

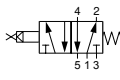
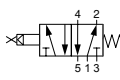
Miniature Pneumatic Valves

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

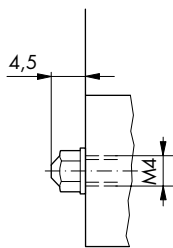
Technical information

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)

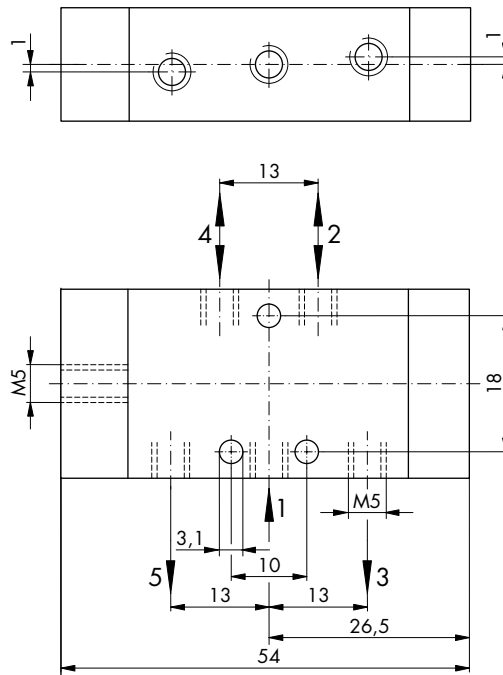


Symbol	Description	Type	Orifice	Ports	Order code
	5/2 way spring return, M5 threaded nozzle Order code 43.138 required.	Spool	2mm	M5	81.025
	5/2 way spring return fixed nozzle	Spool	2mm	M5	81.026

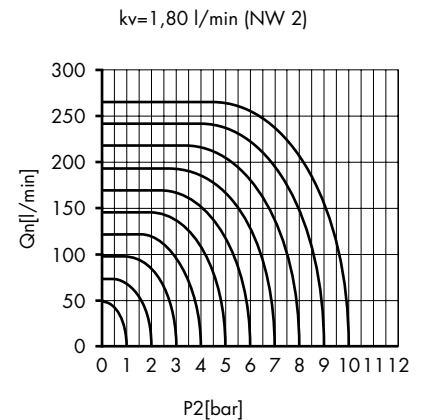
Dimensional drawings



Fixed Nozzle



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.



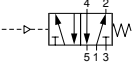
Miniature Pneumatic Valves

Kuhnke 81 Series Valve - 5/2 Way Amplifier Valve

Technical information

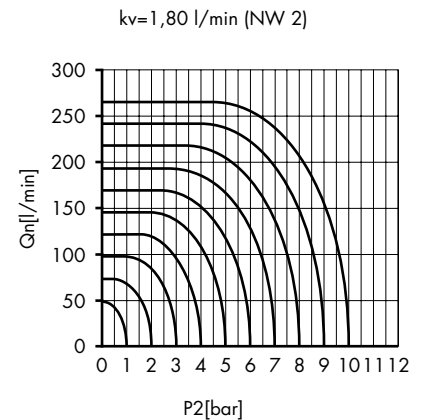
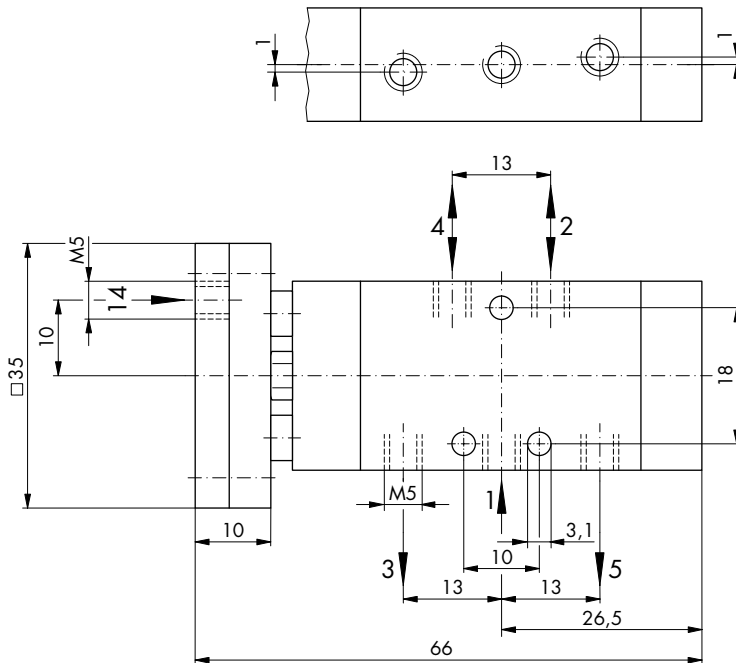
Air consumption:	Approx. 2 l/min
Pressure range:	2-10 bar
Control pressure:	5... 100 mbar
Temperature range:	-10°C...+70°C
Housing:	Aluminium alloy/Zinc alloy/Makrolon
Spool & liner:	Steel, corrosion resistant
Lubricant: Operating medium:	Not required 5 micron filtered, lubricated or non-lubricated compressed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



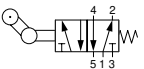
Miniature Pneumatic Valves

Kuhnke 81 Series Valve - One Way Roller Lever

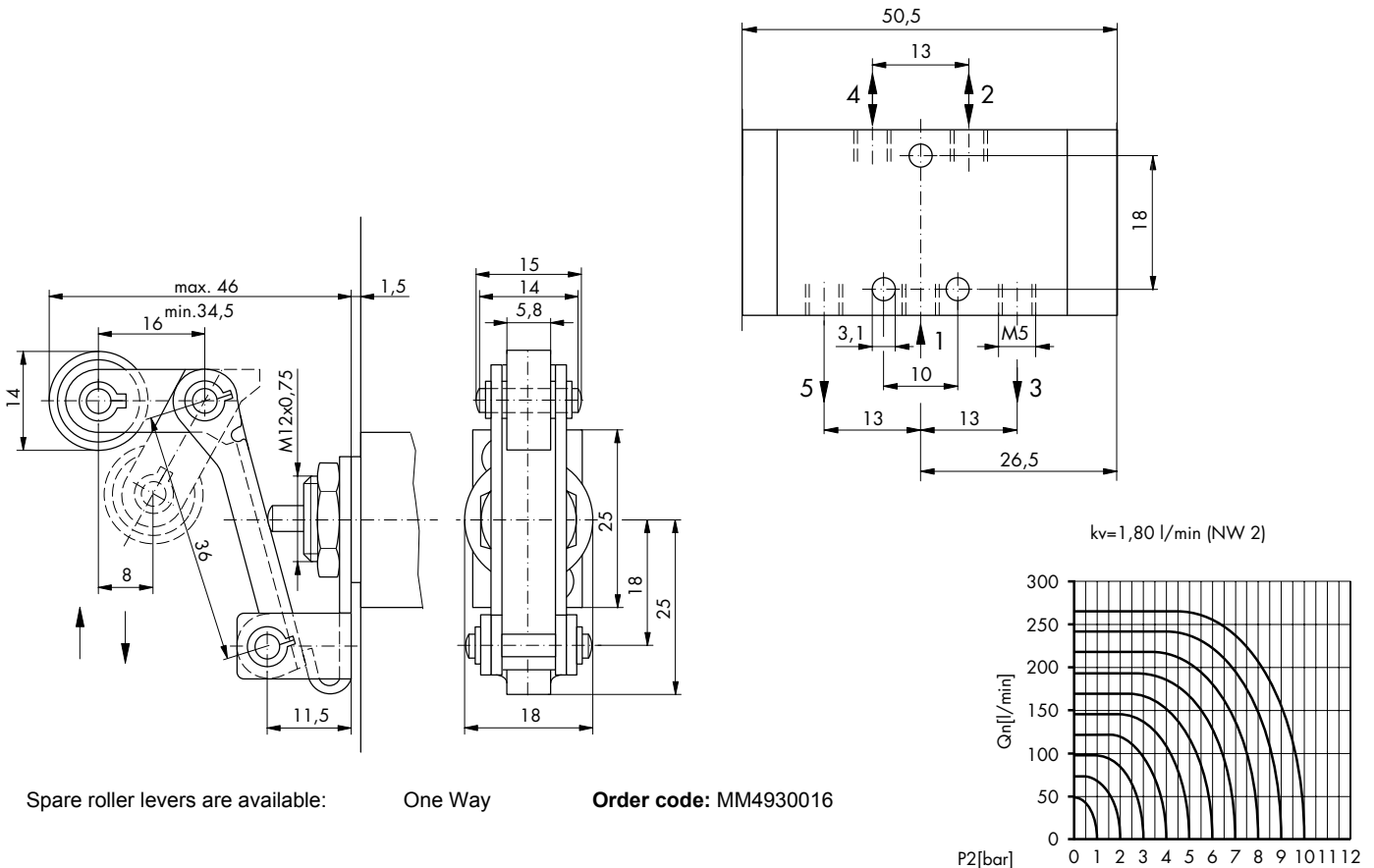
Technical information

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 - Plunger & Push Button

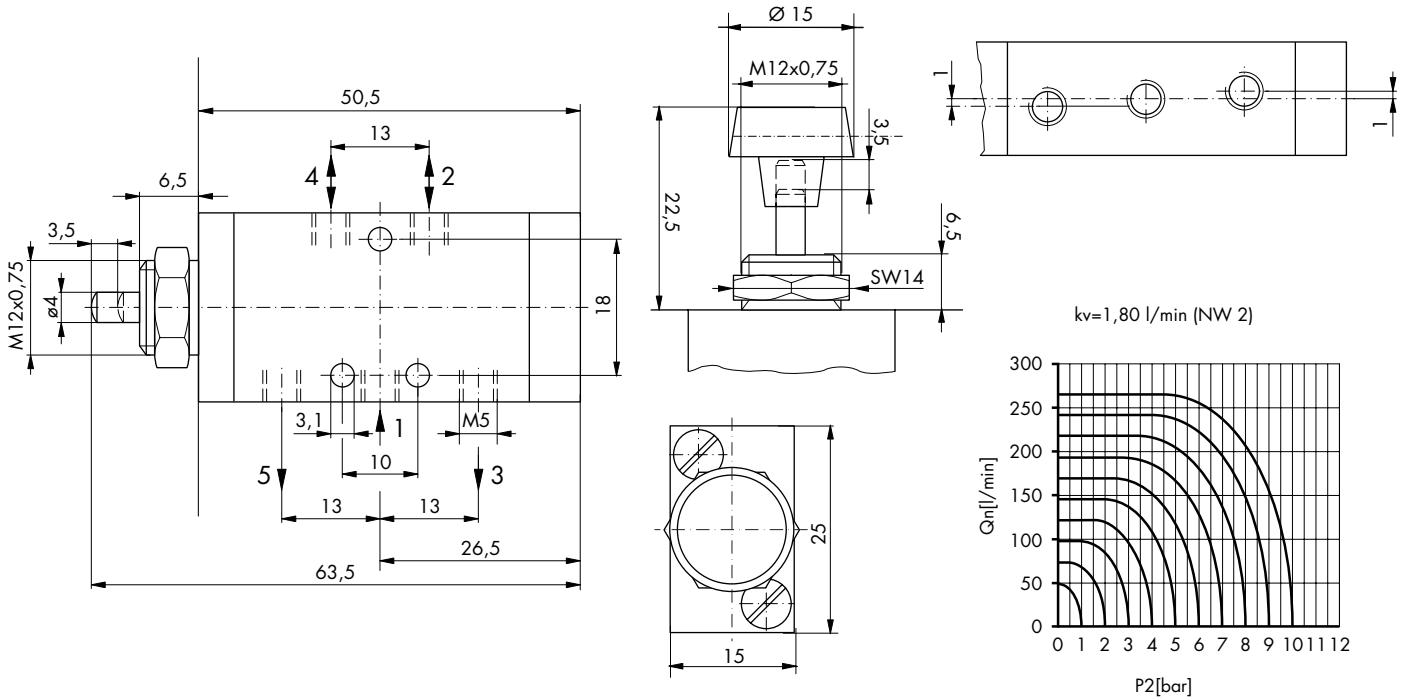
Technical information

Actuation force:	Approx. 10N
Actuation stroke:	Approx. 3.5 mm
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 plunger spring return	Spool	2mm	M5	81.020
	5/2 way push button spring return	Spool	2mm	M5	81.021

Dimensional drawings



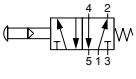
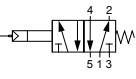
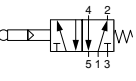
Miniature Pneumatic Valves

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.

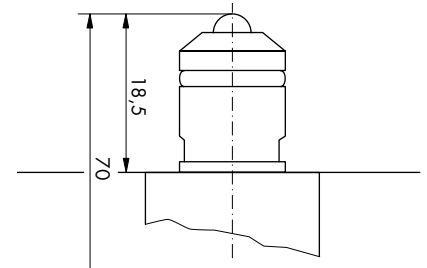
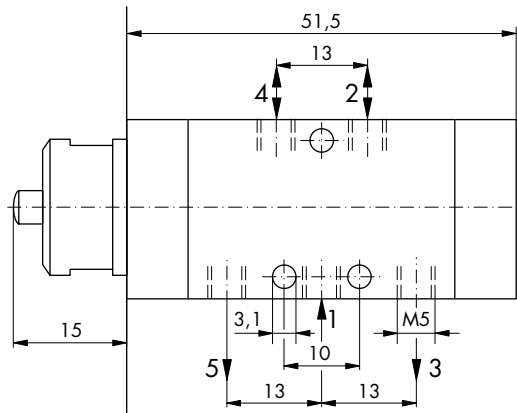
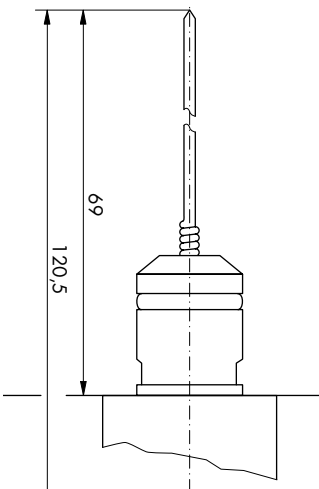


Symbol	Description	Type	Orifice	Ports	Order code
	5/2 way button operated spring return	Spool	2mm	M5	81.027
	5/2 way whisker operated spring return	Spool	2mm	M5	81.028
	5/2 way roller ball operated spring return	Spool	2mm	M5	81.029

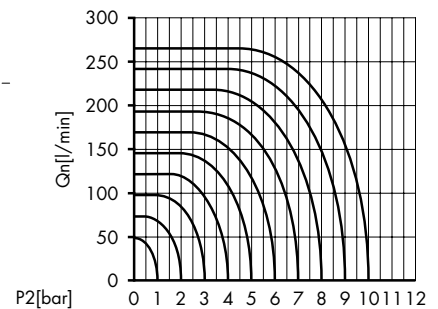
Dimensional drawings

Spare whiskers are available

Order code: MM4920003



$k_v=1,80$ l/min (NW 2)



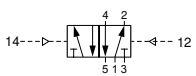
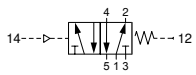
Miniature Pneumatic Valves

Kuhnke 81 Series Valve - 5/2 Way Double Pilot Operated

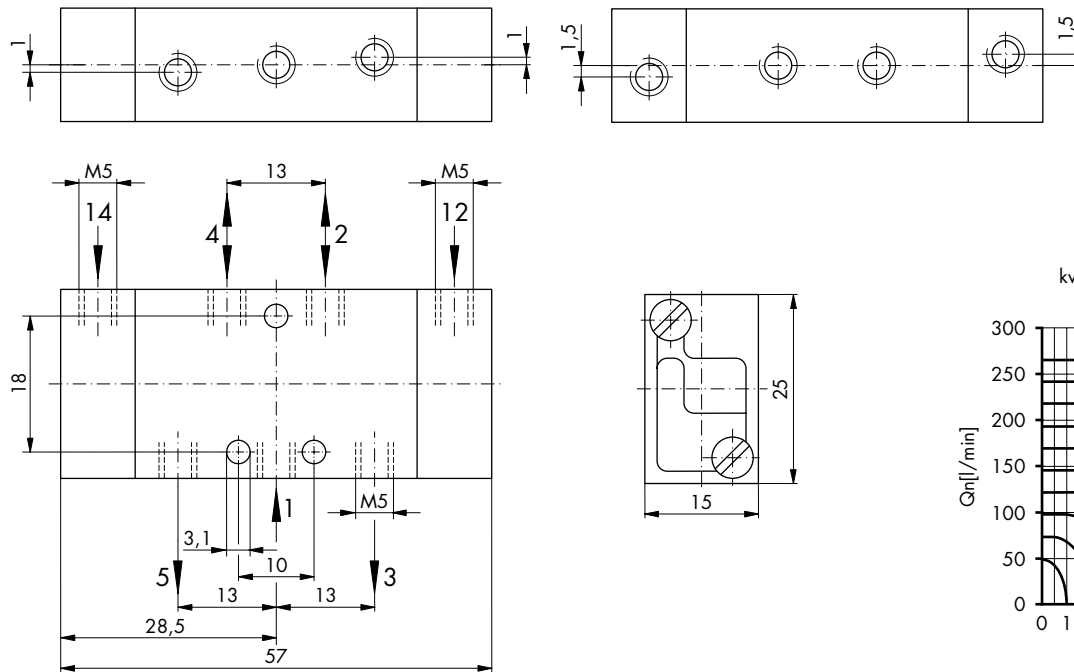
Technical information

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.

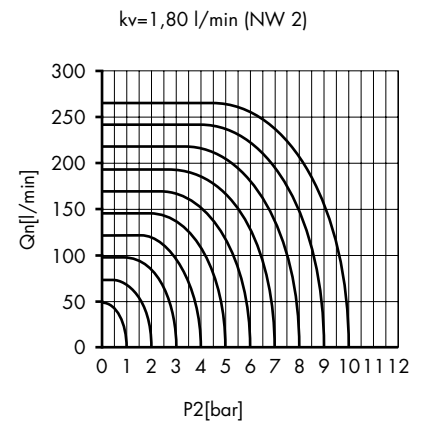


Symbol	Description	Type	Orifice	Ports	Order code
	5/2 way double pilot	Spool	2mm	M5	81.014
	5/2 way double pilot differential pressure valve**	Spool	2mm	M5	81.016

Dimensional drawings



**Differential pressure valves are used in pressure compensating circuits, valves can be used to maintain pressure in balancing or levelling applications. When both pilot pressures are equalised the valve is returned by the spring.



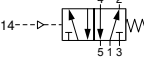
Miniature Pneumatic Valves

Kuhnke 81 Series Valve - 5/2 Way Single Pilot Operated

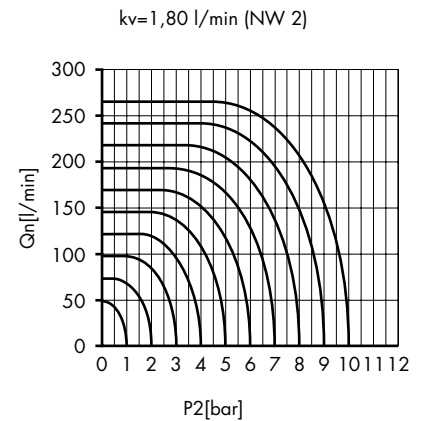
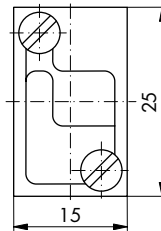
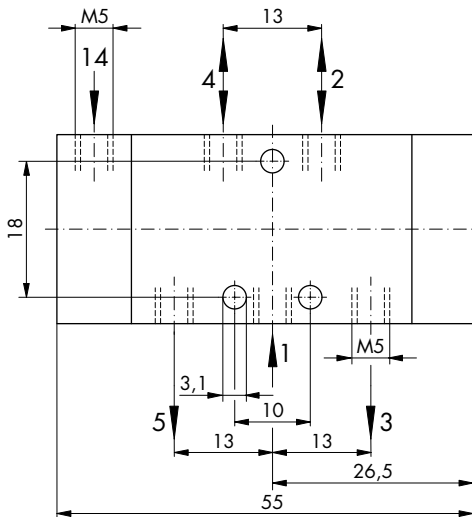
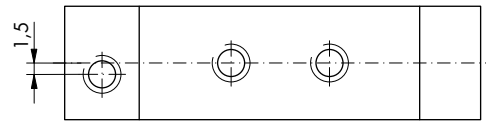
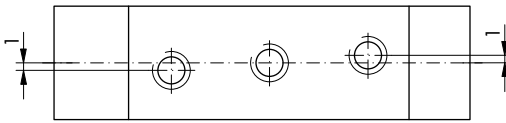
Technical information

Pressure range:	0-10 bar
Control pressure:	Min. 2 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 spring return	Spool	2mm	M5	81.012

Dimensional drawings



Miniature Solenoid Valves

Kuhnke 81 Series Valve - 5/2 Way Single & Double Solenoid

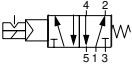
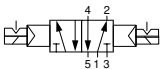
Technical information

Pressure range:	2-8 bar
Temperature range:	-10°C...+50°C
Duty cycle:	Continuous 100%
Housing:	Aluminium alloy/Zinc alloy/Makrolon
Spool & liner:	Steel, corrosion resistant
Lubricant:	Not required.
Earthing contact:	Part of the standard device.
Operating medium:	5 micron filtered, lubricated or non-lubricated compressed air.

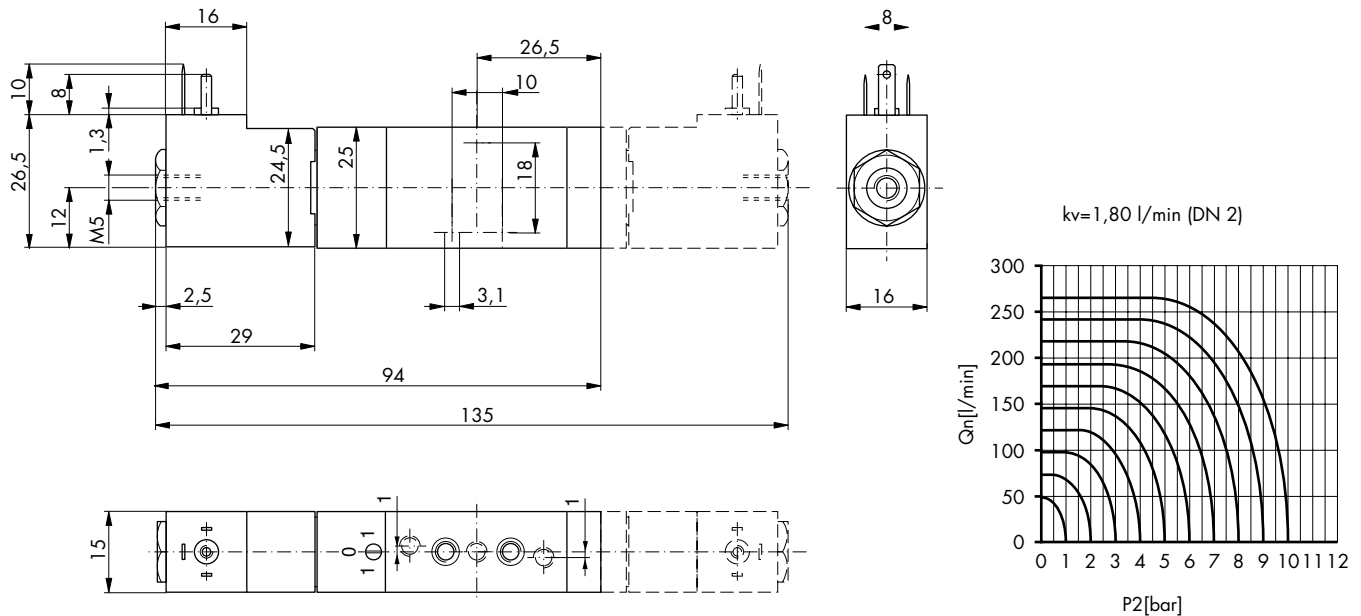


Other information

Insert coil voltage required to complete the order code, example 81.040.01 24VDC.
Standard voltages are 12 and 24 VDC: 24, 110 and 230 VAC.
Order connecting plugs separately, part number 64.230.01.

Symbol	Description	Ports	Coil Power	Type	Orifice	Order code
	5/2 way spring return DC coil	M5	1.8 W	Spool	2mm	81.040.01
	5/2 way spring return AC coil	M5	5.5 VA	Spool	2mm	81.040.02
	5/2 way double solenoid DC coil	M5	1.8 W	Spool	2mm	81.044.01
	5/2 way double solenoid AC coil	M5	5.5 VA	Spool	2mm	81.044.02

Dimensional drawings



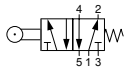
Miniature Pneumatic Valves

Kuhnke 81 Series Valve - Two Way Roller Lever

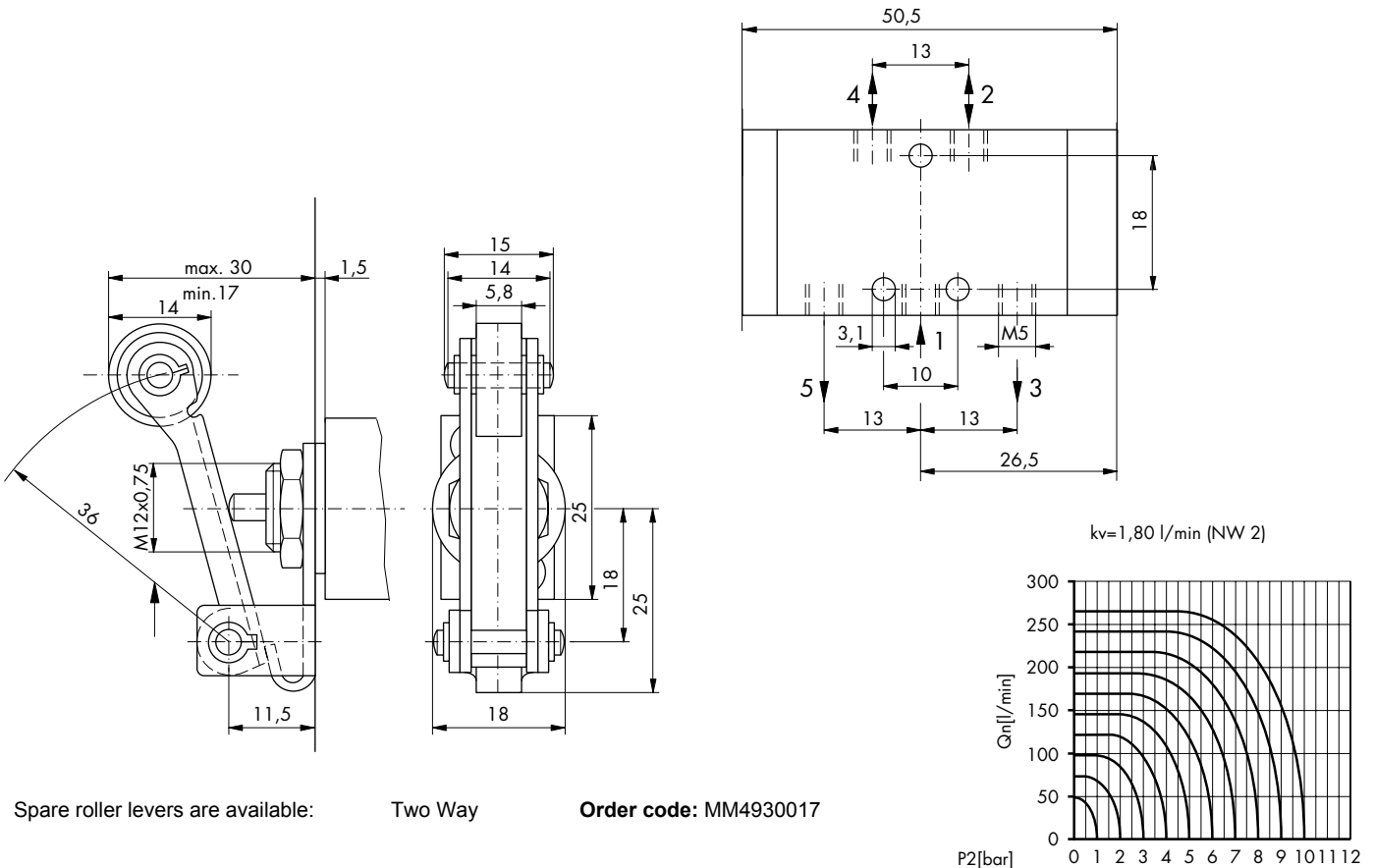
Technical information

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

Order code: MM4930017