The year 2015 sees the start-up of the SEALCORE Network, which is the result of the union of some entrepreneurial Companies from the Bergamo area in Italy, active for many years in the production of customized articles to drawing and technical components for various industrial sectors: Pulp&Paper - Wind Mills - Mining and earth moving equipment - Primary Metals - Naval & Marine - Aerospace - Food Automotive - Automation - Chemicals - Petrochemical - Pharmaceutical - Hydraulic, Heating & Sanitary Systems - Dynamic Sealing, Heavy Duty and General Industry. All the companies in the SEALCORE Network are independent, family owned and run with a familiar approach, but characterized by a strong entrepreneurial spirit voted to the growth and continuation of their presence in the market in the long term, thanks to the new generations.

SEALCORE Network is not just “do business”, but “be business”; and because of its familiar spirit, SEALCORE Network means “to be business together” and together become a new landmark in the global market.

The SEALCORE Network, 3 of these Companies among decided to team up and aim their joint business actions to the Oil & Gas industry worldwide, proposing a wide variety of products like seals, bushings, rubber and technopolymer components and whatsoever required for valves, compressors, pumps, electric gearboxes and the general industry with applications related to pistons, cylinders, machine tools, motors, connectors, actuators, and many more.

The lean management and a focus on service to the customer, in addition to a high quality made in Italy guaranteed, are the strength of the newborn SEALCORE Network, and the 3 Companies dedicated to this O&G project:

- **ORINGONE**: Large diameter and Endless O-Rings produced with an innovative step-molding method ([www.oringone.com](http://www.oringone.com));
- **FLUORTEN**: PTFE and HPP – High Performance Polymers. Stock shapes and customized engineering components ([www.fluorten.com](http://www.fluorten.com));
- **SLIB ITALY**: Bearings and bushings for valves and other applications for the hydraulic, power supply and metal industry ([www.slibitaly.com](http://www.slibitaly.com));

The synergy and the know-how of the Companies in the SEALCORE Network provide a complete service to meet the needs of the global market and a wide range of Technical Products: Standard and Endless O-Rings, Rotary Shaft Seals, Industrial Components in Rubber to Metal, Elastomer, Liquid Silicon, PTFE and HPP - High Performance Polymers.

All this and much more is SEALCORE Network.

Discover us under [www.sealcore.net](http://www.sealcore.net)
Orange items: Fluorten
Light Blue item: OringOne
Yellow items: Slib Italy
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 M710 ed. 3 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 ed. 3 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.
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®, PEEK, DuPont™Vespel®, PCTFE, PA 6.12 and more on demand; most of them Norsok M710 ed. 3 approved.

APPLICATION

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Standard</th>
<th>Unit</th>
<th>F10-01 VIRGIN PTFE Norsok Approved</th>
<th>F10-02 MODIFIED PTFE Norsok Approved</th>
<th>F10-26 FILLED PTFE</th>
<th>F10-15 VICTREX® PEEK 450G Norsok Approved</th>
<th>DuPont TM Vespel® SP21</th>
<th>F10-14 PCTFE</th>
<th>F10-27 POLYAMIDE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td>ASTM D 792</td>
<td>g/cm³</td>
<td>2,16</td>
<td>2,16</td>
<td>2,10</td>
<td>1,30</td>
<td>1,42</td>
<td>2,1</td>
<td>1,14</td>
</tr>
<tr>
<td>Tensile strength</td>
<td>ASTM D 4894</td>
<td>Mpa</td>
<td>20</td>
<td>30</td>
<td>12,5</td>
<td>**90</td>
<td>**62</td>
<td>30</td>
<td>80</td>
</tr>
<tr>
<td>Elongation</td>
<td>ASTM D 4894</td>
<td>%</td>
<td>200</td>
<td>350</td>
<td>100</td>
<td>**30</td>
<td>**5,5</td>
<td>50</td>
<td>10</td>
</tr>
<tr>
<td>Hardness</td>
<td>ASTM D 2240</td>
<td>Shore D</td>
<td>55</td>
<td>60</td>
<td>65</td>
<td>*94</td>
<td>*80</td>
<td>75</td>
<td>80</td>
</tr>
<tr>
<td>Max. / Min. operating temperature</td>
<td>/</td>
<td>°C</td>
<td>+250 /-50</td>
<td>+250 /-100</td>
<td>+250 /-100</td>
<td>+240 /-60</td>
<td>+300 /-250</td>
<td>+150 /-250</td>
<td>+120 /-40</td>
</tr>
</tbody>
</table>

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 responsibility either for the results obtained from this information or for situations in conflict with any existing patents.
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...

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.
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.

Requests from the marketplace went to a point where traditional methods used to supply big diameter O-Rings (hot jointing or using several glues) couldn’t be accepted anymore for high performances needed applications. Because of this OringOne worked for more than 5 years on that, experimenting designing and realizing brand new machineries, tools and procedures, completely new and never known before.

The operation basics of our productive process are based on traditional compression moulding, that guarantees the reaching of the best mechanical performances.

However, we work on special machineries and moulds that have been invented, designed and built within our departments and take part to a very innovative environment where everything is managed and guided by specialized operators and specific software.

The advantages of our production system are: No Internal Diameter dimensional limits, No moulds costs, No minimum quantity for purchase order required, Mechanical performances comparable to traditional system made O-Rings (compression and injection moulding), Competitive prices, Very fast deliveries, O-Rings customization.
DIAMETERS WITHOUT LIMITS

Until now, the maximum size of the O-rings depended on the size of the molds and presses. With OringOne you will not 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 you need! You only need to choose the available cross section (see below), calculate the diameter for your applications and the O-Ring will be produced according to your specifications. Special plants, large machinery and equipment, non-standard applications, etc. can therefore be equipped with O-Rings produced with our system. This opens a new market where quality, price and service reach the highest levels.

Cross sections available:

<table>
<thead>
<tr>
<th>Diameter</th>
<th>Inside Diameter</th>
<th>Inside Diameter</th>
<th>Inside Diameter</th>
<th>Inside Diameter</th>
<th>Inside Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,62 mm</td>
<td>19,00 mm</td>
<td>3,00 mm</td>
<td>3,53 mm</td>
<td>4,00 mm</td>
<td>4,50 mm</td>
</tr>
<tr>
<td>5,33 mm</td>
<td>19,00 mm</td>
<td>5,50 mm</td>
<td>5,70 mm</td>
<td>6,00 mm</td>
<td>6,35 mm</td>
</tr>
<tr>
<td>7,00 mm</td>
<td>19,00 mm</td>
<td>7,50 mm</td>
<td>8,00 mm</td>
<td>8,40 mm</td>
<td>8,50 mm</td>
</tr>
<tr>
<td>9,50 mm</td>
<td>19,00 mm</td>
<td>10,00 mm</td>
<td>10,82 mm</td>
<td>11,00 mm</td>
<td>12,00 mm</td>
</tr>
<tr>
<td>13,00 mm</td>
<td>19,00 mm</td>
<td>14,00 mm</td>
<td>14,40 mm</td>
<td>15,00 mm</td>
<td>16,00 mm</td>
</tr>
<tr>
<td>18,00 mm</td>
<td>19,00 mm</td>
<td>20,00 mm</td>
<td>22,00 mm</td>
<td>24,00 mm</td>
<td>25,00 mm</td>
</tr>
<tr>
<td>28,00 mm</td>
<td>19,00 mm</td>
<td>30,00 mm</td>
<td>40,00 mm</td>
<td>60,00 mm</td>
<td></td>
</tr>
</tbody>
</table>
“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 and since we launched this service, no customers was disappointed. You can choose from four options.

<table>
<thead>
<tr>
<th>Xpress0</th>
<th>Xpress4</th>
<th>Xpress7</th>
<th>Xpress10</th>
</tr>
</thead>
<tbody>
<tr>
<td>fastest possible</td>
<td>delivery in 4 work days</td>
<td>delivery in 7 work days</td>
<td>delivery in 10 work days</td>
</tr>
</tbody>
</table>

Please, contact our sales department 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.

<table>
<thead>
<tr>
<th>Compound</th>
<th>Color</th>
<th>Hardness</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>NBR</td>
<td>Black</td>
<td>From 50 ShA to 90 ShA</td>
<td></td>
</tr>
<tr>
<td>HNBR</td>
<td>Black</td>
<td>From 60 ShA to 90 ShA</td>
<td>AED approved materials available</td>
</tr>
<tr>
<td>EPDM</td>
<td>Black</td>
<td>From 50 ShA to 80 ShA</td>
<td></td>
</tr>
<tr>
<td>EPDM Px</td>
<td>Black</td>
<td>From 60 ShA to 70 ShA</td>
<td>Potable water and FDA approved materials available</td>
</tr>
<tr>
<td>FKM</td>
<td>Black, Red, Blue, Green, Brown</td>
<td>From 60 ShA to 98 ShA</td>
<td>FDA, AED, LOW TEMP, OUTGAS approved materials available</td>
</tr>
<tr>
<td>FFKM</td>
<td>Black</td>
<td>From 70 ShA to 90 ShA</td>
<td>AED formulation, Chemical and High Temp resistance materials available</td>
</tr>
<tr>
<td>CR</td>
<td>Black</td>
<td>From 60 ShA to 80 ShA</td>
<td></td>
</tr>
<tr>
<td>FEPM</td>
<td>Black</td>
<td>From 75 ShA to 90 ShA</td>
<td></td>
</tr>
<tr>
<td>VMQ</td>
<td>Red</td>
<td>From 60 ShA to 70 ShA</td>
<td>FDA approved materials available</td>
</tr>
</tbody>
</table>

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.

The aim of FP Flli Paris and the Slib Italy production department, together with partners with years of experience in the manufacturing of Sliding Bearings, is to become a worldwide reference, focusing its strengths on the achievement, the maintenance and the improvement of the following prerogatives:

• Team work in order to reach the maximum satisfaction of the client;
• Constant work of R&D;
• Flexible manufacturing capability for all the different applications;
• Competitive prices and high quality technology;
• Guarantee of the agreed lead times;
• Attention to the quality of the products.

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)
### TF-C, TF-316, TF-316S, TF-625, TF-625S, TF-F51

<table>
<thead>
<tr>
<th>Mechanic Properties</th>
<th>TF-C</th>
<th>TF-316</th>
<th>TF-316S</th>
<th>TF-625</th>
<th>TF-625S</th>
<th>TF-F51</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Supporting Shell</strong></td>
<td>Carbon Steel S235 JR + Sintering</td>
<td>Aisi 316L + Sintering</td>
<td>Aisi 316L + Sintering * + PTFE Modified</td>
<td>Inconel 625 + Sintering</td>
<td>Inconel 625 + Sintering * + PTFE Modified</td>
<td>Duplex A182 F51 + Sintering</td>
</tr>
<tr>
<td>Steel</td>
<td>C 0.17% max Mn 1.40% max P 0.045% max S 0.045% max N 0.009% max</td>
<td>C 0.03%, S 0.025% P 0.030%, Si 0.5% Mn 1.8%, Cr 16.7%, Ni 10.0% Mo 2.00%</td>
<td>C 0.03%, S 0.025% P 0.030%, Si 0.5% Mn 1.8%, Cr 16.7%, Ni 10.0% Mo 2.00%</td>
<td>C 0.10% max Mn 0.05% max Cr 20 + 23%, Mo 8 = 10%, Co 1% max Ta + Nb 3.15 + 4.15% Ni Rest.</td>
<td>C 0.10% max Mn 0.05% max Cr 20 + 23%, Mo 8 = 10%, Co 1% max Ta + Nb 3.15 + 4.15% Ni Rest.</td>
<td>C 0.20% max S &lt;0.15%, P 0.025% Si 0.50%, Mn 1.40% Cr 22.70%, Ni 5.60% Mo 3.20%, N 0.16%</td>
</tr>
</tbody>
</table>

### Supporting Shell

- **PTFE** (polytetrafluoroethylene) modified, colours Black-Gray, thickness 200 – 220 micron, heavy load capacity and self-lubricating under dry operation, lead free, and NON COATED.

### Working Temperature

- **TF-C**
  - Min - 190 °C max + 260 °C
- **TF-316**
  - Min - 190 °C max + 260 °C
- **TF-316S**
  - Min - 190 °C max + 260 °C
- **TF-625**
  - Min - 190 °C max + 260 °C
- **TF-625S**
  - Min - 190 °C max + 260 °C
- **TF-F51**
  - Min - 190 °C max + 260 °C

### Coefficient of Friction

- **TF-C**
  - 0.03-0.20
- **TF-316**
  - 0.03-0.20
- **TF-316S**
  - 0.03-0.20
- **TF-625**
  - 0.03-0.20
- **TF-625S**
  - 0.03-0.20
- **TF-F51**
  - 0.03-0.20

### Max Static Load

- **TF-C**
  - 250 N/mm²
- **TF-316**
  - 250 N/mm²
- **TF-316S**
  - 250 N/mm²
- **TF-625**
  - 250 N/mm²
- **TF-625S**
  - 250 N/mm²
- **TF-F51**
  - 250 N/mm²

### MAX. Dynamic Load

- **TF-C**
  - 140 N/mm²
- **TF-316**
  - 180 N/mm²
- **TF-316S**
  - 180 N/mm²
- **TF-625**
  - 180 N/mm²
- **TF-625S**
  - 180 N/mm²
- **TF-F51**
  - 180 N/mm²

###shaft

- For optimal performance, the shaft surface finishing shall be between Ra 0.4 and Ra 1.6 micron, depending on the application. Hardness 80 - 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 Flli 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.
<table>
<thead>
<tr>
<th>SUPPORTING SHELL</th>
<th>PHYSICAL VAPORIZATION OF THE SPECIAL COATING</th>
<th>MULTILAYER DEPOSIT OF THE SURFACE, MINIMUM HARDNESS 180 HB, AND MINIMUM THICKNESS 15 MICRON.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C 0.03%, S 0.025%, P 0.030%, Si 0.5%, Mn 1.8%, Cr 16.7%, Ni 10.0%, Mo 2.00%</td>
<td>Aisi 316L + Special Coating</td>
<td>PMT-316</td>
</tr>
<tr>
<td>C 0.10% max, Mn 0.05% max Cr 20 ÷ 23 %, Mo 8 ÷ 10 % Co 1% max, Ta + Nb 3.15 ÷ 4.15 % Ni Rest.</td>
<td>Inconel 625 + Special Treatment</td>
<td>PMT-625</td>
</tr>
<tr>
<td>C 0.10% max, Mn 0.05% max Cr 20 ÷ 23 %, Mo 8 ÷ 10 % Co 1% max, Ta + Nb 3.15 ÷ 4.15 % Ni Rest.</td>
<td>Inconel 625 + Special Treatment</td>
<td>PMT-625 plus</td>
</tr>
</tbody>
</table>

**SLIDING LAYERS**

**WORKING TEMPERATURE**

<table>
<thead>
<tr>
<th>Min - 198°C Max +340°C</th>
<th>Min - 198°C Max + 430°C</th>
<th>Min - 198°C Max + 600°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.06 - 0.12</td>
<td>0.06 - 0.12</td>
<td>0.04 - 0.10</td>
</tr>
<tr>
<td>0.4 m/s</td>
<td>0.4 m/s</td>
<td>0.5 m/s</td>
</tr>
</tbody>
</table>

**MAX. STATIC LOAD**

<table>
<thead>
<tr>
<th>Max. Static Load 200 N/mm²</th>
<th>Max. Static Load 200 N/mm²</th>
<th>Max. Static Load 200 N/mm²</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 N/mm²</td>
<td>200 N/mm²</td>
<td>200 N/mm²</td>
</tr>
</tbody>
</table>

**MAX. DYNAMIC LOAD**

<table>
<thead>
<tr>
<th>Max. Dynamic Load (Max. Speed 0.1 m/s)</th>
<th>Max. Dynamic Load (Max. Speed 0.1 m/s)</th>
<th>Max. Dynamic Load (Max. Speed 0.1 m/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>150 N/mm²</td>
<td>150 N/mm²</td>
<td>190 N/mm²</td>
</tr>
</tbody>
</table>

**MAX. DYNAMIC LOAD**

<table>
<thead>
<tr>
<th>Max. Dynamic Load (Max. Speed 0.4 m/s)</th>
<th>Max. Dynamic Load (Max. Speed 0.4 m/s)</th>
<th>Max. Dynamic Load (Max. Speed 0.4 m/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 N/mm²</td>
<td>100 N/mm²</td>
<td>100 N/mm²</td>
</tr>
</tbody>
</table>

**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 Fili 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.

**FAST TRACK SERVICE**

Knowing that in the valves industry the delivery performances and the capability of being reactive in the right moment are keys to success, we offer to our customer a fast track service! We can deliver in 5 working days and less according to the situation, the cost of the fast track will be nothing compared with the benefits of the service!
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