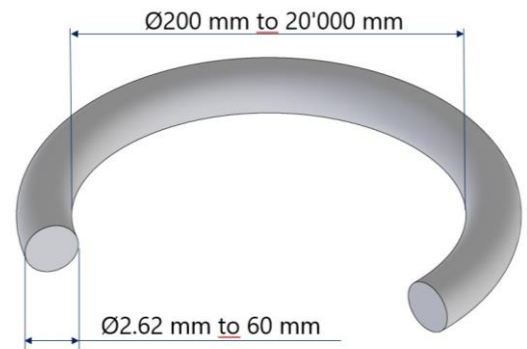


## Gigant-O®

### Kubo O-Rings With Very Large Inner Diameters



**New: Kubo now offers you cost-effective O-rings with practically unlimited inner diameters and at the same time all the properties of a standard O-ring**

#### Initial Situation

Until recently, the technical possibilities in the production of moulded O-rings with very large inner diameters were very limited. Due to high mould costs and small quantities, manufacturing O-rings in XXL dimensions was almost impossible at a reasonable price.

In case an O-ring was not deliverable at short term, or only meeting the corresponding tooling costs, the only alternative was the option to use glued to the joint or hot vulcanized round cords. Tolerances for these continuous vulcanized or glued profiles are according to the DIN ISO 3302-1 class E2 norm for extruded elastomer profiles. Tolerances for extruded profiles are considerably bigger than those for vulcanized seals of the Class M2.

Both executions though had the disadvantage of not being deployable in all cases, due to their much bigger tolerances in the cord diameter and the worse physical characteristics of the joint compared to an O-ring. In particular dynamic sealing or high-pressure applications or with gaseous media the use of vulcanized or glued O-rings was strongly discouraged.

Thanks to the development of a new manufacturing process, we are now able to offer you significantly larger continuous vulcanized O-rings in a wide range of materials and with the same tight cord tolerances according to the O-ring norms ISO 3601-1 and ISO 3601-3.

The new compression step moulding vulcanization process guarantees good physical and chemical properties, a homogeneous surface quality and consistent tolerances over the whole circumference of the O-ring comparable to those of an O-ring manufactured in a mould.

- No limits to the internal diameter
- Tolerances comparable to those of a standard O-ring according to ISO 3601-1 and ISO 3601-3 (grade N and S)
- Chemical and physical properties equal to those of a standard O-ring
- Large variety of materials, also with conformities (such as FDA)
- No tooling costs
- Low costs
- Short delivery times, express service possible

## Materials

<p><b>NBR</b></p> <p>black 50 – 90 Shore A FDA / low temp.</p>	<p><b>HNBR</b></p> <p>black 60 – 98 Shore A AED</p>	<p><b>EPDM</b></p> <p>black 60 – 80 Shore A FDA</p>
<p><b>FKM</b></p> <p>Black, green, blue, brown 50 – 98 Shore A FDA / low temp. /AED</p>	<p><b>FFKM</b></p> <p>Black, white 75 – 90 Shore A FDA / USP Class / low and high temp.</p>	<p><b>EPDM</b> cross-linked</p> <p>black, white 60 – 70 Shore A FDA / USP Class / 3-A cross-linked</p>
<p><b>CR</b></p> <p>black 60 – 70 Shore A</p>	<p><b>FEPM</b></p> <p>black 70 – 90 Shore A Aflas®</p>	<p><b>MVQ</b></p> <p>red 60 – 70 Shore A FDA</p>

Shore A: hardness scale for elastomer materials as per DIN ISO 7619-1 from 0 Shore A (soft) to 100 Shore A (hard)

FDA: the American Food and Drug Administration controls the safety of products which are to be in contact with foods and drugs. The regulations are USA orientated but are applied worldwide. The regulation FDA CFR 21.177.2600 rules the substances in elastomer materials which are in recurrent contact with foods.

AED: Anti-explosive decompression. The explosive decompression is a failure mechanism of elastomer sealing materials, triggered by a sudden pressure drop of the gaseous media. Special rubber compounds are resistant against this destruction.

USP: the certification according to the USP Class VI is based upon the regulations of the United States Pharmacopeia. The regulations are USA orientated but are applied worldwide. The conformity assessment tests the effects of the material and the extractable substances

on the tissues.

3A: 3A Sanitary Standards are based on the regulations of the American Organisation 3A Sanitary Standards Inc. The regulations are USA orientated but are applied worldwide. The norms define the hygiene prescriptions in the food, beverage, dairy, and pharmaceutical industry.

Cross-linked: To maintain their elastic characteristics, elastomers need to be reticulated. This can happen through different reticulation systems. One of them is based on cross-linked systems which improve the material properties and the temperature resistance.

## Cord Sizes CS

2.62 mm	5.5 mm	8 mm	10.82 mm	16 mm	25 mm
3.00 mm	5.7 mm	8.2 mm	11 mm	17 mm	25.86 mm
3.5 mm	6 mm	8.4 mm	12 mm	18 mm	26 mm
3.53 mm	6.35 mm	8.5 mm	12.7 mm	19 mm	28 mm
4 mm	6.5 mm	9.2 mm	13 mm	19.2 mm	30 mm
4.5 mm	7 mm	9.5 mm	14 mm	20 mm	32 mm
5 mm	7.1 mm	9.65 mm	14.4 mm	22 mm	40 mm
5.33 mm	7.5 mm	10 mm	15 mm	24 mm	60 mm

We are looking forward to your enquiry via [verkauf1@kubo.ch](mailto:verkauf1@kubo.ch)!