

RELY ON EXCELLENCE

LY9DSTT

Mechanical seals | Mechanical seals for pumps | Metal bellows seals



Features

- API 682 Category 2 and 3, Type C, Arrangement 3 seal
- Dual seal in face-to-face arrangement
- Balanced
- Cartridge unit
- Stationary metal bellows
- Shrink fitted seal rings and solid mating rings

Advantages

- Very compact design
- Suitable for higher speeds
- Good followability due to no influence from run-out, squareness or vibration of the shaft
- Low heat generation and power consumption due to narrow seal face width
- Longer seal life
- Also available in double ply design
- Suited for applications with extreme high and low temperatures
- Absence of dynamic O-Ring eliminates/reduces seal face hang-up
- Bellows design minimizes variation in face load due to shaft expansion or face wear
- Resistant to abrasive particles in the medium, no shaft or sleeve fretting

Operating range

Shaft diameter: d1 = 20 ... 110 mm (0.79" ... 4.33")
 Pressure single ply bellows: p = vacuum ... 20 bar (... 290 PSI)
 Pressure double ply bellows: p = vacuum ... 35 bar (... 508 PSI)
 Temperature: t = -130 °C ... +400 °C (-202 °F ... +752 °F)
 Sliding velocity: vg ... 50 m/s (... 164 ft/s)

Materials

Seal rings: Blister resistant carbon, Silicon carbide SSiC (Q1), RBSiC (Q2)
 Mating rings: Silicon carbide SSiC (Q1), RBSiC (Q2)
 Bellows: Inconel® 718 (M6)
 Secondary seals: Graphite (G)
 Metal parts: CrNiMo steel 316 (G), Carpenter® 42 (T4)

Standards and approvals

- API 682 / ISO 21049
- API 682 4th ed. Cat. 2/3 - 3CW-FF

Recommended applications

- Refining technology
- Oil and gas industry
- Petrochemical industry
- Chemical industry
- Power plant technology
- LPG plants
- API 610 / ISO 13709 pumps
- Process pumps

Recommended piping plans

Process side:

[API Plan 01](#)
[API Plan 02](#)
[API Plan 03](#)
[API Plan 11](#)
[API Plan 12](#)
[API Plan 13](#)
[API Plan 14](#)
[API Plan 21](#)
[API Plan 22](#)
[API Plan 23](#)
[API Plan 31](#)
[API Plan 32](#)
[API Plan 41](#)

Between seals:

[API Plan 52](#)
[API Plan 53A](#)

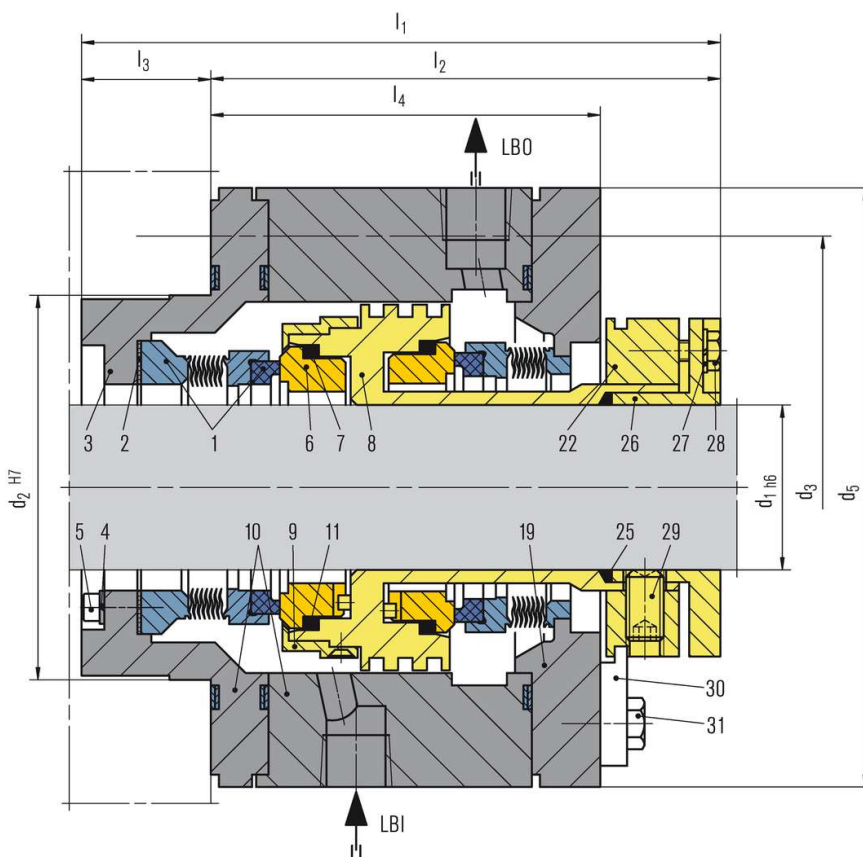
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API Plan 53B
API Plan 53C
API Plan 54
API Plan 55

Atmospheric side*:

API Plan 61
API Plan 62
API Plan 65A
API Plan 65B

* Throttle bushing on request



Item	Description
1	Seal ring with bellows unit
2	Gasket
3, 10, 19	Gland plate
4, 27	Spring washer
5	HSH Cap screw
6	Mating ring
7, 11, 25	Graphite ring
8	Seal sleeve with pumping ring
9	Retaining ring
22	Drive collar
26	Clamp sleeve
28, 31	Hexagon bolt
29	Set screw
30	Setting device

LBO Liquid barrier OUT
LBI Liquid barrier IN

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Dimensions

API/d ₁	API/d ₂	API/d ₃	d ₅	l ₁	l ₂	l ₃	l ₄
20	70	105	-	-	-	-	-
30	80	115	138	145	98	47	73
40	90	125	148	151	97	54	73.5
50	100	140	168	149	107	42	84
60	120	160	188	162	107	55	80
70	130	170	198	169	107	62	81.5
80	140	180	208	162	107	55	79
90	160	205	248	180	117	63	88.5
100	170	215	258	184	117	67	85
110	180	225	268	189	117	72	83.5

Dimensions in millimeter, for single ply bellows - dimensions for double ply bellows on request.