

SLIDING BEARINGS

FOREWORD

Mongodi Group started up 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. A modern approach to business, high technologies, marketing relationship and a team philosophy have allowed this company to move to a purpose-built, modern factory. Since 1986 Mongodi Group carried out an intensive research programme, 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, and nowadays it is present directly on the European, American, South-American and Asian market. The following companies are part of the Mongodi Group:

Manufacturing facility:

Technymon Srl
Sabrorazi (Technymon Polymers Divis.)
Himon
Technymon Technology USA
Technymon Technology Brasil
Technymon Technology India

Sales Company:

Framon
SMB AB
Espamon
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 hydraulic and electromechanical segments.

Furthermore during the last three years Mongodi Group is specialized also in the production of the plastic market in connection with the opening of the automotive segment.

The Group's strengths are:

- Wide range of standard items always available in stock.
- Competitive prices and high technical features.
- Worldwide presence (10 locations divided in several macro-areas such as Europe, North America, South America and Asia)
- 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 of Technymon Technology Usa, Brasil & India; coming from Technymon Srl (Italy), this company is certificated with the following norm:

QUALITY MANAGEMENT SYSTEM
CERTIFIED BY DNV
ISO 9001:2000

QUALITY MANAGEMENT SYSTEM
CERTIFIED BY DNV
ISO/TS 16949:2002



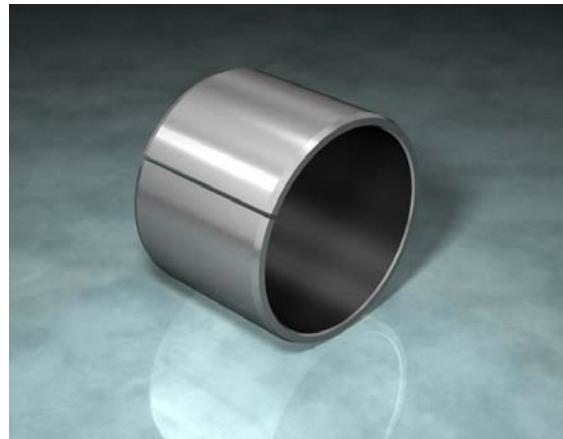
MATERIAL OF OUR PRODUCTIONS

<i>Name</i>	<i>Composition</i>	<i>Characteristic</i>	<i>Items</i>
MU	Steel -Sintered Bronze -PTFE Modified	Self-Lubricating	04, 10÷23
MU-B	Bronze -Sintered Bronze -PTFE Modified	Self-Lubricating	04, 10÷23
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
MP-G	Thermoplastic Material - Solid Lubricant	Self-Lubricating	06, 24÷33
TWM	Glass Fibres - Polymer Fibres - PTFE Fibres	Self-Lubricating	07
MX / MX-R	Steel - Sintered Bronze - POM	To-Lubricated	07, 34÷39
MX-H	Steel - Sintered Bronze - POM	To-Lubricated	08, 34÷39
BMT	Steel - Sintered Bronze (CuSn10Pb10)	To-Lubricated	08
BRM-10	Bronze (CuSn8P) with Lozenge Pockets	To-Lubricated	09
BRM-10 WR	Bronze (CuSn8P) with Lozenge Pockets + Wiper Rings	To-Lubricated	09

Special Parts	40
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Fitting Methods	42,43
Checking Methods	44,45
The Group	47

MU

MU is a composite multiple-layer material used in the manufacture of dry self-lubricating sliding bearings. The main parts composing 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 10 to 23).



CHARACTERISTICS:

- 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

TECHNICAL DATA

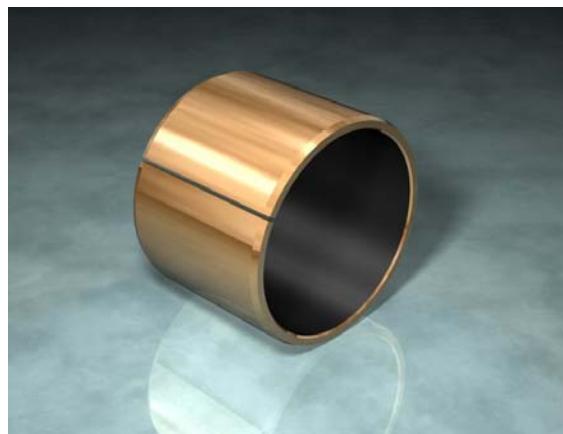
	Alternativ load	PV	25.000 psi-fpm	0,9 N/mm ² ·m/s
Maximum load factor -Dry	Continuous load	PV	50.000 psi-fpm	1,8 N/mm ² ·m/s
	Short-term limit	PV	100.000 psi-fpm	3,6 N/mm ² ·m/s
Maximum Specific Load	Static	P	35500 psi	250 N/mm ²
	Reduced movements	P	20000 psi	140 N/mm ²
	Rotary and swinging	P	8750 psi	60 N/mm ²
Maximum Speed	Dry	v	1000 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). Basically, 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.

Corrosion phenomena show up in the presence of fuming sulphuric acid and spirits of turpentine.

(Dimensional tables on pages 10 to 23, MU-B material is only on request).



CHARACTERISTICS:

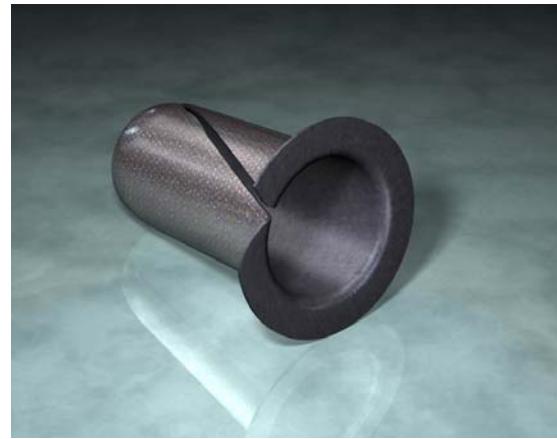
- High load capacity
- Dry self-lubrication
- Low friction factor, either static and dynamic (no stick-slip effect)
- Minimized wear and excellent service life
- High chemical inertia and good compatibility with fluids
- Wide range of service temperatures
- Good thermal conductivity
- Good electrical conductivity
- Minimum overall dimensions
- Easy mounting
- Wide selection of standard items
- Special items on demand

TECHNICAL DATA

	Alternativ load	PV	25.000 psi-fpm	0,9 N/mm ² ·m/s
Maximum load factor -Dry	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
	Rotary and swinging	P	8750 psi	60 N/mm ²
Maximum Speed	Dry	v	1000 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 (Polytetrafluoroethylene) 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-1 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:

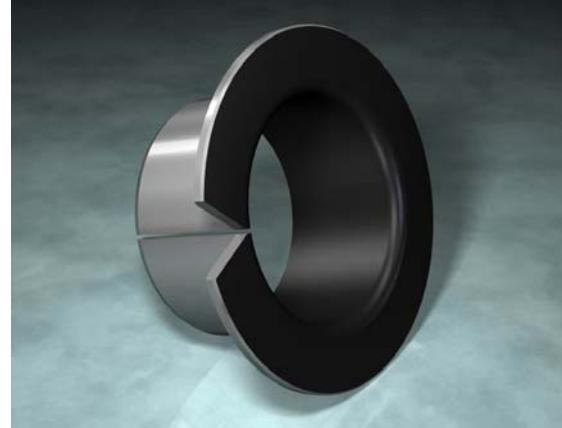
- High load capacities
- Easy mounting
- Good chemical inertia to corrosive agents
- High thermal conductivity
- Negligible water absorption
- Wide range of service temperatures
- Minimum overall dimensions and no maintenance
- Special items available on demand

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	400 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 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, belts and cast-to-size parts with thickness standard is from .0196 in. (0,500 mm). (Please contact our technical/commercial officies to forward your request).



CHARACTERISTICS:

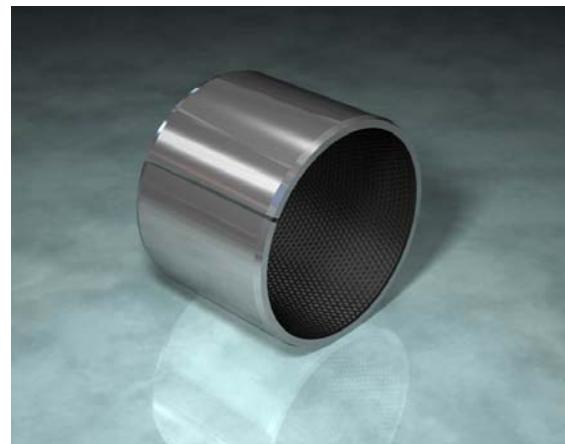
- Minimum tolerance on the inside diameter
- High load capacity
- Self-lubricating under dry operation
- Minimum wear and excellent operating life
- High chemical resistance and compatibility with fluids
- Minimum dimensions
- Easy of fittings
- Special items on demand
- Excellent performance / cost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

TECHNICAL DATA

Maximum Specific Load	Static	P	29000 psi	200 N/mm ²
	Dynamic	P	21300 psi	150 N/mm ²
Maximum Speed	Dry	v	600 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
Max load factor (Dry)	Maximum	PV	50000 psi-fpm	1,8 N/mm ² · m/s
	Maximum (short periods)	PV	61100 psi-fpm	2,2 N/mm ² · m/s

FRITEX

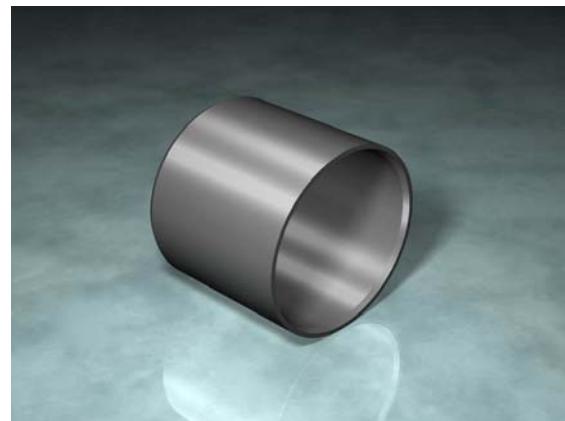
The Fritex trademark identifies a series of bearings that are specially manufactured to allow the sticking of fabric with PTFE fibres on metal supports in various types and shapes. The Sliding Surface fabric is primarily composed of PTFE fibres. The bearing support is available in several materials, that vary according to the application type. These versions are: Fritex-C= standard 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:		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	58000 psi	400 N/mm ²	
		Dynamic	P	26000 psi	180 N/mm ²	
Maximum Speed	Dry	v	1000 fpm	2,5 m/s		
	Minimum	t	-328°F	-200°C		
Service Temperature	Maximum	t	+500°F	+260°C		
Coefficient of Friction-Dry	Minimum	μ		0,03		
	Maximum	μ		0,15		

MP-G

MP-G is a thermoplastic material with a lattice of fibres mixed with solid lubricants. The product shows a good wearproofing feature, the solid lubricants highly reduce the friction factor and form, by microabrasion, an excellent sliding surface with the counter-piece. There are several applications, ranging from office furniture, to medical equipment, pneumatic cylinders, hinges, rudder bars, etc. The MP-G series includes cylindrical and flanged bearings as well as washers, and special parts are available on demand. (Dimensional tables on pages 24 ÷ 33).



CHARACTERISTICS:		TECHNICAL DATA				
Maximum Specific Load	Static	P	11600 psi	80 N/mm ²		
Maximum Speed (rotating)	Dry	v	195 fpm	1,2 m/s		
Maximum Speed (linear)	Dry	v	980 fpm	4,0 m/s		
Service Temperature	Minimum	t	-40°F	-40°C		
	Maximum	t	+266°F	+130°C		
Coefficient of Friction-Dry	Minimum	μ		0,08		
	Maximum	μ		0,20		

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 highstrength polymer fibres. Please contact our offices to forward your request.



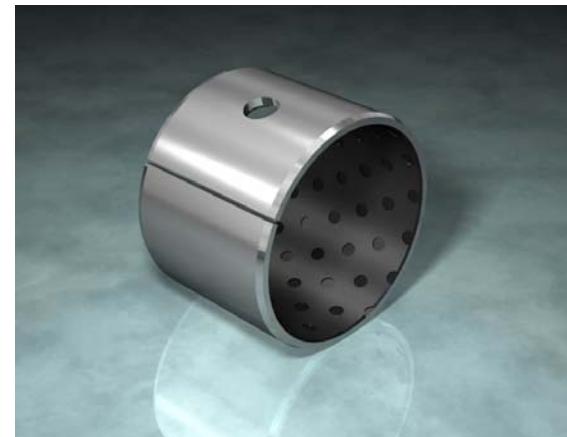
CHARACTERISTICS:		TECHNICAL DATA			
-Excellent sliding property		Maximum Specific Load	Static	P	30450 psi
-High load carrying capacity			Dynamic	P	140 N/mm ²
-Long service life		Maximum Speed	Dry	v	20 fpm
-Maintenance free			Minimum	t	-320°F
-Insensitive to edge loading and misalignment		Service Temperature	Maximum	t	+320°F
-Good impact resistance			Maximum	PV	1,05 N/mm ² · m/s
-Good noise and vibration damping		Max load factor (Dry)	Maximum (short periods)	PV	1,50 N/mm ² · m/s
-Excellent resistance to corrosive media, even to salt water					
-Good insulator preventing passage of electric current					

MX & MXR

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

The polymeric surface has indentations in which the lubricating oil/grease 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 34 ÷ 39).



CHARACTERISTICS:		TECHNICAL DATA			
-Good load capacity		Maximum Specific Load	Static	P	20000 psi
-Special suiting rotating movements			Dynamic	P	70 N/mm ²
-Water-repellent (no swelling)		Maximum Speed	Dry	v	1000 fpm
-Minimized wear and excellent service life			Minimum	t	-40°F
-Little maintenance required		Service Temperature	Maximum	t	+266°F
-Insensitive to shocks			Maximum	PV	3,0 N/mm ² · m/s
-Easy lubricated		Max load factor (Dry)	Maximum (short periods)	PV	5,0 N/mm ² · m/s
-Wide range of operating temperature					
-Minimum overall dimensions					
-Easy mounting					
-Wide range of standard items					
-Special items available on request					

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). For the standard dimension available see pg. 34 ÷ 39.



CHARACTERISTICS:		TECHNICAL DATA				
Maximum Specific Load	Static	P	20000 psi	140 N/mm ²		
	Dynamic	P	10000 psi	70 N/mm ²		
Maximum Speed	Dry	v	1000 fpm	2,5 m/s		
	Minimum	t	-40°F	-40°C		
Service Temperature	Maximum	t	+266°F	+130°C		
	Maximum	PV	83300 psi-fpm	3,0 N/mm ² · m/s		
Max load factor (Dry)	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.

BMT-2= bronze surface with diamond pits.

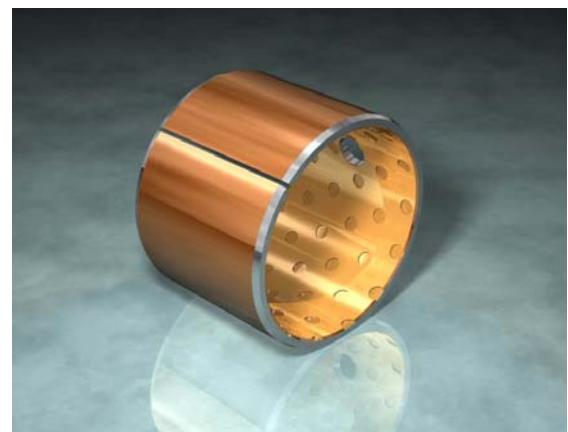
BMT-3= smooth bronze surface.

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.

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



CHARACTERISTICS:		TECHNICAL DATA				
Maximum Specific Load	Static	P	45000 psi	310 N/mm ²		
	Dynamic	P	22000 psi	150 N/mm ²		
Maximum Speed	Dry	v	1000 fpm	2,5 m/s		
Coefficient of Friction-Dry	Minimum	μ		0,15		
	Minimum (Oil)	t	-40°F	-40°C		
Service Temperature	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).



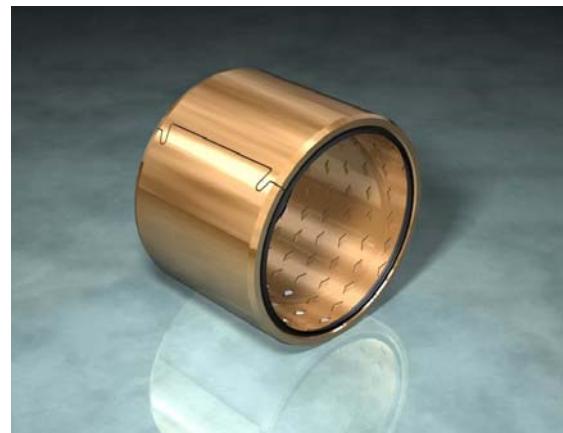
CHARACTERISTICS:		TECHNICAL DATA			
Maximum Specific Load	Static	P	22000 psi	150 N/mm ²	
	Dynamic	P	9000 psi	60 N/mm ²	
Maximum Speed	Dry	v	800 fpm	2,0 m/s	
Service Temperature	Minimum	t	-40°F	-40°C	
	Maximum	t	+302°F	+150°C	
Max load factor (Dry)	Maximum	PV	83300 psi-fpm	3,0 N/mm ² · m/s	
	Maximum (short periods)	PV	138800 psi-fpm	5,0 N/mm ² · m/s	
Coefficient of Friction-Dry	Minimum-Maximum	μ		0,06 ÷ 0,15	

BRM-10 WR

The BRM-10 sliding bearings can be also supplied with wiper rings for the retention of the lubricant. This seals solves the problem of damage caused by contamination during operation.

By the addition of these seals, better performance and longer life are achieved. Because the seals are in the bearings no external seals are required thus saving space as well machining and assembly cost.

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



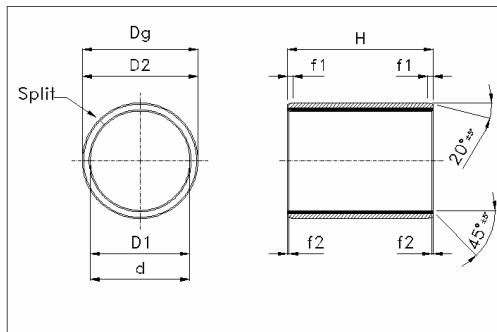
CHARACTERISTICS:		TECHNICAL DATA			
High load capacity	Static	P	22000 psi	150 N/mm ²	
Easy lubricated (Better retention of the lubricant)	Dynamic	P	9000 psi	60 N/mm ²	
Increase performance and longer life	Dry	v	800 fpm	2,0 m/s	
Good chemical inertia to corrosive agents	Minimum	t	-40°F	-40°C	
High thermal conductivity	Maximum	t	+266°F	+130°C	
Minimized overall dimensions	Maximum	PV	83300 psi-fpm	3,0 N/mm ² · m/s	
Easy mounting	Maximum (short periods)	PV	138800 psi-fpm	5,0 N/mm ² · m/s	
Wide range of standard items	Minimum-Maximum	μ		0,06 ÷ 0,15	
Special items available on request					

Cylindrical Plain Bearings
dimension according to ISO 3547

Part Number Structure:

MU	P	20	23	20
Items	D1	D2	H	
Material				

General Tollerances:
Length (H) = ± 0.25 (mm)



Part Number	D1	D2	H	D1 (After Assembly)	Dg (Housing Recommended)	d (Shaft Recommended)
MU P 034.503	03	4.5	03	3.000 \div 3.048	4.500 \div 4.508	2.994 \div 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 \div 4.048	5.500 \div 5.508	3.992 \div 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 \div 5.055	7.000 \div 7.015	4.978 \div 4.990
MU P 050708			08			
MU P 050710			10			
MU P 060804	06	08	04	5.990 \div 6.055	8.000 \div 8.015	5.978 \div 5.990
MU P 060806			06			
MU P 060808			08			
MU P 070910	07	09	10	6.990 \div 7.055	9.000 \div 9.015	6.972 \div 6.987
MU P 081006	08	10	06	7.990 \div 8.055	10.000 \div 10.015	7.972 \div 7.987
MU P 081008			08			
MU P 081010			10			
MU P 081012			12			
MU P 101208	10	12	08	9.990 \div 10.058	12.000 \div 12.018	9.972 \div 9.987
MU P 101210			10			
MU P 101212			12			
MU P 101215			15			
MU P 101220			20			
MU P 121408	12	14	08	11.990 \div 12.058	14.000 \div 14.018	11.966 \div 11.984
MU P 121410			10			
MU P 121412			12			
MU P 121415			15			
MU P 121420			20			
MU P 121425			25			
MU P 131510	13	15	10	12.990 \div 13.058	15.000 \div 15.018	12.966 \div 12.984
MU P 131520			20			
MU P 141605	14	16	05	13.990 \div 14.058	16.000 \div 16.018	13.966 \div 13.984
MU P 141610			10			
MU P 141612			12			
MU P 141615			15			
MU P 141620			20			
MU P 141625			25			
MU P 151710	15	17	10	14.990 \div 15.058	17.000 \div 17.018	14.966 \div 14.984
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 Recommended)	d (Shaft Recommended)
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 Recommended)	d (Shaft Recommended)
MU P 374120	37	41	20	$36.990 \div 37.085$	$41.000 \div 41.025$	$36.950 \div 36.975$
MU P 404420			20			
MU P 404430			30			
MU P 404440		40	40	$39.990 \div 40.085$	$44.000 \div 44.025$	$39.950 \div 39.975$
MU P 404445			45			
MU P 404450			50			
MU P 455020			20			
MU P 455030			30			
MU P 455040		45	40	$44.990 \div 45.105$	$50.000 \div 50.025$	$44.950 \div 44.975$
MU P 455045			45			
MU P 455050			50			
MU P 505520			20			
MU P 505525			25			
MU P 505530			30			
MU P 505540			40			
MU P 505550			50			
MU P 505560			60			
MU P 556020			20			
MU P 556025			25			
MU P 556030			30			
MU P 556040		55	40	$49.990 \div 50.110$	$55.000 \div 55.030$	$49.950 \div 49.975$
MU P 556050			50			
MU P 556055			55			
MU P 556060			60			
MU P 606520			20			
MU P 606530			30			
MU P 606540			40			
MU P 606550		60	50	$54.990 \div 55.110$	$60.000 \div 60.030$	$54.940 \div 54.970$
MU P 606560			60			
MU P 606570			70			
MU P 657030			30			
MU P 657040		65	40	$64.990 \div 65.110$	$70.000 \div 70.030$	$64.940 \div 64.970$
MU P 657050			50			
MU P 657070			70			
MU P 707540			40			
MU P 707550		70	50	$69.990 \div 70.110$	$75.000 \div 75.030$	$69.940 \div 69.970$
MU P 707560			60			
MU P 707570			70			
MU P 758040			40			
MU P 758050		75	50	$74.990 \div 75.110$	$80.000 \div 80.030$	$74.940 \div 74.970$
MU P 758060			60			
MU P 758070			70			
MU P 758080			80			
MU P 808560			60			
MU P 808580		80	80	$80.020 \div 80.155$	$85.000 \div 85.035$	$79.954 \div 80.000$
MU P 8085100			100			
MU P 859030			30			
MU P 859060		85	60	$85.020 \div 85.155$	$90.000 \div 90.035$	$84.946 \div 85.000$
MU P 859100			100			
MU P 909560			60			
MU P 9095100		90	95	$90.020 \div 90.155$	$95.000 \div 95.035$	$89.946 \div 90.000$
MU P 9510060			100			
MU P 95100100			100	$95.020 \div 95.155$	$100.000 \div 100.035$	$94.946 \div 95.000$
MU P 10010550		100	105	50	$100.020 \div 100.155$	$105.000 \div 105.035$
MU P 10010560				60		$99.946 \div 100.000$

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			

Part Number	D1	D2	H	DI (After Assembly)	Dg (Housing Recommended)	d (Shaft Recommended)
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			

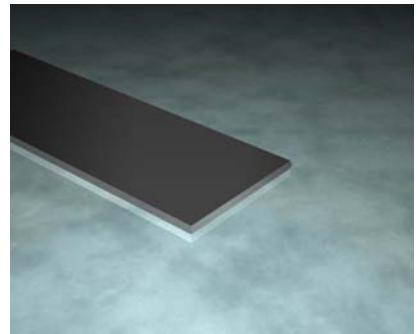
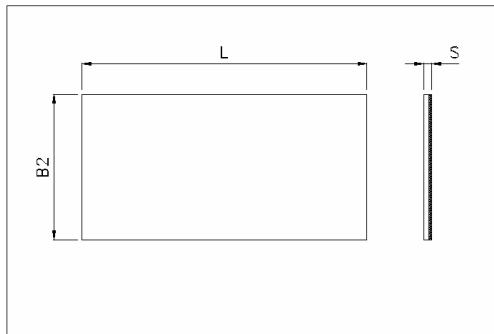
Chamfers General Tollerances:

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

Strips

Part Number Structure:

MU	S	07	150	500
	Shape	S	B2	L
Material				

*General Tollerances:*Width (B2) = ± 2 Length (L) = ± 2 

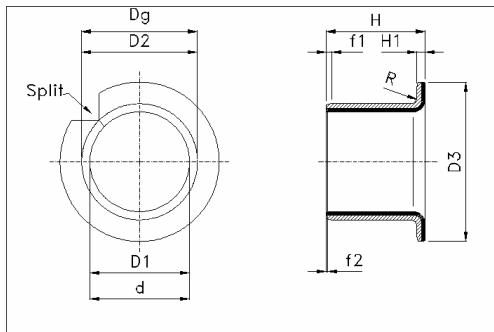
Part Number	S	B2	L
MU S 07150500	0.704 ÷ 0.744	150	500
MU S 10215500	0.950 ÷ 0.990	215	500
MU S 15245500	1.470 ÷ 1.510	245	500
MU S 20245500	1.960 ÷ 2.000	245	500
MU S 25245500	2.460 ÷ 2.500	245	500
MU S 30245500	3.020 ÷ 3.060	245	500

Flanged Plain Bearings
dimension according to ISO 3547

Part Number Structure:

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

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



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

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

MU/MU-B

METRIC SIZES

Thrust Washers

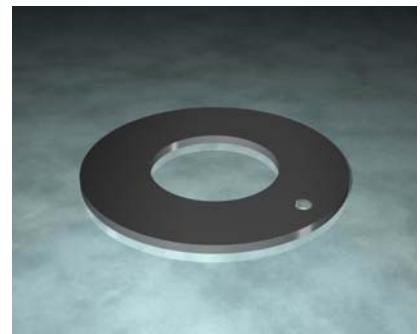
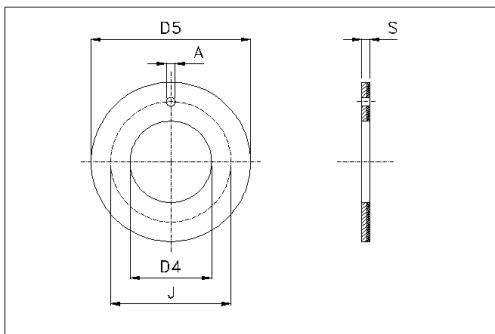
Part Number Structure:

MU	W	10	20	1.5
		D4	D5	S
Material	Shape	D4	D5	S

General Tollerances:

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

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



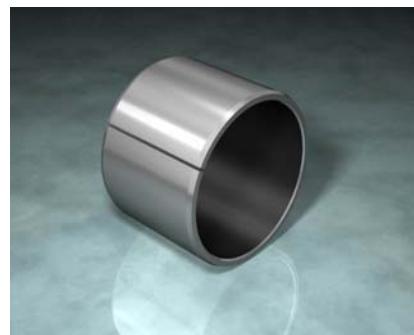
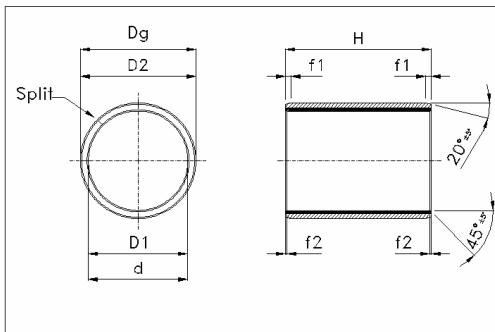
Part Number	D4	D5	S	J	A
MU W 10201.5	10	20	1.450 ÷ 1.500	-	-
MU W 12241.5	12	24	1.450 ÷ 1.500	18	1.620 ÷ 1.870
MU W 14261.5	14	26	1.450 ÷ 1.500	20	2.120 ÷ 2.370
MU W 16301.5	16	30	1.450 ÷ 1.500	22	2.120 ÷ 2.370
MU W 18321.5	18	32	1.450 ÷ 1.500	25	2.120 ÷ 2.370
MU W 20361.5	20	36	1.450 ÷ 1.500	28	3.120 ÷ 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

Cylindrical Plain Bearings
dimension according to ISO 3547

Part Number Structure:

MU	02	TH	02
Material	D1	Inch	H

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



Part Number	D1	D2	H	D1 (After Assembly)	Dg (Housing Recommended)	d (Shaft Recommended)
MU 02TH02	0.1250	0.1875	0.1250	0.1243 \div 0.1268	0.1873 \div 0.1878	0.1236 \div 0.1243
MU 02TH03			0.1875			
MU 025TH025	0.1563	0.2188	0.1563	0.1556 \div 0.1581	0.2186 \div 0.2191	0.1547 \div 0.1554
MU 025TH04			0.2500			
MU 03TH03	0.1875	0.2500	0.1875	0.1867 \div 0.1893	0.2497 \div 0.2503	0.1858 \div 0.1865
MU 03TH04			0.2500			
MU 03TH06			0.3750			
MU 04TH04	0.2500	0.3125	0.2500	0.2492 \div 0.2518	0.3122 \div 0.3128	0.2481 \div 0.2490
MU 04TH06			0.3750			
MU 05TH06	0.3125	0.3750	0.3750	0.3117 \div 0.3143	0.3747 \div 0.3753	0.3106 \div 0.3115
MU 05TH08			0.5000			
MU 06TH03	0.3750	0.4688	0.1875	0.3742 \div 0.3769	0.4684 \div 0.4691	0.3731 \div 0.3740
MU 06TH04			0.2500			
MU 06TH06			0.3750			
MU 06TH08			0.5000			
MU 06TH10			0.6250			
MU 06TH12			0.7500			
MU 07TH08	0.4375	0.5313	0.5000	0.4367 \div 0.4394	0.5309 \div 0.5316	0.4355 \div 0.4365
MU 07TH12			0.7500			
MU 08TH04	0.5000	0.5938	0.2500	0.4992 \div 0.5019	0.5934 \div 0.5941	0.4980 \div 0.4990
MU 08TH06			0.3750			
MU 08TH08			0.5000			
MU 08TH10			0.6250			
MU 08TH12			0.7500			
MU 08TH14			0.8750			
MU 09TH06	0.5625	0.6563	0.3750	0.5617 \div 0.5644	0.6559 \div 0.6566	0.5605 \div 0.5615
MU 09TH08			0.5000			
MU 09TH10			0.6250			
MU 09TH12			0.7500			
MU 10TH04	0.6250	0.7188	0.2500	0.6242 \div 0.6270	0.7184 \div 0.7192	0.6230 \div 0.6240
MU 10TH08			0.5000			
MU 10TH10			0.6250			
MU 10TH12			0.7500			
MU 10TH14			0.8750			
MU 10TH16			1.0000			
MU 11TH14	0.6875	0.7813	0.8750	0.6867 \div 0.6895	0.7809 \div 0.7817	0.6855 \div 0.6865
MU 12TH04	0.7500	0.8750	0.2500	0.7493 \div 0.7525	0.8747 \div 0.8755	0.7479 \div 0.7491
MU 12TH06			0.3750			
MU 12TH08			0.5000			

Part Number	D1	D2	H	D1 (After Assembly)	Dg (Housing Recommended)	d (Shaft Recommended)
MU 12TH10	0.7500	0.8750	0.6250	0.7493 ÷ 0.7525	0.8747 ÷ 0.8755	0.7479 ÷ 0.7491
MU 12TH12			0.7500			
MU 12TH16			1.0000			
MU 13TH12	0.8125	0.9375	0.7500	0.8118 ÷ 0.8150	0.9372 ÷ 0.9380	0.8104 ÷ 0.8116
MU 13TH18			1.1250			
MU 14TH04	0.8750	1.0000	0.2500	0.8743 ÷ 0.8775	0.9997 ÷ 1.0005	0.8729 ÷ 0.8741
MU 14TH06			0.3750			
MU 14TH12			0.7500			
MU 14TH14			0.8750			
MU 14TH16			1.0000			
MU 14TH20			1.2500			
MU 16TH06	1.0000	1.1250	0.3750	0.9992 ÷ 1.0026	1.1246 ÷ 1.1256	0.9979 ÷ 0.9991
MU 16TH08			0.5000			
MU 16TH12			0.7500			
MU 16TH16			1.0000			
MU 16TH20			1.2500			
MU 16TH24			1.5000			
MU 18TH06	1.1250	1.2813	0.3750	1.1240 ÷ 1.1278	1.2808 ÷ 1.2818	1.1226 ÷ 1.1238
MU 18TH10			0.6250			
MU 18TH12			0.7500			
MU 18TH16			1.0000			
MU 20TH06	1.2500	1.4063	0.3750	1.2490 ÷ 1.2528	1.4058 ÷ 1.4068	1.2472 ÷ 1.2488
MU 20TH12			0.7500			
MU 20TH14			0.8750			
MU 20TH16			1.0000			
MU 20TH20			1.2500			
MU 20TH28			1.7500			
MU 22TH12	1.3750	1.5313	0.7500	1.3740 ÷ 1.3778	1.5308 ÷ 1.5318	1.3722 ÷ 1.3738
MU 22TH16			1.0000			
MU 22TH22			1.3750			
MU 22TH24			1.5000			
MU 22TH28			1.7500			
MU 24TH08	1.5000	1.6563	0.5000	1.4990 ÷ 1.5028	1.6558 ÷ 1.6568	1.4972 ÷ 1.4988
MU 24TH16			1.0000			
MU 24TH18			1.1250			
MU 24TH20			1.2500			
MU 24TH24			1.5000			
MU 24TH32			2.0000			
MU 26TH16	1.6250	1.7813	1.0000	1.6240 ÷ 1.6278	1.7808 ÷ 1.7818	1.6222 ÷ 1.6238
MU 26TH24			1.5000			
MU 28TH16	1.7500	1.9375	1.0000	1.7489 ÷ 1.7535	1.9371 ÷ 1.9381	1.7471 ÷ 1.7487
MU 28TH24			1.5000			
MU 28TH28			1.7500			
MU 28TH32			2.0000			
MU 30TH12	1.8750	2.0625	0.7500	1.8739 ÷ 1.8787	2.0621 ÷ 2.0633	1.8721 ÷ 1.8737
MU 30TH16			1.0000			
MU 30TH30			1.8750			
MU 30TH36			2.2500			
MU 32TH08	2.0000	2.1875	0.5000	1.9989 ÷ 2.0037	2.1871 ÷ 2.1883	1.9969 ÷ 1.9987
MU 32TH16			1.0000			
MU 32TH24			1.5000			

Part Number	D1	D2	H	D1 (After Assembly)	Dg (Housing Recomended)	d (Shaft Recomended)
MU 32TH28	2.0000	2.1875	1.7500	1.9989 ÷ 2.0037	2.1871 ÷ 2.1883	1.9969 ÷ 1.9987
MU 32TH32			2.0000			
MU 32TH40			2.5000			
MU 34TH48	2.1250	2.3125	3.0000	2.1259 ÷ 2.1323	2.3115 ÷ 2.3127	2.1239 ÷ 2.1257
MU 36TH28	2.2500	2.4375	1.7500	2.2509 ÷ 2.2573	2.4365 ÷ 2.4377	2.2489 ÷ 2.2507
MU 36TH32			2.0000			
MU 36TH36			2.2500			
MU 36TH40			2.5000			
MU 36TH48			3.0000			
MU 36TH56			3.5000			
MU 36TH60			3.7500			
MU 36TH64			4.0000			
MU 36TH72			4.5000			
MU 40TH16	2.5000	2.6875	1.0000	2.5013 ÷ 2.5077	2.6869 ÷ 2.6881	2.4993 ÷ 2.5011
MU 40TH26			1.6250			
MU 40TH32			2.0000			
MU 40TH40			2.5000			
MU 40TH48			3.0000			
MU 40TH56			3.5000			
MU 40TH60			3.7500			
MU 40TH64			4.0000			
MU 40TH72			4.5000			
MU 40TH76			4.7500			
MU 44TH32	2.7500	2.9375	2.0000	2.7502 ÷ 2.7566	2.9358 ÷ 2.9370	2.7482 ÷ 2.7500
MU 44TH36			2.2500			
MU 44TH40			2.5000			
MU 44TH48			3.0000			
MU 44TH56			3.5000			
MU 44TH60			3.7500			
MU 44TH64			4.0000			
MU 44TH72			4.5000			
MU 44TH76			4.7500			
MU 44TH80			5.0000			
MU 46TH32	2.8750	3.0625	2.0000	2.8754 ÷ 2.8819	3.0610 ÷ 3.0623	2.8734 ÷ 2.8752
MU 46TH36			2.2500			
MU 46TH40			2.5000			
MU 46TH48			3.0000			
MU 46TH56			3.5000			
MU 46TH60			3.7500			
MU 46TH64			4.0000			
MU 46TH72			4.5000			
MU 46TH76			4.7500			
MU 46TH80			5.0000			
MU 48TH32	3.0000	3.1875	2.0000	3.0002 ÷ 3.0068	3.1858 ÷ 3.1872	2.9982 ÷ 3.0000
MU 48TH36			2.2500			
MU 48TH40			2.5000			
MU 48TH48			3.0000			
MU 48TH56			3.5000			
MU 48TH60			3.7500			
MU 48TH64			4.0000			
MU 48TH72			4.5000			

Part Number	D1	D2	H	D1 (After Assembly)	Dg (Housing Recomended)	d (Shaft Recomended)
MU 48TH76	3.0000	3.1875	4.7500	3.0002 ÷ 3.0068	3.1858 ÷ 3.1872	2.9982 ÷ 3.0000
MU 48TH80			5.0000			
MU 52TH32	3.2500	3.4375	2.0000	3.2502 ÷ 3.2568	3.4358 ÷ 3.4372	3.2480 ÷ 3.2500
MU 52TH38			2.3750			
MU 52TH40			2.5000			
MU 52TH48			3.0000			
MU 52TH56			3.5000			
MU 52TH60			3.7500			
MU 52TH64			4.0000			
MU 52TH72			4.5000			
MU 52TH76			4.7500			
MU 52TH80			5.0000			
MU 56TH32	3.5000	3.6875	2.0000	3.5002 ÷ 3.5068	3.6858 ÷ 3.6872	3.4978 ÷ 3.5000
MU 56TH38			2.3750			
MU 56TH40			2.5000			
MU 56TH48			3.0000			
MU 56TH56			3.5000			
MU 56TH60			3.7500			
MU 56TH64			4.0000			
MU 56TH72			4.5000			
MU 56TH76			4.7500			
MU 56TH80			5.0000			
MU 58TH32	3.6250	3.8125	2.0000	3.6258 ÷ 3.6318	3.8108 ÷ 3.8122	3.6228 ÷ 3.6250
MU 58TH36			2.2500			
MU 58TH40			2.5000			
MU 58TH48			3.0000			
MU 58TH56			3.5000			
MU 58TH60			3.7500			
MU 58TH64			4.0000			
MU 58TH72			4.5000			
MU 58TH76			4.7500			
MU 58TH80			5.0000			
MU 60TH32	3.7500	3.9375	2.0000	3.7502 ÷ 3.7568	3.9358 ÷ 3.9372	3.7478 ÷ 3.7500
MU 60TH36			2.2500			
MU 60TH40			2.5000			
MU 60TH48			3.0000			
MU 60TH56			3.5000			
MU 60TH60			3.7500			
MU 60TH64			4.0000			
MU 60TH72			4.5000			
MU 60TH76			4.7500			
MU 60TH80			5.0000			
MU 64TH32	4.0000	4.1875	2.0000	4.0002 ÷ 4.0068	4.1858 ÷ 4.1872	3.9978 ÷ 4.0000
MU 64TH36			2.2500			
MU 64TH40			2.5000			
MU 64TH48			3.0000			
MU 64TH56			3.5000			
MU 64TH60			3.7500			
MU 64TH64			4.0000			
MU 64TH72			4.5000			
MU 64TH76			4.7500			
MU 64TH80			5.0000			

Part Number	D1	D2	H	D1 (After Assembly)	Dg (Housing Recommended)	d (Shaft Recommended)		
MU 64TH80	4.0000	4.1875	5.0000	4.0002 ÷ 4.0068	4.1858 ÷ 4.1872	3.9978 ÷ 4.0000		
MU 68TH32	4.2500		2.0000	4.2502 ÷ 4.2568		4.2478 ÷ 4.2500		
MU 68TH36			2.2500					
MU 68TH40			2.5000					
MU 68TH48			3.0000					
MU 68TH56			3.5000					
MU 68TH60			3.7500					
MU 68TH64			4.0000					
MU 68TH72			4.5000					
MU 68TH76			4.7500					
MU 68TH80			5.0000					
MU 70TH32	4.3750	4.5625	2.0000	4.3752 ÷ 4.3818	4.5608 ÷ 4.5622	4.3728 ÷ 4.3750		
MU 70TH36			2.2500					
MU 70TH40			2.5000					
MU 70TH48			3.0000					
MU 70TH56			3.5000					
MU 70TH60			3.7500					
MU 70TH64			4.0000					
MU 70TH72			4.5000					
MU 70TH76			4.7500					
MU 70TH80			5.0000					
MU 72TH32	4.5000	4.6875	2.0000	4.5002 ÷ 4.5068	4.6858 ÷ 4.6872	4.4978 ÷ 4.5000		
MU 72TH36			2.2500					
MU 72TH40			2.5000					
MU 72TH48			3.0000					
MU 72TH56			3.5000					
MU 72TH60			3.7500					
MU 72TH64			4.0000					
MU 72TH72			4.5000					
MU 72TH76			4.7500					
MU 72TH80			5.0000					
MU 76TH32	4.7500	4.9375	2.0000	4.7502 ÷ 4.7570	4.9358 ÷ 4.9374	4.7475 ÷ 4.7500		
MU 76TH36			2.2500					
MU 76TH40			2.5000					
MU 76TH48			3.0000					
MU 76TH56			3.5000					
MU 76TH60			3.7500					
MU 76TH64			4.0000					
MU 76TH72			4.5000					
MU 76TH76			4.7500					
MU 76TH80			5.0000					
MU 80TH32	5.0000	5.1875	2.0000	4.9988 ÷ 5.0056	5.1844 ÷ 5.1860	4.9961 ÷ 4.9986		
MU 80TH36			2.2500					
MU 80TH40			2.5000					
MU 80TH48			3.0000					
MU 80TH56			3.5000					
MU 80TH60			3.7500					
MU 80TH64			4.0000					
MU 80TH72			4.5000					
MU 80TH76			4.7500					
MU 80TH80			5.0000					

Part Number	D1	D2	H	D1 (After Assembly)	Dg (Housing Recommended)	d (Shaft Recommended)
MU 84TH32	5.2500	5.4375	2.0000	$5.2502 \div 5.2570$	$5.4358 \div 5.4374$	$5.2475 \div 5.2500$
MU 84TH36			2.2500			
MU 84TH40			2.5000			
MU 84TH48			3.0000			
MU 84TH56			3.5000			
MU 84TH60			3.7500			
MU 84TH64			4.0000			
MU 84TH72			4.5000			
MU 84TH76			4.7500			
MU 84TH80			5.0000			
MU 88TH32	5.5000	5.6875	2.0000	$5.5002 \div 5.5070$	$5.6858 \div 5.6874$	$5.4975 \div 5.5000$
MU 88TH36			2.2500			
MU 88TH40			2.5000			
MU 88TH48			3.0000			
MU 88TH56			3.5000			
MU 88TH60			3.7500			
MU 88TH64			4.0000			
MU 88TH72			4.5000			
MU 88TH76			4.7500			
MU 88TH80			5.0000			
MU 92TH32	5.7500	5.9375	2.0000	$5.7502 \div 5.7570$	$5.9358 \div 5.9374$	$5.7475 \div 5.7500$
MU 92TH36			2.2500			
MU 92TH40			2.5000			
MU 92TH48			3.0000			
MU 92TH56			3.5000			
MU 92TH60			3.7500			
MU 92TH64			4.0000			
MU 92TH72			4.5000			
MU 92TH76			4.7500			
MU 92TH80			5.0000			
MU 96TH32	6.0000	6.1875	3.7500	$6.0002 \div 6.0070$	$6.1858 \div 6.1874$	$5.9975 \div 6.0000$
MU 96TH36			4.0000			
MU 96TH40			4.5000			
MU 96TH48			4.7500			
MU 96TH56			5.0000			
MU 96TH60			2.0000			
MU 96TH64			2.2500			
MU 96TH72			2.5000			
MU 96TH76			3.0000			
MU 96TH80			3.5000			
MU 100TH32	6.2500	6.4375	2.0000	$6.2502 \div 6.2570$	$6.4358 \div 6.4374$	$6.2475 \div 6.2500$
MU 100TH36			2.2500			
MU 100TH40			2.5000			
MU 100TH48			3.0000			
MU 100TH56			3.5000			
MU 100TH60			3.7500			
MU 100TH64			4.0000			
MU 100TH72			4.5000			
MU 100TH76			4.7500			
MU 100TH80			5.0000			
MU 104TH32	6.5000	6.6875	2.0000	$6.5002 \div 6.5070$	$6.6858 \div 6.6874$	$6.4975 \div 6.5000$

Part Number	D1	D2	H	D1 (After Assembly)	Dg (Housing Recommended)	d (Shaft Recommended)
MU 104TH36	6.5000	6.6875	2.2500	6.5002 ÷ 6.5070	6.6858 ÷ 6.6874	6.4975 ÷ 6.5000
MU 104TH40			2.5000			
MU 104TH48			3.0000			
MU 104TH56			3.5000			
MU 104TH60			3.7500			
MU 104TH64			4.0000			
MU 104TH72			4.5000			
MU 104TH76			4.7500			
MU 104TH80			5.0000			
MU 108TH32	6.7500	6.9375	2.0000	6.7502 ÷ 6.7570	6.9358 ÷ 6.9374	6.7475 ÷ 6.7500
MU 108TH36			2.2500			
MU 108TH40			2.5000			
MU 108TH48			3.0000			
MU 108TH56			3.5000			
MU 108TH60			3.7500			
MU 108TH64			4.0000			
MU 108TH72			4.5000			
MU 108TH76			4.7500			
MU 108TH80			5.0000			
MU 112TH32	7.0000	7.1875	2.0000	6.9965 ÷ 7.0026	7.1812 ÷ 7.1830	6.9929 ÷ 6.9954
MU 112TH36			2.2500			
MU 112TH40			2.5000			
MU 112TH48			3.0000			
MU 112TH56			3.5000			
MU 112TH60			3.7500			
MU 112TH64			4.0000			
MU 112TH72			4.5000			
MU 112TH76			4.7500			
MU 112TH80			5.0000			

Chamfers General Tolerances:

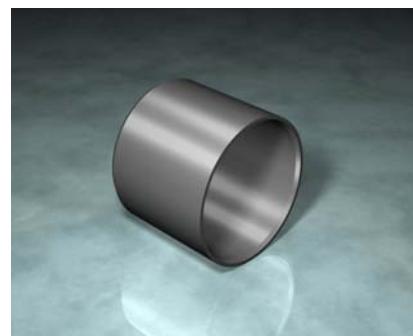
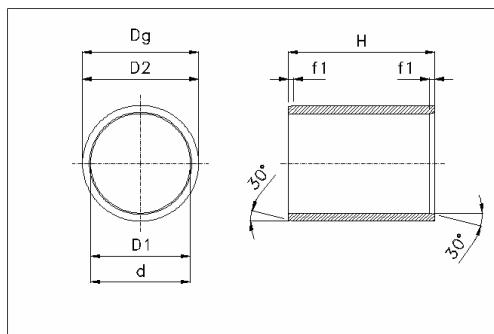
Part Number	Part Number	f1	f2
MU 02TH02	MU 05TH08	0.0078 ÷ 0.0314	0.0039 ÷ 0.0157
MU 06TH03	MU 11TH14	0.0078 ÷ 0.0939	0.0039 ÷ 0.0196
MU 12TH04	MU 16TH24	0.0078 ÷ 0.0939	0.0039 ÷ 0.0275
MU 18TH06	MU 26TH24	0.0314 ÷ 0.0629	0.0039 ÷ 0.0275
MU 28TH16	MU 112TH80	0.0472 ÷ 0.0944	0.0078 ÷ 0.0393

Cylindrical Plain Bearings
dimension according to ISO 3547

Part Number Structure:

MP-G	P	M	05	07	05
Material	Shape		D1	D2	H

General Tollerances:
Length (H) = h13



Part Number	D1	D2	H	D1 (After Assembly)	Dg (Housing Recommended)	d (Shaft Recommended)
MP-G PM 020303	02	3.5	03	2.014 ÷ 2.054	3.500 ÷ 3.510	1.975 ÷ 2.000
MP-G PM 030403			03			
MP-G PM 030405	03	4.5	05	3.014 ÷ 3.054	4.500 ÷ 4.512	2.970 ÷ 3.000
MP-G PM 030406			06			
MP-G PM 040504	04	5.5	04	4.020 ÷ 4.068	5.500 ÷ 5.512	3.970 ÷ 4.000
MP-G PM 040506			06			
MP-G PM 050605	05	06	05	5.010 ÷ 5.040	6.000 ÷ 6.015	4.970 ÷ 5.000
MP-G PM 050705			05			
MP-G PM 050708	05	07	08	5.020 ÷ 5.068	7.000 ÷ 7.015	4.970 ÷ 5.000
MP-G PM 050710			10			
MP-G PM 060706	06	07	06	6.010 ÷ 6.040	7.000 ÷ 7.015	5.970 ÷ 6.000
MP-G PM 060804			04			
MP-G PM 060805	06	08	05			
MP-G PM 060806			06	6.020 ÷ 6.068	8.000 ÷ 8.015	5.970 ÷ 6.000
MP-G PM 060808			08			
MP-G PM 060810			10			
MP-G PM 070909			09			
MP-G PM 070910	07	09	10	7.025 ÷ 7.083	9.000 ÷ 9.015	6.964 ÷ 7.000
MP-G PM 070912			12			
MP-G PM 081006			06			
MP-G PM 081007	08	10	07			
MP-G PM 081008			08			
MP-G PM 081010			10	8.025 ÷ 8.083	10.000 ÷ 10.015	7.964 ÷ 8.000
MP-G PM 081012			12			
MP-G PM 081015			15			
MP-G PM 081020			20			
MP-G PM 081022			22			
MP-G PM 091106	09	11	06	9.025 ÷ 9.083	11.000 ÷ 11.018	8.964 ÷ 9.000
MP-G PM 101204			04			
MP-G PM 101205	10	12	05			
MP-G PM 101206			06			
MP-G PM 101207			07			
MP-G PM 101208			08			
MP-G PM 101209			09	10.025 ÷ 10.083	12.000 ÷ 12.018	9.964 ÷ 10.000
MP-G PM 101210			10			
MP-G PM 101212			12			
MP-G PM 101214			14			
MP-G PM 101215			15			
MP-G PM 101217			17			
MP-G PM 101220			20			
MP-G PM 121404			04			
MP-G PM 121406	12	14	06	12.032 ÷ 12.102	14.000 ÷ 14.018	11.957 ÷ 12.000
MP-G PM 121408			08			

Part Number	D1	D2	H	D1 (After Assembly)	Dg (Housing Recommended)	d (Shaft Recommended)
MP-G PM 121410	12	14	10	12.032 ÷ 12.102	14.000 ÷ 14.018	11.957 ÷ 12.000
MP-G PM 121412			12			
MP-G PM 121415			15			
MP-G PM 121420			20			
MP-G PM 121425			25			
MP-G PM 131510	13	15	10	13.032 ÷ 13.102	15.000 ÷ 15.018	12.957 ÷ 13.000
MP-G PM 131515			15			
MP-G PM 131520			20			
MP-G PM 131525			25			
MP-G PM 141608	14	16	08	14.032 ÷ 14.102	16.000 ÷ 16.018	13.957 ÷ 14.000
MP-G PM 141610			10			
MP-G PM 141615			15			
MP-G PM 141620			20			
MP-G PM 141625			25			
MP-G PM 151710	15	17	10	15.032 ÷ 15.102	17.000 ÷ 17.018	14.957 ÷ 15.000
MP-G PM 151712			12			
MP-G PM 151715			15			
MP-G PM 151720			20			
MP-G PM 151725			25			
MP-G PM 161810	16	18	10	16.032 ÷ 16.102	18.000 ÷ 18.018	15.957 ÷ 16.000
MP-G PM 161812			12			
MP-G PM 161815			15			
MP-G PM 161820			20			
MP-G PM 161825			25			
MP-G PM 182010	18	20	10	18.032 ÷ 18.102	20.000 ÷ 20.021	17.957 ÷ 18.000
MP-G PM 182012			12			
MP-G PM 182015			15			
MP-G PM 182020			20			
MP-G PM 182025			25			
MP-G PM 202215	20	22	15	20.040 ÷ 20.124	22.000 ÷ 22.021	19.948 ÷ 20.000
MP-G PM 202220			20			
MP-G PM 202222			22			
MP-G PM 202230			30			
MP-G PM 202310	20	23	10	20.040 ÷ 20.124	23.000 ÷ 23.021	19.948 ÷ 20.000
MP-G PM 202315			15			
MP-G PM 202320			20			
MP-G PM 202323			23			
MP-G PM 202325			25			
MP-G PM 202330			30			
MP-G PM 222415	22	24	15	22.040 ÷ 22.124	24.000 ÷ 24.021	21.948 ÷ 22.000
MP-G PM 222420			20			
MP-G PM 222430			30			
MP-G PM 222515	22	25	15	22.040 ÷ 22.124	25.000 ÷ 25.021	21.948 ÷ 22.000
MP-G PM 222520			20			
MP-G PM 222525			25			
MP-G PM 222530			30			
MP-G PM 242715	24	27	15	24.040 ÷ 24.124	27.000 ÷ 27.021	23.948 ÷ 24.000
MP-G PM 242720			20			
MP-G PM 242725			25			
MP-G PM 242730			30			
MP-G PM 252812	25	28	12	25.040 ÷ 25.124	28.000 ÷ 28.021	24.948 ÷ 25.000
MP-G PM 252815			15			
MP-G PM 252820			20			
MP-G PM 252825			25			
MP-G PM 252830			30			

Part Number	D1	D2	H	D1 (After Assembly)	Dg (Housing Recommended)	d (Shaft Recommended)
MP-G PM 252835	25	28	35	25.040 ÷ 25.124	28.000 ÷ 28.021	24.948 ÷ 25.000
MP-G PM 252850			50			
MP-G PM 263016	26	30	16	26.040 ÷ 26.124	30.000 ÷ 30.021	25.948 ÷ 26.000
MP-G PM 283212	28	32	12	28.040 ÷ 28.124	32.000 ÷ 32.025	27.948 ÷ 28.000
MP-G PM 283215			15			
MP-G PM 283220			20			
MP-G PM 283225			25			
MP-G PM 283230			30			
MP-G PM 303415	30	34	15	30.040 ÷ 30.124	34.000 ÷ 34.025	29.948 ÷ 30.000
MP-G PM 303420			20			
MP-G PM 303425			25			
MP-G PM 303430			30			
MP-G PM 303435			35			
MP-G PM 303440			40			
MP-G PM 323620	32	36	20	32.050 ÷ 32.150	36.000 ÷ 36.025	31.938 ÷ 32.000
MP-G PM 323630			30			
MP-G PM 323640			40			
MP-G PM 353920	35	39	20	35.050 ÷ 35.150	39.000 ÷ 39.025	34.938 ÷ 35.000
MP-G PM 353925			25			
MP-G PM 353930			30			
MP-G PM 353940			40			
MP-G PM 353950			50			
MP-G PM 404420	40	44	20	40.050 ÷ 40.150	44.000 ÷ 44.025	39.938 ÷ 40.000
MP-G PM 404430			30			
MP-G PM 404440			40			
MP-G PM 404450			50			
MP-G PM 424640	42	46	40	42.050 ÷ 42.150	46.000 ÷ 46.025	41.938 ÷ 42.000
MP-G PM 455030	45	50	30	45.050 ÷ 45.150	50.000 ÷ 50.025	44.938 ÷ 45.000
MP-G PM 455040			40			
MP-G PM 455050			50			
MP-G PM 505520	50	55	20	50.050 ÷ 50.150	55.000 ÷ 55.030	49.938 ÷ 50.000
MP-G PM 505525			25			
MP-G PM 505530			30			
MP-G PM 505540			40			
MP-G PM 505550			50			
MP-G PM 556040	55	60	40	55.060 ÷ 55.180	60.000 ÷ 60.030	54.926 ÷ 55.000
MP-G PM 556050			50			
MP-G PM 556060			60			

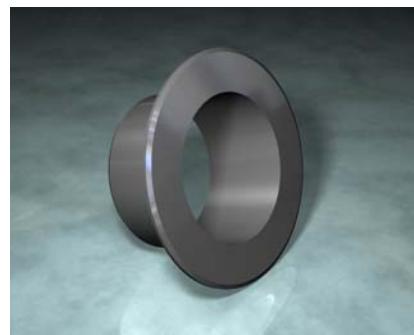
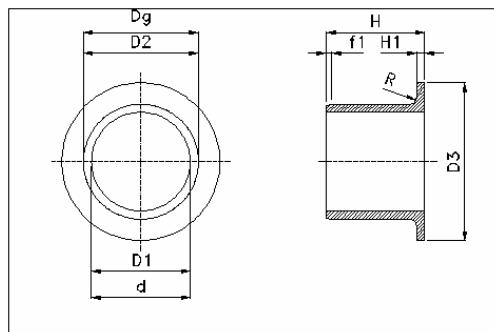
Chamfers General Tolerances:

Part Number	Part Number	f1
MP-G PM 020303	MP-G PM 101220	0.50
MP-G PM 121404	MP-G PM 303440	0.80
MP-G PM 323620	MP-G PM 556060	1.20

Flanged Plain Bearings
dimension according to ISO 3547

Part Number Structure:

MP-G	F	M	05	07	05
Material	Shape	Metric	D1	D2	H



General Tolerances:
Length (H) = h13
Flange Diameter (D3) = d13
Flange Thickness (H1) = 0/-0.14

Part Number	D1	D2	D3	H	H1	D1 (After Ass.ly)	Dg (Housing Rec)	d (Shaft Recom.)
MP-G FM 030402	03	4.5	7.5	02	0.75	3.014 ÷ 3.054	4.500 ÷ 4.512	2.975 ÷ 3.000
MP-G FM 030403				03				
MP-G FM 030405				05				
MP-G FM 040503	04	5.5	9.5	03	0.75	4.020 ÷ 4.068	5.500 ÷ 5.512	3.970 ÷ 4.000
MP-G FM 040504				04				
MP-G FM 040506				06				
MP-G FM 050703	05	07	11	03	1.0	5.020 ÷ 5.068	7.000 ÷ 7.015	4.970 ÷ 5.000
MP-G FM 050704				04				
MP-G FM 050705				05				
MP-G FM 060804	06	08	12	04	1.0	6.020 ÷ 6.068	8.000 ÷ 8.015	5.970 ÷ 6.000
MP-G FM 060805				05				
MP-G FM 060806				06				
MP-G FM 060808				08				
MP-G FM 060810				10				
MP-G FM 070906	07	09	15	06	1.0	7.025 ÷ 7.083	9.000 ÷ 9.015	6.964 ÷ 7.000
MP-G FM 070910				10				
MP-G FM 070912				12				
MP-G FM 081005	08	10	15	5.5	1.0	8.025 ÷ 8.083	10.000 ÷ 10.015	7.964 ÷ 8.000
MP-G FM 081007				7.5				
MP-G FM 081009				9.5				
MP-G FM 081010				10				
MP-G FM 081015				15				
MP-G FM 081025				25				
MP-G FM 081030				30				
MP-G FM 101204	10	12	18	04	1.0	10.025 ÷ 10.083	12.000 ÷ 12.018	9.964 ÷ 10.000
MP-G FM 101205				05				
MP-G FM 101206				06				
MP-G FM 101207				07				
MP-G FM 101209				09				
MP-G FM 101210				10				
MP-G FM 101212				12				
MP-G FM 101215				15				
MP-G FM 101217				17				
MP-G FM 12141815	12	14	18	15	1.0	12.032 ÷ 12.102	14.000 ÷ 14.018	11.957 ÷ 12.000
MP-G FM 121406	12	14	20	06	1.0	12.032 ÷ 12.102	14.000 ÷ 14.018	11.957 ÷ 12.000
MP-G FM 121407				07				
MP-G FM 121408				08				
MP-G FM 121409				09				
MP-G FM 121410				10				
MP-G FM 121412				12				
MP-G FM 121415				15				
MP-G FM 121417				17				
MP-G FM 121420				20				

Part Number	D1	D2	D3	H	H1	DI (After Ass.ly)	Dg (Housing Rec.)	d (Shaft Recom.)
MP-G FM 121424	12	14	20	24	1.0	12.032÷12.102	14.000÷14.018	11.957÷12.000
MP-G FM 131506	13	15	22	06	1.0	13.032÷13.102	15.000÷15.018	12.957÷13.000
MP-G FM 141606	14	16	22	06	1.0	14.032÷14.102	16.000÷16.018	13.957÷14.000
MP-G FM 141608				08				
MP-G FM 141612				12				
MP-G FM 141617				17				
MP-G FM 141621				21				
MP-G FM 151704	15	17	23	04	1.0	15.032÷15.102	17.000÷17.018	14.957÷15.000
MP-G FM 151705				05				
MP-G FM 151709				09				
MP-G FM 151712				12				
MP-G FM 151717				17				
MP-G FM 151720				20				
MP-G FM 161809	16	18	24	09	1.0	16.032÷16.102	18.000÷18.018	15.957÷16.000
MP-G FM 161812				12				
MP-G FM 161817				17				
MP-G FM 161821				21				
MP-G FM 171909	17	19	25	09	1.0	17.032÷17.102	19.000÷19.021	16.957÷17.000
MP-G FM 171925				25				
MP-G FM 182004	18	20	26	04	1.0	18.032÷18.102	20.000÷20.021	17.957÷18.000
MP-G FM 182006				06				
MP-G FM 182012				12				
MP-G FM 182017				17				
MP-G FM 182022				22				
MP-G FM 182032				32				
MP-G FM 20232621	20	23	26	21	1.5	20.040÷20.124	23.000÷23.021	19.948÷20.000
MP-G FM 202311	20	23	30	11.5	1.5	20.040÷20.124	23.000÷23.021	19.948÷20.000
MP-G FM 202316				16.5				
MP-G FM 202321				21.5				
MP-G FM 242707	24	27	32	07	1.5	24.040÷24.124	27.000÷27.021	23.948÷24.000
MP-G FM 242710				10				
MP-G FM 252811	25	28	35	11.5	1.5	25.040÷25.124	28.000÷28.021	24.948÷25.000
MP-G FM 252816				16.5				
MP-G FM 252821				21				
MP-G FM 283220	28	32	39	20	2.0	28.040÷28.124	32.000÷32.025	27.948÷28.000
MP-G FM 303212	30	32	37	12	1.0	30.040÷30.124	32.000÷32.025	29.948÷30.000
MP-G FM 303222				22				
MP-G FM 303416	30	34	42	16	2.0	30.040÷30.124	34.000÷34.025	29.948÷30.000
MP-G FM 303420				20				
MP-G FM 303426				26				
MP-G FM 303437				37				
MP-G FM 303440				40				
MP-G FM 323616	32	36	40	16	2.0	32.050÷32.150	36.000÷36.025	31.938÷32.000
MP-G FM 323626				26				
MP-G FM 343835	34	38	50	35	2.0	34.050÷34.150	38.000÷38.025	33.938÷34.000
MP-G FM 353916	35	39	47	16	2.0	35.050÷35.150	39.000÷39.025	34.938÷35.000
MP-G FM 353926				26				
MP-G FM 384222	38	42	54	22	2.0	38.050÷38.150	42.000÷42.025	37.938÷38.000
MP-G FM 404414	40	44	52	14	2.0	40.050÷40.150	44.000÷44.025	39.938÷40.000
MP-G FM 404430				30				
MP-G FM 404440				40				
MP-G FM 404450				50				
MP-G FM 424619	42	46	53	19	2.0	42.050÷42.150	46.000÷46.025	41.938÷42.000

Chamfers General Tolerances:

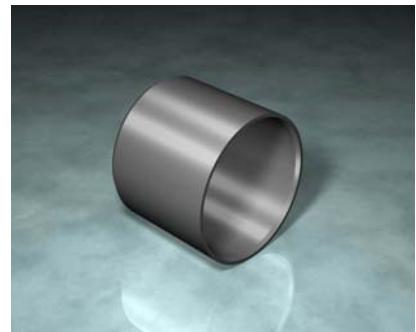
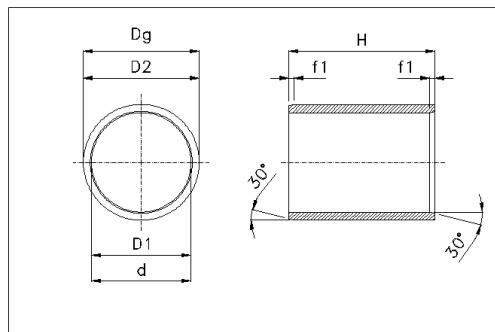
MP-G FM 030402	÷	MP-G FM 101217	f1 = 0.50
MP-G FM 12141815	÷	MP-G FM 303440	f1 = 0.80
MP-G FM 323616	÷	MP-G FM 424619	f1 = 1.20

Cylindrical Plain Bearings
dimension according to ISO 3547

Part Number Structure:

MP-G	P	I	05	07	05
Material	Shape		D1	D2	H

General Tollerances:
Length (H) = h13



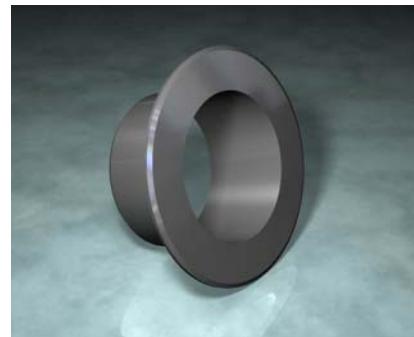
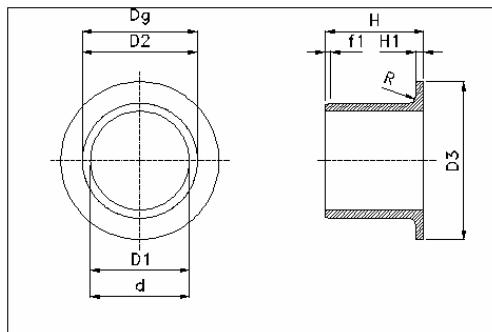
Part Number	D1	D2	H	D1 (After Assembly)	Dg (Housing Recommended)	d (Shaft Recommended)
MP-G PI 020303	1/8	3/16	3/16	0.1251 ÷ 0.1269	0.1873 ÷ 0.1878	0.1236 ÷ 0.1243
MP-G PI 020304			1/4			
MP-G PI 020306			3/8			
MP-G PI 030404	3/16	1/4	1/4	0.1873 ÷ 0.1892	0.2497 ÷ 0.2503	0.1858 ÷ 0.1865
MP-G PI 030406			3/8			
MP-G PI 030408			1/2			
MP-G PI 040504	1/4	5/16	1/4	0.2498 ÷ 0.2521	0.3122 ÷ 0.3128	0.2481 ÷ 0.2490
MP-G PI 040505			5/16			
MP-G PI 040506			3/8			
MP-G PI 040508			1/2			
MP-G PI 040510			5/8			
MP-G PI 040512			3/4			
MP-G PI 050604	5/16	3/8	1/4	0.3125 ÷ 0.3148	0.3747 ÷ 0.3753	0.3106 ÷ 0.3115
MP-G PI 050606			3/8			
MP-G PI 050608			1/2			
MP-G PI 050612			3/4			
MP-G PI 060704	3/8	15/32	1/4	0.3750 ÷ 0.3773	0.4684 ÷ 0.4691	0.3731 ÷ 0.3740
MP-G PI 060706			3/8			
MP-G PI 060708			1/2			
MP-G PI 060712			3/4			
MP-G PI 060808	3/8	17/32	1/2	0.3750 ÷ 0.3773	0.5309 ÷ 0.5316	0.3731 ÷ 0.3740
MP-G PI 060812			3/4			
MP-G PI 070804	7/16	17/32	1/4	0.4379 ÷ 0.4406	0.5309 ÷ 0.5316	0.4355 ÷ 0.4365
MP-G PI 070808			1/2			
MP-G PI 080903	1/2	19/32	3/16	0.5003 ÷ 0.5030	0.5934 ÷ 0.5941	0.4980 ÷ 0.4990
MP-G PI 080904			1/4			
MP-G PI 080906			3/8			
MP-G PI 080908			1/2			
MP-G PI 080910			5/8			
MP-G PI 080916			1			
MP-G PI 081008	1/2	5/8	1/2	0.5013 ÷ 0.5040	0.6250 ÷ 0.6260	0.4990 ÷ 0.5000
MP-G PI 081012			3/4			
MP-G PI 091006	9/16	21/32	3/8	0.5627 ÷ 0.5655	0.6559 ÷ 0.6566	0.5605 ÷ 0.5615
MP-G PI 091008			1/2			
MP-G PI 091010			5/8			
MP-G PI 101106			3/8			
MP-G PI 101108	5/8	23/32	1/2	0.6253 ÷ 0.6280	0.7184 ÷ 0.7192	0.6230 ÷ 0.6240
MP-G PI 101110			5/8			
MP-G PI 101112			3/4			

Part Number	DI	D2	H	DI (After Assembly)	Dg (Housing Recommended)	d (Shaft Recommended)
MP-G PI 101116	5/8	23/32	1	0.6253 ÷ 0.6280	0.7184 ÷ 0.7192	0.6230 ÷ 0.6240
MP-G PI 101120			1 1/4			
MP-G PI 101130			1 7/8			
MP-G PI 101208			1/2		0.7809 ÷ 0.7817	0.6240 ÷ 0.6250
MP-G PI 101216			1		0.7809 ÷ 0.7817	0.6240 ÷ 0.6250
MP-G PI 111214			7/8		0.7809 ÷ 0.7817	0.6855 ÷ 0.6865
MP-G PI 121406			3/8			
MP-G PI 121408			1/2			
MP-G PI 121412			3/4			
MP-G PI 121416			1			
MP-G PI 121420	3/4	7/8	1 1/4	0.7505 ÷ 0.7541	0.8747 ÷ 0.8755	0.7479 ÷ 0.7491
MP-G PI 121424			1 1/2			
MP-G PI 141606	7/8	1	3/8			
MP-G PI 141608			1/2			
MP-G PI 141610			5/8			
MP-G PI 141612			3/4			
MP-G PI 141616	1	1 1/8	1	0.8757 ÷ 0.8791	0.9997 ÷ 1.0005	0.8729 ÷ 0.8741
MP-G PI 141624			1 1/2			
MP-G PI 161808	1	1 1/8	1/2			
MP-G PI 161812			3/4			
MP-G PI 161816			1			
MP-G PI 161820			1 1/4			
MP-G PI 161824	1 1/8	1 9/32	1 1/2	1.0007 ÷ 1.0041	1.1247 ÷ 1.1255	0.9979 ÷ 0.9991
MP-G PI 161833			2 1/16			
MP-G PI 182012			3/4			
MP-G PI 182024			1 1/2			
MP-G PI 202212	1 1/4	1 13/32	3/4	1.2508 ÷ 1.2548	1.4058 ÷ 1.4068	1.2472 ÷ 1.2488
MP-G PI 202214			7/8			
MP-G PI 202216			1			
MP-G PI 202220			1 1/4			
MP-G PI 202224			1 1/2			
MP-G PI 222416	1 3/8	1 17/32	1	1.3758 ÷ 1.3798	1.5308 ÷ 1.5318	1.3722 ÷ 1.3738
MP-G PI 222424			1 1/2			
MP-G PI 222426			1 5/8			
MP-G PI 242606	1 1/2	1 21/32	3/8	1.5008 ÷ 1.5048	1.6558 ÷ 1.6568	1.4972 ÷ 1.4988
MP-G PI 242607			7/16			
MP-G PI 242608			1/2			
MP-G PI 242612			3/4			
MP-G PI 242616			1			
MP-G PI 242624			1 1/2			
MP-G PI 262920	1 5/8	1 25/32	1 1/4	1.6258 ÷ 1.6297	1.7808 ÷ 1.7818	1.6222 ÷ 1.6238
MP-G PI 283116	1 3/4	1 15/16	1	1.7507 ÷ 1.7547	1.9371 ÷ 1.9381	1.7471 ÷ 1.7487
MP-G PI 283124			1 1/2			
MP-G PI 283132			2			
MP-G PI 283140			2 1/2			
MP-G PI 283148			3			
MP-G PI 323516	2	2 3/16	1	2.0011 ÷ 2.0052	2.1871 ÷ 2.1883	1.9969 ÷ 1.9981
MP-G PI 323524			1 1/2			
MP-G PI 323532			2			
MP-G PI 363932	2 1/4	2 7/16	2	2.2531 ÷ 2.2577	2.4368 ÷ 2.4377	2.2489 ÷ 2.2507

Flanged Plain Bearings
dimension according to ISO 3547

Part Number Structure:

MP-G	F	I	05	07	05
Material	Shape	Inch	D1	D2	H



General Tolerances:

Length (H) = h13

Flange Diameter (D3) = d13

Flange Thickness (H1) = 0/-0.0055

Part Number	D1	D2	D3	H	H1	D1 (After Ass.ly)	Dg (Housing Rec.)	d (Shaft Recom.)
MP-G FI 020302	1/8	3/16	0.3120	1/8	0.0320	0.1251÷0.1269	0.1873÷0.1878	0.1236÷0.1243
MP-G FI 020303				3/16				
MP-G FI 020304				1/4				
MP-G FI 020306				3/8				
MP-G FI 030404	3/16	1/4	0.3750	1/4	0.0320	0.1873÷0.1892	0.2497÷0.2503	0.1858÷0.1865
MP-G FI 030406				3/8				
MP-G FI 030408				1/2				
MP-G FI 040504	1/4	5/16	0.5000	1/4	0.0320	0.2498÷0.2521	0.3122÷0.3128	0.2481÷0.2490
MP-G FI 040505				5/16				
MP-G FI 040506				3/8				
MP-G FI 040508				1/2				
MP-G FI 040512				3/4				
MP-G FI 050604	5/16	3/8	0.5620	1/4	0.0320	0.3125÷0.3148	0.3747÷0.3753	0.3106÷0.3115
MP-G FI 050606				3/8				
MP-G FI 050608				1/2				
MP-G FI 050612				3/4				
MP-G FI 060704	3/8	15/32	0.6870	1/4	0.0460	0.3750÷0.3773	0.4684÷0.4691	0.3731÷0.3740
MP-G FI 060705				5/16				
MP-G FI 060706				3/8				
MP-G FI 060708				1/2				
MP-G FI 060712				3/4				
MP-G FI 060714				7/8				
MP-G FI 070804	7/16	17/32	0.7500	1/4	0.0460	0.4379÷0.4406	0.5309÷0.5316	0.4355÷0.4365
MP-G FI 070808				1/2				
MP-G FI 080904	1/2	19/32	0.8750	1/4	0.0460	0.5003÷0.5030	0.5934÷0.5941	0.4980÷0.4990
MP-G FI 080905				5/16				
MP-G FI 080906				3/8				
MP-G FI 080908				1/2				
MP-G FI 080912				3/4				
MP-G FI 080916				1				
MP-G FI 101106	5/8	23/32	0.9370	3/8	0.0460	0.6253÷0.6280	0.7184÷0.7192	0.6230÷0.6240
MP-G FI 101108				1/2				
MP-G FI 101112				3/4				
MP-G FI 101114				7/8				
MP-G FI 101116				1				
MP-G FI 101124				1 1/2				
MP-G FI 121402	3/4	7/8	1.1250	1/8	0.0620	0.7507÷0.7541	0.8747÷0.8755	0.7479÷0.7491
MP-G FI 121406				3/8				
MP-G FI 121408				1/2				

Part Number	D1	D2	D3	H	H1	D1 (After Ass.ly)	Dg (Housing Rec.)	d (Shaft Recom.)
MP-G FI 121410	3/4	7/8	1.1250	5/8	0.0620	0.7507÷0.7541	0.8747÷0.8755	0.7479÷0.7491
MP-G FI 121412				3/4				
MP-G FI 121416				1				
MP-G FI 121424				1 1/2				
MP-G FI 141608	7/8	1	1.2500	1/2	0.0620	0.8757÷0.8791	0.9997÷1.0005	0.8729÷0.8741
MP-G FI 141612				3/4				
MP-G FI 141616				1				
MP-G FI 141620				1 1/4				
MP-G FI 141624				1 1/2				
MP-G FI 161808	1	1 1/8	1.3750	1/2	0.0620	1.0007÷1.0041	1.1247÷1.1255	0.9979÷0.9991
MP-G FI 161812				3/4				
MP-G FI 161816				1				
MP-G FI 161820				1 1/4				
MP-G FI 161824				1 1/2				
MP-G FI 182012	1 1/8	1 9/32	1.5620	3/4	0.0780	1.1254÷1.1288	1.2808÷1.2818	1.1226÷1.1238
MP-G FI 182024				1 1/2				
MP-G FI 202206	1 1/4	1 13/32	1.6870	3/8	0.0780	1.2508÷1.2548	1.4058÷1.4068	1.2472÷1.2488
MP-G FI 202212				3/4				
MP-G FI 202214				7/8				
MP-G FI 202216				1				
MP-G FI 202220				1 1/4				
MP-G FI 202224				1 1/2				
MP-G FI 222416	1 3/8	1 17/32	1.8750	1	0.0780	1.3758÷1.3798	1.5308÷1.5318	1.3722÷1.3738
MP-G FI 242612	1 1/2	1 21/32	2.0000	3/4	0.0780	1.5008÷1.5048	1.6558÷1.6568	1.4972÷1.4988
MP-G FI 242616				1				
MP-G FI 242624				1 1/2				
MP-G FI 283116	1 3/4	1 15/16	2.3750	1	0.0930	1.7507÷1.7547	1.9371÷1.9381	1.7471÷1.7487
MP-G FI 283124				1 1/2				
MP-G FI 283132				2				
MP-G FI 323516	2	2 3/16	2.6250	1	0.0930	2.0011÷2.0052	2.1871÷2.1883	1.9969÷1.9981
MP-G FI 323524				1 1/2				
MP-G FI 323532				2				
MP-G FI 363932	2 1/4	2 7/16	2.7500	2	0.0930	2.2531÷2.2577	2.4365÷2.4377	2.2489÷2.2507

Chamfers General Tollerances:

MP-G FI 020302 ÷ MP-G FI 070804 ÷ MP-G FI 202206

MP-G FI 060714 fl = 0.019
MP-G FI 182024 fl = 0.031
MP-G FI 363932 fl = 0.047

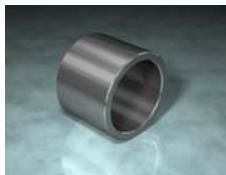
OTHERS KIND OF POLYMER BEARINGS AVAILABLE



MP-200 is a thermoplastic material. This product has a low coefficient of friction at high speed and a very low moisture absorption, vibration dampening and self lubricating. Plain and flanged bearings are available as standard. Special shapes and sizes can be manufactured according to customer's requirements.



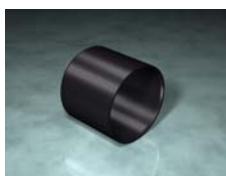
MP-210 is a thermoplastic material with fibres mixed with solid lubricants. This product has a low moisture absorption, good chemical resistance, low coefficient of friction, low wear against different shaft material; the best performance are with soft shaft material. Plain and flanged bearings are available as standard. Special shapes and sizes can be manufactured according to customer's requirements.



MP-M is a thermoplastic material with a wire of fibres mixed with solid lubricants. This product are developed by their vibration dampening, impact strength and wear resistant properties. Plain and flanged bearings are available as standard. Special shapes and sizes can be manufactured according to customer's requirements.



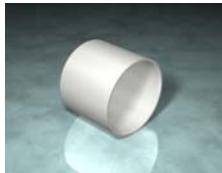
MP-300 is a thermoplastic material with fibres mixed with solid lubricants dedicated in those applications where traditional self-lubricating cannot guarantee the necessary resistance to the wear. This product has a good mechanical property and excellent self-lubricating property. Plain and flanged bearings are available as standard. Special shapes and sizes can be manufactured.



MP-310 is a thermoplastic material with a wire of fibres mixed with solid lubricants. The product has an optimal wear resistance also with high loads, good dirt resistant and good resistant to edge loads. Plain and flanged bearings are available as standard. Special shapes and sizes can be manufactured according to customer's requirements.



MP-320 is a thermoplastic material with a wire of fibres. This product is electrically conductive e it has good chemical resistance and good resistance to high loads. Plain and flanged bearings are available as standard. Special shapes and sizes can be manufactured according to customer's requirements.



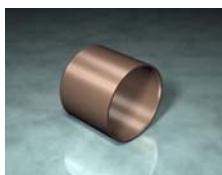
MP-330 is a thermoplastic without solid lubricants. This product is ideal for use in direct contact with pharmaceuticals and food. Plain and flanged bearings are available as standard. Special shapes and sizes can be manufactured according to customer's requirements.



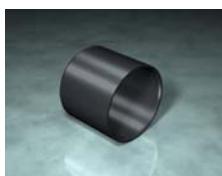
MP-340 is a thermoplastic material with a wire of fibres mixed with solid lubricants. The product has a good wear resistance, low water absorption and high loads resistant. Plain and flanged bearings are available as standard. Special shapes and sizes can be manufactured according to customer's requirements.



MP-400 is a thermoplastic material with a wire of fibres mixed with solid lubricants. This product are developed for use underwater, in atmospheres with high humidity and it has a very low moisture absorption, good chemical resistant, high temperature resistance and high mechanical loading resistant. Plain and flanged bearings are available as standard. Special shapes and sizes can be manufactured.



MP-410 is a thermoplastic material with a wire of fibres mixed with solid lubricants. This product has a good high thermal resistance, wear resistance and are developed for resistance to high loads static and dynamic Plain and flanged bearings are available as standard. Special shapes and sizes can be manufactured according to customer's requirements.



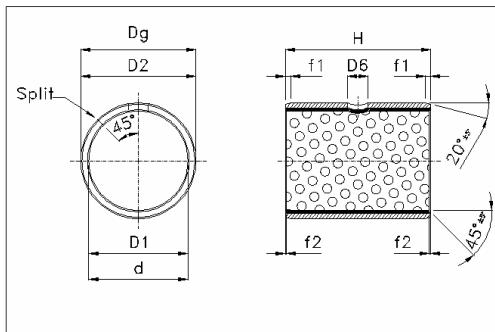
MP-500 is a thermoplastic material with a wire of fibres mixed with solid lubricants. This product has an optimal resistance at high temperature, excellent mechanical properties, good wear resistance and optimal chemical. Plain and flanged bearings are available as standard. Special shapes and sizes can be manufactured according to customer's requirements.

Cylindrical Plain Bearings
dimension according to ISO 3547

Part Number Structure:

MX	P	20	23	20
Material	Shape	D1	D2	H

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

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

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

Part Number	D1	D2	H	D6	D1 (After As.bly)	Dg (Housing Recom.)	d (Shaft Recomended)
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

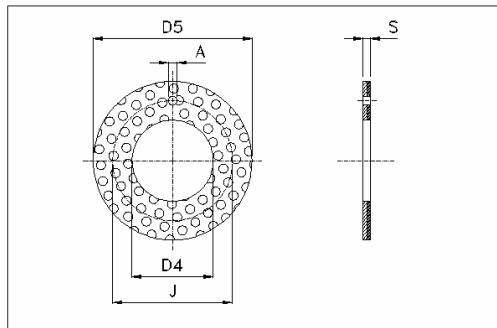
Thrust Washers

Part Number Structure:

MX	W	12	24	1.5
Material	Shape	D4	D5	S

General Tollerances:

I.D. (D4) = $-0/+0.25$
O.D. (D5) = $+0/-0.25$
 $J = \pm 0.12$



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

MX

METRIC SIZES

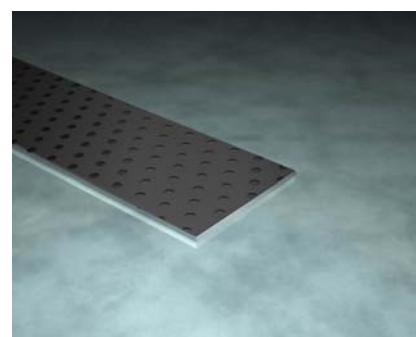
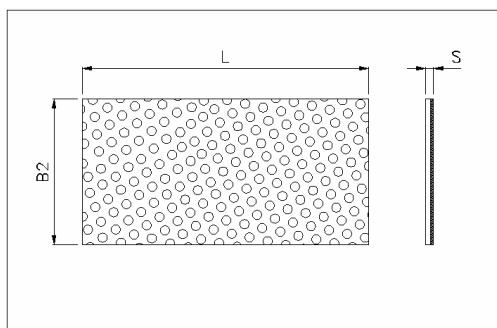
Strips

Part Number Structure:

MX	S	15	100	460
Material	Shape	S	B2	L

General Tollerances:

Width (B2) = ± 2
Length (L) = ± 2



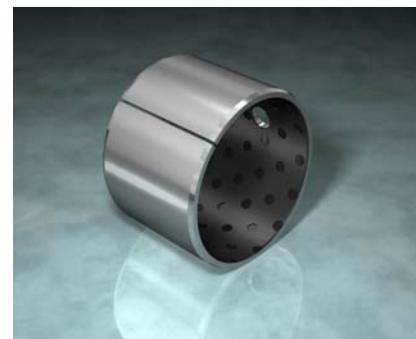
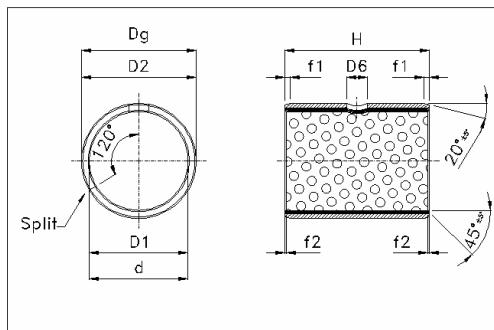
Part Number	S	B2	L
MX S 1070460	$1.030 \div 1.060$	70	460
MX S 15100460	$1.520 \div 1.550$	100	460
MX S 20100460	$2.020 \div 2.050$	100	460
MX S 25100460	$2.530 \div 2.560$	100	460

Cylindrical Plain Bearings
dimension according to ISO 3547

Part Number Structure:

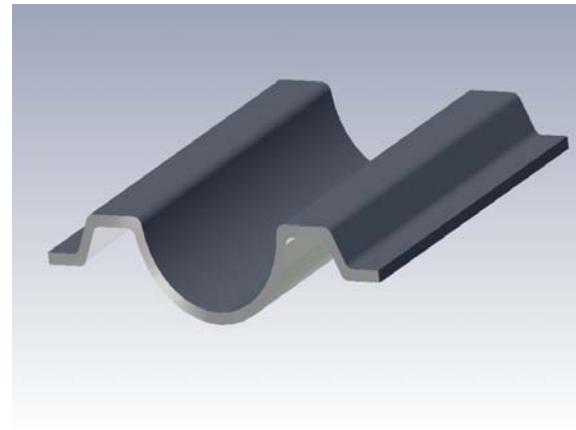
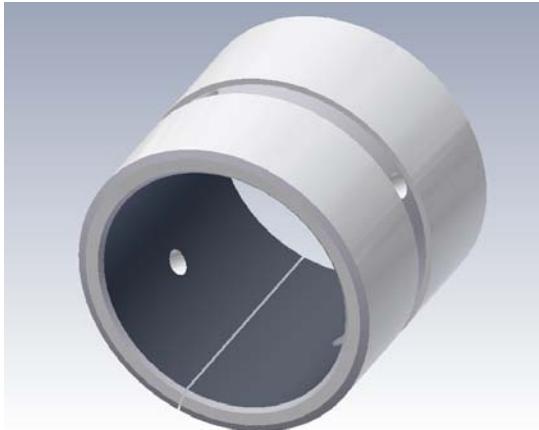
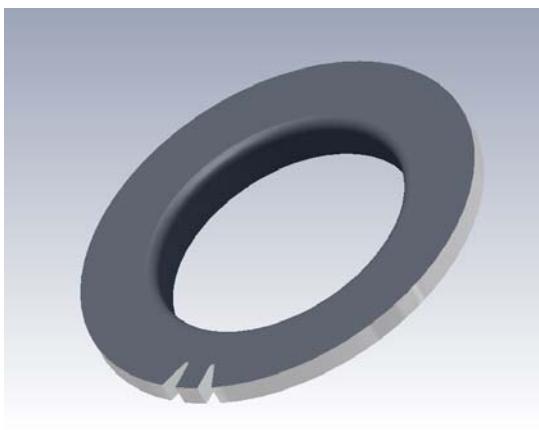
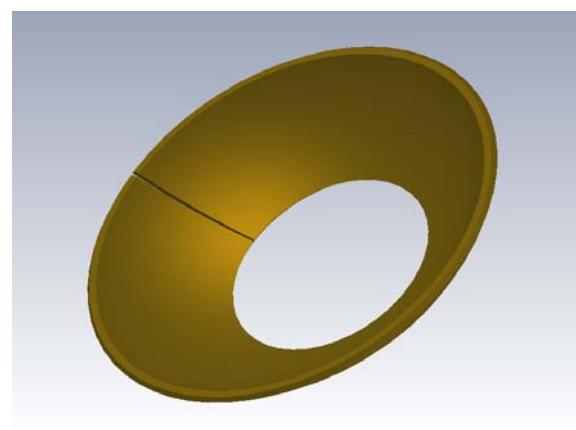
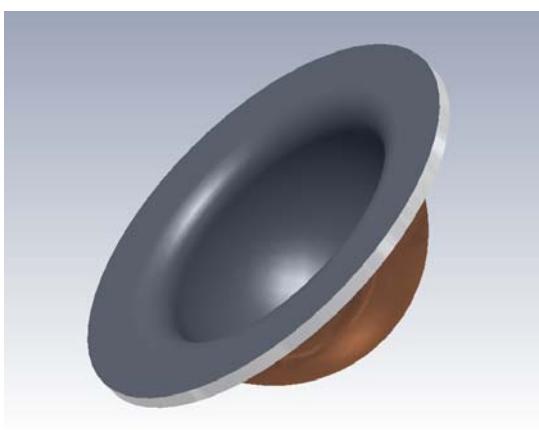
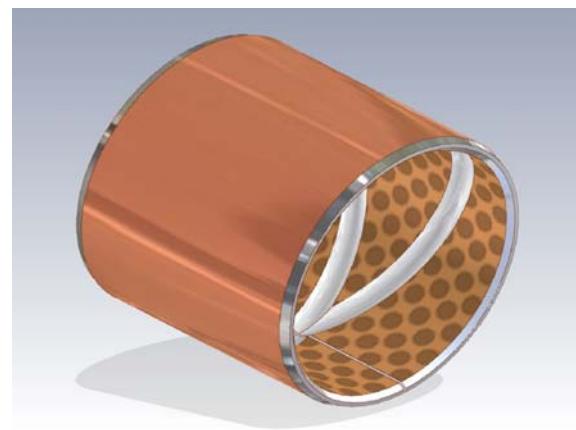
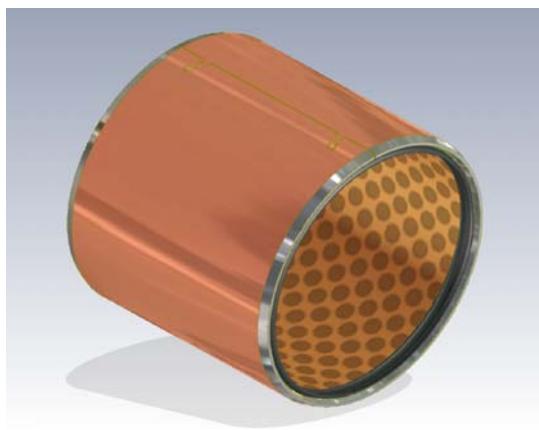
008 MXR 006
D1 H
Inch U.S Code

General Tolerances:
Length (H) = ± 0.010
Lubric. Hole (D6) = ± 0.011
Position Hole = 120°



Part Number	D1	D2	H	D6	D1 (After As.bly)	Dg (Housing Recom.)	d (Shaft Recomended)
008MXR006	1/2	0.6345	3/8 1/2	5/32	0.5007 ÷ 0.5038	0.6345 ÷ 0.6352	0.4990 ÷ 0.5000
008MXR008							
010MXR010	5/8	0.7596	5/8 3/4	5/32	0.6258 ÷ 0.6290	0.7596 ÷ 0.7604	0.6240 ÷ 0.6250
010MXR012							
012MXR012	3/4	0.8846	3/4 1	5/32	0.7508 ÷ 0.7540	0.8846 ÷ 0.8854	0.7488 ÷ 0.7500
012MXR016							
014MXR012	7/8	1.0097	3/4 1	5/32	0.8759 ÷ 0.8791	1.0097 ÷ 1.0105	0.8738 ÷ 0.8750
014MXR016							
016MXR012	1	1.1348	3/4 1	5/16	1.0010 ÷ 1.0042	1.1348 ÷ 1.1356	0.9988 ÷ 1.0000
016MXR016							
018MXR012	1 1/8	1.2598	3/4 1	5/16	1.1260 ÷ 1.1292	1.2598 ÷ 1.2606	1.1238 ÷ 1.1250
018MXR016							
020MXR012	1 1/4	1.4160	3/4 1	5/16	1.2512 ÷ 1.2550	1.4160 ÷ 1.4170	1.2484 ÷ 1.2500
020MXR016							
022MXR016	1 3/8	1.5410	1 1 1/2	5/16	1.3762 ÷ 1.3800	1.5410 ÷ 1.5420	1.3734 ÷ 1.3750
022MXR024							
024MXR016	1 1/2	1.6660	1 1 1/2 2	5/16	1.5012 ÷ 1.5050	1.6660 ÷ 1.6670	1.4984 ÷ 1.5000
024MXR024							
024MXR032							
026MXR016	1 5/8	1.7910	1 1 1/2 2	5/16	1.6262 ÷ 1.6300	1.7910 ÷ 1.7920	1.6234 ÷ 1.6250
026MXR024							
026MXR032							
028MXR016	1 3/4	1.9371	1 1 1/2 2	5/16	1.7515 ÷ 1.7577	1.9371 ÷ 1.9381	1.7484 ÷ 1.7500
028MXR024							
028MXR032							
030MXR016	1 7/8	2.0621	1 1 1/2 2 2 1/4	5/16	1.8765 ÷ 1.8829	2.0621 ÷ 2.0633	1.8734 ÷ 1.8750
030MXR024							
030MXR032							
030MXR036							
032MXR016	2	2.1871	1 1 1/2 2	5/16	2.0015 ÷ 2.0079	2.1871 ÷ 2.1883	1.9982 ÷ 2.0000
032MXR024							
032MXR032							
040MXR024	2 1/2	2.6871	1 1/2 2 2 1/2	5/16	2.5015 ÷ 2.5079	2.6871 ÷ 2.6883	2.4982 ÷ 2.5000
040MXR032							
040MXR040							
048MXR024	3	3.0019	1 1/2 2 2 1/2 3	5/16	3.0019 ÷ 3.0085	3.1875 ÷ 3.1889	2.9982 ÷ 3.0000
048MXR032							
048MXR040							
048MXR048							

SPECIAL PARTS



DATA SHEET

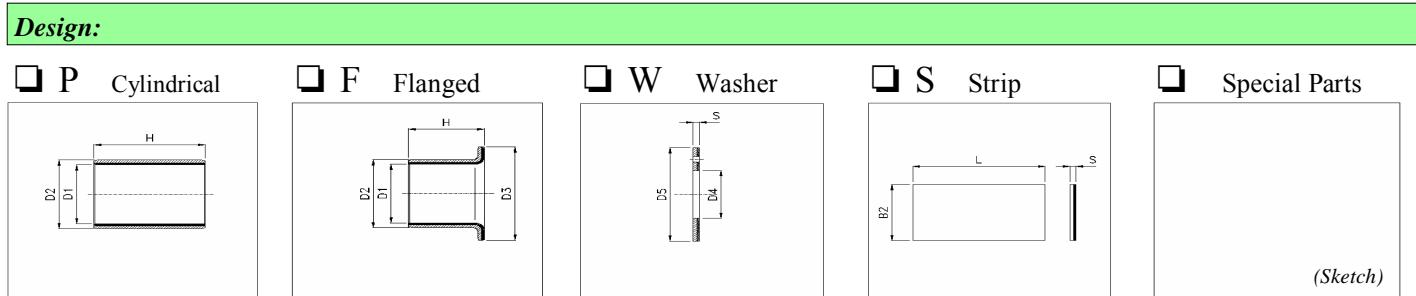
DATA FOR BEARING DESIGN CALCULATION



Customer:	Date:	Telephone:	Fax:	Project No.:	Quantity:
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Application:	_____
New Project	<input type="checkbox"/>
Existing Project	<input type="checkbox"/>

Dimensions		Load		Type of Load	
Inside Diameter:		Radial Load	<input type="checkbox"/>	Static (N)	
Outside Diameter:			<input type="checkbox"/>	Dynamic (N)	
Length:		Axial Load	<input type="checkbox"/>	Static (N)	
Flange Diameter:			<input type="checkbox"/>	Dynamic (N)	
Wall Thickness:		Specific Load	<input type="checkbox"/>	Radial (Mpa)	
Length of Strip:			<input type="checkbox"/>	Axial (Mpa)	
Width of Strip:					
Thickness of Strip:					

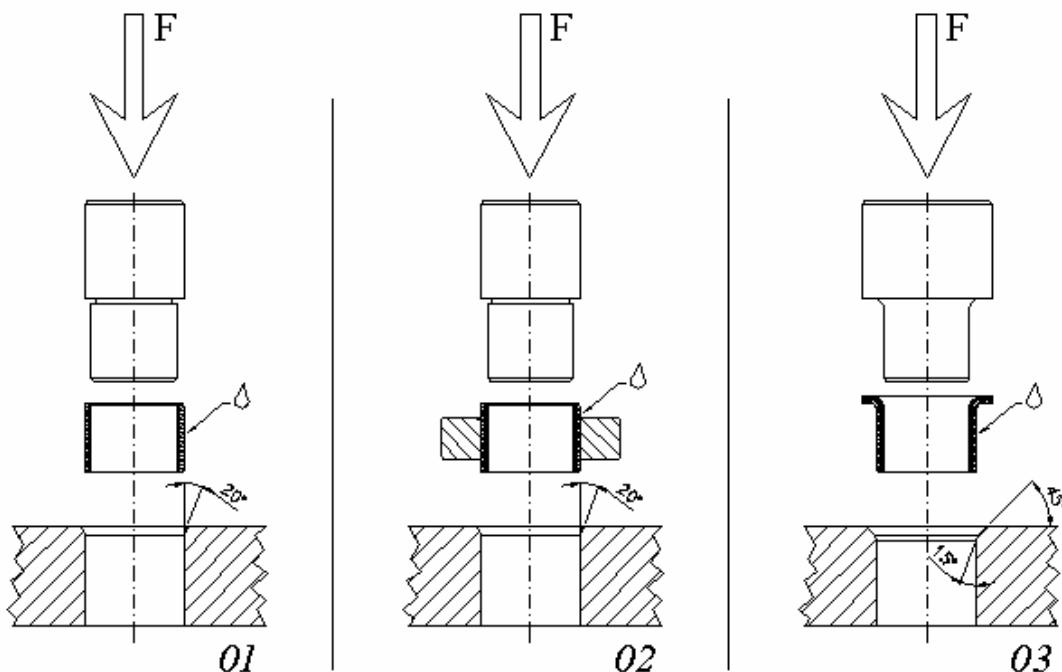


Motion:		Lubrication:		Operations:	
Rotational Speed (1/min)		Dry	<input type="checkbox"/>	Operating Time	
Speed (ms)		Lubricating	<input type="checkbox"/>	Continuous Operation	
Stroke (mm)		Initial Lubrication Only	<input type="checkbox"/>	Intermittent Operation	
Oscillating (°)		Hydrodynamic Conditions	<input type="checkbox"/>	Days per Years	
Oscillating Freq. (1/min)		Chemical neutral	<input type="checkbox"/>	Required Service Life (h)	
Linear Frequency (min)		Chemical Aggressive	<input type="checkbox"/>		
Average Temperature		Other	<input type="checkbox"/>		
Maximum Temperature					
Duration at Maximum Temp.					
Cooling					

Mating Surface		Additional Information :	
Shaft Material			
Shaft Hardness			
Shaft Finish			
Shaft Tollerance			
Housing Material			
Housing Tollerance			

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° ($\pm 5^\circ$) the seat lead-in to reach $1\div 2$ mm (.039 \div .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 $0,25\div 0,40$ 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).



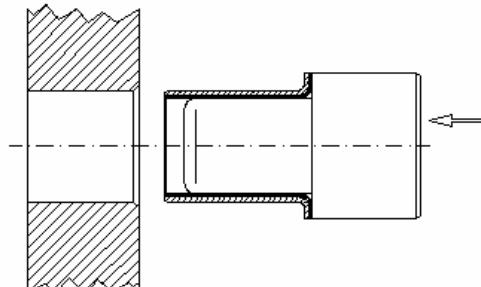
Approximate Values of The Fitting Force "F" (Newton)

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

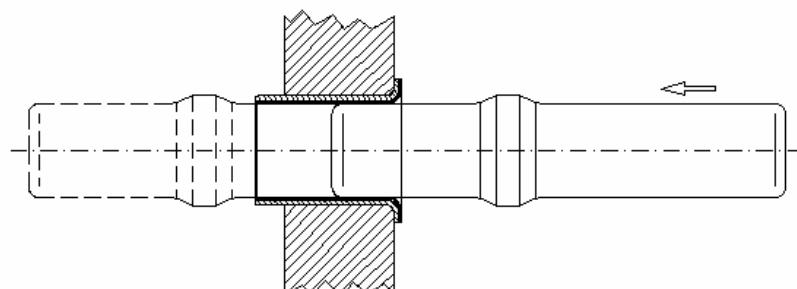


The installation process for MR material mentioned in this page shown the most common phases recommended in order to obtain a good assembly sizing, and flanging installing process, particularly for bearings without press fit.



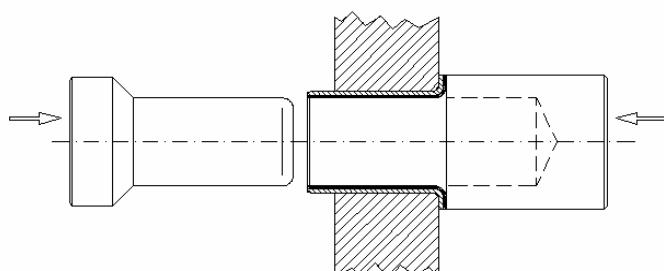
Pressing in:

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.



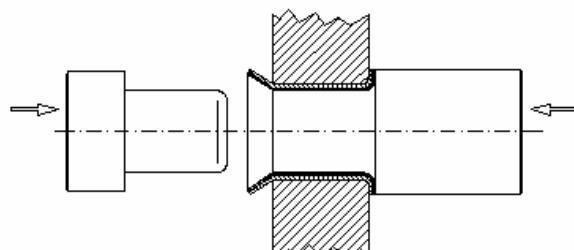
Sizing:

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).



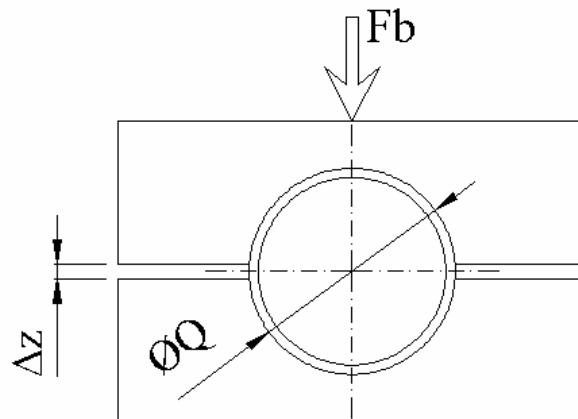
Final Flanging:

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.

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.

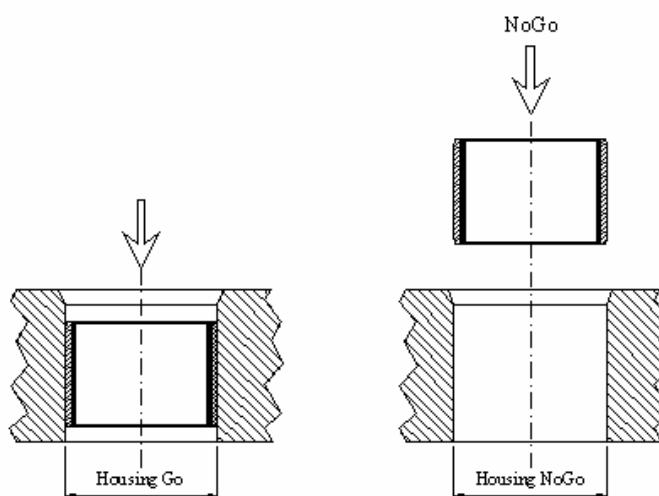
TESTING METHOD "A"

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.



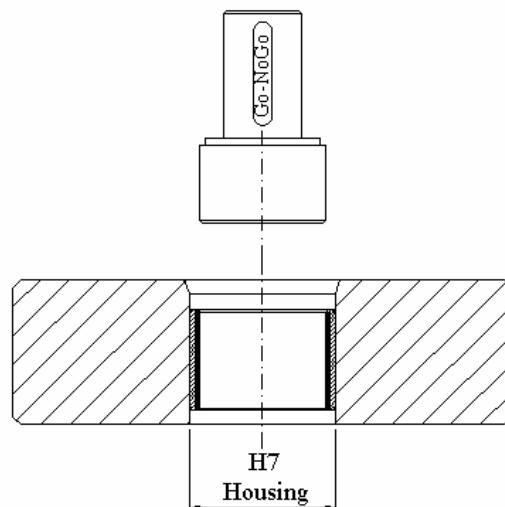
TESTING METHOD "B"

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.



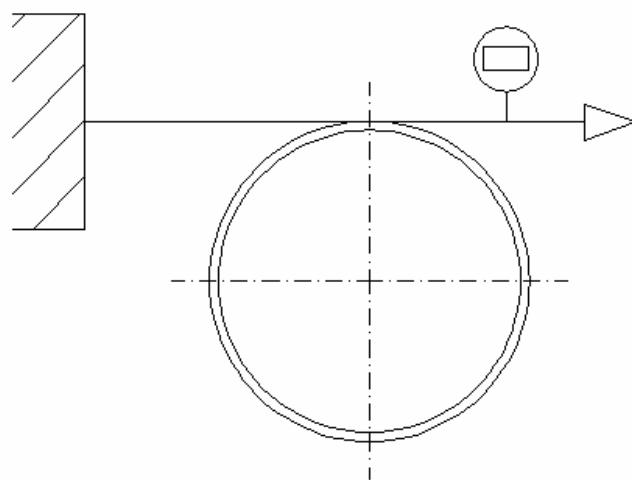
TESTING METHOD "C"

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.



NOTES





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