

Circpac MD

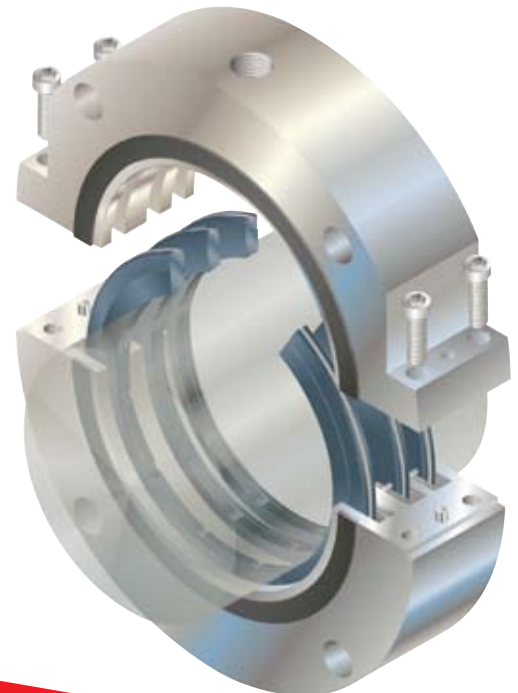
Segmented circumferential seal

A segmented circumferential seal designed for fans, blowers, dryers, turbines, centrifuges and other rotating equipment comes packaged in a convenient split housing for easy installation. Standard designs consistently outperform packing, bushings, labyrinths, and felt seals with lower gas consumption over a wider range of operating conditions.



Features and Benefits

- Floating circumferential rings are engineered for long-term, reliable performance - Hydraulically balanced rings with hydrodynamic surface features extend the maximum pressure, temperature, and speed limits beyond conventional circumferential seal designs.
- Radially split seal housing is installed without dismantling the equipment - With no equipment modifications, seal mounts outside the seal chamber to simplify installation and reduce downtime.
- Robust carbon rings are durable for split installation handling and upset conditions - Designed with foul resistant joints and large bearing pads, carbon rings assemble easily and maintain integrity during off-design operation.
- Large housing clearance accommodates equipment thermal growth and shaft misalignment - Standard radial clearances up to 6 mm (0.25 inch) satisfy various equipment types.
- Multiple ring configurations provide an economical solution to various application requirements - Rings can be staged for reduced leakage, pressurized for zero process emissions, or extra rings added for emergency backup.
- Materials of construction are selected for application compatibility - Various material grades are available to meet temperature and corrosion resistance requirements.
- Lower gas consumption allows simplified gas control system - Circpac MD seal cost of operation is lower than typical circumferential or labyrinth seals.

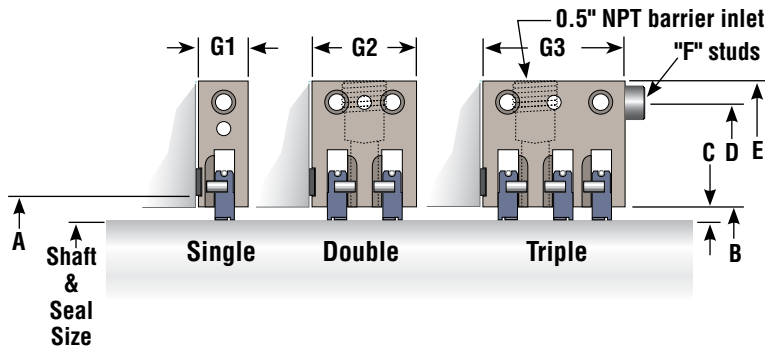


Materials of Construction

Seal Ring	Carbon Graphite
Metal Components	316 Stainless Steel, 410 Stainless Steel, Alloy 600
Springs	Alloy 600, Alloy X-750
Gaskets	Elastomer, Fiber, Graphite

Operating Parameters

Pressure	Vacuum to 6.9 bar (100 psi)
Temperature	up to 593°C (1100°F)
Shaft Speed	up to 45.7 m/s (150 fps)
Shaft Size	35 to 457 mm (1.375 to 18.000 inch)



An optional **Gas Barrier Control Panel**

is available for the **Circpac MD** seal. This self-contained, compact, easy-to-use unit includes all controls necessary for simple, efficient seal operation. It also

eliminates the time, expense and hassle of installing each component separately.

Dimensional Data in millimeters

Shaft & Seal Size	A	B	C	D	E	F	G1	G2	G3
35	63.5	37.5	1.27	100	130	10	26.1	46.7	60.7
40	63.5	42.5	1.27	100	130	10	26.1	46.7	60.7
50	69.0	52.5	1.27	110	150	13	26.1	47.8	62.2
80	102.0	85.6	2.79	150	185	13	26.1	47.8	62.2
100	125.0	106.4	3.18	180	210	13	30.2	49.3	64.5
130	160.0	139.7	4.83	210	250	13	30.2	49.3	64.5
150	180.0	159.7	4.83	240	285	16	30.2	50.8	66.8
180	212.0	192.7	6.35	280	320	16	34.1	53.8	66.8
200	232.0	212.7	6.35	300	345	16	34.1	53.8	69.1
230	262.0	242.7	6.35	330	375	16	34.1	53.8	69.1
250	282.0	262.7	6.35	360	400	16	34.1	53.8	71.4
280	312.0	292.7	6.35	380	435	19	38.2	63.5	71.4
300	332.0	312.7	6.35	410	460	19	38.2	63.5	73.7
330	362.0	342.7	6.35	440	490	19	38.2	63.5	73.7
350	382.0	362.7	6.35	460	515	19	38.2	63.5	75.9
380	412.0	392.7	6.35	490	550	22	38.2	63.5	75.9
400	432.0	412.7	6.35	520	575	22	38.2	63.5	75.9
430	462.0	442.7	6.35	540	600	22	38.2	63.5	75.9
450	482.0	462.7	6.35	570	625	22	38.2	63.5	75.9

in inches

Shaft & Seal Size	A	B	C	D	E	F	G1	G2	G3
1.375	2.50	1.48	0.050	3.750	4.88	0.375	1.03	1.84	2.39
1.500	2.50	1.60	0.050	3.750	4.88	0.375	1.03	1.84	2.39
2.000	2.75	2.10	0.050	4.250	5.63	0.500	1.03	1.88	2.45
3.000	3.87	3.22	0.110	5.625	7.01	0.500	1.03	1.88	2.45
4.000	5.00	4.25	0.125	6.750	8.13	0.500	1.19	1.94	2.54
5.000	6.12	5.38	0.190	8.250	9.63	0.500	1.19	1.94	2.54
6.000	7.12	6.38	0.190	9.375	11.01	0.625	1.19	2.00	2.63
7.000	8.25	7.50	0.250	10.750	12.38	0.625	1.34	2.12	2.63
8.000	9.25	8.50	0.250	11.750	13.38	0.625	1.34	2.12	2.72
9.000	10.25	9.50	0.250	12.875	14.51	0.625	1.34	2.12	2.72
10.000	11.25	10.50	0.250	13.875	15.51	0.625	1.34	2.12	2.81
11.000	12.25	11.50	0.250	15.000	16.88	0.750	1.51	2.50	2.81
12.000	13.25	12.50	0.250	16.000	17.88	0.750	1.51	2.50	2.90
13.000	14.25	13.50	0.250	17.125	19.01	0.750	1.51	2.50	2.90
14.000	15.25	14.50	0.250	18.125	20.01	0.750	1.51	2.50	2.99
15.000	16.25	15.50	0.250	19.250	21.38	0.875	1.51	2.50	2.99
16.000	17.25	16.50	0.250	20.250	22.38	0.875	1.51	2.50	2.99
17.000	18.25	17.50	0.250	21.250	23.38	0.875	1.51	2.50	2.99
18.000	19.25	18.50	0.250	22.250	24.38	0.875	1.51	2.50	2.99

Contact Flowserve for extended conditions, other sizes, alternate materials, or custom configurations.

FSD195eng REV 10/11 Printed in USA

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