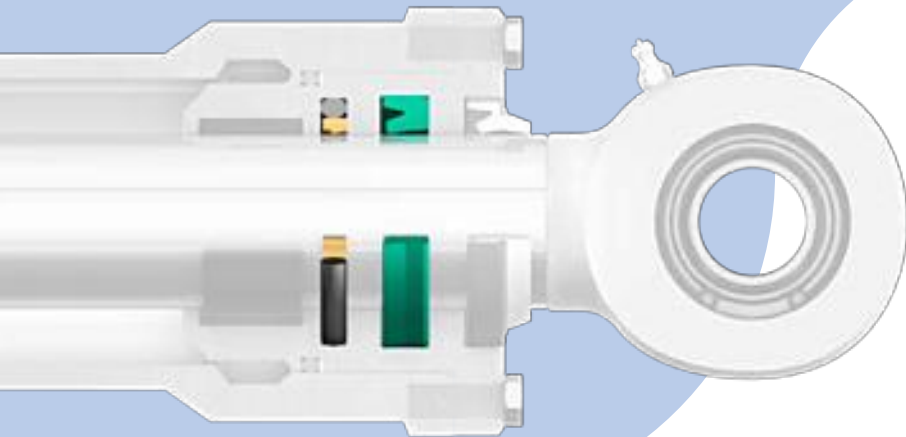


Why SKF?

Rod and buffer seals



Rod and buffer seals maintain sealing contact in a sliding motion between the cylinder head and the piston rod. A rod sealing system can consist of a rod seal and a buffer seal or a rod seal only. For heavy duty applications, rod sealing systems typically consist of a combination of both seal types, whereas the buffer seal is arranged between the rod seal and the piston in the cylinder head.

Depending on the profile and the required characteristics of its components, rod seal or buffer seals can consist of one or more materials.

Common materials used for the sealing and energizing elements of rod and buffer seals are thermoplastic polyurethane (TPU), polytetrafluorethylene (PTFE) or nitrile rubber (NBR). Common materials used for rod seal anti-extrusion rings are polyamide (PA), polyacetal (POM), or PTFE.

Common applications:

- Hydraulic cylinders used in off-highway equipment for:
 - Construction
 - Mining (mobile and stationary applications)
 - Agriculture
 - Forestry
- Industrial stationary cylinders and presses

Product features

- Rod seals provide a thin lubrication film that lubricates themselves, the wiper seals and inhibits corrosion of the piston rod surface
- Integrated anti-extrusion ring designs
- Optimized wear resistance
- Wide range of profiles, sizes and materials for a wide variety of operating conditions and applications

User benefits

- Improved sealing performance
- Extended system service life
- Increased productivity
- Reduced maintenance costs
- Increased mean time between failures (MTBF)
- Optimized design and development of fluid sealing systems for custom applications



Profile overview

Profile	Description	Profile	Description
S1S	 Single-lip U-cup profile made of polyurethane; suitable for heavy duty applications	DZR	 Nitrile rubber primary sealing ring, polyurethane secondary sealing ring, integrated triangular polyamide anti-extrusion ring; improved gap extrusion resistance; suitable for heavy duty applications and extreme pressures
ZBR	 Double lip U-cup profile made of polyurethane; suitable for heavy duty applications	RBB	 Buffer seal with polyurethane sealing ring, integrated anti-extrusion ring; designed to vent pressure back to system side; improved gap extrusion resistance at abrupt pressure peaks; fits narrow grooves; for heavy duty applications
SIL	 Double lip U-cup profile made of polyurethane; suitable for low temperatures and light to medium duty applications	S9B	 Nitrile rubber O-ring energizer, PTFE slide ring; also available with polyurethane slide ring to improve wear resistance and ease installation;
PTB	 Polyurethane U-cup profile with incorporated nitrile rubber X-ring, which provides good performance even at low pressure and temperature;	RSB	 Buffer seal with PTFE slide ring, nitrile rubber energizer; patented and improved design to reduce pressure peaks acting on the rod seal and vent pressure back to system side; improved gap extrusion resistance at abrupt pressure peaks; for heavy duty applications
STD	 Polyurethane U-cup profile with incorporated nitrile rubber X-ring, which provides good performance even at low pressure and temperature; fits narrow housings		
DZ	 Nitrile rubber primary sealing ring, polyurethane secondary sealing ring; low friction; suitable for heavy duty applications		

More rod and buffer seals

The rod and buffer seals listed above represent the preferred profiles available in common sizes. SKF supplies many additional sizes and profiles. SKF can manufacture a wide variety of rod and buffer seal profiles with different materials and sizes both moulded and with its industry-leading SKF SEAL JET production system.

For additional information about these profiles or if the application requires a solution different than what is shown here, contact SKF.

SKF can provide customized sealing solutions for the toughest application conditions.

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