

# ROUND CORDS AND ROUND CORD RINGS



Round cords and round cord rings from the Dichtomatik brand achieve their sealing effect from the deformation of the cross section after installation and compression into the installation space. As static seals, they are superbly suited for tube fittings and cap seals in container construction.

Round cords and round cord rings are available in the materials NBR, FKM, EPDM and VMQ. Round cords mostly serve as the base product for round cord rings. They are extruded as finite strands. A round cord ring is comparable to an O-Ring, not just in its cross-section but in its handling and application as well. Round cord rings are often used for repairs and assembled to size on site.

Depending on the purpose, a round cord joint for a round cord ring can be established with cyanoacrylate (e.g. Loctite 406®) – or two-component adhesives. The temperature limit during use is about 80°C. For EPDM, VMQ and FKM round cords, a special primer (e.g. Loctite 770®) can be used in certain circumstances.

For applications in seawater or other demanding uses, the adhesive bond is not sufficient. Here the connection must be made using butt vulcanization.

## DIMENSIONS

The currently available dimensions can be found on our website [dichtomatik.fst.com](https://dichtomatik.fst.com) or on our online ordering platform **EASY**.

## TOLERANCES

- NBR, FKM, EPDM: in accordance with ISO 3302-1 E1
- VMQ: in accordance with ISO 3302-1 E2

## YOUR ADVANTAGES AT A GLANCE

- Media pressure strengthens the sealing function in the operational state
- Round cords can be individually joined into round cord rings in the desired dimensions at the point of use
- In the case of round cord rings: a high degree of flexibility thanks to customized dimensions
- The material VMQ 60 is suited to food contact. The appropriate reference testing is in accordance with FDA (21 CFR § 177.200) and LFGB Recommendation XV (EC 1935/2004)

## MOUNTING

Before mounting, dust, dirt, metal filings and any type of soiling must be removed. Crests of threads and installation spaces for other seal and guide elements should be covered with a mounting sleeve. All existing edges must be burr-free and bevels must be added seamlessly. The mounting surface and the round cord should be treated with a suitable grease in advance. If the elastomer is heated to about 80°C in water or oil, it will be even more pliable. Before gluing, the two joint ends should be roughed with fine sandpaper and, with the help of a suitable cleaner (e.g. Acetone®), all grease should be removed. The two ends must be glued stresslessly. Then it is essential to see whether the point of adhesion is completely cured throughout. The end-joined round cord ring must not be stretched over the joint. The joint created in this way also shows a significantly lower bending elasticity than the round cord itself.

In addition, the ring should be rolled over the mounting surface. As the ring snaps into the groove, twisting must be avoided. Any mounting tools such as expanding mandrels or expansion sleeves should be made of soft material (e.g. POM) and free of sharp edges.







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## Roung cords and round cord rings

Profile	Color	Material	Shore A Hardness	Temperature (°C)	Material resistance
	black	NBR	70	-30 to +100	Good chemical resistance to mineral oils and greases, the hydraulic oils H, HL, HLP, flame-resistant pressure fluids up to about +50°C and water up to +80°C
	black	FKM	75	-15 to +200	<ul style="list-style-type: none"> <li>• Good chemical resistance to petroleum oils and greases, synthetic oils and greases, engine, transmission and ATF oils up to about +150°C, fuels, flame-resistant HFD pressure fluids, aliphatic, aromatic and chlorinated hydrocarbons, water up to a maximum of +80°C</li> <li>• Very good weathering, ozone and aging resistance</li> <li>• Very low gas permeability (thus well-suited for vacuum uses)</li> <li>• Broad chemical resistance</li> </ul>
	black	EPDM perox.	70	-35 to +140	<ul style="list-style-type: none"> <li>• Very stable in hot water and steam, lyes in the form of washing agents, caustic soda and caustic potash, silicone oils and greases, many polar solvents, many diluted acids and chemicals</li> <li>• Good ozone resistance</li> <li>• Incompatibility with any kind of petroleum oil product (lubricants and fuels)</li> </ul>
	red-brown	VMQ	60	-55 to +200	<ul style="list-style-type: none"> <li>• Good stability in water (up to +100°C), aliphatic engine and transmission oils, animal and plant oils and greases</li> <li>• Suited to food contact</li> <li>• Not resistant to fuels, aromatic petroleum oils, steam (short-term up to a maximum of +120°C is possible), silicone oils and greases, along with acids and alkali compounds</li> </ul>

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