

COMPONENTS FOR PNEUMATIC AUTOMATION



**PNEUMAX NEWS 53  
VALVES AND SOLENOID VALVES  
FOR COMPRESSED AIR  
AND VACUUM WITH BODY  
IN TECNOPOLYMER G1”**





**General**

This new range of G1" pilot and solenoid operated poppet valves represents an evolution of the current popular Zama series and of the series T772-T773 (G1/2" - 3/4").

Also for this series the main feature is the tecnopolimer material used to mould most of its components. The use of this materiel results in a versatile, lightweight and economical valve.

The new series also has other technical and functional enhancements over the existing range. Firstly, the traditional piston lip seal has been replaced with a rolling diaphragm, thereby eliminating frictional wear and tear to this seal. The new series (with the exception of certain vacuum models) also features a seal, which separates port 3 from the piston head. The inclusion of this seal has enhanced the valve's performance and allows the valve to be used as normally open (a configuration not possible in the Zama series).

Solenoid operated valves (both internal and external pilot versions) are fitted with a quick exhaust unit, which reduces the return stroke operating time by 80%. The bulk of the valves in this series use the MP type operator, the exception being internally piloted vacuum models, which use the MV operator. These operators differ from the M2 type in that they have self-tapping mounting screws for use in plastics.

Bistable versions are also available, both for air or for vacuum. These valves are fitted with a 3/2 sol-sol valve (instead of the standard pilot valve) fitted with two 15mm 24V Dc microvalves (N331.0A).

**Ordering codes refer to solenoid valves with MP or MV assembled on them.**

**Coils are not included and have to be ordered separately (series 300, Section 1, General Catalogue), with the exception of the bistable versions which already include 24V Dc Coils (N331.0A).**

Coils  homologated are also available. (series 300, Section 1, General Catalogue).

**Construction characteristics**

body, operator and end cover	High resistance tecnopolymer
seals and poppets	oil resistant rubber (NBR)
piston and shaft	acetylic resin
springs	AISI 302 stainless steel
diaphragm	oil resistant rubber coated (NBR)

**Use and mainutenance**

Under correct working conditions the average life of this series of valves is 10 - 15 million cycles. Lubrication is not required but correct air filtration is recommended.

It is also important to ensure that the application parameters are in line with those indicated in the technical specification of this product: pressure, temperature....

The valves, thanks to their construction design, do not require maintenance involving replacement of parts; when necessary it is possible to carefully clean and remove any dirt that might have accumulated internally.

When using the internal pilot version, both for air or vacuum, it is necessary to ensure that the downstream flow rate is lower than the inlet flow rate. Should the flow requirement match or exceed the inlet flow rate the pressure / vacuum inside the valve would drop below the minimum value necessary to actuate the pilot valve. This is a normal scenario on poppet valves as without pilot, not having a closed centre position, the valve would exhaust from port 3.

For applications where downstream flow rate requirements can match or exceed inlet flow rate use externally piloted valves.

**Air valve port layout:**

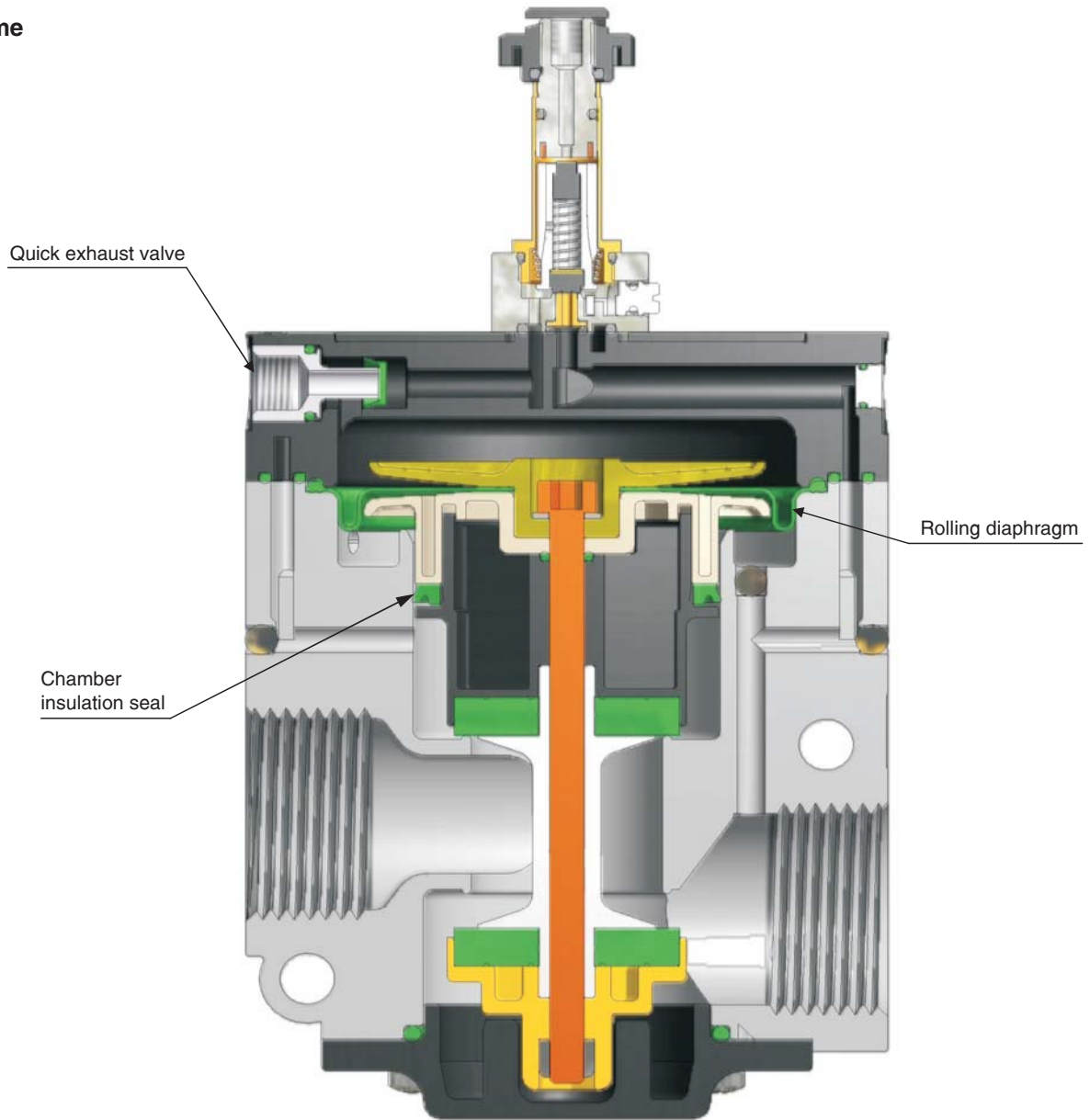
- NORMALLY CLOSED:
  - 1 = LINE IN
  - 2 = CONSUMPTION
  - 3 = EXHAUST
  
- NORMALLY OPEN:
  - 1 = EXHAUST
  - 2 = CONSUMPTION
  - 3 = LINE IN

**Vacuum valve port layout:**

- NORMALLY CLOSED INTERNAL PILOT
  - 1 = EXHAUST
- NORMALLY OPEN (SERVOASSISTED) EXTERNAL PILOT
  - 2 = CONSUMPTION
  - 3 = PUMP
  
- NORMALLY OPEN INTERNAL PILOT
  - 1 = PUMP
- NORMALLY CLOSED (SERVOASSISTED) EXTERNAL PILOT
  - 2 = CONSUMPTION
  - 3 = EXHAUST

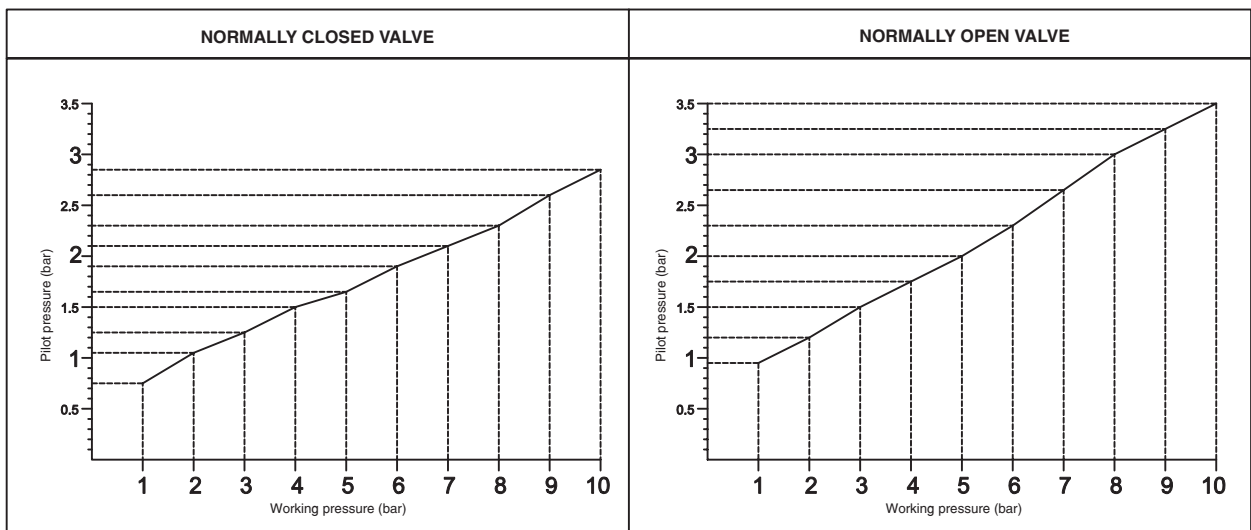
Scheme

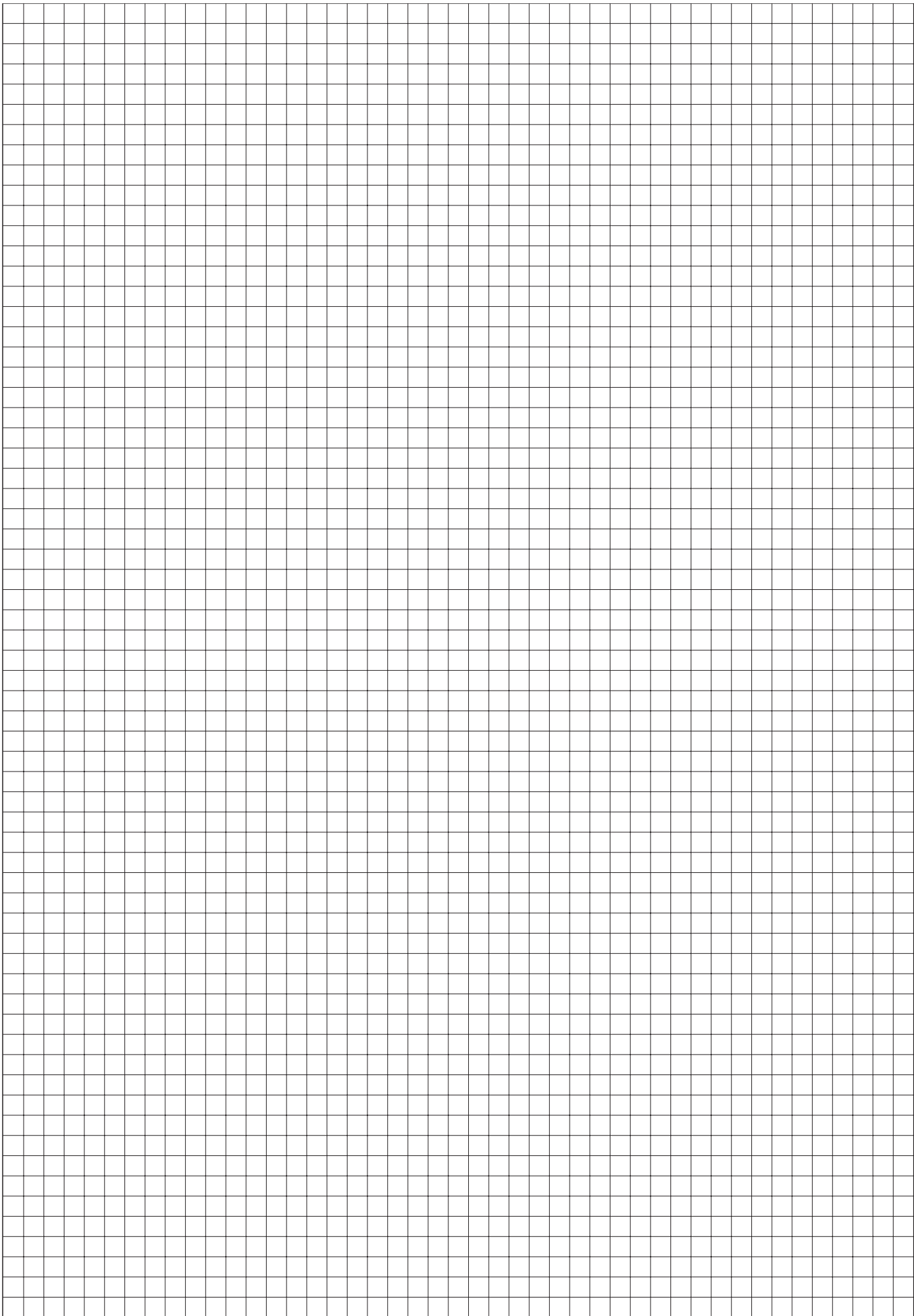
3/2



Pressure diagram

**MINIMUM WORKING PRESSURE DIAGRAM**  
PNEUMATIC/SRING AND EXTERNAL SOLENOID PILOT VERSION



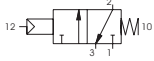


**Valve  
Pneumatic spring**

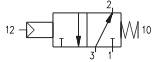
Ordering code

**T771.32.11.1**

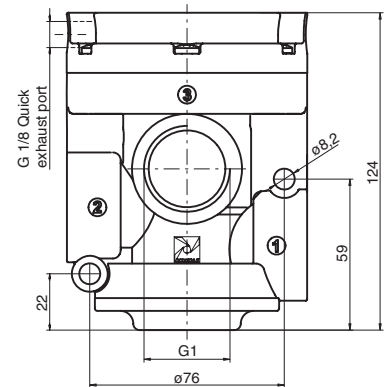
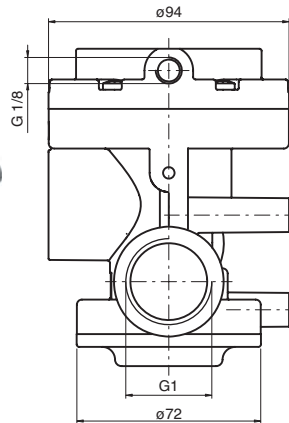
*Normally closed*



*Normally open*



Weight gr. 480

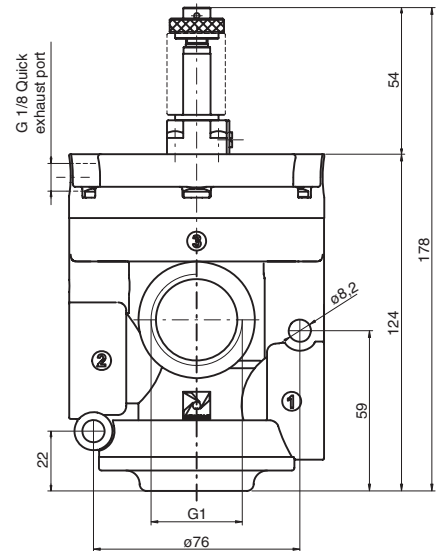
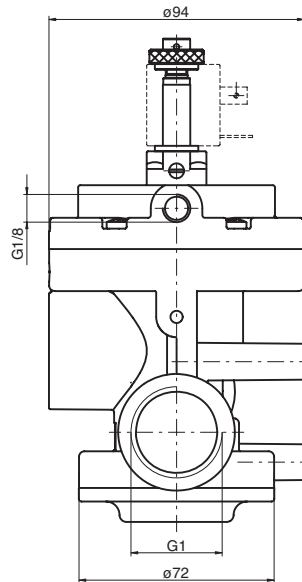


Minimum working pressure: see scheme at page 2

**Solenoid valve  
Solenoid spring**



Weight gr. 520



Ordering code

<i>Internal pilot</i>	<i>Servoassisted external pilot</i>	<i>Internal pilot with quick exhaust</i>	<i>Servoassisted external pilot with quick exhaust</i>
<p><b>T771.32.0.1AC.MP</b> <i>Normally closed</i></p>	<p><b>T771.32.0.1.MP</b> <i>Normally closed</i></p>	<p><b>T771S.32.0.1AC.MP</b> <i>Normally closed</i></p>	<p><b>T771S.32.0.1.MP</b> <i>Normally closed</i></p>
<p><b>T771.32.0.1AA.MP</b> <i>Normally open</i></p>	<p><i>Normally open</i></p>	<p><b>T771S.32.0.1AA.MP</b> <i>Normally open</i></p>	<p><i>Normally open</i></p>
<p>Minimum working pressure: 2,5 bar</p>	<p>Minimum working pressure: see scheme at page 2</p>	<p>Minimum working pressure: 2,5 bar</p>	<p>Minimum working pressure: see scheme at page 2</p>

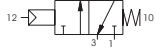
Operational characteristics	Fluid	Max working pressure	Operating temperature		Flow rate at 6 bar with Δp = 1 bar	Orifice size	Working port size	Pilot ports size
	Filtered and lubricated or non lubricated air	10 bar	min.	max.				
			-5° C	+50°C	12.000 NI/min	mm 25	G 1”	G 1/8”

**Valve**  
**Pneumatic spring**

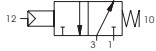
Ordering code

**T771/V.32.11.1**

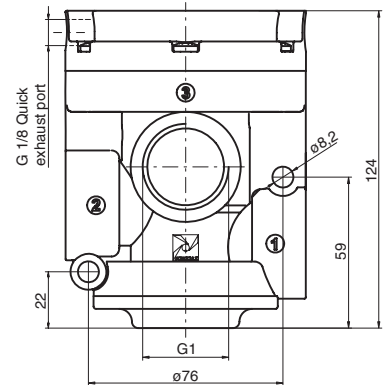
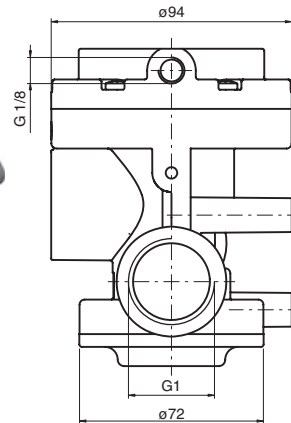
*Normally open*



*Normally closed*



Weight gr. 480

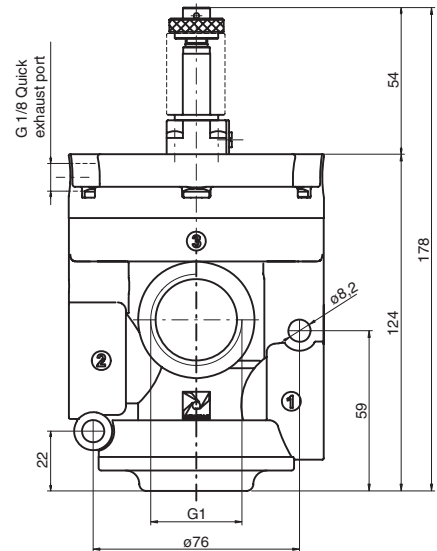
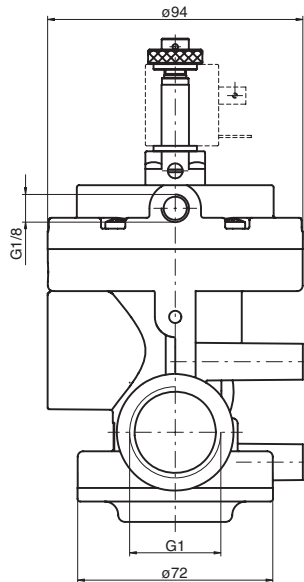


Minimum working pressure: at page 2

**Solenoid valve**  
**Solenoid spring**



Weight gr. 520



Ordering code

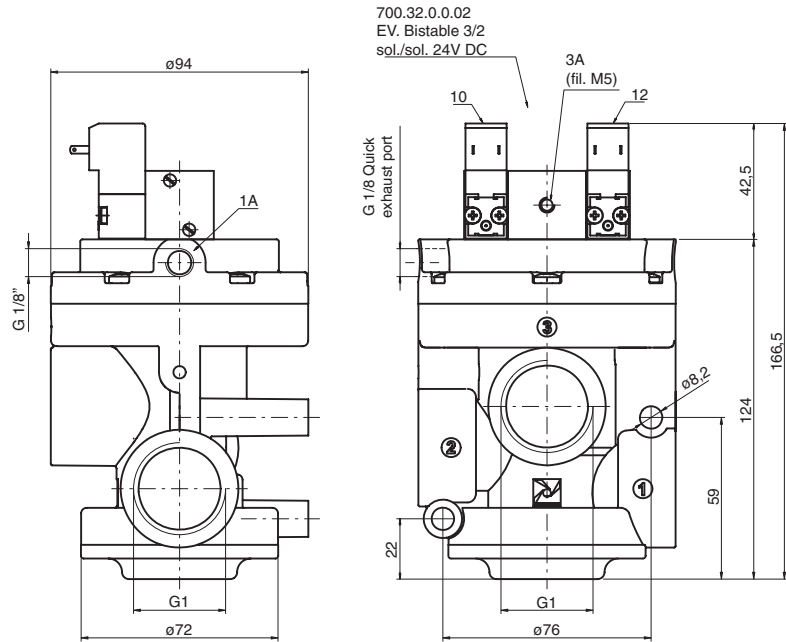
<i>Internal pilot</i>	<i>Servoassisted external pilot</i>	<i>Servoassisted external pilot with quick exhaust</i>
<p><b>T771/V.32.0.1AA.MV</b> <i>Normally open</i></p> <p><b>T771/V.32.0.1AC.MV</b> <i>Normally closed</i></p>	<p><b>T771/V.32.0.1.MP</b></p> <p><i>Normally open</i></p> <p><i>Normally closed</i></p>	<p><b>T771/VS.32.0.1.MP</b></p> <p><i>Normally open</i></p> <p><i>Normally closed</i></p>

Minimum working pressure: 2 bar

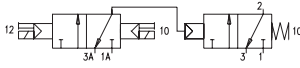
Operational characteristics	Fluid	Temperature		Orifice size	Working port size	Pilot ports size
	Vacuum	min.	max.	mm 25	G 1"	G 1/8"
		-5°C	+50°C			

Bistable version for Compressed air

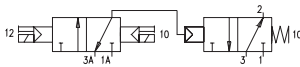
3/2



700.32.0.0.02  
EV. Bistable 3/2  
sol./sol. 24V DC



**Air - N.C.**  
1 = line in  
2 = consumption  
1 = exhaust



**Air - N.A.**  
3 = line in  
2 = consumption  
1 = exhaust

Weight gr. 680

Ordering code

*with quick exhaust*

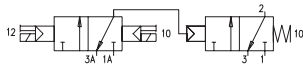
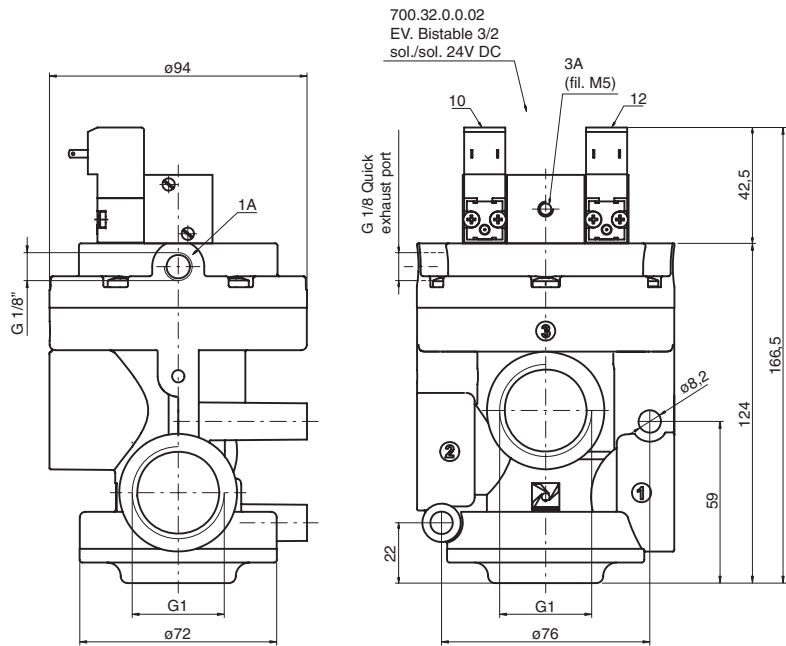
**T771.32.0.1BP**  
*Normally closed*  
*Normally open*

**T771S.32.0.1BP**  
*Normally closed*  
*Normally open*

Operational characteristics	Fluid	Max working pressure	Minumum working pressure	Operating temperature		Flow rate at 6 bar with $\Delta p = 1$ bar	Orifice size	Working port size	Pilot ports size
	Filtered and lubricated air	10 bar	2,5 bar	min.	max.				
				-5° C	+50° C	12.000 NI/min	mm 25	G 1”	G 1/8”

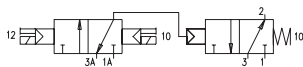
Bistable version for Vacuum

3/2



**Vacuum - N.A.**

- 3 = pump
- 2 = consumption
- 1 = exhaust



**Vacuum - N.C.**

- 1 = pump
- 2 = consumption
- 3 = exhaust

Weight gr. 680

Ordering code

*with quick exhaust*

**T771/V.32.0.1BP**  
Normally closed  
Normally open

**T771/VS.32.0.1BP**  
Normally closed  
Normally open

Operational characteristics	Fluid	Minumum working pressure	Temperature		Orifice size	Working port size	Pilot ports size
	Vacuum	2,5 bar	min.	max.			
	Vacuum	2,5 bar	-5° C	+50° C	mm 25	G 1"	G 1/8"

