

VGM9610 Single Seals Standard Mechanical Seals - Metal Bellows Seals



Product Description

1. Single seal configuration
2. Balanced design
3. Independent of direction of rotation
4. For plain shafts
5. Rotary metal bellows design

Technical Features

1. Suitable for high temperature application
2. No dynamically loaded O-ring
3. Pumping screw for media with higher viscosity also available
4. Short installation length possible
5. Rugged design for long operating life
6. Bellows design efficiently ensure self-cleaning

Typical Industrial Applications

Chemical industry
Cold media
Highly viscous media
Hot media
Power plant technology
Refining technology

Standards

EN 12756

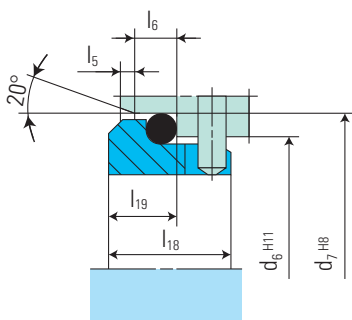
Performance Capabilities

Sizes: $d_1 =$ Upto 100 mm (Upto 4.000")
Externally pressurized:
 $p_1 = \dots$ 25 bar (363 PSI)
Internally pressurized:
 $p_1 < 120^\circ\text{C}$ (248 °F) 10 bar (145 PSI)
 $p_1 < 220^\circ\text{C}$ (428 °F) 5 bar (72 PSI)
Temperature: $t = -40^\circ\text{C} \dots +220^\circ\text{C}$ (-40°F...+428°F)
Stationary seat lock necessary.
Speed = 20 m/s (66 ft/s)

Materials

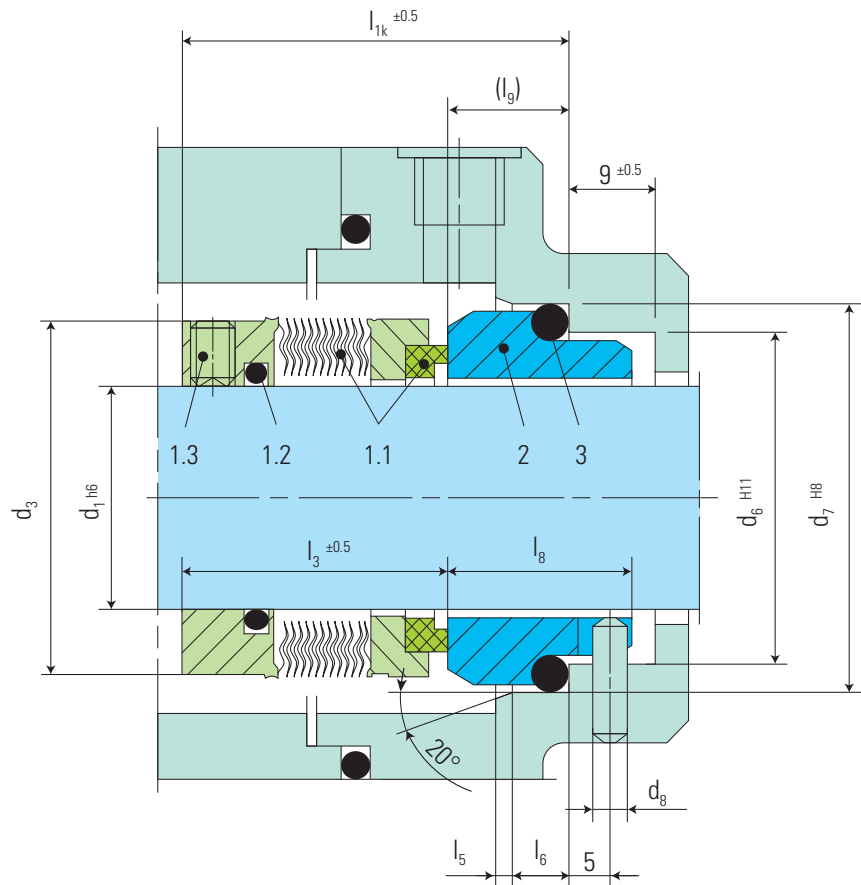
Seal face: Carbon graphite antimony impregnated (A), Silicon carbide (Q12)
Seat: Silicon carbide (Q1)
Bellows: Inconel® 718 hardened (M6), Hastelloy® C-276 (M5)
Metal parts: CrNiMo steel (G), Duplex (G1), Hastelloy® C-4 (M)

Stationary Seats



G16

(l1k shorter than specified by EN 12756)



Note: The item numbers as depicted above are based on our technical experience and knowledge and are placed in the chronological order of their assembly procedure.

| Item | Part no. | Description |
|------------------|----------|-----------------------------|
| 1.1 | 472/481 | Seal face with bellows unit |
| 1.2 | 412.1 | O-ring |
| 1.3 | 904 | Set Screw |
| 2 | 475 | Seat (G9) |
| 3 | 412.2 | O-ring |
| DIN 24250 | | |



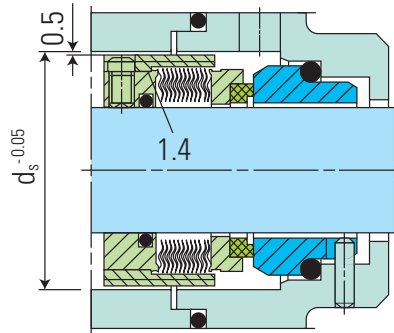
Design Variations

UFL900N

Shaft diameter: $d_1 =$ Upto 100 mm (Upto 4.000")
 Internally pressurized: $p_1 = \dots$ 16 bar (232 PSI),
 stationary seat lock necessary.
 Externally pressurized: $p_1 = 10$ bar(145PSI)
 Temperature: $t = -40$ °C...+ 220 °C (- 40 °F...+ 428°F)
 Speed = 20 m/s (66 ft/s)

UFL850P / UFL900P

Version with pumping ring. Dependent on direction of rotation. Can be retrofitted.



UFL850F

Dimensions, items and description as for UFL850N, but with pumping screw (item no. 1.4). Dependent on direction of rotation. The pumping screw can be retrofitted.

Dimensional Data

Dimensions in millimeter

| d_1 | d_3 | d_6 | d_7 | d_8 | d_s | l_{1K} | l_3 | l_5 | l_6 | l_8 | l_9 | l_{18} | l_{19} | b | s |
|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-------|-------|----------|----------|-----|------|
| 16 | 30 | 23 | 27 | 3 | 38 | 42.5*) | 32.5 | 1.5 | 4 | 17.5 | 10 | - | - | 1.6 | 9.0 |
| 18 | 32 | 27 | 33 | 3 | 39 | 42 | 30.5 | 2 | 5 | 14 | 11.5 | 15 | 7.0 | 1.6 | 10.0 |
| 20 | 33.5 | 29 | 35 | 3 | 41 | 42 | 30.5 | 2 | 5 | 14 | 11.5 | 15 | 7.0 | 1.6 | 10.0 |
| 22 | 36.5 | 31 | 37 | 3 | 44 | 42 | 30.5 | 2 | 5 | 14 | 11.5 | 15 | 7.0 | 1.6 | 10.0 |
| 24 | 39 | 33 | 39 | 3 | 47 | 40 | 28.5 | 2 | 5 | 19.5 | 11.5 | 15 | 7.0 | 1.6 | 8.2 |
| 25 | 39.6 | 34 | 40 | 3 | 48 | 40 | 28.5 | 2 | 5 | 19.5 | 11.5 | 15 | 7.0 | 1.6 | 8.5 |
| 28 | 42.8 | 37 | 43 | 3 | 51 | 42.5 | 31 | 2 | 5 | 19.5 | 11.5 | 15 | 7.0 | 1.6 | 9.0 |
| 30 | 45 | 39 | 45 | 3 | 53 | 42.5 | 31 | 2 | 5 | 19.5 | 11.5 | 15 | 7.0 | 1.6 | 8.5 |
| 32 | 46 | 42 | 48 | 3 | 55 | 42.5 | 31 | 2 | 5 | 19.5 | 11.5 | 15 | 7.0 | 1.6 | 9.2 |
| 33 | 48 | 42 | 48 | 3 | 56 | 42.5 | 31 | 2 | 5 | 19.5 | 11.5 | 15 | 7.0 | 1.6 | 9.2 |
| 35 | 49.2 | 44 | 50 | 3 | 58 | 42.5 | 31 | 2 | 5 | 19.5 | 11.5 | 15 | 7.0 | 1.6 | 9.5 |
| 38 | 52.3 | 49 | 56 | 4 | 61 | 45 | 31 | 2 | 6 | 22 | 14 | 16 | 8.0 | 1.6 | 9.2 |
| 40 | 55.5 | 51 | 58 | 4 | 64 | 45 | 31 | 2 | 6 | 22 | 14 | 16 | 8.0 | 1.6 | 9.2 |
| 43 | 57.5 | 54 | 61 | 4 | 67 | 45 | 31 | 2 | 6 | 22 | 14 | 16 | 8.0 | 1.6 | 9.2 |
| 45 | 58.7 | 56 | 63 | 4 | 69 | 45 | 31 | 2 | 6 | 22 | 14 | 16 | 8.0 | 1.6 | 9.5 |
| 48 | 61.9 | 59 | 66 | 4 | 72 | 45 | 31 | 2 | 6 | 22 | 14 | 16 | 8.0 | 1.6 | 9.2 |
| 50 | 65 | 62 | 70 | 4 | 74 | 47.5 | 32.5 | 2.5 | 6 | 23 | 15 | 17 | 9.5 | 1.6 | 10.5 |
| 53 | 68.2 | 65 | 73 | 4 | 77 | 47.5 | 32.5 | 2.5 | 6 | 23 | 15 | 17 | 9.5 | 1.6 | 10.5 |
| 55 | 70 | 67 | 75 | 4 | 80 | 47.5 | 32.5 | 2.5 | 6 | 23 | 15 | 17 | 9.5 | 1.6 | 10.0 |
| 58 | 71.7 | 70 | 78 | 4 | 83 | 52.5 | 37.5 | 2.5 | 6 | 23 | 15 | 18 | 10.5 | 3.0 | 14.0 |
| 60 | 74.6 | 72 | 80 | 4 | 85 | 52.5 | 37.5 | 2.5 | 6 | 23 | 15 | 18 | 10.5 | 3.0 | 14.0 |
| 63 | 79 | 75 | 83 | 4 | 88 | 52.5 | 37.5 | 2.5 | 6 | 23 | 15 | 18 | 10.5 | 3.0 | 14.0 |
| 65 | 84.1 | 77 | 85 | 4 | 95 | 52.5 | 37.5 | 2.5 | 6 | 23 | 15 | 18 | 10.5 | 3.0 | 14.0 |
| 68 | 87.3 | 81 | 90 | 4 | 96 | 52.5 | 34.5 | 2.5 | 7 | 26 | 18 | 18.5 | 11.0 | 1.6 | 10.0 |
| 70 | 87.3 | 83 | 92 | 4 | 96 | 60 | 42 | 2.5 | 7 | 26 | 18 | 19 | 11.5 | 3.0 | 17.0 |
| 75 | 95 | 88 | 97 | 4 | 104 | 60 | 42 | 2.5 | 7 | 26 | 18 | 19 | 11.5 | 3.0 | 16.0 |
| 80 | 98.4 | 95 | 105 | 4 | 109 | 60 | 41.8 | 3 | 7 | 26.2 | 18.2 | 19 | 11.5 | 3.0 | 16.0 |
| 85 | 104.7 | 100 | 110 | 4 | 114 | 60 | 41.8 | 3 | 7 | 26.2 | 18.2 | 19 | 11.5 | 3.0 | 16.0 |
| 90 | 111 | 105 | 115 | 4 | 119 | 65 | 46.8 | 3 | 7 | 26.2 | 18.2 | 20.5 | 13.0 | 3.0 | 21.0 |
| 95 | 114 | 110 | 120 | 4 | 124 | 65 | 47.8 | 3 | 7 | 25.2 | 17.2 | 20.5 | 13.0 | 3.0 | 21.0 |
| 100 | 117.4 | 115 | 125 | 4 | 129 | 65 | 47.8 | 3 | 7 | 25.2 | 17.2 | 20.5 | 13.0 | 3.0 | 20.0 |

*) Installation length is longer than l_{1k} specified by EN 12756

inch size available from size 0.625 to 4.000

Note: Additional technical & dimensional information will be provided on request.