



General

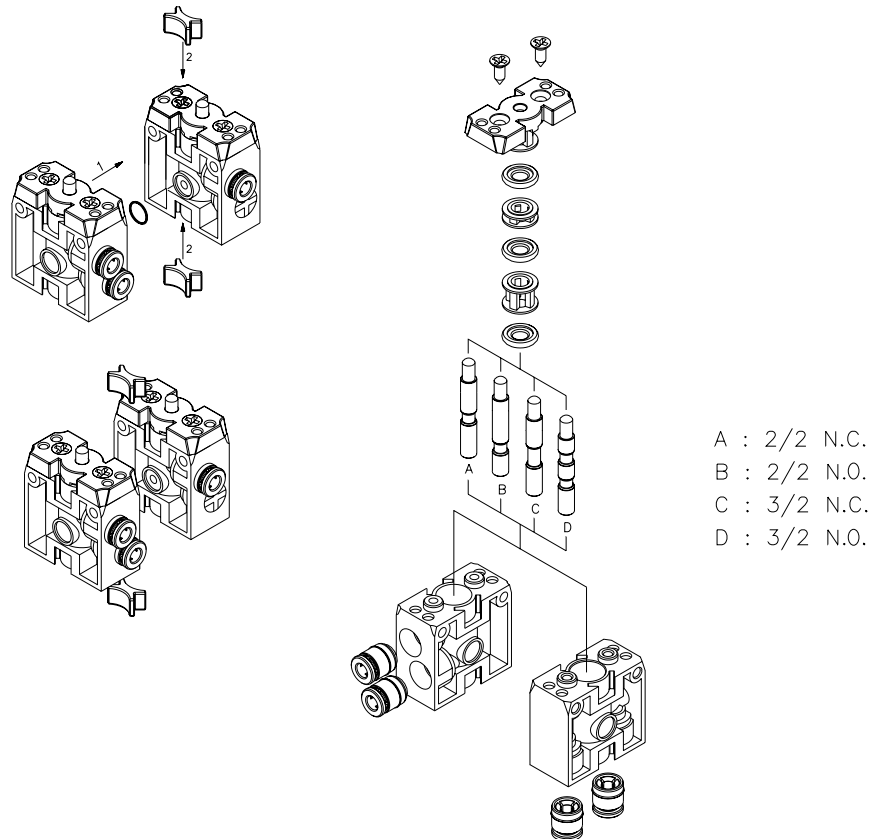
New 104 micro valves series have been realized as an economic version to complete the range of 105 valves version. With their small overall dimensions it makes easy installation and operation. Their main characteristic is the possibility to choose between the version with lateral or rear pneumatic connections realized with quick fitting for Ø 4 mm. tube included.

The valves are available with 2 or 3 ways versions, normally closed or open, 5 ways and 5 ways 3 positions open centers and pressured centres.

The 5 ways version is made with two 3 ways valves placed side by side with common inlet.

The operators available for this valve are push button (different versions) and selector (key, short and long lever) and pneumatic.

It is also possible to combine the 2 and 3 ways valves with electrical switches, normally closed or open.



Construction characteristics

Body and cover	Reinforced technopolymer
Actuators	Plastic material for buttons and switches
Seals	Oil proof rubber NBR
Spacer	Acetal resin
Spool	Nickel-plated steel
Spring	Spring steel AISI 302

Use and maintenance

These valves have a mean life of 10 to 15 millions of cycles depending on application. Proper lubrication with specified oil may reduce the wear of the seals and good filtration insures long and trouble free operation. Check that the operating conditions are in accordance with the suggested pressure, temperature and so on.

ATTENTION: use hydraulic oil class H for lubrication such as MAGNA GC 32 (Castrol).



2/2 - 3/2

Tappet - spring

Lateral connections

Rear connections

Weight gr. 20
 Operating force 13 N

Ordering code

104. .0.1.

TYPE:
 22 = 2 way
 32 = 3 way

CONNECTION TYPE:
 L = Lateral
 P = Rear

FUNCTION:
 C = Norm. closed N.C.
 A = Norm. open N.O.

2/2 - 3/2

Pneumatic - spring

Lateral connections

Rear connections

Weight gr. 25
 Minimum operating pressure 2,5 bar

Ordering code

104. .11.1.

TYPE:
 22 = 2 way
 32 = 3 way

CONNECTION TYPE:
 L = Lateral
 P = Rear

FUNCTION:
 C = Norm. closed N.C.
 A = Norm. open N.O.

2/2 - 3/2

Push button - spring

Lateral connections

Rear connections

Weight gr. 50
 Operating force 18 N

Ordering code

104. .6.22/ .

TYPE:
 22 = 2 ways
 32 = 3 ways

BUTTON COLOR:
 1 = Red
 2 = Black
 3 = Green
 4 = Yellow

CONNECTION TYPE:
 L = Lateral
 P = Rear

FUNCTION:
 C = Norm. closed N.C.
 A = Norm. open N.O.

5/2

Lateral connections

Rear connections

Weight gr. 105
 Operating force 30 N

Ordering code

104. 52.6.22/ .

BUTTON COLOR:
 1 = Red
 2 = Black
 3 = Green
 4 = Yellow

CONNECTION TYPE:
 L = Lateral
 P = Rear

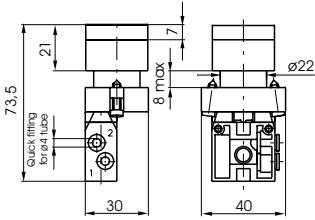
Operational Characteristics	Fluid	Max working pressure	Operating Temperature		Flow rate 6 bar at $\Delta p = 1$	Orifice size	Working port size
	Filtered and lubricated air	10 bar	min. -5° C	max. +50° C	90 NI/min	mm 2,5	tube Ø4

1

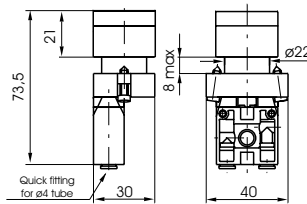


2/2 - 3/2

Lateral connections



Push button 2 positions
(step - step)
Rear connections



Ordering code

104. .6.31.

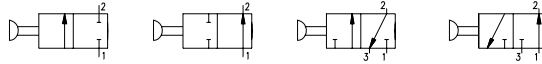
TYPE:
22 = 2 way
32 = 3 way

CONNECTION TYPE:
L = Lateral
P = Rear

FUNCTION:
C = Norm. closed N.C.
A = Norm. open N.O.

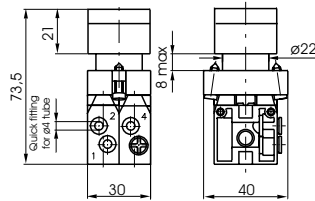
Weight gr. 60

Operating force 18 N

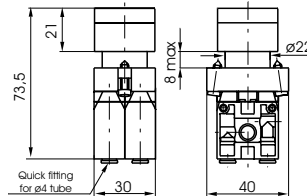


5/2

Lateral connections



Rear connections



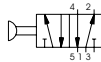
Ordering code

104. 52.6.31.

CONNECTION TYPE:
L = Lateral
P = Rear

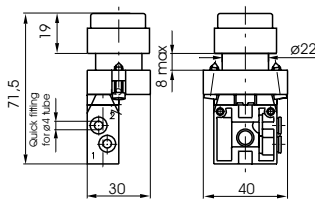
Weight gr. 110

Operating force 30 N



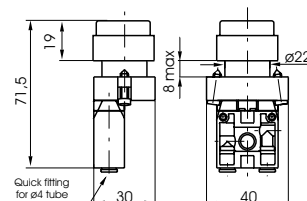
2/2 - 3/2

Lateral connections



Raised Push button - spring

Rear connections



Ordering code

104. .6.23/ .

TYPE:
22 = 2 ways
32 = 3 ways

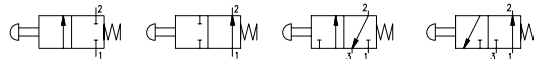
BUTTON COLOR:
1 = Red
2 = Black
3 = Green
4 = Yellow

CONNECTION TYPE:
L = Lateral
P = Rear

FUNCTION:
C = Norm. closed N.C.
A = Norm. open N.O.

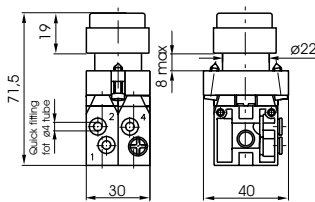
Weight gr. 50

Operating force 18 N

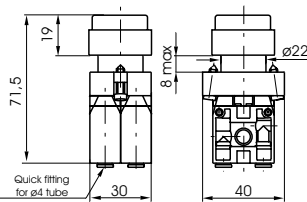


5/2

Lateral connections



Rear connections



Ordering code

104. 52.6.23/ .

BUTTON COLOR:
1 = Red
2 = Black
3 = Green
4 = Yellow

CONNECTION TYPE:
L = Lateral
P = Rear

Weight gr. 105

Operating force 30 N



Operational Characteristics	Fluid	Max working pressure	Operating Temperature		Flow rate 6 bar at $\Delta p = 1$	Orifice size	Working port size
	Filtered and lubricated air	10 bar	min. -5° C	max. +50° C	90 NI/min	mm 2,5	tube ø4



2/2 - 3/2

Palm button 2 position (emergency)

Lateral connections

Rear connections

Ordering code

104. .6.25.

TYPE:
 22 = 2 way
 32 = 3 way

CONNECTION TYPE:
 L = Lateral
 P = Rear

FUNCTION:
 C = Norm. closed N.C.
 A = Norm. open N.O.

Weight gr. 65
 Operating force 19 N

5/2

Lateral connections

Rear connections

Ordering code

104. 52.6.25.

CONNECTION TYPE:
 L = Lateral
 P = Rear

Weight gr. 120
 Operating force 32 N

2/2 - 3/2

Switch - short lever

Lateral connections

Rear connections

Ordering code

104. .6.30.

TYPE:
 22 = 2 ways
 32 = 3 ways

CONNECTION TYPE:
 L = Lateral
 P = Rear

FUNCTION:
 C = Norm. closed N.C.
 A = Norm. open N.O.

Switch 2 positions stable

Weight gr. 65

5/2 - 5/3

Lateral connections

Rear connections

Ordering code

104. 52.6.30.

CONNECTION TYPE:
 L = Lateral
 P = Rear

Switch 2 positions stable

104.53. .6.30.

FUNCTION:
 32 = Open centres
 33 = Pressured centres

SWITCH POSITIONS:
 0 = 3 pos. instable
 1 = 3 pos. stable

CONNECTION TYPE:
 L = Lateral
 P = Rear

Weight gr. 120

Operational Characteristics	Fluid	Max working pressure	Operating Temperature		Flow rate 6 bar at Δp = 1	Orifice size	Working port size
	Filtered and lubricated air	10 bar	min. -5° C	max. +50° C	90 NI/min	mm 2,5	tube Ø4

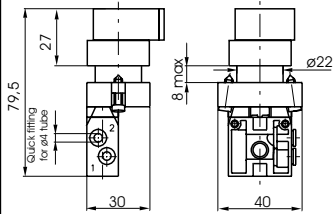
1



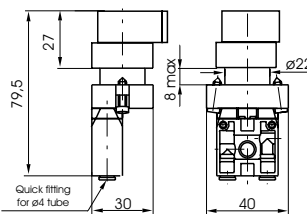
2/2 - 3/2

Switch - long lever

Lateral connections



Rear connections



Ordering code

104. .6.27.

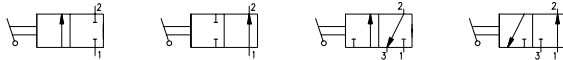
TYPE:
22 = 2 way
32 = 3 way

CONNECTION TYPE:
L = Lateral
P = Rear

FUNCTION:
C = Norm. closed N.C.
A = Norm. open N.O.

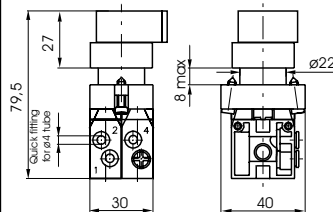
Switch 2 positions stable

Weight gr. 65

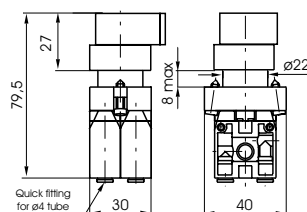


5/2 - 5/3

Lateral connections



Rear connections



Ordering code

104. 52.6.27.

CONNECTION TYPE:
L = Lateral
P = Rear

Switch 2 positions stable

104. 53. .6.27.

FUNCTION:
32 = Open centres
33 = Pressured centres

SWITCH POSITIONS:
0 = 3 pos. instable
1 = 3 pos. stable

CONNECTION TYPE:
L = Lateral
P = Rear

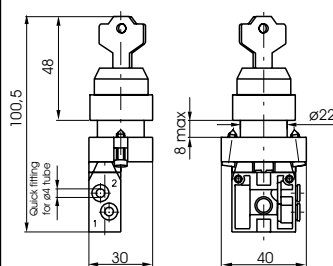
Weight gr. 120



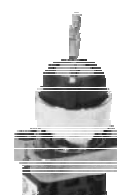
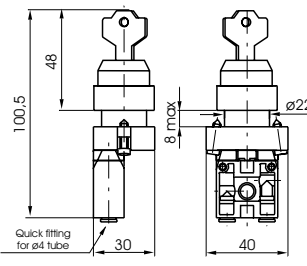
2/2 - 3/2

Kej switch

Lateral connections



Rear connections



Ordering code

104. .6.28.

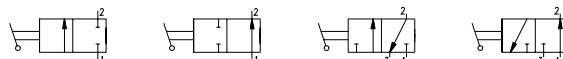
TYPE:
22 = 2 way
32 = 3 way

CONNECTION TYPE:
L = Lateral
P = Rear

FUNCTION:
C = Norm. closed N.C.
A = Norm. open N.O.

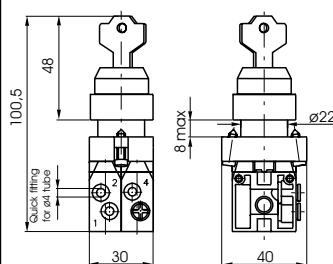
Switch 2 positions stable

Weight gr. 100

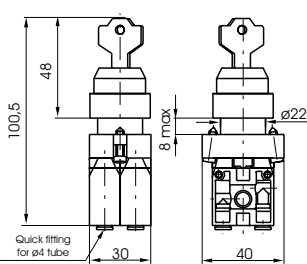


5/2 - 5/3

Lateral connections



Rear connections



Ordering code

104. 52.6.28.

CONNECTION TYPE:
L = Lateral
P = Rear

Switch 2 positions stable

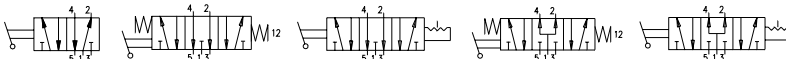
104. 53. .6.28.

FUNCTION:
32 = Open centres
33 = Pressured centres

SWITCH POSITIONS:
0 = 3 pos. instable
1 = 3 pos. stable











CONNECTION TYPE:
L = Lateral
P = Rear

Weight gr. 155



Operational Characteristics	Fluid	Max working pressure	Operating Temperature		Flow rate 6 bar at $\Delta p = 1$	Orifice size	Working port size
	Filtered and lubricated air	10 bar	min. -5° C	max. +50° C	90 NI/min	mm 2,5	tube ø4



<p style="text-align: center;">Push button</p> <hr/> <p style="text-align: center;">Ordering code</p> <hr/> <p>104.6.22/</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>BUTTON COLOR: 1 = Red 2 = Black 3 = Green 4 = Yellow</p> </div> 	<p style="text-align: center;">Raised push button</p> <hr/> <p style="text-align: center;">Ordering code</p> <hr/> <p>104.6.23/</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>BUTTON COLOR: 1 = Red 2 = Black 3 = Green 4 = Yellow</p> </div> 
<p style="text-align: center;">Push button 2 positions (step - step)</p> <hr/> <p style="text-align: center;">Ordering code</p> <hr/> <p>104.6.31</p> 	<p style="text-align: center;">Palm button 2 positions</p> <hr/> <p style="text-align: center;">Ordering code</p> <hr/> <p>104.6.25</p> 
<p style="text-align: center;">Switch short lever</p> <hr/> <p style="text-align: center;">Ordering code</p> <hr/> <p>104.6.30 Switch 2 positions stable</p> <p>104.6.30.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>0 = Switch 3 pos. instable 1 = Switch 3 pos. stable</p> </div> 	<p style="text-align: center;">Switch long lever</p> <hr/> <p style="text-align: center;">Ordering code</p> <hr/> <p>104.6.27 Switch 2 positions stable</p> <p>104.6.27.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>0 = Switch 3 pos. instable 1 = Switch 3 pos. stable</p> </div> 
<p style="text-align: center;">Kej switch</p> <hr/> <p style="text-align: center;">Ordering code</p> <hr/> <p>104.6.28 Switch 2 positions stable</p> <p>104.6.28.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>0 = Switch 3 pos. instable 1 = Switch 3 pos. stable</p> </div> 	<p style="text-align: center;">Fixing plate (completwith fixing screws)</p> <hr/> <p style="text-align: center;">Ordering code</p> <hr/> <p>104.00</p> 
<p style="text-align: center;">Compleat pneumatic operator</p> <hr/> <p style="text-align: center;">Ordering code</p> <hr/> <p>104.11</p> 	<p style="text-align: center;">Contact electric element</p> <hr/> <p style="text-align: center;">Ordering code</p> <hr/> <p>104.NC Normally closed 104.NA Normally open</p> 

1