



TECHNICAL INFORMATION

Rotary Seals | Turcon® Roto Variseal®

Description

The Turcon® Roto Variseal® is a single-acting seal consisting of a U-shaped seal jacket and a V-shaped corrosion-resistant metal spring. One characteristic of the Roto Variseal® is the flanged heel, which prevents the seal from rotating as it is clamped in the groove, and the short and heavy dynamic lip offering reduced friction, long service life and a good scraping effect even in highly viscous media. At low and zero pressure, the metal spring provides the primary sealing force. As the system pressure increases, the main sealing force is achieved by the system

pressure and ensures a tight seal from zero to high pressure.

The Turcon® Roto Variseal® is used as a single acting rotary seal in sectors such as:

- Rotary injection units (injection molding machines)
- Rotary distributors
- Pivoting motors in pharmacy, industry, and machine tools

Advantages

- Suitable for rotary, reciprocating and static applications
- Protects against mechanical torsion
- Low coefficient of friction
- Remains tight in groove even when subject to oscillating or helical movements
- Withstands rapid changes in temperature
- High abrasion resistance
- Excellent resistance to aging
- Good scraping ability



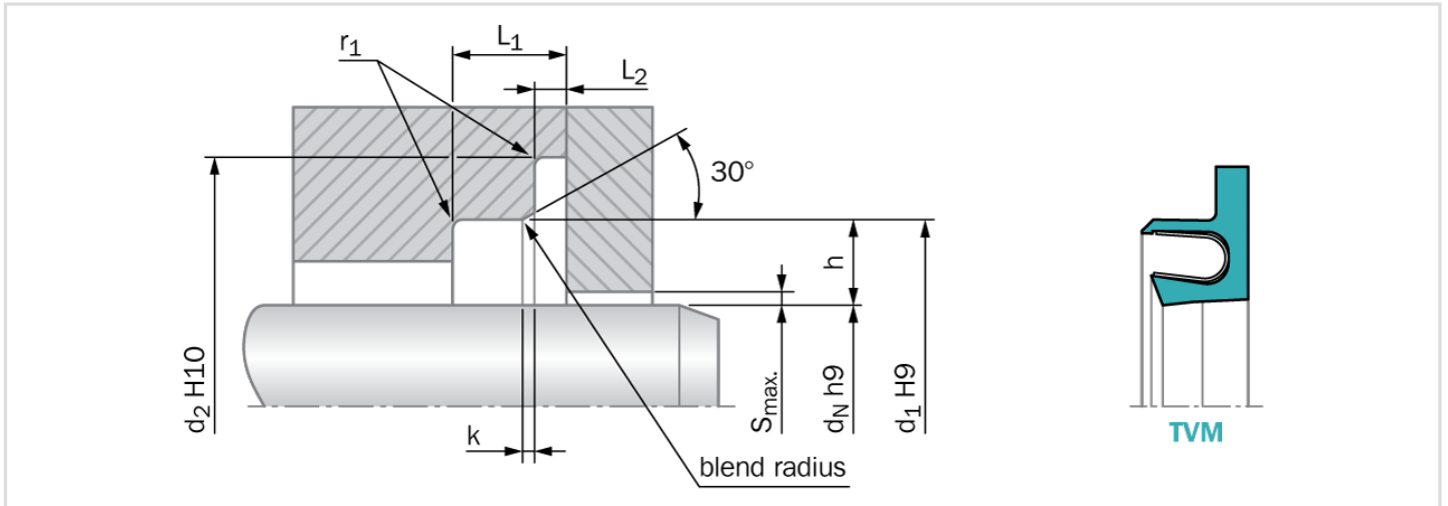
Technical Data

| | | |
|-----------------------------------|---|--|
| Pressure | : | 15 MPa (For dynamic loads) 25 MPa (For static loads) |
| Velocity | : | Up to 2 m/s (Rotating) |
| Temperature | : | -100 °C to +260 °C |
| Pressure under dynamic conditions | : | max. 100 N/mm ² at 25 °C max. 50 N/mm ² > 60 °C |



TECHNICAL INFORMATION

Rotary Seals | Turcon® Roto Variseal®



Installation dimensions - Standard recommendations

| Series No. | Shaft Diameter d_N h9 | | d_1 | h | d_2 | L_1 | L_2 | k | r_1 | Radial Clearance $S_{max.}$ | | | |
|------------|-------------------------|----------------|-----------------------|--------------|------------------------|---------------------|---------------------|-----------------|---------------|-----------------------------|--------|--------|------|
| | Standard Range | Extended Range | | | | | | | | 2 MPa | 10 MPa | 20 MPa | |
| | | | Groove Diameter H9 | Groove Depth | Flange Diameter H10 | Groove Width Min | Flange Groove Width | Lead-in Chamfer | Radius Max | | | | |
| TVM1 | 5.0 - 19.9 | 5.0 - 200.0 | $d_N + 5.0$ | 2.50 | $d_N + 9.0$ | 3.6 | 0.85 | +0/-0.10 | 0.8 | 0.38 | 0.25 | 0.15 | 0.10 |
| TVM2 | 20.0 - 39.9 | 10.0 - 400.0 | $d_N + 7.0$ | 3.50 | $d_N + 12.5$ | 4.8 | 1.35 | +0/-0.15 | 1.1 | 0.38 | 0.35 | 0.20 | 0.15 |
| TVM3 | 40.0 - 399.9 | 20.0 - 700.0 | $d_N + 10.5$ | 5.25 | $d_N + 17.5$ | 7.1 | 1.80 | +0/-0.20 | 1.4 | 0.38 | 0.50 | 0.25 | 0.20 |
| TVM4 | 400.0 - 999.9 | 35.0 - 999.9 | $d_N + 14.0$ | 7.00 | $d_N + 22.0$ | 9.5 | 2.80 | +0/-0.20 | 1.6 | 0.51 | 0.60 | 0.30 | 0.25 |

Important Note

Installation suggestions, material recommendations, parameters and further data provided are always subject to the particular field of use and the application in which the seal is intended to be used, in particular the interaction of the seal with other components of the application. Therefore they neither constitute an agreement on the legal and factual nature nor a guarantee of quality. Technical changes and errors remain reserved.