

SERIES K8MDC
DISPENSING
NEEDLE VALVE



SERIES K8MDC

RELIABILITY AND PRECISION IN MICRO-DOSING APPLICATIONS

The current tendency to concentrate performance and features of devices in compact sizes and dimensions has as main result the need to achieve even smaller and more precise deposits of fluids.


It is, therefore, particularly important to be able to apply the exact amount of product to the required point, especially when constancy and repeatability are requested. To meet this need, Camozzi has designed the K8MDC dispensing needle valve which ensures fast applications and to control a wide range of low and medium viscosity fluids, including solvents, lubricants, reagents, glue and water.



MEDIA:

- WATER
- LUBRICANTS
- GREASE
- DRUGS
- ADDITIVES
- GLUE
- REAGENT
- SILICON
- SUBSTRAT
- PROTECTION
- RESINS
- INKS

DOSING AND DISPENSING APPLICATIONS

LUBRICATION 
Machine tools
and laminates processing

RESINES DOSING 
Impregnation
process

INDUSTRIAL 
Filling process

PRINTING 
Gluing process

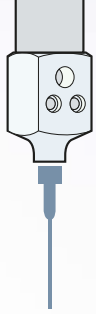
WOOD 
Gluing process

ANALYTICAL 
Reagent dispensing

HUMIDIFICATION 
Water and fragrances
dosing

FOOD 
Filling process

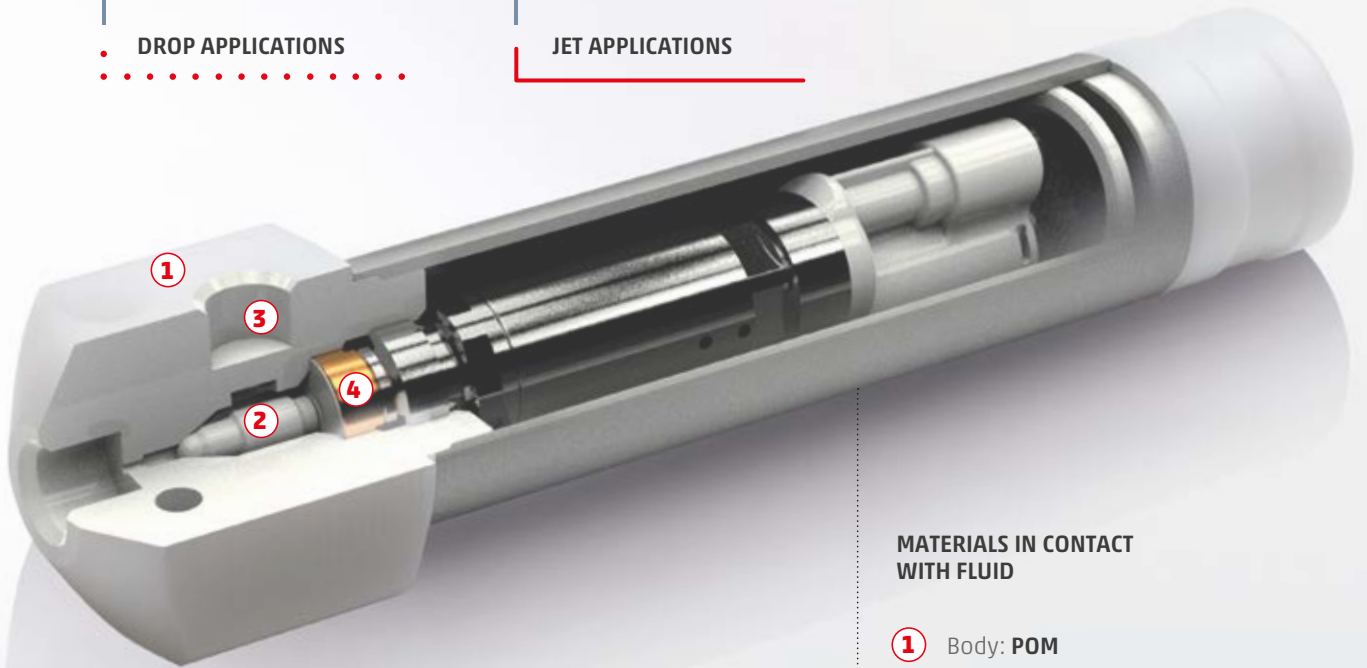
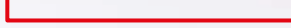




DROP APPLICATIONS



JET APPLICATIONS



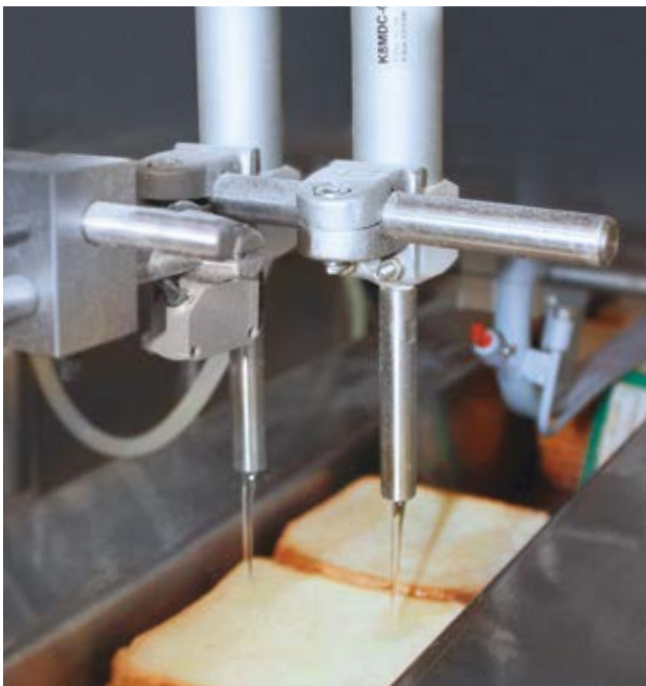
MATERIALS IN CONTACT WITH FLUID

- ① Body: **POM**
- ② Dosing stem: **POM**
- ③ Filter: **PP**
- ④ Membrane: **PTFE**

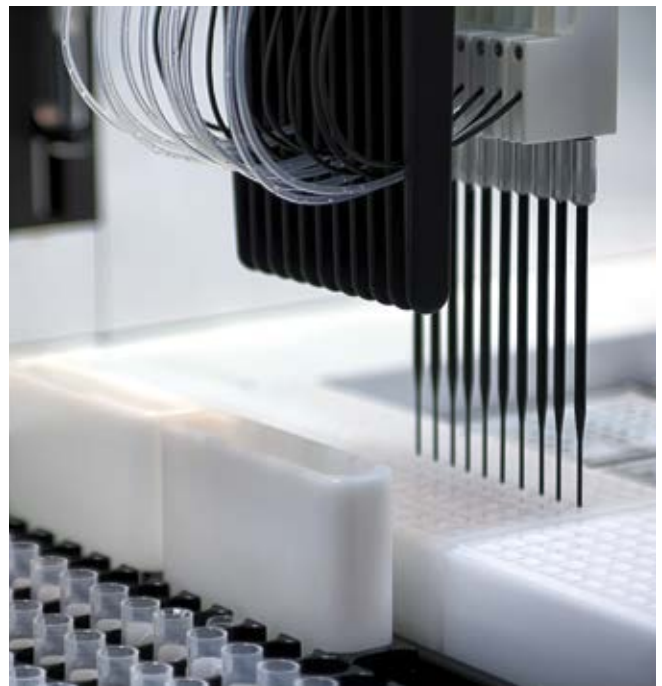
The innovative design of this valve consists of a nozzle dispensing body with a varying inner diameter from 0.5 to 1.8 mm allowing a uniform deposit of fluid and circumscribed to small dimensions.



INDUSTRIAL



LIFE SCIENCE



General data

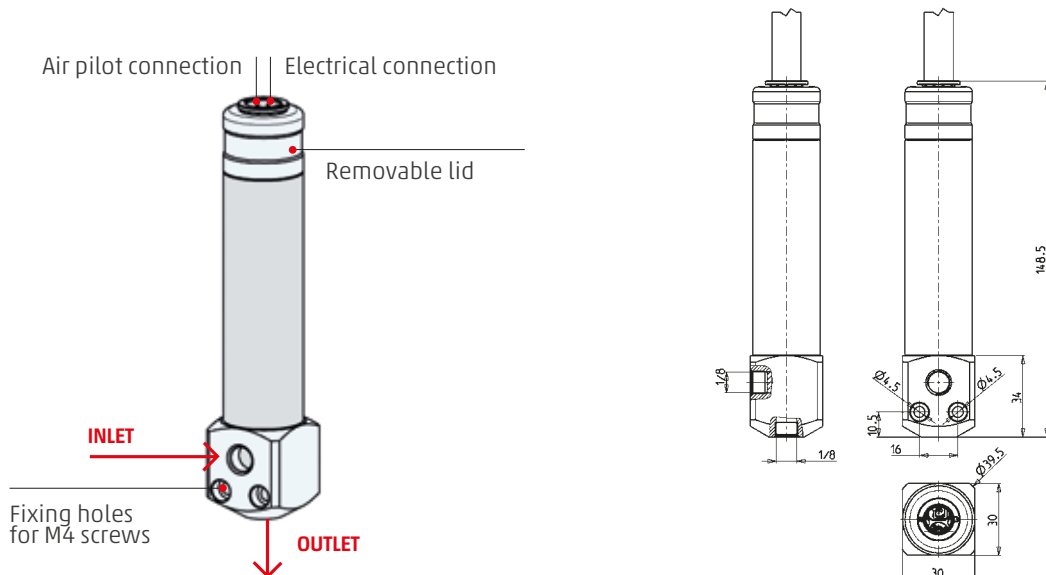
Function	2/2 NC - media isolation
Control method	Electro-pneumatic or pneumatic
Dispense method	Continuous
Inner nozzle	Ø 0.5 - Ø 1 - Ø 1.8 mm
Operating temperature	0° C ÷ 40° C
Storage temperature	-5° C ÷ 50° C
Piloting pressure	6 ÷ 7 bar
Dosing pressure	0.5 ÷ 6 bar
Voltage	12 V DC - 6 V DC - 24 V DC
Power consumption	0.6 W
Inlet and outlet connection	1/8 ISO 228 or 1/8 NPTF
Air pilot connection	Ø 4
Electrical connection	Connector PHR-3 JST
Pilot fluid	Filtered air 5 µm without lubrication, inert gas
Dosing fluid	Various (check the chemical compatibility)
Speed/cycle (IN = 5 bar; Pilot = 6 bar)	1500 cycles/min
Frequency	25 Hz
Accuracy	> 98% dispensing tolerance
Repeatability	< 2%
Viscosity rate	0.001 Pa·s ÷ 12.5 Pa·s
Flow range (IN = 5 bar; OUT = free flow)	Gases (air): Ø 1.8 = 180 l/min; Ø 1 = 55 l/min; Ø 0.5 = 16 l/min Liquids (water): Ø 1.8 = 1.8 l/min; Ø 1 = 0.6 l/min; Ø 0.5 = 0.16 l/min
Weight	150 g
Assembly	Wall-mounting (in any position)
Accessories	Needles and brushes are available upon request in different sizes and can be mounted on NPTF bodies only

Coding example

K8MDC	-	A	0	0	1	0	TF
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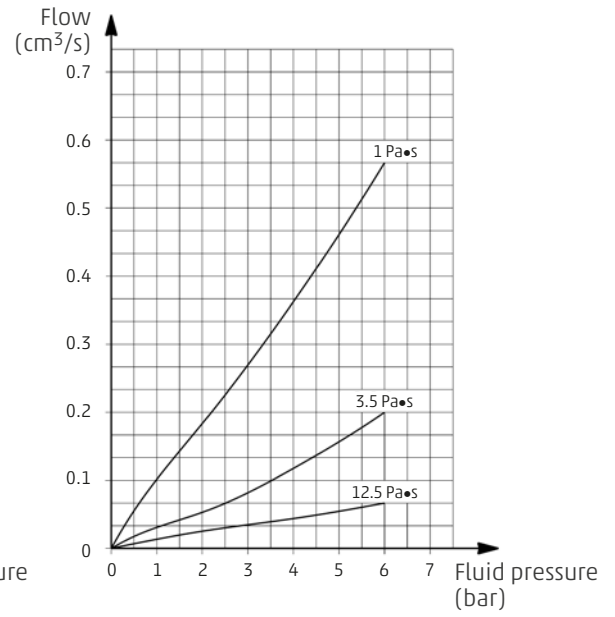
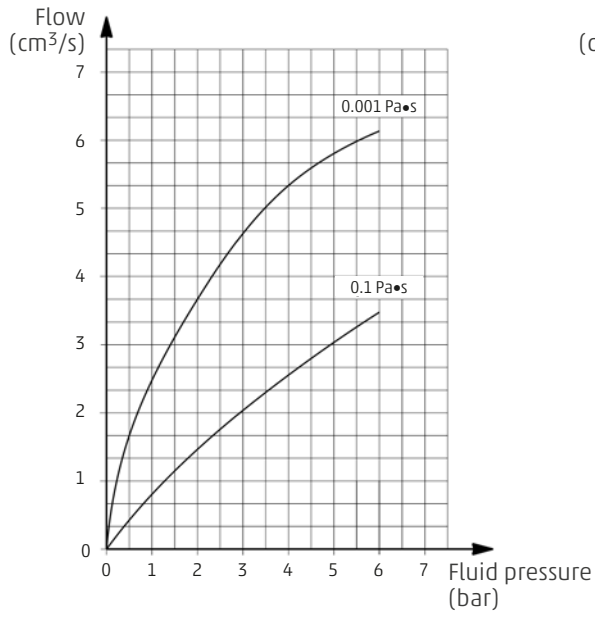
K8MDC	SERIES
A	INNER NOZZLES: A = Ø 0.5 - B = Ø 1 - C = Ø 1.8
0	VNR: 0 = without VNR
0	FILTER: 0 = without filter - 1 = with filter in PP
1	STEM: 1 = stem in POM
0	CONTROL: 0 = 12 V DC - 1 = 6 V DC - 2 = 24 V DC - P = Pneumatic
TF	THREADS (INLET AND OUTLET): = BSP - TF = NPTF

Functioning and dimensions

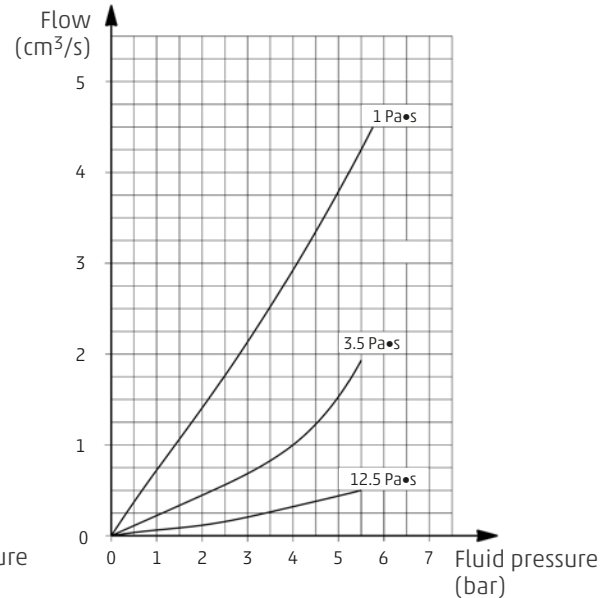
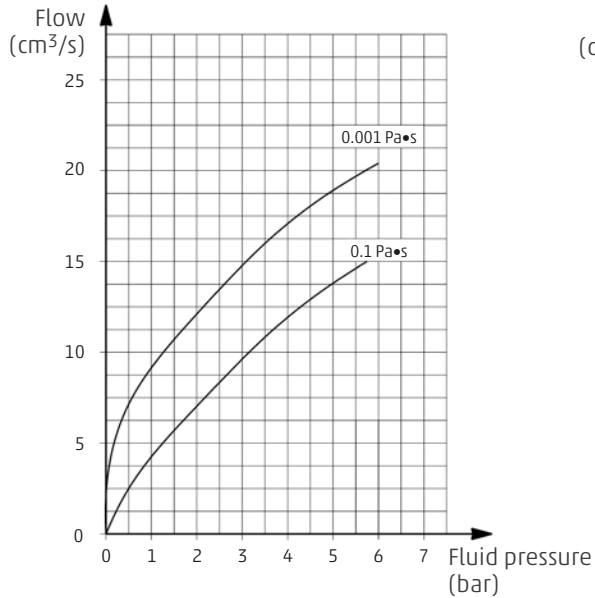


Diagrams

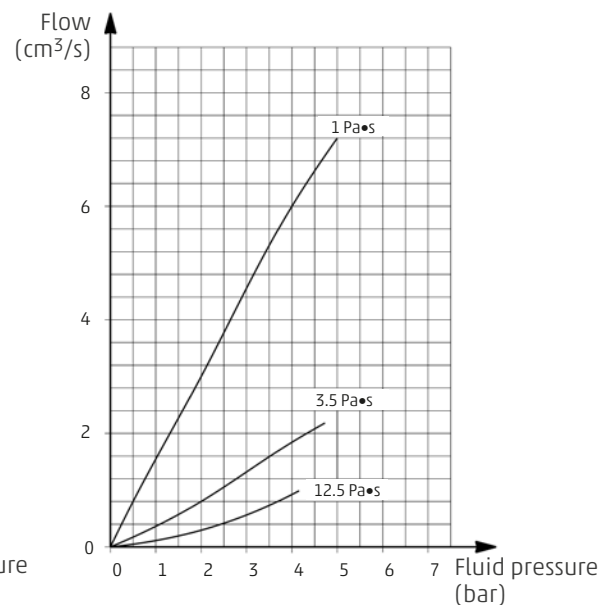
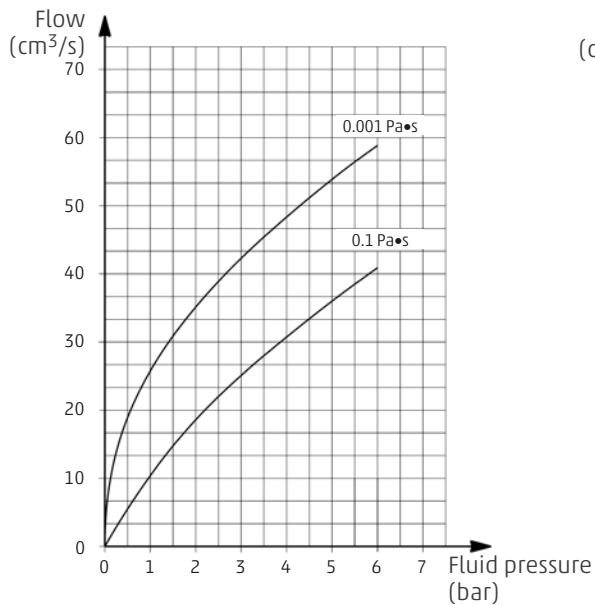
Ø 0.5 mm



Ø 1.0 mm



Ø 1.8 mm



Accessories

1/8 NPTF - Luer Lock adapter

Made of polyamide, necessary to mount all types of tips.
To combine with the K8MDC valve with NPTF connections only.



Code	DAC-ADNPT18-LL
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The kit includes 1 piece per package

Rigid tips kit

Realized with high precision in stainless steel
with polypropylene luer lock double helix port.

Code	Gauge	D.I. (mm)	Colour	Length (mm)
DAC-TLLAS22-0025	22	0.41	Blue	25.4
DAC-TLLAS18-0025	18	0.84	Green	25.4
DAC-TLLAS14-0025	14	1.60	Olive	25.4

The kit includes 5 pieces per package



Tapered tips kit

Made of high-density polyethylene with luer lock double helix port.
To facilitate the dispensing of medium and high viscosity fluids.

Code	Gauge	D.I. (mm)	Colour	Length (mm)
DAC-TLLPT22-0031	22	0.42	Blue	31.7
DAC-TLLPT18-0031	18	0.84	Green	31.7
DAC-TLLPT14-0031	14	1.52	Olive	31.7

The kit includes 5 pieces per package



Flexible tips kit

Entirely made of polypropylene with luer lock double helix port.
They allow to reach difficult points and can be cut to the desired length.

Code	Gauge	D.I. (mm)	Colour	Length (mm)
DAC-TLLAF22-0038	22	0.40	Blue	38.1
DAC-TLLAF18-0038	18	0.84	Green	38.1
DAC-TLLAF14-0038	14	1.55	Olive	38.1

The kit includes 5 pieces per package



Brush tips

Available in soft or rigid bristle versions and with luer lock double helix port.
Ideal for applying glues or lubricants.

Code	Gauge	D.I. (mm)	Bristles
DAC-TLLBS18-00ST	18	0.84	Soft
DAC-TLLBR18-00ST	18	0.84	Rigid

The kit includes 1 piece per package



Note: The above dispensing tips are intended for industrial use only. They are not sterile and should not be used for medical purposes.

ELECTRONIC CONTROL DEVICE

MOD. 130-MDC01



Enables to control the dosing of fluid through the regulation of the opening time of the K8MDC valve.

The device is equipped with a digital input to start the dosing function. Upon activation, the K8MDC dosing valve is activated for a preset time indicated by the number on the display.

By using the two buttons placed on the front, you can set the desired value by choosing the one that suits the application best among more than 99 preset times available. Each time the buttons are pressed, the time is increased or decreased by a fixed value of about 8% starting from

a minimum value of 20 milliseconds up to a maximum value of 19 seconds.

By switching off the system, the device will memorize the last value set and displays it immediately the next time the device is switched on.

Moreover, a second digital input is available that can be used, for example, to monitor the fluid level and an output which, activated by the second input, allows to give a warning in case the minimum level is reached. Information regarding system diagnostics is viewed on the display.

General data

Maximum number of settable times	99
Settable time	from 0.02 to 20 s
Power supply	24 V DC $\pm 10\%$
Power absorbed	0.4 W
Input	24 V DC - maximum current available: 100 mA total
Output	24 V DC PNP - maximum current available 200 mA (5W)
Protection	polarity inversion
Environmental temperature	from 0 to 50 °C
Electrical connections	screw-type terminal blocks
Installation position	any position
Housing material	Polycarbonate
Protection class	IP54 - EN 60529
Diameter of sheath connection cable	5 \div 7.5 mm only with seal 4 \div 6 mm with adapter and seal
Conductor section	26 \div 16 AWG - 0.13 \div 1.5 mm ²

Contacts

fluid@camozzi.com

For further information about our products and conditions of sale,
contact Camozzi Fluid Control department at:

Camozzi Automation S.p.A.

Società Unipersonale
Via Eritrea, 20/I
25126 Brescia
Italy
Tel. +39 030 37921

Customer Service

Tel. +39 030 3792790
service@camozzi.com

Export Department

Tel. +39 030 3792262
sales@camozzi.com

