EagleBurgmann
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RELY ON EXCELLENCE

# H74-D

## Mechanical Seals | Mechanical seals for pumps | Pusher seals

### Features

- For stepped shafts
- Dual seal
- Balanced
- Rotating multiple springs
- Independent of direction of rotation
- Seal concept based on the H7 range
- Variant with pumping screw available (H74F-D)

### Advantages

- Efficient stock keeping due to easily interchangeable faces
- Extended selection of materials
- Flexibility in torque transmissions
- Insensitive to low solids contents
- EN 12756 (For connection dimensions d1 up to 100 mm (3.94"))

### Operating range

Shaft diameter:
d1 = 14 ... 200 mm (0.55" ... 7.87")
Pressure:
p1 = 80 bar (1,160 PSI) for d1 = 14 ... 100 mm,
p1 = 25 bar (363 PSI) for d1 = 100 ... 200 mm,
p1 = 16 bar (232 PSI) for d1 > 200 mm
Temperature:
t = -50 °C ... 220 °C (-58 °F ... 428 °F)
Sliding velocity: vg = 20 m/s (66 ft/s)
Axial movement:
d1 up to 100 mm: ± 0.5 mm
d1 from 100 mm: ± 2.0 mm

### Materials

Seal face: Silicon carbide (Q1, Q2), Carbon graphite antimony impregnated (A), Aluminium oxide (V), Special cast CrMo steel (S)
Seat G9: Carbon graphite antimony impregnated (A), Carbon graphite resin impregnated (B), Silicon carbide (Q1*, Q2*)
Secondary seals: EPDM (E), NBR (P), FKM (V), FFKM (K)
Springs: CrNiMo steel (G)
Metal parts: CrNiMo steel (G), Duplex (G1)
* Cannot be combined with seal face made of S

### Standards and approvals

- EN 12756

### Recommended applications

- Low solids content and low abrasive media
- Toxic and hazardous media
- Media with poor lubrication properties
- Adhesives
- Process industry
- Oil and gas industry
- Refining technology
- Petrochemical industry
- Chemical industry
- Power plant technology
- Pulp and paper industry
- Chemical standard pumps

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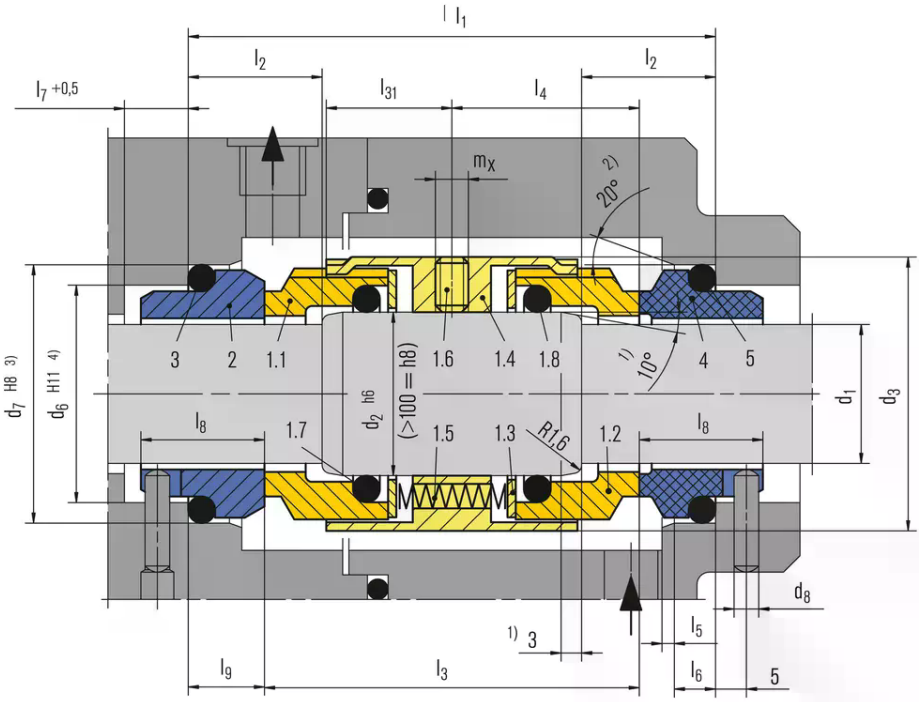
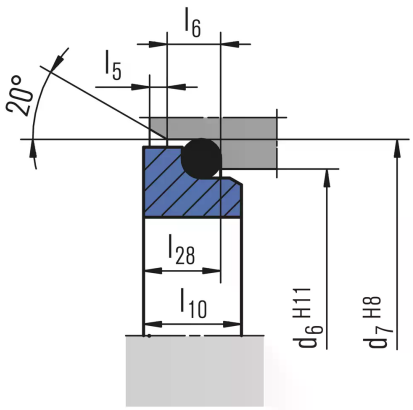


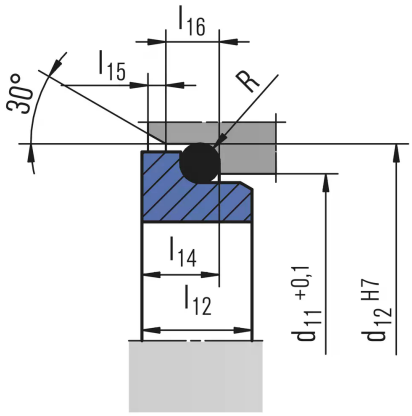

| Item | Part no.to DIN 24250 | Description |
|---|---|---|
| 1.1 | 472.1 | Seal face |
| 1.2 | 472.2 | Seal face |
| 1.3 | 474 | Thrust ring |
| 1.4 | 485 | Drive collar |
| 1.5 | 477 | Spring |
| 1.6 | 904 | Set screw |
| 1.7 | 412.1 | O-Ring |
| 1.8 | 412.2 | O-Ring |
| 2 | 475.1 | Seat (G9) |
| 3 | 412.3 | O-Ring |
| 4 | 475.2 | Seat (G9) |
| 5 | 412.4 | O-Ring |

1) d1 > 100 mm: 2 mm x 30°
2) d1 > 100 mm: 30°
3) d1 > 100 mm: H7
4) d1 > 100 mm: +0.1

## Seat alternatives



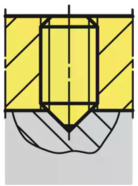

**G6** (EN 12756)



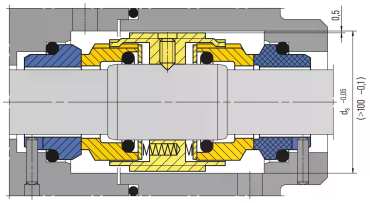

**G4**

## Torque transmissions

d12 ≥ 105 mm Torque transmission by **4 set screws** with cone point. Offset: 90°



## Product variants



**H74F-D**
Dimensions, items and descriptions as for H74-D, but with pumping screw.
Dependent on direction of rotation.

## Dimensions

| $d_1$ | $d_2$ | $d_3$ | $d_6$ | $d_7$ | $d_8$ | $d_{11}$ | $d_{12}$ | $d_s$ | $l_1$ | $l_2$ | $l_3$ | $l_4$ | $l_5$ | $l_6$ | $l_7$ | $l_8$ | $l_9$ | $l_{12}$ | $l_{14}$ | $l_{10}$ | $l_{15}$ | $l_{28}$ | $l_{16}$ | $l_{31}$ | $m_x$ | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 18 | 33 | 21 | 25 | 3 | 24 | 30 | – | 73 | 18 | 53 | 26.5 | 1.5 | 4 | 8.5 | 17.5 | 10 | 6.5 | 5.6 | 7.5 | 1.5 | 6.6 | 5 | 17 | M5 | 1.2 |
| 16 | 20 | 35 | 23 | 27 | 3 | 29.5 | 35 | – | 73 | 18 | 53 | 26.5 | 1.5 | 4 | 8.5 | 17.5 | 10 | 8.5 | 7.5 | 7.5 | 1.5 | 6.6 | 5 | 17 | M5 | 1.5 |
| 18 | 22 | 37 | 27 | 33 | 3 | 29.5 | 35 | 42 | 76 | 20 | 53 | 26.5 | 2 | 5 | 9 | 19.5 | 11.5 | 9 | 8 | 8.5 | 1.5 | 7.5 | 5 | 17 | M5 | 1.5 |
| 20 | 24 | 39 | 29 | 35 | 3 | 32 | 38 | 44 | 76 | 20 | 53 | 26.5 | 2 | 5 | 9 | 19.5 | 11.5 | 8.5 | 7.5 | 8.5 | 1.5 | 7.5 | 5 | 17 | M5 | 1.5 |
| 22 | 26 | 41 | 31 | 37 | 3 | 32 | 38 | 45 | 76 | 20 | 53 | 26.5 | 2 | 5 | 9 | 19.5 | 11.5 | 8.5 | 7.5 | 8.5 | 1.5 | 7.5 | 5 | 17 | M5 | 1.5 |
| 24 | 28 | 43 | 33 | 39 | 3 | 36 | 42 | 47 | 77 | 20 | 54 | 27 | 2 | 5 | 9 | 19.5 | 11.5 | 8.5 | 7.5 | 8.5 | 1.5 | 7.5 | 5 | 17.5 | M6 | 1.5 |
| 25 | 30 | 45 | 34 | 40 | 3 | 39.2 | 45 | 49 | 77 | 20 | 54 | 27 | 2 | 5 | 9 | 19.5 | 11.5 | 8.5 | 7.5 | 8.5 | 1.5 | 7.5 | 5 | 17.5 | M6 | 1.5 |
| 28 | 33 | 48 | 37 | 43 | 3 | 42.2 | 48 | 51 | 77 | 20 | 54 | 27 | 2 | 5 | 9 | 19.5 | 11.5 | 10 | 9 | 8.5 | 1.5 | 7.5 | 5 | 17.5 | M6 | 1.5 |
| 30 | 35 | 50 | 39 | 45 | 3 | 44.2 | 50 | 54 | 77 | 20 | 54 | 27 | 2 | 5 | 9 | 19.5 | 11.5 | 11.5 | 10.5 | 8.5 | 1.5 | 7.5 | 5 | 17.5 | M6 | 1.5 |
| 32 | 38 | 55 | 42 | 48 | 3 | 46.2 | 52 | 59 | 79 | 20 | 56 | 28 | 2 | 5 | 9 | 19.5 | 11.5 | 11.5 | 10.5 | 8.5 | 1.5 | 7.5 | 5 | 18.5 | M6 | 1.5 |
| 33 | 38 | 55 | 42 | 48 | 3 | 49.2 | 55 | 59 | 79 | 20 | 56 | 28 | 2 | 5 | 9 | 19.5 | 11.5 | 12 | 10.5 | 8.5 | 1.5 | 7.5 | 5 | 18.5 | M6 | 1.5 |
| 35 | 40 | 57 | 44 | 50 | 3 | 52.2 | 58 | 61 | 80 | 20 | 57 | 28.5 | 2 | 5 | 9 | 19.5 | 11.5 | 12 | 11 | 8.5 | 1.5 | 7.5 | 5 | 19 | M6 | 1.5 |
| 38 | 43 | 60 | 49 | 56 | 4 | 53.3 | 62 | 65 | 85 | 23 | 57 | 28.5 | 2 | 6 | 9 | 22 | 14 | 11.3 | 10.3 | 10 | 2 | 9 | 6 | 19 | M6 | 1.5 |
| 40 | 45 | 62 | 51 | 58 | 4 | 55.3 | 64 | 66 | 85 | 23 | 57 | 28.5 | 2 | 6 | 9 | 22 | 14 | 11.8 | 10.8 | 10 | 2 | 9 | 6 | 19 | M6 | 1.5 |
| 43 | 48 | 65 | 54 | 61 | 4 | 59.7 | 68.4 | 69 | 85 | 23 | 57 | 28.5 | 2 | 6 | 9 | 22 | 14 | 13.2 | 12 | 10 | 2 | 9 | 6 | 19 | M6 | 2.5 |
| 45 | 50 | 67 | 56 | 63 | 4 | 60.8 | 69.3 | 71 | 84 | 23 | 56 | 28 | 2 | 6 | 9 | 22 | 14 | 12.8 | 11.6 | 10 | 2 | 9 | 6 | 19.5 | M6 | 2.5 |
| 48 | 53 | 70 | 59 | 66 | 4 | 63.8 | 72.3 | 75 | 84 | 23 | 56 | 28 | 2 | 6 | 9 | 22 | 14 | 12.8 | 11.6 | 10 | 2 | 9 | 6 | 19.5 | M6 | 2.5 |
| 50 | 55 | 72 | 62 | 70 | 4 | 66.5 | 75.4 | 76 | 93 | 25 | 63 | 31.5 | 2.5 | 6 | 9 | 23 | 15 | 12.8 | 11.6 | 10.5 | 2 | 9.5 | 6 | 19.5 | M6 | 2.5 |
| 53 | 58 | 79 | 65 | 73 | 4 | 69.5 | 78.4 | 83 | 97 | 25 | 67 | 33.5 | 2.5 | 6 | 9 | 23 | 15 | 13.5 | 12.3 | 12 | 2 | 11 | 6 | 23.5 | M8 | 2.5 |
| 55 | 60 | 81 | 67 | 75 | 4 | 71.5 | 80.4 | 85 | 97 | 25 | 67 | 33.5 | 2.5 | 6 | 9 | 23 | 15 | 14.5 | 13.3 | 12 | 2 | 11 | 6 | 23.5 | M8 | 2.5 |
| 58 | 63 | 84 | 70 | 78 | 4 | 74.5 | 83.4 | 88 | 104 | 25 | 74 | 37 | 2.5 | 6 | 9 | 23 | 15 | 14.5 | 13.3 | 12 | 2 | 11 | 6 | 24.5 | M8 | 2.5 |
| 60 | 65 | 86 | 72 | 80 | 4 | 76.5 | 85.4 | 95 | 104 | 25 | 74 | 37 | 2.5 | 6 | 9 | 23 | 15 | 14.5 | 13.3 | 12 | 2 | 11 | 6 | 24.5 | M8 | 2.5 |
| 63 | 68 | 89 | 75 | 83 | 4 | 82.7 | 91.5 | 93 | 109 | 25 | 79 | 39.5 | 2.5 | 6 | 9 | 23 | 15 | 14.2 | 13.3 | 12 | 2 | 11 | 6 | 24.5 | M8 | 2.5 |
| 65 | 70 | 91 | 77 | 85 | 4 | 83 | 92 | 95 | 98 | 25 | 68 | 34 | 2.5 | 6 | 9 | 23 | 15 | 14.2 | 13 | 12 | 2 | 11 | 6 | 23.5 | M8 | 2.5 |
| 70 | 75 | 99 | 83 | 92 | 4 | 90.2 | 99 | 105 | 112.5 | 28 | 76.4 | 38.2 | 2.5 | 7 | 9 | 26 | 18 | 14.9 | 13.7 | 12.5 | 2 | 11.3 | 6 | 25.5 | M8 | 2.5 |
| 75 | 80 | 104 | 88 | 97 | 4 | 95.2 | 104 | 109 | 112.5 | 28 | 76.4 | 38.2 | 2.5 | 7 | 9 | 26 | 18 | 14.2 | 13 | 12.5 | 2 | 11.3 | 6 | 25.5 | M8 | 2.5 |
| 80 | 85 | 109 | 95 | 105 | 4 | 100.2 | 109 | 114 | 112.5 | 28 | 76 | 38 | 3 | 7 | 9 | 26.2 | 18.2 | 15.2 | 14 | 12.5 | 2 | 11.3 | 6 | 25 | M8 | 2.5 |
| 85 | 90 | 114 | 100 | 110 | 4 | 105.2 | 114 | 119 | 112.5 | 28 | 76 | 38 | 3 | 7 | 9 | 26.2 | 18.2 | 16.2 | 15 | 13 | 2 | 12 | 6 | 25.5 | M8 | 2.5 |
| 90 | 95 | 119 | 105 | 115 | 4 | 111.6 | 120.3 | 124 | 112.5 | 28 | 76 | 38 | 3 | 7 | 9 | 26.2 | 18.2 | 16 | 14.8 | 15 | 2 | 14 | 6 | 25 | M8 | 2.5 |
| 95 | 100 | 124 | 110 | 120 | 4 | 114.5 | 123.3 | 129 | 110.5 | 28 | 76 | 38 | 3 | 7 | 9 | 25.2 | 17.2 | 16 | 14.8 | 15 | 2 | 14 | 6 | 25 | M8 | 2.5 |
| 100 | 105 | 129 | 115 | 125 | 4 | – | – | 134 | 110.5 | 28 | 76 | 38 | 3 | 7 | 9 | 25.2 | 17.2 | 17 | 15.8 | 15 | – | 14 | – | 25.5 | M8 | 2.5 |
| 105 | 115 | 148 | 122.2 | 134.3 | 5 | – | – | 153 | 122 | 32 | 82 | 41 | 2 | 10 | – | 30 | 20 | 17 | 15.8 | 15 | – | 14 | – | 31.5 | M8 | 2.5 |
| 110 | 120 | 153 | 128.2 | 140.3 | 5 | – | – | 158 | 122 | 32 | 82 | 41 | 2 | 10 | – | 30 | 20 | – | – | – | – | – | – | 31.5 | M8 | - |
| 115 | 125 | 158 | 136.2 | 148.3 | 5 | – | – | 163 | 122 | 32 | 82 | 41 | 2 | 10 | – | 30 | 20 | – | – | – | – | – | – | 31.5 | M8 | - |
| 120 | 130 | 163 | 138.2 | 150.3 | 5 | – | – | 168 | 122 | 32 | 82 | 41 | 2 | 10 | – | 30 | 20 | – | – | – | – | – | – | 31.5 | M8 | - |
| 125 | 135 | 168 | 142.2 | 154.3 | 5 | – | – | 173 | 122 | 32 | 82 | 41 | 2 | 10 | – | 30 | 20 | – | – | – | – | – | – | 31.5 | M8 | - |
| 130 | 140 | 173 | 146.2 | 158.3 | 5 | – | – | 178 | 122 | 32 | 82 | 41 | 2 | 10 | – | 30 | 20 | – | – | – | – | – | – | 31.5 | M8 | - |
| 135 | 145 | 178 | 152.2 | 164.3 | 5 | – | – | 183 | 122 | 32 | 82 | 41 | 2 | 10 | – | 30 | 20 | – | – | – | – | – | – | 31.5 | M8 | - |
| 140 | 150 | 183 | 156.2 | 168.3 | 5 | – | – | 188 | 122 | 32 | 82 | 41 | 2 | 10 | – | 30 | 20 | – | – | – | – | – | – | 31.5 | M8 | - |
| 145 | 155 | 191 | 161.2 | 173.3 | 5 | – | – | 196 | 133 | 34 | 93 | 46.5 | 2 | 10 | – | 30 | 20 | – | – | – | – | – | – | 35.5 | M8 | - |
| 150 | 160 | 196 | 168.2 | 180.3 | 5 | – | – | 201 | 137 | 36 | 93 | 46.5 | 2 | 10 | – | 32 | 22 | – | – | – | – | – | – | 35.5 | M8 | - |
| 155 | 165 | 201 | 173.2 | 185.3 | 5 | – | – | 206 | 141 | 38 | 93 | 46.5 | 2 | 12 | – | 34 | 24 | – | – | – | – | – | – | 35.5 | M8 | - |
| 160 | 170 | 206 | 178.2 | 190.3 | 5 | – | – | 211 | 141 | 38 | 93 | 46.5 | 2 | 12 | – | 34 | 24 | – | – | – | – | – | – | 35.5 | M8 | - |
| 165 | 175 | 211 | 183.2 | 195.3 | 5 | – | – | 216 | 141 | 38 | 93 | 46.5 | 2 | 12 | – | 34 | 24 | – | – | – | – | – | – | 35.5 | M8 | - |
| 170 | 180 | 216 | 188.2 | 200.3 | 5 | – | – | 221 | 141 | 38 | 93 | 46.5 | 2 | 12 | – | 34 | 24 | – | – | – | – | – | – | 35.5 | M8 | - |
| 175 | 185 | 221 | 193.2 | 205.3 | 5 | – | – | 226 | 141 | 38 | 93 | 46.5 | 2 | 12 | – | 34 | 24 | – | – | – | – | – | – | 35.5 | M8 | - |
| 180 | 190 | 226 | 207.5 | 219.3 | 5 | – | – | 231 | 149 | 42 | 93 | 46.5 | 2 | 12 | – | 38 | 28 | – | – | – | – | – | – | 35.5 | M8 | - |
| 185 | 195 | 231 | 212.5 | 224.3 | 5 | – | – | 236 | 149 | 42 | 93 | 46.5 | 2 | 12 | – | 38 | 28 | – | – | – | – | – | – | 35.5 | M8 | - |
| 190 | 200 | 236 | 217.5 | 229.3 | 5 | – | – | 241 | 149 | 42 | 93 | 46.5 | 2 | 12 | – | 38 | 28 | – | – | – | – | – | – | 35.5 | M8 | - |

| $d_1$ | $d_2$ | $d_3$ | $d_6$ | $d_7$ | $d_8$ | $d_{11}$ | $d_{12}$ | $d_s$ | $l_1$ | $l_2$ | $l_3$ | $l_4$ | $l_5$ | $l_6$ | $l_7$ | $l_8$ | $l_9$ | $l_{12}$ | $l_{14}$ | $l_{10}$ | $l_{15}$ | $l_{28}$ | $l_{16}$ | $l_{31}$ | $m_x$ | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 195 | 205 | 245 | 222.5 | 234.3 | 5 | – | – | 250 | 151 | 43 | 95 | 47.5 | 2 | 12 | – | 38 | 28 | – | – | – | – | – | – | – | M10 | - |
| 200 | 210 | 250 | 227.5 | 239.3 | 5 | – | – | 255 | 151 | 43 | 95 | 47.5 | 2 | 12 | – | 38 | 28 | – | – | – | | | | | | |

Dimensions in millimeter