General

The series 105 consist of a broad range of miniature valves and valves with various type of actuation.
The connections are M5 for this series.
Due to their special construction with a balanced spool, these valves can be used interchangeably as 3 ways or 5 ways as can be seen in the functional schematics in section 0. This is important because, for example, the 3 ways can be used normally closed or normally open and the 5 ways can be fed through the exhausts 3 and 5 with different pressures according to the need. The spool, as it is moving, isolates the connections without being effected by the inlet pressure.

Construction characteristics

	M5	**G 1/8" - G 1/4" - G 1/2" - G 1"**
Body	Nickel plated brass	Aluminium
Actuators	Nickel plated brass Stainless steel for roller levers and button levers. Zinc plated steel for side levers Plastic material for handles, buttons, switches	Aluminium
Seals	NBR	NBR
Spacer	Acetal resin	Technopolymer (Aluminium for G 1")
Spool	Stainless steel	Stainless steel / Technopolymer
Bottom plates		Technopolymer
Spring	Spring steel	Spring steel

Use and maintenance

These valves have an average life of 15 million cycles depending on the application and air quality, filtered and lubricated air using specified lubricants will dramatically reduce the wear of the seals and ensures long and trouble free operation.
Please ensure that the valve is being used according with the manufacturers specification, such as air pressure and temperature and that exhaust ports 3 & 5 are protected against the possible ingress of dirt or debris.
Repair kits including the spool complete with seals are available for overhauling the valves; however, although this is a simple operation it should be carried out by a competent person.

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

Specifications may be subject to change without prior notice.

1

Tappet panel - Spring

3/2

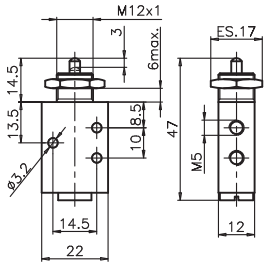
Ordering code

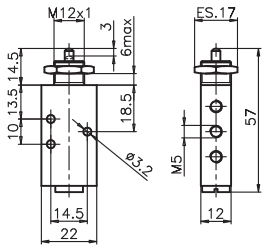
105.Ⓣ.0.1

	TYPE
Ⓣ	32 = 3 ways
	52 = 5 ways

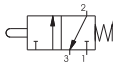
5/2

Tappet panel - Spring





Weight gr. 70
Operating force 14 N



Weight gr. 87
Operating force 14 N

Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (Nl/min)	Orifice size (mm)	Working ports size
	Filtered and lubricated air	10 bar	-5 - +70	120 Nl/min	mm 2,5	M5

Lever roller - Spring

3/2

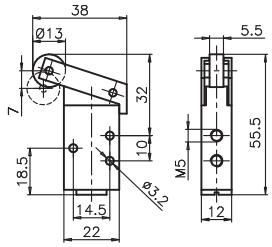
Ordering code

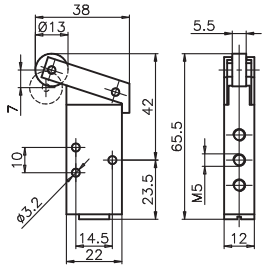
105.Ⓣ.2.1

	TYPE
Ⓣ	32 = 3 ways
	52 = 5 ways

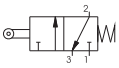
5/2

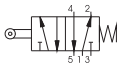
Lever roller - Spring





Weight gr. 85
Operating force 6 N





Weight gr. 102
Operating force 6 N

Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (Nl/min)	Orifice size (mm)	Working ports size
	Filtered and lubricated air	10 bar	-5 - +70	120 Nl/min	mm 2,5	M5

Lever roller ball bearing - Spring

3/2

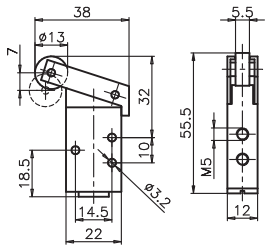
Ordering code

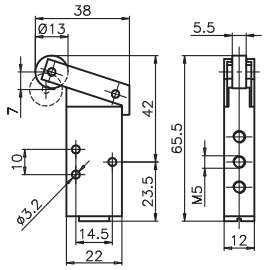
105.Ⓣ.2.1/1

	TYPE
Ⓣ	32 = 3 ways
	52 = 5 ways

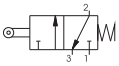
5/2

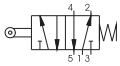
Lever roller ball bearing - Spring





Weight gr. 100
Operating force 6 N





Weight gr. 177
Operating force 6 N

Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (Nl/min)	Orifice size (mm)	Working ports size
	Filtered and lubricated air	10 bar	-5 - +70	120 Nl/min	mm 2,5	M5

1

Lever button - Spring

3/2

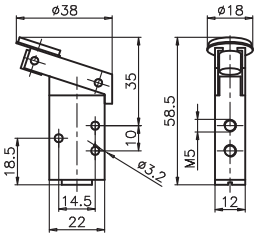
Ordering code

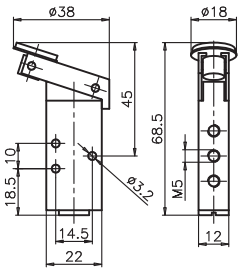
105.Ⓣ.2.6/Ⓒ

Ⓣ	TYPE
	32 = 3 ways
	52 = 5 ways
Ⓒ	BUTTON COLOR
	1 = Red
	2 = Black
	3 = Green

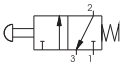
5/2

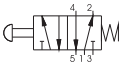
Lever button - Spring





Weight gr. 85
Operating force 6 N





Weight gr. 102
Operating force 6 N

Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (Nl/min)	Orifice size (mm)	Working ports size
	Filtered and lubricated air	10 bar	-5 - +70	120 Nl/min	mm 2,5	M5

Lever unidirectional - Spring

3/2

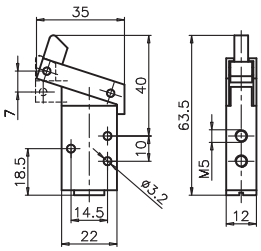
Ordering code

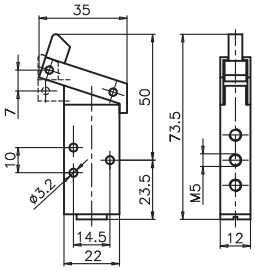
105.Ⓣ.3.1

Ⓣ	TYPE
	32 = 3 ways
	52 = 5 ways

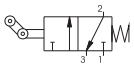
5/2

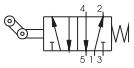
Lever unidirectional - Spring





Weight gr. 85
Operating force 6 N





Weight gr. 102
Operating force 6 N

Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (Nl/min)	Orifice size (mm)	Working ports size
	Filtered and lubricated air	10 bar	-5 - +70	120 Nl/min	mm 2,5	M5

Lever panel Ø22 - 2 positions

3/2

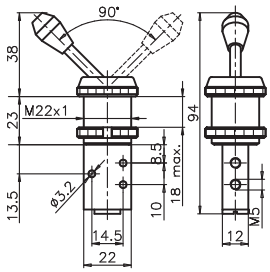
Ordering code

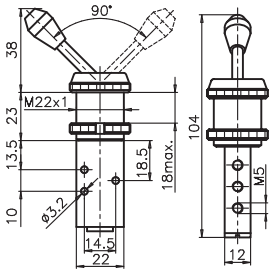
105.Ⓣ.4/Ⓒ

Ⓣ	TYPE
	32 = 3 ways
	52 = 5 ways
Ⓒ	BUTTON COLOR
	1 = Red
	2 = Black
	3 = Green

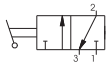
5/2

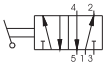
Lever panel Ø22 - 2 positions





Weight gr. 125





Weight gr. 142

Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (Nl/min)	Orifice size (mm)	Working ports size
	Filtered and lubricated air	10 bar	-5 - +70	120 Nl/min	mm 2,5	M5

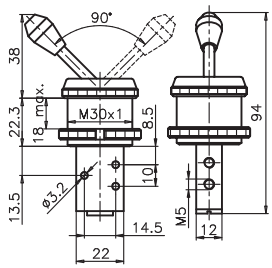
Specifications may be subject to change without prior notice

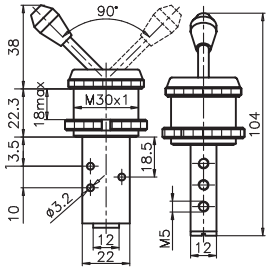
Lever panel Ø30 - 2 positions

3/2 | Ordering code | 5/2

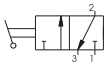
105.Ⓣ.5/Ⓒ

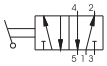
Ⓣ	TYPE
	32 = 3 ways
	52 = 5 ways
Ⓒ	BUTTON COLOR
	1 = Red
	2 = Black
	3 = Green





Weight gr. 165





Weight gr. 182

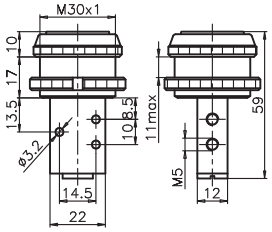
Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (Nl/min)	Orifice size (mm)	Working ports size
	Filtered and lubricated air	10 bar	-5 - +70	120 Nl/min	mm 2,5	M5

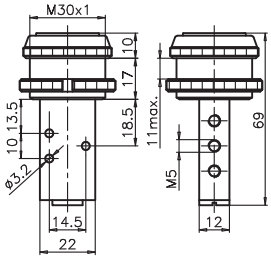
Push button Ø30 - Spring

3/2 | Ordering code | 5/2

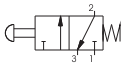
105.Ⓣ.6.1/Ⓒ

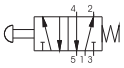
Ⓣ	TYPE
	32 = 3 ways
	52 = 5 ways
Ⓒ	BUTTON COLOR
	1 = Red
	2 = Black
	3 = Green





Weight gr. 123
Operating force 14 N





Weight gr. 140
Operating force 14 N

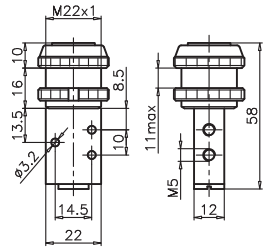
Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (Nl/min)	Orifice size (mm)	Working ports size
	Filtered and lubricated air	10 bar	-5 - +70	120 Nl/min	mm 2,5	M5

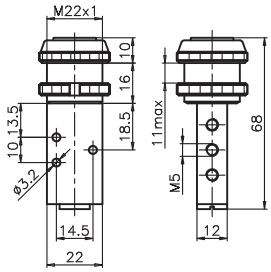
Push button Ø22 - Spring

3/2 | Ordering code | 5/2

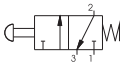
105.Ⓣ.6.2/Ⓒ

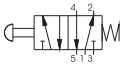
Ⓣ	TYPE
	32 = 3 ways
	52 = 5 ways
Ⓒ	BUTTON COLOR
	1 = Red
	2 = Black
	3 = Green





Weight gr. 102
Operating force 14 N





Weight gr. 119
Operating force 14 N

Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (Nl/min)	Orifice size (mm)	Working ports size
	Filtered and lubricated air	10 bar	-5 - +70	120 Nl/min	mm 2,5	M5

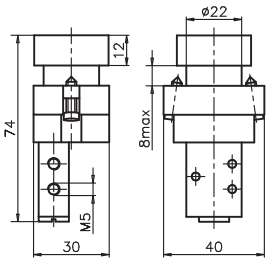
1

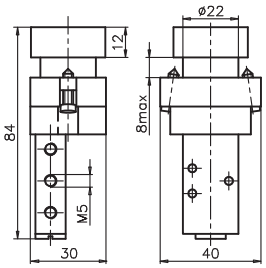
Push button - Spring

3/2 | Ordering code | 5/2 | Push button - Spring

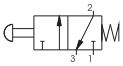
105.Ⓣ.6.22/Ⓒ

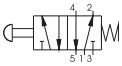
Ⓣ	TYPE
	32 = 3 ways
	52 = 5 ways
Ⓒ	BUTTON COLOR
	1 = Red
	2 = Black
	3 = Green
	4 = Yellow





Weight gr. 165
Operating force 14 N





Weight gr. 182
Operating force 14 N

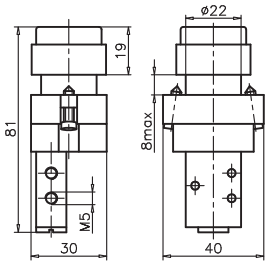
Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (Nl/min)	Orifice size (mm)	Working ports size
	Filtered and lubricated air	10 bar	-5 - +70	120 Nl/min	mm 2,5	M5

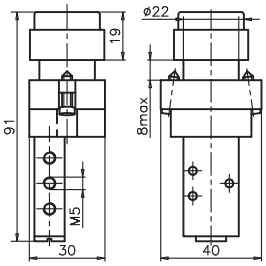
Raised Push button - Spring

3/2 | Ordering code | 5/2 | Raised Push button - Spring

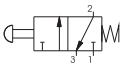
105.Ⓣ.6.23/Ⓒ

Ⓣ	TYPE
	32 = 3 ways
	52 = 5 ways
Ⓒ	BUTTON COLOR
	1 = Red
	2 = Black
	3 = Green
	4 = Yellow





Weight gr. 170
Operating force 14 N



Weight gr. 187
Operating force 14 N

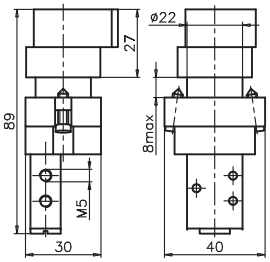
Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (Nl/min)	Orifice size (mm)	Working ports size
	Filtered and lubricated air	10 bar	-5 - +70	120 Nl/min	mm 2,5	M5

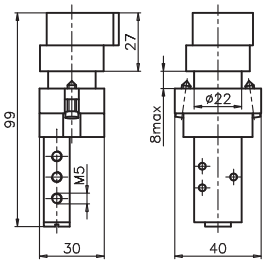
Switch 2 positions

3/2 | Ordering code | 5/2 | Switch 2 positions

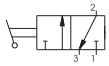
105.Ⓣ.6.27

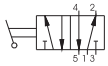
Ⓣ	TYPE
	32 = 3 ways
	52 = 5 ways





Weight gr. 185





Weight gr. 202

Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (Nl/min)	Orifice size (mm)	Working ports size
	Filtered and lubricated air	10 bar	-5 - +70	120 Nl/min	mm 2,5	M5

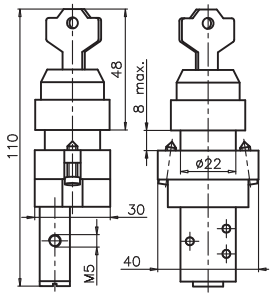
Specifications may be subject to change without prior notice

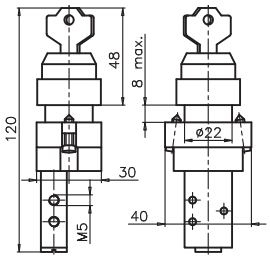
Key switch 2 positions

3/2 | Ordering code | 5/2

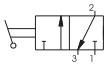
105.Ⓣ.6.28

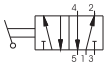
Ⓣ	TYPE
	32 = 3 ways
	52 = 5 ways





Weight gr. 215





Weight gr. 232

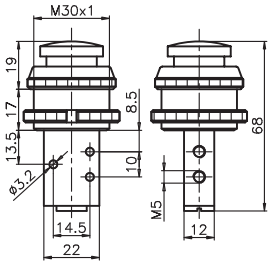
Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (Nl/min)	Orifice size (mm)	Working ports size
	Filtered and lubricated air	10 bar	-5 - +70	120 Nl/min	mm 2,5	M5

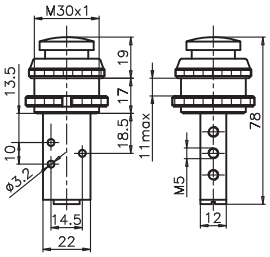
Palm pushbutton Ø30 - Spring

3/2 | Ordering code | 5/2

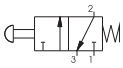
105.Ⓣ.7.1/Ⓒ

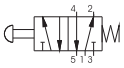
Ⓣ	TYPE
	32 = 3 ways
	52 = 5 ways
Ⓒ	BUTTON COLOR
	1 = Red
	2 = Black
	3 = Green





Weight gr. 126
Operating force 14 N





Weight gr. 143
Operating force 14 N

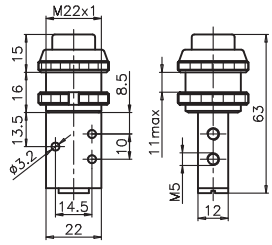
Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (Nl/min)	Orifice size (mm)	Working ports size
	Filtered and lubricated air	10 bar	-5 - +70	120 Nl/min	mm 2,5	M5

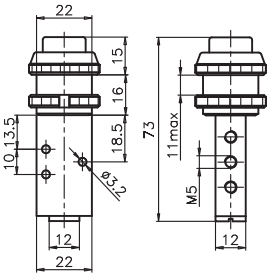
Palm pushbutton Ø22 - Spring

3/2 | Ordering code | 5/2

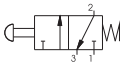
105.Ⓣ.7.2/Ⓒ

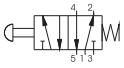
Ⓣ	TYPE
	32 = 3 ways
	52 = 5 ways
Ⓒ	BUTTON COLOR
	1 = Red
	2 = Black
	3 = Green





Weight gr. 103
Operating force 14 N





Weight gr. 120
Operating force 14 N

Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (Nl/min)	Orifice size (mm)	Working ports size
	Filtered and lubricated air	10 bar	-5 - +70	120 Nl/min	mm 2,5	M5

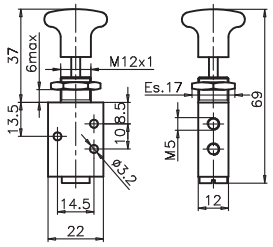
1

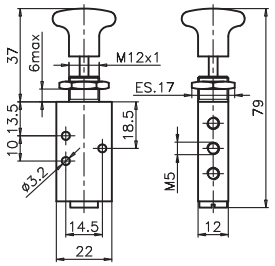
Push button - Spring

3/2 | Ordering code | 5/2 | Push button - Spring

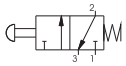
105.Ⓣ.8.1/Ⓒ

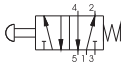
Ⓣ	TYPE
	32 = 3 ways
	52 = 5 ways
Ⓒ	BUTTON COLOR
	1 = Red
	2 = Black
	3 = Green





Weight gr. 75
Operating force 14 N





Weight gr. 92
Operating force 14 N

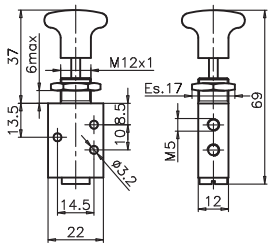
Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (Nl/min)	Orifice size (mm)	Working ports size
	Filtered and lubricated air	10 bar	-5 - +70	120 Nl/min	mm 2,5	M5

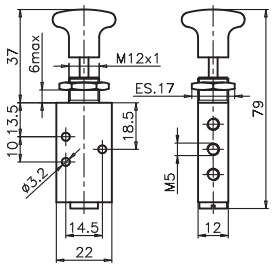
Push button 2 positions

3/2 | Ordering code | 5/2 | Push button 2 positions

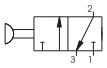
105.Ⓣ.8/Ⓒ

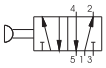
Ⓣ	TYPE
	32 = 3 ways
	52 = 5 ways
Ⓒ	BUTTON COLOR
	1 = Red
	2 = Black
	3 = Green





Weight gr. 75
Operating force 14 N





Weight gr. 92
Operating force 14 N

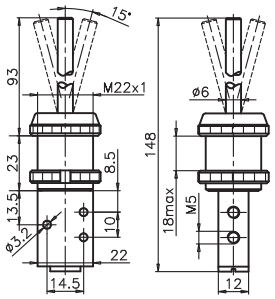
Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (Nl/min)	Orifice size (mm)	Working ports size
	Filtered and lubricated air	10 bar	-5 - +70	120 Nl/min	mm 2,5	M5

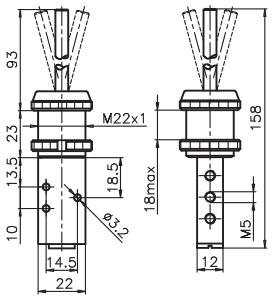
Whisker - Spring

3/2 | Ordering code | 5/2 | Whisker - Spring

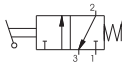
105.Ⓣ.9.1

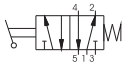
Ⓣ	TYPE
	32 = 3 ways
	52 = 5 ways





Weight gr. 136





Weight gr. 153

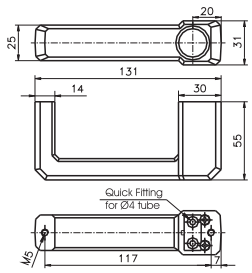
Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (Nl/min)	Orifice size (mm)	Working ports size
	Filtered and lubricated air	10 bar	-5 - +70	120 Nl/min	mm 2,5	M5

Specifications may be subject to change without prior notice

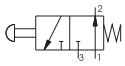
Handle with valve

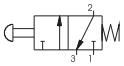
3/2

Ordering code
105.32.6.40Ⓕ
Ⓕ FUNCTION
A = Normally Open
C = Normally Closed



Weight gr. 165
Operating force 14 N





Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (Nl/min)	Orifice size (mm)	Working ports size
	Filtered and lubricated air	10 bar	-5 - +70	120 Nl/min	mm 2,5	M5 - Quick Fitting for Ø4 tube

Handle with valve

5/2

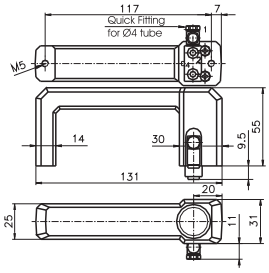
Left feeding

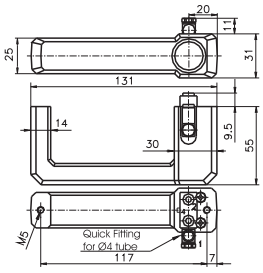
Ordering code
105.52.6.Ⓣ
Ⓣ TYPE
40 = Left feeding
40D = Right feeding

5/2

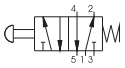
Handle with valve

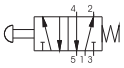
Right feeding





Weight gr. 190
Operating force 14 N





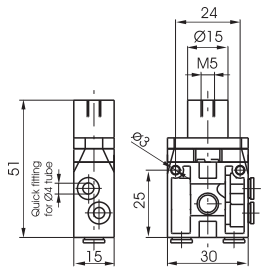
Weight gr. 190
Operating force 14 N

Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (Nl/min)	Orifice size (mm)	Working ports size
	Filtered and lubricated air	10 bar	-5 - +70	120 Nl/min	mm 2,5	M5 - Quick Fitting for Ø4 tube

Pneumatic - Spring

2/2
3/2

Lateral connections



Ordering code

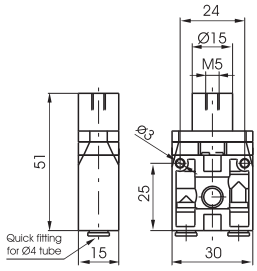
104.T.11.1.CF

T	TYPE
	22 = 2 ways
	32 = 3 ways
C	CONNECTION TYPE
	L = Lateral
	P = Rear
F	FUNCTION
	A = Normally Open
	C = Normally Closed

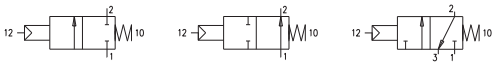
2/2
3/2

Pneumatic - Spring

Rear connections



Weight gr. 25
Minimum piloting pressure 2,5 bar

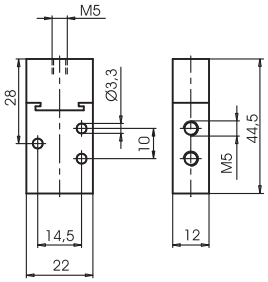


Weight gr. 25
Minimum piloting pressure 2,5 bar

Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C		Flow rate at 6 bar with Δp=1 (Nl/min)	Orifice size (mm)	Working ports size	Pilot ports size
	Filtered air, with or without lubrication	10 bar	Min. -5°C	Max. +50°C	90 Nl/min	mm 2,5	ø4 tube	M5

Pneumatic - Spring

3/2



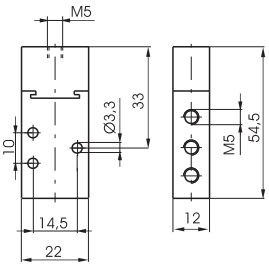
Ordering code

105.T.11.1

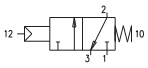
T	TYPE
	32 = 3 ways
	52 = 5 ways

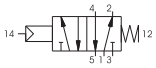
5/2

Pneumatic - Spring



Weight gr. 90
Minimum piloting pressure 2,5 bar



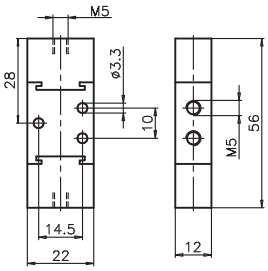


Weight gr. 100
Minimum piloting pressure 2,5 bar

Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (Nl/min)	Orifice size (mm)	Working ports size	Pilot ports size
	Filtered and lubricated air	10 bar	-5 - +70	120 Nl/min	mm 2,5	M5	M5

Pneumatic - Differential external

3/2



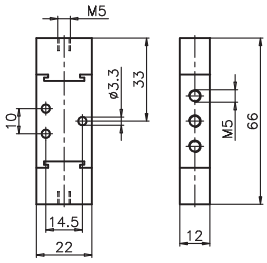
Ordering code

105.T.11.12

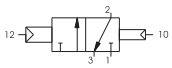
T	TYPE
	32 = 3 ways
	52 = 5 ways

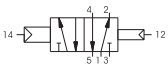
5/2

Pneumatic - Differential external



Weight gr. 110
Minimum piloting pressure 2,5 bar



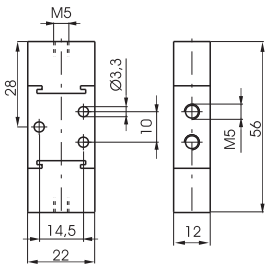


Weight gr. 120
Minimum piloting pressure 2,5 bar

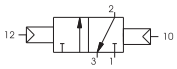
Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (Nl/min)	Orifice size (mm)	Working ports size	Pilot ports size
	Filtered and lubricated air	10 bar	-5 - +70	120 Nl/min	mm 2,5	M5	M5

1

Pneumatic - Pneumatic | 3/2



Weight gr. 110
Minimum piloting pressure 2,5 bar

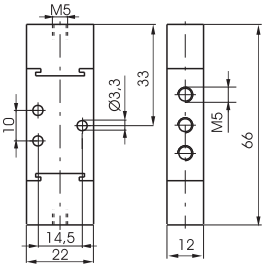


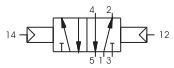
Ordering code

105.Ⓣ.11.11

Ⓣ	TYPE
	32 = 3 ways
	52 = 5 ways

5/2 | **Pneumatic - Pneumatic**





Weight gr. 120
Minimum piloting pressure 2,5 bar

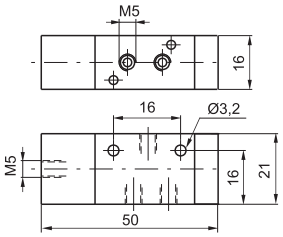
Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (Nl/min)	Orifice size (mm)	Working ports size	Pilot ports size
	Filtered and lubricated air	10 bar	-5 - +70	120 Nl/min	mm 2,5	M5	M5

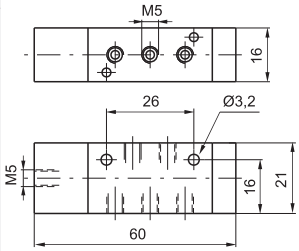
Specifications may be subject to change without prior notice

Pneumatic - Spring | 3/2 | Ordering code | 5/2 | **Pneumatic - Spring**

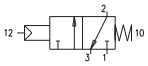
805.Ⓣ.11.1

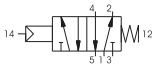
Ⓣ	TYPE
	32 = 3 ways
	52 = 5 ways





Weight gr. 45
Minimum piloting pressure 2 bar





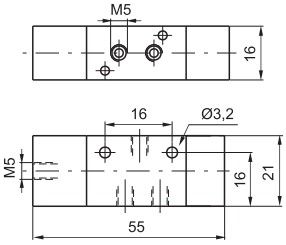
Weight gr. 50
Minimum piloting pressure 2 bar

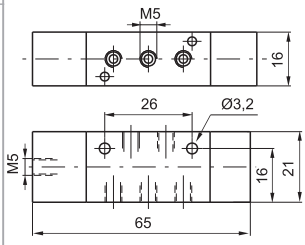
Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (Nl/min)	Orifice size (mm)	Working ports size	Pilot ports size
	Filtered and lubricated air	10 bar	-5 - +70	160 Nl/min	mm 2,5	M5	M5

Pneumatic - Differential | 3/2 | Ordering code | 5/2 | **Pneumatic - Differential**

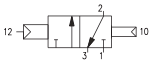
805.Ⓣ.11.12

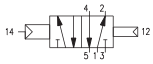
Ⓣ	TYPE
	32 = 3 ways
	52 = 5 ways





Weight gr. 50
Minimum piloting pressure 2 bar





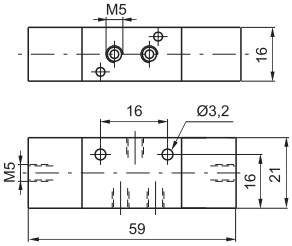
Weight gr. 55
Minimum piloting pressure 2 bar

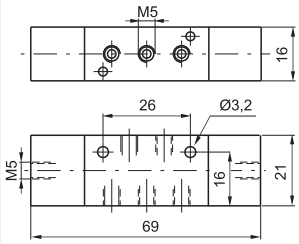
Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (Nl/min)	Orifice size (mm)	Working ports size	Pilot ports size
	Filtered and lubricated air	10 bar	-5 - +70	160 Nl/min	mm 2,5	M5	M5

Pneumatic - Pneumatic | 3/2 | Ordering code | 5/2 | **Pneumatic - Pneumatic**

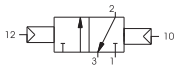
805.Ⓣ.11.11

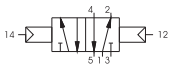
Ⓣ	TYPE
	32 = 3 ways
	52 = 5 ways





Weight gr. 55
Minimum piloting pressure 1,5 bar





Weight gr. 60
Minimum piloting pressure 1,5 bar

Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (Nl/min)	Orifice size (mm)	Working ports size	Pilot ports size
	Filtered and lubricated air	10 bar	-5 - +70	160 Nl/min	mm 2,5	M5	M5