

Circpac HP >

Balanced floating carbon ring design

- > High pressure capability

Deep hydropad grooves

- > Minimize contact loads and wear

Narrow ring clearance

- > Provides lower leakage than fixed clearance seals

Precision joint technology

- > Low joint bypass leakage
- > Anti-fouling in bearing oil, solids, or process contaminants

Modular ring units

- > Zero emissions barrier
- > Tandem staging
- > Product flush
- > Bearing protection
- > Pressure reversal containment
- > Over-pressure emergency backup
- > Varieties of porting

Simplified control system requirements

- > Compared to fixed clearance seals, control by constant pressure instead of constant flow
- > Various barrier gases provide zero emissions without contamination

Cartridge seal assembly

- > One piece unit reduces downtime and eliminates delicate part handling
- > Package fits into narrow radial spaces originally designed for labyrinths or liquid seals
- > Optional split housing avoids equipment teardown

Economical alternative to liquid seals and clearance seals

- > Low total life cycle costs
- > Energy savings
- > No process contamination
- > Lower gas consumption

Circpac HP is an engineered segmented circumferential gas seal for gas compressors with higher pressure capability than typical circumferential seals. Pressure balanced ring designs and hydrodynamic surface features provide low gas consumption and long life in a variety of ring configurations.



Typical Operating Parameters

- Pressure: Vacuum to 150 psi (10 bar)
- Temperature: -40 to 350° F (-40 to 177° C)
- Speed: 0 to 300 fps (91 m/s)
- Size: 1.000" to 11.000" (25 to 280 mm)

* Contact Flowserve for extended conditions.

Typical Materials

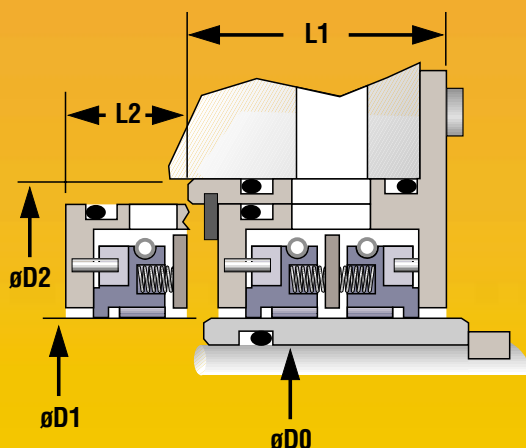
- Ring: Special grade carbon
- Housing: Stainless Steel or NACE compliant
- Sleeve: NACE compliant with hard coating
- Elastomers: Fluoroelastomer,
Perfluoroelastomer

* Other materials available as required.

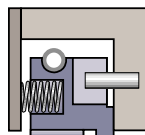
Control Panels

- A properly engineered control panel provides the right environment for successful operation of a Circpac HP compressor gas seal. Panels distribute filtered buffer and barrier gas with pressure control and flow monitoring. Flowserve offers standard configurations that provide reliable, economical support for gas seals and will custom engineer panels to meet customer specifications.

Dimensional Data

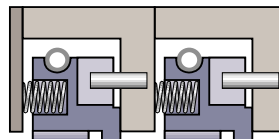


Sample Ring Configurations

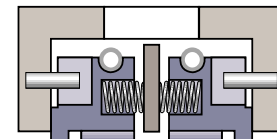


Single

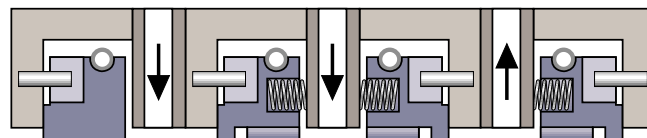
Any ring combination can be arranged in a Circpac HP to meet specific application requirements. Additional features such as labyrinths, face seals, pressure sensing ports, and purge/vent/drain ports are also available.



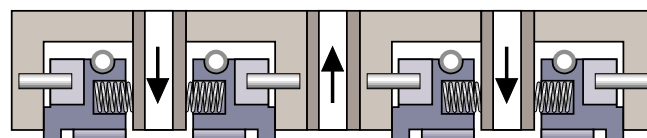
Tandem



Double



Double with Purge and Vent



Dual Double with Vent

Dimensional Data

Inch Dimensions					mm Dimensions				
D0	D1	D2	L1	L2	D0	D1	D2	L1	L2
nom	min	min	min	min	nom	min	min	min	min
3.000	3.400	4.400	1.500	0.625	75	85	112	38	16
3.250	3.650	4.650	1.500	0.625	80	90	118	38	16
3.500	3.900	4.900	1.500	0.625	90	100	124	38	16
3.750	4.150	5.150	1.500	0.625	100	110	131	38	16
4.000	4.400	5.400	1.500	0.625	110	120	137	38	16
4.500	4.900	5.900	1.500	0.625	120	130	150	38	16
5.000	5.400	6.415	1.515	0.635	130	140	163	38	16
5.500	5.900	6.935	1.530	0.640	140	150	176	39	16
6.000	6.400	7.450	1.550	0.650	150	160	189	39	16
6.500	6.900	7.965	1.565	0.660	160	170	202	40	17
7.000	7.400	8.480	1.580	0.665	180	190	215	40	17
7.500	7.900	9.000	1.600	0.675	200	210	229	41	17
8.000	8.400	9.515	1.615	0.685	220	230	242	41	17
9.000	9.400	10.550	1.650	0.700	240	250	268	42	18
10.000	10.400	11.585	1.685	0.720	260	270	294	43	18
11.000	11.400	12.625	1.720	0.735	280	290	320	44	19

* Dimensions provided for reference only. Final dimensions depend on actual equipment and Flowserve Engineering review.



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