

Pressure boosters

Pressure boosters

Information

Pressure boosters provide an output pressure higher than the available system pressure applied on the entrance, at the expense of a loss of air flow (as expressed by the ideal gas law $pV=nRT$).

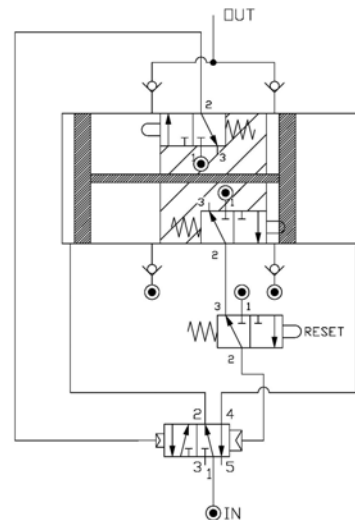
Function

Mechanically the pressure booster is composed of two pistons connected between them that compress alternately the inlet air, the pistons are controlled by a 5/2 pneumatic valve, in turn controlled by two limit switches.

The pressure boosters start automatically as soon as pressure is applied to the input and the output pressure has not yet reached twice the input pressure.

The outlet pressure can possibly be adjusted via a pressure regulator mounted at the inlet.

When no air is drawn, the multiplier will automatically stop as soon as the pressure is multiplied. The presence of non-return valves integrated allows to keep the pressure multiplied even in the absence of inlet pressure.



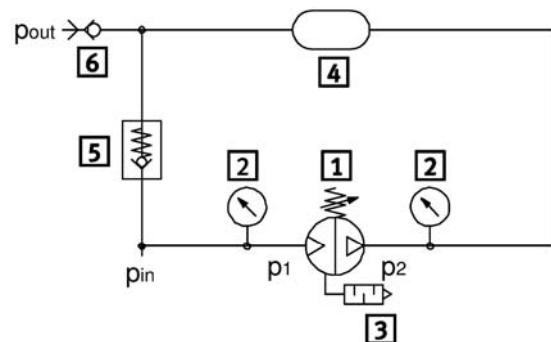
Connection to the compressed air network

In case of direct connection of the booster in a system it should be provided a 3/2 valve to open and close the circuit.

We recommend you always to use an air tank (4) the output of the multiplier to avoid pulse.

An optional non-return valve (5) can be useful to speed up the initial filling of the system.

The pressure boosters are not designed to operate in place of a compressor, but to provide momentary pressure increases on applications that require greater pneumatic force.



Maintenance

The booster has an average life of 20 million cycles, depending on the conditions of use, a high degree of filtration (<50 microns) helps to increase the life of the component. We recommend using suitable filters to protect from dust the exhaust ports.

Replacement kit for the seals are available on request.



Codification key

Type

- UM11- (standard)
- UM21- (with pressure regulator)

Bore	Compression ratio
040	RC1.2
063	RC1.3 (only Ø40)
100	RC1.4 (only Ø40)

Bore (mm):	40	63	100
Connections:	G1/8"	G3/8"	G1/2"
Nominal bore (mm):	5	7	12
Weight (Kg):	1.6	2.8	9.7

Technical data

Fluid: filtered air, lubricated* or (preferred) non lubricated.

Inlet pressure: Max 10 bar.

Ambient temperature: -20°C ÷ +50°C.

Mounting position: it is suggested mounting with the inlet connection above.

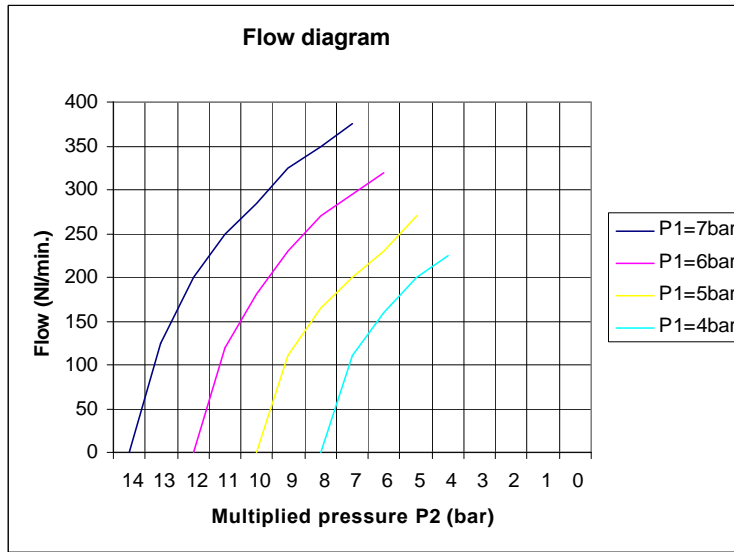
***ATTENTION**: all the sliding elements and the seals are lubricated with special high performance grease. If you began to lubricate with oil mist, you will have to lubricate continuously.

Materials

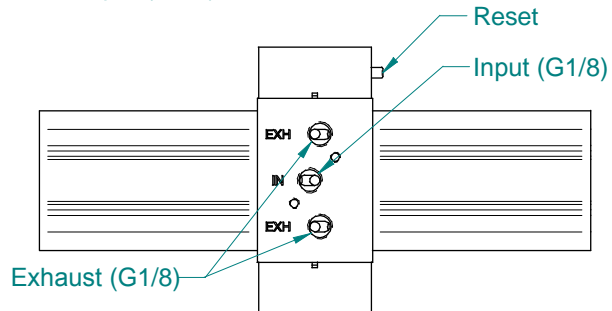
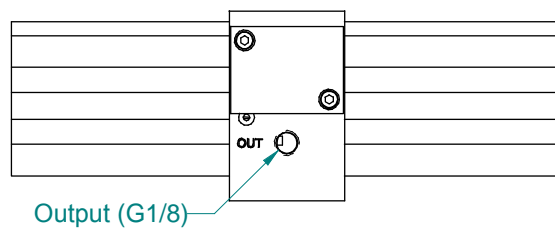
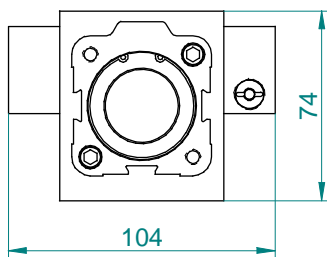
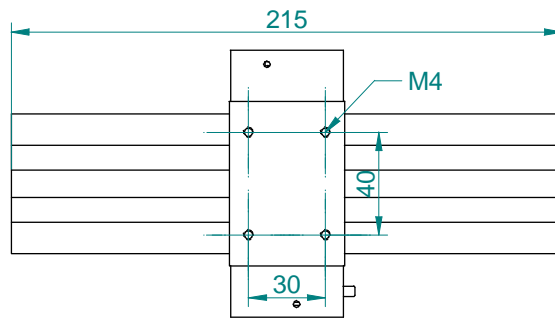
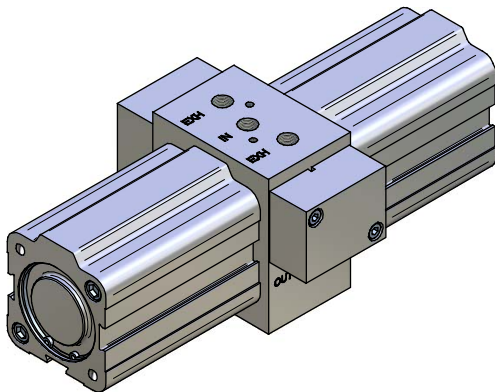
Description	Material	Treatment
Body, end-caps	Aluminium 2011	Anodized
Pistons	Aluminium 2011	
Rod	Chromated steel	
Fixing screws	Steel	Galvanized
Spools	Aluminium 2011 / OT58	
Seals	NBR - Polyurethane	

Pressure booster Ø40 (2-1)

Flow diagram

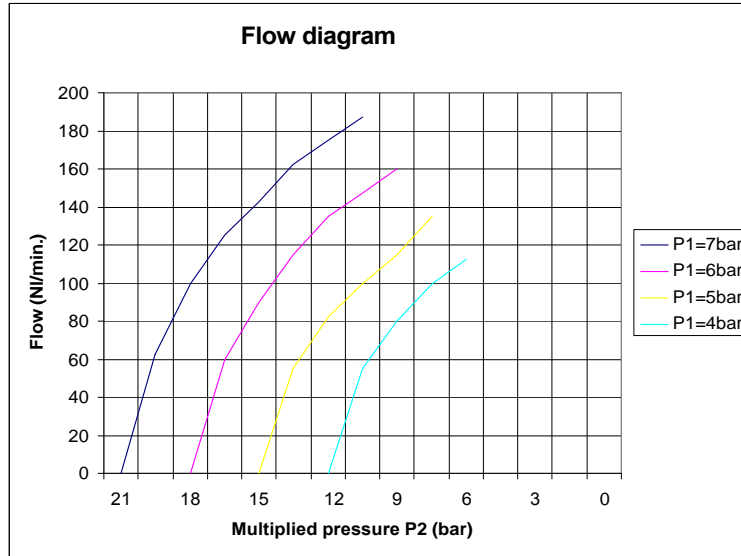


Dimensions

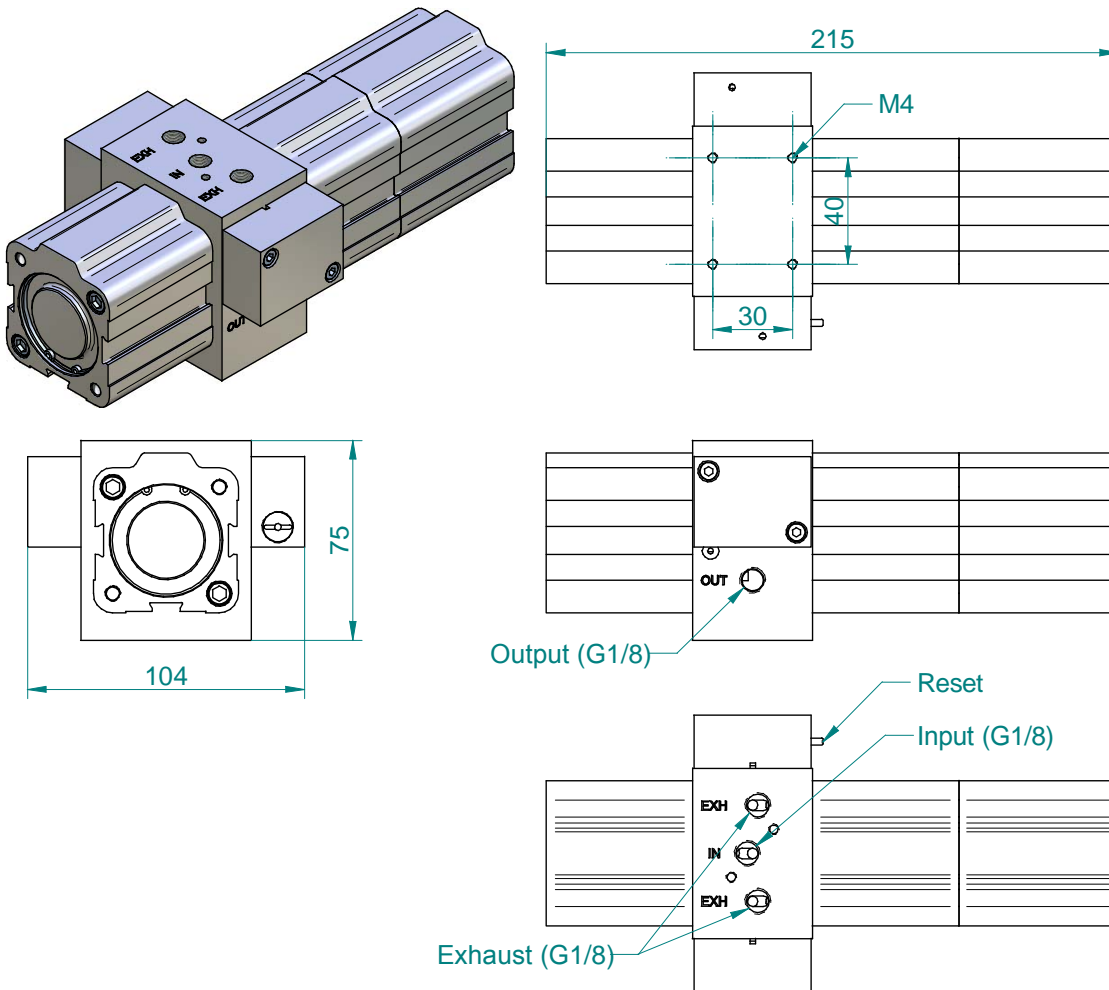


Pressure booster Ø40 (3-1)

Flow diagram

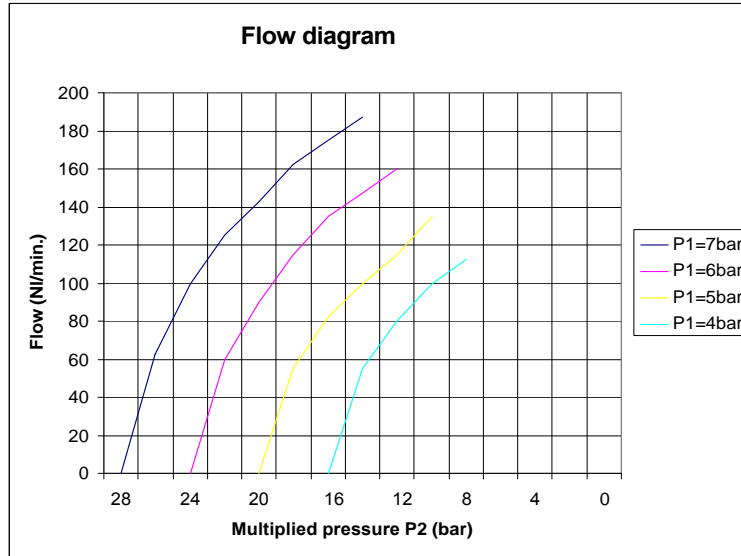


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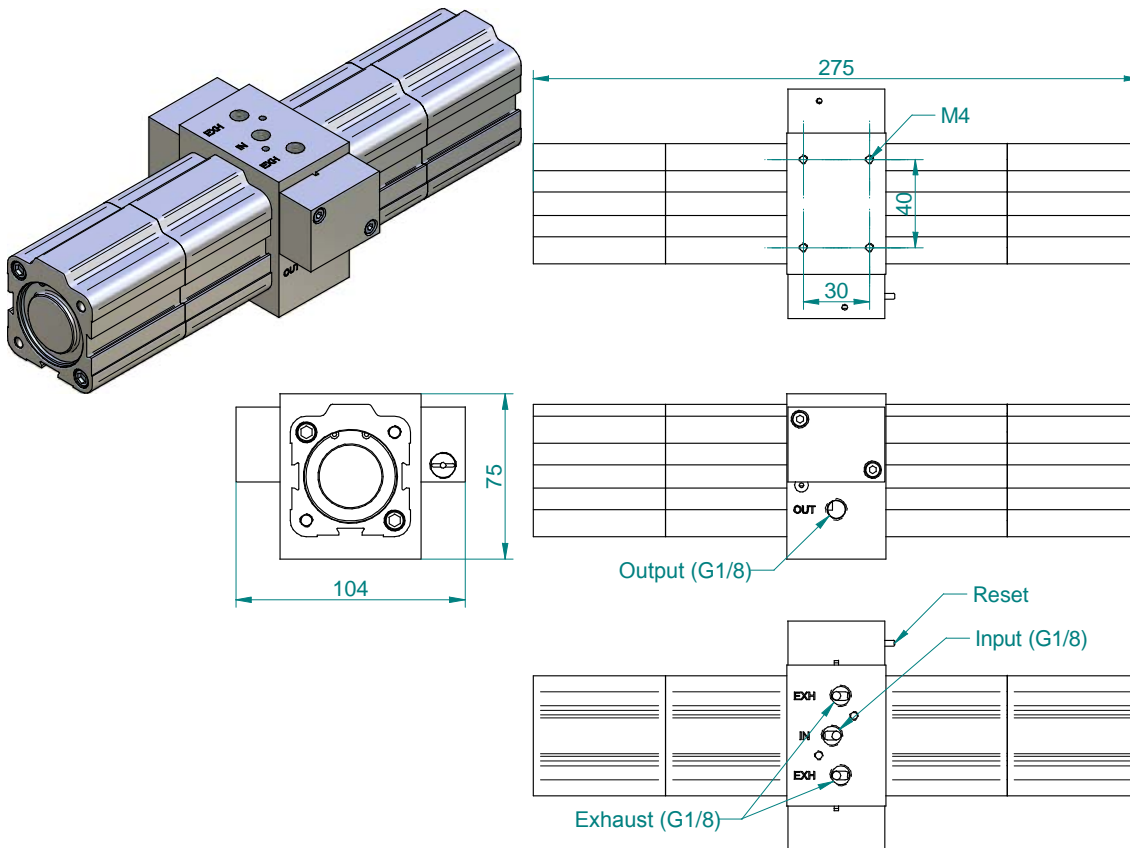


Pressure booster Ø40 (4-1)

Flow diagram

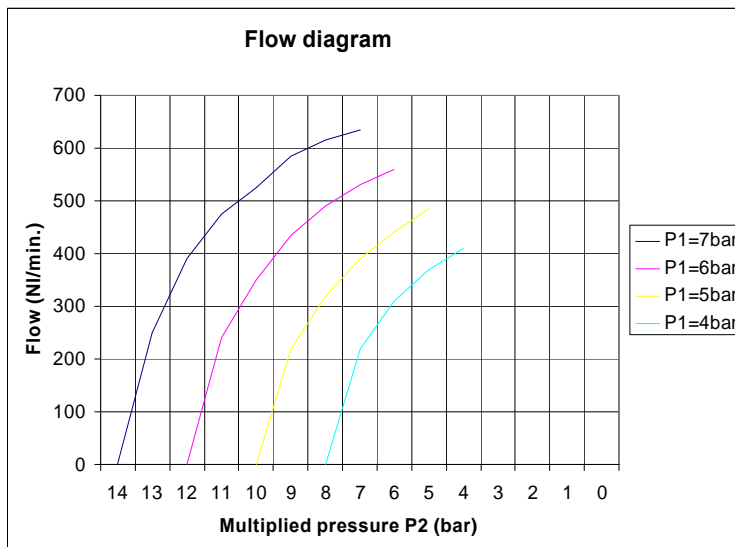


Dimensions

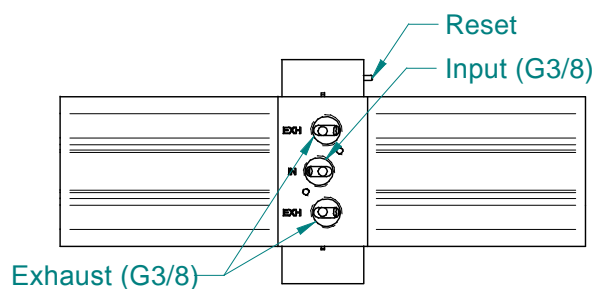
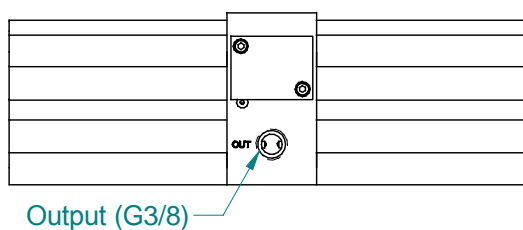
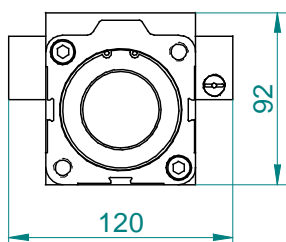
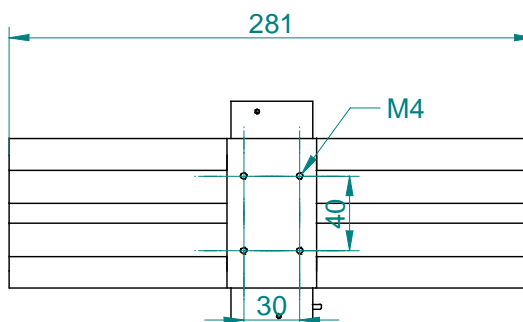
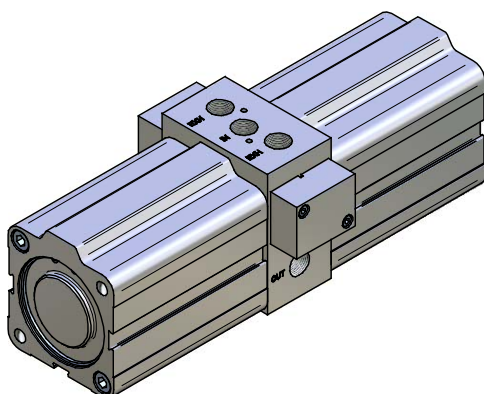


Pressure booster Ø63

Flow diagram

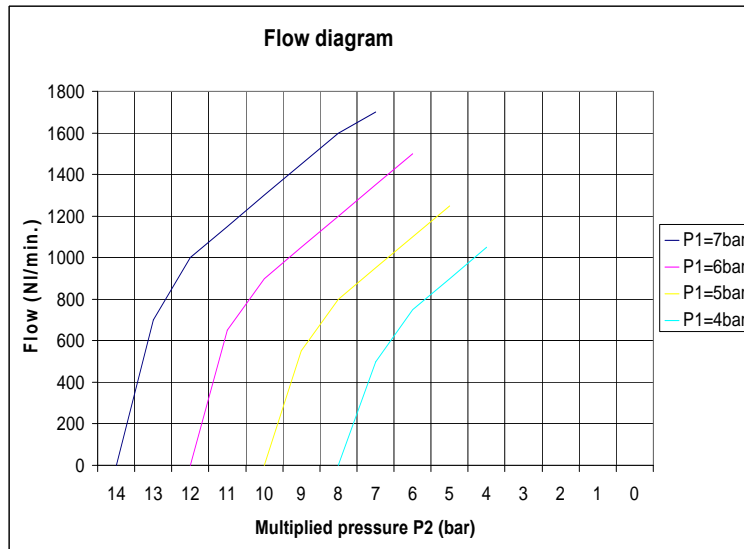


Dimensions



Pressure booster Ø100

Flow diagram



Dimensions

