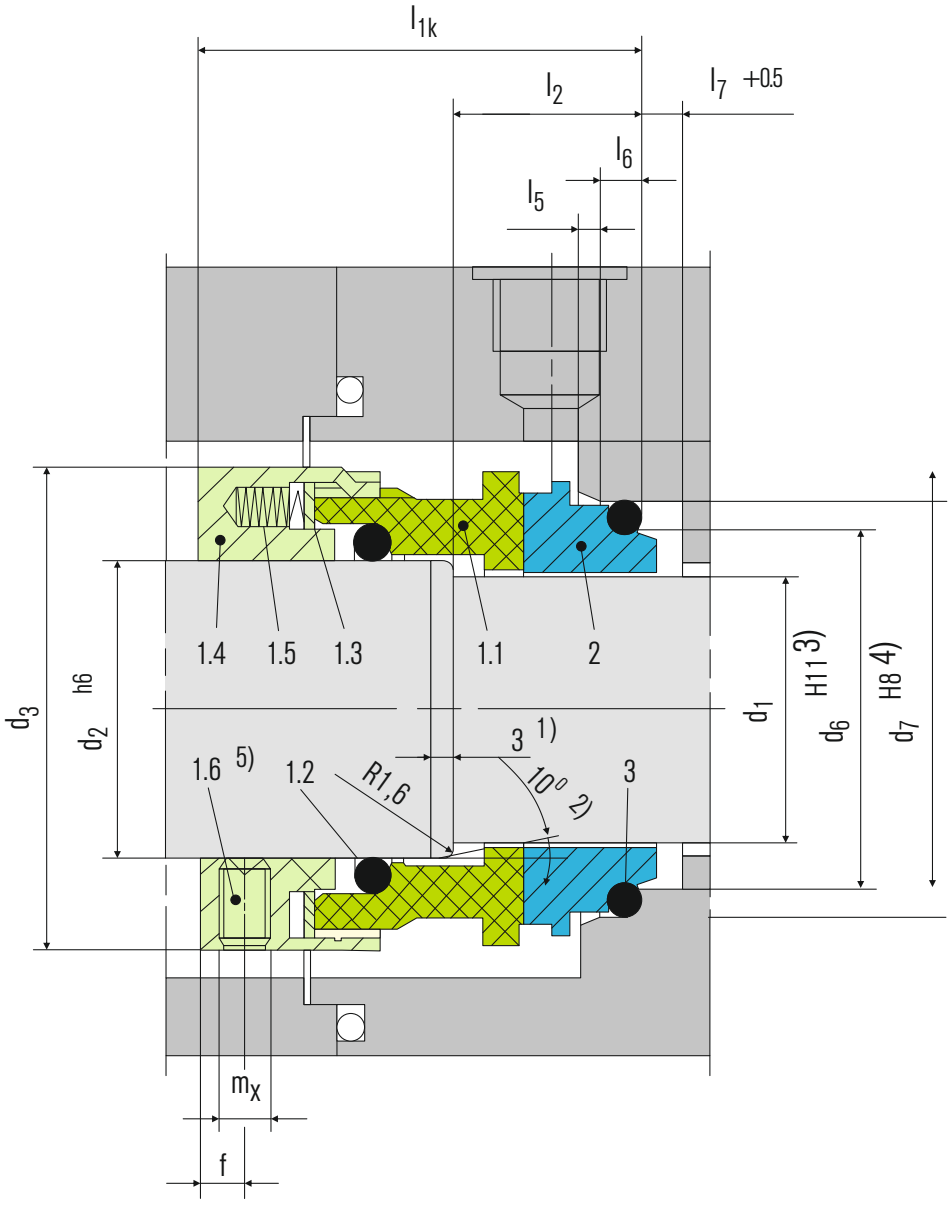
Product Description

1. Balanced
2. Does not open in the event of buffer pressure failure, self closing at pressure reversal
3. For stepped shafts
4. Gas-lubricated
5. Rotating spring
6. Single or double seal available
7. Standard version with U-grooves, V-grooves optional (dependent of direction of rotation)

Technical Features

1. Applicable as containment seal acc. to API 682
2. Contact-free operation, no friction
3. No differential pressure required with hard/soft material combination



Typical Industrial Applications

Chemical industry
Refining technology
Gases and liquids (single seals only gas)
Gases and liquids which must not get into the atmosphere (dual seal)
Gases not harmful to the environment (single seal)
Fans
Small steam turbines
Blowers
Roots compressors
Pumps

Performance Capabilities

Shaft diameter: d1 = 28 ... 125 mm (1.10" ... 4.92")
Pressure: p1 = 25 bar (363 PSI)
Temperature: t* = -20 °C ... +170 °C (-4 °F ... +338 °F)
Sliding velocity: vg = 4 ... 25 m/s (13 ... 82 ft/s)
* Depending on resistance of O-Rings

Materials

Seal face: Carbon graphite antimony impregnated (A), Silicon carbide (Q2), alternatively: Carbon graphite resin impregnated (B), Silicon carbide (Q1) Seat: Silicon carbide (Q1, Q2),
Silicon carbide (Q19, Q29) with seal face in Q1 resp. Q2
Metal parts: CrNiMo steel (G)

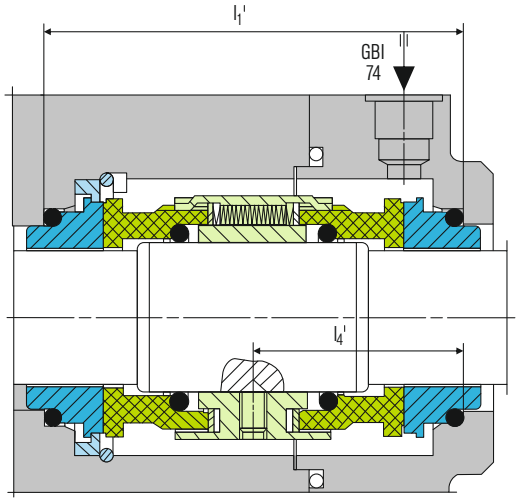
Standards

EN 12756
API 682 / ISO 21049

Item	Part no.	Description
1.1	472	Sliding face
1.2	412.1	O-Ring
1.3	474	Thrust ring
1.4	485	Drive collar
1.5	477	Spring
1.6	904	Set screw
2	475.1	Seat
3	412.3	O-Ring
DIN 24250		

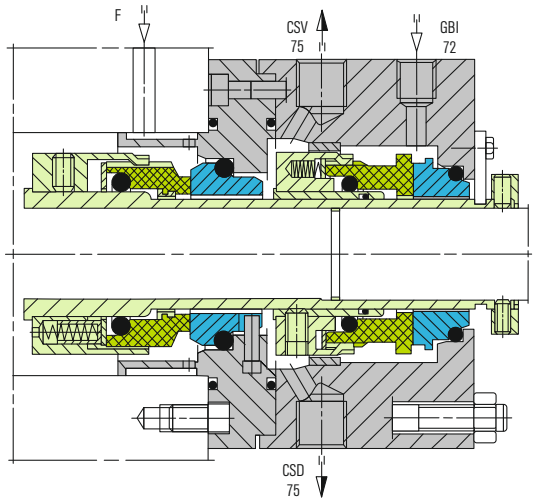
1) d1 > 105: 2 mm x 30°
2) d1 > 105: 30°
3) d1 > 105: +0.1
4) d1 > 105: H7
5) 3 x 120°

Design Variations



GSPH-KD

Double seal back-to-back, buffered with gas, according to API 682 configuration 3NC-BB, Plan 74. Items, descriptions and unspecified dimensions as for GSPH-K.
Pressure: p1 = ... 22 bar (319PSI), p3 = ... 25 bar (363 PSI) (over the whole nominal diameter range, higher values on request).
Differential pressure Δp = min. 3 bar (44 PSI)
Other operating limits as GSPH-K.



GSPH Tandem arrangement

acc. to API 682 3rd Edition.
Configuration: 2CW-CS, Plan 72, 75, 76.
For media with a gaseous leakage. B750VN on the product side. In case of a failure, the GSPH on the atmosphere side works as a liquid seal.

Dimensional Data

Dimensions in millimeter

d_1	d_2	d_3	d_6	d_7	l_{1K}	l1'	l_2	l4'	l_5	l_6	l_7	f	m_x
28*	33	53	37.0	43.0	50.0	89	20	44.5	2.0	5	9	5	M6
30*	35	55	39.0	45.0	50.0	89	20	44.5	2.0	5	9	5	M6
32*	38	60	42.0	48.0	50.0	89	20	44.5	2.0	5	9	5	M6
33*	38	60	42.0	48.0	50.0	89	20	44.5	2.0	5	9	5	M6
35*	40	62	44.0	50.0	50.0	89	20	44.5	2.0	5	9	5	M6
38*	43	65	49.0	56.0	52.5	95	23	47.5	2.0	6	9	5	M6
40*	45	67	51.0	58.0	52.5	95	23	47.5	2.0	6	9	5	M6
43*	48	70	54.0	61.0	52.5	95	23	47.5	2.0	6	9	5	M6
45*	50	72	56.0	63.0	52.5	95	23	47.5	2.0	6	9	5	M6
48*	53	75	59.0	66.0	52.5	95	23	47.5	2.0	6	9	5	M6
50*	55	77	62.0	70.0	57.5	104	25	52.0	2.5	6	9	5	M6
53*	58	84	65.0	73.0	57.5	104	25	52.0	2.5	6	9	5	M6
55*	60	86	67.0	75.0	57.5	106	25	53.0	2.5	6	9	5	M6
58*	63	89	70.0	78.0	62.5	112	25	56.0	2.5	6	9	7	M8
60*	65	91	72.0	80.0	62.5	112	25	56.0	2.5	6	9	7	M8
63*	68	94	75.0	83.0	62.5	112	25	56.0	2.5	6	9	7	M8
65*	70	97	77.0	85.0	62.5	112	25	56.0	2.5	6	9	7	M8
70*	75	104	83.0	92.0	70.0	126	28	63.0	2.5	7	9	7	M8
75*	80	109	88.0	97.0	70.0	126	28	63.0	2.5	7	9	7	M8
80*	85	114	95.0	105.0	70.0	126	28	63.0	3.0	7	9	7	M8
85*	90	119	100.0	110.0	75.0	126	28	63.0	3.0	7	9	7	M8
90*	95	124	105.0	115.0	75.0	126	28	63.0	3.0	7	9	7	M8
95*	100	129	110.0	120.0	75.0	126	28	63.0	3.0	7	9	7	M8
100*	105	132	115.0	125.0	75.0	126	28	63.0	3.0	7	9	7	M8
105*	115	153	122.2	134.3	73.0	136	32	68.0	2.0	10	9	7	M8
110*	120	158	128.2	140.3	73.0	136	32	68.0	2.0	10	–	7	M8
115*	125	163	136.2	148.3	73.0	136	32	68.0	2.0	10	–	7	M8
120*	130	168	138.2	150.3	73.0	136	32	68.0	2.0	10	–	7	M8
125*	135	173	142.2	154.3	73.0	136	32	68.0	2.0	10	–	7	M8

inch size available from size 1.125" to 5.000"
Note: Additional technical & dimensional information will be provided on request.