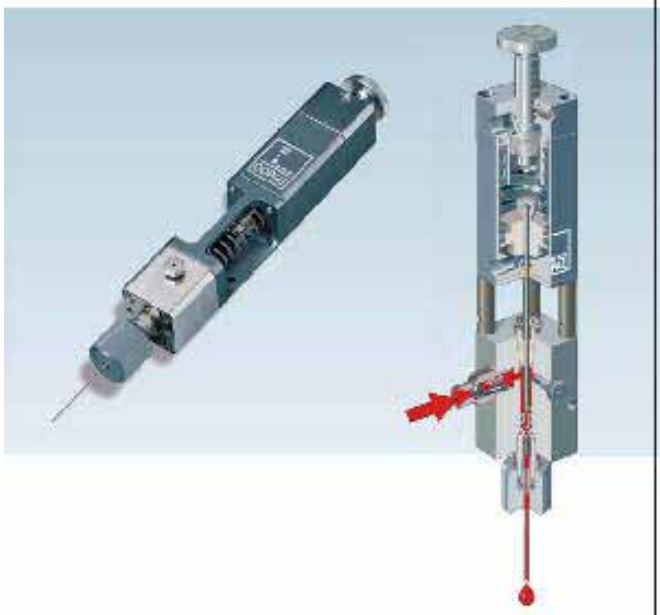
Metering valves

Version needle metering valves



Needle metering valve

Metering volume: 0,001 - 3,0 cm³

Needle metering valves are used for processing low to high viscosity media.

The valve consists of two separated parts. This separation means that it is not possible for any leaking material to flow into the actuating air cylinder that might otherwise cause a malfunction of the valve.

The needle is sealed by means of an adjustable packing set.

Product features

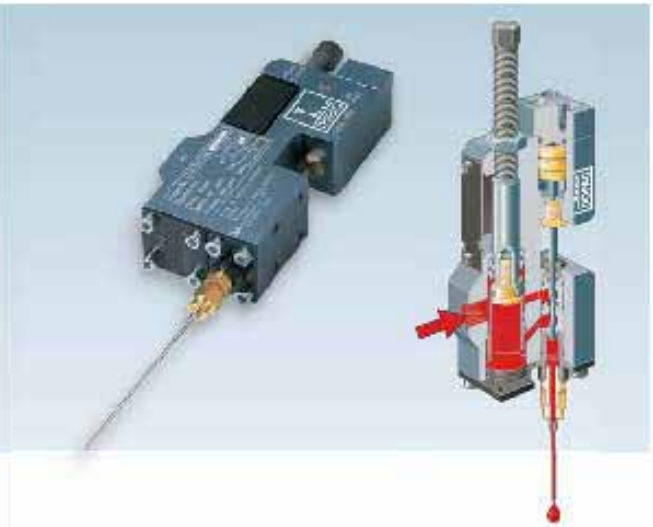
- Metering volume infinitely adjustable
- High-precision, reproducible dosage
- Pneumatic control

Options

- Solenoid valve plate
- Wetted parts made of stainless steel
- Valve seat and needle made of tungsten carbide for processing abrasive media
- Stroke detection
- Manual handle with trigger for pneumatic or electric operation
- Universal holder for adjusting the valve in height and depth

Metering valves

Version chamber metering valves



Cartridge chamber metering valves

Metering volume: 0,025 - 10 cm³
Cartridge: 0,025 / 1,0 / 10 cm³

The cartridge chamber metering valve is a new generation of precision metering valves based on a completely new principle.

The metering chamber is an exchangeable cartridge contained within an aluminium valve body.

There are cartridges available with a defined volume of 0,025, 1,00 and 10,00 cm³. The volumetric output is infinitely adjustable between its limits.

Speed of metering depends on the material viscosity and the material pressure.

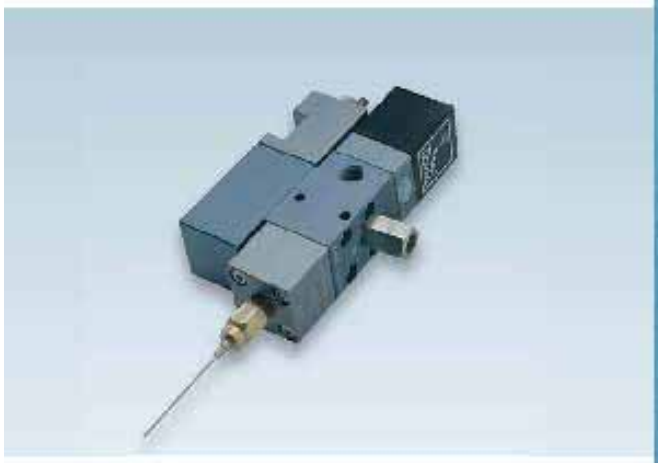
Adjusting the metering volume can be achieved easily by simply changing the metering cartridge.

Product features

- Metering volume infinitely adjustable
- Valve body made of aluminium
- Capable of withstanding high pressure
- Snuff back effect
- Pneumatic control

Options

- Solenoid valve plate
- Double initiator receptacle: Monitoring the stroke needle position



Chamber metering valve

Metering volume: 0,050 - 100 cm³

The chamber metering valve is constructed with a metering chamber, whose size is adjusted to the metering volume.

Standard sizes in different optional types allow a shot size from 0,050 up to 100,00 cm³.

Speed of metering depends on the material viscosity and the material pressure.

Product features

- Valve body made of aluminium
- High maximum working pressure
- Snuff back effect
- Pneumatic control

Options

- Solenoid valve plate
- Stainless steel version
- Fine adjustment
- Initiator receptacle:
  Monitoring the metering piston position
- Manual handle with trigger for pneumatic or electric operation

Needle metering valves

Metering volume/shot cm³	Material input pressure in bar minimum	maximum	Weight approx. kg	Wetted parts made of: steel/aluminium	stainless steel	Options: hollow needles	needle connection	stroke detection	fine tuning	solenoid valve plate	handle	spray adapter
0,001 - 0,01	3	20	0,25	●	O	O	●	-	●	O	O	-
0,005 - 0,10	3	20	0,80	●	O	O	●	-	●	O	O	O
0,008 - 0,18	3	20	0,80	●	O	O	●	-	●	O	O	O
0,020 - 0,40	3	20	1,40	●	O	O	●	O	●	O	O	-
0,060 - 1,00	3	20	1,40	●	O	O	●	O	●	O	O	-
0,100 - 3,00	3	20	1,40	●	O	O	●	O	●	O	O	-

Chamber metering valves series 415

Metering volume/shot cm³	Material input pressure in bar minimum	maximum	Weight approx. kg (standard)	Wetted parts made of: steel/aluminium	stainless steel	Options: hollow needles	needle connection	initiator receptacle	fine tuning	measuring stick	handle
0,050 - 0,50	15	150	0,50	●	O	O	O	O	-	-	O
0,100 - 3,00	15	150	0,60	●	O	O	O	O	-	-	O
0,500 - 12,00	15	150	1,95	●	O	O	O	O	O	O	O
5,000 - 100,00	15	150	4,10	●	O	O	O	O	O	O	O

Cartridge chamber metering valve series 418

Metering volume/shot cm³	Material input pressure in bar minimum	maximum	Weight approx. kg (standard)	Wetted parts made of: steel/aluminium	stainless steel	Options: hollow needles	needle connection	initiator receptacle	fine tuning	solenoid valve plate	handle	replacement cartridge
0,025 - 0,25	40	100	1,00	●	-	O	O	O	●	O	O	O
0,050 - 1,00	20	150	1,00	●	-	O	O	O	●	O	O	O
0,500 - 10,00	6	150	1,00	●	-	O	O	O	●	O	O	O

Key to symbols:
● standard O optional - not available

Metering Valves

	version (material)		part number	piston Ø [mm]		shot size [ml]		working pressure [bar]			connections [i= internal thread, a= external thread] [inch or mm]				options (i = inclusive) (x = optional)												stock movement			stock part	weight [kg]	possible applications
	steel	stainless		open	close	from	to	minimum value	nominal value	maximal value	air	material input	*cleaner drilling	material output	nozzle	nozzle adapter	control valve	initiator connector	fine adjustment	measuring rod	solenoid-valve plate	adapter plate	**handle	packing key	valve cartridge	spray adapter	high	medium	low	no = 10 weeks delevery time	with packing	
standard	x		401.04.70	16	16	0,001	0,01	3	*	20	M5 i	G1/8 a	-	M12x1 a	x	i	-	-	i	i	x	-	x	x	-	-	x	-	-	yes	0,28	1 component, small shots
		x	403.04.70	16	16	0,001	0,01	3	*	20	M5 i	G1/8 a	-	M12x1 a	x	i	-	-	i	i	x	-	x	x	-	-	-	-	x	yes	0,28	1 component, small shots, stainless versions
standard	x		400.04.47	30	30	0,003	0,1	3	*	60	G1/8 i	G1/4 i	-	-	x	i	-	-	i	i	-	-	-	x	-	-	-	-	x	yes	1,45	2 component, small shots
standard	x		401.04.00	28	28	0,005	0,1	3	*	20	G1/8 i	G1/4 a	-	M12x1 a	x	i	-	-	i	i	x	-	x	x	-	x	x	-	-	yes	0,84	1 component, small shots
	x		401.04.02	28	28	0,005	0,1	3	*	20	G1/8 i	G1/4 a	-	M12x1 a	x	i	-	-	i	i	x	-	x	x	-	x	-	-	x	no	0,84	1 component, small shots with V-packing
		x	403.04.00	28	28	0,005	0,1	3	*	20	G1/8 i	G1/4 a	-	M12x1 a	x	i	-	-	i	i	x	-	x	x	-	x	-	-	x	yes	0,87	1 component, small shots, stainless versions
standard	x		402.04.00	28	28	0,005	0,1	3	*	20	G1/8 i	G1/4 i	-	M12x1 a	x	i	-	-	i	i	x	-	x	x	-	x	-	-	x	yes	1,57	1 component, small shots
	x		402.04.01	28	28	0,005	0,1	3	*	20	G1/8 i	G1/4 i	-	M12x1 a	x	i	-	-	i	i	x	-	x	x	-	x	-	-	x	no	1,57	1 component, small shots with V-packing
standard	x		402.04.30	28	28	0,008	0,18	3	*	20	G1/8 i	G1/4 a		M12x1 a	x	i	-	-	i	i	x	-	x	x	-	x	-	x	-	yes	0,83	1 component, small shots
	x		402.04.02	28	28	0,008	0,18	3	*	20	G1/8 i	G1/4 a	-	M12x1 a	x	i	-	-	i	i	x	-	x	x	-	x	-	-	x	yes	1,57	1 component, small shots
	x		417.01.30	36	36	0,02	0,4	3	*	20	G1/8 i	G1/4 a	-	ø 17	-	-	-	-	i	i	x	-	-	-	-	-	-	-	x	yes	1,70	color metering valve with Vari Seal
standard	x		415.01.70	20	20	0,05	0,5	15	100	160	G1/8 i	G1/8 i	G1/8 i	G1/8 i	x	x	i	-	-	-	-	-	-	-	-	-	x	-	-	yes	0,56	1 component dosage, with back snuff effect
	x		415.01.73	20	20	0,05	0,5	15	100	160	G1/8 i	G1/8 i	G1/8 i	G1/8 i	x	x	i	i	-	-	-	-	-	-	-	-	x	-	-	yes	0,63	1 component dosage, with back snuff effect
standard	x		418.01.00	20	20	0,05	1	15	60	160	G1/8 i	G1/4 i	-	G1/8 i	x	x	i	x	i	x	x	x	x	-	x	-	-	-	-	x	yes	1,02	1 component dosage, with back snuff effect
standard	x		419.01.00	36	36	0,05	1	3	*	20	G1/8 i	G1/4 a	-	M12x1 a	x	i	-	-	i	i	x	x	x	x	-	x	x	-	-	yes	1,40	1 component dosage
		x	419.01.20	36	36	0,05	1	3	*	20	G1/8 i	G1/4 a	-	M12x1 a	x	i	-	-	i	i	x	x	x	x	-	x	-	-	x	yes	1,48	1 component dosage, stainless versions
standard	x		415.01.72	20	20	0,1	3	15	100	160	G1/8 i	G1/8 i	G1/8 i	G1/8 i	x	x	i	-	-	-	-	-	-	-	-	-	x	-	-	yes	0,68	1 component dosage, with back snuff effect
standard	x		415.01.75	20	20	0,1	3	15	100	160	G1/8 i	G1/8 i	G1/8 i	G1/8 i	x	x	i	i	-	-	-	-	-	-	-	-	x	-	-	yes	0,68	1 component dosage, with back snuff effect
		x	414.01.75	20	20	0,1	3	15	100	160	G1/8 i	G1/8 i	G1/8 i	G1/8 i	x	x	i	i	-	-	-	-	-	-	-	-	-	-	x	no	0,68	1 component dosage, stainless versions
	x		418.10.00	20	20	0,5	10	15	60	160	G1/8 i	G1/4 i	-	G1/8 i	x	x	i	x	i	x	x	x	x	-	x	-	-	-	x	yes	1,02	1 component dosage, with back snuff effect
standard	x		415.12.00	32	32	0,5	12	15	100	160	G1/8 i	G1/4 i	G1/8 i	G1/4 i	x	x	i	-	-	-	x	x	-	-	-	-	x	-	-	yes	1,65	1 component dosage, with back snuff effect
	x		415.12.15	32	32	0,5	12	15	100	160	G1/8 i	G1/4 i	G1/8 i	G1/4 i	x	x	i	-	i	-	-	x	x	-	-	-	-	-	-	x	yes	1,75	1 component dosage, with back snuff effect
	x		415.12.40	32	32	0,5	12	15	100	160	G1/8 i	G1/4 i	G1/8 i	G1/4 i	x	x	i	-	i	i	-	x	x	-	-	-	-	-	-	x	yes	1,65	1 component dosage, with back snuff effect
	x		415.12.21	32	32	0,5	12	15	100	160	G1/8 i	G1/4 i	G1/8 i	G1/4 i	x	x	i	i	-	-	-	x	x	-	-	-	-	-	x	-	yes	1,95	1 component dosage, with back snuff effect
standard	x		415.100.0	32	32	5	100	15	100	160	G1/8 i	G1/4 i	G1/8 i	G1/4 i	x	x	i	-	-	-	-	i	-	-	-	-	-	x	-	yes	4,10	1 component dosage, with back snuff effect
	x		415.100.5	32	32	5	100	15	100	160	G1/8 i	G1/4 i	G1/8 i	G1/4 i	x	x	i	-	i	-	-	i	-	-	-	-	-	-	x	yes	4,95	1 component dosage, with back snuff effect
	x		415.101.0	32	32	5	100	15	100	160	G1/8 i	G1/4 i	G1/8 i	G1/4 i	x	x	i	i	-	-	-	i	-	-	-	-	-	-	x	yes	4,75	1 component dosage, with back snuff effect
	x		415.101.7	32	32	5	100	15	100	160	G1/8 i	G1/4 i	G1/8 i	G1/4 i	x	x	i	-	i	i	-	i	-	-	-	-	-	-	x	yes	4,75	1 component dosage, with back snuff effect

*clock frequency and viscosity affect the input pressure (test pressure 4-6 bar/medium mesamol)
The mean time between failure is dependent of the material to apply!

**optional electric or pneumatic handle
control pressure 3 - 6 bar