

RELY ON EXCELLENCE

Espey WKA700

Carbon Floating Ring Seals | Shaft seals



Features

- Chamber seal (modular design - can be combined in any order), optimal with housing and lid for screw compressors with one-part and horizontally split housing
- Very small operation gap - low leakage
- Dry running
- Seal rings bear radial shaft movements
- Compensates axial shaft movements
- No sealing components mounted on the shaft and hence no additional shaft vibrations
- Seal rings running contact-free - sliding faces and machine consume no additional power
- One-piece seal ring with titanium bandage
- Both side balanced seal ring inside chamber for short-term backpressure operation
- Seal ring axially spring-loaded - no swinging up at pressure-less machine operation

Advantages

- High reliability
- Long-term operation time
- Maintainability

Operating range

Shaft diameter:
 $d = 50 \dots 340 \text{ mm (1.79" ... 13.39")}$
 Operating pressure:
 $p = \text{vacuum} \dots 65 \text{ bar (942.75 PSI) abs.}$
 Operating temperature:
 $t = -120 \text{ °C} \dots +225 \text{ °C (-184 °F} \dots +437 \text{ °F)}$
 Sliding velocity: $v_g = \text{max. } 240 \text{ m/s (787 ft/s)}$
 Radial play: 1.0 mm (0.04")
 Axial movement: theoretically unlimited
 Recommended wear guard: $>58 \text{ HRC}$

Materials

Seal ring: Carbon with titanium bandage
 Chamber and housing parts: 1.4021, 1.4571, 1.4313
 Hastelloy®, Titanium, Inconel®, others
 Secondary seal (elastomer): Fluorocarbon rubber
 (Viton®), Nitrile-butadiene-rubber (Perbunan®), Perfluorocarbon rubber (Kalrez®)
 Secondary seal (gasket): Statotherm-HT/HD, KSIL C 4400

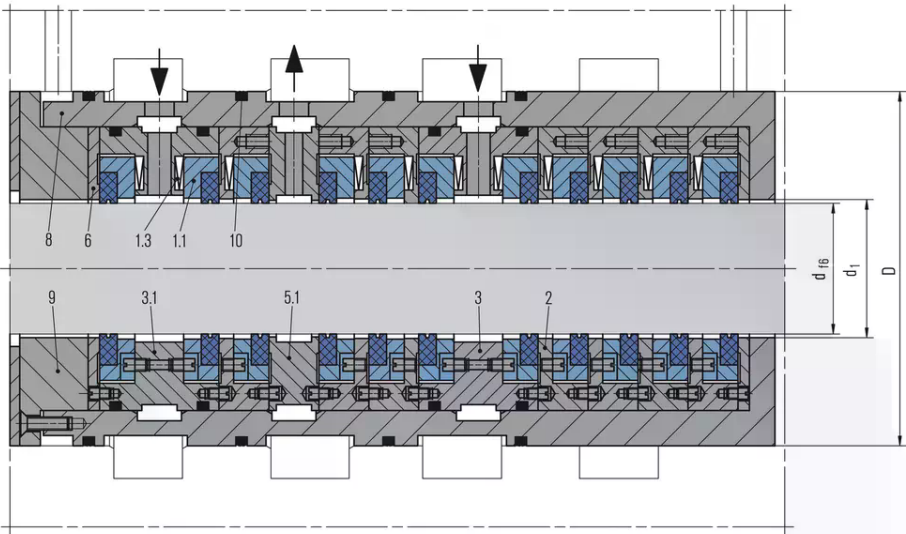
Standards and approvals

- FDA

Recommended applications

- Gases
- Fumes and exhaust, solids containing, acid containing and toxic gases
- (Solids containing) steams/liquid mist
- Oil mist/penetrating oil
- Water
- Oil and gas industry
- Refining technology
- Chemical industry
- Petrochemical industry
- Pulp and paper industry
- Metal production and processing
- Power plant technology
- CO2 transportation and storage
- Screw compressors

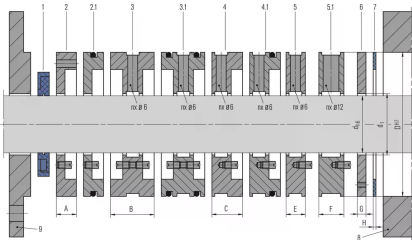
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Item	Description	Variable for width
1.1	Seal ring	
1.3	Pressure spring	
2	Chamber	A
2.1	Chamber with O-Ring	A
3	Barrier gas chamber	B
3.1	Barrier gas chamber with O-Rings	B
4	Lantern chamber	C
4.1	Lantern chamber with O-Ring	C
5.1	Lantern breit	F
6	End ring	G
7	Flat seal	H
8*	8* Housing	
9*	9* Lid	
10*	10* O-Ring Housing	

* On request

Installation, details, options



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Dimensions

d7 _{h6}	d ₁	D	A	B	C	F	G	H
50	52	100	15	36	26	20	5	1
55	57	105	15	36	26	20	5	1
60	62	110	15	36	26	20	5	1
65	67	115	15	36	26	20	5	1
70	72	120	15	36	26	20	5	1
75	77	125	15	36	26	20	5	1
80	82	130	15	36	26	20	5	1
85	87	135	15	36	26	20	5	1
90	92	140	15	36	26	20	5	1
95	97	145	15	36	26	20	5	1
100	102	150	15	36	26	20	5	1
105	107	155	15	36	26	20	5	1
110	112	160	15	36	26	20	5	1
115	117	165	15	36	26	20	5	1
120	122	180	15	36	26	20	5	1
130	132	190	15	36	26	20	5	1
140	142	200	15	36	26	20	5	1
150	152	210	15	36	26	20	5	1
160	162	220	15	36	26	20	5	1
170	172	230	15	36	26	20	5	1
180	182	240	15	36	26	20	5	1
190	192	250	15	36	26	20	5	1
200	202	260	15	36	26	20	5	1
220	222	290	15	36	26	20	5	1
240	242	310	15	36	26	20	5	1
260	262	330	15	36	26	20	5	1
280	282	350	15	36	26	20	5	1
300	302	370	15	36	26	20	5	1
320	322	390	15	36	26	20	5	1
340	342	410	15	36	26	20	5	1

Dimensions in Millimeter Special sizes and smaller outside diameters on request.