EagleBurgmann
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RELY ON EXCELLENCE

LL9DJUE

API 682 4th edition | Mechanical seals | Balanced pusher seals

Features

- API 682 Category 2 and 3, Type A, Arrangement 2 seal
- Dual seal in face-to-back arrangement
- Dry contact outer seal (containment seal)
- Balanced
- Cartridge unit
- Stationary multiple springs
- Solid seal faces

Advantages

- Outer seal which can be used for flashing as well as non-flashing applications prevents hazardous emissions in case of inboard seal failure
- Low heat generation and power consumption due to narrow seal face width of inner seal
- Longer seal life
- Good followability due to no influence from run-out, squareness or vibration of the shaft
- Pressure-balanced design prevents mating ring being forced out under reverse pressure
- No damage to shaft sleeve as dynamic O-Ring is not in direct contact with the sleeve

Operating range

Shaft diameter: d1 = 20 ... 110 mm (0.79" ... 4.33")
Pressure (primary seal): p = vacuum ... 60 bar (870 PSI)
Pressure (secondary seal): p = 2.75 bar (40 PSI) normal operation,
max. 60 bar (870 PSI) in wet operation
Temperature: -40 °C ... +176 °C (-40 °F ... +349 °F)*
Sliding velocity: ... 25 m/s (82 ft/s)

* Engineered up to 260 °C (500 °F) with FFKM (K) secondary seals.

Materials

Seal ring (primary seal): Blister resistant carbon,
Silicon carbide SSiC (Q1), RBSiC (Q2)
Seal ring (secondary seal): Special carbon
Mating rings:
Silicon carbide SSiC (Q1), RBSiC (Q2)
Secondary seals:
FKM (V), FFKM (K), EPDM (E), NBR (P)
Springs: Hastelloy® C-276 (M5)
Metal parts: CrNiMo steel 316 (G)

Standards and approvals

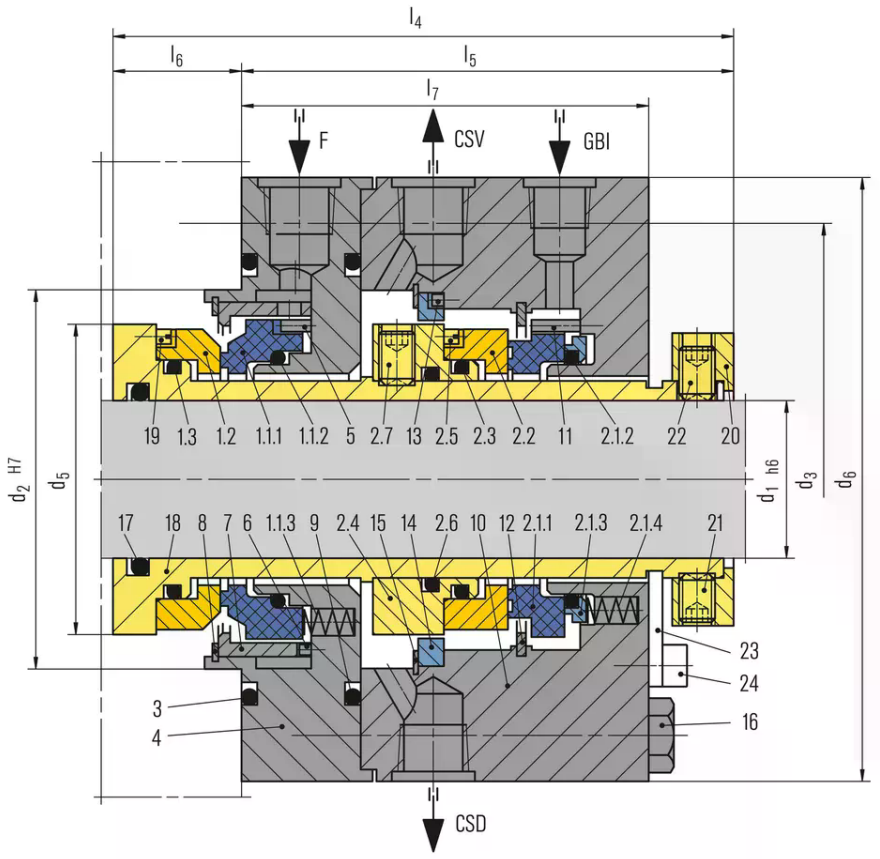
- API 682 / ISO 21049
- API 682 4th ed. Cat. 2/3 - 2CW-CS

Recommended applications

- Light volatile hydrocarbons
- Refining technology
- Oil and gas industry
- Petrochemical industry
- Chemical industry
- Power plant technology
- CCUS
- Alternative fuels production
- 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 71
API Plan 72
API Plan 75
API Plan 76

Item	Description
1.1.1, 2.1.1	Seal ring
1.1.2, 1.3, 2.1.2, 2.3,	
2.6, 3, 9, 17	O-Ring
1.1.3, 2.1.4	Spring
1.2, 2.2	Mating ring
2.1.3	Thrust ring
2.4	Collar
2.5, 19	Drive screw
2.7, 21, 22	Set screw
4, 10	Gland plate
5, 6, 11, 13	Pin
7	Flow distributor
8, 12, 15	Retaining ring
14	Throat bushing
16	Hexagon bolt
18	Seal sleeve
20	Drive collar
23	Setting device
24	HSH Cap screw

F Flush
CSV Containment seal vent
GBI Gas buffer IN
CSD Containment seal drain

Dimensions

API/d_1	API/d_2	API/d_3	d_5	d_6	l_4	l_5	l_6	l_7
20	70	105	51	128	128	98	30	80
30	80	115	63	138	130	98	32	80
40	90	125	74	148	133	98	35	80
50	100	140	84	168	142	107	35	87
60	120	160	99	188	142	107	35	87
70	130	170	108	198	142	107	35	87
80	140	180	120	208	142	107	35	87
90	160	205	138	248	150	115	35	93
100	170	215	148	258	150	115	35	93
110	180	225	157	268	155	115	40	93

Dimensions in millimeter