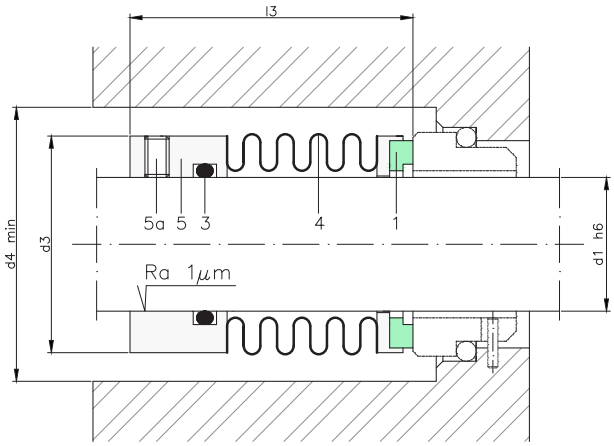
# LMB84

## COMPONENTS:

1 Rotating contact surface
3 O-rings
4 Metal bellows.
5 Set screws
6 Metal frame




## SECTORS:

## CHARACTERISTICS:

- Balanced.
- Spiral-wound metal bellows.
- Not dependent on the rotation direction.

## OPERATING LIMITS:

$d_1$= 18 ÷ 100 mm  p= 20 kg/cm²

v= 25 m/s  t= -40÷ +200ºC (*)

(*) The temperature resistance depends on the material of the secondary seals used.

The operating limits are defined by the PV factor which is determined for the sealing system characteristics and those of the application.

## DESCRIPTION:

Balanced by the bellows, without the need for a stepped shaft (models LWS10B, LMS20B). Suitable for working in applications with high pressures. The O-ring resting on the shaft does not cause wear as there is no axial movement (changes in pressure). Recommended for working with sticky or viscous fluids that require cleaning processes (CIP) or sterilisation processes (SIP) in situ due to the geometry of the spiral-wound bellows.

This seal may be supplied with any of the stationary parts shown in pages 56 and 57. for measurements in mm, and 58 for the measurements in inches.

## DIMENSIONS CHART

### Dimensions in mm

| Shaft | Rotary part | | |
|---|---|---|---|
| mm | $d_3$ | $d_4$ | $l_3$ |
| 18 | 31 | 34 | 31,5 |
| 20 | 31 | 36 | 31,5 |
| 22 | 31 | 38 | 31,5 |
| 24 | 36 | 40 | 36,7 |
| 25 | 36 | 41 | 37 |
| 28 | 39 | 44 | 37,5 |
| 30 | 42 | 46 | 38 |
| 32 | 46 | 48 | 43 |
| 33 | 46 | 49 | 43 |
| 35 | 48,5 | 51 | 43 |
| 38 | 51,5 | 58 | 42 |
| 40 | 54 | 60 | 42 |
| 43 | 58,4 | 63 | 47 |
| 45 | 58,4 | 65 | 47 |
| 48 | 63,7 | 68 | 47 |
| 50 | 63,7 | 70 | 46,5 |
| 53 | 69 | 73 | 56,5 |
| 55 | 71 | 75 | 56,5 |
| 58 | 73,3 | 83 | 56,5 |
| 60 | 76,7 | 85 | 56,5 |
| 63 | 79,4 | 88 | 56,5 |
| 65 | 83 | 90 | 66,5 |
| 68 | 87,8 | 93 | 66,5 |
| 70 | 87,8 | 95 | 65,5 |
| 75 | 94 | 104 | 65,5 |
| 80 | 100,6 | 109 | 75 |
| 85 | 106 | 114 | 75 |
| 90 | 110,3 | 119 | 75 |
| 95 | 114,9 | 124 | 75 |
| 100 | 121,3 | 129 | 75 |

### Dimensions in mm

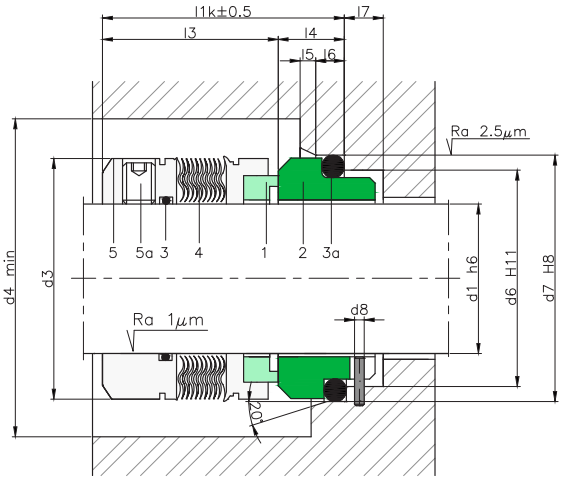
| Shaft | | Rotary part | | |
|---|---|---|---|---|
| (“) | mm | $d_3$ | $d_4$ | $l_3$ |
| 0,750 | 19,05 | 31 | 34,9 | 31,5 |
| 0,875 | 22,23 | 36 | 38,1 | 37 |
| 1,000 | 25,40 | 39 | 41,3 | 37,5 |
| 1,125 | 28,58 | 42 | 44,5 | 38 |
| 1,250 | 31,75 | 46 | 47,6 | 43 |
| 1,375 | 34,93 | 48,5 | 50,8 | 43 |
| 1,500 | 38,10 | 51,5 | 57,2 | 42 |
| 1,625 | 41,28 | 58,4 | 60,3 | 47 |
| 1,750 | 44,45 | 58,4 | 63,5 | 47 |
| 1,875 | 47,63 | 63,7 | 66,7 | 46,5 |
| 2,000 | 50,80 | 63,7 | 69,9 | 46,5 |
| 2,125 | 53,98 | 69 | 73 | 56,5 |
| 2,250 | 57,15 | 73,3 | 76,2 | 56,5 |
| 2,375 | 60,33 | 76,7 | 79,4 | 56,5 |
| 2,500 | 63,50 | 79,4 | 82,6 | 56,5 |
| 2,625 | 66,68 | 83 | 85,7 | 66,5 |
| 2,750 | 69,85 | 87,8 | 96 | 65,5 |
| 2,875 | 73,03 | 94 | 99 | 65,5 |
| 3,000 | 76,20 | 94 | 100 | 65,5 |
| 3,125 | 79,38 | 100,6 | 104 | 75 |
| 3,250 | 82,55 | 100,6 | 108 | 75 |
| 3,375 | 85,73 | 106 | 111 | 75 |
| 3,500 | 88,90 | 110,3 | 115 | 75 |
| 3,625 | 92,08 | 114,9 | 118 | 75 |
| 3,750 | 95,25 | 114,9 | 121 | 75 |
| 3,875 | 98,43 | 121,3 | 124 | 75 |
| 4,000 | 101,60 | 121,3 | 127 | 75 |

Dimensions subject to changes or modifications.

# LMB85

## COMPONENTS:

1 Rotating contact surface
2 Stationary contact surface
3 O-rings
3a O-rings
4 Metal bellows
5 Metal frame
5a Set screws




## SECTORS:

## CHARACTERISTICS:

- Balanced.
- Welded metal bellows.
- Not dependent on the rotation direction.

## OPERATING LIMITS:

$d_1$= 16 ÷ 100 mm  p= 20 kg/cm²

v= 25 m/s  t= -40÷ +200ºC

-40÷ +200 °C (up to 400º C with a special design) (*)

(*) The temperature resistance depends on the material of the secondary seals used.

The operating limits are defined by the PV factor which is determined for the sealing system characteristics and those of the application.

## DESCRIPTION:

Internally balanced, with no need for a stepped shaft (models LWS10B, LMS20B). The O-ring resting on the shaft does not cause wear as there is no axial movement. Appropriate for applications with sticky or high viscosity fluids as its open leaf design generates a self-cleaning effect. In addition it is suitable for application at moderate pressures and high temperatures (for up to 400º C please enquire) and very aggressive fluids in chemical and mechanical terms. Very often used in compressors.

## DIMENSIONS CHART

### Dimensions in mm

| Shaft | Rotary part | | |
|---|---|---|---|
| mm | $d_3$ | $d_4$ | $l_3$ |
| 16 | 30 | 34 | 32,5 |
| 18 | 32 | 36 | 30,5 |
| 20 | 33,5 | 37,5 | 30,5 |
| 22 | 36,5 | 40,5 | 30,5 |
| 24 | 39 | 43 | 28,5 |
| 25 | 39,6 | 43 | 28,5 |
| 28 | 42,8 | 46,8 | 31 |
| 30 | 45 | 49 | 31 |
| 32 | 46 | 50 | 31 |
| 33 | 48 | 52 | 31 |
| 35 | 49,2 | 63,2 | 31 |
| 38 | 52,3 | 56,3 | 31 |
| 40 | 55,5 | 59,5 | 31 |
| 43 | 57,5 | 61,5 | 31 |
| 45 | 58,7 | 62,7 | 31 |
| 48 | 61,9 | 65,9 | 31 |
| 50 | 65 | 69 | 32,5 |
| 53 | 68,2 | 72,2 | 32,5 |
| 55 | 70 | 74 | 32,5 |
| 58 | 71,7 | 75,7 | 37,5 |
| 60 | 74,6 | 78,6 | 37,5 |
| 63 | 79 | 83 | 37,5 |
| 65 | 84,1 | 88,1 | 37,5 |
| 68 | 87,3 | 91,3 | 34,5 |
| 70 | 87,3 | 91,3 | 42 |
| 75 | 95 | 99 | 42 |
| 80 | 98,4 | 102,4 | 41,8 |
| 85 | 104,7 | 108,7 | 41,8 |
| 90 | 111 | 115 | 46,8 |
| 95 | 114 | 118 | 47,8 |
| 100 | 117,4 | 121,4 | 47,8 |

### Dimensions in inches

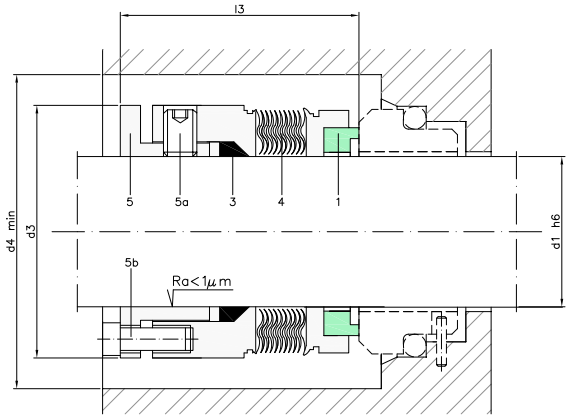
| Shaft | | Rotary part | | | Stationary part | | | Total length |
|---|---|---|---|---|---|---|---|---|
| (") | mm | $d_3$ | $d_4$ | $l_3$ | $d_6$ | $d_7$ | $l_4$ | $l_1$ |
| 0,750 | 19,05 | 34 | 38 | 30,5 | 29,5 | 35 | 11,5 | 42 |
| 0,875 | 22,23 | 39 | 43 | 28,5 | 33,5 | 39 | 11,5 | 40 |
| 1,000 | 25,40 | 39,6 | 43,6 | 28,5 | 34,5 | 40 | 11,5 | 40 |
| 1,125 | 28,58 | 42,8 | 46,8 | 31 | 37,5 | 43 | 11,5 | 42,5 |
| 1,250 | 31,75 | 46 | 50 | 31 | 42,5 | 48 | 11,5 | 42,5 |
| 1,375 | 34,93 | 49,2 | 53,2 | 31 | 44,5 | 50 | 11,5 | 42,5 |
| 1,500 | 38,10 | 52,5 | 56,5 | 31 | 49,5 | 56 | 14 | 45 |
| 1,625 | 41,28 | 55,5 | 59,5 | 31 | 54,5 | 61 | 14 | 45 |
| 1,750 | 44,45 | 59,5 | 63,5 | 31 | 56,5 | 63 | 14 | 45 |
| 1,875 | 47,63 | 62,5 | 66,5 | 31 | 59,5 | 66 | 14 | 45 |
| 2,000 | 50,80 | 65 | 69 | 32,5 | 62,5 | 70 | 15 | 47,5 |
| 2,125 | 53,98 | 68,2 | 72,2 | 32,5 | 67,5 | 75 | 15 | 47,5 |
| 2,250 | 57,15 | 71,7 | 75,7 | 37,5 | 70,5 | 78 | 15 | 52,5 |
| 2,375 | 60,33 | 75 | 79 | 37,5 | 72,5 | 80 | 15 | 52,5 |
| 2,500 | 63,50 | 79 | 83 | 37,5 | 75,5 | 83 | 15 | 52,5 |
| 2,625 | 66,68 | 84,1 | 88,1 | 34,5 | 81,5 | 90 | 18 | 52,5 |
| 2,750 | 69,85 | 87,3 | 91,3 | 42 | 83,5 | 92 | 18 | 60 |
| 2,875 | 73,03 | 92 | 96 | 42 | 88,5 | 97 | 18 | 60 |
| 3,000 | 76,20 | 95 | 99 | 42 | 88,5 | 97 | 18 | 60 |
| 3,125 | 79,38 | 98,4 | 102,4 | 41,8 | 95,5 | 105 | 18,2 | 60 |
| 3,250 | 82,55 | 101,6 | 105,6 | 41,8 | 100,5 | 110 | 18,2 | 60 |
| 3,375 | 85,73 | 104,7 | 108,7 | 41,8 | 100,5 | 110 | 18,2 | 60 |
| 3,500 | 88,90 | 108 | 112 | 46,8 | 105,5 | 115 | 18,2 | 65 |
| 3,625 | 92,08 | 111 | 115 | 46,8 | 105,5 | 115 | 18,2 | 65 |
| 3,750 | 95,25 | 114 | 118 | 47,8 | 110,5 | 120 | 17,2 | 65 |
| 3,875 | 98,43 | 117,5 | 121,5 | 47,8 | 115,5 | 125 | 17,2 | 65 |
| 4,000 | 101,60 | 119 | 123 | 47,8 | 115,5 | 125 | 17,2 | 65 |

Dimensions subject to changes or modifications.

# LMB86

## COMPONENTS:

1 Rotating contact surface
3 Graphite wedge
4 Metal bellows
5 Metal frame
5a Set screws
5b Tightening screw




## SECTORS :

## CHARACTERISTICS:

- Balanced.
- Graphite wedge
- Welded metal bellows.
- Not dependent on the rotation direction.

## OPERATING LIMITS:

$d_1$= 25 ÷ 100 mm  p= 20 kg/cm²

v= 25 m/s  t= -75÷ -425ºC (*)

(*) The temperature resistance depends on the material of the secondary seals used.

The operating limits are defined by the PV factor which is determined for the sealing system characteristics and those of the application.

## DESCRIPTION :

Internally balanced, with no need for a stepped shaft (models LWS10B, LMS20B). The graphite wedge allwos applications at very high temperatures.
Appropriate for applications with sticky or high viscosity fluids as its open leaf design generates a self-cleaning effect.
In addition it is suitable for application at moderate pressures as well as with very aggressive fluids, both chemically and mechanically terms. Very often used in compressors.

This seal may be supplied with any of the stationary parts shown in pages 56 and 57. for measurements in mm, and 58 for the measurements in inches.

## DIMENSIONS CHART

### Dimensions in mm

| Shaft | Rotary part | | |
|---|---|---|---|
| mm | $d_3$ | $d_4$ | $l_3$ |
| 25 | 41,28 | 46,28 | 38,89 |
| 28 | 44,45 | 49,45 | 39,67 |
| 32 | 47,63 | 52,63 | 40,46 |
| 35 | 50,80 | 55,80 | 40,46 |
| 38 | 53,98 | 58,98 | 40,46 |
| 40 | 57,15 | 62,15 | 40,46 |
| 45 | 60,33 | 65,33 | 41,28 |
| 48 | 63,50 | 68,50 | 41,28 |
| 50 | 66,68 | 71,68 | 42,06 |
| 55 | 69,85 | 74,85 | 42,06 |
| 60 | 76,20 | 81,20 | 43,66 |
| 65 | 82,55 | 87,55 | 44,45 |
| 70 | 88,90 | 93,90 | 45,24 |
| 75 | 96,82 | 101,82 | 47,63 |
| 80 | 101,60 | 106,60 | 47,63 |
| 85 | 107,95 | 112,95 | 47,63 |
| 90 | 111,13 | 116,13 | 47,63 |
| 95 | 117,48 | 122,48 | 47,63 |
| 100 | 123,83 | 128,83 | 47,63 |

Dimensions subject to changes or modifications.

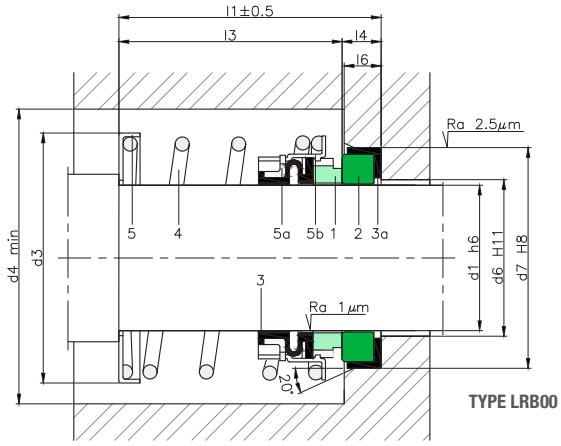
### Dimensions in inches

| Shaft | | Rotary part | | |
|---|---|---|---|---|
| (") | mm | $d_3$ | $d_4$ | $l_3$ |
| 1,000 | 25,40 | 41,28 | 46,28 | 38,89 |
| 1,125 | 28,58 | 44,45 | 49,45 | 39,67 |
| 1,250 | 31,75 | 47,63 | 52,63 | 40,46 |
| 1,375 | 34,93 | 50,80 | 55,80 | 40,46 |
| 1,500 | 38,10 | 53,98 | 58,98 | 40,46 |
| 1,625 | 41,28 | 57,15 | 62,15 | 40,46 |
| 1,750 | 44,45 | 60,33 | 65,33 | 41,28 |
| 1,875 | 47,63 | 63,50 | 68,50 | 41,28 |
| 2,000 | 50,80 | 66,68 | 71,68 | 42,06 |
| 2,125 | 53,98 | 69,85 | 74,85 | 42,06 |
| 2,250 | 57,15 | 73,03 | 78,03 | 43,66 |
| 2,375 | 60,33 | 76,20 | 81,20 | 43,66 |
| 2,500 | 63,50 | 82,55 | 87,55 | 44,45 |
| 2,625 | 66,68 | 85,73 | 90,73 | 45,24 |
| 2,750 | 69,85 | 88,90 | 93,90 | 45,24 |
| 2,875 | 73,03 | 93,65 | 98,65 | 47,63 |
| 3,000 | 76,20 | 96,82 | 101,82 | 47,63 |
| 3,125 | 79,38 | 101,60 | 106,60 | 47,63 |
| 3,250 | 82,55 | 104,78 | 109,78 | 47,63 |
| 3,375 | 85,73 | 107,95 | 112,95 | 47,63 |
| 3,500 | 88,90 | 111,13 | 116,13 | 47,63 |
| 3,625 | 92,08 | 114,30 | 119,30 | 47,63 |
| 3,750 | 95,25 | 117,48 | 122,48 | 47,63 |
| 3,875 | 98,43 | 120,65 | 125,65 | 47,63 |
| 4,000 | 101,60 | 123,83 | 128,83 | 47,63 |

# LRB00

## COMPONENTS:

1 Rotating contact surface
2 Stationary contact surface
3 Bellows
3a Elastomeric cup
4 Spring
5 Ring
5a Drive ring
5b Metal frame




TYPE LRB00

## SECTORS:

## CHARACTERISTICS:

- Balanced.
- Not dependent on the rotation direction.
- Single cylindrical spring.

## OPERATING LIMITS:

$d_1$= 9.52 ÷101.60 mm p= 14 kg/cm²

v= 13 m/s t= -20÷ +200ºC (*)

(*) The temperature resistance depends on the material of the secondary seals used.

The operating limits are defined by the PV factor which is determined for the sealing system characteristics and those of the application.

## DESCRIPTION:

Mechanical seal with a simple, compact design for all-purpose use and in particular in applications with moderate pressures (up to 14 kg/cm²) such as pumps and compressors.

## DIMENSIONS CHART LRB00

Dimensions in inches

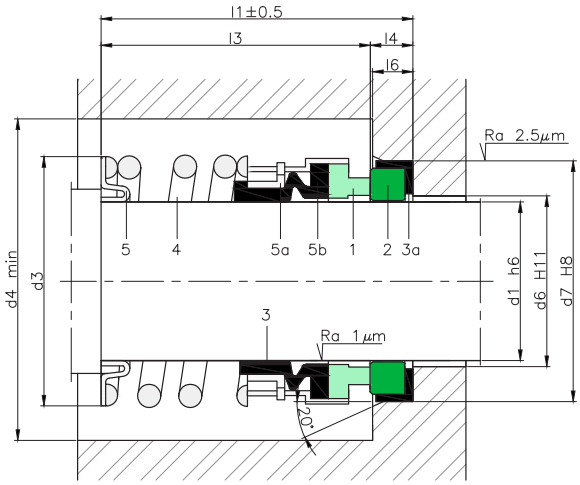
| Shaft | | Rotary part | | | Stationary part | | | | Total length |
|---|---|---|---|---|---|---|---|---|---|
| (") | mm | $d_3$ | $d_4$ | $l_3$ | $d_6$ | $d_7$ | $l_4$ | $l_6$ | $l_1$ |
| 3/8 | 9.52 | 28 | 32 | 25 | 11.0 | 24.6 | 8.7 | 7.1 | 33.7 |
| 1/2 | 12.70 | 32 | 36 | 25 | 13.5 | 27.8 | 8.7 | 7.1 | 33.7 |
| 5/8 | 15.88 | 35 | 39 | 25 | 17.0 | 30.9 | 10.5 | 8.7 | 35.5 |
| 3/4 | 19.05 | 40 | 44 | 25 | 20.0 | 34.1 | 10.5 | 8.7 | 35.5 |
| 13/16 | 20.63 | 41 | 45 | 25 | 22.0 | 35.7 | 10.5 | 8.7 | 35.5 |
| 7/8 | 22.22 | 43 | 47 | 25 | 23.0 | 37.3 | 10.5 | 8.7 | 35.5 |
| 1 | 25.40 | 47 | 51 | 25 | 26.5 | 40.5 | 10.5 | 8.7 | 35.5 |
| 1 1/8 | 28.57 | 56 | 60 | 33 | 29.5 | 47.6 | 12.0 | 10.3 | 45.0 |
| 1 1/4 | 31.75 | 59 | 63 | 33 | 32.5 | 50.8 | 12.0 | 10.3 | 45.0 |
| 1 3/8 | 34.92 | 63 | 67 | 33 | 36.5 | 54.0 | 12.0 | 10.3 | 45.0 |
| 1 1/2 | 38.10 | 67 | 71 | 33 | 39.5 | 57.1 | 12.0 | 10.3 | 45.0 |
| 1 5/8 | 41.27 | 71 | 75 | 33 | 42.5 | 60.3 | 12.0 | 10.3 | 45.0 |
| 1 3/4 | 44.45 | 74 | 78 | 41 | 46.0 | 63.5 | 12.0 | 10.3 | 53.0 |
| 1 7/8 | 47.62 | 77 | 81 | 41 | 49.0 | 66.7 | 12.0 | 10.3 | 53.0 |
| 2 | 50.80 | 81 | 85 | 41 | 52.0 | 69.8 | 13.5 | 12.0 | 54.5 |
| 2 1/8 | 53.97 | 84 | 88 | 41 | 55.5 | 73.1 | 13.5 | 12.0 | 54.5 |
| 2 1/4 | 57.15 | 88 | 92 | 41 | 58.5 | 76.2 | 13.5 | 12.0 | 54.5 |
| 2 3/8 | 60.32 | 91 | 95 | 41 | 61.5 | 79.4 | 13.5 | 12.0 | 54.5 |
| 2 1/2 | 63.50 | 94 | 98 | 41 | 65.0 | 82.5 | 13.5 | 12.0 | 54.5 |
| 2 5/8 | 66.67 | 100 | 104 | 49 | 68.0 | 92.1 | 16.0 | 14.3 | 65.0 |
| 2 3/4 | 69.85 | 103 | 107 | 49 | 71.0 | 95.2 | 16.0 | 14.3 | 65.0 |
| 2 7/8 | 73.02 | 108 | 112 | 52 | 74.5 | 98.4 | 16.0 | 14.3 | 68.0 |
| 3 | 76.20 | 111 | 115 | 52 | 77.5 | 101.6 | 16.0 | 14.3 | 68.0 |
| 3 1/8 | 79.37 | 118 | 122 | 56 | 80.5 | 111.1 | 20.0 | 18.3 | 76.0 |
| 3 1/4 | 82.55 | 121 | 125 | 56 | 84.0 | 114.3 | 20.0 | 18.3 | 76.0 |
| 3 3/8 | 85.72 | 125 | 129 | 56 | 87.0 | 117.5 | 20.0 | 18.3 | 76.0 |
| 3 1/2 | 88.90 | 128 | 132 | 56 | 90.5 | 120.6 | 20.0 | 18.3 | 76.0 |
| 3 5/8 | 92.07 | 131 | 135 | 59 | 93.5 | 123.8 | 20.0 | 18.3 | 79.0 |
| 3 3/4 | 95.25 | 134 | 138 | 59 | 96.5 | 127.0 | 20.0 | 18.3 | 79.0 |
| 3 7/8 | 98.42 | 139 | 143 | 62 | 100.0 | 130.2 | 20.0 | 18.3 | 82.0 |
| 4 | 101.60 | 142 | 146 | 62 | 103.0 | 133.3 | 20.0 | 18.3 | 82.0 |

Dimensions subject to changes or modifications.

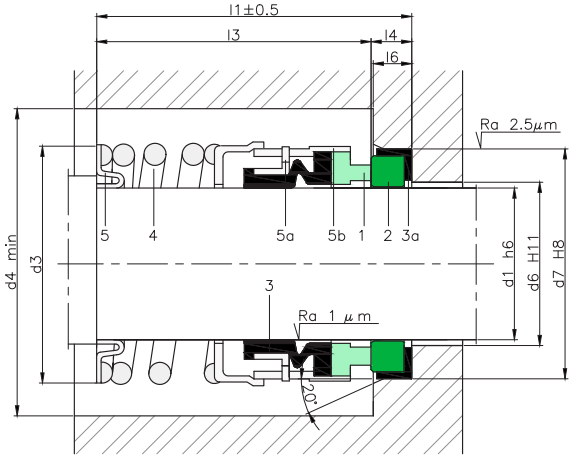
# LRB00U and LRB00L

## COMPONENTS:

1 Rotating contact surface
2 Stationary contact surface
3 Bellows
3a Elastomeric cup
4 Spring
5 Ring
5a Drive ring
5b Metal frame




TYPE LRB00U




TYPE LRB00L

## DIMENSIONS CHART LRB00U

Dimensions in inches

| Shaft | | Rotary part | | | Stationary part | | | | Total length |
|---|---|---|---|---|---|---|---|---|---|
| (") | mm | $d_3$ | $d_4$ | $l_3$ | $d_6$ | $d_7$ | $l_4$ | $l_6$ | $l_1$ |
| 5/8 | 15.88 | 27.8 | 31.8 | 33.3 | 23.80 | 31.75 | 10.3 | 8.7 | 43.6 |
| 3/4 | 19.05 | 30.9 | 34.9 | 33.3 | 26.98 | 34.93 | 10.3 | 8.7 | 43.6 |
| 7/8 | 22.23 | 34.1 | 38.1 | 33.3 | 30.15 | 38.10 | 10.3 | 8.7 | 43.6 |
| 1 | 25.40 | 38.1 | 42.1 | 39.7 | 33.32 | 41.28 | 11.1 | 9.5 | 50.8 |
| 1 1/8 | 28.58 | 41.3 | 45.3 | 41.3 | 36.50 | 44.44 | 11.1 | 9.5 | 52.4 |
| 1 1/4 | 31.75 | 46.0 | 50.0 | 41.3 | 39.70 | 47.63 | 11.1 | 9.5 | 52.4 |
| 1 3/8 | 34.93 | 47.6 | 51.6 | 42.9 | 42.84 | 50.80 | 11.1 | 9.5 | 54.0 |
| 1 1/2 | 38.10 | 50.8 | 54.8 | 42.9 | 46.05 | 53.98 | 11.1 | 9.5 | 54.0 |
| 1 5/8 | 41.28 | 57.2 | 61.2 | 50.8 | 50.80 | 60.33 | 12.7 | 11.1 | 63.5 |
| 1 3/4 | 44.45 | 60.4 | 64.4 | 50.8 | 53.97 | 63.50 | 12.7 | 11.1 | 63.5 |
| 1 7/8 | 47.63 | 63.5 | 67.5 | 54.0 | 57.15 | 66.68 | 12.7 | 11.1 | 66.7 |
| 2 | 50.80 | 66.7 | 70.7 | 54.0 | 60.32 | 69.85 | 12.7 | 11.1 | 66.7 |
| 2 1/8 | 53.98 | 71.4 | 75.4 | 60.3 | 60.32 | 76.20 | 14.2 | 12.7 | 74.5 |
| 2 1/4 | 57.15 | 74.6 | 78.6 | 60.3 | 61.90 | 79.38 | 14.2 | 12.7 | 74.5 |
| 2 3/8 | 60.33 | 78.3 | 82.3 | 63.5 | 67.39 | 82.55 | 14.2 | 12.7 | 77.7 |
| 2 1/2 | 63.50 | 81.0 | 85.0 | 63.5 | 68.25 | 85.73 | 14.2 | 12.7 | 77.7 |
| 2 5/8 | 66.68 | 85.7 | 89.7 | 69.9 | 71.42 | 85.73 | 15.8 | 14.5 | 85.7 |
| 2 3/4 | 69.85 | 88.9 | 92.9 | 69.9 | 74.60 | 88.90 | 15.8 | 14.5 | 85.7 |
| 2 7/8 | 73.03 | 92.1 | 96.1 | 73.0 | 77.77 | 95.25 | 15.8 | 14.5 | 88.8 |
| 3 | 76.20 | 95.3 | 99.3 | 73.0 | 80.95 | 98.43 | 15.8 | 14.5 | 88.8 |
| 3 1/8 | 79.38 | 101.6 | 105.6 | 79.4 | 84.12 | 101.60 | 19.8 | 16.6 | 99.2 |
| 3 1/4 | 82.55 | 104.8 | 108.8 | 79.4 | 87.30 | 104.78 | 19.8 | 16.6 | 99.2 |
| 3 3/8 | 85.73 | 108.0 | 112.0 | 79.4 | 90.47 | 107.95 | 19.8 | 16.6 | 99.2 |
| 3 1/2 | 88.90 | 111.1 | 115.1 | 79.4 | 93.65 | 111.13 | 19.8 | 16.6 | 99.2 |
| 3 5/8 | 92.08 | 114.3 | 118.3 | 82.6 | 96.82 | 114.30 | 19.8 | 16.6 | 102.4 |
| 3 3/4 | 95.25 | 117.7 | 121.7 | 82.6 | 100.00 | 117.48 | 19.8 | 16.6 | 102.4 |
| 3 7/8 | 98.43 | 120.7 | 124.7 | 85.7 | 103.17 | 120.65 | 19.8 | 16.6 | 105.5 |
| 4 | 101.60 | 123.8 | 127.8 | 85.7 | 106.35 | 123.85 | 19.8 | 16.6 | 105.5 |

Dimensions subject to changes or modifications.

## DIMENSIONS CHART LRB00L

Dimensions in inches

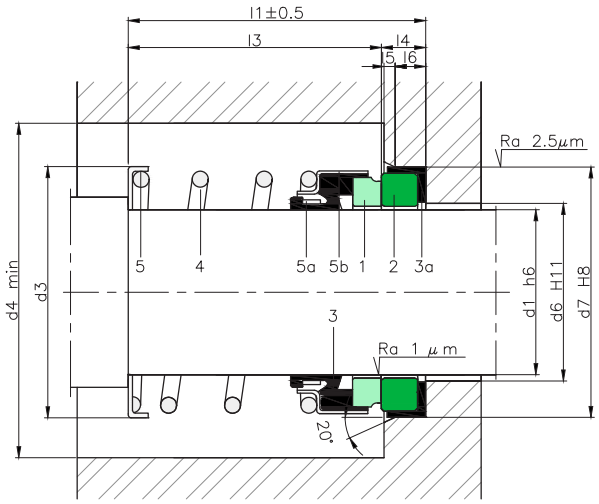
| Shaft | | Rotary part | | | Stationary part | | | | Total length |
|---|---|---|---|---|---|---|---|---|---|
| (") | mm | $d_3$ | $d_4$ | $l_3$ | $d_6$ | $d_7$ | $l_4$ | $l_6$ | $l_1$ |
| 5/8 | 15.88 | 27.8 | 31.8 | 44 | 17.0 | 30.9 | 10.5 | 8.7 | 54.5 |
| 3/4 | 19.05 | 30.9 | 34.9 | 44 | 20.0 | 34.1 | 10.5 | 8.7 | 54.5 |
| 7/8 | 22.23 | 34.1 | 38.1 | 44 | 23.0 | 37.3 | 10.5 | 8.7 | 54.5 |
| 1 | 25.40 | 38.1 | 42.1 | 44 | 26.5 | 40.5 | 10.5 | 8.7 | 54.5 |
| 1 1/8 | 28.58 | 41.3 | 45.3 | 60 | 29.5 | 47.6 | 12.0 | 10.3 | 72.0 |
| 1 1/4 | 31.75 | 46.0 | 50.0 | 60 | 32.5 | 50.8 | 12.0 | 10.3 | 72.0 |
| 1 3/8 | 34.93 | 47.6 | 51.6 | 60 | 36.5 | 54.0 | 12.0 | 10.3 | 72.0 |
| 1 1/2 | 38.10 | 50.8 | 54.8 | 60 | 39.5 | 57.1 | 12.0 | 10.3 | 72.0 |
| 1 5/8 | 41.28 | 57.2 | 61.2 | 60 | 42.5 | 60.3 | 12.0 | 10.3 | 72.0 |
| 1 3/4 | 44.45 | 60.4 | 64.4 | 71 | 46.0 | 63.5 | 12.0 | 10.3 | 83.0 |
| 1 7/8 | 47.63 | 63.5 | 67.5 | 71 | 49.0 | 66.7 | 12.0 | 10.3 | 83.0 |
| 2 | 50.80 | 66.7 | 70.7 | 71 | 52.0 | 69.8 | 13.5 | 12.0 | 84.5 |
| 2 1/8 | 53.98 | 71.4 | 75.4 | 71 | 55.5 | 73.1 | 13.5 | 12.0 | 84.5 |
| 2 1/4 | 57.15 | 74.6 | 78.6 | 71 | 58.5 | 76.2 | 13.5 | 12.0 | 84.5 |
| 2 3/8 | 60.33 | 78.3 | 82.3 | 71 | 61.5 | 79.4 | 13.5 | 12.0 | 84.5 |
| 2 1/2 | 63.50 | 81.0 | 85.0 | 71 | 65.0 | 82.5 | 13.5 | 12.0 | 84.5 |
| 2 5/8 | 66.68 | 85.7 | 89.7 | 70 | 68.0 | 92.1 | 16.0 | 14.3 | 86.0 |
| 2 3/4 | 69.85 | 88.9 | 92.9 | 70 | 71.0 | 95.2 | 16.0 | 14.3 | 86.0 |
| 2 7/8 | 73.03 | 92.1 | 96.1 | 73 | 74.5 | 98.4 | 16.0 | 14.3 | 89.0 |
| 3 | 76.20 | 95.3 | 99.3 | 73 | 77.5 | 101.6 | 16.0 | 14.3 | 89.0 |
| 3 1/8 | 79.38 | 101.6 | 105.6 | 79 | 80.5 | 111.1 | 20.0 | 18.3 | 99.0 |
| 3 1/4 | 82.55 | 104.8 | 108.8 | 79 | 84.0 | 114.3 | 20.0 | 18.3 | 99.0 |
| 3 3/8 | 85.73 | 108.0 | 112.0 | 79 | 87.0 | 117.5 | 20.0 | 18.3 | 99.0 |
| 3 1/2 | 88.90 | 111.1 | 115.1 | 79 | 90.5 | 120.6 | 20.0 | 18.3 | 99.0 |
| 3 5/8 | 92.08 | 114.3 | 118.3 | 83 | 93.5 | 123.8 | 20.0 | 18.3 | 103.0 |
| 3 3/4 | 95.25 | 117.7 | 121.7 | 83 | 96.5 | 127.0 | 20.0 | 18.3 | 103.0 |
| 3 7/8 | 98.43 | 120.7 | 124.7 | 86 | 100.0 | 130.2 | 20.0 | 18.3 | 106.0 |
| 4 | 101.60 | 123.8 | 127.8 | 86 | 103.0 | 133.3 | 20.0 | 18.3 | 106.0 |

Dimensions subject to changes or modifications.

# LRB01-LRB01S -LRB04 - LRB04A and LRB06

## COMPONENTS:

1 Rotating contact surface
2 Stationary contact surface
3 Bellows
3a Elastomeric cup
4 Spring
5 Ring
5a Drive ring
5b Metal frame




## SECTORS:

## CHARACTERISTICS:

- Unbalanced.
- Not dependent on the rotation direction.
- Single cylindrical spring.

## OPERATING LIMITS:

$d_1$= 9.52 ÷101.60 mm p= 10 kg/cm²

v= 10 m/s t= -15÷ +200ºC (*)

(*) The temperature resistance depends on the material of the secondary seals used.

The operating limits are defined by the PV factor which is determined for the sealing system characteristics and those of the application.

## DESCRIPTION:

Mechanical seal with a simple design for general use. Type LRB04/ LRB04A are standardised models in accordance with EN 12756 (KU).

## DIMENSIONS CHART LRB01

Dimensions in inches

| Shaft | | Rotary part | | | Stationary part | | | | | Total length |
|---|---|---|---|---|---|---|---|---|---|---|
| (“) | mm | $d_3$ | $d_4$ | $l_3$ | $d_6$ | $d_7$ | $l_4$ | $l_5$ | $l_6$ | $l_1$ |
| 3/8 | 9.52 | 23.80 | 28.80 | 22.20 | 15.90 | 22.22 | 6.3 | 1.3 | 5.1 | 28.50 |
| 1/2 | 12.70 | 23.80 | 28.80 | 20.60 | 19.05 | 25.40 | 8.0 | 1.3 | 5.1 | 28.60 |
| 5/8 | 15.88 | 26.50 | 31.50 | 22.20 | 22.20 | 31.75 | 10.3 | 1.3 | 7.5 | 32.50 |
| 3/4 | 19.05 | 30.50 | 35.50 | 22.20 | 25.40 | 34.93 | 10.3 | 1.3 | 7.5 | 32.50 |
| 7/8 | 22.20 | 34.00 | 39.50 | 24.00 | 28.60 | 38.10 | 10.3 | 1.3 | 7.5 | 34.30 |
| 1 | 25.40 | 40.00 | 45.00 | 25.40 | 31.80 | 41.28 | 11.0 | 1.3 | 8.3 | 36.40 |
| 1 1/8 | 28.60 | 44.50 | 49.50 | 27.00 | 35.70 | 44.45 | 11.0 | 1.3 | 8.3 | 38.00 |
| 1 1/4 | 31.75 | 46.50 | 52.00 | 27.00 | 38.90 | 47.66 | 11.0 | 1.3 | 8.3 | 38.00 |
| 1 3/8 | 34.92 | 51.50 | 56.50 | 28.50 | 42.10 | 50.80 | 11.0 | 1.3 | 8.3 | 39.50 |
| 1 1/2 | 38.10 | 54.00 | 60.00 | 28.50 | 45.20 | 54.00 | 11.0 | 1.3 | 8.3 | 39.50 |
| 1 5/8 | 41.27 | 58.00 | 63.00 | 35.00 | 48.80 | 60.30 | 12.7 | 1.3 | 9.8 | 47.70 |
| 1 3/4 | 44.45 | 61.50 | 66.50 | 35.00 | 51.60 | 63.50 | 12.7 | 1.3 | 9.8 | 47.70 |
| 1 7/8 | 47.62 | 65.50 | 70.50 | 38.00 | 54.80 | 66.65 | 12.7 | 1.3 | 9.8 | 50.70 |
| 2 | 50.80 | 70.50 | 75.50 | 38.00 | 58.00 | 69.85 | 12.7 | 1.3 | 9.8 | 50.70 |
| 2 1/8 | 53.97 | 75.00 | 80.00 | 43.00 | 62.00 | 76.20 | 14.3 | 1.3 | 11.4 | 57.30 |
| 2 1/4 | 57.15 | 79.00 | 84.00 | 43.00 | 65.00 | 79.40 | 14.3 | 1.3 | 11.4 | 57.30 |
| 2 3/8 | 60.32 | 82.00 | 87.00 | 46.00 | 68.00 | 82.55 | 14.3 | 1.3 | 11.4 | 60.30 |
| 2 1/2 | 63.50 | 87.00 | 92.00 | 46.00 | 71.20 | 85.70 | 14.3 | 1.3 | 11.4 | 60.30 |
| 2 5/8 | 66.68 | 88.00 | 96.50 | 49.20 | 71.00 | 85.70 | 15.9 | 1.3 | 13.2 | 65.10 |
| 2 3/4 | 69.85 | 90.00 | 98.00 | 49.20 | 74.60 | 88.90 | 15.9 | 1.3 | 13.2 | 65.10 |
| 2 7/8 | 73.03 | 95.00 | 104.00 | 52.40 | 77.80 | 95.25 | 15.9 | 1.3 | 13.2 | 68.30 |
| 3 | 76.20 | 99.00 | 104.00 | 52.40 | 81.00 | 98.43 | 15.9 | 1.3 | 13.2 | 68.30 |
| 3 1/8 | 79.38 | 104.00 | 109.00 | 55.50 | 80.10 | 101.60 | 19.8 | 1.3 | 15.4 | 74.90 |
| 3 1/4 | 82.55 | 109.00 | 114.00 | 55.50 | 87.30 | 104.78 | 19.8 | 1.3 | 15.4 | 74.90 |
| 3 3/8 | 85.73 | 109.00 | 114.00 | 55.50 | 90.50 | 107.95 | 19.8 | 1.3 | 15.4 | 74.90 |
| 3 1/2 | 88.90 | 114.00 | 119.00 | 55.50 | 93.60 | 111.13 | 19.8 | 1.3 | 15.4 | 74.90 |
| 3 5/8 | 92.08 | 119.00 | 124.00 | 58.70 | 96.80 | 114.30 | 19.8 | 1.3 | 15.4 | 78.50 |
| 3 3/4 | 95.25 | 119.00 | 124.00 | 58.70 | 100.00 | 117.48 | 19.8 | 1.3 | 15.4 | 78.50 |
| 3 7/4 | 98.43 | 124.00 | 129.00 | 61.90 | 103.10 | 120.65 | 19.8 | 1.3 | 15.4 | 81.70 |
| 4 | 101.60 | 124.00 | 129.00 | 61.90 | 106.30 | 123.83 | 19.8 | 1.3 | 15.4 | 81.70 |

Dimensions subject to changes or modifications.

## DIMENSIONS CHART LRB01S

Dimensions in inches

| Shaft | | Rotary part | | | Stationary part | | | | | Total length |
|---|---|---|---|---|---|---|---|---|---|---|
| (“) | mm | $d_3$ | $d_4$ | $l_3$ | $d_6$ | $d_7$ | $l_4$ | $l_5$ | $l_6$ | $l_1$ |
| 3/8 | 9.52 | 22 | 27 | 25.4 | 16 | 24.6 | 8.7 | 1.3 | 6.2 | 34.1 |
| 1/2 | 12.70 | 26 | 31 | 25.4 | 19 | 27.8 | 8.7 | 1.3 | 6.2 | 34.1 |
| 5/8 | 15.88 | 32 | 37 | 25.4 | 22 | 30.9 | 10.3 | 1.3 | 9.0 | 35.7 |
| 3/4 | 19.05 | 36 | 41 | 25.4 | 25 | 34.1 | 10.3 | 1.3 | 9.0 | 35.7 |
| 7/8 | 22.20 | 39 | 44 | 25.4 | 28 | 37.3 | 10.3 | 1.3 | 9.0 | 35.7 |
| 1 | 25.40 | 42 | 47 | 25.4 | 32 | 40.5 | 10.3 | 1.3 | 9.0 | 35.7 |
| 1 1/8 | 28.60 | 46 | 51 | 33.3 | 36 | 47.6 | 12.0 | 1.3 | 9.2 | 45.5 |
| 1 1/4 | 31.75 | 49 | 54 | 33.3 | 39 | 50.8 | 12.0 | 1.3 | 9.2 | 45.5 |
| 1 3/8 | 34.92 | 54 | 59 | 33.3 | 42 | 53.9 | 12.0 | 1.3 | 9.2 | 45.5 |
| 1 1/2 | 38.10 | 59 | 64 | 33.3 | 45 | 57.1 | 12.0 | 1.3 | 9.2 | 45.5 |
| 1 5/8 | 41.27 | 61 | 66 | 33.3 | 48 | 60.3 | 12.0 | 1.3 | 9.2 | 45.5 |
| 1 3/4 | 44.45 | 64 | 69 | 40.5 | 52 | 63.5 | 12.0 | 1.3 | 9.2 | 52.5 |
| 1 7/8 | 47.62 | 66 | 71 | 40.5 | 55 | 66.7 | 12.0 | 1.3 | 9.2 | 52.5 |
| 2 | 50.80 | 69 | 74 | 40.5 | 58 | 69.8 | 13.5 | 1.3 | 10.7 | 54.0 |
| 2 1/8 | 53.97 | 78 | 83 | 41.0 | 62 | 73.1 | 13.5 | 1.3 | 10.7 | 54.5 |
| 2 1/4 | 57.15 | 80 | 85 | 41.0 | 65 | 76.2 | 13.5 | 1.3 | 10.7 | 54.5 |
| 2 3/8 | 60.32 | 83 | 88 | 41.0 | 68 | 79.4 | 13.5 | 1.3 | 10.7 | 54.5 |
| 2 1/2 | 63.50 | 85 | 90 | 41.0 | 71 | 82.5 | 13.5 | 1.3 | 10.7 | 54.5 |
| 2 5/8 | 66.68 | 90 | 95 | 49.0 | 78 | 92.1 | 15.9 | 1.3 | 13.2 | 64.9 |
| 2 3/4 | 69.85 | 95 | 100 | 49.0 | 81 | 95.2 | 15.9 | 1.3 | 13.2 | 64.9 |
| 2 7/8 | 73.03 | 99 | 104 | 49.0 | 84 | 98.4 | 15.9 | 1.3 | 13.2 | 64.9 |
| 3 | 76.20 | 99 | 104 | 49.0 | 88 | 101.6 | 15.9 | 1.3 | 13.2 | 64.9 |
| 3 1/8 | 79.38 | 104 | 109 | 56.0 | 94 | 111.1 | 20.0 | 1.3 | 17.2 | 76.0 |
| 3 1/4 | 82.55 | 109 | 114 | 56.0 | 97 | 114.3 | 20.0 | 1.3 | 17.2 | 76.0 |
| 3 3/8 | 85.73 | 109 | 114 | 56.0 | 100 | 117.5 | 20.0 | 1.3 | 17.2 | 76.0 |
| 3 1/2 | 88.90 | 114 | 119 | 56.0 | 103 | 120.6 | 20.0 | 1.3 | 17.2 | 76.0 |
| 3 5/8 | 92.08 | 119 | 124 | 59.0 | 106 | 123.8 | 20.0 | 1.3 | 17.2 | 79.0 |
| 3 3/4 | 95.25 | 119 | 124 | 59.0 | 109 | 127.0 | 20.0 | 1.3 | 17.2 | 79.0 |
| 3 7/4 | 98.43 | 124 | 129 | 62.0 | 113 | 130.2 | 20.0 | 1.3 | 17.2 | 82.0 |
| 4 | 101.60 | 124 | 129 | 62.0 | 116 | 133.3 | 20.0 | 1.3 | 17.2 | 82.0 |

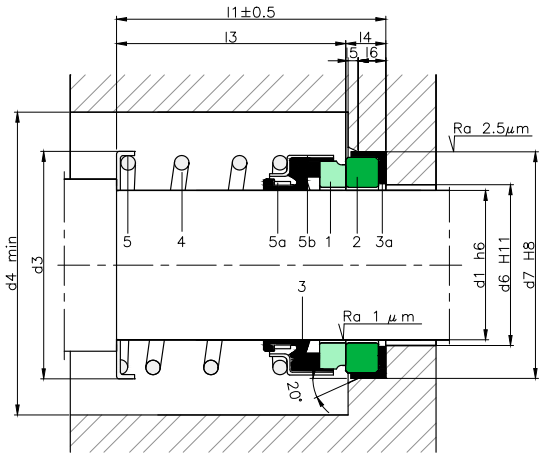
Dimensions subject to changes or modifications.

## DIMENSIONS CHART LRB04 / LRB04A

Dimensions in mm

| Shaft | Rotary part | | | | Stationary part | | | | | | Total length |
|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | $d_3$ | $d_4$ | $l_3$ | $l_{3A}$ | $d_6$ | $d_7$ | $l_4$ | $l_{4A}$ | $l_5$ | $l_6$ | $l_1$ |
| 10 | 20 | 25 | 23.9 | _ _ | 17 | 21 | 8.6 | _ _ | 1.5 | 4 | 32.5 |
| 12 | 22 | 27 | 23.9 | 26 | 19 | 23 | 8.6 | 6,5 | 1.5 | 4 | 32.5 |
| 14 | 24 | 29 | 26.4 | _ _ | 21 | 25 | 8.6 | _ _ | 1.5 | 4 | 35.0 |
| 16 | 26 | 31.5 | 26.4 | 24.7 | 23 | 27 | 8.6 | 10.3 | 1.5 | 4 | 35.0 |
| 18 | 32 | 37 | 27.5 | _ _ | 27 | 33 | 10.0 | _ _ | 2.0 | 4 | 37.5 |
| 20 | 34 | 39.5 | 27.5 | _ _ | 29 | 35 | 10.0 | _ _ | 2.0 | 5 | 37.5 |
| 22 | 36 | 41 | 27.5 | 26.5 | 31 | 37 | 10.0 | 11 | 2.0 | 5 | 37.5 |
| 24 | 38 | 45 | 30.0 | 29.0 | 33 | 39 | 10.0 | 11 | 2.0 | 5 | 40.0 |
| 25 | 39 | 45 | 30.0 | 29.0 | 34 | 40 | 10.0 | 11 | 2.0 | 5 | 40.0 |
| 28 | 42 | 49.5 | 32.5 | 31.5 | 37 | 43 | 10.0 | 11 | 2.0 | 5 | 42.5 |
| 30 | 44 | 52 | 32.5 | 31.5 | 39 | 45 | 10.0 | 11 | 2.0 | 5 | 42.5 |
| 32 | 46 | 52 | 32.5 | 31.5 | 42 | 48 | 10.0 | 11 | 2.0 | 5 | 42.5 |
| 33 | 47 | 55.5 | 32.5 | 31.5 | 42 | 48 | 10.0 | 11 | 2.0 | 5 | 42.5 |
| 35 | 49 | 56.5 | 32.5 | 31.5 | 44 | 50 | 10.0 | 11 | 2.0 | 5 | 42.5 |
| 38 | 54 | 60 | 34.0 | _ _ | 49 | 56 | 11.0 | _ _ | 2.0 | 6 | 45.0 |
| 40 | 56 | 63 | 34.0 | 32.3 | 51 | 58 | 11.0 | 12.7 | 2.0 | 6 | 45.0 |
| 43 | 59 | 66.5 | 34.0 | 32.3 | 54 | 61 | 11.0 | 12.7 | 2.0 | 6 | 45.0 |
| 45 | 61 | 66.5 | 34.0 | 32.3 | 56 | 63 | 11.0 | 12.7 | 2.0 | 6 | 45.0 |
| 48 | 64 | 70.5 | 34.0 | 32.3 | 59 | 66 | 11.0 | 12.7 | 2.0 | 6 | 45.0 |
| 50 | 66 | 75 | 34.5 | 34.8 | 62 | 70 | 13.0 | 12.7 | 2.5 | 6 | 47.5 |
| 53 | 69 | 79 | 34.5 | 33.2 | 65 | 73 | 13.0 | 14.3 | 2.5 | 6 | 47.5 |
| 55 | 71 | 81 | 34.5 | 33.2 | 67 | 75 | 13.0 | 14.3 | 2.5 | 6 | 47.5 |
| 58 | 78 | 84 | 39.5 | 38.2 | 70 | 78 | 13.0 | 14.3 | 2.5 | 6 | 52.5 |
| 60 | 80 | 87 | 39.5 | 38.2 | 72 | 80 | 13.0 | 14.3 | 2.5 | 6 | 52.5 |
| 63 | 83 | 91 | 39.5 | 38.2 | 75 | 83 | 13.0 | 14.3 | 2.5 | 6 | 52.5 |
| 65 | 85 | 92 | 39.5 | 36.5 | 77 | 85 | 13.0 | 16 | 2.5 | 6 | 52.5 |
| 68 | 88 | 96.5 | 37.2 | 36.5 | 81 | 90 | 15.3 | 16 | 2.5 | 7 | 52.5 |
| 70 | 90 | 98 | 44.7 | 44.0 | 83 | 92 | 15.3 | 16 | 2.5 | 7 | 60.0 |
| 75 | 99 | 104 | 44.7 | _ _ | 88 | 97 | 15.3 | _ _ | 2.5 | 7 | 60.0 |
| 80 | 104 | 109 | 44.3 | _ _ | 95 | 105 | 15.7 | _ _ | 3.0 | 7 | 60.0 |
| 85 | 109 | 114 | 44.3 | _ _ | 100 | 110 | 15.7 | _ _ | 3.0 | 7 | 60.0 |
| 90 | 114 | 119 | 49.3 | _ _ | 105 | 115 | 15.7 | _ _ | 3.0 | 7 | 65.0 |
| 95 | 119 | 124 | 49.3 | _ _ | 110 | 120 | 15.7 | _ _ | 3.0 | 7 | 65.0 |
| 100 | 124 | 129 | 49.3 | _ _ | 115 | 125 | 15.7 | _ _ | 3.0 | 7 | 65.0 |

Dimensions subject to changes or modifications.

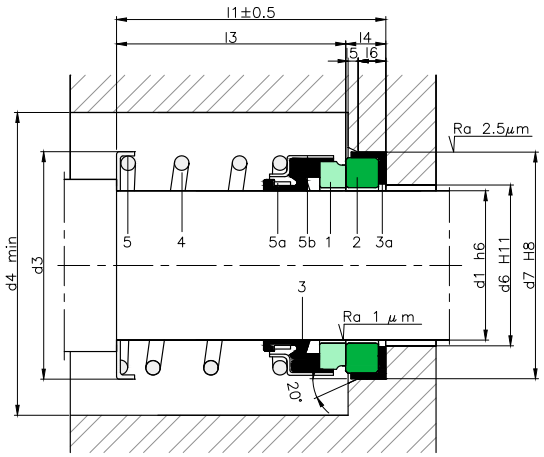



## DIMENSIONS CHART LRB06

Dimensions in mm

| Shaft | Rotary part | | | Stationary part | | | | | Total length |
|---|---|---|---|---|---|---|---|---|---|
| mm | $d_3$ | $d_4$ | $l_3$ | $d_6$ | $d_7$ | $l_4$ | $l_5$ | $l_6$ | $l_1$ |
| 10 | 20 | 25 | 25.4 | 16.0 | 24.6 | 8.7 | 1.5 | 7.5 | 34.1 |
| 12 | 22 | 27 | 25.4 | 19.0 | 27.8 | 8.7 | 1.5 | 7.5 | 34.1 |
| 13 | 24 | 29 | 25.4 | 19.0 | 27.8 | 8.7 | 1.5 | 7.5 | 34.1 |
| 14 | 24 | 29 | 25.4 | 22.2 | 30.9 | 10.3 | 1.5 | 7.5 | 34.1 |
| 15 | 26 | 31 | 25.4 | 22.2 | 30.9 | 10.3 | 1.5 | 7.5 | 35.7 |
| 16 | 26 | 31 | 25.4 | 22.2 | 30.9 | 10.3 | 1.5 | 7.5 | 34.1 |
| 18 | 32 | 37 | 25.4 | 25.4 | 34.1 | 10.3 | 1.5 | 7.5 | 34.1 |
| 19 | 34 | 39 | 25.4 | 25.4 | 34.1 | 10.3 | 1.5 | 7.5 | 34.1 |
| 20 | 34 | 39 | 25.4 | 27.0 | 35.7 | 10.3 | 1.5 | 7.5 | 35.7 |
| 22 | 36 | 41 | 25.4 | 28.6 | 37.3 | 10.3 | 1.5 | 7.5 | 34.1 |
| 24 | 38 | 43 | 25.4 | 31.7 | 40.5 | 10.3 | 1.5 | 7.5 | 34.1 |
| 25 | 39 | 44 | 25.4 | 31.7 | 40.5 | 10.3 | 1.5 | 7.5 | 35.7 |
| 28 | 42 | 47 | 33.3 | 35.7 | 47.6 | 12.0 | 2.0 | 8.5 | 45.3 |
| 30 | 44 | 49 | 33.3 | 38.9 | 50.8 | 12.0 | 2.0 | 8.5 | 45.3 |
| 32 | 46 | 51 | 33.3 | 38.9 | 50.8 | 12.0 | 2.0 | 8.5 | 45.3 |
| 33 | 47 | 52 | 33.3 | 42.1 | 54.0 | 12.0 | 2.0 | 8.5 | 45.3 |
| 34 | 49 | 54 | 33.3 | 42.1 | 54.0 | 12.0 | 2.0 | 8.5 | 45.3 |
| 35 | 49 | 54 | 33.3 | 42.1 | 54.0 | 12.0 | 2.0 | 8.5 | 45.3 |
| 38 | 54 | 59 | 33.3 | 45.2 | 57.2 | 12.0 | 2.0 | 8.5 | 45.3 |
| 40 | 56 | 61 | 33.3 | 48.8 | 60.3 | 12.0 | 2.0 | 8.5 | 45.3 |
| 42 | 59 | 64 | 40.5 | 51.6 | 63.5 | 12.0 | 2.0 | 8.5 | 52.5 |
| 43 | 59 | 64 | 40.5 | 51.6 | 63.5 | 12.0 | 2.0 | 8.5 | 52.5 |
| 44 | 61 | 66 | 40.5 | 51.6 | 63.5 | 12.0 | 2.0 | 8.5 | 52.5 |
| 45 | 61 | 66 | 40.5 | 51.6 | 63.5 | 12.0 | 2.0 | 8.5 | 52.5 |
| 48 | 64 | 69 | 40.5 | 54.8 | 66.7 | 12.0 | 2.0 | 8.5 | 52.5 |
| 50 | 66 | 71 | 40.5 | 58.0 | 69.8 | 12.0 | 2.0 | 8.5 | 52.5 |
| 53 | 69 | 74 | 41.0 | 62.0 | 73.0 | 13.5 | 2.0 | 10.0 | 54.5 |
| 55 | 71 | 76 | 41.0 | 65.0 | 76.2 | 13.5 | 2.0 | 10.0 | 54.5 |
| 58 | 78 | 83 | 41.0 | 68.0 | 79.4 | 13.5 | 2.0 | 10.0 | 54.5 |
| 60 | 80 | 85 | 41.0 | 68.0 | 79.4 | 13.5 | 2.0 | 10.0 | 54.5 |
| 63 | 83 | 88 | 41.0 | 71.2 | 82.5 | 13.5 | 2.0 | 10.0 | 54.5 |
| 65 | 85 | 90 | 49.0 | 78.3 | 92.1 | 15.9 | 2.0 | 12.0 | 64.9 |
| 70 | 90 | 95 | 49.0 | 81.1 | 95.5 | 15.9 | 2.0 | 12.0 | 64.9 |
| 75 | 99 | 104 | 49.0 | 88.1 | 101.6 | 15.9 | 2.0 | 12.0 | 64.9 |
| 80 | 104 | 109 | 56.0 | 97.0 | 114.3 | 20.0 | 2.0 | 16.5 | 76.0 |
| 85 | 109 | 114 | 56.0 | 100.0 | 117.5 | 20.0 | 2.0 | 16.5 | 76.0 |
| 90 | 114 | 119 | 59.0 | 107.0 | 123.8 | 20.0 | 2.0 | 16.5 | 79.0 |
| 95 | 119 | 124 | 59.0 | 110.0 | 127.0 | 20.0 | 2.0 | 16.5 | 79.0 |
| 100 | 124 | 129 | 62.0 | 116.0 | 133.3 | 20.0 | 2.0 | 16.5 | 82.0 |

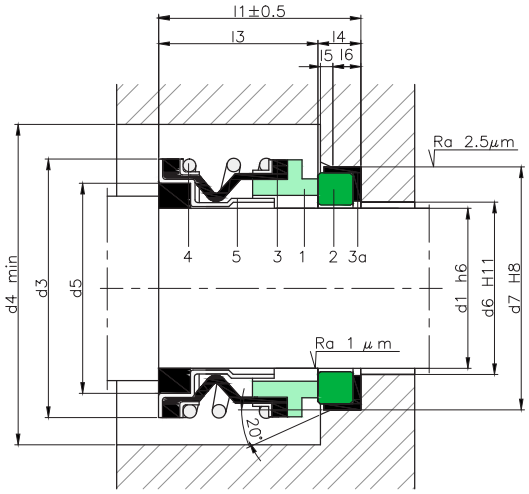
Dimensions subject to changes or modifications.



# LRB02

## COMPONENTS:

1 Rotating contact surface
2 Stationary contact surface
3 Bellows
3a Elastomeric cup
4 Spring
5 Metal frame




## SECTORS:

## CHARACTERISTICS:

- Unbalanced.
- Not dependent on the rotation direction.
- Single cylindrical spring.

## OPERATING LIMITS:

$d_1$= 9.52 ÷ 25.40 mm  p= 7 kg/cm²

v= 10 m/s  t= -15÷ +200ºC (*)

(*) The temperature resistance depends on the material of the secondary seals used.

The operating limits are defined by the PV factor which is determined for the sealing system characteristics and those of the application.

## DESCRIPTION:

Seal with a compact design for applications with low demands that require small diameters and often used for water pumps.

## DIMENSIONS CHART

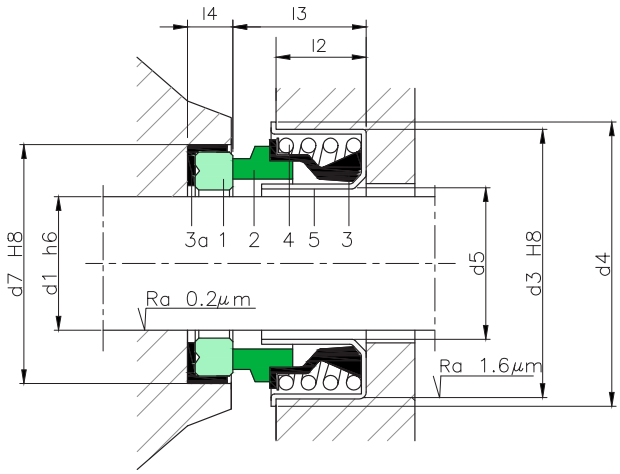
Dimensions in inches

| Shaft | | Rotary part | | | | Stationary part | | | | | Total length |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (“) | mm | $d_3$ | $d_4$ | $d_5$ | $l_3$ | $d_6$ | $d_7$ | $l_4$ | $l_5$ | $l_6$ | $l_1$ |
| 3/8 | 9.52 | 23.80 | 28.80 | 17.46 | 16.00 | 14.3 | 22.22 | 6.2 | 1.3 | 5.1 | 22.2 |
| 1/2 | 12.70 | 26.97 | 31.97 | 20.63 | 18.30 | 17.5 | 25.40 | 8.0 | 1.3 | 5.1 | 26.3 |
| 5/8 | 15.88 | 30.94 | 35.94 | 23.81 | 18.70 | 20.6 | 31.75 | 10.3 | 1.3 | 7.5 | 29.0 |
| 3/4 | 19.05 | 34.11 | 39.11 | 26.98 | 18.70 | 23.8 | 34.93 | 10.3 | 1.3 | 7.5 | 29.0 |
| 1 | 25.40 | 42.85 | 47.85 | 33.33 | 20.60 | 30.2 | 41.28 | 11.0 | 1.3 | 7.5 | 31.6 |

Dimensions subject to changes or modifications.

# LRB03 - LRB03A - LRB03B

TYPE LRB03




## COMPONENTS:

1 Rotating contact surface
2 Stationary contact surface
3 Bellows
3a Elastomeric cup
4 Spring
5 Metal frame

## SECTORS:

## CHARACTERISTICS:

- Unbalanced.
- Not dependent on the rotation direction.
- Single cylindrical spring.

## OPERATING LIMITS:

$d_1$= 10 ÷ 30 mm  p= 6 kg/cm²

v= 10 m/s  t= -20÷ +100ºC (*)

(*) The temperature resistance depends on the material of the secondary seals used.

The operating limits are defined by the PV factor which is determined for the sealing system characteristics and those of the application.

## DESCRIPTION:

Mechanical seal with a compact design and small dimensions which is ideal for simple hydromassage or drinking water pumps.
The rotating part is attached to the pump impeller, rotates together with it. The stationary part is secured to the housing on its external diameter.

## DIMENSIONS CHART LRB03

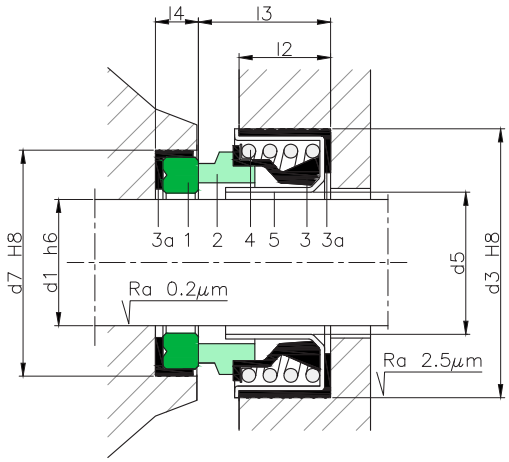
Dimensions in mm

| Shaft | | Rotary part | | Stationary part | | | | |
|---|---|---|---|---|---|---|---|---|
| (") | mm | $d_7$ | $l_4$ | $d_3$ | $d_4$ | $d_5$ | $l_2$ | $l_3$ |
| 1/2 | 13 | 25.0 | 7.5 | 28.5 | 32.0 | 14.5 | 8.0 | 13.2 |
| 1/2 B | 13 | 25.0 | 5.0 | 28.5 | 32.0 | 14.5 | 8.0 | 13.2 |
| 1/2 C | 13 | 25.0 | 5.0 | 30.0 | 34.5 | 14.0 | 7.5 | 13.2 |
| 5/8 | 16 | 31.7 | 10.0 | 36.5 | 41.0 | 17.5 | 8.5 | 16.3 |
| 5/8 B | 16 | 31.0 | 5.0 | 36.5 | 41.0 | 17.5 | 8.5 | 16.3 |
| 3/4 | 19 | 35.0 | 10.0 | 40.0 | 43.0 | 21.5 | 9.5 | 16.0 |
| 3/4 B | 19 | 35.0 | 5.0 | 40.0 | 43.0 | 21.5 | 9.5 | 16.0 |
| 1 | 25 | 41.0 | 11.0 | 47.0 | 51.0 | 26.5 | 11.0 | 18.0 |
| 1 1/8 | 29 | 48.0 | 8.5 | 52.0 | 57.0 | 31.0 | 11.0 | 18.5 |

Dimensions subject to changes or modifications.

# LRB03A

TYPE LRB03A




## DIMENSIONS CHART LRB03A

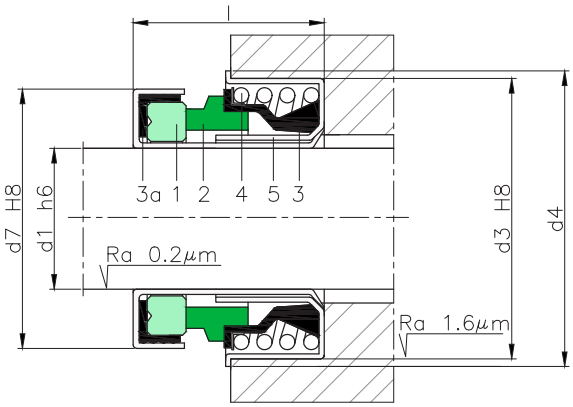
Dimensions in mm

| Shaft | Rotary part | | Stationary part | | | |
|---|---|---|---|---|---|---|
| mm | $d_7$ | $l_4$ | $d_3$ | $d_5$ | $l_2$ | $l_3$ |
| 10 | 23.0 | 4 | 27 | 11.0 | 7.5 | 14.0 |
| 12 | 25.0 | 5 | 32 | 14.2 | 8.5 | 14.2 |
| 16 | 31.0 | 5 | 41 | 18.2 | 10.0 | 16.8 |
| 20 | 35.0 | 5 | 45 | 21.4 | 10.0 | 17.5 |
| 25 | 41.3 | 11 | 52 | 26.4 | 11.5 | 20.0 |
| 30 | 48.0 | 8 | 58 | 31.0 | 12.5 | 21.0 |

Dimensions subject to changes or modifications.

# LRB03B

TYPE LRB03B




## DIMENSIONS CHART LRB03B

Dimensions in mm

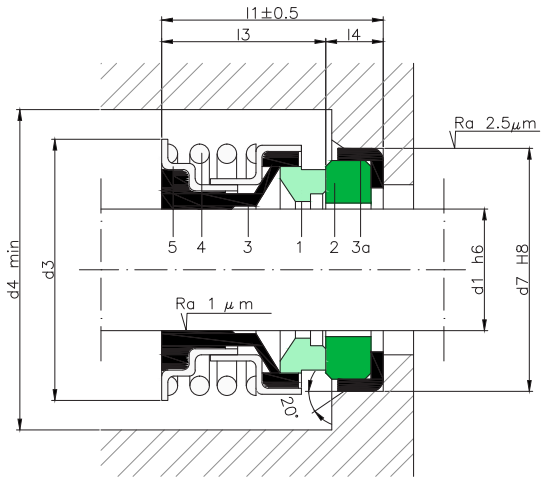
| Shaft | | | | | |
|---|---|---|---|---|---|
| mm | | $d_3$ | $d_4$ | $d_7$ | l |
| 12 | 12.0 | 30.00 | 35.0 | 25.0 | 17.7 |
| 12 B | 12.0 | 28.55 | 32.0 | 25.0 | 17.7 |
| 12 C | 12.0 | 33.40 | 38.0 | 25.0 | 17.5 |
| 13 | 13.0 | 30.00 | 35.0 | 25.0 | 17.7 |
| 15 | 15.0 | 36.50 | 41.5 | 30.0 | 20.0 |
| 16 | 16.0 | 36.50 | 41.5 | 30.0 | 20.0 |
| 16 B | 16.0 | 38.10 | 41.3 | 28.5 | 20.0 |
| 20 | 20.0 | 40.00 | 43.7 | 37.0 | 22.0 |
| 20 B | 20.0 | 38.00 | 43.7 | 37.0 | 22.0 |

Dimensions subject to changes or modifications.

# LRB05

## COMPONENTS:

1 Rotating contact surface
2 Stationary contact surface
3 Bellows
3a Elastomeric cup
4 Spring
5 Ring
5a Drive ring
5b Metal frame




## SECTORS:

## CHARACTERISTICS:

- Unbalanced.
- Not dependent on the rotation direction.
- Single cylindrical spring.

## OPERATING LIMITS:

$d_1$=12 ÷ 25.4 mm  p= 7 kg/cm²

v= 10 m/s  t= -20÷ +100ºC (*)

(*) The temperature resistance depends on the material of the secondary seals used.

The operating limits are defined by the PV factor which is determined for the sealing system characteristics and those of the application.

## DESCRIPCIÓN:

Mechanical seal with a simple design for general use.

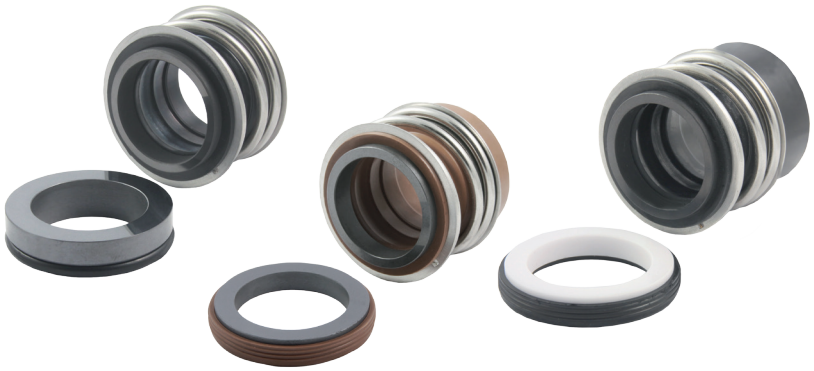
## DIMENSIONS CHART

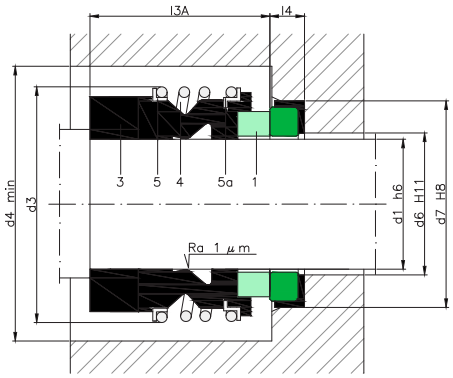
Dimensions in mm

| Shaft | | Rotary part | | | Stationary part | | Total length |
|---|---|---|---|---|---|---|---|
| (") | mm | $d_3$ | $d_4$ | $l_3$ | $d_7$ | $l_4$ | $l_1$ |
| | 12.00 | 23.30 | 28.30 | 16.30 | 24 | 4.5 | 20.8 |
| | 14.00 | 30.40 | 35.40 | 18.60 | 30 | 8.5 | 27.1 |
| 5/8 | 15.88 | 30.40 | 35.40 | 18.60 | 30 | 8.5 | 27.1 |
| 3/4 | 19.05 | 33.00 | 38.0 | 17.70 | 35 | 10.3 | 28.0 |
| 7/8 | 22.20 | 36.30 | 41.30 | 20.60 | 38 | 10.3 | 30.9 |
| 1 | 25.40 | 39.40 | 44.40 | 20.70 | 41.3 | 11.0 | 31.7 |

Dimensions subject to changes or modifications.

# LRB17 -LRB17A - LRB17E - LRB17KU -LRB17NU






TYPE LRB17A

## COMPONENTS:

1 Rotating contact surface
3 Bellows
4 Spring
5 Ring
5a Ring

## SECTORS:

## CHARACTERISTICS:

- Unbalanced.
- Not dependent on the rotation direction.
- Single cylindrical spring.

## OPERATING LIMITS:

$d_1$= 10 ÷ 100 mm  p= 12 kg/cm²

v= 10 m/s  t= -15÷ +200ºC (*)

(*) The temperature resistance depends on the material of the secondary seals used.

The operating limits are defined by the PV factor which is determined for the sealing system characteristics and those of the application.

## DESCRIPTION:

A versatile, robust single seal that is widely used in many different industrial and household applications.
The different type LRB17 varieties can be combined with a wide range of stationary parts, thereby increasing its versatility due to the combination of different materials and working lengths.
Types:
LRB17KU–L6 / LRB17KU-L60 : standardised dimensions in accordance with standard EN 12756 (KU).
LRB17NU –L6 / LRB17NU-L60 : standardised dimensions in accordance with standard EN 12756 (NU).

## DIMENSIONS CHART LRB17A

Dimensions in mm

| Shaft | Rotary part | | | | Stationary part | | |
|---|---|---|---|---|---|---|---|
| mm | $d_1$ | $d_3$ | $d_4$ | $l_{3A}$ | $d_6$ | $d_7$ | $l_4$ |
| 15 | 15 | 28 | 33 | 17 | 29 | 35 | 4 |
| 20 | 20 | 37 | 42 | 21.5 | 29 | 35 | 7.5 |
| 25 | 25 | 41 | 46 | 23 | 34 | 40 | 7.5 |
| 30 | 30 | 48 | 53 | 24 | 45 | 51 | 9.5 |
| 45 | 45 | 65 | 70 | 30 | 58 | 65 | 12.5 |
| 55 | 55 | 80 | 85 | 43 | 67 | 76.5 | 14 |

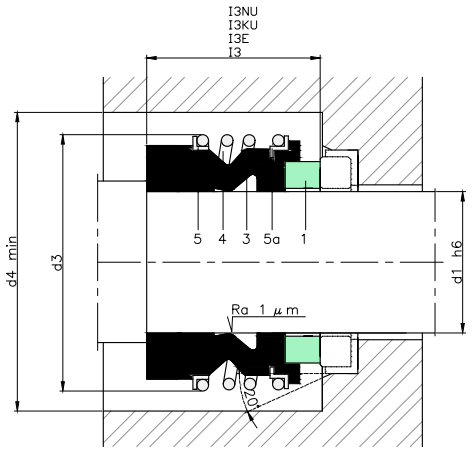
Dimensions subject to changes or modifications.

# DIMENSIONS CHART LRB17 - LRB17E - LRB17KU- LRB17NU

Dimensions in mm

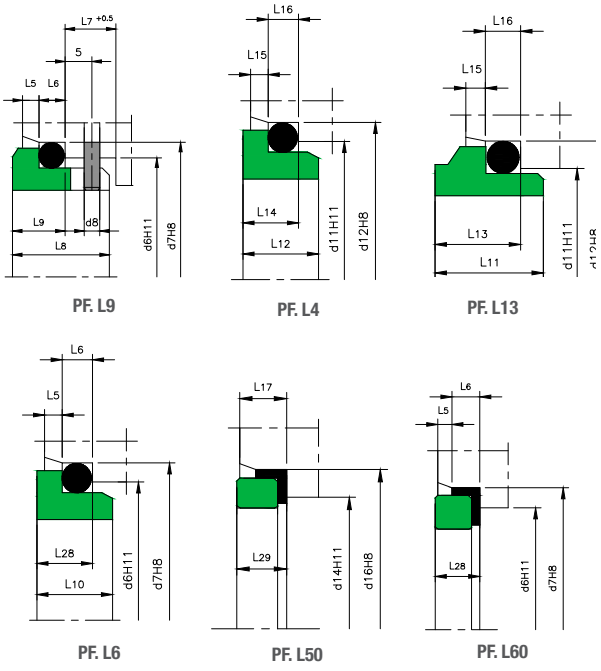
| Shaft | Rotary part | | | | | | Stationary part | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | $d_3$ | $d_4$ | $l_3$ | $l_{3E}$ | $l_{3KU}$ | $l_{3NU}$ | $d_6$ | $d_7$ | $d_8$ | $d_{11}$ | $d_{12}$ | $d_{14}$ | $d_{16}$ | $l_5$ | $l_6$ | $l_7$ | $l_8$ | $l_9$ | $l_{10}$ | $l_{11}$ | $l_{12}$ | $l_{13}$ | $l_{14}$ | $l_{15}$ | $l_{16}$ | $l_{17}$ | $l_{28}$ | $l_{29}$ |
| 10 | 22.5 | 25.0 | 14.5 | 25 | 25.9 | 33.4 | 17 | 21 | 3 | 15.5 | 19.2 | 11.0 | 24.60 | 1.5 | 4 | 8.5 | 17.5 | 10.0 | 7.5 | -- | 7.5 | -- | 6.6 | 1.2 | 3.8 | 7.5 | 6.6 | 9.0 |
| 12 | 25.0 | 27.5 | 15.0 | 25 | 25.9 | 33.4 | 19 | 23 | 3 | 17.5 | 21.6 | 13.5 | 27.80 | 1.5 | 4 | 8.5 | 17.5 | 10.0 | 7.5 | -- | 6.5 | -- | 5.6 | 1.2 | 3.8 | 7.5 | 6.6 | 9.0 |
| 14 | 28.5 | 32.0 | 17.0 | 25 | 28.4 | 33.4 | 21 | 25 | 3 | 20.5 | 24.6 | 17.0 | 30.95 | 1.5 | 4 | 8.5 | 17.5 | 10.0 | 7.5 | -- | 6.5 | -- | 5.6 | 1.2 | 3.8 | 9.0 | 6.6 | 10.5 |
| 15 | 28.5 | 32.0 | 17.0 | 25 | -- | -- | -- | -- | -- | 20.5 | 24.6 | 17.0 | 30.95 | -- | -- | -- | -- | -- | -- | -- | 7.5 | -- | 6.6 | 1.2 | 3.8 | 9.0 | -- | 10.5 |
| 16 | 28.5 | 32.0 | 17.0 | 25 | 28.4 | 33.4 | 23 | 27 | 3 | 22.0 | 28.0 | 17.0 | 30.95 | 1.5 | 4 | 8.5 | 17.5 | 10.0 | 7.5 | -- | 8.5 | -- | 7.5 | 1.5 | 5.0 | 9.0 | 6.6 | 10.5 |
| 18 | 32.0 | 34.5 | 19.5 | 25 | 30.0 | 37.5 | 27 | 33 | 3 | 24.0 | 30.0 | 20.0 | 34.15 | 2.0 | 5 | 9.0 | 19.5 | 11.5 | 8.5 | 12.5 | 9.0 | 10.0 | 8.0 | 1.5 | 5.0 | 9.0 | 7.5 | 10.5 |
| 20 | 37.0 | 39.5 | 21.5 | 25 | 30.0 | 37.5 | 29 | 35 | 3 | 29.5 | 35.0 | 21.5 | 35.70 | 2.0 | 5 | 9.0 | 19.5 | 11.5 | 8.5 | 12.5 | 8.5 | 9.5 | 7.5 | 1.5 | 5.0 | 9.0 | 7.5 | 10.5 |
| 22 | 37.0 | 39.5 | 21.5 | 25 | 30.0 | 37.5 | 31 | 37 | 3 | 29.5 | 35.0 | 23.0 | 37.30 | 2.0 | 5 | 9.0 | 19.5 | 11.5 | 8.5 | 12.5 | 8.5 | 9.5 | 7.5 | 1.5 | 5.0 | 9.0 | 7.5 | 10.5 |
| 24 | 42.5 | 45.0 | 22.5 | 25 | 32.5 | 42.5 | 33 | 39 | 3 | 32.0 | 38.0 | 26.5 | 40.50 | 2.0 | 5 | 9.0 | 19.5 | 11.5 | 8.5 | 12.5 | 8.5 | 9.5 | 7.5 | 1.5 | 5.0 | 9.0 | 7.5 | 10.5 |
| 25 | 42.5 | 45.0 | 23.0 | 25 | 32.5 | 42.5 | 34 | 40 | 3 | 32.0 | 38.0 | 26.5 | 40.50 | 2.0 | 5 | 9.0 | 19.5 | 11.5 | 8.5 | 12.5 | 8.5 | 9.5 | 7.5 | 1.5 | 5.0 | 9.0 | 7.5 | 10.5 |
| 28 | 49.0 | 51.5 | 26.5 | 33 | 35.0 | 42.5 | 37 | 43 | 3 | 36.0 | 42.0 | 29.5 | 47.65 | 2.0 | 5 | 9.0 | 19.5 | 11.5 | 8.5 | 14.0 | 10.0 | 11.0 | 9.0 | 1.5 | 5.0 | 10.5 | 7.5 | 12.0 |
| 30 | 49.0 | 51.5 | 26.5 | 33 | 35.0 | 42.5 | 39 | 45 | 3 | 39.2 | 45.0 | 32.5 | 50.80 | 2.0 | 5 | 9.0 | 19.5 | 11.5 | 8.5 | 14.0 | 11.5 | 11.0 | 10.5 | 1.5 | 5.0 | 10.5 | 7.5 | 12.0 |
| 32 | 53.5 | 56.0 | 27.5 | 33 | 35.0 | 47.5 | 42 | 48 | 3 | 42.2 | 48.0 | 32.5 | 50.80 | 2.0 | 5 | 9.0 | 19.5 | 11.5 | 8.5 | 14.0 | 11.5 | 11.0 | 10.5 | 1.5 | 5.0 | 10.5 | 7.5 | 12.0 |
| 33 | 53.5 | 56.0 | 27.5 | 33 | 35.0 | 47.5 | 42 | 48 | 3 | 44.2 | 50.0 | 36.5 | 54.00 | 2.0 | 5 | 9.0 | 19.5 | 11.5 | 8.5 | 14.5 | 12.0 | 11.5 | 11.0 | 1.5 | 5.0 | 10.5 | 7.5 | 12.0 |
| 35 | 57.0 | 59.5 | 28.5 | 33 | 35.0 | 47.5 | 44 | 50 | 3 | 46.2 | 52.0 | 36.5 | 54.00 | 2.0 | 5 | 9.0 | 19.5 | 11.5 | 8.5 | 14.5 | 12.0 | 11.5 | 11.0 | 1.5 | 5.0 | 10.5 | 7.5 | 12.0 |
| 38 | 59.0 | 61.5 | 30.0 | 33 | 36.0 | 46.0 | 49 | 56 | 4 | 49.2 | 55.0 | 39.5 | 57.15 | 2.0 | 6 | 9.0 | 22.0 | 14.0 | 10.0 | 14.5 | 11.3 | 11.5 | 10.3 | 1.5 | 5.0 | 10.5 | 9.0 | 12.0 |
| 40 | 62.0 | 64.5 | 30.0 | 33 | 36.0 | 46.0 | 51 | 58 | 4 | 52.2 | 58.0 | 42.5 | 60.35 | 2.0 | 6 | 9.0 | 22.0 | 14.0 | 10.0 | 14.5 | 11.8 | 11.5 | 10.8 | 1.5 | 5.0 | 10.5 | 9.0 | 12.0 |
| 43 | 65.5 | 68.0 | 30.0 | 41 | 36.0 | 51.0 | 54 | 61 | 4 | 53.3 | 62.0 | 46.0 | 63.50 | 2.0 | 6 | 9.0 | 22.0 | 14.0 | 10.0 | 17.0 | 13.2 | 14.3 | 12.0 | 2.0 | 6.0 | 10.5 | 9.0 | 12.0 |
| 45 | 68.0 | 70.5 | 30.0 | 41 | 36.0 | 51.0 | 56 | 63 | 4 | 55.3 | 64.0 | 46.0 | 63.50 | 2.0 | 6 | 9.0 | 22.0 | 14.0 | 10.0 | 17.0 | 12.8 | 14.3 | 11.6 | 2.0 | 6.0 | 10.5 | 9.0 | 12.0 |
| 48 | 70.5 | 73.0 | 30.5 | 41 | 36.0 | 51.0 | 59 | 66 | 4 | 59.7 | 68.4 | 49.0 | 66.70 | 2.0 | 6 | 9.0 | 22.0 | 14.0 | 10.0 | 17.0 | 12.8 | 14.3 | 11.6 | 2.0 | 6.0 | 10.5 | 9.0 | 12.0 |
| 50 | 74.0 | 74.5 | 30.5 | 41 | 38.0 | 50.5 | 62 | 70 | 4 | 60.8 | 69.3 | 52.0 | 69.85 | 2.5 | 6 | 9.0 | 23.0 | 15.0 | 10.5 | 17.0 | 12.8 | 14.3 | 11.6 | 2.0 | 6.0 | 12.0 | 9.5 | 13.5 |
| 53 | 78.5 | 82.5 | 33.0 | 41 | 36.5 | 59.0 | 65 | 73 | 4 | 63.8 | 72.3 | 55.5 | 73.05 | 2.5 | 6 | 9.0 | 23.0 | 15.0 | 12.0 | 17.0 | 13.5 | 14.3 | 12.3 | 2.0 | 6.0 | 12.0 | 11.0 | 13.5 |
| 55 | 81.0 | 85.5 | 35.0 | 41 | 36.5 | 59.0 | 67 | 75 | 4 | 66.5 | 75.4 | 58.5 | 76.20 | 2.5 | 6 | 9.0 | 23.0 | 15.0 | 12.0 | 18.0 | 14.5 | 15.3 | 13.3 | 2.0 | 6.0 | 12.0 | 11.0 | 13.5 |
| 58 | 85.5 | 89.5 | 37.0 | 41 | 41.5 | 59.0 | 70 | 78 | 4 | 69.5 | 78.4 | 61.5 | 79.40 | 2.5 | 6 | 9.0 | 23.0 | 15.0 | 12.0 | 18.0 | 14.5 | 15.3 | 13.3 | 2.0 | 6.0 | 12.0 | 11.0 | 13.5 |
| 60 | 85.5 | 92.5 | 38.0 | 41 | 41.5 | 59.0 | 72 | 80 | 4 | 71.5 | 80.4 | 61.5 | 79.40 | 2.5 | 6 | 9.0 | 23.0 | 15.0 | 12.0 | 18.0 | 14.5 | 15.3 | 13.3 | 2.0 | 6.0 | 12.0 | 11.0 | 13.5 |
| 65 | 93.5 | 97.5 | 40.0 | 49 | 41.5 | 69.0 | 77 | 85 | 4 | 76.5 | 85.4 | 68.0 | 92.10 | 2.5 | 6 | 9.0 | 23.0 | 15.0 | 12.0 | 18.0 | 14.2 | 15.3 | 13.0 | 2.0 | 6.0 | 14.5 | 11.0 | 16.0 |
| 68 | 96.5 | 100.5 | 40.0 | 49 | 41.2 | 68.7 | 81 | 90 | 4 | 82.7 | 91.5 | 71.0 | 95.25 | 2.5 | 7 | 9.0 | 26.2 | 18.0 | 12.5 | 19.0 | 14.9 | 16.0 | 13.7 | 2.0 | 6.0 | 14.5 | 11.3 | 16.0 |
| 70 | 99.5 | 103.5 | 40.0 | 49 | 48.7 | 68.7 | 83 | 92 | 4 | 83.0 | 92.0 | 71.0 | 95.25 | 2.5 | 7 | 9.0 | 26.2 | 18.0 | 12.5 | 18.0 | 14.2 | 15.3 | 13.0 | 2.0 | 6.0 | 14.5 | 11.3 | 16.0 |
| 75 | 107.0 | 111.0 | 40.0 | 52 | 48.7 | 68.7 | 88 | 97 | 4 | 90.2 | 99.0 | 77.5 | 101.60 | 2.5 | 7 | 9.0 | 26.2 | 18.0 | 12.5 | 18.0 | 15.2 | 15.3 | 14.0 | 2.0 | 6.0 | 14.5 | 11.3 | 16.0 |
| 80 | 112.0 | 116.0 | 40.0 | 56 | 48.0 | 78.0 | 95 | 105 | 4 | 95.2 | 104.0 | 84.0 | 114.30 | 3.0 | 7 | 9.0 | 26.2 | 18.2 | 13.0 | 19.0 | 16.2 | 16.3 | 15.0 | 2.0 | 6.0 | 18.5 | 12.0 | 20.0 |
| 85 | 120.0 | 124.0 | 41.0 | 56 | 46.0 | 76.0 | 100 | 110 | 4 | 100.2 | 109.0 | 87.0 | 117.50 | 3.0 | 7 | 9.0 | 26.2 | 18.2 | 15.0 | 19.0 | 16.0 | 16.3 | 14.8 | 2.0 | 6.0 | 18.5 | 14.0 | 20.0 |
| 90 | 127.0 | 131.0 | 45.0 | 59 | 51.0 | 76.0 | 105 | 115 | 4 | 105.2 | 114.0 | 93.5 | 123.85 | 3.0 | 7 | 9.0 | 26.2 | 18.2 | 15.0 | 19.0 | 16.0 | 16.3 | 14.8 | 2.0 | 6.0 | 18.5 | 14.0 | 20.0 |
| 95 | 132.0 | 136.0 | 46.0 | 59 | 51.0 | 76.0 | 110 | 120 | 4 | 111.6 | 120.3 | 96.5 | 127.00 | 3.0 | 7 | 9.0 | 25.2 | 17.2 | 15.0 | 20.0 | 17.0 | 17.3 | 15.8 | 2.0 | 6.0 | 18.5 | 14.0 | 20.0 |
| 100 | 137.0 | 141.0 | 47.0 | 59 | 51.0 | 76.0 | 115 | 125 | 4 | 114.5 | 123.3 | 103.0 | 133.35 | 3.0 | 7 | 9.0 | 25.2 | 17.2 | 15.0 | 20.0 | 17.0 | 17.3 | 15.8 | 2.0 | 6.0 | 18.5 | 14.0 | 20.0 |

Dimensions subject to changes or modifications.



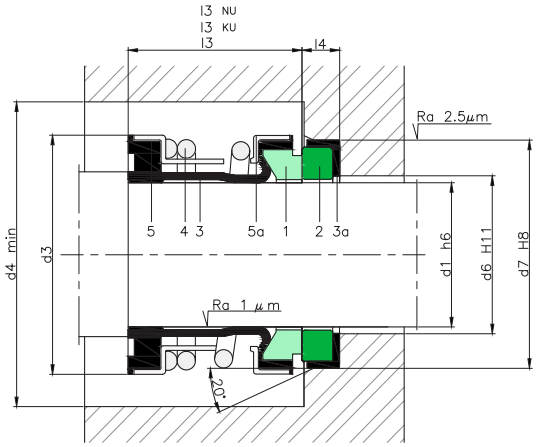

TYPE LRB17 - TYPE LRB17E - TYPE LRB17KU - TYPE LRB17NU

## The usual stationary part types:




Tolerances $l_1$ $d_1$ 10… 12 mm ± 0.5; 14… 18 mm ± 1.0; 20… 25 mm ± 1.5; 28… 100 mm ± 2.0

# LRB25-R - LRB25KU-R and LRB25NU-R




## COMPONENTS:

1 Rotating contact surface
2 Stationary contact surface
3 Bellows
3a Elastomeric cup
4 Spring
5 Ring
5a Metal frame

## SECTORS:

## CHARACTERISTICS:

- Balanced.
- Not dependent on the rotation direction.
- Single cylindrical spring.

## OPERATING LIMITS:

$d_1$= 10 ÷ 100 mm  p= 20 kg/cm²

v= 15 m/s  t= -15÷ +200ºC (*)

(*) The temperature resistance depends on the material of the secondary seals used.

The operating limits are defined by the PV factor which is determined for the sealing system characteristics and those of the application.

## DESCRIPTION:

An extremely versatile general-use mechanical seal. It has metal tabs that reduce fatigue and tension in the rubber bellow when in the working position.
A balanced seal without the need for a stepped shaft.
The seal can operate in applications with high pressures without suffering premature wear.
Types:
LRB25KU-R and LRB25NU-R: standardised dimensions in accordance with standard EN 12756 (KU and NU respectively).

## DIMENSIONS CHART

### Dimensions in mm

| Shaft | Rotary part | | | | | Stationary part | | |
|---|---|---|---|---|---|---|---|---|
| mm | $d_3$ | $d_4$ | $l_3$ | $l_{3KU}$ | $l_{3NU}$ | $d_6$ | $d_7$ | $l_4$ |
| 10 | 20 | 22 | 15 | 27.5 | 35.0 | 15 | 21 | 5.0 |
| 12 | 22 | 24 | 15 | 26.5 | 34.0 | 17 | 23 | 6.0 |
| 14 | 24 | 26 | 15 | 29.0 | 34.0 | 19 | 25 | 6.0 |
| 15 | 25 | 27 | 15 | 29.0 | 34.0 | 20 | 26 | 6.0 |
| 16 | 26 | 28 | 15 | 29.0 | 34.0 | 23 | 27 | 6.0 |
| 18 | 32 | 34 | 20 | 31.5 | 39.0 | 25 | 33 | 6.0 |
| 20 | 34 | 36 | 20 | 31.5 | 39.0 | 27 | 35 | 6.0 |
| 22 | 36 | 38 | 20 | 31.5 | 39.0 | 29 | 37 | 6.0 |
| 24 | 38 | 40 | 20 | 34.0 | 44.0 | 31 | 39 | 6.0 |
| 25 | 39 | 41 | 20 | 34.0 | 44.0 | 32 | 40 | 6.0 |
| 28 | 42 | 44 | 26 | 36.5 | 44.0 | 35 | 43 | 6.0 |
| 30 | 44 | 46 | 26 | 35.5 | 43.0 | 37 | 45 | 7.0 |
| 32 | 46 | 48 | 26 | 35.5 | 48.0 | 40 | 48 | 7.0 |
| 33 | 47 | 49 | 26 | 35.5 | 48.0 | 40 | 48 | 7.0 |
| 35 | 49 | 51 | 26 | 34.5 | 47.0 | 42 | 50 | 8.0 |
| 38 | 54 | 58 | 30 | 37.0 | 47.0 | 47 | 56 | 8.0 |
| 40 | 56 | 60 | 30 | 37.0 | 47.0 | 49 | 58 | 8.0 |
| 43 | 59 | 63 | 30 | 37.0 | 52.0 | 52 | 61 | 8.0 |
| 45 | 61 | 65 | 30 | 37.0 | 52.0 | 54 | 63 | 8.0 |
| 48 | 64 | 68 | 30 | 35.0 | 50.0 | 57 | 66 | 10.0 |
| 50 | 66 | 70 | 30 | 37.5 | 50.0 | 60 | 70 | 10.0 |
| 53 | 69 | 73 | 30 | 37.5 | 50.0 | 63 | 73 | 10.0 |
| 55 | 71 | 75 | 30 | 37.5 | 50.0 | 65 | 75 | 10.0 |
| 58 | 78 | 83 | 33 | 42.5 | 60.0 | 68 | 78 | 10.0 |
| 60 | 80 | 85 | 33 | 40.5 | 58.0 | 70 | 80 | 12.0 |
| 63 | 83 | 88 | 33 | 40.5 | 58.0 | 73 | 83 | 12.0 |
| 65 | 85 | 90 | 33 | 40.5 | 68.0 | 75 | 85 | 12.0 |
| 68 | 88 | 93 | 33 | 40.5 | 68.0 | 79 | 90 | 12.0 |
| 70 | 90 | 95 | 33 | 48.0 | 68.0 | 81 | 92 | 12.0 |
| 75 | 99 | 104 | 40 | 48.0 | 68.0 | 86 | 97 | 12.0 |
| 80 | 104 | 109 | 40 | 47.5 | 77.5 | 92 | 105 | 12.5 |
| 85 | 109 | 114 | 40 | 47.5 | 77.5 | 97 | 110 | 12.5 |
| 90 | 114 | 119 | 40 | 52.5 | 77.5 | 102 | 115 | 12.5 |
| 95 | 119 | 124 | 40 | 52.5 | 77.5 | 117 | 120 | 12.5 |
| 100 | 124 | 129 | 40 | 52.5 | 77.5 | 122 | 125 | 12.5 |

Dimensions subject to changes or modifications.

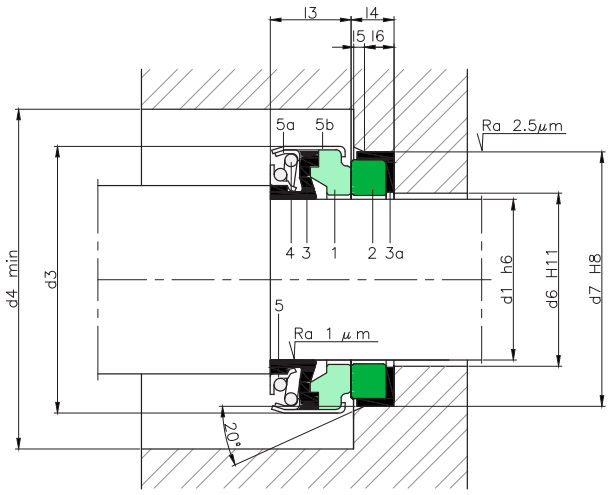
### Dimensions in inches

| Shaft | | Rotary part | | | Stationary part | |
|---|---|---|---|---|---|---|
| (") | mm | $d_3$ | $d_4$ | $l_3$ | $d_7$ | $l_4$ |
| 0,375 | 9,53 | 20 | 22 | 15 | 22,23 | 7,9 |
| 0,500 | 12,70 | 24 | 26 | 15 | 25,40 | 7,9 |
| 0,625 | 15,88 | 26 | 28 | 15 | 31,75 | 10,3 |
| 0,750 | 19,05 | 32 | 34 | 20 | 34,93 | 10,3 |
| 0,875 | 22,23 | 36 | 38 | 20 | 38,10 | 10,3 |
| 1,000 | 25,40 | 39 | 41 | 20 | 41,28 | 11,1 |
| 1,125 | 28,58 | 42 | 44 | 26 | 44,45 | 11,1 |
| 1,250 | 31,75 | 46 | 48 | 26 | 47,63 | 11,1 |
| 1,375 | 34,93 | 49 | 51 | 26 | 50,80 | 11,1 |
| 1,500 | 38,10 | 54 | 58 | 30 | 53,98 | 11,1 |
| 1,625 | 41,28 | 56 | 60 | 30 | 60,33 | 12,7 |
| 1,750 | 44,45 | 61 | 65 | 30 | 63,50 | 12,7 |
| 1,875 | 47,63 | 64 | 68 | 30 | 66,68 | 12,7 |
| 2,000 | 50,80 | 66 | 70 | 30 | 69,85 | 12,7 |
| 2,125 | 53,98 | 69 | 73 | 30 | 76,20 | 14,3 |
| 2,250 | 57,15 | 78 | 83 | 33 | 79,38 | 14,3 |
| 2,375 | 60,33 | 80 | 85 | 33 | 82,55 | 14,3 |
| 2,500 | 63,50 | 83 | 88 | 33 | 85,73 | 14,3 |
| 2,625 | 66,68 | 88 | 93 | 33 | 85,73 | 15,9 |
| 2,750 | 69,85 | 90 | 95 | 33 | 88,90 | 15,9 |
| 2,875 | 73,03 | 96 | 101 | 33 | 95,25 | 15,9 |
| 3,000 | 76,20 | 99 | 104 | 40 | 98,43 | 15,9 |
| 3,125 | 79,38 | 103 | 108 | 40 | 101,60 | 19,8 |
| 3,250 | 82,55 | 104 | 109 | 40 | 104,78 | 19,8 |
| 3,375 | 85,73 | 108 | 114 | 40 | 107,95 | 19,8 |
| 3,500 | 88,90 | 112 | 117 | 40 | 111,13 | 19,8 |
| 3,625 | 92,08 | 114 | 119 | 40 | 114,30 | 19,8 |
| 3,750 | 95,25 | 118 | 124 | 40 | 117,48 | 19,8 |
| 3,875 | 98,43 | 122 | 127 | 40 | 120,65 | 19,8 |
| 4,000 | 101,60 | 124 | 129 | 40 | 123,83 | 19,8 |

# AR / LRB31

## COMPONENTS:

1 Rotating contact surface
2 Stationary contact surface
3 Bellows.
3a Elastomeric cup
4 Spring
5 Ring
5a Blocking ring
5b Metal frame




## SECTORS:

## CHARACTERISTICS:

- Unbalanced.
- Not dependent on the rotation direction.
- Single cylindrical spring.

## OPERATING LIMITS:

$d_1$= 6 ÷ 70 mm  p= 6 kg/cm²

v= 10 m/s  t= -20÷ +140ºC (*)

(*) The temperature resistance depends on the material of the secondary seals used.

The operating limits are defined by the PV factor which is determined for the sealing system characteristics and those of the application.

## DESCRIPTION:

Economic mechanical seal with small dimensions, used in large household pump productions for re-circulating water or for working conditions with low demands.

## DIMENSIONS CHART

Dimensions in mm

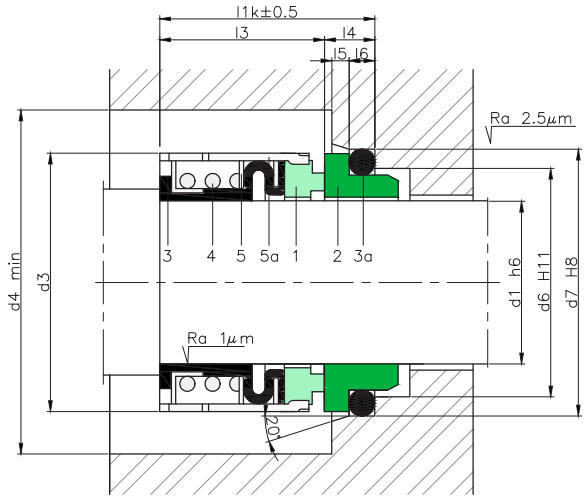
| Shaft | Rotary part | | | | Stationary part | | | | |
|---|---|---|---|---|---|---|---|---|---|
| mm | $d_3$ | $d_4$ | $l_3$ | | $d_6$ | $d_7$ | $l_4$ | $l_5$ | $l_6$ |
| 6 | 18 | 23 | 8.0 | +0.5 | 8 | 22.0 | 4.0 | 0.5 | 3.5 |
| 6 A | 18 | 23 | 11.0 | +0.5 | 8 | 22.0 | 4.0 | 0.5 | 3.5 |
| 8 | 20 | 23 | 11.0 | +0.5 | 10 | 22.0 | 4.0 | 0.5 | 3.5 |
| 8 A | 20 | 27 | 11.0 | +0.5 | 10 | 26.0 | 5.5 | 1.0 | 5.0 |
| 8 B | 24 | 27 | 11.0 | +0.5 | 10 | 26.0 | 8.0 | 1.0 | 6.0 |
| 10 | 24 | 27 | 11.0 | +0.5 | 12 | 26.0 | 8.0 | 1.0 | 6.0 |
| 11 | 24 | 27 | 11.0 | +0.5 | 13 | 26.0 | 8.0 | 1.0 | 6.0 |
| 11 A | 24 | 27 | 13.0 | +0.5 | 13 | 26.0 | 8.0 | 1.0 | 6.0 |
| 12 A | 24 | 27 | 11.0 | +0.5 | 14 | 26.0 | 8.0 | 1.0 | 6.0 |
| 12 B | 24 | 27 | 12.8 | +0.7 | 14 | 26.0 | 8.0 | 1.0 | 6.0 |
| 12 C | 24 | 27 | 13.0 | +0.7 | 14 | 26.0 | 5.5 | 1.0 | 6.0 |
| 13 | 24 | 27 | 12.8 | +0.7 | 15 | 26.0 | 8.0 | 1.0 | 6.0 |
| 13 A | 24 | 27 | 13.0 | +0.7 | 15 | 26.0 | 5.5 | 1.0 | 6.0 |
| 14 A | 32 | 35 | 12.8 | +0.7 | 16 | 29.5 | 8.0 | 1.0 | 6.0 |
| 14 B | 28 | 30 | 12.8 | +0.7 | 18 | 28.5 | 7.5 | 1.0 | 5.5 |
| 14 C | 28 | 30 | 13.0 | +0.7 | 18 | 28.5 | 8.0 | 1.0 | 5.5 |
| 15 | 32 | 35 | 12.8 | +0.7 | 17 | 29.5 | 8.0 | 1.0 | 6.0 |
| 15 A | 28 | 35 | 13.0 | +0.7 | 17 | 30.0 | 8.0 | 1.0 | 6.0 |
| 16 A | 32 | 35 | 12.8 | +0.7 | 18 | 29.5 | 8.0 | 1.0 | 6.0 |
| 16 B | 39 | 43 | 12.8 | +0.7 | 18 | 38.0 | 8.0 | 1.0 | 6.0 |
| 17 | 39 | 43 | 12.8 | +0.7 | 19 | 42.0 | 8.0 | 1.0 | 6.0 |
| 18 | 39 | 43 | 12.8 | +0.7 | 20 | 42.0 | 8.0 | 1.0 | 6.0 |
| 19 | 39 | 43 | 12.8 | +0.7 | 21 | 42.0 | 8.0 | 1.0 | 6.0 |
| 20 A | 39 | 43 | 12.8 | +0.7 | 22 | 42.0 | 8.0 | 1.0 | 6.0 |
| 20 B | 42 | 47 | 12.8 | +0.7 | 22 | 45.0 | 10.0 | 1.0 | 8.0 |
| 22 | 42 | 47 | 12.8 | +0.7 | 24 | 45.0 | 10.0 | 1.0 | 8.0 |
| 22 A | 39 | 47 | 13.0 | +0.7 | 24 | 42.0 | 8.0 | 1.0 | 8.0 |
| 23 | 47 | 52 | 13.5 | +1.0 | 25 | 50.0 | 10.0 | 1.0 | 8.0 |
| 24 | 47 | 52 | 13.5 | +1.0 | 26 | 50.0 | 10.0 | 1.0 | 8.0 |
| 25 A | 42 | 52 | 13.5 | +1.0 | 27 | 50.0 | 10.0 | 1.0 | 8.0 |
| 25 B | 47 | 52 | 13.5 | +1.0 | 27 | 50.0 | 10.0 | 1.0 | 8.0 |
| 25 C | 42 | 52 | 13.0 | +1.0 | 27 | 45.0 | 10.0 | 1.0 | 8.0 |
| 26 | 47 | 52 | 13.5 | +1.0 | 29 | 50.0 | 10.0 | 1.0 | 8.0 |
| 27 | 47 | 52 | 13.5 | +1.0 | 30 | 50.0 | 10.0 | 1.0 | 8.0 |
| 28 | 54 | 60 | 15.0 | +1.0 | 31 | 57.0 | 10.0 | 1.0 | 8.0 |
| 30 | 54 | 60 | 15.0 | +1.0 | 33 | 57.0 | 10.0 | 1.0 | 8.0 |
| 32 | 54 | 60 | 15.0 | +1.0 | 35 | 57.0 | 10.0 | 1.0 | 8.0 |
| 35 | 60 | 70 | 16.0 | +1.0 | 38 | 63.0 | 10.0 | 1.0 | 8.0 |
| 38 | 65 | 75 | 18.0 | +1.0 | 41 | 68.0 | 12.0 | 2.0 | 9.0 |
| 40 | 65 | 75 | 18.0 | +1.0 | 43 | 68.0 | 12.0 | 2.0 | 9.0 |
| 45 | 70 | 80 | 20.0 | +1.0 | 48 | 73.0 | 12.0 | 2.0 | 9.0 |
| 50 | 85 | 95 | 23.0 | +1.0 | 53 | 88.0 | 15.0 | 2.0 | 12.0 |
| 55 | 85 | 95 | 23.0 | +1.0 | 95 | 88.0 | 15.0 | 2.0 | 12.0 |
| 60 | 105 | 115 | 30.0 | +1.0 | 63 | 110.0 | 15.0 | 2.0 | 12.0 |
| 65 | 105 | 115 | 30.0 | +1.0 | 68 | 110.0 | 15.0 | 2.0 | 12.0 |
| 70 | 105 | 115 | 32.0 | +1.0 | 73 | 110.0 | 15.0 | 2.0 | 12.0 |

Dimensions subject to changes or modifications.

# LRB50

## COMPONENTS:

1 Rotating contact surface
2 Stationary contact surface
3 Bellows
3a O-rings
4 Spring
5 Ring
5a Metal frame




## SECTORS:

## CHARACTERISTICS:

- Balanced.
- Not dependent on the rotation direction.
- Single cylindrical spring.

## OPERATING LIMITS:

$d_1$= 14 ÷ 100 mm  p= 20 kg/cm²

v= 15 m/s  t= -15÷ +200ºC (*)

(*) The temperature resistance depends on the material of the secondary seals used.

The operating limits are defined by the PV factor which is determined for the sealing system characteristics and those of the application.

## DESCRIPTION:

A balanced seal without the need for a stepped shaft. The casing of the rotating part protects the bellows from abrasion and from the rotation transmission tensions, and the spring from blocking in the event of being contaminated by fibres and particles.
It is recommended for use with highly viscous or sticky fluids containing fibres or particles, or with fluids that produce a chemical attack on the shaft.

## DIMENSIONS CHART

Dimensions in mm

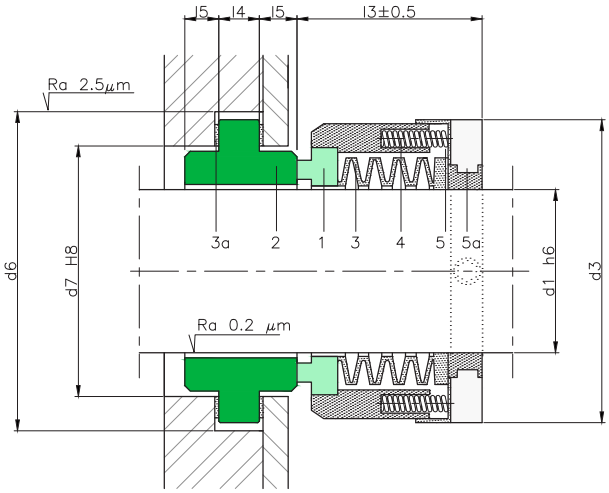
| Shaft | Rotary part | | | Stationary part | | | | | Total length |
|---|---|---|---|---|---|---|---|---|---|
| mm | $d_3$ | $d_4$ | $l_3$ | $d_6$ | $d_7$ | $l_4$ | $l_5$ | $l_6$ | $l_{1K}$ |
| 14 | 24 | 26 | 23.0 | 21 | 25 | 12.0 | 1.5 | 4 | 35.0 |
| 16 | 26 | 28 | 23.0 | 23 | 27 | 12.0 | 1.5 | 4 | 35.0 |
| 18 | 32 | 34 | 24.0 | 27 | 33 | 13.5 | 2.0 | 4 | 37.5 |
| 20 | 34 | 36 | 24.0 | 29 | 35 | 13.5 | 2.0 | 5 | 37.5 |
| 22 | 36 | 38 | 24.0 | 31 | 37 | 13.5 | 2.0 | 5 | 37.5 |
| 24 | 38 | 40 | 26.7 | 33 | 39 | 13.5 | 2.0 | 5 | 40.2 |
| 25 | 39 | 41 | 27.0 | 34 | 40 | 13.0 | 2.0 | 5 | 40.0 |
| 28 | 42 | 44 | 30.0 | 37 | 43 | 12.5 | 2.0 | 5 | 42.5 |
| 30 | 44 | 46 | 30.5 | 39 | 45 | 12.0 | 2.0 | 5 | 42.5 |
| 32 | 46 | 48 | 30.5 | 42 | 48 | 12.0 | 2.0 | 5 | 42.5 |
| 33 | 47 | 49 | 30.5 | 42 | 48 | 12.0 | 2.0 | 5 | 42.5 |
| 35 | 49 | 51 | 30.5 | 44 | 50 | 12.0 | 2.0 | 5 | 42.5 |
| 38 | 54 | 58 | 32.0 | 49 | 56 | 13.0 | 2.0 | 6 | 45.0 |
| 40 | 56 | 60 | 32.0 | 51 | 58 | 13.0 | 2.0 | 6 | 45.0 |
| 43 | 59 | 63 | 32.0 | 54 | 61 | 13.0 | 2.0 | 6 | 45.0 |
| 45 | 61 | 65 | 32.0 | 56 | 63 | 13.0 | 2.0 | 6 | 45.0 |
| 48 | 64 | 68 | 32.0 | 59 | 66 | 13.0 | 2.0 | 6 | 45.0 |
| 50 | 66 | 70 | 34.0 | 62 | 70 | 13.5 | 2.5 | 6 | 47.5 |
| 53 | 69 | 73 | 34.0 | 65 | 73 | 13.5 | 2.5 | 6 | 47.5 |
| 55 | 71 | 75 | 34.0 | 67 | 75 | 13.5 | 2.5 | 6 | 47.5 |
| 58 | 78 | 83 | 39.0 | 70 | 78 | 13.5 | 2.5 | 6 | 52.5 |
| 60 | 80 | 85 | 39.0 | 72 | 80 | 13.5 | 2.5 | 6 | 52.5 |
| 63 | 83 | 88 | 39.0 | 75 | 83 | 13.5 | 2.5 | 6 | 52.5 |
| 65 | 85 | 90 | 39.0 | 77 | 85 | 13.5 | 2.5 | 6 | 52.5 |
| 68 | 88 | 93 | 39.0 | 81 | 90 | 13.5 | 2.5 | 7 | 52.5 |
| 70 | 90 | 95 | 45.5 | 83 | 92 | 14.5 | 2.5 | 7 | 60.0 |
| 75 | 95 | 104 | 45.5 | 88 | 97 | 14.5 | 2.5 | 7 | 60.0 |
| 80 | 104 | 109 | 45.0 | 95 | 105 | 14.5 | 2.5 | 7 | 60.0 |
| 85 | 109 | 114 | 45.0 | 100 | 110 | 14.5 | 2.5 | 7 | 60.0 |
| 90 | 110 | 119 | 50.0 | 105 | 115 | 15.0 | 3.0 | 7 | 65.0 |
| 95 | 119 | 124 | 50.0 | 110 | 120 | 15.0 | 3.0 | 7 | 65.0 |
| 100 | 124 | 129 | 50.0 | 115 | 125 | 15.0 | 3.0 | 7 | 65.0 |

Dimensions subject to changes or modifications.

# LTB16

## COMPONENTS:

1 Rotating contact surface
2 Stationary contact surface
3 Bellows
3a PTFE gasket
4 Spring
5 Ring
5a Set screw




## SECTORS:

## CHARACTERISTICS:

- Unbalanced.
- Not dependent on the rotation direction.
- External mounting.

## OPERATING LIMITS:

$d_1$= 25 ÷ 100 mm  p= 12 kg/cm²

v= 16 m/s  t= -40÷ +200ºC (*)

(*) The temperature resistance depends on the material of the secondary seals used.

The operating limits are defined by the PV factor which is determined for the sealing system characteristics and those of the application.

## DESCRIPTION:

This mechanical seal model is mostly made of PTFE and other materials that are resistant to chemically aggressive products. The metal parts are isolated from the process fluid.

## DIMENSIONS CHART

### Dimensions in mm

| Shaft | Rotary part | | Stationary part | | | |
|---|---|---|---|---|---|---|
| mm | $d_3$ | $l_3$ | $d_6$ | $d_7$ | $l_4$ | $l_5$ |
| 20 | 57 | 31 | 51 | 40.6 | 8 | 4.8 |
| 25 | 61 | 33 | 54 | 42.86 | 8.0 | 4.8 |
| 28 | 67 | 36 | 65 | 50.80 | 11.0 | 8.0 |
| 30 | 70 | 37 | 68 | 53.98 | 11.0 | 8.0 |
| 32 | 70 | 37 | 68 | 53.98 | 11.0 | 8.0 |
| 33 | 73 | 38 | 71 | 57.15 | 11.0 | 8.0 |
| 35 | 73 | 38 | 71 | 57.15 | 11.0 | 8.0 |
| 38 | 76 | 38 | 78 | 63.50 | 11.0 | 8.0 |
| 40 | 80 | 40 | 81 | 66.68 | 11.0 | 8.0 |
| 43 | 83 | 40 | 84 | 69.85 | 11.0 | 8.0 |
| 45 | 83 | 40 | 84 | 69.85 | 11.0 | 8.0 |
| 48 | 89 | 43 | 97 | 79.38 | 14.3 | 9.5 |
| 50 | 89 | 43 | 97 | 79.38 | 14.3 | 9.5 |
| 53 | 103 | 53 | 100 | 82.55 | 14.3 | 9.5 |
| 55 | 107 | 53 | 103 | 85.73 | 14.3 | 9.5 |
| 58 | 110 | 53 | 106 | 88.90 | 14.3 | 9.5 |
| 60 | 110 | 53 | 106 | 88.90 | 14.3 | 9.5 |
| 63 | 113 | 53 | 110 | 92.08 | 14.3 | 9.5 |
| 65 | 116 | 53 | 113 | 95.25 | 14.3 | 9.5 |
| 68 | 118 | 53 | 116 | 98.43 | 14.3 | 9.5 |
| 70 | 118 | 53 | 116 | 98.43 | 14.3 | 9.5 |
| 75 | 126 | 53 | 121 | 103.19 | 14.3 | 9.5 |
| 80 | 150 | 73 | 132 | 114.30 | 14.3 | 9.5 |
| 85 | 156 | 73 | 138 | 120.65 | 14.3 | 9.5 |
| 90 | 163 | 73 | 144 | 127.00 | 14.3 | 9.5 |
| 95 | 163 | 73 | 144 | 127.00 | 14.3 | 9.5 |
| 100 | 169 | 73 | 151 | 133.35 | 14.3 | 9.5 |

### Dimensions in inches

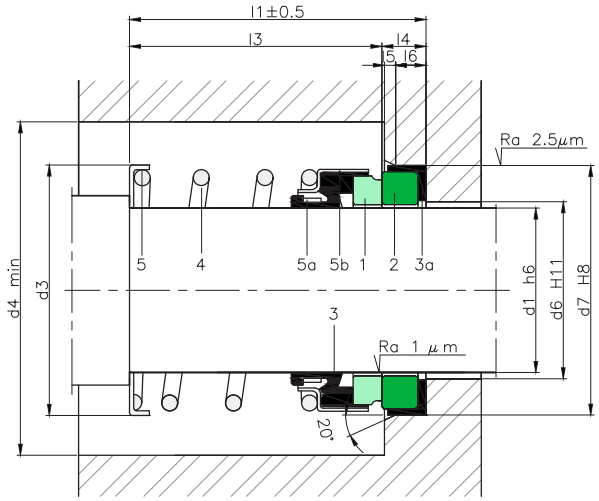
| Shaft | | Rotary part | | Stationary part | | | |
|---|---|---|---|---|---|---|---|
| (“) | mm | $d_3$ | $l_3$ | $d_6$ | $d_7$ | $l_4$ | $l_5$ |
| 0,875 | 22,23 | 57 | 31 | 51 | 40,6 | 8 | 4,8 |
| 1,000 | 25,40 | 61 | 33 | 54 | 42,9 | 8 | 4,8 |
| 1,125 | 28,58 | 67 | 36 | 65 | 50,8 | 11 | 8 |
| 1,250 | 31,75 | 70 | 37 | 68 | 54 | 11 | 8 |
| 1,375 | 34,93 | 73 | 38 | 71 | 57,2 | 11 | 8 |
| 1,500 | 38,10 | 76 | 38 | 78 | 63,5 | 11 | 8 |
| 1,625 | 41,28 | 80 | 40 | 84 | 69,9 | 11 | 8 |
| 1,750 | 44,45 | 83 | 40 | 84 | 69,9 | 11 | 8 |
| 1,875 | 47,63 | 86 | 43 | 97 | 79,4 | 14,3 | 9,5 |
| 2,000 | 50,80 | 89 | 43 | 97 | 79,4 | 14,3 | 9,5 |
| 2,125 | 53,98 | 103 | 53 | 103 | 95,7 | 14,3 | 9,5 |
| 2,250 | 57,15 | 107 | 53 | 106 | 88,9 | 14,3 | 9,5 |
| 2,375 | 60,33 | 110 | 53 | 106 | 88,9 | 14,3 | 9,5 |
| 2,500 | 63,50 | 113 | 53 | 110 | 92,1 | 14,3 | 9,5 |
| 2,625 | 66,68 | 116 | 53 | 116 | 98,4 | 14,3 | 9,5 |
| 2,750 | 69,85 | 118 | 53 | 116 | 98,4 | 14,3 | 9,5 |
| 2,875 | 73,03 | 122 | 53 | 121 | 103,2 | 14,3 | 9,5 |
| 3,000 | 76,20 | 126 | 53 | 121 | 103,2 | 14,3 | 9,5 |
| 3,250 | 82,55 | 150 | 73 | 138 | 120,7 | 14,3 | 9,5 |
| 3,500 | 88,90 | 156 | 73 | 144 | 127 | 14,3 | 9,5 |
| 3,750 | 95,25 | 163 | 73 | 144 | 127 | 14,3 | 9,5 |
| 4,000 | 101,60 | 169 | 73 | 151 | 133,4 | 14,3 | 9,5 |

Dimensions subject to changes or modifications.

# PNL

## COMPONENTS:

1 Rotating contact surface
2 Stationary contact surface
3 Bellows
3a Elastomeric cup
4 Spring
5 Ring
5a Drive ring
5b Metal frame




## SECTORS:

## CHARACTERISTICS:

- Unbalanced.
- Not dependent on the rotation direction.
- Single cylindrical spring.

## OPERATING LIMITS:

$d_1$= 8 ÷ 40 mm  p= 12 kg/cm²

v= 10 m/s  t= -20÷ +120ºC (*)

(*) The temperature resistance depends on the material of the secondary seals used.

The operating limits are defined by the PV factor which is determined for the sealing system characteristics and those of the application.

## DESCRIPTION:

Mechanical seal with a simple design for general use.

## DIMENSIONS CHART

Dimensions in mm

| Shaft | Rotary part | | | Stationary part | | | | | Total length |
|---|---|---|---|---|---|---|---|---|---|
| mm | $d_3$ | $d_4$ | $l_3$ | $d_6$ | $d_7$ | $l_4$ | $l_5$ | $l_6$ | $l_1$ |
| 8 | 22 | 27 | 15.5 | 14 | 26.00 | 5.5 | 0.5 | 4.5 | 21.0 |
| 10 | 22 | 27 | 15.5 | 14 | 26.00 | 5.5 | 0.5 | 4.5 | 21.0 |
| 11 | 22 | 27 | 15.5 | 14 | 26.00 | 5.5 | 0.5 | 4.5 | 21.0 |
| 12 | 22 | 27 | 15.5 | 14 | 26.00 | 5.5 | 0.5 | 4.5 | 21.0 |
| 13 A | 28 | 33 | 18.0 | 17 | 29.50 | 8.0 | 1.0 | 6.0 | 26.0 |
| 13 B | 32 | 37 | 13.0 | 17 | 29.50 | 8.0 | 1.0 | 6.0 | 21.0 |
| 14 B | 28 | 33 | 18.0 | 17 | 29.50 | 8.0 | 1.0 | 6.0 | 26.0 |
| 14 C | 28 | 33 | 22.0 | 19 | 23.10 | 6.0 | 1.2 | 3.0 | 28.0 |
| 14 A | 32 | 37 | 13.0 | 17 | 29.50 | 8.0 | 1.0 | 6.0 | 21.0 |
| 15 A | 28 | 33 | 18.0 | 17 | 29.50 | 8.0 | 1.0 | 6.0 | 26.0 |
| 15 B | 32 | 37 | 13.0 | 17 | 29.50 | 8.0 | 1.0 | 6.0 | 21.0 |
| 16 C | 28 | 33 | 18.0 | 17 | 29.50 | 8.0 | 1.0 | 6.0 | 26.0 |
| 16 F | 28 | 33 | 23.0 | 21 | 26.90 | 7.0 | 1.5 | 4.0 | 30.0 |
| 16 E | 31 | 36 | 29.0 | 17 | 29.50 | 8.0 | 1.0 | 6.0 | 37.0 |
| 16 A | 32 | 37 | 13.0 | 17 | 29.50 | 8.0 | 1.0 | 6.0 | 21.0 |
| 16 D | 32 | 37 | 13.0 | 17 | 42.00 | 8.0 | 1.0 | 6.0 | 21.0 |
| 16 B | 33 | 38 | 16.3 | 17 | 29.50 | 8.0 | 1.0 | 6.0 | 24.0 |
| 18 A | 32 | 37 | 24.0 | 20 | 42.00 | 8.0 | 1.0 | 6.0 | 32.0 |
| 18 B | 32 | 37 | 24.0 | 25 | 30.90 | 8.0 | 1.5 | 4.0 | 32.0 |
| 19.05 | 32 | 37 | 19.0 | 22 | 35.00 | 10.2 | 1.2 | 7.8 | 24.0 |
| 19.05 | 32 | 37 | 22.0 | 22 | 35.00 | 10.2 | 1.2 | 7.8 | 32.2 |
| 20 A | 32 | 37 | 22.0 | 22 | 42.00 | 8.0 | 1.0 | 6.0 | 30.0 |
| 20 B | 44 | 49 | 14.0 | 22 | 42.00 | 8.0 | 1.0 | 6.0 | 22.0 |
| 22 A | 39 | 44 | 25.0 | 30 | 35.40 | 8.0 | 2.0 | 4.0 | 33.0 |
| 22 | 44 | 49 | 14.0 | 23 | 42.00 | 8.0 | 1.0 | 6.0 | 22.0 |
| 25.4 | 42 | 47 | 27.2 | 29 | 41.25 | 11.0 | 1.5 | 8.5 | 38.2 |
| 30 B | 52 | 57 | 28.0 | 33 | 52.00 | 12.0 | 1.5 | 8.5 | 40.0 |
| 30A | 60 | 65 | 22.0 | 33 | 52.00 | 12.0 | 1.5 | 8.5 | 34.0 |
| 31.75 | 52 | 57 | 49.2 | 34 | 47.62 | 11.0 | 1.5 | 8.5 | 60.2 |
| 40 | 63 | 68 | 35.0 | 45 | 68.00 | 12.0 | 1.5 | 8.5 | 47.0 |

Dimensions subject to changes or modifications.