

BX Series

Metal bellows seals

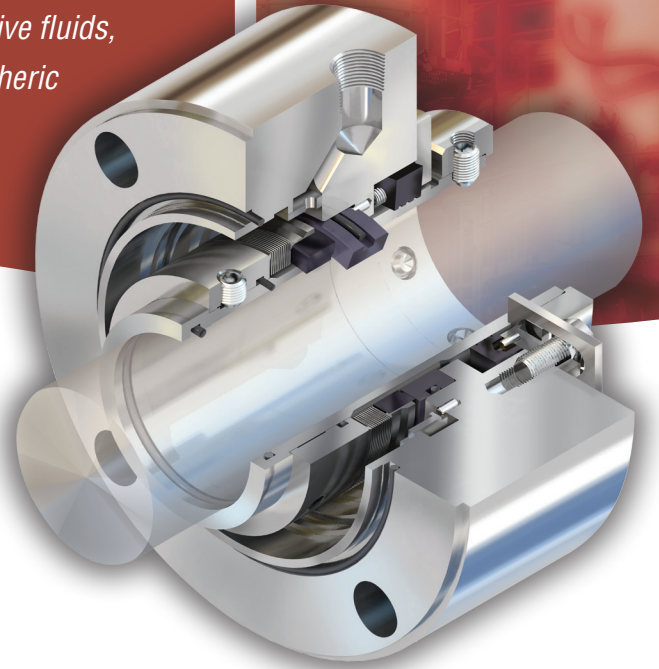
The BX Series is a family of balanced metal bellows seals available in single and dual seal configurations. BX Series seals provide exceptional reliability in corrosive and non-corrosive fluids, especially fluids that crystallize or coke in atmospheric conditions. The BX Series is fully compliant with API 682 Type B requirements.

Features and Benefits

- 0.20 mm (0.008 inch) thick standard welded bellows provides maximum resistance to corrosion, shaft vibrations, and centrifugal forces.
- Rotating bellows acts to clear convolutions and prevent accumulation of debris.
- Absence of springs and dynamic elastomers reduces clogging vulnerabilities.
- Circulating device integrated into the dual seal cartridge circulates barrier fluid to keep the seal faces cool. A circulating device is also available on single seals for fluids over 75°C (167°F).
- Available multi-port flush distributes flush fluid evenly around the seal faces for uniform cooling.
- Part interchangeability between single and dual seal arrangements minimizes inventory requirements and maximizes design flexibility.

Specialized designs for specific applications

- BXQ** High balance low emission hydrocarbon design for specific gravities down to 0.45 with multi-port flush. Standard API 682 Type B Arrangement 1 seal.
- BXB** Inner bellows designed for ID pressurization with barrier fluid. Standard API 682 Type B Arrangement 3 pressurized dual seal.
- BXLS** Designed to international standard DIN EN 12 756 L1k for use in DIN pumps.
- BXR** Stationary bellows design capable of speeds up to 46 m/s (150 fps).

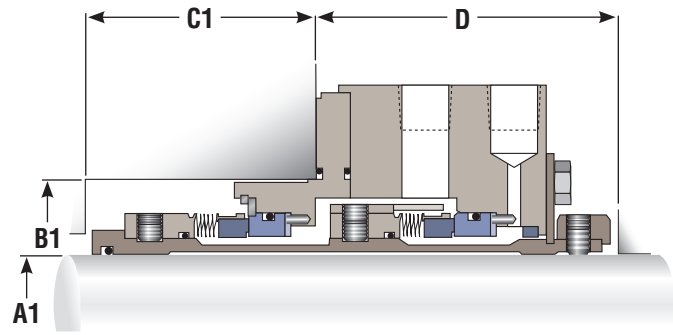
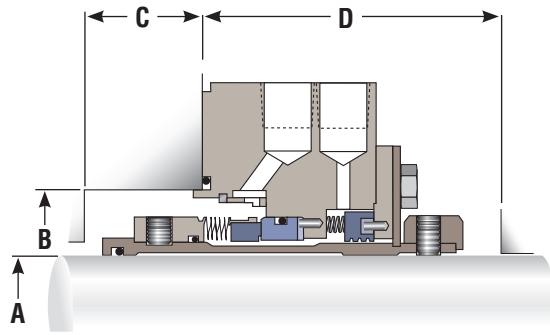


Materials of Construction

| | |
|-------------------------|---|
| Metal Bellows | 316 Stainless Steel, Alloy C-276, Alloy 400 |
| Rotating Face | Carbon, Silicon Carbide, Tungsten Carbide |
| Stationary Face | Silicon Carbide, Tungsten Carbide |
| Metal Components | 316 Stainless Steel, Alloy C-276, Alloy 400 |
| Gaskets | Fluoroelastomer, Perfluoroelastomer |

Operating Parameters

| | |
|-------------------------|--|
| Pressure | Up to 28 bar (400 psi) Higher pressures available for selected sizes. |
| Temperature | -40 to 204°C (-40 to 400°F) |
| Specific Gravity | 0.45 and higher |
| Surface Speed | Up to 23 m/s (75 fps) |
| Shaft Sizes | 12.3 to 152.4 mm (0.483 to 6.000 inch) |


Dimensional Data in millimeters
in inches

| Seal Size | A | A1 | B | B1 | C | C1 | D | A | A1 | B | B1 | C | C1 | D |
|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | Max | Max | Min | Min | Min | Min | Min | | | | | | | |
| 875 | 16.51 | 16.51 | 41.28 | 47.63 | 25.78 | 67.08 | 63.09 | 0.650 | 0.650 | 1.625 | 1.875 | 1.015 | 2.641 | 2.484 |
| 1000 | 19.69 | 16.51 | 44.45 | 51.99 | 27.36 | 68.68 | 63.09 | 0.775 | 0.775 | 1.750 | 2.047 | 1.077 | 2.704 | 2.484 |
| 1125 | 22.86 | 22.86 | 47.63 | 55.17 | 26.59 | 68.68 | 63.09 | 0.900 | 0.900 | 1.875 | 2.172 | 1.047 | 2.704 | 2.484 |
| 1250 | 26.04 | 26.04 | 50.80 | 58.34 | 28.17 | 68.68 | 66.27 | 1.025 | 1.025 | 2.000 | 2.297 | 1.109 | 2.704 | 2.609 |
| 1375 | 29.21 | 29.21 | 53.98 | 63.09 | 27.38 | 69.44 | 69.44 | 1.150 | 1.150 | 2.125 | 2.484 | 1.078 | 2.734 | 2.734 |
| 1500 | 32.39 | 32.39 | 57.15 | 67.46 | 32.13 | 78.18 | 69.44 | 1.275 | 1.275 | 2.250 | 2.656 | 1.265 | 3.078 | 2.734 |
| 1625 | 35.56 | 33.02 | 65.08 | 70.64 | 34.52 | 82.93 | 70.26 | 1.400 | 1.300 | 2.562 | 2.781 | 1.359 | 3.265 | 2.766 |
| 1750 | 38.74 | 33.27 | 68.10 | 74.63 | 42.44 | 79.76 | 73.43 | 1.525 | 1.310 | 2.681 | 2.938 | 1.671 | 3.140 | 2.891 |
| 1875 | 41.91 | 36.45 | 71.42 | 77.80 | 43.23 | 80.57 | 73.43 | 1.650 | 1.435 | 2.812 | 3.063 | 1.702 | 3.172 | 2.891 |
| 2000 | 45.09 | 39.62 | 74.60 | 81.36 | 43.23 | 80.57 | 73.43 | 1.775 | 1.560 | 2.937 | 3.203 | 1.702 | 3.172 | 2.891 |
| 2125 | 48.26 | 42.80 | 80.95 | 87.71 | 45.62 | 82.14 | 73.43 | 1.900 | 1.685 | 3.187 | 3.453 | 1.796 | 3.234 | 2.891 |
| 2250 | 51.44 | 45.97 | 84.12 | 89.31 | 45.62 | 82.14 | 73.43 | 2.025 | 1.810 | 3.312 | 3.516 | 1.796 | 3.234 | 2.891 |
| 2375 | 54.61 | 49.15 | 87.30 | 91.29 | 47.19 | 83.74 | 73.43 | 2.150 | 1.935 | 3.437 | 3.594 | 1.858 | 3.297 | 2.891 |
| 2500 | 57.79 | 52.32 | 90.47 | 97.23 | 51.15 | 91.67 | 73.43 | 2.275 | 2.060 | 3.562 | 3.828 | 2.014 | 3.609 | 2.891 |
| 2625 | 60.96 | 55.50 | 90.47 | 100.0 | 51.15 | 91.67 | 73.43 | 2.400 | 2.185 | 3.562 | 3.938 | 2.014 | 3.609 | 2.891 |
| 2750 | 64.14 | 58.67 | 93.65 | 103.9 | 52.78 | 94.46 | 77.39 | 2.525 | 2.310 | 3.687 | 4.094 | 2.078 | 3.719 | 3.047 |
| 2875 | 67.31 | 61.85 | 100.0 | 108.7 | 52.37 | 94.46 | 79.38 | 2.650 | 2.435 | 3.937 | 4.281 | 2.062 | 3.719 | 3.125 |
| 3000 | 70.49 | 65.02 | 103.2 | 111.9 | 52.37 | 94.46 | 79.38 | 2.775 | 2.560 | 4.062 | 4.406 | 2.062 | 3.719 | 3.125 |
| 3125 | 73.66 | 68.20 | 108.0 | 117.5 | 54.76 | 96.75 | 83.34 | 2.900 | 2.685 | 4.250 | 4.625 | 2.156 | 3.809 | 3.281 |
| 3250 | 76.84 | 71.37 | 111.1 | 120.7 | 54.76 | 96.75 | 83.34 | 3.025 | 2.810 | 4.375 | 4.750 | 2.156 | 3.809 | 3.281 |
| 3375 | 80.01 | 74.55 | 114.3 | 124.2 | 54.76 | 96.75 | 83.34 | 3.150 | 2.935 | 4.500 | 4.891 | 2.156 | 3.809 | 3.281 |
| 3500 | 83.19 | 77.72 | 117.5 | 127.4 | 54.76 | 98.43 | 83.34 | 3.275 | 3.060 | 4.625 | 5.016 | 2.156 | 3.875 | 3.281 |
| 3750 | 89.54 | 84.07 | 123.8 | 133.8 | 54.76 | 98.43 | 83.34 | 3.525 | 3.310 | 4.875 | 5.266 | 2.156 | 3.875 | 3.281 |
| 4000 | 95.89 | 90.42 | 131.7 | 140.5 | 54.76 | 92.08 | 89.69 | 3.775 | 3.560 | 5.187 | 5.531 | 2.156 | 3.625 | 3.531 |
| 4250 | 95.89 | 96.77 | 131.7 | 148.8 | 54.76 | 92.08 | 89.69 | 4.025 | 3.810 | 5.500 | 5.859 | 2.156 | 3.625 | 3.531 |
| 4500 | 108.6 | 103.1 | 146.0 | 153.6 | 54.76 | 92.08 | 89.69 | 4.275 | 4.060 | 5.750 | 6.047 | 2.156 | 3.625 | 3.531 |
| 5000 | 121.2 | 115.8 | 158.8 | 166.7 | 57.15 | 93.68 | 89.69 | 4.775 | 4.560 | 6.250 | 6.563 | 2.250 | 3.688 | 3.531 |
| 5500 | 134.0 | 128.5 | 171.5 | 181.0 | 57.15 | 93.68 | 89.69 | 5.275 | 5.060 | 6.750 | 7.125 | 2.250 | 3.688 | 3.531 |
| 6250 | 152.4 | 147.6 | 193.7 | 203.2 | 57.15 | 93.68 | 89.69 | 6.000 | 5.810 | 7.625 | 8.000 | 2.250 | 3.688 | 3.531 |

Note: For sizes and conditions not listed, contact your Flowserve Representative.

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