

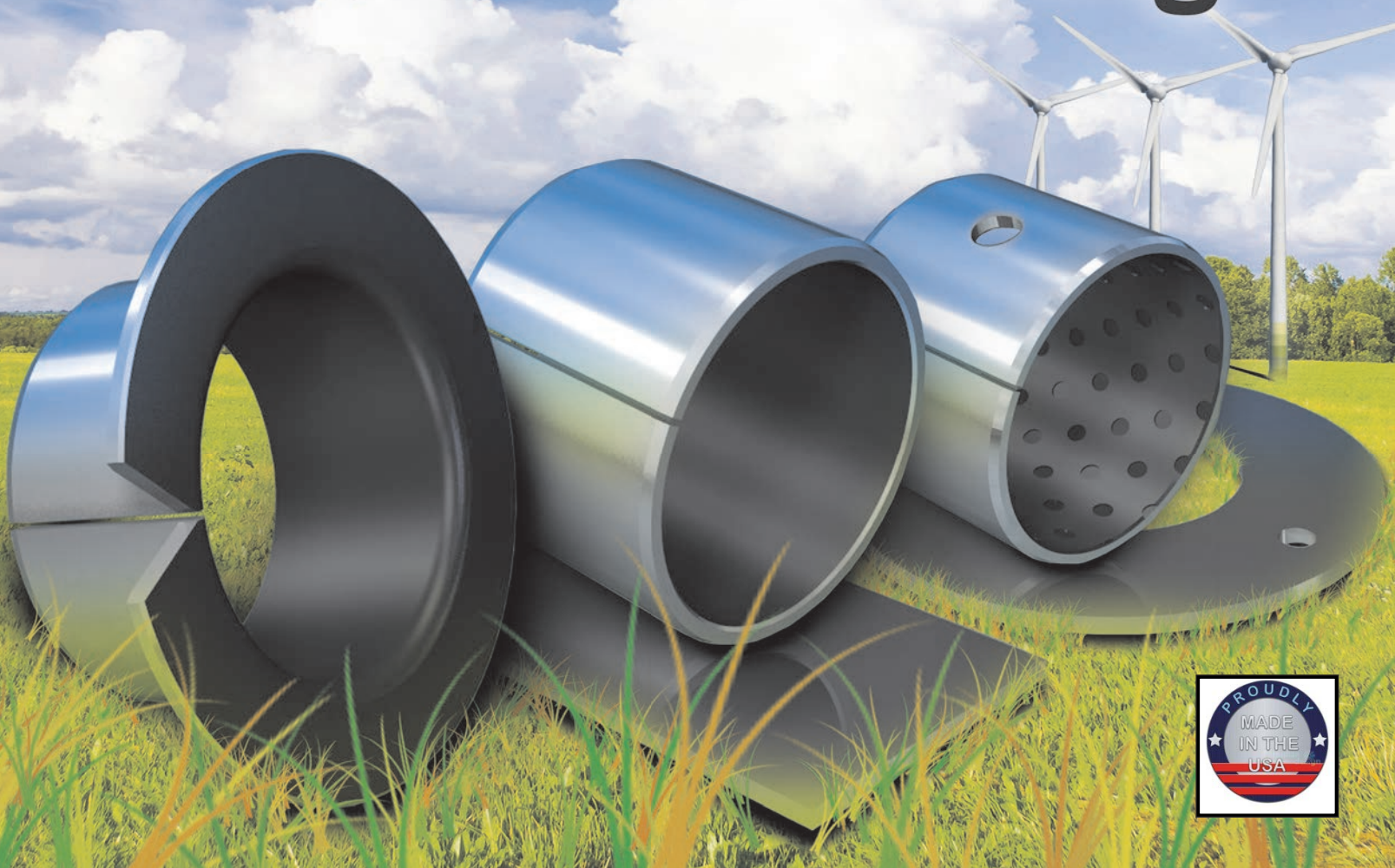


TECHNYMON Technology USA Inc

GROUP

Sliding Bearings

Keep the world
moving



Mission Statement

“To surpass customer expectations in service, quality, and cost through continuous improvements and customer relationships”

Foreword

Mongodi Group began in 1975 as a small owned family company specialized in the production of sliding bearings. Thanks to the strong attachment to the business and to all the efforts of all the people involved in this project this company has been able to grow and become a model of Italian enterprise.

With a modern approach to business, by constantly developing new products and technologies, along with a team philosophy, allow the Mongodi Group to be successful. Since 1986 Mongodi Group carried out an intensive research program, which combined with considerable investments have brought this company to achieve rapid success on all the principal markets worldwide. Since 1990 Mongodi Group has been opening new manufacturing facilities and sales company all over the world.

The following companies are part of the Mongodi Group:

Manufacturing facility:

Technymon Technology USA, Inc.	(TTU)
Technymon Technology Europe SpA	(Italy – Global Headquarters)
Technymon Technology Brazil Ltda.	
Technymon Technology India Pvt. Ltd.	

Sales Company:

MBC Bearings Inc.
Technymon GmbH

Mongodi Group's production includes self-lubricated and lubricated sliding bearings as well as flanged bearings, thrust washers, strips and also special parts. The products cover the whole mechanical industry with applications that vary from heavy machinery and equipment to components for consumer products.

The Group's strengths are:

- Availability of a wide range of standard items
- Competitive prices with distinguished technical features
- Worldwide presence
- Flexible manufacturing capability for different applications
- Team work and customers' satisfaction are the core in the Mongodi's Group working philosophy

The raw material used at Technymon Technology Usa, Brazil & India; is produced at Technymon Technology Europe SpA. (Italy), each production location is certified to the highest level.

Production Materials

<i>Name</i>	<i>Composition</i>	<i>Characteristic</i>	<i>Items</i>
MU	Steel –Sintered Bronze -PTFE Modified	Self-Lubricating	04, 11 ÷ 26
MU-B	Bronze -Sintered Bronze -PTFE Modified	Self-Lubricating	04, 11 ÷ 26
MR-3	Bronze Mesh - PTFE Modified	Self-Lubricating	05
MR-5	Steel - PTFE Modified	Self-Lubricating	05
FRITEX	Steel/Bronze/Aisi316/Inconell625 - PTFE Fabric	Self-Lubricating	06
TWM	Glass Fibres - Polymer Fibres - PTFE Fibres	Self-Lubricating	06
MX / MX-R	Steel - Sintered Bronze - POM	Lubricated	07, 27 ÷ 32
MX-H	Steel - Sintered Bronze - POM	Lubricated	07
BMT	Steel - Sintered Bronze (CuSn10Pb10)	Lubricated	08
BRM-10	Bronze (CuSn8P) with Lozenge Pockets	Lubricated	08

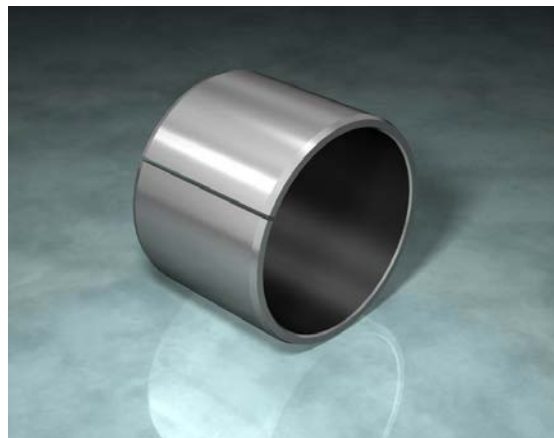
Special Parts	09
Others Kinds of Material Available	10
Data Sheet	33
Checking Methods	34 ÷ 35
Fitting Methods	36 ÷ 37
The Group	39

MU

MU is a composite multiple-layer material used in the manufacture of dry self-lubricating sliding bearings.

The main parts composed this product are a loaded PTFE-based sliding layer (without lead, complying with the European Parliament's "ELV" directive 2000/53/EC), a sintered tin bronze layer and a low carbon steel support. Thanks to its structure, MU provides an excellent match between the mechanical strength of steel and the low coefficient of friction due to the PTFE-based sliding layer.

The bronze layer guarantees a sound coupling for the self-lubricating mixture and allows a good loss of the heat produced during operation. (Dimensional tables on pages 11 to 26).



CHARACTERISTICS:	TECHNICAL DATA				
- High load capacity - Dry self-lubrication - Low friction factor, either static and dynamic (no stick-slip effect) - Minimized wear and excellent service life - High chemical inertia and good compatibility with fluids - Wide range of working temperatures - Good thermal conductivity - Good electrical conductivity - Small overall dimensions - Easy mounting - Wide selection of standard items - Special items on demand	Maximum PV factor -Dry	Alternativ load	PV	25.000 psi-fpm	0,9 N/mm ² ·m/s
		Continuous load	PV	50.000 psi-fpm	1,8 N/mm ² ·m/s
		Short-term limit	PV	100.000 psi-fpm	3,6 N/mm ² ·m/s
	Maximum Specific Load	Static	P	35500 psi	250 N/mm ²
		Reduced movements	P	20000 psi	140 N/mm ²
	Maximum Speed	Dry	v	500 fpm	2,5 m/s
		Hydrodynamic state	v	2000 fpm	< 10 m/s
	Service Temperature	Minimum	t	-328°F	-200°C
		Maximum	t	+536°F	+280°C
	Coefficient of Friction-Dry	Minimum	μ	0,03	
		Maximum	μ	0,20	

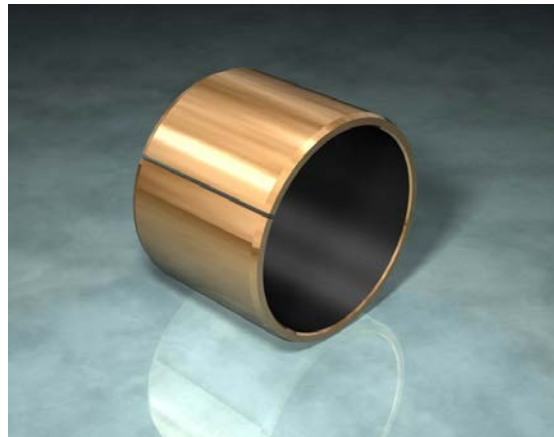
MU-B

The only difference between the MU and the MU-B is that the support of the MU-B composite structure is made of tin bronze (CuSn8P).

The main parts forming this item are: A loaded PTFE-based sliding layer (without lead, complying with the European Parliament's "ELV" directive 2000/53/EC), a sintered tin bronze layer and a tin bronze support.

With MU-B we have improved the strength against corrosion that can be caused by the presence of water and oxygen, this performance is guaranteed even in a saline environment.

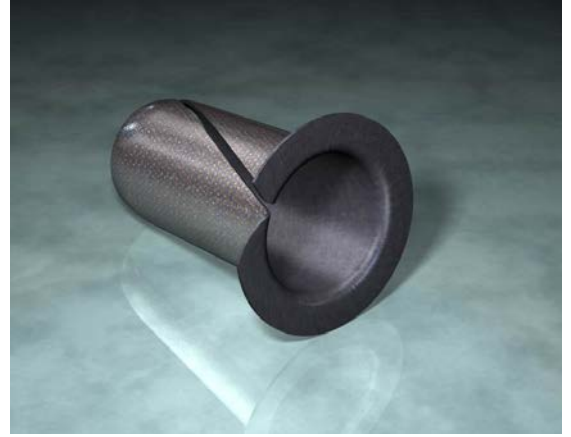
(MU-B material is only on request).



CHARACTERISTICS:	TECHNICAL DATA				
- High load capacity - Dry self-lubrication - Low friction factor, either static and dynamic (no stick-slip effect) - Minimized wear and excellent service life - High chemical inertia and good compatibility with fluids - Wide range of service temperatures - Good thermal conductivity - Good electrical conductivity - Minimum overall dimensions - Easy mounting - Wide selection of standard items - Special items on demand	Maximum PV factor -Dry	Alternativ load	PV	25.000 psi-fpm	0,9 N/mm ² ·m/s
		Continuous load	PV	50.000 psi-fpm	1,8 N/mm ² ·m/s
		Short-term limit	PV	100.000 psi-fpm	3,6 N/mm ² ·m/s
	Maximum Specific Load	Static	P	35500 psi	250 N/mm ²
		Reduced movements	P	20000 psi	140 N/mm ²
	Maximum Speed	Dry	v	500 fpm	2,5 m/s
		Hydrodynamic state	v	2000 fpm	< 10 m/s
	Service Temperature	Minimum	t	-328°F	-200°C
		Maximum	t	+536°F	+280°C
	Coefficient of Friction-Dry	Minimum	μ	0,03	
		Maximum	μ	0,20	

MR-3

The MR-3 trademark identifies a range of bearings composed of a metal grid housed within PTFE loaded with solid lubricants. The bronze grid gives the bearings the mechanical strength and the formability required to manufacture the finished parts; the loaded PTFE gives the MR-3 bearings a low friction factor and a high chemical resistance, entirely similar to those featured by pure PTFE. Thanks to their composite structure, the MR-3 bearings provide the best match of mechanical strength, thermal conductivity and low friction factor. The available products are cylindrical and flanged bearings, washers, belts and cast-to-size parts with thickness ranging from 0,500 to 1,000 mm (.019 to .039 inch). Please contact our technical/commercial offices to forward your requests.



CHARACTERISTICS:

- High load capacities
- Easy mounting
- Good chemical inertia to corrosive agents
- High thermal conductivity
- Negligible water absorption
- Wide range of service temperatures
- Minimum overall dimensions and no maintenance
- Special items available on demand

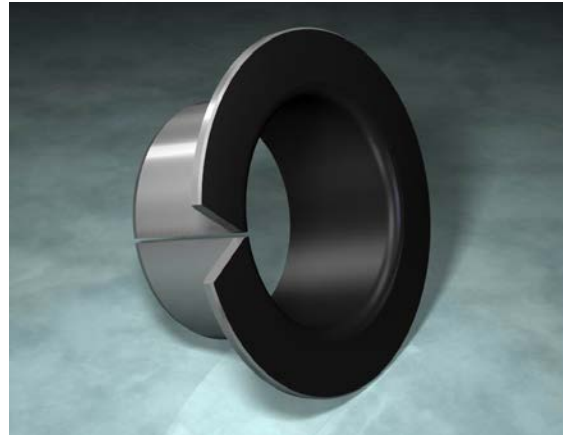
TECHNICAL DATA

Maximum Load Factor - Dry	Continuous Load	PV	27700 psi-fpm	1 N/mm ² -m/s
	Short - term limit	PV	83300 psi-fpm	3 N/mm ² -m/s
Maximum Specific Load	Static	P	14500 psi	100 N/mm ²
	Dynamic	P	11600 psi	80 N/mm ²
Maximum Speed	Dry	v	200 fpm	1 m/s
Service Temperature	Minimum	t	-328°F	-200°C
	Maximum	t	+500°F	+260°C

MR-5

The MR-5 trademark identifies a range of bearings composed material of compounded PTFE (polytetrafluoroethylene) tape on a metal shell (steel). The tape of PTFE contains carbon and graphite and isolates noise and is designed for obtain self lubricated bearings without play. The available products are cylindrical and flanged bearings, washers, with thickness standard is from .0196 in. (0,500 mm).

(Please contact our technical/commercial officies to forward your request).



CHARACTERISTICS:

- Minimum tolerance on the inside diameter
- High load capacity
- Self-lubricating under dry operation
- Minimum wear and excellent operating life
- High chemical resistance and compatibility with fluids
- Minimum dimensions
- Easy of fittings
- Special items on demand
- Excellent performance / cost ratio
- Low static and dynamic coefficient of friction (no stick-slip effect)

TECHNICAL DATA

Maximum Load Factor - Dry	Continuous load	PV	50000 psi-fpm	1,8 N/mm ² -m/s
	Short-term limit	PV	61100 psi-fpm	2,2 N/mm ² -m/s
Maximum Specific Load	Static	P	29000 psi	200 N/mm ²
	Dynamic	P	21300 psi	150 N/mm ²
Maximum Speed	Dry	v	300 fpm	1,5 m/s
Service Temperature	Minimum	t	-328°F	-200°C
	Maximum	t	+356°F	+180°C
	Maximum (Intermittent)	t	+500°F	+260°C

FRITEX

The Fritex trademark identifies a series of bearings that are specially manufactured to allow the sticking of fabric with PTFE fibres on metal supports in various types and shapes. The Sliding Surface fabric is primarily composed of PTFE fibres. The bearing support is available in several materials, that vary according to the application type. These versions are:

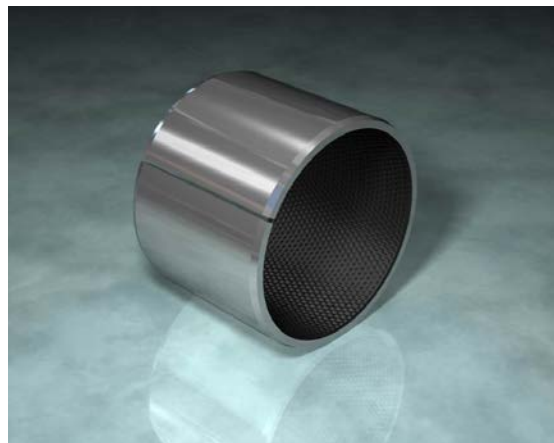
Fritex-C= version with low-carbon steel support

Fritex-316= support made from AISI 316 stainless steel

Fritex-625= support made from INCONEL-625 nickel alloy

Fritex-B= bronze support (CuSn8)

Fritex products find their best applications with slow movements, high loads and where dry running is required; e.g. actuators of big valves, textile industry machinery, etc. Please contact our offices to forward your request.



CHARACTERISTICS:

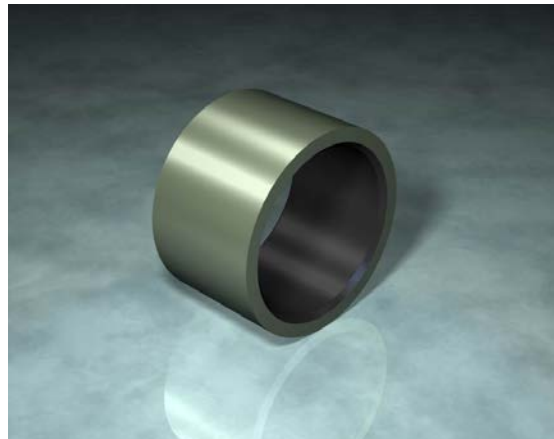
- High load capacity
- Dry self-lubrication
- Low friction factor, either static or dynamic
- Minimized wear and excellent service life
- High chemical inertia and good compatibility with fluids
- Wide range of service temperature values
- High corrosion strength linked with the housing
- Minimized overall dimensions
- Easy mounting
- Standard items widely available
- Special items on demand

TECHNICAL DATA

Maximum load factor -Dry	Continuous load	PV	69400 psi-fpm	2,5 N/mm ² · m/s
	Short-term limit	PV	277700 psi-fpm	10 N/mm ² · m/s
Maximum Specific Load	Static	P	43500 psi	300 N/mm ²
	Dynamic	P	26000 psi	180 N/mm ²
Maximum Speed	Dry	v	300 fpm	1,5 m/s
Service Temperature	Minimum	t	-148°F	-100°C
	Maximum	t	+500°F	+260°C
Coefficient of Friction-Dry	Minimum	μ		0,03
	Maximum	μ		0,15

TWM

TWM identifies an entire sliding bearings family constituted from a complex fibre-winding technique. The highstrength backing consist of a glass fibres and the sliding surface is made of PTFE and polymer fibres. Both layers are embedded in an epoxy resin matrix. This material selection combines the special mechanical properties of glass fibres with the outstanding tribological properties of PTFE and the high strength polymer fibres. Please contact our offices to forward your request.



CHARACTERISTICS:

- Excellent sliding property
- High load carrying capacity
- Long service life
- Maintenance free
- Intensive to edge loading and misalignment
- Good impact resistance
- Good noise and vibration damping
- Excellent resistance to corrosive media, even to salt water
- Good insulator preventing passage of electric current

TECHNICAL DATA

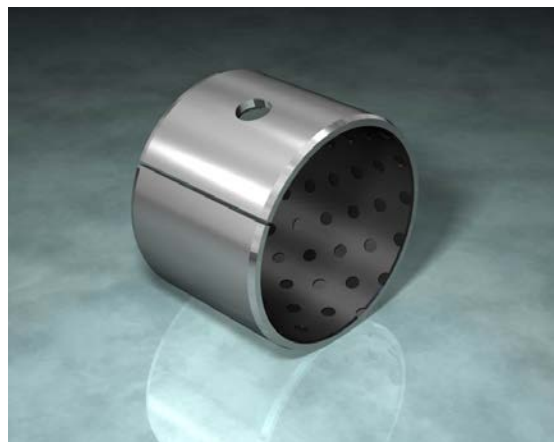
Maximum Specific Load	Static	P	36200 psi	250 N/mm ²
	Dynamic	P	20300 psi	140 N/mm ²
Maximum Speed	Dry	v	20 fpm	0,1 m/s
Service Temperature	Minimum	t	-58°F	-50°C
	Maximum	t	+302°F	+150°C
Max load factor (Dry)	Maximum	PV	29100 psi-fpm	1,05 N/mm ² · m/s
	Maximum (short periods)	PV	41600 psi-fpm	1,50 N/mm ² · m/s

MX & MXR

This range is for use with additional lubricant and consists of a carbon steel backing, an intermediate layer of sintered bronze upon which a layer of co-acetyl plastic is bonded.

The polymeric surface has indentations in which the lubricating oil/grease is collected and gradually released in order to reduce friction and to protect the mating surface.

Plain bushes as well as thrust washers and strips are available as standard. (Dimensional tables on pages 27 ÷ 32).



CHARACTERISTICS:	TECHNICAL DATA				
	Maximum Specific Load	Static	P	20000 psi	140 N/mm ²
		Dynamic	P	10000 psi	70 N/mm ²
	Maximum Speed	with grease	v	500 fpm	2,5 m/s
	Service Temperature	Minimum	t	-40°F	-40°C
		Maximum	t	+266°F	+130°C
	Max load factor (Dry)	Maximum	PV	83300 psi-fpm	3,0 N/mm ² · m/s
		Maximum (short periods)	PV	138800 psi-fpm	5,0 N/mm ² · m/s

MX-H

MX-H range is an evolution of the MX bearings. The difference between MX and MX-H is that the indentations on the surface are replaced by through-holes which allow a greater capacity for the lubricant to collect. MX-H and MX can be supplied with wiper rings for the retention of the lubricant (see the picture of BRM-10 WR on the next page as example).

(Material only on request).



CHARACTERISTICS:	TECHNICAL DATA				
	Maximum Specific Load	Static	P	20000 psi	140 N/mm ²
		Dynamic	P	10000 psi	70 N/mm ²
	Maximum Speed	with grease	v	500 fpm	2,5 m/s
	Service Temperature	Minimum	t	-40°F	-40°C
		Maximum	t	+266°F	+130°C
	Max load factor (Dry)	Maximum	PV	83300 psi-fpm	3,0 N/mm ² · m/s
		Maximum (short periods)	PV	138800 psi-fpm	5,0 N/mm ² · m/s

BMT

The name BMT labels the range of bimetallic bearings made of a low-carbon steel support and a layer of sintered bronze (CuSn10Pb10). These bearings are used with oil or grease lubricant. The sliding surface is available in many types of surfaces:

BMT-1= bronze surface with round pits (Standard).

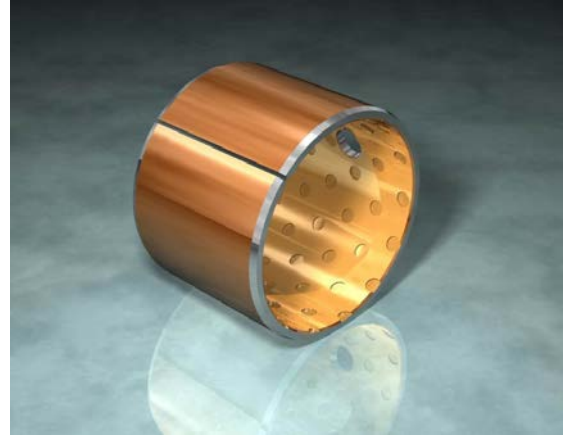
BMT-2= bronze surface with diamond pits.

BMT-3= smooth bronze surface.

BMT-4= bronze surface with stock.

BMT-SPC= bronze surface with cast-to-size lubrication channels.

All BMT lines are available in the cylindrical or flanged shape, washers, belts and special cast-to-size items.



CHARACTERISTICS:	TECHNICAL DATA				
	Maximum Specific Load	Static	P	45000 psi	310 N/mm ²
- Excellent load capacity - Easy mounting and lubrication - High thermal conductivity - Minimized wear and excellent service life - Wide range of service temperatures - Minimized overall dimensions - Special items on option		Dynamic	P	22000 psi	150 N/mm ²
	Maximum Speed	with Oil or Grease	v	500 fpm	2,5 m/s
	Coefficient of Friction-Dry	Minimum	μ	0,04 ÷ 0,15	
	Service Temperature	Minimum (Oil)	t	-40°F	-40°C
		Maximum (Oil)	t	+482°F	+250°C
		Minimum (Grease)	t	-40°F	-40°C
		Maximum (Grease)	t	+302°F	+150°C

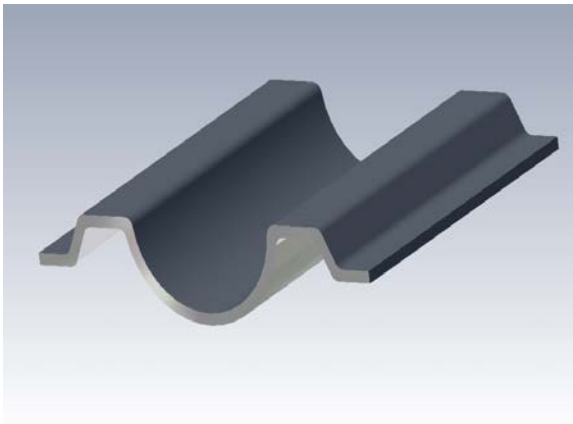
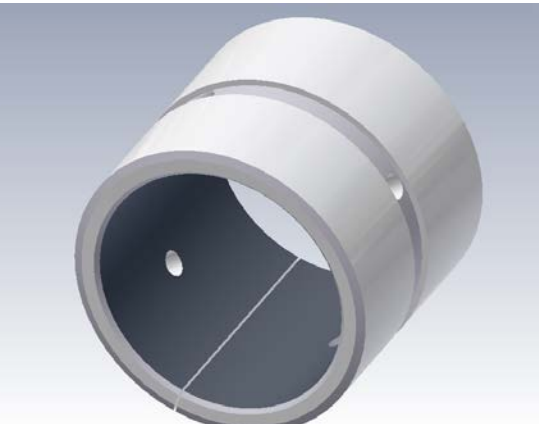
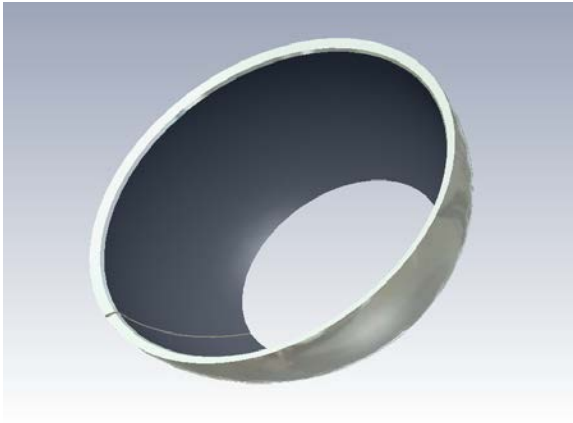
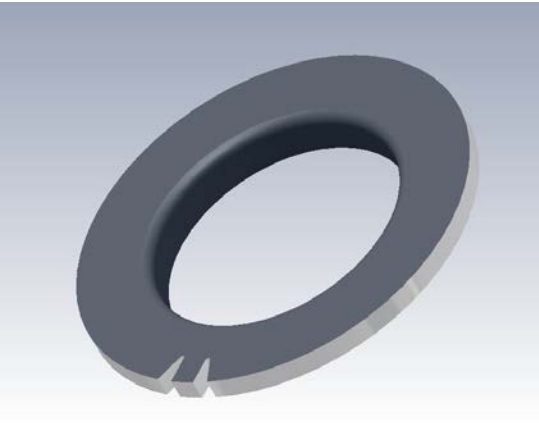
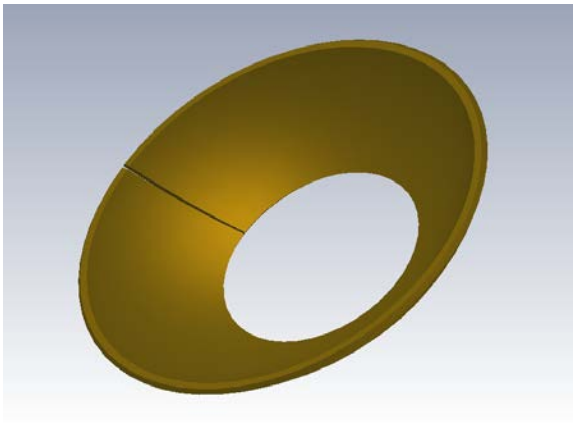
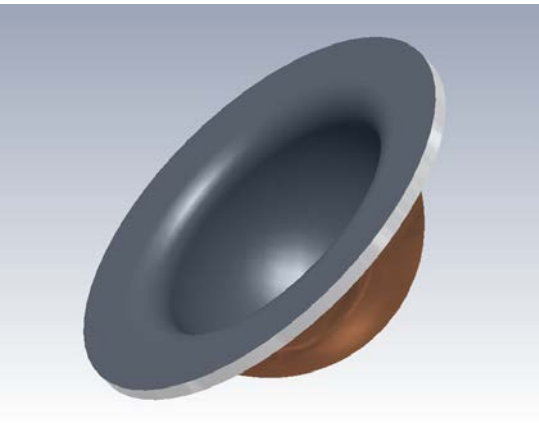
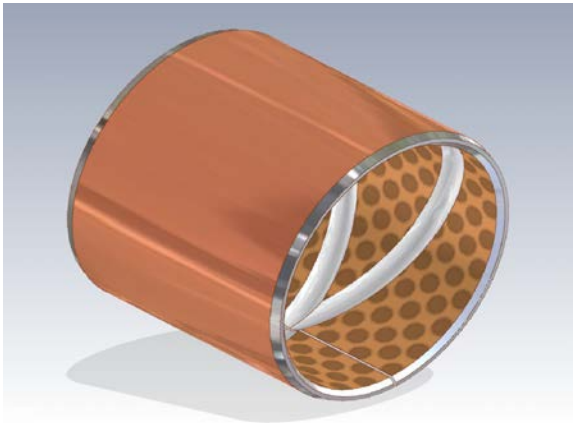
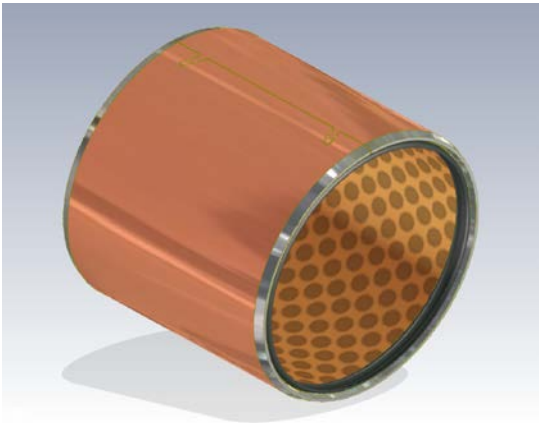
BRM-10

The bearings of the BRM-10 series are entirely made of CuSn8P bronze. This alloy specially suits sliding couplings lubricated with oil or grease. Moreover it shows high resistance to corrosion caused by chemical and environmental agents.

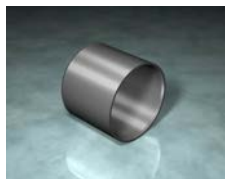
The work surface of this product features diamond pits, as these allow the lubricant to be initially collected and gradually released during operation. The range is available in cylindrical and flanged shapes, as washers, belts and special parts. The most common application of BRM-10 is in the industry of earthmovers, agricultural machines, excavators, tilters, etc. (Please contact our technical/commercial offices to forward your request).



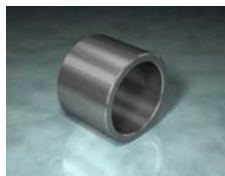
CHARACTERISTICS:	TECHNICAL DATA				
	Maximum Specific Load	Static	P	21700 psi	150 N/mm ²
- High load capacity - Easy lubricated - Good chemical inertia to corrosive agents - High thermal conductivity - Minimized overall dimensions - Easy mounting - Wide range of standard items - Special items available on request		Dynamic	P	8700 psi	60 N/mm ²
	Maximum Speed	with Oil or Grease	v	500 fpm	2,5 m/s
	Service Temperature	Minimum	t	-40°F	-40°C
		Maximum	t	+302°F	+150°C
	Max load factor (Dry)	Maximum	PV	83300 psi-fpm	3,0 N/mm ² · m/s
		Maximum (short periods)	PV	138800 psi-fpm	5,0 N/mm ² · m/s
	Coefficient of Friction-Dry	Minimum-Maximum	μ	0,06 ÷ 0,17	



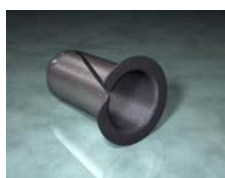
OTHERS KINDS OF MATERIAL AVAILABLE



MP-G is a thermoplastic material with a lattice of fibers mixed with solid lubricants. The product shows good wear resistance, the solid lubricants highly reduce the friction factor and form, by micro abrasion, an excellent sliding surface with the counter-piece.



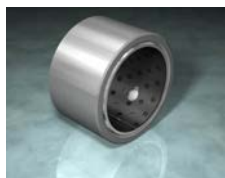
MP-M is a thermoplastic material made of fibers threads mixed with solid lubricants. This product are developed for their vibration dampening, impact strength, and wear resistant properties. Plain and flanged bearings are available as standard.



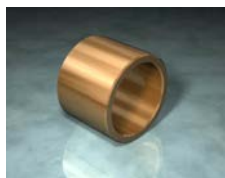
The MR-4 name identifies a range of bearings composed of a metal grid housed within PTFE loaded with solid lubricants. The stainless steel AISI 316 grid gives the bearings the mechanical strength and the formability required to manufacture the finished parts; the loaded PTFE gives a low friction factor.



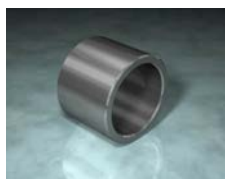
This range is maintenance free and is suitable for heavy loads at low sliding speed. Solid lubricant is provided by PTFE or graphite which are inserted into the bronze structure of the bearing. OLTECC-500 product range includes cylindrical bushes, flanged bushes, plain and sliding guides.



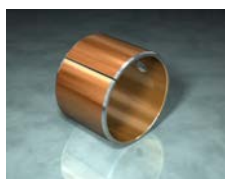
BL identifies the full range of linear bushings, composed of an aluminium anodized shell which is wrapped a sliding bearing various types of offerings. BL linear bushings allow smooth and noiseless linear motion. The sleeves are available with BL Linear bearings in different versions.



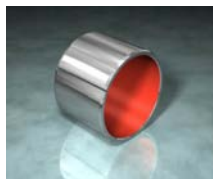
Sinter Bronze is a complete range of bronze bushing both standard and special shapes. The porous micro-structure of the sintered bearings is suitable for impregnation with oil so that are self-lubricated and are maintenance free.



Sintered Iron is a complete range of sintered bushings in different shapes, cylindrical and flanged, in iron material. The porous micro-structure of the sintered bearings is suitable for impregnation with oil so that they are self-lubricated and maintenance free for long periods.



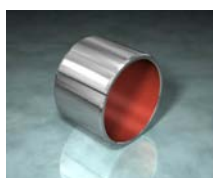
BT-11 bearings are self-lubricating, and designed for heavy duty applications with high thermal deviations. They have excellent wear and corrosion resistance also can be used in the presence of sea water.



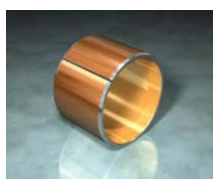
The MU-316 material consists of a based of AISI 316, an intermediate layer of bronze alloy, and sliding layer of PTFE Modified with solid lubricant (Pb free). The MU-316 is the ideal material for applications where resistance to corrosion and chemical agents is inevitable.



MU-625 material is derived from the product MU, the substantial difference is the support material which is Inconel 625, a nichel alloy. It is suitable for applications with highly corrosive chemicals and is especially recommended for the petrochemical industry.



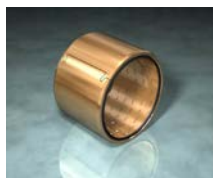
Drinox self-lubricating bearings, are products with good load capacity and with maximum resistance to corrosion. The sliding layer (PTFE based) is applied, with special treatment, directly on the support of stainless steel AISI 316. Drinox is suitable for applications with static and semi-static needs.



The BMT-4 identifies a range of bearings bimetallic, the same as BMT. These bearings are used with lubricating oil or grease. In this version of the bronze layer is increased by 0.10-0.15 mm in order to get a bearing to be reworked after installation, for optimum concentricity and tighter tolerances.



HT-316 identifies a new generation of bearings that are designed for cryogenic use. HT-316 parts have an operating temperature from -200°C to +430 °C. The outer surface is composed of stainless steel AISI 316, treated with a special coating called "Duritex ML".



The BRM-10 sliding bearings can be also supplied with wiper rings for the retention of the lubricant. These seals solves the problem of damage caused by contamination during operation. By the addition of these seals, better performance and longer life are achieved.



The BRM-80 trademark identifies a line of bearings entirely made of CuSn8P bronze (derived from the BRM-10). The fundamental difference is in that the diamond pits are replaced with through holes, as they feature a better lubricant accumulation capacity.



WR-2 identifies a range of oil seals dedicated to the size of our bearings. The WR-2 can be applied with self-lubricating bearings to protect them from impurities, thus increasing the useful life of the bearing itself, for applications including lubrication, prevents the lubricant from leaving the zone of work.

MU/MU-B

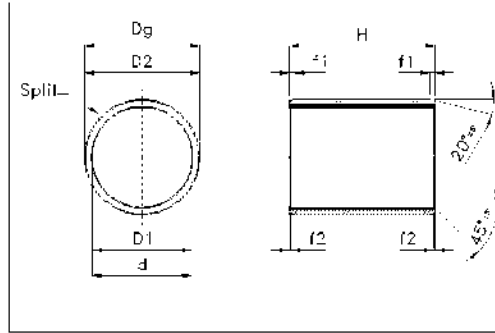
INCH SIZES

Cylindrical Plain Bearings
dimension according to ISO 3547

Part Number Structure:



General Tolerances:
Length (H) = ± 0.010 (in)



Part Number	D1	D2	H	D1 (After Assembly)	Dg (Housing Recomend)	d (Shaft Recomend)
02MU02	0.1250	0.1875	0.1250	0.1243 ÷ 0.1268	0.1873 ÷ 0.1878	0.1236 ÷ 0.1243
02MU03			0.1875			
025MU025	0.1563	0.2188	0.1563	0.1556 ÷ 0.1581	0.2186 ÷ 0.2191	0.1547 ÷ 0.1554
025MU04			0.2500			
03MU03	0.1875	0.2500	0.1875	0.1867 ÷ 0.1893	0.2497 ÷ 0.2503	0.1858 ÷ 0.1865
03MU04			0.2500			
03MU06			0.3750			
04MU04	0.2500	0.3125	0.2500	0.2492 ÷ 0.2518	0.3122 ÷ 0.3128	0.2481 ÷ 0.2490
04MU06			0.3750			
05MU06	0.3125	0.3750	0.3750	0.3117 ÷ 0.3143	0.3747 ÷ 0.3753	0.3106 ÷ 0.3115
05MU08			0.5000			
06MU03	0.3750	0.4688	0.1875	0.3742 ÷ 0.3769	0.4684 ÷ 0.4691	0.3731 ÷ 0.3740
06MU04			0.2500			
06MU06			0.3750			
06MU08			0.5000			
06MU10			0.6250			
06MU12			0.7500			
07MU08	0.4375	0.5313	0.5000	0.4367 ÷ 0.4394	0.5309 ÷ 0.5316	0.4355 ÷ 0.4365
07MU12			0.7500			
08MU04	0.5000	0.5938	0.2500	0.4992 ÷ 0.5019	0.5934 ÷ 0.5941	0.4980 ÷ 0.4990
08MU06			0.3750			
08MU08			0.5000			
08MU10			0.6250			
08MU12			0.7500			
08MU14			0.8750			
09MU06	0.5625	0.6563	0.3750	0.5617 ÷ 0.5644	0.6559 ÷ 0.6566	0.5605 ÷ 0.5615
09MU08			0.5000			
09MU10			0.6250			
09MU12			0.7500			
10MU04	0.6250	0.7188	0.2500	0.6242 ÷ 0.6270	0.7184 ÷ 0.7192	0.6230 ÷ 0.6240
10MU08			0.5000			
10MU10			0.6250			
10MU12			0.7500			
10MU14			0.8750			
10MU16			1.0000			
11MU14	0.6875	0.7813	0.8750	0.6867 ÷ 0.6895	0.7809 ÷ 0.7817	0.6855 ÷ 0.6865
12MU04	0.7500	0.8750	0.2500	0.7493 ÷ 0.7525	0.8747 ÷ 0.8755	0.7479 ÷ 0.7491
12MU06			0.3750			
12MU08			0.5000			

Part Number	D1	D2	H	D1 (After Assembly)	Dq (Housing Recommended)	d (Shaft Recommended)
12MU10	0.7500	0.8750	0.6250	0.7493 ÷ 0.7525	0.8747 ÷ 0.8755	0.7479 ÷ 0.7491
12MU12			0.7500			
12MU16			1.0000			
13MU12	0.8125	0.9375	0.7500	0.8118 ÷ 0.8150	0.9372 ÷ 0.9380	0.8104 ÷ 0.8116
13MU18			1.1250			
14MU04			0.2500			
14MU06	0.8750	1.0000	0.3750	0.8743 ÷ 0.8775	0.9997 ÷ 1.0005	0.8729 ÷ 0.8741
14MU12			0.7500			
14MU14			0.8750			
14MU16			1.0000			
14MU20			1.2500			
16MU06	1.0000	1.1250	0.3750	0.9992 ÷ 1.0026	1.1246 ÷ 1.1256	0.9979 ÷ 0.9991
16MU08			0.5000			
16MU12			0.7500			
16MU16			1.0000			
16MU20			1.2500			
16MU24	1.1250	1.2813	1.5000	1.1240 ÷ 1.1278	1.2808 ÷ 1.2818	1.1226 ÷ 1.1238
18MU06			0.3750			
18MU10			0.6250			
18MU12			0.7500			
18MU16			1.0000			
20MU06	1.2500	1.4063	0.3750	1.2490 ÷ 1.2528	1.4058 ÷ 1.4068	1.2472 ÷ 1.2488
20MU12			0.7500			
20MU14			0.8750			
20MU16			1.0000			
20MU20			1.2500			
20MU28	1.3750	1.5313	1.7500	1.3740 ÷ 1.3778	1.5308 ÷ 1.5318	1.3722 ÷ 1.3738
22MU12			0.7500			
22MU16			1.0000			
22MU22			1.3750			
22MU24			1.5000			
24MU08	1.5000	1.6563	1.7500	1.4990 ÷ 1.5028	1.6558 ÷ 1.6568	1.4972 ÷ 1.4988
24MU16			0.5000			
24MU18			1.0000			
24MU20			1.1250			
24MU24			1.2500			
24MU32	1.6250	1.7813	1.5000	1.6240 ÷ 1.6278	1.7808 ÷ 1.7818	1.6222 ÷ 1.6238
26MU16			2.0000			
26MU24			1.0000			
28MU16			1.5000			
28MU24			1.7500			
28MU28	1.7500	1.9375	2.0000	1.7489 ÷ 1.7535	1.9371 ÷ 1.9381	1.7471 ÷ 1.7487
28MU32			0.7500			
30MU12			1.0000			
30MU16	1.8750	2.0625	1.8750	1.8739 ÷ 1.8787	2.0621 ÷ 2.0633	1.8721 ÷ 1.8737
30MU30			2.2500			
30MU36			0.5000			
32MU08	2.0000	2.1875	1.0000	1.9989 ÷ 2.0037	2.1871 ÷ 2.1883	1.9969 ÷ 1.9987
32MU16			1.5000			
32MU24			0.7500			

Part Number	D1	D2	H	D1 (After Assembly)	Dg (Housing Recomend)	d (Shaft Recomend)
32MU28	2.0000	2.1875	1.7500	1.9989 ÷ 2.0037	2.1871 ÷ 2.1883	1.9969 ÷ 1.9987
32MU32			2.0000			
32MU40			2.5000			
34MU48	2.1250	2.3125	3.0000	2.1259 ÷ 2.1323	2.3115 ÷ 2.3127	2.1239 ÷ 2.1257
36MU28	2.2500	2.4375	1.7500	2.2509 ÷ 2.2573	2.4365 ÷ 2.4377	2.2489 ÷ 2.2507
36MU32			2.0000			
36MU36			2.2500			
36MU40			2.5000			
36MU48			3.0000			
36MU56			3.5000			
36MU60			3.7500			
36MU64			4.0000			
36MU72			4.5000			
40MU16	2.5000	2.6875	1.0000	2.5013 ÷ 2.5077	2.6869 ÷ 2.6881	2.4993 ÷ 2.5011
40MU26			1.6250			
40MU32			2.0000			
40MU40			2.5000			
40MU48			3.0000			
40MU56			3.5000			
40MU60			3.7500			
40MU64			4.0000			
40MU72			4.5000			
40MU76			4.7500			
44MU32	2.7500	2.9375	2.0000	2.7502 ÷ 2.7566	2.9358 ÷ 2.9370	2.7482 ÷ 2.7500
44MU36			2.2500			
44MU40			2.5000			
44MU48			3.0000			
44MU56			3.5000			
44MU60			3.7500			
44MU64			4.0000			
44MU72			4.5000			
44MU76			4.7500			
44MU80			5.0000			
46MU32	2.8750	3.0625	2.0000	2.8754 ÷ 2.8819	3.0610 ÷ 3.0623	2.8734 ÷ 2.8752
46MU36			2.2500			
46MU40			2.5000			
46MU48			3.0000			
46MU56			3.5000			
46MU60			3.7500			
46MU64			4.0000			
46MU72			4.5000			
46MU76			4.7500			
46MU80			5.0000			
48MU32	3.0000	3.1875	2.0000	3.0002 ÷ 3.0068	3.1858 ÷ 3.1872	2.9982 ÷ 3.0000
48MU36			2.2500			
48MU40			2.5000			
48MU48			3.0000			
48MU56			3.5000			
48MU60			3.7500			
48MU64			4.0000			
48MU72			4.5000			

Part Number	D1	D2	H	D1 (After Assembly)	Dg (Housing Recommended)	d (Shaft Recommended)
48MU76	3.0000	3.1875	4.7500	3.0002 ÷ 3.0068	3.1858 ÷ 3.1872	2.9982 ÷ 3.0000
48MU80			5.0000			
52MU32	3.2500	3.4375	2.0000	3.2502 ÷ 3.2568	3.4358 ÷ 3.4372	3.2480 ÷ 3.2500
52MU38			2.3750			
52MU40			2.5000			
52MU48			3.0000			
52MU56			3.5000			
52MU60			3.7500			
52MU64			4.0000			
52MU72			4.5000			
52MU76			4.7500			
52MU80			5.0000			
56MU32	3.5000	3.6875	2.0000	3.5002 ÷ 3.5068	3.6858 ÷ 3.6872	3.4978 ÷ 3.5000
56MU38			2.3750			
56MU40			2.5000			
56MU48			3.0000			
56MU56			3.5000			
56MU60			3.7500			
56MU64			4.0000			
56MU72			4.5000			
56MU76			4.7500			
56MU80			5.0000			
58MU32	3.6250	3.8125	2.0000	3.6258 ÷ 3.6318	3.8108 ÷ 3.8122	3.6228 ÷ 3.6250
58MU36			2.2500			
58MU40			2.5000			
58MU48			3.0000			
58MU56			3.5000			
58MU60			3.7500			
58MU64			4.0000			
58MU72			4.5000			
58MU76			4.7500			
58MU80			5.0000			
60MU32	3.7500	3.9375	2.0000	3.7502 ÷ 3.7568	3.9358 ÷ 3.9372	3.7478 ÷ 3.7500
60MU36			2.2500			
60MU40			2.5000			
60MU48			3.0000			
60MU56			3.5000			
60MU60			3.7500			
60MU64			4.0000			
60MU72			4.5000			
60MU76			4.7500			
60MU80			5.0000			
64MU32	4.0000	4.1875	2.0000	4.0002 ÷ 4.0068	4.1858 ÷ 4.1872	3.9978 ÷ 4.0000
64MU36			2.2500			
64MU40			2.5000			
64MU48			3.0000			
64MU56			3.5000			
64MU60			3.7500			
64MU64			4.0000			
64MU72			4.5000			
64MU76			4.7500			

Part Number	D1	D2	H	D1 (After Assembly)	Dg (Housing Recommended)	d (Shaft Recommended)
64MU80	4.0000	4.1875	5.0000	4.0002 ÷ 4.0068	4.1858 ÷ 4.1872	3.9978 ÷ 4.0000
68MU32	4.2500	4.4375	2.0000	4.2502 ÷ 4.2568	4.4358 ÷ 4.4372	4.2478 ÷ 4.2500
68MU36			2.2500			
68MU40			2.5000			
68MU48			3.0000			
68MU56			3.5000			
68MU60			3.7500			
68MU64			4.0000			
68MU72			4.5000			
68MU76			4.7500			
68MU80			5.0000			
70MU32	4.3750	4.5625	2.0000	4.3752 ÷ 4.3818	4.5608 ÷ 4.5622	4.3728 ÷ 4.3750
70MU36			2.2500			
70MU40			2.5000			
70MU48			3.0000			
70MU56			3.5000			
70MU60			3.7500			
70MU64			4.0000			
70MU72			4.5000			
70MU76			4.7500			
70MU80			5.0000			
72MU32	4.5000	4.6875	2.0000	4.5002 ÷ 4.5068	4.6858 ÷ 4.6872	4.4978 ÷ 4.5000
72MU36			2.2500			
72MU40			2.5000			
72MU48			3.0000			
72MU56			3.5000			
72MU60			3.7500			
72MU64			4.0000			
72MU72			4.5000			
72MU76			4.7500			
72MU80			5.0000			
76MU32	4.7500	4.9375	2.0000	4.7502 ÷ 4.7570	4.9358 ÷ 4.9374	4.7475 ÷ 4.7500
76MU36			2.2500			
76MU40			2.5000			
76MU48			3.0000			
76MU56			3.5000			
76MU60			3.7500			
76MU64			4.0000			
76MU72			4.5000			
76MU76			4.7500			
76MU80			5.0000			
80MU32	5.0000	5.1875	2.0000	4.9988 ÷ 5.0056	5.1844 ÷ 5.1860	4.9961 ÷ 4.9986
80MU36			2.2500			
80MU40			2.5000			
80MU48			3.0000			
80MU56			3.5000			
80MU60			3.7500			
80MU64			4.0000			
80MU72			4.5000			
80MU76			4.7500			
80MU80			5.0000			

Part Number	D1	D2	H	D1 (After Assembly)	Dg (Housing Recomend)	d (Shaft Recomend)
84MU32	5.2500	5.4375	2.0000	5.2502 ÷ 5.2570	5.4358 ÷ 5.4374	5.2475 ÷ 5.2500
84MU36			2.2500			
84MU40			2.5000			
84MU48			3.0000			
84MU56			3.5000			
84MU60			3.7500			
84MU64			4.0000			
84MU72			4.5000			
84MU76			4.7500			
84MU80			5.0000			
88MU32	5.5000	5.6875	2.0000	5.5002 ÷ 5.5070	5.6858 ÷ 5.6874	5.4975 ÷ 5.5000
88MU36			2.2500			
88MU40			2.5000			
88MU48			3.0000			
88MU56			3.5000			
88MU60			3.7500			
88MU64			4.0000			
88MU72			4.5000			
88MU76			4.7500			
88MU80			5.0000			
92MU32	5.7500	5.9375	2.0000	5.7502 ÷ 5.7570	5.9358 ÷ 5.9374	5.7475 ÷ 5.7500
92MU36			2.2500			
92MU40			2.5000			
92MU48			3.0000			
92MU56			3.5000			
92MU60			3.7500			
92MU64			4.0000			
92MU72			4.5000			
92MU76			4.7500			
92MU80			5.0000			
96MU32	6.0000	6.1875	3.7500	6.0002 ÷ 6.0070	6.1858 ÷ 6.1874	5.9975 ÷ 6.0000
96MU36			4.0000			
96MU40			4.5000			
96MU48			4.7500			
96MU56			5.0000			
96MU60			2.0000			
96MU64			2.2500			
96MU72			2.5000			
96MU76			3.0000			
96MU80			3.5000			
100MU32	6.2500	6.4375	2.0000	6.2502 ÷ 6.2570	6.4358 ÷ 6.4374	6.2475 ÷ 6.2500
100MU36			2.2500			
100MU40			2.5000			
100MU48			3.0000			
100MU56			3.5000			
100MU60			3.7500			
100MU64			4.0000			
100MU72			4.5000			
100MU76			4.7500			
100MU80			5.0000			
104MU32	6.5000	6.6875	2.0000	6.5002 ÷ 6.5070	6.6858 ÷ 6.6874	6.4975 ÷ 6.5000

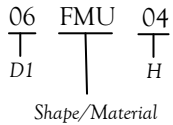
Part Number	D1	D2	H	D1 (After Assembly)	Dq (Housing Recomend)	d (Shaft Recomend)
104MU36	6.5000	6.6875	2.2500	6.5002 ÷ 6.5070	6.6858 ÷ 6.6874	6.4975 ÷ 6.5000
104MU40			2.5000			
104MU48			3.0000			
104MU56			3.5000			
104MU60			3.7500			
104MU64			4.0000			
104MU72			4.5000			
104MU76			4.7500			
104MU80			5.0000			
108MU32	6.7500	6.9375	2.0000	6.7502 ÷ 6.7570	6.9358 ÷ 6.9374	6.7475 ÷ 6.7500
108MU36			2.2500			
108MU40			2.5000			
108MU48			3.0000			
108MU56			3.5000			
108MU60			3.7500			
108MU64			4.0000			
108MU72			4.5000			
108MU76			4.7500			
108MU80			5.0000			
112MU32	7.0000	7.1875	2.0000	6.9965 ÷ 7.0026	7.1812 ÷ 7.1830	6.9929 ÷ 6.9954
112MU36			2.2500			
112MU40			2.5000			
112MU48			3.0000			
112MU56			3.5000			
112MU60			3.7500			
112MU64			4.0000			
112MU72			4.5000			
112MU76			4.7500			
112MU80			5.0000			

Chamfers General Tollerances:

Part Number	Part Number	f1	f2
02MU02	05MU08	0.0078 ÷ 0.0314	0.0039 ÷ 0.0157
06MU03	11MU14	0.0078 ÷ 0.0939	0.0039 ÷ 0.0196
12MU04	16MU24	0.0078 ÷ 0.0939	0.0039 ÷ 0.0275
18MU06	26MU24	0.0314 ÷ 0.0629	0.0039 ÷ 0.0275
28MU16	112MU80	0.0472 ÷ 0.0944	0.0078 ÷ 0.0393

Flanged Plain Bearings
dimension according to ISO 3547

Part Number Structure:

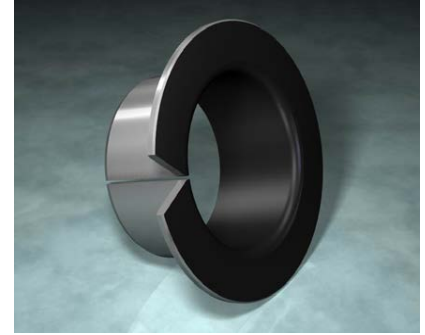
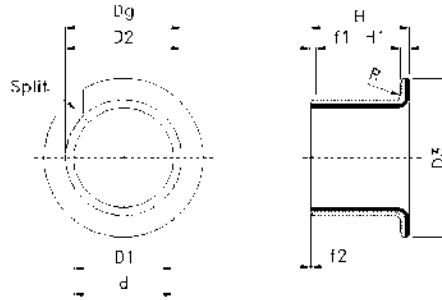


General Tolerances:

Length (H) = ± 0.010

Flange (D3) = ± 0.020

Flange Thick. (H1) = $+0.0019/0.0078$



Part Number	D1	D2	D3	H	D1 (After Assembly)	Dg (Housing Recommended)	d (Shaft Recommended)
06FMU04	0.3750	0.4688	0.6875	0.2500	0.3742 $\div$ 0.3769	0.4684 $\div$ 0.4691	0.3731 $\div$ 0.3740
06FMU06				0.3750			
06FMU08				0.5000			
06FMU12				0.7500			
08FMU04	0.5000	0.5938	0.8125	0.2500	0.4992 $\div$ 0.5019	0.5934 $\div$ 0.5941	0.4980 $\div$ 0.4990
08FMU06				0.3750			
08FMU08				0.5000			
08FMU12				0.7500			
10FMU06	0.6250	0.7188	0.9375	0.3750	0.6242 $\div$ 0.6270	0.7184 $\div$ 0.7192	0.6230 $\div$ 0.6240
10FMU08				0.5000			
10FMU10				0.6250			
10FMU12				0.7500			
12FMU06	0.7500	0.8750	1.1250	0.3750	0.7493 $\div$ 0.7525	0.8747 $\div$ 0.8755	0.7479 $\div$ 0.7491
12FMU08				0.5000			
12FMU12				0.7500			
12FMU16				1.0000			
14FMU08	0.8750	1.0000	1.2500	0.5000	0.8743 $\div$ 0.8775	0.9997 $\div$ 1.0005	0.8729 $\div$ 0.8741
14FMU12				0.7500			
14FMU16				1.0000			
14FMU20				1.2500			
16FMU08	1.0000	1.1250	1.3750	0.5000	0.9992 $\div$ 1.0026	1.1246 $\div$ 1.1256	0.9979 $\div$ 0.9991
16FMU12				0.7500			
16FMU16				1.0000			
16FMU20				1.2500			
20FMU16	1.2500	1.4063	1.7500	1.0000	1.2490 $\div$ 1.2528	1.4058 $\div$ 1.4068	1.2472 $\div$ 1.2488
20FMU20				1.2500			
20FMU24				1.5000			
24FMU16				1.0000	1.4990 $\div$ 1.5028	1.6558 $\div$ 1.6568	1.4972 $\div$ 1.4988
24FMU24	1.5000	1.6563	2.0000	1.5000			
24FMU32				2.0000			
28FMU16				1.0000	1.7489 $\div$ 1.7535	1.9371 $\div$ 1.9381	1.7471 $\div$ 1.7487
28FMU24	1.7500	1.9375	2.3750	1.5000			
28FMU32				2.0000			

General Tolerances:

Part Number	Part Number	f1	f2	H1	R
06FMU04	10FMU12	0.0078 $\div$ 0.0314	0.0039 $\div$ 0.0157	0.0381 $\div$ 0.0490	0.0342 $\div$ 0.0460
12FMU06	16FMU20	0.0078 $\div$ 0.0393	0.0039 $\div$ 0.0196	0.0535 $\div$ 0.0645	0.0496 $\div$ 0.0614
20FMU16	24FMU32	0.0078 $\div$ 0.0393	0.0039 $\div$ 0.0275	0.0688 $\div$ 0.0803	0.0653 $\div$ 0.0767
28FMU16	28FMU32	0.0314 $\div$ 0.0629	0.0039 $\div$ 0.0275	0.0842 $\div$ 0.0960	0.0803 $\div$ 0.0921

MU

SELF-LUBRICATED THRUST WASHERS

INCH SIZES

Thrust Washers

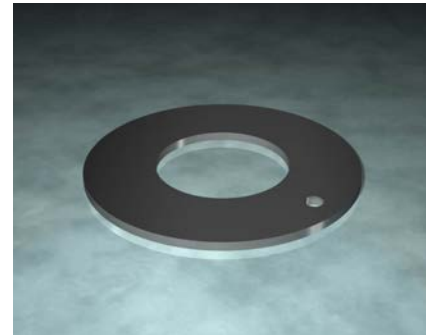
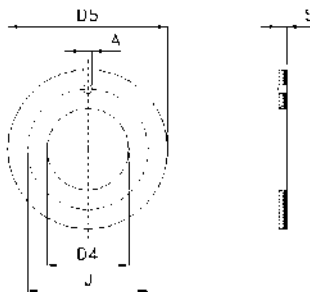
Part Number Structure:

W MU06
Shape Material / Inch Code

General Tolerances:

I.D. (D4) = +0.010

O.D. (D5) = -0.010



Part Number	D4	D5	S	J	A
W MU06	0.5000	0.8750	0.061 ÷ 0.063	0.682 ÷ 0.692	0.067 ÷ 0.077
W MU07	0.5620	1.0000	0.061 ÷ 0.063	0.776 ÷ 0.786	0.067 ÷ 0.077
W MU08	0.6250	1.1250	0.061 ÷ 0.063	0.870 ÷ 0.880	0.099 ÷ 0.109
W MU09	0.6870	1.1870	0.061 ÷ 0.063	0.932 ÷ 0.942	0.099 ÷ 0.109
W MU10	0.7500	1.2500	0.061 ÷ 0.063	0.995 ÷ 1.005	0.099 ÷ 0.109
W MU11	0.8120	1.3750	0.061 ÷ 0.063	1.089 ÷ 1.099	0.099 ÷ 0.109
W MU12	0.8750	1.5000	0.061 ÷ 0.063	1.182 ÷ 1.192	0.130 ÷ 0.140
W MU14	1.0000	1.7500	0.061 ÷ 0.063	1.370 ÷ 1.380	0.130 ÷ 0.140
W MU16	1.1250	2.0000	0.061 ÷ 0.063	1.557 ÷ 1.567	0.161 ÷ 0.171
W MU18	1.2500	2.1250	0.061 ÷ 0.063	1.682 ÷ 1.692	0.161 ÷ 0.171
W MU20	1.3750	2.2500	0.061 ÷ 0.063	1.807 ÷ 1.817	0.161 ÷ 0.171
W MU22	1.5000	2.5000	0.061 ÷ 0.063	1.995 ÷ 2.005	0.192 ÷ 0.202
W MU24	1.6250	2.6250	0.061 ÷ 0.063	2.120 ÷ 2.130	0.192 ÷ 0.202
W MU26	1.7500	2.7500	0.061 ÷ 0.063	2.245 ÷ 2.255	0.192 ÷ 0.202
W MU28	2.0000	3.0000	0.091 ÷ 0.093	2.495 ÷ 2.505	0.192 ÷ 0.202
W MU30	2.1250	3.1250	0.091 ÷ 0.093	2.620 ÷ 2.630	0.192 ÷ 0.202
W MU32	2.2500	3.2500	0.091 ÷ 0.093	2.745 ÷ 2.755	0.192 ÷ 0.202

MU

SELF-LUBRICATED STRIPS

INCH SIZES

Strips

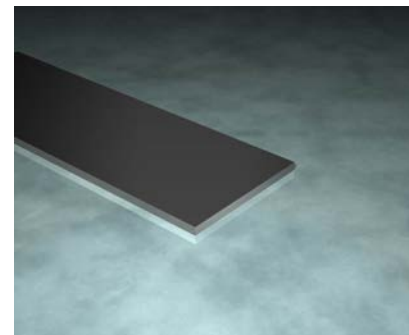
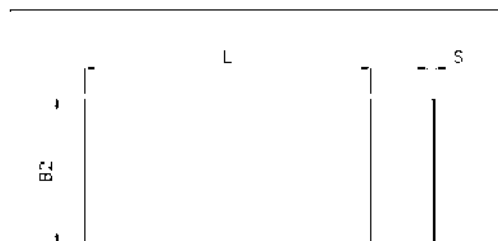
Part Number Structure:

MU S 0
Material Shape Inch Code

General Tolerances:

Width (B2) = ±0.078

Length (L) = ±0.078

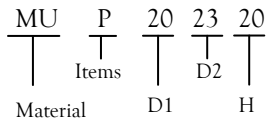


Part Number	S	B2	L
MU S 0	0.0277 ÷ 0.0293	2.75	18.00
MU S 1	0.0431 ÷ 0.0447	4.00	18.00
MU S 2	0.0586 ÷ 0.0602	4.00	18.00
MU S 3	0.0740 ÷ 0.0756	4.00	18.00
MU S 4	0.0897 ÷ 0.0913	4.00	18.00
MU S 5	0.1190 ÷ 0.1210	4.00	18.00

MU/MU-B

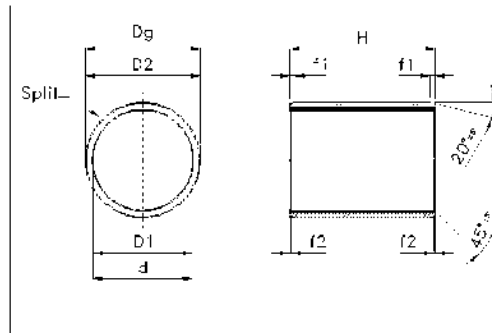
Cylindrical Plain Bearings
dimension according to ISO 3547

Part Number Structure:



General Tollerances:

Length (H) = ± 0.25 (mm)



METRIC SIZES

Part Number	D1	D2	H	D1 (After Assembly)	Dg (Housing Recomend)	d (Shaft Recomend)
MU P 034.503	03	4.5	03	3.000 ÷ 3.048	4.500 ÷ 4.508	2.994 ÷ 3.000
MU P 034.504			04			
MU P 034.505			05			
MU P 034.506			06			
MU P 045.503	04	5.5	03	4.000 ÷ 4.048	5.500 ÷ 5.508	3.992 ÷ 4.000
MU P 045.504			04			
MU P 045.506			06			
MU P 045.510			10			
MU P 050705	05	07	05	4.990 ÷ 5.055	7.000 ÷ 7.015	4.978 ÷ 4.990
MU P 050708			08			
MU P 050710			10			
MU P 060804	06	08	04	5.990 ÷ 6.055	8.000 ÷ 8.015	5.978 ÷ 5.990
MU P 060806			06			
MU P 060808			08			
MU P 070910	07	09	10	6.990 ÷ 7.055	9.000 ÷ 9.015	6.972 ÷ 6.987
MU P 081006	08	10	06	7.990 ÷ 8.055	10.000 ÷ 10.015	7.972 ÷ 7.987
MU P 081008			08			
MU P 081010			10			
MU P 081012			12			
MU P 101208	10	12	08	9.990 ÷ 10.058	12.000 ÷ 12.018	9.972 ÷ 9.987
MU P 101210			10			
MU P 101212			12			
MU P 101215			15			
MU P 101220	12	14	20	11.990 ÷ 12.058	14.000 ÷ 14.018	11.966 ÷ 11.984
MU P 121408			08			
MU P 121410			10			
MU P 121412			12			
MU P 121415			15			
MU P 121420			20			
MU P 121425	13	15	25	12.990 ÷ 13.058	15.000 ÷ 15.018	12.966 ÷ 12.984
MU P 131510			10			
MU P 131520			20			
MU P 141605	14	16	05	13.990 ÷ 14.058	16.000 ÷ 16.018	13.966 ÷ 13.984
MU P 141610			10			
MU P 141612			12			
MU P 141615			15			
MU P 141620			20			
MU P 141625	15	17	25	14.990 ÷ 15.058	17.000 ÷ 17.018	14.966 ÷ 14.984
MU P 151710			10			
MU P 151712			12			
MU P 151715			15			
MU P 151720			20			
MU P 151725			25			

Part Number	D1	D2	H	D1 (After Assembly)	Dg (Housing Recomendend)	d (Shaft Recomendend)
MU P 161810	16	18	10	15.990 ÷ 16.058	18.000 ÷ 18.018	15.966 ÷ 15.984
MU P 161812			12			
MU P 161815			15			
MU P 161820			20			
MU P 161825			25			
MU P 171915	17	19	15	16.990 ÷ 17.058	19.000 ÷ 19.021	16.966 ÷ 16.984
MU P 171920			20			
MU P 182010	18	20	10	17.990 ÷ 18.061	20.000 ÷ 20.021	17.966 ÷ 17.984
MU P 182015			15			
MU P 182020			20			
MU P 182025			25			
MU P 202210	20	22	10	19.990 ÷ 20.061	22.000 ÷ 22.021	19.959 ÷ 19.980
MU P 202215			15			
MU P 202220			20			
MU P 202310	20	23	10	19.990 ÷ 20.071	23.000 ÷ 23.021	19.959 ÷ 19.980
MU P 202315			15			
MU P 202320			20			
MU P 202325			25			
MU P 202330			30			
MU P 222515	22	25	15	21.990 ÷ 22.071	25.000 ÷ 25.021	21.959 ÷ 21.980
MU P 222520			20			
MU P 222525			25			
MU P 222530			30			
MU P 242715	24	27	15	23.990 ÷ 24.071	27.000 ÷ 27.021	23.959 ÷ 23.980
MU P 242720			20			
MU P 242725			25			
MU P 242730			30			
MU P 242815	24	28	15	23.990 ÷ 24.081	28.000 ÷ 28.021	23.959 ÷ 23.980
MU P 242820			20			
MU P 242825			25			
MU P 242830			30			
MU P 252812	25	28	12	24.990 ÷ 25.071	28.000 ÷ 28.021	24.959 ÷ 24.980
MU P 252815			15			
MU P 252820			20			
MU P 252825			25			
MU P 252830			30			
MU P 252850			50			
MU P 283215	28	32	15	27.990 ÷ 28.085	32.000 ÷ 32.025	27.959 ÷ 27.980
MU P 283220			20			
MU P 283225			25			
MU P 283230			30			
MU P 303410	30	34	10	29.990 ÷ 30.085	34.000 ÷ 34.025	29.959 ÷ 29.980
MU P 303415			15			
MU P 303420			20			
MU P 303425			25			
MU P 303430			30			
MU P 303440			40			
MU P 323620	32	36	20	31.990 ÷ 32.085	36.000 ÷ 36.025	31.950 ÷ 31.975
MU P 323630			30			
MU P 323640			40			
MU P 353920	35	39	20	34.990 ÷ 35.085	39.000 ÷ 39.025	34.950 ÷ 34.975
MU P 353930			30			
MU P 353935			35			
MU P 353940			40			
MU P 353950			50			

Part Number	D1	D2	H	D1 (After Assembly)	Dg (Housing Recomend)	d (Shaft Recomend)
MU P 374120	37	41	20	36.990 ÷ 37.085	41.000 ÷ 41.025	36.950 ÷ 36.975
MU P 404420	40	44	20	39.990 ÷ 40.085	44.000 ÷ 44.025	39.950 ÷ 39.975
MU P 404430			30			
MU P 404440			40			
MU P 404445			45			
MU P 404450			50			
MU P 455020	45	50	20	44.990 ÷ 45.105	50.000 ÷ 50.025	44.950 ÷ 44.975
MU P 455030			30			
MU P 455040			40			
MU P 455045			45			
MU P 455050			50			
MU P 505520	50	55	20	49.990 ÷ 50.110	55.000 ÷ 55.030	49.950 ÷ 49.975
MU P 505525			25			
MU P 505530			30			
MU P 505540			40			
MU P 505550			50			
MU P 505560			60			
MU P 556020	55	60	20	54.990 ÷ 55.110	60.000 ÷ 60.030	54.940 ÷ 54.970
MU P 556025			25			
MU P 556030			30			
MU P 556040			40			
MU P 556050			50			
MU P 556055			55			
MU P 556060			60			
MU P 606520	60	65	20	59.990 ÷ 60.110	65.000 ÷ 65.030	59.940 ÷ 59.970
MU P 606530			30			
MU P 606540			40			
MU P 606550			50			
MU P 606560			60			
MU P 606570			70			
MU P 657030	65	70	30	64.990 ÷ 65.110	70.000 ÷ 70.030	64.940 ÷ 64.970
MU P 657040			40			
MU P 657050			50			
MU P 657070			70			
MU P 707540	70	75	40	69.990 ÷ 70.110	75.000 ÷ 75.030	69.940 ÷ 69.970
MU P 707550			50			
MU P 707560			60			
MU P 707570			70			
MU P 758040	75	80	40	74.990 ÷ 75.110	80.000 ÷ 80.030	74.940 ÷ 74.970
MU P 758050			50			
MU P 758060			60			
MU P 758070			70			
MU P 758080			80			
MU P 808560	80	85	60	80.020 ÷ 80.155	85.000 ÷ 85.035	79.954 ÷ 80.000
MU P 808580			80			
MU P 8085100			100			
MU P 859030	85	90	30	85.020 ÷ 85.155	90.000 ÷ 90.035	84.946 ÷ 85.000
MU P 859060			60			
MU P 8590100			100			
MU P 909560	90	95	60	90.020 ÷ 90.155	95.000 ÷ 95.035	89.946 ÷ 90.000
MU P 9095100			100			
MU P 9510060	95	100	60	95.020 ÷ 95.155	100.000 ÷ 100.035	94.946 ÷ 95.000
MU P 95100100			100			
MU P 10010550	100	105	50	100.020 ÷ 100.155	105.000 ÷ 105.035	99.946 ÷ 100.000
MU P 10010560			60			

MU/MU-B

METRIC SIZES

Part Number	D1	D2	H	D1 (After Assembly)	Dg (Housing Recommended)	d (Shaft Recommended)
MU P 10010570	100	105	70	100.020 ÷ 100.155	105.000 ÷ 105.035	99.946 ÷ 100.000
MU P 10010580			80			
MU P 100105100			100			
MU P 100105115			115			
MU P 10511060	105	110	60	105.020 ÷ 105.155	110.000 ÷ 110.035	104.946 ÷ 105.000
MU P 105110100			100			
MU P 105110115			115			
MU P 11011560	110	115	60	110.020 ÷ 110.155	115.000 ÷ 115.035	109.946 ÷ 110.000
MU P 110115100			100			
MU P 110115115			115			
MU P 11512050	115	120	50	115.020 ÷ 115.155	120.000 ÷ 120.035	114.946 ÷ 115.000
MU P 11512060			60			
MU P 11512070			70			
MU P 115120115			115			
MU P 12012550	120	125	50	120.070 ÷ 120.210	125.000 ÷ 125.040	119.946 ÷ 120.000
MU P 12012560			60			
MU P 120125100			100			
MU P 12513060	125	130	60	125.070 ÷ 125.210	130.000 ÷ 130.040	124.937 ÷ 125.000
MU P 125130100			100			
MU P 13013560	130	135	60	130.070 ÷ 130.210	135.000 ÷ 135.040	129.937 ÷ 130.000
MU P 130135100			100			
MU P 13514060	135	140	60	135.070 ÷ 135.210	140.000 ÷ 140.040	134.937 ÷ 135.000
MU P 13514080			80			
MU P 135140100			100			
MU P 14014560	140	145	60	140.070 ÷ 140.210	145.000 ÷ 145.040	139.937 ÷ 140.000
MU P 140145100			100			
MU P 14515060	145	150	60	145.070 ÷ 145.210	150.000 ÷ 150.040	144.937 ÷ 145.000
MU P 145150100			100			
MU P 15015560	150	155	60	150.070 ÷ 150.210	155.000 ÷ 155.040	149.937 ÷ 150.000
MU P 15015580			80			
MU P 150155100			100			
MU P 15516060	155	160	60	155.070 ÷ 155.210	160.000 ÷ 160.040	154.937 ÷ 155.000
MU P 155160100			100			
MU P 16016560	160	165	60	160.070 ÷ 160.210	165.000 ÷ 165.040	159.937 ÷ 160.000
MU P 16016580			80			
MU P 160165100			100			
MU P 16517060	165	170	60	165.070 ÷ 165.210	170.000 ÷ 170.040	164.937 ÷ 165.000
MU P 165170100			100			
MU P 17017560	170	175	60	170.070 ÷ 170.210	175.000 ÷ 175.040	169.937 ÷ 170.000
MU P 170175100			100			
MU P 17518060	175	180	60	175.070 ÷ 175.210	180.000 ÷ 180.040	174.937 ÷ 175.000
MU P 175180100			100			
MU P 18018560	180	185	60	180.070 ÷ 180.216	185.000 ÷ 185.046	179.937 ÷ 180.000
MU P 18018580			80			
MU P 180185100			100			
MU P 19019560	190	195	60	190.070 ÷ 190.216	195.000 ÷ 195.046	189.928 ÷ 190.000
MU P 190195100			100			
MU P 20020560	200	205	60	200.070 ÷ 200.216	205.000 ÷ 205.046	199.928 ÷ 200.000
MU P 200205100			100			
MU P 20521060	205	210	60	205.070 ÷ 205.216	210.000 ÷ 210.046	204.928 ÷ 205.000
MU P 205210100			100			
MU P 21021560	210	215	60	210.070 ÷ 210.216	215.000 ÷ 215.046	209.928 ÷ 210.000
MU P 210215100			100			
MU P 21522060	215	220	60	215.070 ÷ 215.216	220.000 ÷ 220.046	214.928 ÷ 215.000
MU P 215220100			100			

MU/MU-B

METRIC SIZES

Part Number	D1	D2	H	D1 (After Assembly)	Dg (Housing Recomend)	d (Shaft Recomend)
MU P 22022560	220	225	60	220.070 ÷ 220.216	225.000 ÷ 225.046	219.928 ÷ 220.000
MU P 220225100			100			
MU P 23023560	230	235	60	230.070 ÷ 230.216	235.000 ÷ 235.046	229.928 ÷ 230.000
MU P 230235100			100			
MU P 24024560	240	245	60	240.070 ÷ 240.216	245.000 ÷ 245.046	239.928 ÷ 240.000
MU P 240245100			100			
MU P 25025560	250	255	60	250.070 ÷ 250.222	255.000 ÷ 255.052	249.928 ÷ 250.000
MU P 250255100			100			
MU P 28028560	280	285	60	280.070 ÷ 280.222	285.000 ÷ 285.052	279.919 ÷ 280.000
MU P 280285100			100			
MU P 30030560	300	305	60	300.070 ÷ 300.222	305.000 ÷ 305.052	299.919 ÷ 300.000
MU P 300305100			100			

Chamfers General Tollerances:

Part Number	Part Number	f1	f2
MU P 034.503	MU P 045.510	0.20÷0.80	0.10÷0.40
MU P 050705	MU P 182025	0.20÷1.00	0.10÷0.50
MU P 202310	MU P 252850	0.20÷1.00	0.10÷0.70
MU P 283215	MU P 404450	0.80÷1.60	0.10÷0.70
MU P 455020	MU P 300305100	1.20÷2.40	0.20÷1.00

MU/MU-B

METRIC SIZES

Strips

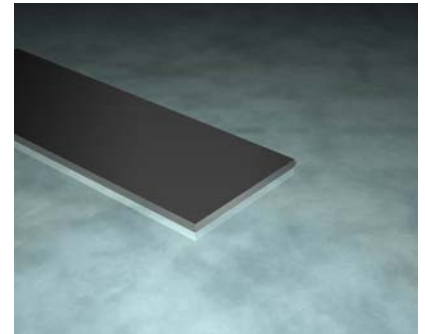
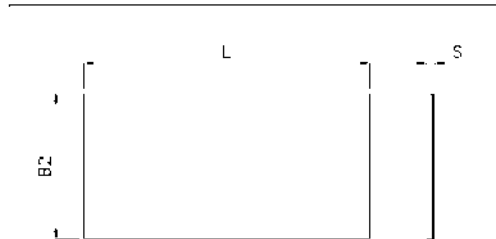
Part Number Structure:

MU	S	07	150	500
	Shape		B2	L
Material	S			

General Tollerances:

Width (B2) = ± 2

Length (L) = ± 2



Part Number	S	B2	L
MU S 07150500	0.704 ÷ 0.744	150	500
MU S 10215500	0.950 ÷ 0.990	215	500
MU S 15245500	1.470 ÷ 1.510	245	500
MU S 20245500	1.960 ÷ 2.000	245	500
MU S 25245500	2.460 ÷ 2.500	245	500
MU S 30245500	3.020 ÷ 3.060	245	500

MU/MU-B

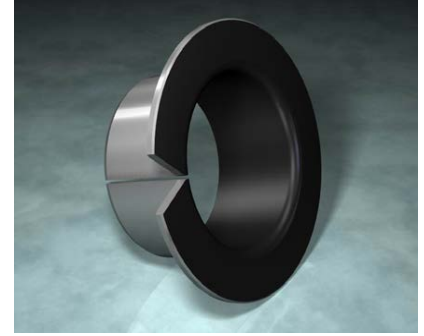
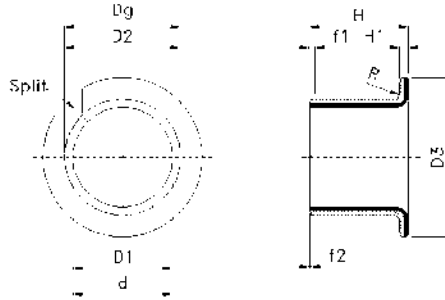
METRIC SIZES

Flanged Plain Bearings
dimension according to ISO 3547

Part Number Structure:

MU	F	06	08	12	04
	Shape	D1	D2	D3	H
Material					

General Tolerances:
Length (H) = ± 0.25
Flange (D3) = ± 0.50



Part Number	D1	D2	D3	H	D1 (After Assembly)	Dg (Housing Recommended)	d (Shaft Recommended)
MU F 06081204	06	08	12	04	5.990 ÷ 6.055	8.000 ÷ 8.015	5.990 ÷ 5.978
MU F 06081207				07			
MU F 06081208				08			
MU F 08101505.5	08	10	15	5.5	7.990 ÷ 8.055	10.000 ÷ 10.015	7.972 ÷ 7.987
MU F 08101507.5				7.5			
MU F 08101509.5				9.5			
MU F 10121807	10	12	18	07	9.990 ÷ 10.058	12.000 ÷ 12.018	9.972 ÷ 9.987
MU F 10121809				09			
MU F 10121812				12			
MU F 10121817				17			
MU F 12142007	12	14	20	07	11.990 ÷ 12.058	14.000 ÷ 14.018	11.966 ÷ 11.984
MU F 12142009				09			
MU F 12142012				12			
MU F 12142017				17			
MU F 14162212	14	16	22	12	13.990 ÷ 14.058	16.000 ÷ 16.018	13.966 ÷ 13.984
MU F 14162217				17			
MU F 15172309	15	17	23	09	14.990 ÷ 15.058	17.000 ÷ 17.018	14.966 ÷ 14.984
MU F 15172312				12			
MU F 15172317				17			
MU F 16182412	16	18	24	12	15.990 ÷ 16.058	18.000 ÷ 18.018	15.966 ÷ 15.984
MU F 16182417				17			
MU F 18202612	18	20	26	12	17.990 ÷ 18.061	20.000 ÷ 20.021	17.966 ÷ 17.984
MU F 18202617				17			
MU F 18202622				22			
MU F 20233011.5	20	23	30	11.5	19.990 ÷ 20.071	23.000 ÷ 23.021	19.959 ÷ 19.980
MU F 20233016.5				16.5			
MU F 20233021.5				21.5			
MU F 25283511.5	25	28	35	11.5	24.990 ÷ 25.071	28.000 ÷ 28.021	24.959 ÷ 24.980
MU F 25283516.5				16.5			
MU F 25283521.5				21.5			
MU F 30344216	30	34	42	16	29.990 ÷ 30.085	34.000 ÷ 34.025	29.959 ÷ 29.980
MU F 30344226				26			
MU F 35394716	35	39	47	16	34.990 ÷ 35.085	39.000 ÷ 39.025	34.950 ÷ 34.975
MU F 35394726				26			
MU F 40445316	40	44	53	16	39.990 ÷ 40.085	44.000 ÷ 44.025	39.950 ÷ 39.975
MU F 40445326				26			
MU F 45505816	45	50	58	16	44.990 ÷ 45.105	50.000 ÷ 50.025	44.950 ÷ 44.975
MU F 45505826				26			

General Tolerances:

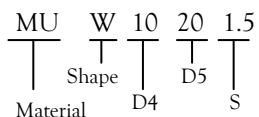
Part Number	Part Number	f1	f2	H1	R
MU F 06081204	MU F 18202622	0.20÷0.80	0.10÷0.40	0.80 ÷ 1.05	0.70 ÷ 1.00
MU F 20233011.5	MU F 25283521.5	0.20÷1.00	0.10÷0.50	1.30 ÷ 1.55	1.20 ÷ 1.50
MU F 30344216	MU F 40445326	0.20÷1.00	0.10÷0.70	1.80 ÷ 2.05	1.70 ÷ 2.00
MU F 45505816	MU F 45505826	0.80÷1.60	0.10÷0.70	2.30 ÷ 2.55	2.20 ÷ 2.50

MU/MU-B

METRIC SIZES

Thrust Washers

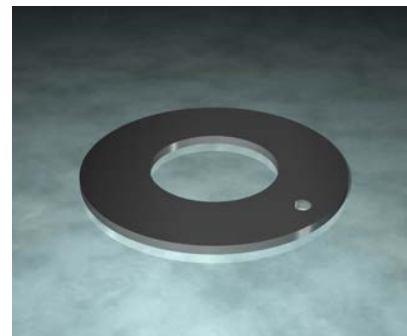
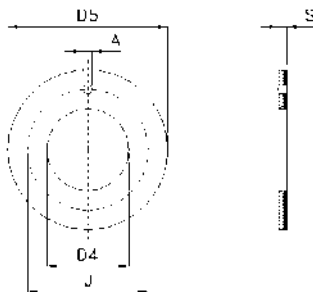
Part Number Structure:



General Tolerances:

I.D. (D4) = -0 / +0.25

O.D. (D5) = +0 / -0.25



Part Number	D4	D5	S	J	A
MU W 10201.5	10	20	1.450 ÷ 1.500	-	-
MU W 12241.5	12	24	1.450 ÷ 1.500	18	1.620 ÷ 1.870
MU W 14261.5	14	26	1.450 ÷ 1.500	20	2.120 ÷ 2.370
MU W 16301.5	16	30	1.450 ÷ 1.500	22	2.120 ÷ 2.370
MU W 18321.5	18	32	1.450 ÷ 1.500	25	2.120 ÷ 2.370
MU W 20361.5	20	36	1.450 ÷ 1.500	28	3.120 ÷ 3.370
MU W 22381.5	22	38	1.450 ÷ 1.500	30	3.120 ÷ 3.370
MU W 24421.5	24	42	1.450 ÷ 1.500	33	3.120 ÷ 3.370
MU W 26441.5	26	44	1.450 ÷ 1.500	35	3.120 ÷ 3.370
MU W 28481.5	28	48	1.450 ÷ 1.500	38	4.120 ÷ 4.370
MU W 32541.5	32	54	1.450 ÷ 1.500	43	4.120 ÷ 4.370
MU W 38621.5	38	62	1.450 ÷ 1.500	50	4.120 ÷ 4.370
MU W 42661.5	42	66	1.450 ÷ 1.500	54	4.120 ÷ 4.370
MU W 48742.0	48	74	1.950 ÷ 2.000	61	4.120 ÷ 4.370
MU W 52782.0	52	78	1.950 ÷ 2.000	65	4.120 ÷ 4.370
MU W 62902.0	62	90	1.950 ÷ 2.000	76	4.120 ÷ 4.370

MX-R

INCH SIZES U.S.

Cylindrical Plain Bearings
dimension according to ISO 3547

Part Number Structure:

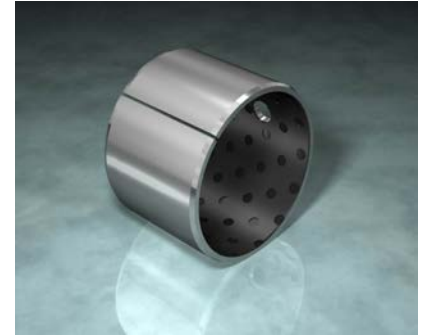
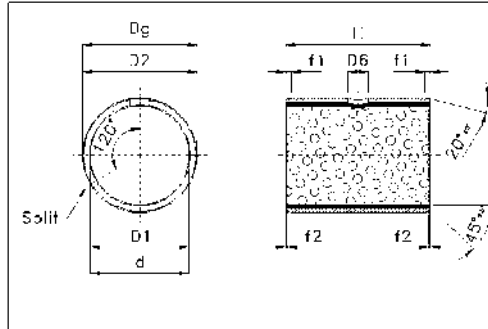
008 MXR 006
D1 H
Inch U.S Code

General Tollerances:

Length (H) = ± 0.010

Lubric. Hole (D6) = ± 0.011

Position Hole = 120°



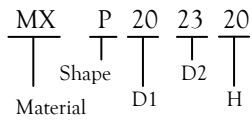
Part Number	D1	D2	H	D6	D1 (After As.bly)	Dq (Housing Recom.)	d (Shaft Recomend)
008MXR006	1/2	0.6345	3/8	5/32	0.5007 $\div$ 0.5038	0.6345 $\div$ 0.6352	0.4990 $\div$ 0.5000
008MXR008			1/2				
010MXR010			5/8				
010MXR012	5/8	0.7596	3/4	5/32	0.6258 $\div$ 0.6290	0.7596 $\div$ 0.7604	0.6240 $\div$ 0.6250
012MXR012			3/4				
012MXR016			1				
014MXR012	7/8	1.0097	3/4	5/32	0.8759 $\div$ 0.8791	1.0097 $\div$ 1.0105	0.8738 $\div$ 0.8750
014MXR016			1				
016MXR012			3/4	5/16	1.0010 $\div$ 1.0042	1.1348 $\div$ 1.1356	0.9988 $\div$ 1.0000
016MXR016	1	1.1348	1				
018MXR012			3/4				
018MXR016	1 1/8	1.2598	1	5/16	1.1260 $\div$ 1.1292	1.2598 $\div$ 1.2606	1.1238 $\div$ 1.1250
020MXR012			3/4				
020MXR016			1				
022MXR016	1 3/8	1.5410	1	5/16	1.3762 $\div$ 1.3800	1.5410 $\div$ 1.5420	1.3734 $\div$ 1.3750
022MXR024			1 1/2				
024MXR016			1	5/16	1.5012 $\div$ 1.5050	1.6660 $\div$ 1.6670	1.4984 $\div$ 1.5000
024MXR024	1 1/2	1.6660	1 1/2				
024MXR032			2				
026MXR016	1 5/8	1.7910	1	5/16	1.6262 $\div$ 1.6300	1.7910 $\div$ 1.7920	1.6234 $\div$ 1.6250
026MXR024			1 1/2				
026MXR032			2				
028MXR016	1 3/4	1.9371	1	5/16	1.7515 $\div$ 1.7577	1.9371 $\div$ 1.9381	1.7484 $\div$ 1.7500
028MXR024			1 1/2				
028MXR032			2				
030MXR016	1 7/8	2.0621	1	5/16	1.8765 $\div$ 1.8829	2.0621 $\div$ 2.0633	1.8734 $\div$ 1.8750
030MXR024			1 1/2				
030MXR032			2				
030MXR036	2	2.1871	2 1/4	5/16	2.0015 $\div$ 2.0079	2.1871 $\div$ 2.1883	1.9982 $\div$ 2.0000
032MXR016			1				
032MXR024			1 1/2				
032MXR032	2 1/2	2.6871	2	5/16	2.5015 $\div$ 2.5079	2.6871 $\div$ 2.6883	2.4982 $\div$ 2.5000
040MXR024			1 1/2				
040MXR032			2				
040MXR040	3	3.0019	2 1/2	5/16	3.0019 $\div$ 3.0085	3.1875 $\div$ 3.1889	2.9982 $\div$ 3.0000
048MXR024			1 1/2				
048MXR032			2				
048MXR040	3	3.0019	2 1/2	5/16	3.0019 $\div$ 3.0085	3.1875 $\div$ 3.1889	2.9982 $\div$ 3.0000
048MXR048			3				

MX

METRIC SIZES

Cylindrical Plain Bearings
dimension according to ISO 3547

Part Number Structure:

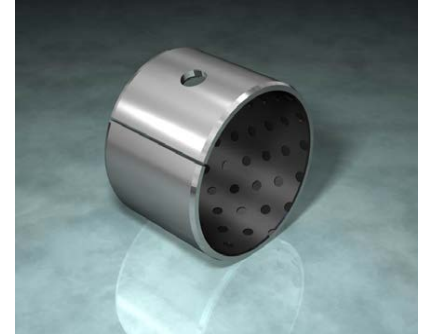
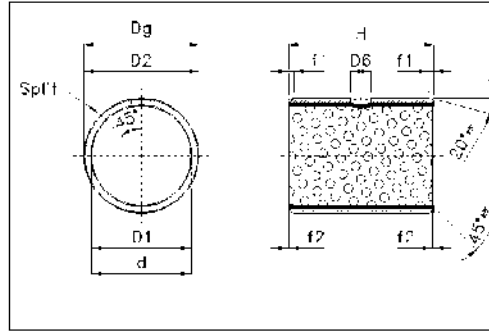


General Tollerances:

Length (H) = ± 0.25

Lubric. Hole (D6) = ± 0.30

Position Hole = 45°



Part Number	D1	D2	H	D6	D1 (After As.bly)	Dg (Housing Recom.)	d (Shaft Recomend)
MX P 081008	08	10	08	-	8.040 ÷ 8.105	10.000 ÷ 10.015	7.978 ÷ 8.000
MX P 081010			10				
MX P 081012			12				
MX P 101210	10	12	10	03	10.040 ÷ 10.108	12.000 ÷ 12.018	9.978 ÷ 10.000
MX P 101212			12				
MX P 101215			15				
MX P 101220			20				
MX P 121410	12	14	10	03	12.040 ÷ 12.108	14.000 ÷ 14.018	11.973 ÷ 12.000
MX P 121412			12				
MX P 121415			15				
MX P 121420			20				
MX P 121425			25				
MX P 141615	14	16	15	03	14.040 ÷ 14.108	16.000 ÷ 16.018	13.973 ÷ 14.000
MX P 141620			20				
MX P 141625			25				
MX P 151710	15	17	10	03	15.040 ÷ 15.108	17.000 ÷ 17.018	14.973 ÷ 15.000
MX P 151712			12				
MX P 151715			15				
MX P 151720			20				
MX P 161815	16	18	15	03	16.040 ÷ 16.108	18.000 ÷ 18.018	15.973 ÷ 16.000
MX P 161820			20				
MX P 161825			25				
MX P 182015	18	20	15	03	18.040 ÷ 18.111	20.000 ÷ 20.021	17.973 ÷ 18.000
MX P 182020			20				
MX P 182025			25				
MX P 202310	20	23	10	03	20.050 ÷ 20.131	23.000 ÷ 23.021	19.967 ÷ 20.000
MX P 202315			15				
MX P 202320			20				
MX P 202325			25				
MX P 202330	22	25	30	03	22.050 ÷ 22.131	25.000 ÷ 25.021	21.967 ÷ 22.000
MX P 222515			15				
MX P 222520			20				
MX P 222525			25				
MX P 222530	24	27	30	04	24.050 ÷ 24.131	27.000 ÷ 27.021	23.967 ÷ 24.000
MX P 242715			15				
MX P 242720			20				
MX P 242725			25				
MX P 242730	25	28	30	04	25.050 ÷ 25.131	28.000 ÷ 28.021	24.967 ÷ 25.000
MX P 252815			15				
MX P 252820			20				
MX P 252825			25				
MX P 252830	28	31	30	04	28.050 ÷ 28.135	31.000 ÷ 31.025	27.967 ÷ 28.000
MX P 283130			30				

Part Number	D1	D2	H	D6	D1 (After As.bly)	Dg (Housing Recom.)	d (Shaft Recommended)
MX P 283220	28	32	20	04	28.060 ÷ 28.155	32.000 ÷ 32.025	27.967 ÷ 28.000
MX P 283225			25				
MX P 283230			30				
MX P 303420	30	34	20	04	30.060 ÷ 30.155	34.000 ÷ 34.025	29.967 ÷ 30.000
MX P 303430			30				
MX P 303440			40				
MX P 323620	32	36	20	04	32.060 ÷ 32.155	36.000 ÷ 36.025	31.961 ÷ 32.000
MX P 323630			30				
MX P 323635			35				
MX P 323640	35	39	40	04	35.060 ÷ 35.155	39.000 ÷ 39.025	34.961 ÷ 35.000
MX P 353920			20				
MX P 353930			30				
MX P 353935			35				
MX P 353950	36	40	50	04	36.060 ÷ 36.155	40.000 ÷ 40.025	35.961 ÷ 36.000
MX P 364035			35				
MX P 374120	37	41	20	04	37.060 ÷ 37.155	41.000 ÷ 41.025	36.961 ÷ 37.000
MX P 404420	40	44	20	04	40.060 ÷ 40.155	44.000 ÷ 44.025	39.961 ÷ 40.000
MX P 404430			30				
MX P 404440			40				
MX P 404450			50				
MX P 455020	45	50	20	05	45.080 ÷ 45.195	50.000 ÷ 50.025	44.961 ÷ 45.000
MX P 455030			30				
MX P 455040			40				
MX P 455045			45				
MX P 455050	50	55	50	05	50.080 ÷ 50.200	55.000 ÷ 55.030	49.961 ÷ 50.000
MX P 505540			40				
MX P 505550			50				
MX P 505560			60				
MX P 556020	55	60	20	06	55.080 ÷ 55.200	60.000 ÷ 60.030	54.954 ÷ 55.000
MX P 556025			25				
MX P 556030			30				
MX P 556040			40				
MX P 556050	60	65	50	06	60.080 ÷ 60.200	65.000 ÷ 65.030	59.954 ÷ 60.000
MX P 556060			60				
MX P 606530			30				
MX P 606540			40				
MX P 606560	65	70	60	06	65.080 ÷ 65.200	70.000 ÷ 70.030	64.954 ÷ 65.000
MX P 606570			70				
MX P 657040			40				
MX P 657050			50				
MX P 657060	70	75	60	06	70.080 ÷ 70.200	75.000 ÷ 75.030	69.954 ÷ 70.000
MX P 657070			70				
MX P 707540			40				
MX P 707550			50				
MX P 707565	75	80	65	06	75.080 ÷ 75.200	80.000 ÷ 80.030	74.954 ÷ 75.000
MX P 707570			70				
MX P 707580			80				
MX P 758040			40				
MX P 758060	80	85	60	06	80.080 ÷ 80.205	85.000 ÷ 85.035	79.954 ÷ 80.000
MX P 758080			80				
MX P 808540			40				
MX P 808550			50				
MX P 808560	80	85	60	06	80.080 ÷ 80.205	85.000 ÷ 85.035	79.954 ÷ 80.000
MX P 808580			80				
MX P 8085100			100				

Part Number	D1	D2	H	D6	D1 (After As.bly)	Dg (Housing Recom.)	d (Shaft Recomend)
MX P 859030	85	90	30	06	85.080 ÷ 85.205	90.000 ÷ 90.035	84.946 ÷ 85.000
MX P 859040			40				
MX P 859060			60				
MX P 859080			80				
MX P 8590100			100				
MX P 909540	90	95	40	06	90.080 ÷ 90.205	95.000 ÷ 95.035	89.946 ÷ 90.000
MX P 909560			60				
MX P 909580			80				
MX P 909590			90				
MX P 9095100			100				
MX P 9510060	95	100	60	06	95.080 ÷ 95.205	100.000 ÷ 100.035	94.946 ÷ 95.000
MX P 95100100			100				
MX P 10010550	100	105	50	06	100.080 ÷ 100.205	105.000 ÷ 105.035	99.946 ÷ 100.000
MX P 10010560			60				
MX P 10010580			80				
MX P 10010595			95				
MX P 100105115			115				
MX P 10511060	105	110	60	08	105.080 ÷ 105.205	110.000 ÷ 110.035	104.946 ÷ 105.000
MX P 105110110			110				
MX P 105110115			115				
MX P 11011560	110	115	60	08	110.080 ÷ 110.205	115.000 ÷ 115.035	109.946 ÷ 110.000
MX P 110115110			110				
MX P 110115115			115				
MX P 11512050	115	120	50	08	115.080 ÷ 115.205	120.000 ÷ 120.035	114.946 ÷ 115.000
MX P 11512070			70				
MX P 12012560	120	125	60	08	120.080 ÷ 120.210	125.000 ÷ 125.040	119.946 ÷ 120.000
MX P 120125100			100				
MX P 120125110			110				
MX P 12513060	125	130	60	08	125.080 ÷ 125.210	130.000 ÷ 130.040	124.937 ÷ 125.000
MX P 125130100			100				
MX P 125130110			110				
MX P 13013550	130	135	50	08	130.080 ÷ 130.210	135.000 ÷ 135.040	129.937 ÷ 130.000
MX P 13013560			60				
MX P 13013580			80				
MX P 130135100			100				
MX P 13514060	135	140	60	08	135.080 ÷ 135.210	140.000 ÷ 140.040	134.937 ÷ 135.000
MX P 13514080			80				
MX P 14014550	140	145	50	08	140.080 ÷ 140.210	145.000 ÷ 145.040	139.937 ÷ 140.000
MX P 14014560			60				
MX P 14014580			80				
MX P 140145100			100				
MX P 15015550	150	155	50	08	150.080 ÷ 150.210	155.000 ÷ 155.040	149.937 ÷ 150.000
MX P 15015060			60				
MX P 15015080			80				
MX P 150150100			100				
MX P 16016550	160	165	50	08	160.080 ÷ 160.210	165.000 ÷ 165.040	159.937 ÷ 160.000
MX P 16016560			60				
MX P 16016580			80				
MX P 160165100			100				
MX P 17017550	170	175	50	08	170.080 ÷ 170.210	175.000 ÷ 175.040	169.937 ÷ 170.000
MX P 17017560			60				
MX P 17017580			80				
MX P 170175100			100				
MX P 18018550	180	185	50	08	180.080 ÷ 180.216	185.000 ÷ 185.046	179.937 ÷ 180.000
MX P 18018560			60				

Part Number	D1	D2	H	D6	D1 (After As.bly)	Dg (Housing Recom.)	d (Shaft Recomend)
MX P 18018580	180	185	80	08	180.080 ÷ 180.216	185.000 ÷ 185.046	179.937 ÷ 180.000
MX P 180185100			100				
MX P 19019550	190	195	50	08	190.080 ÷ 190.216	195.000 ÷ 195.046	189.928 ÷ 190.000
MX P 19019560			60				
MX P 19019580			80				
MX P 190195100			100				
MX P 190195120			120				
MX P 20020550	200	205	50	08	200.080 ÷ 200.216	205.000 ÷ 205.046	199.928 ÷ 200.000
MX P 20020560			60				
MX P 20020580			80				
MX P 200205100			100				
MX P 200205120			120				
MX P 22022550	220	225	50	08	220.080 ÷ 220.216	225.000 ÷ 225.046	219.928 ÷ 220.000
MX P 22022560			60				
MX P 22022580			80				
MX P 220225100			100				
MX P 220225120			120				
MX P 24024550	240	245	50	08	240.080 ÷ 240.216	245.000 ÷ 245.046	239.928 ÷ 240.000
MX P 24024560			60				
MX P 24024580			80				
MX P 240245100			100				
MX P 240245120			120				
MX P 25025550	250	255	50	08	250.080 ÷ 250.222	255.000 ÷ 255.052	249.928 ÷ 250.000
MX P 25025560			60				
MX P 25025580			80				
MX P 250255100			100				
MX P 250255120			120				
MX P 26026550	260	265	50	08	260.080 ÷ 260.222	265.000 ÷ 265.052	259.919 ÷ 260.000
MX P 26026560			60				
MX P 26026580			80				
MX P 260265100			100				
MX P 260265120			120				
MX P 28028550	280	285	50	08	280.080 ÷ 280.222	285.000 ÷ 285.052	279.919 ÷ 280.000
MX P 28028560			60				
MX P 28028580			80				
MX P 280285100			100				
MX P 280285120			120				
MX P 30030550	300	305	50	08	300.080 ÷ 300.222	305.000 ÷ 305.052	299.919 ÷ 300.000
MX P 30030560			60				
MX P 30030580			80				
MX P 300305100			100				
MX P 300305120			120				

Chamfers General Tollerances:

Part Number	Part Number	f1	f2
MU P 081008	MU P 182025	0.20÷1.00	0.10÷0.50
MU P 202310	MU P 283130	0.20÷1.00	0.10÷0.70
MU P 283220	MU P 404450	0.80÷1.60	0.10÷0.70
MU P 455020	MU P 300305120	1.20÷2.40	0.20÷1.00

MX

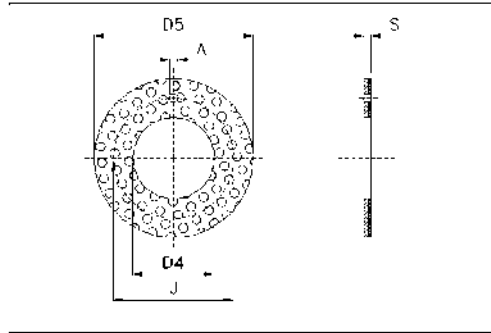
METRIC SIZES

Thrust Washers

Part Number Structure:

MX	W	12	24	1.5
	Shape	D4	D5	S
Material				

General Tolerances:
 I.D. (D4) = -0/+0.25
 O.D. (D5) = +0/- 0.25
 J = ± 0.12



Part Number	D4	D5	S	J	A
MX W 12241.5	12	24	1.487 ÷ 1.577	18	1.620 ÷ 1.870
MX W 14261.5	14	26	1.487 ÷ 1.577	20	2.120 ÷ 2.370
MX W 16301.5	16	30	1.487 ÷ 1.577	22	2.120 ÷ 2.370
MX W 18321.5	18	32	1.487 ÷ 1.577	25	2.120 ÷ 2.370
MX W 20361.5	20	36	1.487 ÷ 1.577	28	3.125 ÷ 3.375
MX W 22381.5	22	38	1.487 ÷ 1.577	30	3.125 ÷ 3.375
MX W 24421.5	24	42	1.487 ÷ 1.577	33	3.125 ÷ 3.375
MX W 26441.5	26	44	1.487 ÷ 1.577	35	3.125 ÷ 3.375
MX W 28481.5	28	48	1.487 ÷ 1.577	38	4.125 ÷ 4.375
MX W 32541.5	32	54	1.487 ÷ 1.577	43	4.125 ÷ 4.375
MX W 38621.5	38	62	1.487 ÷ 1.577	50	4.125 ÷ 4.375
MX W 42661.5	42	66	1.487 ÷ 1.577	54	4.125 ÷ 4.375
MX W 48742.5	48	74	2.510 ÷ 2.600	61	4.125 ÷ 4.375
MX W 52782.5	52	78	2.510 ÷ 2.600	65	4.125 ÷ 4.375

MX

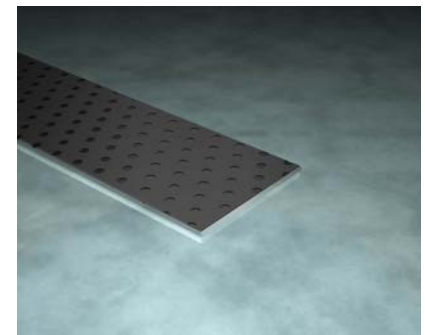
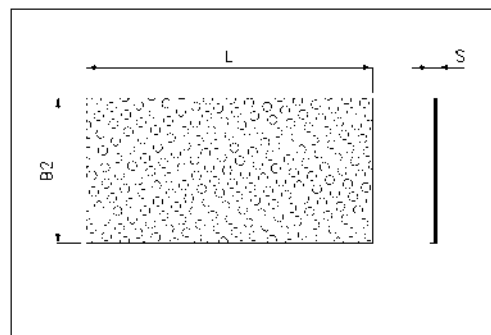
METRIC SIZES

Strips

Part Number Structure:

MX	S	15	100	460
	Shape	S	B2	L
Material				

General Tolerances:
 Width (B2) = ± 2
 Length (L) = ± 2



Part Number	S	B2	L
MX S 1070460	1.030 ÷ 1.060	70	460
MX S 15100460	1.520 ÷ 1.550	100	460
MX S 20100460	2.020 ÷ 2.050	100	460
MX S 25100460	2.530 ÷ 2.560	100	460

DATA SHEET

DATA FOR BEARING DESIGN CALCULATION



Customer:	Date:	Phone:	Fax:	Project No.:	Quantity:
Application: New Project ☐ Existing Project ☐					

Dimensions	
Inside Diameter:	
Outside Diameter:	
Length:	
Flange Diameter:	
Wall Thickness:	
Length of Strip:	
Width of Strip:	
Thickness of Strip:	

Load	
Radial Load ☐	Static (N) Dynamic (N)
Axial Load ☐	Static (N) Dynamic (N)
Specific Load ☐	Radial (Mpa) Axial (Mpa)

Type of Load	
One direction	☐
Rotational Movements	☐
Rotating Load	☐
Steady Load	☐
Linear Movement	☐
Oscillating Movements	☐
Intermittent	☐

Design:	
☐ P Cylindrical 	☐ F Flanged
☐ W Washer 	☐ S Strip
☐ Special Parts 	
(Sketch)	

Motion:	
Rotational Speed (1/min)	
Speed (ms)	
Stroke (mm)	
Oscillating (°)	
Oscillating Freq. (1/min)	
Linear Frequency (min)	
Average Temperature	
Maximum Temperature	
Duration at Maximum Temp.	
Cooling	

Lubrication:	
Dry	☐
Lubricating	☐
Initial Lubrication Only	☐
Hydrodynamic Conditions	☐
Chemical neutral	☐
Chemical Aggressive	☐
Other	☐

Operations:	
Operating Time	
Continuous Operation	
Intermittent Operation	
Days per Years	
Required Service Life (h)	

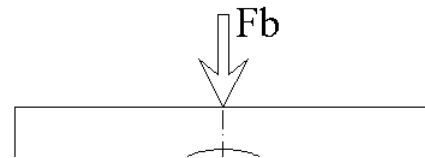
Mating Surface	
Shaft Material	
Shaft Hardness	
Shaft Finish	
Shaft Tollerance	
Housing Material	
Housing Tollerance	

Additional Information :	

The sliding bearings are checked in accordance with the ISO 3547-2 (DIN 1494-2) Standard, which proves that the (inside/outside) bearing diameters cannot be tested in a free condition, since an imperfect contact between the two surfaces of the edges brings forth wrong measurements.

TESTING METHOD "A"

The Test rig consist of a base on which the two parts of the checking block are mounted. A detting plug is inserted in the checking block and the two halves of the checking block are pressed towards one another using the given load (F_b) and the indicator reading set. The setting plug is then removed and replaced by the bush to be checked, and the checking load reapplied. After the bush has been inserted, the distance (Δz), between the two halves of the checking block changes under checking load, and the distance indicator reading (Δz), is recording.



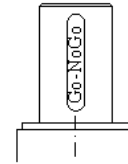
TESTING METHOD "B"

The Test is carried out with two ring gauge, a GO ring gauge and a NO GO ring gauge. It shall be possible to press the bush into the GO ring gauge with hand pressure (maximum force 250 N) However, with the same force it shall not be possible for the bush to enter the NO GO gauge.



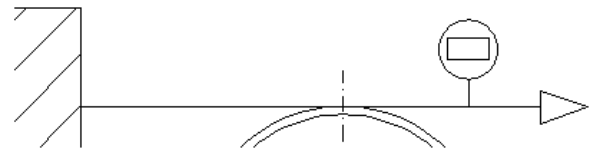
TESTING METHOD “C”

In order to check the inside diameter, the bush is pressed into a ring gauge, whose the diameter correspond to the external dimension of the bush under control. Inside diameter shall be measured with a three-point instruments, or checked with a GO and NO GO plug gauge. The GO plug gauge shall enter the bush with minimum effort; the NO GO plug gauge shall not enter the bush manually (maximum force 250 N). When the bush is pressed into the ring gauge, it is possible that there will be a permanent reduction in the outside diameter.



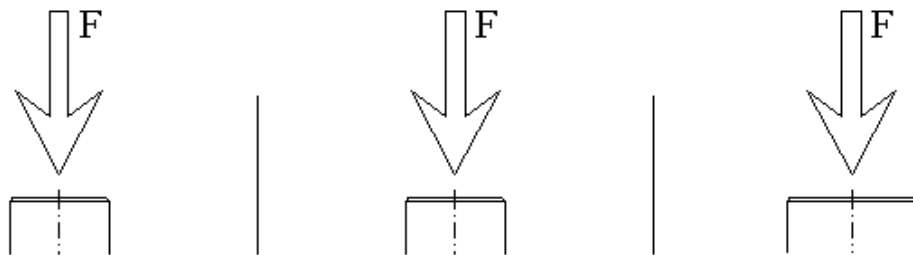
TESTING METHOD “D”

A precision measuring tape or wire is used to measure the circumference of the bush.



The bearing fitting system varies according to the application, quantities and equipment available. At all events, the most common method includes the use of hydraulic or pneumatic presses. After making the suitable seat for the bearing to be fitted, the following actions are required:

- Machine to 20° (±5°) the seat lead-in to reach 1÷2 mm (.039 ÷ .078 inches) in depth.
- Trim and clean the seat surface.
- Lubricate the external surface of the bearing before fitting it in place.
- Check the center lines between the bearing and the seat for proper alignment
- When two bearings are needed for insertion into the same seat, the related junctions need to be aligned.
- It is advisable to use a guide mandrel to fit the bearings into their seats. (Fig. 01)
- For bearings whose diameter exceeds 55 mm (2.165 inches), it is advisable to perform the fitting using a supporting ring tool whose diameter increased by 0,25÷0,40 mm (.011/.015 inches) in value. (Fig. 02)
- As far as flanged bearings are concerned, (Fig. 03) the seat lead-in shall be 45° and the minimum depth shall equal 2 mm (.078 inches); 2,5 mm (.098 inches) for bearings with wall thickness equaling 2,5 mm (.098 inches).

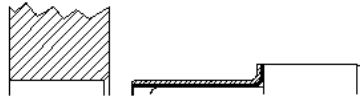


<i>Approximate Values of The Fitting Force “F” (Newton)</i>	
Rated Thickness of Bearings Wall 1,0 mm	$F = 300 \cdot H$
Rated Thickness of Bearings Wall 1,5 mm	$F = 500 \cdot H$
Rated Thickness of Bearings Wall 2,0 mm	$F = 700 \cdot H$
Rated Thickness of Bearings Wall 2,5 mm	$F = 900 \cdot H$

MR SERIES BEARINGS INSTALLATION



The installation process for MR material mentioned in this page shown the most common phases recommended in order to obtain a good assembly sizing, and flanging installing process, particularly for bearings without press fit.



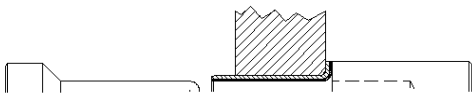
Pressing in:

With a mandrel (diameter -0.05 mm smaller than the installed bearing diameter) insert the bush into the housing. The mandrel must have a radius that avoid damage to the bearing surface.



Sizing:

With a hardened sizing mandrel (self-centering) pass through the bush in order to obtain the sizing required. The mandrel must have a radius that avoid damage to the bearing surface.



Pre-Flanging:

It is suggested to flange in two steps, first at 45° and second at 90° . For a correct and self-centering flanging operation, oppose the flanging with an empty guide pin (see picture).



Final Flanging:

The final flanging is obtained with a hardened final flanged mandrel at 90° . The mandrel for Pre-flanging and Final Flanging must have a radius that avoid damages to the bearing surface.



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