EagleBurgmann
a member of EKK and FREUDENBERG

RELY ON EXCELLENCE

LL9DTUE

API 682 4th edition product range | 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
- 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
- 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 ... 42 bar (... 609 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: ... 23 m/s (... 75 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

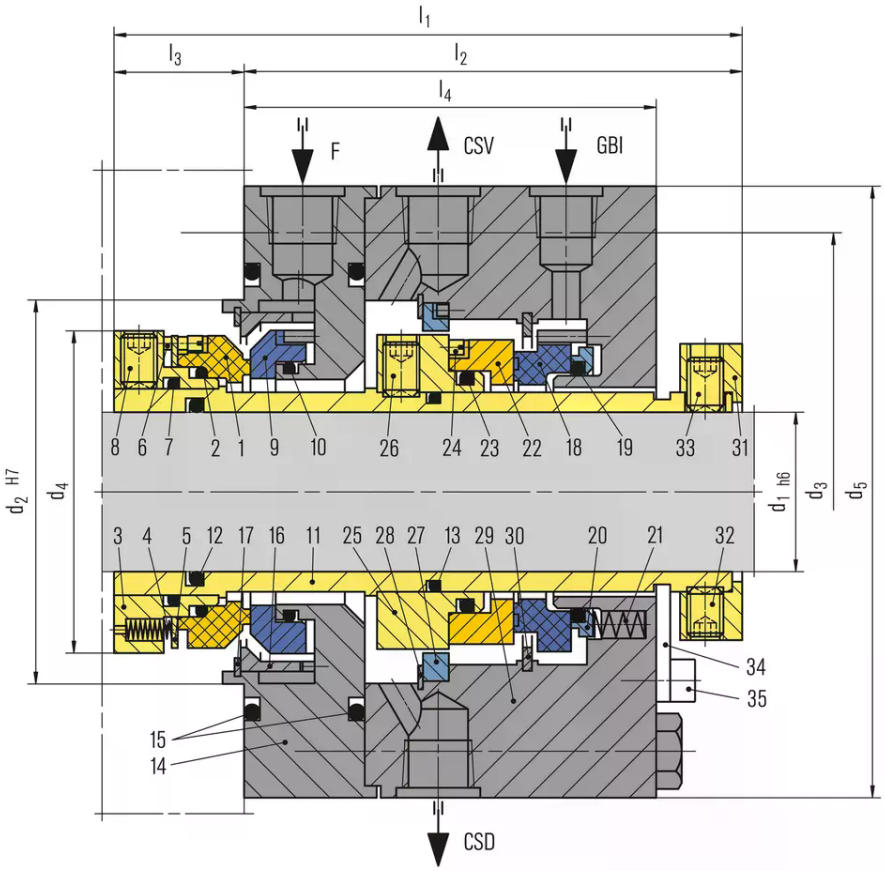
- Light volatile hydrocarbons
- Refining technology
- Oil and gas industry
- Petrochemical industry
- Chemical industry
- Power plant technology
- CCUS
- Alternative fuels production
- LPG plants
- API 610 / ISO 13709 pumps
- Process pumps

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

eagleburgmann.com
info@eagleburgmann.com

All technical specifications are based on extensive tests and our many years of experience. The diversity of possible applications means, however, that they can serve only as guide values.
We must be notified of the exact conditions of application before we can provide any guarantee for a specific case. Subject to change.



API Plan 32
API Plan 41

Between seals:
API Plan 71
API Plan 72
API Plan 75
API Plan 76

Item	Description
1, 18	Seal ring
2, 7, 10, 12, 13, 15, 19, 23	O-Ring
3, 25	Collar
4, 21	Spring
5, 20	Thrust ring
6, 24	Drive screw
8, 26, 32, 33	Set screw
9, 22	Mating ring
11	Seal sleeve
14, 29	Gland plate
16	Flow distributor
17, 28, 30	Retaining ring
27	Throat bushing
31	Drive collar
34	Setting device
35	HSH Cap screw

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

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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	-	-	-	-	-	-
30	80	115	69	138	130	98	32	80
40	90	125	79	148	133	98	35	80
50	100	140	89	168	142	107	35	87
60	120	160	105	188	142	107	35	87
70	130	170	115	198	142	107	35	87
80	140	180	125	208	142	107	35	87
90	160	205	137	248	150	115	35	93
100	170	215	150	258	150	115	35	93
110	180	225	163	268	155	115	40	93

Dimensions in millimeter

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