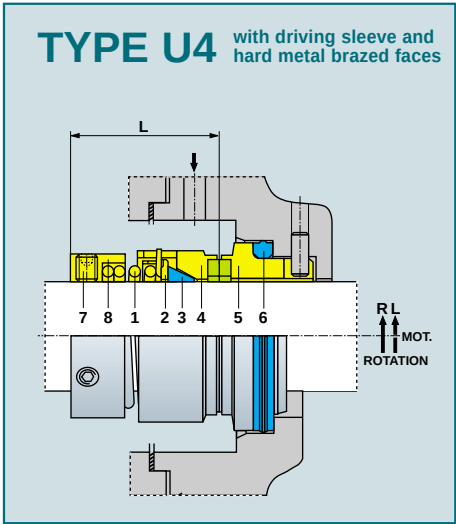
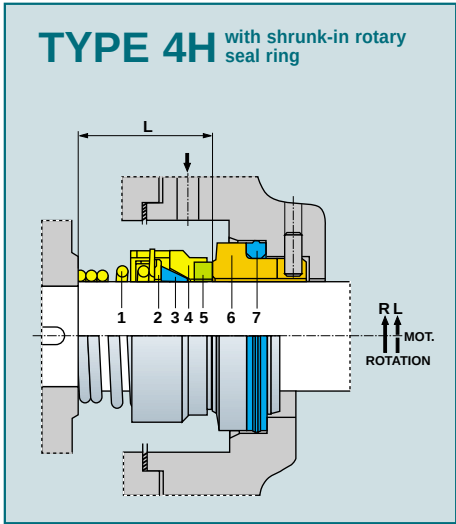
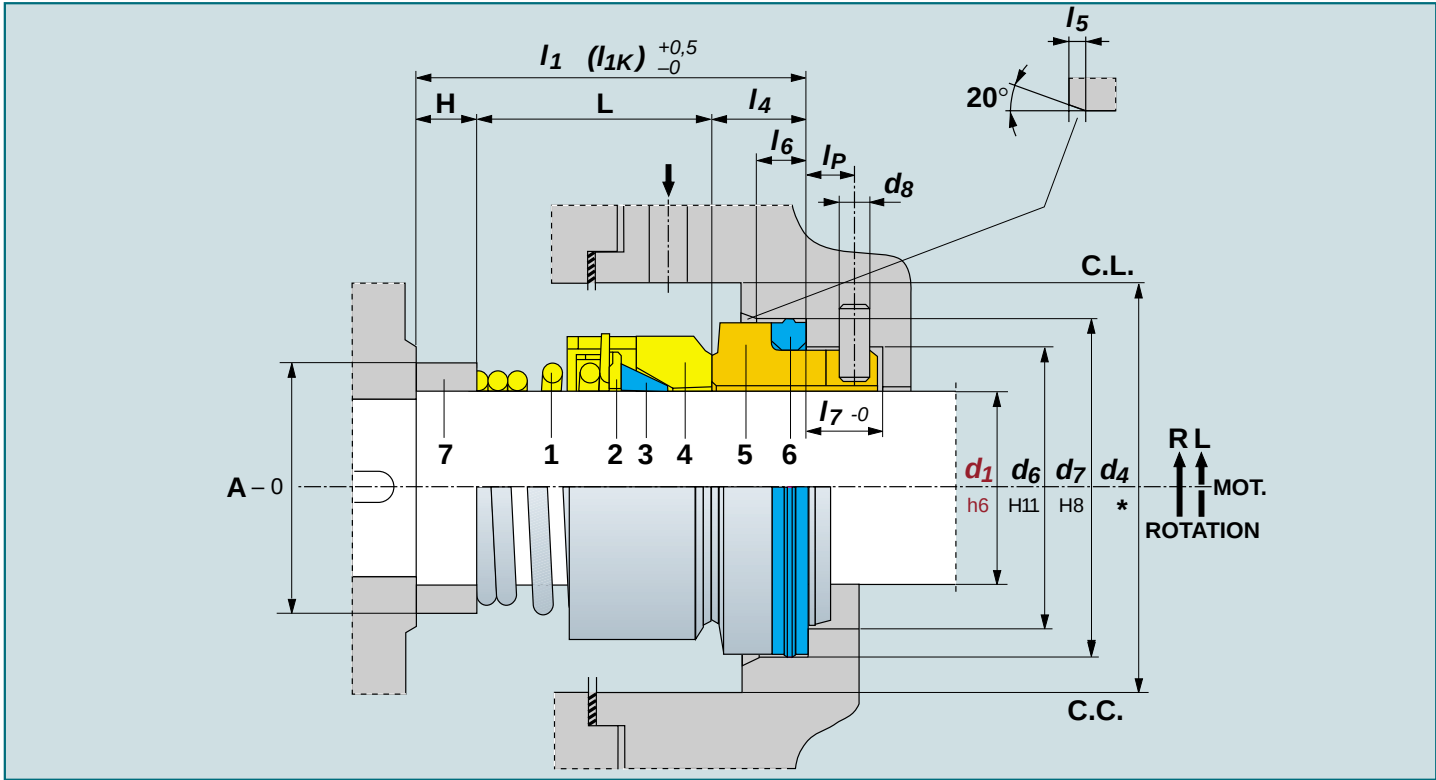


TYPE 4



This seal is fitted with PTFE gaskets and can be used for most fluids provided that the operating conditions are within the design limits and the face materials are compatible. The standard version contains stainless steel, PTFE and Carbon, but to take full advantage of the characteristics of PTFE, the seal can be supplied with hard faces, hard metal inserts, special anticorrosion alloys, special carbons, glass-filled PTFE and special faces shrunk-fit into the frame. The seal is suitable for most solvents, pharmaceutical and chemical products at elevated temperatures.

| POS. TYPE |     |    |  | COMPONENTS                |   | STANDARD MATERIALS |     |     |    |    |    |  |  |
|-----------|-----|----|--|---------------------------|---|--------------------|-----|-----|----|----|----|--|--|
| 4         | 4H  | U4 |  |                           |   |                    |     |     |    |    |    |  |  |
| 4K        | 4KH |    |  |                           |   |                    |     |     |    |    |    |  |  |
| 1         | 1   | 1  |  | Self-driving spring       | X | L                  |     |     |    |    |    |  |  |
| 2         | 2   | 2  |  | Gasket thrust washer      | X | L                  |     |     |    |    |    |  |  |
| 3         | 3   | 3  |  | Wedge shaft gasket (PTFE) | 5 | 4**                | 0** |     |    |    |    |  |  |
|           | 4   |    |  | Frame                     | X | D                  |     |     |    |    |    |  |  |
| 4         | 5*  | 4  |  | Rotary seal ring          | X | J                  | 3   | L   | K* | R* | Z* |  |  |
| 5         | 6   | 5  |  | Stationary seal ring      | V | Z                  | 1   | 3   | 4  | K  | R  |  |  |
| 6         | 7   | 6  |  | Stationary gasket (PTFE)  | 5 | F                  | 4** | 0** |    |    |    |  |  |
| 7         |     |    |  | Spacer (if required)      | X | L                  |     |     |    |    |    |  |  |
|           | 7   |    |  | Grub screws               | H | X                  | L   |     |    |    |    |  |  |
|           |     | 8  |  | Driving "U" sleeve        | X |                    |     |     |    |    |    |  |  |

\* SHRUNK FIT

\*\* For particular operating conditions the wedge and stationary gasket may be manufactured also in the codes 0 and 4.

C.C. = stationary ring with short tail  
C.L. = stationary ring with extended tail and slot  
4K = UNITEN 4 model with working length according to DIN norm K up to ø 55 included

MAX.WORKING CONDITIONS

|                                                                               |             |
|-------------------------------------------------------------------------------|-------------|
| These depend on: ø shaft, pressure, speed, temperature and fluid to be sealed |             |
| p ≤                                                                           | 12 bar      |
| t =                                                                           | 10 ÷ 180°C  |
| v ≤                                                                           | 15 m/s      |
| For TYPE 4H                                                                   |             |
| t =                                                                           | -20 ÷ 150°C |



## ROTEN

| TYPE 4 4H U4 |       |       |       |       |     |       |       |       |       |       |       |  |
|--------------|-------|-------|-------|-------|-----|-------|-------|-------|-------|-------|-------|--|
| $d_1$        | $d_6$ | $d_7$ | $d_4$ | $l_1$ | $L$ | $l_4$ | $l_6$ | $l_5$ | $d_8$ | $l_7$ | $l_p$ |  |
| 6            | 10,6  | 13,1  | 20    | 19,5  | 15  | 4,5   | 2     | 1,2   | 2     | 6     | 3,5   |  |
| 7÷9          | 13    | 17,1  | 23    | 20,5  | 15  | 5,5   | 2,8   | 1,2   | 2     | 6,2   | 3,5   |  |
| 10           | 14    | 18,1  | 24    | 20,5  | 15  | 5,5   | 2,8   | 1,2   | 2     | 6,2   | 3,5   |  |
| 11÷12        | 16,5  | 20,6  | 27    | 23,5  | 18  | 5,5   | 2,8   | 1,2   | 2     | 6,2   | 3,5   |  |
| 13÷14        | 19    | 23,1  | 30    | 28    | 22  | 6     | 2,8   | 1,2   | 2     | 6,7   | 4     |  |
| 15           | 21    | 26,9  | 31    | 29    | 22  | 7     | 3,7   | 1,3   | 2,5   | 7,6   | 4     |  |
| 16÷17        | 21    | 26,9  | 34    | 30    | 23  | 7     | 3,7   | 1,3   | 2,5   | 7,6   | 4     |  |
| 18           | 25    | 30,9  | 37    | 32    | 24  | 8     | 3,7   | 1,3   | 3     | 8,5   | 4,5   |  |
| 19÷20        | 25    | 30,9  | 39    | 33    | 25  | 8     | 3,7   | 1,3   | 3     | 8,5   | 4,5   |  |
| 21÷22        | 30    | 35,4  | 42    | 33    | 25  | 8     | 3,7   | 1,8   | 3,5   | 8,5   | 5     |  |
| 23÷24        | 30    | 35,4  | 44    | 35    | 27  | 8     | 3,7   | 1,8   | 3,5   | 8,5   | 5     |  |
| 25÷27        | 33    | 38,2  | 48    | 35,5  | 27  | 8,5   | 3,7   | 1,8   | 4     | 9,1   | 5     |  |
| 28           | 38    | 43,3  | 50    | 38    | 29  | 9     | 3,7   | 1,8   | 4     | 9,6   | 6     |  |
| 29÷32        | 38    | 43,3  | 53    | 39    | 30  | 9     | 3,7   | 1,8   | 4     | 9,6   | 6     |  |
| 33÷34        | 45    | 53,5  | 64    | 50,5  | 39  | 11,5  | 5,4   | 2,1   | 5     | 12    | 7,5   |  |
| 35÷37        | 45    | 53,5  | 64    | 50,5  | 39  | 11,5  | 5,4   | 2,1   | 5     | 12    | 7,5   |  |
| 38÷43        | 52    | 60,5  | 69    | 50,5  | 39  | 11,5  | 5,4   | 2,1   | 5     | 12    | 7,5   |  |
| 44÷45        | 57    | 65,5  | 76    | 52,5  | 41  | 11,5  | 5,4   | 2,1   | 5     | 13    | 8,5   |  |
| 46÷49        | 57    | 65,5  | 80    | 52,5  | 41  | 11,5  | 5,4   | 2,1   | 5     | 13    | 8,5   |  |
| 50           | 64    | 72,5  | 82    | 56,5  | 45  | 11,5  | 5,4   | 2,1   | 5     | 13    | 8,5   |  |
| 55           | 64    | 72,5  | 87    | 58,5  | 47  | 11,5  | 5,4   | 2,1   | 5     | 13    | 8,5   |  |
| 60           | 72    | 79,3  | 93    | 60,5  | 49  | 11,5  | 5,4   | 2,1   | 5     | 13,5  | 8,5   |  |
| 65           | 77    | 84,5  | 102   | 62,5  | 51  | 11,5  | 5,4   | 2,1   | 5     | 13,5  | 8,5   |  |
| 70           | 82    | 89,5  | 107   | 62,5  | 51  | 11,5  | 5,4   | 2,1   | 5     | 13,5  | 8,5   |  |
| 75           | 87    | 94,5  | 113   | 68,5  | 57  | 11,5  | 5,4   | 2,1   | 5     | 13,5  | 8,5   |  |
| 80           | 92    | 99,5  | 117   | 70,5  | 59  | 11,5  | 5,4   | 2,1   | 5     | 13,5  | 8,5   |  |
| 85           | 98    | 105,5 | 126   | 72,5  | 59  | 13,5  | 5,4   | 2,6   | 5     | 13,5  | 8,5   |  |
| 90           | 105   | 111,5 | 131   | 75,5  | 62  | 13,5  | 5,4   | 2,6   | 5     | 13,5  | 8,5   |  |
| 95           | 110   | 116,5 | 138   | 75,5  | 62  | 13,5  | 5,4   | 2,6   | 5     | 13,5  | 8,5   |  |
| 100          | 114   | 119,5 | 144   | 88,5  | 75  | 13,5  | 5,4   | 2,6   | 5     | 13,5  | 8,5   |  |
| 110          | 124   | 132,2 | 168   | 92,5  | 75  | 17,5  | 7,1   | 3,9   | 5     | 13,5  | 8,5   |  |
| 120          | 134   | 142,2 | 178   | 102,5 | 85  | 17,5  | 7,1   | 3,9   | 5     | 13,5  | 8,5   |  |
| 130          | 145   | 153,2 | 190   | 112,5 | 95  | 17,5  | 7,1   | 3,9   | 5     | 13,5  | 8,5   |  |
| 135          | 152   | 161,2 | 201   | 113,5 | 95  | 18,5  | 7,1   | 3,9   | 5     | 13,5  | 8,5   |  |
| 140          | 157   | 164,3 | 206   | 118,5 | 100 | 18,5  | 7,1   | 3,9   | 5     | 13,5  | 8,5   |  |
| 150          | 167   | 174,2 | 219   | 128,5 | 110 | 18,5  | 7,1   | 3,9   | 5     | 13,5  | 8,5   |  |
| 160          | 188   | 195   | 239   | 141   | 120 | 21    | 9,1   | 3,9   | 5     | 15,5  | 8,5   |  |

NB: The spacer is never to be considered for ROTEN 4.

## EN 12756

## UNITEN

## ISO 3069

| TYPE 4 4H U4 |       |       |       |       |     |       |       |       |     |     |       |       |
|--------------|-------|-------|-------|-------|-----|-------|-------|-------|-----|-----|-------|-------|
| $d_1$        | $d_6$ | $d_7$ | $d_4$ | $l_1$ | $L$ | $l_4$ | $l_6$ | $l_5$ | $H$ | $A$ | $d_8$ | $l_7$ |
| 10           | 17    | 21    | 22    | 40    | 15  | 7     | 4     | 1,5   | 18  | 13  | 3     | 8,5   |
| 12           | 19    | 23    | 24    | 40    | 18  | 7     | 4     | 1,5   | 15  | 15  | 3     | 8,5   |
| 14           | 21    | 25    | 26    | 40    | 22  | 7     | 4     | 1,5   | 11  | 18  | 3     | 8,5   |
| 16           | 23    | 27    | 28    | 40    | 23  | 7     | 4     | 1,5   | 10  | 20  | 3     | 8,5   |
| 18           | 27    | 33    | 34    | 45    | 24  | 10    | 5     | 2     | 11  | 22  | 3     | 9     |
| 20           | 29    | 35    | 36    | 45    | 25  | 10    | 5     | 2     | 10  | 25  | 3     | 9     |
| 22           | 31    | 37    | 38    | 45    | 25  | 10    | 5     | 2     | 10  | 27  | 3     | 9     |
| 24           | 33    | 39    | 40    | 50    | 27  | 10    | 5     | 2     | 13  | 29  | 3     | 9     |
| 25           | 34    | 40    | 41    | 50    | 27  | 10    | 5     | 2     | 13  | 30  | 3     | 9     |
| 28           | 37    | 43    | 44    | 50    | 29  | 10    | 5     | 2     | 11  | 34  | 3     | 9     |
| 30           | 39    | 45    | 48+   | 50    | 30  | 10    | 5     | 2     | 10  | 36  | 3     | 9     |
| 32           | 42    | 48    | 48    | 55    | 30  | 10    | 5     | 2     | 15  | 38  | 3     | 9     |
| 33           | 42    | 48    | 54+   | 55    | 39  | 10    | 5     | 2     | 6   | 40  | 3     | 9     |
| 35           | 44    | 50    | 54+   | 55    | 39  | 10    | 5     | 2     | 6   | 42  | 3     | 9     |
| 38           | 49    | 56    | 58    | 55    | 42  | 13    | 6     | 2     | —   | 45  | 4     | 9     |
| 40           | 51    | 58    | 60    | 55    | 42  | 13    | 6     | 2     | —   | 47  | 4     | 9     |
| 43           | 54    | 61    | 63    | 60    | 47  | 13    | 6     | 2     | —   | 51  | 4     | 9     |
| 45           | 56    | 63    | 65    | 60    | 47  | 13    | 6     | 2     | —   | 53  | 4     | 9     |
| 48           | 59    | 66    | 73+   | 60    | 47  | 13    | 6     | 2     | —   | 56  | 4     | 9     |
| 50           | 62    | 70    | 75+   | 60    | 46  | 14    | 6     | 2,5   | —   | 59  | 4     | 9     |
| 53           | 65    | 73    | 73    | 70    | 56  | 14    | 6     | 2,5   | —   | 62  | 4     | 9     |
| 55           | 67    | 75    | 80+   | 70    | 56  | 14    | 6     | 2,5   | —   | 64  | 4     | 9     |
| 58           | 70    | 78    | 83    | 70    | 56  | 14    | 6     | 2,5   | —   | 68  | 4     | 9     |
| 60           | 72    | 80    | 85    | 70    | 56  | 14    | 6     | 2,5   | —   | 70  | 4     | 9     |
| 63           | 75    | 83    | 88    | 70    | 56  | 14    | 6     | 2,5   | —   | 73  | 4     | 9     |
| 65           | 77    | 85    | 90    | 80    | 66  | 14    | 6     | 2,5   | —   | 76  | 4     | 9     |
| 68           | 81    | 90    | 93    | 80    | 64  | 16    | 7     | 2,5   | —   | 79  | 4     | 9     |
| 70           | 83    | 92    | 95    | 80    | 64  | 16    | 7     | 2,5   | —   | 81  | 4     | 9     |
| 75           | 88    | 97    | 104   | 80    | 64  | 16    | 7     | 2,5   | —   | 86  | 4     | 9     |
| 80           | 95    | 105   | 109   | 90    | 72  | 18    | 7     | 3     | —   | 92  | 4     | 9     |
| 85           | 100   | 110   | 114   | 90    | 72  | 18    | 7     | 3     | —   | 98  | 4     | 9     |
| 90           | 105   | 115   | 119   | 90    | 72  | 18    | 7     | 3     | —   | 103 | 4     | 9     |
| 95           | 110   | 120   | 131+  | 90    | 72  | 18    | 7     | 3     | —   | 108 | 4     | 9     |
| 100          | 115   | 125   | 137+  | 90    | 72  | 18    | 7     | 3     | —   | 114 | 4     | 9     |

+ This size is larger than the minimum prescribed by the DIN norm.

\* The size  $d_4$  is considered the minimum dimension for the stuffing box diameter. Where possible, it is better to have a larger dimension or a conical stuffing box.