fluorten.com

oringone.com

slibitaly.com

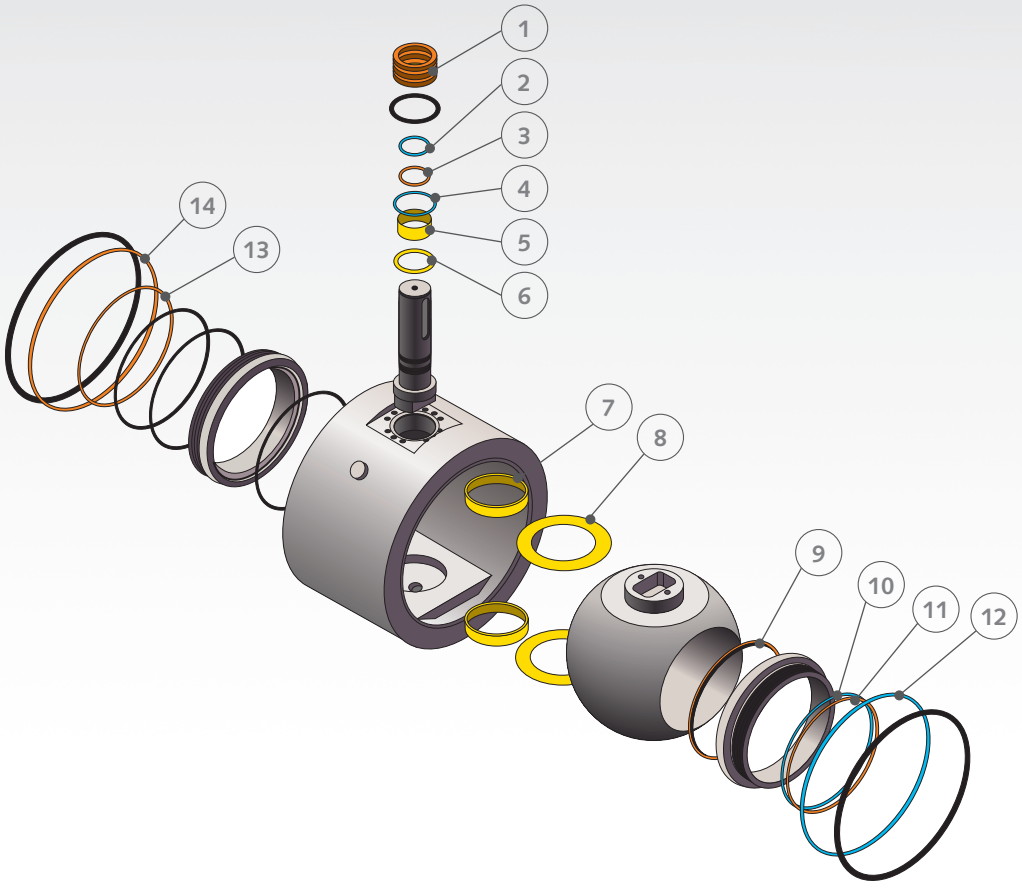
OIL & GAS INDUSTRY

ENGINEERED SEALING SOLUTIONS

sealcore network

sealcore network

VALVE COMPONENTS



1. STEM PACKING
2. STEM O-RING
3. STEM LIP SEAL
4. TRIM O-RING
5. STEM BEARING
6. STEM THRUST WASHER
7. BALL BEARING
8. BALL THRUST WASHER
9. SEAT INSERT
10. SEAT O-RING
11. Back Up RING
12. CLOSURE O-RING
13. SEAT LIP SEAL
14. CLOSURE LIP SEAL

Orange items: Fluorten
Light Blue item: OringOne
Yellow items: Slib Italy

FLUORTEN	1-3-9-11-13-14	STEM PACKING STEM LIP SEAL SEAT INSERT Back Up RING SEAT LIP SEAL CLOSURE LIP SEAL	PTFE MOD FLUOR PEEK NAT AND MOD DuPont™ Vespel® SP21 PCTFE PA 6.12
ORINGONE	2-4-10-12	STEM O-RING TRIM O-RING SEAT O-RING CLOSURE O-RING	NBR FKM FEPM VMQ HNBR
SLIB ITALY	5-6-7-8	STEM PACKING STEM THRUST WASHER BALL BEARING BALL THRUST WASHER	TF C/316/316S/625/625S/F51 TX C/316/625/F51 PMT 316/625/625 Plus

BALL VALVE COMPONENTS

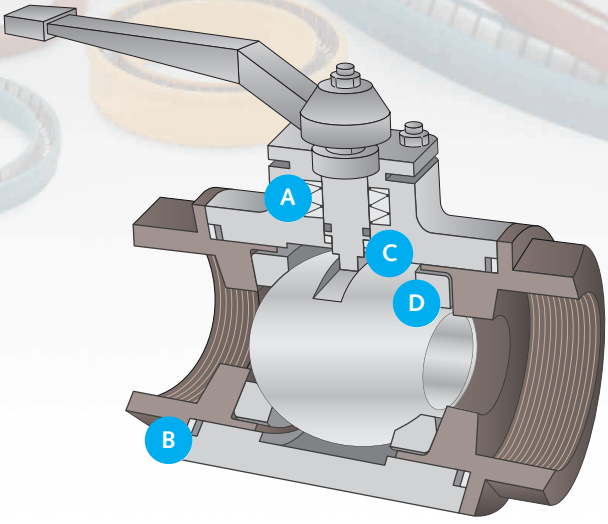
Fluorten is a leading market manufacturer of industrial ball valves components like seats, Spring Energized Seals, and gland packing in PTFE and HPP - High Performance Polymers – able to satisfy engineering demand like for instance temperatures from cryogenic (-196°C) to 288 ° C and, for short periods, up to 482 °C. Thanks to the partnerships with most important worldwide producers of polymers, Fluorten can provide high quality engineering customized parts manufactured in pure and filled PTFE, modified PTFE (3M™ Dyneon™ TFM™), HPP-High Performance Polymers - like VICTREX®, PEEKTM, DuPont™Vespel®, PCTFE, PA 6.12 and more on demand; most of them Norsok approved.

VALVE SEAT COMPONENTS

SEATS AND BODY SEALS

APPLICATION FIELDS

- A GLAND PACKING
- B BODY SEAL
- C THRUST WASHER
- D SEAT



APPLICATION

Seats and sealing for industrial ball valves mainly used in the following fields: oil & gas, chemical, cryogeny, pharmaceutical, heating, marine, water and food.

	PROPERTY	DENSITY	TENSILE	STRENGHT	ELONGATION	HARDNESS MAX. OPERATING TEMP.
	STANDARD	ASTM D 792	ASTM D 4894	ASTM D 4894	ASTM D 2240	/
	UNITS	G/CM³	MPA	%	SHORE D	°C
TYPICAL VALUES	F10-01 VIRGIN PTFE	2.16	20	200	55	+250 / -50
	F10-02 MODIFIED PTFE	2.16	30	350	60	+250 / -100
	F10-26 FILLED PTFE	2.10	12.5	100	65	+250 / -100
	F10-15 NAT PEEK	1.30	**90	**30	*94	+240 / -60
	DUPONT ™ VESPEL ® SP21	1.42	**62	**5.5	*80	+300 / -250
	F10-14 PCTFE	2.1	30	50	75	+150 / -250
	F10-27 POLYAMIDE	1.14	80	10	80	+120 / -40

PTFE and TECHNOPOLYMERS special formulations available on demand. For any further information please contact our technical office.
***Rockwell Hardness scale M in compliance with Standard ASTM D785**
****Ultimate tensile strength and Ultimate elongation in compliance with Standard ISO 527**
Whilst data and information given here are the result of our considerable experience they are only intended as a guide line and Fluorten s.r.l. can accept no responsability either for the results obtained from this information or for situations in conflict with any existing patents.

F10-XX Material Norsok M-710 ED.3 and API 6A approved available on demand

PTFE AND TECNOLPOLYMERS MANUFACTURING

Since 1966, Fluorten has been a worldwide market-leading manufacturer of industrial components in PTFE and HPP- High Performance Polymers for industrial and engineering applications. Today, thanks to continuing strong investments in modern and latest manufacturing technologies, together with support in designing from skilled and qualified technicians, Fluorten is able to produce and supply high quality "tailor made" products manufactured by using only the highest quality grades and qualified raw materials to give maximum response in final applications. Fluorten is working in partnership with main market leading companies in specific fields like: Oil & Gas, hydraulic, industrial machinery, construction, aerospace, heavy machines, automotive, electronic and electro mechanics, chemical and food industries, to mention just a few, especially for Oil &Gas market Fluorten has recently developed a new range of material Norsok approved.

High Performance Heart

FASTRACK SERVICE

Quick delivery service on demand.

fluorten® 1966/2016 | sealcore® network

NORSOK M710-ED.3
API 6A APPROVED

Among key industrial applications, Fluorten is able to manufacture and supply:

- Pure, filled and modified PTFE stock shapes and finished CNC machined customized engineered parts.
- Victrex® PEEK™ and PCTFE tubes and machined seals, seats and inserts rings.
- Valves and general industrial customized components (high pressure, from high to cryogenic temperatures).
- PTFE and Technopolymers spring energized seals. Norsok M710 approved.
- Reciprocating compressors PTFE and HPP seals and bearings including Victrex® PEEK™ discs for plate valves (e.g.Oil & Gas, PET bottle blowing, compressed technical gases, etc.).
- PTFE etching for bonding (tapes and finished parts).
- PTFE bridge bearings (acc. to EN-1337/2) and for Oil & Gas off-shore / ship launching pads, pipe line plates supports and sliding in general.
- Slipper seals and Fluor/S bearing tapes for sealing and bearing in hydraulic industry.
- Fluor/SC tapes for CNC machines sliding plate bearings.
- Technopolymers injection moulding and machining with inhouse moulds design and manufacturing.
- Official distributors DuPont™ Vespel®, SGPPL Rulon®
- Fully equipped Quality Control laboratory for mechanical, physical and dimensional test – from raw material to finished parts controlled production chain - with specific certificates issued on demand.
- SPC"in line" workshops stations.
- Certified EN 9100 (Aerospace supplying), ISO 9001 and ISO 14001.

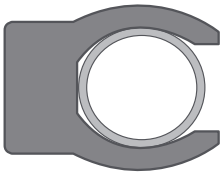
SPRING ENERGIZED SEALS

Fluorten's expertise in manufacturing, machining and transforming of PTFE and HPP - High Performance Polymers - is expanding in designing and manufacturing high performance spring energized seals. A well trained and experienced engineering team is ready to design with you unique solutions for demanding applications. Spring Energized Seals Ideas with future Designs to last.

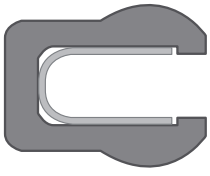
APPLICATION FIELD

Fluorten srl designs and manufactures SES – Spring Energized Seals - in a wide range of PTFE and HPP – High Performance Polymers – materials, that thanks to their high performances, are suitable for the following industrial and engineering applications.

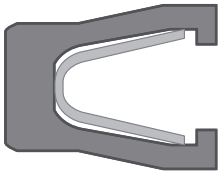
- Aero hydraulics & Pneumatic Systems
- Coolers
- Cryogenic Swivels
- Diesel Engines
- Filling Machines
- Flange connections
- Fuel Control Systems
- Gas Turbine Engines
- HPLC Pumps
- Laboratory equipment
- Low Friction Pneumatics
- Medical & Laboratory Instrumentations
- Oil Field Equipment
- Pumps
- Robotics
- Rotary joints
- Semiconductor Processing Equipment
- Swivels
- Vacuum Equipment
- Valves, Cryogenic, High temperature
- Valves, Gate, Ball, Control...



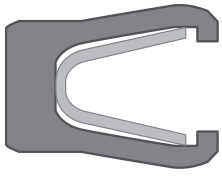
H-Helicoil Spring type
Radial and face type seal
From 1/16 up 1/2 inch



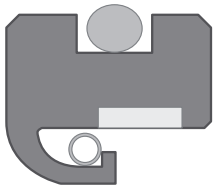
U-Spring type
Radial and face type seal
From 1/16 up 1/2 inch



V-Spring type
Radial and face type seal
From 1/16 up 1/2 inch



W-Spring type
Radial and face type seal
From 3/32 up 1/2 inch



Lipseals
Sizes according DIN3760

SPECIAL ON DEMAND

High Performance Spring Energized Seals – SES - are manufactured from high performance polymers. These include PTFE, PTFE Compounds, 3M™ Dyneon™ TFM™ modified PTFE and other suitable high performance polymers – HPP. Spring Energized Seals are precision machined parts. Both the seal diameter as well as the seal section are function critical. The U-cup shape or jacket allows the system pressure to assist in maintaining a certain seating load. The high precision metal spring, located in the jacket creates the initial seating load needed to create positive sealing. Fluorten's SES are available in a wide variety of designs, each with a spring designs optimized to handle the most demanding applications. Most of these require a different approach regarding jacket material and spring characteristics. Some applications require critical low spring load, other require higher ones. Fluorten SES are designed to function from extreme low temperatures, - 270°C up to very high temperatures, sometimes exceeding 300°C. Specific designs can withstand extreme HTHP combinations. (high temperature-high pressure) Fluorten's SES are available in radial design as well as face sealing design, both for static as well as dynamic applications. The available sizes cover all possible combinations from as small as a few mm up to +2 meter diameter. For low friction applications both seal design and spring selection are equally important. Fluorten's SES are virtually inert to all chemicals except molten alkali metals, fluorine gas at high temperature and chlorine trifluoride. The available spring materials range from stainless steel like 1.4301 up to high alloys such as Elgiloy®, Hastelloy® and Inconel 718.

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F10-XX Material Norsok M-710 ED.3 approved available on demand

VICTREX®PEEK

Fluorten developed high knowledge in manufacturing VICTREX®PEEK products play an important role into the Fluorten technical supplied products in order to cover a wider range of applications. Rods and Sleeves are suitable for manufacturing sealing elements and technical mechanical elements for industrial applications where high accuracy and dimensional stability is required. Different technologies are used to manufacture VICTREX®PEEK sleeves, depending on the final size and material performances. Dimensions of products are available into a wide range of diameters.

Application field of VICTREX® PEEK

- Aerospace as an ideal substitute for metals. Automotive, due to its tribological properties together with excellent mechanical properties
- Electronics, due to its high mechanical resistance, its high dimensional stability and creep resistance represent the best choice to manufacture small parts with very low thin wall
- General technical application in mechanical industry, due to its mechanical, chemical and thermal properties
- Medical, for surgical and dental tools
- Food, for mechanical elements with complex shapes and for items realized by tooling machines
- Protective lining and coating for chemical, food and for general industrial applications where aggressive and corrosive environments are involved.

PROPERTY	DENSITY	TENSILE	STRENGHT	ELONGATION	HARDNESS MAX. OPERATING TEMP.
STANDARD	ASTM D 792	ISO 527	ISO 527	ASTM D 785	/
UNITS	G/CM^3	MPA	%	M SCALE	°C
F10-15 NAT	1.30	90	30	94	+240 / -60
F10-20 FC	1.48	110	2.20	80	+240 / -60
F10-34 GL	1.49	90	2.00	100	+240 / -60
F10-16 CA	1.40	200	2.00	107	+240 / -60
F10-18 FE	1.40	78	25	87	+240 / -60

F10-XX Material Norsok M-710 ED.3 and API 6A approved available on demand

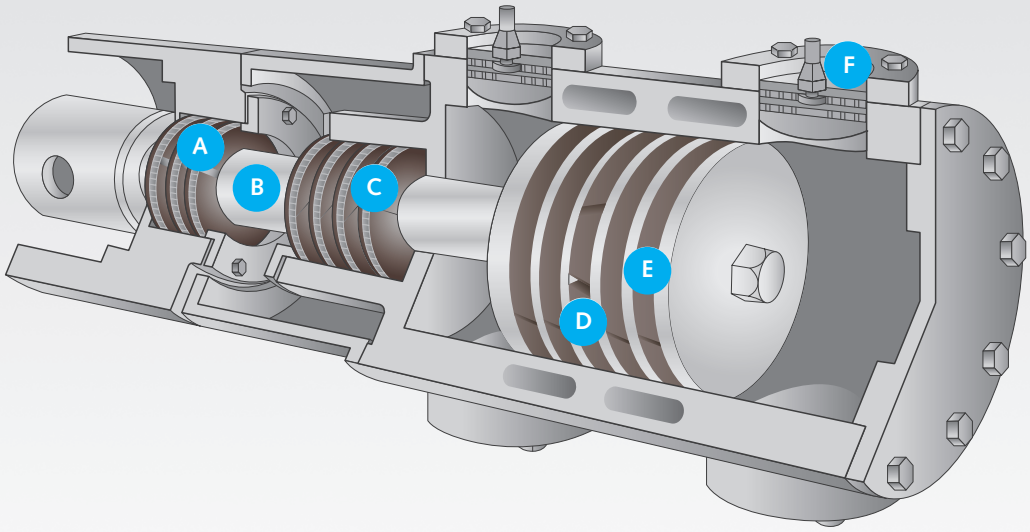
sealcore network

COMPRESSOR COMPONENTS
PISTON RINGS AND GUIDE BEARINGS

APPLICATION FIELDS

- A OIL SCRAPER
- B PISTON ROD
- C FLOATING RINGS
- D GUIDE BEARING
- E PISTON RING
- F VALVE - INLET OR OUTLET

We can propose you a wide range of standard and special O-Rings, as much as coated metal Bushings and Washers.



	PROPERTY	DENSITY	TENSILE	STRENGHT	ELONGATION	HARDNESS MAX. OPERATING TEMP.
	STANDARD	ASTM D 792	ASTM D 4894	ASTM D 4894	ASTM D 2240	/
	UNITS	G/CM³	MPA	%	SHORE D	°C
TYPICAL VALUES	PTFE C-657	2.05	14	50	67	+250
	PTFE BM-40111	3.80	18	140	67	+250
	PTFE VGM-70411	2.27	16	100	65	+250
	PEEK F10-15 NAT	1.30	**90	**30	*94	+240
	PEEK F10-34 GL	1.49	**90	**2	*100	+240
	PEEK F10-16 CA	1.40	**200	**2	*107	+240
	DUPONT ™ VESPEL ® SP21	1.42	**62	**5.5	80	+300

PTFE and TECHNOPOLYMERS special formulations available on demand. For any further information please contact our technical office.

***Rockwell Hardness scale M in compliance with Standard ASTM D785.**

****Ultimate tensile strenght and Ultimate elongation in compliance with Standard ISO 527.**

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F10-XX Material Norsok M-710 ED.3 and API 6A approved available on demand

ENDLESS POSSIBILITIES

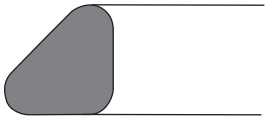
The OringOne history begins back in 2002 from an experimental project born to create a production system, that allows to produce O-Rings with non-standard dimensions in series. The global market requires large diameter O-Rings, that due to the always higher performance requests cannot be accepted if produced with traditional methods like hot jointing or using several glues. Because of this OringOne worked on a special production method investing money, experimenting, designing and realizing brand new machineries, tools and procedures, completely new and never known before in order to guarantee the top-end quality standards required by the industry. The operation basics of our productive process are designed on a traditional compression moulding method, that guarantees the reaching of the best mechanical performances. However we have invented, designed and engineered special machineries and moulds, totally built in the OringOne Technical and Production departments, and in a very innovative environment where everything is managed and guided by specialized operators and special software.

The advantages of our production system are:

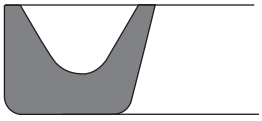
- No Internal Diameter dimensional limits;
- No moulds costs; No minimum order required;
- Mechanical performances comparable or better than traditional system made O-Rings (compression and injection moulding);
- Competitive prices;
- Very fast deliveries;
- O-Rings customization

OringOne produces also other profiles, different from O-Rings, in order to fulfill the always growing demand for specialties. In this moment we can serve you also with these other products :

DELTA RINGS



U-RINGS



DIAMETERS WITHOUT LIMITS

In general the maximum size of an O-rings depends on the mould, and the size of the machine used for its production.
With OringOne you will never have these limitations, and you will be free to choose the diameter you need. Our minimum inside diameter is 200,00 mm, while the maximum diameter matches whatever size you may need ! You only need to choose the available cross section (see table below), calculate the diameter for your applications and the O-Ring will be produced according to your specifications no matter what is the final application : special plants, large machinery and equipment, non-standard applications, etc.

Available Cross sections:

2,62	3,00	3,53	4,00	4,50	5,00
5,33	5,50	5,70	6,00	6,35	6,50
7,00	7,50	8,00	8,40	8,50	9,00
9,50	10,00	10,82	11,00	12,00	12,70
13,00	14,00	14,40	15,00	16,00	17,00
18,00	19,00	20,00	22,00	24,00	25,00
26,00	28,00	30,00	40,00	60,00	

XPRESS SERVICE

How many times were you in critical situations and have been hoping to receive your O-rings in a very short time? Today you have the solution! With our "Xpress" service send order and receive O-rings in a very short time it will be easy and guaranteed. Our company provides hundreds of Xpress shipments worldwide, considering 4 level of urgency

XPRESS 0

We guarantee the fastest delivery time possible for our production, in a maximum time of 48hrs

Max 30 pcs per order - No limits for Orders

Orders must be in before 10 o'c a.m.

XPRESS 4

4 working days delivery guaranteed

Max 30 pcs per order - No limits for Orders

Orders must be in before 10 o'c a.m.

XPRESS 7

7 working days delivery guaranteed

Max 50 pcs per order - No limits for Orders

Orders must be in before 15 o'c a.m.

XPRESS 10

10 working days delivery guaranteed

Max 50 pcs per order - No limits for Orders

Orders must be in before 15 o'c a.m.

Please, contact our sales department or login in our web page "BUY. ORINGONE" for more information on the availability of the service.

A LOT OF COMPOUNDS

We can produce O-rings with the most important and used compounds on the market. In the table below you can see an overview of our production program.

NBR	Color: Hardness:	Black From 50 ShA to 90 ShA
HNBR	Color: Hardness: Notes:	Black From 60 ShA to 90 ShA AED approved materials available
EPDM	Color: Hardness:	Black From 50 ShA to 80 ShA
EPDM Px	Color: Hardness: Notes:	Black From 60 ShA to 70 ShA Potable water and FDA approved materials available
FKM	Color: Hardness: Notes:	Black, Red, Blue, Green, Brown From 60 ShA to 98 ShA FDA, AED, LOW TEMP, OUTGAS approved materials available
FFKM	Color: Hardness: Notes:	Black From 70 ShA to 90 ShA AED formulation, Chemical and Hight Temp resistance materials available
CR	Color: Hardness:	Black From 60 ShA to 80 ShA
FEPM	Color: Hardness:	Black From 75 ShA to 90 ShA
VMQ	Color: Hardness: Notes:	Red From 60 ShA to 70 ShA FDA approved materials available

We are working to introduce new materials. If you are interested in a material not found in the table or you need more information on a material present in our program, please contact our sales department.

SLIDING BEARINGS DIVISION

HYDRAULIC, POWER SUPPLY AND METAL INDUSTRY

SLIB ITALY is specialized in the manufacturing of pressed Sliding Bearings with thin wall-thickness, dry self-lubricating, or with grease or oil lubrication, and produced in accordance to ISO 3547 directive. Bearings and washers can be produced according to specific requests or to customers' drawings. Dimensions range from a min. of 10 mm to a max. of 1.000 mm, both for standard sizes and for special ones.
These Bearings guarantee superior performances in terms of:

- Wear resistance;
- Load capacity, both static and dynamic;
- Maximum flexibility of usage in the most different applications;
- Less space requirement in the application;
- Resistance to impacts and to vibrations;
- Possibility of usage both at low and high temperatures;
- Chemical resistance in contact with various substances.

VALVES APPLICATIONS:

- Subsea (tested in valves installed at 2.500 meters under sea level)
- Cryogenic (specific product for -198°C)
- High temperature (specific product for +600°C)
- High pressure (tested in valves up to 15.000 PSI)

		TX-STE	TX-TI1
		Bushings **Stellite 6b** + Sintering + Fiber + filled PTFE	Bushings **Titanium ASTM B265 Gr.1** + Sintering + Fiber + filled PTFE
	SUPPORTING SHELL	**Co** Rest, **Cr** 28 ÷ 32% **W** 3.5 ÷ 5.5%, **C** 0.9 – 1.4% **Mo** 1.5% max, **Other** Ni, Fe, Si, Mn	**Ti** Rest, **O** 0.18% **N** 0.03%, **C** 0.08% **H** 0.015%, **Fe** 0.20%
		The given values are nominal values from literature.	
	SLIDING LAYERS	Special fiber with filled PTFE, colour black-gray, thickness 400 micron, heavy load capacity and self-lubricating under dry operation.	
	SINTERING	Special adhesive between the fiber and the backing steel, thickness 60 micron.	
	SHAFT	For an optimal performance the shaft surface finishing shall be between Ra 0.4 and Ra 1.6 micron, depending on different applications. Hardness 80 – 160 HB5.	
MECHANICAL PROPERTIES	WORKING TEMPERATURE	min - 180 °C - max + 260 °C	min - 180 °C - max + 260 °C
	COEFFICIENT OF FRICTION	0.03-0.10	0.03-0.10
	MAX. SPEED	0.50 m/s	0.50 m/s
	MAX. STATIC LOAD	400 N/mm2	400 N/mm2
	MAX. DYNAMIC LOAD (max. speed 0,05 m/s)	190 N/mm2	190 N/mm2
	MAX. DYNAMIC LOAD (max. speed 0,50 m/s)	100 N/mm2	100 N/mm2

	TF-C	TF-316	TF-316S	TF-625	TF-625S	TF-F51
	Carbon Steel S235 JR +Sintering + Filled PTFE film	Aisi 316L + Sintering + Filled PTFE film	Aisi 316L + Sintering * + PTFE Modified	Inconel 625 + Sintering + Filled PTFE film	Inconel 625 + Sintering * + PTFE Modified	Duplex A182 F51 + Sintering + Filled PTFE film
FASTRACK SERVICE	✓	✓		✓		✓
SUPPORTING SHELL	**C** 0.170%, **S** 0,045% **Mn** 1.40% max **N** 0.009% max **P** 0.045%	**C** 0.03%, **Mn** 1.8% **S** 0.025%, **Cr** 16.7% **P** 0.030%, **Ni** 10.0% **Si** 0.5%, **Mo** 2.00%	**C** 0.10%, Co 1% **Mn** 0.05% **Ta + Nb** 3.15 ÷ 4.15% **Cr** 20 ÷ 23%, **Ni** Rest **Mo** 8 ÷ 10%	**C** 0.10%, **Co** 1% **Mn** 0.05% **Ta + Nb** 3.15 ÷ 4.15% **Cr** 20 ÷ 23%, **Ni** Rest **Mo** 8 ÷ 10%	**C** 0.10%, **Co** 1% **Mn** 0.05% **Ta + Nb** 3.15 ÷ 4.15% **Cr** 20 ÷ 23%, **Ni** Rest **Mo** 8 ÷ 10%	**C** 0.20%, **Cr** 22.70% **S** <0.15%, **Ni** 5.60% **P** 0.025%, **Mo** 3.20% **Si** 0.50%, **N** 0.16% **Mn** 1.40%
	The given values are nominal values from literature.					
SLIDING LAYERS	Filled PTFE film, colour black-gray, thickness 200–220 micron, heavy load capacity and self-lubricating under dry operation, lead free and non-coated. Filed PTFE modified film, colour black, thickness 200-220 micron, heavy load capacity and self-lubricating under dry operation, valid just for TF-316S and TF-625S.					
SINTERING	Sintering process made in oven between PTFE and the steel backing at a temperature of +250 ° C, BRONZE FREE * Special adhesive between the filled PTFE modified film and the backing steel, thickness 60 micron, valid just for TF-316S and TF-625S					
SHAFT	For optimal performances, the shaft surface finishing shall be between Ra 0.4 and Ra 1.6 micron, depending on the applications. Hardness 80 - 160 HB5.					
	MECHANICAL PROPERTIES					
MECHANICAL PROPERTIES — WORKING TEMPERATURE	min - 190 °C max + 260 °C	min - 190 °C max + 260 °C	min - 190 °C max + 260 °C	min - 190 °C max + 260 °C	min - 190 °C max + 260 °C	min - 190 °C max + 260 °C
COEFFICIENT OF FRICTION	0.03-0.20	0.03-0.20	0.03-0.20	0.03-0.20	0.03-0.20	0.03-0.20
MAX. SPEED	1.00 m/s	1.00 m/s	0.50 m/s	1.00 m/s	0.50 m/s	1.00 m/s
MAX. STATIC LOAD	250 N/mm2	250 N/mm2	250 N/mm2	250 N/mm2	250 N/mm2	250 N/mm2
MAX. DYNAMIC LOAD (max. speed)	140 N/mm2 (0.10 m/s)	140 N/mm2 (0.05 m/s)	180 N/mm2 (0.10 m/s)	140 N/mm2 (0.10 m/s)	180 N/mm2 (0.05 m/s)	180 N/mm2 (0.10 m/s)
MAX. DYNAMIC LOAD (max. speed)	60 N/mm2 (1.00 m/s)	60 N/mm2 (1.00 m/s)	80 N/mm2 (0.50 m/s)	60 N/mm2 (1.00 m/s)	80 N/mm2 (0.50 m/s)	60 N/mm2 (1.00 m/s)

	TX-C	TX-316	TX-625	TX-F51
	Bushings **Carbon Steel S235 JR** + Sintering + Fabric PTFE	Bushings **Aisi 316L** + Sintering + Fiber + filled PTFE	**Bushings Inconel 625** + Sintering + Fiber + filled PTFE	**Bushings Duplex A182 F51** + Sintering + Fiber + filled PTFE
FASTRACK SERVICE	✓	✓	✓	✓
SUPPORTING SHELL	**C** 0.170%, **S** 0,045% **Mn** 1.40%, **N** 0.009% **P** 0.045%	**C** 0.03%, **Mn** 1.8% **S** 0.025%, **Cr** 16.7% **P** 0.030%, **Ni** 10.0% **Si** 0.5%, **Mo** 2.00%	**C** 0.10%, **Co** 1% **Mn** 0.05%, **Ta + Nb** 3.15 ÷ 4.15% **Cr** 20 ÷ 23%, **Ni** Rest **Mo** 8 ÷ 10%	**C** 0.20%, **Cr** 22.70% **S** <0.15%, **Ni** 5.60% **P** 0.025%, **Mo** 3.20% **Si** 0.50%, **N** 0.16% **Mn** 1.40%
	The given values are nominal values from literature.			
SLIDING LAYERS	Special fiber with filled PTFE, colour black-gray, thickness 400 micron, heavy load capacity and self-lubricating under dry operation.			
SINTERING	Special adhesive between the fiber and the backing steel, thickness 60 micron.			
SHAFT	The shaft surface finishing, for optimal performance, shall be between 0.4 and 1.6 micron Ra, depending on different application. Hardness 80 – 160 HB5.			
MECHANICAL PROPERTIES — WORKING TEMPERATURE	min - 180°C max + 260 °C	min - 180°C max + 260 °C	min - 180°C max + 260 °C	min - 180°C max + 260 °C
COEFFICIENT OF FRICTION	0.03-0.10	0.03-0.10	0.03-0.10	0.03-0.10
MAX. SPEED	0.50 m/s	0.50 m/s	0.50 m/s	0.50 m/s
MAX. STATIC LOAD	300 N/mm2	300 N/mm2	400 N/mm2	400 N/mm2
MAX. DYNAMIC LOAD (max. speed 0,05 m/s)	190 N/mm2	190 N/mm2	190 N/mm2	190 N/mm2
MAX. DYNAMIC LOAD (max. speed 0,50 m/s)	100 N/mm2	100 N/mm2	100 N/mm2	100 N/mm2
REMARKS	For these products we propose an upgraded version called Plus, with an enhanced coefficient of friction. Range 0.02 – 0.08			

		PMT-316	PMT-625	PMT-625 *PLUS*
		Aisi 316L + Special Coating	**Inconel 625** + Special Treatment	**Inconel 625** + Special Treatment
	FASTRACK SERVICE	✓	✓	
	SUPPORTING SHELL	**C** 0.03%, **Mn** 1.8% **S** 0.025%, **Cr** 16.7% **P** 0.030%, **Ni** 10.0% **Si** 0.5%, **Mo** 2.00%	**C** 0.10%, **Co** 1% **Mn** 0.05%, **Ta + Nb** 3.15 ÷ 4.15 % **Cr** 20 ÷ 23%, **Ni** Rest **Mo** 8 ÷ 10 %	**C** 0.10%, **Co** 1% **Mn** 0.05%, **Ta + Nb** 3.15 ÷ 4.15 % **Cr** 20 ÷ 23 %, **Ni** Rest **Mo** 8 ÷ 10 %
	SLIDING LAYERS	Physical Vaporization of the special coating. Multilayer deposit of the Surface, minimum hardness 180 HB, and minimum thickness 15 micron.		
MECHANICAL PROPERTIES	WORKING TEMPERATURE	min - 198°C max +430 °C	min - 100°C - max + 600 °C	min - 100°C - max + 600 °C
	COEFFICIENT OF FRICTION	0.06-0.12	0.06-0.12	0.04-0.10
	MAX. SPEED	0.40 m/s	0.40 m/s	0.50 m/s
	MAX. STATIC LOAD	200 N/mm2	200 N/mm2	200 N/mm2
	MAX. DYNAMIC LOAD (max. speed 0,10 m/s)	150 N/mm2	150 N/mm2	190 N/mm2
	MAX. DYNAMIC LOAD (max. speed 0,40 m/s)	100 N/mm2	100 N/mm2	100 N/mm2
	SHAFT	The shaft surface finishing, for optimal performance, shall be between 0.4 and 1.6 micron Ra, depending on different application. Hardness 100 – 160 HB5.		

Note: the information in this sheet are to be considered reliable, but conditions and methods of use, which are beyond our control, may modify the results. The information and data contained in this data sheet are the result of long and detailed researches, however FP F.lli Paris Srl cannot be considered responsible for any incorrect or incomplete data. Owing to the constant development of the products, we reserve the right to make changes to the products without prior notice.

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