

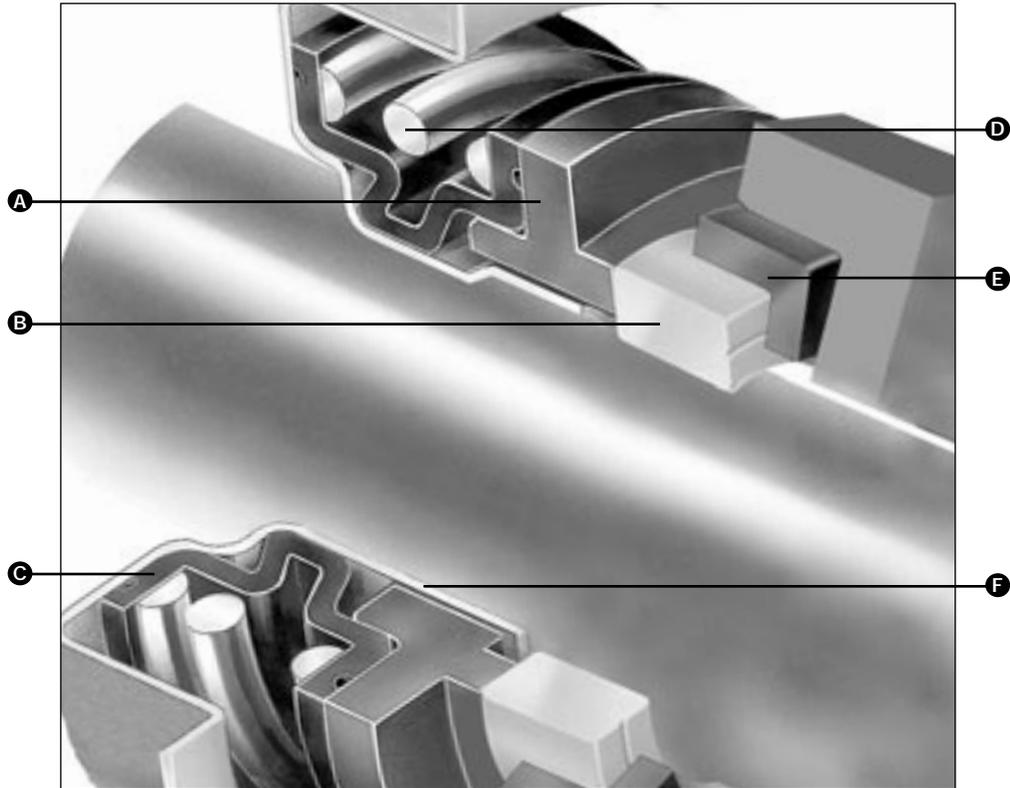


TYPE 6A

Elastomer Bellows Seal

6A

- A – Face/Primary Ring
- B – Seat/Mating Ring
- C – Elastomer Bellows
- D – Spring
- E – Seat Cup
- F – Retainer



Product Description

The Type 6A is a compact, single-spring, elastomer bellows mechanical seal.

- Type 6A seals are designed for use in small centrifugal water pumps, deep and shallow-well jet pumps, swimming pool pumps, submersible pumps and wastewater pumps.

Performance Capabilities

- Temperature:
-40°C to +205°C / -40°F to +400°F (depending on materials used)
- Pressure:
ID: 0.5 bar/7.20 psi
OD: Up to 5 bar g/75 psig
- Speed:
Up to 10,000 rpm (depending on seal size and face materials)
Up to 2500 fpm (13 m/s)
- End Play/Axial Float Allowance:
0.127mm/0.005" FIM max.
- Shaft Runout: 0.13mm [0.005" per inch] FIM max.

* For Larger Runouts, Consult John Crane Engineering.

Design Features

- **Sealing Faces**
Precision surface finish optimizes the service life and reliability. Materials designed to meet the broadest range of applications.
- **Flexible Bellows**
Full convolution elastomer bellows provides maximum flexibility in compensating for shaft movement and wear.
- **Spring**
Coil spring provides consistent face loading through extreme working conditions.
- **Positive Drive**
Seal face torsional movement is restricted by dent and groove positive drive arrangement to minimize torsional stress on the flexible bellows.
- **Rotating Mating Ring**
Rotating mating ring allows operation at higher speeds than comparable rotating seal head arrangements.

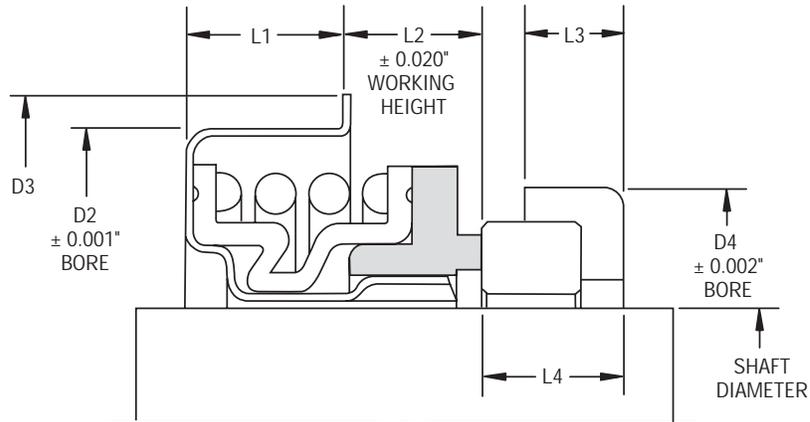


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Type 6A Typical Arrangement/Dimensional Data

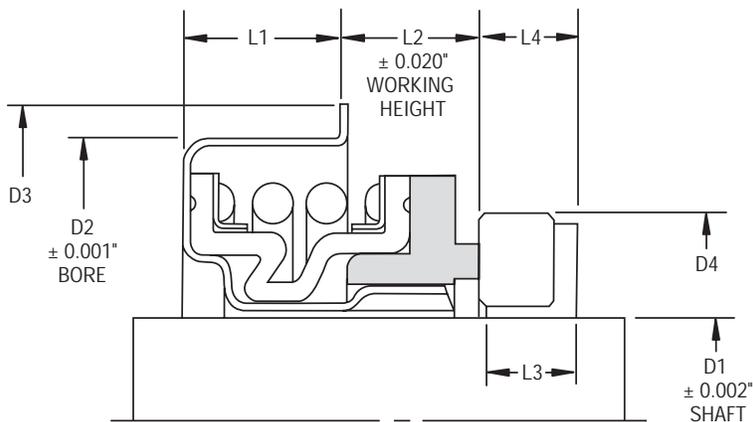
Two-Piece Seal with an OD Cup Mounted Mating Ring as Standard



Type 6A Dimensional Data* (inches)

Shaft Diameter		D2	D3	D4	L1	L2	L3	L4
Nominal	MAX							
0.375	0.380	1.125	1.250	0.875	0.312	0.062	0.218	0.312
0.500	0.505	1.125	1.375	1.000	0.344	0.203	0.218	0.312
0.625	0.635	1.436	1.625	1.250	0.338	0.265	0.343	0.406
0.750	0.760	1.576	1.718	1.375	0.375	0.235	0.312	0.406

Two-Piece Seal with Optional Ferrules and Optional ID Cup Mounted Mating Ring



Type 6A Dimensional Data* (inches)

D1	D2	D3	D4	L1	L2	L3	L4
0.500	1.125	1.375	0.924	0.344	0.203	0.198	0.213
0.625	1.436	1.625	1.125	0.338	0.265	0.198	0.213
0.750	1.576	1.718	1.187	0.375	0.235	0.203	0.218

*Designs for other sizes are available.



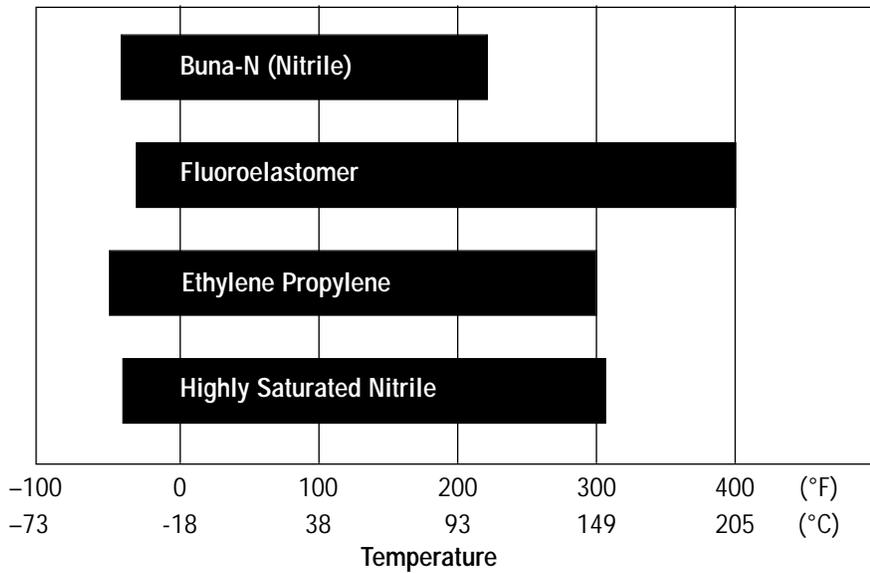
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Elastomer Bellows Seal

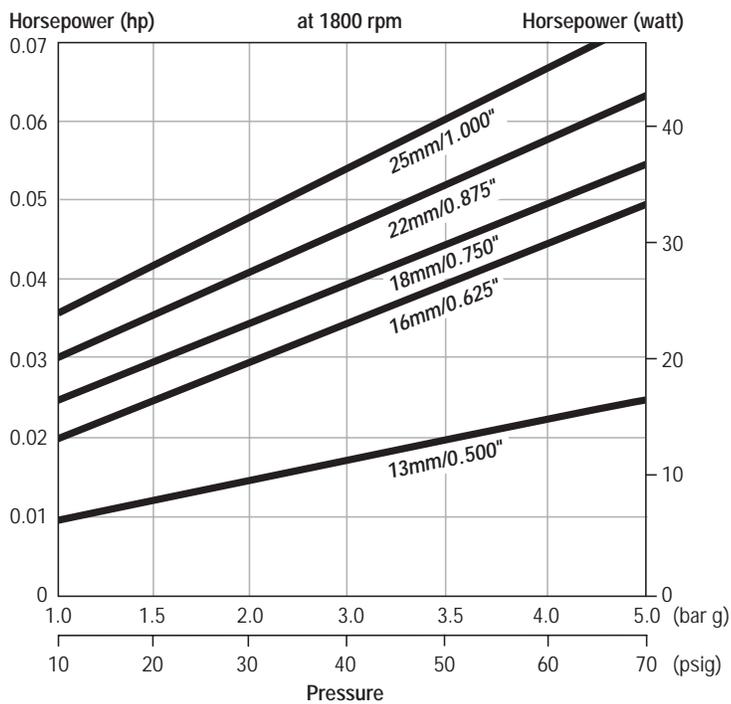
Criteria for Installation

Shaft/Sleeve	Limits
Surface Finish	32 to 63 Ra
Out of Roundness	.002"
Axial End Play	± 0.005"

Elastomer Temperature Limits



Energy Consumption





TYPE 6A

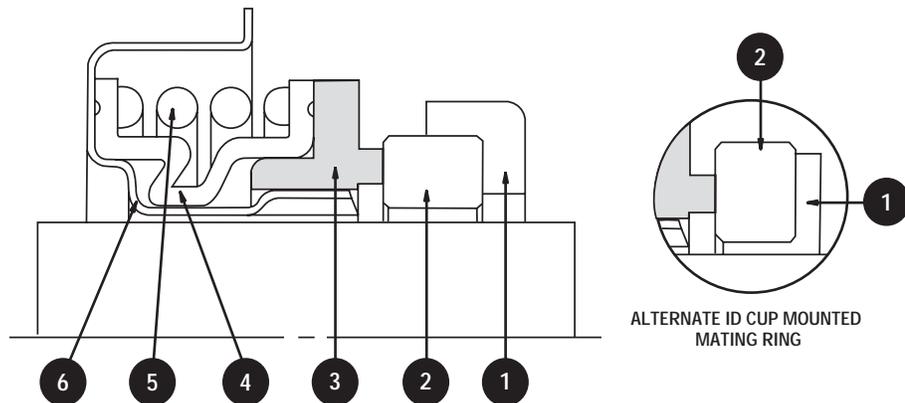
Elastomer Bellows Seal

Materials of Construction

SEAL COMPONENTS	MATERIALS
Face/Primary Ring	Cranecarb (Phenolic Carbon Graphite) Carbon Silicon Carbide
Seat/Mating Ring	Alumina Ceramic Silicon Carbide
Retainer	18-8 Stainless Steel
Bellows Seat Cup	Buna-N (Nitrile) Fluoroelastomer Ethylene Propylene Highly Saturated Nitrile (HNBR)
Spring	18-8 Stainless Steel

Item.

- ① – Seat Cup
- ② – Seat/Mating Ring
- ③ – Face/Primary Ring
- ④ – Elastomer Bellows
- ⑤ – Spring
- ⑥ – Retainer



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