EagleBurgmann®
Rely on excellence

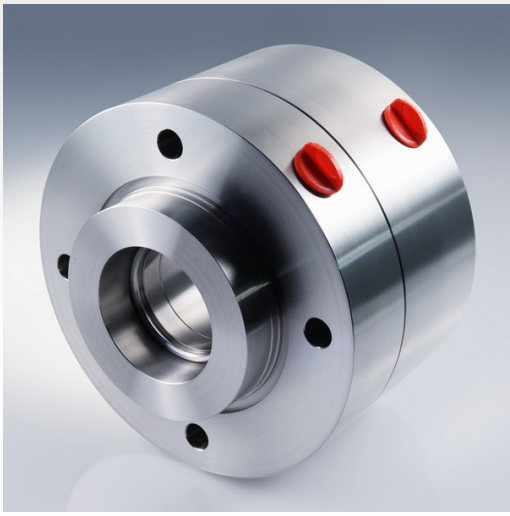
# LL9DSUU

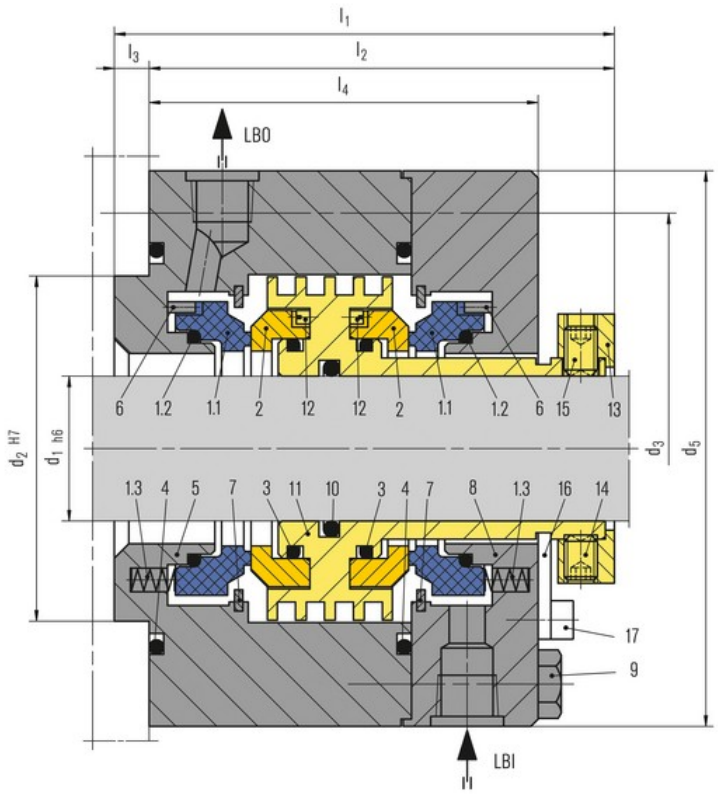
## Features

- API 682 Category 2 and 3, Type A, Arrangement 3 seal
- Dual seal in face-to-face arrangement
- Same size of inboard and outboard seal
- Balanced
- Cartridge unit
- Stationary multiple springs
- Solid seal faces

## Advantages

- Suitable for higher speeds
- Good followability due to no influence from run-out, squareness or vibration of the shaft
- Compact design
- Low heat generation and power consumption due to narrow seal face width
- Longer seal life
- Pressure-balanced design prevents mating ring being forced out under reverse pressure
- No damage to shaft sleeve as dynamic O-Ring is not in direct contact with the sleeve






| Item | Description |
|---|---|
| 1.1 | Seal ring |
| 1.2, 3, 4, 10 | O-Ring |
| 1.3 | Spring |
| 2 | Mating ring |
| 5, 8 | Gland plate |
| 6 | Pin |
| 7 | Retaining ring |
| 9 | Hexagon bolt |
| 11 | Shaft sleeve |
| 12 | Drive screw |
| 13 | Drive collar |
| 14, 15 | Set screw |
| 16 | Setting device |
| 17 | HSH Cap screw |



**EagleBurgmann Japan Co., Ltd.**
1-12-15, Shiba-Daimon, Minato-Ku
Tokyo, 105-8587
Japan

Tel.: +81 (0)33432 4771
Fax: +81 (0)33438 2370
info@jp.eagleburgmann.com
www.eagleburgmann.jp

# LL9DSUU (2)

## Recommended applications

- Refining technology
- Oil and gas industry
- Petrochemical industry
- Chemical industry
- Power plant technology
- Light volatile hydrocarbons
- LPG plants
- API 610 / ISO 13709 pumps
- Process pumps

## Standards and approvals

- API 682 / ISO 21049

## Operating range

Pressure: p = 60 bar (870 PSI)
Temperature: -40 °C … +176 °C (-40 °F … +349 °F)*
Sliding velocity: vg = 50m/s (164 ft/s)
Viscosity: ... 300 mPas
Solids content: ... 0.5 wt.%

* Engineered up to 260 °C (500 °F) with FFKM (K) secondary seals

## Materials

Seal ring: Blister resistant carbon,
Silicon carbide SSiC (Q1), RBSiC (Q2)
Mating ring:
Silicon carbide SSiC (Q1), RBSiC (Q2)
Secondary seals:
FKM (V), FFKM (K), EPDM (E), NBR (P)
Springs: Hastelloy® C-276 (M5)
Metal parts: CrNiMo steel 316 (G)

## Recommended piping plans

Process side:
02, 11, 12, 13, 14, 21, 22, 31, 32, 41
Between seals:
53A, 53B, 53C, 54
Atmospheric side*:
61, 62, 65A, 65B

* Throttle bushing on request

## Dimensions

| API/$d_1$ | API/$d_2$ | API/$d_3$ | $d_5$ | $l_1$ | $l_2$ | $l_3$ | $l_4$ |
|---|---|---|---|---|---|---|---|
| 20 | 70 | 105 | 128 | 108 | 98 | 10 | 80 |
| 30 | 80 | 115 | 138 | 110 | 98 | 12 | 80 |
| 40 | 90 | 125 | 148 | 113 | 98 | 15 | 80 |
| 50 | 100 | 140 | 168 | 122 | 107 | 15 | 87 |
| 60 | 120 | 160 | 188 | 122 | 107 | 15 | 87 |
| 70 | 130 | 170 | 198 | 122 | 107 | 15 | 87 |
| 80 | 140 | 180 | 208 | 122 | 107 | 15 | 87 |
| 90 | 160 | 205 | 238 | 130 | 115 | 15 | 93 |
| 100 | 170 | 215 | 248 | 130 | 115 | 15 | 93 |
| 110 | 180 | 225 | 258 | 135 | 115 | 20 | 93 |



**EagleBurgmann Japan Co., Ltd.**
1-12-15, Shiba-Daimon, Minato-Ku
Tokyo, 105-8587
Japan

Tel.: +81 (0)33432 4771
Fax: +81 (0)33438 2370
info@jp.eagleburgmann.com
www.eagleburgmann.jp