

# Tecno FUN

## General

New compact line of different logic functions that can be used in any place of the secondary pneumatic circuit, developed to be installed directly onto the main pneumatic components (distributors or cylinders). Thanks to the modular design it is possible to easily join together multiple logic functions without the need of using pipes to connect them; it is also possible to choose the type and style of each connection. The connections available are the following: straight cartridge; Banjo PL cartridge; male cartridge threaded 1/8" or 1/4" and female cartridge threaded 1/8".

Function fittings can also be assembled side by side in order to be assembled on the DIN EN 50022 rail (using the relevant kit).



### Other characteristics:

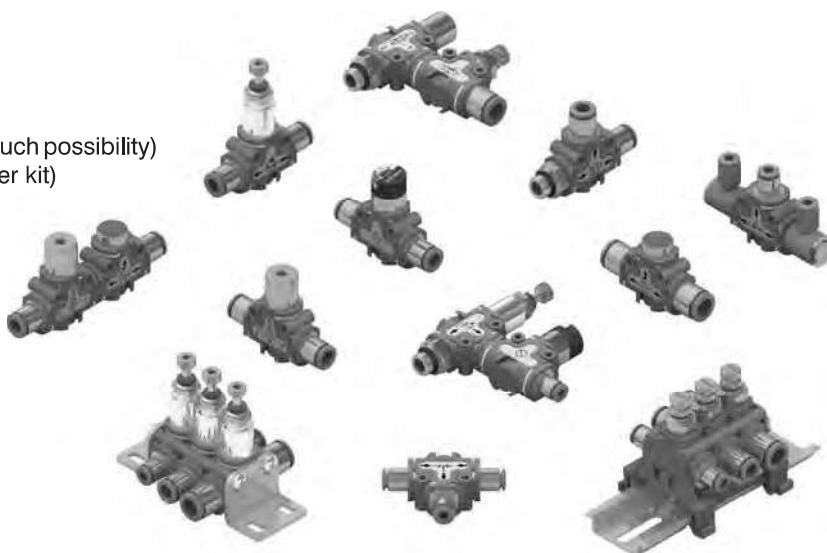
Technopolymer body  
Input/output connection directly integrated into the body  
In line or 90° connection  
Possibility to build a manifold -parallel mounting-  
Different connection options:  
Tube Ø4 Ø6 Ø8 (elbow version as well)  
G1/8" G1/4" male straight cartridge  
G1/8" female cartridge, in line or 90°

### Different mounting options:

- Wall fixing through the holes in the body
- By means of the fixing bracket
- Panel mounting (for those function that include such possibility)
- On DIN rail EN 50022 (using the DIN rail adapter kit)

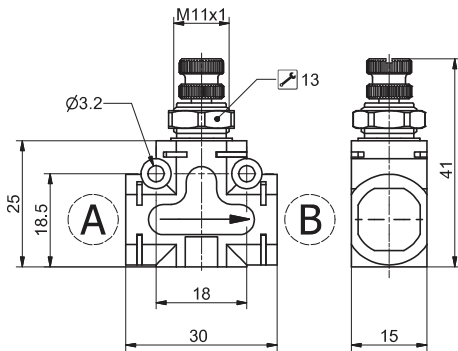
### Available functions:

- Flow control valve (FCV)
- pressure regulator (PR)
- block valve (BV)
- quick exhaust valve (QEV)
- OR gate (CSV-OR)
- AND gate (CSV-AND)
- pressure gauge (PI)
- pressure regulator + pressure gauge (PR+PI)
- block valve + Flow control valve (BV+FCV)
- block valve + quick exhaust valve (BV+QEV)





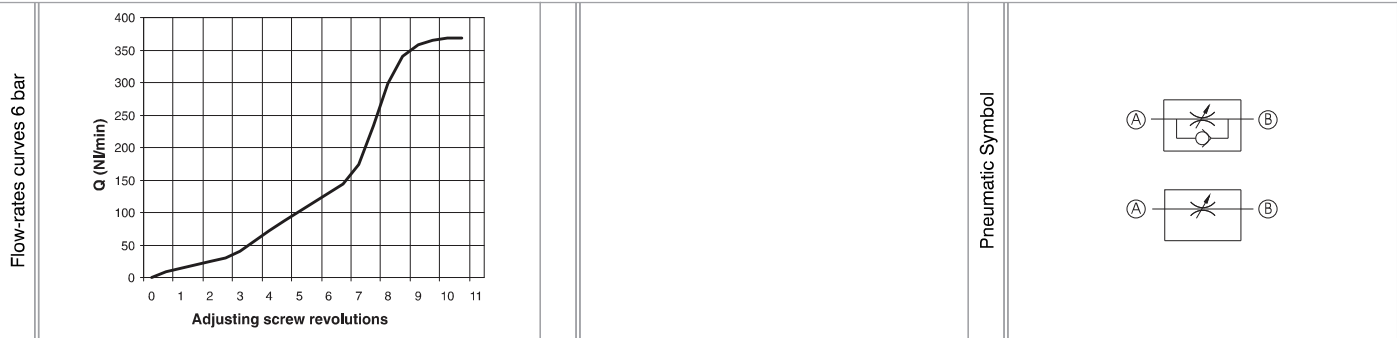
Flow regulator



Ordering code  
**551.11T.A.B.XX**

VERSION	
T	1 = Unidirectional 2 = Bidirectional
A	Connection A see CONNECTIONS LIST
B	Connection B see CONNECTIONS LIST
CONNECTIONS LIST	
00 = None	
D4 = Straight Ø4	
D6 = Straight Ø6	
D8 = Straight Ø8	
L1 = Female banjo G1/8"	
G4 = Rotating banjo Ø 4	
G6 = Rotating banjo Ø 6	
G8 = Rotating banjo Ø 8	
M1 = G1/8 male	
M2 = G1/4 male	
F1 = G1/8 female	

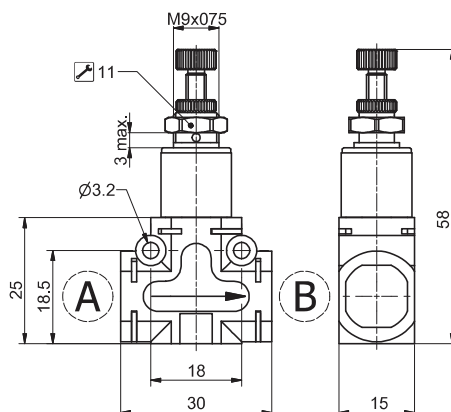
NOTE : For the dimension including cartridges see page CONNECTIONS  
Example: 551.111.D6.D6.XX  
Flow control valve, unidirectional, CONNECTIONS "A" and "B" Tube Ø6



Operational characteristic		Technical characteristic	
<ul style="list-style-type: none"><li>- The flow control valve is normally used to regulate the air flow and, as a consequence, for example, the speed of a cylinder. Two types of flow control valves are available: unidirectional and bidirectional. In the unidirectional valve the flow is regulated only in one direction while is free to move in the opposite direction; in the bidirectional valve the flow is regulated in both directions.</li><li>- Mounting options:<ul style="list-style-type: none"><li>- panel mounting using the lock nut supplied as standard</li><li>- on DIN rail using the relevant adaptor kit (see accessories)</li><li>- with 90° bracket (see accessories)</li></ul></li><li>- directly on the support plate thanks to two through holes on the body</li></ul>		Fluid	Filtered air, with or without lubrication
		Connections	See CONNECTIONS LIST
		Max working pressure (bar)	10 bar
		Temperature °C	-5 - +50
		Weight without connections	26 gr.
		Ø Orifice size (mm)	Ø3 mm
		Free exhaust flow rate in the opposite side of the regulation (for unidirectional version)	800 Nl/min.

1

# In line pressure regulator

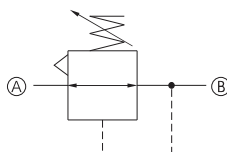


Ordering code  
**551.12T.A.B.XX**

VERSION
2 = 0 - 2 bar
4 = 0 - 4 bar
8 = 0 - 8 bar
CONNECTIONS LIST
00 = None
D4 = Straight Ø4
D6 = Straight Ø6
D8 = Straight Ø8
L1 = Female banjo G1/8"
G4 = Rotating banjo Ø 4
G6 = Rotating banjo Ø 6
G8 = Rotating banjo Ø 8
M1 = G1/8 male
M2 = G1/4 male
F1 = G1/8 female

NOTE : For the dimension including cartridges see page CONNECTIONS  
Example: 551.128.D8.D8.XX  
In line pressure regulator, Pressure range (bar) 0 - 8 bar. CONNECTIONS "A" and "B" Tube Ø8

Pneumatic Symbol



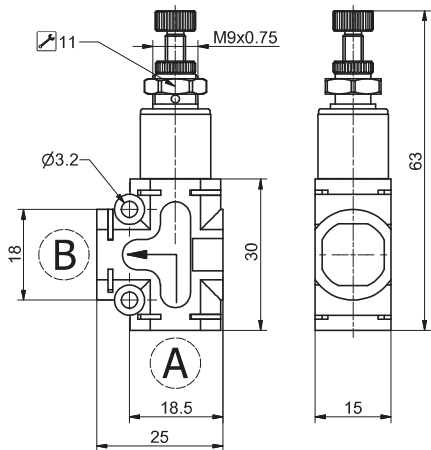
## Operational characteristic

- The pressure regulator is a device which is used to reduce, regulate and stabilize the air pressure in a conduit in order to adapt it to the needs of the equipments to be supplied. The pressure regulator incorporates the relieving function.
- Mounting options:
  - panel mounting using the lock nut supplied as standard
  - on DIN rail using the relevant adaptor kit (see accessories)
  - with 90° bracket (see accessories)
- directly on the support plate thanks to two through holes on the body

## Technical characteristic

Fluid	Filtered air, with or without lubrication
Connections	See CONNECTIONS LIST
Max working pressure (bar)	10 bar
Temperature °C	-5 - +50
Weight without connections	31 gr.
Flow rate at 6 bar with $\Delta p = 1$ (NI/min)	180 NI/min
Regulated Pressure range (bar)	0 - 2 bar 0 - 4 bar 0 - 8 bar

90° pressure regulator



Ordering code

551.22T.A.B.XX

VERSION

- T 2 = 0 - 2 bar  
4 = 0 - 4 bar  
8 = 0 - 8 bar

A Connection A  
see CONNECTIONS LIST

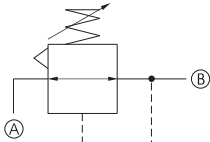
B Connection B  
see CONNECTIONS LIST

CONNECTIONS LIST

- 00 = None  
D4 = Straight Ø4  
D6 = Straight Ø6  
D8 = Straight Ø8  
L1 = Female banjo G1/8"  
G4 = Rotating banjo Ø 4  
G6 = Rotating banjo Ø 6  
G8 = Rotating banjo Ø 8  
M1 = G1/8 male  
M2 = G1/4 male  
F1 = G1/8 female

NOTE : For the dimension including cartridges see page CONNECTIONS  
Example: 551.224.M1.D6.XX  
90° pressure regulator, Pressure range (bar) 0 - 4 bar. CONNECTIONS "A" Male G1/8 and "B" Tube Ø6

Pneumatic Symbol



Operational characteristic

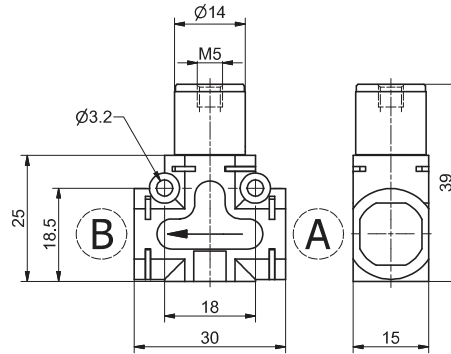
- The pressure regulator is a device which is used to reduce, regulate and stabilize the air pressure in a conduit in order to adapt it to the needs of the equipments to be supplied. The pressure regulator incorporates the relieving function.
- Mounting options:
  - panel mounting using the lock nut supplied as standard
  - on DIN rail using the relevant adaptor kit (see accessories)
  - with 90° bracket (see accessories)
- directly on the support plate thanks to two through holes on the body

Technical characteristic

Fluid	Filtered air, with or without lubrication
Connections	See CONNECTIONS LIST
Max working pressure (bar)	10 bar
Temperature °C	-5 - +50
Weight without connections	31 gr.
Flow rate at 6 bar with Δp=1 (NI/min)	180 NI/min
Regulated Pressure range (bar)	0 - 2 bar 0 - 4 bar 0 - 8 bar

1

## Blocking valve



### Ordering code

**551.13T.A.B.XX**

#### VERSION

- T** 1 = Unidirectional
- 2 = Bidirectional

**A** Connection A  
see CONNECTIONS LIST

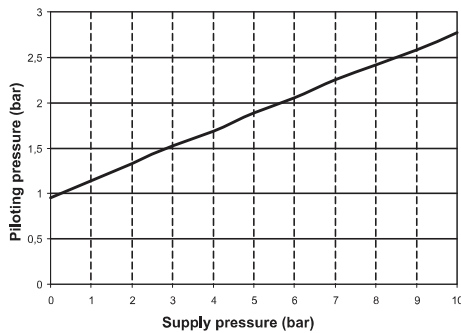
**B** Connection B  
see CONNECTIONS LIST

#### CONNECTIONS LIST

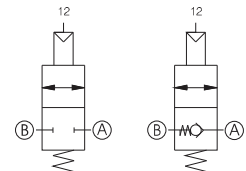
- 00 = None
- D4 = Straight Ø4
- D6 = Straight Ø6
- D8 = Straight Ø8
- L1 = Female banjo G1/8"
- G4 = Rotating banjo Ø 4
- G6 = Rotating banjo Ø 6
- G8 = Rotating banjo Ø 8
- M1 = G1/8 male
- M2 = G1/4 male
- F1 = G1/8 female

NOTE : For the dimension including cartridges see page CONNECTIONS  
Example: 551.131.D4.D4.XX  
In line blocking valve, unidirectional, CONNECTIONS "A" and "B" Tube Ø4

Piloting curves



Pneumatic Symbol



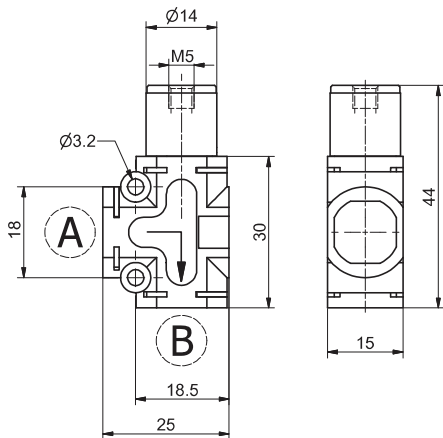
### Operational characteristic

- The blocking valve function is to maintain the circuit downstream pressure in the event of loss of supply pressure. It is normally fitted directly onto the cylinder connections ports in order to ensure that, in case of accidental loss of the supply pressure, the units positions is maintained. This is achieved as the blocking valve preserves the pressure inside the pressurised chamber. Blocking valves can be unidirectional or bidirectional. In the unidirectional version the air flow is free in one direction while in order to allow the flow in the opposite direction is necessary to send a pneumatic signal to the unit connection 12. The bidirectional version requires a pneumatic signal on connection 12 to allow the flow in any of the two directions.
- Mounting options:
  - on DIN rail using the relevant adaptor kit (see accessories)
  - with 90° bracket (see accessories)
  - directly on the support plate thanks to two through holes on the body

### Technical characteristic

Fluid	Filtered air, with or without lubrication
Connections	See CONNECTIONS LIST
Working pressure	0,5 - 10 bar
Temperature °C	-5 - +50
Weight without connections	26 gr.
Flow rate at 6 bar with $\Delta p = 1$ (NI/min) Unidirectional and bidirectional version	285 NI/min
Flow rate at 6 bar with free exhaust Unidirectional and bidirectional version	450 NI/min

90° blocking valve



Ordering code

551.231.A.B.XX

VERSION	
T	1 = Unidirectional 2 = Bidirectional
A	Connection A see CONNECTIONS LIST
B	Connection B see CONNECTIONS LIST
CONNECTIONS LIST	
00 = None	
D4 = Straight Ø4	
D6 = Straight Ø6	
D8 = Straight Ø8	
L1 = Female banjo G1/8"	
G4 = Rotating banjo Ø 4	
G6 = Rotating banjo Ø 6	
G8 = Rotating banjo Ø 8	
M1 = G1/8 male	
M2 = G1/4 male	
F1 = G1/8 female	

NOTE : For the dimension including cartridges see page CONNECTIONS  
Example: 551.231.M1.D6.XX  
90° blocking valve, unidirectional, CONNECTIONS "A" Male G1/8 and "B" Tube Ø6

Piloting curves



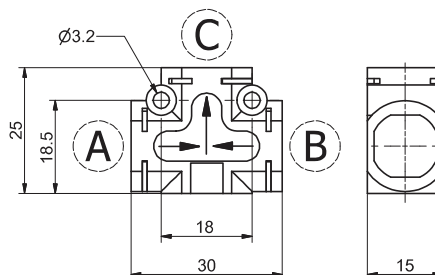
Pneumatic Symbol



Operational characteristic	Technical characteristic	
<ul style="list-style-type: none"><li>- The blocking valve function is to maintain the circuit downstream pressure in the event of loss of supply pressure. It is normally fitted directly onto the cylinder connections ports in order to ensure that, in case of accidental loss of the supply pressure, the units positions is maintained. This is achieved as the blocking valve preserves the pressure inside the pressurised chamber. Blocking valves can be unidirectional or bidirectional. In the unidirectional version the air flow is free in one direction while in order to allow the flow in the opposite direction is necessary to send a pneumatic signal to the unit connection 12. The bidirectional version requires a pneumatic signal on connection 12 to allow the flow in any of the two directions.</li><li>- Mounting options:</li><li>- on DIN rail using the relevant adaptor kit (see accessories)</li><li>- with 90° bracket (see accessories)</li><li>- directly on the support plate thanks to two through holes on the body</li></ul>	Fluid	Filtered air, with or without lubrication
	Connections	See CONNECTIONS LIST
	Working pressure	0,5 - 10 bar
	Temperature °C	-5 - +50
	Weight without connections	26 gr.
	Flow rate at 6 bar with Δp=1 (NI/min) Unidirectional and bidirectional version	285 NI/min
	Flow rate at 6 bar with free exhaust Unidirectional and bidirectional version	450 NI/min

1

### Circuit selector valve - OR



#### Ordering code

**551.141.A.B.C**

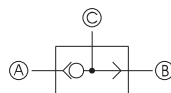
- A** Connection A  
see CONNECTIONS LIST
- B** CONNECTIONS B  
see CONNECTIONS LIST
- C** Connection C  
see CONNECTIONS LIST

#### CONNECTIONS LIST

- 00 = None
- D4 = Straight Ø4
- D6 = Straight Ø6
- D8 = Straight Ø8
- L1 = Female banjo G1/8"
- G4 = Rotating banjo Ø 4
- G6 = Rotating banjo Ø 6
- G8 = Rotating banjo Ø 8
- M1 = G1/8 male
- M2 = G1/4 male
- F1 = G1/8 female

NOTE : For the dimension including cartridges see page CONNECTIONS  
Example: 551.141.D8.D8.D8  
Circuit selector valve OR, CONNECTIONS "A", "B" and "C" Tube Ø8

Pneumatic Symbol



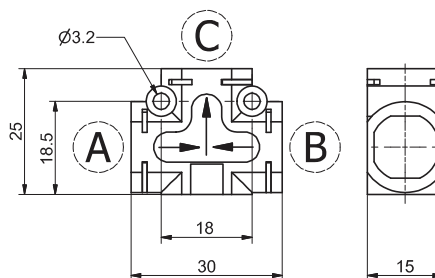
#### Operational characteristic

- These valves have two inlets and one output connection and are normally called high pressure selector valves as, when receiving two separate pressure supply, only allow the passage of the highest pressure. The most common application is to operate a component from two separate positions.
- Mounting options:
  - on DIN rail using the relevant adaptor kit (see accessories)
  - with 90° bracket (see accessories)
  - directly on the support plate thanks to two through holes on the body

#### Technical characteristic

Fluid	Filtered air, with or without lubrication
Connections	See CONNECTIONS LIST
Max working pressure (bar)	10 bar
Temperature °C	-5 - +50
Weight without connections	10 gr.
Flow rate at 6 bar with $\Delta p = 1$ (NI/min)	600 NI/min

### Circuit selector valve - AND



#### Ordering code

**551.151.A.B.C**

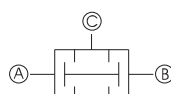
- A** Connection A  
see CONNECTIONS LIST
- B** CONNECTIONS B  
see CONNECTIONS LIST
- C** Connection C  
see CONNECTIONS LIST

#### CONNECTIONS LIST

- 00 = None
- D4 = Straight Ø4
- D6 = Straight Ø6
- D8 = Straight Ø8
- L1 = Female banjo G1/8"
- G4 = Rotating banjo Ø 4
- G6 = Rotating banjo Ø 6
- G8 = Rotating banjo Ø 8
- M1 = G1/8 male
- M2 = G1/4 male
- F1 = G1/8 female

NOTE : For the dimension including cartridges see page CONNECTIONS  
Example: 551.151.D6.D6.D6  
Circuit selector valve AND, CONNECTIONS "A", "B" and "C" Tube Ø6

Pneumatic Symbol



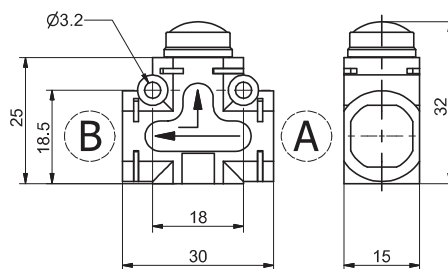
#### Operational characteristic

- These valves have two inlets and one output connection and are normally called low pressure selector valves as, when receiving two separate pressure supply, only allow the passage of the lowest pressure. The most common application is to operate a component from two separate positions.
- Mounting options:
  - on DIN rail using the relevant adaptor kit (see accessories)
  - with 90° bracket (see accessories)
  - directly on the support plate thanks to two through holes on the body

#### Technical characteristic

Fluid	Filtered air, with or without lubrication
Connections	See CONNECTIONS LIST
Max working pressure (bar)	10 bar
Temperature °C	-5 - +50
Weight without connections	10 gr.
Flow rate at 6 bar with $\Delta p = 1$ (NI/min)	550 NI/min

## Quick exhaust valve



## Ordering code

551.161.A.B.XX

- A** Connection A  
see CONNECTIONS LIST
- B** Connection B  
see CONNECTIONS LIST

## CONNECTIONS LIST

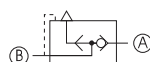
00 = None  
 D4 = Straight Ø4  
 D6 = Straight Ø6  
 D8 = Straight Ø8  
 L1 = Female banjo G1/8"  
 G4 = Rotating banjo Ø 4  
 G6 = Rotating banjo Ø 6  
 G8 = Rotating banjo Ø 8  
 M1 = G1/8 male  
 M2 = G1/4 male  
 F1 = G1/8 female

NOTE : For the dimension including cartridges see page CONNECTIONS

Example: 551.161.D8.D8.XX

Quick exhaust valve, CONNECTIONS "A" and "B" Tube Ø8

Pneumatic Symbol



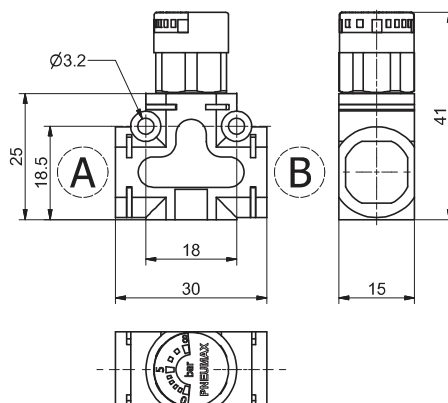
## Operational characteristic

- These are 3 ways, two positions valves which can be directly mounted onto the actuator or between the actuator and the control valve. Their function is to discharge the air directly into the atmosphere without going through the pneumatic circuit enabling the actuator to reach the maximum speed.
- Mounting options:
  - on DIN rail using the relevant adaptor kit (see accessories)
  - with 90° bracket (see accessories)
- directly on the support plate thanks to two through holes on the body

## Technical characteristic

Fluid	Filtered air, with or without lubrication
Connections	See CONNECTIONS LIST
Max working pressure (bar)	10 bar
Temperature °C	-5 - +50
Weight without connections	15 gr.
Flow rate at 6 bar with $\Delta p=1$ (NI/min) (from 1 to 2)	250 NI/min
Flow rate at 6 bar with free exhaust (from 2 to 3)	500 NI/min

## Pressure indicator



## Ordering code

551.178.A.B.XX

- A** Connection A  
see CONNECTIONS LIST
- B** Connection B  
see CONNECTIONS LIST

## CONNECTIONS LIST

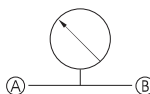
00 = None  
 D4 = Straight Ø4  
 D6 = Straight Ø6  
 D8 = Straight Ø8  
 L1 = Female banjo G1/8"  
 G4 = Rotating banjo Ø 4  
 G6 = Rotating banjo Ø 6  
 G8 = Rotating banjo Ø 8  
 M1 = G1/8 male  
 M2 = G1/4 male  
 F1 = G1/8 female

NOTE : For the dimension including cartridges see page CONNECTIONS

Example: 551.178.D6.D4.XX

Pressure indicator, CONNECTIONS "A" Tube Ø6, "B" Tube Ø4

Pneumatic Symbol



## Operational characteristic

- The pressure visual indicator is a device which measures the pressure inside a pneumatic circuit. The 0 to 8 bar visual indicator makes very easy to monitor the pressure state inside the circuit. It can be use on its own or can be coupled with another device.
- Mounting options:
  - on DIN rail using the relevant adaptor kit (see accessories)
  - with 90° bracket (see accessories)
- directly on the support plate thanks to two through holes on the body

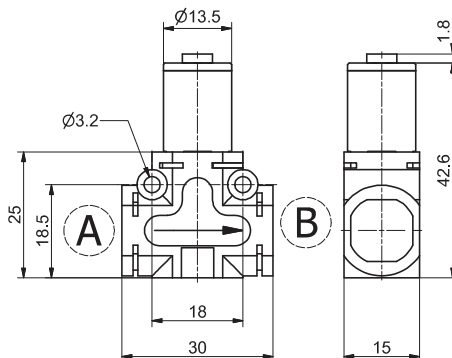
## Technical characteristic

Fluid	Filtered air, with or without lubrication
Connections	See CONNECTIONS LIST
Max working pressure (bar)	8 bar
Visualization scale	0 - 8 bar
Temperature °C	-5 - +50
Weight without connections	20,5 gr.



1

In line progressive start-up valve



Ordering code

**551.181.A.B.XX**

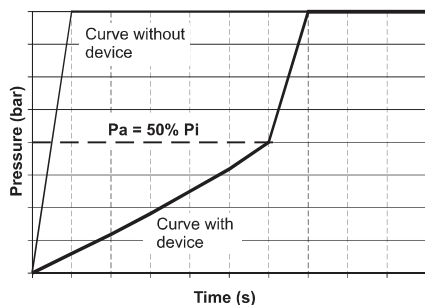
- A** Connection A  
see CONNECTIONS LIST
- B** Connection B  
see CONNECTIONS LIST

**CONNECTIONS LIST**

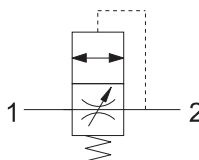
00 = None  
D4 = Straight Ø4  
D6 = Straight Ø6  
D8 = Straight Ø8  
L1 = Female banjo G1/8"  
G4 = Rotating banjo Ø 4  
G6 = Rotating banjo Ø 6  
G8 = Rotating banjo Ø 8  
M1 = G1/8 male  
M2 = G1/4 male  
F1 = G1/8 female

NOTE : For the dimension including cartridges see page CONNECTIONS  
Example: 551.181.D6.D4.XX  
Progressive start-up, CONNECTIONS "A" Tube Ø6, "B" Tube Ø4

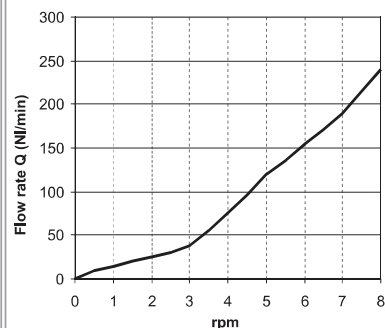
Piloting curves



Pneumatic Symbol



Adjustment curve



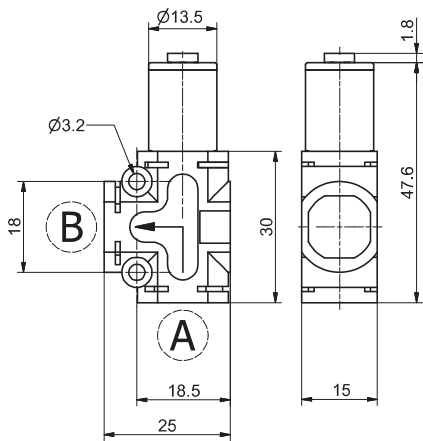
**Operational characteristic**

- The soft start valve is a device designed to gradually pressurise the downstream circuit until 50% of the upstream pressure value is reached.
- Once the 50% of the upstream pressure value is reached in the down stream circuit the valve fully opens allowing full air passage.
- The filling time can be adjusted thanks to the built in flow regulator.
- This device is used in order to ensure that during the pneumatic circuit start up the cylinders will return to their home position slowly avoiding collisions or sudden movements.

**Technical characteristic**

Fluid	Filtered air, with or without lubrication
Connections	See CONNECTIONS LIST
Working pressure (bar)	2 - 10 bar
Opening pressure (Pa)	50% of the inlet pressure (Pi)
Flow rate at 6 bar with free exhaust (NI/min)	650 NI/min (from 1 to 2 with opening circuit)
Flow rate at 6 bar with $\Delta p=1$ (NI/min)	350 NI/min (from 1 to 2 with opening circuit)
Flow rate at 6 bar with $\Delta p=1$ (NI/min)	600 NI/min (from 2 to 1 with opening pin)
Temperature °C	-5 - +50
Weight without connections	31 gr.

90° progressive start-up valve



Ordering code

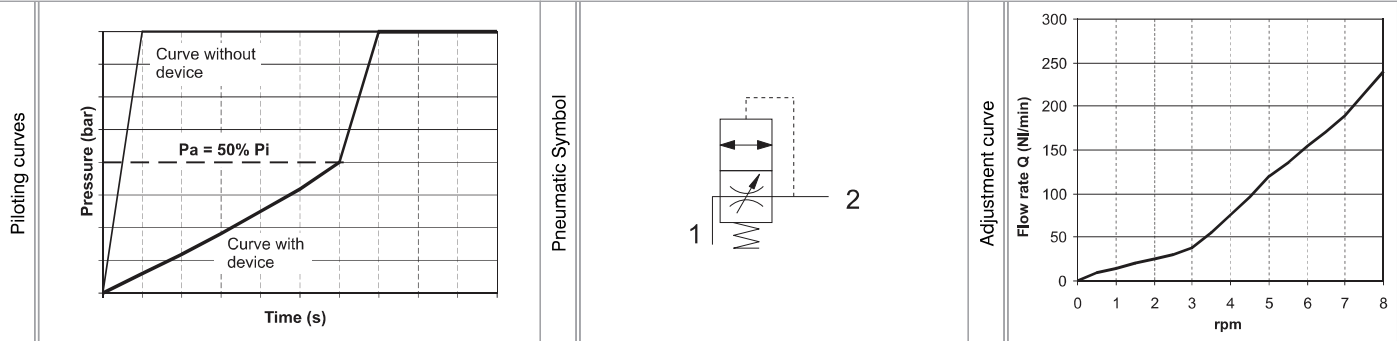
551.281.A.B.XX

- A** Connection A  
see CONNECTIONS LIST
- B** Connection B  
see CONNECTIONS LIST

CONNECTIONS LIST

- 00 = None  
D4 = Straight Ø4  
D6 = Straight Ø6  
D8 = Straight Ø8  
L1 = Female banjo G1/8"  
G4 = Rotating banjo Ø 4  
G6 = Rotating banjo Ø 6  
G8 = Rotating banjo Ø 8  
M1 = G1/8 male  
M2 = G1/4 male  
F1 = G1/8 female

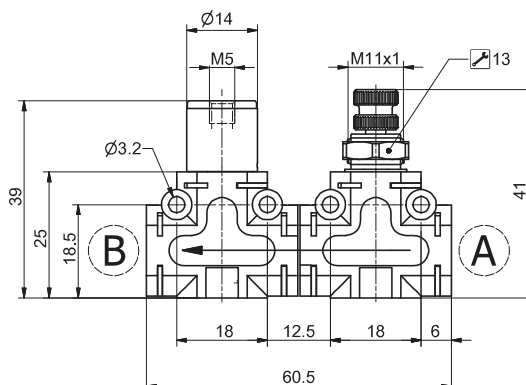
NOTE : For the dimension including cartridges see page CONNECTIONS  
Example: 551.281.M1.D4.XX  
Progressive start-up, CONNECTIONS "A" Tube Ø6, "B" Tube Ø4



Operational characteristic		Technical characteristic	
<ul style="list-style-type: none"><li>- The soft start valve is a device designed to gradually pressurise the downstream circuit until 50% of the upstream pressure value is reached.</li><li>- Once the 50% of the upstream pressure value is reached in the down stream circuit the valve fully opens allowing full air passage.</li><li>- The filling time can be adjusted thanks to the built in flow regulator.</li><li>- This device is used in order to ensure that during the pneumatic circuit start up the cylinders will return to theirs home position slowly avoiding collisions or sudden movements.</li></ul>		Fluid	Filtered air, with or without lubrication
		Connections	See CONNECTIONS LIST
		Max working pressure (bar)	2 - 10 bar
		Opening pressure (Pa)	50% of the inlet pressure (Pi)
		Flow rate at 6 bar with free exhaust (NI/min)	650 NI/min (from 1 to 2 with opening circuit)
		Flow rate at 6 bar with $\Delta p=1$ (NI/min)	350 NI/min (from 1 to 2 with opening circuit)
		Flow rate at 6 bar with $\Delta p=1$ (NI/min)	600 NI/min (from 2 to 1 with opening pin)
		Temperature °C	-5 - +50
		Weight without connections	31 gr.

1

In line blocking valve + flow control valve



Ordering code

**551.1F1.A.B.XX**

VERSION

- 1 = Unidirectional blocking valve + Unidirectional flow control valve
- 2 = Bidirectional blocking valve + Bidirectional flow control valve
- 3 = Unidirectional blocking valve + Bidirectional flow control valve
- 4 = Bidirectional blocking valve + Unidirectional flow control valve

**T**

**A** see CONNECTIONS LIST A

**B** see CONNECTIONS LIST B

CONNECTIONS LIST

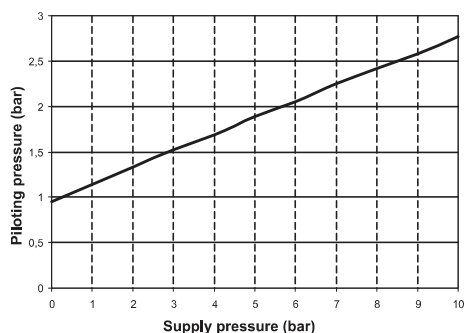
- 00 = None
- D4 = Straight Ø4
- D6 = Straight Ø6
- D8 = Straight Ø8
- L1 = Female banjo G1/8"
- G4 = Rotating banjo Ø 4
- G6 = Rotating banjo Ø 6
- G8 = Rotating banjo Ø 8
- M1 = G1/8 male
- M2 = G1/4 male
- F1 = G1/8 female

NOTE : For the dimension including cartridges see page CONNECTIONS

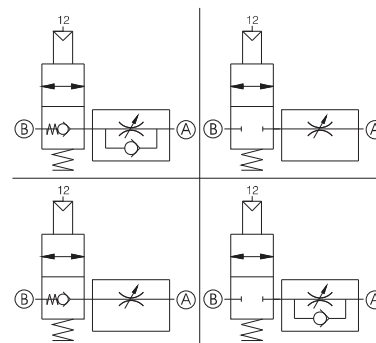
Example: 551.1F1.00.00.XX

In line unidirectional blocking valve + unidirectional flow control valve, without CONNECTIONS "A" and "B"

Piloting curves



Pneumatic Symbol



Operational characteristic

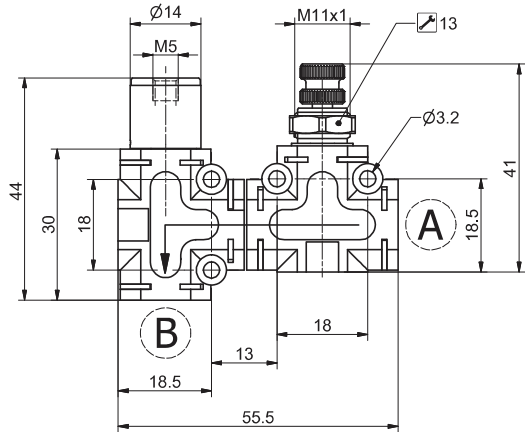
- The combination of this two functions ensures that the downstream pressure is maintained in case of accidental loss of supply pressure and at the same time grants the possibility to regulate the circuit flow rate. A typical application of this combination is close to or directly assembled onto the actuator connection ports. This allows to keep pressurised the cylinder chamber in case of accidental loss of supply pressure and to regulate the exhaust flow rate when the blocking valve is actuated.
- The possible combinations are the following:
  - unidirectional blocking valve + unidirectional flow control valve.
  - bidirectional blocking valve + bidirectional flow control valve
  - bidirectional blocking valve + unidirectional flow control valve
  - unidirectional blocking valve + bidirectional flow control valve

Technical characteristic

Fluid	Filtered air, with or without lubrication
Connections	See CONNECTIONS LIST
Max working pressure (bar)	0,5 - 10 bar
Temperature °C	-5 - +50
Ø Orifice size (mm)	Ø3 mm
Flow rate at 6 bar with $\Delta p=1$ (NI/min)	285 NI/min
Weight without connections	62 gr.



90° blocking valve + flow control valve



Ordering code

551.2F<sup>T</sup>.A.B.XX

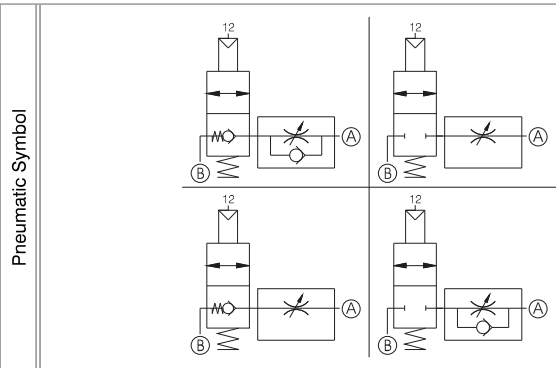
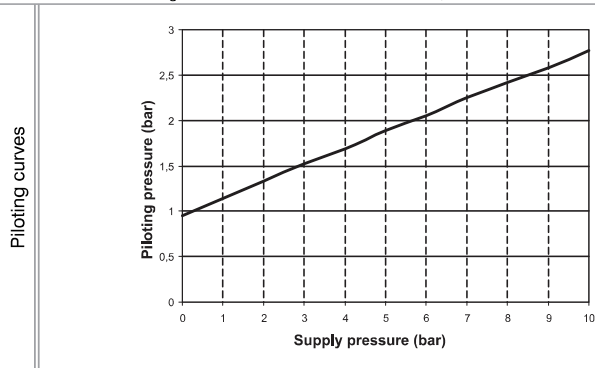
VERSION

- 1 = Unidirectional blocking valve + Unidirectional flow control valve
- <sup>T</sup> 2 = Bidirectional blocking valve + Bidirectional flow control valve
- 3 = Unidirectional blocking valve + Bidirectional flow control valve
- 4 = Bidirectional blocking valve + Unidirectional flow control valve
- <sup>A</sup> see CONNECTIONS LIST A
- <sup>B</sup> see CONNECTIONS LIST B

CONNECTIONS LIST

- 00 = None
- D4 = Straight Ø4
- D6 = Straight Ø6
- D8 = Straight Ø8
- L1 = Female banjo G1/8"
- G4 = Rotating banjo Ø 4
- G6 = Rotating banjo Ø 6
- G8 = Rotating banjo Ø 8
- M1 = G1/8 male
- M2 = G1/4 male
- F1 = G1/8 female

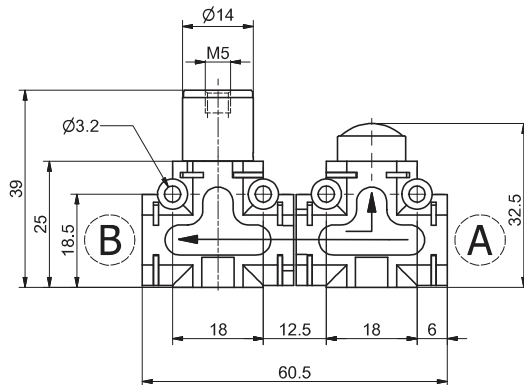
NOTE : For the dimension including cartridges see page CONNECTIONS  
Example: 551.2F1.00.00.XX  
90° unidirectional blocking valve + unidirectional flow control valve, without CONNECTIONS "A" and "B"



Operational characteristic		Technical characteristic	
<ul style="list-style-type: none"><li>- The combination of this two functions ensures that the downstream pressure is maintained in case of accidental loss of supply pressure and at the same time grants the possibility to regulate the circuit flow rate. A typical application of this combination is close to or directly assembled onto the actuator connection ports. This allows to keep pressurised the cylinder chamber in case of accidental loss of supply pressure and to regulate the exhaust flow rate when the blocking valve is actuated.</li><li>- The possible combinations are the following:<ul style="list-style-type: none"><li>- 90° unidirectional blocking valve + unidirectional flow control valve.</li><li>- 90° bidirectional blocking valve + bidirectional flow control valve</li><li>- 90° unidirectional blocking valve + bidirectional flow control valve</li><li>- 90° bidirectional blocking valve + unidirectional flow control valve</li></ul></li></ul>		Fluid	Filtered air, with or without lubrication
		Connections	See CONNECTIONS LIST
		Max working pressure (bar)	0,5 - 10 bar
		Temperature °C	-5 - +50
		Ø Orifice size (mm)	Ø3 mm
		Flow rate at 6 bar with Δp=1 (NI/min)	285 NI/min
		Weight without connections	62 gr.

1

In line blocking valve + quick exhaust valve



Ordering code

**551.1G<sup>T</sup>.A.B.XX**

VERSION

- T** 1 = Unidirectional blocking valve + quick exhaust valve  
2 = Bidirectional blocking valve + quick exhaust valve

**A** Connection A see CONNECTIONS LIST

**B** Connection B see CONNECTIONS LIST

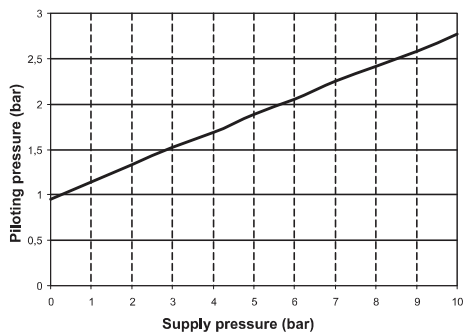
CONNECTIONS LIST

- 00 = None  
D4 = Straight Ø4  
D6 = Straight Ø6  
D8 = Straight Ø8  
L1 = Female banjo G1/8"  
G4 = Rotating banjo Ø 4  
G6 = Rotating banjo Ø 6  
G8 = Rotating banjo Ø 8  
M1 = G1/8male  
M2 = G1/4 male  
F1 = G1/8 female

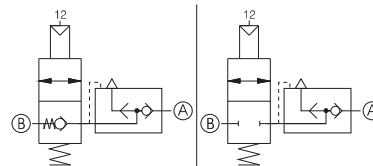
NOTE : For the dimension including cartridges see page CONNECTIONS  
Example: 551.1G1.00.00.XX

In line unidirectional blocking valve + quick exhaust valve, without CONNECTIONS "A" and "B"

Piloting curves



Pneumatic Symbol



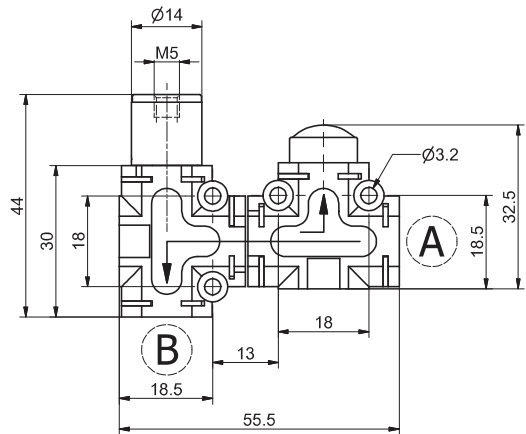
Operational characteristic

- The combination of this two functions ensures that the downstream pressure is maintained in case of accidental loss of supply pressure and at the same time allows for the air to be directly discharged into the atmosphere without going through the pneumatic circuit. A typical application of this combination is close to or directly assembled onto the actuator connection ports. This allows to keep pressurised the cylinder chamber in case of accidental loss of supply pressure and to quickly discharge the same chamber when the blocking valve is actuated.
- The possible combination are the following:
  - unidirectional blocking valve + quick exhaust valve
  - bidirectional blocking valve + quick exhaust valve.

Technical characteristic

Fluid	Filtered air, with or without lubrication
Connections	See CONNECTIONS LIST
Max working pressure (bar)	0,5 - 10 bar
Temperature °C	-5 - +50
Weight without connections	51 gr.
Flow rate at 6 bar with $\Delta p=1$ (NI/min)	285 NI/min

90° blocking valve + quick exhaust valve



Ordering code

551.2G1.A.B.XX

VERSION

- 1 = 90° Unidirectional blocking valve + quick exhaust valve  
2 = 90° Bidirectional blocking valve + quick exhaust valve

Connection A see CONNECTIONS LIST

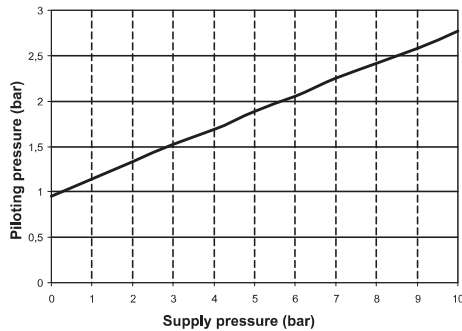
Connection B see CONNECTIONS LIST

CONNECTIONS LIST

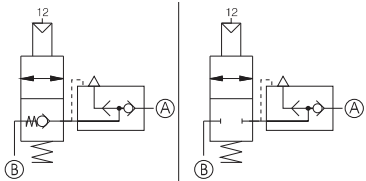
- 00 = None  
D4 = Straight Ø4  
D6 = Straight Ø6  
D8 = Straight Ø8  
L1 = Female banjo G1/8"  
G4 = Rotating banjo Ø 4  
G6 = Rotating banjo Ø 6  
G8 = Rotating banjo Ø 8  
M1 = G1/8 male  
M2 = G1/4 male  
F1 = G1/8female

NOTE : For the dimension including cartridges see page CONNECTIONS  
Example: 551.2G1.00.00.XX  
90° unidirectional blocking valve + quick exhaust valve, without CONNECTIONS "A" and "B"

Piloting curves



Pneumatic Symbol



Operational characteristic

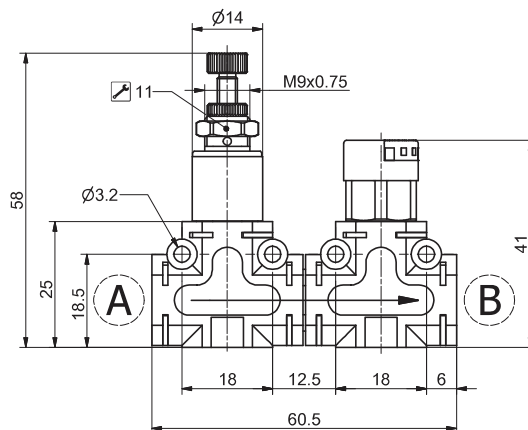
- The combination of this two functions ensures that the downstream pressure is maintained in case of accidental loss of supply pressure and at the same time allows for the air to be directly discharged into the atmosphere without going through the pneumatic circuit. A typical application of this combination is close to or directly assembled onto the actuator connection ports. This allows to keep pressurised the cylinder chamber in case of accidental loss of supply pressure and to quickly discharge the same chamber when the blocking valve is actuated.
- The possible combination are the following:
  - 90° unidirectional blocking valve + quick exhaust valve
  - 90° bidirectional blocking valve + quick exhaust valve.

Technical characteristic

Fluid	Filtered air, with or without lubrication
Connections	See CONNECTIONS LIST
Max working pressure (bar)	0,5 - 10 bar
Temperature °C	-5 - +50
Weight without connections	51 gr.
Flow rate at 6 bar with Δp=1 (NI/min)	285 NI/min

1

In line pressure regulator + pressure indicator



Ordering code

**551.1H.T.A.B.XX**

VERSION

- T** 2 = 0 - 2 bar
- 4 = 0 - 4 bar
- 8 = 0 - 8 bar

**A** Connection A  
see CONNECTIONS LIST

**B** Connection B  
see CONNECTIONS LIST

CONNECTIONS LIST

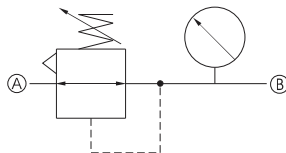
- 00 = None
- D4 = Straight  $\varnothing 4$
- D6 = Straight  $\varnothing 6$
- D8 = Straight  $\varnothing 8$
- L1 = Female banjo G1/8"
- G4 = Rotating banjo  $\varnothing 4$
- G6 = Rotating banjo  $\varnothing 6$
- G8 = Rotating banjo  $\varnothing 8$
- M1 = G1/8 male
- M2 = G1/4 male
- F1 = G1/8 female

NOTE : For the dimension including cartridges see page CONNECTIONS

Example: 551.1H2.M1.D4.XX

In line pressure regulator, adjusting range 0 - 2 bar + pressure indicator, CONNECTIONS "A" Male G 1/8 and "B" Tube  $\varnothing 4$

Pneumatic Symbol



Operational characteristic

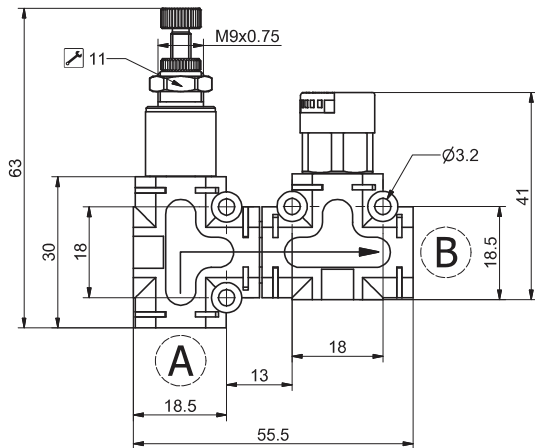
- The combination of this two functions ensures the possibility to regulate the downstream pressure while directly visualising the adjusted pressure value.
- The possible combinations are the following:
- 0 to 2 bar pressure regulator + pressure visual indicator
- 0 to 4 bar pressure regulator + pressure visual indicator
- 0 to 8 bar pressure regulator + pressure visual indicator
- the visual indicator Pressure range (bar) is always 0 to 8 bar

Technical characteristic

Fluid	Filtered air, with or without lubrication
Connections	See CONNECTIONS LIST
Max working pressure (bar)	8 bar
Temperature °C	-5 - +50
Visualization scale	0 - 8 bar
Regulated Pressure range (bar)	0 - 2 bar 0 - 4 bar 0 - 8 bar
Weight without connections	62 gr.



90° pressure regulator + pressure indicator



Ordering code

551.2H●.A.●.XX

VERSION

- 2 = 0 - 2 bar
- 4 = 0 - 4 bar
- 8 = 0 - 8 bar

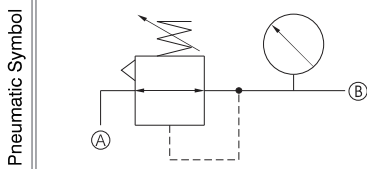
● Connection A  
see CONNECTIONS LIST

● Connection B  
see CONNECTIONS LIST

CONNECTIONS LIST

- 00 = None
- D4 = Straight Ø4
- D6 = Straight Ø6
- D8 = Straight Ø8
- L1 = Female banjo G1/8"
- G4 = Rotating banjo Ø 4
- G6 = Rotating banjo Ø 6
- G8 = Rotating banjo Ø 8
- M1 = G1/8 male
- M2 = G1/4 male
- F1 = G1/8 female

NOTE : For the dimension including cartridges see page CONNECTIONS  
Example: 551.2H2.M1.D4.XX  
90° pressure regulator, adjusting range 0 - 2 bar + pressure indicator, CONNECTIONS "A" Male G 1/8 and "B" Tube Ø4



Operational characteristic

- The combination of this two functions ensures the possibility to regulate the downstream pressure while directly visualising the adjusted pressure value.
- The possible combinations are the following:
  - 0 to 2 bar pressure regulator + pressure visual indicator
  - 0 to 4 bar pressure regulator + pressure visual indicator
  - 0 to 8 bar pressure regulator + pressure visual indicator
- the visual indicator Pressure range (bar) is always 0 to 8 bar

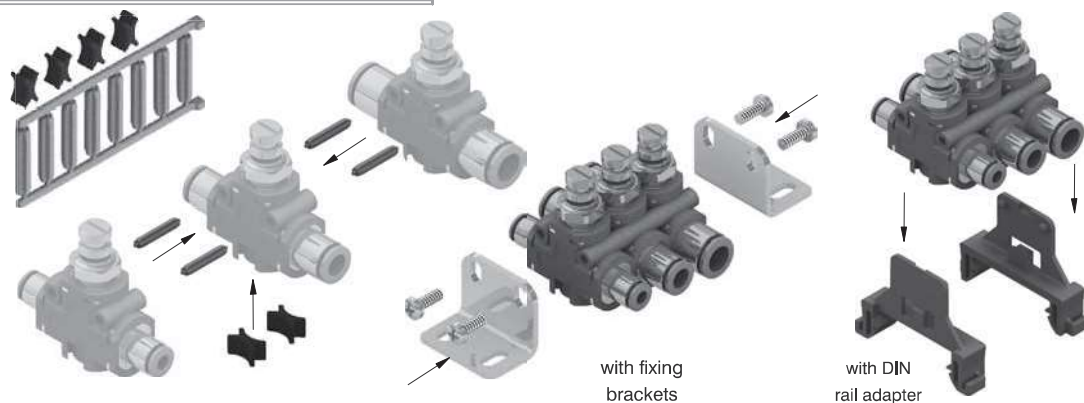
Technical characteristic

Fluid	Filtered air, with or without lubrication
Connections	See CONNECTIONS LIST
Max working pressure (bar)	8 bar
Temperature °C	-5 - +50
Visualization scale	0 - 8 bar
Regulated Pressure range (bar)	0 - 2 bar 0 - 4 bar 0 - 8 bar
Weight without connections	62 gr.



### Coupling kit (pins and forks)

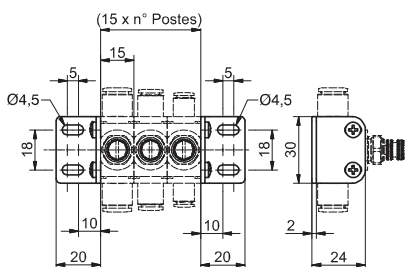
Ordering code

**55160**


Weight 2,5 gr. - The kit, which includes a series of pins and forks, enables to join together in a fast and safe way the function fittings. The pins, once inserted in the front holes, ensure resistance against forces applied perpendicularly and sideways (for example the insertion of the tube in the cartridges). The forks, once located in the profiled housing ensures that the parts are held together tightly. The kit allows for 5 function fittings to be mounted together.

### Fixing brackets

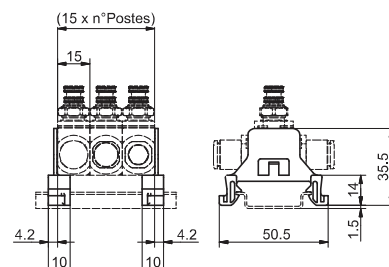
### DIN rail adapter



Ordering code

**55150**

Weight gr. 18  
The kit comprises two fixing brackets and the screws



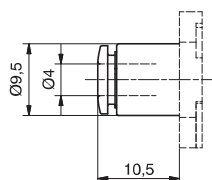
Ordering code

**55116**

Weight gr. 4  
The kit comprises two adapters

### Ø4 straight cartridge

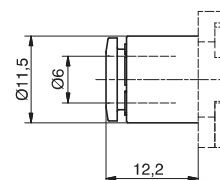
### Ø6 straight cartridge



Ordering code

**551KD4**

Weight 7,5 gr.



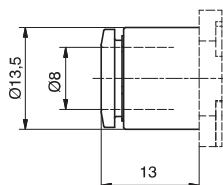
Ordering code

**551KD6**

Weight 7,3 gr.

### Ø8 straight cartridge

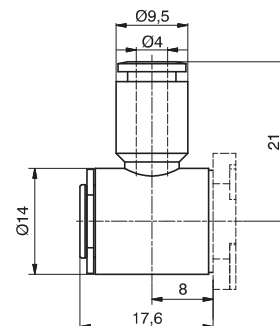
### Ø4 banjo PL cartridge



Ordering code

**551KD8**

Weight 7 gr.




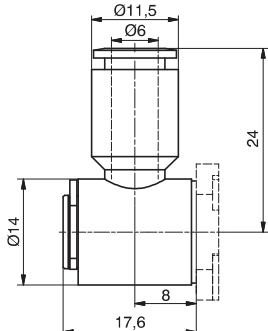

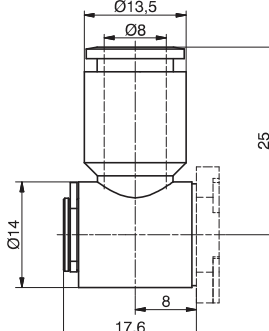
Ordering code


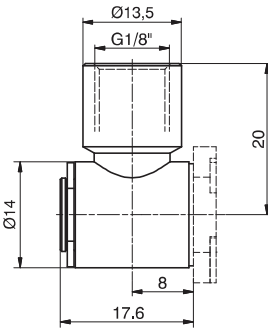

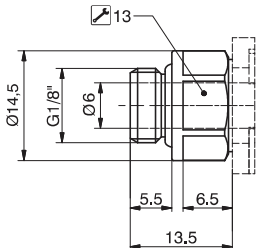
**551KG4**


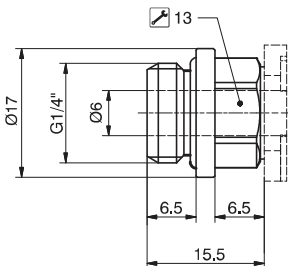

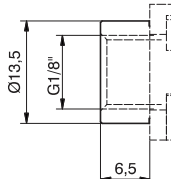
Weight 13,6 gr.




1

<b>Ø6 banjo PL cartridge</b>		<b>Ø8 banjo PL cartridge</b>	
			
Ordering code		Ordering code	
<b>551KG6</b>		<b>551KG8</b>	
Weight 14 gr.		Weight 14,3 gr.	

<b>G1/8" banjo female cartridge</b>		<b>G1/8" male straight cartridge</b>	
			
Ordering code		Ordering code	
<b>551KL1</b>		<b>551KM1</b>	
Weight 30 gr.		Weight 14 gr.	

<b>G1/4" male straight cartridge</b>		<b>G1/8" female straight cartridge</b>	
			
Ordering code		Ordering code	
<b>551KM2</b>		<b>551KF1</b>	
Weight 20 gr.		Weight 9 gr.	

<b>Connection for multiple function</b>	
	
Ordering code	
<b>551KUU</b>	
Weight 14 gr.	

## General

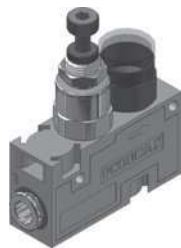
This new type of miniaturised pressure regulators are mostly indicated for the use on the secondary level of the pneumatic circuits.

Thanks to the contained dimensions are particularly indicated to be used very closely or directly mounted onto the consumption.

Three versions are available.



Version rod G1/8" swivel ring with female thread G 1/8" and G 1/4" or push-in fitting for tube Ø4, Ø6 and Ø8



model with body in technopolymer integrated gauge and quick coupling fittings for tube Ø4 and Ø6.

### G1/8" model to be directly mounted onto the valve

Compact design to be directly mounted onto the valves uses standard swivel rings with G1/8" female thread (ref 41218) or quick coupling fittings for tube sizes.

It is also possible to supply the regulating shaft without the swivel ring.

### Model with body in technopolymer and integrated gauge

is the more complete solution, comprises a movable gauge which enables to check the regulated pressure

Is manufactured using the same regulating unit as the base model fitted into a technopolymer body on which are inserted two quick coupling cartridges, 4mm or 6mm tube for inlet and outlet connections; two side plates lock the cartridges and gauge in position.

It is possible to join together more than one regulator by means of a dedicated adaptor made of technopolymer which must be inserted in the appropriate slot, (the air must be supplied independently to each regulator.)

Several mounting solutions are available: wall mounting via two mounting holes, on DIN rail using the specific accessories or on panels.

## Mounting solutions

Several mounting solution are available:



G1/8" model to be directly mounted onto the valve:  
Directly mounted onto the valves threaded connections (consumptions)



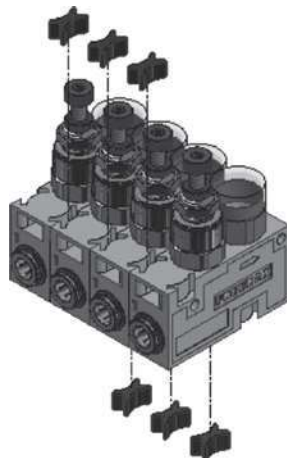
Model with body in technopolymer and integrated gauge:  
Wall mounting via the mounting holes on the body



Model with body in technopolymer and integrated gauge:  
Panel mounting via the locking nut



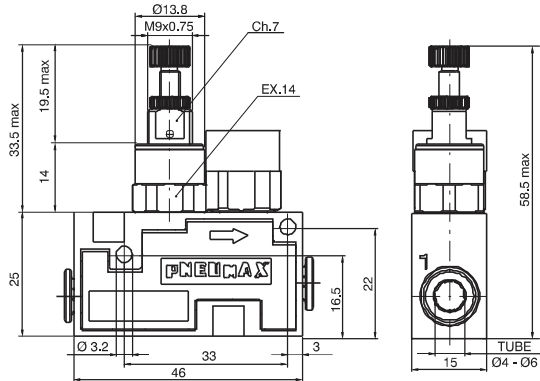
Model with body in technopolymer and integrated gauge:  
On DIN rail using the specific accessories



Model with body in technopolymer and integrated gauge:  
In batteries using the appropriate "X" shaped connecting insert.



Miniaturised pressure regulators



Ordering code

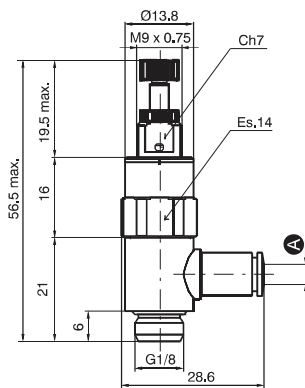
17522A.C.R

CONNECTIONS
4= Tube Ø4mm
6= Tube Ø6mm
REGULATION RANGE
C = 0 - 8 bar
B = 0 - 4 bar
A = 0 - 2 bar

Example: Miniaturised pressure regulators with technopolymer body and integrated gauge, with quick coupling cartridges for tube Ø6 mm and tube Ø4 mm, pressure regulation range 0 - 8 bar

Operational characteristic	Technical characteristic
Regulating cartridge = Nickel-plated brass	Max working pressure (bar)
Regulator body = Technopolymer	Temperature °C
Seals = Oil resistant nitrilic rubber (NBR)	Flow rate at 6 bar with Δp=1 (NI/min)
Plunger spring = AISI 302	Inlet connections sizes
Regulating spring = Spring suitable steel	Consumption connection sizes
Plunger = Oil resistant nitrilic rubber (NBR)	Mounting positioning
Other parts = Brass	

Miniaturised pressure regulators



Ordering code

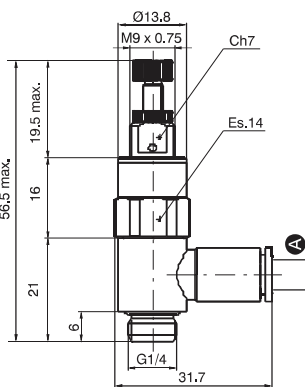
17602A.A.R

SWIVEL RING
0= None
1= Swivel ring G1/8" female
4= Tube Ø4mm
6= Tube Ø6mm
8= Tube Ø8mm
REGULATION RANGE
C = 0 - 8 bar
B = 0 - 4 bar
A = 0 - 2 bar

Example: Miniaturised pressure regulators, version rod G1/8" swivel ring with female thread G 1/8", pressure regulation range 0 - 8 bar

Operational characteristic	Technical characteristic
Regulating cartridge = Nickel-plated brass	Max working pressure (bar)
Regulator body = Nickel-plated brass	Temperature °C
Seals = Oil resistant nitrilic rubber (NBR)	Flow rate at 6 bar with Δp=1 (NI/min)
Plunger spring = AISI 302	Inlet connections sizes
Regulating spring = Spring suitable steel	Consumption connection sizes
Plunger = Oil resistant nitrilic rubber (NBR)	Mounting positioning
Other parts = Brass	

Miniaturised pressure regulators



Ordering code

17602B.A.R

SWIVEL RING
0= None
1= Swivel ring G1/4" female
6= Tube Ø6mm
8= Tube Ø8mm
REGULATION RANGE
C = 0 - 8 bar
B = 0 - 4 bar
A = 0 - 2 bar

Example: Miniaturised pressure regulators, version rod G1/8" swivel ring with female thread G 1/8", pressure regulation range 0 - 8 bar

Operational characteristic	Technical characteristic
Regulating cartridge = Nickel-plated brass	Max working pressure (bar)
Regulator body = Nickel-plated brass	Temperature °C
Seals = Oil resistant nitrilic rubber (NBR)	Flow rate at 6 bar with Δp=1 (NI/min)
Plunger spring = AISI 302	Inlet connections sizes
Regulating spring = Spring suitable steel	Consumption connection sizes
Plunger = Oil resistant nitrilic rubber (NBR)	Mounting positioning
Other parts = Brass	

## Technical data for push-in fittings

## TECHNICAL DATA

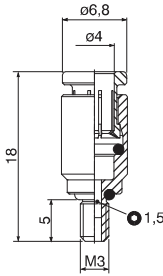
Working temperature:	-20°C +70°C
Maximum working pressure:	10 bar
Fluid:	Compressed air (others fluids on request)
Materials:	Nichel-plated brass body Brass grip Silicone free NBR gaskets
Thread:	Cylindrical with O-Ring
Maximum torque	
Thread: M3:	0,4 Nm
Thread: M6 and M6x0,75:	1,3 Nm

## MAIN FEATURES


- 1 Can be inserted and extracted with one hand
- 2 Suitable for tube Rilsan, Polyurethane, Nylon, Polyethylene
- 3 Supercompact
- 4 Extremely lightweight yet sturdy
- 5 O-Ring provided with his own seat to ensure seal with polished surface
- 6 Suitable for vacuum application


Art. RDR Straight male adaptor (parallel)


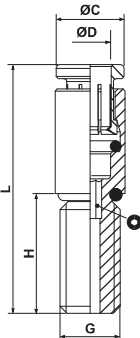
Ordering code  
**ART. RDR3.40-MH05**





Art. RDR Straight male adaptor (parallel)

Ordering code  
**ART. RDR6.40-**

VERSION  
 MH12=M6, H=12mm  
 FH12=M6x0,75, H=12mm


CODE	ØD	G	ØC	H	L	
RDR6.40-MH12	4	M6	6,8	12	25	2
RDR6.40-FH12	4	M6x0,75	6,8	12	25	2


Art. RGR Complete single banjo with stem


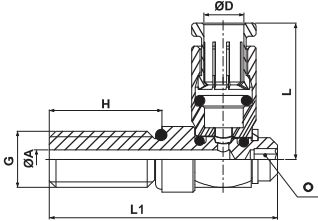
Ordering code  
**ART. RGR3.40-MH05**





Art. RGR Complete single banjo with stem

Ordering code  
**ART. RGR6.40-**

VERSION  
 MH12=M6, H=12mm  
 FH12=M6x0,75, H=12mm

CODE	ØD	G	ØA	H	L1	L	
RGR6.40-MH12	4	M6	2	12	24,3	14,5	2
RGR6.40-FH12	4	M6x0,75	2	12	24,3	14,5	2