FC guiding tapes are extremely wear-resistant and suitable for piston and rod guiding. They can be cut to any desired length (max. 10 m). The tapes are wound on flat coils with a core diameter of approximately 120 mm. FC guiding tape stock is sold in packaging units of 10-metre rolls (desired length to be cut by the customer).

Range of Application

Guiding element for pistons and piston rods in hydraulic cylinders.

Working temperature	-40 °C to +120 °C

Max Side Load - Static		330 N/mm²
- Dynamic		80 N/mm²

Water absorption acc. to DIN 53495	< 0.1 %
Surface speed	≤ 0.5 m/s

- Minimal play due to extremely small manufacturing tolerances of the guiding elements.
- Vibration absorption effect.
- Extreme wear resistance.
- Improved sliding properties due to surface structure.
- Can be elongated or compressed within limited diameter ranges (preferably ≥ 100 mm).
- Significantly higher permissible loading pressure compared with other guidance tape materials.
- Dimensions according to ISO 10766.
- Any desired nominal diameter available due to use of machining technique.
- Suitable for cylinder repairs.
- Ideally suited for large-diameters.
- Bulk material.
- Installation in closed and undercut housings.

Compounds

Synthetic resins with fabric reinforcement, PTFE added.

Colour: Blue

Installation

For piston and rod diameters up to 100 mm, we recommend our FR guide rings.

For surface requirements, see chapter "General installation guidelines".

The installed rings must have a gap "k" between their diagonally cut ends:
k = 0.008 x d + 2
The calculated values for "k" are rounded up to the nearest millimetre.

The calculation of the permissible radial force is based on the projected area D · H (cylinder) or d · H (rod).

Example: permissible radial force F_R for a cylinder diameter of D = 80 mm, length L = 15 mm, compound Q5038T and safety factor 4:

$$F_R = \frac{D \cdot L \cdot q}{\nu} = \frac{80 \cdot 15 \cdot 320}{4} = 96\,000 \text{ N}$$

Recommendation for determing the safety factor ν: $\nu > 3$

Calculation of elongated length
"U" (piston) = $\pi \cdot (D - S) - k$

Calculation of elongated length
"U" (rod) = $\pi \cdot (d + S) - k$

In case of special operating conditions (specific pressure loads, temperature, speed, use in water, HFA, HFB fluids etc.), please contact our consultancy service for a selection of the material and design best suiting your particular application requirements.

Guiding elements
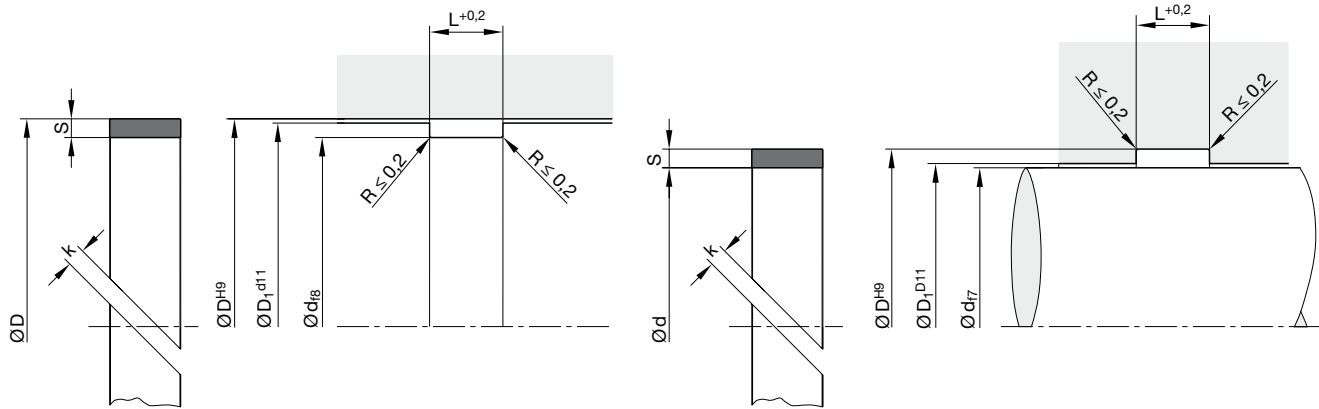
For surface finish, lead in chamfer and other installation dimensions see "General installation guidelines".

Part Number	SIZE (Groove width X depth)
FC000011925056A	5.6x2,5
FC000011925060A	6.0X2.5
FC000011925097A	9.7x2.5
FC000011925100A	10.0X2.5
FC000011925150A	15x2.5
FC000011925200A	20x2.5
FC000011925250A	25x2.5
FC000011940097A	9.7x4
FC000011940150A	15x4
FC000011940200A	20x4
FC000011940250A	25x4

Note: Sold by length. 10meter/roll.

Further sizes on request.