



AV Hydraulic Wiper with Integrated Dirt Shield

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Contamination by dirt or the intrusion of dirt into hydraulic cylinders is the most common cause of failure in mobile machines. As operating cycles and working conditions of the machines and equipment continue to rise high availability is of crucial importance to all end users. The AV wiper by Parker Prädifa provides effective protection against system contamination and corrosion and thus contributes to the high availability of mobile machinery.

The wiper is the major element on the hydraulic cylinder to prevent the intrusion of dirt. It protects the entire hydraulic system against, dust, dirt, moisture and other environmental influences. Due to increasingly sensitive elements being used within hydraulic circuits the wiping function has been steadily gaining importance as

contaminated fluid systems are common causes of total failures with high consequential costs.

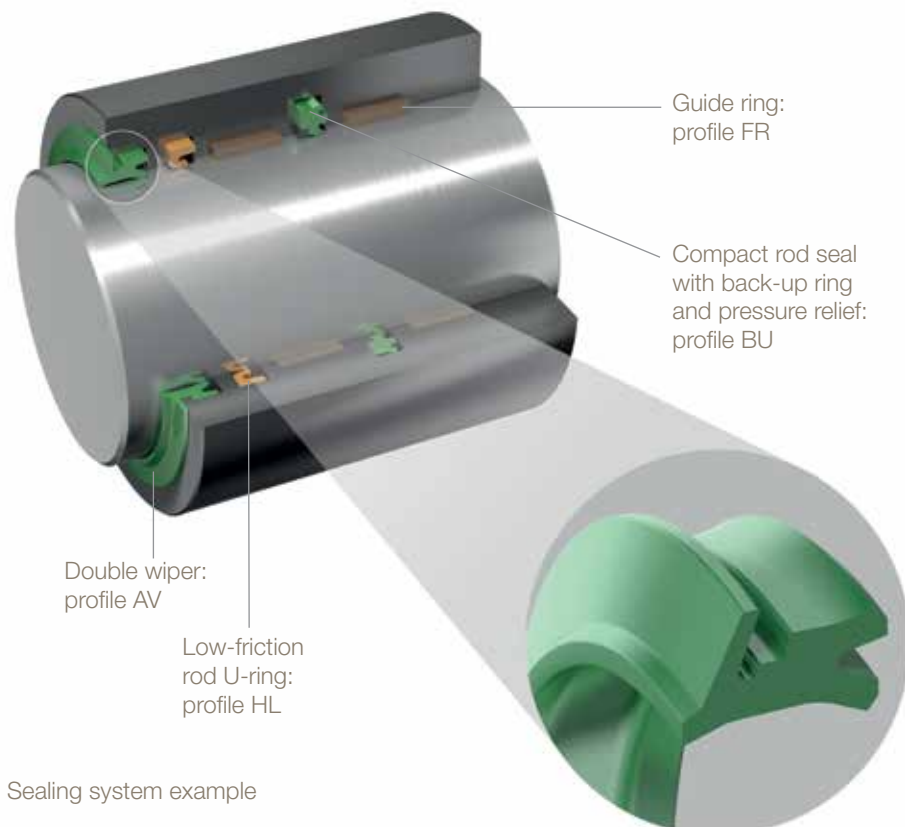
To improve the wiping function Parker Prädifa has developed a special wiper profile with the following features:

- Dirt shield
- Dirt sealing edge on the groove side
- Double wiper
- Pressure relief drill hole
- Optimised wiper lip geometry
- Time-tested sealing function due to robust seal profile

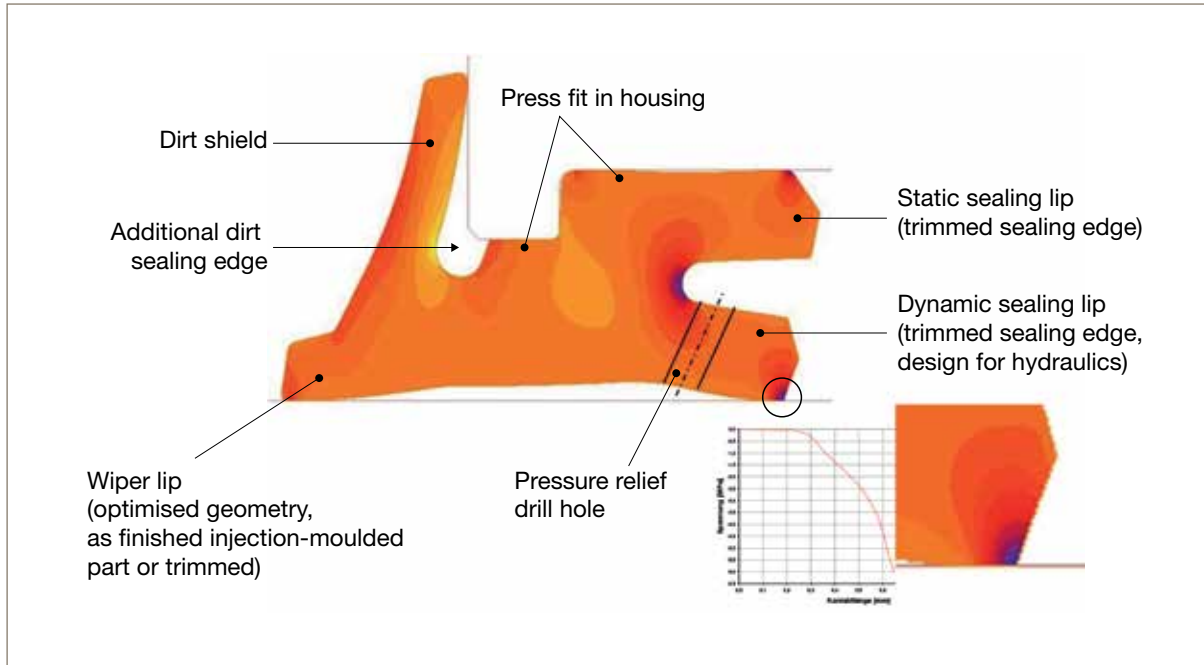
Range of application

The AV wiper can be used in all hydraulic cylinders and is particularly well-suited for

mobile applications. The moulded dirt shield on the wiper prevents the migration of moisture underneath the wiper in the groove. The common occurrence of corrosion in the groove can thus be avoided. In applications with a vertically positioned piston rod head (piston rod head pointing upwards) the dirt shield to protect the seal groove is particularly effective. Water running down the piston rod is diverted and does not enter the wiper groove. Due to the press fit in the housing and the pressure relief drill hole the risk of the wiper being pushed out of the cylinder housing is minimised.



Sealing system example



Product characteristics

Product benefits

- Pressure relief function with an opening towards the cylinder rod tube
 - Oil leakage remains inside the cylinder, running towards the outside when an appropriate pressure gradient exists between the wiper and the atmosphere, and is evenly distributed on the piston rod
 - The wiper cannot be pushed out of the housing
- Time-tested sealing function oriented to profile AY
 - Press fit in the housing due to overlapping – stable position
 - Compression of the sealing element oriented to profile AY
- Robust wiper lip featuring the time-tested design of the AY and AH profile ranges
- Dirt shield prevents intrusion of dirt and moisture in vertical cylinder applications
- Wide compound range available

Materials

The standard material is P5008, a Parker compound based on polyurethane with a hardness of approx. 93 Shore A. Compared to off-the-shelf polyurethane grades it is characterized by higher thermal and hydrolysis resistance and a lower compression set.

Performance data

Operating temperature	-35 to +100 °C
Sliding speed	≤ 2 m/s



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