

MPV-160X139X8.1

Heavy duty rubber-energized polyurethane piston seal

MPV seals are metric sized, double-acting piston seals with a polyurethane slide ring and a rectangular nitrile rubber energizer. The wear-resistant slide ring has a profiled sealing surface, optimized to reduce friction and resist gap extrusion. Notches in the slide ring edges enable rapid pressurization of the seal to react quickly to changes in pressure and direction. These profiles can usually be installed without special equipment.

- Premium grade sealing solution
- Suitable for medium to heavy duty applications
- Available in metric sizes
- Fit seal housings in accordance with ISO 7425-1 for some sizes
- If not in stock alternatives can be produced by SKF SEAL JET systems

Overview

Dimensions

Cylinder bore diameter	160 mm
Piston groove diameter	139 mm
Piston groove width	8.1 mm

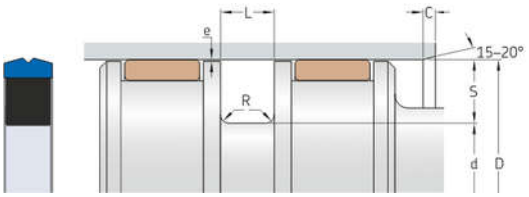
Performance

Pressure limit, maximum	40 N/mm

Properties

Compound 2	Nitrile Rubber (NBR N80/198)
Design	MPV
Primary sealing element	Polyurethane (X-ECOPUR PS)

Technical Specification



Dimensions

D	160 mm	Cylinder bore diameter
d	139 mm	Piston groove diameter
L	8.1 mm	Piston groove width
S	10.5 mm	Radial depth
R	max. 0.9 mm	Groove radius
C	min. 6 mm	Lead-in chamfer length

Tolerances

tol D	0.1 mm	Upper limit deviation
	0 mm	Lower limit deviation
	H9	Tolerance class for cylinder bore diameter
tol d	0 mm	Upper limit deviation
	-0.1 mm	Lower limit deviation
	h9	Tolerance class for piston groove diameter
tol L	0.2 mm	Upper limit deviation
	0 mm	Lower limit deviation

Maximum extrusion gap

Reference temperature for extrusion gap		80 °C
Extrusion gap at 160 bar	e	0.7 mm
Extrusion gap at 250 bar	e	0.55 mm
Extrusion gap at 400 bar	e	0.4 mm

Pressure and speed

Pressure	max. 400 bar
Speed	max. 1 m/s



Operating temperature

T_6	max. 130 °C	Extreme upper temperature limit
T_5	max. 120 °C	Reduced performance upper temperature limit
T_4	max. 110 °C	Upper operating temperature limit
T_3	min. -20 °C	Lower operating temperature limit
T_2	min. -30 °C	Reduced performance lower temperature limit
T_1	min. -40 °C	Extreme lower temperature limit

Maximum values of application parameters (e.g. pressure, speed, temperature, e-gap) should not be applied continuously nor simultaneously.

Materials

Primary sealing element	Polyurethane (X-ECOPUR PS)
Additional element	Nitrile Rubber (NBR N80/198)

Compliance with standard

In accordance with	ISO 7425-1

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