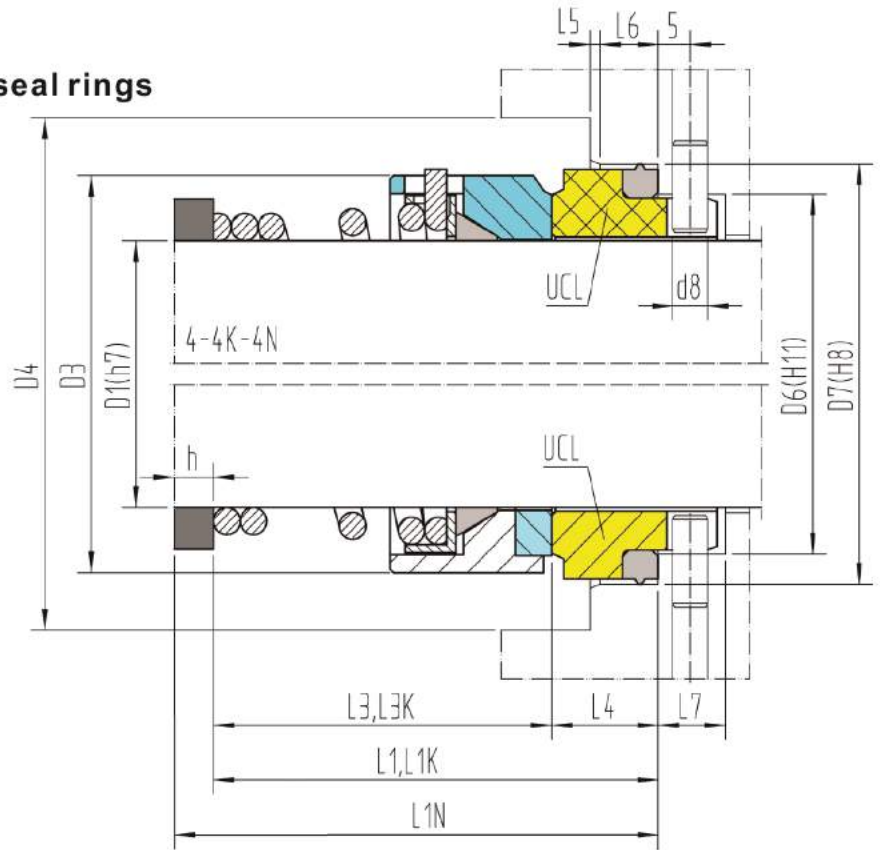


# 4-4K-4N

**Universal chemistry seal**  
**Conical spring rotating**  
**Massive, brazed or shrunk seal rings**

Unbalanced  
 Dependent on rotation

Wedge gasket  
 Mechanical seals



**Operating limits:**  
 (look at working conditions page 112)

|         |                     |
|---------|---------------------|
| 4-4K-4N |                     |
| p ≤     | 12 bar (16 bar)     |
| t =     | -35 ÷ 140°C (180°C) |
| v ≤     | 15 m/s              |

**Materials:**

Rotary: B, G, Q, U, M  
 Stationary: B, Q, U  
 Rubber parts: T

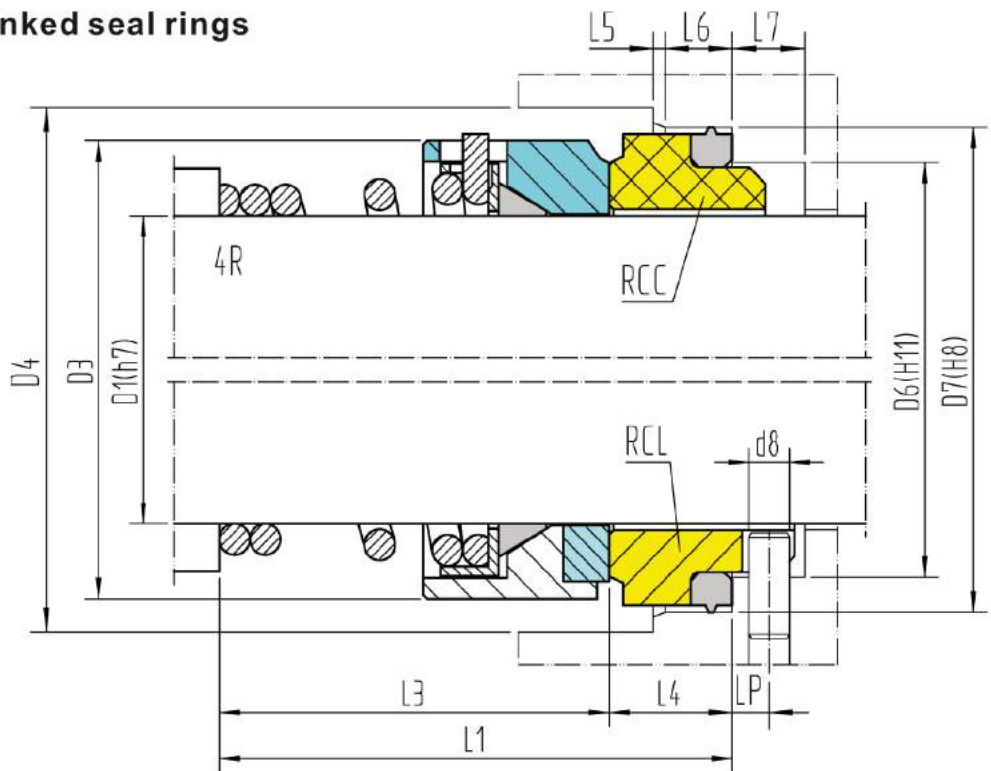
L1=L3+L4  
 L1K=L3K+L4  
 L1N=L3+H+L4

**EN 12756 (DIN 24960)**

| EN 12756 (DIN 24960) |     |     |     |      |      |      |     |    |    |    |    |     | UCC | UCL |     |
|----------------------|-----|-----|-----|------|------|------|-----|----|----|----|----|-----|-----|-----|-----|
| D1                   | D6  | D7  | D3  | D4   | L1K  | L3K  | L1N | L1 | L3 | L4 | L6 | L5  | H   | D8  | L7  |
| 10                   | 17  | 21  | 21  | 22   | 32.5 | 25.5 | 40  | 22 | 15 | 7  | 4  | 1.5 | 18  | 3   | 8.5 |
| 12                   | 19  | 23  | 22  | 24   | 32.5 | 25.5 | 40  | 25 | 18 | 7  | 4  | 1.5 | 15  | 3   | 8.5 |
| 14                   | 21  | 25  | 24  | 26   | 35   | 28   | 40  | 29 | 22 | 7  | 4  | 1.5 | 11  | 3   | 8.5 |
| 16                   | 23  | 27  | 26  | 28   | 35   | 28   | 40  | 30 | 23 | 7  | 4  | 1.5 | 10  | 3   | 8.5 |
| 18                   | 27  | 33  | 29  | 34   | 37.5 | 27.5 | 45  | 34 | 24 | 10 | 5  | 2   | 11  | 3   | 9   |
| 20                   | 29  | 35  | 30  | 36   | 37.5 | 27.5 | 45  | 35 | 25 | 10 | 5  | 2   | 10  | 3   | 9   |
| 22                   | 31  | 37  | 34  | 38   | 37.5 | 27.5 | 45  | 35 | 25 | 10 | 5  | 2   | 10  | 3   | 9   |
| 24                   | 33  | 39  | 35  | 40   | 40   | 30   | 50  | 37 | 27 | 10 | 5  | 2   | 13  | 3   | 9   |
| 25                   | 34  | 40  | 37  | 41   | 40   | 30   | 50  | 37 | 27 | 10 | 5  | 2   | 13  | 3   | 9   |
| 28                   | 37  | 43  | 42  | 44   | 42.5 | 32.5 | 50  | 39 | 29 | 10 | 5  | 2   | 11  | 3   | 9   |
| 30                   | 39  | 45  | 45  | 48+  | 42.5 | 32.5 | 50  | 40 | 30 | 10 | 5  | 2   | 10  | 3   | 9   |
| 32                   | 42  | 48  | 45  | 48   | 42.5 | 32.5 | 55  | 40 | 30 | 10 | 5  | 2   | 15  | 3   | 9   |
| 33                   | 42  | 48  | 48  | 54+  | 42.5 | 32.5 | 55  | 49 | 39 | 10 | 5  | 2   | 6   | 3   | 9   |
| 35                   | 44  | 50  | 50  | 54+  | 42.5 | 32.5 | 55  | 49 | 39 | 10 | 5  | 2   | 6   | 3   | 9   |
| 38                   | 49  | 56  | 54  | 58   | 45   | 32   | 55  | 55 | 42 | 13 | 6  | 2   | —   | 4   | 9   |
| 40                   | 51  | 58  | 56  | 60   | 45   | 32   | 55  | 55 | 42 | 13 | 6  | 2   | —   | 4   | 9   |
| 43                   | 54  | 61  | 60  | 63   | 45   | 32   | 60  | 60 | 47 | 13 | 6  | 2   | —   | 4   | 9   |
| 45                   | 56  | 63  | 64  | 65   | 45   | 32   | 60  | 60 | 47 | 13 | 6  | 2   | —   | 4   | 9   |
| 48                   | 59  | 66  | 67  | 73+  | 45   | 32   | 60  | 60 | 47 | 13 | 6  | 2   | —   | 4   | 9   |
| 50                   | 62  | 70  | 69  | 75+  | 47.5 | 33.5 | 60  | 60 | 46 | 14 | 6  | 2.5 | —   | 4   | 9   |
| 53                   | 65  | 73  | 74  | 73   | 47.5 | 33.5 | 70  | 70 | 56 | 14 | 6  | 2.5 | —   | 4   | 9   |
| 55                   | 67  | 75  | 74  | 80+  | 47.5 | 33.5 | 70  | 70 | 56 | 14 | 6  | 2.5 | —   | 4   | 9   |
| 58                   | 70  | 78  | 80  | 83   | 52.5 | 38.5 | 70  | 70 | 56 | 14 | 6  | 2.5 | —   | 4   | 9   |
| 60                   | 72  | 80  | 80  | 85   | 52.5 | 38.5 | 70  | 70 | 56 | 14 | 6  | 2.5 | —   | 4   | 9   |
| 63                   | 75  | 83  | 87  | 88   | 52.5 | 38.5 | 70  | 70 | 56 | 14 | 6  | 2.5 | —   | 4   | 9   |
| 65                   | 77  | 85  | 87  | 90   | 52.5 | 38.5 | 80  | 80 | 66 | 14 | 6  | 2.5 | —   | 4   | 9   |
| 68                   | 81  | 90  | 92  | 93   | 52.5 | 36.5 | 80  | 80 | 64 | 16 | 7  | 2.5 | —   | 4   | 9   |
| 70                   | 83  | 92  | 92  | 95   | 60   | 44   | 80  | 80 | 64 | 16 | 7  | 2.5 | —   | 4   | 9   |
| 75                   | 88  | 97  | 97  | 104  | 60   | 44   | 80  | 80 | 64 | 16 | 7  | 2.5 | —   | 4   | 9   |
| 80                   | 95  | 105 | 102 | 109  | 60   | 42   | 90  | 90 | 72 | 18 | 7  | 3   | —   | 4   | 9   |
| 85                   | 100 | 110 | 110 | 114  | 60   | 42   | 90  | 90 | 72 | 18 | 7  | 3   | —   | 4   | 9   |
| 90                   | 105 | 115 | 117 | 119  | 65   | 42   | 90  | 90 | 72 | 18 | 7  | 3   | —   | 4   | 9   |
| 95                   | 110 | 120 | 122 | 131+ | 65   | 42   | 90  | 90 | 72 | 18 | 7  | 3   | —   | 4   | 9   |
| 100                  | 115 | 125 | 127 | 137+ | 65   | 42   | 90  | 90 | 72 | 18 | 7  | 3   | —   | 4   | 9   |

+ This size is larger than the minimum prescribed by EN 12756  
 Spacer ring is not included in the delivery of the mechanical seal.

**Universal chemistry seal  
Conical spring rotating  
Massive, brazed or shrunk seal rings**



**Materials:**  
 Rotary: B, G, Q, U, M  
 Stationary: B, Q, U  
 Rubber parts: T

**Operating limits:**  
 (look at working conditions page 112)

|          |                     |
|----------|---------------------|
| 4R       |                     |
| $p \leq$ | 12 bar (16bar)      |
| $t =$    | -35 ÷ 140°C (180°C) |
| $v \leq$ | 15 m/s              |

**Special fitting dimensions**

|       |      |       |      |     |       |     |      |     |     |     |      |     | RCC | RCL |
|-------|------|-------|------|-----|-------|-----|------|-----|-----|-----|------|-----|-----|-----|
| D1    | D6   | D7    | D3   | D4  | L1    | L3  | L4   | L6  | L5  | D8  | L7   | Lp  |     |     |
| 6     | 10.6 | 13.1  | 14   | 20  | 19.5  | 15  | 4.5  | 2   | 1.2 | 2   | 6    | 3.5 |     |     |
| 7+9   | 13   | 17.1  | 17   | 23  | 20.5  | 15  | 5.5  | 2.8 | 1.2 | 2   | 6.2  | 3.5 |     |     |
| 10    | 14   | 18.1  | 18.4 | 24  | 20.5  | 15  | 5.5  | 2.8 | 1.2 | 2   | 6.2  | 3.5 |     |     |
| 11+12 | 16.5 | 20.6  | 21   | 27  | 23.5  | 18  | 5.5  | 2.8 | 1.2 | 2   | 6.2  | 3.5 |     |     |
| 13+14 | 19   | 23.1  | 24   | 30  | 28    | 22  | 6    | 2.8 | 1.2 | 2   | 6.7  | 4   |     |     |
| 15    | 21   | 26.9  | 25.4 | 31  | 29    | 22  | 7    | 3.7 | 1.3 | 2.5 | 7.6  | 4   |     |     |
| 16+17 | 21   | 26.9  | 26   | 34  | 30    | 23  | 7    | 3.7 | 1.3 | 2.5 | 7.6  | 4   |     |     |
| 18    | 25   | 30.9  | 29   | 37  | 32    | 24  | 8    | 3.7 | 1.3 | 3   | 8.5  | 4.5 |     |     |
| 19+20 | 25   | 30.9  | 30   | 39  | 33    | 25  | 8    | 3.7 | 1.3 | 3   | 8.5  | 4.5 |     |     |
| 21+22 | 30   | 35.4  | 34   | 42  | 33    | 25  | 8    | 3.7 | 1.8 | 3.5 | 8.5  | 5   |     |     |
| 23+24 | 30   | 35.4  | 35   | 44  | 35    | 27  | 8    | 3.7 | 1.8 | 3.5 | 8.5  | 5   |     |     |
| 25+27 | 33   | 38.2  | 37   | 48  | 35.5  | 27  | 8.5  | 3.7 | 1.8 | 4   | 9.1  | 5   |     |     |
| 28    | 38   | 43.3  | 42   | 50  | 38    | 29  | 9    | 3.7 | 1.8 | 4   | 9.6  | 6   |     |     |
| 29+32 | 38   | 43.3  | 45   | 53  | 39    | 30  | 9    | 3.7 | 1.8 | 4   | 9.6  | 6   |     |     |
| 33+34 | 45   | 53.5  | 48   | 64  | 50.5  | 39  | 11.5 | 5.4 | 2.1 | 5   | 12   | 7.5 |     |     |
| 35+37 | 45   | 53.5  | 50   | 64  | 50.5  | 39  | 11.5 | 5.4 | 2.1 | 5   | 12   | 7.5 |     |     |
| 38+43 | 52   | 60.5  | 54   | 69  | 50.5  | 39  | 11.5 | 5.4 | 2.1 | 5   | 12   | 7.5 |     |     |
| 44+45 | 57   | 65.5  | 60   | 76  | 52.5  | 41  | 11.5 | 5.4 | 2.1 | 5   | 13   | 8.5 |     |     |
| 46+49 | 57   | 65.5  | 67   | 80  | 52.5  | 41  | 11.5 | 5.4 | 2.1 | 5   | 13   | 8.5 |     |     |
| 50    | 64   | 72.5  | 69   | 82  | 56.5  | 45  | 11.5 | 5.4 | 2.1 | 5   | 13   | 8.5 |     |     |
| 55    | 64   | 72.5  | 74   | 87  | 58.5  | 47  | 11.5 | 5.4 | 2.1 | 5   | 13   | 8.5 |     |     |
| 60    | 72   | 79.3  | 80   | 93  | 60.5  | 49  | 11.5 | 5.4 | 2.1 | 5   | 13.5 | 8.5 |     |     |
| 65    | 77   | 84.5  | 87   | 102 | 62.5  | 51  | 11.5 | 5.4 | 2.1 | 5   | 13.5 | 8.5 |     |     |
| 70    | 82   | 89.5  | 92   | 107 | 62.5  | 51  | 11.5 | 5.4 | 2.1 | 5   | 13.5 | 8.5 |     |     |
| 75    | 87   | 94.5  | 97   | 113 | 68.5  | 57  | 11.5 | 5.4 | 2.1 | 5   | 13.5 | 8.5 |     |     |
| 80    | 92   | 99.5  | 102  | 117 | 70.5  | 59  | 11.5 | 5.4 | 2.1 | 5   | 13.5 | 8.5 |     |     |
| 85    | 98   | 105.5 | 110  | 126 | 72.5  | 59  | 13.5 | 5.4 | 2.6 | 5   | 13.5 | 8.5 |     |     |
| 90    | 105  | 111.5 | 117  | 131 | 75.5  | 62  | 13.5 | 5.4 | 2.6 | 5   | 13.5 | 8.5 |     |     |
| 95    | 110  | 116.5 | 122  | 138 | 75.5  | 62  | 13.5 | 5.4 | 2.6 | 5   | 13.5 | 8.5 |     |     |
| 100   | 114  | 119.5 | 127  | 144 | 88.5  | 75  | 13.5 | 5.4 | 2.6 | 5   | 13.5 | 8.5 |     |     |
| 110   | 124  | 132.2 | 143  | 168 | 92.5  | 75  | 17.5 | 7.1 | 3.9 | 5   | 13.5 | 8.5 |     |     |
| 120   | 134  | 142.2 | 155  | 178 | 102.5 | 85  | 17.5 | 7.1 | 3.9 | 5   | 13.5 | 8.5 |     |     |
| 130   | 145  | 153.2 | 166  | 190 | 112.5 | 95  | 17.5 | 7.1 | 3.9 | 5   | 13.5 | 8.5 |     |     |
| 135   | 152  | 161.2 | 179  | 201 | 113.5 | 95  | 18.5 | 7.1 | 3.9 | 5   | 13.5 | 8.5 |     |     |
| 140   | 157  | 164.3 | 186  | 206 | 118.5 | 100 | 18.5 | 7.1 | 3.9 | 5   | 13.5 | 8.5 |     |     |
| 150   | 167  | 174.2 | 199  | 219 | 128.5 | 110 | 18.5 | 7.1 | 3.9 | 5   | 13.5 | 8.5 |     |     |
| 160   | 188  | 195   | 215  | 239 | 141   | 120 | 21   | 9.1 | 3.9 | 5   | 15.5 | 8.5 |     |     |

Unbalanced  
Dependent on rotation

Wedge gasket  
Mechanical seals