250 - 0.250	+0.0320 - 0.0320
C	+0.050 - 0.050	+0.0030 - 0.0030
D1	+0.050 - 0.050	+0.0030 - 0.0030
D2	+0.050 - 0.050	+0.0030 - 0.0030
bore	+0.060 - 0.000	+0.0020 - 0.0000
G	+0.300 - 0.300	+0.0118 - 0.0118
A1	+0.300 - 0.160	+0.0118 - 0.0062
A2	+0.300 - 0.160	+0.0118 - 0.0062
B1	+0.150 - 0.000	+0.0060 - 0.0000
D3	+0.130 - 0.130	+0.0050 - 0.0050
L1	+0.500 - 0.500	+0.0196 - 0.0196
L2	+0.300 - 0.300	+0.0118 - 0.0118
L3	+0.300 - 0.300	+0.0118 - 0.0118
Ball studs:		
BALL Ø	+0.064 - 0.013	+0.0025 - 0.0005
A	+0.130 - 0.130	+0.0050 - 0.0050
B	+0.250 - 0.250	+0.0320 - 0.0320
C	+0.050 - 0.050	+0.0030 - 0.0030
K	+0.130 - 0.130	+0.0050 - 0.0050
Threads:		
Male	ISO 6G	Class 2A
Female	ISO 6H	Class 2B



ISO 9001:2008

Our commitment is to quality, to continuously improve in every aspect of the companies activities. In 2006, we successfully passed UKAS quality assurance inspection to ISO 9001:2008 for the manufacture and distribution of bearings, power transmission and motion transfer linkages.

ISO 14001:2004

As a responsible European manufacturer, we take our environmental responsibility extremely seriously. In 2012, we successfully passed UKAS quality assurance inspection to ISO14001:2004 for the manufacture and distribution of bearings, power transmission and motion transfer linkages.

Plating Options

DUNLOP rod ends, spherical bearings, ball joints and clevises are available in a wide range of plating options. Our standard catalogue and stock specification is trivalent F39, zinc and white/blue passivate, (zinc and clear), that conforms with RoHS directives on banned substances and is ELV 2000/S3/EC compliant.

Table below shows our suffix designations, other available plating options may not be RoHS and ELV compliant, please enquire for availability. For a full list of options, please refer to table below.

BRITISH PLATING STANDARDS

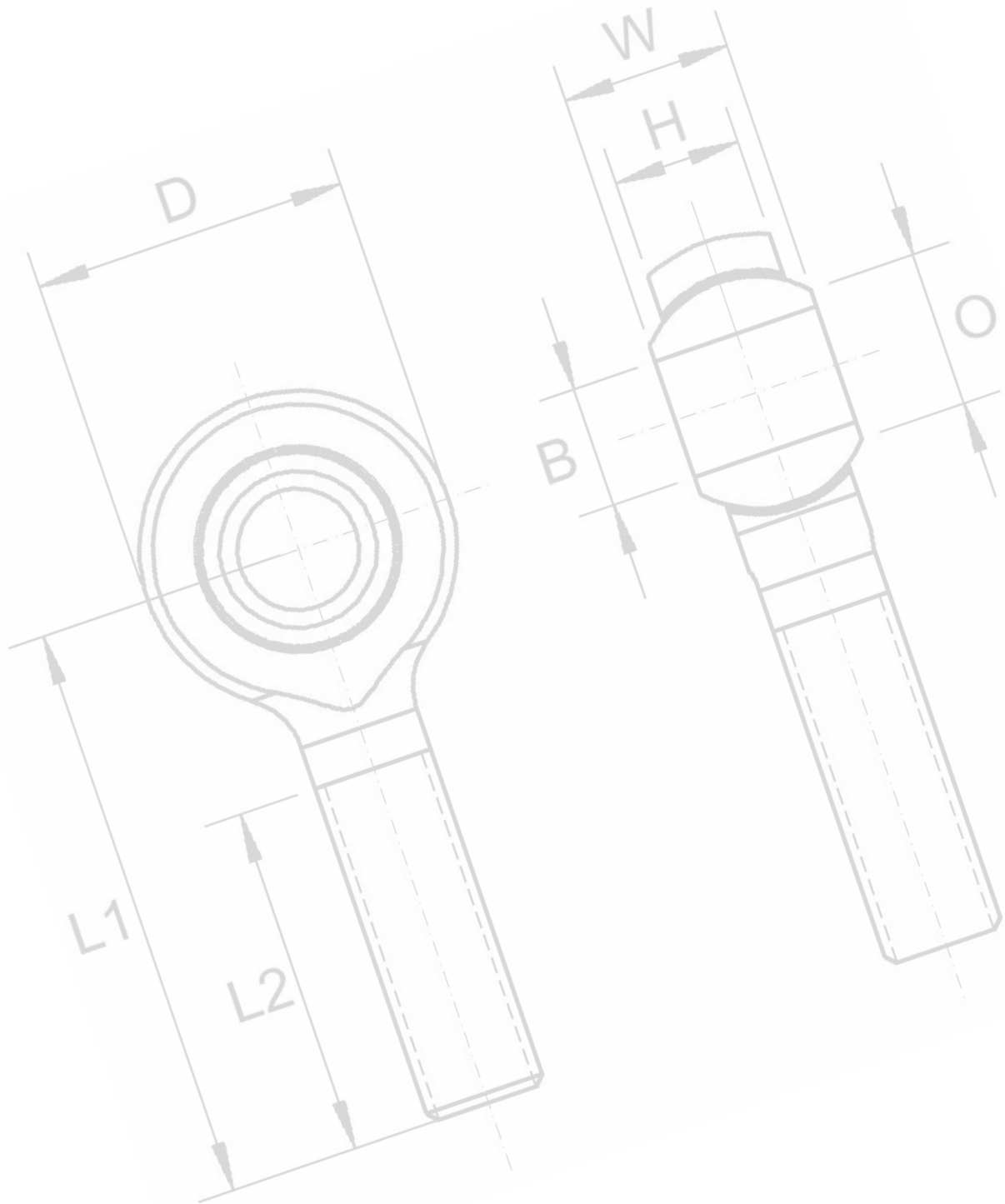
BS3382 – Zinc plating of all steel parts with external threads

Basic major diameter of thread	Average plating thickness
0.127"-0.250" (3-6mm)	5.0 to 6.4 µm
0.251"-0.500" (6-12mm)	6.4 to 7.6 µm
0.501"-0.750" (12-19mm)	7.6 to 8.9 µm
0.751" and over (19mm)	8.9 to 12.7 µm

Finish Code	Finish Description
F0	SELF COLOUR
F1	ZINC PLATE & YELLOW PASSIVATE (CONTAINS HEXAVALENT CHROMIUM)
F2	ZINC PLATE & CLEAR PASSIVATE (CONTAINS HEXAVALENT CHROMIUM)
F3	PHOSPHATE, DE-EMBRITTLE & OIL
F4	ZINC NICKEL ALLOY & BLACK PASSIVATE 8 microns (2000 hours salt spray resistance)
F5	CHEMI-BLACK
F6	AS SPECIFIED ON CUSTOMERS DRAWING
F7	ZINC PLATE & BLUE PASSIVATE
F8	ZINC PLATE & OLIVE DRAB PASSIVATE TO ACCO CABLES (TRIDENT) SPEC. FS.25
F9	COPPER PLATE 0.0127/0.0203mm THICK
F10	DACROMET (REPLACED BY GEOMET F54)
F11	ZINC PLATE, DE-EMBRITTLE & YELLOW PASSIVATE (CONTAINS HEXAVALENT CHROMIUM)
F12	ZINC PLATE, DE-EMBRITTLE & CLEAR PASSIVATE
F13	ZINC PLATE, DE-EMBRITTLE & BLUE PASSIVATE
F14	ZINC PLATE, DE-EMBRITTLE & OLIVE DRAB PASSIVATE
F15	PHOSPHATE & OIL
F16	MECHANICAL ZINC PLATE & YELLOW PASSIVATE
F17	CATHODIC BLACK
F18	XYLON XL BLACK
F19	PHOSPHATE, DE-EMBRITTLE & OIL DRY TO TOUCH
F20	PARKERISE
F21	ZINC PLATE & BLACK PASSIVATE (CONTAINS HEXAVALENT CHROMIUM)
F22	PAINT TO IRR NATO GREEN – DEF STD 80-41
F23	ZINC PLATE & BRONZE PASSIVATE FORD WSD-M1P85-A2+WSB-M10P10-A4

Table continued from over page:

Finish Code	Finish Description
F24	RED OXIDE PAINT AND SPRAY BLACK GLOSS TO S/A SPEC 1000-SEDDON
F25	BLACK FURALON B5514 FORD SPEC WSK-M2P153-A3
F26	BRIGHT NICKEL FLASH (PLATING DEPOSIT 0.0025/0.0051mm)
F27	POWDER COAT PAINT
F28	OIL
F29	ZINC PLATE, DE-EMBRITTLE & BLACK PASSIVATE (CONTAINS HEXAVALENT CHROMIUM)
F30	BLACKODIZE
F31	BLACK PAINT TO AULTRAFast SPEC AF1
F32	NITROTEC TO SPECIFICATION NQ40
F33	NITROTEC TO SPECIFICATION NQ3
F34	ZINC PLATE TO JS 500 (NO COLOUR)
F35	FERRITIC NITROCARBURISE
F36	ZINC NICKEL ALLOY & CLEAR PASSIVATE
F37	ZINC NICKEL ALLOY & YELLOW PASSIVATE
F38	ZINC PLATE & YELLOW TRIVALENT PASSIVATE (COLOUR DIE)
F39	ZINC PLATE & CLEAR TRIVALENT PASSIVATE
F40	DELTATONE & DELTASEAL BLACK (FREE FROM HEXAVALENT CHROMIUM)
F41	ZINC NICKEL PLATE, DE-EMBRITTLE & BLACK TRIVALENT PASSIVATE
F42	ZINC NICKEL PLATE & BLACK TRIVALENT PASSIVATE
F43	ZINC IRON PLATE & BLACK TRIVALENT PASSIVATE
F44	ZINC PLATE & BLACK TRIVALENT PASSIVATE
F45	ZINC NICKEL PLATE & CLEAR TRIVALENT PASSIVATE (BRIGHT FINISH)
F46	ZINC NICKEL PLATE, DE-EMBRITTLE & CLEAR TRIVALENT PASSIVATE
F47	ZINC PLATE, DE-EMBRITTLE & CLEAR TRIVALENT PASSIVATE WITHOUT SEALER
F48	ZINC PLATE, CLEAR TRIVALENT PASSIVATE AND SEAL (ZINKLAD 250)
F49	ZINC PLATE, DE-EMBRITTLE, CLEAR TRIVALENT PASSIVATE & SEAL (ZINKLAD 250)
F50	ZINC PLATE, THICK FILM PASSIVATE AND ADDITIONALLY SEAL / SST
F51	ZINC PLATE, DE-EMBRITTLE & YELLOW TRIVALENT PASSIVATE
F52	ZINC PLATE & TRIPASS CORROBLUE ELV
F53	ZINC PLATE, DE-EMBRITTLE & TRIPASS CORROBLUE ELV
F54	GEOMET 500 (REPLACES DACROMET A) F10
F55	SALT BATH NITRIDE TO AMS 2753B COMPOUND DEPTH .0003/.0010" SURFACE FILE HARD TO RC58.
F56	ZINC IRON PLATE, DE-EMBRITTLE & BLACK TRIVALENT PASSIVATE
F57	GEOMET 321 PLUS 10 VW 137 50, T602
F58	ELECTROLESS NICKEL PLATE
F59	CADMIUM PLATE TO DEF 03-19 AND CHROMATE PASSIVATE TO DEF 130
F60	BLACK PHOSPHATE DEF STAN 3-11 ROHS AND ELV COMPLIANT
F61	BLACK ANODISE ROHS & ELV COMPLIANT
F62	ZINC FLAKE COATING TO VW SPEC T630 TL233 SILVER
F63	BRIGHT NICKEL PLATE
F64	MANGANESE PHOSPHATE AND OIL
F65	ZINC NICKEL PLATE, DE-EMBRITTLE & Cr3 PASSIVATE TO KA SPEC PS224500
F66	ZINC NICKEL PLATE AND Cr3 PASSIVATE.
F67	ZINC PLATE, DE-EMBRITTLE & THICK FILM PASSIVATE AND ADDITIONALLY SEAL
F68	BLACK ON STAINLESS STEEL, STAY BLACK.



**English****Español****Italiano****Deutsch****Français****Nederlands****Polskie****MP series**

Serie MP • Serie MP • MP-Serie

Série MP • MP-serie • seria MP

18**MH series**

Serie MH • Serie MH • MH-Serie

Série MH • MH-serie • seria MH

22**RM series**

Serie RM • Serie RM • RM-Serie

Série RM • RM-serie • seria RM

25**MB series**

Serie MB • Serie MB • MB-Serie

Série MB • MB-serie • seria MB

27**MS series**

Serie MS • Serie MS • MS-Serie

Série MS • MS-serie • seria MS

30**MSX series**

Serie MSX • Serie MSX • MSX-Serie

Série MSX • MSX-serie • seria MSX

34**MX series**

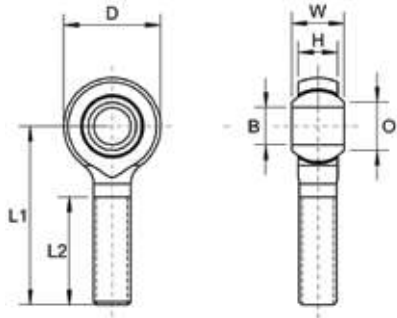
Serie MX • Serie MX • MX-Serie

Série MX • MX-serie • seria MX

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MALE ROD ENDS



MP-SERIES: MP – MPS – MP SS

Description

MP-Series is our 3-piece standard range of self lubricating general purpose male rod ends suitable for light to medium heavy industrial/mechanical load applications requiring low friction and good wear resistance, available in both metric and imperial bore and thread sizes. They have excellent moisture resistance and require no maintenance and have a wide operating temperature range.

Material Specifications

Housing: Steel 230M07PB. and forged 080M46, zinc plated and clear trivalent plastic and stainless steel 303L & 304 forged. Race: GR-nylon LV-3H. Ball: Bearing steel 100Cr6, hardened and electroless nickel plated and stainless steel 440C and *SAE660. Stud: Steel 230M07PB zinc plated and clear trivalent passivate and stainless steel 303L.

Features

- Metric & imperial thread & bore sizes
- Low friction
- Self-lubricating
- Good wear resistance
- Excellent moisture resistance
- Studded option

Possible Applications

- Light to medium/heavy industrial/mechanical applications
- Construction equipment
- Agricultural equipment
- Recreational vehicles
- Precision equipment
- No maintenance
- Linear movement

Temperature Range

-30°C to +170°C

Specification

ELV & RoHS compliant

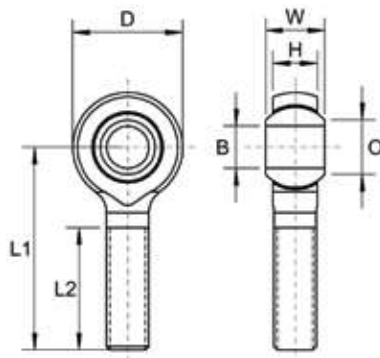
Interchange table

Dunlop	Rose	Tuthill	Alinabal	SKF	Asahi	IKO
MP-M (metric)	MMP	MJ-M	MPM-M	SAKB-M	JAM EC	POS-EC
MP (imperial)	RMP	MJ	PM-	-	-	POSB-EC

Note: Manufacturers part numbers are used for descriptive purposes only and may not be direct equivalent products.



MP SERIES: MAINTENANCE FREE ROD ENDS WITH MALE THREAD (METRIC)



Housing: Steel 230M07Pb (Sizes M03 – M12)
 Forged 080M46 (Sizes M14 – M25)
 Zinc Plated and Clear Trivalent Passivate

Race: GR-Nylon, LV-3H

Ball: Bearing Steel 100Cr6, Hardened and Electro-less Nickel Plated

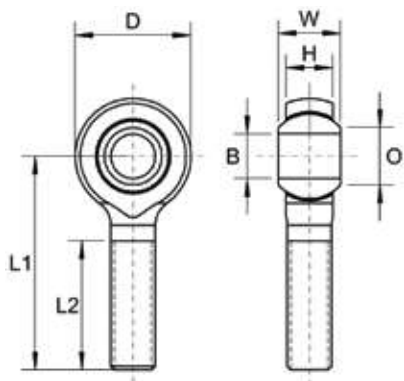
Specification: ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Bore Size	Thread	W	H	D	L1	L2	O	Static Load Rating (Newtons) Radial
MP-M03	MPL-M03	3	M3X0.50	6	4.50	12	27	15	5.20	3,040
MP-M04-3	MPL-M04-3	3	M4X0.70	7	5.00	14	30	18	6.30	4,060
MP-M04	MPL-M04	4	M4X0.70	7	5.00	14	30	18	6.30	4,060
MP-M05-4	MPL-M05-4	4	M5X0.80	8	6.00	16	33	20	7.50	5,340
MP-M05	MPL-M05	5	M5X0.80	8	6.00	16	33	20	7.50	5,340
MP-M06-5	MPL-M06-5	5	M6X1.00	9	6.75	18	36	22	9.30	7,720
MP-M06	MPL-M06	6	M6X1.00	9	6.75	18	36	22	9.30	7,720
MP-M08-6	MPL-M08-6	6	M8X1.25	12	9.00	22	42	25	10.40	12,775
MP-M08-6C	MPL-M08-6C	6	M8X1.00	12	9.00	22	42	25	10.40	12,775
MP-M08	MPL-M08	8	M8X1.25	12	9.00	22	42	25	10.40	12,775
MP-M08C	MPL-M08C	8	M8X1.00	12	9.00	22	42	25	10.40	12,775
MP-M10-8	MPL-M10-8	8	M10X1.50	14	10.50	26	48	29	12.90	16,960
MP-M10-8C	MPL-M10-8C	8	M10X1.25	14	10.50	26	48	29	12.90	16,960
MP-M10	MPL-M10	10	M10X1.50	14	10.50	26	48	29	12.90	16,960
MP-M10C	MPL-M10C	10	M10X1.25	14	10.50	26	48	29	12.90	16,960
MP-M12-10	MPL-M12-10	10	M12X1.75	16	12.00	30	54	33	15.40	22,900
MP-M12-10C	MPL-M12-10C	10	M12X1.25	16	12.00	30	54	33	15.40	22,900
MP-M12	MPL-M12	12	M12X1.75	16	12.00	30	54	33	15.40	22,900
MP-M12C	MPL-M12C	12	M12X1.25	16	12.00	30	54	33	15.40	22,900
MP-M14-12	MPL-M14-12	12	M14X2.00	19	13.50	34	60	36	16.80	28,950
MP-M14-12C	MPL-M14-12C	12	M14X1.50	19	13.50	34	60	36	16.80	28,950
MP-M14	MPL-M14	14	M14X2.00	19	13.50	34	60	36	16.80	28,950
MP-M14C	MPL-M14C	14	M14X1.50	19	13.50	34	60	36	16.80	28,950
MP-M16-14	MPL-M16-14	14	M16X2.00	21	15.00	38	66	40	19.30	37,130
MP-M16-14C	MPL-M16-14C	14	M16X1.50	21	15.00	38	66	40	19.30	37,130
MP-M16	MPL-M16	16	M16X2.00	21	15.00	38	66	40	19.30	37,130
MP-M16C	MPL-M16C	16	M16X1.50	21	15.00	38	66	40	19.30	37,130
MP-M18-16C	MPL-M18-16C	16	M18X1.50	23	16.50	46	72	43	21.80	45,730
MP-M18C	MPL-M18C	18	M18X1.50	23	16.50	46	72	43	21.80	45,730
MP-M20-18	MPL-M20-18	18	M20X2.50	25	18.00	50	78	46	24.50	55,240
MP-M20-18C	MPL-M20-18C	18	M20X1.50	25	18.00	50	78	46	24.50	55,240
MP-M20	MPL-M20	20	M20X2.50	25	18.00	50	78	46	24.50	55,240
MP-M20C	MPL-M20C	20	M20X1.50	25	18.00	50	78	46	24.50	55,240
MP-M22	MPL-M22	22	M22X1.50	28	20.00	54	84	51	25.80	57,420
MP-M25	MPL-M25	25	M24X2.00	31	22.00	60	94	57	29.60	67,140

For stainless steel add 'SS' to part no. For example 'MP-M03 SS'

MP SERIES: MAINTENANCE FREE ROD ENDS WITH MALE THREAD (IMPERIAL)



Housing: Steel 230M07Pb (Sizes 03 - 07)
 Forged 080M46 (Sizes 08 - 16)
 Zinc Plated and Clear Trivalent Passivate

Race: GR-Nylon, LV-3H

Ball: Bearing Steel 100Cr6, Hardened
 and Electro-less Nickel Plated

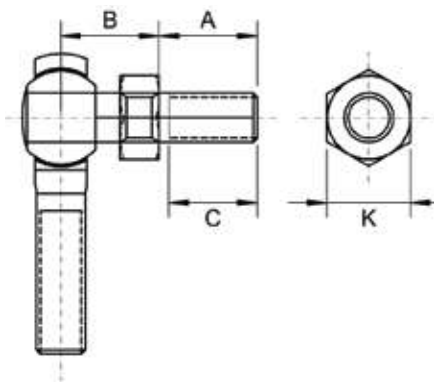
Specification: ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Bore Size	Thread	W	H	D	L1	L2	O	Static Load Rating (Newtons) Radial
MP-03	MPL-03	3/16	10-32 UNF	0.312	0.250	0.625	1.250	0.750	0.306	5,340
MP-04-3	MPL-04-3	3/16	1/4 UNF	0.375	0.281	0.750	1.562	1.000	0.354	8,450
MP-04	MPL-04	1/4	1/4 UNF	0.375	0.281	0.750	1.562	1.000	0.354	8,450
MP-04F	MPL-04F	1/4	1/4 BSF	0.375	0.281	0.750	1.562	1.000	0.354	8,450
MP-05-4	MPL-05-4	1/4	5/16 UNF	0.437	0.344	0.875	1.875	1.250	0.447	12,010
MP-05-4F	MPL-05-4F	1/4	5/16 BSF	0.437	0.344	0.875	1.875	1.250	0.447	12,010
MP-05	MPL-05	5/16	5/16 UNF	0.437	0.344	0.875	1.875	1.250	0.447	12,010
MP-05F	MPL-05F	5/16	5/16 BSF	0.437	0.344	0.875	1.875	1.250	0.447	12,010
MP-06-5	MPL-06-5	5/16	3/8 UNF	0.500	0.406	1.000	1.938	1.250	0.516	16,900
MP-06-5F	MPL-06-5F	5/16	3/8 BSF	0.500	0.406	1.000	1.938	1.250	0.516	16,900
MP-06	MPL-06	3/8	3/8 UNF	0.500	0.406	1.000	1.938	1.250	0.516	16,900
MP-06/1	MPL-06/1	10mm	3/8 UNF	0.500	0.406	1.000	1.938	1.250	0.516	16,900
MP-06/2	MPL-06/2	3/8 HEX	3/8 UNF	0.500	0.406	1.000	1.938	1.250	0.516	16,900
MP-06F	MPL-06F	3/8	3/8 BSF	0.500	0.406	1.000	1.938	1.250	0.516	16,900
MP-07-6	MPL-07-6	3/8	7/16 UNF	0.562	0.437	1.125	2.125	1.375	0.586	19,750
MP-07-6F	MPL-07-6F	3/8	7/16 BSF	0.562	0.437	1.125	2.125	1.375	0.586	19,750
MP-07	MPL-07	7/16	7/16 UNF	0.562	0.437	1.125	2.125	1.375	0.586	19,750
MP-07F	MPL-07F	7/16	7/16 BSF	0.562	0.437	1.125	2.125	1.375	0.586	19,750
MP-08-7	MPL-08-7	7/16	1/2 UNF	0.625	0.500	1.312	2.438	1.500	0.700	28,900
MP-08-7F	MPL-08-7F	7/16	1/2 BSF	0.625	0.500	1.312	2.438	1.500	0.700	28,900
MP-08	MPL-08	1/2	1/2 UNF	0.625	0.500	1.312	2.438	1.500	0.700	28,900
MP-08F	MPL-08F	1/2	1/2 BSF	0.625	0.500	1.312	2.438	1.500	0.700	28,900
MP-10-8	MPL-10-8	1/2	5/8 UNF	0.750	0.562	1.500	2.625	1.625	0.811	32,000
MP-10-8F	MPL-10-8F	1/2	5/8 BSF	0.750	0.562	1.500	2.625	1.625	0.811	32,000
MP-10	MPL-10	5/8	5/8 UNF	0.750	0.562	1.500	2.625	1.625	0.811	32,000
MP-10F	MPL-10F	5/8	5/8 BSF	0.750	0.562	1.500	2.625	1.625	0.811	32,000
MP-12-10	MPL-12-10	5/8	3/4 UNF	0.875	0.685	1.750	2.875	1.750	0.978	52,400
MP-12-10F	MPL-12-10F	5/8	3/4 BSF	0.875	0.685	1.750	2.875	1.750	0.978	52,400
MP-12	MPL-12	3/4	3/4 UNF	0.875	0.685	1.750	2.875	1.750	0.978	52,400
MP-12F	MPL-12F	3/4	3/4 BSF	0.875	0.685	1.750	2.875	1.750	0.978	52,400
MP-16-12	MPL-16-12	3/4	1" UNF	1.375	1.00	2.750	4.125	2.125	1.486	65,200
MP-16-12F	MPL-16-12F	3/4	1" BSF	1.375	1.00	2.750	4.125	2.125	1.486	65,200
MP-16	MPL-16	1	1" UNF	1.375	1.00	2.750	4.125	2.125	1.486	65,200
MP-16F	MPL-16F	1	1" BSF	1.375	1.00	2.750	4.125	2.125	1.486	65,200

For stainless steel add 'SS' to part no. For example 'MP-03 SS'

MPS SERIES: STUDED MALE ROD ENDS (METRIC)



Housing: Steel 230M07Pb (Sizes M05 – M12 & 03 – 07)
 Forged 080M46 (Sizes M14 – M16 & 08 - 10)
 Zinc Plated and Clear Trivalent Passivated

Race: GR-Nylon, LV-3H

Ball: Bearing Steel 100Cr6, Hardened and Electro-less Nickel Plated

Stud: Steel 230M07Pb, Zinc Plated and Clear. Trivalent Passivated

Specification: ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Stud Size	Thread	A	B	C	K	Static Load Rating (Newtons) Radial
MP-M05S	MPL-M05S	M5X0.80	M5X0.80	10	10	8	9	1,200
MP-M06-5S	MPL-M06-5S	M5X0.80	M6X1.00	12	12	10	10	1,200
MP-M06S	MPL-M06S	M6X1.00	M6X1.00	12	12	10	10	1,930
MP-M08-6S	MPL-M08-6S	M6X1.00	M8X1.25	16	16	14	13	1,930
MP-M08S	MPL-M08S	M8X1.25	M8X1.25	16	16	14	13	3,190
MP-M10-8S	MPL-M10-8S	M8X1.25	M10X1.50	20	20	18	17	3,190
MP-M10S	MPL-M10S	M10X1.50	M10X1.50	20	20	18	17	4,240
MP-M12-10S	MPL-M12-10S	M10X1.50	M12X1.75	24	24	21	19	4,240
MP-M12S	MPL-M12S	M12X1.75	M12X1.75	24	24	21	19	5,720
MP-M14-12S	MPL-M14-12S	M12X1.75	M14X2.00	28	28	25	22	5,720
MP-M14S	MPL-M14S	M14X2.00	M14X2.00	28	28	25	22	7,200
MP-M16-14S	MPL-M16-14S	M14X2.00	M16X2.00	29	29	24	24	7,200
MP-M16S	MPL-M16S	M16X2.00	M16X2.00	29	29	24	24	9,000

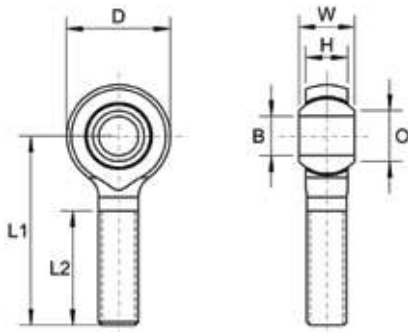
MPS SERIES: STUDED MALE ROD ENDS (IMPERIAL)

Part No. Right Hand	Part No. Left Hand	Stud Size	Thread	A	B	C	K	Static Load Rating (Newtons) Radial
MP-03S	MPL-03S	3/16UNF	3/16 UNF	0.500	0.516	0.437	0.312	1,200
MP-04-3S	MPL-04-3S	3/16 UNF	1/4 UNF	0.562	0.485	0.500	0.375	1,200
MP-04S	MPL-04S	1/4 UNF	1/4 UNF	0.562	0.485	0.500	0.375	1,930
MP-05-4S	MPL-05-4S	1/4 UNF	5/16 UNF	0.687	0.547	0.594	0.437	1,930
MP-05S	MPL-05S	5/16 UNF	5/16 UNF	0.687	0.547	0.594	0.437	3,190
MP-06-5S	MPL-06-5S	5/16 UNF	3/8 UNF	0.906	0.562	0.812	0.500	3,190
MP-06S	MPL-06S	3/8 UNF	3/8 UNF	0.906	0.562	0.812	0.500	4,240
MP-07-6S	MPL-07-6S	3/8 UNF	7/16 UNF	1.125	0.843	1.000	0.625	4,240
MP-07S	MPL-07S	7/16 UNF	7/16 UNF	1.125	0.843	1.000	0.625	5,720
MP-08-7S	MPL-08-7S	7/16 UNF	1/2 UNF	1.125	0.875	1.000	0.625	5,720
MP-08S	MPL-08S	1/2 UNF	1/2 UNF	1.125	0.875	1.000	0.625	7,200
MP-10-8S	MPL-10-8S	1/2 UNF	5/8 UNF	1.125	1.000	1.000	0.750	7,200
MP-10S	MPL-10S	5/8 UNF	5/8 UNF	1.125	1.000	1.000	0.750	9,000

For stainless steel add 'SS' to part no. For example 'MP-M05S SS'



MALE ROD ENDS



MH SERIES: MH - MHS - MH SS

Description:

MH series is our 3-piece unique internationally patented range of male rod ends incorporating a polyurethane bearing race that provides ultra smooth operation. A nitrotec surface protected ball with a PTFE lubricant provide superior shock load and extended wear properties, combined with excellent chemical and corrosion resistance. The unique innovative captive body design prevents detachment through excessive axial loads. For optimum performance, ensure that the rod end is mounted with the moulded lettering facing away from the direction of pull.

Material Specifications:

Housing: Steel 230M07PB zinc plated and clear trivalent passivate. Race: Polyurethane. Ball: 230M07PB nitrotec finish. Stud: Steel 230M07PB zinc plated and clear trivalent passivate and stainless steel 303C. Lubricant: Uniflor oil.

Features:

- Metric & imperial sizes
- Ultra low friction
- High shock loads
- Extended wear life
- No maintenance
- Studded option

Possible Applications:

- Light to medium
- Construction equipment
- Agricultural equipment
- Recreational vehicles
- High precision motion control
- Safety features

Temperature Range:

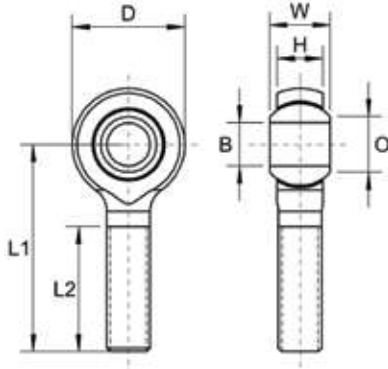
-40°C to + 80°C

Specification:

ELV & RoHS compliant



MH SERIES: MAINTENANCE FREE ROD ENDS WITH MALE THREAD (METRIC)



- Housing:** Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate
- Race:** Polyurethane
- Ball:** Steel 230M07Pb – Nitrotec Surface Protection
- Lubricant:** Uniflor Oil
- Specification:** ELV and RoHS Compliant

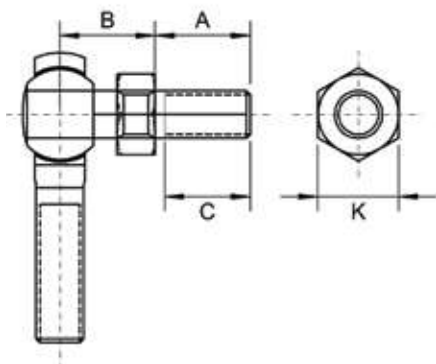


Part No. Right Hand	Part No. Left Hand	Bore Size	Thread	W	H	D	L1	L2	O	Static Load Rating (Newtons) Radial
MH-M06	MHL-M06	6	M6X1.00	9	6.75	20	36	21	8.90	9,806
MH-M08	MHL-M08	8	M8X1.25	12	9.00	24	42	25	10.35	17,652
MH-M08C	MHL-M08C	8	M8X1.00	12	9.00	24	42	25	10.35	17,652
MH-M10	MHL-M10	10	M10X1.50	14	10.50	28	48	28	12.85	21,575
MH-M10C	MHL-M10C	10	M10X1.25	14	10.50	28	48	28	12.85	21,575

MH SERIES: MAINTENANCE FREE ROD ENDS WITH MALE THREAD (IMPERIAL)

Part No. Right Hand	Part No. Left Hand	Bore Size	Thread	W	H	D	L1	L2	O	Static Load Rating (Newtons) Radial
MH-04	MHL-04	1/4	1/4 UNF	0.354	0.266	0.787	1.417	0.827	0.350	9,806
MH-04F	MHL-04F	1/4	1/4 BSF	0.354	0.266	0.787	1.417	0.827	0.350	9,806
MH-05	MHL-05	5/16	5/16 UNF	0.472	0.354	0.945	1.654	0.984	0.406	17,652
MH-05F	MHL-05F	5/16	5/16 BSF	0.472	0.354	0.945	1.654	0.984	0.406	17,652
MH-06	MHL-06	3/8	3/8 UNF	0.551	0.413	1.102	1.890	1.102	0.508	21,575
MH-06F	MHL-06F	3/8	3/8 BSF	0.551	0.413	1.102	1.890	1.102	0.508	21,575
MH-07	MHL-07	7/16	7/16 UNF	0.562	0.437	1.201	2.118	1.323	0.585	23,540
MH-07F	MHL-07F	7/16	7/16 BSF	0.562	0.437	1.201	2.118	1.323	0.585	23,540
MH-08	MHL-08	1/2	1/2 UNF	0.628	0.472	1.250	2.441	1.457	0.610	25,890
MH-08F	MHL-08F	1/2	1/2 BSF	0.628	0.472	1.250	2.441	1.457	0.610	25,890
MH-10	MHL-10	5/8	5/8 UNF	0.750	0.560	1.503	2.625	1.575	0.811	34,520
MH-10F	MHL-10F	5/8	5/8 UNF	0.750	0.560	1.503	2.625	1.575	0.811	34,520
MH-12	MHL-12	3/4	3/4 UNF	0.875	0.689	1.75	2.875	1.75	0.978	52,000
MH-12F	MHL-12F	3/4	3/4 BSF	0.875	0.689	1.75	2.875	1.75	0.978	52,000

MHS SERIES: MAINTENANCE FREE ROD ENDS WITH MALE THREAD (METRIC)



Housing: Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivated

Race: Polyurethane

Ball: Steel 230M07Pb – Nitrotec Surface Protection

Lubricant: Uniflor Oil

Stud: Steel 230M07Pb, Zinc Plated and Clear. Trivalent Passivated

Specification: ELV and RoHS Compliant



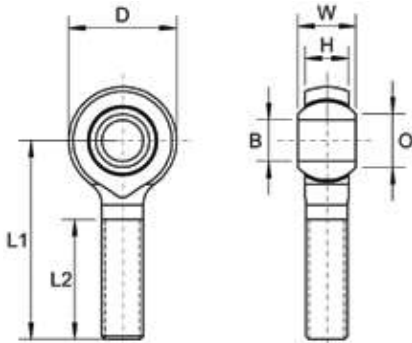
Part No. Right Hand	Part No. Left Hand	Stud size	Thread	A	B	C	K	Static Load Rating (Newtons) Radial
MH-M06S	MHL-M06S	M6X1.00	M6X1.00	12.5	11.0	10.5	8	1,930
MH-M08S	MHL-M08S	M8X1.25	M8X1.25	16.5	13.0	14.5	11	3,190
MH-M10S	MHL-M10S	M10X1.50	M10X1.50	20.0	16.0	18.0	13	4,240
MH-M10CS	MHL-M10CS	M10X1.50	M10X1.25	20.0	16.0	18.0	13	4,240
MH-M12S	MHL-M12S	M12X1.75	M12X1.75	20.0	13.0	18.0	16	5,720
MH-M12CS	MHL-M12CS	M12X1.75	M12X1.25	20.0	13.0	18.0	16	5,720

MHS SERIES: MAINTENANCE FREE ROD ENDS WITH MALE THREAD (IMPERIAL)

Part No. Right Hand	Part No. Left Hand	Stud Size	Thread	A	B	C	K	Static Load Rating (Newtons) Radial
MH-04S	MHL-04S	1/4 UNF	1/4 UNF	0.492	0.433	0.412	5/16	1,930
MH-04FS	MHL-04FS	1/4 UNF	1/4 BSF	0.492	0.433	0.412	5/16	1,930
MH-05S	MHL-05S	5/16 UNF	5/16 UNF	0.650	0.512	0.570	7/16	3,190
MH-05FS	MH-05FS	5/16 UNF	5/16 BSF	0.650	0.512	0.570	7/16	3,190
MH-06S	MH-06S	3/8 UNF	3/8 UNF	0.787	0.630	0.707	1/2	4,240
MH-06FS	MH-06FS	3/8 UNF	3/8 BSF	0.787	0.630	0.707	1/2	4,240
MH-07S	MH-07S	7/16 UNF	7/16 UNF	0.945	0.750	0.865	1/2	5,720
MH-07FS	MH-07FS	7/16 UNF	7/16 BSF	0.945	0.750	0.865	1/2	5,720
MH-08S	MHL-08S	1/2 UNF	1/2 UNF	1.100	0.866	0.945	9/16	7,200
MH-08FS	MHL-08FS	1/2 UNF	1/2 BSF	1.100	0.866	0.945	9/16	7,200



MALE ROD ENDS



RM SERIES: RM - RMS - RM SS

Description:

RM series is our 3-piece thin series range of male rod ends that have been specifically designed for use with other linkage components such as clevises etc, The RM-Series design allows the rod ends head and ball to neatly slide inside of its mating clevises fork end, ideal for fitting to pre-assembled linkages. Metric and imperial bore and thread sizes are available. Standard product is supplied with a frictional load on the bearing ball, recommended for applications where misalignment may arise in an assembly.

Material Specifications:

Housing: Steel 230M07Pb, zinc plated and clear trivalent passivate. Race: Nylon 66 glass filled with molybdenum disulphide. Ball: Bearing steel 100Cr6, hardened and electroless nickel plated and. Stud: Steel 230M07PB zinc plated and clear trivalent passivate and stainless steel 303L.

Features:

- Metric thread & bore sizes
- Friction load
- High shock loads
- Thin section
- No maintenance
- Studded option

Possible Applications:

- Light to medium industrial/mechanical applications
- Construction equipment
- Agricultural equipment
- Recreational vehicles

Temperature Range:

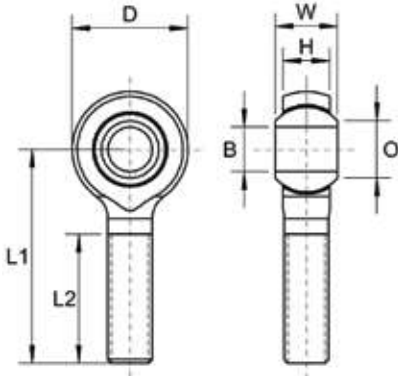
-30°C to + 120°C

Specification:

ELV & RoHS compliant



RM SERIES: MAINTENANCE FREE ROD ENDS WITH MALE THREAD (METRIC)



Housing: Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate

Race: Nylon 66

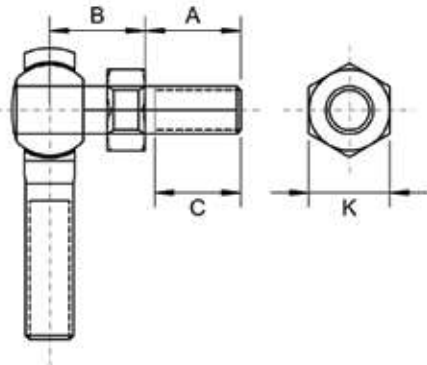
Ball: Bearing Steel 100Cr6, Hardened and Electro-less Nickel Plated

Specification: ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Bore Size	Thread	W	H	D	L1	L2	O	Static Load Rating (Newtons) Radial
RMM6	RMM6LH	6	M6X1.00	6	4	21	36	22	8.00	1,930
RMM8	RMM8LH	8	M8X1.25	8	6	24	42	24	10.25	3,190
RMM8C	RMM8CLH	8	M8X1.00	8	6	24	42	24	10.25	3,190
RMM10	RMM10LH	10	M10X1.50	9	7	29	48	29	13.23	4,240
RMM10C	RMM10CLH	10	M10X1.25	9	7	29	48	29	13.23	4,240

RMS SERIES: MAINTENANCE FREE ROD ENDS WITH MALE THREAD (METRIC)



Housing: Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate

Race: Nylon 66

Ball: Bearing Steel 100Cr6, Hardened and Electro-less Nickel Plated

Stud: Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate

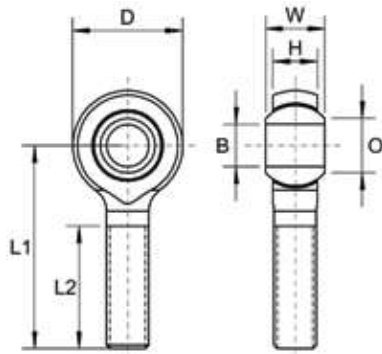
Specification: ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Stud Size	Thread	A	B	C	K	Static Load Rating (Newtons) Radial
RMM6S	RMM6SLH	M6X1.00	M6X1.00	12.5	11.0	10.5	8	1,930
RMM8S	RMM8SLH	M8X1.25	M8X1.25	16.5	13.0	14.5	11	3,190
RMM8CS	RMM8CSLH	M8X1.25	M8X1.00	16.5	13.0	14.5	11	3,190
RMM10S	RMM10SLH	M10X1.50	M10X1.50	20.0	16.0	12.0	13	4,240
RMM10CS	RMM10CSLH	M10X1.5	M10X1.25	20.0	16.0	12.0	13	4,240



MALE ROD ENDS



MB SERIES: MB – MBS

Description:

MB Series is our 3-piece standard range of maintenance required general purpose male rod ends suitable for medium heavy industrial/mechanical load applications requiring low friction and good wear resistance, available in both metric and imperial bore and thread sizes. An oil impregnated sintered bronze race is also available for some sizes or if quantity justifies production, suitable for high precision motion transfer applications and extended wear life.

Material Specifications:

Housing: Steel 230M07PB and forged 080M46, zinc plated and clear trivalent passivate. Race: Bronze SAE660. Ball: Bearing steel 100Cr6, hardened and electroless nickel plated.

Stud: Steel 230M07PB zinc plated and clear trivalent passivate.

Features:

- Metric & imperial thread & bore sizes
- Low friction
- Self-lubricating option available
- Extended wear life
- Maintenance required
- Studded option

Possible Applications

- Medium/heavy industrial/mechanical applications
- Construction equipment
- Agricultural equipment
- Recreational vehicles
- Precision equipment

Temperature Range:

-34°C to +149°C

Specification:

ELV & RoHS compliant

Interchange table

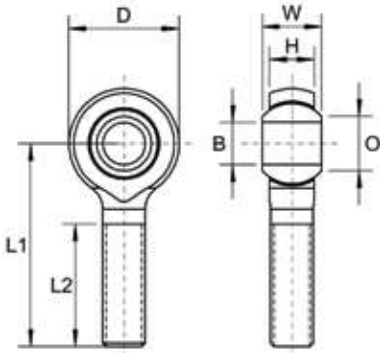
Dunlop	Rose	Tuthill	Alinabal	SKF	Asahi	IKO	Fluro
MB-M (metric)	MM	MB-M	MVM-M	SAKAC-M	JAM	POS	GAS
MB (imperial)	RM-U	MB	VM-G	-	-	POSB	-

Note: Manufacturers part numbers are used for descriptive purposes only and may not be direct equivalent products.



For stainless steel add 'SS' to part no. For example 'MB-M03 SS'

MB SERIES: MAINTENANCE REQUIRED - ROD ENDS WITH MALE THREAD (METRIC)



Housing: Steel 230M07Pb (Sizes M03 – M12),
Forged 080M46 (Sizes M14 – M25),
Zinc Plated and Clear Trivalent Passivate

Race: Bronze SAE660

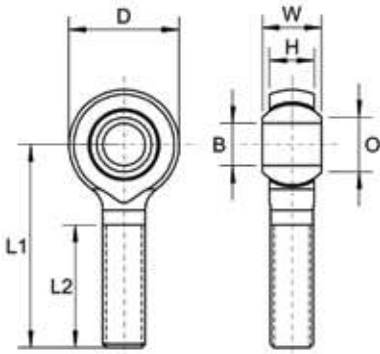
Ball: Bearing Steel 100Cr6, Hardened
Electro-less Nickel Plated

Specification: ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Bore Size	Thread	W	H	D	L1	L2	O	Static Load Rating (Newtons) Radial
MB-M03	MBL-M03	3	M3X0.50	6	4.50	12	27	15	5.20	3,648
MB-M04	MBL-M04	4	M4X0.70	7	5.00	14	30	18	6.30	4,960
MB-M05	MBL-M05	5	M5X0.80	8	6.00	16	33	20	7.50	6,360
MB-M06	MBL-M06	6	M6X1.00	9	6.75	18	36	22	9.30	6,820
MB-M08	MBL-M08	8	M8X1.25	12	9.00	22	42	25	10.40	10,450
MB-M10	MBL-M10	10	M10X1.50	14	10.50	26	48	29	12.90	14,000
MB-M12	MBL-M12	12	M12X1.75	16	12.00	30	54	33	15.40	18,745
MB-M14	MBL-M14	14	M14X2.00	19	13.50	34	60	36	16.80	22,125
MB-M16	MBL-M16	16	M16X2.00	21	15.00	38	66	40	19.30	23,700
MB-M18C	MBL-M18C	18	M18X1.50	23	16.50	46	72	43	21.80	25,600
MB-M20	MBL-M20	20	M20X2.50	25	18.00	50	78	46	24.50	28,640
MB-M22	MBL-M22	22	M22X1.50	28	20.00	54	84	51	25.80	34,200
MB-M25	MBL-M25	25	M24X2.00	31	22.00	60	94	57	29.60	47,750

MB SERIES: MAINTENANCE REQUIRED - ROD ENDS WITH MALE THREAD (IMPERIAL)



Housing: Steel 230M07Pb (Sizes 03 - 07),
Forged 080M46 (Sizes 08 - 16),
Zinc Plated and Clear Trivalent Passivate

Race: Bronze SAE660

Ball: Bearing Steel 100Cr6, Hardened
and Electro-less Nickel Plated

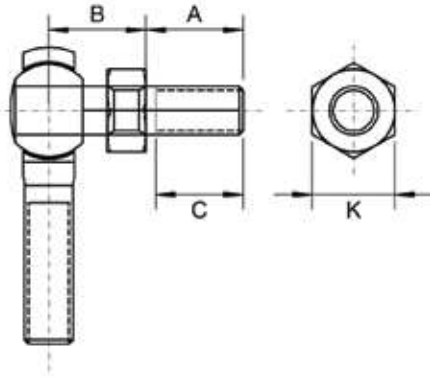
Specification: ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Bore Size	Thread	W	H	D	L1	L2	O	Static Load Rating (Newtons) Radial
MB-03	MBL-03	3/16	10-32 UNF	0.312	0.250	0.625	1.250	0.750	0.306	6,360
MB-04	MBL-04	1/4	1/4 UNF	0.375	0.281	0.750	1.562	1.000	0.354	6,820
MB-05	MBL-05	5/16	5/16 UNF	0.437	0.344	0.875	1.875	1.250	0.447	10,450
MB-06	MBL-06	3/8	3/8 UNF	0.500	0.406	1.000	1.938	1.250	0.516	13,640
MB-07	MBL-07	7/16	7/16 UNF	0.562	0.437	1.125	2.125	1.375	0.586	16,360
MB-08	MBL-08	1/2	1/2 UNF	0.625	0.500	1.312	2.438	1.500	0.700	19,545
MB-10	MBL-10	5/8	5/8 UNF	0.750	0.562	1.500	2.625	1.625	0.811	22,500
MB-12	MBL-12	3/4	3/4 UNF	0.875	0.685	1.750	2.875	1.750	0.978	28,640
MB-16	MBL-16	1	1" UNF	1.375	1.00	2.750	4.125	2.125	1.486	47,500

An oil impregnated Sintered Bronze race is also available for many sizes or if quantity justifies production. This will offer extended life without the need for routine maintenance i.e. maintenance free, add suffix "SPB" to part number for example MB-M10SPB. Please enquire for availability.

MBS SERIES - STUDED MALE ROD ENDS (METRIC)



Housing: Steel 230M07Pb (Sizes M05 – M12)
Forged 080M46 (Sizes M14 – M16)
Zinc Plated and Clear Trivalent Passivate

Race: Bronze SAE660

Ball: Bearing Steel 100Cr6, Hardened and Electro-less Nickel Plated

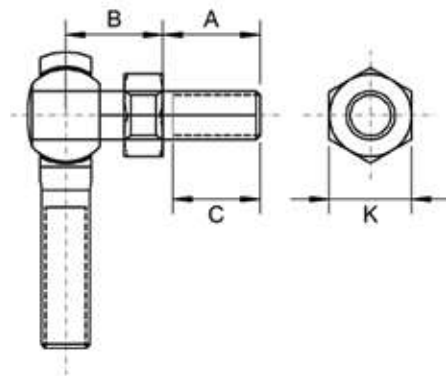
Stud: Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate

Specification: ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Stud Size	Thread	A	B	C	K	Static Load Rating (Newtons) Radial
MB-M05S	MBL-M05S	M5X0.50	M5X0.80	10	10	8	9	1,200
MB-M06S	MBL-M06S	M6X1.00	M6X1.00	12	12	10	10	1,930
MB-M08S	MBL-M08S	M8X1.25	M8X1.25	16	16	14	13	3,190
MB-M10S	MBL-M10S	M10X1.50	M10X1.50	20	20	18	17	4,240
MB-M12S	MBL-M12S	M12X1.75	M12X1.75	24	24	21	19	5,720
MB-M14S	MBL-M14S	M14X2.00	M14X2.00	28	28	25	22	7,200
MB-M16S	MBL-M16S	M16X2.00	M16X2.00	29	29	24	24	9,000

MBS SERIES - STUDED MALE ROD ENDS (IMPERIAL)



Housing: Steel 230M07Pb (Sizes 03 – 07)
Forged 080M46 (Sizes 08 - 10)
Zinc Plated and Clear Trivalent Passivate

Race: Bronze SAE660

Ball: Bearing Steel 100Cr6, Hardened and Electro-less Nickel Plated

Stud: Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate

Specification: ELV and RoHS Compliant



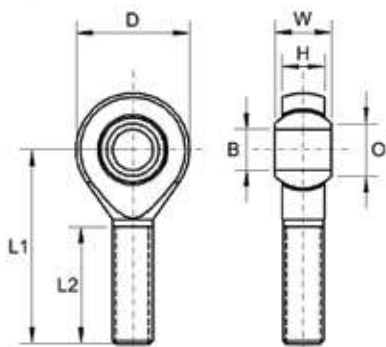
Part No. Right Hand	Part No. Left Hand	Stud Size	Thread	A	B	C	K	Static Load Rating (Newtons) Radial
MB-03S	MBL-03S	3/16 UNF	3/16 UNF	0.500	0.516	0.437	0.312	1,200
MB-04S	MBL-04S	1/4 UNF	1/4 UNF	0.562	0.485	0.500	0.375	1,930
MB-05S	MBL-05S	5/16 UNF	5/16 UNF	0.687	0.547	0.594	0.437	3,190
MB-06S	MBL-06S	3/8 UNF	3/8 UNF	0.906	0.562	0.812	0.500	4,240
MB-07S	MBL-07S	7/16 UNF	7/16 UNF	1.125	0.843	1.000	0.625	5,720
MB-08S	MBL-08S	1/2 UNF	1/2 UNF	1.125	0.875	1.000	0.625	7,200
MB-10S	MBL-10S	5/8 UNF	5/8 UNF	1.125	1.000	1.000	0.750	9,000

B.S.F. threads are available from size MB-04S, (MBL-04S), and above by adding suffix "F" to the part number e.g. MB-08FS, (MBL-08FS). Stainless steel, Grade 303L, rod ends are available by adding suffix "SS" to the part number e.g. MB-M10S-SS, (MBL-M10S-SS).

For stainless steel add 'SS' to part no. For example 'MB-M05S SS'



MALE ROD ENDS



MS SERIES: MS – MSS – MS SS

Description:

MS Series is our 3-piece steel on steel range of male rod ends incorporating a high strength PTFE bronze mesh between the ball and the liner material, suitable for high shock loads and medium to heavy mechanical load applications requiring low friction, available in both metric and imperial bore thread sizes, they do not require maintenance.

Material Specifications:

Housing: Steel 230M07Pb and forged 080M46, zinc plated and clear trivalent passivate and stainless steel 303L and forged 304. Inner Ring: Steel 070M20 zinc plated and clear trivalent passivate. Liner: High strength PTFE bronze mesh composite. Ball: Bearing steel 100Cr6, heat treated, polished & electroless nickel plated and stainless steel 440C

Features:

Metric & imperial thread & bore sizes, low friction, high shock loads. Extended wear life No maintenance Studded and stainless steel options.

Possible Applications:

Medium/heavy industrial/mechanical applications Construction equipment Agricultural equipment Motor sport and recreational vehicles requiring high precision motion control.

Temperature Range:

-200°C to + 260°C

Specification:

ELV & RoHS compliant

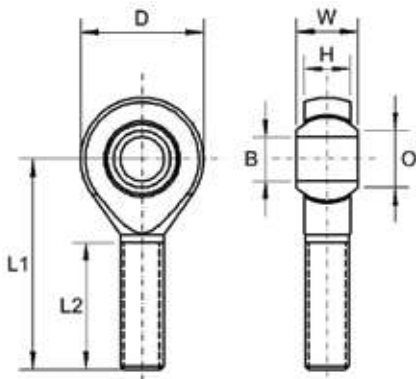
Interchange table

Dunlop	Rose	Aurora	Askubal	SKF	ASAHI	IKO	Fluro
MS-M (metric)	MMC	MM-M-T and MB-M-T	KA-P	SAKB-F	JAM-EC	POS-EC	GASW
MS (imperial)	RMC	MM-T and MB-T	-	-		POSB-EC	

Note: Manufacturers part numbers are used for descriptive purposes only and may not be direct equivalent products.



MS SERIES: MAINTENANCE FREE - ROD ENDS WITH MALE THREAD (METRIC)



Housing: Steel 230M07Pb (Sizes M05 – M12)
 Forged 080M46 (Sizes M14 – M25)
 Zinc Plated and Clear Trivalent Passivate

Inner Ring: Steel 070M20, Zinc Plated and Clear Trivalent Passivate

Ball: Bearing Steel 100Cr6, Hardened and Electro-less Nickel Plated

Liner: High Strength PTFE composite

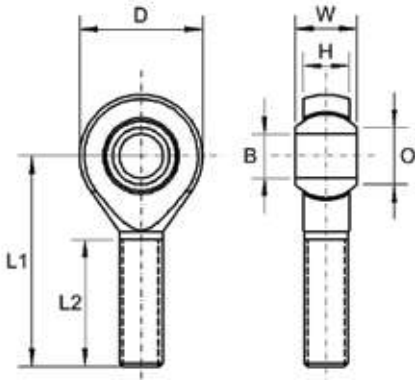
Specification: ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Bore Size	Thread	W	H	D	L1	L2	O	Static Load Rating (Newtons) Radial
MS-M05	MSL-M05	5	M5x0.80	8	6.00	18	33	20	7.70	4,300
MS-M06-5	MSL-M06-5	5	M6X1.00	9	6.75	20	36	22	8.90	6,000
MS-M06	MSL-M06	6	M6X1.00	9	6.75	20	36	22	8.90	6,000
MS-M08-6	MSL-M08-6	6	M8X1.25	12	9.00	24	42	25	10.40	11,100
MS-M08-6C	MSL-M08-6C	6	M8X1.00	12	9.00	24	42	25	10.40	11,100
MS-M08	MSL-M08	8	M8X1.25	12	9.00	24	42	25	10.40	11,100
MS-M08C	MSL-M08C	8	M8X1.00	12	9.00	24	42	25	10.40	11,100
MS-M10-8	MSL-M10-8	8	M10X1.50	14	10.50	28	48	29	12.90	17,500
MS-M10-8C	MSL-M10-8C	8	M10X1.25	14	10.50	28	48	29	12.90	17,500
MS-M10	MSL-M10	10	M10X1.50	14	10.50	28	48	29	12.90	17,500
MS-M10C	MSL-M10C	10	M10X1.25	14	10.50	28	48	29	12.90	17,500
MS-M12-10	MSL-M12-10	10	M12X1.75	16	12.00	32	54	33	15.40	23,600
MS-M12-10C	MSL-M12-10C	10	M12X1.25	16	12.00	32	54	33	15.40	23,600
MS-M12	MSL-M12	12	M12X1.75	16	12.00	32	54	33	15.40	23,600
MS-M12C	MSL-M12C	12	M12X1.25	16	12.00	32	54	33	15.40	23,600
MS-M14-12	MSL-M14-12	12	M14X2.00	19	13.50	36	60	38	16.80	29,200
MS-M14-12C	MSL-M14-12C	12	M14X1.50	19	13.50	36	60	38	16.80	29,200
MS-M14	MSL-M14	14	M14X2.00	19	13.50	36	60	38	16.80	29,200
MS-M14C	MSL-M14C	14	M14X1.50	19	13.50	36	60	38	16.80	29,200
MS-M16-14	MSL-M16-14	14	M16X2.00	21	15.00	42	66	40	19.30	32,100
MS-M16-14C	MSL-M16-14C	14	M16X1.50	21	15.00	42	66	40	19.30	32,100
MS-M16	MSL-M16	16	M16X2.00	21	15.00	42	66	40	19.30	32,100
MS-M16C	MSL-M16C	16	M16X1.50	21	15.00	42	66	40	19.30	32,100
MS-M18-16C	MSL-M18-16C	16	M18X1.50	23	16.50	46	72	44	21.80	38,400
MS-M18C	MSL-M18C	18	M18X1.50	23	16.50	46	72	44	21.80	38,400
MS-M20-18	MSL-M20-18	18	M20X2.50	25	18.00	50	78	47	24.30	45,000
MS-M20-18C	MSL-M20-18C	18	M20X1.50	25	18.00	50	78	47	24.30	45,000
MS-M20	MSL-M20	20	M20X2.50	25	18.00	50	78	47	24.30	45,000
MS-M20C	MSL-M20C	20	M20X1.50	25	18.00	50	78	47	24.30	45,000
MS-M22-20	MSL-M22-20	20	M22X1.50	28	20.00	54	84	51	25.80	52,750
MS-M22	MSL-M22	22	M22X1.50	28	20.00	54	84	51	25.80	52,750
MS-M25-20	MSL-M25-20	20	M24X2.00	31	22.00	60	94	57	29.60	60,900
MS-M25	MSL-M25	25	M24X2.00	31	22.00	60	94	57	29.60	60,900

For stainless steel add 'SS' to part no. For example 'MS-M05 SS'

MS SERIES: MAINTENANCE FREE - ROD ENDS WITH MALE THREAD (IMPERIAL)



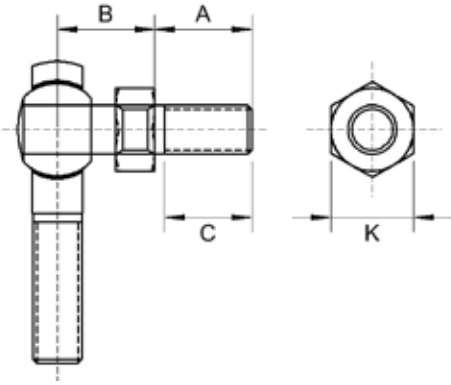
- Housing:** Steel 230M07Pb (Sizes 04 - 07)
Forged 080M46 (Sizes 08 - 12)
Zinc Plated and Clear Trivalent Passivate
- Inner Ring:** Steel 070M20, Zinc Plated and Clear Trivalent Passivate
- Ball:** Bearing Steel 100Cr6, Hardened and Electro-less Nickel Plated
- Liner:** High Strength PTFE Composite
- Specification:** ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Bore Size	Thread	W	H	D	L1	L2	O	Static Load Rating (Newtons) Radial
MS-04	MSL-04	1/4	1/4 UNF	0.375	0.281	0.812	1.562	1.000	8.40	6,000
MS-04F	MSL-04F	1/4	1/4 BSF	0.375	0.281	0.812	1.562	1.000	8.40	6,000
MS-05-4	MSL-05-4	1/4	5/16 UNF	0.437	0.344	1.000	1.875	1.250	11.35	11,100
MS-05-4F	MSL-05-4F	1/4	5/16 BSF	0.437	0.344	1.000	1.875	1.250	11.35	11,100
MS-05	MSL-05	5/16	5/16 UNF	0.437	0.344	1.000	1.875	1.250	11.35	11,100
MS-05F	MSL-05F	5/16	5/16 BSF	0.437	0.344	1.000	1.875	1.250	11.35	11,100
MS-06-5	MSL-06-5	5/16	3/8 UNF	0.500	0.406	1.125	1.938	1.250	13.10	17,500
MS-06-5F	MSL-06-5F	5/16	3/8 BSF	0.500	0.406	1.125	1.938	1.250	13.10	17,500
MS-06	MSL-06	3/8	3/8 UNF	0.500	0.406	1.125	1.938	1.250	13.10	17,500
MS-06F	MSL-06F	3/8	3/8 BSF	0.500	0.406	1.125	1.938	1.250	13.10	17,500
MS-07-6	MSL-07-6	3/8	7/16 UNF	0.562	0.437	1.250	2.125	1.375	14.90	19,900
MS-07-6F	MSL-07-6F	3/8	7/16 BSF	0.562	0.437	1.250	2.125	1.375	14.90	19,900
MS-07	MSL-07	7/16	7/16 UNF	0.562	0.437	1.250	2.125	1.375	14.90	19,900
MS-07F	MSL-07F	7/16	7/16 BSF	0.562	0.437	1.250	2.125	1.375	14.90	19,900
MS-08-7	MSL-08-7	7/16	1/2 UNF	0.625	0.500	1.375	2.438	1.500	17.75	23,600
MS-08-7F	MSL-08-7F	7/16	1/2 BSF	0.625	0.500	1.375	2.438	1.500	17.75	23,600
MS-08	MSL-08	1/2	1/2 UNF	0.625	0.500	1.375	2.438	1.500	17.75	23,600
MS-08F	MSL-08F	1/2	1/2 BSF	0.625	0.500	1.375	2.438	1.500	17.75	23,600
MS-10-8	MSL-10-8	1/2	5/8 UNF	0.750	0.562	1.750	2.625	1.625	21.30	32,100
MS-10-8F	MSL-10-8F	1/2	5/8 BSF	0.750	0.562	1.750	2.625	1.625	21.30	32,100
MS-10	MSL-10	5/8	5/8 UNF	0.750	0.562	1.750	2.625	1.625	21.30	32,100
MS-10F	MSL-10F	5/8	5/8 BSF	0.750	0.562	1.750	2.625	1.625	21.30	32,100
MS-12-10	MSL-12-10	5/8	3/4 UNF	0.875	0.687	2.000	2.875	1.750	24.80	45,000
MS-12-10F	MSL-12-10F	5/8	3/4 BSF	0.875	0.687	2.000	2.875	1.750	24.80	45,000
MS-12	MSL-12	3/4	3/4 UNF	0.875	0.687	2.000	2.875	1.750	24.80	45,000
MS-12F	MSL-12F	3/4	3/4 BSF	0.875	0.687	2.000	2.875	1.750	24.80	45,000

For stainless steel add 'SS' to part no. For example 'MS-04 SS'

MSS SERIES: STUDED MALE ROD ENDS (METRIC)

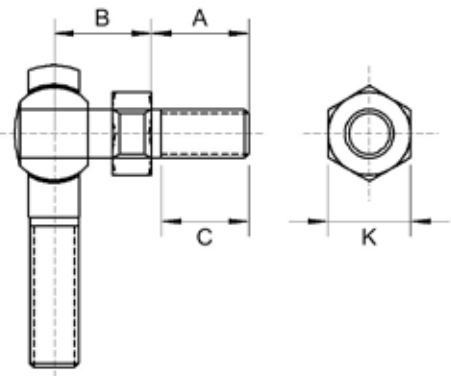


- Housing:** Steel 230M07Pb (Sizes M05 – M12)
Forged 080M46 (Sizes M14 – M16)
Zinc Plated and Clear Trivalent Passivate
- Inner Ring:** Steel 070M20, Zinc Plated and Clear Trivalent Passivate
- Ball:** Bearing Steel 100Cr6, Hardened and Electro-less Nickel Plated
- Stud:** Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate
- Liner:** High Strength PTFE Composite
- Specification:** ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Stud Size	Thread	A	B	C	K	Static Load Rating (Newtons) Radial
MS-M05S	MSL-M05S	M5X0.80	M5x0.80	10	10	8	9	1,200
MS-M06S	MSL-M06S	M6X1.00	M6X1.00	12	12	10	10	1,930
MS-M08S	MSL-M08S	M8X1.25	M8X1.25	16	16	14	13	3,190
MS-M10S	MSL-M10S	M10X1.50	M10X1.50	20	20	18	17	4,240
MS-M12S	MSL-M12S	M12X1.75	M12X1.75	24	24	21	19	5,720
MS-M14S	MSL-M14S	M14X2.00	M14X2.00	28	28	25	22	7,200
MS-M16S	MSL-M16S	M16X2.00	M16X2.00	29	29	24	24	9,000

MSS SERIES: STUDED MALE ROD ENDS (IMPERIAL)



- Housing:** Steel 230M07Pb (Sizes 04 - 07)
Forged 080M46 (Sizes 08 - 10)
Zinc Plated and Clear Trivalent Passivate
- Inner Ring:** Steel 070M20, Zinc Plated and Clear Trivalent Passivate
- Ball:** Bearing Steel 100Cr6, Hardened and Electro-less Nickel Plated
- Stud:** Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate
- Liner:** High Strength PTFE Composite
- Specification:** ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Stud Size	Thread	A	B	C	K	Static Load Rating (Newtons) Radial
MS-04S	MSL-04S	1/4 UNF	1/4 UNF	0.562	0.485	0.500	0.375	1,200
MS-05S	MSL-05S	5/16 UNF	5/16 UNF	0.687	0.547	0.594	0.437	3,190
MS-06S	MSL-06S	3/8 UNF	3/8 UNF	0.906	0.562	0.812	0.500	4,240
MS-07S	MSL-07S	7/16 UNF	7/16 UNF	1.125	0.843	1.000	0.625	5,720
MS-08S	MSL-08S	1/2 UNF	1/2 UNF	1.125	0.875	1.000	0.625	7,200
MS-10S	MSL-10S	5/8 UNF	5/8 UNF	1.125	1.000	1.000	0.750	9,000

For stainless steel add 'SS' to part no. For example 'MS-M05S SS'



MALE ROD ENDS

MSX SERIES

Description:

MSX series is our 3-piece steel on steel high strength range of male rod ends designed for motorsport and heavy industrial mechanical load applications. Incorporating a high strength PTFE bronze mesh between the ball and the liner material, suitable for high shock loads and heavy mechanical load applications requiring low friction, available in both metric and imperial bore and thread sizes, they do not require maintenance.

Material Specifications:

Housing: Steel 708M40, heat treated, zinc plated and clear trivalent passivate. Inner Ring: Steel 070M20, zinc plated and clear trivalent passivate and stainless steel 304C. Liner High strength PTFE bronze mesh composite. Ball: 100Cr6 heat treated, polished and electroless Nickel plated and stainless steel 440C

Features:

Metric & imperial thread & bore sizes, low friction, high shock loads. Extended wear life No maintenance Studded and stainless steel options.

Possible Applications:

Medium/heavy industrial/mechanical applications Construction equipment Agricultural equipment Motor sport and recreational vehicles requiring high precision motion control.

Temperature Range:

-200°C to + 260°C

Specification:

ELV & RoHS compliant

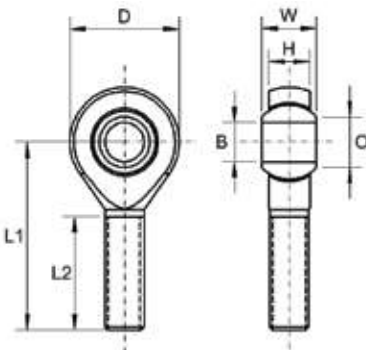


Interchange table

Dunlop	Aurora	Fluro
MSX MS-M (metric)	AM-M-T and AB-M-T	GAXSW
MSX MS (imperial)	AM-T and AB-T	

Note: Manufacturers part numbers are used for descriptive purposes only and may not be direct equivalent products.

MSX SERIES: MAINTENANCE FREE ROD ENDS WITH MALE THREAD (IMPERIAL)

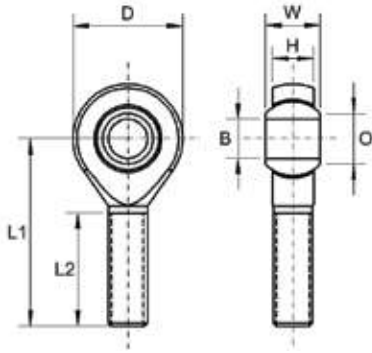


- Housing:** Steel 708M40, Heat Treated, Zinc Plated and Clear Trivalent Passivate
- Inner Ring:** Steel 070M20, Zinc Plated and Clear Trivalent Passivate
- Ball:** Bearing Steel 100Cr6, Hardened and Electro-less Nickel Plated
- Liner:** High Strength PTFE Composite
- Temp Range:** -200°C to +260°C
- Specification:** ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Bore size	Thread	W	H	D	L1	L2	Static Load Rating (Newtons) Radial
MSX-04-3	MSLX-04-3	3/16	1/4 UNF	0.375	0.281	0.812	1.562	1.000	9800
MSX-04	MSLX-04	1/4	1/4 UNF	0.375	0.281	0.812	1.562	1.000	9800
MSX-05-4	MSLX-05-4	1/4	5/16 UNF	0.437	0.344	1.000	1.875	1.250	19800
MSX-05	MSLX-05	5/16	5/16 UNF	0.437	0.344	1.000	1.875	1.250	19800
MSX-06-5	MSLX-06-5	5/16	3/8 UNF	0.500	0.406	1.125	1.938	1.250	31500
MSX-06	MSLX-06	3/8	3/8 UNF	0.500	0.406	1.125	1.938	1.250	31500
MSX-07-6	MSLX-07-6	3/8	7/16 UNF	0.562	0.437	1.250	2.125	1.375	35000
MSX-07	MSLX-07	7/16	7/16 UNF	0.562	0.437	1.250	2.125	1.375	35000
MSX-08-7	MSLX-08-7	7/16	1/2 UNF	0.625	0.500	1.375	2.438	1.500	42000
MSX-08	MSLX-08	1/2	1/2 UNF	0.625	0.500	1.375	2.438	1.500	42000
MSX-10-8	MSLX-10-8	1/2	5/8 UNF	0.750	0.562	1.750	2.625	1.625	67000
MSX-10	MSLX-10	5/8	5/8 UNF	0.750	0.562	1.750	2.625	1.625	67000
MSX-12-10	MSLX-12-10	5/8	3/4 UNF	0.875	0.687	2.000	2.875	1.750	93500
MSX-12	MSLX-12	3/4	3/4 UNF	0.875	0.687	2.000	2.875	1.750	93500

MSX SERIES: MAINTENANCE FREE ROD ENDS WITH MALE THREAD (METRIC)



- Housing:** Steel 708M40, Heat Treated, Zinc Plated and Clear Trivalent Passivate
- Inner Ring:** Steel 070M20, Zinc Plated and Clear Trivalent Passivate
- Ball:** Bearing Steel 100Cr6, Hardened and Electro-less Nickel Plated
- Liner:** High Strength PTFE Composite
- Temp Range:** -200°C to +260°C
- Specification:** ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Bore size	Thread	W	H	D	L1	L2	Static Load Rating (Newtons) Radial
MSX-M05	MSLX-M05	5	M5x0.80	8	6.00	18	33	20	8000
MSX-M06-5	MSLX-M06-5	5	M6x1.00	9	6.75	20	36	22	9800
MSX-M06	MSLX-M06	6	M6x1.00	9	6.75	20	36	22	9800
MSX-M08-6	MSLX-M08-6	6	M8x1.25	12	9.00	24	42	25	19500
MSX-M08	MSLX-M08	8	M8x1.25	12	9.00	24	42	25	19500
MSX-M10-8	MSLX-M10-8	8	M10x1.50	14	10.50	28	48	29	31500
MSX-M10-8C	MSLX-M10-8C	8	M10x1.25	14	10.50	28	48	29	31500
MSX-M10	MSLX-M10	10	M10x1.50	14	10.50	28	48	29	31500
MSX-M10C	MSLX-M10C	10	M10x1.25	14	10.50	28	48	29	31500
MSX-M12-10	MSLX-M12-10	10	M12x1.75	16	12.00	32	54	33	42000
MSX-M12-10C	MSLX-M12-10C	10	M12x1.25	16	12.00	32	54	33	42000
MSX-M12	MSLX-M12	12	M12x1.75	16	12.00	32	54	33	42000
MSX-M12C	MSLX-M12C	12	M12x1.25	16	12.00	32	54	33	42000
MSX-M14	MSLX-M14	14	M14x2.00	19	13.50	36	60	38	57000
MSX-M14C	MSLX-M14C	14	M14x1.50	19	13.50	36	60	38	57000
MSX-M16-14	MSLX-M16-14	14	M16x2.00	21	15.00	42	66	40	67000
MSX-M16-14C	MSLX-M16-14C	14	M16x1.50	21	15.00	42	66	40	67000
MSX-M16	MSLX-M16	16	M16x2.00	21	15.00	42	66	40	67000
MSX-M16C	MSLX-M16C	16	M16x1.50	21	15.00	42	66	40	67000
MSX-M20-16	MSLX-M20-16	16	M20x2.50	25	18.00	50	78	47	93500
MSX-M20-16C	MSLX-M20-16C	16	M20x1.50	25	18.00	50	78	47	93500
MSX-M20	MSLX-M20	20	M20x2.50	25	18.00	50	78	47	93500
MSX-M20C	MSLX-M20C	20	M20x1.50	25	18.00	50	78	47	93500

For stainless steel add 'SS' to part no. For example 'MSX-M05 SS'



MALE ROD ENDS



MX SERIES

Description:

MX series Rod Ends have been developed for use in General Engineering applications where medium to high loads are encountered. Within their load carrying capacity they will withstand shock loading and high frequency oscillation.

Material Specifications:

Housing: 817M 40, heat treated to 80/90 tons/in² tensile, Phosphated all over.
Ball: 100Cr 6, heat treated, Phosphated all over.

Features:

Metric and Imperial sizes available
Can be used in application involving shock loading and high frequency oscillation.

Possible Applications:

Medium / heavy industrial/mechanical applications
Construction equipment
Agricultural equipment and motor sport.

Temperature Range:

-40°C to +150°C

Specification:

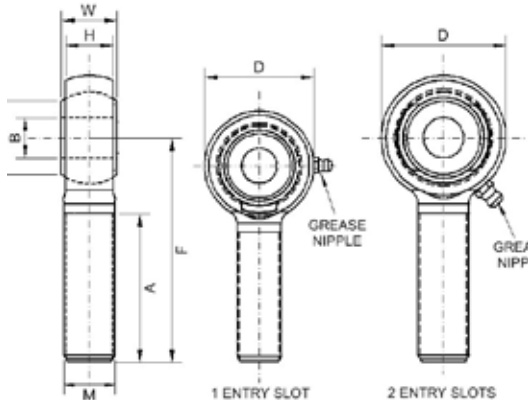
ELV & RoHS compliant

Interchange table

Dunlop	Rose	NMB
MX-M (metric)	RBJ-M	RBJ-M
MX (imperial)	RBJ	RBJ

Note: Manufacturers part numbers are used for descriptive purposes only and may not be direct equivalent products.

MX SERIES: MAINTENANCE REQUIRED ROD ENDS WITH MALE THREAD (METRIC)



Housing: Forged 817M40, Heat Treated to 80/90 tons/in² tensile and Phosphate all over

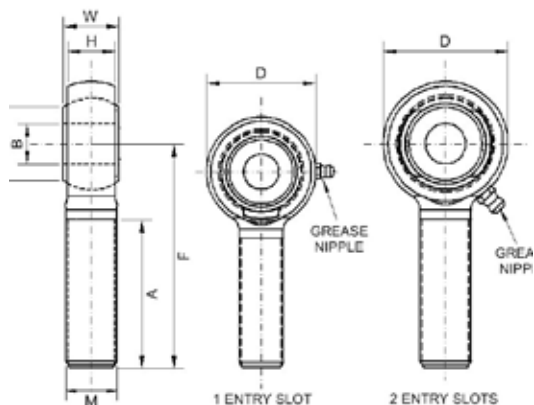
Ball: Bearing Steel 100Cr6, Heat Treated and Phosphate all over

Specification: ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	B	W	H	O	D	F	A	M	X	Static Load Rating (Newtons) Radial
MX-M08-6C	MXL-M08-6C	6	9,5	8,1	9,5	20,6	41,5	26	M8 x 1.00	22	11770
MX-M08-6	MXL-M08-6	6	9,5	8,1	9,5	20,6	41,5	26	M8 x 1.25	22	11770
MX-M10-8C	MXL-M10-8C	8	11,0	9,5	11,0	23,8	47,5	31	M10 x 1.25	21	19610
MX-M10-8	MXL-M10-8	8	11,0	9,5	11,0	23,8	47,5	31	M10 x 1.50	21	19610
MX-M12-10CG	MXL-M12-10CG	10	14,2	12,2	14,2	31,0	60,5	40	M12 x 1.25	22	27460
MX-M12-10G	MXL-M12-10G	10	14,2	12,2	14,2	31,0	60,5	40	M12 x 1.75	22	27460
MX-M16-12CG	MXL-M16-12CG	12	19,0	16,2	19,0	41,2	76,0	50	M16 x 1.50	22	49030
MX-M16-12G	MXL-M16-12G	12	19,0	16,2	19,0	41,2	76,0	50	M16 x 2.00	22	49030
MX-M20-16CG	MXL-M20-16CG	16	22,2	19,0	22,2	49,2	89,0	59	M20 x 1.50	21	77470
MX-M20-16G	MXL-M20-16G	16	22,2	19,0	22,2	49,2	89,0	59	M20 x 2.50	21	77470
MX-M24-20G	MXL-M24-20G	20	22,2	20,6	25,4	54,0	101,5	69	M24 x 2.00	16	110810

MX SERIES: MAINTENANCE REQUIRED ROD ENDS WITH MALE THREAD (IMPERIAL)



Housing: Forged 817M40, Heat Treated to 80/90 tons/in² tensile and Phosphate all over

Ball: Bearing Steel 100Cr6, Heat Treated and Phosphate all over

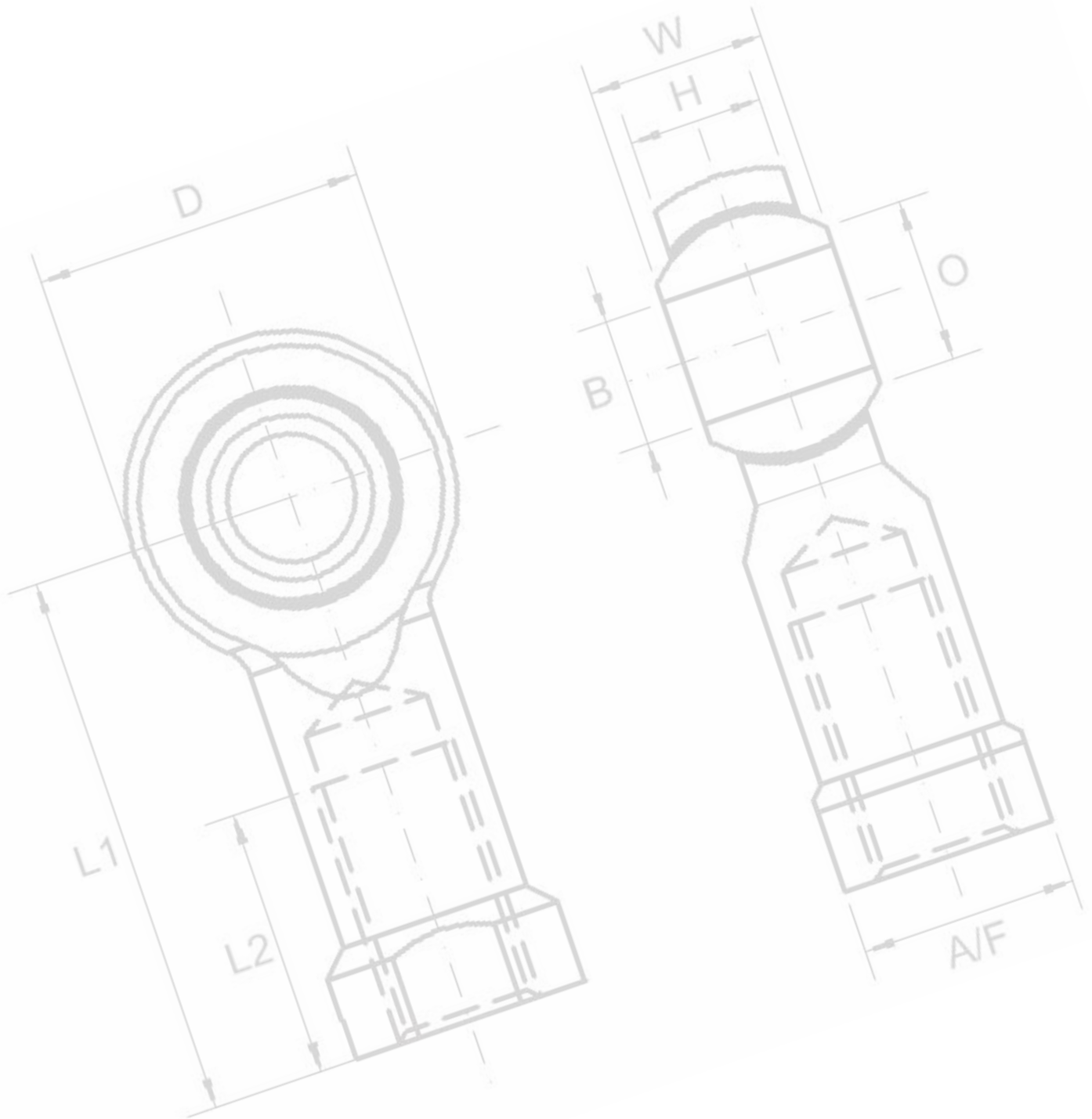
Specification: ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	B	W	H	O	D	F	A	M	X	Static Load Rating (Newtons) Radial
MX-05-4	MXL-05-4	.2500	.375	.320	.375	.812	1.625	1.062	5/16 UNF	22	11770
MX-05-4F	MXL-05-4F	.2500	.375	.320	.375	.812	1.625	1.062	5/16 BSF	22	11770
MX-06-5	MXL-06-5	.3125	.437	.375	.437	.937	1.875	1.250	3/8 UNF	21	19610
MX-06-5F	MXL-06-5F	.3125	.437	.375	.437	.937	1.875	1.250	3/8 BSF	21	19610
MX-08-6G	MXL-08-6G	.3750	.562	.480	.562	1.218	2.375	1.625	1/2 UNF	22	27460
MX-08-6FG	MXL-08-6FG	.3750	.562	.480	.562	1.218	2.375	1.625	1/2 BSF	22	27460
MX-10-8G	MXL-10-8G	.5000	.750	.640	.750	1.625	3.000	2.000	5/8 UNF	22	49030
MX-10-8FG	MXL-10-8FG	.5000	.750	.640	.750	1.625	3.000	2.000	5/8 BSF	22	49030
MX-12-10G	MXL-12-10G	.6250	.875	.750	.875	1.937	3.500	2.375	3/4 UNF	21	77470
MX-12-10FG	MXL-12-10FG	.6250	.875	.750	.875	1.937	3.500	2.375	3/4 BSF	21	77470
MX-14-12G	MXL-14-12G	.7500	.875	.812	1.000	2.125	4.000	2.750	7/8 UNF	16	110810
MX-14-12FG	MXL-14-12FG	.7500	.875	.812	1.000	2.125	4.000	2.750	7/8 BSF	16	110810
MX-20F-16G	MXL-20F-16G	1.0000	1.375	1.0000	1.375	3.000	5.250	3.500	1 1/4 UNF	24	150250
MX-20F-16FG	MXL-20F-16FG	1.0000	1.375	1.0000	1.375	3.000	5.250	3.500	1 1/4 BSF	24	150250



'G' in part number denotes grease nipple is fitted.



**English****Español****Italiano****Deutsch****Français****Nederlands****Polskie****FP series**

Serie FP • Serie FP • FP-Serie

Série FP • FP-serie • seria FP

40**FH series**

Serie FH • Serie FH • FH-Serie

Série FH • FH-serie • seria FH

44**RF series**

Serie RF • Serie RF • RF-Serie

Série RF • RF-serie • seria RF

47**FB series**

Serie FB • Serie FB • FB-Serie

Série FB • FB-serie • seria FB

49**FS series**

Serie FS • Serie FS • FS-Serie

Série FS • FS-serie • seria FS

56**FX series**

Serie FX • Serie FX • FX-Serie

Série FX • FX-serie • seria FX

58**AL series**

Serie AL • Serie AL • AL-Serie

Série AL • AL-serie • seria AL

60**DB series**

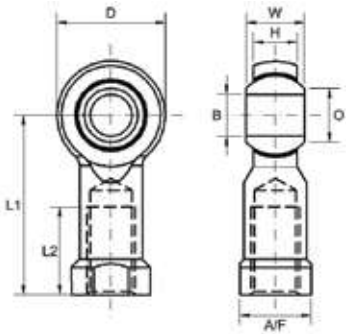
Serie DB • Serie DB • DB-Serie

Série DB • DB-serie • seria DB

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FEMALE ROD ENDS



FP SERIES: FP - FPS - FP SS

Description:

FP-Series is our 3-piece standard range of self-lubricating general purpose female rod ends, suitable for light to medium heavy industrial/mechanical load applications requiring low friction and good wear resistance, available in both metric and imperial bore and thread sizes. They have excellent moisture resistance and require no maintenance and have a wide operating temperature range.

Material Specifications:

Housing: Steel 230M07PB and forged 080M46, zinc plated and clear trivalent passivate and stainless steel 303L 304. Race: GR-nylon LV-3H. Ball: Bearing steel 100Cr6, hardened and electroless nickel plated and stainless steel 440C and *SAE660. Stud: Steel 230M07PB zinc plated and clear trivalent passivate and stainless steel 303L.

Features:

- Metric & imperial thread & bore sizes
- Low friction
- Self-lubricating
- Good wear resistance
- Excellent moisture resistance
- No maintenance

Studded option

Possible Applications:

- Light to medium/heavy industrial/mechanical applications
- Construction equipment
- Agricultural equipment
- Recreational vehicles

Precision equipment
Linear movement

Temperature Range:
-30°C to +170°C

Specification:
ELV & RoHS compliant

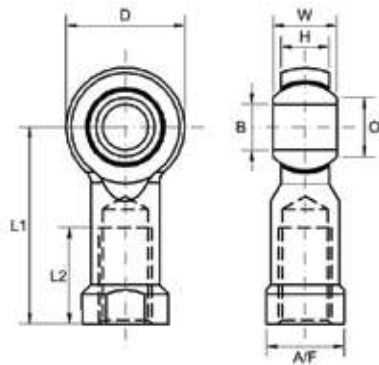
Interchange table

Dunlop	Rose	Tuthill	Alinabal	IKO	SKF	Asahi
FP-M (metric)	MFP	FJ-M	MPF	PHS-EC	SIKB-F	JAF-EC
FP (imperial)	RFP-U	FJ	PF	PHSB-EC	-	-

Note: Manufacturers part numbers are used for descriptive purposes only and may not be direct equivalent products.



FP SERIES: MAINTENANCE FREE ROD ENDS WITH FEMALE THREAD (METRIC)



Housing: Steel 230M07Pb (Sizes M03 – M12)
 Forged 080M46 (Sizes M14 – M25)
 Zinc Plated and Clear Trivalent Passivate

Race: GR-Nylon, LV-3H

Ball: Bearing Steel 100Cr6, Hardened and Electro-less Nickel Plated

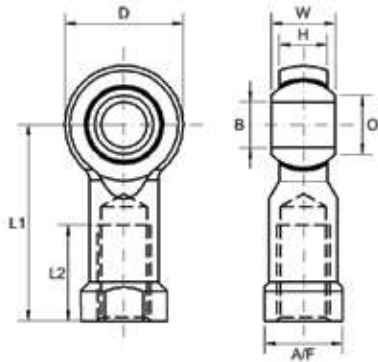
Specification: ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Bore Size	Thread	W	H	D	L1	L2	O	AF	Static Load Rating Radial (Newtons)
FP-M03	FPL-M03	3	M3X0.50	6	4.50	12	21	10	5.20	6.5	3,040
FP-M04-3	FPL-M04-3	3	M4X0.70	7	5.00	14	24	12	6.30	8.0	4,060
FP-M04	FPL-M04	4	M4X0.70	7	5.00	14	24	12	6.30	8.0	4,060
FP-M05-4	FPL-M05-4	4	M5X0.80	8	6.00	16	27	14	7.50	9.0	5,340
FP-M05	FPL-M05	5	M5X0.80	8	6.00	16	27	14	7.50	9.0	5,340
FP-M06-5	FPL-M06-5	5	M6X1.00	9	6.75	18	30	14	9.30	11.0	7,720
FP-M06	FPL-M06	6	M6X1.00	9	6.75	18	30	14	9.30	11.0	7,720
FP-M08-6	FPL-M08-6	6	M8X1.25	12	9.00	22	36	17	10.40	14.0	12,775
FP-M08-6C	FPL-M08-6C	6	M8X1.00	12	9.00	22	36	17	10.40	14.0	12,775
FP-M08	FPL-M08	8	M8X1.25	12	9.00	22	36	17	10.40	14.0	12,775
FP-M08C	FPL-M08C	8	M8X1.00	12	9.00	22	36	17	10.40	14.0	12,775
FP-M10-8	FPL-M10-8	8	M10X1.50	14	10.50	26	43	21	12.90	17.0	16,960
FP-M10-8C	FPL-M10-8C	8	M10X1.25	14	10.50	26	43	21	12.90	17.0	16,960
FP-M10	FPL-M10	10	M10X1.50	14	10.50	26	43	21	12.90	17.0	16,960
FP-M10C	FPL-M10C	10	M10X1.25	14	10.50	26	43	21	12.90	17.0	16,960
FP-M12-10	FPL-M12-10	10	M12X1.75	16	12.00	30	50	24	15.40	19.0	22,900
FP-M12-10C	FPL-M12-10C	10	M12X1.25	16	12.00	30	50	24	15.40	19.0	22,900
FP-M12	FPL-M12	12	M12X1.75	16	12.00	30	50	24	15.40	19.0	22,900
FP-M12C	FPL-M12C	12	M12X1.25	16	12.00	30	50	24	15.40	19.0	22,900
FP-M14-12	FPL-M14-12	12	M14X2.00	19	13.50	34	57	27	16.80	22.0	28,950
FP-M14-12C	FPL-M14-12C	12	M14X1.50	19	13.50	34	57	27	16.80	22.0	28,950
FP-M14	FPL-M14	14	M14X2.00	19	13.50	34	57	27	16.80	22.0	28,950
FP-M14C	FPL-M14C	14	M14X1.50	19	13.50	34	57	27	16.80	22.0	28,950
FP-M16-14	FPL-M16-14	14	M16X2.00	21	15.00	38	64	33	19.30	22.0	37,130
FP-M16-14C	FPL-M16-14C	14	M16X1.50	21	15.00	38	64	33	19.30	22.0	37,130
FP-M16	FPL-M16	16	M16X2.00	21	15.00	38	64	33	19.30	22.0	37,130
FP-M16C	FPL-M16C	16	M16X1.50	21	15.00	38	64	33	19.30	22.0	37,130
FP-M18-16C	FPL-M18-16C	16	M18X1.50	23	16.50	46	71	36	21.80	27.0	45,730
FP-M18C	FPL-M18C	18	M18X1.50	23	16.50	46	71	36	21.80	27.0	45,730
FP-M20-18	FPL-M20-18	18	M20X2.50	25	18.00	50	77	40	24.50	32.0	55,240
FP-M20-18C	FPL-M20-18C	18	M20X1.50	25	18.00	50	77	40	24.50	32.0	55,240
FP-M20	FPL-M20	20	M20X2.50	25	18.00	50	77	40	24.50	32.0	55,240
FP-M20C	FPL-M20C	20	M20X1.50	25	18.00	50	77	40	24.50	32.0	55,240
FP-M22	FPL-M22	22	M22X1.50	28	20.00	54	84	43	25.80	32.0	57,420
FP-M25	FPL-M25	25	M24X2.00	31	22.00	60	94	48	29.60	36.0	67,140

For stainless steel add 'SS' to part no. For example 'FP-M03 SS'

FP SERIES: MAINTENANCE FREE ROD ENDS WITH FEMALE THREAD (IMPERIAL)



Housing: Steel 230M07Pb (Sizes 03 - 07)
 Forged 080M46 (Sizes 08 - 16)
 Zinc Plated and Clear Trivalent Passivate

Race: GR-Nylon, LV-3H

Ball: Bearing Steel 100Cr6, Hardened and Electro-less Nickel Plated

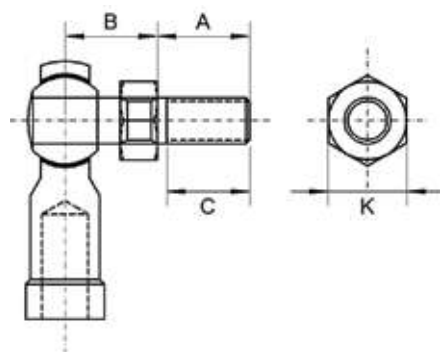
Specification: ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Bore Size	Thread	W	H	D	L1	L2	O	AF	Static Load Rating Radial (Newtons)
FP-03	FPL-03	3/16	10-32 UNF	0.312	0.250	0.625	1.062	0.562	0.306	0.312	5,340
FP-04-3	FPL-04-3	3/16	1/4 UNF	0.375	0.281	0.750	1.312	0.750	0.354	0.375	8,450
FP-04-3F	FPL-04-3F	3/16	1/4 BSF	0.375	0.281	0.750	1.312	0.750	0.354	0.375	8,450
FP-04	FPL-04	1/4	1/4 UNF	0.375	0.281	0.750	1.312	0.750	0.354	0.375	8,450
FP-04F	FPL-04F	1/4	1/4 BSF	0.375	0.281	0.750	1.312	0.750	0.354	0.375	8,450
FP-05-4	FPL-05-4	1/4	5/16 UNF	0.437	0.344	0.875	1.375	0.750	0.447	0.437	12,010
FP-05-4F	FPL-05-4F	1/4	5/16 BSF	0.437	0.344	0.875	1.375	0.750	0.447	0.437	12,010
FP-05	FPL-05	5/16	5/16 UNF	0.437	0.344	0.875	1.375	0.750	0.447	0.437	12,010
FP-05F	FPL-05F	5/16	5/16 BSF	0.437	0.344	0.875	1.375	0.750	0.447	0.437	12,010
FP-06-5	FPL-06-5	5/16	3/8 UNF	0.500	0.406	1.000	1.625	0.932	0.516	0.562	16,900
FP-06-5F	FPL-06-5F	5/16	3/8 BSF	0.500	0.406	1.000	1.625	0.932	0.516	0.562	16,900
FP-06	FPL-06	3/8	3/8 UNF	0.500	0.406	1.000	1.625	0.932	0.516	0.562	16,900
FP-06F	FPL-06F	3/8	3/8 BSF	0.500	0.406	1.000	1.625	0.932	0.516	0.562	16,900
FP-07-6	FPL-07-6	3/8	7/16 UNF	0.562	0.437	1.125	1.812	1.062	0.586	0.625	19,750
FP-07-6F	FPL-07-6F	3/8	7/16 BSF	0.562	0.437	1.125	1.812	1.062	0.586	0.625	19,750
FP-07	FPL-07	7/16	7/16 UNF	0.562	0.437	1.125	1.812	1.062	0.586	0.625	19,750
FP-07F	FPL-07F	7/16	7/16 BSF	0.562	0.437	1.125	1.812	1.062	0.586	0.625	19,750
FP-08-7	FPL-08-7	7/16	1/2 UNF	0.625	0.500	1.312	2.125	1.187	0.700	0.750	28,900
FP-08-7F	FPL-08-7F	7/16	1/2 BSF	0.625	0.500	1.312	2.125	1.187	0.700	0.750	28,900
FP-08	FPL-08	1/2	1/2 UNF	0.625	0.500	1.312	2.125	1.187	0.700	0.750	28,900
FP-08F	FPL-08F	1/2	1/2 BSF	0.625	0.500	1.312	2.125	1.187	0.700	0.750	28,900
FP-10-8	FPL-10-8	1/2	5/8 UNF	0.750	0.562	1.500	2.500	1.500	0.811	0.875	32,000
FP-10-8F	FPL-10-8F	1/2	5/8 BSF	0.750	0.562	1.500	2.500	1.500	0.811	0.875	32,000
FP-10	FPL-10	5/8	5/8 UNF	0.750	0.562	1.500	2.500	1.500	0.811	0.875	32,000
FP-10F	FPL-10F	5/8	5/8 BSF	0.750	0.562	1.500	2.500	1.500	0.811	0.875	32,000
FP-12-10	FPL-12-10	5/8	3/4 UNF	0.875	0.687	1.750	2.875	1.562	0.978	1.000	52,400
FP-12-10F	FPL-12-10F	5/8	3/4 BSF	0.875	0.687	1.750	2.875	1.562	0.978	1.000	52,400
FP-12	FPL-12	3/4	3/4 UNF	0.875	0.687	1.750	2.875	1.562	0.978	1.000	52,400
FP-12F	FPL-12F	3/4	3/4 BSF	0.875	0.687	1.750	2.875	1.562	0.978	1.000	52,400
FP-16-12	FPL-16-12	3/4	1" UNF	1.375	1.000	2.500	4.125	2.125	1.486	1.500	65,200
FP-16-12F	FPL-16-12F	3/4	1" BSF	1.375	1.000	2.500	4.125	2.125	1.486	1.500	65,200
FP-16	FPL-16	1	1" UNF	1.375	1.000	2.500	4.125	4.125	1.486	1.500	65,200
FP-16F	FPL-16F	1	1" BSF	1.375	1.000	2.500	4.125	2.125	1.486	1.500	65,200

For stainless steel add 'SS' to part no. For example 'FP-03 SS'

FPS SERIES: STUDED FEMALE ROD ENDS (METRIC)



Housing: Steel 230M07Pb (Sizes M05 – M12 & 03 – 07)
 Forged 080M46 (Sizes M14 – M16 & 08 - 10)
 Zinc Plated and Clear Trivalent Passivate

Race: GR-Nylon, LV-3H

Ball: Bearing Steel 100Cr6, Hardened and Electro-less Nickel Plated

Stud: Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate

Specification: ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Stud Size	Housing Thread	A	B	C	K	Static Load Rating (Newtons) Radial
FP-M05S	FPL-M05S	M5X0.80	M5X0.80	10	10	8	9	1,200
FP-M06-5S	FPL-M06-5S	M5X0.80	M6X1.00	12	12	10	10	1,200
FP-M06S	FPL-M06S	M6X1.00	M6X1.00	12	12	10	10	1,930
FP-M08-6S	FPL-M08-6S	M6X1.00	M8X1.25	16	16	14	13	1,930
FP-M08S	FPL-M08S	M8X1.25	M8X1.25	16	16	14	13	3,140
FP-M10-8S	FPL-M10-8S	M8X1.25	M10X1.50	20	20	18	17	3,140
FP-M10S	FPL-M10S	M10X1.50	M10X1.50	20	20	18	17	4,240
FP-M12-10S	FPL-M12-10S	M10X1.50	M12X1.75	24	24	21	19	4,240
FP-M12S	FPL-M12S	M12X1.75	M12X1.75	24	24	21	19	5,720
FP-M14-12S	FPL-M14-12S	M12X1.75	M14X2.00	28	28	25	22	5,720
FP-M14S	FPL-M14S	M14X2.00	M14X2.00	28	28	25	22	7,200
FP-M16-14S	FPL-M16-14S	M14X2.00	M16X2.00	29	29	24	24	7,200
FP-M16S	FPL-M16S	M16X2.00	M16X2.00	29	29	24	24	9,000

FPS SERIES: STUDED FEMALE ROD ENDS (IMPERIAL)

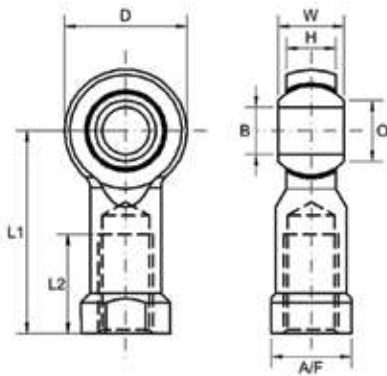
Part No. Right Hand	Part No. Left Hand	Stud Size	Housing Thread	A	B	C	K	Static Load Rating (Newtons) Radial
FP-03S	FPL-03S	3/16 UNF	3/16 UNF	0.500	0.516	0.437	0.312	1,200
FP-04-3S	FPL-04-3S	3/16 UNF	1/4 UNF	0.562	0.485	0.500	0.375	1,200
FP-04S	FPL-04S	1/4 UNF	1/4 UNF	0.562	0.485	0.500	0.375	1,930
FP-05-4S	FPL-05-4S	1/4 UNF	5/16 UNF	0.687	0.547	0.594	0.437	1,930
FP-05S	FPL-05S	5/16 UNF	5/16 UNF	0.687	0.547	0.594	0.437	3,140
FP-06-5S	FPL-06-5S	5/16 UNF	3/8 UNF	0.906	0.562	0.812	0.500	3,140
FP-06S	FPL-06S	3/8 UNF	3/8 UNF	0.906	0.562	0.812	0.500	4,240
FP-07-6S	FPL-07-6S	3/8 UNF	7/16 UNF	1.125	0.843	1.000	0.625	4,240
FP-07S	FPL-07S	7/16 UNF	7/16 UNF	1.125	0.843	1.000	0.625	5,720
FP-08-7S	FPL-08-7S	7/16 UNF	1/2 UNF	1.125	0.875	1.000	0.625	5,720
FP-08S	FPL-08S	1/2 UNF	1/2 UNF	1.125	0.875	1.000	0.625	7,200
FP-10-8S	FPL-10-8S	1/2 UNF	5/8 UNF	1.125	1.000	1.000	0.750	7,200
FP-10S	FPL-10S	5/8 UNF	5/8 UNF	1.125	1.000	1.000	0.750	9,000

For stainless steel add 'SS' to part no. For example 'FP-M05S SS'

B.S.F. threads are available from size FP-04S, (FPL-04S), and above by adding suffix "F" to the part number e.g. FP-08FS, (FPL-08FS).
 Stainless steel, Grade 303L, rod ends are available by adding suffix "SS" to the part number e.g. FP-M10S-SS, (FPL-M10S-SS).



FEMALE ROD ENDS



FH SERIES: FH - FHS - FH SS

Description:

FH-Series is our 3-piece unique internationally patented range of female rod ends, incorporating a polyurethane bearing race that provides ultra smooth operation. A nitrotec surface protected ball with a PTFE lubricant provide superior shock load and extended wear properties, combined with excellent chemical and corrosion resistance. The unique innovative captive body design prevents detachment through excessive axial loads. For optimum performance, ensure that the rod end is mounted with the moulded lettering facing away from the direction of pull.

Material Specifications:

Housing: Steel 230M07PB zinc plated and clear trivalent passivate and stainless steel 303C. Race: Polyurethane. Ball: 230M07PB nitrotec finish and stainless steel 440C. Stud: Steel 230M07PB zinc plated and clear trivalent passivate and stainless steel 303C. Lubricant: Uniflor oil.

Features:

- Metric & imperial sizes
- Ultra low friction
- High shock loads
- Extended wear life
- No maintenance
- Studded option
- Safety features
- Studded option

Possible Applications:

- Metric & imperial sizes
- Ultra low friction
- High shock loads
- Extended wear life
- No maintenance
- Studded option
- Safety features

Temperature Range:

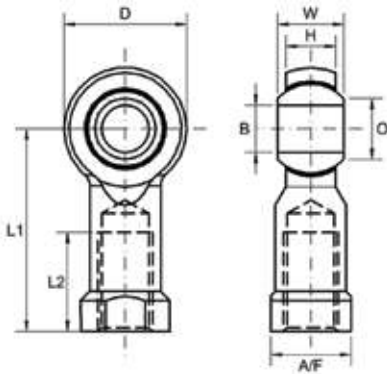
-30°C to +170°C

Specification:

ELV & RoHS compliant



FH SERIES: MAINTENANCE FREE ROD ENDS WITH FEMALE THREAD (METRIC)



Housing: Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate

Race: Polyurethane

Ball: Steel 230M07Pb – Nitrotec Surface Protection

Lubricant: Uniflor Oil

Specification: ELV and RoHS Compliant



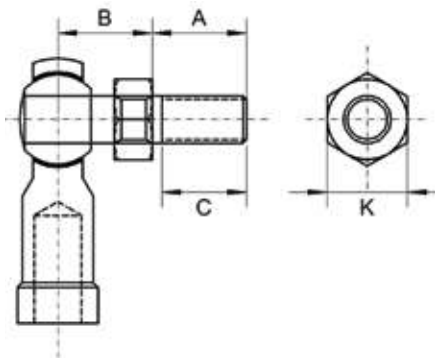
Part No. Right Hand	Part No. Left Hand	Bore Size	Thread	W	H	D	L1	L2	O	Static Load Rating (Newtons) Radial
FH-M06	FHL-M06	6	M6X1.00	9	6.75	20	30	14.0	8.90	9,506
FH-M08	FHL-M08	8	M8X1.25	12	9.00	24	36	17.0	10.35	17,652
FH-M08C	FHL-M08C	8	M8X1.00	12	9.00	24	36	17.0	10.35	17,652
FH-M10	FHL-M10	10	M10X1.50	14	10.50	28	43	21.0	12.85	21,575
FH-M10C	FHL-M10C	10	M10X1.25	14	10.50	28	43	21.0	12.85	21,575
FH-M12	FHL-M12	12	M12X1.75	16	12.00	32	50	25.0	15.46	25,890
FH-M12C	FHL-M12C	12	M12X1.25	16	12.00	32	50	25.0	15.46	25,890

FH SERIES: MAINTENANCE FREE ROD ENDS WITH FEMALE THREAD (IMPERIAL)

Part No. Right Hand	Part No. Left Hand	Bore Size	Thread	W	H	D	L1	L2	O	Static Load Rating (Newtons) Radial
FH-04	FHL-04	1/4	1/4 UNF	0.354	0.266	0.787	1.181	0.551	0.350	9,806
FH-04F	FHL-04F	1/4	1/4 BSF	0.354	0.266	0.787	1.181	0.551	0.350	9,806
FH-05	FHL-05	5/16	5/16 UNF	0.472	0.354	0.945	1.417	0.670	0.406	17,652
FH-05F	FHL-05F	5/16	5/16 BSF	0.472	0.354	0.945	1.417	0.670	0.406	17,652
FH-06	FHL-06	3/8	3/8 UNF	0.551	0.413	1.102	1.693	0.827	0.508	21,575
FH-06F	FHL-06F	3/8	3/8 BSF	0.551	0.413	1.102	1.693	0.827	0.508	21,575
FH-07	FHL-07	7/16	7/16 UNF	0.561	0.440	1.200	1.810	0.905	0.585	23,540
FH-07F	FHL-07F	7/16	7/16 BSF	0.561	0.440	1.200	1.810	0.905	0.585	23,540
FH-08	FHL-08	1/2	1/2 UNF	0.623	0.472	1.250	1.968	0.984	0.700	25,890
FH-08F	FHL-08F	1/2	1/2 BSF	0.623	0.472	1.250	1.968	0.984	0.700	25,890
FH-10	FHL-10	5/8	5/8 UNF	0.750	0.562	1.503	2.520	1.300	0.811	34,520
FH-10F	FHL-10F	5/8	5/8 BSF	0.750	0.562	1.503	2.520	1.300	0.811	34,520
FH-12	FHL-12	3/4	3/4 UNF	0.875	0.687	1.750	2.875	1.575	0.978	43,150
FH-12F	FHL-12F	3/4	3/4 BSF	0.875	0.687	1.750	2.875	1.575	0.978	43,150

For stainless steel add 'SS' to part no. For example 'FH-M06 SS'

FHS SERIES: MAINTENANCE FREE ROD ENDS WITH FEMALE THREAD (METRIC)



- Housing:** Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate
- Race:** Polyurethane
- Ball:** Steel 230M07Pb – Nitrotec Surface Protection
- Lubricant:** Uniflor Oil
- Stud:** Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate
- Specification:** ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Stud Size	Housing Thread	A	B	C	K	Static Load Rating (Newtons) Radial
FH-M06S	FHL-M06S	M6X1.00	M6X1.00	12.5	11.0	10.5	8	1,930
FH-M08S	FHL-M08S	M8X1.25	M8X1.25	16.5	13.0	14.5	11	3,190
FH-M08/1S	FHL-M08/1S	M8X1.25	M6X1.00	16.5	13.0	14.5	9	3,190
FH-M08/2S	FHL-M08/2S	M8X1.25	M10X1.50	16.5	13.0	14.5	9	3,190
FH-M10S	FHL-M10S	M10X1.50	M10X1.50	20.0	16.0	18.0	13	4,240
FH-M10CS	FHL-M10CS	M10X1.50	M10X1.25	20.0	16.0	18.0	13	4,240
FH-M10/1S	FHL-M10/1S	M10X1.50	M10X1.50	28.1	15.3	13.5*	13	4,240
FH-M10/2S	FHL-M10/2S	M10X1.50	M10X1.50	23.0	16.0	20.0	11	4,240
FH-M12S	FHL-M12S	M12X1.75	M12X1.75	20.0	13.0	18.0	16	5,720

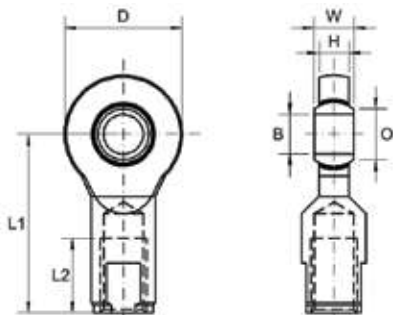
FHS SERIES: MAINTENANCE FREE ROD ENDS WITH FEMALE THREAD (IMPERIAL)

Part No. Right Hand	Part No. Left Hand	Stud Size	Housing Thread	A	B	C	K	Static Load Rating (Newtons) Radial
FH-04S	FHL-04S	1/4 UNF	1/4 UNF	0.492	0.433	0.412	5/16	1,930
FH-04FS	FHL-04FS	1/4 UNF	1/4 BSF	0.492	0.433	0.412	5/16	1,930
FH-05S	FHL-05S	5/16 UNF	5/16 UNF	0.650	0.512	0.570	7/16	3,190
FH-05FS	FHL-05FS	5/16 UNF	5/16 BSF	0.650	0.512	0.570	7/16	3,190
FH-06S	FHL-06S	3/8 UNF	3/8 UNF	0.787	0.630	0.707	1/2	4,240
FH-06FS	FHL-06FS	3/8 UNF	3/8 BSF	0.787	0.630	0.707	1/2	4,240
FH-07S	FHL-07S	7/16 UNF	7/16 UNF	0.945	0.750	0.865	1/2	5,720
FH-07FS	FHL-07FS	7/16 UNF	7/16 BSF	0.945	0.750	0.865	1/2	5,720
FH-08S	FHL-08S	1/2 UNF	1/2 UNF	1.100	0.866	0.945	9/16	7,200
FH-08FS	FHL-08FS	1/2 UNF	1/2 BSF	1.100	0.866	0.945	9/16	7,200

For stainless steel add 'SS' to part no. For example 'FH-M06S SS'



FEMALE ROD ENDS



RF SERIES: RF - RFS

Description:

RF-Series is our 3-piece thin series range of female rod ends that have been specifically designed for use with other linkage components such as clevises etc. The RM-Series design allows the rod ends head and ball to neatly slide inside of its mating clevises fork end, ideal for fitting to pre-assembled linkages. Metric and imperial bore and thread sizes are available. Standard product is supplied with a frictional load on the bearing ball, recommended for applications where misalignment may arise in an assembly.

Material Specifications:

Housing: Steel 230M07Pb, zinc plated and clear trivalent passivate and stainless steel 303L. Race: Nylon 66 glass filled with molybdenum disulphide. Ball: Bearing steel 100Cr6, hardened and electroless nickel plated and stainless steel 440C. Stud: Steel 230M07PB zinc plated and clear trivalent passivate and stainless steel 303L.

Features

- Metric thread & bore sizes
- Friction load applications
- High shock loads
- Thin section
- No maintenance
- Studded option

Possible Applications

- Light to medium industrial/mechanical
- Construction equipment
- Agricultural equipment
- Recreational vehicles

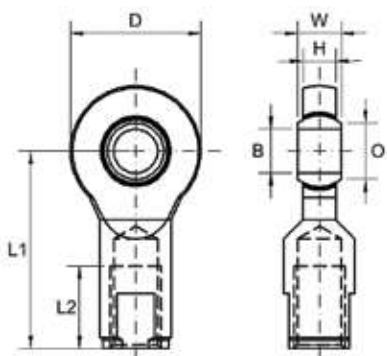
Temperature Range

-30 °C to +120 °C

Specification

ELV & RoHS compliant

RF SERIES: MAINTENANCE FREE ROD ENDS WITH FEMALE THREAD (METRIC)



Housing: Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate

Race: Nylon 66

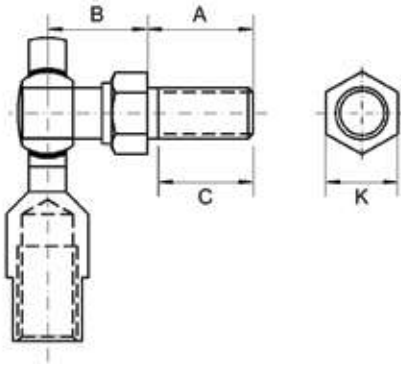
Ball: Bearing Steel 100Cr6, Hardened and Electro-less Nickel Plated

Specification: ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Bore Size	Thread	W	H	D	L1	L2	O	Static Load Rating (Newtons) Radial
RMF6	RMF6LH	6	M6X1.00	6	4.0	21	30	15	8.00	7,500
RMF6/2	RMF6/2LH	6	M8X1.25	6	4.0	20.7	30	15	8.00	7,500
RMF8	RMF8LH	8	M8X1.25	8	6.0	24	36	15	10.25	12,850
RMF8C	RMF8CLH	8	M8X1.00	8	6.0	24	36	15	10.25	12,850
RMF8/2	RMF8/2LH	8	M8X1.25	8	6.0	24	36	15	10.25	12,850
RMF8/3	RMF8/3LH	8	M10X1.50	8	6.0	24	36	15	10.25	12,850
RMF8/4	RMF8/4LH	8	M6X1.00	8	6.0	24	36	15	10.25	12,850
RMF8/6	RMF8/6LH	8	M10X1.50	8	6.0	24	56	35	10.25	12,850
RMF8/7	RMF8/7LH	8	M8X1.25	8	5.2	24	46	26	10.25	12,850
RMF10	RMF10LH	10	M10X1.50	9	7.0	29	43	19	13.23	17,125
RMF10C	RMF10CLH	10	M10X1.25	9	7.0	29	43	19	13.23	17,125
RMF10/4	RMF0/4LH	12	M10X1.50	9	7.0	29	43	19	13.23	17,125

RFS SERIES: MAINTENANCE FREE ROD ENDS WITH FEMALE THREAD (METRIC)



- Housing:** Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate
- Race:** Nylon 66
- Ball:** Bearing Steel 100Cr6, Case Hardened and Electro-less Nickel Plated
- Stud:** Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate
- Specification:** ELV and RoHS Compliant



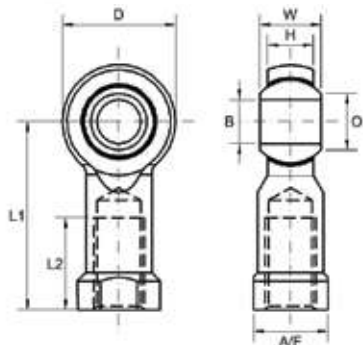
Part No. Right Hand	Part No. Left Hand	Stud Size	Housing Thread	A	B	C	K	Static Load Rating (Newtons) Radial
RMFS6	RMFS6LH	M6X1.00	M6X1.00	12.5	11.0	8.00	9	1,930
RMFS6/1	RMFS6/1LH	M6X1.00	1/4 UNF	0.492"	0.453"	0.470"	5/16"	1,930
RMFS6/2	RMFS6/2LH	M6X1.00	M6X1.00	12.5	11.0	11.00	8	1,930
RMFS8	RMFS8LH	M8X1.25	M8X1.25	16.5	13.0	10.00	10	3,190
RMFS8C	RMFS8CLH	M8X1.25	M8X1.00	16.5	13.0	10.00	10	3,190
RMFS8/1	RMFS8/1LH	M8X1.25	M8X1.25	19.8	10.0	18.00	11	3,190
RMFS8/2	RMFS8/2LH	M8X1.25	M6X1.00	15.2	10.2	13.25	11	3,190
RMFS8/4	RMFS8/4LH	M8X1.25	M8X1.25	19.8	10.0	14.20	11	3,190
RMFS8/5	RMFS8/5LH	M8X1.25	M8X1.25	16.5	13.0	15.00	11	3,190
RMFS10	RMFS10LH	M10X1.50	M10X1.50	20.0	13.0	18.00	13	4,240
RMFS10C	RMFS10CLH	M10X1.50	M10X1.25	20.0	13.0	18.00	13	4,240
RMFS10/2	RMFS10/2LH	M10X1.50	M10X1.50	20.0	16.0	18.00	13	4,240
RMFS10/3	RMFS10/3LH	M10X1.50	M10X1.25	20.0	16.0	18.00	13	4,240



For stainless steel add 'SS' to part no. For example 'RMF6 SS' and RMF6S SS



FEMALE ROD ENDS



FB SERIES: FB - FBS

Description:

FB-Series is our 4-piece standard range of maintenance required general purpose female rod ends suitable for medium heavy industrial/mechanical load applications requiring low friction and good wear resistance, available in both metric and imperial bore and thread sizes. An oil impregnated sintered bronze race is also available for some sizes or if quantity justifies production, suitable for high precision motion transfer applications and extended wear life.

Material Specifications:

Housing: Steel 230M07PB and forged 080M46, zinc plated and clear trivalent passivate Race: Bronze SAE660. Ball: Bearing steel 100Cr6, hardened and electroless nickel plated. Stud: Steel 230M07PB zinc plated and clear trivalent passivate.

Features

- Metric & imperial thread & bore sizes
- Low friction
- Self-lubricating option
- Extended wear life
- Maintenance required
- Studded option

Possible Applications

- Medium/heavy industrial/mechanical applications
- Construction equipment
- Agricultural equipment
- Recreational vehicles
- Precision equipment

Temperature Range

-34 °C to +149 °C

Specification

ELV & RoHS compliant

Interchange table

Dunlop	Rose	Tuthill	Alinabal	SKF	Asahi	IKO	Fluro
FB-M (metric)	MF	FB-M	MVF-M	SIKAC-M	JAF	PHS	GIS
FB (imperial)	RF-U	FB	VF-G	-	-	PHSB	-

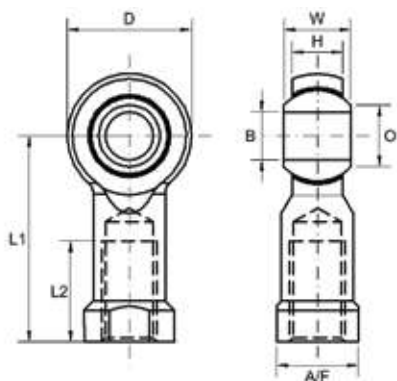
Note: Manufacturers part numbers are used for descriptive purposes only and may not be direct equivalent products.



An oil impregnated Sintered Bronze race is also available for many sizes or if quantity justifies production. This will offer extended life without the need for routine maintenance i.e. maintenance free, add suffix "SPB" to part number for example FB-M10SPB. Please enquire for availability

For stainless steel add 'SS' to part no. For example 'FB-M03 SS'

FB SERIES: MAINTENANCE REQUIRED ROD ENDS WITH FEMALE THREAD (METRIC)



Housing: Steel 230M07Pb (Sizes M03 – M12),
Forged 080M46 (Sizes M14 – M25),
Zinc Plated and Clear Trivalent Passivate

Race: Bronze SAE660

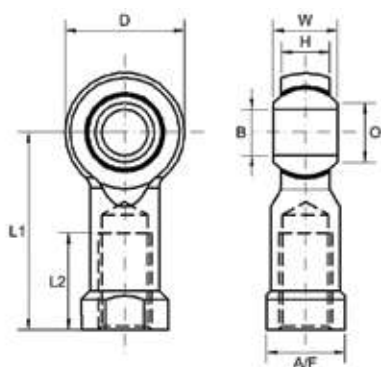
Ball: Bearing Steel 100Cr6, Hardened
Electro-less Nickel Plated

Specification: ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Bore Size	Thread	W	H	D	L1	L2	O	AF	Static Load Rating Radial (Newtons)
FB-M03	FBL-M03	3	M3X0.50	6	4.50	12	21	10	5.20	6.5	3,648
FB-M04	FBL-M04	4	M4X0.70	7	5.00	14	24	12	6.30	8.0	4,960
FB-M05	FBL-M05	5	M5X0.80	8	6.00	16	27	14	7.50	9.0	6,360
FB-M06	FBL-M06	6	M6X1.00	9	6.75	18	30	14	9.30	11.0	6,820
FB-M08	FBL-M08	8	M8X1.25	12	9.00	22	36	17	10.40	14.0	10,450
FB-M10	FBL-M10	10	M10X1.50	14	10.50	26	43	21	12.90	17.0	14,000
FB-M12	FBL-M12	12	M12X1.75	16	12.00	30	50	24	15.40	19.0	18,745
FB-M14	FBL-M14	14	M14X2.00	19	13.50	34	57	27	16.80	22.0	22,125
FB-M16	FBL-M16	16	M16X2.00	21	15.00	38	64	33	19.30	22.0	23,700
FB-M20	FBL-M20	20	M20X2.50	25	18.00	50	77	40	24.50	32.0	28,640
FB-M22	FBL-M22	22	M22X1.50	28	20.00	54	84	43	25.80	32.0	34,200
FB-M25	FBL-M25	25	M24X2.00	31	22.00	60	94	48	29.60	36.0	47,750

FB SERIES: MAINTENANCE REQUIRED ROD ENDS WITH FEMALE THREAD (IMPERIAL)



Housing: Steel 230M07Pb (Sizes 03 - 07),
Forged 080M46 (Sizes 08 - 16),
Zinc Plated and Clear Trivalent Passivate

Race: Bronze SAE660

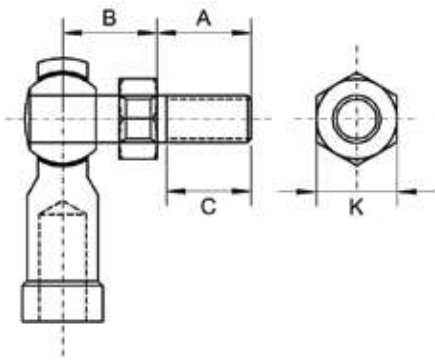
Ball: Bearing Steel 100Cr6, Hardened
and Electro-less Nickel Plated

Specification: ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Bore Size	Thread	W	H	D	L1	L2	O	AF	Static Load Rating Radial (Newtons)
FB-03	FBL-03	3/16	10-32	0.312	0.250	0.625	1.062	0.562	0.306	0.312	6,360
FB-04	FBL-04	1/4	1/4 UNF	0.375	0.281	0.750	1.312	0.750	0.354	0.375	6,820
FB-05	FBL-05	5/16	5/16 UNF	0.437	0.344	0.875	1.375	0.750	0.447	0.437	10,450
FB-06	FBL-06	3/8	3/8 UNF	0.500	0.406	1.000	1.625	0.932	0.516	0.562	13,640
FB-07	FBL-07	7/16	7/16 UNF	0.562	0.437	1.125	1.812	1.062	0.586	0.625	16,360
FB-08	FBL-08	1/2	1/2 UNF	0.625	0.500	1.312	2.125	1.187	0.700	0.750	19,545
FB-10	FBL-10	5/8	5/8 UNF	0.750	0.562	1.500	2.500	1.500	0.811	0.875	22,500
FB-12	FBL-12	3/4	3/4 UNF	0.875	0.687	1.750	2.875	1.562	0.978	1.000	28,640
FB-16	FBL-16	1	1" UNF	1.375	1.000	2.500	4.125	2.125	1.486	1.500	47,500

FBS SERIES: MAINTENANCE FREE ROD ENDS WITH FEMALE THREAD (METRIC)



Housing: Steel 230M07Pb (Sizes M05 – M12)
 Forged 080M46 (Sizes M14 – M16)
 Zinc Plated and Clear Trivalent Passivate

Race: Bronze SAE660

Ball: Bearing Steel 100Cr6, Hardened and Electro-less Nickel Plated

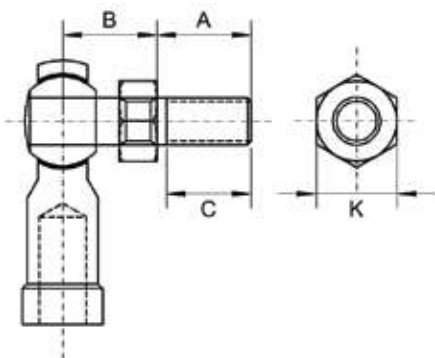
Stud: Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate

Specification: ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Stud Size	Housing Thread	A	B	C	K	Static Load Rating (Newtons) Radial
FB-M05S	FBL-M05S	M5X0.80	M5X0.80	10	10	8	9	1,200
FB-M06S	FBL-M06S	M6X1.00	M6X1.00	12	12	10	10	1,930
FB-M08S	FBL-M08S	M8X1.25	M8X1.25	16	16	14	13	3,190
FB-M10S	FBL-M10S	M10X1.50	M10X1.50	20	20	18	17	4,240
FB-M12S	FBL-M12S	M12X1.75	M12X1.75	24	24	21	19	5,720
FB-M14S	FBL-M14S	M14X2.00	M14X2.00	28	28	25	22	7,200
FB-M16S	FBL-M16S	M16X2.00	M16X2.00	29	29	24	24	9,000

FBS SERIES: STUDED FEMALE ROD ENDS (IMPERIAL)



Housing: Steel 230M07Pb (Sizes 03 – 07)
 Forged 080M46 (Sizes 08 - 10)
 Zinc Plated and Clear Trivalent Passivate

Race: Bronze SAE660

Ball: Bearing Steel 100Cr6, Hardened and Electro-less Nickel Plated

Stud: Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate

Specification: ELV and RoHS Compliant



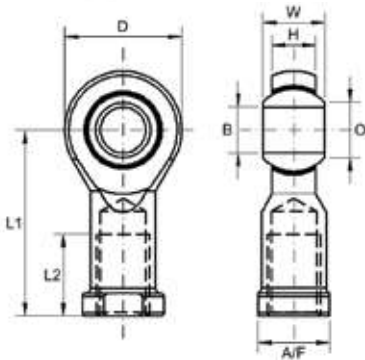
Part No. Right Hand	Part No. Left Hand	Stud Size	Housing Thread	A	B	C	K	Static Load Rating (Newtons) Radial
FB-03S	FBL-03S	3/16 UNF	3/16 UNF	0.500	0.516	0.437	0.312	1,200
FB-04S	FBL-04S	1/4 UNF	1/4 UNF	0.562	0.485	0.500	0.375	1,930
FB-05S	FBL-05S	5/16 UNF	5/16 UNF	0.687	0.547	0.594	0.437	3,190
FB-06S	FBL-06S	3/8 UNF	3/8 UNF	0.906	0.562	0.812	0.500	4,240
FB-07S	FBL-07S	7/16 UNF	7/16 UNF	1.125	0.843	1.000	0.625	5,720
FB-08S	FBL-08S	1/2 UNF	1/2 UNF	1.125	0.875	1.000	0.625	7,200
FB-10S	FBL-10S	5/8 UNF	5/8 UNF	1.125	1.000	1.000	0.750	9,000

B.S.F. threads are available from size FB-04S, (FBL-04S), and above by adding suffix "F" to the part number e.g. FB-08FS, (FBL-08FS). Stainless steel, Grade 303L, rod ends are available by adding suffix "SS" to the part number e.g. FB-M10S-SS, (FBL-M10S-SS).

For stainless steel add 'SS' to part no. For example 'FB-M05S SS'



FEMALE ROD ENDS



FS SERIES: FS - FSS - FS SS

Description:

FS Series is our 3-piece steel on steel range of male rod ends incorporating a high strength PTFE bronze mesh between the ball and the liner material, suitable for high shock loads and medium to heavy mechanical load applications requiring low friction, available in both metric and imperial bore thread sizes, they do not require maintenance.

Material Specifications:

Housing: Steel 230M07Pb and forged 080M46, zinc plated and clear trivalent passivate and stainless steel 303L and forged 304. Inner Ring: Steel 070M20 zinc plated and clear trivalent passivate. Liner: High strength PTFE bronze mesh composite. Ball: Bearing steel 100Cr6, heat treated, polished & electroless nickel plated and stainless steel 440C

Features:

Metric & imperial thread & bore sizes, low friction, high shock loads. Extended wear life No maintenance Studded and stainless steel options.

Possible Applications:

Medium/heavy industrial/mechanical applications Construction equipment Agricultural equipment Motor sport and recreational vehicles requiring high precision motion control.

Temperature Range:

-200°C to +260°C

Specification:

ELV & RoHS compliant

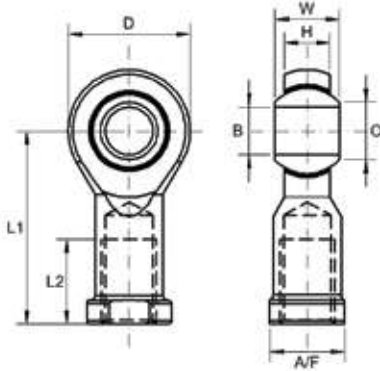
Interchange table

Dunlop	Rose	Aurora	Askubal	SKF	Asahi	IKO	Fluro
FS-M (metric)	MFC	MW-M-T and MG-M-T	KI-P	SIKB-F	JAF-EC	PHS-EC	GISW
FS (imperial)	RFC	MW-T and MG-T	-	-	PHSB-EC	-	

Note: Manufacturers part numbers are used for descriptive purposes only and may not be direct equivalent products.



FS SERIES: MAINTENANCE FREE ROD ENDS WITH FEMALE THREAD (METRIC)



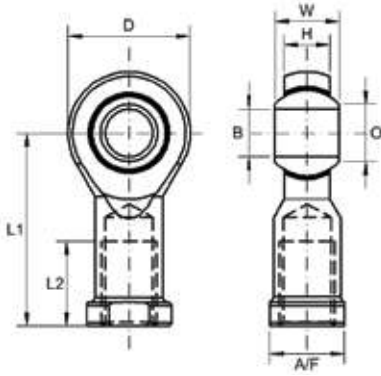
- Housing:** Steel 230M07Pb (Sizes M05 – M12)
Forged 080M46 (Sizes M14 – M25)
Zinc Plated and Clear Trivalent Passivate
- Inner Ring:** Steel 070M20, Zinc Plated and Clear Trivalent Passivate
- Ball:** Bearing Steel 100Cr6, Hardened and Electro-less Nickel Plated
- Liner:** High strength PTFE composite
- Specification:** ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Bore Size	Thread	W	H	D	L1	L2	O	AF	Static Load Rating (Newtons) Radial
FS-M05	FSL-M05	5	M8X0.80	8	6.00	18	27	10	7.70	9	8000
FS-M06-5	FSL-M06-5	5	M6X1.00	9	6.75	20	30	12	8.90	11	8900
FS-M06	FSL-M06	6	M6X1.00	9	6.75	20	30	12	8.90	11	8900
FS-M08-6	FSL-M08-6	6	M8X1.25	12	9.00	24	36	16	10.40	13	14,100
FS-M08-6C	FSL-M08-6C	6	M8X1.00	12	9.00	24	36	16	10.40	13	14,100
FS-M08	FSL-M08	8	M8X1.25	12	9.00	24	36	16	10.40	13	14,100
FS-M08C	FSL-M08C	8	M8X1.00	12	9.00	24	36	16	10.40	13	14,100
FS-M10-8	FSL-M10-8	8	M10X1.50	14	10.50	28	43	20	12.90	17	19,300
FS-M10-8C	FSL-M10-8C	8	M10X1.25	14	10.50	28	43	20	12.90	17	19,300
FS-M10	FSL-M10	10	M10X1.50	14	10.50	28	43	20	12.90	17	19,300
FS-M10C	FSL-M10C	10	M10X1.25	14	10.50	28	43	20	12.90	17	19,300
FS-M12-10	FSL-M12-10	10	M12X1.75	16	12.00	32	50	22	15.40	19	23,600
FS-M12-10C	FSL-M12-10C	10	M12X1.25	16	12.00	32	50	22	15.40	19	23,600
FS-M12	FSL-M12	12	M12X1.75	16	12.00	32	50	22	15.40	19	23,600
FS-M12C	FSL-M12C	12	M12X1.25	16	12.00	32	50	22	15.40	19	23,600
FS-M14-12	FSL-M14-12	12	M14X2.00	19	13.50	36	57	25	16.80	22	29,200
FS-M14-12C	FSL-M14-12C	12	M14X1.50	19	13.50	36	57	25	16.80	22	29,200
FS-M14	FSL-M14	14	M14X2.00	19	13.50	36	57	25	16.80	22	29,200
FS-M14C	FSL-M14C	14	M14X1.50	19	13.50	36	57	25	16.80	22	29,200
FS-M16-14	FSL-M16-14	14	M16X2.00	21	15.00	42	64	28	19.30	22	32,100
FS-M16-14C	FSL-M16-14C	14	M16X1.50	21	15.00	42	64	28	19.30	22	32,100
FS-M16	FSL-M16	16	M16X2.00	21	15.00	42	64	28	19.30	22	32,100
FS-M16C	FSL-M16C	16	M16X1.50	21	15.00	42	64	28	19.30	22	32,100
FS-M18-16C	FSL-M18-16C	16	M18X1.50	23	16.50	46	71	32	21.80	27	38,400
FS-M18C	FSL-M18C	18	M18X1.50	23	16.50	46	71	32	21.80	27	38,400
FS-M20-18	FSL-M20-18	18	M20X2.50	25	18.00	50	77	33	24.30	32	45,000
FS-M20-18C	FSL-M20-18 C	18	M20X1.50	25	18.00	50	77	33	24.30	32	45,000
FS-M20	FSL-M20	20	M20X2.50	25	18.00	50	77	33	24.30	32	45,000
FS-M20C	FSL-M20C	20	M20X1.50	25	18.00	50	77	33	24.30	32	45,000
FS-M22-20	FSL-M22-20	20	M22X1.50	28	20.00	54	84	37	25.80	32	52,750
FS-M22	FSL-M22	22	M22X1.50	28	20.00	54	84	37	25.80	32	52,750
FS-M25-20	FSL-M25-20	20	M24X2.00	31	22.00	60	94	42	29.60	36	62,000
FS-M25	FSL-M25	25	M24X2.00	31	22.00	60	94	42	29.60	36	62,000

For stainless steel add 'SS' to part no. For example 'FS-M05 SS'

FS SERIES: MAINTENANCE FREE ROD ENDS WITH FEMALE THREAD (IMPERIAL)



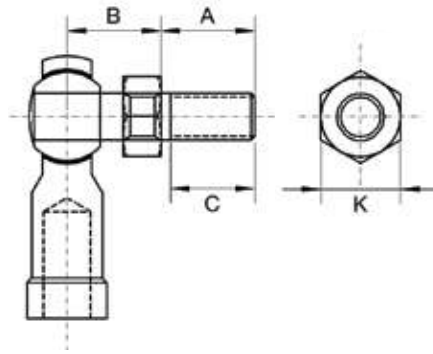
- Housing:** Steel 230M07Pb (Sizes 04 - 07)
Forged 080M46 (Sizes 08 - 12)
Zinc Plated and Clear Trivalent Passivate
- Inner Ring:** Steel 070M20, Zinc Plated and Clear Trivalent Passivate
- Ball:** Bearing Steel 100Cr6, Hardened and Electro-less Nickel Plated
- Liner:** High Strength PTFE Composite
- Specification:** ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Bore Size	Thread	W	H	D	L1	L2	O	AF	Static Load Rating (Newtons) Radial
FS-04	FSL-04	1/4	1/4 UNF	0.375	0.281	0.812	1.312	0.750	8.40	0.375	8,500
FS-04F	FSL-04F	1/4	1/4 BSF	0.375	0.281	0.812	1.312	0.750	8.40	0.375	8,500
FS-05-4	FSL-05-4	1/4	5/16 UNF	0.437	0.344	1.000	1.375	0.750	11.35	0.437	14,100
FS-05-4F	FSL-05-4F	1/4	5/16 BSF	0.437	0.344	1.000	1.375	0.750	11.35	0.437	14,100
FS-05	FSL-05	5/16	5/16 UNF	0.437	0.344	1.000	1.375	0.750	11.35	0.437	14,100
FS-05F	FSL-05F	5/16	5/16 BSF	0.437	0.344	1.000	1.375	0.750	11.35	0.437	14,100
FS-06-5	FSL-06-5	5/16	3/8 UNF	0.500	0.406	1.125	1.625	0.937	13.10	0.562	19,300
FS-06-5F	FSL-06-5F	5/16	3/8BSF	0.500	0.406	1.125	1.625	0.937	13.10	0.562	19,300
FS-06	FSL-06	3/8	3/8 UNF	0.500	0.406	1.125	1.625	0.937	13.10	0.562	19,300
FS-06F	FSL-06F	3/8	3/8 BSF	0.500	0.406	1.125	1.625	0.937	13.10	0.562	19,300
FS-07-6	FSL-07-6	3/8	7/16 UNF	0.562	0.437	1.250	1.812	1.062	14.90	0.625	21,000
FS-07-6F	FSL-07-6F	3/8	7/16 BSF	0.562	0.437	1.250	1.812	1.062	14.90	0.625	21,000
FS-07	FSL-07	7/16	7/16 UNF	0.562	0.437	1.250	1.812	1.062	14.90	0.625	21,000
FS-07F	FSL-07F	7/16	7/16 BSF	0.562	0.437	1.250	1.812	1.062	14.90	0.625	21,000
FS-08-7	FSL-08-7	7/16	1/2 UNF	0.625	0.500	1.375	2.125	1.187	17.75	0.750	23,600
FS-08-7F	FSL-08-7F	7/16	1/2 BSF	0.625	0.500	1.375	2.125	1.187	17.75	0.750	23,600
FS-08	FSL-08	1/2	1/2 UNF	0.625	0.500	1.375	2.125	1.187	17.75	0.750	23,600
FS-08F	FSL-08F	1/2	1/2 BSF	0.625	0.500	1.375	2.125	1.187	17.75	0.750	23,600
FS-10-8F	FSL-10-8F	1/2	5/8 UNF	0.750	0.562	1.750	2.500	1.500	21.30	0.875	32,100
FS-10-8F	FSL-10-8F	1/2	5/8 BSF	0.750	0.562	1.750	2.500	1.500	21.30	0.875	32,100
FS-10	FSL-10	5/8	5/8 UNF	0.750	0.562	1.750	2.500	1.500	21.30	0.875	32,100
FS-10F	FSL-10F	5/8	5/8 BSF	0.750	0.562	1.750	2.500	1.500	21.30	0.875	32,100
FS-12-10	FSL-12-10	5/8	3/4 UNF	0.875	0.687	2.000	2.875	1.750	24.80	1.000	45,000
FS-12-10F	FSL-12-10F	5/8	3/4 BSF	0.875	0.687	2.000	2.875	1.750	24.80	1.000	45,000
FS-12	FSL-12	3/4	3/4 UNF	0.875	0.687	2.000	2.875	1.750	24.80	1.000	45,000
FS-12F	FSL-12F	3/4	3/4 BSF	0.875	0.687	2.000	2.875	1.750	24.80	1.000	45,000

For stainless steel add 'SS' to part no. For example 'FS-04 SS'

FSS SERIES: STUDED FEMALE ROD ENDS (METRIC)

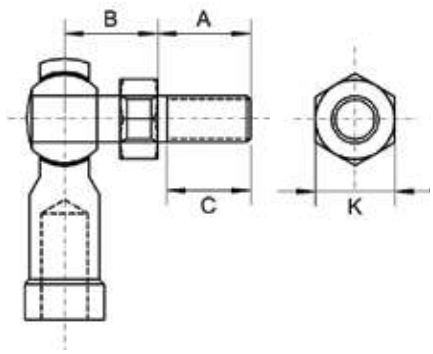


- Housing:** Steel 230M07Pb (Sizes M05 – M12)
Forged 080M46 (Sizes M14 – M16)
Zinc Plated and Clear Trivalent Passivate
- Inner Ring:** Steel 070M20, Zinc Plated and Clear Trivalent Passivate
- Ball:** Bearing Steel 100Cr6, Hardened and Electro-less Nickel Plated
- Stud:** Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate
- Liner:** High Strength PTFE Composite
- Specification:** ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Stud Size	Housing Thread	A	B	C	K	Static Load Rating (Newtons) Radial
FS-M05S	FSL-M05S	M5X0.80	M5x0.80	10	10	8	9	1,200
FS-M06S	FSL-M06S	M6X1.00	M6X1.00	12	12	10	10	1,930
FS-M08S	FSL-M08S	M8X1.25	M8X1.25	16	16	14	13	3,190
FS-M10S	FSL-M10S	M10X1.50	M10X1.50	20	20	18	17	4,240
FS-M12S	FSL-M12S	M12X1.75	M12X1.75	24	24	21	19	5,720
FS-M14S	FSL-M14S	M14X2.00	M14X2.00	28	28	25	22	7,200
FS-M16S	FSL-M16S	M16X2.00	M16X2.00	29	29	24	24	9,000

FSS SERIES: STUDED FEMALE ROD ENDS (IMPERIAL)



- Housing:** Steel 230M07Pb (Sizes 04 - 07)
Forged 080M46 (Sizes 08 - 10)
Zinc Plated and Clear Trivalent Passiv.
- Inner Ring:** Steel 070M20, Zinc Plated and Clear Trivalent Passivate
- Ball:** Bearing Steel 100Cr6, Hardened and Electro-less Nickel Plated
- Stud:** Steel 230M07Pb, Zinc Plated and Clea Trivalent Passivate
- Liner:** High Strength PTFE Composite
- Specification:** ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Stud Size	Housing Thread	A	B	C	K	Static Load Rating (Newtons) Radial
FS-04S	FSL-04S	1/4 UNF	1/4 UNF	0.562	0.485	0.500	0.375	1,500
FS-05S	FSL-05S	5/16 UNF	5/16 UNF	0.687	0.547	0.594	0.437	3,190
FS-06S	FSL-06S	3/8 UNF	3/8 UNF	0.906	0.562	0.812	0.500	4,240
FS-07S	FSL-07S	7/16 UNF	7/16 UNF	1.125	0.843	1.000	0.625	5,720
FS-08S	FSL-08S	1/2 UNF	1/2 UNF	1.125	0.875	1.000	0.625	7,200
FS-10S	FSL-10S	5/8 UNF	5/8 UNF	1.125	1.000	1.000	0.750	9,000

For stainless steel add 'SS' to part no. For example 'FS-M05S SS'



FEMALE ROD ENDS



FSX SERIES

Description:

FSX series is our 3-piece steel on steel high strength range of female rod ends designed for motorsport and heavy industrial mechanical load applications. Incorporating a high strength PTFE bronze mesh between the ball and the liner material, suitable for high shock loads and heavy mechanical load applications requiring low friction, available in both metric and imperial bore and thread sizes, they do not require maintenance.

Material Specifications:

Housing: Steel 708M40, heat treated, zinc plated and clear trivalent passivate. Inner Ring: Steel 070M20, zinc plated and clear trivalent passivate and stainless steel 304C. Liner High strength PTFE bronze mesh composite. Ball: 100Cr6 heat treated, polished and electroless Nickel plated and stainless steel 440C

Features:

Metric & imperial thread & bore sizes, low friction, heavy duty, high shock loads, extended wear life, no maintenance,

studded option

Possible Applications:

Motorsport and heavy industrial mechanical applications.

Temperature Range:

-200°C to + 260°C

Specification:

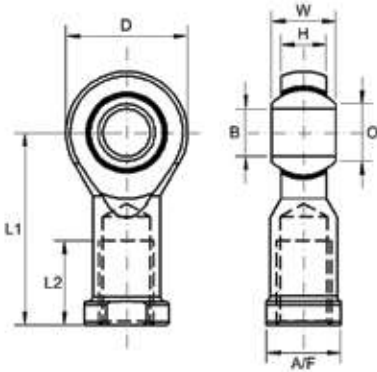
ELV & RoHS compliant

Interchange table

Dunlop	Aurora	Fluro
FSX-M (metric)	AW-M-T and AG-M-T	GIXSW
FSX (imperial)	AW-T and AG-T	

Note: Manufacturers part numbers are used for descriptive purposes only and may not be direct equivalent products.

FSX SERIES: MAINTENANCE FREE ROD ENDS WITH FEMALE THREAD (METRIC)



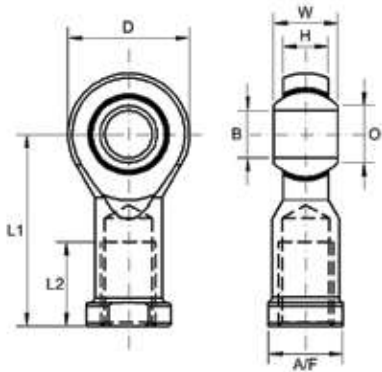
- Housing:** Steel 708M40, Heat Treated, Zinc Plated and Clear Trivalent Passivate
- Inner Ring:** Steel 070M20, Zinc Plated and Clear Trivalent Passivate
- Ball:** Bearing Steel 100Cr6, Case Hardened and Electro-less Nickel Plated
- Liner:** High Strength PTFE Composite
- Temp Range:** -200°C to +260°C
- Specification:** ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Bore Size	Thread	W	H	D	L1	L2	AF	Static Load Rating (Newtons) Radial
FSX-M05	FSLX-M05	5	M5x0.80	8	6.00	18	27	10	9	15000
FSX-M06-5	FSLX-M06-5	5	M6x1.00	9	6.75	20	30	12	11	16700
FSX-M06	FSLX-M06	6	M6x1.00	9	6.75	20	30	12	11	16700
FSX-M08-6	FSLX-M08-6	6	M8x1.25	12	9.00	24	36	16	13	25500
FSX-M08	FSLX-M08	8	M8x1.25	12	9.00	24	36	16	13	25500
FSX-M10-8	FSLX-M10-8	8	M10x1.50	14	10.50	28	43	20	17	34800
FSX-M10-8C	FSLX-M10-8C	8	M10x1.25	14	10.50	28	43	20	17	34800
FSX-M10	FSLX-M10	10	M10x1.50	14	10.50	28	43	20	17	34800
FSX-M10C	FSLX-M10C	10	M10x1.25	14	10.50	28	43	20	17	34800
FSX-M12-10	FSLX-M12-10	10	M12x1.75	16	12.00	32	50	22	19	42000

FSX-M12-10C	FSLX-M12-10C	10	M12x1.25	16	12.00	32	50	22	19	42000
FSX-M12	FSLX-M12	12	M12x1.75	16	12.00	32	50	22	19	42000
FSX-M12C	FSLX-M12C	12	M12x1.25	16	12.00	32	50	22	19	42000
FSX-M14	FSLX-M14	14	M14x2.00	19	13.50	36	57	25	22	57000
FSX-M14C	FSLX-M14C	14	M14x1.50	19	13.50	36	57	25	22	57000
FSX-M16-14	FSLX-M16-14	14	M16x2.00	21	15.00	42	64	28	22	67500
FSX-M16-14C	FSLX-M16-14C	14	M16x1.50	21	15.00	42	64	28	22	67500
FSX-M16	FSLX-M16	16	M16x2.00	21	15.00	42	64	28	22	67500
FSX-M16C	FSLX-M16C	16	M16x1.50	21	15.00	42	64	28	22	67500
FSX-M20-16	FSLX-M20-16	16	M20x2.50	25	18.00	50	77	33	32	93500
FSX-M20-16C	FSLX-M20-16C	16	M20x1.50	25	18.00	50	77	33	32	93500
FSX-M20	FSLX-M20	20	M20x2.50	25	18.00	50	77	33	32	93500
FSX-M20C	FSLX-M20C	20	M20x1.50	25	18.00	50	77	33	32	93500

FSX SERIES: MAINTENANCE FREE ROD ENDS WITH FEMALE THREAD (IMPERIAL)



- Housing:** Steel 708M40, Heat Treated, Zinc Plated and Clear Trivalent Passivate
- Inner Ring:** Steel 070M20, Zinc Plated and Clear Trivalent Passivate
- Ball:** Bearing Steel 100Cr6, Hardened and Electro-less Nickel Plated
- Liner:** High Strength PTFE Composite
- Temp Range:** -200°C to +260°C
- Specification:** ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Bore Size	Thread	W	H	D	L1	L2	AF	Static Load Rating (Newtons) Radial
FSX-04-3	FSLX-04-3	3/16	1/4 UNF	0.375	0.281	0.812	1.312	0.750	0.375	16700
FSX-04	FSLX-04	1/4	1/4 UNF	0.375	0.281	0.812	1.312	0.750	0.375	16700
FSX-05-4	FSLX-05-4	1/4	5/16 UNF	0.437	0.344	1.000	1.375	0.750	0.437	25500
FSX-05	FSLX-05	5/16	5/16 UNF	0.437	0.344	1.000	1.375	0.750	0.437	25500
FSX-06-5	FSLX-06-5	5/16	3/8 UNF	0.500	0.406	1.125	1.625	0.937	0.562	34800
FSX-06	FSLX-06	3/8	3/8 UNF	0.500	0.406	1.125	1.625	0.937	0.562	34800
FSX-07-6	FSLX-07-6	3/8	7/16 UNF	0.562	0.437	1.250	1.812	1.062	0.625	38000
FSX-07	FSLX-07	7/16	7/16 UNF	0.562	0.437	1.250	1.812	1.062	0.625	38000
FSX-08-7	FSLX-08-7	7/16	1/2 UNF	0.625	0.500	1.375	2.125	1.187	0.750	42000
FSX-08	FSLX-08	1/2	1/2 UNF	0.625	0.500	1.375	2.125	1.187	0.750	42000
FSX-10-8	FSLX-10-8	1/2	5/8 UNF	0.750	0.562	1.750	2.500	1.500	0.875	67500
FSX-10	FSLX-10	5/8	5/8 UNF	0.750	0.562	1.750	2.500	1.500	0.875	67500
FSX-12-10	FSLX-12-10	5/8	3/4 UNF	0.875	0.687	2.000	2.875	1.750	1.000	93500
FSX-12	FSLX-12	3/4	3/4 UNF	0.875	0.687	2.000	2.875	1.750	1.000	93500

For stainless steel add 'SS' to part no. For example 'FSX-04 SS'



FEMALE ROD ENDS



FX SERIES

Description:

FX series Rod Ends have been developed for use in General Engineering applications where medium to high loads are encountered. Within their load carrying capacity they will withstand shock loading and high frequency oscillation.

Material Specifications:

Housing: 817M 40, heat treated to 80/90 tons/in² tensile, Phosphated all over. Ball: 100Cr 6, heat treated, Phosphated all over.

Features

Metric and Imperial sizes available
Can be used in application involving shock loading and high frequency oscillation.

Possible Applications

Medium / heavy industrial/mechanical applications
Construction equipment
Agricultural equipment and motor sport.

Temperature Range

-40°C to +150°C

Specification

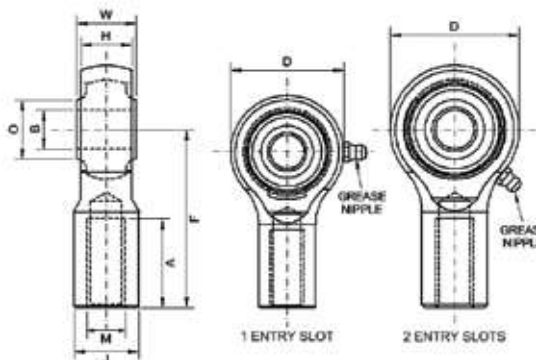
ELV & RoHS compliant

Interchange table

Dunlop	Rose	NMB
FX-M (metric)	RBJ-M	RBJ-M
FX (imperial)	RBJ	RBJ

Note: Manufacturers part numbers are used for descriptive purposes only and may not be direct equivalent products.

FX SERIES: MAINTENANCE REQUIRED ROD ENDS WITH FEMALE THREAD (METRIC)



Housing:

Forged 817M40, Heat Treated to 80/90 tons/in² tensile and Phosphate all over

Ball:

Bearing Steel 100Cr6, Heat Treated and Phosphate all over

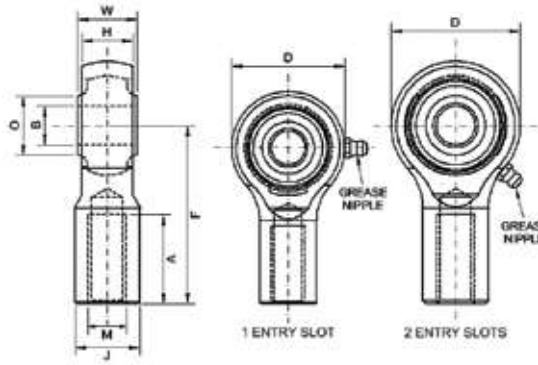
Specification:

ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	B	W	H	O	D	F	A	J	M	X	Static Load Rating (Newtons) Radial
FX-M06	FXL-M06	6	9,5	8,1	9,5	20,6	28,7	14,0	10,1	M6 x 1.00	22	11770
FX-M08C	FXL-M08C	8	11,0	9,5	11,0	23,8	33,2	17,0	11,1	M8 x 1.00	21	19610
FX-M08	FXL-M08	8	11,0	9,5	11,0	23,8	33,2	17,0	11,1	M8 x 1.25	21	19610
FX-M10C	FXL-M10C	10	14,2	12,2	14,2	31,0	41,2	21,0	15,2	M10 x 1.25	22	27460
FX-M10	FXL-M10	10	14,2	12,2	14,2	31,0	41,2	21,0	15,2	M10 x 1.50	22	27460
FX-M12CG	FXL-M12CG	12	19,0	16,2	19,0	41,2	54,2	28,0	20,3	M12 x 1.25	22	49030
FX-M12G	FXL-M12G	12	19,0	16,2	19,0	41,2	54,2	28,0	20,3	M12 x 1.75	22	49030
FX-M16CG	FXL-M16CG	16	22,2	19,0	22,2	49,2	66,7	34,0	25,4	M16 x 1.50	21	77470
FX-M16G	FXL-M16G	16	22,2	19,0	22,2	49,2	66,7	34,0	25,4	M16 x 2.00	21	77470
FX-M20CG	FXL-M20CG	20	22,2	20,6	25,4	54,0	79,2	44,0	28,5	M20 x 1.50	16	110810
FX-M20G	FXL-M20G	20	22,2	20,6	25,4	54,0	79,2	44,0	28,5	M20 x 2.50	16	110810

FX SERIES: MAINTENANCE REQUIRED ROD ENDS WITH FEMALE THREAD (IMPERIAL)



Housing: Forged 817M40, Heat Treated to 80/90 tons/in² tensile and Phosphate all over

Ball: Bearing Steel 100Cr6, Heat Treated and Phosphate all over

Specification: ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	B	W	H	O	D	F	A	J	M	X	Static Load Rating (Newtons) Radial
FX-04	FXL -04	.2500	.375	.320	.375	.812	1.125	.562	.400	1/4 UNF	22	11770
FX-05	FXL-05	.3125	.437	.375	.437	.937	1.312	.687	.437	5/16 UNF	21	19610
FX-05F	FXL-05F	.3125	.437	.375	.437	.937	1.312	.687	.437	5/16 BSF	21	19610
FX-06	FXL-06	.3750	.562	.480	.562	1.218	1.625	.875	.600	3/8 UNF	22	27460
FX-06F	FXL-06F	.3750	.562	.480	.562	1.218	1.625	.875	.600	3/8 BSF	22	27460
FX-08G	FXL-08G	.5000	.750	.640	.750	1.625	2.125	1.125	.800	1/2 UNF	22	49030
FX-08FG	FXL-08FG	.5000	.750	.640	.750	1.625	2.125	1.125	.800	1/2 BSF	22	49030
FX-10G	FXL-10G	.6250	.875	.750	.875	1.937	2.625	1.375	1.000	5/8 UNF	21	77470
FX-10FG	FXL-10FG	.6250	.875	.750	.875	1.937	2.625	1.375	1.000	5/8 BSF	21	77470
FX-12G	FXL-12G	.7500	.875	.812	1.000	2.125	3.125	1.750	1.125	3/4 UNF	16	110810
FX-12G	FXL-12FG	.7500	.875	.812	1.000	2.125	3.125	1.750	1.125	3/4 BSF	16	110810
FX-16G	FXL-16G	1.0000	1.375	1.0000	1.375	3.000	4.125	2.125	1.625	1 1/4 UNF	24	150250
FX-16FG	FXL-16FG	1.0000	1.375	1.0000	1.375	3.000	4.125	2.125	1.625	1 1/4 BSF	24	150250



'G' in part number denotes grease nipple fitted.



FEMALE ROD ENDS



AL SERIES

Description:

AL-Series is our 3-piece aluminium light weight range of self-lubricating general purpose female rod ends suitable for light industrial/mechanical load applications requiring low friction, with good wear resistance and available in metric bore and thread sizes. They have excellent moisture resistance and require no maintenance.

Material Specifications:

Housing: Aluminium A6026, black anodised. Race: GR-nylon LV-3H. Ball: Bearing steel 100Cr6, hardened and electroless nickel plated.

Features

- Metric bore & thread sizes
- Low friction
- Self-lubricating
- Good wear resistance
- Excellent moisture resistance
- No maintenance
- Light weight

Possible Applications

- Light industrial/mechanical applications
- Weight restricted applications
- Linear movement sensors

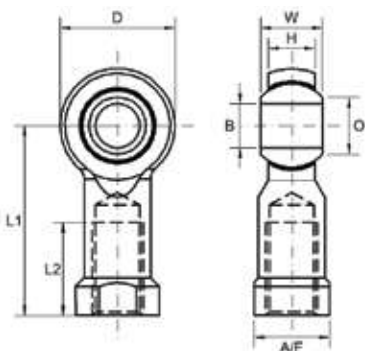
Temperature Range

-30°C to +170°C

Specification

ELV & RoHS compliant

AL SERIES: MAINTENANCE FREE ROD ENDS WITH FEMALE THREAD (METRIC)



Housing: Aluminium A6026, Black Anodised

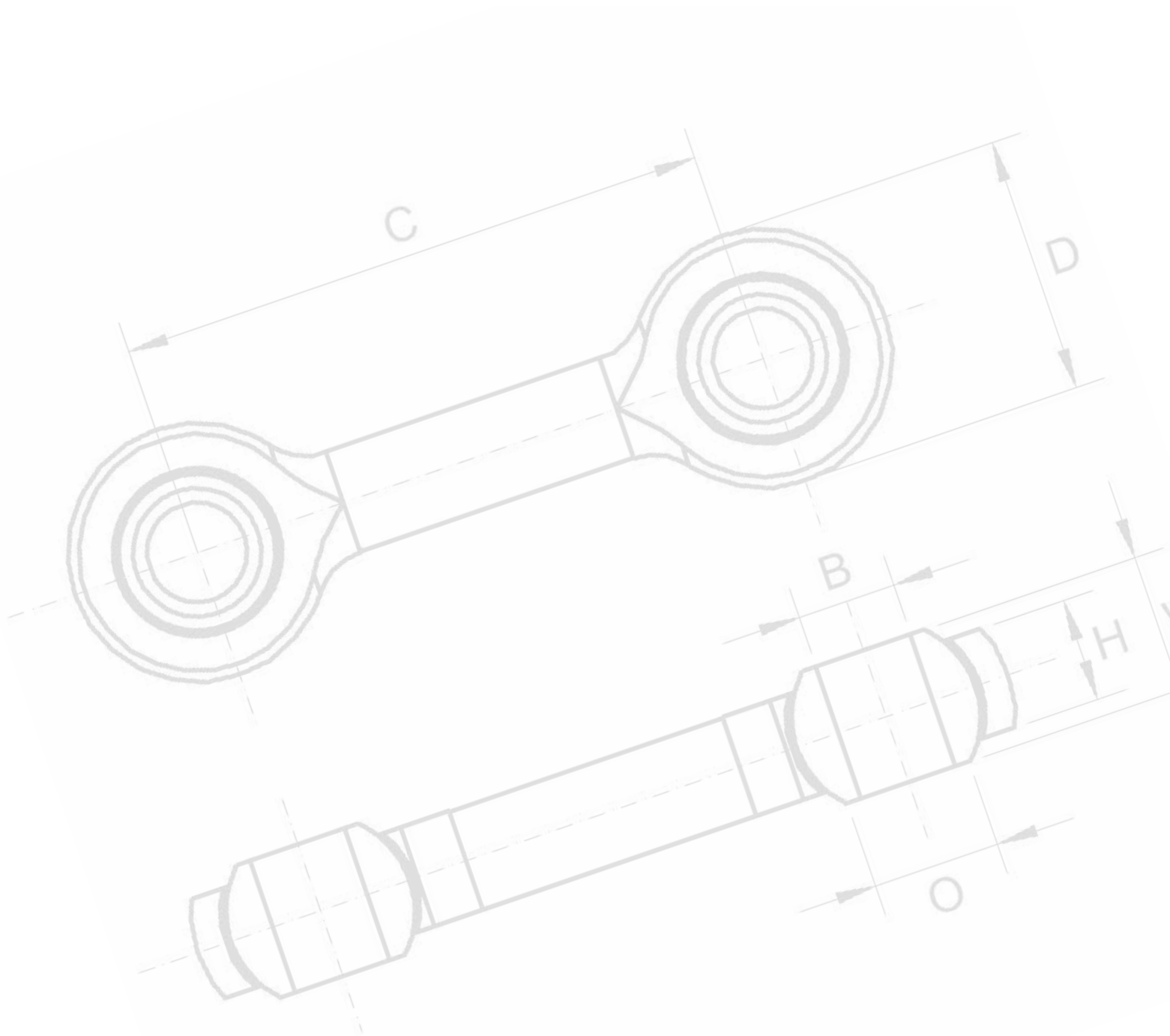
Race: GR-Nylon, LV-3H

Ball: Bearing Steel 100Cr6, Hardened and Electro-less Nickel Plated

Specification: ELV and RoHS Compliant

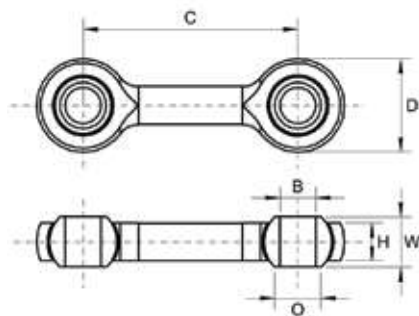


Part No. Right Hand	Part No. Left Hand	Bore Size	Thread	W	H	D	L1	L2	O	AF	Static Load Rating Radial (Newtons)
AL-SA-116	AL-SA-116LH	3	M3X0.50	6	4.50	12	13.5	6.0	5.2	6.0	3,040
AL-SA-176	AL-SA-176LH	3	M3X0.50	6	4.50	12	13.5	6.0	5.2	7.0	3,040
AL-SA-106	AL-SA-106LH	3	M3X0.50	6	4.50	12	18.5	7.0	5.2	6.5	3,040
AL-SA-032	AL-SA-032LH	3	M3X0.50	6	4.50	12	18.5	7.0	5.2	6.5	3,040
AL-SA-033	AL-SA-033LH	3	M3X0.50	6	4.50	12	21.0	9.0	5.2	6.5	3,040
AL-SA-127	AL-SA-127LH	3	M4X0.70	6	4.50	12	13.5	6.0	5.2	7.0	3,040
AL-SA-091	AL-SA-091LH	3	M4X0.70	6	4.50	12	13.5	6.0	5.2	6.0	3,040
AL-SA-090	AL-SA-090LH	3	M4X0.70	6	4.50	12	19.5	6.0	5.2	6.0	3,040
AL-SA-009	AL-SA-009LH	5	M4X0.70	8	6.00	16	27.0	14.0	9.0	9.0	5,340
AL-SA-178	AL-SA-178LH	5	M4X0.70	8	6.00	16	16.2	8.0	9.0		5,340
AL-SA-135	AL-SA-135LH	5	M4X0.70	8	6.00	16	18.0	6.0	9.0	9.0	5,340
AL-SA-111	AL-SA-111LH	5	M4X0.70	8	6.00	16	25.0	11.5	9.0	9.0	5,340
AL-SA-177	AL-SA-177LH	5	M4X0.70	8	6.00	16	27.0	17.5	9.0	9.0	5,340
AL-SA-010	AL-SA-010LH	5	M5X0.80	8	6.00	16	27.0	14.0	9.0	9.0	5,340
AL-SA-019	AL-SA-019LH	5	M5X0.80	8	6.00	16	18.0	6.5	9.0	9.0	5,340
AL-SA-201	AL-SA-201LH	5	M6X1.00	8	6.00	16	27.0	13.5	9.0	9.0	5,340
AL-SA-080		6	M6X1.00	9	6.75	18	30.0	13.5	9.3	11.0	7,720
AL-SA-081		6	M6X1.00	9	6.75	18	30.0	13.5	9.3	11.0	7,720
AL-SA-082	AL-SA-082LH	8	M8X1.25	12	9.00	22	36.0	16.5	10.4	14.0	7,720





MALE ROD ENDS



DB SERIES: DBM - DBI

Description:

DB-Series is our 3-piece 'dog bone' range of rod ends primarily based on our MP-Series with regards to function and structure. A wide range of preset centre distances are available. Suitable for light to medium industrial/mechanical load applications requiring low friction, with good wear resistance and available in both metric and imperial bore sizes. They have excellent moisture resistance and require no maintenance.

Material Specifications:

Housing: Steel 230M07PB zinc plated and clear trivalent passivate.
Race: GR-nylon LV-3H. Ball: Bearing steel 100Cr6, hardened and electroless nickel plated.

Features:

- Metric & imperial thread & bore sizes
- Low friction
- Self-lubricating
- Good wear resistance
- Excellent moisture resistance
- No maintenance

Possible Applications:

- Light to medium/heavy industrial/mechanical applications
- Construction equipment
- Agricultural equipment
- Recreational vehicles

Temperature Range:

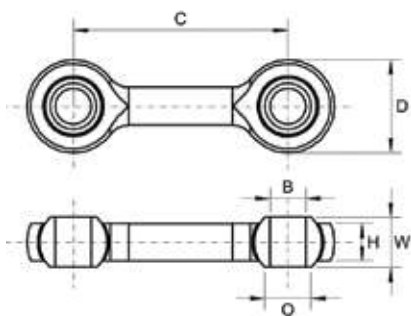
-30°C to +170°C

Specification:

ELV & RoHS compliant



DB SERIES: MAINTENANCE FREE DOG BONE ROD ENDS (IMPERIAL)



Housing: Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate

Race GR-Nylon, LV-3H

Ball: Bearing Steel 100Cr6, Hardened and Electro-less Nickel Plated



Part No.	Bore Size	C	W	H	D	O	Liner	Static Load Rating (Newtons) Radial
DB-SA-076	5/16	60.0	0.437	0.344	0.875	0.447	GR-NYLON	6,880
DB-SA-158	5/16	75.0	0.437	0.344	0.875	0.447	GR-NYLON	12,010
DB-SA-067	5/16	80.0	0.437	0.344	0.875	0.447	GR-NYLON	12,010
DB-SA-128	5/16	82.5	0.437	0.344	0.875	0.447	GR-NYLON	12,010
DB-SA-162	3/8	50.0	0.500	0.406	1.000	0.516	GR-NYLON	12,830
DB-SA-156	3/8	60.0	0.500	0.406	1.000	0.516	GR-NYLON	12,830
DB-SA-205	3/8	60.0	0.500	0.415	1.000	0.516	SINTERED BRONZE	13,640
DB-SA-159	3/8	65.0	0.500	0.406	1.000	0.516	GR-NYLON	16,900
DB-SA-195	3/8	70.0	0.500	0.406	1.000	0.516	GR-NYLON	16,900
DB-SA-206	3/8	85.0	0.500	0.406	1.000	0.516	GR-NYLON	16,900
DB-SA-155	3/8	100.0	0.500	0.406	1.000	0.516	GR-NYLON	16,900
DB-SA-168	3/8	120.0	0.500	0.406	1.000	0.516	GR-NYLON	16,900
DB-SA-157	3/8	124.0	0.500	0.406	1.000	0.516	GR-NYLON	16,900
DB-SA-207	3/8	175.0	0.500	0.406	1.000	0.516	GR-NYLON	16,900

DB SERIES: MAINTENANCE FREE DOG BONE ROD ENDS (METRIC)

Part No.	Bore Size	C	W	H	D	O	Liner	Static Load Rating (Newtons) Radial
DB-SA-074	8	60.0	12	9.0	22	10.4	GR-NYLON	12,775
DB-SA-173	8	75.0	12	9.0	22	10.4	GR-NYLON	12,775
DB-SA-169	8	80.0	12	9.0	22	10.4	GR-NYLON	12,775
DB-SA-170	8	82.5	12	9.0	22	10.4	GR-NYLON	12,775
DB-SA-175	10	50.0	14	10.5	26	12.9	GR-NYLON	16,960
DB-SA-060	10	60.0	14	10.5	26	12.9	GR-NYLON	16,960
DB-SA-200	10	60.0	14	10.5	26	12.9	SINTERED BRONZE	16,960
DB-SA-174	10	65.0	14	10.5	26	12.9	GR-NYLON	16,960
DB-SA-196	10	70.0	14	10.5	26	12.9	GR-NYLON	16,960
DB-SA-160	10	85.0	14	10.5	26	12.9	GR-NYLON	16,960
DB-SA-171	10	100.0	14	10.5	26	12.9	GR-NYLON	16,960
DB-SA-059	10	120.0	14	10.5	26	12.9	GR-NYLON	16,960
DB-SA-172	10	124.0	14	10.5	26	12.9	GR-NYLON	16,960
DB-SA-180	10	175.0	14	10.5	26	12.9	GR-NYLON	16,960
DB-SA-355	12	151.0	16	12.0	30	15.4	SINTERED BRONZE	22,900

The above list shows our current production programme of Dog Bone rod ends. Please enquire for any item not shown.

 English	SP series 66
	Serie SP • Serie SP • SP-Serie
	Série SP • SP-serie • Seria FP
 Español	SPH series 68
	Serie SPH • SerieSPH • SPH-Serie
	Série SPH • SPH-serie • seria SPH
 Italiano	GE-FW series 69
	Serie GE-FW • Serie GE-FW • GE-FW-Serie
	Série GE-FW • GE-FW-serie • seria GE-FW
 Deutsch	GE-UK series 70
	Serie GE-UK • Serie GE-UK • GE-UK-Serie
	Série GE-UK • GE-UK-serie • seria GE-UK
 Français	GE-ES series 71
	Serie GE-ES • Serie GE-ES • GE-ES-Serie
	Série GE-ES • GE-ES-serie • seria GE-ES
 Nederlands	GE-LO series 73
	Serie GE-LO • Serie GE-LO • GE-LO-Serie
	Série GE-LO • GE-LO-serie • seria GE-LO
 Polskie	GE-HO series 74
	Serie GE-HO • Serie GE-HO • GE-HO-Serie
	Série GE-HO • GE-HO-serie • seria GE-HO
	GE-Z series 75
	Serie GE-Z • Serie GE-Z • GE-Z-Serie
	Série GE-Z • GE-Z-serie • seria GE-Z
	GF-DO series 76
	Serie GF-DO • Serie GF-DO • GF-DO-Serie
	Série GF-DO • GF-DO-serie • seria GF-DO


English

Español

Italiano

Deutsch

Français

Nederlands

Polskie
GK-DO series
77

Serie GK-DO • Serie GK-DO • GK-DO-Serie
Série GK-DO • GK-DO-serie • seria GK-DO

GE-AW series
78

Serie GE-AW • Serie GE-AW • GE-AW-Serie
Série GE-AW • GE-AW-serie • seria GE-AW

GE-AX series
79

Serie GE-AX • Serie GE-AX • GE-AX-Serie
Série GE-AX • GE-AX-serie • seria GE-AX

GE-SW series
80

Serie GE-SW • Serie GE-SW • GE-SW-Serie
Série GE-SW • GE-SW-serie • seria GE-SW

GE-SX series
81

Serie GE-SX • Serie GE-SX • GE-SX-Serie
Série GE-SX • GE-SX-serie • seria GE-SX

GXSW series
82

Serie GXSW • Serie GXSW • GXSW-Serie
Série GXSW • GXSW-serie • seria GXSW

COM series
85

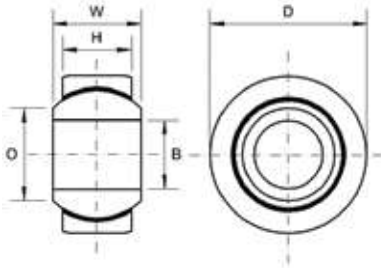
Serie COM • Serie COM • COM-Serie
Série COM • COM-serie • seria COM

SX series
86

Serie SX • Serie SX • SX-Serie
Série SX • SX-serie • seria SX



SPHERICAL BEARINGS



SP SERIES

Description:

SP-Series is our 3-piece standard range of self lubricating general purpose spherical bearings suitable for light to medium industrial/mechanical load applications requiring low friction, with good wear resistance and available in both metric and imperial bore sizes. They have excellent moisture resistance and require no maintenance.

Material Specifications:

Housing: Steel 230M07PB chemi-black finish. Race: GR-nylon LV-3H. Ball: Bearing steel 100Cr6, hardened and electro-less nickel plated.

Features:

- Metric & imperial bore sizes
- Low friction
- Self-lubricating
- Good wear resistance
- Excellent moisture resistance
- No maintenance

Possible Applications:

- Light to medium/heavy industrial/mechanical applications
- Construction equipment
- Agricultural equipment
- Recreational vehicles
- Precision equipment

Temperature Range:

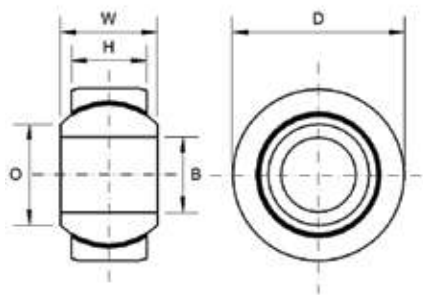
-30°C to +170°C

Specification:

ELV & RoHS compliant



SP SERIES: MAINTENANCE FREE SPHERICAL BEARINGS (METRIC)



Outer Ring: Steel 230M07Pb, Chemi-Blacked
Race: GR-nylon, LV-3H.
Ball: Bearing Steel 100Cr6, Hardened and Electro-less Nickel Plated
Specification: ELV and RoHS compliant.



Part No.	Bore Size	W	H	D	O	Static Load Rating (Newtons) Radial
SP-M03	3	6	4.50	16	5.20	3,040
SP-M04-3	3	7	5.00	18	6.30	4,060
SP-M04	4	7	5.00	18	6.30	4,060
SP-M05-4	4	8	6.00	16	7.50	5,340
SP-M05	5	8	6.00	16	7.50	5,340
SP-M06-5	5	9	6.75	18	9.30	7,720
SP-M06	6	9	6.75	18	9.30	7,720
SP-M08-6	6	12	9.00	22	10.40	12,775
JBS 8N	8	12	7.90	22	10.40	12,775
SP-M08	8	12	9.00	22	10.40	12,775
SP-M10-8	8	14	10.50	26	12.90	16,960
JBS 10N	10	14	9.50	26	12.90	16,960
SP-M10	10	14	10.50	26	12.90	16,960
SP-M12-10	10	16	12.00	30	15.40	22,900
SP-M12	12	16	12.00	30	15.40	22,900
SP-M14-12	12	19	13.50	34	16.80	28,950
SP-M14	14	19	13.50	34	16.80	28,950
SP-M16-14	14	21	15.00	38	19.30	37,130
SP-M16	16	21	15.00	38	19.30	37,130

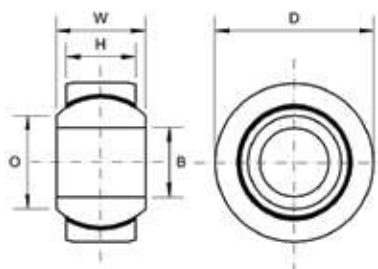
SP SERIES: MAINTENANCE FREE SPHERICAL BEARINGS (IMPERIAL)

Part No.	Bore Size	W	H	D	O	Static Load Rating (Newtons) Radial
SP-03	3/16	0.281	0.218	0.5625	0.293	4,900
SP-04-03	3/16	0.343	0.250	0.6562	0.364	7,150
SP-04	1/4	0.343	0.250	0.6562	0.364	7,150
SP-05-04	1/4	0.375	0.281	0.7500	0.419	12,000
SP-05	5/16	0.375	0.281	0.7500	0.419	12,000
SP-06-05	5/16	0.406	0.312	0.8125	0.475	13,090
SP-06	3/8	0.406	0.312	0.8125	0.475	13,090
SP-07-06	3/8	0.437	0.343	0.9062	0.530	16,100
SP-07	7/16	0.437	0.343	0.9062	0.530	16,100
SP-08-07	7/16	0.500	0.390	1.0000	0.600	19,250
SP-08	1/2	0.500	0.390	1.0000	0.600	19,250
SP-10-08	1/2	0.625	0.500	1.1875	0.739	30,250
SP-10	5/8	0.625	0.500	1.1875	0.739	30,250

For stainless steel add 'SS' to part no. For example 'SP-M03 SS'



SPHERICAL BEARINGS



SPH SERIES

Description:

SPH-Series is our 3-piece unique Internationally patented range of spherical bearings incorporating a Grilamid bearing race that provides ultra smooth operation. A nitrotec surface protected ball with a PTFE lubricant provide superior shock load and extended wear properties combined with excellent chemical and corrosion resistance.

The unique innovative captive body design prevents detachment through excessive axial loads.

Material Specifications:

Outer ring: Steel 230M07PB zinc plated and clear trivalent passivate. Race: Grilamid L20LF. Ball: 230M07PB nitrotec finish.

Features:

- Metric bore sizes
- Safety features applications
- High shock loads
- Extended wear life
- No maintenance

Possible Applications:

- Light to medium industrial/mechanical
- Construction equipment
- Agricultural equipment
- Recreational vehicles
- High precision motion control

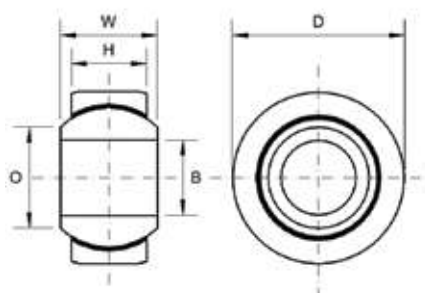
Temperature Range:

-40°C to +80°C

Specification:

ELV and RoHS compliant

SPH SERIES: MAINTENANCE FREE SPHERICAL BEARINGS (METRIC)



Outer Ring: Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate

Race: Grilamid L20LF.

Ball: 230M07Pb, Nitrotec Surface Protection

Lubricant: Uniflor oil.

Specification: ELV and RoHS compliant.



Part No.	Bore Size	W	H	D	O	Static Load Rating (Newtons) Radial
SPH-M06	6	9	6.75	18	9.30	9,300
SPH-M08	8	12	9.00	22	10.40	14,100
JBS8H	8	12	7.90	22	10.40	14,100
SPH-M10	10	14	10.50	26	12.90	18,690
JBS10H	10	14	9.50	26	12.90	18,690
SPH-M12	12	16	12.00	30	15.40	24,555
SPH-M14	14	19	13.50	34	16.80	34,650
SPH-M16	16	21	15.00	38	19.30	41,250

For stainless steel add 'SS' to part no. For example 'SPH-M06 SS'



GE FW SERIES

Description:

GE-FW-Series is our 2-piece metric range of general purpose spherical plain bearings incorporating a thin PTFE fabric between the ball and the outer ring, suitable for high shock loads and medium to heavy industrial/mechanical load applications requiring low friction, they do not require maintenance.

Material Specifications:

Outer ring: Bearing steel 100Cr6, case hardened. Ball: Bearing steel 100Cr6, hardened and electro-less nickel plated. Liner: PTFE fabric. Seals: Polyurethane.

Features:

- Metric bore sizes
- Low friction
- High shock loads
- Extended wear life
- No maintenance

Possible Applications:

- Medium/heavy industrial/mechanical applications
- Construction equipment
- Agricultural equipment
- Recreational vehicles
- High precision motion control

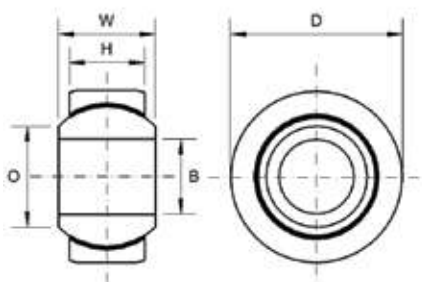
Temperature Range:

-53°C to +121°C

Specification:

ELV & RoHS compliant

GE FW SERIES: MAINTENANCE FREE SPHERICAL BEARINGS (METRIC)



- Outer Ring:** Bearing Steel 100Cr6, Hardened
- Race:** Bearing Steel 100Cr6, Hardened and Electro-less Nickel Plated
- Ball:** PTFE Fabric
- Specification:** ELV and RoHS Compliant



Part No. Unsealed	Part No. Sealed	Bore Size	W	H	D	Static Load Rating (Newtons) Radial
GE6FW		6	9	5	16	14,000
GE8FW		8	11	6	19	21,000
GE10FW		10	12	7	22	28,000
GE12FW		12	15	9	26	45,000
GE15FW		15	16	10	30	56,000
GE17FW		17	20	12	35	78,000
GE20FW		20	25	16	42	127,000
GE25FW		25	28	18	47	166,000
GE30FW	GE30FW-2RS	30	32	20	55	350,000
GE35FW	GE35FW-2RS	35	35	22	62	462,000
GE40FW	GE40FW-2RS	40	40	25	68	600,000
GE45FW	GE45FW-2RS	45	43	28	75	737,000
GE50FW	GE50FW-2RS	50	56	36	90	1,150,000
GE60FW	GE60FW-2RS	60	63	40	105	1,475,000
GE70FW	GE70FW-2RS	70	70	45	120	1,875,000
GE80FW	GE80FW-2RS	80	75	50	130	2,300,000
GE90FW	GE90FW-2RS	90	85	55	150	2,862,000
GE100FW	GE100FW-2RS	100	85	55	160	3,075,000

For stainless steel add 'SS' to part no. For example 'GE6FW SS'



SPHERICAL BEARINGS



GE UK SERIES

Description:

GE-UK-Series is our 2-piece metric range of general purpose spherical plain bearings incorporating a thin PTFE fabric between the ball and the outer ring, suitable for high shock loads and medium to heavy industrial/mechanical load applications requiring low friction. They do not require maintenance.

Material Specifications:

Outer ring: Bearing steel 100Cr6 and stainless steel 316, hardened. Ball: Bearing steel 100Cr6 hardened and electro-less nickel plated and stainless steel 440C. Liner: High temperature PTFE composite. Seals: Polyurethane.

Features

Metric bore sizes
Low friction
High shock loads
Extended wear life
No maintenance

Possible Applications

Medium/heavy industrial/mechanical applications
Construction equipment
Agricultural equipment
Recreational vehicles
Precision motion control

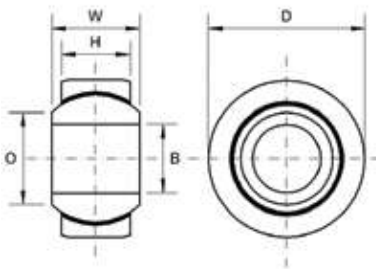
Temperature Range

-200°C to +260°C

Specification

ELV & RoHS compliant

GE UK SERIES: MAINTENANCE FREE SPHERICAL BEARINGS (METRIC)



- Outer Ring:** Bearing Steel 100Cr6, Hardened
- Ball:** Bearing Steel 100Cr6, Hardened and Electro-less Nickel Plated
- Liner:** High Temperature PTFE Composite
- Specification:** ELV and RoHS Compliant

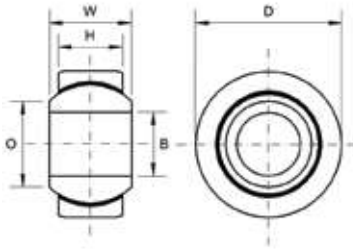


Part No. Unsealed	Part No. Sealed	Bore Size	W	H	D	Static Load Rating (Newtons) Radial
GE6UK	-	6	6	4	14	9,100
GE8UK	-	8	8	5	16	14,000
GE10UK	-	10	9	6	19	21,000
GE12UK	-	12	10	7	22	28,000
GE15UK	-	15	12	9	26	45,000
GE17UK	GE17UK-2RS	17	14	10	30	56,000
GE20UK	GE20UK-2RS	20	16	12	35	78,000
GE25UK	GE25UK-2RS	25	20	16	42	127,000
GE30UK	GE30UK-2RS	30	22	18	47	166,000
GE35UK	GE35UK-2RS	35	25	20	55	224,000
GE40UK	GE40UK-2RS	40	28	22	62	280,000
GE45UK	GE45UK-2RS	45	32	25	68	360,000
GE50UK	GE50UK-2RS	50	35	28	75	440,000
GE60UK	GE60UK-2RS	60	44	36	90	695,000
GE70UK	GE70UK-2RS	70	49	40	105	880,000
GE80UK	GE80UK-2RS	80	55	45	120	1,140,000
GE90UK	GE90UK-2RS	90	60	50	130	1,370,000
GE100UK	GE100UK-2RS	100	70	55	150	1,730,000
GE110UK	GE110UK-2RS	110	70	55	160	1,860,000
GE120UK	GE120UK-2RS	120	85	70	180	2,700,000

For stainless steel add 'SS' to part no. For example 'GE6UK SS'



SPHERICAL BEARINGS



GE ES SERIES

Description:

GE-ES-Series is our 2-piece fractured outer ring metric range of spherical plain bearings used in non rotational applications. Ball and race sliding surfaces are treated with MoS2 for increased lubricity on wear surface. A lubrication groove is provided on the raceway for applications requiring re-lubrication after installation.

Material Specifications:

Outer ring: Bearing steel 100Cr6, hardened and manganese phosphate, treated with MoS2. Ball: Bearing steel 100Cr6, hardened and manganese phosphate. Seals: Polyurethane.

Features:

- Metric bore sizes
- Low cost
- Maintenance required
- Up to 140mm bore sizes available

Possible Applications:

- Light to heavy industrial/mechanical applications
- Construction equipment
- Agricultural equipment
- Hydraulic applications

Temperature Range:

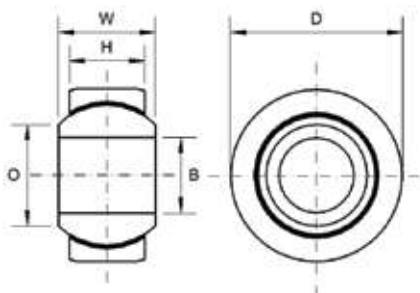
-54°C to +121°C

Specification:

ELV & RoHS compliant



GE ES SERIES: MAINTENANCE REQUIRED SPHERICAL BEARINGS (METRIC)



Outer Ring: Bearing Steel 100Cr6, Hardened and Manganese Phosphate, wear faces treated with MoS2.

Ball: Bearing Steel 100Cr6, Hardened and Manganese Phosphate

Seals: Polyurethane

Specification: ELV and RoHS Compliant



Part No. Unsealed	Part No. Sealed	Bore Size	W	H	D	Static Load Rating (Newtons) Radial
GE06ES	GE06ES-2RS	6	6	4	14	17,000
GE08ES	GE08ES-2RS	8	8	5	16	27,500
GE10ES	GE10ES-2RS	10	9	6	19	40,500
GE12ES	GE12ES-2RS	12	10	7	22	54,000
GE15ES	GE15ES-2RS	15	12	9	26	85,000
GE17ES	GE17ES-2RS	17	14	10	30	106,000
GE20ES	GE20ES-2RS	20	16	12	35	146,000
GEH20ES	GEH20ES-2RS	20	25	16	42	240,000
GE25ES	GE25ES-2RS	25	20	16	42	240,000
GEH25ES	GEH25ES2-RS	25	28	18	47	310,000
GE30ES	GE30ES-2RS	30	22	18	47	310,000
GEH30ES	GEH30ES-2RS	30	32	20	55	400,000
GE35ES	GE35ES-2RS	35	25	20	55	400,000
GEH35ES	GEH35ES-2RS	35	35	22	62	500,000
GE40ES	GE40ES-2RS	40	28	22	62	500,000
GEH40ES	GEH40ES-2RS	40	40	25	68	640,000
GE45ES	GE45ES-2RS	45	32	25	68	640,000
GEH45ES	GEH45ES-2RS	45	43	28	75	780,000
GE50ES	GE50ES-2RS	50	35	28	75	780,000
GEH50ES	GEH50ES-2RS	50	56	36	90	1,220,000
GE60ES	GE60ES-2RS	60	44	36	90	1,220,000
GEH60ES	GEH60ES-2RS	60	63	40	105	1,560,000
GE70ES	GE70ES-2RS	70	49	40	105	1,560,000
GEH70ES	GEH70ES-2RS	70	70	45	120	2,000,000
GE80ES	GE80ES-2RS	80	55	45	120	2,000,000
GEH80ES	GEH80ES-2RS	80	75	50	130	2,450,000
GE90ES	GE90ES-2RS	90	60	50	130	2,450,000
GEH90ES	GEH90ES-2RS	90	85	55	150	3,050,000
GE100ES	GE100ES-2RS	100	70	55	150	3,050,000
GE110ES	GE110ES-2RS	110	70	55	160	3,250,000
GE120ES	GE120ES-2RS	120	85	70	180	4,750,000
GE140ES	GE140ES-2RS	140	90	70	210	5,400,000



SPHERICAL BEARINGS



GE LO SERIES

Description:

GE-LO-Series is our 2 piece metric range of spherical plain bearings used in non-rotational applications. Ball and race sliding surfaces are phosphate treated for increased lubricity. A lubrication groove is provided on the raceway for applications requiring re-lubrication after installation.

Material Specifications:

Outer Ring: Bearing Steel 100Cr6, hardened and phosphate – with single split in axial direction. Ball: Bearing Steel 100Cr6, hardened and phosphate – with cylindrical extensions at both sides.

Features:

- Metric bore sizes
- Low cost
- Maintenance required
- Up to 160mm bore sizes available

Possible Applications:

- Light to heavy industrial/mechanical applications
- Construction equipment
- Agricultural equipment
- Hydraulic applications

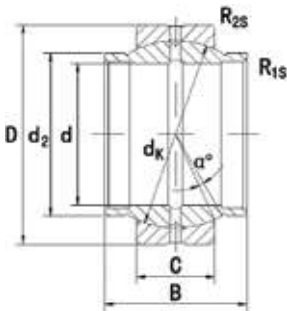
Temperature Range:

-54°C to +121°C

Specification:

ELV & RoHS compliant

GE LO SERIES: MAINTENANCE REQUIRED



Outer Ring: Bearing Steel 100Cr6, Hardened, Phosphate
Note: Single split in axial direction

Ball: Bearing Steel 100Cr6, Hardened, Phosphate
Note: With cylindrical extensions at both sides

Specification: ELV and RoHS Compliant



Part No.	Dimensions									kN Load Ratings		kg weight
	d	d ₂	D	B	C	d _k	R _{15 MIN}	R _{25 MIN}	α	dyn C	stat C ₀	
GE 12 LO	12	15.5	22	12	7	18	0.3	0.3	4	10	53	0.022
GE 16 LO	16	20	28	16	9	23	0.3	0.3	4	17	85	0.035
GE 20 LO	20	25	35	20	12	29	0.3	0.3	4	30	146	0.070
GE 25 LO	25	30	42	25	16	35.5	0.6	0.6	4	48	240	0.120
GE 30 LO	30	34	47	30	18	40	0.6	0.6	4	62	310	0.168
GE 32 LO	32	38	52	32	18	44	0.6	1.0	4	67	335	0.200
GE 35 LO	35	40	55	35	20	48	0.6	1.0	4	79	399	0.253
GE 40 LO	40	46	62	40	22	53	0.6	1.0	4	100	500	0.340
GE 50 LO	50	57	75	50	25	66	0.6	1.0	4	156	780	0.560
GE 60 LO	60	68	90	60	36	80	1.0	1.0	4	245	1220	1.15
GE 63 LO	63	71.5	95	63	36	83	1.0	1.0	4	255	1270	1.20
GE 70 LO	70	79	105	70	40	92	1.0	1.0	4	315	1560	1.70
GE 80 LO	80	91	120	80	45	105	1.0	1.0	4	400	2000	2.40
GE 90 LO	90	99	130	90	50	115	1.0	1.0	4	488	2440	3.20
GE 100 LO	100	113	150	100	55	130	1.0	1.0	4	607	3030	4.80
GE 110 LO	110	124	160	110	55	140	1.0	1.0	4	654	3270	5.78
GE 125 LO	125	138	180	125	70	160	1.0	1.0	4	950	4750	8.49
GE 160 LO	160	177	230	160	80	200	1.0	1.0	4	1370	6800	16.5



SPHERICAL BEARINGS



GE HO 2RS SERIES

Description:

GE-HO-2RS Series is our 2 piece metric range of spherical plain bearings used in non-rotational applications. Ball and race sliding surfaces are phosphate treated for increased lubricity. A lubrication groove is provided on the raceway for applications requiring re-lubrication after installation. Plastic seals are provided to stop the ingress of contaminants.

Material Specifications:

Outer Ring: Bearing Steel 100Cr6, hardened and phosphate – with single split in axial direction. Ball: Bearing Steel 100Cr6, hardened and phosphate – with cylindrical extensions at both sides. Seals: Polyurethane

Features:

- Metric bore sizes
- Low cost
- Maintenance required
- Up to 80mm bore sizes available

Possible Applications:

- Light to heavy industrial/mechanical applications
- Construction equipment
- Agricultural equipment
- Hydraulic applications

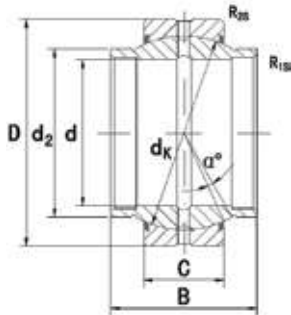
Temperature Range:

-54°C to +121°C

Specification:

ELV & RoHS compliant

GE HO 2RS SERIES: MAINTENANCE REQUIRED



- Outer Ring:** Bearing Steel 100Cr6, Hardened, Phosphate
Note: Single split in axial direction
- Ball:** Bearing Steel 100Cr6, Hardened, Phosphate
Note: With cylindrical extensions both sides
- Seals:** Polyurethane
- Specification:** ELV and RoHS Compliant



Part No.	Dimensions									kN Load Ratings		kg weight
	d	d ₂	D	B	C	d _k	R ₁₅ MIN	R ₂₅ MIN	α	dyn C	stat C ₀	
GE 20 HO 2RS	20	24	35	24	12	29	0.2	0.3	3	30	146	0.057
GE 25 HO 2RS	25	29	42	29	16	35.5	0.2	0.6	3	48	240	0.10
GE 30 HO 2RS	30	34.2	47	30	18	40.7	0.2	0.6	3	62	310	0.14
GE 35 HO 2RS	35	40	55	35	20	47	0.3	1.0	3	80	400	0.24
GE 40 HO 2RS	40	45	62	38	22	53	0.3	1.0	3	100	500	0.29
GE 45 HO 2RS	45	51.5	68	40	25	60	0.3	1.0	3	127	640	0.43
GE 50 HO 2RS	50	56.5	75	43	28	66	0.3	1.0	3	156	780	0.54
GE 60 HO 2RS	60	67.7	90	54	36	80	0.3	1.0	3	245	1220	1.10
GE 70 HO 2RS	70	78	105	65	40	92	0.3	1.0	3	315	1560	1.60
GE 80 HO 2RS	80	90	120	74	45	105	0.3	1.0	3	400	2000	2.40



SPHERICAL BEARINGS



GEZ ES SERIES

Description:

GEZ-ES-Series is our 2-piece fractured outer ring metric range of spherical plain bearings used in non rotational applications. Ball and race sliding surfaces are treated with MoS2 for increased lubricity on wear surface. A lubrication groove is provided on the raceway for applications requiring re-lubrication after installation.

Material Specifications:

Outer ring: Bearing steel 100Cr6, case hardened and manganese phosphated, treated with MoS2. Ball: Bearing steel 100Cr6, hardened and manganese phosphate. Seals: Polyurethane.

Features:

Metric bore sizes
Low cost
Maintenance required
Up to 140mm bore sizes available

Possible Applications:

Light to heavy industrial/mechanical applications
Construction equipment
Agricultural equipment
Hydraulic applications

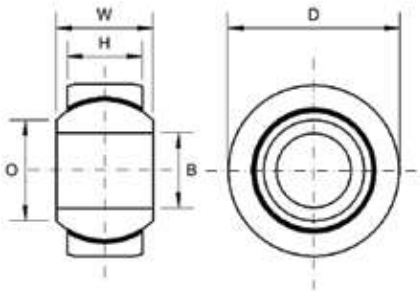
Temperature Range:

-54°C to +121°C

Specification:

ELV & RoHS compliant

GEZ ES SERIES: MAINTENANCE REQUIRED SPHERICAL BEARINGS (IMPERIAL)



Outer Ring:

Bearing Steel 100Cr6, Hardened and Manganese Phosphate, wear faces treated with MoS2.

Ball:

Bearing Steel 100Cr6, Hardened and Manganese Phosphate

Seals:

Polyurethane

Specification:

ELV and RoHS Compliant



Part No. Unsealed	Part No. Sealed	Bore Size	W	H	D	Static Load Rating (Newtons) Radial
GEZ008ES	GEZ008ES-2RS	1/2	11.100	9.525	22.225	41,000
GEZ010ES	GEZ010ES-2RS	5/8	13.894	11.913	26.988	65,000
GEZ012ES	GEZ012ES-2RS	3/4	16.662	14.275	31.750	95,000
GEZ014ES	GEZ014ES-2RS	7/8	19.431	16.662	36.513	127,000
GEZ100ES	GEZ100ES-2RS	1	22.225	19.050	41.275	166,000
GEZ104ES	GEZ104ES-2RS	1-1/4	27.762	23.800	50.800	260,000
GEZ106ES	GEZ106ES-2RS	1-3/8	30.150	26.187	55.563	310,000
GEZ108ES	GEZ108ES-2RS	1-1/2	33.325	28.575	61.913	375,000
GEZ112ES	GEZ112ES-2RS	1-3/4	38.887	33.325	71.438	510,000
GEZ200ES	GEZ200ES-2RS	2	44.450	38.100	80.963	670,000
GEZ204ES	GEZ204ES-2RS	2-1/4	55.013	42.850	90.488	850,000
GEZ208ES	GEZ208ES-2RS	2-1/2	55.550	47.625	100.013	1,060,000
GEZ212ES	GEZ212ES-2RS	2-3/4	61.112	52.375	111.125	1,250,000
GEZ300ES	GEZ300ES-2RS	3	66.675	57.150	120.65	1,500,000
GEZ304ES	GEZ304ES-2RS	3-1/4	72.238	61.900	130.175	1,760,000
GEZ308ES	GEZ308ES-2RS	3-1/2	77.775	66.675	139.700	2,040,000



SPHERICAL BEARINGS



GF DO SERIES

Description:

GF-DO-Series is our 3 piece metric range of spherical plain bearings comprising weldable rod end housing and spherical plain bearing used in non-rotational applications. Ball and race sliding surfaces are phosphate treated for increased lubricity. A lubrication groove is provided on the raceway along with a grease nipple on the rod end housing for applications requiring re-lubrication after installation.

Material Specifications:

Rod End Housing: Weldable steel, phosphate. Bearing: Includes a GE-ES-Series spherical bearing – see pages 75 and 76 for material specifications.

Features:

- Metric bore sizes
- Low cost
- Maintenance required
- Up to 120mm bore sizes available

Possible Applications:

- Light to heavy industrial/mechanical applications
- Construction equipment
- Agricultural equipment
- Hydraulic applications

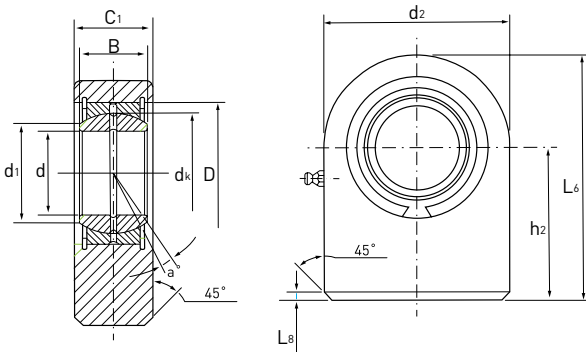
Temperature Range:

-54°C to +121°C

Specification:

ELV & RoHS compliant

GF DO SERIES: MAINTENANCE REQUIRED, FOR WELDING



Housing:

Weldable Steel, Phosphate

Bearing:

Includes a GE ES Series spherical bearing

Specification:

ELV and RoHS Compliant



Part No.	Dimensions										kN Load Ratings		kg weight
	d	C ₁	B	d ₂	L ₂	h ₂	d _k	d ₁	D	L ₈	dyn C	stat C ₀	
GF 20 DO	20	19	16	50	63	38	29	24.2	35	2	30.0	67.0	0.35
GF 25 DO	25	23	20	55	72.5	45	35.5	29.3	42	2	48.0	69.5	0.53
GF 30 DO	30	28	22	65	83.5	51	40.7	34.2	47	2	62.0	118	0.87
GF 35 DO	35	30	25	83	102.5	61	47	39.8	55	2	80.0	196	1.50
GF 40 DO	40	35	28	100	119	69	53	45.0	62	3	100	300	2.40
GF 45 DO	45	40	32	110	132	77	60	50.8	68	3	127	380	3.40
GF 50 DO	50	40	35	123	149.5	88	66	55.9	75	3	156	440	4.40
GF 60 DO	60	50	44	140	170	100	80	66.8	90	4	245	570	7.10
GF 70 DO	70	55	49	164	197	115	92	77.9	105	4	315	695	10.5
GF 80 DO	80	60	55	180	231	141	105	89.4	120	4	400	780	15.0
GF 90 DO	90	65	60	226	263	150	115	98.1	130	4	490	1340	23.5
GF 100 DO	100	70	70	250	295	170	130	109.5	150	4	610	1500	31.5
GF 110 DO	110	80	70	295	332.5	185	140	121.2	160	4	655	2160	48.5
GF 120 DO	120	90	85	360	390	210	180	135.5	180	4	950	3250	79.0



SPHERICAL BEARINGS



GK DO SERIES

Description:

GK-DO-Series is our 3 piece metric range of spherical plain bearings comprising weldable rod end housing with dowel pin and spherical plain bearing used in non-rotational applications. Ball and race sliding surfaces are phosphate treated for increased lubricity. A lubrication groove is provided on the raceway along with a grease nipple on the rod end housing for applications requiring re-lubrication after installation.

Material Specifications:

Rod End Housing: Weldable steel, phosphate – with a dowel pin at the base of the housing. Bearing: Includes a GE-ES-Series spherical bearing – see pages 75 and 76 for material specification.

Features:

- Metric bore sizes
- Low cost
- Maintenance required
- Up to 80mm bore sizes available

Possible Applications:

- Light to heavy industrial/mechanical applications
- Construction equipment
- Agricultural equipment
- Hydraulic applications

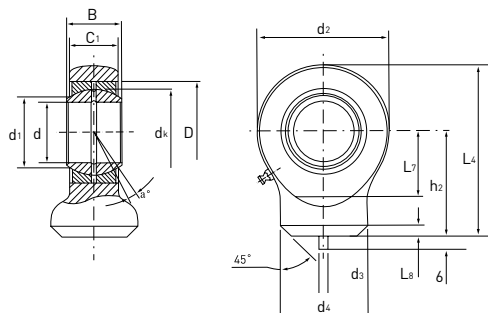
Temperature Range:

-54°C to +121°C

Specification:

ELV & RoHS compliant

GK DO SERIES: MAINTENANCE REQUIRED, FOR WELDING



Housing:

Weldable Steel, Phosphate
Note: With dowel pin at the base of the housing

Bearing:

Includes a GE ES Series spherical bearing

Specification:

ELV and RoHS Compliant



Part No.	Dimensions														kN Load Ratings		kg weight
	d	d ₁	B	C ₁	d _k	d ₂	L ₄	h ₂	L _{7 min}	L ₈	d ₃	d ₄	D	α	dyn C	stat C ₀	
GK 10 DO	10	13.2	9	7	16	29	38.5	24	15	1.5	3	15	19	12	8.15	15.6	0.041
GK 12 DO	12	15.0	10	8	18	34	44	27	18	1.5	3	17.5	22	11	10.8	21.6	0.066
GK 15 DO	15	18.4	12	10	22	40	51	31	20	2.0	4	21	26	8	17.0	32.0	0.12
GK 17 DO	17	20.7	14	11	25	46	58	35	23	2.0	4	24	30	10	21.2	40.0	0.19
GK 20 DO	20	24.2	16	13	29	53	64.5	38	27.5	2.0	4	27.5	35	9	30.0	54.0	0.23
GK 25 DO	25	29.3	20	17	35.5	64	77	45	33	3.0	4	33.5	42	7	48.0	72.0	0.43
GK 30 DO	30	34.2	22	19	40.7	73	87.5	51	37.5	3.0	4	40	47	6	62.0	95.0	0.64
GK 35 DO	35	39.8	25	21	47	82	102	61	43	3.0	4	47	55	6	80.0	125	0.96
GK 40 DO	40	45.0	28	23	53	92	115	69	48	4.0	4	52	62	7	100	156	1.30
GK 45 DO	45	50.8	32	27	60	102	128	77	52	4.0	6	58	68	7	127	208	1.80
GK 50 DO	50	55.9	35	30	66	112	144	88	59	4.0	6	62	75	6	156	250	2.50
GK 60 DO	60	66.8	44	38	80	135	167.5	100	72.5	4.0	6	70	90	6	245	390	3.90
GK 70 DO	70	77.9	49	42	92	160	195	115	86	5.0	6	80	105	6	315	510	6.60
GK 80 DO	80	89.4	55	47	105	180	231	141	98	5.0	6	95	120	6	400	620	8.70



SPHERICAL BEARINGS



GE AW SERIES

Description:

GE-AW-Series is our 2 piece metric range of thrust spherical bearings incorporating a thin PTFE fabric between the ball and the outer ring – suitable for high shock loads and medium to heavy industrial/mechanical load applications requiring low friction. They do not require maintenance.

Material Specifications:

Outer Ring: Bearing Steel 100Cr6, hardened and phosphate. Ball: Bearing Steel 100Cr6, hardened, precision ground and hard chrome plated. Liner: PTFE fabric.

Features:

- Metric bore sizes
- Low cost
- Maintenance required
- Up to 140mm bore sizes available

Possible Applications:

- Light to heavy industrial/mechanical applications
- Construction equipment
- Agricultural equipment
- Hydraulic applications

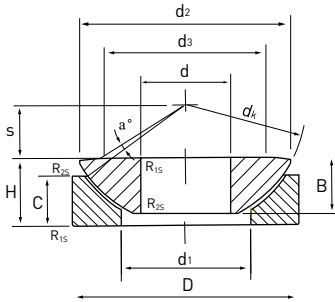
Temperature Range:

-54°C to +121°C

Specification:

ELV & RoHS compliant

GE AW SERIES



- Outer Ring:** Bearing Steel 100Cr6, Hardened, Phosphate
- Ball:** Bearing Steel 100Cr6, Hardened, Precision Ground, Hard Chrome Plated
- Liner:** PTFE Fabric
- Specification:** ELV and RoHS Compliant



Part No.	Dimensions mm														KN Load Ratings		Weight kg
	d	D	H	dk	d1	d2	d3	B	C	S	R1S min	R2s	α	dyn. C	stat. Co		
GE 10 AW	10	20	9.5	32	16.5	27.5	21	7.9	6.0	7.0	0.6	0.2	10	36	72	0.04	
GE 12 AW	12	35	13	37	19.5	32	24	9.3	9.0	8.0	0.6	0.2	9.0	49	98	0.07	
GE 15 AW	15	42	15	45	24	38.9	29	10.7	11	10	0.6	0.2	7.0	78	156	0.12	
GE 17 AW	17	47	16	50	28	43.4	34	11.5	11.5	11	0.6	0.2	6.0	88	176	0.16	
GE 20 AW	20	55	20	60	33.5	50	40	14.3	13	13	1.0	0.3	6.0	112	224	0.25	
GE 25 AW	25	62	22.5	66	34.5	57.5	45	16	17	17	1.0	0.3	7.0	193	390	0.38	
GE 30 AW	30	75	26	80	44	69	56	18	19.5	19.5	1.0	0.3	6.0	255	510	0.65	
GE 35 AW	35	90	28	98	52	84	66	22	20	20	1.0	0.3	6.0	390	780	1.0	
GE 40 AW	40	105	32	114	59	98	78	27	22	24.5	1.0	0.3	6.0	560	1120	1.6	
GE 45 AW	45	120	36.5	130	68	112	89	31	25	27.5	1.0	0.3	6.0	735	1460	2.4	
GE 50 AW	50	130	42.5	140	69	122.5	98	33.5	32	30	1.0	0.3	5.0	980	1960	3.3	
GE 60 AW	60	150	45	160	86	140	108	37	33	35	1.0	0.3	7.0	1100	2200	4.5	
GE 70 AW	70	160	50	170	95	149.5	121	40	36	35	1.0	0.3	6.0	1200	2400	5.5	
GE 80 AW	80	180	50	194	108	168	130	42	36	42.5	1.0	0.3	6.0	1560	3100	7.0	
GE 100 AW	100	210	59	220	133	195.5	155	50	42	45	1.0	0.3	7.0	1800	3600	10.5	
GE 120 AW	120	230	64	245	154	214	170	52	45	52.5	1.0	0.3	8.0	1860	3750	13	
GE 140 AW	140	260	72	272	176	244	198	61	50	52.5	1.5	0.6	6.0	2450	4900	18	
GE 160 AW	160	290	77	310	199	272	213	65	52	65	1.5	0.6	7.0	2850	5700	23	
GE 180 AW	180	320	86	335	224	300	240	70	60	67.5	1.5	0.6	8.0	3200	6400	31	
GE 200 AW	200	340	87	358	246	321	265	74	60	70	1.5	0.6	8.0	3550	7100	34	
GE 220 AW	220	370	97	388	265	350	289	82	67	75	1.5	0.6	7.0	4400	8800	44.5	
GE 240 AW	240	400	103	420	294	382	314	87	73	77.5	1.5	0.6	0.6	5200	10400	55	
GE 260 AW	260	430	115	449	317	409	336	95	80	82.5	1.5	0.6	7.0	5400	10800	69	
GE 280 AW	280	460	110	480	337	445	366	100	85	80	3.0	1.0	4.0	8500	17000	82	
GE 300 AW	300	480	110	490	356	460	388	100	90	80	3.0	1.0	3.5	8650	17300	87	
GE 320 AW	320	520	116	540	380	500	405	105	91	95	4.0	1.1	4.0	10600	21200	109	
GE 340 AW	340	540	116	550	380	510	432	105	91	95	4.0	1.1	4.0	11800	23600	114	
GE 360 AW	360	560	125	575	400	535	452	115	95	95	4.0	1.1	4.0	12700	25500	129	



GE AX SERIES

Description:

GE-AX-Series is our 2 piece metric range of thrust spherical bearings. A lubrication groove is provided on the raceway for applications requiring re-lubrication after installation.

Material Specifications:

Outer Ring: Bearing Steel 100Cr6, hardened and precision ground. Ball: Bearing Steel 100Cr6, hardened and phosphate.

Features:

- Metric bore sizes
- Low cost
- Maintenance required
- Up to 140mm bore sizes available

Possible Applications:

- Light to heavy industrial/mechanical applications
- Construction equipment
- Agricultural equipment
- Hydraulic applications

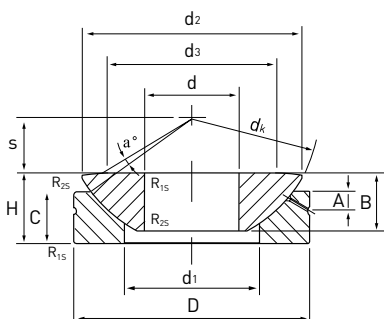
Temperature Range:

-54°C to +121°C

Specification:

ELV & RoHS compliant

GE AX SERIES



- Outer Ring:** Bearing Steel 100Cr6, Hardened, Precision Ground
- Ball:** Bearing Steel 100Cr6, Hardened, Phosphate
- Specification:** ELV and RoHS Compliant



Part No.	Dimensions mm														Load Ratings KN		Weight kg
	d	D	H	dK	d1	d2	d3	B	C	S	A	R1s	R2s	α	dyn.	stat.	
GE 10 AX	10	30	9.5	32	16.5	27.5	21	7.9	6	7	3	0.6	0.2	10	24	120	0.04
GE 12 AX	12	35	13	37	19.5	32	24	9.3	9	8	4	0.6	0.2	9	32.5	163	0.07
GE 15 AX	15	42	15	45	24	38.9	29	10.7	11	10	5	0.6	0.2	7	52	260	0.12
GE 17 AX	17	47	16	50	28	43.4	34	11.5	11.5	11	5	0.6	0.15	6	58.5	300	0.16
GE 20 AX	20	55	20	60	33.5	50	40	14.3	13	12.5	6	1.0	0.3	6	75	375	0.25
GE 25 AX	25	62	22.5	66	34.5	57.5	45	16	17	14	6	1.0	0.3	7	129	640	0.38
GE 30 AX	30	75	26	80	44	69	56	18	19.5	17.5	8	1.0	0.3	6	170	850	0.65
GE 35 AX	35	90	28	98	52	84	66	22	20	22	8	1.0	0.3	6	260	1290	1.0
GE 40 AX	40	105	32	114	59	98	78	27	22	24.5	9	1.0	0.3	6	375	1860	1.6
GE 45 AX	45	120	36.5	130	68	112	89	31	25	27.5	11	1.0	0.3	6	490	2450	2.4
GE 50 AX	50	130	42.5	140	69	122.5	98	33.5	32	30	10	1.0	0.3	5	655	3250	3.3
GE 60 AX	60	150	45	160	86	140	108	37	33	35	12.5	1.0	0.3	7	735	3650	4.5
GE 70 AX	70	160	50	170	95	149.5	121	40	36	35	13.5	1.0	0.3	6	800	4050	5.5
GE 80 AX	80	190	50	194	108	168	130	42	36	42.5	14.5	1.0	0.3	6	1040	5200	7.0
GE 100 AX	100	210	59	220	133	195.5	155	50	42	45	15	1.0	0.3	7	1200	6000	10.5
GE 120 AX	120	230	64	245	154	214	170	52	45	52.5	16.5	1.0	0.3	8	1250	6200	13.0
GE 140 AX	140	260	72	272	176	244	198	61	50	52.5	23	1.5	0.6	6	1630	8150	18.0
GE 160 AX	160	290	77	310	199	272	213	65	52	65	23	1.5	0.6	7	1900	9500	23.0
GE 180 AX	180	320	86	335	224	300	240	70	60	67.5	26	1.5	0.6	8	2120	10600	31.0
GE 200 AX	200	340	87	358	246	321	265	74	60	70	27	1.5	0.6	8	2360	11800	34.0



SPHERICAL BEARINGS



GE SW SERIES

Description:

GE-SW-Series is our 2 piece metric range of angular contact bearings incorporating a thin PTFE fabric between the ball and the outer ring – suitable for high shock loads and medium to heavy industrial/mechanical load applications requiring low friction. They do not require maintenance.

Material Specifications:

Outer Ring: Bearing Steel 100Cr6, hardened and phosphate. Ball: Bearing Steel 100Cr6, hardened, precision ground and hard chrome plated. Liner: PTFE fabric.

Features:

Metric bore sizes
Low cost Maintenance required Up to 140mm bore sizes available

Possible Applications:

Light to heavy industrial/mechanical applications
Construction equipment
Agricultural equipment
Hydraulic applications

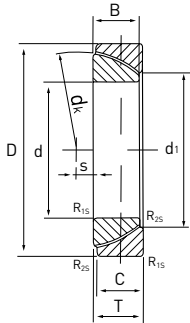
Temperature Range:

-54°C to +121°C

Specification:

ELV & RoHS compliant

GE SW SERIES



Outer Ring:

Bearing Steel 100Cr6,
Hardened, Phosphate

Ball:

Bearing Steel 100Cr6, Hardened,
Precision Ground, Hard Chrome Plated

Liner:

PTFE Fabric

Specification:

ELV and RoHS Compliant



Part No.	Dimensions mm										Load Ratings		Weight
	d	D	T	dk	d ₁	B	C	S	R ₁₅ MIN	R ₂₅ MIN	dyn.	stat.	
GE 25 SW	25	47	15	42.5	31.4	14	14	1.0	0.6	0.2	71	140	0.14
GE 28 SW	28	52	16	47	35.7	15	15	1.0	1.0	0.3	90	180	0.18
GE 30 SW	30	55	17	50	36.1	16	16	2.0	1.0	0.3	95	190	0.22
GE 32 SW	32	58	17	52	37.5	17	16	2.0	1.0	0.3	102	204	0.24
GE 35 SW	35	62	17	50	42.4	17	17	2.0	1.0	0.3	116	232	0.28
GE 40 SW	40	68	19	60	46.8	18	18	1.5	1.0	0.3	134	270	0.34
GE 45 SW	45	75	20	66	52.8	19	19	1.5	1.0	0.3	160	320	0.43
GE 50 SW	50	80	20	74	59.1	19	19	4.0	1.0	0.3	176	355	0.47
GE 55 SW	55	90	23	80	62	22	22	4.0	1.5	0.5	220	440	0.70
GE 60 SW	60	95	23	86	68.1	22	22	5.0	1.5	0.6	240	480	0.75
GE 65 SW	65	100	23	92	75.6	22	22	5.0	1.5	0.6	260	520	0.8
GE 70 SW	70	110	25	102	62.2	24	24	7.0	1.5	0.6	315	630	1.0
GE 75 SW	75	115	25	107	84.4	25	25	7.9	1.5	0.6	345	670	1.1
GE 80 SW	80	125	29	115	90.5	27	27	10	1.5	0.6	375	750	1.6
GE 85 SW	85	130	29	122	94.8	29	26.5	9.4	1.5	0.6	425	810	1.7
GE 90 SW	90	140	32	130	103.3	30	30	11	2.0	0.6	480	965	2.2
GE 95 SW	95	145	32	135	104.4	32	29.5	10.8	2.0	0.6	500	1000	2.3
GE 100 SW	100	150	32	140	114.3	30	30	12	2.0	0.6	520	1040	2.4
GE 105 SW	105	160	35	148	113.8	35	32.5	12.3	2.0	2.0	565	1250	2.8
GE 110 SW	110	170	38	160	125.8	36	36	15	2.5	0.6	710	1430	3.7
GE 120 SW	120	180	38	170	135.4	36	36	17	2.5	0.6	765	1530	4.0
GE 130 SW	130	200	45	190	148	42	42	20	2.5	0.6	965	1930	6.0
GE 140 SW	140	210	45	200	160.8	42	42	20	2.5	0.6	1020	2040	6.4
GE 150 SW	150	225	48	213	170.9	45	45	21	3.0	1.0	1180	2360	7.9
GE 160 SW	160	240	51	225	181.4	48	48	21	3.0	1.0	1340	2700	9.6
GE 170 SW	170	260	57	250	194.3	54	54	27	3.0	1.0	1660	3350	13.0
GE 180 SW	180	280	65	260	205.5	61	61	21	3.0	1.0	2000	4000	17.5
GE 190 SW	190	290	64	275	211.8	61	61	29	3.0	1.0	2080	4150	18.0
GE 200 SW	200	310	70	290	229.2	66	66	26	3.0	1.0	2360	4750	23.0



SPHERICAL BEARINGS



GE SX SERIES

Description:

GE-SX-Series is our 2 piece metric range of angular contact bearings. Ball and race sliding surfaces are phosphate treated for increased lubricity. A lubrication groove is provided on the raceway for applications requiring re-lubrication after installation.

Material Specification:

Outer Ring: Bearing Steel 100Cr6, hardened and phosphate. Ball: Bearing Steel 100Cr6, hardened and phosphate.

Features:

Metric bore sizes
Low cost
Maintenance required
Up to 140mm bore sizes available

Possible Applications:

Light to heavy industrial/mechanical applications
Construction equipment
Agricultural equipment
Hydraulic applications

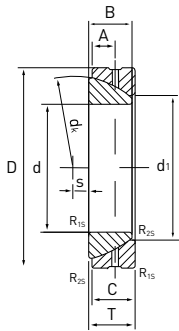
Temperature Range:

-54°C to +121°C

Specification:

ELV & RoHS compliant

GE SX SERIES



Outer Ring: Bearing Steel 100Cr6, Hardened, Phosphate

Ball Bearing Steel 100Cr6, Hardened, Phosphate

Specification: ELV and RoHS Compliant



Part No.	Dimensions mm													Weight kg
	d	D	T	dk	d ₁	B	C	S	A	R _{15 min}	R _{25 min}	dyn. C	stat. Co	
GE 25 SX	25	47	15	42.5	31.4	14	14	1	7.5	0.6	0.2	47.5	236	0.13
GE 28 SX	28	52	16	47	35.7	15	15	1	8	1.0	0.3	60	300	0.17
GE 30 SX	30	55	17	50	36.1	16	16	2	8.5	1.0	0.3	63	315	0.21
GE 32 SX	32	58	17	52	37.5	17	16	2	8.5	1.0	0.3	71	354	0.24
GE 35 SX	35	62	18	56	42.4	17	17	2	9	1.0	0.3	76.5	390	0.27
GE 40 SX	40	68	19	60	46.8	18	18	1.5	9.5	1.0	0.3	90	450	0.32
GE 45 SX	45	75	20	66	52.9	19	19	1.5	10	1.0	0.3	106	530	0.41
GE 50 SX	50	80	20	74	59.1	19	19	4	10	1.0	0.3	118	585	0.45
GE 55 SX	55	90	23	80	62	22	22	4	11.5	1.5	0.6	146	735	0.67
GE 60 SX	60	95	23	86	68.1	22	22	5	11.5	1.5	0.6	160	800	0.72
GE 65 SX	65	100	23	92	75.6	22	22	5	11.5	1.5	0.6	173	865	0.76
GE 70 SX	70	110	25	102	82.2	24	24	7	12.5	1.5	0.6	208	1040	1.0
GE 75 SX	75	115	25	107	84.4	25	24	7.9	12.5	1.5	0.6	220	1129	1.1
GE 80 SX	80	125	29	115	90.5	27	27	10	14.5	1.5	0.6	250	1250	1.5
GE 85 SX	85	130	29	122	94.8	29	26.5	9.4	14.5	1.5	0.6	284	1422	1.6
GE 90 SX	90	140	32	130	103.3	30	30	11	16	2.0	0.6	320	1600	2.1
GE 95 SX	95	145	32	135	104.4	32	29.5	10.8	16	2.0	0.6	335	1750	2.2
GE 100 SX	100	150	32	140	114.3	30	30	12	16	2.0	0.6	345	1760	2.3
GE 105 SX	105	160	35	148	113.8	35	32.5	12.3	17.5	2.0	0.6	423	2116	2.9
GE 110 SX	110	170	38	160	125.8	36	36	15	19	2.5	0.6	475	2360	3.6
GE 120 SX	120	180	38	170	135.4	36	36	17	19	2.5	0.6	510	2550	3.9
GE 130 SX	130	200	45	190	148	42	42	20	22.5	2.5	0.6	640	3200	5.9
GE 140 SX	140	210	45	200	160.6	42	42	20	22.5	2.5	0.6	680	3450	6.3
GE 150 SX	150	225	48	213	170.9	45	45	21	24	3.0	1.0	780	3900	7.7
GE 160 SX	160	240	51	225	181.4	48	48	21	25.5	3.0	1.0	900	4500	9.4
GE 170 SX	170	260	57	250	194.3	54	54	27	28.5	3.0	1.0	1100	5500	12.0
GE 180 SX	180	280	64	260	205.5	61	61	21	32	3.0	1.0	1320	6700	17.0
GE 190 SX	190	290	64	275	211.8	61	61	29	32	3.0	1.0	1370	6950	18.0
GE 200 SX	200	310	70	290	229.2	66	66	26	35	3.0	1.0	1560	7800	22.5



SPHERICAL BEARINGS



GXSW SERIES

Description:

GXSW Series is our 2-piece metric range of general purpose spherical plain bearings incorporating a thin PTFE fabric between the ball and the outer ring, suitable for high shock loads and medium to heavy industrial/mechanical load applications requiring low friction. They do not require maintenance.

Material Specifications:

Outer ring: Steel 070M20, zinc plated and clear trivalent passivate.
 Ball: Bearing steel 100Cr6, hardened and electro-less nickel plated.
 Liner: High temperature PTFE composite.

Features

- Metric bore sizes
- Low friction
- High shock loads
- Extended wear life
- No maintenance

Possible Applications

- Medium/heavy industrial/mechanical
- Construction equipment
- Agricultural equipment
- Recreational vehicles
- High precision motion control

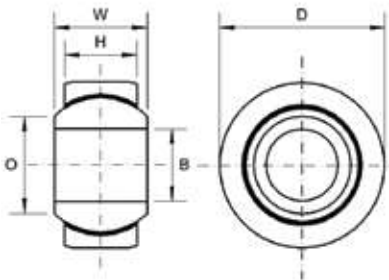
Temperature Range

-200°C to +260°C

Specification

ELV & RoHS compliant

GXSW SERIES: MAINTENANCE FREE SPHERICAL BEARING (METRIC)



- Outer Ring:** Steel 070M20, Zinc Plated and Clear Trivalent Passivate
- Ball:** Bearing Steel 100Cr6, Hardened and Electro-less Nickel Plated
- Liner:** High Temperature PTFE Composite
- Specification:** ELV and RoHS Compliant



Part No.	Bore Size	W	H	D	C	Static Load Rating (Newtons) Radial
GXSW-M05	5	8	6.00	13	1x15°	12,500
GXSW-M06	6	9	6.75	15	1x15°	15,500
GXSW-M08	8	12	9	18	1.2x15°	27,800
GXSW-M10	10	14	10.5	21	1.2x15°	39,000
GXSW-M12	12	16	12	24.5	1.2x15°	53,500
GXSW-M14	14	19	13.5	28	1.5x15°	70,000
GXSW-M16	16	21	15	31.5	1.5x15°	88,000
GXSW-M18	18	23	16.5	34.5	1.5x15°	106,500
GXSW-M20	20	25	18	38	1.5x15°	130,000
GXSW-M22	22	28	20	41	1.5x15°	162,000
GXSW-M25	25	31	22	46	1.5x15°	204,000

GXSW SERIES: MAINTENANCE FREE SPHERICAL BEARING (IMPERIAL)

Part No.	Bore Size	W	H	D	C	Static Load Rating (Newtons) Radial
GXSW-04	1/4	0.375	0.281	0.6094	0.039x15°	15,500
GXSW-05	5/16	0.437	0.344	0.7500	0.047x15°	27,800
GXSW-06	3/8	0.500	0.406	0.8437	0.047x15°	39,000
GXSW-07	7/16	0.562	0.437	1.000	0.047x15°	44,000
GXSW-08	1/2	0.625	0.500	1.0937	0.059x15°	53,500
GXSW-10	5/8	0.750	0.562	1.3125	0.059x15°	88,000
GXSW-12	3/4	0.875	0.687	1.500	0.059x15°	130,000



SPHERICAL BEARINGS



GXSW SS SERIES

Description:

GXSW SS-Series is our 2-piece metric range of general purpose spherical plain bearings incorporating a thin PTFE fabric between the ball and the outer ring, suitable for high shock loads and medium to heavy industrial/mechanical load applications requiring low friction. They do not require maintenance.

Material Specifications:

Outer ring: Stainless steel 304L. Ball: Stainless steel 440C.
Liner: High temperature PTFE composite.

Features

- Metric bore sizes
- Low friction
- High shock loads
- Extended wear life
- No maintenance

Possible Applications

- Medium/heavy industrial/mechanical Construction equipment
- Agricultural equipment
- Recreational vehicles
- High precision motion control

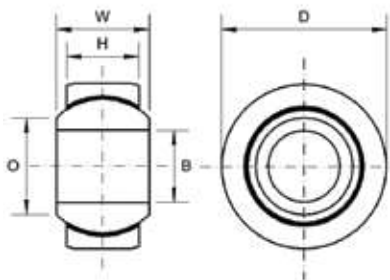
Temperature Range

-200°C to +260°C

Specification

ELV & RoHS compliant

GXSW SERIES: MAINTENANCE FREE SPHERICAL BEARING (METRIC)

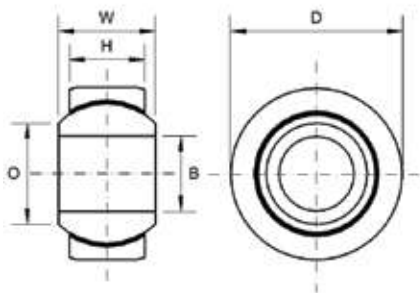


- Outer Ring:** Stainless Steel 304
- Ball:** Stainless Steel 440C
- Liner:** High Temperature PTFE Composite
- Specification:** ELV and RoHS Compliant



Part No.	Bore Size	W	H	D	C	Static Load Rating (Newtons) Radial
GXSW-M05-SS	5	8	6.00	13	1x15°	12,500
GXSW-M06-5SS	5	9	6.75	15	1x15°	15,500
GXSW-M06-SS	6	9	6.75	15	1x15°	15,500
GXSW-M08-6SS	6	12	9	18	1.2x15°	27,800
GXSW-M08-SS	8	12	9	18	1.2x15°	27,800
GXSW-M10-8SS	8	14	10.5	21	1.2x15°	39,000
GXSW-M10-SS	10	14	10.5	21	1.2x15°	39,000
GXSW-M12-10SS	10	16	12	24.5	1.2x15°	53,500
GXSW-M12-SS	12	16	12	24.5	1.2x15°	53,500
GXSW-M14-12SS	12	19	13.5	28	1.5x15°	70,000
GXSW-M14-SS	14	19	13.5	28	1.5x15°	70,000
GXSW-M16-14SS	14	21	15	31.5	1.5x15°	88,000
GXSW-M16-SS	16	21	15	31.5	1.5x15°	88,000
GXSW-M18-16SS	16	23	16.5	34.5	1.5x15°	106,500
GXSW-M18-SS	18	23	16.5	34.5	1.5x15°	106,500
GXSW-M20-18SS	18	25	18	38	1.5x15°	130,000
GXSW-M20-SS	20	25	18	38	1.5x15°	130,000
GXSW-M22-20SS	20	28	20	41	1.5x15°	162,000
GXSW-M22-SS	22	28	20	41	1.5x15°	162,000
GXSW-M25-SS	25	31	22	46	1.5x15°	204,000
GXSW-M25-20SS	20	31	22	46	1.5x15°	204,000

GXSW SERIES: MAINTENANCE FREE SPHERICAL BEARING (IMPERIAL)



- Outer Ring:** Stainless Steel 304
- Ball:** Stainless Steel 440C
- Liner:** High Temperature PTFE Composite
- Specification:** ELV and RoHS Compliant



Part No.	Bore Size	W	H	D	C	Static Load Rating (Newtons) Radial
GXSW-04-SS	1/4	0.375	0.281	0.6094	0.039x15°	24,000
GXSW-05-4SS	1/4	0.437	0.344	0.7500	0.047x15°	41,200
GXSW-05-SS	5/16	0.437	0.344	0.7500	0.047x15°	41,200
GXSW-06-5SS	5/16	0.500	0.406	0.8437	0.047x15°	58,900
GXSW-06-SS	3/8	0.500	0.406	0.8437	0.047x15°	58,900
GXSW-07-6SS	3/8	0.562	0.437	1.000	0.047x15°	68,950
GXSW-07-SS	7/16	0.562	0.437	1.000	0.047x15°	68,950
GXSW-08-7SS	7/16	0.625	0.500	1.0937	0.059x15°	79,000
GXSW-08-SS	1/2	0.625	0.500	1.0937	0.059x15°	79,000
GXSW-10-8SS	1/2	0.750	0.562	1.3125	0.059x15°	124,600
GXSW-10-SS	5/8	0.750	0.562	1.3125	0.059x15°	124,600
GXSW-12-10SS	5/8	0.875	0.687	1.500	0.059x15°	183,400
GXSW-12	3/4	0.875	0.687	1.500	0.059x15°	183,400





SPHERICAL BEARINGS



COM SERIES

Description:

COM-Series is our 2-piece metric range of general purpose spherical plain bearings. the "T" design incorporates a thin PTFE fabric between the ball and the outer ring. Suitable for high shock loads and medium industrial/mechanical load applications requiring low friction. The COMT series do not require maintenance. Dimensions suited to auto-sport and racing applications.

Material Specifications:

Outer ring: Bearing steel 100Cr6 and stainless steel 304L. Ball: Bearing steel 100Cr6, heat treated and electro-less nickel plated and stainless steel 440C. Liner: High temperature PTFE composite.

Features

Imperial bore sizes
Low friction
High shock loads
Motor sport dimensions
No maintenance

Possible Applications

Medium / heavy industrial/mechanical applications
Motor sport and re-creational vehicles

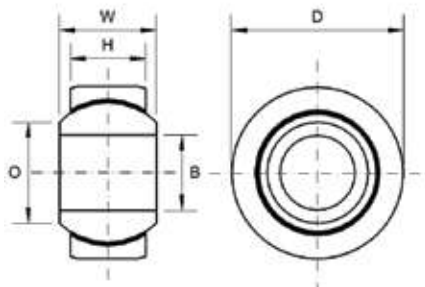
Temperature Range

-200°C to +260°C

Specification

ELV & RoHS compliant

COM SERIES: MAINTENANCE FREE SPHERICAL BEARINGS (IMPERIAL)



- Outer Ring:** Bearing Steel 100Cr6
- Ball:** Bearing Steel 100Cr6, Hardened and Electro-less Nickel Plated
- Liner:** (Indicated by part No. ending with 'T') High Strength PTFE fabric
- Specification:** ELV and RoHS Compliant



Part No. Unsealed	Bore Size	W	H	D	O	Static Load Rating (Newtons) Radial
COM-03	3/16	0.281	0.218	0.563	0.293	14,464
COM-03T	3/16	0.281	0.218	0.563	0.293	21,680
COM-04	1/4	0.343	0.250	0.656	0.364	22,015
COM-04T	1/4	0.343	0.250	0.656	0.364	33,020
COM-05	5/16	0.375	0.281	0.750	0.419	28,800
COM-05T	5/16	0.375	0.281	0.750	0.419	43,200
COM-06	3/8	0.406	0.312	0.813	0.516	37,361
COM-06T	3/8	0.406	0.312	0.813	0.516	56,040
COM-07	7/16	0.437	0.343	0.906	0.530	42,048
COM-07T	7/16	0.437	0.343	0.906	0.530	63,070
COM-08	1/2	0.500	0.390	1.000	0.640	58,934
COM-08T	1/2	0.500	0.390	1.000	0.640	88,390
COM-09	9/16	0.562	0.437	1.094	0.710	73,967
COM-09T	9/16	0.562	0.437	1.094	0.710	110,940
COM-10	5/8	0.625	0.500	1.187	0.780	94,658
COM-10T	5/8	0.625	0.500	1.187	0.780	141,960
COM-12	3/4	0.750	0.593	1.437	0.920	141,982
COM-12T	3/4	0.750	0.593	1.437	0.920	212,940
COM-14	7/8	0.875	0.703	1.563	0.980	186,639
COM-14T	7/8	0.875	0.703	1.563	0.980	279,930
COM-16	1	1.000	0.797	1.750	1.118	245,534
COM-16T	1	1.000	0.797	1.750	1.118	368,250

For stainless steel add 'SS' to part no. For example 'COM-03 SS'



SPHERICAL BEARINGS



SX SERIES

Description:

SX series Spherical Bearings have been developed for use in General Engineering applications where medium to high loads are encountered. Within their load carrying capacity they will withstand shock loading and high frequency oscillation.

Material Specifications:

Outer ring: 100Cr6, heat treated, Phosphated all over.
Ball: 100Cr6, heat treated, Phosphated all over.

Features

Metric and Imperial sizes available
Can be used in application involving shock loading and high frequency oscillation.

Medium / heavy industrial/mechanical applications
Construction equipment
Agricultural equipment and motor sport.

-40°C to +150°C

Specification

ELV & RoHS compliant

Possible Applications

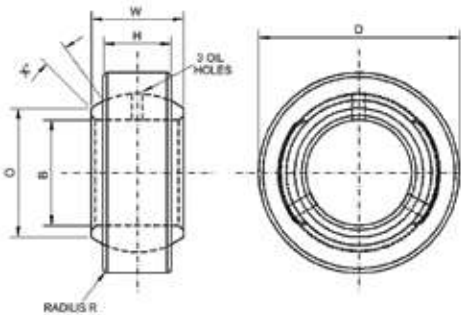
Temperature Range

Interchange table

Dunlop	Rose	NMB
MX-M (metric)	RBJ-M	RBJ-M
MX (imperial)	RBJ	RBJ

Note: Manufacturers part numbers are used for descriptive purposes only and may not be direct equivalent products.

SX SERIES: MAINTENANCE REQUIRED SPHERICAL BEARINGS (IMPERIAL)



Outer Ring: Bearing Steel 100Cr6, Heat Treated, Phosphate all over except track

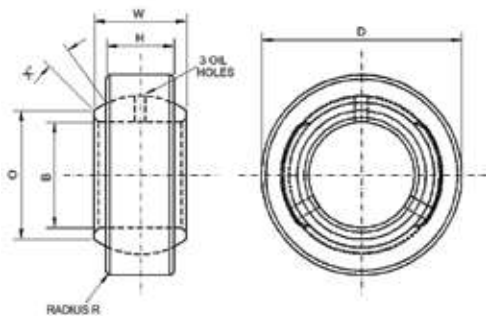
Ball: Bearing Steel 100Cr6, Heat Treated, Phosphate all over

Specification: ELV and RoHS Compliant



Part No.	B	D	W	H	O	R	X deg	Static Load Rating (Newtons) Radial
SX-03	.1898	.5625	.2187	.1562	.343	.015	10	19710
SX-04	.2500	.5625	.2187	.1562	.343	.015	10	19710
SX-05	.3125	.6250	.2500	.1875	.390	.015	10	27260
SX-06	.3750	.7500	.3125	.2187	.546	.015	9.5	42660
SX-08	.5000	.9375	.4375	.3125	.610	.015	11	72570
SX-10	.6250	1.1250	.5000	.3437	.750	.015	11.5	96100
SX-12	.7500	1.3125	.5625	.3750	.947	.031	10.5	127480
SX-16	1.0000	1.5625	.6875	.4375	1.125	.031	12	179460
SX-18	1.1250	1.8750	.8125	.5625	1.421	.062	9.5	287330
SX-20	1.2500	2.0000	.8125	.5625	1.562	.062	9	307920
SX-24	1.5000	2.5000	.9375	.6250	1.906	.062	9	415830

SX SERIES: MAINTENANCE REQUIRED SPHERICAL BEARINGS (METRIC)



Outer Ring: Bearing Steel 100Cr6, Heat Treated, Phosphate all over except track

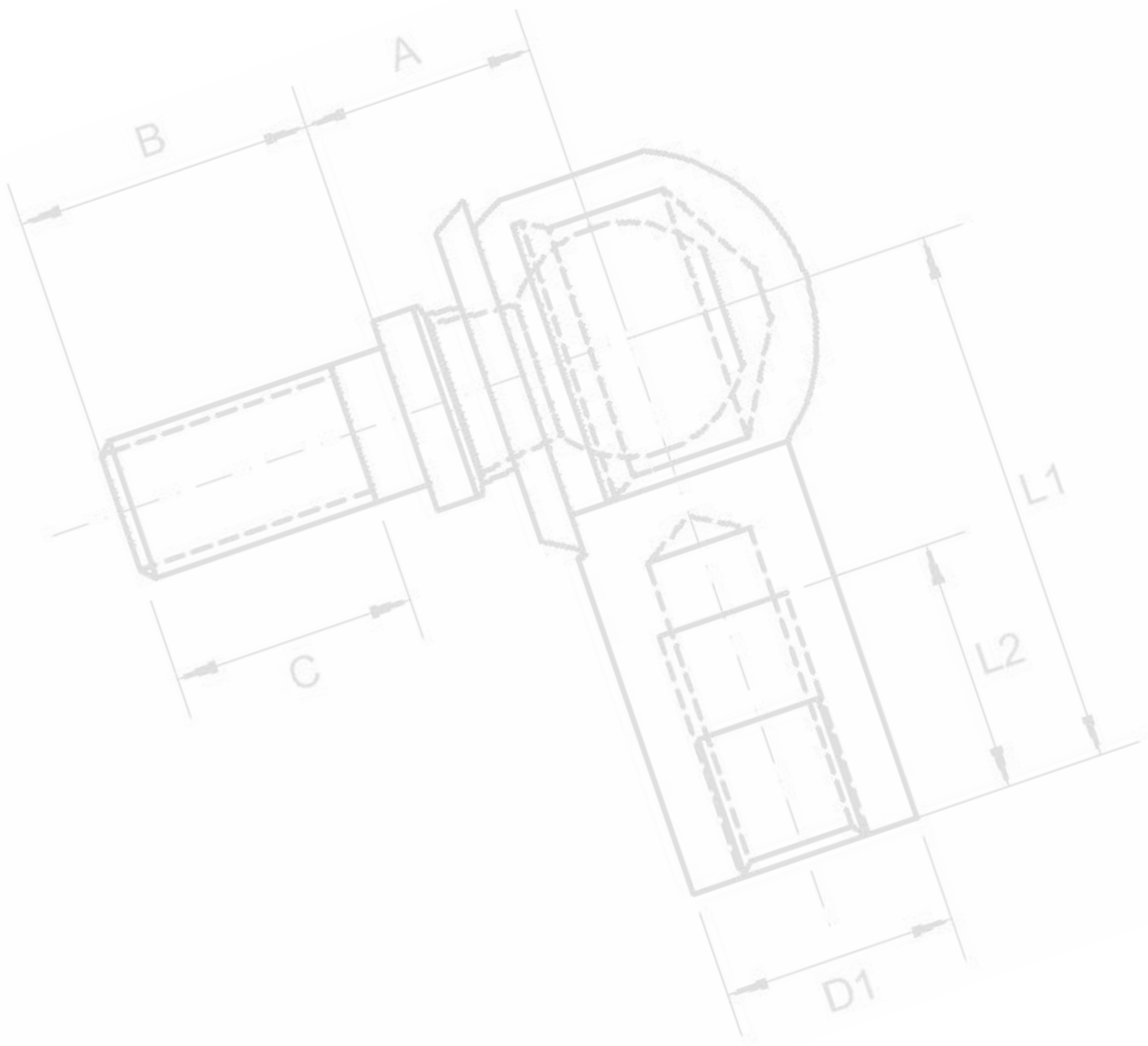
Ball: Bearing Steel 100Cr6, Heat Treated, Phosphate all over

Specification: ELV and RoHS Compliant



Part No.	B	D	W	H	O	R	X deg	Static Load Rating (Newtons) Radial
SX-M04	4	14	5,50	4,00	8,71	0,4	9,5	19710
SX-M06	6	14	5,50	4,00	8,71	0,4	9,5	19710
SX-M08	8	16	6,25	4,75	10,12	0,4	8	27260
SX-M10	10	20	8,00	5,50	13,86	0,4	10	42660
SX-M12	12	24	11,00	8,00	15,55	0,4	10,5	72570
SX-M16	16	28	12,75	8,75	19,14	0,4	11,5	96100
SX-M18	18	34	14,25	9,50	24,03	0,8	10,5	127480
SX-M26	26	40	17,50	11,00	28,58	0,8	12,5	179460
SX-M28	28	48	20,50	14,25	36,26	1,6	9,5	287330
SX-M32	32	50	20,50	14,25	39,72	1,6	8,5	307920
SX-M38	38	64	23,75	16,00	48,45	1,6	9	415830





**English****Español****Italiano****Deutsch****Français****Nederlands****Polskie****A series**

Serie A • Serie A • A-Serie

Série A • A-serie • seria A

90**BL series**

Serie BL • Serie BL • BL-Serie

Série BL • BL-serie • seria BL

92**BM series**

Serie BM • Serie BM • BM-Serie

Série BM • BM-serie • seria BM

93**C series**

Serie C • Serie C • C-Serie

Série C • C-serie • seria C

94**D series**

Serie D • Serie D • D-Serie

Série D • D-serie • seria D

95**F series**

Serie F • Serie F • F-Serie

Série F • F-serie • seria F

96**I series**

Serie I • Serie I • I-Serie

Série I • I-serie • seria I

98**M series**

Serie M • Serie M • M-Serie

Série M • M-serie • seria M

99**P series**

Serie P • Serie P • P-Serie

Série P • P-serie • seria P

100**Q series**

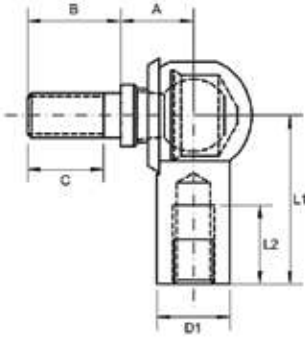
Serie Q • Serie Q • Q-Serie

Série Q • Q-serie • seria Q

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BALL JOINTS



A SERIES: AMG - AIG

Description:

A-Series is our 4-piece standard range of nylon lined ball joints suitable for light to medium industrial/mechanical load applications requiring smooth action and good wear resistance. Available in both metric and imperial thread sizes. A-Series ball joints are also available without the ball stud allowing for assembly on to a pre-positioned stud. Please refer to compatible ball stud options in our miscellaneous product section. Neoprene gaiter helps resist dirt contamination, if gaiter is not required, please remove the letter G from the part number.

Material Specifications:

Body: Steel 230M07PB zinc plated and clear trivalent passivate.
 Ball stud: Steel 230M07PB zinc plated and clear trivalent passivate.
 Liner: Nylon 6 white. 300L Stainless Steel. Gaiter: Neoprene.

Features

- Metric & imperial thread sizes
- Ultra smooth action
- Can be assembled in situ
- Good wear resistance
- Lubricated

Possible Applications

- Industrial equipment
- Construction equipment
- Agricultural equipment
- Lawn & garden equipment

Temperature Range

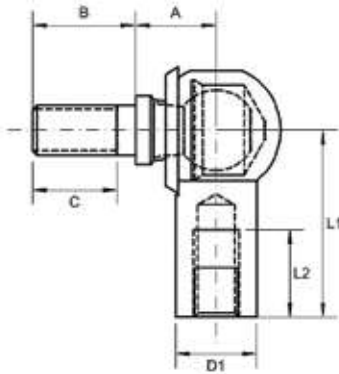
-30°C to +120°C

Specification

ELV & RoHS compliant



AMG SERIES: LINER RETAINED BALL JOINTS (METRIC)

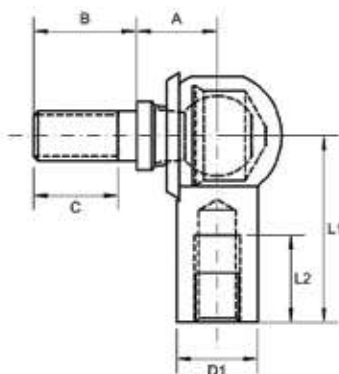


- Body:** Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate OR Zinc Plated and Yellow Hexavalent Passivate
- Liner:** Nylon 6
- Ball Stud:** Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate
- Dust Seal:** Neoprene Rubber
- Specification:** ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Body Thread	Stud Thread	Ball Dia	L1	L2 Min	Stud A/F	A	B	C Min	D1
AMG6	AMG6LH	M6X1.00	M6X1.00	10	25.0	11.5	8	11.0	12.5	10.0	10
AMG6/2	AMG6/LH	M6X1.00	M8X1.25	10	25.0	11.5	8	11.0	12.5	10.0	10
AMG8	AMG8LH	M8X1.25	M8X1.25	13	30.0	14.0	11	13.0	16.5	13.5	13
AMG8/1	AMG8/1LH	M8X1.25	M8X1.25	13	41.0	25.0	11	13.0	16.5	13.5	13
AMG8/6	AMG8/6LH	M8X1.25	M8X1.25	13	41.0	25.0	11	13.0	20.0	13.5	13
AMG8/7	AMG8/7LH	M8X1.25	M8X1.25	13	30.0	14.0	11	13.0	20.0	17.5	13
AMG8/8	AMG8/8LH	M6X1.00	M8X1.25	13	30.0	14.0	11	13.0	16.5	13.5	13
AMG8/10	AMG8/10LH	M8X1.25	M8X1.25	13	30.0	14.0	11	13.0	18.5	15.5	13
AMG8/11	AMG8/11LH	M6X1.00	M8X1.25	13	51.0	25.0	11	13.0	16.5	13.5	13
AMG8/13	AMG8/13LH	M10X1.50	M8X1.25	13	30.0	15.0	11	13.0	16.5	13.5	13
AMG8/14	AMG8/14LH	M8X1.00	M8X1.25	13	25.0	12.0	11	13.0	16.5	13.5	13
AMG10	AMG10LH	M10X1.50	M10X1.50	16	35.0	15.5	13	16.0	20.0	15.0	16
AMG10/1	AMG10/1LH	M12X1.75	M10X1.50	16	45.0	25.5	13	16.0	20.0	15.0	16
AMG10/2	AMG10/2LH	M6X1.00	M10X1.50	16	30.0	10.5	13	14.5	19.0	11.1	16
AMG10/3	AMG10/3LH	M10X1.50	M10X1.50	16	35.0	15.5	13	16.0	25.0	20.0	16
AMG10/5	AMG10/5LH	M10X1.50	M10X1.50	16	35.0	15.5	13	16.0	20.0	15.0	16
AMG12	AMG12LH	M12X1.75	M12X1.75	16	45.0	25.5	13	16.0	20.0	17.0	16
AMG12/1	AMG12/1LH	M16X2.00	M12X1.75	16	45.0	30.0	13	16.0	20.0	17.0	16

AIG SERIES: LINER RETAINED BALL JOINTS (IMPERIAL)



- Body:** Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate OR Zinc Plated and Yellow Hexavalent Passivate
- Liner:** Nylon 6
- Ball Stud:** Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate
- Dust Seal:** Neoprene Rubber
- Specification:** ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Body Thread	Stud Thread	Ball Dia	L1	L2 Min	Stud A/F	A	B	C Min	D1
AIG312	AIG312LH	5/16 UNF	5/16 UNF	0.512	1.181	0.555	0.433	0.512	0.650	0.512	0.512
AIG312/1	AIG312/1LH	5/16 UNF	5/16 UNF	0.512	1.181	0.555	0.433	0.512	0.827	0.750	0.512

For stainless steel add 'SS' to part no. For example 'AMG6 SS'



BALL JOINTS

BL SERIES

Description:

BL-Series is our 4-piece standard range of die cast zinc alloy ball joints suitable for medium industrial/mechanical load applications requiring smooth action and good wear resistance. The body is die cast around the ball giving an ultra smooth surface contact area, the ball stud is hardened and friction welded to the ball. The neoprene gaiter helps resist dirt contamination.

Material Specifications:

Body: Die cast zinc alloy. Ball: 100Cr6 bearing steel. Ball stud: Steel S35C hardened zinc plated and clear trivalent passivated. Gaiter: Neoprene.

Features

Metric thread sizes Ultra smooth action Strong & cost effective High pull out load axial & radial. Good wear resistance. Lubricated

Possible Applications

Industrial equipment Construction equipment Agricultural equipment Lawn & garden equipment

Temperature Range

-30°C to +120°C

Specification

ELV & RoHS compliant

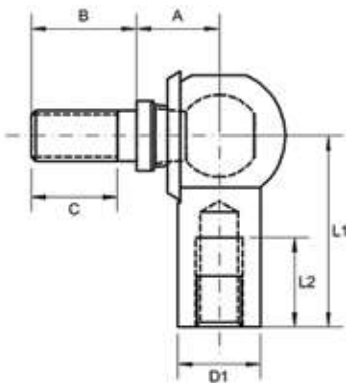


Interchange table

Dunlop	IKO	THK	Alinabal	SKF	Asahi	Rose
BL (metric)	LHSA	BL-D	-	-	-	-

Note: Manufacturers part numbers are used for descriptive purposes only and may not be direct equivalent products.

BL SERIES: DIE CAST BALL JOINTS (METRIC)



- Body:** Die Cast Zinc Alloy
- Ball:** Bearing Steel 100Cr6
- Ball Stud:** S35C, Hardened, Zinc Plated and Clear Trivalent Passivate
- Dust Seal:** Neoprene Rubber
- Specification:** ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Body Thread	Stud Thread	Ball Dia	L1	L2 Min	Stud A/F	A	B	C Min	D1
BL6D	BL6DL	M6X1.00	M10X1.25	8	30	16	10	11.0	15.0	11.0	11
BL8D	BL8DL	M8X1.25	M8X1.25	8	36	19	12	14.0	17.0	12.0	14
BL10BD	BL10BDL	M10X1.50	M10X1.50	10	43	23	14	17.0	26.0	21.0	17
BL10D	BL10DL	M10X1.25	M10X1.25	13	43	23	14	17.0	20.0	15.0	17
BL12BD	BL12BDL	M12X1.75	M12X1.75	13	50	26	17	19.0	30.0	24.0	19
BL12D	BL12DL	M12X1.25	M12X1.25	13	50	26	17	19.0	23.0	17.0	19
BL14BD	BL14BDL	M14X2.00	M14X2.00	13	57	30	19	21.5	40.5	28.0	22
BL14D	BL14DL	M14X1.50	M14X1.50	13	57	30	19	21.5	34.5	22.0	22
BL16BD	BL16BDL	M16X2.00	M16X2.00	13	64	34	22	23.5	42.5	29.0	24
BL16D	BL16DL	M16X1.50	M16X1.50	13	64	34	22	23.5	36.5	23.0	24



BALL JOINTS



BM SERIES

Description:

BM-Series is our 3-piece range of light weight nylon bodied ball joints, suitable for light industrial/mechanical load applications requiring smooth action and good wear resistance. BMG-Series ball joints are also available without the ball stud allowing for assembly on to a pre-positioned stud. Please refer to compatible ball stud options in our miscellaneous product section. BMG-Series ball joints can be moulded directly onto a linkage rod etc. Neoprene gaiter helps resist dirt contamination. If gaiter is not required please remove the letter G from the part number.

Material Specifications:

Body: Nylon 12 grey with graphite additive. Ball stud: Steel 230M07PB zinc plated and clear trivalent passivate. 303L Stainless Steel. Gaiter: Neoprene.

Features

Metric thread sizes
Smooth action. Can be assembled in situ
Good wear resistance
Light weight. Economical
Lubricated

Possible Applications

Light industrial equipment. Light agricultural equipment
Lawn & garden equipment
Engine controls

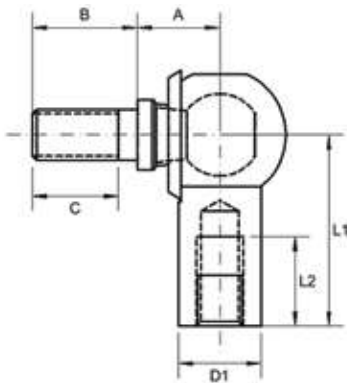
Temperature Range

-30°C to +120°C

Specification

ELV & RoHS compliant

BMG SERIES: LIGHT WEIGHT NYLON BODIED BALL JOINTS (METRIC)



- Body:** Nylon 12 with Graphite Trace
- Ball Stud:** Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate
- Dust Seal:** Neoprene Rubber
- Specification:** ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Body Thread	Stud Thread	Ball Dia	L1	L2 Min	Stud A/F	A	B	C Min	D1
BM5	BM5LH	M5X0.80	M5X0.80	8	20	12	7	9.0	10.2	8.6	10.0
BMG5	BMG5LH	M5X0.80	M5X0.80	8	20	12	7	9.0	10.2	8.6	10.0
BM5/6*	BM5/6LH*	M5X0.80	M5X0.80	8	20	12	7	9.0	10.2	8.6	10.0
BMG5/6*	BMG5/6LH*	M5X0.80	M5X0.80	8	20	12	7	9.0	10.2	8.6	10.0
BM6	BM6LH	M6X1.00	M6X1.00	10	24	14	8	11.0	12.5	10	12.0
BMG6	BMG6LH	M6X1.00	M6X1.00	10	24	14	8	11.0	12.5	10	12.0
BM8	BM8LH	M8X1.25	M8X1.25	13	30	17	11	13.0	16.5	13.5	15.0
BMG8	BMG8LH	M8X1.25	M8X1.25	13	30	17	11	13.0	16.5	13.5	15.0

BMG5/6* Cross hole for locking pin.

For stainless steel add 'SS' to part no. For example 'BM5 SS'



BALL JOINTS



C SERIES: CMG

Description:

C-Series is our 5-piece range of spring retained and lockable ball joints suitable for medium industrial/mechanical load applications, inner ring retains the ball stud while the safety clip prevents the ball stud from being removed. CMG/1-Series ball joints are also available without the ball stud allowing for assembly on to a pre-positioned stud, please refer to compatible ball stud options in our miscellaneous product section.

Material Specifications:

Body: Steel 230M07PB zinc plated and clear trivalent passivate. Ball stud: Steel 212A42 hardened and zinc plated and clear trivalent passivate. Inner ring and safety clip: Spring steel to BS5216. Gaiter: Neoprene.

Features

- Metric thread sizes
- Lubricated
- Can be assembled in situ
- Good wear resistance
- Medium duty
- Safety features

Possible Applications

- Industrial equipment
- Construction equipment
- Agricultural equipment
- Lawn & garden equipment

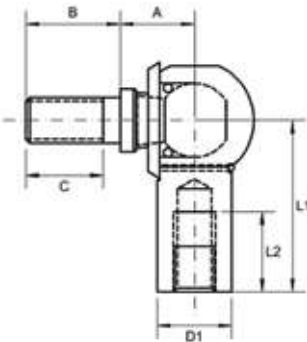
Temperature Range

-30°C to +90°C

Specification

ELV & RoHS compliant

CMG SERIES: DIN STANDARD BALL JOINTS (METRIC)



- Body:** Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate
- Ball Stud:** Steel 212A42, Hardened, Zinc Plated and Clear Trivalent Passivate
- Safety Clip:** Spring Steel
- Outer Clip:** Spring Steel
- Dust Seal:** Neoprene Rubber
- Specification:** ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Body Thread	Stud Thread	Ball Dia	Body Flats	L1	L2 Min	Stud A/F	A	B	C Min	D1
CM5/1	CM5/1LH	M5X0.80	M5X0.80	8	7	22	10	7	9.0	10.2	7.7	8.0
CMG5/1	CMG5/1LH	M5X0.80	M5X0.80	8	7	22	10	7	9.0	10.2	7.7	8.0
CM6/1	CM6/1LH	M6X1.00	M6X1.00	10	9	25	11.5	8	11.0	12.5	10.0	10.0
CMG6/1	CMG6/1LH	M6X1.00	M6X1.00	10	9	25	11.5	8	11.0	12.5	10.0	10.0
CM8/1	CM8/1LH	M8X1.25	M8X1.25	13	11	30	14	11	13.0	16.5	14.0	13.0
CMG8/1	CMG8/1LH	M8X1.25	M8X1.25	13	11	30	14	11	13.0	16.5	14.0	13.0
CM10/1	CM10/1LH	M10X1.50	M10X1.50	16	13	35	15	13	16.0	20.0	17.5	16.0
CMG10/1	CMG10/1LH	M10X1.50	M10X1.50	16	13	35	15	13	16.0	20.0	17.5	16.0
CM12/1	CM12/1LH	M12x1.75	M12x1.75	16	14	35	15	13	16.0	20.0	17.5	16.0
CMG12/1	CMG12/1LH	M12x1.75	M12x1.75	16	14	35	15	13	16.0	20.0	17.5	16.0
CM14/1	CM14/1LH	M14X2.00	M14X2.00	19	19	45	21	16	20.0	28.0	22.0	22.0
CMG14/1	CMG14/1LH	M14X2.00	M14X2.00	19	19	45	21	16	20.0	28.0	22.0	22.0
CM14C/1	CM14C/1LH	M14X1.50	M14X1.50	19	19	45	21	16	20.0	28.0	22.0	22.0
CMG14C/1	CMG14C/1LH	M14X1.50	M14X1.50	19	19	45	21	16	20.0	28.0	22.0	22.0
CM16/1	CM16/1LH	M16X2.00	M16X2.00	19	-	45	21	16	20.0	28.0	22.0	22.0
CMG16/1	CMG16/1LH	M16X2.00	M16X2.00	19	-	45	21	16	20.0	28.0	22.0	22.0



BALL JOINTS



D SERIES: DMG - DIG

Description:

D-Series is our 3-piece range of swaged design ball joints, suitable for medium industrial/mechanical load applications. The swaging of the body produces a permanent assembly with the ball stud. Available in both metric and imperial thread sizes. Neoprene gaiter helps resist dirt contamination. If gaiter is not required please remove the letter G from the part number.

Material Specifications:

Body: Steel 230M07PB zinc plated and clear trivalent passivate. Ball stud: Steel 230M07PB hardened and zinc plated and clear trivalent passivate. Gaiter: Neoprene

Features

Metric & imperial thread
Permanent assembly
High pull out load
Good wear resistance
Lubricated

Possible Applications

Industrial equipment
Construction equipment
Agricultural equipment
Lawn & garden equipment

Temperature Range

-30°C to +120°C

Specification

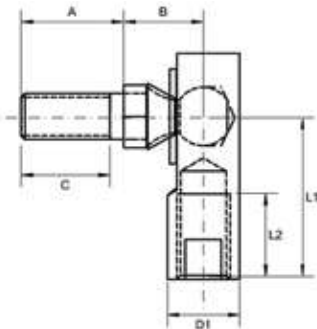
ELV & RoHS compliant

Interchange table

Dunlop	Tuthill	Dunlop	Tuthill
DMG (metric)	SPG-M	DIG (imperial)	SPG

Note: Part numbers used for descriptive purposes only, may not be direct equivalent products.

DMG SERIES: SWAGED RETAINED BALL JOINTS (METRIC)



Body: Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate

Ball Stud: Steel 230M07Pb, Hardened, Zinc Plated and Clear Trivalent Passivate

Dust Seal: Neoprene Rubber

Specification: ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Body Thread	Stud Thread	Ball Dia	L1	L2 Min	Stud A/F	A	B	C Min	D1
DMG6	DMG6LH	M6X1.00	M6X1.00	8.8	24.6	13.5	10	14.0	11.8	11.9	11.0
DMG6/1	DMG6/1LH	M6X1.00	M6X1.00	7.7	30.7	14.0	10	14.3	11.8	11.9	11.1
DMG6/2	DMG6/2LH	M6x1.00	M6X1.00	7.7	30.7	16.0	10	14.3	11.8	11.9	11.1
DMG8	DMG8LH	M8X1.25	M8X1.25	10.3	28.6	15.0	11	18.0	13.6	15.6	13.0
DMG8/1	DMG8/1LH	M8X1.25	M8X1.25	10.3	28.6	15.0	13	20.0	16.1	17.6	13.0
DMG10	DMG10LH	M10X1.50	M10X1.50	12.4	35.0	20.6	13	22.0	18.0	19.6	16.0

DIG SERIES: SWAGED RETAINED BALL JOINTS (IMPERIAL)

Part No. Right Hand	Part No. Left Hand	Body Thread	Stud Thread	Ball Dia	L1	L2 Min	Stud A/F	A	B	C Min	D1
DIG250	DIG250LH	1/4 UNF	1/4 UNF	0.347	0.969	0.531	0.375	0.562	0.466	0.468	0.437
DIG250/1	DIG250/1LH	1/4 BSF	M6x1.0	0.347	0.969	0.531	0.375	0.551	0.466	0.450	0.437
DIG250/2	DIG250/2LH	1/4 BSF	1/4 BSF	0.347	0.969	0.531	0.375	0.562	0.466	0.468	0.437
DIG312	DIG312LH	5/16 UNF	5/16 UNF	0.405	1.125	0.594	0.437	0.688	0.517	0.588	0.500
DIG312/1	DIG312/1LH	5/16 UNF	5/16 UNF	0.405	2.187	1.535	0.437	0.688	0.517	0.588	0.500
DIG375	DIG375LH	3/8 UNF	3/8 UNF	0.488	1.375	0.812	0.500	0.875	0.683	0.775	0.625
DIG375/1	DIG375/1LH	3/8 UNF	3/8 UNF	0.488	1.375	0.812	0.500	0.437	0.683	0.337	0.625
DIG375/2	DIG375/2LH	3/8 UNF	3/8 UNF	0.488	1.375	0.812	0.500	0.630	0.683	0.530	0.625
DIG375/3	DIG375/3LH	3/8 UNF	3/8 UNF	0.488	1.375	0.812	0.500	0.590	0.683	0.490	0.625



BALL JOINTS



F SERIES: FMG - FIG

Description:

F-Series is our 4-piece range of spring retained ball joints suitable for medium industrial/mechanical load applications. Available in both metric and imperial thread sizes. F-Series ball joints are ideal for severe wear conditions and are resistant to vibration and high shock loading. Neoprene gaiter helps resist dirt contamination. If gaiter is not required please remove the letter G from the part number.

Material Specifications:

Body: Steel 230M07PB ferritic nitrocarburised and zinc plated and clear trivalent passivate. Ball stud: Steel 230M07PB ferritic nitrocarburised and zinc plated and clear trivalent passivate. Inner ring: Hardened and tempered spring steel to BS5216. Gaiter: Neoprene.

Features

- Metric & imperial thread sizes
- High pull out load
- High wear conditions
- High shock loads
- Resistant to vibration
- Lubricated

Possible Applications

- Industrial equipment
- Construction equipment
- Agricultural equipment
- Lawn & garden equipment

Temperature Range

-30°C to +120°C

Specification

ELV & RoHS compliant

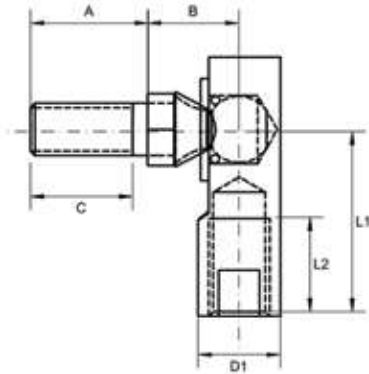
Interchange table

Dunlop	Tuthill	THK	Alinabal	SKF	Asahi	Rose
FMG (metric)	SRG-M	-	-	-	-	-
FIG (imperial)	SRG	-	-	-	-	-

Note: Manufacturers part numbers are used for descriptive purposes only and may not be direct equivalent products.



FMG SERIES: SPRING RETAINED BALL JOINTS (METRIC)



Body: Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate

Ball Stud: Steel 230M07Pb, Hardened, Zinc Plated and Clear Trivalent Passivate

Dust Seal: Neoprene Rubber

Spring: Spring Steel

Specification: ELV and RoHS Compliant



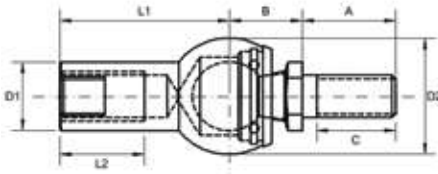
Part No. Right Hand	Part No. Left Hand	Body Thread	Stud Thread	Ball Dia	L1	L2 Min	Stud A/F	A	B	C Min	D1
FMG5	FMG5LH	M5X0.80	M5X0.80	7.75	24.6	12.7	10.00	14.30	11.90	12.0	11.11
FMG6	FMG6LH	M6X1.00	M6X1.00	7.75	24.6	12.7	10.00	14.30	11.90	12.0	11.11
FMG6/1	FMG6/1LH	M6X1.00	M6X1.00	7.75	19.2	7.3	10.00	14.30	11.90	12.0	11.11
FMG8	FMG8LH	M8X1.25	M8X1.25	8.74	28.4	14.2	13.00	17.45	13.50	15.0	12.70
FMG8/1	FMG8/1LH	M8X1.25	M8X1.25	8.74	41.0	25.0	13.00	17.45	13.50	15.0	12.70
FMG8/2	FMG8/2LH	M8X1.25	M8X1.25	8.74	28.4	14.2	13.00	11.50	13.50	9.0	12.70
FMG8/3	FMG8/3LH	M8X1.25	M6X1.00	8.74	28.4	14.2	10.00	12.70	13.50	10.0	12.70
FMG10	FMG10LH	M10X1.50	M10X1.50	10.59	35.0	19.0	13.00	22.23	17.45	20.0	15.88
FMG10/1	FMG10/1LH	M8X1.25	M10X1.50	10.59	35.0	19.0	13.00	22.23	17.45	20.0	15.88
FMG10/2	FMG10/2LH	M8X1.25	M10X1.50	10.59	35.0	19.0	13.00	12.00	17.45	9.5	15.88
FMG10/4	FMG10/4LH	M12X1.25	M10X1.50	10.59	35.0	19.0	15.88	18.00	17.45	15.5	15.88
FMG12	FMG12LH	M12X1.75	M12X1.75	14.10	49.2	25.4	17.00	28.60	22.20	26.0	19.05
FMG12/1	FMG12/1LH	M12X1.75	M10X1.50	14.10	49.2	25.4	17.00	28.60	22.20	26.0	19.05

FIG SERIES: SPRING RETAINED BALL JOINTS (IMPERIAL)

Part No. Right Hand	Part No. Left Hand	Body Thread	Stud Thread	Ball Dia	L1	L2 Min	Stud A/F	A	B	C Min	D1
FIG250	FIG250LH	1/4 UNF	1/4 UNF	0.306	0.969	0.500	0.375	0.562	0.469	0.370	0.437
FIG312	FIG312LH	5/16 UNF	5/16 UNF	0.344	1.125	0.562	0.437	0.687	0.531	0.580	0.500
FIG312/1	FIG312/1LH	BLANK0.312	5/16 UNF	0.344	1.125	0.562	0.437	0.687	0.531	0.580	0.500
FIG312/2	FIG312/2LH	5/16 UNF	5/16 UNF	0.344	1.120	0.562	0.437	0.687	0.531	0.580	0.500
FIG375	FIG375LH	3/8 UNF	3/8 UNF	0.416	1.375	0.750	0.500	0.875	0.687	0.770	0.625
FIG375/1	FIG375/1LH	3/8 UNF	3/8 UNF	0.416	1.772	1.181	0.500	0.787	0.866	0.680	0.625
FIG375/2	FIG375/2LH	3/8 BSF	3/8 UNF	0.416	1.375	0.750	0.500	0.787	0.866	0.680	0.625
FIG375/3	FIG375/3LH	3/8 UNF	3/8 UNF	0.416	1.375	0.750	0.500	0.620	0.688	0.520	0.625
FIG375/4	FIG375/4LH	7/16 UNF	3/8 UNF	0.416	1.375	0.750	0.500	0.620	0.688	0.520	0.625
FIG437/1	FIG437/1LH	7/16 UNEF	7/16 UNF	0.416	1.375	0.750	0.625	0.875	0.687	0.770	0.625
FIG500	FIG500LH	1/2 UNF	1/2 UNF	0.555	1.937	1.000	0.625	1.125	0.875	1.000	0.750



BALL JOINTS



I SERIES: IMG

Description:

I-Series is our 5-piece range of inline nylon lined ball joints suitable for medium industrial/mechanical load applications. IMG has an inner ring that retains the ball stud and has no nylon liner. Available in both metric and imperial thread sizes.

Material Specifications:

Body: Steel 230M07PB case hardened and zinc plated and clear trivalent passivate. IL - Ball stud: Steel 230M07PB zinc plated and clear trivalent passivate. IMG - ball stud: Steel 212A42 induction hardened. Liner: Nylon 6 white (No liner in IMG range). Inner ring and safety clip: Spring steel to BS5216. Gaiter: Neoprene

Features

Metric & imperial thread sizes. Ultra smooth action. High pull out loads. Good wear resistance. Push & pull applications Lubricated. Male to male option

Possible Applications

Industrial equipment
Construction equipment
Agricultural equipment
Lawn & garden equipment

Temperature Range

-40°C to +80°C

Specification

ELV & RoHS compliant

IMG SERIES: IN-LINE FEMALE-MALE BALL JOINTS (METRIC)

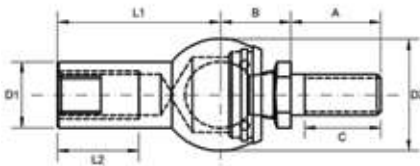
Body: Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate

Ball Stud: Steel 212A42, Hardened, Zinc Plated and Clear Trivalent Passivate

Clip: Spring Steel

Dust Seal: Neoprene Rubber

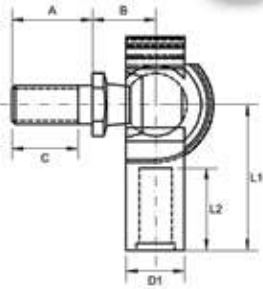
Specification: ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Body Thread	Stud Thread	Ball Dia	Body Flats	L1	L2 Min	Stud A/F	A	B	C Min	D1	D2
IM5	IM5LH	M5X0.80	M5X0.80	8	7	22	10.2	7	10.2	9.0	8.0	8.0	12.8
IMG5	IMG5LH	M5X0.80	M5X0.80	8	7	22	10.2	7	10.2	9.0	8.0	8.0	12.8
IM6	IM6LH	M6X1.00	M6X1.00	10	9	25	11.5	8	12.5	11.0	10.0	10.0	14.8
IMG6	IMG6LH	M6X1.00	M6X1.00	10	9	25	11.5	8	12.5	11.0	10.0	10.0	14.8
IM8	IM8LH	M8X1.25	M8X1.25	13	11	30	14.0	11	16.5	13.0	14.0	13.0	19.3
IMG8	IMG8LH	M8X1.25	M8X1.25	13	11	30	14.0	11	16.5	13.0	14.0	13.0	19.3
IM10	IM10LH	M10X1.50	M10X1.50	16	13	35	15.5	13	20.0	16.0	17.5	16.0	24.0
IMG10	IMG10LH	M10X1.50	M10X1.50	16	13	35	15.5	13	20.0	16.0	17.5	16.0	24.0
IM12	IM12LH	M12X1.75	M12X1.75	16	13	35	15.5	13	20.0	16.0	17.5	16.0	24.0
IMG12	IMG12LH	M12X1.75	M12X1.75	16	13	35	15.5	13	20.0	16.0	17.5	16.0	24.0
IM14	IM14LH	M14X1.50	M14X1.50	19	19	45	21.5	17	28.0	20.0	25.5	22.0	30.0
IMG14	IMG14LH	M14X1.50	M14X1.50	19	19	45	21.5	17	28.0	20.0	25.5	22.0	30.0
IM14/1	IM14/1LH	M14X2.00	M14X2.00	19	19	45	21.5	17	28.0	20.0	25.5	22.0	30.0
IMG14/1	IMG14/1LH	M14X2.00	M14X2.00	19	19	45	21.5	17	28.0	20.0	25.5	22.0	30.0



BALL JOINTS



M SERIES

Description:

M-Series is our 2-piece range of light weight nylon bodied lockable ball joints, suitable for light industrial/mechanical load applications requiring smooth action and good wear resistance. M-Series ball joints are also available without the ball stud, allowing for assembly on to a pre-positioned stud. Please refer to compatible ball stud options in our miscellaneous product section. M-Series ball joints have a unique locking clip incorporated into the one piece body, that when closed increases axial pull out and reduces backlash.

Materials:

Body: Nylon PA 6.6 black. Ball stud: Steel 230M07PB zinc plated and clear trivalent passivate.

Features

- Metric thread sizes
- Smooth action
- Can be assembled in situ
- Economical
- Light weight

Possible Applications

- Light industrial equipment
- Light agricultural equip.
- Lawn & garden equipment
- Engine controls

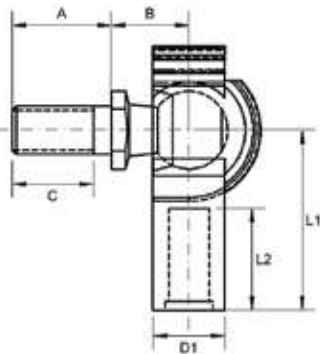
Temperature Range

-40°C to +80°C

Specification

ELV & RoHS compliant

M SERIES: SELF RETAINED BALL JOINTS (METRIC)



Body: PA 6.6

Ball Stud: Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate

Specification: ELV and RoHS Compliant



Part No. Right Hand	Body Thread	Stud Thread	Ball Dia	L1	L2 Min	Stud A/F	A	B	C Min	D1
M6008	M4X0.70	M4X0.70	6	17	10	5	6.5	8.5	5.5	8.0
M6010	M5X0.80	M5X0.80	8	22	12	7	10.2	9.0	8.6	9.5
M6012	M6X1.00	M6X1.00	10	25	14	8	12.5	11.0	10.0	12.0
M6014	M8X1.25	M8X1.25	13	30	17	11	16.5	13.0	13.5	15.0





BALL JOINTS



P SERIES: PM - PI

Description:

P-Series is our 3-piece range of quick release ball joints, suitable for light industrial/mechanical load applications requiring good wear resistance. Available in both metric and imperial thread sizes. Easily disconnected or re-assembled during installation. P-Series ball joints are also available without the ball stud allowing for assembly on to a pre-positioned stud. Please refer to compatible ball stud options in our miscellaneous product section.

Material Specifications:

Body: Steel 230M07PB hardened and zinc plated and clear trivalent passivate
Ball stud: Steel 230M07PB hardened and zinc plated and clear trivalent passivate
Clip: CS70 carbon steel, hardened and tempered and geomet finish.

Features

Metric & imperial thread
Easily disconnected or re-assembled during installation
Can be assembled in situ
Good wear resistance

Lubricated. Light weight

Possible Applications

Light industrial
Light construction
Light agricultural
Lawn & garden
Automotive

Temperature Range

-30°C to +120°C

Specification

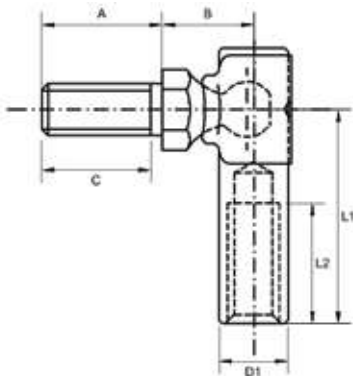
ELV & RoHS compliant

Interchange table

Dunlop	Tuthill	THK	Alinabal	SKF	Asahi	Rose
PM (metric)	SC-M	-	-	-	-	-
PI (imperial)	SC	-	-	-	-	-

Note: Manufacturers part numbers are used for descriptive purposes only and may not be direct equivalent products.

PM SERIES: CLIP RETAINED BALL JOINTS (METRIC)

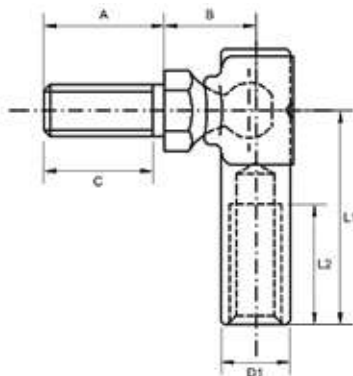


- Body:** Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate
- Ball Stud:** Steel 230M07Pb, Hardened, Zinc Plated and Clear Trivalent Passivate
- Clip:** CS 70 Carbon Steel
- Specification:** ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Body Thread	Stud Thread	Ball Dia	L1	L2 Min	Stud A/F	A	B	C Min	D1
PM4	PM4LH	M4X0.70	M4X0.70	4.75	17	10	7	8.0	7.25	6.0	6.0
PM5	PM5LH	M5X0.80	M5X0.80	6.35	22	12	8	11.0	10.63	9.0	8.0
PM5/1	PM5/1LH	M6X1.00	M6X1.00	6.35	22	12	8	14.0	10.63	12.0	8.0
PM6	PM6LH	M6X1.00	M6X1.00	6.35	25	14	8	14.0	10.63	12.0	8.0
PM6/1	PM6/1LH	M6X1.00	M6X1.00	6.35	25	14	8	11.0	10.63	9.0	8.0
PM8	PM8LH	M8X1.25	M8X1.25	8.00	22	12	11	14.0	13.35	12.0	10.0

PI SERIES: CLIP RETAINED BALL JOINTS (IMPERIAL)



Body: Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate

Ball Stud: Steel 230M07Pb, Hardened, Zinc Plated and Clear Trivalent Passivate

Clip: CS 70 Carbon Steel

Specification: ELV and RoHS Compliant

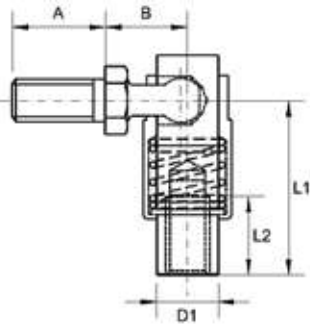


Part No. Right Hand	Part No. Left Hand	Body Thread	Stud Thread	Ball Dia	L1	L2 Min	Stud A/F	A	B	C Min	D1
PI187	PI187LH	10-32 UNF	10-32 UNF	0.250	0.875	0.484	0.312	0.437	0.420	0.337	0.312
PI187/1	PI187/1LH	10-32 UNF	1/4 UNF	0.250	0.875	0.484	0.312	0.562	0.420	0.462	0.312
PI187/2	PI187/2LH	10-32 UNF	10-32 UNF	0.250	0.969	0.531	0.312	0.438	0.420	0.375	0.312
PI187/3	PI187/3LH	10-32 UNF	M6 X 1.00	0.250	0.875	0.484	0.312	0.551	0.420	0.489	0.312
PI187/4	PI187/4LH	0.080 dia	N/A	N/A	0.719	0.390	N/A	N/A	N/A	N/A	0.312
PI187/5	PI187/5LH	0.074 dia	N/A	N/A	0.875	0.250	N/A	N/A	N/A	N/A	0.312
PI250	PI250LH	1/4 UNF	1/4 UNF	0.250	0.970	0.531	0.312	0.562	0.420	0.460	0.312
PI250/1	PI250/1LH	1/4 UNF	10-32 UNF	0.250	0.970	0.531	0.312	0.437	0.420	0.330	0.312
PI250/2	PI250/2LH	0.228 dia	1/4 UNF	0.250	0.970	0.500	0.312	0.562	0.420	0.460	0.312
PI250/3	PI250/3LH	10-32 UNF	10-32 UNF	0.250	0.875	0.484	0.312	0.438	0.420	0.390	0.312
PI312	PI312LH	5/16 UNF	5/16 UNF	0.312	0.875	0.484	0.437	0.562	0.553	0.460	0.394





BALL JOINTS



Q SERIES: QM - QI

Description:

Q-Series is our 4-piece range of quick release, spring loaded ball joints, suitable for medium industrial/mechanical load applications. Available in both metric and imperial thread sizes. Q-Series ball joints are also available without the ball stud allowing for assembly on to a pre-positioned stud. Please refer to compatible ball stud options in our miscellaneous product section. Q-Series ball joints are ideal for severe wear conditions and are resistant to vibration and high shock loading.

Material Specifications:

Body: Steel 230M07PB hardened and zinc plated and clear trivalent passivate.
 Ball stud: Steel 230M07PB hardened and zinc plated and clear trivalent passivate.
 Shield: Steel 230M07PB zinc plated and clear trivalent passivate
 Spring: Stainless steel.

Features

- Metric & imperial thread
- High pull out load
- High wear conditions
- High shock loads
- Resistant to vibration
- Lubricated
- Knurl aids assembly

Possible Applications

- Industrial equipment
- Construction equipment
- Agricultural equipment
- Lawn & garden equipment

Temperature Range

-30°C to +120°C

Specification

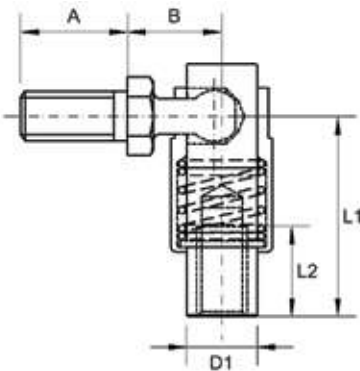
ELV & RoHS compliant

Interchange table

Dunlop	Tuthill	THK	Alinabal	SKF	Asahi	Rose
QM (metric)	S-M	-	-	-	-	-
QI (imperial)	S	-	-	-	-	-

Note: Manufacturers part numbers are used for descriptive purposes only and may not be direct equivalent products.

QM SERIES: QUICK RELEASE BALL JOINTS (METRIC)

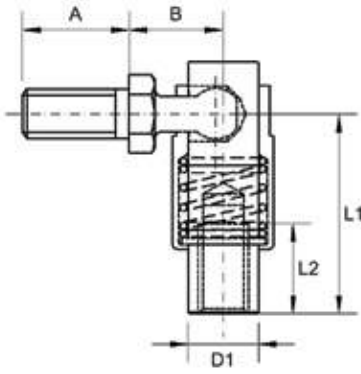


- Body:** Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate
- Ball Stud:** Steel 230M07Pb, Hardened, Zinc Plated and Clear Trivalent Passivate
- Shield:** Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate
- Spring:** 302S 26 Stainless Steel
- Specification:** ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Body Thread	Stud Thread	Ball Dia	Length L1	Length L2	Stud A/F	A	B	C	D1
QM5	QM5LH	M5X0.80	M5X0.80	6.4	23.0	11.1	8	11.1	11.9	9.0	7.9
QM6	QM6LH	M6X1.00	M6X1.00	7.9	24.6	13.0	10	14.3	12.6	12.8	9.4
QM6/1	QM6/1LH	M6X1.00	M6X1.00	7.9	24.6	13.0	10	14.3	12.7	12.8	9.4
QM6/2	QM6/2LH	M6X1.00	M6X1.00	7.9	24.6	13.0	10	11.0	12.7	9.5	9.4
QM6/3	QM6/3LH	10-32 UNF	M6X1.00	7.9	24.6	13.0	10	14.3	12.7	12.8	9.4
QM6/4SS	QM6/4SSLH	M6X1.00	M6X1.00	7.9	24.6	13.0	10	14.3	12.7	12.8	9.4
QM8	QM8LH	M8X1.25	M8X1.25	8.6	31.7	14.3	11	17.5	14.0	15.5	11.1
QM8/1	QM8/1LH	M8X1.25	M6X1.00	8.6	31.7	14.3	11	17.5	14.0	15.5	11.1
QM8/2	QM8/2LH	M8X1.25	M8X1.25	8.6	31.7	14.3	11	11.0	14.0	9.0	11.1
QM8/3	QM8/3LH	M8X1.25	M8X1.25	8.6	31.7	14.3	11	10.0	15.2	8.0	11.1
QM8/4SS	QM8/4SSLH	M8X1.25	M6X1.00	8.6	31.7	14.3	11	17.5	15.2	15.5	11.1
QM10	QM10LH	M10X1.50	M10X1.50	10.7	39.7	27.0	13	22.2	19.8	20.0	14.1

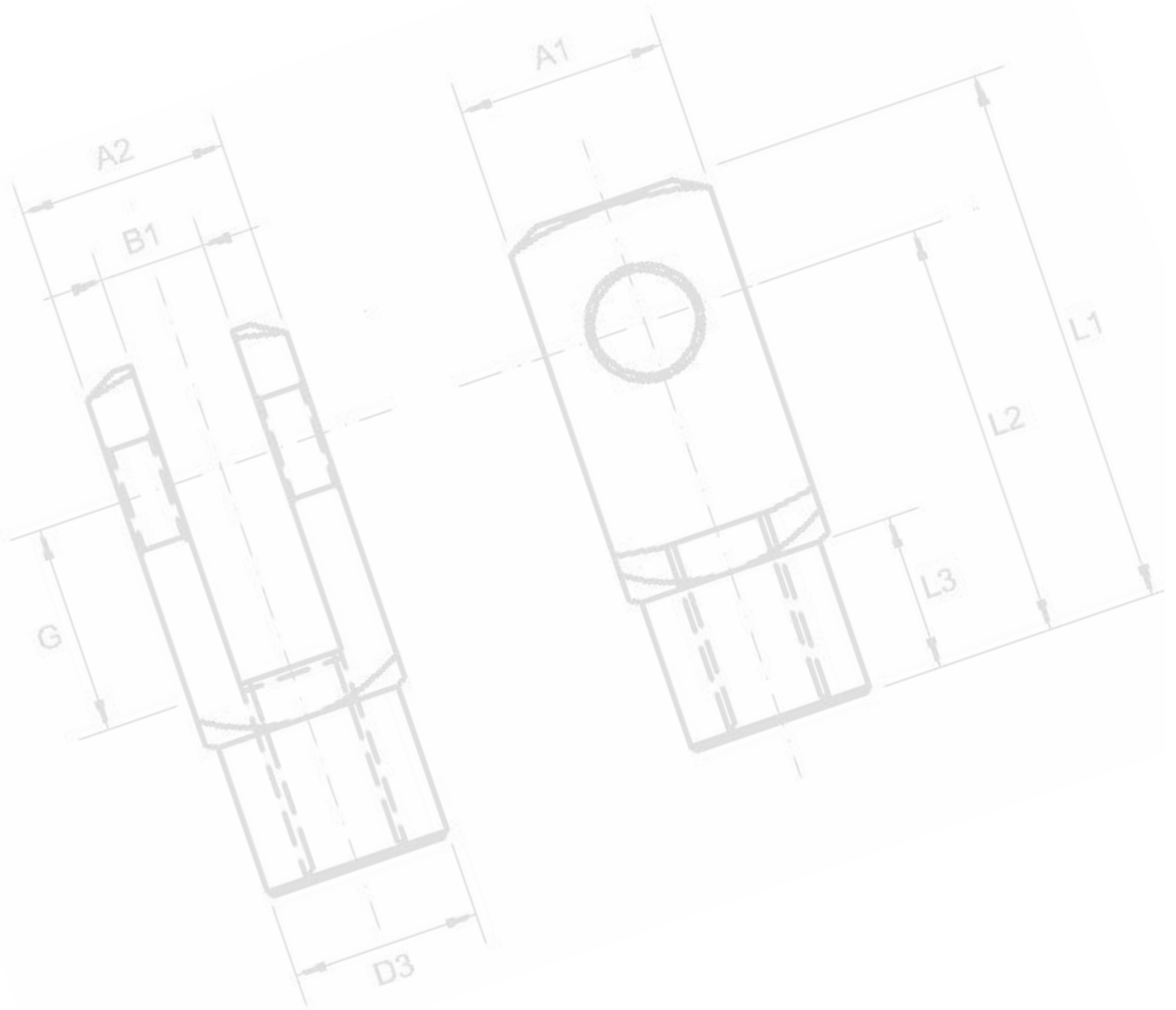
QI SERIES: QUICK RELEASE BALL JOINTS (IMPERIAL)



- Body:** Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate
- Ball Stud:** Steel 230M07Pb, Hardened, Zinc Plated and Clear Trivalent Passivate
- Shield:** Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate
- Spring:** 302S 26 Stainless Steel
- Specification:** ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Body Thread	Stud Thread	Ball Dia	L1	L2 Min	Stud A/F	A	B	C	D1
QI187	QI187LH	10-32 UNF	10-32 UNF	0.250	0.906	0.437	0.312	0.437	0.468	0.330	0.310
QI187/2	QI1872LH	10-32 UNF	1/4" UNF	0.250	0.906	0.437	0.312	0.562	0.468	0.500	0.310
QI187/3	QI1873LH	10-32 UNF	M5 x 0.80	0.250	0.906	0.437	0.315	0.437	0.468	0.375	0.310
QI187/5	QI1875LH	10-32 UNF	M6 x 1.00	0.250	0.906	0.437	0.315	0.551	0.421	0.490	0.310
QI250	QI250LH	1/4" UNF	1/4" UNF	0.311	0.969	0.500	0.375	0.562	0.500	0.490	0.370
QI250/1	QI250/1LH	10-32 UNF	1/4" UNF	0.311	0.969	0.500	0.375	0.562	0.500	0.500	0.370
QI250/2	QI250/2LH	1/4" UNF	M6 x 1.00	0.311	0.969	0.500	0.394	0.562	0.500	0.500	0.370
QI250/4	QI250/4LH	1/4" BSF	1/4" BSF	0.311	0.969	0.500	0.375	0.562	0.500	0.500	0.370
QI250/5	QI250/5LH	1/4" UNF	5/16" UNF	0.311	0.969	0.500	0.375	0.882	0.449	0.820	0.370
QI250/6	QI250/6LH	1/4" UNF	1/4" UNF	0.311	0.969	0.500	0.375	0.875	0.449	0.812	0.370
QI312	QI312LH	5/16" UNF	5/16" UNF	0.339	1.250	0.562	0.437	0.687	0.594	0.580	0.439
QI312/1	QI312/1LH	5/16" BSF	5/16" BSF	0.339	1.250	0.562	0.437	0.687	0.594	0.625	0.439
QI312/2	QI312/2LH	1/4" UNF	5/16" UNF	0.339	1.250	0.562	0.437	0.882	0.594	0.820	0.439
QI312/3	QI312/3LH	5/16" UNF	5/16" UNF	0.339	1.250	0.562	0.437	0.882	0.594	0.820	0.439
QI312/4	QI312/4LH	10-32 UNF	5/16" UNF	0.339	1.250	0.562	0.437	0.882	0.594	0.820	0.439
QI375	QI375LH	3/8" UNF	3/8" UNF	0.421	1.562	1.062	0.500	0.875	0.719	0.770	0.556



**English****Español****Italiano****Deutsch****Français****Nederlands****Polskie****G series**

Serie G • Serie G • G-Serie

Série G • G-serie • seria G

106**ES series**

Serie ES • Serie ES • ES-Serie

Série ES • ES-serie • seria ES

110**NB series**

Serie NB • Serie NB • NB-Serie

Série NB • NB-serie • seria NB

112**DE series**

Serie DE • Serie DE • DE-Serie

Série DE • DE-serie • seria DE

113**SL series**

Serie SL • Serie SL • SL-Serie

Série SL • SL-serie • seria SL

114**KL series**

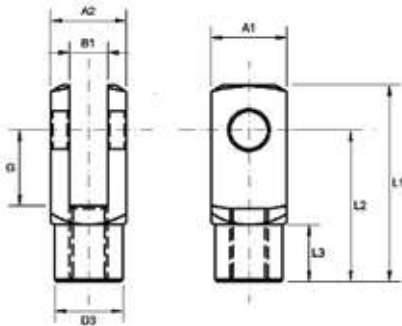
Serie KL • Serie KL • KL-Serie

Série KL • KL-serie • seria KL

115



CLEVIS JOINTS



G SERIES: GM - GI - GM SS

Description:

G-Series is our standard range of metric and imperial clevises also known as 'yoke' and 'fork' ends. In addition to our catalogue range, we have produced over 2,000 special clevises to suit individual customer applications, therefore please enquire for any item not shown. Imperial sizes are easily identified by a groove on the tail. Stainless steel clevis assemblies are also available.

Metric sizes up to GML16 are used with ESM folding spring pins on page 97 or with NBM clevis pins on page 98. GM18 - GM30 are used with DEM clevis pins on page 99, size GM20 may also be used with ESM20 on page 97. Imperial sizes up to GIL625 are used with ESI folding spring pins on page 97 or with NBI clevis pins on page 98. GI750 - GI1000 are used with DEI clevis pins on page 99.

Material Specifications:

Clevis: Steel 230M07PB zinc plated and clear trivalent passivate and stainless steel 303L.

Features

- Metric & imperial thread & bore sizes
- Standard & long series
- Course & fine threads
- No maintenance

Possible Applications

- Light to heavy industrial/mechanical applications
- Construction equipment
- Agricultural equipment
- Industrial equipment

Temperature Range

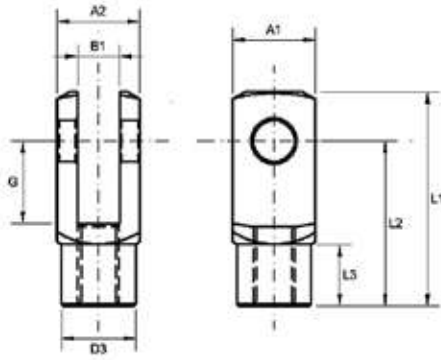
-40°C to +170°C

Specification

ELV & RoHS compliant



GM SERIES: STEEL CLEVIS JOINTS (METRIC)



Material: Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate

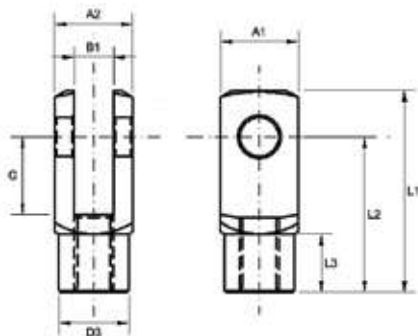
Specification: ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Bore Size*	Thread	G	A1	A2	B1	D3	L1	L2	L3
GM4	GM4LH	4	M4X0.70	8	8	8	4	8	21	16	6.0
GML4	GML4LH	4	M4X0.70	16	8	8	4	8	29	24	6.0
GM5	GM5LH	5	M5X0.80	10	10	10	5	9	26	20	7.5
GML5	GML5LH	5	M5X0.80	20	10	10	5	9	36	30	7.5
GM6	GM6LH	6	M6X1.00	12	12	12	6	10	31	24	9.0
GML6	GML6LH	6	M6X1.00	24	12	12	6	10	43	36	9.0
GM8	GM8LH	8	M8X1.25	16	16	16	8	14	42	32	12.0
GML8	GML8LH	8	M8X1.25	32	16	16	8	14	58	48	12.0
GM8C	GM8CLH	8	M8X1.00	16	16	16	8	14	42	32	12.0
GML8C	GML8CLH	8	M8X1.00	32	16	16	8	14	58	48	12.0
GM10	GM10LH	10	M10X1.50	20	20	20	10	18	52	40	15.0
GML10	GML10LH	10	M10X1.50	40	20	20	10	18	72	60	15.0
GM10C	GM10CLH	10	M10X1.25	20	20	20	10	18	52	40	15.0
GML10C	GML10CLH	10	M10X1.25	40	20	20	10	18	72	60	15.0
GM12	GM12LH	12	M12X1.75	24	24	24	12	20	62	48	18.0
GML12	GML12LH	12	M12X1.75	48	24	24	12	20	86	72	18.0
GM12C	GM12CLH	12	M12X1.25	24	24	24	12	20	62	48	18.0
GML12C	GML12CLH	12	M12X1.25	48	24	24	12	20	86	72	18.0
GM14	GM14LH	14	M14X2.00	28	27	27	14	24	72	56	22.5
GML14	GML14LH	14	M14X2.00	56	27	27	14	24	101	85	22.5
GM14C	GM14CLH	14	M14X1.50	28	27	27	14	24	72	56	22.5
GML14C	GML14CLH	14	M14X1.50	56	27	27	14	24	101	85	22.5
GM16	GM16LH	16	M16X2.00	32	32	32	16	26	83	64	24.0
GM16C	GM16CLH	16	M16X1.50	32	32	32	16	26	83	64	24.0
GML16	GML16LH	16	M16X2.00	64	32	32	16	26	115	96	24.0
GML16C	GML16CLH	16	M16X1.50	64	32	32	16	26	115	96	24.0
GM18	GM18LH	18	M18X2.50	36	36	36	18	30	94	72	27.0
GM18C	GM18CLH	18	M18X1.50	36	36	36	18	30	94	72	27.0
GM20	GM20LH	20	M20X2.50	40	40	40	20	34	105	80	30.0
GM20C	GM20CLH	20	M20X1.50	40	40	40	20	34	105	80	30.0
GM25	GM25LH	25	M24X3.00	50	50	50	25	42	132	100	36.0
GM25C	GM25CLH	25	M24X2.00	50	50	50	25	42	132	100	36.0
GM28	GM28LH	28	M27X3.00	56	55	55	28	48	148	112	40.0
GM28C	GM28CLH	28	M27X2.00	56	55	55	28	48	148	112	40.0
GM30	GM30LH	30	M30X3.50	60	60	60	30	52	160	120	42.0
GM30C	GM30CLH	30	M30X2.00	60	60	60	30	52	160	120	42.0

*Cross hole tolerance: +0.06 -0.00 mm

GI SERIES: STEEL CLEVIS JOINTS (IMPERIAL)



Material: Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate

Specification: ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Bore Size*	Thread	G	A1	A2	B1	D3	L1	L2	L3
GI187	GI187 LH	3/16	10-32 UNF	0.394	0.375	0.375	0.1875	0.354	1.024	0.788	0.295
GIL187	GIL187 LH	3/16	10-32 UNF	0.787	0.375	0.375	0.1875	0.354	1.417	1.181	0.295
GI250	GI250 LH	1/4	1/4 UNF	0.472	0.500	0.500	0.2500	0.394	1.220	0.944	0.354
GIL250	GIL250 LH	1/4	1/4 UNF	0.945	0.500	0.500	0.2500	0.394	1.693	1.417	0.354
GI312	GI312 LH	5/16	5/16 UNF	0.630	0.630	0.630	0.3125	0.551	1.654	1.260	0.472
GIL312	GIL312 LH	5/16	5/16 UNF	1.260	0.630	0.630	0.3125	0.551	2.283	1.890	0.472
GI375	GI375 LH	3/8	3/8 UNF	0.787	0.750	0.750	0.3750	0.708	2.047	1.574	0.591
GIL375	GIL375 LH	3/8	3/8 UNF	1.575	0.750	0.750	0.3750	0.708	2.834	2.362	0.591
GI500	GI500 LH	1/2	1/2 UNF	1.102	1.000	1.000	0.5000	0.945	2.834	2.204	0.886
GIL500	GIL500 LH	1/2	1/2 UNF	2.205	1.000	1.000	0.5000	0.945	3.976	3.346	0.886
GI625	GI625 LH	5/8	5/8 UNF	1.260	1.250	1.250	0.6250	1.024	3.268	2.520	0.945
GIL625	GIL625 LH	5/8	5/8 UNF	2.520	1.250	1.250	0.6250	1.024	4.528	3.780	0.945
GI750	GI750 LH	3/4	3/4 UNF	1.575	1.575	1.575	0.7500	1.339	4.134	3.150	1.181
GI1000	GI1000 LH	1	1 UNF	1.969	1.970	1.970	1.0000	1.654	5.197	3.938	1.417

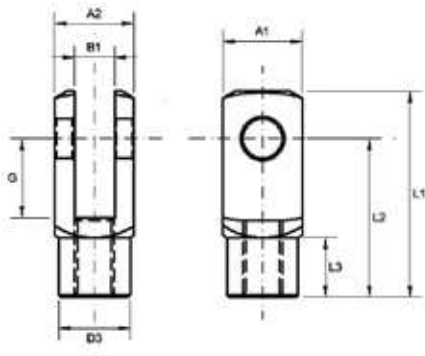
*Cross hole tolerance: +0.06 -0.00 mm.

Stainless steel materials such as 304, 314 and 316 are also available to order, please enquire for further information.



*Cross hole tolerance: +0.06 -0.00 mm. Stainless steel materials such as 304, 314 and 316 are also available to order, please enquire for further information.

GM SS SERIES: ASSEMBLY SERIES STAINLESS STEEL CLEVIS JOINTS (METRIC)



- Clevis:** Stainless Steel 303
- Clevis Pin:** Stainless Steel 303
- Washer:** Stainless Steel 303
- Split Pin:** Stainless Steel 303
- Specification:** ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Bore Size*	Thread	G	A1	A2	B1	D3	L1	L2	L3
GM4SS-ASSY	GM4SSLH-ASSY	4	M4X0.70	8	8	8	4	8	21	16	6.0
GML4SS-ASSY	GML4SSLH-ASSY	4	M4X0.70	16	8	8	4	8	29	24	6.0
GM5SS-ASSY	GM5SSLH-ASSY	5	M5X0.80	10	10	10	5	9	26	20	7.5
GML5SS-ASSY	GML5SSLH-ASSY	5	M5X0.80	20	10	10	5	9	36	30	7.5
GM6SS-ASSY	GM6SSLH-ASSY	6	M6X1.00	12	12	12	6	10	31	24	9.0
GML6SS-ASSY	GML6SSLH-ASSY	6	M6X1.00	24	12	12	6	10	43	36	9.0
GM8SS-ASSY	GM8SSLH-ASSY	8	M8X1.25	16	16	16	8	14	42	32	12.0
GML8SS-ASSY	GML8SSLH-ASSY	8	M8X1.25	32	16	16	8	14	58	48	12.0
GM10SS-ASSY	GM10SSLH-ASSY	10	M10X1.50	20	20	20	10	18	57	40	15.0
GML10SS-ASSY	GML10SSLH-ASSY	10	M10X1.50	40	20	20	10	18	72	60	15.0
GM12SS-ASSY	GM12SSLH-ASSY	12	M12X1.75	24	24	24	12	20	62	48	18.0
GML12SS-ASSY	GML12SSLH-ASSY	12	M12X1.75	48	24	24	12	20	86	72	18.0
GM14SS-ASSY	GM14SSLH-ASSY	14	M14X2.00	28	27	27	14	24	72	56	22.5
GML14SS-ASSY	GML14SSLH-ASSY	14	M14X2.00	56	27	27	14	24	101	85	22.5
GM16SS-ASSY	GM16SSLH-ASSY	16	M16X2.00	32	32	32	16	26	83	64	24.0
GML16SS-ASSY	GML16SSLH-ASSY	16	M16X2.00	64	32	32	16	26	115	96	24.0
GM18SS-ASSY	GM18SSLH-ASSY	18	M18X2.50	36	36	36	18	30	94	72	27.0
GM20SS-ASSY	GM20SSLH-ASSY	20	M20X2.50	40	40	40	20	34	105	80	30.0
GM25SS-ASSY	GM25SSLH-ASSY	25	M24X3.00	50	50	50	25	42	132	100	36.0
GM28SS-ASSY	GM28SSLH-ASSY	28	M27X3.00	56	55	55	28	48	148	112	40.0
GM30SS-ASSY	GM30SSLH-ASSY	30	M30X3.50	60	60	60	30	52	160	120	42.0



CLEVIS JOINTS



ES SERIES: ESM - ESI

Description:

ES-Series is our standard range of metric and imperial folding spring pins for use with GM and GI Clevis joints. They are easily pre-assembled or removed by hand without the need for any tools. ESM folding spring pins for use with GM-Series metric clevis joints. ESI folding spring pins for use with GI-Series imperial clevis joints.

Material Specifications:

Pin: Steel 230M07PB zinc plated and clear trivalent passivate.

Spring: CS70 carbon steel, hardened and tempered and zinc plated and clear trivalent passivate.

Features

Metric & imperial sizes
Standard & long series
No maintenance

Possible Applications

Light - heavy industrial/
mechanical applications
Construction equipment
Agricultural equipment
Industrial equipment

Temperature Range

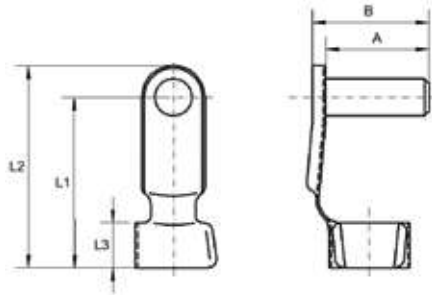
-40°C to +170°C

Specification

ELV & RoHS compliant



ESM SERIES: FOLDING SPRING PIN CLEVIS JOINTS (METRIC)



Pin: Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate

Spring: Spring Steel, Hardened, Zinc Plated and Clear Trivalent Passivate

Specification: ELV and RoHS Compliant



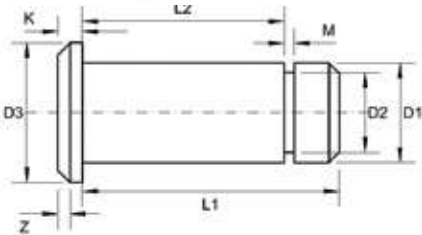
Part No.	Pin Size	A	B	L1	L2	L3
ESM4	4	9.5	11.0	15.0	18.5	4.5
ESM5	5	12.0	13.5	19.0	23.0	5.5
ESML5	5	12.0	13.5	29.0	33.0	5.5
ESM6	6	14.0	16.0	23.0	28.0	6.5
ESML6	6	14.0	16.0	35.0	40.0	6.5
ESM8	8	19.0	21.5	30.0	36.5	8.0
ESML8	8	19.0	21.5	46.0	52.0	8.0
ESM10	10	23.0	26.0	38.0	45.0	10.0
ESML10	10	23.0	26.0	58.0	65.0	10.0
ESM12	12	28.0	31.0	45.0	53.0	12.0
ESML12	12	28.0	31.0	69.0	78.0	12.0
ESM14	14	29.4	34.0	52.0	62.0	14.0
ESML14	14	29.4	34.0	82.0	91.0	14.0
ESM16	16	36.0	39.0	62.0	73.5	16.0
ESML16	16	36.0	39.0	92.0	103.0	16.0
ESM20	20	44.0	49.0	71.0	88.0	16.0

ESI SERIES: FOLDING SPRING PIN CLEVIS JOINTS (IMPERIAL)

Part No.	Pin Size	A	B	L1	L2	L3
ESI187	3/16	0.430	0.490	0.750	0.900	0.220
ESIL187	3/16	0.430	0.490	1.140	1.300	0.220
ESI250	1/4	0.560	0.640	0.900	1.100	0.250
ESIL250	1/4	0.560	0.640	1.380	1.570	0.250
ESI312	5/16	0.700	0.790	1.180	1.430	0.310
ESIL312	5/16	0.700	0.790	1.810	2.050	0.310
ESI375	3/8	0.830	0.950	1.500	1.770	0.390
ESIL375	3/8	0.830	0.950	2.280	2.560	0.390
ESI500	1/2	1.090	1.210	2.050	2.440	0.550
ESIL500	1/2	1.090	1.210	3.230	3.580	0.550
ESI625	5/8	1.350	1.470	2.440	2.890	0.630
ESIL625	5/8	1.350	1.470	3.620	4.050	0.630



CLEVIS JOINTS



NB SERIES: NBM - NBI

Description:

NB-Series is our standard range of metric and imperial clevis pins for use with GM and GI clevis joints. NBM clevis pins for use with GM series metric clevis joints. NBI clevis pins for use with GI series imperial clevis joints.

Material Specifications:

Pin: Steel 230M07PB zinc plated and clear trivalent passivate.

Features

Metric & imperial sizes
Standard & long series
No maintenance

Possible Applications

Light - heavy industrial/
mechanical applications
Construction equipment
Agricultural equipment
Industrial equipment

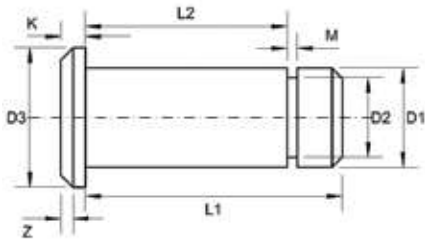
Temperature Range

-40°C to +170°C

Specification

ELV & RoHS compliant

NBM SERIES: STEEL CLEVIS PINS (METRIC)



Pin: Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate

Specification: ELV and RoHS Compliant



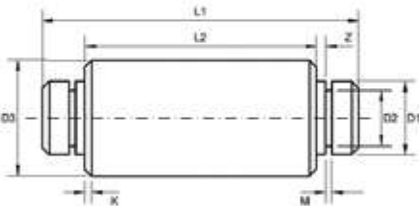
Part No.	Pin Size D1	D2	D3	K	M	Z	L1	L2
NBM4	4	3.2	6	1.5	0.74	0.75	10.35	8.25
NBM5	5	4.1	8	1.0	0.84	0.50	12.85	10.25
NBM6	6	5.1	9	1.5	0.84	0.75	15.35	12.25
NBM8	8	6.1	12	2.0	1.04	1.00	19.85	16.25
NBM10	10	8.2	14	2.5	1.15	1.25	24.85	20.25
NBM12	12	9.2	16	3.0	1.25	1.25	29.35	24.25
NBM14	14	10.2	18	3.0	1.35	1.25	32.85	27.25
NBM16	16	12.2	20	3.5	1.45	1.50	38.35	32.25

NBI SERIES: STEEL CLEVIS PINS (IMPERIAL)

Part No.	Pin Size D1	D2	D3	K	M	Z	L1	L2
NBI187	3/16	0.140	0.250	0.050	0.028	0.030	0.480	0.385
NBI250	1/4	0.193	0.343	0.062	0.034	0.030	0.625	0.510
NBI312	5/16	0.240	0.437	0.078	0.041	0.040	0.770	0.635
NBI375	3/8	0.301	0.500	0.090	0.045	0.050	0.932	0.760
NBI500	1/2	0.388	0.625	0.110	0.054	0.060	1.223	1.010
NBI625	5/8	0.480	0.781	0.120	0.057	0.060	1.491	1.260



CLEVIS JOINTS



DE SERIES: DEM - DEI

Description:

DE-Series is our standard range of metric and imperial clevis pins for use with GM and GI Clevis joints. DEM clevis pins are designed for use with GM20 - GM30 clevis Joints. DEI clevis pins are designed for use with GI750 - GI1000 clevis joints.

Material Specifications:

Pin: Steel 230M07PB zinc plated and clear trivalent passivate.

Features

Metric & imperial sizes
Standard & long series
No maintenance

Possible Applications

Light to heavy industrial/
mechanical applications
Construction equipment
Agricultural equipment
Industrial equipment

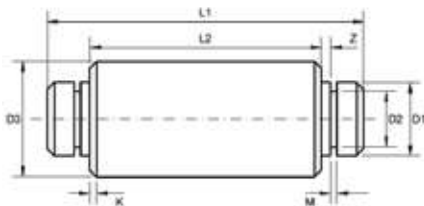
Temperature Range

-40°C to +170°C

Specification

ELV & RoHS compliant

DEM SERIES: STEEL CLEVIS PINS (METRIC)



Pin: Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate

Specification: ELV and RoHS Compliant



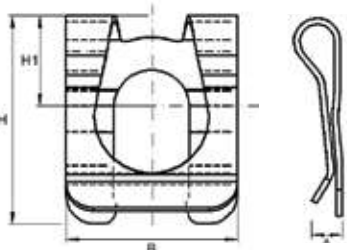
Part No.	D1	D2	Pin Size D3	K	M	Z	L1	L2	Other Items Required
DEM20	15.87	12.2	20	1.5	1.35	NO SHOULDER	52.22	40.50	2 X SLM16 (ONLY)
DEM25	15.87	12.2	25	1.5	1.35	2.08	66.38	50.50	2 X SLM16 + 2 X M7105
DEM30	15.87	12.2	30	1.5	1.35	3.75	79.72	60.50	2 X SLM16 + 2 X M7107

DEI SERIES: STEEL CLEVIS PINS (IMPERIAL)

Part No.	D1	D2	Pin Size D3	K	M	Z	L1	L2	Other Items Required
DEI750	0.625	0.480	0.75	0.04	0.053	NO SHOULDER	2.066	1.594	2 X SLM16 (ONLY)
DEI1000	0.625	0.480	1.00	0.06	0.053	0.082	2.624	1.988	2 X SLM16 + 2 X M7105



CLEVIS JOINTS



SL SERIES: SLM - SLI

Description:

SL-Series is our standard range of metric and imperial safety clips for use with GM and GI Clevis joints. They are easily pre-assembled or removed by hand without the need for any tools. SLM safety clips are designed for use with NBM clevis pins. SLI safety clips are designed for use with NBI clevis pins. SLM16 is also compatible with DEM20 - DEM30. SLM16 is also compatible with DEI750 - DEI1000.

Material Specifications:

Clip: CS70 carbon steel hardened and tempered and zinc plated and clear trivalent passivate.

Features

Metric & imperial sizes
Safety lip prevents accidental removal
Assembly rattle is eliminated by the fastener holding the clevis pin under tension

Possible Applications

Light to heavy industrial/mechanical
Construction equipment
Agricultural equipment
Industrial equipment

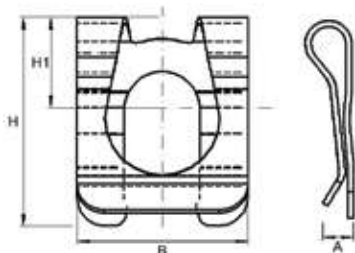
Temperature Range

-40°C to +170°C

Specification

ELV & RoHS compliant

SLM SERIES: SPRING STEEL SAFETY CLIP (METRIC)



Safety Clip: Spring Steel, Zinc Plated and Clear Trivalent Passivate, Hardened and Annealed to 1450 to 1600 N/mm² Tensile Strength

Specification: ELV and RoHS Compliant



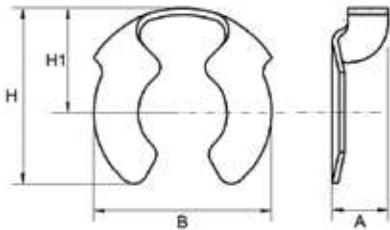
Part No.	Pin Size	B	H	H1	A	Thickness	Max Axial Thrust (n)
SLM4	4	7.0	8.75	4.0	2.2	0.30	1,000
SLM5	5	9.0	11.00	5.0	2.3	0.35	1,300
SLM6	6	11.0	14.25	6.0	3.2	0.40	1,500
SLM8	8	14.0	17.50	8.0	3.7	0.45	3,600
SLM10	10	18.0	21.75	10.3	4.6	0.50	6,400
SLM12	12	22.0	26.00	12.0	5.5	0.50	9,600
SLM14	14	25.1	30.10	13.5	5.8	0.60	11,320
SLM16	16	28.0	34.50	16.0	6.8	0.60	13,500

SLI SERIES: SPRING STEEL SAFETY CLIP (IMPERIAL)

Part No.	Pin Size	B	H	H1	A	Thickness	Max Axial Thrust (n)
SLI187	3/16	0.355	0.429	0.195	0.084	0.0135	1,300
SLI250	1/4	0.437	0.562	0.245	0.130	0.0150	1,500
SLI312	5/16	0.551	0.689	0.315	0.146	0.0170	3,600
SLI375	3/8	0.710	0.844	0.385	0.211	0.0190	6,400
SLI500	1/2	1.000	1.200	0.520	0.235	0.0230	9,600
SLI625	5/8	1.102	1.358	0.630	0.237	0.0230	13,500



CLEVIS JOINTS



KL SERIES: KLM

Description:

KL-Series is our range of metric safety clips for use with GM clevis joints, they are easily pre-assembled or removed by hand without the need for any tools, KLM retaining clips are designed as an alternative option to SLM safety clips. KLM safety clips are designed for use with NBM clevis pins.

Material Specifications:

Clip: CS70 carbon steel hardened and tempered and zinc plated and clear trivalent passivate.

Features

Metric sizes
Dished design ensures clip is under constant tension to minimise rattle

Possible Applications

Light to heavy industrial/mechanical
Agricultural equipment
Industrial equipment
Construction equipment

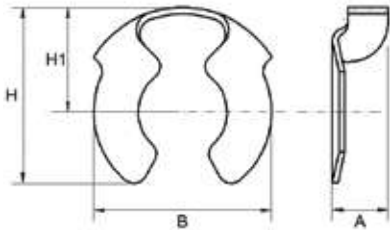
Temperature Range

-40°C to +170°C

Specification

ELV & RoHS compliant

KLM SERIES: SPRING STEEL SAFETY CLIP (METRIC)



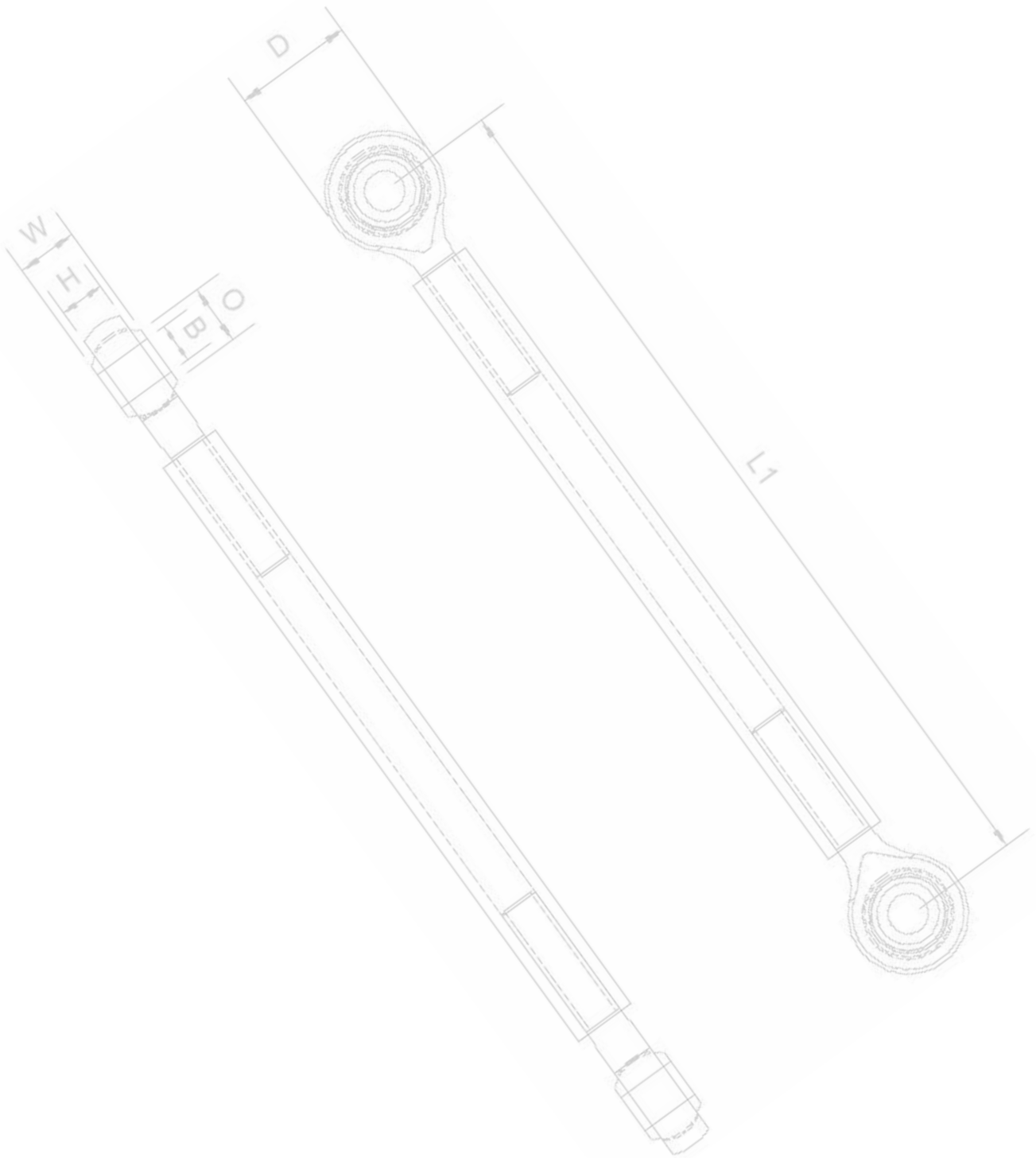
Safety Clip: Spring Steel, Zinc Plated and Clear Trivalent Passivate, Hardened and Annealed to 1450 to 1600 N/mm² Tensile Strength

Specification: ELV and RoHS Compliant

Note: Dimensions may vary slightly in line with DIN standards.



Part No.	Pin Size	B	H	H1	A	Thickness	Max Axial Thrust (n)
KLM4	4	6.8	7.0	4.3	2.6	0.40	1,500
KLM5	5	7.7	8.4	5.2	2.8	0.50	3,000
KLM6	6	10.6	11.7	6.8	3.5	0.50	4,850
KLM8	8	11.5	11.8	7.4	4.0	0.50	5,500
KLM10	10	15.5	15.9	9.5	5.0	0.60	9,500
KLM12	12	17.2	18.5	11.5	6.0	0.60	10,700
KLM14	14	19.7	20.0	11.9	6.7	0.70	12,700
KLM16	16	23.2	24.5	14.6	7.0	0.80	14,000
KLM24	24	34.0	34.0	18.5	9.0	1.00	15,000



**English****Español****Italiano****Deutsch****Français****Nederlands****Polskie****Linkages**

Vínculos entre • Collegamenti • Gestänge

Liens • Verbanden • powiązania

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LINKAGES



LINKAGES

Description:

We specialise in the supply of custom rod-based linkages, ready to fit and quality guaranteed, from end-to-end. Major manufacturers of construction, navigation and hospital equipment, through to farm tractors, food processing machinery and beer pumps depend on Dunlop resources for complete linkages, cost reductions and improved efficiency.

Rod Based Linkages:

Aluminium 6082 T 6. Brass CW 609 N (CZ 121). Carbon steel strip CS 70. Plastics Nylon 6, nylon 66 with molybdenum disulphide and nylon 66 30% glass-filled polyurethane. Steel: Rods 040 A 10 and 080 A 42, turned parts 230 M 07 pb, stainless 303 S 31.

Features

Reduced part numbers
Reduced suppliers
Eliminates stock imbalance
Cost savings
Bespoke designs available

Possible Applications

Light to heavy industrial/mechanical applications
Construction equipment
Agricultural equipment
Industrial equipment

Temperature Range

-200°C to +260°C

Specification

ELV & RoHS compliant

**Custom rod-based linkages**

In addition to our standard range of ball joints, rod ends, clevises and spring pins, we specialise in the supply of custom rod-based linkages, ready to fit and quality guaranteed, from end-to-end.

Besides the savings on your own in-house costs, there are invisible savings to be made from reduction in part numbers, suppliers and inventory variety, as well as stock imbalance elimination.

Cost reductions & improved efficiency

Major manufacturers of construction, navigation and hospital equipment, through to farm tractors, food processing machinery and beer pumps depend on Dunlop resources for complete linkages, cost reductions and improved efficiency.

Why not join them?

Bespoke design service

Take advantage of our design co-operation service from initial application appraisal, through costings and prototypes to I.S.I.R approval and production supply.

Linkage Rods

We specialise in the production of straight or bent formed rods incorporating rolled or cut right hand or left hand threads.

To provide added strength and avoid the on-cost of turning and thread-cutting, we recommend that linkage rods are quoted to be manufactured from threading rolling size mild steel material, with ends cropped and thread rolled for greater strength and economy. The rolling diameters range from 2mm up to 12mm or inch equivalents, rod lengths range from 12mm up to 3m. Threads include BA, BSF, BSW, ISO Metric, UNC & UNF.

However, quotations for cut threads are also available on request. When enquiring, please specify the overall rod length, minimum thread lengths, thread pitch and size and whether right or left hand. If required, to facilitate adjustment, please advise the position of the pressed flats or an identity/adjustment knurl, which are normally positioned near the LH thread end.

A combination of right and left hand threads on both the rod and linkage components allows precise assembly length adjustment without disconnection. Right/left hand threaded products can only be adjusted to within one thread pitch.

The standard finish is zinc plated and white/blue passivated (silver/clear) including routine Dengembrittling, where relevant, our codes F39 or F47. At time of enquiry, please confirm that this finish is acceptable to you.

Non standard Linkage components

The flexible manufacturing techniques used in the production of linkage components featured in this catalogue, allow non-standard derivatives to be readily manufactured.

We already produce hundreds of customer specials with varying dimensions, thread forms and features and welcome your enquiries.

Custom rod-based linkages

Purchasing complete linkages, rather than multi-sourced items, reduces part numbers, suppliers, inventory variety and eliminates stock imbalance. Product quality is guaranteed from end-to-end. To benefit from the knowledge we have gained from so many earlier application challenges, we recommend that you allow us to review your linkage design for component and cost-saving recommendations.

Linkage assemblies are built and shipped loose for final adjustment at the point of fit. Alternatively, where required, by using length-setting gauges, linkages can be supplied to pre-determined fixed centres.

Warranty

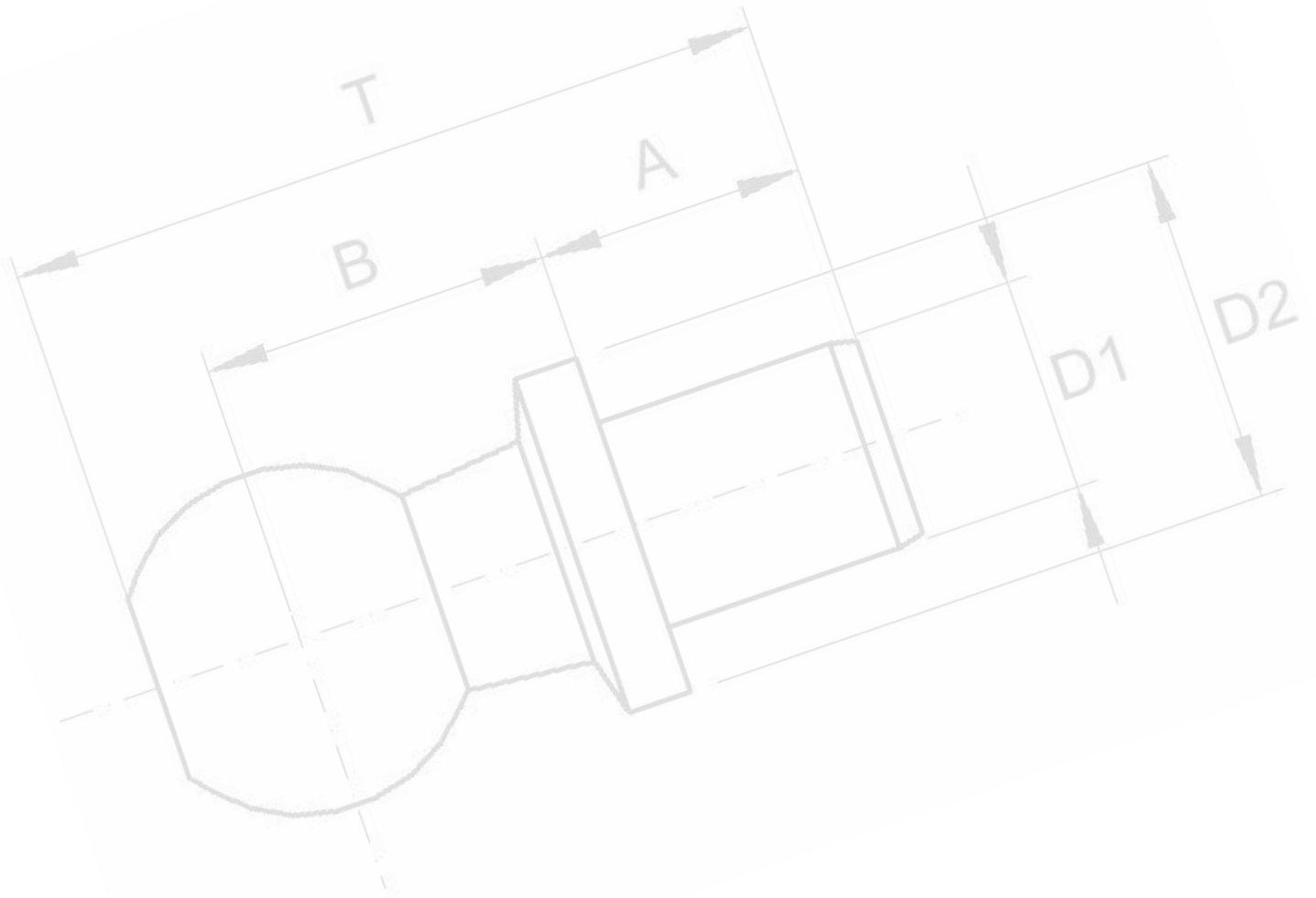
We will replace, free of charge, any product found to have a defect in materials or workmanship. However, the company is not responsible for defects which result from unsuitable product selection and application, abuse, incorrect assembly or incorrect adjustment of its linkage products.

Continuing improvement

The information contained in this publication is intended to assist the specifier and user in the selection and application of products and is believed to be reliable. However, it is the responsibility of the specifier and user to determine suitability for purpose, methods or apparatus and to adopt such safety precautions as may be advisable.

We operate a policy of continuing improvement and reserves the right to amend specifications, without prior notice.





**English****Español****Italiano****Deutsch****Français****Nederlands****Polskie****Ball Studs****122**

Pernos de bola • Perni sferici • Kugelbolzen

Rotules • bal hengsten • Szpilki kulkowe

Dust Seals**124**

Guardapolvos • Parapolvere • Staub-Dichtungen

Joints de poussière • Stof zeehonden • uszczelki przeciwpyłowe

Nuts**126**

Tuercas • Dadi • Muttern

Noix • Noten • Orzechy

Washers**128**

Arandelas • Rondelle • Unterlegscheiben

Rondelles • Unterlegscheiben • Podkładki



ACCESSORIES

BALL STUDS

Description:

Ball studs are available in three different series that can be interchanged with corresponding ball joints, hardened threaded, burnished threaded and hardened riveting. Specials can be produced to suit customers requirements, so please enquire for any item not shown.

Material Specifications:

Ball stud: Steel 212A42 hardened and zinc plated and clear trivalent passivate.

Features

Metric & imperial thread sizes
 Course & fine threads
 Interchangeable with ball joints
 Burnished ball for smooth operation

Possible Applications

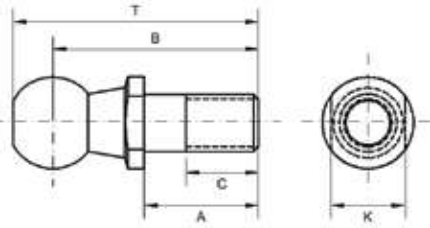
Light to medium industrial/mechanical
 Construction equipment
 Agricultural equipment
 Industrial equipment

Temperature Range

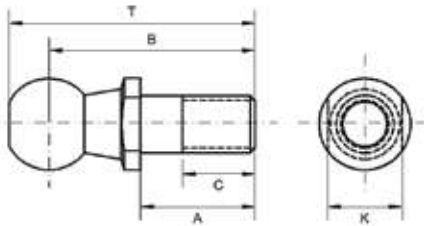
-40°C to +170°C

Specification

ELV & RoHS compliant



BALL STUDS: THREADED SERIES HARDENED (METRIC)



Stud: Steel 212A42, Hardened, Zinc Plated and Clear Trivalent Passivate

Specification: ELV and RoHS Compliant

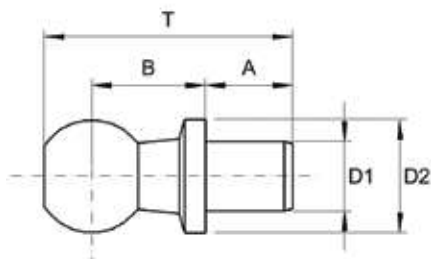


Part No. Right Hand	Ball Dia.	Stud Thread	A	B	C	K	T	Ball Type
M2662	8	M5X0.80	10.2	19.2	6.2	7	22.7	TYPE A
M2667	10	M6X1.00	12.5	23.5	8.5	8	28.0	TYPE A
M2671	13	M8X1.25	16.5	29.5	11.2	11	35.0	TYPE A
M2675	16	M10X1.50	20.0	36.0	12.7	13	43.0	TYPE A
M2679	16	M12X1.75	20.0	36.0	17.0	13	43.0	TYPE A
M2683	19	M14X1.50	28.0	48.0	17.2	16	56.5	TYPE A
M2687	19	M14X2.00	28.0	48.0	17.2	16	56.5	TYPE A

For stainless steel add 'SS' to part no. For example 'M2662 SS'

BALL STUDS: THREADED SERIES HARDENED (IMPERIAL)

Part No. Right Hand	Ball Dia.	Stud Thread	A	B	C	K	T	Ball Type
M1688	0.251	10 - 32 UNF	0.437	0.874	0.360	0.312	0.965	TYPE A
M1158	0.348	1/4 - 28 UNF	0.562	1.015	0.460	0.375	1.166	TYPE A
M1059	0.251	1/4 - 28 UNF	0.562	0.949	0.480	0.312	1.052	TYPE A
M1247	0.310	1/4 - 28 UNF	0.562	1.011	0.480	0.375	1.141	TYPE B
M2262	0.304	1/4 - 28 UNF	0.562	1.030	0.468	0.375	1.156	TYPE C
M1205	0.406	5/16 - 24 UNF	0.687	1.218	0.600	0.437	1.375	TYPE A
M1240	0.311	5/16 - 24 UNF	0.562	1.046	0.500	0.437	1.172	TYPE A
M1187	0.340	5/16 - 24 UNF	0.687	1.234	0.620	0.437	1.375	TYPE B
M2263	0.343	5/16 - 24 UNF	0.687	1.218	0.593	0.437	1.343	TYPE C
M1171	0.489	3/8 - 24 UNF	0.875	1.516	0.780	0.500	1.719	TYPE A
M1333	0.422	3/8 - 24 UNF	0.875	1.522	0.780	0.500	1.687	TYPE B
M2264	0.416	3/8 - 24 UNF	0.875	1.562	0.781	0.500	1.722	TYPE C
M2265	0.554	1/2 - 20 UNF	1.125	2.000	1.000	0.625	2.230	TYPE C

BALL STUDS: RIVETING SERIES HARDENED (METRIC)


Stud: Steel 212A42, Ball Induction Hardened,
Zinc Plated and Clear Trivalent Passivate

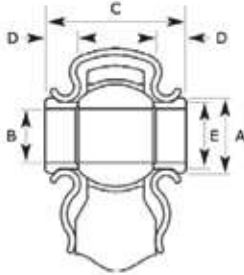
Specification: ELV and RoHS Compliant



Part No. Right Hand	Ball Dia.	A	B	T	D1	D2	Ball Type
M2691	8	4	9	16.5	5	8	5.000 / 5.075
M2692	8	7.5	9	20.0	5	8	5.000 / 5.075
M2693	10	4.5	11	19.5	6	10	6.000 / 6.075
M2694	10	8	11	23.5	6	10	6.000 / 6.075
M2695	13	5	13	23.5	8	13	8.000 / 8.090
M2696	13	10	13	28.5	8	13	8.000 / 8.090
M2697	16	6	16	29.0	10	16	10.000 / 10.090
M2698	16	13	16	35.0	10	16	10.000 / 10.090
M2699	19	12	20	40.5	14	19	14.000 / 14.110
M2700	19	18	20	46.5	14	19	14.000 / 14.110



ACCESSORIES



DUST SEALS & SPACERS: RDS - RDSS

Description:

Dust seals and spacers are available to suit standard rod ends and will give extra protection when used in harsh environments. In certain atmospheres condensation may occur and be trapped inside of the seal, therefore increasing the risk of corrosion. It is essential to use a suitable grease able to withstand water, a recommended grease is Shell Alvania No. 2 or equivalent.

Material Specifications:

Dust seal: Neoprene.

Spacer: Steel 230M07PB zinc plated and clear trivalent passivate.

Features

To suit both metric & imperial rod end bearings

Possible Applications

All rod end bearing applications

Temperature Range

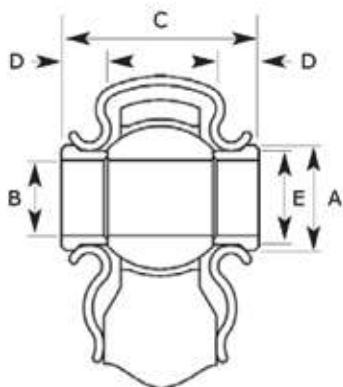
-30°C to +120°C

Specification

ELV & RoHS compliant



RUBBER DUST SEALS & SPACERS



Dust Seal: Neoprene Rubber
Spacer: Steel 230M07Pb, Zinc Plated and Clear Trivalent Passivate
Specification: ELV and RoHS Compliant



Part No.	To Suit Rod End Bore Sizes				
RDS-04	6mm	8mm	1/4"	5/16"	
RDS-06	10mm	3/8"	7/16"		
RDS-08	12mm	14mm	1/2"	5/8"	
RDS-12	16mm	18mm	20mm	22mm	3/4"

SPACERS (METRIC)

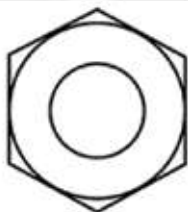
Part No.	Bore Size	A	B	C	D	E
RDSS-M06	6	10	6	21	6	8.5
RDSS-M08	8	12	8	24	6	10.0
RDSS-M10	10	14	10	26	6	12.5
RDSS-M12	12	18	12	28	6	15.0
RDSS-M14	14	20	14	35	8	16.5
RDSS-M16	16	22	16	37	8	19.0
RDSS-M18	18	24	18	39	8	21.0
RDSS-M20	20	26	20	41	8	24.0
RDSS-M22	22	28	22	44	8	25.5

SPACERS (IMPERIAL)

Part No.	Bore Size	A	B	C	D	E
RDSS-04	1/4	0.437	0.250	0.875	0.250	0.343
RDSS-05	5/16	0.500	0.312	0.937	0.250	0.437
RDSS-06	3/8	0.562	0.375	1.000	0.250	0.500
RDSS-07	7/16	0.625	0.437	1.062	0.250	0.562
RDSS-08	1/2	0.750	0.500	1.250	0.312	0.656
RDSS-10	5/8	0.875	0.625	1.375	0.312	0.781
RDSS-12	3/4	1.000	0.750	1.500	0.312	0.906



ACCESSORIES



LOCKING NUTS

Description:

Nuts are available in both grade 4 and grade 8, in full and half width sizes. They are used on many of our linkage assemblies to secure rod ends, ball joints and clevis joints into place.

Material Specifications:

Nut: Steel grade 4 and grade 8 zinc plated and clear trivalent passivate.

Features

Metric & imperial sizes
Full and half width sizes

Possible Applications

All rod end bearing applications
All linkage assembly applications

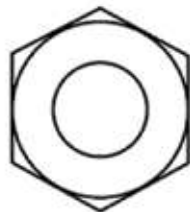
Temperature Range

-30°C to +120°C

Specification

ELV & RoHS compliant

NUTS: GRADE 4 (METRIC)



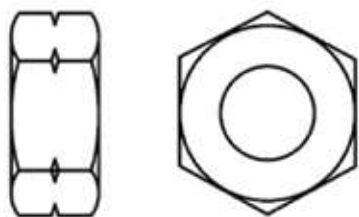
Nut: Grade 4 Steel, Zinc Plated and Clear Trivalent Passivate

Specification: ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Thread	Type
M7000	M7001	M4 X 0.70	FULL
M7002	M7003	M4 X 0.70	THIN
M7007	M7008	M5 X 0.80	FULL
M7009	M7010	M5 X 0.80	THIN
M7014	M7015	M6 X 1.00	FULL
M7016	M7017	M6 X 1.00	THIN
M7025	M7026	M8 X 1.25	FULL
M7027	M7028	M8 X 1.25	THIN
M7033	M7034	M10 X 1.50	FULL
M7035	M7036	M10 X 1.50	THIN
M7040	M7041	M12 X 1.75	FULL
M7042	M7043	M12 X 1.75	THIN

NUTS: GRADE 4 (IMPERIAL)



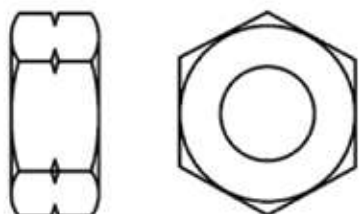
Nut: Grade 4 Steel, Zinc Plated and Clear Trivalent Passivate

Specification: ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Thread	Type
M7050	M7051	10-32 UNF	FULL
M7060	M7061	1/4 UNF	FULL
M7062	M7063	1/4 UNF	THIN
M7070	M7071	5/16 UNF	FULL
M7072	M7073	5/16 UNF	THIN
M7080	M7081	3/8 UNF	FULL
M7082	M7083	3/8 UNF	THIN
M7090	M7091	7/16 UNF	FULL
M7092	M7093	7/16 UNF	THIN

NUTS: GRADE 8 (METRIC)



Nut: Grade 8 Steel, Zinc Plated and Clear Trivalent Passivate

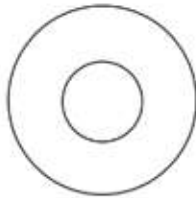
Specification: ELV and RoHS Compliant



Part No. Right Hand	Part No. Left Hand	Thread	Type
M7814	M7815	M6 X 1.00	FULL
M7825	M7826	M8 X 1.25	FULL
M7827	M7828	M8 X 1.25	THIN
M7833	M7834	M10 X 1.50	FULL
M7835	M7836	M10 X 1.50	THIN
M7840	M7841	M12 X 1.75	FULL
M7842	M7843	M12 X 1.75	THIN



ACCESSORIES



WASHERS

Description:

Washers are available in both metric and imperial sizes. They are used on many of our linkage assemblies to help secure rod ends, ball joints and clevis joints into place.

Material Specifications:

Steel 230M07PB zinc plated and clear trivalent passivate.

Features:

Metric & imperial sizes

Possible Applications:

All rod end bearing applications
All linkage assembly applications

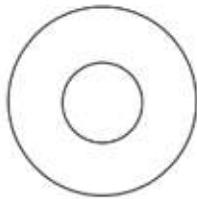
Temperature Range:

-30°C to +120°C

Specification:

ELV & RoHS compliant

PLAIN WASHERS: STANDARD (METRIC)



Washer: Steel

Specification: ELV and RoHS Compliant



Part No. Right Hand	Ball Dia.	Stud Thread	A	B
M7100		10	5.3	1.0
M7111	Special Plain Washer	17	8.4	1.6
M7112	DIN 125 Form B Plain Washer	24	13.0	1.6
M7113	Special Plain Washer	30	17.0	2.0
M7114	Special Plain Washer	21	8.4	1.6
M7117	Special Plain Washer	33	21.0	2.5

PLAIN WASHERS: STANDARD (METRIC)

Part No. Right Hand	Ball Dia.	Stud Thread	A	B
M7101	Plain Washer	0.442 / 0.432	0.268 / 0.263	0.032
M7102	Plain Washer	0.510 / 0.490	0.332 / 0.327	0.032
M7116	Plain Washer	0.625 / 0.615	0.332 / 0.327	0.072
M7103	Plain Washer	0.580 / 0.555	0.415 / 0.410	0.032
M7104	Plain Washer	0.753 / 0.743	0.514 / 0.512	0.039
M7105	Plain Washer	1.250 / 1.240	0.656 / 0.651	0.072
M7106	Plain Washer	1.375 / 1.365	0.656 / 0.651	0.072
M7107	Plain Washer	1.625 / 1.615	0.656 / 0.651	0.128
M7108	Plain Washer	2.000 / 1.990	0.656 / 0.651	0.128
M7109	Plain Washer	0.875 / 0.870	0.395 / 0.390	0.072
M7110	Plain Washer	1.500 / 1.480	0.333 / 0.328	0.057



“We are proud to be a European manufacturer; it is a privilege to supply our products to some of the world’s most prestigious original equipment manufacturers in the Agricultural, Automotive, Construction, Industrial and Motor Sport sectors”.



Agriculture

“Our distributor network is vital to the continued global growth of the DUNLOP brand and our valued distributor partners form the perfect link between manufacturer and end user”.



Automotive

“Our commitment to our staff, our customers and the environment is of paramount importance to our company, we will continue to develop our organisational skills to further enhance our company’s potential, to engage in sustainable practices and anticipate the needs and expectations of our customers”.



Construction

“We love our products”.

Ray Mifsud, Managing Director.

A handwritten signature in black ink, appearing to read 'R. Mifsud'.



Industrial

#WeLoveOurProducts



Motor Sport





LINKAGES

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