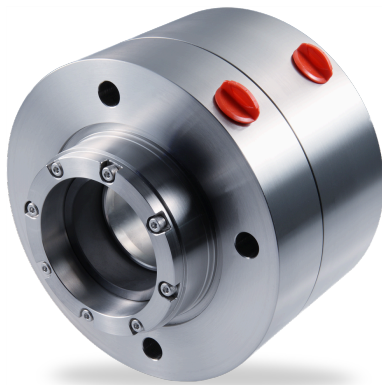


RELY ON EXCELLENCE

MBS682P-D

Mechanical seals | Mechanical seals for pumps | Metal bellows seals



Features

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

Advantages

- Compact 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
- Also available in double ply design

Operating range

Shaft diameter: $d_1 = 20 \dots 110 \text{ mm}$ (0.79" ... 4.33")
 Pressure single ply bellows: $p = \text{vacuum} \dots 25 \text{ bar}$ (... 363 PSI)*
 Pressure double ply bellows: $p = \text{vacuum} \dots 35 \text{ bar}$ (... 508 PSI)
 Temperature: $t = -75 \text{ °C} \dots +400 \text{ °C}$ (-103 °F ... +752 °F)
 Sliding velocity: $v_g \dots 23 \text{ m/s}$ (... 75 ft/s)

* $p > 20 \text{ bar}$ (290 PSI) on request.

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-BB

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](#)

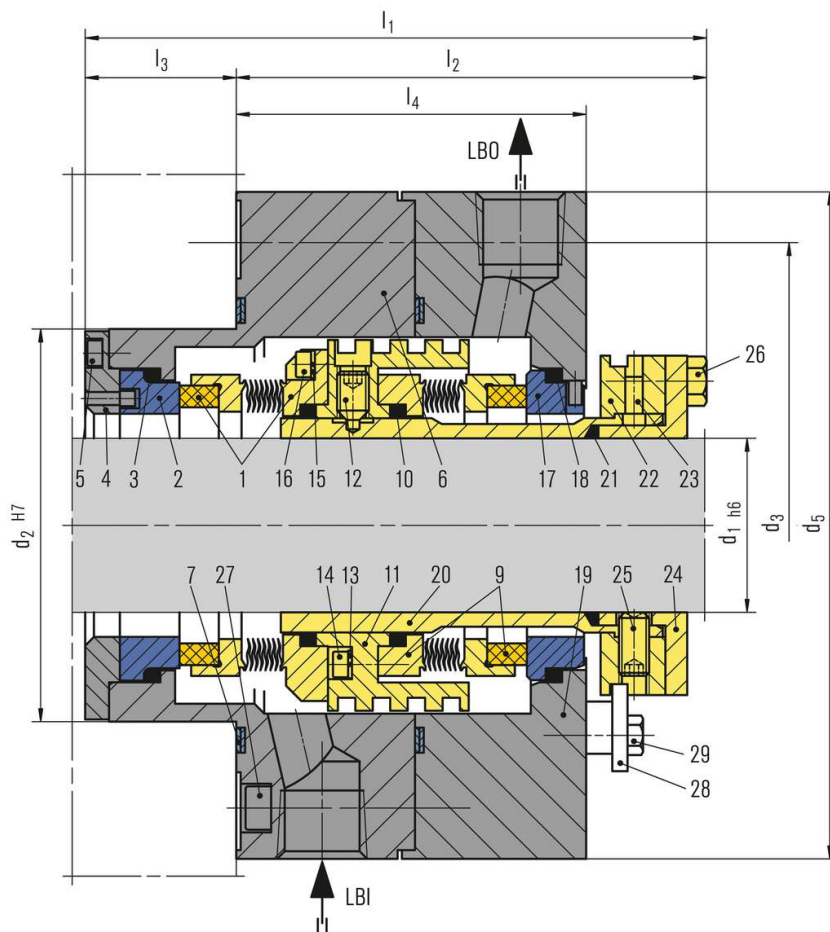
RELY ON EXCELLENCE

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, 9	Seal ring with bellows unit
2, 17	Mating ring
3, 10, 18, 21	Graphite ring
4	Clamp ring
5, 14, 16, 27	HSH Cap screw
6, 19	Gland plate
7	Gasket
11	Pumping ring
12, 25	Set screw
13, 15	Spring washer
20	Seal sleeve
22	Drive collar
23	Pin
24	Clamping sleeve
26, 29	Hexagon bolt
28	Setting device

LBO Liquid barrier OUT
 LBI Liquid barrier IN

RELY ON EXCELLENCE

Dimensions

API/d ₁	API/d ₂	API/d ₃	d ₄	d ₅	l ₁	l ₂	l ₃	l ₄
20	70	105	-	132	136	98	38	73
30	80	115	-	138	138.5	97.5	41	72.5
40	90	125	-	150	142	98	44	73
50	100	140	-	175	145	105	40	80
60	120	160	-	188	152	107	45	82
70	130	170	-	201	159	107	52	82
80	140	180	-	213	161	107	54	82
90	160	205	-	239	163	115	48	88
100	170	215	-	252	165	115	50	88

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