DICHTOMATIK

# V-Rings

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EN ISO 9001:2000
DNV
Certified Company

DIN EN ISO 9001:2000

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# Dichtomatik

**Any seal. Any time.**
Dichtomatik is known as a specialist in technical seals – and nothing but seals. The company's comprehensive range of products for industrial applications, its worldwide network of highly efficient production partners and its own developments make Dichtomatik a highly competent partner. Customers are guaranteed the best possible support in terms of speed, flexibility and application expertise.

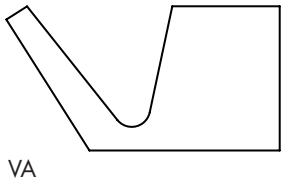
To ensure fast and punctual delivery to all parts of the world. Dichtomatik has continuously expanded its network of subsidiaries, of which there are currently eight in Europe: in England, Sweden, the Netherlands, France, Austria, Hungary, Italy and the head office in Germany, as well as five locations in the USA and Canada. Carefully selected partners are responsible for Central and South America, Africa and Asia.

The Dichtomatik team is committed to living up to the corporate slogan "Any seal. Any time." It devotes all its attention to the customer – when dealing with everyday orders, obtaining a special seal or providing complex technical advice, we always want the work we do to set standards.

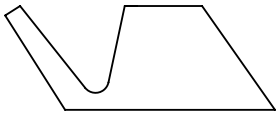
Advice on applications, designing installation housings, altering designs, adapting standard seals to changes in ambient conditions – these are some of the daily demands we make of our application engineers. As highly experienced seal specialists they are familiar with all questions regarding applications and materials and they work closely with customers and suppliers. Application-specific developments and adaptations of constructions and materials are just as much part of the job as supervising product series until they are ready for production.

**www.dichtomatik.de**
The Dichtomatik website provides a virtual insight into the warehouse. Both the availability of all standard seals and technical information on the seal articles, including descriptions of materials and installation instructions, can be accessed at www.dichtomatik.de. Having been issued a personal password, customers can view prices, make enquiries and place orders around the clock.

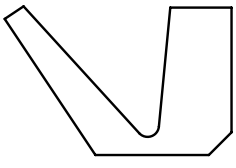
# V-Rings



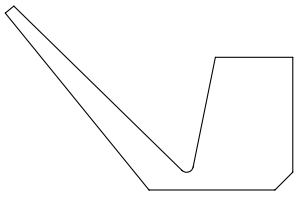
VA



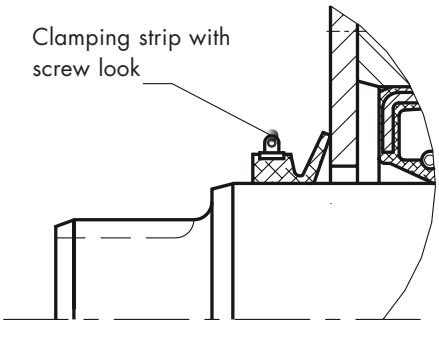
VS



VL



VE




**V-Rings** are axial seals with an elastomer sealing element vulcanised in the mould.
The typical design of a V-Ring is comprised of the body, the flexibe joint and the sealing lip.

**Designs**
V-Rings are classified according to their various profile designs. The following designs are available:

VA
standard design

VS
with reinforced stiffening element

VL
with thin profile for reduced housing e.g. in labyrinth seals

VE
for large diameters

The time-consuming removal of shafts and other components often results in the necessity of using divided V-Rings. These V-Rings are then vulcanised or glued on site.
For special applications, V-Rings can also be produced with incorporated grooves including tightening straps.

**Standard materials**
Elastomer seal:
NBR 60 black,
FKM 60 brown, (FKM 70)
other Elastomer materials are available on request.

**Application areas**
V-Rings are used mainly in combination with other types of seals such as rotary shaft seals and as pre-sealing elements for bearings and shafts.

V-Rings are often applied in drive technology, in general mechanical engineering and plant engineering. V-Rings are also found in electric engines, transmissions, agricultural machines, bearing pedestals and rolling mills.

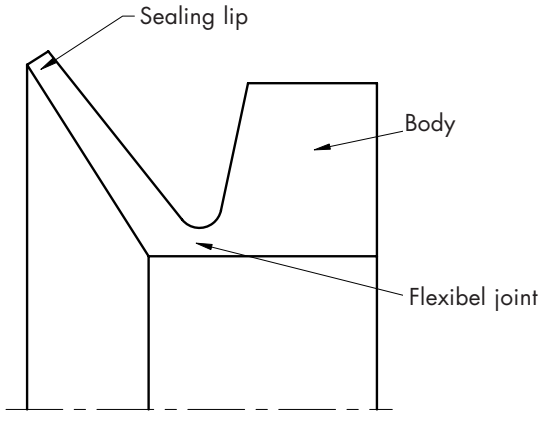
They are used to seal against dust, dirt, lubricant, oil or water spray from the outside. For rougher locational conditions, extensive exposure to masses of earth or gravel, we recommend the sealing elements VRM01 and VRM02 metal case protected axial seals.

**Function**
The V-Ring serves as a lip seal but also as a centrifugal disc.

The V-Ring is stretched onto the shaft and must be installed at an accurately defined distance from the counter-rotating metal surface to guarantee axial preload of the seal lip. The end of a bearing, the bearing case or a shaft collar serve as counter-rotating surface.

The V-Ring rotates with the shaft and seals axially on the counter surface.

With increasing peripheral speed, the seal lip is pulled outwards by the



centrifugal force and the contact pressure is reduced.
At a certain peripheral speed, the seal lip lifts off the counter metal surface completely. The V-Ring then functions only as a gap seal and centrifugal disc.

**Advantages of the V-Ring**

– single function sealing element
– seals against dust, dirt, lubricant, oil or water spray
– works well in combination with rotary shaft seals
– low demands on the counter surface with regard to the surface quality
– simple installation – is stretched onto the shaft
– the dynamic friction reduces with increasing peripheral speed due to the centrifugal force
– good dynamic sealing effect
– balances light axial movements as well as angle and rotary settings
– protects rotary shaft seals from abrasive environmental conditions

**Media**

NBR: Good chemical resistance to many lubricants and mineral oils.

FKM: Mineral oils and lubricants, engine, gear and ATF oils, fuels, aromatic and chlorinated hydrocarbon, resistance to a wide range of chemicals.

**Operational application limits**

Pressure: designed for unpressurized operation
Temperature: NBR -40°C to +100°C
FKM -20°C to +200°C
Peripheral speed (m/s):
NBR ≤ 8; axial secure from ≥ 8m; radial secure from ≥ 12
FKM ≤ 6.5; axial secure from ≥ 6.5; radial secure from ≥ 10

**Design note**
**Counter surface**

The V-Ring runs against a counter-rotating surface situated at right angles to the shaft e.g. the flange cap or the end wall of a bearing casing.
The counter surface should have a finely processed surface with a surface quality of max. Ra=2.0 (sufficient for many applications).
The counter-rotating surface need not be hardened. Under difficult locational conditions such as excessive dirt, masses of earth, fine-grained sand, a minimum hardens should be chosen. In this case, the hardness should be chosen in accordance with the medium to be sealed and the material used for the counter-rotating partner (see table).

Parts made of injection-moulded or cast light metal alloys and formed steel sheets can be used as counter-rotating surface without additional processing. However, they must not contain any surface variations or faults such as sharp edges, burrs, bubbels, waviness, buckles or other damage.

**Material used for the counter-rotating partner**

| Material | Advised Hardness | Media |
|---|---|---|
| Carbon steel | 125 - 150 HV | Sludge, dust |
| Cast iron | 190 - 270 HV | Sludge, dust |
| Cast bronze | 100 - 160 HV | Water, dust |
| Injection-moulded aluminium | 90 - 160 HV | Water spray |
| Stainless steel | 150 - 200 HV | Water |

## Shaft

There are no particular demands on the shaft as, for example, is the case for rotary shaft seals for example lead-in chamfers and special roughness values.

The sealing function remains intact to a shaft deviation of approx. 1°.

Dependent on the dimensions of the V-Ring, an eccentricity is permissible, see diagram (diagram eccentricity) which must be applied in order to enable correct installation of the V-Ring.

| V-Ring shaft ø | Eccentricity |
|---|---|
| 5-8 | 0.2 |
| 10-18 | 0.3 |
| 20-38 | 0.4 |
| 40-65 | 0.5 |
| 70-100 | 0.7 |
| 110-150 | 1.2 |
| 160-199 | 2 |
| >200 | 4 |

## Installation

The V-Ring is simple to install. It can be stretched up to 20% onto the shaft. Precaution must be taken only against damage caused to the V-Ring by sharp edges, etc.

## Storage

Generally speaking, elastomers are suitable for storage. They remain almost unchanged in their properties for years, provided that certain minimum requirements regarding storage conditions are observed. These are described in DIN 7716 and ISO 2230.

The seals must be stored stress-free, i.e. without tension, compression or other forms of deformation.

The seals should be protected from excessive ventilation, especially draughts. Storage in packaging, e.g. polyethylene bags or airtight containers, is recommended.

The storage location should be cool, dry, dust-free and moderately ventilated.

A constant storage temperature is optimal. It should be no lower than -10°C and no higher than +20°C.

Heaters in storage rooms should be screened and placed at a distance of at least 1m from the stored goods.

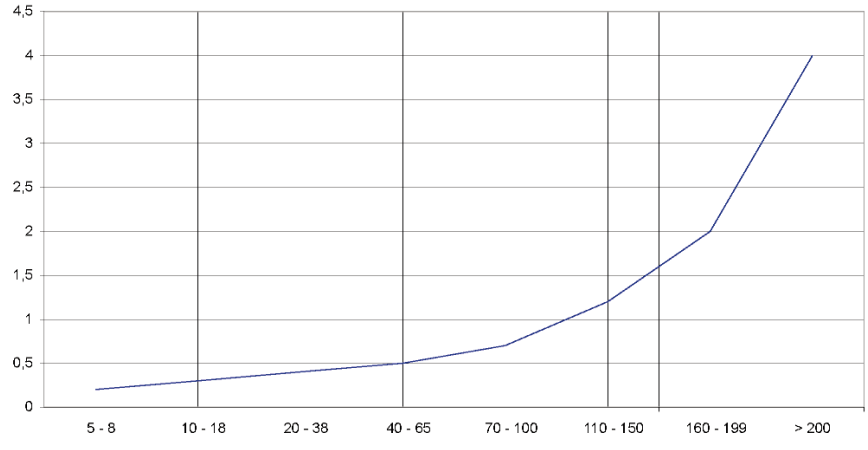
Relative humidity should not exceed 65%. Strong light, especially UV radiation and direct sunlight should be avoided.

Electrical devices that produce ozone should not be placed in storage rooms for elastomers.

## Remarks

The nominal dimensions mentioned on the following pages represent the standard dimensions.

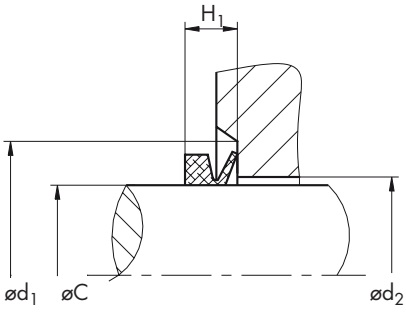
## Admissible eccentricity mm

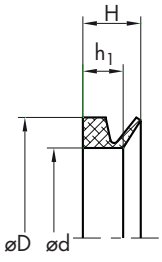



Shaft - ø mm

**VA 50 NBR**

**Sizes**
**metric**




| Part No. | Type | C | d | D | h1 | H | d2 | d1 | H1 |
|---|---|---|---|---|---|---|---|---|---|
| 123483 | VA50-3 | 2.7 - 3.5 | 2.5 | 5.5 | 2.1 | 3 | C+1 | C+4 | 2.5±0.3 |
| 123484 | VA50-4 | 3.5 - 4.5 | 3.2 | 7.2 | 2.4 | 3.7 | C+1 | C+6 | 3±0.4 |
| 123485 | VA50-5 | 4.5 - 5.5 | 4 | 8 | 2.4 | 3.7 | C+1 | C+6 | 3±0.4 |
| 123486 | VA50-6 | 5.5 - 6.5 | 5 | 9 | 2.4 | 3.7 | C+1 | C+6 | 3±0.4 |
| 123487 | VA50-7 | 6.5 - 8 | 6 | 10 | 2.4 | 3.7 | C+1 | C+6 | 3±0.4 |
| 123488 | VA50-8 | 8 - 9.5 | 7 | 11 | 2.4 | 3.7 | C+1 | C+6 | 3±0.4 |
| 123489 | VA50-10 | 9.5 - 11.5 | 9 | 15 | 3.4 | 5.5 | C+2 | C+9 | 4.5±0.6 |
| 123490 | VA50-12 | 11.5 - 12.5 | 10.5 | 16.5 | 3.4 | 5.5 | C+2 | C+9 | 4.5±0.6 |
| 123491 | VA50-14 | 13.5 - 15.5 | 12.5 | 18.5 | 3.4 | 5.5 | C+2 | C+9 | 4.5±0.6 |
| 123492 | VA50-16 | 15.5 - 17.5 | 14 | 20 | 3.4 | 5.5 | C+2 | C+9 | 4.5±0.6 |
| 123493 | VA50-18 | 17.5 - 19 | 16 | 22 | 3.4 | 5.5 | C+2 | C+9 | 4.5±0.6 |
| 123494 | VA50-20 | 19 - 21 | 18 | 26 | 4.7 | 7.5 | C+2 | C+12 | 6±0.8 |
| 123495 | VA50-22 | 21 - 24 | 20 | 28 | 4.7 | 7.5 | C+2 | C+12 | 6±0.8 |
| 126496 | VA50-25 | 24 - 27 | 22 | 30 | 4.7 | 7.5 | C+2 | C+12 | 6±0.8 |
| 123497 | VA50-28 | 27 - 29 | 25 | 33 | 4.7 | 7.5 | C+3 | C+12 | 6±0.8 |
| 123498 | VA50-30 | 29 - 31 | 27 | 35 | 4.7 | 7.5 | C+3 | C+12 | 6±0.8 |
| 123499 | VA50-32 | 31 - 33 | 29 | 37 | 4.7 | 7.5 | C+3 | C+12 | 6±0.8 |
| 123500 | VA50-35 | 33 - 36 | 31 | 39 | 4.7 | 7.5 | C+3 | C+12 | 6±0.8 |
| 123501 | VA50-38 | 36 - 38 | 34 | 42 | 4.7 | 7.5 | C+3 | C+12 | 6±0.8 |
| 123502 | VA50-40 | 38 - 43 | 36 | 46 | 5.5 | 9 | C+3 | C+15 | 7±1 |
| 123503 | VA50-45 | 43 - 48 | 40 | 50 | 5.5 | 9 | C+3 | C+15 | 7±1 |
| 123504 | VA50-50 | 48 - 53 | 45 | 55 | 5.5 | 9 | C+3 | C+15 | 7±1 |
| 123505 | VA50-55 | 53 - 58 | 49 | 59 | 5.5 | 9 | C+3 | C+15 | 7±1 |
| 123506 | VA50-60 | 58 - 63 | 54 | 64 | 5.5 | 9 | C+3 | C+15 | 7±1 |
| 123507 | VA50-65 | 63 - 68 | 58 | 68 | 5.5 | 9 | C+3 | C+15 | 7±1 |
| 123508 | VA50-70 | 68 - 73 | 63 | 75 | 6.8 | 11 | C+4 | C+18 | 9±1.2 |
| 123509 | VA50-75 | 73 - 78 | 67 | 79 | 6.8 | 11 | C+4 | C+18 | 9±1.2 |
| 123510 | VA50-80 | 78 - 83 | 72 | 84 | 6.8 | 11 | C+4 | C+18 | 9±1.2 |
| 123511 | VA50-85 | 83 - 88 | 76 | 88 | 6.8 | 11 | C+4 | C+18 | 9±1.2 |
| 123512 | VA50-90 | 88 - 93 | 81 | 93 | 6.8 | 11 | C+4 | C+18 | 9±1.2 |
| 123513 | VA50-95 | 93 - 98 | 85 | 97 | 6.8 | 11 | C+4 | C+18 | 9±1.2 |
| 123514 | VA50-100 | 98 - 105 | 90 | 102 | 6.8 | 11 | C+4 | C+18 | 9±1.2 |
| 123515 | VA50-110 | 105 - 115 | 99 | 113 | 7.9 | 12.8 | C+4 | C+21 | 10.5±1.5 |
| 123516 | VA50-120 | 115 - 125 | 108 | 122 | 7.9 | 12.8 | C+4 | C+21 | 10.5±1.5 |
| 123517 | VA50-130 | 125 - 135 | 117 | 131 | 7.9 | 12.8 | C+4 | C+21 | 10.5±1.5 |
| 123518 | VA50-140 | 135 - 145 | 126 | 140 | 7.9 | 12.8 | C+4 | C+21 | 10.5±1.5 |
| 123519 | VA50-150 | 145 - 155 | 135 | 149 | 7.9 | 12.8 | C+4 | C+21 | 10.5±1.5 |
| 123520 | VA50-160 | 155 - 165 | 144 | 160 | 9 | 14.5 | C+5 | C+24 | 12±1.8 |
| 123521 | VA50-170 | 165 - 175 | 153 | 169 | 9 | 14.5 | C+5 | C+24 | 12±1.8 |
| 123522 | VA50-180 | 175 - 185 | 162 | 178 | 9 | 14.5 | C+5 | C+24 | 12±1.8 |
| 123523 | VA50-190 | 185 - 195 | 171 | 187 | 9 | 14.5 | C+5 | C+24 | 12±1.8 |
| 123524 | VA50-199 | 195 - 210 | 180 | 196 | 9 | 14.5 | C+5 | C+24 | 12±1.8 |
| 123525 | VA50-200 | 190 - 210 | 180 | 210 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 123526 | VA50-220 | 210 - 235 | 198 | 228 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 123527 | VA50-250 | 235 - 265 | 225 | 255 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 123528 | VA50-275 | 265 -290 | 247 | 277 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 123529 | VA50-300 | 290 - 310 | 270 | 300 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 123530 | VA50-325 | 310 - 335 | 292 | 322 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 123531 | VA50-350 | 335 - 365 | 315 | 345 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 123532 | VA50-375 | 365 - 390 | 337 | 367 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 123533 | VA50-400 | 390 - 430 | 360 | 390 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 123534 | VA50-450 | 430 - 480 | 405 | 435 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 123535 | VA50-500 | 480 - 530 | 450 | 480 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 123536 | VA50-550 | 530 - 580 | 495 | 525 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 123537 | VA50-600 | 580 - 630 | 540 | 570 | 14.3 | 25 | C+10 | C+45 | 20±4 |

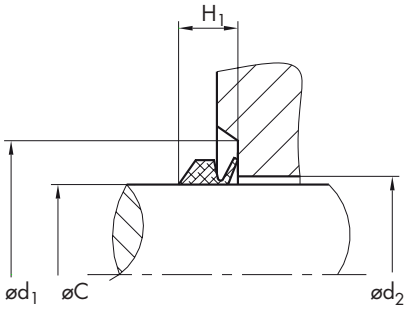
**VA 50 NBR**

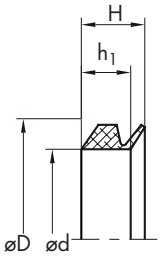
**Sizes**
**metric**

| Part No. | Type | C | d | D | h1 | H | d2 | d1 | H1 |
|---|---|---|---|---|---|---|---|---|---|
| 26264 | VA50-650 | 630 - 665 | 600 | 630 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 27384 | VA50-700 | 665 - 705 | 630 | 660 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 26265 | VA50-725 | 705 - 745 | 670 | 700 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 41194 | VA50-750 | 745 - 785 | 705 | 735 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 16684 | VA50-800 | 785 - 830 | 745 | 775 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 16685 | VA50-850 | 830 - 875 | 785 | 815 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 26266 | VA50-900 | 875 - 920 | 825 | 855 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 35010 | VA50-950 | 920 - 965 | 865 | 895 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 27473 | VA50-1000 | 965 - 1015 | 910 | 940 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 71773 | VA50-1050 | 1015 - 1065 | 955 | 985 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 35045 | VA50-1100 | 1065 - 1115 | 1000 | 1030 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 36903 | VA50-1150 | 1115 - 1165 | 1045 | 1075 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 69606 | VA50-1200 | 1165 - 1215 | 1090 | 1120 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 27385 | VA50-1250 | 1215 - 1270 | 1135 | 1165 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 56734 | VA50-1300 | 1270 - 1320 | 1180 | 1210 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 71774 | VA50-1350 | 1320 - 1370 | 1225 | 1255 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 71775 | VA50-1400 | 1370 - 1420 | 1270 | 1300 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 71776 | VA50-1450 | 1420 - 1470 | 1315 | 1345 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 71777 | VA50-1500 | 1470 - 1520 | 1360 | 1390 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 71778 | VA50-1550 | 1520 - 1570 | 1405 | 1435 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 35875 | VA50-1600 | 1570 - 1620 | 1450 | 1480 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 71779 | VA50-1650 | 1620 - 1670 | 1495 | 1525 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 71780 | VA50-1700 | 1670 - 1720 | 1540 | 1570 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 71781 | VA50-1750 | 1720 - 1770 | 1585 | 1615 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 71782 | VA50-1800 | 1770 - 1820 | 1630 | 1660 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 71783 | VA50-1850 | 1820 - 1870 | 1675 | 1705 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 71784 | VA50-1900 | 1870 - 1920 | 1720 | 1750 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 71785 | VA50-1950 | 1920 - 1970 | 1765 | 1795 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 27445 | VA50-2000 | 1970 - 2020 | 1810 | 1840 | 14.3 | 25 | C+10 | C+45 | 20±4 * |

**VS 50 NBR**

**Sizes**
**metric**




| Part No. | Type | C | d | D | h1 | H | d2 | d1 | H1 |
|---|---|---|---|---|---|---|---|---|---|
| 123597 | VS50-5 | 4.5 - 5.5 | 4 | 8 | 3.9 | 5.2 | C+1 | C+6 | 4.5±0.4 |
| 123598 | VS50-6 | 5.5 - 6.5 | 5 | 9 | 3.9 | 5.2 | C+1 | C+6 | 4.5±0.4 |
| 123599 | VS50-7 | 6.5 - 8 | 6 | 10 | 3.9 | 5.2 | C+1 | C+6 | 4.5±0.4 |
| 123600 | VS50-8 | 8 - 9.5 | 7 | 11 | 3.9 | 5.2 | C+1 | C+6 | 4.5±0.4 |
| 123601 | VS50-10 | 9.5 - 11.5 | 9 | 15 | 5.6 | 7.7 | C+2 | C+9 | 6.7±0.6 |
| 123602 | VS50-12 | 11.5 - 13.5 | 10.5 | 16.5 | 5.6 | 7.7 | C+2 | C+9 | 6.7±0.6 |
| 123603 | VS50-14 | 13.5 - 15.5 | 12.5 | 18.5 | 5.6 | 7.7 | C+2 | C+9 | 6.7±0.6 |
| 123604 | VS50-16 | 15.5 - 17.5 | 14 | 20 | 5.6 | 7.7 | C+2 | C+9 | 6.7±0.6 |
| 123605 | VS50-18 | 17.5 - 19 | 16 | 22 | 5.6 | 7.7 | C+2 | C+9 | 6.7±0.6 |
| 123606 | VS50-20 | 19 - 21 | 18 | 26 | 7.9 | 10.5 | C+2 | C+12 | 9±0.8 |
| 123607 | VS50-22 | 21 - 24 | 20 | 28 | 7.9 | 10.5 | C+2 | C+12 | 9±0.8 |
| 123608 | VS50-25 | 24 - 27 | 22 | 30 | 7.9 | 10.5 | C+2 | C+12 | 9±0.8 |
| 123609 | VS50-28 | 27 - 29 | 25 | 33 | 7.9 | 10.5 | C+3 | C+12 | 9±0.8 |
| 123610 | VS50-30 | 29 - 31 | 27 | 35 | 7.9 | 10.5 | C+3 | C+12 | 9±0.8 |
| 123611 | VS50-32 | 31 - 33 | 29 | 37 | 7.9 | 10.5 | C+3 | C+12 | 9±0.8 |
| 123612 | VS50-35 | 33 - 36 | 31 | 39 | 7.9 | 10.5 | C+3 | C+12 | 9±0.8 |
| 123613 | VS50-38 | 36 - 38 | 34 | 42 | 7.9 | 10.5 | C+3 | C+12 | 9±0.8 |
| 123614 | VS50-40 | 38 - 43 | 36 | 46 | 9.5 | 13 | C+3 | C+15 | 11±1 |
| 123615 | VS50-45 | 43 - 48 | 40 | 50 | 9.5 | 13 | C+3 | C+15 | 11±1 |
| 123616 | VS50-50 | 48 - 53 | 45 | 55 | 9.5 | 13 | C+3 | C+15 | 11±1 |
| 123617 | VS50-55 | 53 - 58 | 49 | 59 | 9.5 | 13 | C+3 | C+15 | 11±1 |
| 123618 | VS50-60 | 58 - 63 | 54 | 64 | 9.5 | 13 | C+3 | C+15 | 11±1 |
| 123619 | VS50-65 | 63 - 68 | 58 | 68 | 9.5 | 13 | C+3 | C+15 | 11±1 |
| 123620 | VS50-70 | 68 - 73 | 63 | 75 | 11.3 | 15.5 | C+4 | C+18 | 13.5±1.2 |
| 123621 | VS50-75 | 73 - 78 | 67 | 79 | 11.3 | 15.5 | C+4 | C+18 | 13.5±1.2 |

* vulcanised

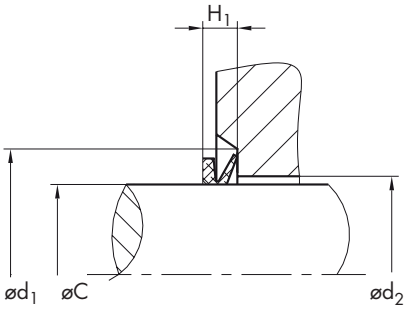
## VS 50 NBR

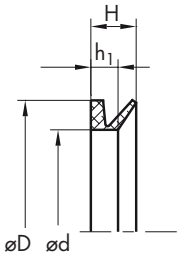
**Sizes**
**metric**

| Part No. | Type | C | d | D | h1 | H | d2 | d1 | H1 |
|---|---|---|---|---|---|---|---|---|---|
| 123622 | VS50-80 | 78 - 83 | 72 | 84 | 11.3 | 15.5 | C+4 | C+18 | 13.5±1.2 |
| 123623 | VS50-85 | 83 - 88 | 76 | 88 | 11.3 | 15.5 | C+4 | C+18 | 13.5±1.2 |
| 123624 | VS50-90 | 88 - 93 | 81 | 93 | 11.3 | 15.5 | C+4 | C+18 | 13.5±1.2 |
| 123625 | VS50-95 | 93 - 98 | 85 | 97 | 11.3 | 15.5 | C+4 | C+18 | 13.5±1.2 |
| 123626 | VS50-100 | 98 - 105 | 90 | 102 | 11.3 | 15.5 | C+4 | C+18 | 13.5±1.2 |
| 123627 | VS50-110 | 105 - 115 | 99 | 113 | 13.1 | 18 | C+4 | C+21 | 15.5±1.5 |
| 123628 | VS50-120 | 115 - 125 | 108 | 122 | 13.1 | 18 | C+4 | C+21 | 15.5±1.5 |
| 123629 | VS50-130 | 125 - 135 | 117 | 131 | 13.1 | 18 | C+4 | C+21 | 15.5±1.5 |
| 123630 | VS50-140 | 135 - 145 | 126 | 140 | 13.1 | 18 | C+4 | C+21 | 15.5±1.5 |
| 123631 | VS50-150 | 145 - 155 | 135 | 149 | 13.1 | 18 | C+4 | C+21 | 15.5±1.5 |
| 123632 | VS50-160 | 155 - 165 | 144 | 160 | 15 | 20.5 | C+5 | C+24 | 18±1.8 |
| 123633 | VS50-170 | 165 - 175 | 153 | 169 | 15 | 20.5 | C+5 | C+24 | 18±1.8 |
| 123634 | VS50-180 | 175 - 185 | 162 | 178 | 15 | 20.5 | C+5 | C+24 | 18±1.8 |
| 123635 | VS50-190 | 185 - 195 | 171 | 187 | 15 | 20.5 | C+5 | C+24 | 18±1.8 |
| 123636 | VS50-199 | 195 - 210 | 180 | 196 | 15 | 20.5 | C+5 | C+24 | 18±1.8 |

## VL NBR

**Sizes**
**metric**



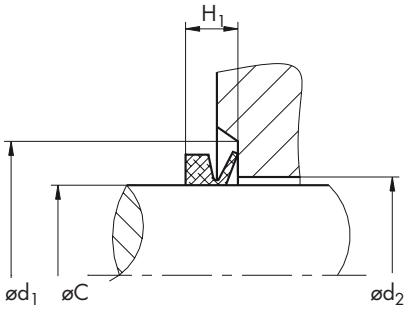



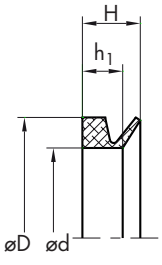

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 123568 | VL50-110 | 105 - 115 | 99 | 105.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 123569 | VL50-120 | 115 - 125 | 108 | 114.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 123570 | VL50-130 | 125 - 135 | 117 | 123.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 123570 | VL50-140 | 135 - 145 | 126 | 132.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 123572 | VL50-150 | 145 - 155 | 135 | 141.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 123573 | VL50-160 | 155 - 165 | 144 | 150.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 123574 | VL50-170 | 165 - 175 | 153 | 159.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 123575 | VL50-180 | 175 - 185 | 162 | 168.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 123576 | VL50-190 | 185 - 195 | 171 | 177.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 123577 | VL50-200 | 195 - 210 | 182 | 188.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 123578 | VL50-220 | 210 - 233 | 198 | 204.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 123579 | VL50-250 | 233 - 260 | 225 | 231.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 123580 | VL50-275 | 260 - 285 | 247 | 253.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 123581 | VL50-300 | 285 - 310 | 270 | 276.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 123582 | VL50-325 | 310 - 335 | 292 | 298.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 123583 | VL50-350 | 335 - 365 | 315 | 321.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 123584 | VL50-375 | 365 - 385 | 337 | 343.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 123585 | VL50-400 | 385 - 410 | 360 | 366.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 123586 | VL50-425 | 410 - 440 | 382 | 388.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 123587 | VL50-450 | 440 475 | 405 | 411.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 123588 | VL50-500 | 475 - 510 | 450 | 456.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 46234 | VL50-525 | 510 - 540 | 472 | 478.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 123589 | VL50-550 | 540 - 575 | 495 | 501.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 123590 | VL50-600 | 575 - 625 | 540 | 546.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 123591 | VL50-650 | 625 - 675 | 600 | 606.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 123592 | VL50-700 | 675 - 710 | 630 | 636.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 167544 | VL50-725 | 710 - 740 | 670 | 676.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 * |
| 123593 | VL50-750 | 740 - 775 | 705 | 711.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 123594 | VL50-800 | 775 - 825 | 745 | 751.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 * |
| 123595 | VL50-850 | 825 - 875 | 785 | 791.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 123596 | VL50-900 | 875 - 925 | 825 | 831.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 165112 | VL50-950 | 925 - 975 | 865 | 871.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 * |
| 79420 | VL50-1000 | 975 - 1025 | 910 | 916.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 * |
| 166758 | VL50-1050 | 1025 - 1075 | 955 | 961.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 * |
| 167585 | VL50-1100 | 1075 - 1125 | 1000 | 1006.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 * |
| 76115 | VL50-1200 | 1175 - 1225 | 1090 | 1096.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 * |
| 69608 | VL50-2000 | 1975 - 2025 | 1810 | 1816.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 * |

* vulcanised

**VA 50 FKM**

**Sizes**
**metric**




| Part No. | Type | C | d | D | h1 | H | d2 | d1 | H1 |
|---|---|---|---|---|---|---|---|---|---|
| 62133 | VA50-3 | 2.7 - 3.5 | 2.5 | 5.5 | 2.1 | 3 | C+1 | C+4 | 2.5±0.3 |
| 62134 | VA50-4 | 3.5 - 4.5 | 3.2 | 7.2 | 2.4 | 3.7 | C+1 | C+6 | 3±0.4 |
| 44103 | VA50-5 | 4.5 - 5.5 | 4 | 8 | 2.4 | 3.7 | C+1 | C+6 | 3±0.4 |
| 62135 | VA50-6 | 5.5 - 6.5 | 5 | 9 | 2.4 | 3.7 | C+1 | C+6 | 3±0.4 |
| 62136 | VA50-7 | 6.5 - 8 | 6 | 10 | 2.4 | 3.7 | C+1 | C+6 | 3±0.4 |
| 62137 | VA50-8 | 8 - 9.5 | 7 | 11 | 2.4 | 3.7 | C+1 | C+6 | 3±0.4 |
| 37437 | VA50-10 | 9.5 - 11.5 | 9 | 15 | 3.4 | 5.5 | C+2 | C+9 | 4.5±0.6 |
| 62138 | VA50-12 | 11.5 - 12.5 | 10.5 | 16.5 | 3.4 | 5.5 | C+2 | C+9 | 4.5±0.6 |
| 62139 | VA50-14 | 13.5 - 15.5 | 12.5 | 18.5 | 3.4 | 5.5 | C+2 | C+9 | 4.5±0.6 |
| 56127 | VA50-16 | 15.5 - 17.5 | 14 | 20 | 3.4 | 5.5 | C+2 | C+9 | 4.5±0.6 |
| 36036 | VA50-18 | 17.5 - 19 | 16 | 22 | 3.4 | 5.5 | C+2 | C+9 | 4.5±0.6 |
| 39208 | VA50-20 | 19 - 21 | 18 | 26 | 4.7 | 7.5 | C+2 | C+12 | 6±0.8 |
| 62140 | VA50-22 | 21 - 24 | 20 | 28 | 4.7 | 7.5 | C+2 | C+12 | 6±0.8 |
| 36553 | VA50-25 | 24 - 27 | 22 | 30 | 4.7 | 7.5 | C+2 | C+12 | 6±0.8 |
| 37602 | VA50-28 | 27 - 29 | 25 | 33 | 4.7 | 7.5 | C+3 | C+12 | 6±0.8 |
| 49455 | VA50-30 | 29 - 31 | 27 | 35 | 4.7 | 7.5 | C+3 | C+12 | 6±0.8 |
| 62141 | VA50-32 | 31 - 33 | 29 | 37 | 4.7 | 7.5 | C+3 | C+12 | 6±0.8 |
| 62142 | VA50-35 | 33 - 36 | 31 | 39 | 4.7 | 7.5 | C+3 | C+12 | 6±0.8 |
| 62143 | VA50-38 | 36 - 38 | 34 | 42 | 4.7 | 7.5 | C+3 | C+12 | 6±0.8 |
| 36931 | VA50-40 | 38 - 43 | 36 | 46 | 5.5 | 9 | C+3 | C+15 | 7±1 |
| 44692 | VA50-45 | 43 - 48 | 40 | 50 | 5.5 | 9 | C+3 | C+15 | 7±1 |
| 22379 | VA50-50 | 48 - 53 | 45 | 55 | 5.5 | 9 | C+3 | C+15 | 7±1 |
| 56950 | VA50-55 | 53 - 58 | 49 | 59 | 5.5 | 9 | C+3 | C+15 | 7±1 |
| 36555 | VA50-60 | 58 - 63 | 54 | 64 | 5.5 | 9 | C+3 | C+15 | 7±1 |
| 37455 | VA50-65 | 63 - 68 | 58 | 68 | 5.5 | 9 | C+3 | C+15 | 7±1 |
| 35344 | VA50-70 | 68 - 73 | 63 | 75 | 6.8 | 11 | C+4 | C+18 | 9±1.2 |
| 35345 | VA50-75 | 73 - 78 | 67 | 79 | 6.8 | 11 | C+4 | C+18 | 9±1.2 |
| 37260 | VA50-80 | 78 - 83 | 72 | 84 | 6.8 | 11 | C+4 | C+18 | 9±1.2 |
| 35610 | VA50-85 | 83 - 88 | 76 | 88 | 6.8 | 11 | C+4 | C+18 | 9±1.2 |
| 37459 | VA50-90 | 88 - 93 | 81 | 93 | 6.8 | 11 | C+4 | C+18 | 9±1.2 |
| 35488 | VA50-95 | 93 - 98 | 85 | 97 | 6.8 | 11 | C+4 | C+18 | 9±1.2 |
| 34854 | VA50-100 | 98 - 105 | 90 | 102 | 6.8 | 11 | C+4 | C+18 | 9±1.2 |
| 36932 | VA50-110 | 105 - 115 | 99 | 113 | 7.9 | 12.8 | C+4 | C+21 | 10.5±1.5 |
| 35613 | VA50-120 | 115 - 125 | 108 | 122 | 7.9 | 12.8 | C+4 | C+21 | 10.5±1.5 |
| 37964 | VA50-130 | 125 - 135 | 117 | 131 | 7.9 | 12.8 | C+4 | C+21 | 10.5±1.5 |
| 44693 | VA50-140 | 135 - 145 | 126 | 140 | 7.9 | 12.8 | C+4 | C+21 | 10.5±1.5 |
| 22378 | VA50-150 | 145 - 155 | 135 | 149 | 7.9 | 12.8 | C+4 | C+21 | 10.5±1.5 |
| 55879 | VA50-160 | 155 - 165 | 144 | 160 | 9 | 14.5 | C+5 | C+24 | 12±1.8 |
| 24715 | VA50-170 | 165 - 175 | 153 | 169 | 9 | 14.5 | C+5 | C+24 | 12±1.8 |
| 35109 | VA50-180 | 175 - 185 | 162 | 178 | 9 | 14.5 | C+5 | C+24 | 12±1.8 |
| 37965 | VA50-190 | 185 - 195 | 171 | 187 | 9 | 14.5 | C+5 | C+24 | 12±1.8 |
| 37427 | VA50-199 | 195 - 210 | 180 | 196 | 9 | 14.5 | C+5 | C+24 | 12±1.8 |
| 36916 | VA50-200 | 190 - 210 | 180 | 210 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 34919 | VA50-220 | 210 - 235 | 198 | 228 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 36654 | VA50-250 | 235 - 265 | 225 | 255 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 41577 | VA50-275 | 265 - 290 | 247 | 277 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 36653 | VA50-300 | 290 - 310 | 270 | 300 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 40235 | VA50-325 | 310 - 335 | 292 | 322 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 70444 | VA50-350 | 335 - 365 | 315 | 345 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 36917 | VA50-375 | 365 - 390 | 337 | 367 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 34918 | VA50-400 | 390 - 430 | 360 | 390 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 35883 | VA50-450 | 430 - 480 | 405 | 435 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 40448 | VA50-500 | 480 - 530 | 450 | 480 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 39580 | VA50-550 | 530 - 580 | 495 | 525 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 40910 | VA50-600 | 580 - 630 | 540 | 570 | 14.3 | 25 | C+10 | C+45 | 20±4 |

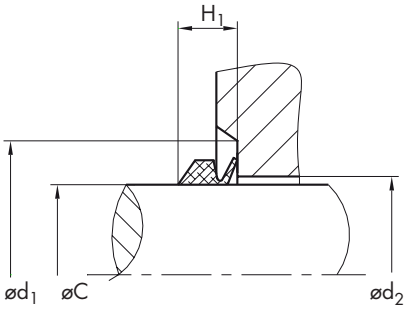
## VA 50 FKM

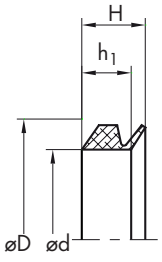
**Sizes**
**metric**

| Part No. | Type | C | d | D | h1 | H | d2 | d1 | H1 |
|---|---|---|---|---|---|---|---|---|---|
| 36676 | VA50-650 | 630 - 665 | 600 | 630 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 64883 | VA50-700 | 665 - 705 | 630 | 660 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 59558 | VA50-725 | 705 - 745 | 670 | 700 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 56375 | VA50-750 | 745 - 785 | 705 | 735 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 69327 | VA50-800 | 785 - 830 | 745 | 775 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 69740 | VA50-850 | 830 - 875 | 785 | 815 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 24280 | VA50-900 | 875 - 920 | 825 | 855 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 24281 | VA50-950 | 920 - 965 | 865 | 895 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 77761 | VA50-1000 | 965 - 1015 | 910 | 940 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 45403 | VA50-1050 | 1015 - 1065 | 955 | 985 | 14.3 | 25 | C+10 | C+45 | 20±4 |
| 38079 | VA50-1100 | 1065 - 1115 | 1000 | 1030 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 35607 | VA50-1150 | 1115 - 1165 | 1045 | 1075 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 36705 | VA50-1200 | 1165 - 1215 | 1090 | 1120 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 46092 | VA50-1250 | 1215 - 1270 | 1135 | 1165 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 56724 | VA50-1300 | 1270 - 1320 | 1180 | 1210 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 45404 | VA50-1350 | 1320 - 1370 | 1225 | 1255 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 45405 | VA50-1400 | 1370 - 1420 | 1270 | 1300 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 6583 | VA50-1450 | 1420 - 1470 | 1315 | 1345 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 161425 | VA50-1500 | 1470 - 1520 | 1360 | 1390 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 28630 | VA50-1550 | 1520 - 1570 | 1405 | 1435 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 45410 | VA50-1600 | 1570 - 1620 | 1450 | 1480 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 28639 | VA50-1650 | 1620 - 1670 | 1495 | 1525 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 45411 | VA50-1700 | 1670 - 1720 | 1540 | 1570 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 45412 | VA50-1750 | 1720 - 1770 | 1585 | 1615 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 45415 | VA50-1800 | 1770 - 1820 | 1630 | 1660 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 45416 | VA50-1850 | 1820 - 1870 | 1675 | 1705 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 45421 | VA50-1900 | 1870 - 1920 | 1720 | 1750 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 28643 | VA50-1950 | 1920 - 1970 | 1765 | 1795 | 14.3 | 25 | C+10 | C+45 | 20±4 * |
| 45422 | VA50-2000 | 1970 - 2020 | 1810 | 1840 | 14.3 | 25 | C+10 | C+45 | 20±4 * |

## VS 50 FKM

**Sizes**
**metric**




| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 62146 | VS50-5 | 4.5 - 5.5 | 4 | 8 | 3.9 | 5.2 | C+1 | C+6 | 4.5±0.4 |
| 62147 | VS50-6 | 5.5 - 6.5 | 5 | 9 | 3.9 | 5.2 | C+1 | C+6 | 4.5±0.4 |
| 27704 | VS50-7 | 6.5 - 8 | 6 | 10 | 3.9 | 5.2 | C+1 | C+6 | 4.5±0.4 |
| 62148 | VS50-8 | 8 - 9.5 | 7 | 11 | 3.9 | 5.2 | C+1 | C+6 | 4.5±0.4 |
| 26256 | VS50-10 | 9.5 - 11.5 | 9 | 15 | 5.6 | 7.7 | C+2 | C+9 | 6.7±0.6 |
| 62149 | VS50-12 | 11.5 - 13.5 | 10.5 | 16.5 | 5.6 | 7.7 | C+2 | C+9 | 6.7±0.6 |
| 62150 | VS50-14 | 13.5 - 15.5 | 12.5 | 18.5 | 5.6 | 7.7 | C+2 | C+9 | 6.7±0.6 |
| 62151 | VS50-16 | 15.5 - 17.5 | 14 | 20 | 5.6 | 7.7 | C+2 | C+9 | 6.7±0.6 |
| 26255 | VS50-18 | 17.5 - 19 | 16 | 22 | 5.6 | 7.7 | C+2 | C+9 | 6.7±0.6 |
| 37062 | VS50-20 | 19 - 21 | 18 | 26 | 7.9 | 10.5 | C+2 | C+12 | 9±0.8 |
| 62152 | VS50-22 | 21 - 24 | 20 | 28 | 7.9 | 10.5 | C+2 | C+12 | 9±0.8 |
| 36554 | VS50-25 | 24 - 27 | 22 | 30 | 7.9 | 10.5 | C+2 | C+12 | 9±0.8 |
| 42591 | VS50-28 | 27 - 29 | 25 | 33 | 7.9 | 10.5 | C+3 | C+12 | 9±0.8 |
| 38226 | VS50-30 | 29 - 31 | 27 | 35 | 7.9 | 10.5 | C+3 | C+12 | 9±0.8 |
| 62153 | VS50-32 | 31 - 33 | 29 | 37 | 7.9 | 10.5 | C+3 | C+12 | 9±0.8 |
| 34911 | VS50-35 | 33 - 36 | 31 | 39 | 7.9 | 10.5 | C+3 | C+12 | 9±0.8 |
| 59658 | VS50-38 | 36 - 38 | 34 | 42 | 7.9 | 10.5 | C+3 | C+12 | 9±0.8 |
| 21550 | VS50-40 | 38 - 43 | 36 | 46 | 9.5 | 13 | C+3 | C+15 | 11±1 |
| 34912 | VS50-45 | 43 - 48 | 40 | 50 | 9.5 | 13 | C+3 | C+15 | 11±1 |
| 34913 | VS50-50 | 48 - 53 | 45 | 55 | 9.5 | 13 | C+3 | C+15 | 11±1 |
| 34917 | VS50-55 | 53 - 58 | 49 | 59 | 9.5 | 13 | C+3 | C+15 | 11±1 |
| 36556 | VS50-60 | 58 - 63 | 54 | 64 | 9.5 | 13 | C+3 | C+15 | 11±1 |
| 21552 | VS50-65 | 63 - 68 | 58 | 68 | 9.5 | 13 | C+3 | C+15 | 11±1 |
| 34855 | VS50-70 | 68 - 73 | 63 | 75 | 11.3 | 15.5 | C+4 | C+18 | 13.5±1.2 |
| 37456 | VS50-75 | 73 - 78 | 67 | 79 | 11.3 | 15.5 | C+4 | C+18 | 13.5±1.2 |

* vulcanised

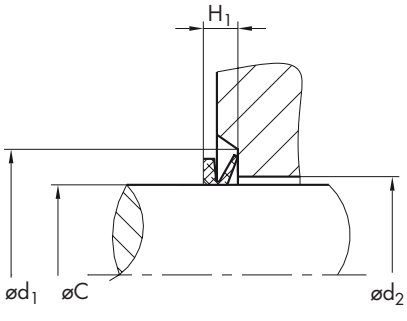
## VS 50 FKM

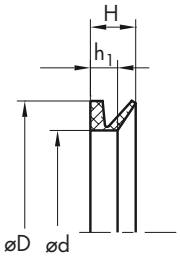
**Sizes**
**metric**

| Part No. | Type | C | d | D | h1 | H | d2 | d1 | H1 |
|---|---|---|---|---|---|---|---|---|---|
| 21551 | VS50-80 | 78 - 83 | 72 | 84 | 11.3 | 15.5 | C+4 | C+18 | 13.5±1.2 |
| 37457 | VS50-85 | 83 - 88 | 76 | 88 | 11.3 | 15.5 | C+4 | C+18 | 13.5±1.2 |
| 37458 | VS50-90 | 88 - 93 | 81 | 93 | 11.3 | 15.5 | C+4 | C+18 | 13.5±1.2 |
| 37460 | VS50-95 | 93 - 98 | 85 | 97 | 11.3 | 15.5 | C+4 | C+18 | 13.5±1.2 |
| 35611 | VS50-100 | 98 - 105 | 90 | 102 | 11.3 | 15.5 | C+4 | C+18 | 13.5±1.2 |
| 21553 | VS50-110 | 105 - 115 | 99 | 113 | 13.1 | 18 | C+4 | C+21 | 15.5±1.5 |
| 37461 | VS50-120 | 115 - 125 | 108 | 122 | 13.1 | 18 | C+4 | C+21 | 15.5±1.5 |
| 37952 | VS50-130 | 125 - 135 | 117 | 131 | 13.1 | 18 | C+4 | C+21 | 15.5±1.5 |
| 27482 | VS50-140 | 135 - 145 | 126 | 140 | 13.1 | 18 | C+4 | C+21 | 15.5±1.5 |
| 57013 | VS50-150 | 145 - 155 | 135 | 149 | 13.1 | 18 | C+4 | C+21 | 15.5±1.5 |
| 24376 | VS50-160 | 155 - 165 | 144 | 160 | 15 | 20.5 | C+5 | C+24 | 18±1.8 |
| 36043 | VS50-170 | 165 - 175 | 153 | 169 | 15 | 20.5 | C+5 | C+24 | 18±1.8 |
| 35952 | VS50-180 | 175 - 185 | 162 | 178 | 15 | 20.5 | C+5 | C+24 | 18±1.8 |
| 37426 | VS50-190 | 185 - 195 | 171 | 187 | 15 | 20.5 | C+5 | C+24 | 18±1.8 |
| 36044 | VS50-199 | 195 - 210 | 180 | 196 | 15 | 20.5 | C+5 | C+24 | 18±1.8 |

## VL 50 FKM

**Sizes**
**metric**




| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 45809 | VL50-110 | 105 - 115 | 99 | 105.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 29726 | VL50-120 | 115 - 125 | 108 | 114.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 45815 | VL50-130 | 125 - 135 | 117 | 123.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 44405 | VL50-140 | 135 - 145 | 126 | 132.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 72420 | VL50-150 | 145 - 155 | 135 | 141.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 81930 | VL50-160 | 155 - 165 | 144 | 150.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 65690 | VL50-170 | 165 - 175 | 153 | 159.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 78092 | VL50-180 | 175 - 185 | 162 | 168.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 74006 | VL50-190 | 185 - 195 | 171 | 177.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 81535 | VL50-200 | 195 - 210 | 182 | 188.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 35519 | VL50-220 | 210 - 233 | 198 | 204.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 35290 | VL50-250 | 233 - 260 | 225 | 231.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 36369 | VL50-275 | 260 - 285 | 247 | 253.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 37466 | VL50-300 | 285 - 310 | 270 | 276.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 78093 | VL50-325 | 310 - 335 | 292 | 298.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 74053 | VL50-350 | 335 - 365 | 315 | 321.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 45816 | VL50-375 | 365 - 385 | 337 | 343.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 37417 | VL50-400 | 385 - 41 | 360 | 366.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 76766 | VL50-425 | 410 - 440 | 382 | 388.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 37418 | VL50-450 | 440 - 475 | 405 | 411.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 45817 | VL50-500 | 475 - 510 | 450 | 456.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 46236 | VL50-525 | 510 - 540 | 472 | 478.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 7597 | VL50-550 | 540 - 575 | 495 | 501.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |
| 45819 | VL50-600 | 575 - 625 | 540 | 546.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 * |
| 45820 | VL50-650 | 625 - 675 | 600 | 606.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 * |
| 6965 | VL50-700 | 675 - 710 | 630 | 636.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 * |
| 167543 | VL50-725 | 710 - 740 | 670 | 676.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 * |
| 45821 | VL50-750 | 740 - 775 | 705 | 711.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 * |
| 45822 | VL50-800 | 775 - 825 | 745 | 751.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 * |
| 45823 | VL50-850 | 825 - 875 | 785 | 791.5 | 6 | 10.5 | C+5 | C+20 | 8±1.5 |

 * vulcanised

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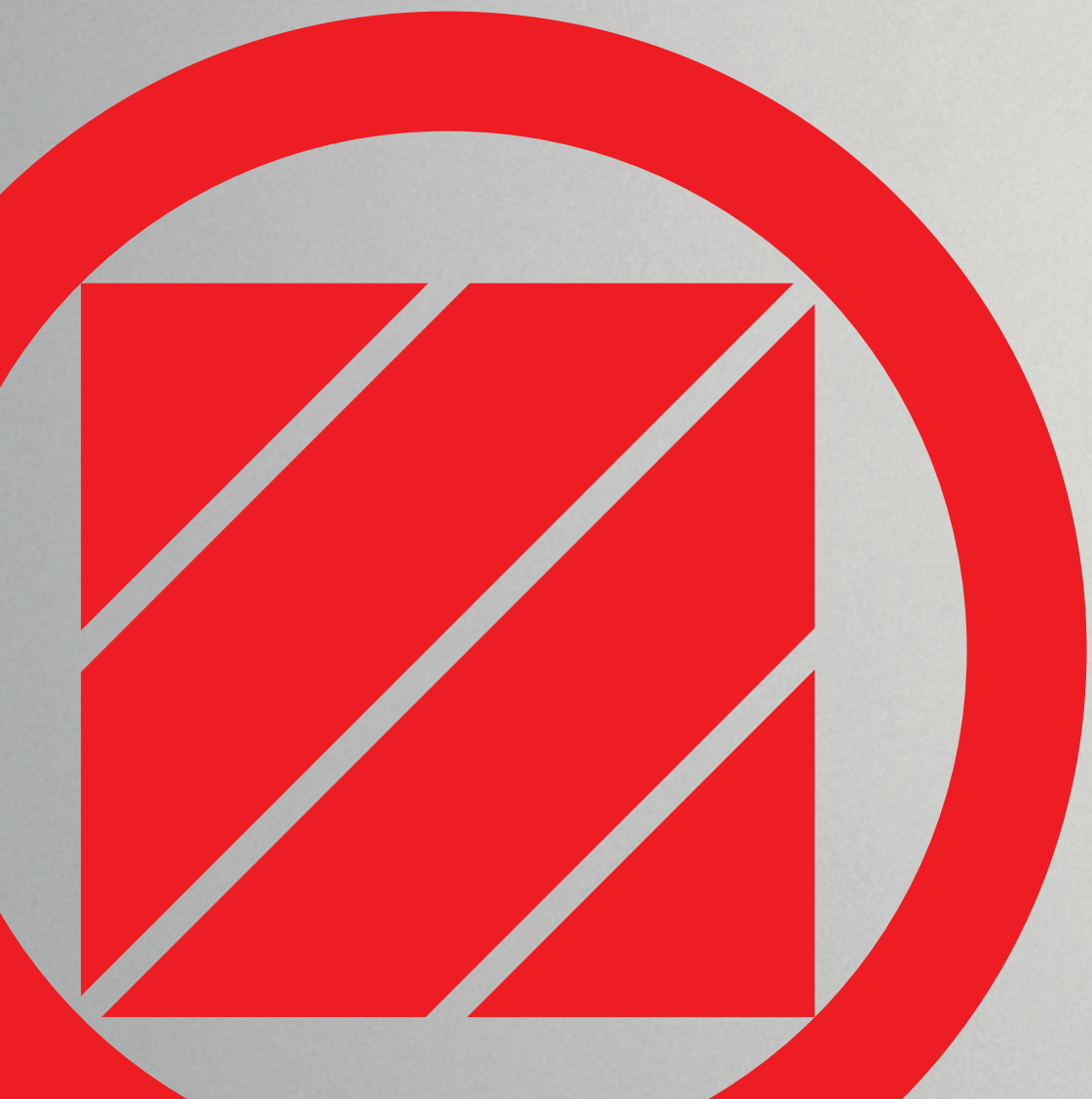
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