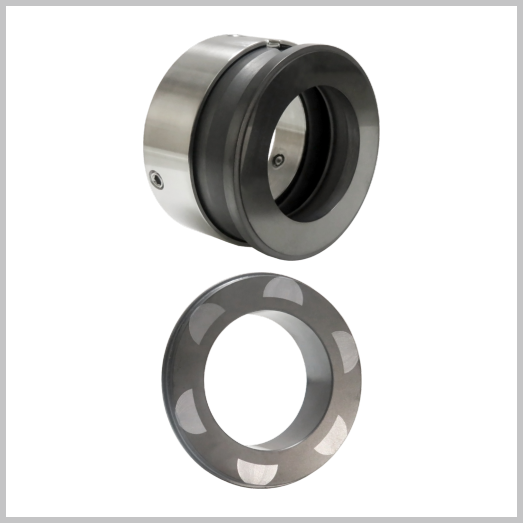
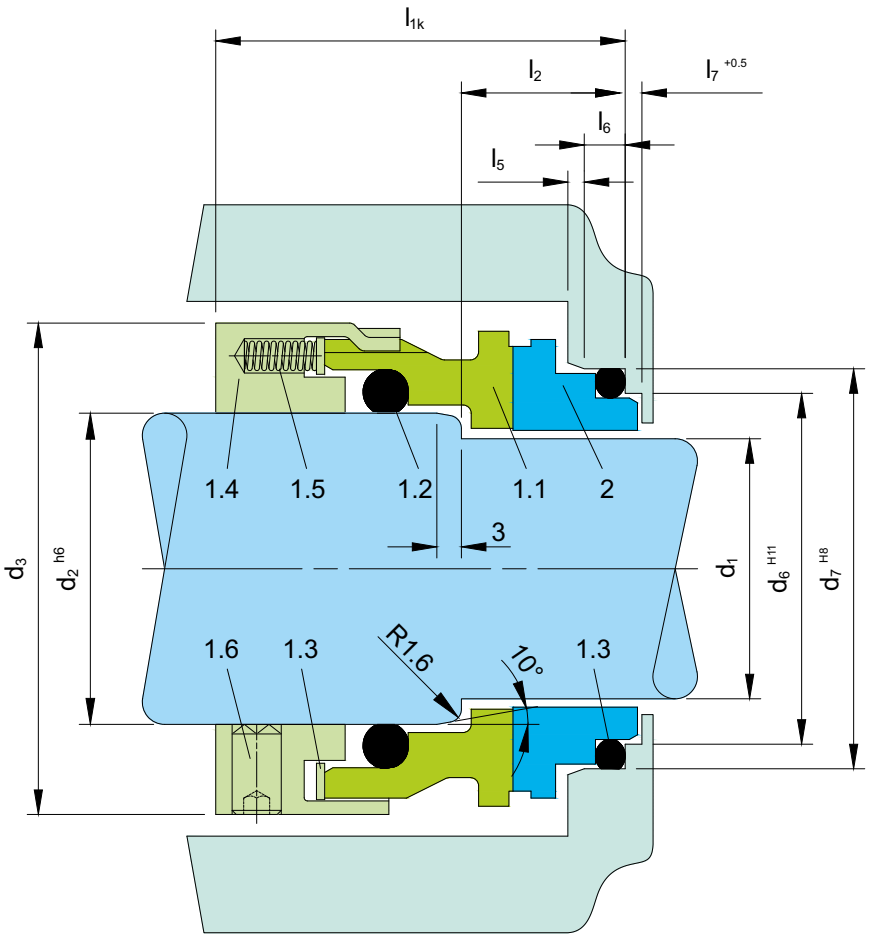


Product Description

1. Single and Dual seal configuration
2. Balanced design
3. For stepped shafts
4. Rotary unit with multiple springs
5. Designed to remain in closed position in the event of buffer pressure failure
6. Can accommodate reverse pressure
7. Gas-lubricated design
8. Gas grooves design is available in V-grooves and U-grooves (independent of direction of rotation)

Technical Features

1. Seal faces are designed to be non-contacting during operation
2. Designed for environmental protection with high efficiency
3. Due to non-contacting design there is no friction on the seal faces and there is no heat generated at the seal or in the medium
4. Trouble free operations as complex components are not required to dissipate frictional heat
5. Differential pressure not required with hard / soft material combination
6. Conforms to containment seal in accordance with API 682



Note: The item numbers as depicted above are based on our technical experience and knowledge and are placed in the chronological order of their assembly procedure.

Typical Industrial Applications	
API & ISO Pumps	Refining technology
Blowers	Roots compressors
Chemical	Small steam turbines
Fans	Gases & liquids
Hydrogen	Environmental harmful
Oil & gas	media
Petrochemical	Harmless gases

Performance Capabilities	
Shaft diameter	d_1 = 28 ... 125 mm (1.10" ... 4.92")
Pressure	p_1 = 25 bar (363 PSI)
Temperature	t* = -20 °C...+170 °C (-4 °F...+338 °F)
Sliding velocity	v_g = 4 ... 25 m/s (13 ... 82 ft/s)
* Depending on resistance of O-rings	

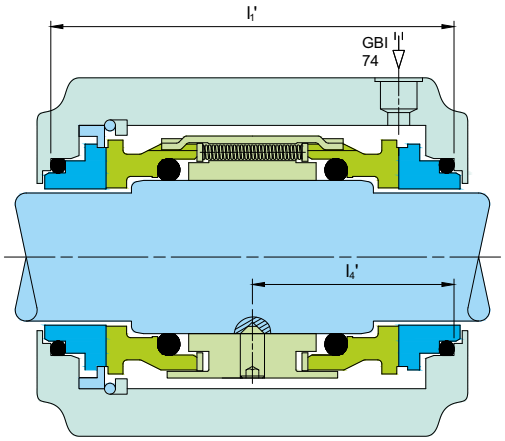
Materials	
Seal face	Carbon graphite antimony impregnated (A), Silicon carbide (Q2),
alternatively	Carbon graphite resin impregnated (B), Silicon carbide (Q1) Seat: Silicon carbide (Q1, Q2),Silicon carbide (Q19, Q29) with seal face in Q1 resp. Q2
Metal parts	CrNiMo steel (G)

Standards
EN 12756
APL 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		

wafaseal

Design Variations



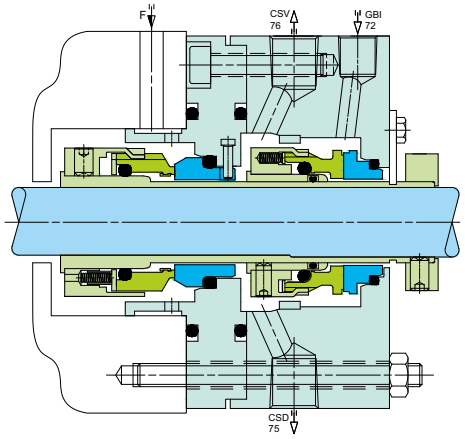
GSPH-KD

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: p_1 = ... 22 bar (319PSI), p_3 = ... 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

According to API 682

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}	l_1'	l_2	l_4'	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	–	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

*** EN 12756**

inch size available from size 1.125" to 5.000"

Note: Additional technical & dimensional information will be provided on request.

The specifications, drawings, images etc included in this catalogue are intended to be generic and must be interpreted as equivalent or functionally equivalent, more specifically the performance capabilities mentioned in this catalogue is based on optimum values, however the performance of the product is dependent on size, material of construction, media, pressure, temperature, sliding velocity etc and it shall vary from size to size or application to application. Customers are requested to consult with Sealmatic before employing the product from this catalogue for any application.