



# SLIDING BEARINGS DIVISION

HYDRAULIC, ENERGY AND METAL INDUSTRY

## TF-F51

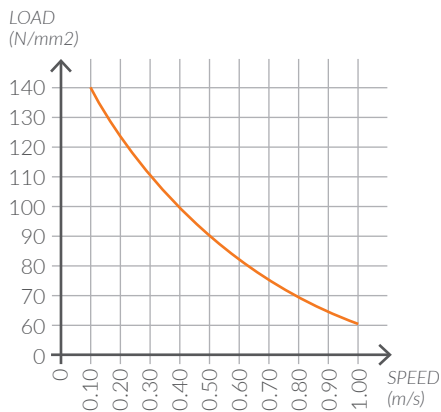
### F51 Duplex + sintering + modified filled PTFE film

#### Supporting shell: F51 Duplex A182

<b>C</b>	0.20%	<b>Cr</b>	22.70%
<b>S</b>	< 0.15%	<b>Ni</b>	5.60%
<b>P</b>	0.025%	<b>Mo</b>	3.20%
<b>Si</b>	0.50%	<b>N</b>	0.16%
<b>Mn</b>	1.40%		

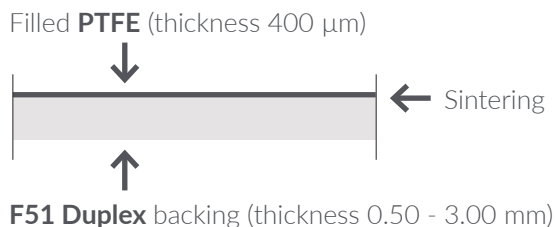
The given values are nominal values from literature.

#### GRAPHIC LOAD / SPEED



Remarks: for more detailed technical information on load/speed tests, please contact our offices.

#### BEARING SECTION



#### SLIDING LAYERS

Filled PTFE film. Colour black-gray. Thickness 200 – 220 μm. Heavy load capacity and self-lubricating under dry operation. Lead free and non-coated.

#### SINTERING

Special adhesive between the filled PTFE film and the backing steel, thickness 60 μm.

#### MECHANICAL PROPERTIES

<b>WORKING TEMPERATURE</b>	min -190°C - max +260 °C
<b>COEFFICIENT OF FRICTION</b>	0.03-0.10
<b>MAX. SPEED</b>	1.00 m/s
<b>MAX. STATIC LOAD</b>	250 N/mm <sup>2</sup>
<b>MAX. DYNAMIC LOAD (max. speed 0.10 m/s)</b>	140 N/mm <sup>2</sup>
<b>MAX. DYNAMIC LOAD (max. speed 1.00 m/s)</b>	60 N/mm <sup>2</sup>

#### SHAFT

For an optimal performance the shaft surface finishing shall be between Ra 0.40 and 1.60 μm, depending on the different applications. Hardness 80 – 160 HB5.

#### CHEMICAL RESISTANCE

<b>HYDROCARBONS</b>	Excellent
<b>HYDROCHLORIC ACID (concentrate to 10%)</b>	Excellent
<b>SULFURIC ACID (concentrate to 10%)</b>	Excellent
<b>METHANE</b>	Excellent
<b>OXYGEN</b>	Excellent
<b>SODIUM HYDROXIDE</b>	Excellent
<b>LIQUID NITROGEN</b>	Excellent
<b>SOLVENTS</b>	Good

For the housing tolerances table please refer to our website or contact us. We can provide you detailed reports on the compatibility tests, performed by the Laboratory AQM S.r.l. in Brescia.

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**Note:** The information in this data-sheet is 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 a long and detailed research, however F.lli Paris S.r.l. 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 them without prior notice.

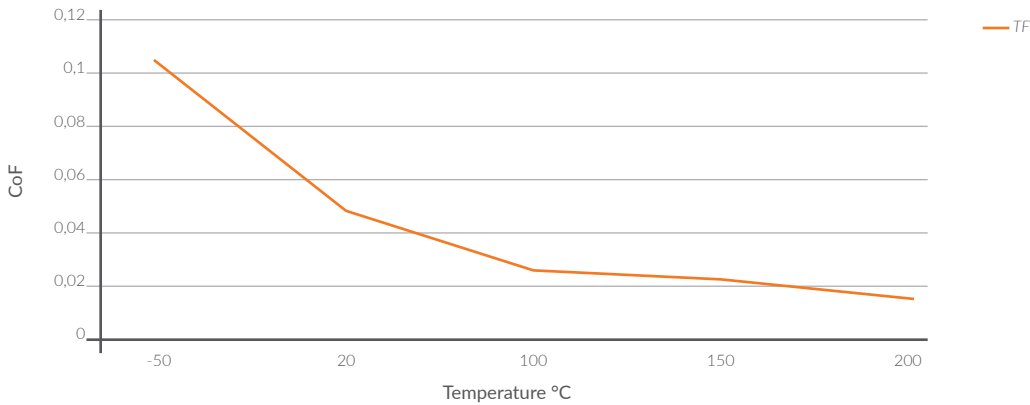
Data sheet n° SBST010 - Rev. 27/03/2019



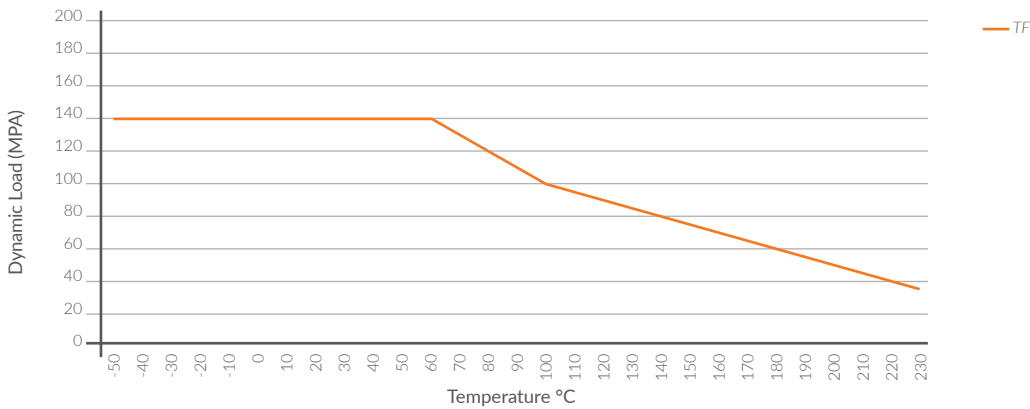
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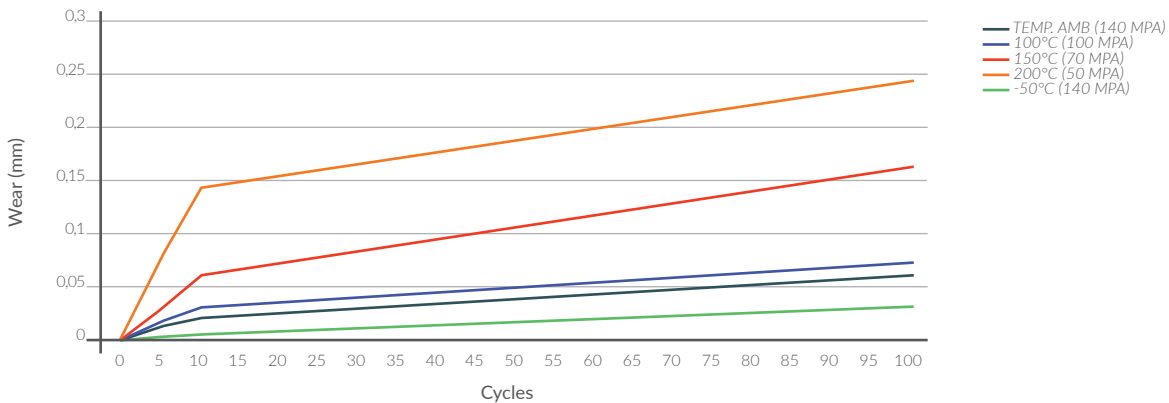
## COEFFICIENT OF FRICTION - TF



## MAX. DYNAMIC LOAD - TF



## INTERNAL SURFACE WEAR - TF



The tests were performed in the Slib Italy laboratory with a Test Bench for the simulation of ball valves

- Types of tested bushes: TX-316, TF-316 and PMT-316
- Shaft roughness of the Test Bench: 0.5 - 0.8 Ra
- Shaft hardness of the Test Bench : 1100 Vickers

- Shaft rotation at 90° with load applied from 0° to 30° and backwars from 30° to 0°
- Rotation speed: 0.083 m/s
- Tests performed with temperatures between -50°C to +200°C