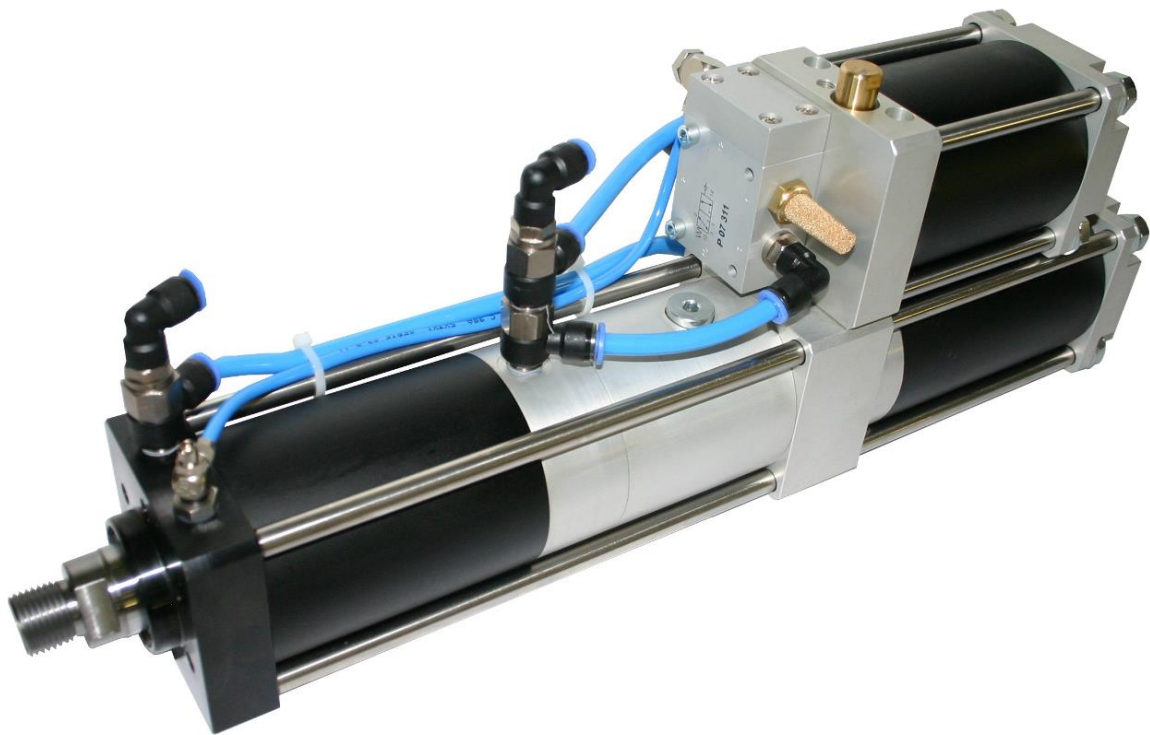


Hydropneumatic power cylinder HPPZ-S20; -S40; -S60; -S80; -S150; -S300



Our power cylinders offer the following advantages:

- Absolute air/oil separation (through use of the external actuating cylinder)
- The power stroke can operate several times per working stroke (control required)
- Automatic switching from the feed stroke to the power stroke
- High cylinder forces without use of a hydraulic unit (hydropneumatic operation)
- Install the cylinder the best way you see fit through the closed oil system (thereby creating a compact design)
- No coil springs using dual-action transmitting cylinder; this prevents any risk of the cylinder being destroyed due to the spring breaking at high stroke frequencies
- The highest degree of durability by using sealing gaskets from well-known German manufacturers
- Visible oil level indicator on the actuating cylinder
- Integrated power stroke control; this allows the cylinder to be controlled like a pneumatic cylinder via a 5/2 way valve
- High-pressure connection, measuring connection and control connection
- Bypass between the oil reserve and the pressure chamber (to prevent a vacuum from forming during the punching process)

Applications:

The power cylinder is used during

- Pressing and force fitting (by means of a greater stroke through repeated action by the power stroke)
- Resistance welding
- Punching
- Stamping
- Riveting
- Deep-drawing

Design:

The power cylinder consists primarily of high-strength anodized aluminum, or rust-free or corrosion-resistant material. Operation is virtually maintenance free; it only needs clean, dry air.

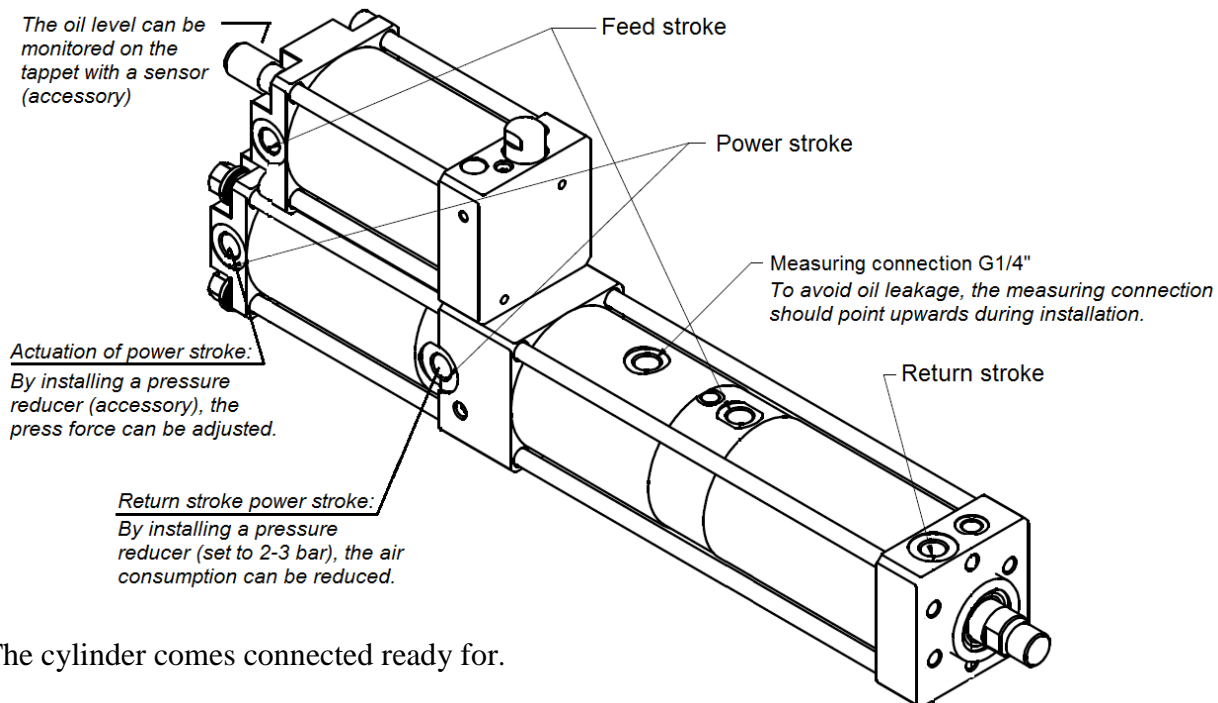
Equipment:

The power cylinder comes standard equipped with a 3/2 way valve that is counteracted through the working piston impact due to the resistance created per the dynamic pressure method. A throttle can be used to adjust the switching time. The 5/2 way valve is not included in the accessories for controlling the cylinder.

Special equipment:

- Contactless sensing of the power stroke cylinder with vibration-free electronic cylinder switches (needed for cyclically repeating the power stroke)
- Control for clocking the power stroke
- Pressure reducer for regulating the power stroke

Connection of power cylinder HPPZ-S20; -S40; -S60; -S80; -S150; -S300



The cylinder comes connected ready for.

Specification of type

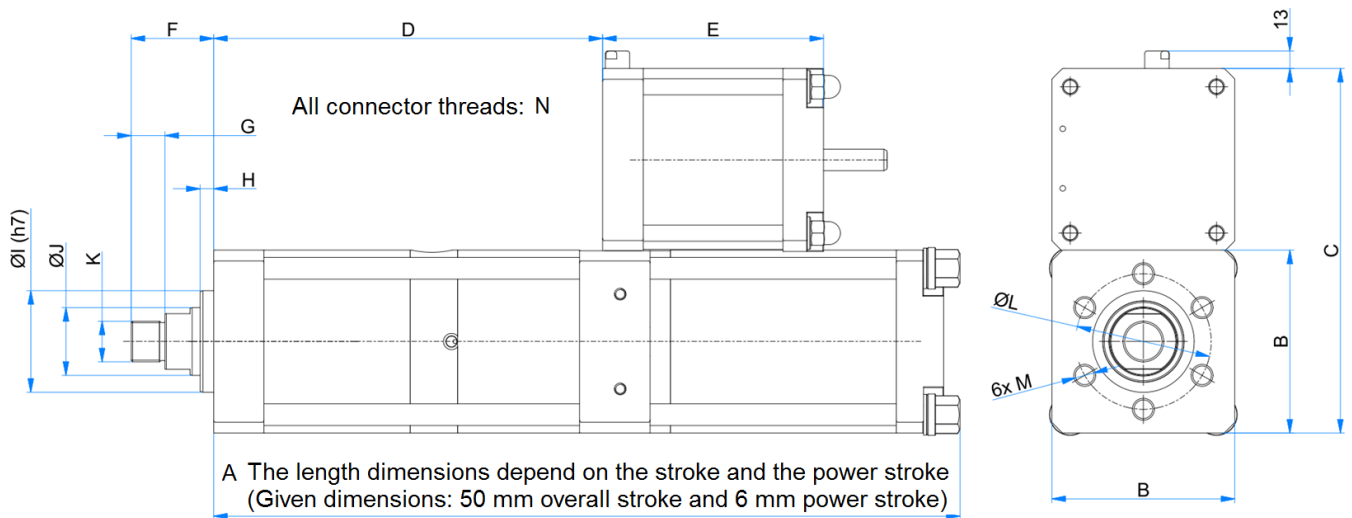
HPPZ-S_ = Type/ frame size
XXX- = Stroke
X- = Power stroke
kN = Application force

Specification of order

HPPZ-S20_100-6-18kN

→ Type: S20
Stroke: 100 mm
Power stroke: 6 mm
Application force: 18 kN at 8 bar

Powerzylinder HPPZ-S



Type	A	B	C	D	E	F	G	H	ØI (h7)	ØJ	K	ØL	M	N
S20	439	70	139	270	142	41	15	10	40	20	M16 x 1,5	54	M8 x 1,25 - 16 deep	G1/4"
S40	472	85	169	270	145	48,5	20	10	50	32	M22 x 2	64	M8 x 1,25 - 18 deep	G1/4"
S60	492	100	199	274	168	48,5	20	10	60	35	M24 x 2	78	M10 x 1,5 - 22 deep	G1/4"
S80	491	110	219	274	158	60	25	10	70	45	M30 x 2	88	M10 x 1,5 - 22 deep	G3/8"
S150	544	135	269	287	162	61	25	10	75	50	M30 x 2	100	M16 x 2 - 27 deep	G3/8"
S300	644	173	348	290	194	80	35	10	100	60	M39 x 2	132	M20 x 2,5 - 30 deep	G1/2"

The stated values are calculated figures; the degree of efficiency is 0.95.

Type	Application force		Return force		Nominal force (on power stroke)	
	6 bar	8 bar	6 bar	8 bar	6 bar	8 bar
S20	1575 N	2100 N	1507 N	2000 N	13 kN	18 kN
S40	2529 N	3370 N	2165 N	2890 N	33,7 kN	45 kN
S60	3690 N	4920 N	3235 N	4310 N	48,6 kN	64,5 kN
S80	4590 N	6120 N	3756 N	5000 N	60 kN	80 kN
S150	7240 N	9650 N	6180 N	8240 N	117 kN	156 kN
S300	11.940 N	15.920 N	10.365 N	13.820 N	300 kN	400 kN