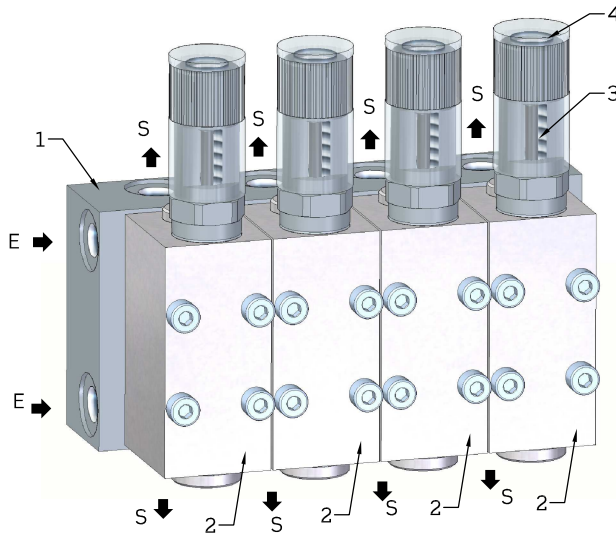
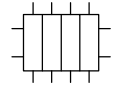


## DOUBLE LINE Distributors

VZ21



- Modular design
- For oil and grease
- Visual monitoring
- Flow rates depending on model
  - VZ21/A :  $0,1 \div 1 \text{ cm}^3/\text{stroke}$
  - VZ21/D :  $0,5 \div 5 \text{ cm}^3/\text{stroke}$
  - VZ21/E :  $3 \div 15 \text{ cm}^3/\text{stroke}$
  - VZ21/H : combination of VZ21/D and VZ21/E



- 1 - Base plate from 2 to 10 outputs
- 2 - Dosing element
- 3 - Visual control
- 4 - Protective cap
- E - Pressure inlet
- S - Lubricant outlets

### Basic principles

Each distributor has a base plate, of 2 to 10 outlets, where the dosing elements are fastened. The base plate has the lubricant inlet and outlet threaded holes.

The advantages of this system:

- to change dosing elements without loosening the pipes from the base plate
- lubrication points can be added or removed without changing the whole distributor
- simplified repairs and replacements

### Operation

The pump creates pressure that is transmitted through the change-over to the distributor. It is transmitted alternatively through the two main conduits that feed the distributor: P1 and P1

The doser works under the effect of the pressure difference which is produced sequentially in its two inlets

Fig.1 - The distributor is on resting position without lubricant. Both reversing and dosing plungers are all on the right position.

Fig.2 - The delivery of lubricant through the inlet P1 creates pressure moving the reversing and dosing plungers and filling up chamber [A] with lubricant.

Fig.3 - The delivery of lubricant through the inlet P2 moves again the reversing and dosing plungers filling up chamber [B] and transferring outside the lubricant accumulated in chamber [A] during the previous movement.

Fig.4 - The pressure that comes in through the inlet P1 moves again the reversing and dosing plungers causing the movement of the accumulated lubricant in chamber [B] during the previous movement, and so on.

Operation sequence:

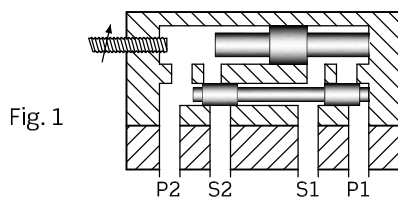


Fig. 1

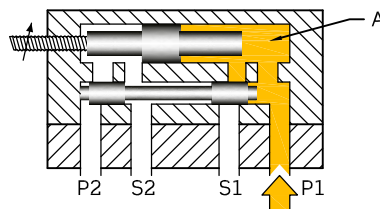


Fig. 2

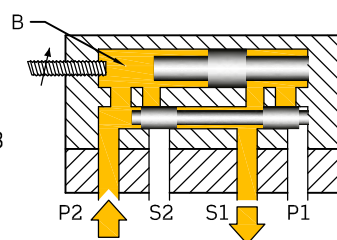


Fig. 3

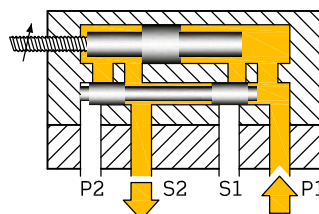
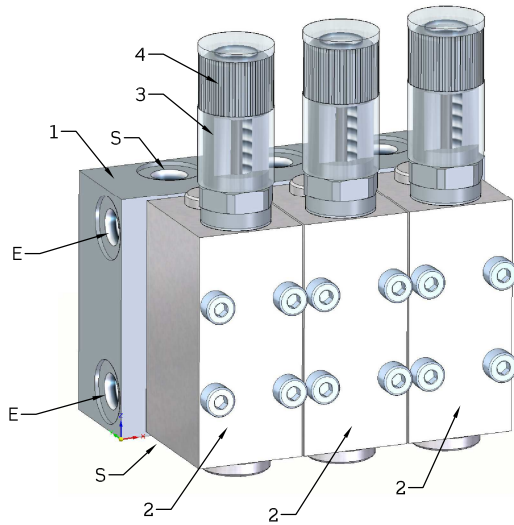
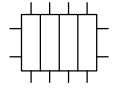


Fig. 4

**DOUBLE LINE  
Distributors**

**VZ21/A**  
376.100.000

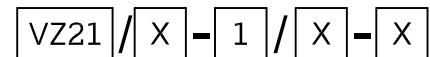
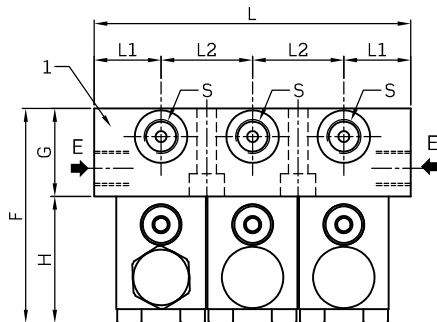
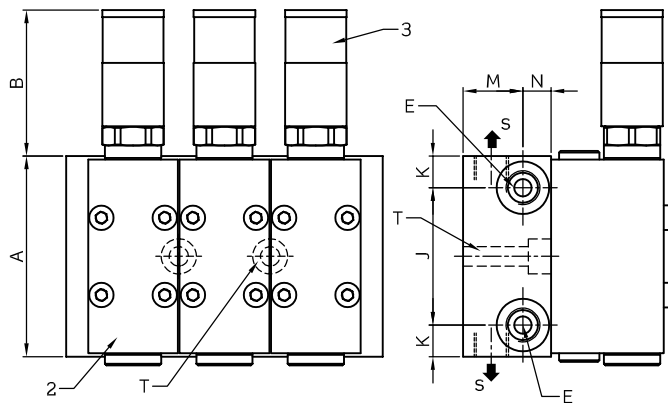
- Modular design
- For oil and grease
- Visual monitoring
- Flow 0,1 ÷ 1 cm<sup>3</sup>/stroke



**Technical characteristics**

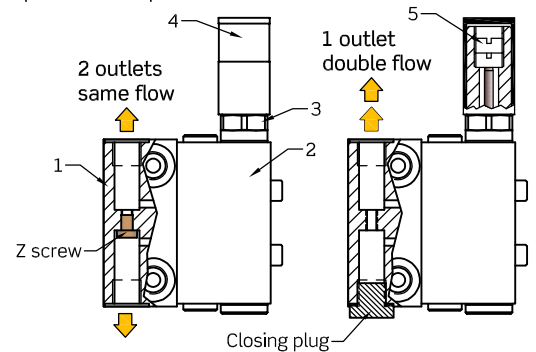
Material..... steel with treated surface  
Maximum pressure..... 350 bar  
Working temperature:  
-10°C ÷ + 80°C (plastic protect. cap)  
-10°C ÷ + 150°C (aluminium protect. cap)  
Lubricant: -oil..... from 100 cSt  
-grease..... up to NLGI 2  
Seal material..... FPM

- 1 - Base plate
- 2 - Dosing element
- 3 - Turret with visual control
- 4 - Protective cap
- 5 - Flow regulating locknut
- E - Pressure inlet
- S - Lubricant outlets
- T - Base plate mooring screw



X	Size cm <sup>3</sup> /stroke	X	Number of dosers	X	Turret protect. cap
A	0,1 ÷ 1	1	1	1	Plastic (up to 80°C)
		2	2	2	Aluminium (up to 150°C)
		3	3		
		4	4		
		5	5		

In order to adjust the outflow, release the protection (plastic or aluminium cap) and adjust the nut/locknut stops inside the turret until the required volume is reached. The locknut is then tightened and the protection is placed.

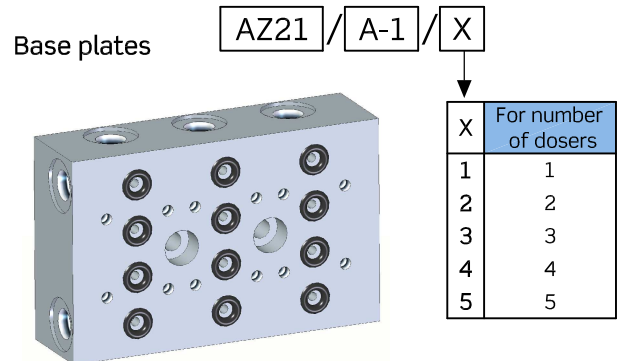
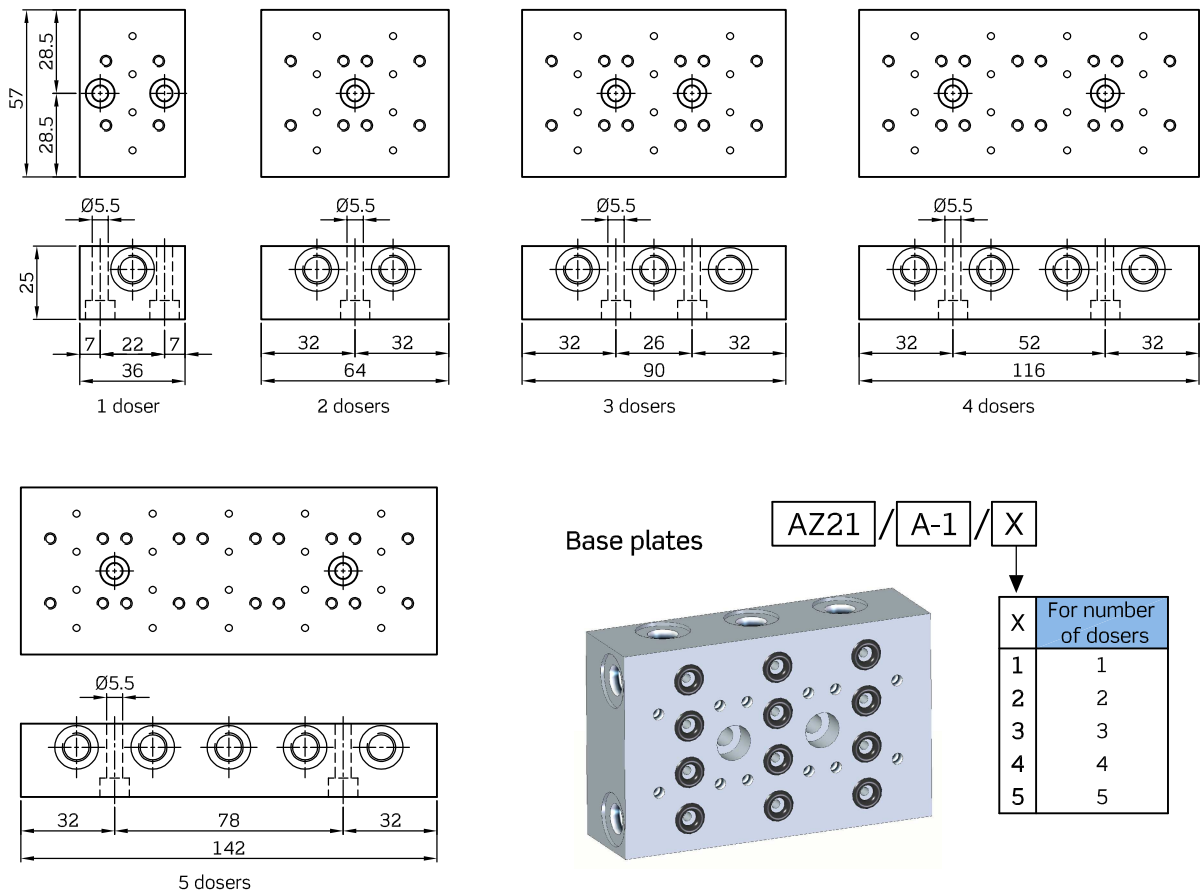


If it's necessary to plug an outlet because of installation requirements:  
-remove Z screw  
-plug the unneeded outlet at the base plate  
Removing Z screw the internal communication is free, having an only outlet with double flow.  
To regain the outlet proceed in the reverse order.

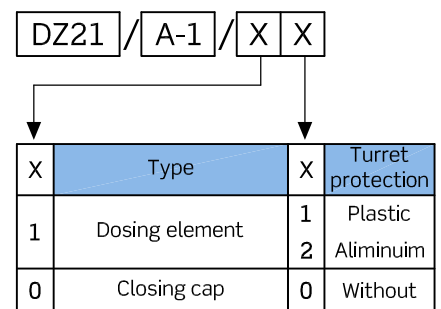
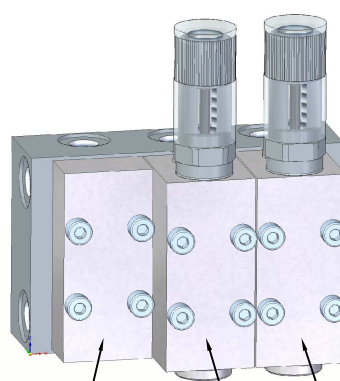
N° of dosers	L	L1	L2	A	B	F	G	H	J	K	M	N	E	S
1	38													
2	64													
3	90	19	26	57	41,5	61	25	36	39	9	17	8	G1/8	G1/8
4	116													
5	142													

VZ21/A

Dimensions for fastening the base plates

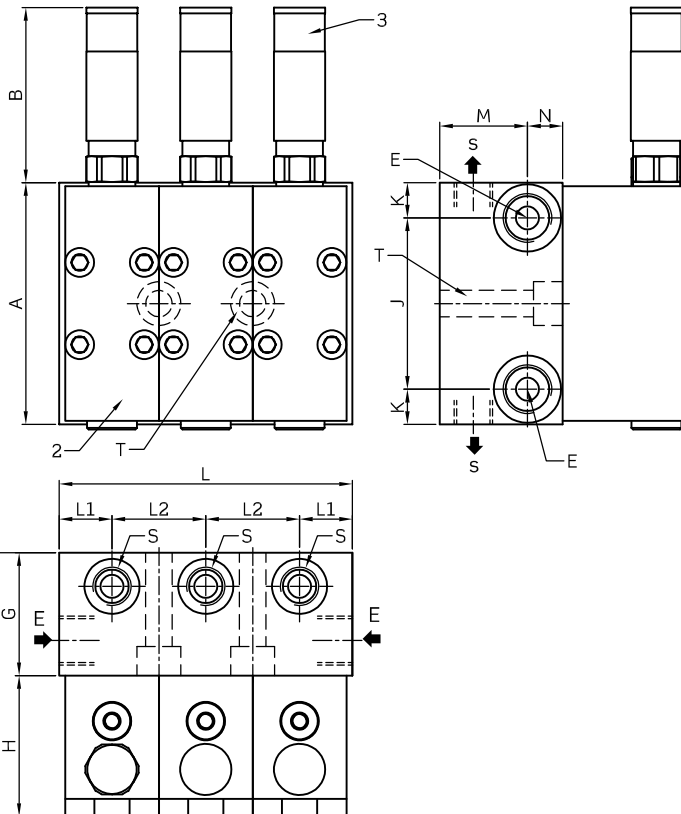
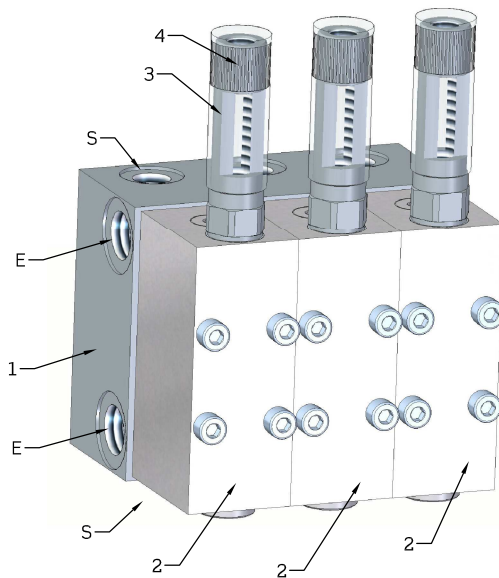


Dosing elements



Closing cap  
 Dosing element  
 Dosing element

This is an element with a cover function that is used to eliminate lubrication points. It doesn't work, neither gives flow  
 Ref. DZ21/A-1/00

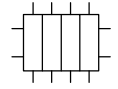


N° of dosers	L	L1	L2	A	B	F	G	H	J	K	M	N	E	S
1	46													
2	68													
3	100	18	32	82,5	60	90	42	48	58,5	12	30	12	G3/8	G1/4
4	132													
5	164													

## DOUBLE LINE Distributors

VZ21/D  
376.400.000

- Modular design
- For oil and grease
- Visual monitoring
- Flow 0,5 ÷ 5 cm<sup>3</sup>/stroke



### Technical characteristics

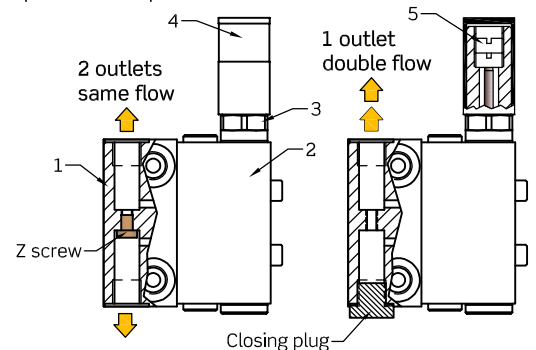
Material..... steel with treated surface  
Maximum pressure..... 350 bar  
Working temperature:  
-10°C ÷ + 80°C (plastic protect. cap)  
-10°C ÷ + 150°C (aluminium protect. cap)  
Lubricant: -oil..... from 100 cSt  
-grease..... up to NLGI 2  
Seal material..... FPM

- 1 - Base plate
- 2 - Dosing element
- 3 - Turret with visual control
- 4 - Protective cap
- 5 - Flow regulating locknut
- E - Pressure inlet
- S - Lubricant outlets
- T - Base plate mooring screw

VZ21 / X - 1 / X - X

X	Size cm <sup>3</sup> /stroke	X	Number of dosers	X	Turret protect. cap
D	0,5 ÷ 5	1	1	1	Plastic (up to 80°C)
		2	2	2	Aluminium (up to 150°C)
		3	3		
		4	4		
		5	5		

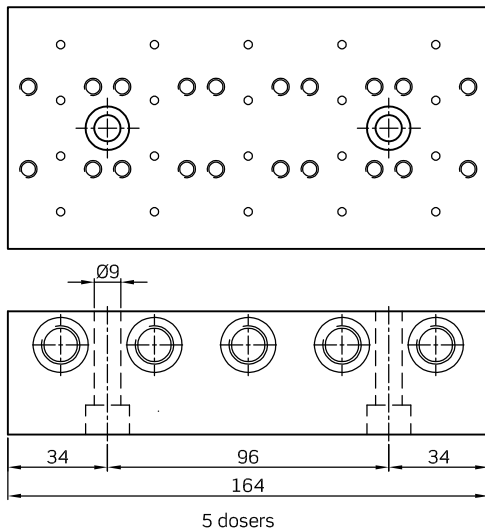
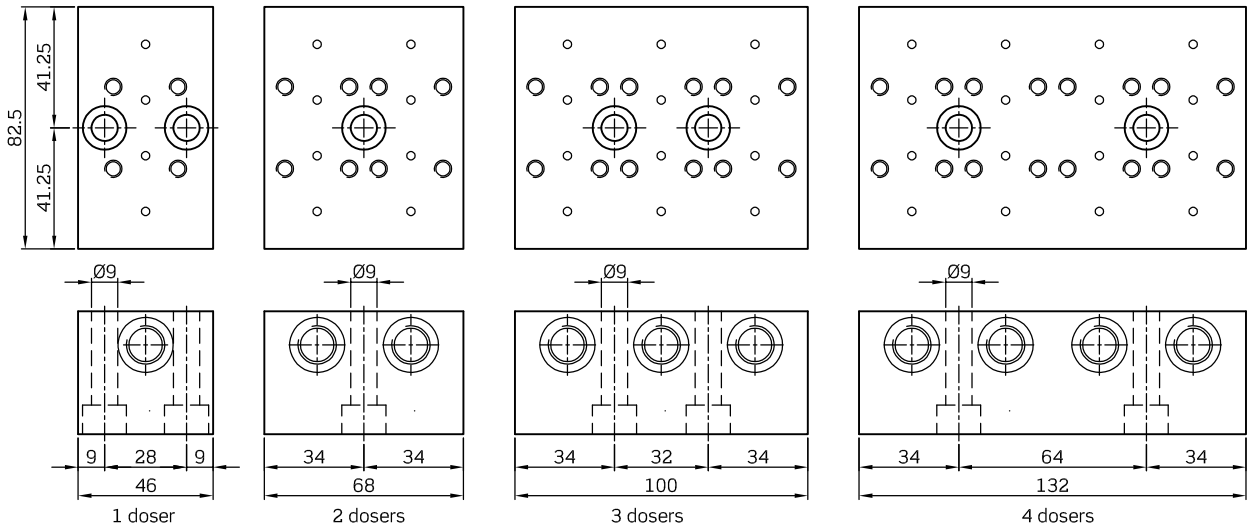
In order to adjust the outflow, release the protection (plastic or aluminium cap) and adjust the nut/locknut stops inside the turret until the required volume is reached. The locknut is then tightened and the protection is placed.



If it's necessary to plug an outlet because of installation requirements:  
-remove Z screw  
-plug the unneeded outlet at the base plate  
Removing Z screw the internal communication is free, having an only outlet with double flow.  
To regain the outlet proceed in the reverse order.

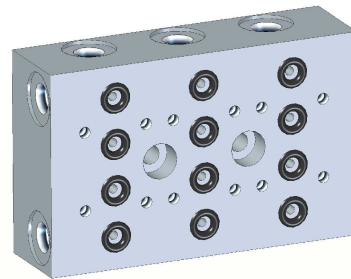
VZ21/D

Dimensions for fastening the base plates



Base plates

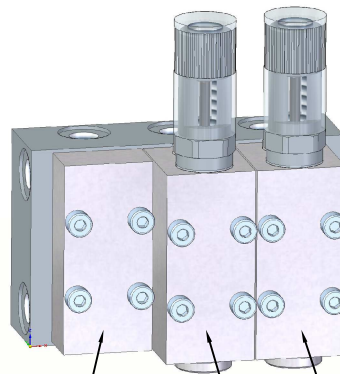
AZ21 / D-1 / X



X	For number of dosers
1	1
2	2
3	3
4	4
5	5

Dosing elements

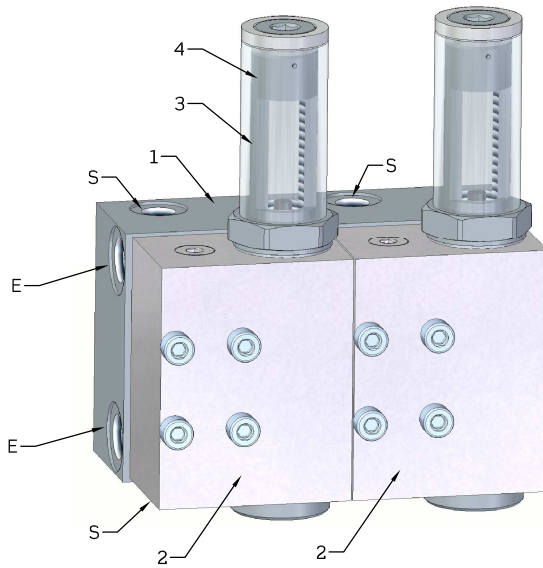
DZ21 / D-1 / X X



X	Type	X	Turret protection
1	Dosing element	1	Plastic
		2	Aliminium
0	Closing cap	0	Without

Closing cap — Dosing element  
 — Dosing element

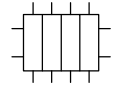
This is an element with a cover function that is used to eliminate lubrication points. It doesn't work, neither gives flow  
 Ref. DZ21/D-1/00



**DOUBLE LINE  
Distributors**

**VZ21/E**  
376.500.000

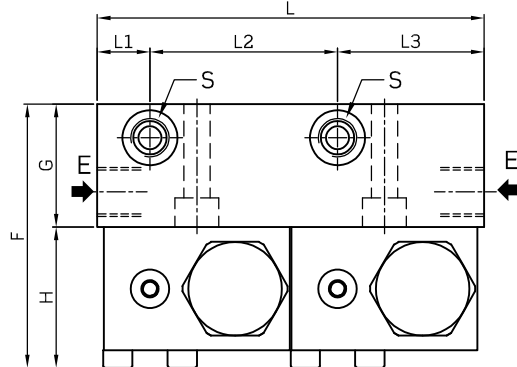
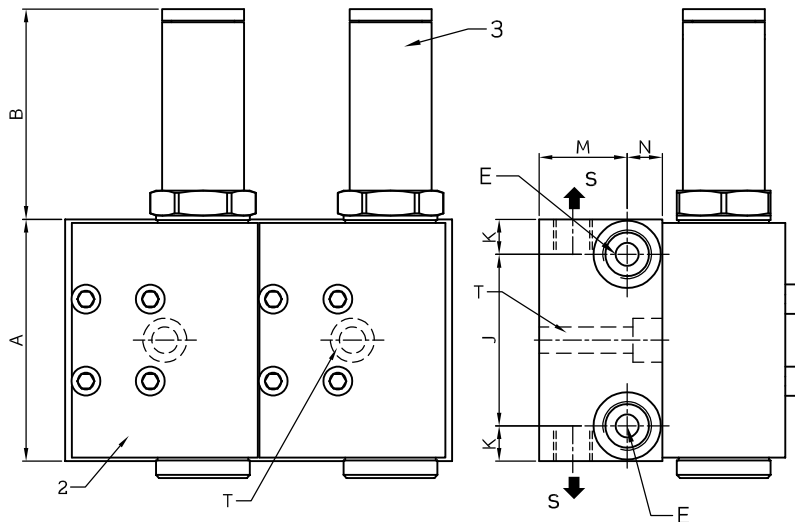
- Modular design
- For oil and grease
- Visual monitoring
- Flow 0,5 ÷ 5 cm<sup>3</sup>/stroke



**Technical characteristics**

Material..... steel with treated surface  
Maximum pressure..... 350 bar  
Working temperature:  
-10°C ÷ + 80°C (plastic protect. cap)  
-10°C ÷ + 150°C (aluminium protect. cap)  
Lubricant: -oil..... from 100 cSt  
-grease..... up to NLGI 2  
Seal material..... FPM

- 1 - Base plate
- 2 - Dosing element
- 3 - Turret with visual control
- 4 - Protective cap
- 5 - Flow regulating locknut
- E - Pressure inlet
- S - Lubricant outlets
- T - Base plate mooring screw

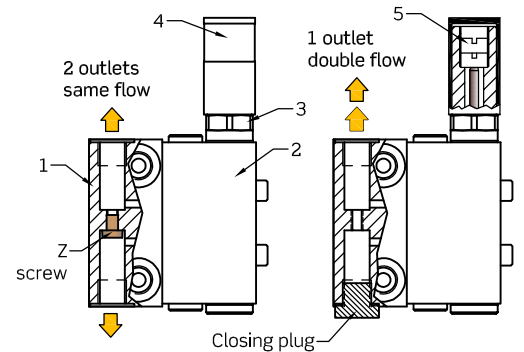


N° of dosers	L	L1	L2	L3	A	B	F	G	H	J	K	M	N	E	S
1	68	18	64	50	82,5	72	90	42	48	58,5	12	30	12	G3/8	G1/4
2	132														

VZ21 / X - 1 / X - X

X	Size cm <sup>3</sup> /str.	X	N° of dosers	X	Turret protect.cap
E	3 ÷ 15	1	1	1	Plastic (up to 80°C)
		2	2	2	Aluminium (up to 150°C)

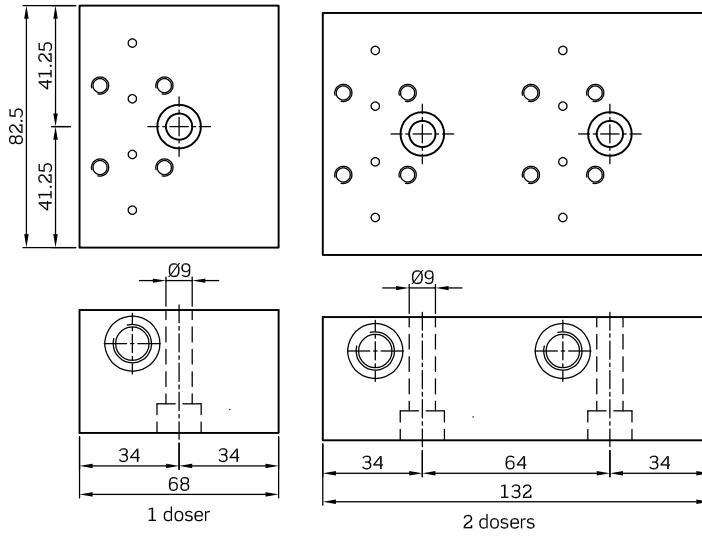
In order to adjust the outflow, release the protection (plastic or aluminium cap) and adjust the nut/locknut stops inside the turret until the required volume is reached. The locknut is then tightened and the protection is placed.



If it's necessary to plug an outlet because of installation requirements:  
-remove Z screw  
-plug the unneeded outlet at the base plate  
Removing Z screw the internal communication is free, having an only outlet with double flow.  
To regain the outlet proceed in the reverse order.

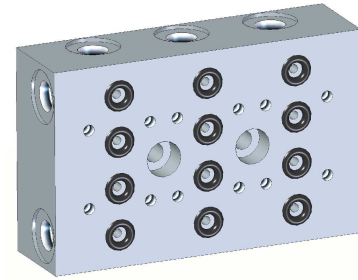
VZ21/E

Dimensions for fastening the base plates



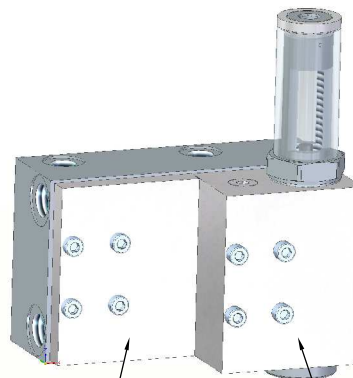
Base plates

AZ21 / E-1 / X



X	For N° of dosers
1	1
2	2

Dosing elements



DZ21 / E-1 / X X

X	Type	X	Turret protection
1	Dosing element	1	Plastic
		2	Aluminium
0	Closing cap	0	Without

Closing cap

Dosing element

This is an element with a cover function that is used to eliminate lubrication points. It doesn't work, neither gives flow  
 Ref. DZ21/E-1/00

**DOUBLE LINE  
Distributors**

**VZ21/H**

378.600.000

- Modular design
- For oil and grease
- Visual monitoring
- Dosers combination:

•D size : 0,5 ÷ 5 cm<sup>3</sup>/stroke

•E size : 3 ÷ 15 cm<sup>3</sup>/stroke

(see technical characteristics on pages 4..7)

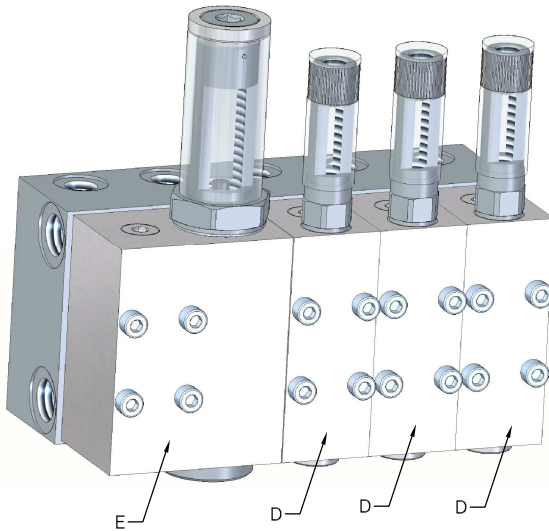
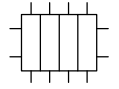


Fig	Turret protection cap	
	Plastic	Aluminium
1	VZ21/H-1/2-ED-1	VZ21/H-1/2-ED-2
2	VZ21/H-1/2-DE-1	VZ21/H-1/2-DE-2
3	VZ21/H-1/3-EDE-1	VZ21/H-1/3-EDE-2
4	VZ21/H-1/3-DEE-1	VZ21/H-1/3-DEE-2
5	VZ21/H-1/3-EDD-1	VZ21/H-1/3-EDD-2
6	VZ21/H-1/3-DED-1	VZ21/H-1/3-DED-2
7	VZ21/H-1/3-DDE-1	VZ21/H-1/3-DDE-2
8	VZ21/H-1/3-EED-1	VZ21/H-1/3-EED-2
9	VZ21/H-1/4-EDDD-1	VZ21/H-1/4-EDDD-2
10	VZ21/H-1/4-DEDD-1	VZ21/H-1/4-DEDD-2
11	VZ21/H-1/4-DDED-1	VZ21/H-1/4-DDED-2
12	VZ21/H-1/4-DDDE-1	VZ21/H-1/4-DDDE-2

