

# QB SERIES

QB series seals are balanced pusher seals available in single and dual seal configurations used for sealing environmentally restricted products in compliance with EPA and OSHA regulations. The QB series is fully compliant with API 682 Type A requirements.

## Features/Benefits

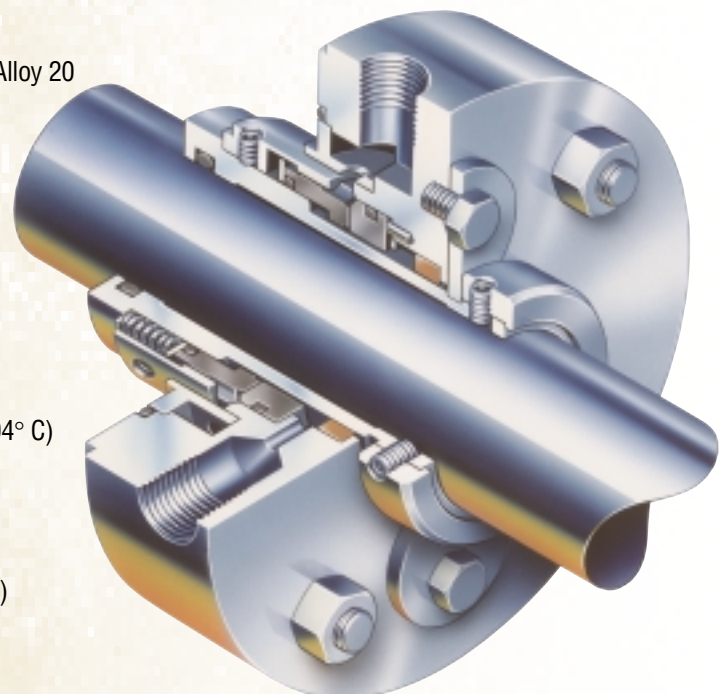
- Compact design - can be furnished as a cartridge assembly and fits most API and ANSI big bore pumps.
- Part interchangeability between single and dual seals - minimizes parts required in inventory
- High balance face option (QBQ) - meets lowest international emission levels, less than 500 ppm
- Springholder pumping ring design - patented design flushes spring area. A single spring version, QBS is also available.
- Heavy duty rotating face design - minimizes distortion at high pressure
- Wide face design - reduces spring unit loading on seal face
- Dual balanced rotating assembly option (QBB) - provides reverse pressure capability for API 682 arrangement 3 requirements.
- Multiport flush option - improves heat dissipation for uniform face cooling.
- Grooved face option (QB-Lube) - designed for hot water applications where cooling water is not available.

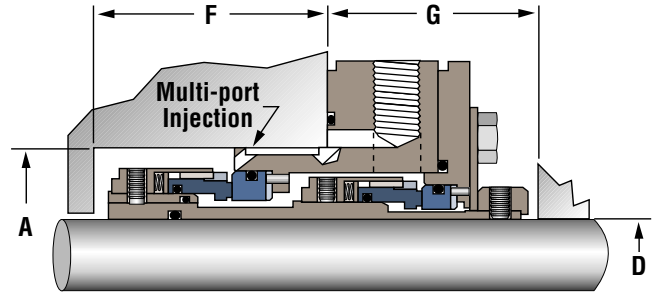
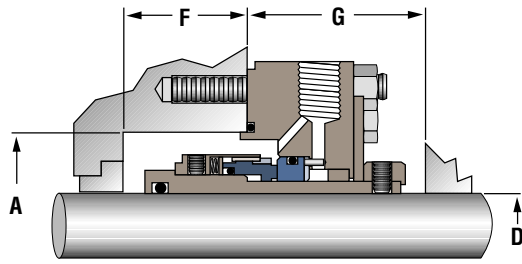
## Materials of Construction

- Metal Components: 316 Stainless Steel, Alloy C-276, Alloy 20
- Rotating Face: Carbon, Silicon Carbide
- Stationary Face: Silicon Carbide, Tungsten Carbide
- Gaskets: Nitrile, Fluoroelastomer, Perfluoroelastomer, EPR, PTFE
- Springs: Alloy C-276

## Operating Parameters

- Maximum Pressure: Up to 750 psig (5170 kPa)
- Temperature: -40° F to +400° F (-40° C to +204° C)
- Specific Gravity: .45 and higher
- Surface Speed: Up to 75 ft/sec (23 m/sec)
- Shaft Sizes: 1/2" through 5-1/2"  
(12.70 mm through 139.70 mm)





**Dimensional Data** (dimensions in inches)

| Seal Size | A Min | D Max | F Min | G Min | Seal Size | A Min | D Max | F Min | G Min |
|-----------|-------|-------|-------|-------|-----------|-------|-------|-------|-------|
| 0875      | 1.718 | 0.500 | 1.406 | 2.031 | 0875      | 1.844 | 0.500 | 2.469 | 2.500 |
| 0937      | 1.750 | 0.563 | 1.406 | 2.031 | 0937      | 1.969 | 0.563 | 2.531 | 2.500 |
| 1000      | 1.843 | 0.625 | 1.406 | 2.031 | 1000      | 2.219 | 0.625 | 2.594 | 2.500 |
| 1125      | 1.968 | 0.750 | 1.468 | 2.031 | 1125      | 2.594 | 0.750 | 2.969 | 2.500 |
| 1250      | 2.093 | 0.813 | 1.437 | 2.063 | 1250      | 2.719 | 0.813 | 2.969 | 2.625 |
| 1375      | 2.218 | 0.875 | 1.437 | 2.063 | 1375      | 2.844 | 0.875 | 3.344 | 2.750 |
| 1500      | 2.343 | 1.000 | 1.437 | 2.219 | 1500      | 2.969 | 1.000 | 3.344 | 2.750 |
| 1625      | 2.593 | 1.125 | 1.781 | 2.219 | 1625      | 3.094 | 1.125 | 3.406 | 2.781 |
| 1750      | 2.718 | 1.250 | 1.781 | 2.219 | 1750      | 3.219 | 1.250 | 3.406 | 2.906 |
| 1875      | 2.843 | 1.375 | 1.718 | 2.375 | 1875      | 3.344 | 1.375 | 3.594 | 2.906 |
| 2000      | 2.968 | 1.500 | 1.937 | 2.500 | 2000      | 3.469 | 1.500 | 3.594 | 2.906 |
| 2125      | 3.156 | 1.625 | 2.000 | 2.500 | 2125      | 3.766 | 1.625 | 3.906 | 2.906 |
| 2250      | 3.281 | 1.750 | 2.000 | 2.500 | 2250      | 3.891 | 1.750 | 3.906 | 2.906 |
| 2375      | 3.406 | 1.875 | 1.968 | 2.594 | 2375      | 4.016 | 1.875 | 4.156 | 2.906 |
| 2500      | 3.531 | 2.000 | 1.968 | 2.594 | 2500      | 4.141 | 2.000 | 4.156 | 2.906 |
| 2625      | 3.843 | 2.125 | 2.250 | 2.625 | 2625      | 4.266 | 2.125 | 4.156 | 2.906 |
| 2750      | 3.968 | 2.250 | 2.250 | 2.625 | 2750      | 4.391 | 2.250 | 4.156 | 3.063 |
| 2875      | 4.093 | 2.375 | 2.250 | 2.625 | 2875      | 4.516 | 2.375 | 4.281 | 3.063 |
| 3000      | 4.218 | 2.500 | 2.250 | 2.781 | 3000      | 4.625 | 2.500 | 4.281 | 3.063 |
| 3125      | 4.343 | 2.625 | 2.250 | 2.781 | 3125      | 4.766 | 2.625 | 4.281 | 3.125 |
| 3250      | 4.468 | 2.750 | 2.250 | 2.781 | 3250      | 4.891 | 2.750 | 4.281 | 3.125 |
| 3375      | 4.593 | 2.875 | 2.250 | 2.906 | 3375      | 5.000 | 2.875 | 4.281 | 3.125 |
| 3500      | 4.687 | 3.000 | 2.156 | 3.000 | 3500      | 5.125 | 3.000 | 4.281 | 3.125 |
| 3625      | 4.843 | 3.125 | 2.156 | 3.000 | 3625      | 5.375 | 3.125 | 4.406 | 3.125 |
| 3750      | 4.968 | 3.250 | 2.125 | 3.031 | 3750      | 5.500 | 3.250 | 4.406 | 3.125 |
| 3875      | 5.062 | 3.375 | 2.125 | 3.031 | 3875      | 5.625 | 3.375 | 4.500 | 3.188 |
| 4000      | 5.187 | 3.500 | 2.125 | 3.031 | 4000      | 5.750 | 3.500 | 4.500 | 3.188 |
| 4125      | 5.562 | 3.625 | 2.218 | 3.188 | 4125      | 5.875 | 3.625 | 4.500 | 3.219 |
| 4250      | 5.687 | 3.750 | 2.218 | 3.188 | 4250      | 6.000 | 3.750 | 4.500 | 3.219 |
| 4375      | 5.812 | 3.875 | 2.218 | 3.219 | 4375      | 6.125 | 3.875 | 4.500 | 3.219 |
| 4500      | 5.937 | 4.000 | 2.218 | 3.219 | 4500      | 6.250 | 4.000 | 4.500 | 3.219 |
| 4625      | 6.062 | 4.125 | 2.125 | 3.313 | 4625      | 6.375 | 4.125 | 4.500 | 3.219 |
| 4750      | 6.187 | 4.250 | 2.125 | 3.313 | 4750      | 6.750 | 4.250 | 4.688 | 3.219 |
| 4875      | 6.312 | 4.375 | 2.125 | 3.313 | 4875      | 6.875 | 4.375 | 4.688 | 3.219 |
| 5000      | 6.437 | 4.500 | 2.125 | 3.313 | 5000      | 7.000 | 4.500 | 4.875 | 3.219 |
| 5125      | 6.562 | 4.625 | 2.125 | 3.313 | 5125      | 7.125 | 4.625 | 4.875 | 3.219 |
| 5250      | 6.937 | 4.750 | 2.312 | 3.313 | 5250      | 7.250 | 4.750 | 4.875 | 3.219 |
| 5375      | 7.062 | 4.875 | 2.312 | 3.313 | 5375      | 7.375 | 4.875 | 4.938 | 3.219 |
| 5625      | 7.312 | 5.125 | 2.312 | 3.313 | 5625      | 7.500 | 5.125 | 4.938 | 3.219 |
| 5750      | 7.437 | 5.250 | 2.312 | 3.313 | 5750      | 7.750 | 5.250 | 4.969 | 3.531 |
| 5875      | 7.562 | 5.375 | 2.437 | 3.563 | 5875      | 7.875 | 5.375 | 4.969 | 3.531 |
| 6000      | 7.687 | 5.500 | 2.437 | 3.563 | 6000      | 8.125 | 5.500 | 4.969 | 3.563 |

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

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