

The double-acting pneumatic complete piston DR with inductive position interrogation and integrated cushioning is specifically designed to meet the requirements of modern pneumatic cylinders. The extremely slim complete piston is suitable for use in a wide range of different cylinder types and with various sensors.

The combination of all functionalities – **sealing, guiding, cushioning, interrogating** – in a single component assures easy assembly and, in addition, offers handling and logistic cost benefits.

- Due to application-optimized geometry and compounds suitable for use in oiled as well as in oil-free air (after initial lubrication on assembly).
- Use of different types of sensors (inductive) is possible.
- Cushioning buffers on the piston's front faces with integrated ventilation ducts provide for mechanical cushioning of the cylinders.
- Multi-functional element: seal, guiding and cushioning element.
- Immediate response (full pressure load) thanks to incorporated venting channels.
- Good wear resistance.
- Ideal corrosion protection thanks to complete elastomer covering.
- Smooth running due to optimum adjustment of the functional lips.
- Easy attachment to the piston rod without additional sealing elements.
- Easy installation due to integrated static sealing function.
- Excellent media resistance in case of suitable compound selection.
- Low assembly height of the complete piston enables short cylinder designs.
- Versatile complete piston for nearly all cylinder designs.

Range of application

Complete piston with end cushioning for double-acting pneumatic cylinders, provided that no excessive lateral guidance loads will occur (long strokes and buckling).

Working pressure	≤ 10 bar
Working temperature	-20 °C to +80 °C
Surface speed	≤ 1 m/s
Media	Oiled as well as oil-free compressed air (after initial lubrication during assembly).

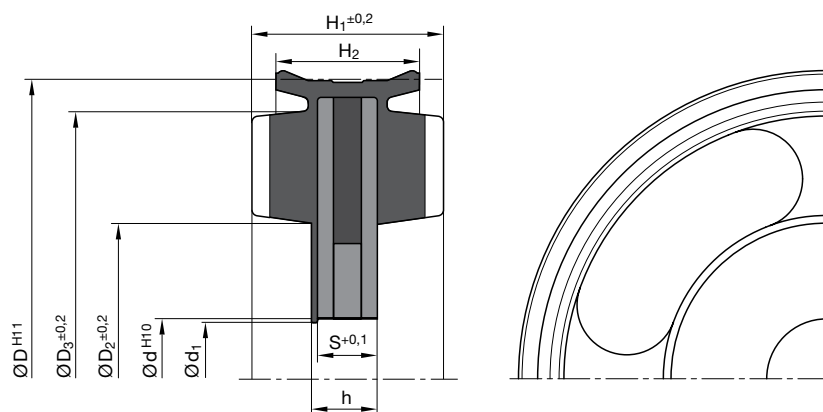
Compounds

Standard compound is an NBR-based elastomer with a hardness of approx. 70 Shore A with vulcanised metal, magnet and reinforcing discs.

Installation

The magnetic piston DR is connected to the piston rod by threading or riveting. The threaded connection should be secured against loosening. For operation in dry or oil-free air, a long-term lubricant must be used for the piston and cylinder.

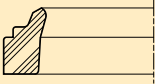
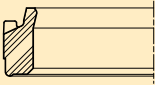
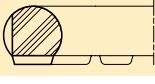
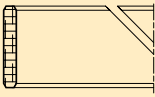

In case of special operating conditions (specific pressure loads, temperature, speed, use in water, HFA, HFB fluids etc.), please contact our consultancy service for a selection of the material and design best suiting your particular application requirements.



For surface finish, lead in chamfer and other installation dimensions see "General installation guidelines".

D	d	H ₁	H ₂	S	h	D ₂	D ₃	Order code
16	4.5	6.5	5.1	2.65	2.95	6.9	13.5	DR 1604 Z4004
20	6	7.5	6.1	3.65	3.95	10.1	17.5	DR 2006 Z4004
25	7	9	7.6	3.65	4.15	11	21.9	DR 2507 Z4004
32	8	10.9	8.7	5	5.5	15	27.9	DR 3208 Z4004
40	8	11.9	9.7	5	5.5	20	35.7	DR 4008 Z4004
50	10	13.8	11.6	6	6.5	26	45.6	DR 5010 Z4004
63	12	13.8	11.6	6	6.5	33.2	58.25	DR 6312 Z4004
80	16	15.9	13.7	7	7.5	34.8	75.4	DR 8016 Z4004
100	20	17.9	15.7	8	8.5	47	95.4	DR A020 Z4004

Further sizes on request.

Profile cross-section	Profile reference	Page
Wipers		
	A2	88
Cushioning seals		
	PP	90
	V6	93
Guiding elements		
Parker-Prädifa guiding elements		95
	F2	96
O-rings		
	V1	99