

# BRC Series High temperature metal bellows seals

*BRC Series edge-welded metal bellows seals are exceptionally robust and designed to seal high-temperature hydrocarbons, heat transfer fluids and severe services in refineries and hydrocarbon processing plants. The BRC series is fully compliant with API 682/ISO 21039 Type C requirements and features thick-plate Alloy 718 bellows convolutions for superior corrosion resistance.*



## Features and Benefits

- Rugged construction throughout makes BRC seals the toughest and most reliable metal bellows mechanical seals for difficult refinery pump services.
- Bellows diaphragm thicknesses start at 0.010 in. (0.25 mm) on small sizes and extend to 0.012 in. (0.30 mm) for the industry's strongest bellows, capable of long-term chemical exposure and low-stress performance.
- Alloy 718 bellows and end adapters satisfy NACE MR0103 and have the highest resistance to stress-cracking corrosion in sulfuric-laced environments at high temperature.
- Mounted in a flexible graphite ring to avoid shrink-fit distortions, the silicon carbide rotating face sustains a stable, flat sealing surface for reliable, low-leakage performance.
- Seal face combinations of carbon against silicon carbide or carbide against carbide are matched with the service conditions from heavy hydrocarbons to light products including some solids.
- Configurable with rotating or stationary bellows, BRC seals include a steam purge baffle under the stationary components to eliminate coking and prolong clean operation.

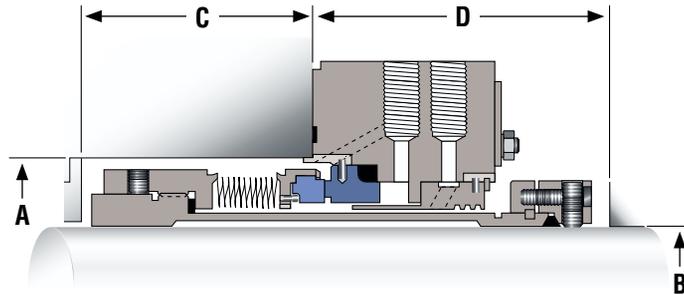
## Operating Parameters

<b>Pressure</b>	Up to 300 psi (20.7 bar)
<b>Temperature</b>	-100°F to 800°F (-73°C to 427°C)
<b>Specific Gravity</b>	0.45 and higher
<b>Surface Speed</b>	Up to 75 ft/sec (23 m/sec)
<b>Shaft Sizes</b>	0.983 to 6.000 inches (25 to 152.4 mm)

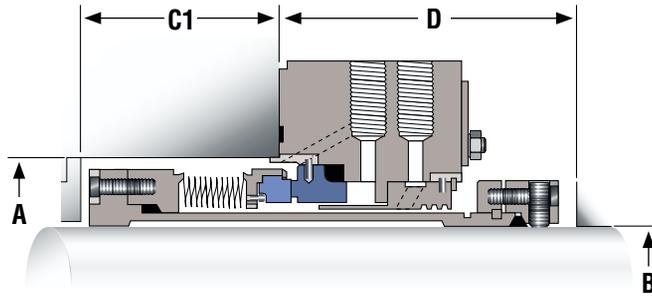
## Materials of Construction

<b>Bellows Assembly</b>	Alloy 718 / 316 Stainless Steel or Alloy 718
<b>Rotating Face</b>	Silicon Carbide
<b>Stationary Face</b>	Carbon or Silicon Carbide
<b>Gaskets</b>	Flexible Graphite
<b>Metal Parts</b>	316 Stainless Steel or Alloy 718

**BRC Seal**  
Standard design  
with threaded  
bellows adapter



**BRCH Seal**  
Optional design  
with bolted  
bellows adapter



**Dimensional Data** inches

Seal Size	A Min	B Max	C Min	C1 Min	D Min
1680	2.449	0.983	2.281	1.969	3.469
1812	2.668	1.108	2.625	2.313	3.563
2027	2.887	1.170	2.688	2.376	3.688
2125	2.950	1.358	2.688	2.376	3.688
2250	3.137	1.420	2.875	2.563	3.688
2375	3.137	1.545	2.531	2.219	3.719
2500	3.316	1.670	2.844	2.532	3.688
2687	3.559	1.795	2.844	2.532	3.781
2750	3.575	1.983	2.781	2.469	3.844
3000	3.952	2.170	3.125	2.813	4.063
3250	4.200	2.420	3.125	2.813	4.063
3500	4.481	2.670	3.125	2.813	4.063
3750	4.699	2.920	3.188	2.876	4.063
4000	5.028	3.108	3.594	3.282	4.063
4250	5.342	3.358	3.375	3.063	4.063
4812	5.875	3.858	3.563	3.251	4.063
5500	6.803	4.483	3.563	3.251	4.156
6750	7.875	6.000	3.625	3.313	3.125

millimeters

Seal Size	A Min	B Max	C Min	C1 Min	D Min
1680	62.2	25.0	57.9	50.0	88.1
1812	67.8	28.1	66.7	58.7	90.5
2027	73.3	29.7	68.3	60.3	93.7
2125	74.9	34.5	68.3	60.3	93.7
2250	79.7	36.1	73.0	65.1	93.7
2375	79.7	39.2	64.3	56.3	94.5
2500	84.2	42.4	72.2	64.3	93.7
2687	90.4	45.6	72.2	64.3	96.0
2750	90.8	50.4	70.6	62.7	97.6
3000	100.4	55.1	79.4	71.4	103.2
3250	106.7	61.5	79.4	71.4	103.2
3500	113.8	67.8	79.4	71.4	103.2
3750	119.4	74.2	81.0	73.0	103.2
4000	127.7	78.9	91.3	83.4	103.2
4250	135.7	85.3	85.7	77.8	103.2
4812	149.2	98.0	90.5	82.6	103.2
5500	172.8	113.9	90.5	82.6	105.6
6750	200.0	152.4	92.1	84.1	79.4

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