

Pneumatic-hydraulic boosters are used for generating high force using standard air pressure. They are designed to save energy, time, space and money in wide variety of applications. These abilities and benefits of power cylinders make them ideal component in many applications, you can use them for such operation as marking, forming, punching riveting, shearing, steering, straightening, and so on.

For more information, please visit our web page on [www.sappv.cz](http://www.sappv.cz).

Working pressure	0.3 to 0.8 MPa
Temp. range	-10°C to +60°C
Working medium	modified compressed air
Installation	vertical (piston rod down)

Type	1T	3T	5T	8T	10T
Tube inside diameter [mm]	50	70	80	100	125
Piston rod diameter [mm]	30	40	50	60	70
Auxiliary stroke / working stroke [mm] *	50, 75, 100, 150, 200 / 5, 10, 15, 20				

\*) See table below for allowed combination of auxiliary and working strokes

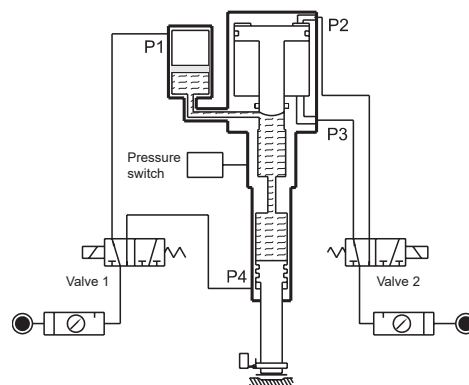
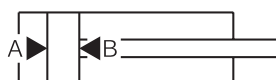
## Order codes

**P MHPD 3T 100 — 10 Z**

Power cylinder		Type		Total stroke		Working stroke		Piston rod end	
MHPD	pneumatic-hydraulic	1T	diameter 50 mm	50	50 mm	5	5 mm		hole
		3T	diameter 70 mm	75	75 mm	10	10 mm	Z	male thread
		5T	diameter 80 mm	100	100 mm	15	15 mm		
		8T	diameter 100 mm	125	125 mm	20	20 mm		
		10T	diameter 125 mm	150	150 mm				
				200	200 mm				

## Theoretic force [N]

Type		1T	3T	5T	8T	10T	
Operating pressure [MPa]	0.3	A	7 216	18 473	30 054	46 959	67 630
		B	377	778	919	1 508	2 527
	0.4	A	9 621	24 630	40 072	62 612	90 174
		B	503	1 037	1 225	2 011	3 369
	0.5	A	12 026	30 788	50 090	78 265	112 717
		B	628	1 296	1 532	2 513	4 212
	0.6	A	14 432	36 945	60 108	93 918	135 261
		B	754	1 555	1 838	3 016	5 054
	0.7	A	16 837	43 103	70 126	109 571	157 804
		B	880	1 814	2 144	3 519	5 896
	0.8	A	19 242	49 260	80 143	125 224	180 347
		B	1 005	2 073	2 450	4 021	6 739



When the air is charged from the port P1, the oil in the tank will forward the hydraulic cylinder quickly. The pressure is the same as the air pressure, but the inflow of oil is large in volume. When the air is charged from the port P2, a ram will advance, the highly pressured fluid will come in to the hydraulic cylinder which will be forwarded by large thrust. When the air is send into port P4 and P3, the hydraulic cylinder is swiftly reversed, and at the same time the ram goes back.

## Working strokes [mm]

Type	Total stroke [mm]	1T	3T	5T	8T	10T
MHPD	50	5,10,15	5,10	5,10	5,10	5,10,15
	75	5,10,15,20	5,10,15	5,10,15	5,10,15	5,10,15
	100	5,10,15,20	5,10,15	5,10,15	5,10,15	5,10,15,20
	125	5,10,15,20	10,15	5,10,15	10,15	10,15,20
	150	10,15,20	10,15,20	10,15,20	10,15,20	10,15,20
	200	10,15,20	10,15,20	10,15,20	10,15,20	10,15,20

Type	Total stroke [mm]	1T	3T	5T	8T	10T
MHPD ... Z	50	5,10,15,20	5,10	5,10,15	5,10,15	5,10,15
	75	5,10,15,20	5,10,15	5,10,15	5,10,15	5,10,15,20
	100	5,10,15,20	5,10,15,20	5,10,15	5,10,15,20	5,10,15,20
	125	5,10,15,20	10,15,20	5,10,15,20	10,15,20	10,15,20
	150	10,15,20	10,15,20	10,15,20	10,15,20	10,15,20
	200	10,15,20	10,15,20	10,15,20	10,15,20	10,15,20