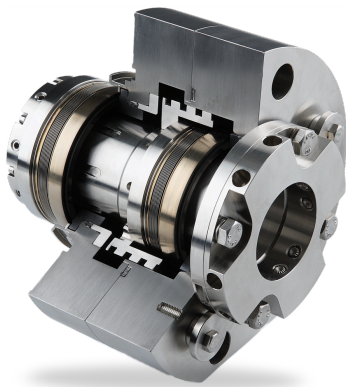


RELY ON EXCELLENCE

MBS682-PTA

Mechanical seals | Mechanical seals for pumps | Metal bellows seals



Features

- API 682 Category 2 and 3, Type C, Arrangement 2 and 3 seal
- Dual seal in face-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: $t = -75 \text{ }^\circ\text{C} \dots +400 \text{ }^\circ\text{C}$ (-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 - 2CW-CW
- API 682 4th ed. Cat. 2/3 - 3CW-FB

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](#)

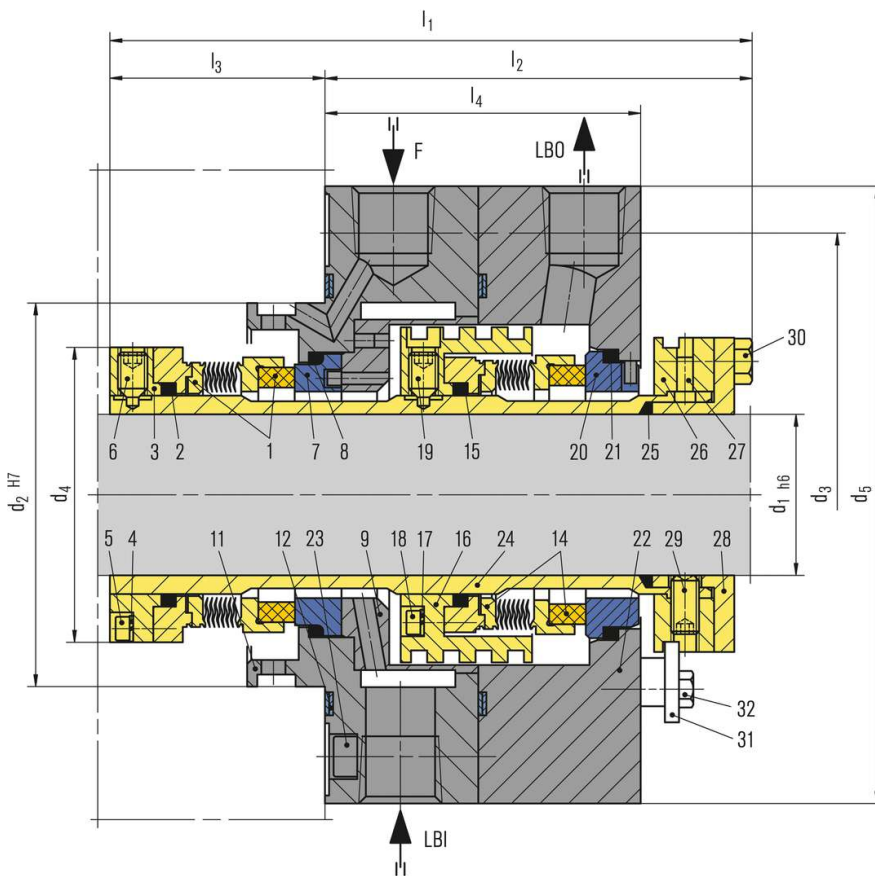
RELY ON EXCELLENCE

API Plan 53A
 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



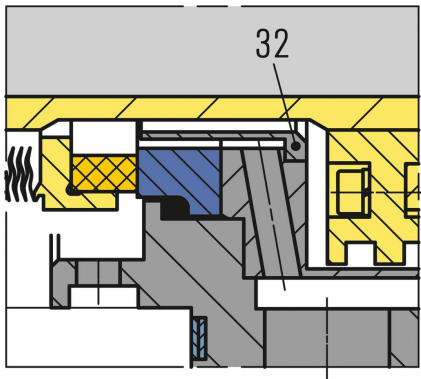
Item	Description
1, 14	Seal ring with bellows unit
2, 8, 15, 21, 25	Graphite ring
3	Collar
4, 17	Spring washer
5, 18, 23	HSH Cap screw
6, 19, 29	Set screw
7, 20	Mating ring
9	Clamp sleeve
11, 22	Gland plate
12	Gasket
16	Pumping ring
24	Seal sleeve
26	Drive collar
27	Pin
28	Clamping sleeve
30, 32	Hexagon bolt
31	Setting device

F Flush
 LBO Liquid barrier/buffer OUT
 LBI Liquid barrier/buffer IN

RELY ON EXCELLENCE

Installation, details, options

32 Guiding sleeve (optional)



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	50.8	132	145	98	47	73
30	80	115	60.3	138	152,5	97,5	55	72,5
40	90	125	69.9	150	155	98	57	73
50	100	140	82.6	175	157	105	52	80
60	120	160	93.7	188	164	107	57	82
70	130	170	104.8	201	169	107	62	82
80	140	180	117.5	213	173	107	66	82
90	160	205	130.2	239	176	115	61	88
100	170	215	136.5	252	177	115	62	88

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