

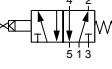
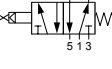
Miniature Pneumatic Valves

Kuhnke 81 Series Valve - 5/2 Way Air Jet Detector

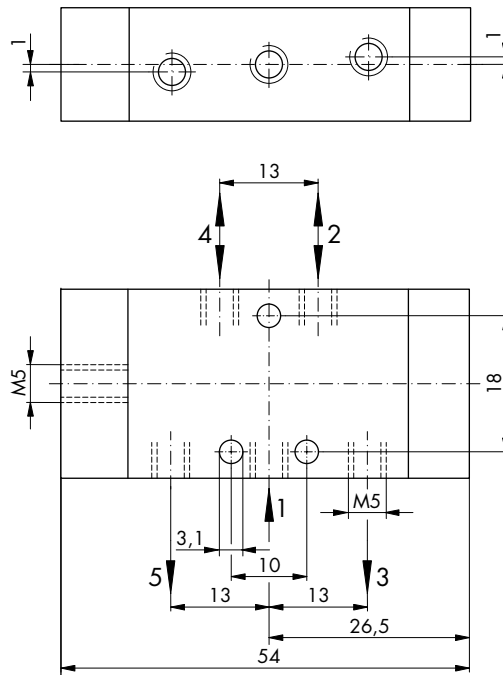
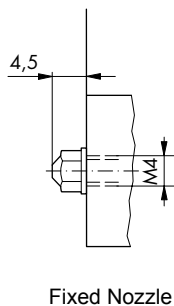
Technical information

Air consumption:	Approx. 2 l/min
Actuation time:	Depends on volume of tubing*
Pressure range:	2-10 bar - air pilot assisted
Temperature range:	0°C...+70°C
Housing:	Aluminium alloy/Zinc alloy/Makrolon
Spool & liner:	Steel, corrosion resistant
Lubricant:	Not required
Operating medium:	5 micron filtered, lubricated or non-lubricated compressed air
Necessary accessories:	Tube nipple, nozzle, hose (Order code 43.138)



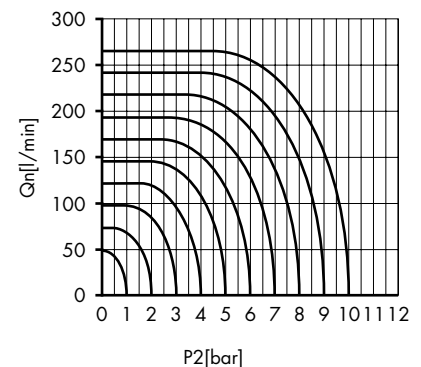
Symbol	Description	Type	Orifice	Ports	Order code
	5/2 way spring return, M5 threaded nozzle	Spool	2mm	M5	81.025
	Order code 43.138 required.				
	5/2 way spring return fixed nozzle	Spool	2mm	M5	81.026

Dimensional drawings



Air jet detectors are used for contact sensing of parts and tools and often used for sensing delicate components. A stream of air is sent from a nozzle, as an object touches off the nozzle the stream is blocked causing back pressure which operates the valve. When using the M5 threaded nozzle, any length of tube can be used, however, the tube length and volume will determine the valve switch time.

kv=1,80 l/min (NW 2)



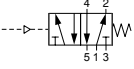
Miniature Pneumatic Valves

Kuhnke 81 Series Valve - 5/2 Way Amplifier Valve

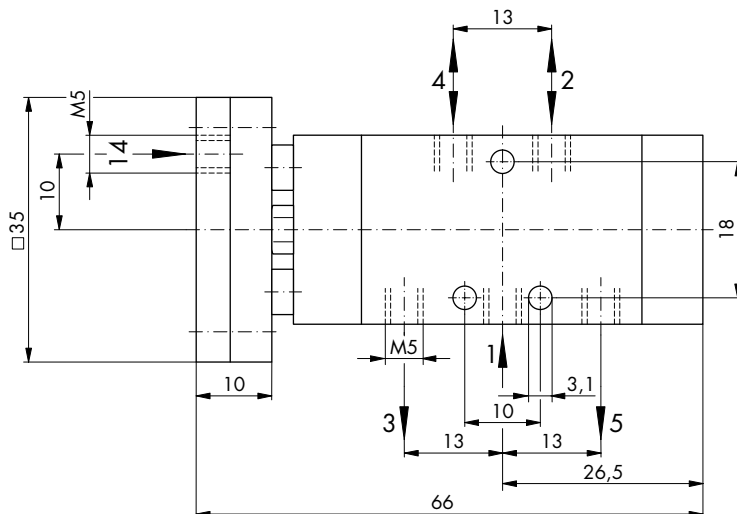
Technical information

Air consumption:	Approx. 2 l/min
Pressure range:	2-10 bar
Control pressure:	5... 100 mbar
Temperature range:	-10°C...+70°C
Housing:	Aluminium alloy/Zinc alloy/Makrolon
Spool & liner:	Steel, corrosion resistant
Lubricant: Operating medium:	Not required 5 micron filtered, lubricated or non-lubricated compressed air

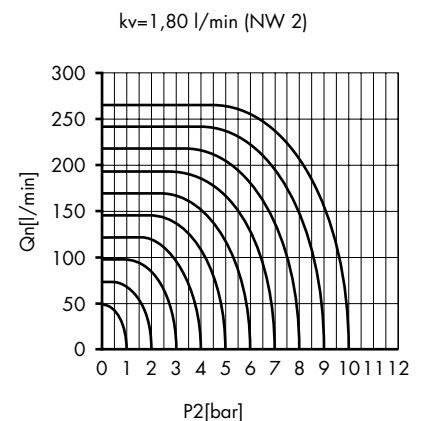


Symbol	Description	Type	Orifice	Ports	Order code
	5/2 way spring return	Spool	2mm	M5	81.024

Dimensional drawings



Amplifier valves are used to switch line pressure valves from a low pilot pressure signal. A pressure signal between 5-100 mbar applied to the control port operates the valve.



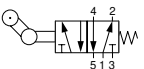
Miniature Pneumatic Valves

Kuhnke 81 Series Valve - One Way Roller Lever

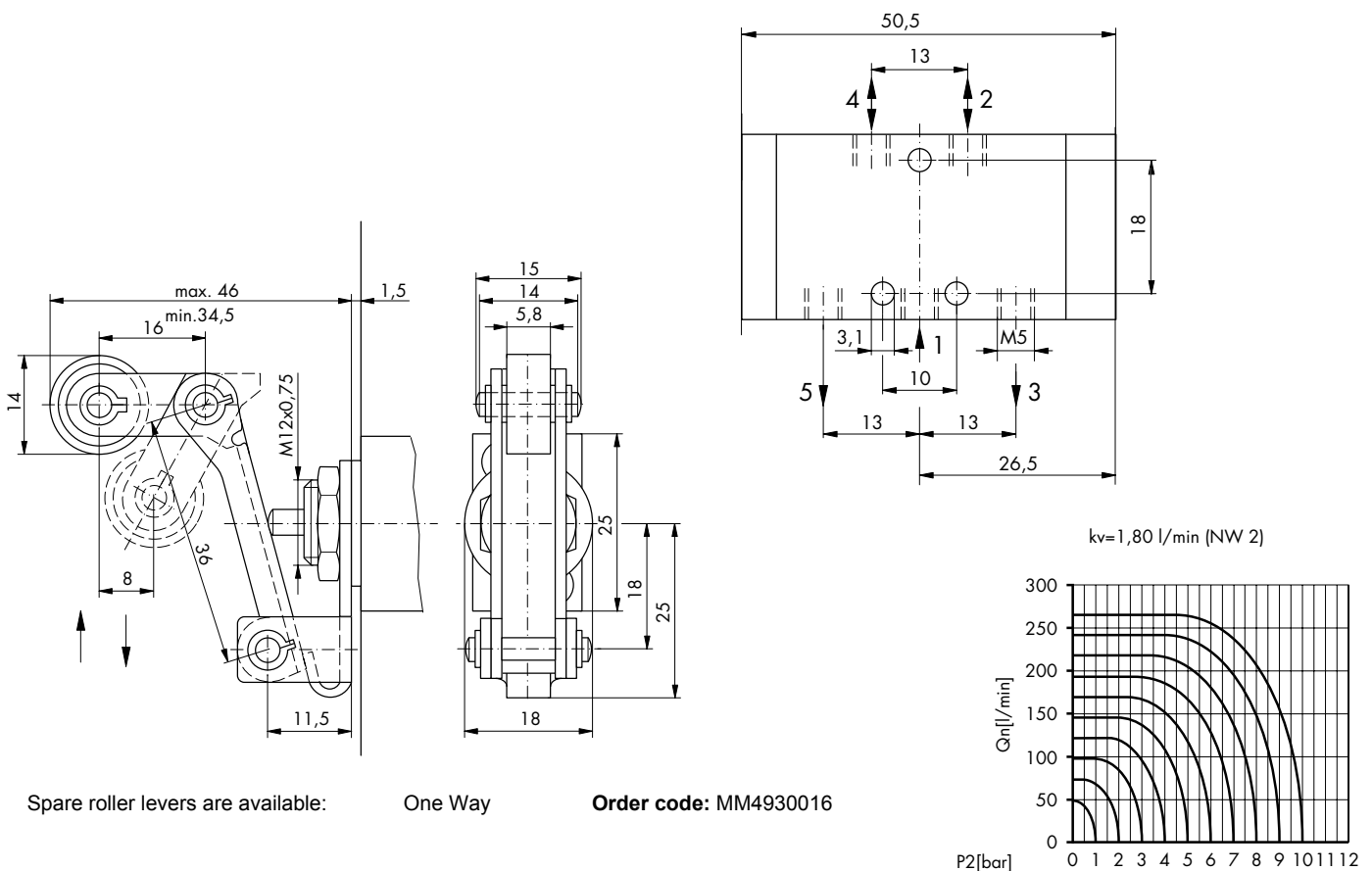
Technical information

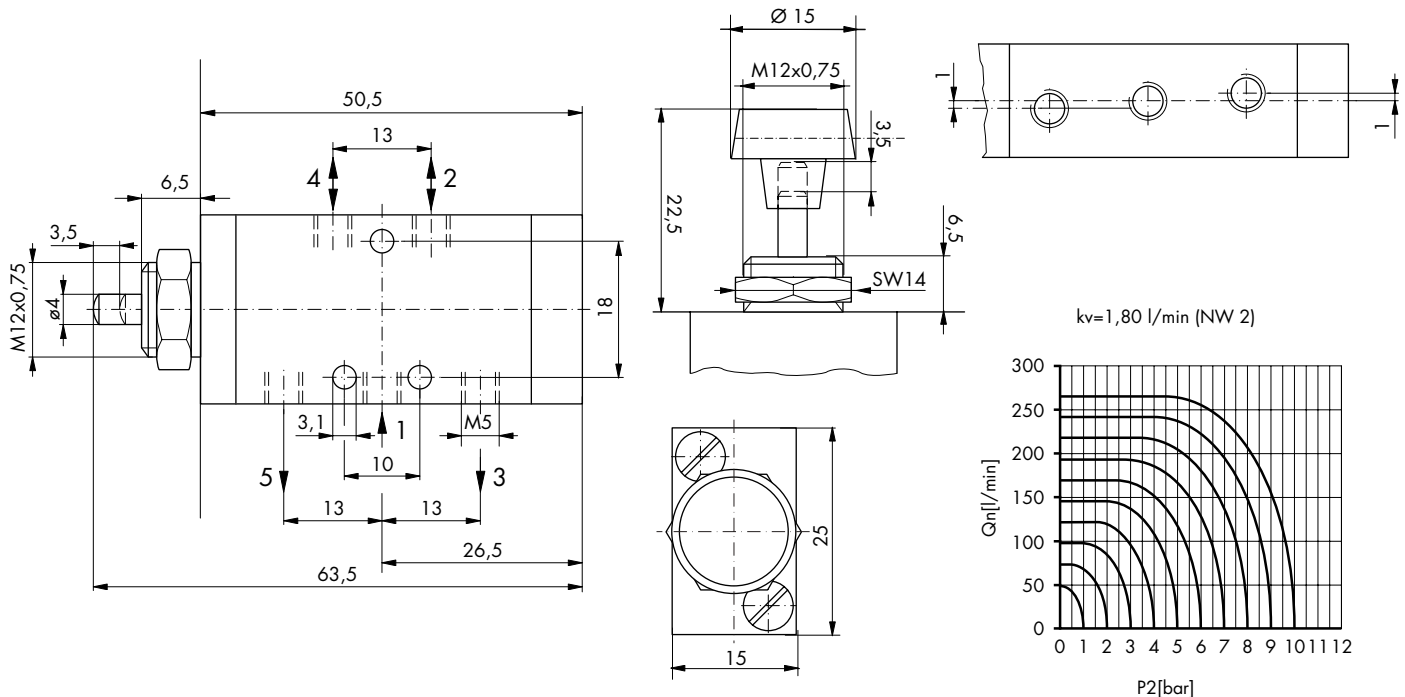
Actuation force:	Approx. 5N
Pressure range:	0-10 bar
Temperature range:	-10°C...+70°C
Housing:	Aluminium alloy/Zinc alloy/Makrolon
Spool & liner:	Steel, corrosion resistant
Lubricant:	Not required
Operating medium:	5 micron filtered, lubricated or non-lubricated compressed air



Symbol	Description	Type	Orifice	Ports	Order code
	5/2 way roller (one way) spring return	Spool	2mm	M5	81.023

Dimensional drawings





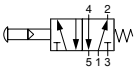
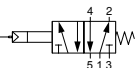
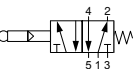
Miniature Pneumatic Valves

Kuhnke 81 Series Valve - Button, Roller & Whisker

Technical information

Actuation force @ 6 bar:	Approx. 0.25N (0.05N at tip for whisker type)
Actuation stroke:	Approx. 1 mm for button & roller ball types
Air consumption @ 6 bar:	Approx. 2 l/min
Pressure range:	2-10 bar - air pilot assisted
Temperature range:	0°C...+70°C
Housing:	Aluminium alloy/Zinc alloy/Makrolon
Spool & liner:	Steel, corrosion resistant
Lubricant:	Not required
Operating medium:	5 micron filtered, lubricated or non-lubricated compressed air.

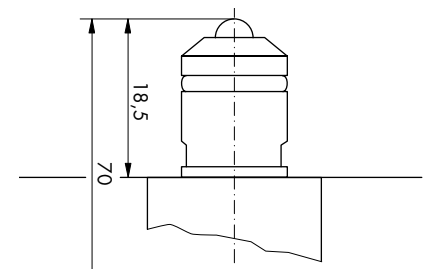
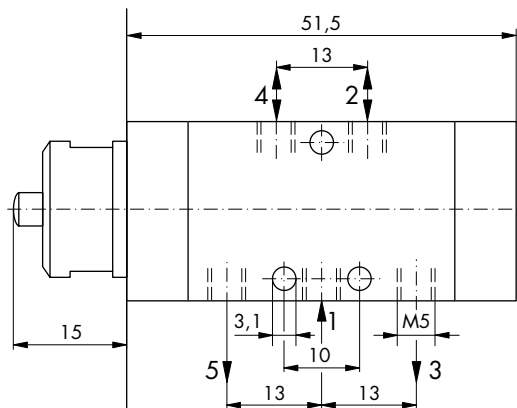
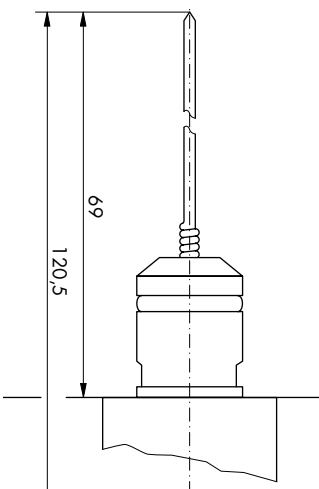


Symbol	Description	Type	Orifice	Ports	Order code
	5/2 way button operated spring return	Spool	2mm	M5	81.027
	5/2 way whisker operated spring return	Spool	2mm	M5	81.028
	5/2 way roller ball operated spring return	Spool	2mm	M5	81.029

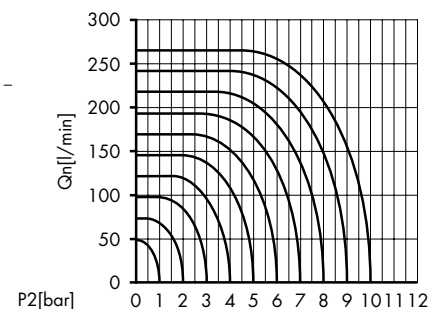
Dimensional drawings

Spare whiskers are available

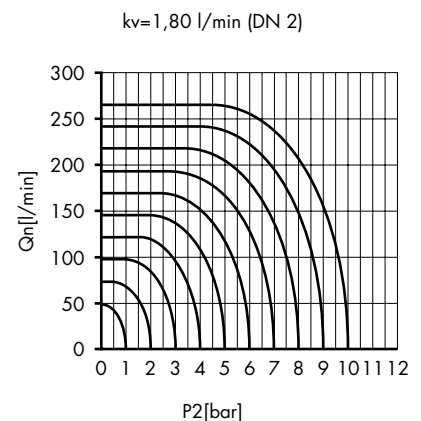
Order code: MM4920003



$k_v = 1,80 \text{ l/min (NW 2)}$



A graph showing the relationship between flow rate Q_n [l/min] (Y-axis) and pressure P_2 [bar] (X-axis). The Y-axis ranges from 0 to 300 in increments of 50. The X-axis ranges from 0 to 12 in increments of 1. Multiple curves are plotted, each representing a different flow rate. The curves show that for a given flow rate, the pressure P_2 increases as the flow rate Q_n increases. The curves are labeled with their respective flow rates: 265, 240, 220, 200, 180, 160, 140, 120, 100, 80, 60, and 40 l/min.



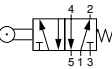
Miniature Pneumatic Valves

Kuhnke 81 Series Valve - Two Way Roller Lever

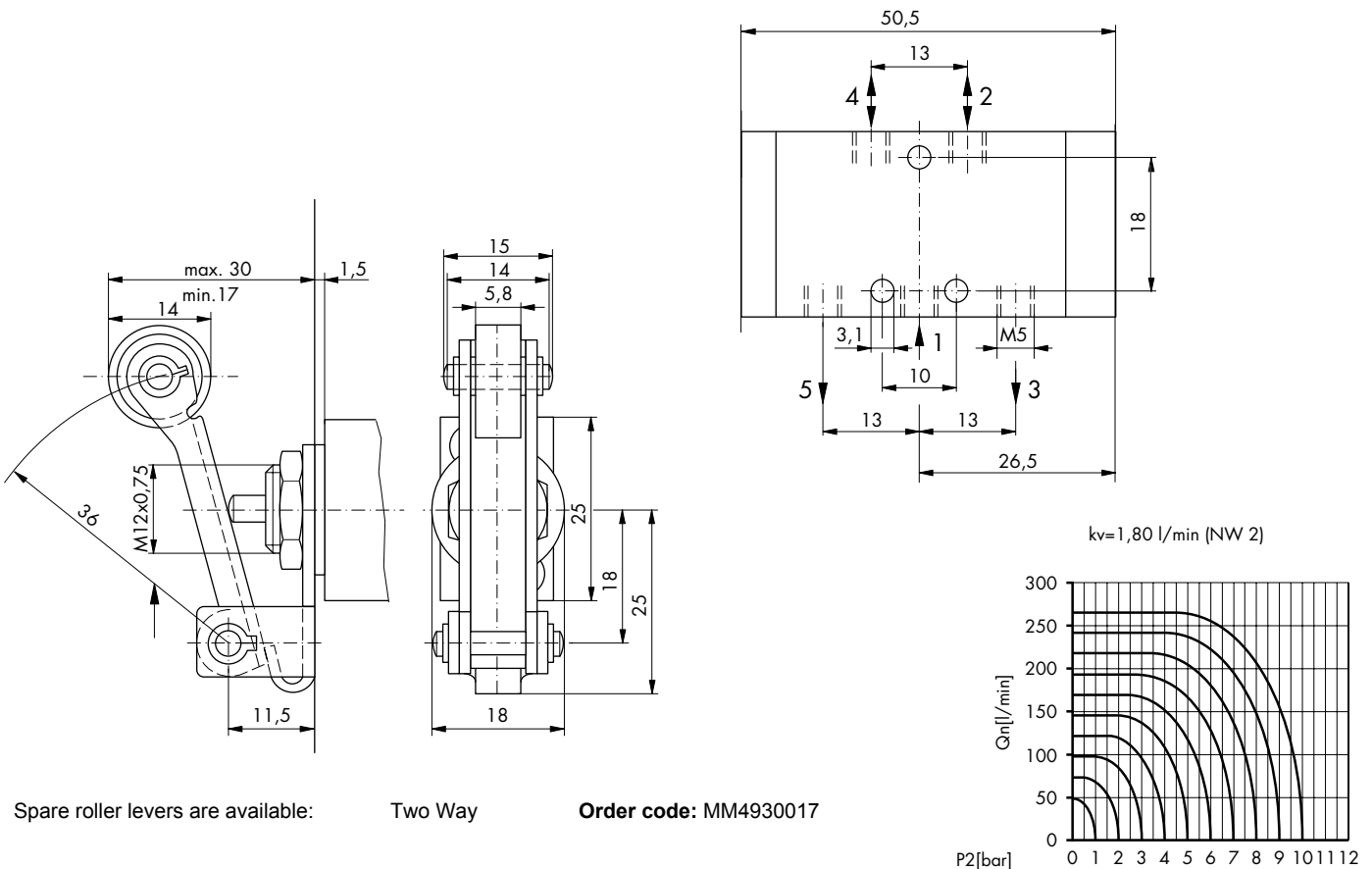
Technical information

Actuation force:	Approx. 5N
Pressure range:	0-10 bar
Temperature range:	-10°C...+70°C
Housing:	Aluminium alloy/Zinc alloy/Makrolon
Spool & liner:	Steel, corrosion resistant
Lubricant:	Not required
Operating medium:	5 micron filtered, lubricated or non-lubricated compressed air



Symbol	Description	Type	Orifice	Ports	Order code
	5/2 way roller (two way) spring return	Spool	2mm	M5	81.022

Dimensional drawings



Spare roller levers are available:

Two Way