

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 corrosion cracking 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.

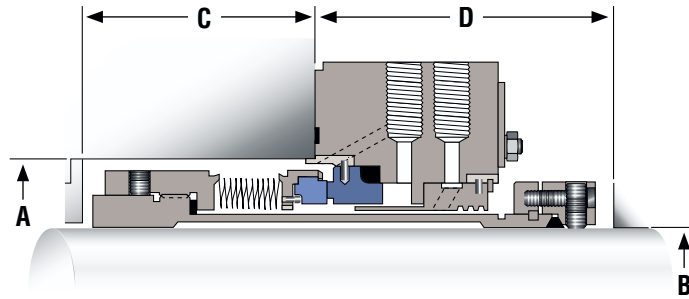
Operating Parameters

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

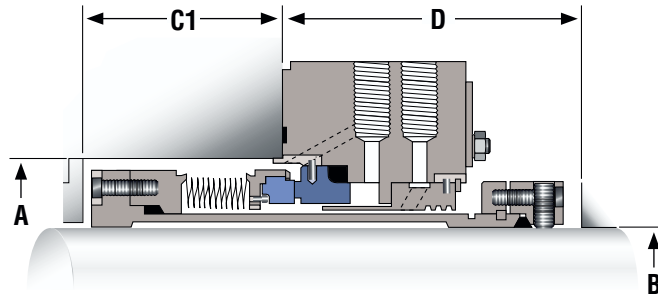
Materials of Construction

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

FSD142eng REV 11/08 Printed in USA

To find your local Flowserve representative
and find out more about Flowserve Corporation visit
www.flowserve.com



Flowserve Corporation has established industry leadership in the design and manufacture of its products. When properly selected, this Flowserve product is designed to perform its intended function safely during its useful life. However, the purchaser or user of Flowserve products should be aware that Flowserve products might be used in numerous applications under a wide variety of industrial service conditions. Although Flowserve can provide general guidelines, it cannot provide specific data and warnings for all possible applications. The purchaser/user must therefore assume the ultimate responsibility for the proper sizing and selection, installation, operation, and maintenance of Flowserve products. The purchaser/user should read and understand the Installation Instructions included with the product, and train its employees and contractors in the safe use of Flowserve products in connection with the specific application.

While the information and specifications contained in this literature are believed to be accurate, they are supplied for informative purposes only and should not be considered certified or as a guarantee of satisfactory results by reliance thereon. Nothing contained herein is to be construed as a warranty or guarantee, express or implied, regarding any matter with respect to this product. Because Flowserve is continually improving and upgrading its product design, the specifications, dimensions and information contained herein are subject to change without notice. Should any question arise concerning these provisions, the purchaser/user should contact Flowserve Corporation at any one of its worldwide operations or offices.

© 2008 Flowserve Corporation

USA and Canada

Kalamazoo, Michigan USA
Telephone: 1 269 381 2650
Telefax: 1 269 382 8726

Europe, Middle East, Africa

Essen, Germany
Telephone: 49 201 31937-0
Telefax: 49 201 2200-561

Asia Pacific

Singapore
Telephone: 65 6544 6800
Telefax: 65 6214 0541

Latin America

Mexico City
Telephone: 52 55 5567 7170
Telefax: 52 55 5567 4224