



PISTON SEALING SET SERIES ZW

Parker Hannifin India Pvt Ltd

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ENGINEERING YOUR SUCCESS.

PISTON SEALING SET SERIES ZW

Reliable Solutions:

The ZW double-acting piston sealing set consists of an elastomer sealing component, two anti-extrusion and two angular guide rings. By combining the sealing and guiding functions, it offers a cost-effective all-in-one solution for medium-duty standard cylinders.

- Good wear resistance.
- Assembly on one-part piston is possible.
- Installation in closed and undercut housings.

Advanced Material:

Seal Material:

- **Rubber Component:** Highly wear resistant NBR compound NA803-80.
- **Anti Extrusion Ring:** High-Strength, Wear Optimized Polyester elastomer W5035-I
- **Angular Guide Rings:** Thermoplastic for High wear resistance even with increase temperature W5301-I

Range of application:

Sealing set for double-acting pistons in presses, control cylinders, back-up and actuating cylinders for industrial and mobile hydraulics.

- Working pressure: ≤ 400 bar
- Working temperature: -35 to $+100^{\circ}\text{C}$
- HFA-, HFB- and HFC-fluids up to max. 60°C
- Surface speed: 0.5 m/s



NA803 Typical physical Properties

	NA803-80
Hardness Shore A Points	79
Tensile strength at Break Mpa	16
Ultimate Elongation %	203
Compression set % ,22 Hrs 100°C	18
Volume change in IRM 903 oil %,72 Hrs 100°C	+5
Service temperature	-40 to $+1000\text{C}$

W5301-I Typical physical Properties

	W5301-I
Density	1.54
Stress at break MPA	115
Strain at break %	2.5
Charpy impact strength (23°C) KJ/m2	7
Charpy impact strength (-30°C) KJ/m2	7

W5035-I Typical physical Properties

	W5035-I
Hardness (3 sec) Shore D	55
Density, g/cm ³ 1.18	1.18
Flexural modulus (10mm/Min), MPa	250
Tensile strength (50mm/min), Mpa	31.5
Elongation at break (50mm/min), %	550

Proven Performance:

The performance of Parker's ZW Piston seal set can be well displayed in the following test designed to capture a rigorous duty cycle often seen in harsh applications with Pressure/Temperature extremes and a high speed and cycle count.

We tested Parker ZW Piston sealing set in our test rig with well-established conditions to evaluate its performance in field level.

Test Parameters

Parameters	
Stroke Length	120mm
Speed	0.5 m/s
Test Duration	100,000

After Every 20,000 Stroke cyclic test

Internal Leakage pressure test	
Pressure	350 Bar
Temperature	80°C
Duration	20 mins

Pressure pulsation Test	
Pressure	350 Bar
Temperature	80°C
Duration	05 mins

Test Results
Zero Internal Leakage or Pressure drop

Seal Condition after 100,000 Cycles



Parker Hannifin India Pvt Ltd

MANUFACTURING LOCATIONS

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