

**PILLAR**

**PILAFLO<sup>®</sup> LBP Curl (Radial) & Thrust Bearing**

**No.4822 & No.4828**

# Stem Bearing

## Lubricant-free Bearing

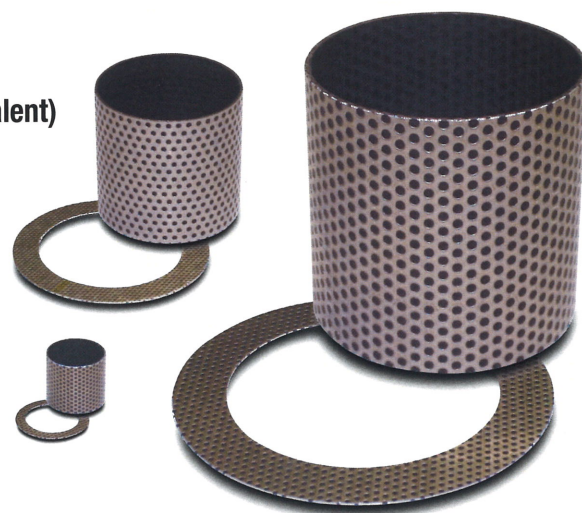
Winded base plate  
Thin PILAFLO<sup>®</sup> film connected firmly to metal plate (316 or equivalent)

## Adhesive-free

Excellent chemical-resisting performance  
Excellent solvent-resisting performance

## Design a Compact unit becomes possible

High-load resistance  
Easy installation  
Light weight



## Specifications

### Temperature

-200~+200°C

### Available Thickness

0.6mm, 0.9mm, 1.63mm

### Maximum Allowable Surface Pressure

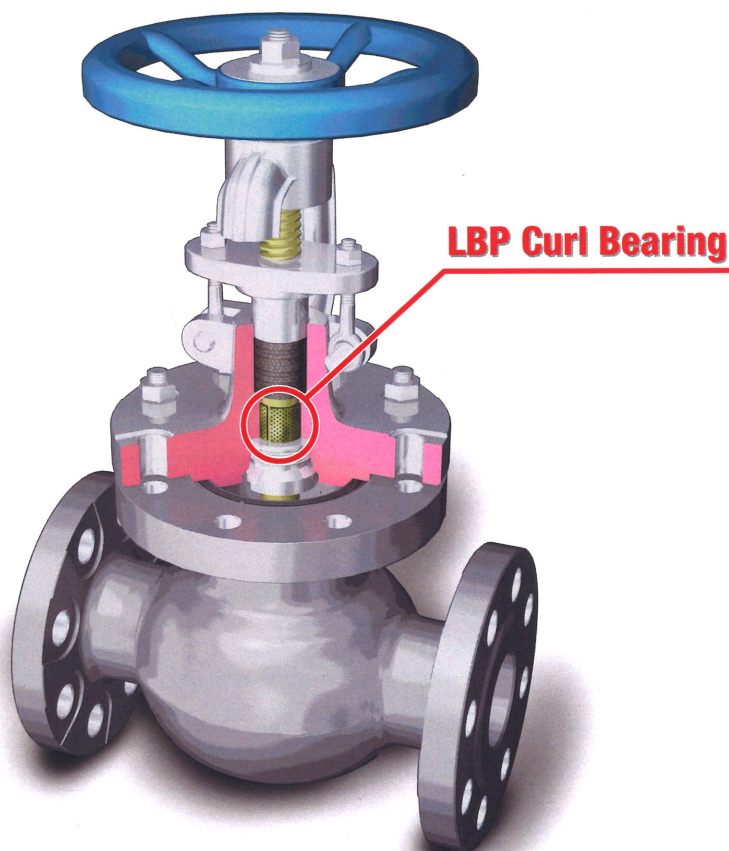
70 N/mm<sup>2</sup> (at room temperature)

## Features

- Since the curl bearing provides the low friction coefficient, it is free from any sticking or slippage (uneven shaft slippage).
- The curl bearing provides the extremely excellent chemical-resisting performance, solvent-resisting performance and weather-resisting performance.
- Since the curl bearing is applicable under thin-wall/high surface pressure condition, it can be designed for compact type.
- Since the curl bearing is so designed that its sliding surface provides the excellent slurry-resisting performance, the shaft will not be scarred.
- Since the curl bearing is little worn, it assures the long service life.
- The curl bearing is easy to handle, and can be attached easily to the housing.

## Requirement on the valves

Stem Finish : Ra0.4 - Ra0.8 (Ry1.6 - Ry3.2)  
Bore of valve body : Ra3.2 - Ra4.5 (Ry12.5 - Ry18)



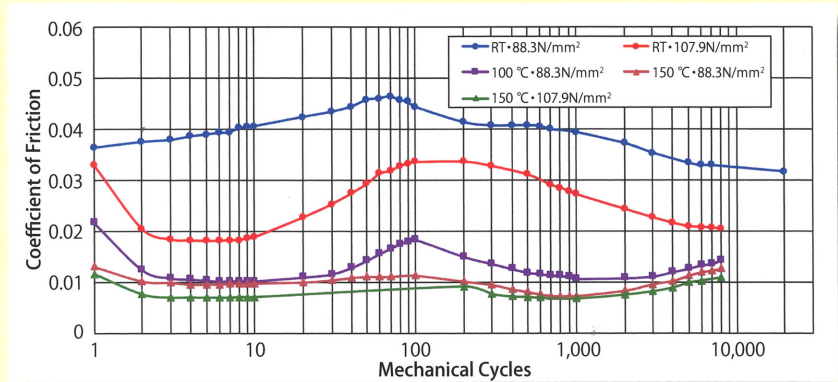
# Sliding coefficient

Using the PLAFLO<sup>®</sup> (which is the lowest coefficient of sliding friction in the lubricant free type bearing) to the ID side, there can be less wear on the stem, maintenance free, and compact design.

The coefficient of sliding friction for this PILAFLO<sup>®</sup> LBP Curl (Radial) Bearing will be low in the High Temperature and High pressure conditions.

In addition, this coefficient will be change a bit depend on the materials of the valve body, or fluid velocity.

Temp. °C	Surface Pressure N/mm <sup>2</sup>	Mechanical Cycles	Coefficient of Friction	Thickness Change mm	Weight Loss g	Worn Height mm	Creep mm	Coefficient of Wear mm/(N/mm <sup>2</sup> ·m/s·Hr)	Spread mm
60	88.3	20,000	0.031~0.046	0.15	0.164	0.08	0.07	$27.5 \times 10^{-4}$	0.4
	107.9	8,000	0.019~0.034	0.146	0.043	0.021	0.125	$14.3 \times 10^{-4}$	0.4
100	88.3	8,000	0.01~0.022	0.055	0.008	0.004	0.051	$3.3 \times 10^{-4}$	0.4
150	88.3	8,000	0.007~0.014	0.16	0.017	0.008	0.152	$6.8 \times 10^{-4}$	0.5
	107.9	8,000	0.007~0.012	0.225	0.017	0.009	0.217	$5.8 \times 10^{-4}$	0.8



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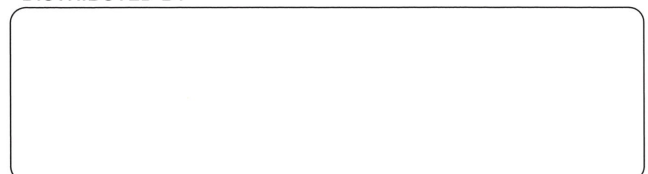
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