

Mechanical seal Type 301



The DEPAC mechanical seal type 301 is a stationary single-cartridge seal that has been specially developed for applications in which flushing is permissible and mandatory in accordance with the API plans. The stationary design principle developed by DEPAC for the process industry also offers maximum running reliability even in difficult ranges of applications for mechanical seals.

Advantages

- Stationary design principle
- Extremely short design
- Fits small stuffing box chambers from a cross section of 7.94 mm ($\frac{5}{16}$ ")
- Cartridge-mounted
- Pressure balanced
- Independent of the direction of rotation
- Multiple springs made of Hastelloy C
- Springs outside the medium - no blockage of the springs
- Vibration-damped rotating face
- Gland with $\frac{1}{4}$ " NPT axial flushing and quenching connection

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Technical specifications

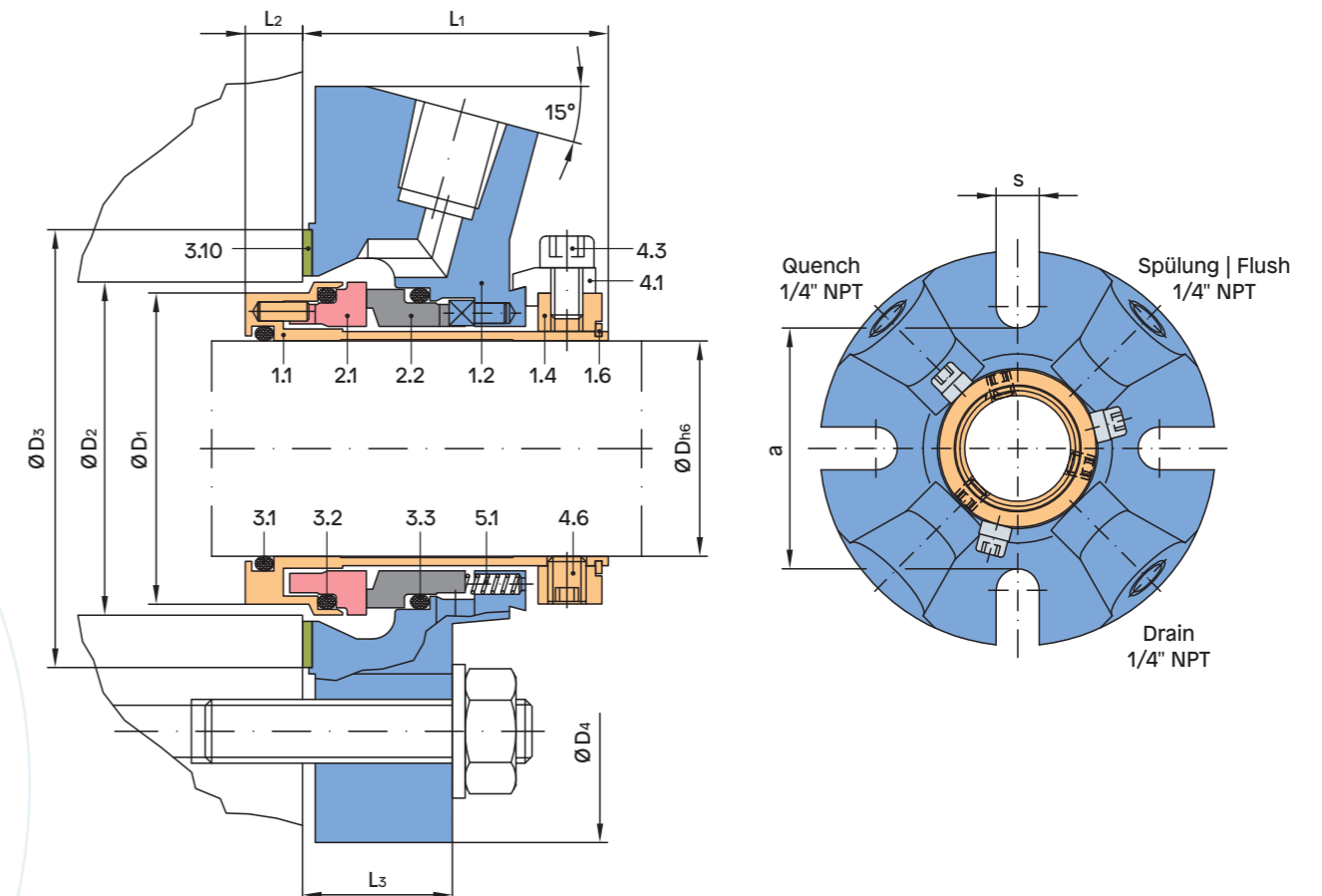
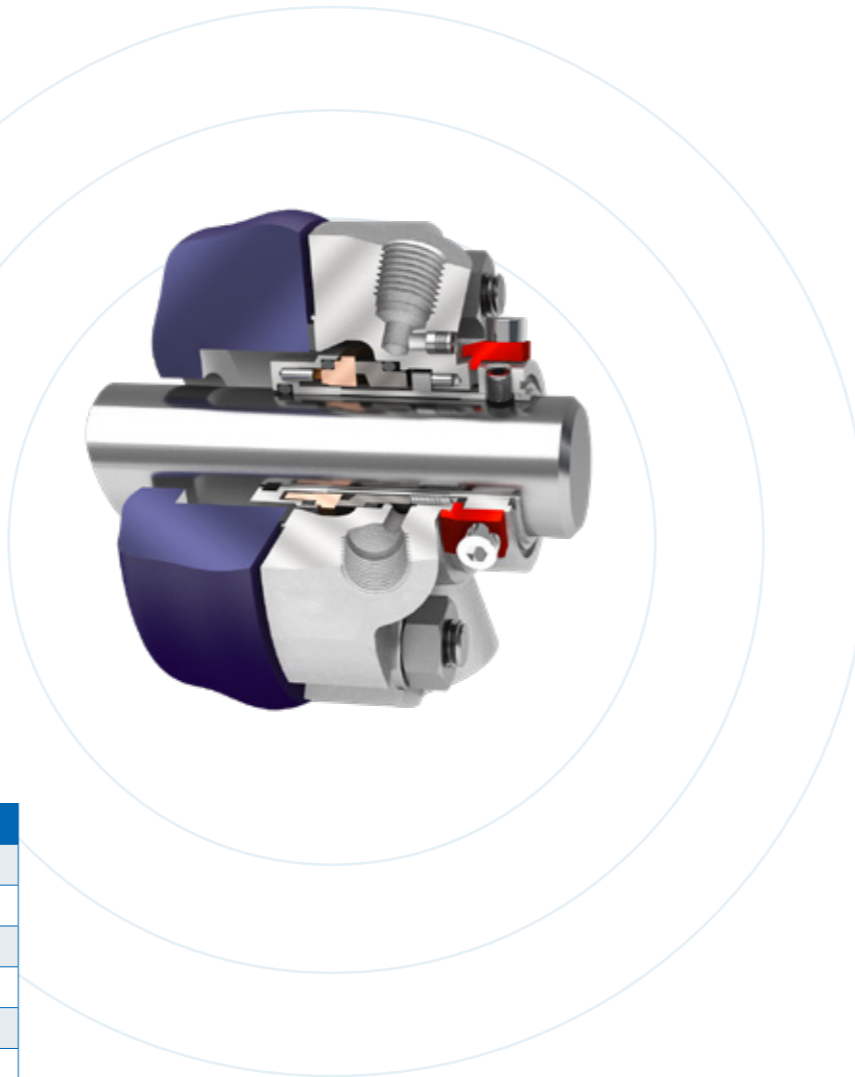
Area of application*

| | |
|------------------|-----------------------------------|
| Pressure: | 700 mmHg to 28 bar |
| Temperature: | depending on elastomer |
| Sliding speed: | up to 35 m/s |
| Shaft movements: | axial ± 1,0 mm radial ± 0,5 mm |

* The maximum specifications for temperature, pressure and sliding speed apply in each case to independent higher operating conditions. However, this does not mean that the seal will function with all extreme conditions at the same time. If in doubt contact DEPAC.

Dimensions

| | |
|-----------------|----------------------------|
| Shaft diameter: | 24 – 160 mm 1" – 6 1/4" |
| | Special sizes on request |



Bill of materials

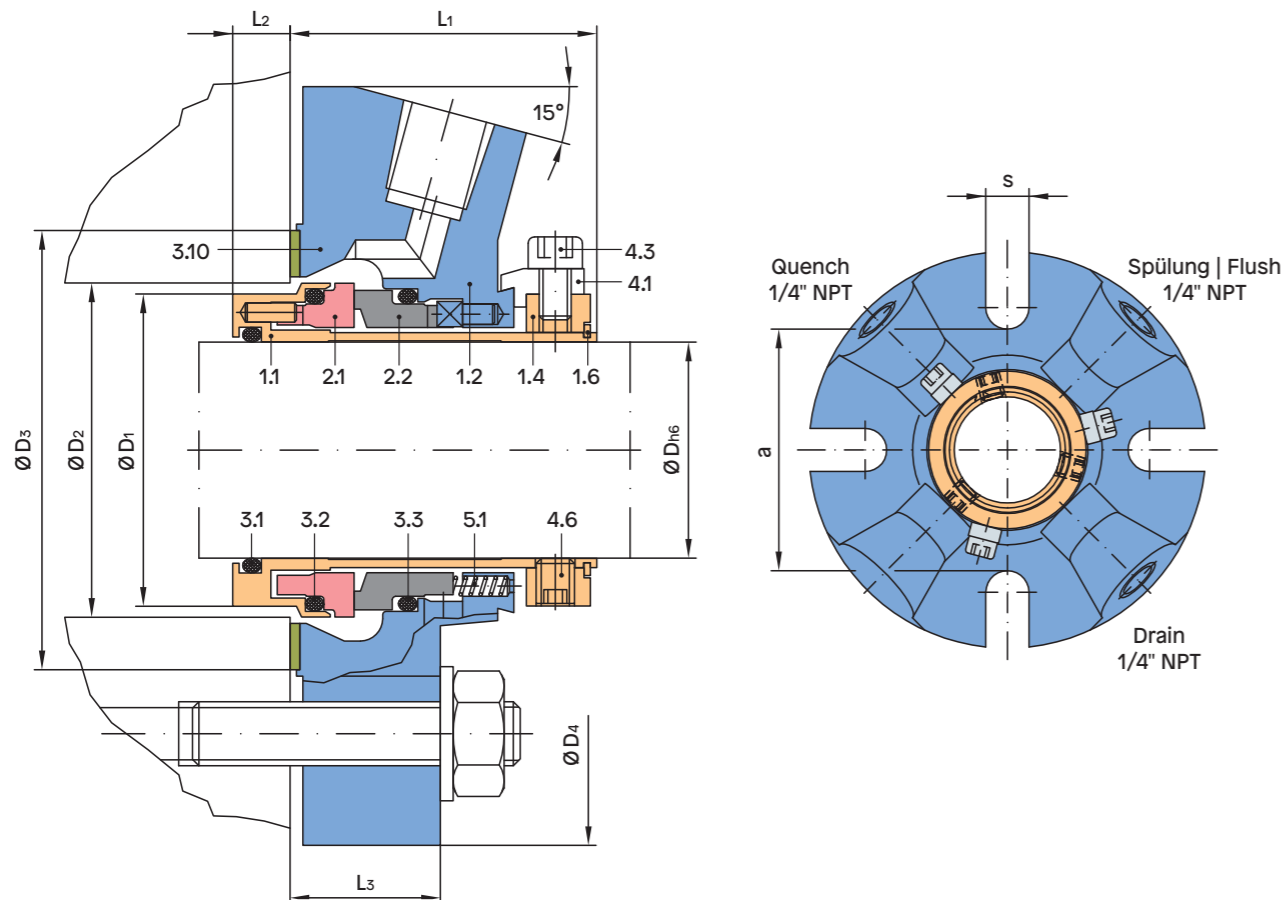
| Item | Description | Material |
|---------------|----------------------|-------------------------------|
| 1.1 | Sleeve | 1.4571 |
| 1.2 | Gland | 1.4571 |
| 1.4 | Adjusting ring | 1.4571 |
| 1.6 | Circlip | 1.4310 |
| 2.1 | Dynamic seal face | SC/SSIC/TC |
| 2.2 | Stationary seal face | CA/SC/SSIC/TC |
| 3.1, 3.2, 3.3 | O-ring | FKM, EPDM, Kalrez®, PTFE,.... |
| 3.10 | Flat gasket | Klingsil® C-4300 |
| 4.1 | Centering piece | Al |
| 4.3 | Socket screw | A2 |
| 4.6 | Threaded pin | A4 |
| 5.1 | Spring | 2.4610 |

Other materials on request!

Dimension table Ø 24 – 45 mm

| Dh6 | D1 | D2 min. | D2 max. | D3 | D4 | L1 | L2 | L3 | a | s | O-rings DASH no. | | |
|-----|----|---------|---------|----|-----|----|----|----|----|------|------------------|-----|-----|
| | | | | | | | | | | | 3.1 | 3.2 | 3.3 |
| 24 | 40 | 42 | 52 | 60 | 104 | 48 | 9 | 24 | 62 | 12,5 | 120 | 127 | 127 |
| 25 | 40 | 42 | 52 | 60 | 104 | 48 | 9 | 24 | 62 | 12,5 | 120 | 127 | 127 |
| 28 | 43 | 45 | 52 | 60 | 104 | 48 | 9 | 24 | 62 | 12,5 | 122 | 129 | 129 |
| 30 | 45 | 47 | 57 | 65 | 104 | 48 | 9 | 24 | 67 | 12,5 | 123 | 130 | 130 |
| 32 | 47 | 49 | 57 | 65 | 104 | 48 | 9 | 24 | 67 | 12,5 | 124 | 131 | 131 |
| 33 | 47 | 49 | 57 | 65 | 104 | 48 | 9 | 24 | 67 | 12,5 | 125 | 131 | 131 |
| 35 | 50 | 52 | 60 | 68 | 110 | 48 | 9 | 24 | 70 | 12,5 | 126 | 133 | 133 |
| 38 | 53 | 55 | 65 | 73 | 125 | 48 | 9 | 24 | 75 | 14,7 | 128 | 136 | 136 |
| 40 | 55 | 57 | 65 | 73 | 125 | 48 | 9 | 24 | 75 | 14,7 | 130 | 137 | 137 |
| 42 | 57 | 59 | 70 | 78 | 133 | 48 | 9 | 24 | 80 | 14,7 | 131 | 138 | 138 |
| 43 | 58 | 60 | 70 | 78 | 133 | 48 | 9 | 24 | 80 | 14,7 | 132 | 138 | 138 |
| 45 | 60 | 62 | 72 | 80 | 140 | 48 | 9 | 24 | 82 | 14,7 | 133 | 140 | 140 |

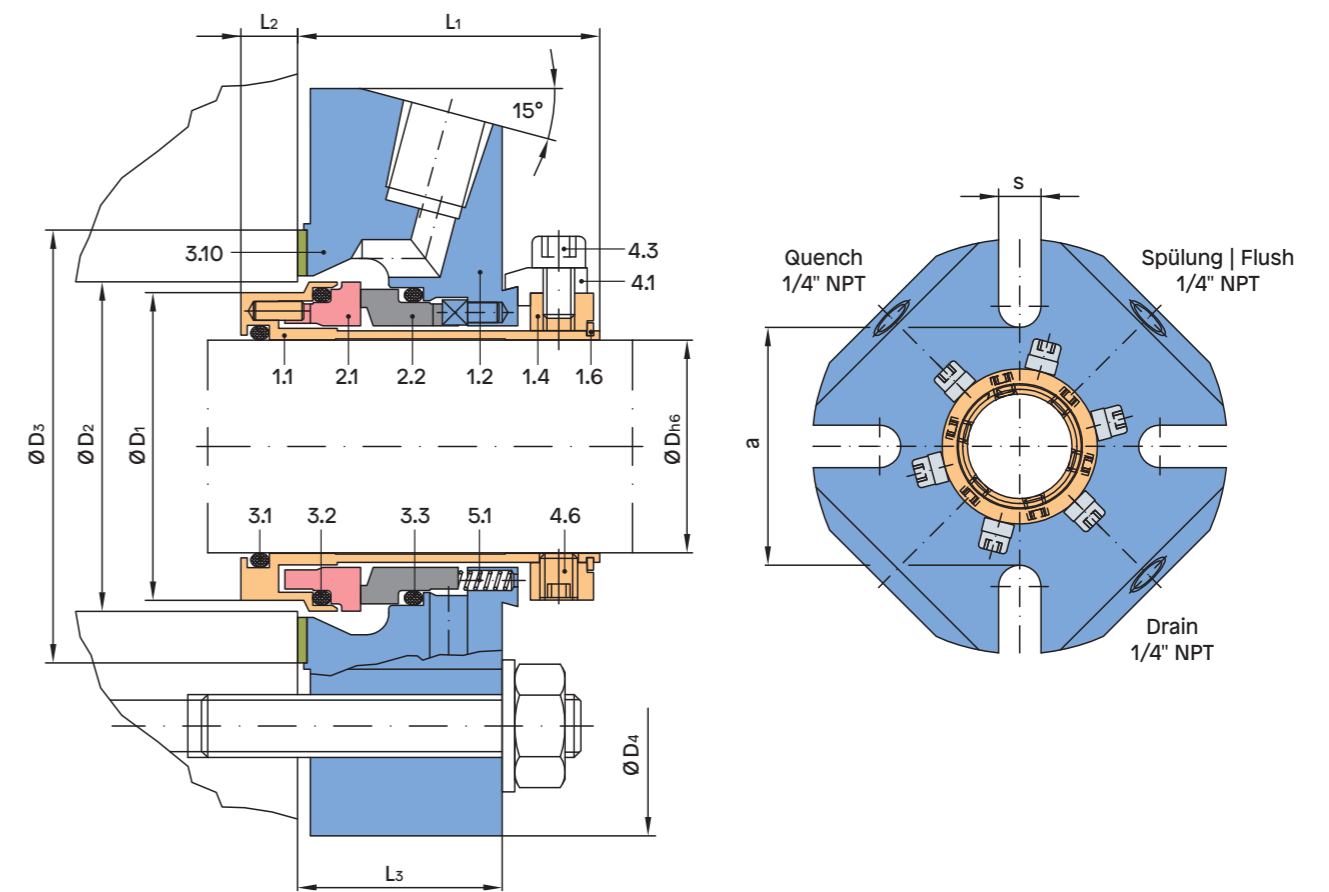
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Dimension table $\varnothing 48 - 70$ mm

| Dh6 | D1 | D2 min. | D2 max. | D3 | D4 | L1 | L2 | L3 | a | s | O-rings DASH no. | | |
|-----|----|---------|---------|-----|-----|----|----|----|-----|------|------------------|-----|-----|
| | | | | | | | | | | | 3.1 | 3.2 | 3.3 |
| 48 | 63 | 65 | 72 | 80 | 140 | 48 | 9 | 24 | 82 | 14,7 | 135 | 142 | 142 |
| 50 | 65 | 67 | 77 | 85 | 140 | 48 | 9 | 24 | 87 | 14,7 | 136 | 143 | 143 |
| 53 | 68 | 70 | 82 | 90 | 150 | 48 | 9 | 24 | 92 | 17,5 | 138 | 145 | 145 |
| 55 | 70 | 72 | 82 | 90 | 150 | 48 | 9 | 24 | 92 | 17,5 | 139 | 146 | 146 |
| 58 | 73 | 75 | 90 | 98 | 160 | 48 | 9 | 24 | 100 | 17,5 | 141 | 148 | 148 |
| 60 | 75 | 77 | 90 | 98 | 160 | 48 | 9 | 24 | 100 | 17,5 | 142 | 149 | 149 |
| 63 | 78 | 80 | 95 | 103 | 165 | 48 | 9 | 24 | 105 | 17,5 | 144 | 150 | 150 |
| 65 | 80 | 82 | 95 | 103 | 165 | 48 | 9 | 24 | 105 | 17,5 | 145 | 151 | 151 |
| 68 | 83 | 85 | 110 | 118 | 180 | 48 | 9 | 24 | 120 | 17,5 | 147 | 151 | 151 |
| 70 | 85 | 87 | 110 | 118 | 180 | 48 | 9 | 24 | 120 | 17,5 | 149 | 152 | 152 |

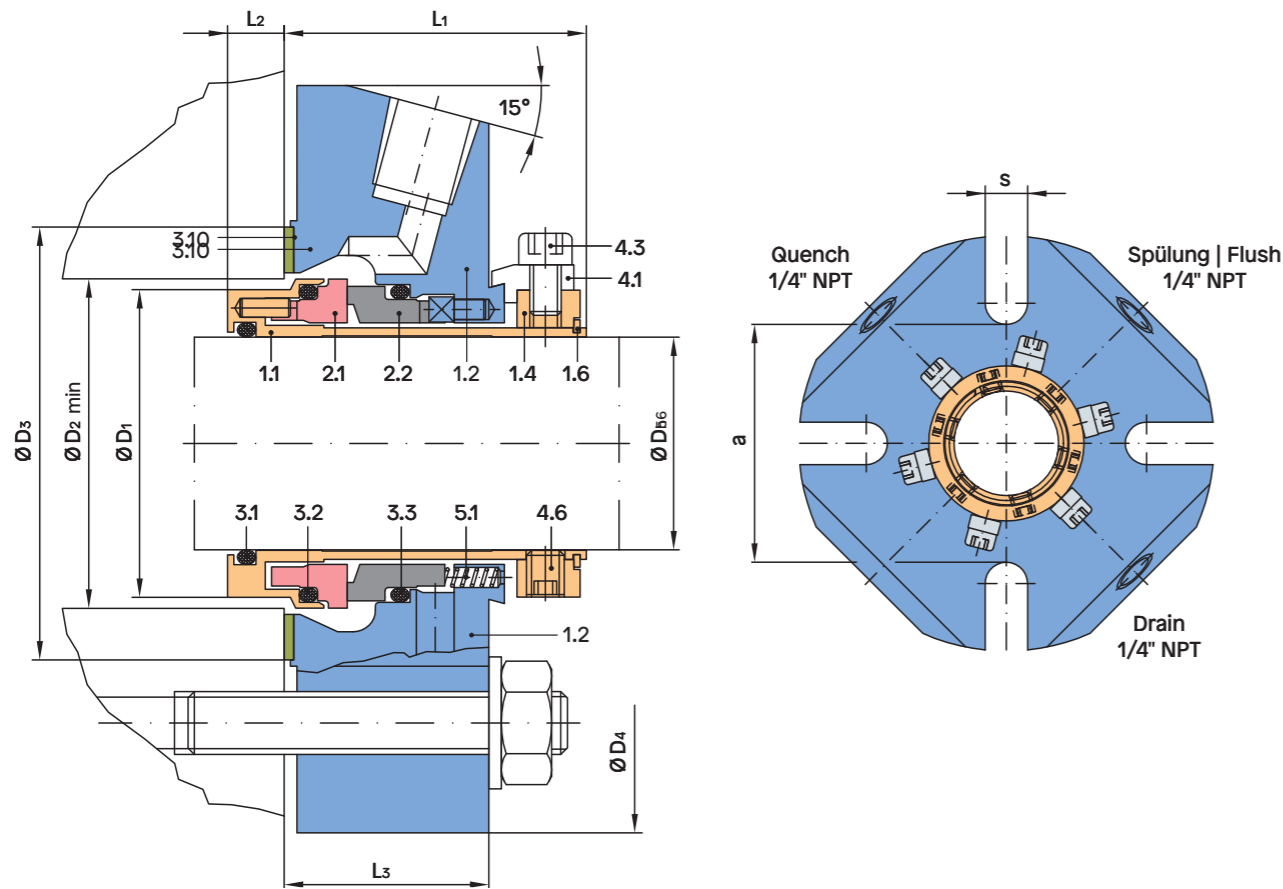
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Dimension table $\varnothing 75 - 130$ mm

| Dh6 | D1 | D2 min. | D2 max. | D3 | D4 | L1 | L2 | L3 | a | s | O-rings DASH no. | | |
|-----|-----|---------|---------|-----|-----|----|----|------|-----|------|------------------|-----|-----|
| | | | | | | | | | | | 3.1 | 3.2 | 3.3 |
| 75 | 95 | 97 | 115 | 123 | 190 | 54 | 8 | 38,5 | 125 | 17,5 | 234 | 238 | 238 |
| 80 | 100 | 102 | 120 | 128 | 190 | 54 | 8 | 38,5 | 130 | 17,5 | 236 | 240 | 240 |
| 85 | 105 | 107 | 125 | 133 | 220 | 54 | 8 | 38,5 | 135 | 21,5 | 237 | 242 | 242 |
| 90 | 110 | 112 | 130 | 138 | 220 | 54 | 8 | 38,5 | 140 | 21,5 | 239 | 243 | 243 |
| 95 | 115 | 117 | 135 | 143 | 220 | 54 | 8 | 38,5 | 145 | 21,5 | 240 | 245 | 245 |
| 100 | 120 | 122 | 140 | 148 | 220 | 54 | 8 | 38,5 | 150 | 21,5 | 242 | 246 | 246 |
| 105 | 125 | 128 | 145 | 153 | 240 | 54 | 8 | 38,5 | 155 | 21,5 | 244 | 248 | 248 |
| 110 | 130 | 133 | 150 | 158 | 240 | 54 | 8 | 38,5 | 160 | 21,5 | 245 | 250 | 250 |
| 115 | 135 | 138 | 155 | 163 | 240 | 54 | 8 | 38,5 | 165 | 21,5 | 247 | 251 | 251 |
| 120 | 140 | 143 | 160 | 168 | 240 | 54 | 8 | 38,5 | 170 | 21,5 | 248 | 253 | 253 |
| 125 | 145 | 148 | 165 | 173 | 260 | 54 | 8 | 38,5 | 175 | 21,5 | 250 | 254 | 254 |
| 130 | 150 | 153 | 170 | 178 | 260 | 54 | 8 | 38,5 | 180 | 21,5 | 251 | 256 | 256 |

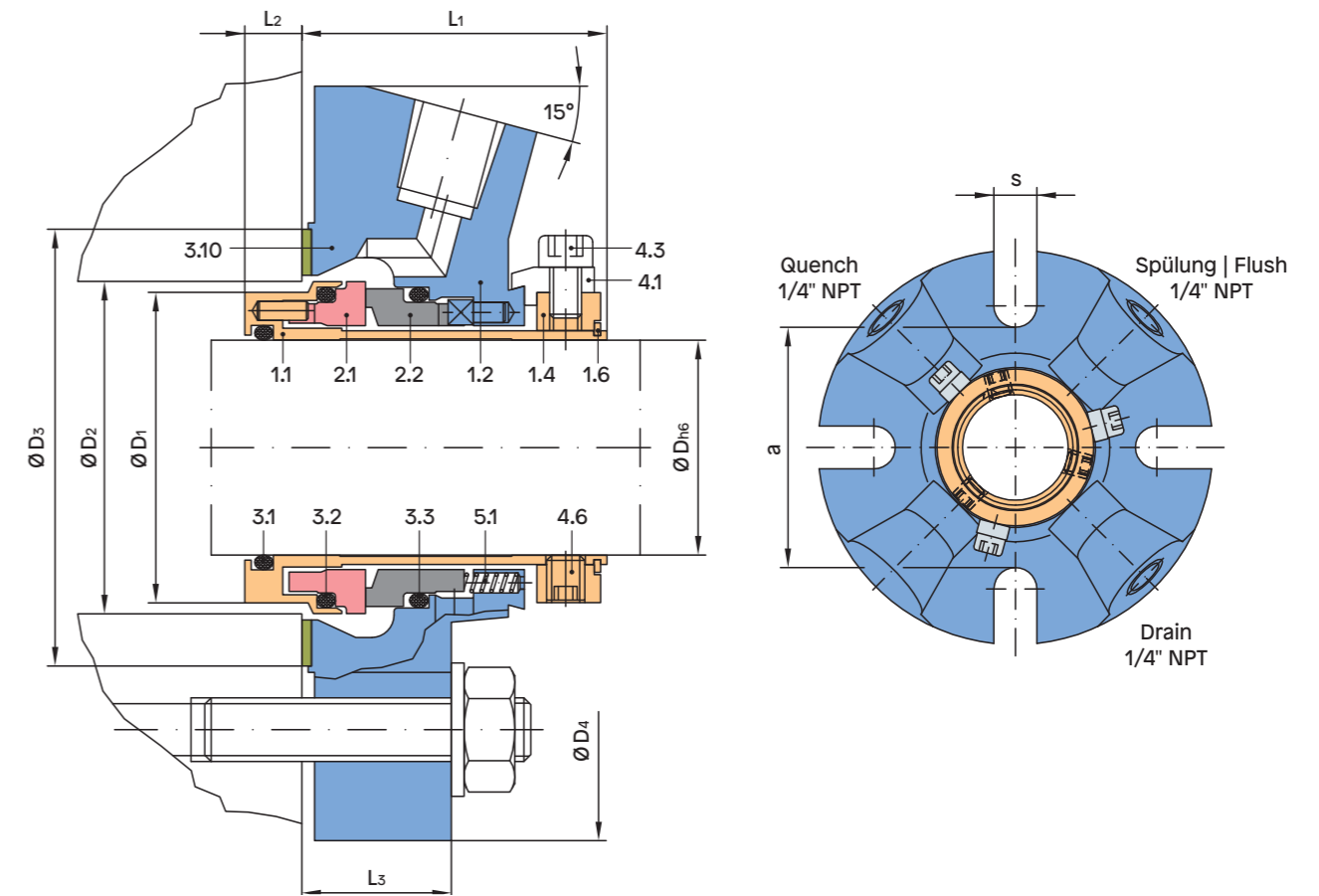
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Dimension table Ø 135 – 160 mm

| Dh6 | D1 | D2 min. | D2 max. | D3 | D4 | L1 | L2 | L3 | a | s | O-rings DASH no. | | |
|-----|-----|---------|---------|-----|-----|----|----|------|-----|------|------------------|-----|-----|
| | | | | | | | | | | | 3.1 | 3.2 | 3.3 |
| 135 | 155 | 158 | 175 | 183 | 260 | 54 | 8 | 38,5 | 185 | 21,5 | 253 | 258 | 258 |
| 140 | 160 | 163 | 180 | 188 | 260 | 54 | 8 | 38,5 | 190 | 21,5 | 255 | 258 | 258 |
| 145 | 165 | 168 | 185 | 193 | 280 | 54 | 8 | 38,5 | 195 | 21,5 | 256 | 259 | 259 |
| 150 | 170 | 173 | 190 | 198 | 280 | 54 | 8 | 38,5 | 200 | 21,5 | 258 | 260 | 260 |
| 155 | 175 | 178 | 195 | 203 | 280 | 54 | 8 | 38,5 | 205 | 21,5 | 259 | 261 | 261 |
| 160 | 180 | 183 | 200 | 208 | 280 | 54 | 8 | 38,5 | 210 | 21,5 | 260 | 261 | 261 |

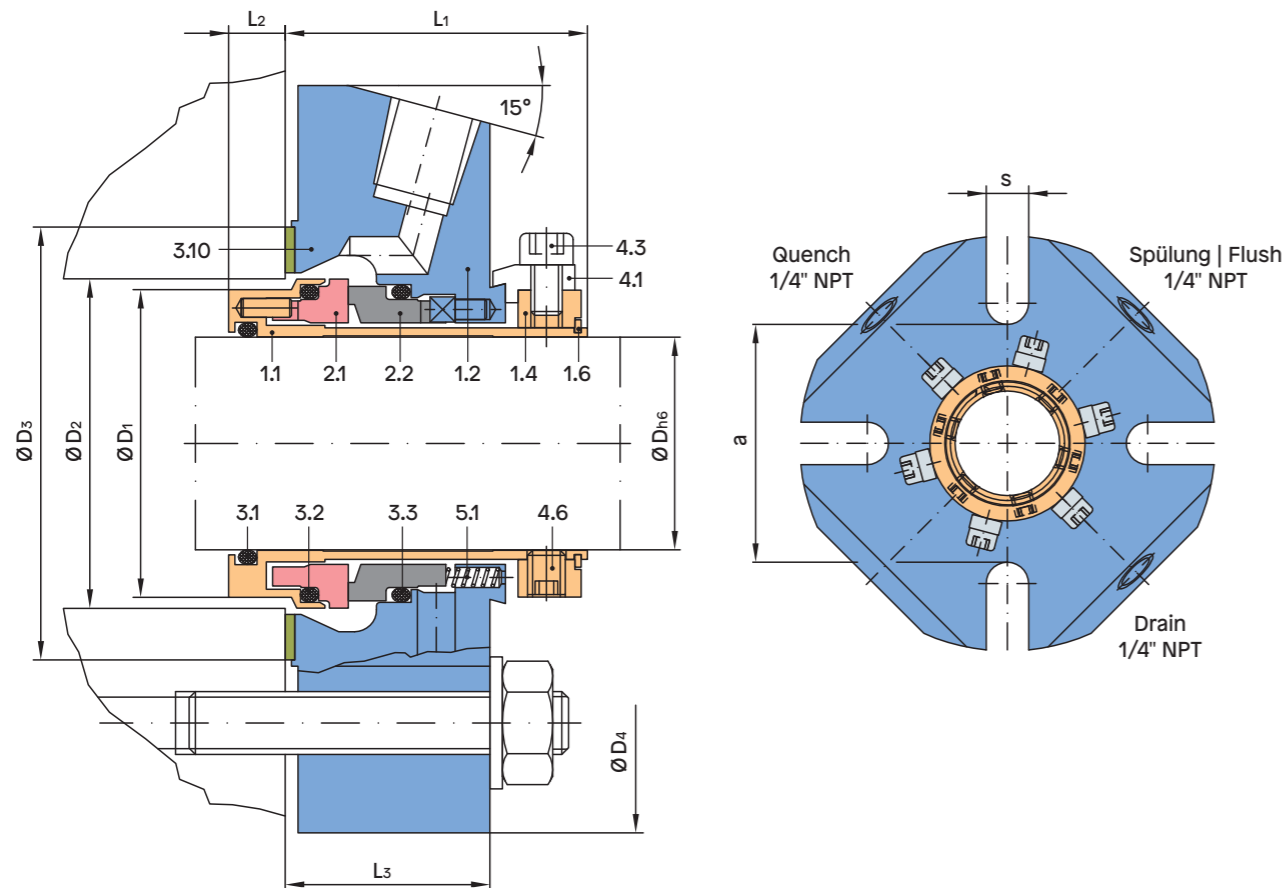
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Dimension table Ø 1 – 2 ¾ inches

| Dh6 | D1 | D2 min. | D2 max. | D3 | D4 | L1 | L2 | L3 | a | s | O-rings DASH no. | | |
|--------|-------|---------|---------|-------|-------|-------|-------|-------|-------|-------|------------------|-----|-----|
| | | | | | | | | | | | 3.1 | 3.2 | 3.3 |
| 1 | 1,575 | 1,625 | 2,047 | 2,362 | 4,094 | 1,890 | 0,354 | 0,945 | 2,441 | 0,492 | 120 | 127 | 127 |
| 1 1/8 | 1,693 | 1,750 | 2,047 | 2,362 | 4,094 | 1,890 | 0,354 | 0,945 | 2,441 | 0,492 | 122 | 129 | 129 |
| 1 1/4 | 1,850 | 1,875 | 2,244 | 2,559 | 4,094 | 1,890 | 0,354 | 0,945 | 2,638 | 0,492 | 124 | 131 | 131 |
| 1 3/8 | 1,969 | 2,000 | 2,362 | 2,677 | 4,331 | 1,890 | 0,354 | 0,945 | 2,756 | 0,492 | 126 | 133 | 133 |
| 1 7/16 | 2,087 | 2,250 | 2,559 | 2,874 | 4,921 | 1,890 | 0,354 | 0,945 | 2,953 | 0,579 | 127 | 136 | 136 |
| 1 1/2 | 2,087 | 2,250 | 2,559 | 2,874 | 4,921 | 1,890 | 0,354 | 0,945 | 2,953 | 0,579 | 128 | 136 | 136 |
| 1 5/8 | 2,244 | 2,375 | 2,756 | 3,071 | 5,236 | 1,890 | 0,354 | 0,945 | 3,150 | 0,579 | 131 | 138 | 138 |
| 1 3/4 | 2,362 | 2,500 | 2,835 | 3,150 | 5,512 | 1,890 | 0,354 | 0,945 | 3,228 | 0,579 | 133 | 140 | 140 |
| 1 7/8 | 2,480 | 2,625 | 2,835 | 3,150 | 5,512 | 1,890 | 0,354 | 0,945 | 3,228 | 0,579 | 135 | 142 | 142 |
| 2 | 2,559 | 2,750 | 3,031 | 3,346 | 5,512 | 1,890 | 0,354 | 0,945 | 3,425 | 0,579 | 136 | 143 | 143 |
| 2 1/8 | 2,677 | 2,875 | 3,150 | 3,465 | 5,906 | 1,890 | 0,354 | 0,945 | 3,622 | 0,689 | 138 | 145 | 145 |
| 2 1/4 | 2,874 | 3,000 | 3,543 | 3,858 | 6,102 | 1,890 | 0,354 | 0,945 | 3,937 | 0,689 | 140 | 147 | 147 |
| 2 3/8 | 2,953 | 3,125 | 3,543 | 3,858 | 6,299 | 1,890 | 0,354 | 0,945 | 3,937 | 0,689 | 142 | 149 | 149 |
| 2 1/2 | 3,071 | 3,250 | 3,661 | 3,976 | 6,469 | 1,890 | 0,354 | 0,945 | 4,055 | 0,689 | 144 | 150 | 150 |
| 2 5/8 | 3,268 | 3,625 | 4,331 | 4,646 | 6,693 | 1,890 | 0,354 | 0,945 | 4,724 | 0,689 | 146 | 151 | 151 |
| 2 3/4 | 3,346 | 3,750 | 4,331 | 4,646 | 7,087 | 1,890 | 0,354 | 0,945 | 4,724 | 0,689 | 149 | 152 | 152 |

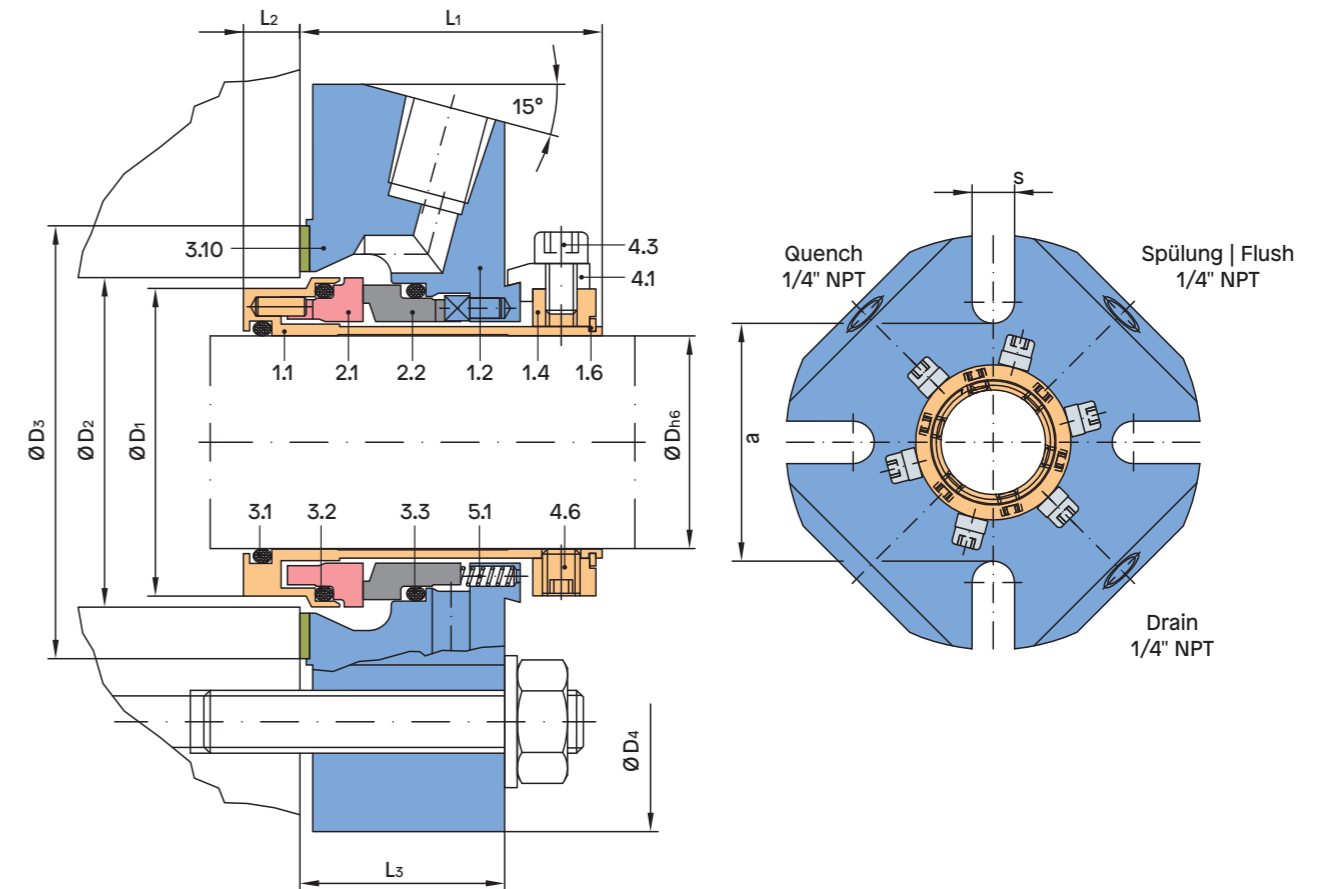
Mechanical seal Type 301



Dimension table $\varnothing 2\frac{7}{8} - 4\frac{1}{4}$ inches

| Dh6 | D1 | D2 min. | D2 max. | D3 | D4 | L1 | L2 | L3 | a | s | O-rings DASH no. | | |
|-------|-------|---------|---------|-------|-------|-------|-------|-------|-------|-------|------------------|-----|-----|
| | | | | | | | | | | | 3.1 | 3.2 | 3.3 |
| 2 7/8 | 3,661 | 3,875 | 4,449 | 4,764 | 7,480 | 2,126 | 0,315 | 1,516 | 4,843 | 0,689 | 233 | 238 | 238 |
| 3 | 3,740 | 4,000 | 4,528 | 4,843 | 7,480 | 2,126 | 0,315 | 1,516 | 4,921 | 0,689 | 234 | 238 | 238 |
| 3 1/8 | 3,937 | 4,125 | 4,724 | 5,039 | 7,480 | 2,126 | 0,315 | 1,516 | 5,118 | 0,689 | 236 | 240 | 240 |
| 3 1/4 | 4,055 | 4,250 | 4,842 | 5,157 | 8,661 | 2,126 | 0,315 | 1,516 | 5,236 | 0,846 | 236 | 241 | 241 |
| 3 3/8 | 4,134 | 4,375 | 4,921 | 5,236 | 8,661 | 2,126 | 0,315 | 1,516 | 5,315 | 0,846 | 237 | 242 | 242 |
| 3 1/2 | 4,331 | 4,500 | 5,118 | 5,433 | 8,661 | 2,126 | 0,315 | 1,516 | 5,512 | 0,846 | 239 | 243 | 243 |
| 3 5/8 | 4,409 | 4,625 | 5,197 | 5,512 | 8,661 | 2,126 | 0,315 | 1,516 | 5,591 | 0,846 | 239 | 244 | 244 |
| 3 3/4 | 4,528 | 4,750 | 5,315 | 5,630 | 8,661 | 2,126 | 0,315 | 1,516 | 5,709 | 0,846 | 240 | 245 | 245 |
| 3 7/8 | 4,724 | 4,875 | 5,512 | 5,827 | 8,661 | 2,126 | 0,315 | 1,516 | 5,906 | 0,846 | 241 | 246 | 246 |
| 4 | 4,724 | 5,000 | 5,512 | 5,827 | 8,661 | 2,126 | 0,315 | 1,516 | 5,906 | 0,846 | 242 | 246 | 246 |
| 4 1/8 | 4,921 | 5,039 | 5,709 | 6,024 | 9,449 | 2,126 | 0,315 | 1,516 | 6,102 | 0,846 | 243 | 248 | 248 |
| 4 1/4 | 5,118 | 5,236 | 5,905 | 6,220 | 9,449 | 2,126 | 0,315 | 1,516 | 6,299 | 0,846 | 244 | 250 | 250 |

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Dimension table $\varnothing 4\frac{3}{8} - 6\frac{1}{4}$ inches

| Dh6 | D1 | D2 min. | D2 max. | D3 | D4 | L1 | L2 | L3 | a | s | O-rings DASH no. | | |
|-------|-------|---------|---------|-------|--------|-------|-------|-------|-------|-------|------------------|-----|-----|
| | | | | | | | | | | | 3.1 | 3.2 | 3.3 |
| 4 3/8 | 5,118 | 5,236 | 5,905 | 6,220 | 9,449 | 2,126 | 0,315 | 1,516 | 6,299 | 0,846 | 245 | 250 | 250 |
| 4 1/2 | 5,315 | 5,433 | 6,102 | 6,417 | 9,449 | 2,126 | 0,315 | 1,516 | 6,496 | 0,846 | 246 | 251 | 251 |
| 4 5/8 | 5,512 | 5,630 | 6,299 | 6,614 | 9,449 | 2,126 | 0,315 | 1,516 | 6,693 | 0,846 | 247 | 253 | 253 |
| 4 3/4 | 5,512 | 5,630 | 6,299 | 6,614 | 9,449 | 2,126 | 0,315 | 1,516 | 6,693 | 0,846 | 248 | 253 | 253 |
| 4 7/8 | 5,709 | 5,827 | 6,496 | 6,811 | 10,236 | 2,126 | 0,315 | 1,516 | 6,890 | 0,846 | 249 | 254 | 254 |
| 5 | 5,906 | 6,024 | 6,693 | 7,008 | 10,236 | 2,126 | 0,315 | 1,516 | 7,087 | 0,846 | 250 | 256 | 256 |
| 5 1/8 | 5,906 | 6,024 | 6,693 | 7,008 | 10,236 | 2,126 | 0,315 | 1,516 | 7,087 | 0,846 | 251 | 256 | 256 |
| 5 1/4 | 6,102 | 6,220 | 6,890 | 7,205 | 10,236 | 2,126 | 0,315 | 1,516 | 7,283 | 0,846 | 252 | 258 | 258 |
| 5 3/8 | 6,102 | 6,220 | 6,890 | 7,205 | 10,236 | 2,126 | 0,315 | 1,516 | 7,283 | 0,846 | 253 | 258 | 258 |
| 5 1/2 | 6,299 | 6,417 | 7,087 | 7,402 | 10,236 | 2,126 | 0,315 | 1,516 | 7,480 | 0,846 | 254 | 258 | 258 |
| 5 5/8 | 6,496 | 6,614 | 7,283 | 7,598 | 11,024 | 2,126 | 0,315 | 1,516 | 7,677 | 0,846 | 255 | 259 | 259 |
| 5 3/4 | 6,496 | 6,614 | 7,283 | 7,598 | 11,024 | 2,126 | 0,315 | 1,516 | 7,677 | 0,846 | 256 | 259 | 259 |
| 5 7/8 | 6,693 | 6,811 | 7,480 | 7,795 | 11,024 | 2,126 | 0,315 | 1,516 | 7,874 | 0,846 | 257 | 260 | 260 |
| 6 | 6,890 | 7,008 | 7,677 | 7,992 | 11,024 | 2,126 | 0,315 | 1,516 | 8,071 | 0,846 | 258 | 261 | 261 |
| 6 1/8 | 6,890 | 7,008 | 7,677 | 7,992 | 11,024 | 2,126 | 0,315 | 1,516 | 8,071 | 0,846 | 259 | 261 | 261 |
| 6 1/4 | 7,087 | 7,205 | 7,874 | 8,189 | 11,024 | 2,126 | 0,315 | 1,516 | 8,268 | 0,846 | 259 | 261 | 261 |



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