

INTEGRATED ELEMENTS

1. FLIP-FLOP VALVES (pneumatic)

It frequently happens that with only one pilot signal available it is necessary to determine any reciprocating movement having two stationary positions. A typical example of this need is the opening and closing of the doors of a bus using a single push-button. This problem is resolved by adopting a flip-flop valve, which acts like a bistable 5/2 valve but is controlled by one single pilot pressure.



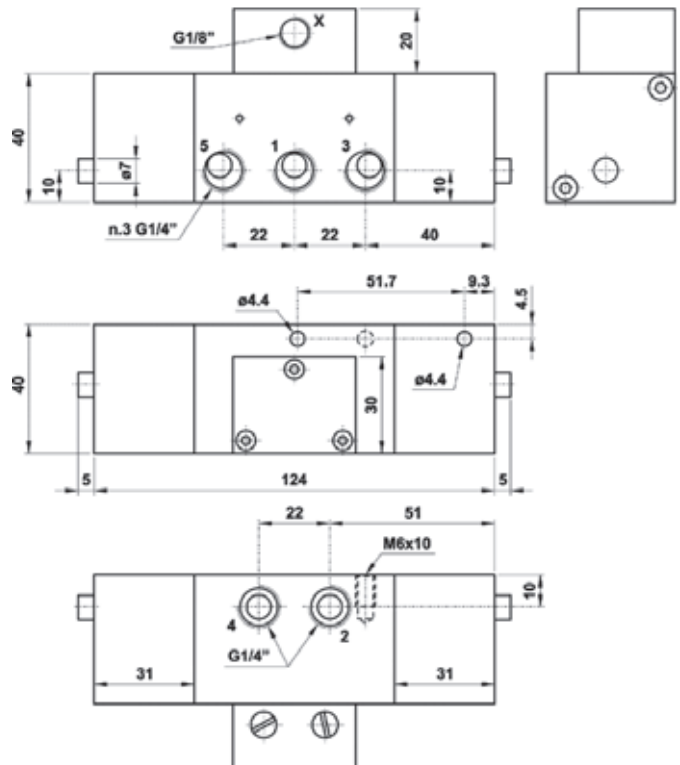
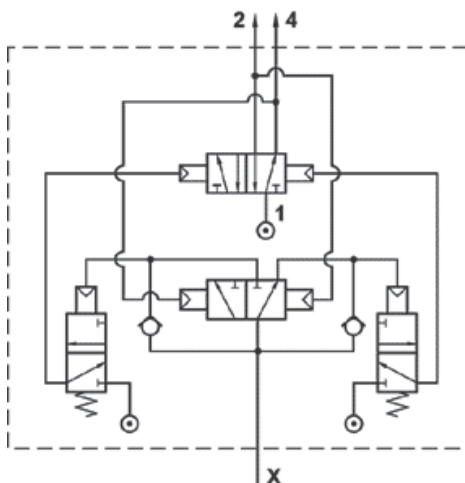
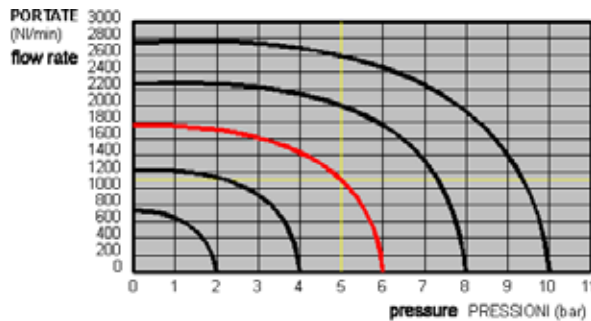
In the event of pilot pressure failure or system maintenance a manual override facility is provided.

Material:

- Body : Aluminium
- Spring : Stainless steel
- Seals : NBR
- Spools : Nickel plated aluminium
- Internal parts : Brass OT58

General characteristics:

- Connections : 1/4" (Pilot pressure 1/8")
- Temperature : max. +60° C
- Pressure : 3 till 10 bar
- Medium : 50µ filtered, lubricated or non lubricated air



**ORDER CODIFICATION :
AZ100354**

2. FLIP-FLOP VALVES (pneumatic & electrical)

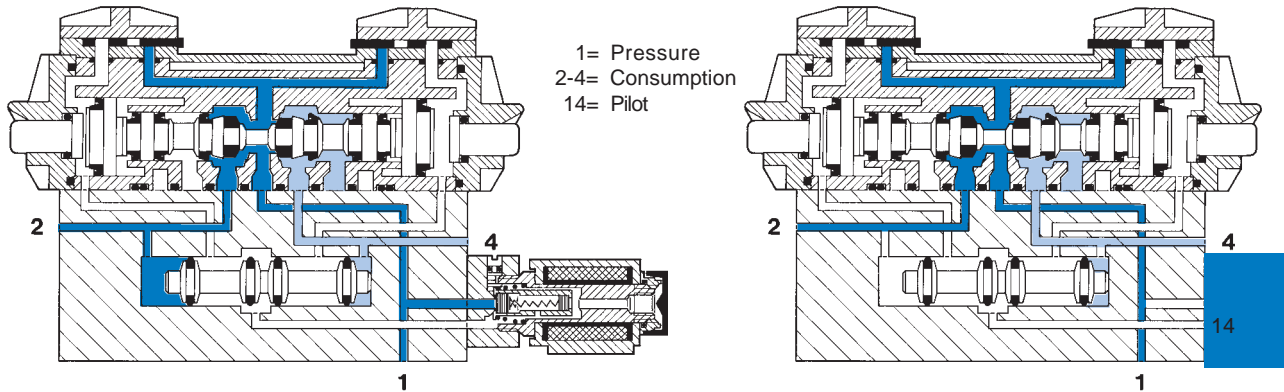
It is frequently required to be able to reciprocate a valve between two positions using a single signal. A typical example of this is the opening and closing of the doors of a bus using a single pushbutton. The problem is resolved by adopting a flip-flop valve, available in electric-pilot and pneumatic-pilot versions.


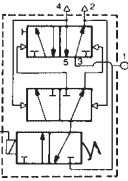

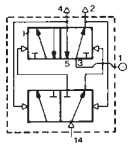
TECHNICAL CHARACTERISTICS

Max working pressure: 10 bar

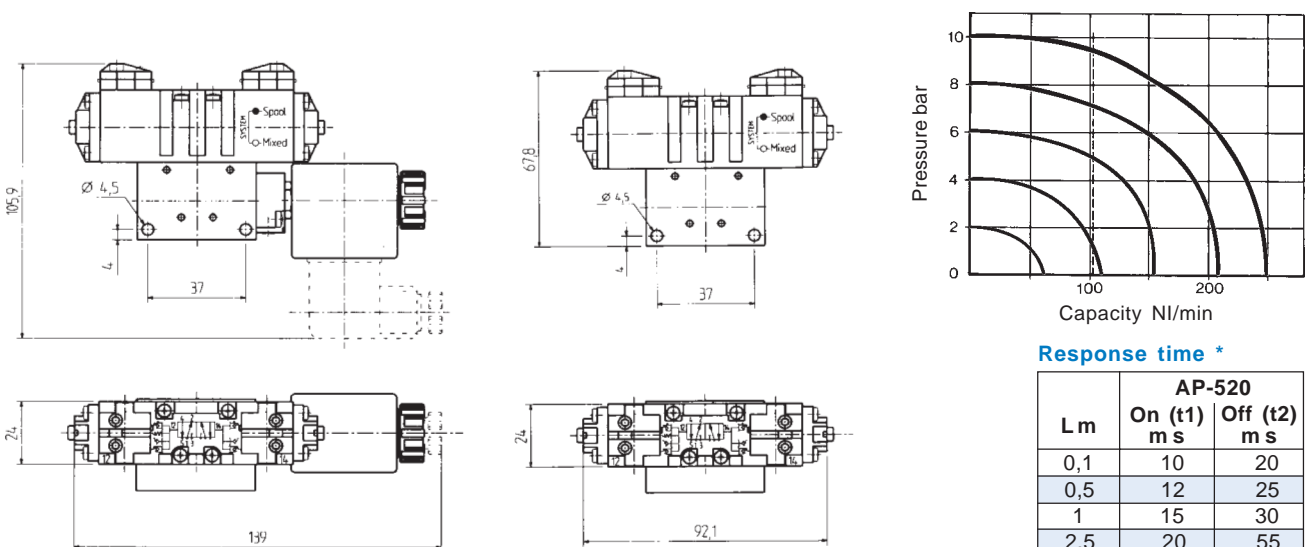
Min working pressure: 2,5 bar

Ambient temperature: -20 ÷ +80°C



| Type | Symbol | Control (12) | Ways | Ø mm | Ports | Capacity NI/min | Pressure bar | Mass kg | Part number |
|--|---|--------------|------|------|-------|-----------------|--------------|---------|---------------|
|  |  | Electrical | 5/2 | 2,5 | M5 | 105 | 2,5 ÷ 10 | 0,240 | AP-500 |
| Energizing time: 13 ms. Standard coil type U1. To be ordered separably. Screw manual override on the pilot, double press-button on the valve body. | | | | | | | | | |
|  |  | Pneum. | 5/2 | 2,5 | M5 | 105 | 2,5 ÷ 10 | 0,190 | AP-520 |
| Double press-button manual override on the valve body. | | | | | | | | | |

Overall dimensions



Response time *

| L m | AP-520 | |
|-----|-------------|--------------|
| | On (t1) m s | Off (t2) m s |
| 0,1 | 10 | 20 |
| 0,5 | 12 | 25 |
| 1 | 15 | 30 |
| 2,5 | 20 | 55 |
| 5 | 45 | 110 |
| 10 | 100 | 250 |
| 15 | 180 | 370 |
| 20 | 250 | 540 |

* Calculated by connecting Ø2,5 mm (inside) pipe (L, see table) to the consumption of a Ø 50 cylinder with 100 mm stroke

Technical modifications keep in reserve !

(2006/12)

3. OSCILLATING VALVES

This control valve generates an alternating signal with a regulating frequency. With this valve it is possible to activate automatically a double-acting cylinder in and out, without any use of end-contacts. The on/off times can be regulated separately by means of 2 incorporated flow-regulators. The valves starts oscillating when "X" is pressurized.

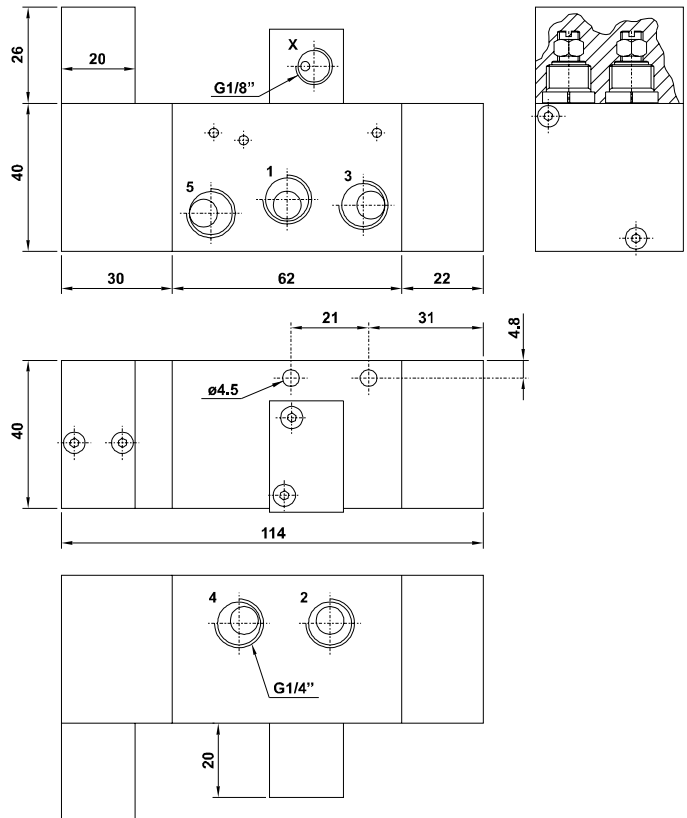
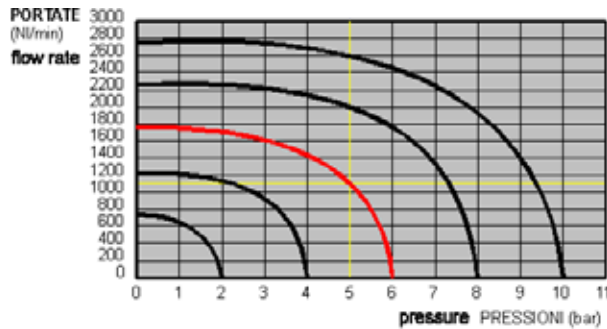


Material:

- Body : Aluminium
- Springs : Stainless steel
- Seals : NBR
- Internal parts : Brass OT58

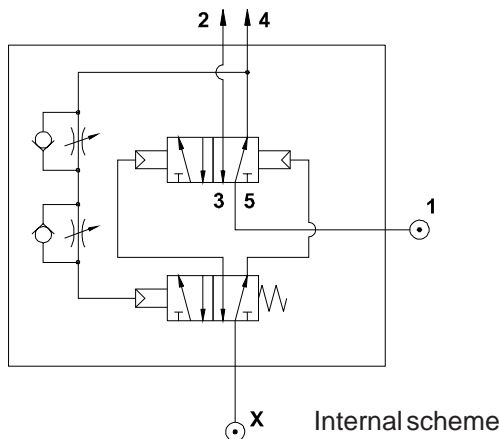
Technical data:

- Connections : 1/4" (Pilot pressure 1/8")
- Temperature : max + 60° C
- Working pressure : 2 till 10 bar
- Actuating pressure (X) : 3 till 10 bar
- Medium : 50µ filtered, lubricated or non lubricated air



CONNECTIONS

- 1. Inlet
- 2-4. Utilisation
- 3-5. Exhaust
- X. Pilot Pressure



ORDER CODIFICATION
AZ010464

Technical modifications keep in reserve !

(2006/12)

4. BIMANUAL VALVES



These control valves are mainly used to control machines like press- and punching-machines. They oblige the user to start a dangerous cycle with both hands.

The main valve is only activated if both signals are pressurized. In all other situations, the main valve shuts off. The interval between the 2 signals is limited in time. So, the bimanual valve will not work when blocking permanently one of the two buttons).

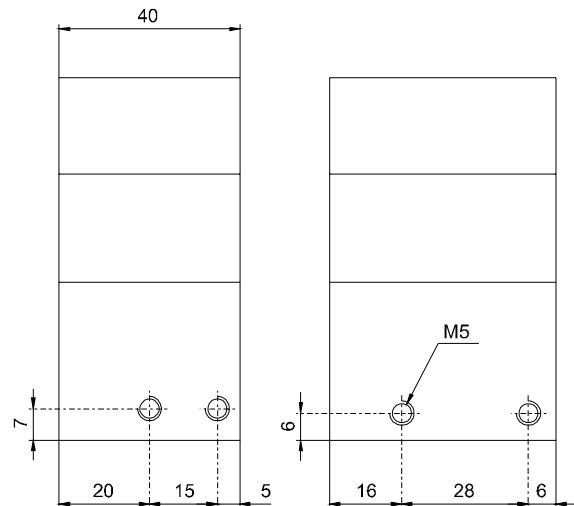
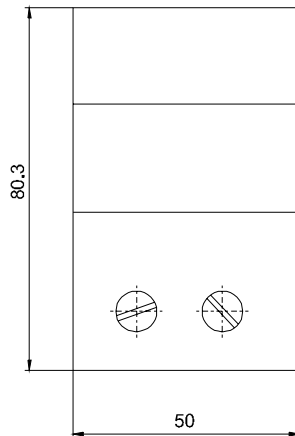
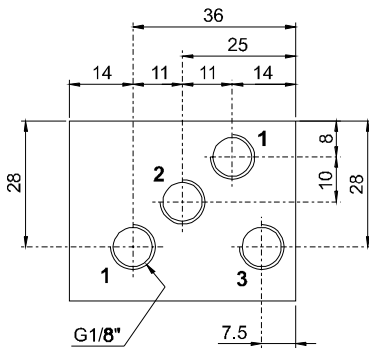


Material:

Corps : Aluminium
Spring : Stainless steel
Gaskets : NBR

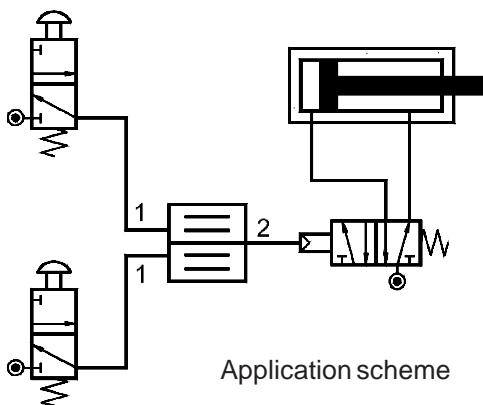
General characteristics:

Connections : 1/8"
Temperature : -10° till + 80° C
Flow : 100 NI/min.
Pressure : 2 till 8 bar
Medium : Filtered air (50μ), lube or not lube

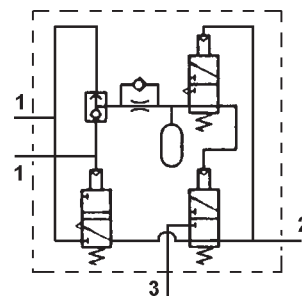


CONNECTIONS

1. Inlet
2. Utilisation
3. Exhaust



Application scheme



Internal scheme

ORDER CODIFICATION :
AZ081564
(CE-certificated)

Technical modifications keep in reserve !

(2006/12)

5. 5/2 OSCILLATING NOT VALVES

It is a high-flow device which allows a double acting cylinder or analogue pneumatic equipment to automatically extend and retract without the need for limit switches.

The frequency of the phases is set by regulation of the exhausts 3 and 5 using separate silencer/regulators which are not included.

When actuating signal is applied or removed the valve automatically moves to the start position ensuring no device is left in a semi-actuated position.

A manual override is integrated to re-activate the oscillator if it gets accidentally blocked.

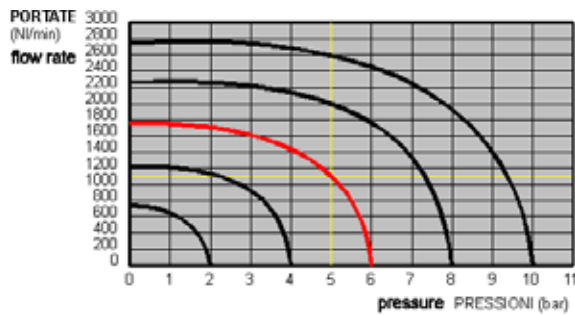


Material:

Body : Aluminium
 Springs : Stainless steel
 Seals : NBR
 Spools : Nickel plated aluminium
 Internal parts : Brass OT58

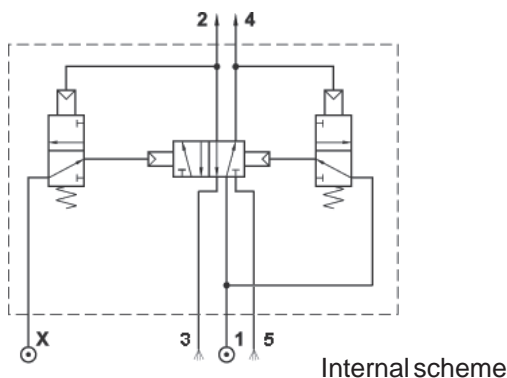
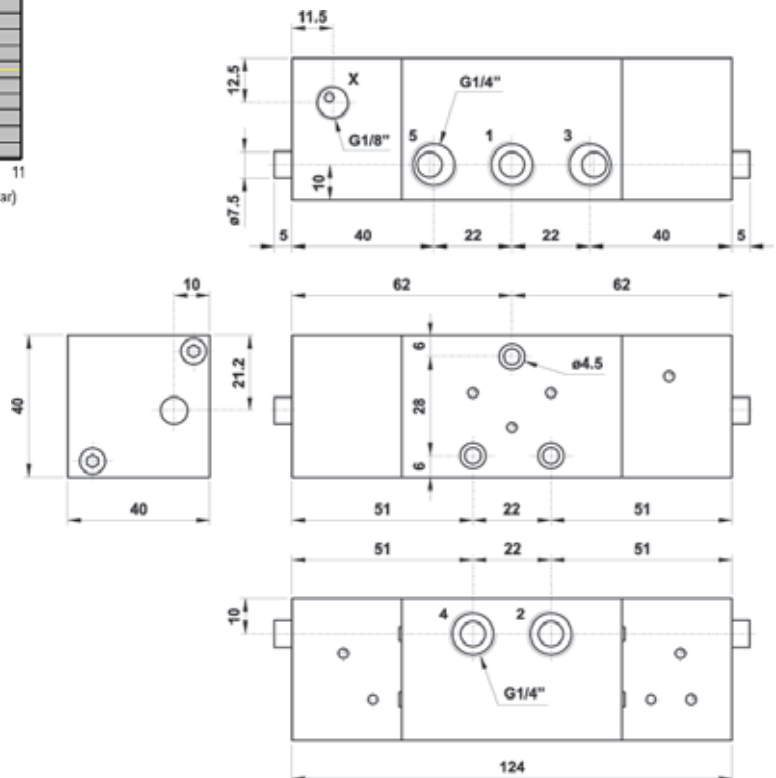
Technical data:

Connections : 1/4" (Pilot pressure 1/8")
 Temperature : max + 60° C
 Working pressure : 2 till 7 bar
 Actuating pressure (X) : 3 till 7 bar
 Medium : 50µ filtered, lubricated or non lubricated air



CONNECTIONS

- 1. Inlet
- 2-4. Utilisation
- 3-5. Exhaust
- X. Pilot Pressure



ORDER CODIFICATION
AZ100274

6. 5/2 TIMER VALVE

This is a high-flow 5 way valve with a pneumatic timer which delays the effect of the pneumatic pilot after a preset time. The time is adjusted by screw (R).

When a signal is applied to X the valve will stay in the rest position until the time which was set at R has elapsed, and then the valve will automatically switch to the actuated position. Then the valve will remain in the actuated position. When the pilot signal stops, the valve returns to the rest position.

The valve will only operate when pressure signal is applied to X.

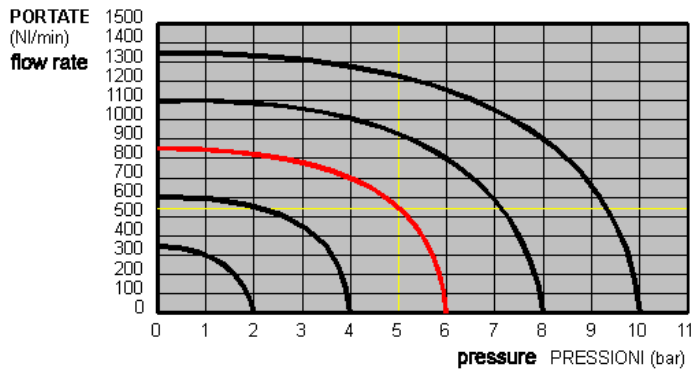


Material:

Body : Aluminium
 Springs : Stainless steel
 Seals : NBR
 Spools : Nickel plated aluminium
 Internal parts : Brass OT58

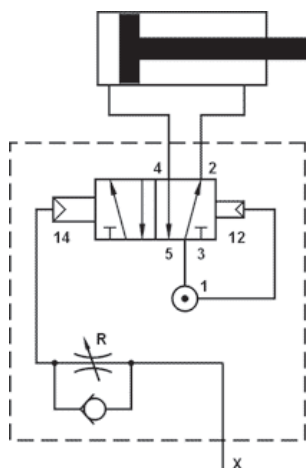
Technical data:

Connections : 1/8"
 Temperature : max + 60° C
 Working pressure : 2 till 10 bar
 Actuating pressure (X) : 3 till 10 bar
 Time regulation : 0 till 15 sec
 Medium : 50µ filtered, lubricated or non lub air

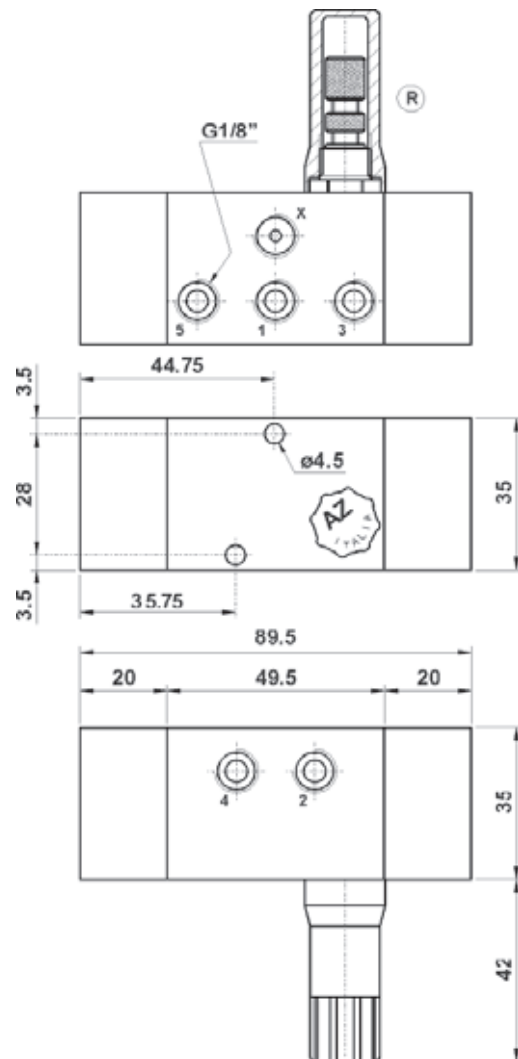


CONNECTIONS

- 1. Inlet
- 2-4. Utilisation
- 3-5. Exhaust
- X. Pilot Pressure



Application scheme



ORDER CODIFICATION
AZ001774

Technical modifications keep in reserve !

(2006/12)