



## TECHNICAL INFORMATION

# Piston Seals | Turcon® AQ-Seal® 5

### Description

The Turcon® AQ-Seal® 5 is a patented development of the proven standard Turcon® AQ-Seal®.

The seal profile of the Turcon® ring has been redesigned on both the dynamic and static sealing surface. Two O-Rings are used to energize the seal instead of one.

The AQ-Seal® 5 combines the benefits of a low-friction Turcon® slipper seal with the high sealing

characteristics of an elastomeric seal by incorporating a limited foot print X-Ring Seal in the dynamic sealing face. This optimizes leakage control while minimizing friction.

The particular characteristics of the AQ-Seal® 5 are the special seal profile with a defined seal edge and the use of two O-Rings as energizing elements to optimize the pressure profile and to reduce the force of attack at gas permeability.

### Advantages

- High sealing effect in applications requiring media separation, e.g. fluid/fluid or fluid/gas
- Double security through the combination of low-friction special materials with elastomer seals
- Higher pressure application, higher sliding speed compared to the AQ-Seal®
- Outstanding sliding properties, no stick-slip effect



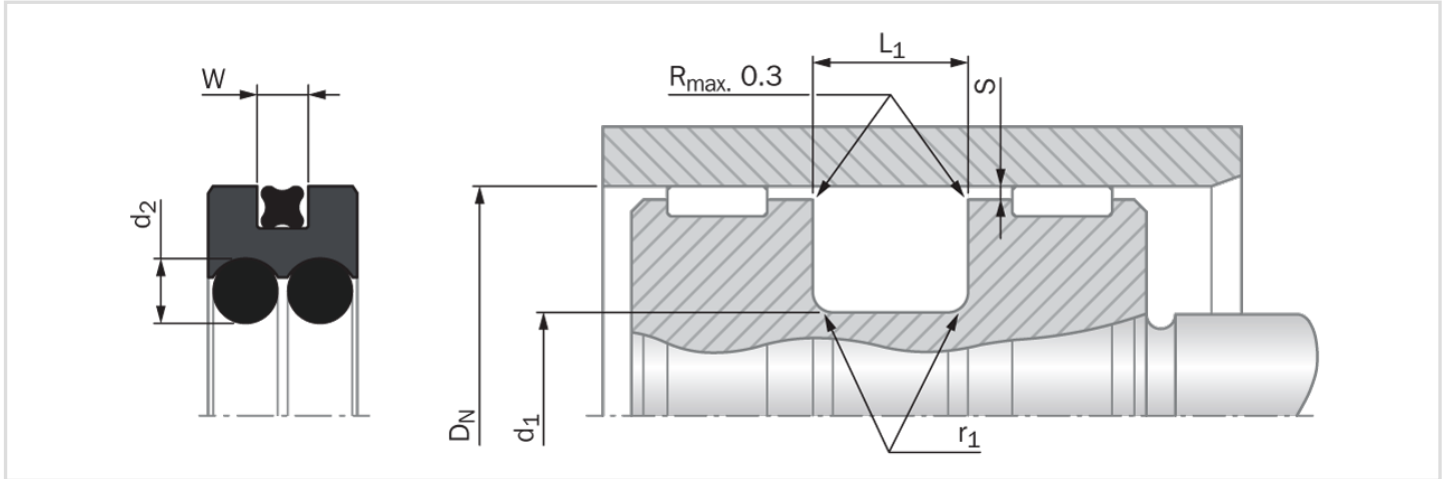
### Technical Data

Pressure	: Up to 50 MPa
Speed	: Up to 3 m/s
Temperature	: -30 °C to +200 °C (depending on O-Ring and X-Ring material)
Media	: Mineral oil-based hydraulic fluids, flame retardant hydraulic fluids, environmentally safe hydraulic fluids (bio-oils), phosphate ester and others, depending on the seal, O-Ring and X-Ring Seal material compatibility
Clearance	: The maximum permissible radial clearance $S_{max}$ is shown in the table on the next page as a function of the operating pressure and functional diameter.



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### Installation dimensions - Standard recommendations

Series No.	Bore Diameter $D_N$ H9		Groove Diameter	Groove Width	Radius	Radial Clearance $S_{max.}^*$			O-Ring Cross-Section $d_2$	X-Ring Seal Cross-Section $W$
	Recommended Range	Extended Range				$d_1$ h9	$L_1 +0.2$	$r_1$		
PQ01	40 - 79.9	25 - 140	$D_N - 10.0$	6.3	0.6	0.30	0.20	0.15	2.62	1.78
PQ02	80 - 132.9	50 - 250	$D_N - 13.0$	8.3	1.0	0.40	0.30	0.15	3.53	2.62
PQ03	133 - 462.9	100 - 480	$D_N - 18.0$	12.3	1.3	0.40	0.30	0.20	5.33	3.53
PQ04	463 - 700.0	425 - 700	$D_N - 31.0$	16.3	1.8	0.50	0.40	0.30	7.00	5.33

\* For pressures from 30 MPa to the maximum specified, use diameter tolerance H8/f8 (bore/rod) in the area behind the seal. Sliding®/Wear Rings are not applicable at very small radial clearance S.

### 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.