# LPV 50X39X4.2




## Rubber-energized polyurethane piston seal

LPV seals are metric sized, double-acting piston seals with a polyurethane slide ring and a nitrile rubber O-ring energizer. 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.

- Cost-effective sealing solution
- Suitable for light to medium 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 | 50 mm |
| Piston groove diameter | 39 mm |
| Piston groove width | 4.2 mm |

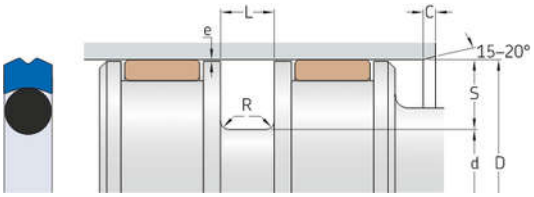
### Performance

| | |
|---|---|
| Pressure limit, maximum | 25 N/mm |

### Properties

| | |
|---|---|
| Compound 2 | Nitrile Rubber (NBR N70/6052) |
| Design | LPV |
| Primary sealing element | Polyurethane (ECOPUR-PT 54D) |

# Technical Specification




## Dimensions

| | | |
|---|---|---|
| D | 50 mm | Cylinder bore diameter |
| d | 39 mm | Piston groove diameter |
| L | 4.2 mm | Piston groove width |
| S | 5.5 mm | Radial depth |
| R | max. 0.5 mm | Groove radius |
| C | min. 4.5 mm | Lead-in chamfer length |

## Tolerances

| | | |
|---|---|---|
| tol D | 0.062 mm | Upper limit deviation |
| | 0 mm | Lower limit deviation |
| | H9 | Tolerance class for cylinder bore diameter |
| tol d | 0 mm | Upper limit deviation |
| | -0.062 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 | 0.4 mm |
| Extrusion gap at 250 bar | e | 0.25 mm |

## Pressure and speed

| | |
|---|---|
| Pressure | max. 250 bar |
| Speed | max. 0.5 m/s |




## Operating temperature

| | | |
|---|---|---|
| $T_6$ | max. 120 °C | Extreme upper temperature limit |
| $T_5$ | max. 110 °C | Reduced performance upper temperature limit |
| $T_4$ | max. 100 °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 (ECOPUR-PT 54D) |
| Additional element | Nitrile Rubber (NBR N70/6052) |

## Compliance with standard

| | |
|---|---|
| In accordance with | ISO 7425-1 |

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