

KR piston sealing set

The specialist for medium-heavy hydraulic applications



Specifically considering the aspect of increased energy efficiency, Parker Prädifa has developed the Ultrathan® Profile KR piston sealing set as a sealing system for agricultural machines, industrial trucks and medium-heavy construction equipment, focused on a newly developed slide ring material.

Modern hydraulic seals should be energy-efficient, eco-friendly and economical. In addition, they should deliver high levels of reliability and long service life. Meeting these demands starts with trained specialists designing the sealing system specifically for the respective application requirements and continues in the form of an efficient, state-of-the-art manufacturing process using recyclable raw materials that do not contain any hazardous substances.

The Profile KR Ultrathan® piston sealing set superbly meets all of these requirements. Due to the newly developed slide ring material it exhibits a properties profile that is highly suitable for a wide range of hydraulic applications:

- Standard industrial cylinders
- Industrial trucks
- Medium-heavy construction equipment
- Agricultural machines

When the driver of a tractor or forklift truck activates hydraulic cylinders, there should be no stick-slip or leakage. These cylinders, such as the upper link of a tractor, primarily operate within a certain range, and their sealing systems have to deliver reliable performance of the following, clearly defined requirements for long periods of time:

- High static and dynamic sealing action
- Low operating friction
- High wear resistance
- Pressures up to 250 bar
- Temperatures from -35 °C to +80 °C (short-term: 100°C)
- Speeds up to 0.5 m/s max
- Mineral oil compatibility

The components

- A slide ring made of the newly developed polyurethane material P6060 with clearly improved sliding properties and particularly high modulus (hardness approx. 58 Shore D).
- A pre-loading element with a rectangular cross-section made of the NBR elastomer NB078 (hardness approx. 80 Shore A).

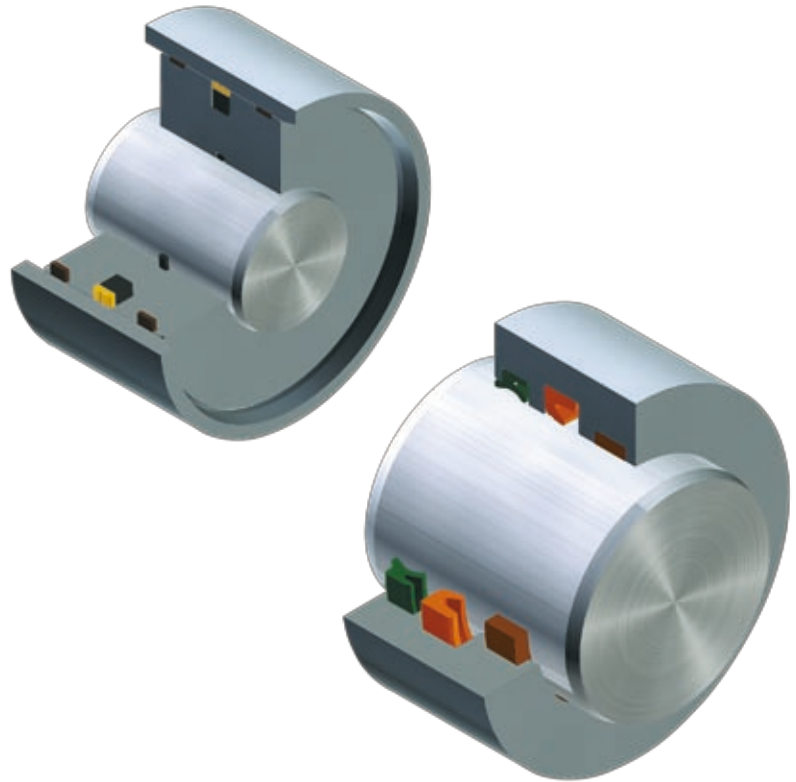


Performance data

Working pressure [bar]	250
Working temperature [°C]	-35 to 80 (short-term 100)
Surface speed [m/s]	0.5
Media	Hydraulic oils based on mineral oil and PAO fluids

The recommended sealing system

- Double wiper, profile AY or AH (open groove)
- Rod seal, profile HL, made of compound P6030
- Double-acting piston seal, profile KR, made of compound P6060
- Guiding elements, profile FR, made of synthetic fibre fabric with modified phenolic resin and PTFE



The material

Physical data

Material	P6060
Elastomer base	EU
Colour	yellow

Test	Standard	Dimension	Result
Hardness	DIN 53505	Shore D	58 ±3
Spec. weight	DIN 53479	g/cm ³	1.23 ±0.2
Modulus 100%	DIN 53504	MPa (min.)	20
Modulus 300%	DIN 53504	MPa (min.)	30
Ultimate elongation	DIN 53504	% (min.)	300
Tensile strength	DIN 53504	MPa (min.)	35
Compression set (0 h / 70 °C)	DIN ISO 815 (25 % compression)	% (max.)	35
Rebound resilience	DIN 53512	% (min.)	32
Tear strength	DIN 53515	N/mm (min.)	318

New order codes: KR **00700**