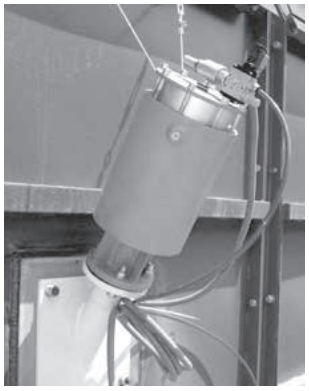
PNEUMATIC SHAKE DEVICES
AIR CANNON



Air cannon is used to give support to free-flow of material in bunkers, hoppers, silos, etc. The volume of reservoir of air cannon is intensely expanded into the area with blocked material. This shot will release the material, which will flow by standard way.

Working pressure	0.6 MPa
Min. pressure	0.2 MPa
Max. pressure	0.6 MPa
Temp. range	-25°C to +90°C
Working medium	modified compressed air

Size - volume	2 litres	8 litres
Connections	G3/8“	G1/2“
Weight [kg]	10	33
Min. tightening torque [Nm]	25	100
Recommended orifice of air supply [mm]	8	10
Recommended flow capacity [Nl/min]	600	1100
Max. number of shots per minute	10	8
Flange connection	DN20 PN6	DN50 PN16

Order codes

Size - volume	Order codes
Air cannon, volume 2 litres	4500 2608 4406 0002
Air cannon, volume 8 litres	4500 2608 4406 0001

Installation and operation notes

We recommend to fix fixing screws with Loctite 242E or similar adhesive.
There is necessary to check right tightening of fixing screws regularly to prevent their releasing.
The quick exhaust valve is included in delivery, compressed air should be connected to the quick exhaust valve.
The air cannon must be fixed by restraining cable to the vessel.
Installation must be done accordingly to the users manual.

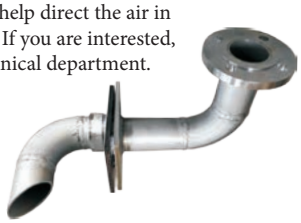
Warning

Detailed information regarding the connection, installation and operation of the cannon is given in the instruction manual of the device. You can find this manual at www.sappv.cz/r/2-70, or you can request it from the sales or technical department of Stránský a Petržík.

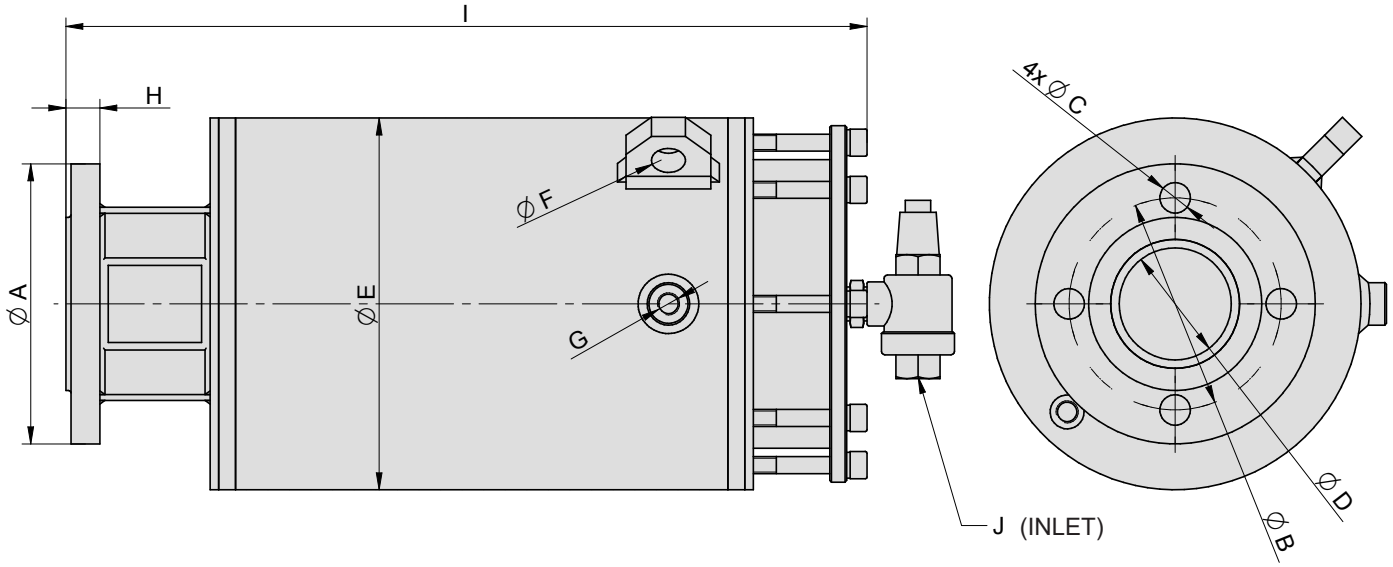
Construction / materials

- body, end cap: steel, zinc plated
- tube: extruded dural tube
- piston: plastic
- sealing: NBR

As an accessory to the cannon, it is possible to supply a force blowing nozzle with the possibility of adjusting the angle of the spiral air flow, which will help direct the air in the required direction. If you are interested, please contact our technical department.

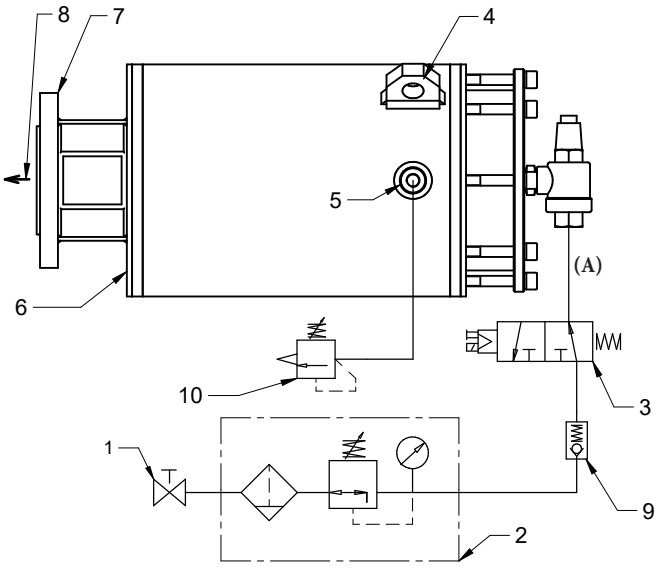


Dimensions



Volume	A	B	C	D	E	F	G	H	I	J
2 litres	90	65	11	20	133	12	G1/4“	14	367	G3/8“
8 litres	165	125	18	66	219	20	G1/4“	20	472	G1/2“

Recommended connection



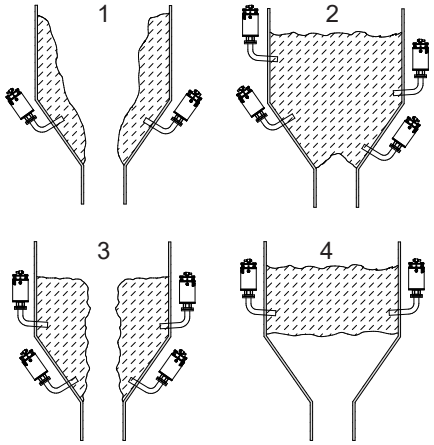
The 3/2 valve is suitable for air cannon control. We recommend to mount the valve outside, where the air cannon's shocks couldn't reach the valve.

Position	Description
1*	shutting-off valve
2*	filter with pressure regulator
3*	3/2 normally open valve
4	shackle for installing restraining cable
5	plug G1/4“ - for example for gauge
6	draining screw
7	flange connection
8	direction of air shot
9*	reverse throttle valve
10*	safety valve

Items marked by asterisk (*) are optional - they have to be ordered separately.

(A) We recommend consulting the choice of length and diameter of the marked parts of the circuit with our technical department.

Mounting examples



There are four main problems associated with interruption of free flow of bulk solids in bunkers, hoppers, silos transfer chutes etc., as shown in Figs. 1, 2, 3 and 4. Please note these illustrations are for general information only, there being various other blocking scenarios which occur

1) Clinging
   Material deposits clinging to the sides of hoppers, reducing free-flow and creating the possibility of contamination of new material if clinging deposits break free from sides of vessel.
2) Bridging
   Blockage at the outlet of the storage hopper resulting in complete loss of production. This is a common fault where fine materials are being processed and the moisture content is higher than normal.
3) Ratholing
   An extreme form of clinging, reducing free-flow and requiring regular topping up of small quantities of material. Loss of production will be the result of this condition and the solution, i.e., high pressure lancing vibration etc., can result in huge lumps of material breaking away and blocking the outlet.
4) Arching
   Type of bridging occurring at a high level within the hopper. This condition creates a dangerous situation for operators when trying to clear the blockage and also a possible maintenance /damage issue for the works engineer and the high costs resulting from the loss of production.