TECHNYMON
Global Bearing Technologies

Product Catalogue

Plain Bearings · Sliding Bearings

ISO 9001 CERTIFIED

IATF 16949:2016 CERTIFIED COMPANY

www.technymon.com

English

Technymon

Technymon was founded in 1975 as a small family-owned company specialized in the production of sliding bearings located in the region of Lombardy (Bergamo), North Italy. During its 42 years of history the company has shown a deep commitment to innovation & product development and with the support of a highly skilled technical team, it has rapidly gained success in all the principal markets worldwide. In May 2017, Technymon was taken over by Global Bearing Technologies, a group focused on the development of innovative bearing materials for Automotive and Industrial applications.

Technology & Innovations

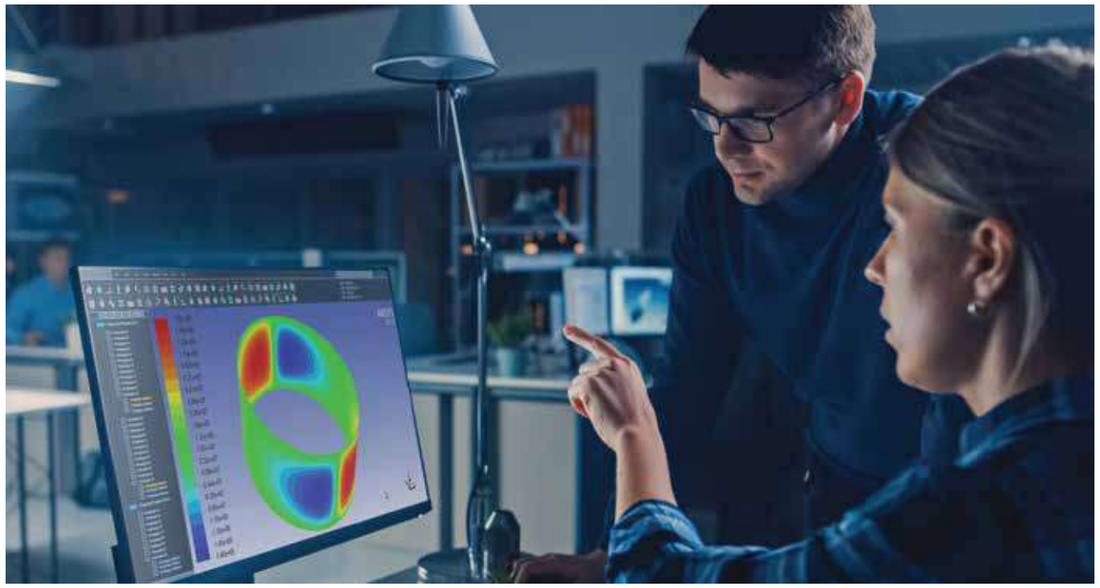
With its headquarters in Bergamo, Technymon is situated in the heart of Italy's most technologically advanced industrial region well-known for its innovative companies particularly in the field of mechanical engineering and Oil & Gas. The company has continuously invested in research and product improvement with its purpose-built, modern factory. Through partnering closely with our clients since so many years we have a profound understanding of the sliding bearing industry and its needs.

Raw Material

Technymon is producing its own raw material, which is made in a continuous process, a proprietary technology that only a handful of companies possess. We have developed technology to manufacture PTFE based materials and parts that is second to none and we are off course ISO and IATF certified.

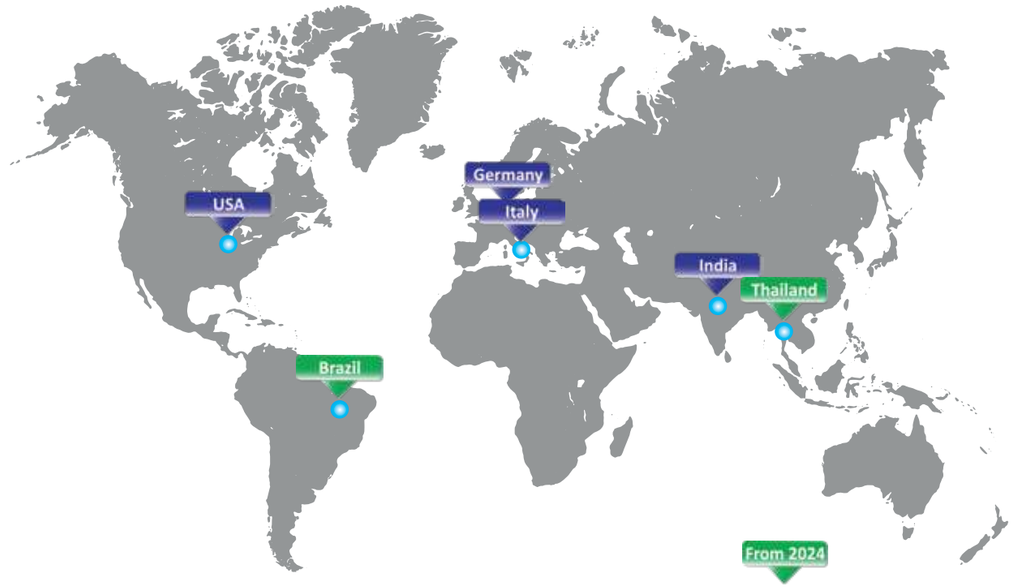
QUALITY MANAGEMENT SYSTEM
CERTIFIED BY DNV
ISO 9001:2000

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



Worldwide

Over the years Technymon has invested in opening new manufacturing facilities and sales companies throughout the world, and nowadays it is present in the European, American and Asian markets.



Some Quick Facts

4	PRODUCTION FACILITIES GLOBALLY
3	CONTINENT PRESENCE
170	EMPLOYEES
40	BEARINGS TECHNOLOGY
4000	PRODUCTS
80:20	SPECIAL VS STANDARD PARTS
160	MILLION BEARINGS PRODUCED ANNUALLY

Our Products

MR Series

The MR trademark identifies a range of bearings composed of a bronze/stainless steel woven/expanded metal mesh housed within PTFE (Polytetrafluoroethylene) loaded with solid lubricants (Without lead, complying with the European Parliament's "ELV" directive 2000/53/Ec). The woven/expanded mesh gives the bearings the mechanical strength and the formability required to manufacture the finished parts; the loaded PTFE gives MR bearings a low friction factor and a high chemical resistance, entirely similar to those featured by pure PTFE.

MU Series

MU is a composite multiple-layer material used for manufacturing 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 bronze layer and a low carbon steel support. The bronze layer guarantees a sound coupling for the self-lubricating mixture and allows good heat loss produced during operation. PTFE layer helps to achieve low friction coefficient and high wear resistance properties.

ML Series

ML defines a multi-layer composite material dedicated for manufacturing of sliding bearings for dry-lubricating applications. Sliding layer is made of expanded metal mesh available in various solutions (bronze, SS, Al-cladded steel) impregnated with PTFE loaded with solid lubricants (Without lead, complying with the European Parliament's "ELV" directive 2000/53/Ec). Backing layer is constituted by steel or Al-cladded steel according to request. Benefits provided by ML material structure include accurate sizing capabilities with the ability to sustain high loads thanks to backing support.

MP Series

MP-G is a thermoplastic material with a lattice of fibers mixed with solid lubricants. The product shows a good wear proofing feature, solid lubricants highly reduce the friction factor and form, by micro abrasion, 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.

MX Series

MX bushings are designed for use with additional lubricant. The material 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.

FRITEX™

The FRITEX trademark identifies a series of bearings that are specially manufactured to allow the sticking of fabric with PTFE fibers on metal supports in various types and shapes. The sliding surface fabric is primarily composed of PTFE fibers. 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.

MR Series







Product family	MR-1/MR-1E	MR-2/MR-2E	MR-3/MR-3E	MR-4/MR-4E	MR-5D/MR-5E	MR-6/MR-6E	MR-7/MR-7E
Sliding layer	Proprietary PTFE compound	Proprietary PTFE compound	Proprietary PTFE compound	Proprietary PTFE compound	PTFE-compounded tape	Proprietary PTFE compound	Proprietary PTFE compound
Connecting layer	-	-	-	-	Proprietary adhesive	-	-
Backing layer	Bronze woven metal mesh	Stainless steel AISI 316 woven metal mesh	Bronze expanded metal mesh	Stainless steel AISI 316 expanded metal mesh	Low carbon steel	Low carbon steel expanded metal mesh	Aluminium-cladded steel expanded metal mesh
Motion	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear
Maintenance	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication
Bore diameter catalogue range	up to 28 mm	up to 28 mm	up to 28 mm	up to 28 mm	up to 28 mm	up to 28 mm	up to 28 mm
Load carrying capacity – Static	100 MPa / 14500 psi	120 MPa / 17400 psi	100 MPa / 14500 psi	120 MPa / 17400 psi	200 MPa / 29000 psi	120 MPa / 17400 psi	110 Mpa / 16000 psi
Load carrying capacity – Dynamic	80 MPa / 11600 psi	80 MPa / 11600 psi	80 MPa / 11600 psi	80 MPa / 11600 psi	150 MPa / 21800 psi	80 MPa / 11600 psi	80 Mpa / 11600 psi
Operating temperature – °C	- 200 to + 260	- 200 to + 260	- 200 to + 260	- 200 to + 260	- 200 to + 180	- 200 to + 260	- 200 to + 260
Operating temperature – °F	- 328 to + 500	- 328 to + 500	- 328 to + 500	- 328 to + 500	- 328 to + 356	- 328 to + 500	- 328 to + 500
Sliding speed (m/s)	1	1	1	1	1.50	1	1
Friction coefficient	0.02 to 0.17	0.02 to 0.17	0.02 to 0.17	0.02 to 0.17	0.05 to 0.15	0.04 to 0.15	0.07 to 0.21
Benefits	- High load capacity - High wear Resistance - Low coefficient of friction - Good corrosion inertia - High thermal conductivity - Electrical conductive / not conductive PTFE sliding layer according to request - Wide range of operating temperatures	- High load capacity - High wear resistance - Low coefficient of friction - High corrosion inertia - High thermal conductivity - Electrical conductive / not conductive PTFE sliding layer according to request - Wide range of operating temperatures	- High load capacity - High wear Resistance - Low coefficient of friction - Good corrosion inertia - High thermal conductivity - Electrical conductive / not conductive PTFE sliding layer according to request - Wide range of operating temperatures	- High load capacity - High wear resistance - Low coefficient of friction - High corrosion inertia - High thermal conductivity - Electrical conductive / not conductive PTFE sliding layer according to request - Wide range of operating temperatures	- High load capacity - High wear resistance - Low coefficient of friction - Good corrosion inertia - High thermal conductivity - Electrical conductive / not conductive PTFE sliding layer according to request - Wide range of operating temperatures	- High load capacity - High wear resistance - Low coefficient of friction - Wide range of operating temperatures - High thermal conductivity - Electrical conductive / not conductive PTFE sliding layer according to request	- High load capacity - High wear resistance - Low coefficient of friction - High corrosion inertia - High thermal conductivity - Electrical conductive / not conductive PTFE sliding layer according to request - Wide range of operating temperatures
Bearing design	- Cylindrical - Flanged - Washers - Belts - Special parts available on request	- Cylindrical - Flanged - Washers - Belts - Special parts available on request	- Cylindrical - Flanged - Washers - Belts - Special parts available on request	- Cylindrical - Flanged - Washers - Belts - Special parts available on request	- Cylindrical - Flanged - Washers - Belts - Special parts available on request	- Cylindrical - Flanged - Washers - Belts - Special parts available on request	- Cylindrical - Flanged - Washers - Belts - Special parts available on request



MU Series







Product family	MU	MU-B	MU-4	MU-8	MU-316	MU-625	MU-F51
Sliding layer	Proprietary PTFE compound	Proprietary PTFE compound	Proprietary PTFE compound	Proprietary PTFE compound	Proprietary PTFE compound	Proprietary PTFE compound	Proprietary PTFE compound
Intermediate layer	Sintered bronze	Sintered bronze	Sintered bronze	Sintered bronze	Sintered bronze	Sintered bronze	Sintered bronze
Backing layer	Low carbon steel	Bronze	Low carbon steel	Low carbon steel	Stainless steel AISI 316	Inconel-625	Stainless steel duplex-F51
Motion	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear
Maintenance	Maintenance-free Dry lubrication / Oil lubrication	Maintenance-free Dry lubrication / Oil lubrication	Maintenance-free Dry lubrication/ Oil lubrication	Maintenance-free Dry lubrication/ Oil lubrication	Maintenance-free Dry lubrication/ Oil lubrication	Maintenance-free Dry lubrication / Oil lubrication	Maintenance-free Dry lubrication / Oil lubrication
Bore diameter catalogue range	- from 3 to 1000 mm (cylindrical) - from 6 to 45 mm (flanged)	- from 3 to 1000 mm (cylindrical) - from 6 to 45 mm (flanged)	- from 3 to 1000 mm (cylindrical) - from 6 to 45 mm (flanged)	- from 3 to 1000 mm (cylindrical)	- from 3 to 1000 mm (cylindrical)	- from 3 to 1000 mm (cylindrical)	- from 3 to 1000 mm (cylindrical)
Load carrying capacity – Static	250 MPa / 36260 psi	250 MPa / 36260 psi	250 MPa / 36260 psi	350 MPa / 50760 psi	350 MPa / 50760 psi	420 MPa / 60920 ps	420 MPa / 60920 psi
Load carrying capacity – Dynamic	180 MPa / 26100 psi	180 MPa / 26100 psi	180 MPa / 26100 psii	180 MPa / 26100 psi	180 MPa / 26100 psi	180 MPa / 26100 psi	180 MPa / 26100 psi
Operating temperature – °C	- 200 to + 280	- 200 to + 280	- 200 to + 280	- 200 to + 280	- 200 to + 280	- 190 to + 280	- 200 to + 280
Operating temperature – °F	- 328 to + 536	- 328 to + 536	- 328 to + 536	- 328 to + 536	- 328 to + 536	- 310 to + 536	- 328 to + 536
Sliding speed (m/s)	2.5 (dry) / 10 (oil)	2.5 (dry) / 10 (oil)	1.5 (dry) / 7.0 (oil))	2.0 (dry) / 10 (oil)	2.5 (dry) / 10 (oil)	2.5 (dry) / 10 (oil)	2.5 (dry) / 10 (oil)
Friction coefficient	0.02 to 0.20 (dry)	0.02 to 0.20 (dry)	0.05 to 0.25 (dry)	0.03 to 0.25 (dry)	0.02 to 0.20 (dry)	0.02 to 0.20 (dry)	0.02 to 0.20 (dry)
Benefits	- High load capacity - High wear resistance - Low coefficient of friction - Good corrosion inertia - Wide range of operating temperatures - Easy mounting	- High load capacity - High wear resistance - Low coefficient of friction - Good corrosion inertia - Wide range of operating temperatures - Easy mounting	- High load capacity - High wear resistance - Low coefficient of friction - Good corrosion inertia - High resistance to abrasion and flow - Wide range of operating temperatures - Easy mounting	- High load capacity - High wear resistance - Low coefficient of friction - Good corrosion inertia - High resistance to abrasion and flow - Wide range of operating temperatures - Easy mounting	- High load capacity - High wear resistance - Low coefficient of friction - High corrosion inertia - Wide range of operating temperatures - Easy mounting	- High load capacity - High wear resistance - Low coefficient of friction - High corrosion inertia - Wide range of operating temperatures - Easy mounting	- High load capacity - High wear resistance - Low coefficient of friction - High corrosion inertia - Wide range of operating temperatures - Easy mounting
Bearing design	- Cylindrical - Flanged - Washers - Belts - Special parts available on request	- Cylindrical - Flanged - Washers - Belts - Special parts available on request	- Cylindrical - Flanged - Washers - Belts - Special parts available on request	- Cylindrical - Flanged - Washers - Belts - Special parts available on request	- Cylindrical - Flanged - Washers - Belts - Special parts available on request	- Cylindrical - Flanged - Washers - Belts - Special parts available on request	- Cylindrical - Flanged - Washers - Belts - Special parts available on request

ML Series



Product family	ML-3	ML-6	ML-7
Sliding layer	Bronze expanded metal mesh filled with modified PTFE	Low carbon steel expanded metal mesh filled with modified PTFE	Aluminium-cladded steel expanded metal mesh filled with modified PTFE
Connecting layer	Proprietary adhesive	Proprietary adhesive	Proprietary adhesive
Backing layer	Low carbon steel	Low carbon steel	Aluminium-cladded steel
Motion	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear
Maintenance	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication
Bore diameter catalog range	up to 28 mm	up to 28 mm	up to 28 mm
Load carrying capacity Static	150 MPa / 21760 psi	150 MPa / 21760 psi	150 MPa / 21760 psi
Load carrying capacity Dynamic	100 MPa / 14500 psi	100 MPa / 14500 psi	100 MPa / 14500 psi
Operating temperature °C	- 200 to + 180	- 200 to + 180	- 200 to + 180
Operating temperature °F	- 328 to + 356	- 328 to + 356	- 328 to + 356
Sliding speed (m/s)	1	1	1
Friction coefficient	0.05 to 0.15	0.05 to 0.15	0.07 to 0.21
Benefits	- High load capacity - Easy mounting - Wide range of service temperatures - Extremely thin wall bearings - Good corrosion resistance - High formability	- High load capacity - Easy mounting - Wide range of service temperatures - Extremely thin wall bearings - Fair corrosion resistance - High formability	- High load capacity - Easy mounting - Wide range of service temperatures - Extremely thin wall bearings - High corrosion resistance - High formability
Bearing design	- Cylindrical - Flanged - Washers - Belts - Special parts available on request	- Cylindrical - Flanged - Washers - Belts - Special parts available on request	- Cylindrical - Flanged - Washers - Belts - Special parts available on request

MP Series




Product family	MP-G	MP-M	MP-200	MP-210
Base material	Modified PA66	Modified PA66	POM	Modified POM
Motion	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear
Maintenance	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication
Load carrying capacity Static	80 MPa / 11600 psi	20 MPa / 2900 psi	25 MPa / 3626 psi	35 MPa / 5076 psi
Operating temperature °C	- 40 to + 130	- 40 to + 80	- 40 to + 130	- 50 to + 90
Operating temperature °F	- 40 to + 266	- 40 to + 176	- 40 to + 266	- 58 to + 194
Sliding speed (m/s)	1.0 (rotating) / 4.0 (linear)	0.8 (rotating) / 2.5 (linear)	1.0 (rotating) / 3.0 (linear)	1.5 (rotating) / 8.0 (linear)
Friction coefficient	0.08 to 0.20	0.27 to 0.29	0.10 to 0.25	0.10 to 0.20
Benefits	- Low friction factor, either static or dynamic - Minimized wear and excellent service life - Good chemical strength - Good abrasion resistance - Easy to assembly	- Resistant to edge loading - High impact resistance - Excellent vibration dampening - Thick walled according DIN 30910 - Good chemical resistance - Low friction factor, either static or dynamic - Minimized wear and excellent service life - Easy to assembly	- Low coefficient of friction at high speed - Low moisture absorption - For low loads - Good vibration dampening - Easy to assembly	- Low moisture absorption - Good chemical resistance - Low coefficient of friction - Low wear against different material Easy to assembly
Bearing design	- Cylindrical - Flanged - Washer - Special parts available on demand	- Cylindrical - Flanged - Washer - Special parts available on demand	- Cylindrical - Flanged - Washer - Special parts available on demand	- Cylindrical - Flanged - Washer - Special parts available on demand

MP Series








Product family	MP-300	MP-310	MP-320	MP-330	MP-340	MP-400	MP-410	MP-500
Base material	Modified PA66	Modified PA66	Modified PPA	PA66	Modified PBT	Modified PPS	Modified PPS	Modified PPA
Motion	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear
Maintenance	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication
Load carrying capacity Static	60 MPa / 8700 psi	70 MPa / 10150 psi	105 MPa / 15230 psi	20 MPa / 2900 psi	50 MPa / 7250 psi	90 MPa / 13050 psi	90 MPa / 13050 psi	140 MPa / 20300 psi
Operating temperature °C	- 40 to + 90	- 40 to + 135	- 40 to + 140	- 40 to + 80	- 40 to + 130	- 40 to + 200	- 70 to + 200	- 100 to + 250
Operating temperature °F	- 40 to + 194	- 40 to + 275	- 40 to + 284	- 40 to + 176	- 40 to + 266	- 40 to + 392	- 94 to + 392	- 148 to + 482
Sliding speed (m/s)	1.5 (rotating) / 5.0 (linear)	1.5 (rotating) / 5.0 (linear)	0.8 (rotating) / 3.0 (linear)	0.8 (rotating) / 2.0 (linear)	1.0 (rotating) / 3.0 (linear)	1.0 (rotating) / 3.0 (linear)	3.0 (rotating) / 5.50 (linear)	1.5 (rotating) / 5.0 (linear)
Friction coefficient	0.08 to 0.23	0.24 to 0.29	0.10 to 0.40	0.10 to 0.40	0.08 to 0.20	0.10 to 0.21	0.17 to 0.21	0.20 to 0.26
Benefits	- Excellent self-lubricating property - Good mechanical property - Low friction factor, either static or dynamic - Minimized wear and excellent service life - Good chemical strength - Good abrasion resistance - Easy to assembly	- Optimal wear resistance also with high loads - Minimized wear and excellent service life - Good chemical strength - Easy to assembly	- Electrically conductive - Good chemical resistance - For high static loads - Easy to assembly	- Ideal for use in direct contact with pharmaceuticals and food - Good abrasion resistance - Easy to assembly	- Good wear resistance - Low water absorption - Good chemical resistance - Easy to assembly	- Underwater applications - Low moisture absorption - Minimized wear and excellent service life - For high mechanical loading - For high tempera-ture resistance - Good chemical resistant - Easy to assembly	- High thermal resistance - High temperature applications - High surface speed - Resistant to high loads static and dynamic - Good wear resistance - Easy to assembly	- For high temperature range application (until +250°C at long term application) - High temperature resistance - Excellent mechanical properties - Very low moisture absorption - Low coefficient of sliding friction - Minimum wear and excellent operating life - Optimal chemical resistance - Easy to assembly
Bearing design	- Cylindircal - Flanged - Washer - Special parts available on demand	- Cylindircal - Flanged - Washer - Special parts available on demand	- Cylindircal - Flanged - Washer - Special parts available on demand	- Cylindircal - Flanged - Washer - Special parts available on demand	- Cylindircal - Flanged - Washer - Special parts available on demand	- Cylindircal - Flanged - Washer - Special parts available on demand	- Cylindircal - Flanged - Washer - Special parts available on demand	- Cylindircal - Flanged - Washer - Special parts available on demand

FRITEX Series










Product family		**FRITEX-S-B**	**FRITEX-S-C**	**FRITEX-S-276**	**FRITEX-S-316/-S-625**	**FRITEX-S-F51**	**FRITEX-316-CRA-A**	**FRITEX-316-CRA-B**	**FRITEX-625-CRA-A**	**FRITEX-625-CRA-B**	**FRITEX-C-CRA-C**
Sliding layer		PTFE impregnated fabric	PTFE impregnated fabric	PTFE impregnated fabric	PTFE impregnated fabric	PTFE impregnated fabric	PTFE fabric with special fibers	PTFE fabric with special fibers	PTFE fabric with special fibers	PTFE fabric with special fibers	PTFE/Aramid fabric with special fibers
Connecting layer		Proprietary glue	Proprietary glue	Proprietary glue	Proprietary glue	Proprietary glue	Proprietary glue	Proprietary glue	Proprietary glue	Proprietary glue	Proprietary glue
Backing layer		Bronze	Low carbon steel	Hastelloy C-276	Stainless steel AISI 316L / Inconel-625	Stainless steel duplex-F51	Stainless steel AISI 316L	Stainless steel AISI 316L	Inconel-625	Inconel-625	Low carbon steel
Motion		Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear
Maintenance		Maintenance-free Dry lubrication	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication
Bore ID catalog range		10 to 300 (cylindrical)	10 to 300 (cylindrical)	10 to 300 (cylindrical)	10 to 300 (cylindrical)	10 to 300 (cylindrical)	10 to 300 (cylindrical)	10 to 300 (cylindrical)	10 to 300 (cylindrical)	10 to 300 (cylindrical)	10 to 300 (cylindrical)
Load carrying capacity	Static	250 MPa / 36260 psi	300 MPa / 43500 psi	400 MPa / 58000 psi	400 MPa / 58000 psi	400 MPa / 58000 psi	220 MPa / 31900 psi	280 MPa / 40610 psi	220 MPa / 31900 psi	280 MPa / 40610 psi	262 MPa / 38000 psi
	Dynamic	180 MPa / 26100 psi	180 MPa / 26100 psi	180 MPa / 26100 psi	180 MPa / 26100 psi	180 MPa / 26100 psi	95 MPa / 13780 psi	130 MPa / 18850 psi	95 MPa / 13780 psi	130 MPa / 18850 psi	140 MPa / 20000 psi
Operating temperature	°C	- 100 to + 240	- 100 to + 240	- 100 to + 240	- 100 to + 240	- 100 to + 240	- 100 to + 130	- 100 to + 240	- 100 to + 130	- 100 to + 240	- 200 to + 150
	°F	- 148 to + 464	- 148 to + 464	- 148 to + 464	- 148 to + 464	- 148 to + 464	- 148 to + 266	- 148 to + 464	- 148 to + 266	- 148 to + 464	- 328 to + 302
Sliding speed (m/s)		1.5	1.5	1.5	1.5	1.5	0.5	0.5	0.5	0.5	3
Friction coefficient		0.03 to 0.15	0.03 to 0.15	0.03 to 0.15	0.03 to 0.15	0.03 to 0.15	0.03 to 0.15	0.03 to 0.15	0.03 to 0.15	0.03 to 0.15	0.06 to 0.12
Benefits		- High load capacity - Low friction factor, either static or dynamic - Minimized wear and excellent service life - Good chemical inertia and compatibility with fluids - Wide range of service temperature values - High corrosion strength linked with the housing - Minimized overall dimensions - Easy mounting	- High load capacity - Low friction factor, either static or dynamic - Minimized wear and excellent service life - Good chemical inertia and compatibility with fluids - Wide range of service temperature values - High corrosion strength linked with the housing - Minimized overall dimensions - Easy mounting	- High load capacity - Low friction factor, either static or dynamic - Minimized wear and excellent service life - High chemical inertia and compatibility with fluids - Wide range of service temperature values - High corrosion strength linked with the housing - Minimized overall dimensions - Easy mounting	- High load capacity - Low friction factor, either static or dynamic - Minimized wear and excellent service life - High chemical inertia and compatibility with fluids - Wide range of service temperature values - High corrosion strength linked with the housing - Minimized overall dimensions - Easy mounting	- High load capacity - Low friction factor, either static or dynamic - Minimized wear and excellent service life - High chemical inertia and compatibility with fluids - Wide range of service temperature values - High corrosion strength linked with the housing - Minimized overall dimensions - Easy mounting	- High load capacity - Low friction factor, either static or dynamic - Minimized wear and excellent service life - High chemical inertia and compatibility with fluids - High corrosion strength linked with the housing - Minimized overall dimensions - Easy mounting	- High load capacity - Low friction factor, either static or dynamic - Minimized wear and excellent service life - High chemical inertia and compatibility with fluids - Wide range of service temperature values - High corrosion strength linked with the housing - Minimized overall dimensions - Easy mounting	- High load capacity - Low friction factor, either static or dynamic - Minimized wear and excellent service life - High chemical inertia and compatibility with fluids - Wide range of service temperature values - High corrosion strength linked with the housing - Minimized overall dimensions - Easy mounting	- High load capacity - Low friction factor, either static or dynamic - Minimized wear and excellent service life - High chemical inertia and compatibility with fluids - Wide range of service temperature values - High corrosion strength linked with the housing - Minimized overall dimensions - Easy mounting	- High load capacity - Low friction factor, either static or dynamic - Minimized wear and excellent service life - High chemical inertia and compatibility with fluids - Wide range of service temperature values - High corrosion strength linked with the housing - Minimized overall dimensions - Easy mounting
Bearing design		- Bushings - Thrust wahers - Standard items widely available - Special items on demand	- Bushings - Thrust wahers - Standard items widely available - Special items on demand	- Bushings - Thrust wahers - Standard items widely available - Special items on demand	- Bushings - Thrust wahers - Standard items widely available - Special items on demand	- Bushings - Thrust wahers - Standard items widely available - Special items on demand	- Bushings - Thrust wahers - Standard items widely available - Special items on demand	- Bushings - Thrust wahers - Standard items widely available - Special items on demand	- Bushings - Thrust wahers - Standard items widely available - Special items on demand	- Bushings - Thrust wahers - Standard items widely available - Special items on demand	- Bushings - Thrust wahers - Standard items widely available - Special items on demand

MX Series




Product Family		MX / MX-R	MX-U	MX-H	MX-L
Sliding layer		POM-C	Modified POM-C	POM-C	POM-C
Intermediate layer		Sintered bronze	Sintered bronze	Sintered bronze	Sintered bronze
Backing layer		Low carbon steel	Low carbon steel	Low carbon steel	Low carbon steel
Motion		Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear
Maintenance		Oil / grease lubrication	Oil / grease lubrication Dry lubrication	Oil / grease lubrication	Oil / grease lubrication
Maximum load factor (grease)		5.0 N / mm²·m / s / 77560 psi-fpm	• 1.5 N / mm²·m / s / 41550 psi-fpm (dry) • 3.0 N / mm²·m / s / 83100 psi-fpm	5.0 N / mm²·m / s / 138500 psi-fpm	5.0 N / mm²·m / s / 138500 psi-fpm
Load carrying capacity	Static	140 MPa ÷ 20300 psi	120 Mpa / 17400 psi	140 MPa ÷ 20300 psi	140 MPa ÷ 20300 psi
	Dynamic	140 MPa ÷ 20300 psi	50 Mpa / 7250 psi	70 MPa ÷ 10150 psi	70 MPa ÷ 10150 psi
Operating temperature	Minimum	- 40 °C / - 40 °F	- 40 °C / - 40 °F	- 40 °C / - 40 °F	- 40 °C / - 40 °F
	Maximum	+ 130 °C / + 266 °F	+ 130 °C / + 266 °F	+ 130 °C / + 266 °F	+ 130 °C / + 266 °F
Sliding speed (m/s)		2.5	1.5 (dry) / 2.5	2.5	2.5
Volumetric resistance (free-state condition)*		> 10^{12} Ω	> 10^{12} Ω	> 10^{12} Ω	> 10^{12} Ω
Friction coefficient		0.05 ÷ 0.12	0.15 ÷ 0.30 (dry) / 0.03 ÷ 0.08 (grease)	0.05 ÷ 0.12	0.05 ÷ 0.12
Benefits		- Wide range of application - Low coefficient of friction - High wear resistance - Available with smooth sliding surface or with pockets according to lubrication requirement - Good corrosion resistance - Easy to assembly	- Wide range of application - Special fillers in sliding layer to improve dry lubrication - High wear resistance - Available with smooth sliding surface or with pockets according to lubrication require-ment - Good corrosion resistance - Easy to assembly	- Wide range of application - Low coefficient of friction - High wear resistance - Through-holes are present in sliding layer, they have a greater capacit to collect lubricant with respect to indentations - Good corrosion resistance - Easy to assembly	- Wide range of application - Extra POM layer, which consent machining - High wear resistance Indentation pockets on sliding layer help to collect and gradually release lubricant - Good corrosion resistance - Easy to assembly
Bearing design		- Bushes - Thrust washers - Strips - Special parts available on request	- Bushes - Thrust washers - Counter-rolling bushes with sliding layer on outside diameter - Special parts available on request	- Bushes - Thrust washers - Strips - Special parts available on request	- Bushes - Thrust washers - Strips - Special parts available on request

Product Family		MH-X
Sliding layer		Pom-C
Intermediate layer		Sintered bronze
Backing layer		Low carbon steel
Motion		Oscillating / rotating / linear
Maintenance		Oil / grease lubrication
Maximum load factor (grease)		5.0 N / mm²·m / s / 138500 psi-fpm
Load carrying capacity	Static	140 MPa ÷ 20300 psi
	Dynamic	70 MPa ÷ 10150 psi
Operating temperature	Minimum	- 40 °C / - 40 °F
	Maximum	+ 130 °C / + 266 °F
Sliding speed (m/s)		2.5
Volumetric resistance (free-state condition)*		> 10^{12} Ω
Friction coefficient		0.05 ÷ 0.12
Benefits		- Wide range of application - Extra POM layer, which consent machining - High wear resistance Indentation pockets on sliding layer help to collect and gradually release lubricant - Good corrosion resistance - Easy to assembly
Bearing design		- Bushes - Thrust washers - Strips - Special parts available on request

TWM Series


Product Family		LP1	LW1
Sliding layer		PTFE and polymer fibers	PTFE and polymer fibers
Intermediate layer		-	-
Backing layer		Glass fibers	Glass fibers
Motion		Oscillating / rotating / linear	Oscillating / rotating / linear
Maintenance		Oil / grease lubrication Dry lubrication	Oil / grease lubrication Dry lubrication
Bore ID catalog range		from 20 to 200 mm (cylindrical)	from 20 to 200 mm (cylindrical)
Maximum load factor (dry)		• 1.05 N / mm²·m / s / 29,085 psi-fpm • 1.50 N / mm²·m / s / 41,550 psi-fpm	• 1.05 N / mm²·m / s / 29,085 psi-fpm • 1.50 N / mm²·m / s / 41,550 psi-fpm
Load carrying capacity	Static	230 MPa ÷ 33,360 psi	250 MPa ÷ 36,260 psi
	Dynamic	125 MPa ÷ 18,130 psi	140 MPa ÷ 20,300 psi
Operating temperature	Minimum	- 100 °C / - 148 °F	- 50 °C / - 58 °F
	Maximum	+ 140 °C / + 284 °F	+ 150 °C / + 302 °F
Sliding speed (m/s)		0.10	0.10
Benefits		- Excellent sliding property; - High load carrying capacity; - Long service life; - Maintenance-free; - Insensitivity to edge loading and misalignment; - Good impact resistance; - Good noise and vibration damping; - Excellent resistance to corrosive media, even to salt water, and many chemicals; - Good insulator preventing passage of electric current;	- Excellent sliding property; - High load carrying capacity; - Long service life; - Maintenance-free; - Insensitivity to edge loading and misalignment; - Good impact resistance; - Good noise and vibration damping; - Excellent resistance to corrosive media, even to salt water, and many chemi-cals; - Good insulator preventing passage of electric current;
Bearing design		- Cylindircal - Strips	- Cylindircal - Strips

BMT Series






Product Family		BT-11	BT-316	BT-625	BT-89	BMT/BT-80	BT-74
Sliding layer		Sintered bronze + self-lubricating black layer	Sintered bronze + self-lubricating black layer	Sintered bronze + self-lubricating black layer	Sintered bronze	Sintered bronze with lead	Sintered bronze with lead
Connecting layer		-	-	-	Copper	Copper	Copper
Backing layer		Low carbon steel	Stainless steel AISI 316	Inconel-625	Low carbon steel	Low carbon steel	Low carbon steel
Motion		Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear
Maintenance		Dry lubrication	Dry lubrication	Dry lubrication	Oil / grease lubrication	Oil / grease lubrication	Oil / grease lubrication
Maximum load factor (dry)		1.5 N / mm²·m / s / 41550 psi-fpm	1.5 N / mm²·m / s / 41550 psi-fpm	1.5 N / mm²·m / s / 41550 psi-fpm	2.7 N /mm²·m / s / 74790 psi-fpm	2.8 N / mm²·m / s / 77560 psi-fpm (grease) 10 N / mm²·m / s / 277000 psi-fpm (oil)	2.5 N / mm²·m / s / 69250 psi-fpm (grease) 10 N/mm²·m/s / 277000 psi-fpm (oil)
Load carrying capacity	Static	300 MPa / 43500 psi	310 MPa / 45000 psi	300 MPa / 43500 psi	310 MPa / 45000 psi	300 MPa / 43500 psi	250 MPa / 36260 psi
	Dynamic	150 MPa / 21760 psi	150 MPa / 21760 psi	150 MPa / 21760 psi	150 MPa / 21760 psi	160 MPa / 23200 psi	140 MPa / 20300 psi
Operating temperature	Minimum	- 180 °C / - 292 °F	- 180 °C / - 292 °F	- 180 °C / - 292 °F	- 40 °C / - 40 °F	- 40 °C / - 40 °F	- 40 °C / - 40 °F
	Maximum	+ 430 °C / + 806 °F	+ 430 °C / + 806 °F	+ 430 °C / + 806 °F	+ 250 °C / + 482 °F	+ 250 °C / + 482 °F	+ 250 °C / + 482 °F
Sliding speed (m/s)		0.50	0.50	0.50	2.5	2.5 (grease) / 10 (oil)	2.5 (grease) / < 10
Volumetric resistance (free-state condition)*		> 10^9 Ω	> 10^9 Ω	> 10^9 Ω	0 (metal fully conductive)	0 (metal fully conductive)	0 (metal fully conductive)
Friction coefficient		0.075 ÷ 0.130	0.075 ÷ 0.130	0.075 ÷ 0.130	0.05 ÷ 0.20	0.04 ÷ 0.15	0.04 ÷ 0.15
Benefits		- Easy installation and maintenance - High load capacity - Very compact dimensions - High thermal conductibility - Wide range of working temperature - Wide availability of standard bushings - Surface pockets can accumulate and release lubricant in oil/grease lubrication - Fair corrosion resistance	- Easy installation and maintenance - High load capacity - Very compact dimensions - High thermal conductibility - Wide range of working temperature - Wide availability of standard bushings - High corrosion resistance	- Easy installation and maintenance - High load capacity - Very compact dimensions - High thermal conductibility - Wide range of working temperature - Wide availability of standard bushings - High corrosion resistance	- Easy installation and maintenance - High load capacity - Very compact dimensions - High thermal conductibility - Wide range of working temperature - Possibility for special items - Fair corrosion resistance	- Easy installation and maintenance - High load capacity - Very compact dimensions - High thermal conductibility - Wide range of working temperature - Wide availability of standard bushings - Possibility for special items	- Easy installation and maintenance - High load capacity - Very compact dimensions - High thermal conductibility - Wide range of working temperature - Wide availability of standard bushings - Possibility for special items
Bearing design		- Cylindrical - Flanged - Thrust washers - Strips - Special items available on demand - Available in std and special surface pattern	- Cylindrical - Flanged - Thrust washers - Strips - Special items available on demand	- Cylindrical - Flanged - Thrust washers - Strips - Special items available on demand	- Cylindrical - Flanged - Thrust washers - Strips - Special items available on demand	- Cylindrical - Flanged - Thrust washers - Strips - Special items available on demand	- Cylindrical - Thrust washers - Strips - Special items available on demand

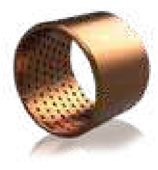


Drinox Series




Product Family		Drinox	Fe + PTFE	F51 + PTFE	Inconel-625 + PTFE
Sliding layer		PTFE layer	PTFE layer	PTFE layer	PTFE layer
Backing Layer		Stainless steel AISI 316	Low carbon steel	Stainless steel duplex-F51	Inconel -625
Motion		Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear
Maintenance		Maintenance-free Dry lubrication	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication
Bore ID catalog range		from 3 to 400 mm (cylindrical)	from 3 to 400 mm (cylindrical)	from 3 to 400 mm (cylindrical)	from 3 to 400 mm (cylindrical)
Load carrying capacity	Static	300 MPa / 43500 psi	100 MPa / 14,500 psi	300 MPa/ 43,500 psi	300 MPa / 43,500 psi
	Dynamic	10 MPa / 1,450 psi	4 MPa / 580 psi	10 MPa/ 1,450 psi	10 MPa / 1,450 psi
Maximum load factor (dry)	Alternating	• 0.1 N / mm²·m / s / 3,000 psi-fpm	• 0.1 N/mm²·m / s / 3,000 psi-fpm	• 0.1 N / mm²·m / s / 3,000 psi-fpm	• 0.1 N/mm²·m/s / 3,000 psi-fpm
	Continuous	• 0.2 N / mm²·m / s / 6,000 psi-fpm	• 0.2 N/mm²·m / s / 6,000 psi-fpm	• 0.2 N / mm²·m / s / 6,000 psi-fpm	• 0.2 N/mm²·m/s / 6,000 psi-fpm
	Short-term	• 0.4 N / mm²·m / s / 12,000 psi-fpm	• 0.4 N/mm²·m / s / 12,000 psi-fpm	• 0.4 N / mm²·m / s / 12,000 psi-fpm	• 0.4 N/mm²·m/s / 12,000 psi-fpm
Operating temperature	Minimum	- 200 °C / - 328 °F	- 50 °C / - 58 °F	- 200 °C / - 328 °F	- 200 °C / - 328 °F
	Maximum	+ 280 °C / + 536 °F	+ 260 °C / + 500 °F	+ 280 °C / + 536 °F	+ 280 °C / + 536 °F
Sliding speed (m/s)		0.5 (dry) / 1.0 (hydrodynamic state)	0.5 (dry)	0.5 (dry)	0.5 (dry)
Friction coefficient		0.03 ÷ 0.20	< 0.10	0.03 ÷ 0.20	0.03 ÷ 0.20
Benefits		- Good load capacity - Self lubricating - Low Static and dynamic friction factor - Minimum wear and excellent life services - Easy to mount - High chemical inertia and good compatibility with fluids - Small overall dimensions - High resistance to corrosion - Wide range of service temperature	- Good load capacity - Self lubricating - Low Static and dynamic friction factor - Minimum wear and excellent life services - Easy to mount - Small overall dimensions - Wide range of service temperature - Fair resistance to corrosion	- Good load capacity - Self lubricating - Low Static and dynamic fiction factor - Minimum wear and excellent life services - Easy to mounting - High chemical inertia and good compatibility with fluids - Small overall dimen-sions - High resistance to corrosion - Wide range of service temperature	- Good load capacity - Self lubricating - Low Static and Dynamic fiction factor - Minimum wear and excellent life services - Easy to mounting - High chemical inertia and good compatibility with fluids - Small overall dimen-sions - Height resistance to corrosion - Wide range of service temperature
Bearing design		- Cylindrical - Thrust washers - Strips - Special items available on demand	- Cylindrical - Thrust washers - Strips - Special items available on demand	- Cylindrical - Thrust washers - Strips - Special items available on demand	- Cylindrical - Thrust washers - Strips - Special items available on demand

BRM Series


Product Family		BRM-10	BRM-20	BRM-80
Sliding layer		Bronze	Bronze	Bronze
Motion		Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear
Maintenance		Oil / grease lubrication -	Oil / grease lubrication Dry lubrication	Oil / grease lubrication -
Bore ID catalog range		- from 10 to 300 mm (cylindrical) - from 25 to 300 mm (flanged)	- from 10 to 300 mm (cylindrical) - from 25 to 300 mm (flanged)	- from 10 to 300 mm (cylindrical) - from 25 to 300 mm (flanged)
Maximum load factor (dry)		2.7 N / mm²·m / s / 74790 psi-fpm	2.7 N / mm²·m / s / 74790 psi-fpm	2.7 N / mm²·m / s / 74790 psi-fpm
Load carrying capacity	Static	150 MPa / 21760 psi	150 MPa / 21760 psi	150 MPa / 21760 psi
	Dynamic	60 MPa / 8700 psi	60 MPa / 8700 psi	60 MPa / 8700 psi
Operating temperature	Minimum	- 40 °C / - 40 °F	- 40 °C / - 40 °F	- 40 °C / - 40 °F
	Maximum	+ 200 °C / + 392 °F	+ 200 °C / + 392 °F	+ 200 °C / + 392 °F
Sliding speed (m/s)		2.5 (oil/grease)	1.5 (dry)	2.5 (oil/grease)
Benefits		- High load capacity - Very compact dimensions - High chemical resistance to aggressive environ-ments - High thermal conductibility - Wide range of working tempera-ture - Easy installation and maintenance - Wide availability of standard bushings - Possibility for special items	- High load capacity - Very compact dimensions - High chemical resistance to aggressive environ-ments - High thermal conductibility - Wide range of working tempera-ture - Easy installation and maintenance - Wide availability of standard bushings - Possibility for special items	- High load capacity - Very compact dimensions - High chemical resistance to aggressive environ-ments - High thermal conductibility - Wide range of working tempera-ture - Easy installation and maintenance - Wide availability of standard bushings - Possibility for special items
Bearing design		- Cylindrical - Flanged - Thrust washers - Strips - Special items available on demand - sliding surface with Lozenge pockets	- Cylindrical - Flanged - Thrust washers - Strips - Special items available on demand - sliding surface with diamond indentation and graphite in the pockets	- Cylindrical - Flanged - Thrust washers - Strips - Special items available on demand - sliding surface with through holes

HT Series








Product Family		**HT-316**	**HT-316 SS**	**HT-625**	**HT-625 SS**	**HT-F51**	**HTC-10**	**HTC-11**	**VJ-625**
Sliding layer		Special surface treatment "Duritex ML"	Special surface treatment "Duritex SS"	Special surface treatment "Duritex ML"	Special surface treatment "Duritex SS"	Special surface treatment "Duritex ML"	Special surface treatment "Duritex"	Special surface treatment "Duritex ML"	Tungsten carbide treatment + coating treatment "Duritex ML"
Backing Layer		Stainless steel AISI 316	Stainless steel AISI 316	Inconel-625	Inconel-625	Stainless steel duplex-F51	Low carbon steel	Low carbon steel	Inconel-625
Motion		Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear	Oscillating / rotating / linear
Maintenance		Maintenance-free Dry lubrication	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication	Oil / grease lubrication	Maintenance-free Dry lubrication	Maintenance-free Dry lubrication
Bore ID catalog range		from 10 to 300 mm (cylindrical)	from 10 to 300 mm (cylindrical)	from 10 to 300 mm (cylindrical)	from 10 to 300 mm (cylindrical)	from 10 to 300 mm (cylindrical)	from 10 to 180 mm (cylindrical)	from 10 to 180 mm (cylindrical)	from 10 to 300 mm (cylindrical)
Load carrying capacity	Static	200 MPa / 29,000 psi	200 MPa / 29,000 psi	200 MPa / 29,000 psi	200 MPa / 29,000 psi	200 MPa / 29,000 psi	300 MPa / 43,500 psi	300 MPa / 43,500 psi	200 MPa / 29,000 psi
	Dynamic	100 MPa / 14,500 psi	100 MPa / 14,500 psi	100 MPa / 14,500 psi	100 MPa / 14,500 psi	100 MPa / 14,500 psi	75 MPa / 10,880 psi	75 MPa / 10,880 psi	100 MPa / 14,500 psi
Maximum load factor (dry)	Alternating	• 0.7 N / mm^2·m / s / 20,000 psi-fpm	-	• 0.7 N / mm^2·m / s / 20,000 psi-fpm	-	• 0.7 N / mm^2·m / s / 20,000 psi-fpm	• 0.7 N / mm^2·m / s / 20,000 psi-fpm	• 0.7 N / mm^2·m / s / 20,000 psi-fpm	-
	Continuous	• 1.0 N / mm^2·m / s / 29,000 psi-fpm	• 1.5 N/mm^2·m/s / 44,000 psi-fpm	• 1.0 N / mm^2·m / s / 29,000 psi-fpm	• 1.5 N / mm^2·m / s / 44,000 psi-fpm	• 1.0 N / mm^2·m / s / 29,000 psi-fpm	• 1.0 N / mm^2·m / s / 29,000 psi-fpm	• 1.0 N / mm^2·m / s / 29,000 psi-fpm	- According to application
	Short-term	• 1.5 N / mm^2·m / s / 44,000 psi-fpm	-	• 1.5 N / mm^2·m / s / 44,000 psi-fpm	-	• 1.5 N / mm^2·m / s / 44,000 psi-fpm	• 1.5 N / mm^2·m / s / 44,000 psi-fpm	• 1.5 N / mm^2·m / s / 44,000 psi-fpm	-
Operating temperature	Minimum	- 200 °C / - 328 °F	- 190 °C / - 310 °F	- 200 °C / - 328 °F	- 190 °C / - 310 °F	- 200 °C / - 328 °F	- 40 °C / - 40 °F	- 40 °C / - 40 °F	- 200 °C / - 328 °F
	Maximum	+ 430 °C / + 806 °F	+ 1,000 °C / + 1,832 °F	+ 430 °C / + 806 °F	+ 1,000 °C / + 1,832 °F	+ 430 °C / + 806 °F	+ 320 °C / + 608 °F	+ 320 °C / + 608 °F	+ 430 °C / + 806 °F
Sliding speed (m/s)		0.5	0.5	0.5	0.5	0.5	0.09	0.4	0.5
Friction coefficient		0.07 ÷ 0.13	0.09 ÷ 0.14	0.07 ÷ 0.13	0.09 ÷ 0.14	0.07 ÷ 0.13	0.07 ÷ 0.10	0.07 ÷ 0.10	0.07 ÷ 0.13
Benefits		- High load capacity in low temperature - Self lubricating - Low Static and dynamic friction factor - Minimum wear and excellent life services - Easy to mount - High chemical inertia - Wide range of service temperature	- High load capacity in low temperature - Self lubricating - Low Static and dynamic friction factor - Minimum wear and excellent life services - Easy to mount - High chemical inertia - Wide range of service temperature	- High load capacity in low temperature - Self lubricating - Low Static and dynamic friction factor - Minimum wear and excellent life services - Easy to mount - High chemical inertia - Wide range of service temperature	- High load capacity in low temperature - Self lubricating - Low Static and dynamic friction factor - Minimum wear and excellent life services - Easy to mount - High chemical inertia - Wide range of service temperature	- High load capacity at high temperature - Self lubricating - Low Static and dynamic friction factor - Minimum wear and excellent life services - Easy to mount - High chemical inertia - Wide range of service temperature	- High load capacity - Minimum wear and excellent life services - Easy to mount - Good chemical inertia - Wide range of operating temperature - Special items on demand	- High load capacity - Self-lubricating - Low Static and dynamic friction factor - Minimum wear and excellent life services - Easy to mount - Good chemical inertia - Wide range of operating temperature - Minimized overall dimensions	- High load capacity at high temperature - Minimum wear and excellent life services - Easy to mount - Very high chemical inertia to industrial fluids and gases. - Wide range of operating temperature - Low Static and Dynamic friction factor - Self lubricating
Bearing design		- Cylindrical - Thrust washers - Strips - Special items available on demand	- Cylindrical - Thrust washers - Strips - Special items available on demand	- Cylindrical - Thrust washers - Strips - Special items available on demand	- Cylindrical - Thrust washers - Strips - Special items available on demand	- Cylindrical - Thrust washers - Strips - Special items available on demand	- Cylindrical - Thrust washers - Strips - Special items available on demand	- Cylindrical - Thrust washers - Strips - Special items available on demand	- Cylindrical - Thrust washers - Strips - Special items available on demand

Steel Series

Product Family		DC04	AISI-316 L
Sliding layer		Low carbon steel DC04	Stainless steel AISI 316
Motion		Oscillating / rotating / linear	Oscillating / rotating / linear
Maintenance		Oil / grease lubricated	Oil / grease lubricated
Bore ID catalog range		-	-
Maximum load factor (dry)		-	-
Load carrying capacity	Static	140 MPa / 20,300 psi	350 MPa / 50,760 psi
	Dynamic	59 MPa / 8,560 psi	60 MPa / 8,700 psi
Operating temperature	Minimum	-	-
	Maximum	+ 329 °C / + 624 °F	+ 329 °C / + 624 °F
Sliding speed (m/s)		0.07	0.07
Friction coefficient		-	-
Benefits		- Good chemical resistance	- High chemical resistance to industrial fluids and gases. - High resistance to corrosion
Bearing design		- Cylindrical	- Cylindrical

OLTEC Series

	OLTEC-500
	Brass + indentations filled with lubricant
	Oscillating / rotating / linear
	Maintenance-free Dry lubrication
	• from 16 to 100 mm (cylindrical) • from 16 to 100 mm (flanged)
	3.8 N/mm²·m/s / 105,300 psi-fpm
	100 MPa / 14,500 psi
	-
	-
	+ 300 °C / + 572 °F
	0.4 (dry) / 5.0 (oil)
	< 0.16
	- High load capacity - Self-lubricating under dry operation - Possibility to use in presence of fluids - Good chemical inertia to corrosive agents - Wide range of operating temperature - Flameproof - Easy to mount - Standard items widely available - Special items on demand
	- Cylindrical - Flanged - Washers - Strips - Special parts available on request

Sinter Series

Product Family		Sintered Steel	Sintered Bronze
Sliding layer		Sintered steel + oil impregnation	Sintered bronze + oil impregnation
Motion		Oscillating / rotating / linear	Oscillating / rotating / linear
Maintenance		Maintenance-free Dry lubrication	Maintenance-free Dry lubrication
Bore ID catalog range		• from 5 to 100 mm (cylindrical) • from 8 to 70 mm (flanged)	• from 4 to 140 mm (cylindrical) • from 3 to 80 mm (flanged)
Bore ID catalog range		1.8 N / mm²·m / s / 49,860 psi-fpm	1.8 N / mm²·m / s / 49,860 psi-fpm
Load carrying capacity	Static	40 MPa / 5,800 psi	10 MPa / 1,450 psi
	Dynamic	10 MPa / 1,450 psi	5 MPa / 725 psi
Operating temperature	Minimum	- 20 °C / - 4 °F	- 5 °C / + 23 °F
	Maximum	+ 100 °C / + 212 °F	+ 90 °C / + 194 °F
Sliding speed (m/s)		4.0	10.0
Friction coefficient		0.08 to 0.12	0.08 to 0.12
Benefits		- Dry Self-lubricating - High load capacity - Easy to assembly - Minimum overall dimensions - Standard items widely available - Special items on demand - Wide range of operating temperature - Minimized wear and good service life	- Dry Self-lubricating - High load capacity - Easy to assembly - Minimum overall dimensions - Standard items widely available - Special items on demand - Wide range of operating temperature - Minimized wear and good service life
Bearing design		- Cylindrical - Flanged - Washers - Special items availble on demand	- Cylindrical - Flanged - Washers - Special items availble on demand

Part Number Structure

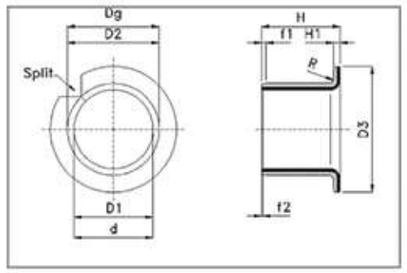
Self-Lubricated Material

Flanged Plain Bearings
Dimension according to ISO 3547

Part Number Structure:

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

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

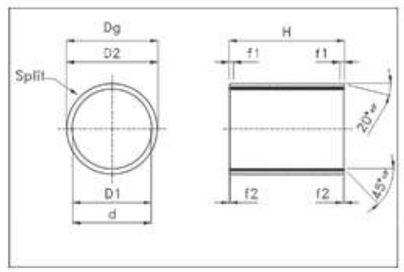


Cylindrical Plain Bearings
Dimension according to ISO 3547

Part Number Structure:

MU	P	20	23	20
Material	Shape	D1	D2	H

General Tolerances:
Length (H) = ±0.25

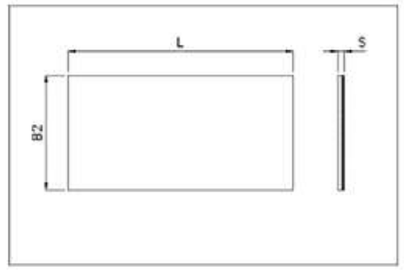


Strips

Part Number Structure:

MU	S	07	150	500
Material	Shape	S	B2	L

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



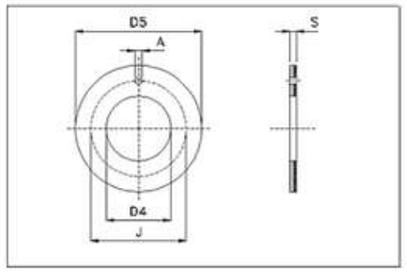
MP Part Number Structure

Thrust Washers

Part Number Structure:

MU	W	10	20	1.5
Material	Shape	D4	D5	S

General Tolerances:
I.D. (D4) = -0 / +0,25
O.D. (D5) = +0 / -0,25



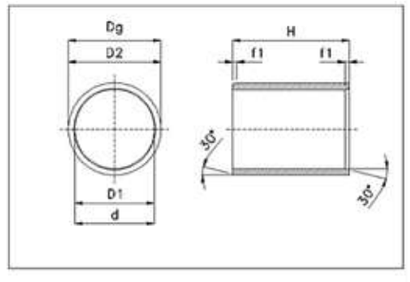
MP Part Number Structure

Cylindrical Plain Bearings
Dimension according to ISO 3547

Part Number Structure:

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

General Tolerances:
Length (H) = h13



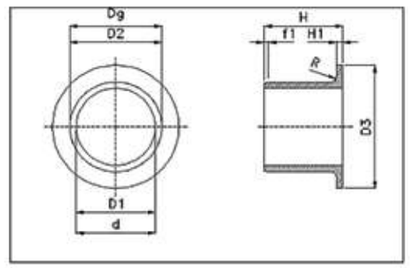
Pre-Lubricated Material

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
Flanged Diamater (D3) = d13
Flanged Thickness (H1) = 0/-0,14

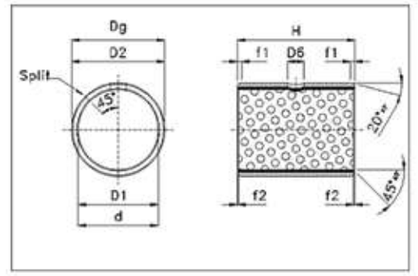


Cylindrical Plain Bearings
Dimension according to ISO 3547

Part Number Structure:

MX	P	20	23	20
Material	Shape	D1	D2	H

General Tolerances:
Length (H) = ±0.25
Lubrication Hole (D6) = ±0.30
Position Hole = 45°

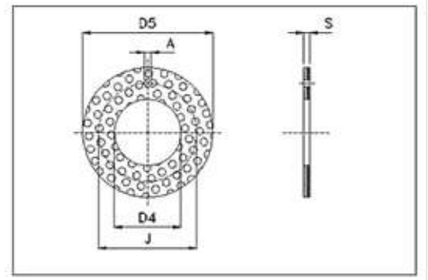


Thrust Washers

Part Number Structure:

MX	W	12	24	1.5
Material	Shape	D4	D5	S

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

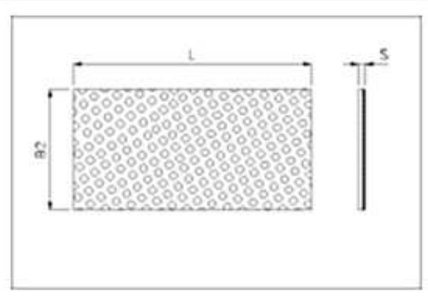


Strips

Part Number Structure:

MX	S	15	100	460
Material	Shape	S	B2	L

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

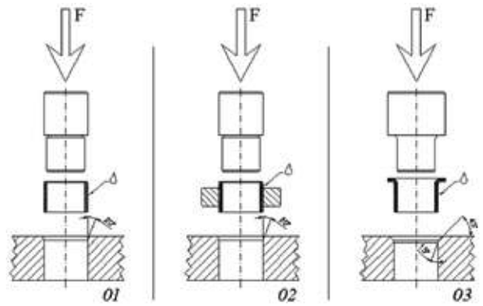


Fitting Methods

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

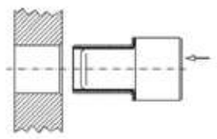
- Machine to 20° (±5°) the seat lead-in to reach 1-2 mm (.039 - .078 inches) in depth.
- Trim and clean the seat surface.
- Lubricate the external surface of the bearing before fitting it in place.
- Check the center lines between the bearing and the seat for proper alignment
- When two bearings are needed for insertion into the same seat, the related junctions need to be aligned.
- It is advisable to use a guide mandrel to fit the bearings into their seats. (Fig. 01)
- For bearings whose diameter exceeds 55 mm (2.165 inches), it is advisable to perform the fitting using a supporting ring tool whose diameter increased by 0.25-0.40 mm (.011-.015 inches) in value. (Fig. 02)
- As far as flanged bearings are concerned, (Fig. 03) the seat lead-in shall be 45° and the minimum depth shall equal 2 mm (.078 inches); 2,5 mm (.098 inches) for bearings with wall thickness equaling 2,5 mm (.098 inches).

Approximate Values of The Fittine Force "F" (Newton)	
Rated Thickness of Bearings Wall 1,0 mm	F = 300 · H
Rated Thickness of Bearings Wall 1,5 mm	F = 500 · H
Rated Thickness of Bearings Wall 2,0 mm	F = 700 · H
Rated Thickness of Bearings Wall 2,5 mm	F = 900 · H

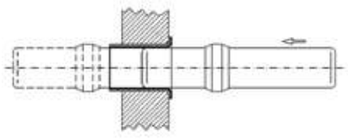


MR Series Bearings Installation

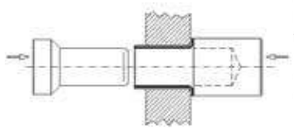
The installation process for MR material mentioned in this page shown the most common phases recommended in order to obtain a good assembly sizing, and flanging installing process, particularly for bearings without press fit.



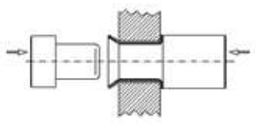
Pressing in:
With a mandrel (diameter –0.05 mm smaller than the installed bearing diameter) insert the bush into the housing. The mandrel must have a radius that avoid damage to the bearing surface.



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 radi□us that avoid damages to the bearing surface.

Data Sheet

Data for bearing design Calculation

Customer:	*Date:*	*Telephone:*	*Fax:*	*Project No.:*	*Quantity:*

Application:
New Project ❑
Existing Project ❑

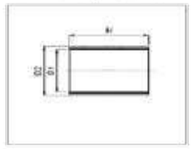
Dimensions	
Inside Diameter:	
Outside Diameter:	
Length:	
Flange Diameter:	
Wall Thickness:	
Length of Strip:	
Width of Strip:	
Thickness of Strip:	

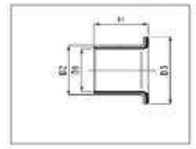
Load		
Radial Load ❑	Static (N)	
	Dynamic (N)	
Axial Load ❑	Static (N)	
	Dynamic (N)	
Specific Load ❑	Radial (Mpa)	
	Axial (Mpa)	

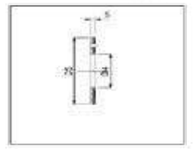
Type of Load	
One direction	❑
Rotational Movements	❑
Rotating Load	❑
Steady Load	❑
Linear Movement	❑
Oscillating Movements	❑
Intermittent	❑

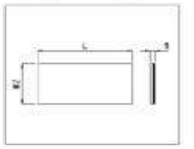
Design:

❑ P Cylindrical ❑ F Flanged ❑ W Washer ❑ S Strip ❑ Special Parts









(Sketch)

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

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

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

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

Additional Information :

Applications

Cars

Motorbikes

Bicycles

Movement is a primary need for human beings
And movement has been the force of human's progress and its impressive evolution. Once humans understood the power of movement, development of various ways of mobility has shaped its society, culture and economy in many profound ways. Creating entire industries from scratch, mobility as of today generates still the most significant impact on our daily lives and will continue to do so in the foreseeable future. To support the means of mobility, lots of mechanical, electrical and electronic components have been developed and one of the most critical pieces has been the development of the Sliding Bearing. Sliding bearings are used to generate low friction and low wear as much as possible during mechanical movements between two metals coming in contact.

Vehicles

Trucks

Aerospace

Technymon launched its first plain bearing already in the market in 1975 and has since developed a broad range of plain bearings with different materials and performances, serving a wide range of different movements and applications. Over the years, its engineering efforts have generated a remarkable number of innovative materials and solutions at the highest quality levels. And therefore, currently it is amongst the most successful of its peers, recognized as one of the leaders in this segment. Various Technymon plain bearings that are incorporated into automotive applications have functionality and performance characteristics that allow for optimum friction control and reduction of energy loss. These are environmentally friendly materials as per ROHS (Restriction of Hazardous Substances) and ELV directive 2000/53/EC. Through its patented production technology, Technymon bearings have an extra edge as far as vehicle safety and comfort, while making a contribution towards a more sustainable global environment.

Industrial Vehicles

Vessels

Applications

Renewable Energy

Automotive

Agriculture

Technymon believes in the development of custom-made solutions. For this, Technymon developed a wide range of materials and products to match any application in any market. As a result, the company and its engineers have gathered profound knowledge in a great variety of applications. And this is shown in the value that its engineers bring to the table during the design phase.

Our engineering team gets involved with product engineers of the customers right at the beginning of the development phase. Customers are impressed by the speed at which ideas and innovation are converted into a successful cost-effective product and this has proven to be a critical factor in winning in the marketplace. It is this unique partnership with our customers that makes all the difference.

Hydraulics

Industries

Material Handeling

Cargo & Transport

Mining & Construction

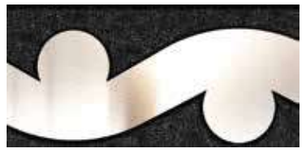
Technymon has its own wear laboratory and collaborates with reputable institutions, to do Tribological testing and work on surface engineering to continually develop cost-effective and optimal bearing materials.

Years of research and understanding of markets has enable Technymon to develop series of materials for challenging needs, like electrical conductive bearings, materials and shapes for cataphoresis, stable performance under elevated temperature, evenly distributed solid lubricants for noise reduction in buzz-squeak-rattle requirements, high cavitation and flow erosions, sliding layers for hydrodynamic applications, thick sliding layers to absorbe shock,vibrations and edge loadings.

Oil & Gas

Micro Section

MR-1 / MR-1E



MR-2 / MR-2E

MR-3 / MR-3E

MR-4 / MR-6 / MR-7

MR-5D / MR-5 316D

MR-5E

MU

MU-B

MU-4

MU-8

MX

Notes

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N.F. 08.2022

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