

# Simple integration in a range of processes

## Injection nozzles



### Injecting the transported chemicals

The main task of an injection nozzle in dosing pumps for fluid chemicals is the mixing of chemicals in the main flow (usually water). At the same time, the non-return function of type R injection nozzle prevents backflow into the dosing pump.

We differentiate between injection nozzles with a hose (S) and injection nozzles with a non-return valve (R). The non-return valve prevents fluids from the pressurised system from flowing back into the dosing system.

The most important factor in choosing the corresponding injection nozzle is the flow volume of the dosing chemical, the chemical resistance, the temperature-resistance and the function of the non-return valve.

#### Temperature-resistance

- PVC injection nozzles: up to 40°C
- PVDC injection nozzles: up to 80°C
- Stainless steel injection nozzles up to 80°C with a cooling pipe up to 120°C

### Functions

- Flow capacity 70 – 2600 l/h
- Opening pressure 0.1 – 1.1 bar
- Type S: a pre-tensioned hose effects very fine spraying of the chemical during the dosing stroke
- Type SAH: Dismantling of the injection pipe under system pressure possible
- Type SKD: self-cleaning from constantly-moving main flow in the injection hose
- The injection pipe (I) enables the injection of the dosing chemical in the pipe system
- The non-return valve (R) prevents fluids from the pressurised system from flowing back into the dosing system.
- A shut-off fitting (A) enables the dosing system to separate itself from the pressurised system
- A cooling pipe (K) can be radiated with the heat from fluids with high temperatures
- A number of transitions are available from the injection nozzle to the dosing line e.g. via a flange connection (F).

## Technical data

Injection nozzle		Type S	Type SKD	Type SAH
Opening pressure	bar	1.1	0.2	1.1
Nominal width		DN4		
Nominal pressure		PN10, PN16 (observe max. hose pressure)	PN16 (observe max. hose pressure)	PN10 (observe max. hose pressure)
max. flow capacity for continuous flow*	l/h	70		
Housing material		PVC, brass, stainless steel	PVC, PVDF	PVC
Valve hose material		FPM	FPM, EPDM	

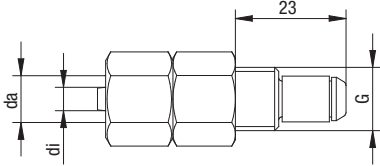
Injection nozzle		Type R	Type IR	Type IRA	Type IRF	Type IRAF
Opening pressure	bar	0.1				
Nominal width		DN4, DN6, DN10, DN15, DN25	DN4, DN6, DN10		DN10, DN15, DN25	
Nominal pressure		DN4: PN16 for PVC and PVDF DN10: PN10 for PVC and PVDF PN100 for stainless steel	DN4: PN16 DN6: PN10 DN10: PN10	PN10		
max. flow capacity for continuous flow*	l/h	DN4: 70 DN6: 150 DN10: 400 DN15: 900 DN25: 2600	DN4: 70 DN6: 150 DN10: 400		DN10: 400 DN15: 900 DN25: 2600	DN10: 400 DN15: 900 DN25: 2500
Housing material		PVC, PVDF, stainless steel	PVC, PVDF	PVC	PVC, stainless steel	
Packing material		FPM, EPDM (CSM), PTFE, AF (asbestos free)	FPM, EPDM (CSM), PTFE	FPM, EPDM (CSM)		
Spring material		Hastelloy				

Other connections and materials available on request.  
(The injection hose is also available in EPDM)

\*Flow control for uniform flow. If a pulsation damper is not used, the maximum flow with motor pumps amounts to 1/3 and with solenoid pumps, 1/10 of the stated value.

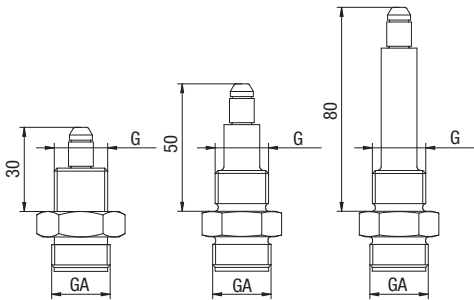
## Dimensions

Type S (with integrated connection)

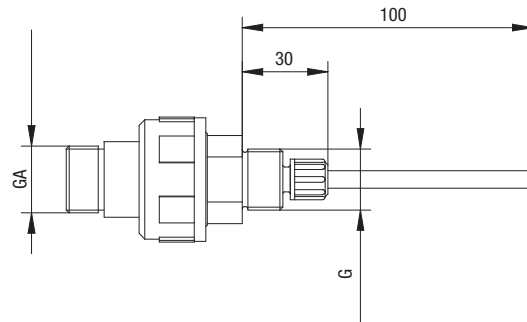


Injection nozzle		Type S (with integrated connection)
Hose connection	di	4/6, 6/8, 6/12
	da	
Screw-in thread	G	G1/2, G1/4

Type S (with separate connection)

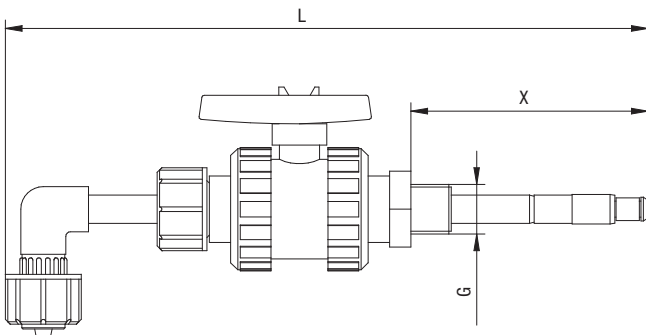


Type SKD



Injection nozzle		Type S (with separate connection)	Type SKD
Cemented connection	GA	G5/8	G5/8
Screw-in thread	G	G1/2	G1/2

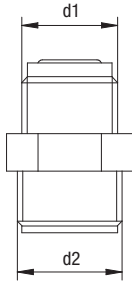
Type SAH



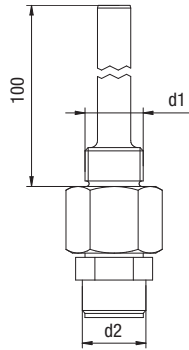
Injection nozzle		Type SAH
Hose connection	di	4/6, 6/9, 6/12
	da	
Screw-in thread	G	R1/2
Length injection pipe	X	for pipe DN100 – DN150: 0 mm – 100 mm for pipe DN150 – DN400: 100 mm – 200 mm
Total length	L	for pipe DN100 – DN150: 267 mm (without hose connection), 271 mm (with hose connection) for pipe DN150 – DN400: 367 mm (without hose connection), 371 mm (with hose connection)

## Dimensions

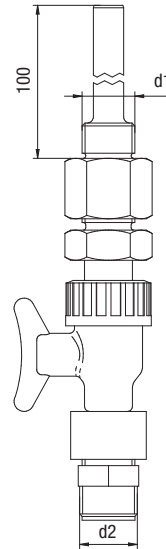
Type R (non-return valve)



Type IR (injection nozzle with non-return valve)

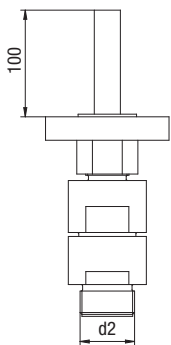


Type IRA (injection nozzle with non-return valve and shut-off fitting)

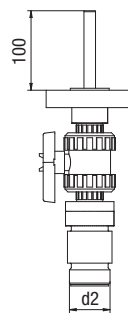


Injection nozzle	Type R					Type IR / Type IRA				
Nominal width	DN4	DN6	DN10	DN15	DN25	DN4	DN6	DN10	DN15	DN25
d1	G1/2	G3/4	G1 1/4	G1	G1 1/2	G1/4	G1/2	G1		G1 1/2
						G1/2	G3/4	G1 1/4	G1 1/2	
						G3/4	G1	G1 1/2	G2	G2
d2	G5/8	G1	G1 1/4		G1 1/2	G5/8	G1	G1 1/4		G1 1/2

Type IRF (injection nozzle with non-return valve and flange connection)



Type IRAF (injection nozzle with non-return valve, shut-off valve and flange connection)



Injection nozzle	Type IRF / Type IRAF		
Nominal width	DN10		DN15
d2	G1 1/4		G1 1/2