

RELY ON EXCELLENCE

SH-D

Mechanical seals | Mechanical seals for pumps | Engineered seals



Features

- Dual seal in face-to-face arrangement
- Balanced
- Cartridge unit
- Stationary multiple springs
- Shrink-fitted seal rings
- Rugged mating rings

Advantages

- Engineered seal for extended requirements
- Deformation-optimized seal for high pressure and high sliding velocity
- Insensitive to shaft deflections due to stationary design
- Version with loose-fitted seal rings available, for extreme applications

Operating range

Shaft diameter:

$d_1 = 40 \dots 110$ (250) mm (1.57" ... 4.33 (9,84)"

Pressure:

$p_1 = 42$ (150) bar (609 (2,175) PSI)

Temperature:

$t = -40 \text{ }^\circ\text{C} \dots +176$ (+200) $^\circ\text{C}$ (-40 $^\circ\text{F} \dots +350$ (+394) $^\circ\text{F}$)

Sliding velocity:

$v_g = 23$ (60) m/s (76 (197) ft/s)

Axial movement: $\pm 3,0$ mm

Materials

Seal rings: Blister resistant carbon, Silicon carbide SSiC (Q1), RBSiC (Q2, Q3)

Mating rings:

Silicon carbide SSiC (Q1), RBSiC (Q2)

Secondary seals:

EPDM (E), NBR (P), FKM (V), FFKM (K)

Springs: Hastelloy® C-4 (M)* and C-276 (M5)

Metal parts: CrNiMo steel 316 (G) or equivalent,

optional materials on request.

* EagleBurgmann standard

Standards and approvals

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

Recommended applications

- Oil and gas industry
- Refining technology
- Chemical industry
- Hot water
- Sour water
- Caustic soda
- Amines
- Crystallizing media
- Crude oil
- Process water
- Crude oil feed pumps
- Injection pumps
- Multiphase pumps

Recommended piping plans

Process side*:

[API Plan 01](#)

[API Plan 02](#)

[API Plan 03](#)

[API Plan 11](#)

[API Plan 12](#)

[API Plan 13](#)

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API Plan 14
API Plan 21
API Plan 22
API Plan 31
API Plan 32
API Plan 41

Between seals:

API Plan 53A
API Plan 53B
API Plan 53C
API Plan 54

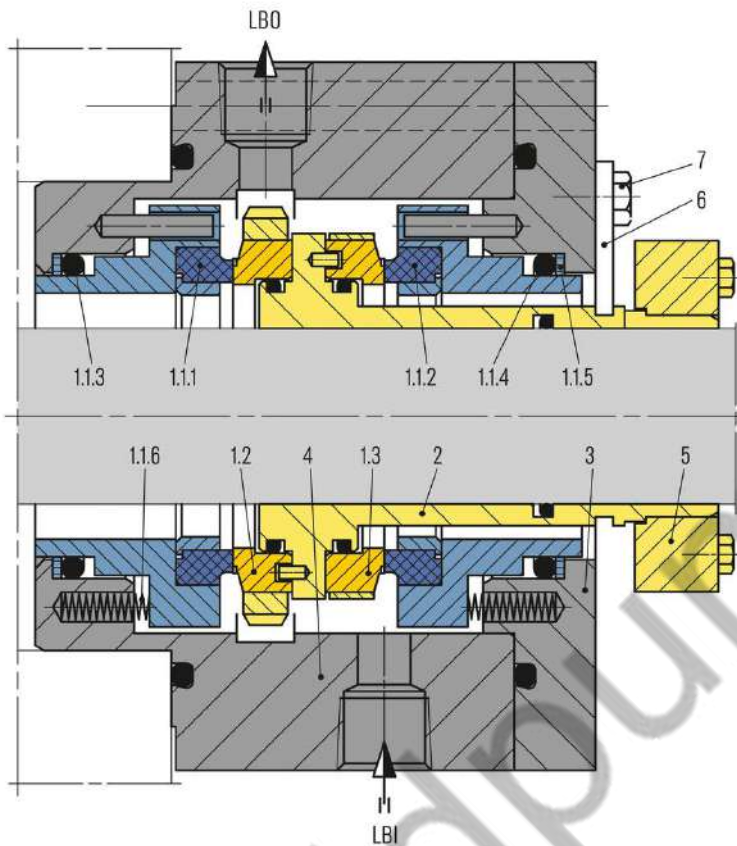
Atmospheric side**:

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

* Piping plans 11 ... 41: Integration in seal to be dimensionally checked.

** Throttle bushing on request.

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Item	Description
1.1.1, 1.1.2	Seal ring
1.1.3, 1.1.4	O-Ring
1.1.5	Thrust ring
1.1.6	Spring
1.2, 1.3	Mating ring
2	Seal sleeve
3, 4	Gland plate
5	Shrink disk
6	Setting device
7	Hexagon bolt

LBO Liquid barrier OUT
LBI Liquid barrier IN

Drawing shows type SHPV-D

Dimensions

Dimensions on request.