

MPV-120X99X8.1

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	120 mm
Piston groove diameter	99 mm
Piston groove width	8.1 mm

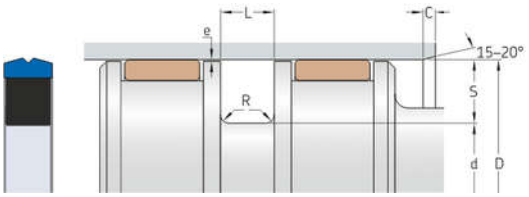
Performance

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	120 mm	Cylinder bore diameter
d	99 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	0.087 mm	Upper limit deviation
	0 mm	Lower limit deviation
	H9	Tolerance class for cylinder bore diameter
tol d	0 mm	Upper limit deviation
	-0.087 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)

Terms and conditions

By accessing and using this website / app owned and published by AB SKF (publ.) (556007-3495 · Gothenburg) ("SKF"), you agree to the following terms and conditions:

Warranty Disclaimer and Limitation of Liability

Although every care has been taken to assure the accuracy of the information on this website / app, SKF provides this information "AS IS" and DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. You acknowledge that your use of this website / app is at your sole risk, that you assume full responsibility for all costs associated with use of this website / app, and that SKF shall not be liable for any direct, incidental, consequential, or indirect damages of any kind arising out of your access to, or use of the information or software made available on this website / app. Any warranties and representations in this website / app for SKF products or services that you purchase or use will be subject to the agreed upon terms and conditions in the contract for such product or service. Further, for non-SKF websites / apps that are referenced in our website / app or where a hyperlink appears, SKF makes no warranties concerning the accuracy or reliability of the information in these websites / apps and assumes no responsibility for material created or published by third parties contained therein. In addition, SKF does not warrant that this website / app or these other linked websites / apps are free from viruses or other harmful elements.

Copyright

Copyright in this website / app copyright of the information and software made available on this website / app rest with SKF or its licensors. All rights are reserved. All licensed material will reference the licensor that has granted SKF the right to use the material. The information and software made available on this website / app may not be reproduced, duplicated, copied, transferred, distributed, stored, modified, downloaded or otherwise exploited for any commercial use without the prior written approval of SKF. However, it may be reproduced, stored and downloaded for use by individuals without prior written approval of SKF. Under no circumstances may this information or software be supplied to third parties.
This website /app includes certain images used under license from Shutterstock, Inc.

Trademarks and Patents

All trademarks, brand names, and corporate logos displayed on the website / app are the property of SKF or its licensors, and may not be used in any way without prior written approval by SKF. All licensed trademarks published on this website / app reference the licensor that has granted SKF the right to use the trademark. Access to this website / app does not grant to the user any license under any patents owned by or licensed to SKF.

Changes

SKF reserves the right to make changes or additions to this website / app at any time.