

HBrinker Mechanical Seal

Standard Cartridge Seal

Mechanical Seal HBCartex Dual Seal



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Operating range

Shaft diameter: $d_1 = 25 \dots 100 \text{ mm}$ (1.000" ... 4.000")

Other sizes on request

Temperature: $t = -40 \text{ }^\circ\text{C} \dots 220 \text{ }^\circ\text{C}$ (-40 °F ... 428 °F) (Check O-Ring resistance)

Sliding face material combination BQ1

Pressure: $p_1 = 25 \text{ bar}$ (363 PSI)

Sliding velocity: $v_g = 16 \text{ m/s}$ (52 ft/s)

Sliding face material combination Q1Q1 or U2Q1

Pressure: $p_1 = 20 \text{ bar}$ (290 PSI)

Sliding velocity: $v_g = 10 \text{ m/s}$ (33 ft/s)

Barrier fluid circulation system:

$p_{3\text{max}} = 25 \text{ bar}$ (363 PSI)

$\Delta p (p_3 - p_1)_{\text{ideal}} = 2 \dots 3 \text{ bar}$ (29 ... 44 PSI),

7 bar (102 PSI) for barrier media with poor lubricating properties.

Pump startup: $\Delta p (p_3 - p_1)_{\text{max}} = 25 \text{ bar}$ (363 PSI) allowed

Recommended supply medium: max. ISO VG 5

Axial movement: $\pm 1.0 \text{ mm}$, $d_1 \geq 75 \text{ mm} \pm 1.5 \text{ mm}$



Materials

- Seal face: Silicon carbide (Q1), Carbon graphite resin impregnated (B), Tungsten carbide (U2)
- Seat: Silicon carbide (Q1)
- Secondary seals: FKM (V), EPDM (E), FFKM(K), Perfluorocarbon rubber/PTFE (U1)
- Springs: Hastelloy® C-4 (M)
- Metal parts: CrNiMo steel (G), CrNiMo cast steel (G)

Advantages

- Ideal seal for standardizations Universal applicable for packings conversions, retrofits or OEM
- No dimensional modification of the seal chamber (centrifugal pumps) necessary, small radial installation height
- No damage of the shaft by dynamically loaded O-Ring
- Extended service life
- No damage caused by dirt entered during assembly
- Straightforward and easy installation due to pre-assembled unit
- Individual adaptation to pump design possible
- Customer specific versions available

Recommended applications

- Petrochemical industry
- Chemical industry
- Pharmaceutical industry
- Power plant technology
- Pulp and paper industry
- Mining industry
- Food and beverage industry
- Sugar industry
- Universally applicable
- Centrifugal pumps
- Eccentric screw pumps

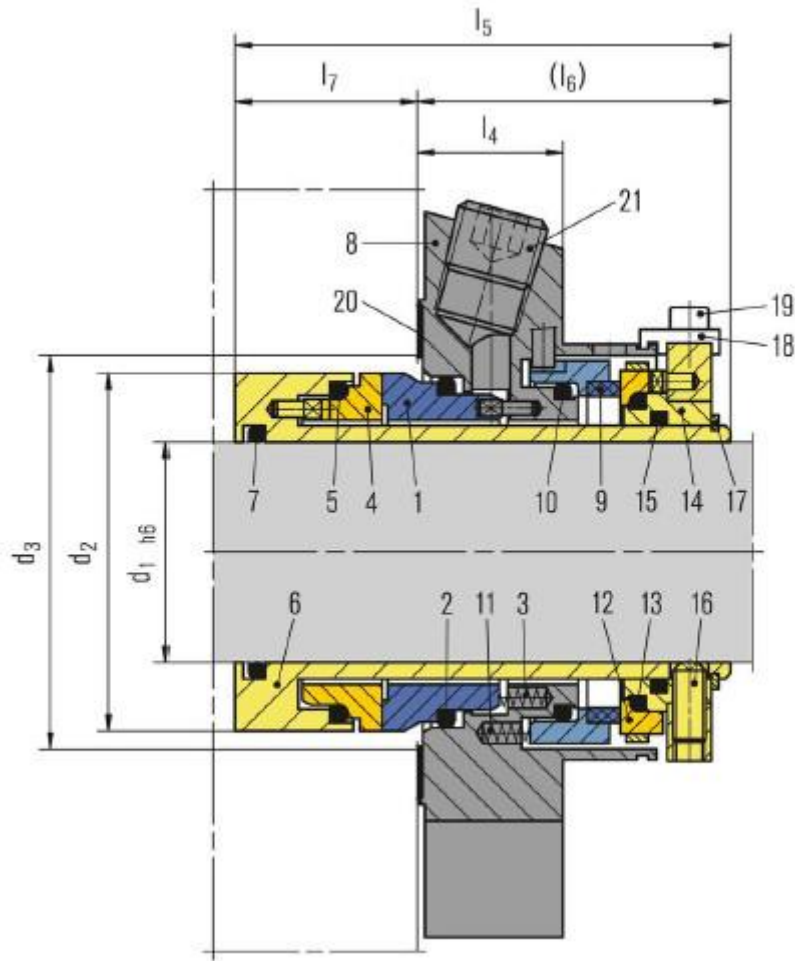
Features

- Dual seal
- Cartridge
- Balanced
- Independent of direction of rotation
- Double pressure balanced
- Integrated pumping device
- Variants available: for eccentric screw pumps (-Vario) and gas-lubricated version (-GSDN)

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| Item | Description |
|----------------|-----------------------|
| 1 | Seal face |
| 2,5,7,10,13,15 | O-Ring |
| 3 | Spring |
| 4 | Seat |
| 6 | Shaft sleeve |
| 8 | Cover |
| 9 | Seal face |
| 11 | Spring |
| 12 | Seat |
| 14 | Drive collar |
| 16 | Set screw |
| 17 | Snap ring |
| 18 | Assembly fixture |
| 19 | Hex socket head screw |
| 20 | Gasket |
| 21 | Screw plug |
| 22 | Gasket |

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Dimension Table in millimeter

| d ₁ | d ₂ | d ₃ min. | d ₃ max. | l ₄ | l ₅ | l ₆ | l ₇ | a ₂ | d _a | s |
|----------------|----------------|---------------------|---------------------|----------------|----------------|----------------|----------------|----------------|----------------|------|
| 25 | 43.0 | 44.0 | 51.5 | 25.4 | 86.5 | 53.4 | 33.1 | 62 | 105 | 13.2 |
| 28 | 46.0 | 47.0 | 52.0 | 25.4 | 86.5 | 53.4 | 33.1 | 61 | 105 | 13.2 |
| 30 | 48.0 | 49.0 | 56.0 | 25.4 | 86.5 | 53.4 | 33.1 | 67 | 105 | 13.2 |
| 32 | 49.8 | 51.0 | 57.0 | 25.4 | 86.5 | 53.4 | 33.1 | 70 | 108 | 13.2 |
| 33 | 49.8 | 51.0 | 57.0 | 25.4 | 86.5 | 53.4 | 33.1 | 70 | 108 | 13.2 |
| 35 | 53.0 | 54.0 | 61.5 | 25.4 | 86.5 | 53.4 | 33.1 | 72 | 113 | 13.2 |
| 38 | 56.0 | 57.0 | 66.0 | 25.4 | 86.5 | 53.4 | 33.1 | 75 | 123 | 13.2 |
| 40 | 58.0 | 59.0 | 68.0 | 25.4 | 86.5 | 53.4 | 33.1 | 77 | 123 | 14.2 |
| 42 | 60.5 | 61.5 | 69.5 | 25.4 | 86.5 | 53.4 | 33.1 | 80 | 133 | 14.2 |
| 43 | 60.5 | 61.5 | 70.5 | 25.4 | 86.5 | 53.4 | 33.1 | 80 | 133 | 14.2 |
| 45 | 62.5 | 64.0 | 73.0 | 25.4 | 86.5 | 53.4 | 33.1 | 82 | 138 | 14.2 |
| 48 | 65.6 | 67.0 | 75.0 | 25.4 | 86.5 | 53.4 | 33.1 | 85 | 138 | 14.2 |
| 50 | 68.0 | 69.0 | 78.0 | 25.4 | 86.5 | 53.4 | 33.1 | 87 | 148 | 14.2 |
| 53 | 72.0 | 73.0 | 87.0 | 25.4 | 86.5 | 53.4 | 33.1 | 97 | 148 | 18.0 |
| 55 | 73.0 | 74.0 | 83.0 | 25.4 | 86.5 | 53.4 | 33.1 | 92 | 148 | 18.0 |
| 60 | 78.0 | 79.0 | 91.0 | 25.4 | 86.5 | 53.4 | 33.1 | 102 | 157 | 18.0 |
| 65 | 84.8 | 85.7 | 98.5 | 25.4 | 86.5 | 53.4 | 33.1 | 109 | 163 | 18.0 |
| 70 | 93.0 | 95.0 | 108.0 | 25.4 | 86.5 | 53.4 | 33.1 | 118 | 178 | 18.0 |
| 75 | 100.0 | 101.6 | 118.0 | 28.0 | 108.0 | 63.9 | 44.1 | 129 | 190 | 18.0 |
| 80 | 106.4 | 108.0 | 124.0 | 28.0 | 108.0 | 63.9 | 44.1 | 135 | 195 | 18.0 |
| 85 | 109.5 | 111.1 | 128.0 | 28.0 | 108.0 | 63.9 | 44.1 | 139 | 198 | 22.0 |
| 90 | 115.9 | 117.5 | 135.0 | 28.0 | 108.0 | 63.9 | 44.1 | 145 | 205 | 22.0 |
| 95 | 119.1 | 120.7 | 138.0 | 28.0 | 108.0 | 63.9 | 44.1 | 148 | 208 | 22.0 |
| 100 | 125.4 | 127.0 | 144.0 | 28.0 | 108.0 | 63.9 | 44.1 | 154 | 218 | 22.0 |