

Umschaltventile – Magnet

– DFE20/3 –



Bestellnr.	Typ
254-030-01155	DFE20/3A18ES-W201-12VDC
254-030-01160	DFE20/3A18ES-W201-24VDC
254-030-01165	DFE20/3A18ES-Y201-12VDC
254-030-01170	DFE20/3A18ES-Y201-24VDC

Weitere Umschaltventil Varianten auf Anfrage möglich!

DFE

with solenoid control

Working conditions

This catalogue shows technical specifications and diagrams measured with mineral oil of 46 mm²/s - 46 cSt viscosity at 40°C temperature.

		DFE052	DFE10	DFE20
N. of available ways		2-3-6-8	3-6	3-6
Nominal flow rating	<i>in steady conditions</i>	60 l/min	90 l/min	140 l/min
Operating pressure (maximum)*	<i>without drain</i>	200 bar 2900 psi	200 bar 2900 psi	200 bar 2900 psi
	<i>with drain</i>	315 bar 4600 psi	315 bar 4600 psi	315 bar 4600 psi
Available nominal voltage	VDC	12-24 48-110	12-24-48	12-24
	VAC 50Hz (with C04 connector)	24-110-220	110-220	24-110-220
Potenza nominale	W	40	60	60
Internal leakage A(B)→T	$\Delta p=100 \text{ bar } 1450 \text{ psi}$ <i>with fluid and valve at 40°C</i>	7 cm ³ /min 0.43 in ³ /min	10 cm ³ /min 0.61 in ³ /min	15 cm ³ /min 0.92 in ³ /min
Fluid		Mineral base oil		
Fluid temperature	<i>with NBR seals</i>	da -20° a 80°C		
	<i>with FPM seals</i>	da -20° a 100°C		
Viscosity	<i>operating range</i>	da 15 a 75 mm ² /s - from 15 to 75 cSt		
	<i>minimum</i>	12 mm ² /s - 12 cSt		
	<i>maximum</i>	400 mm ² /s - 400 cSt		
Max. level of contamination		19/16 - ISO 4406		
Ambient temperature		da -40° a 60°C		

NOTE - For different working conditions please contact Customer Service.

(*) - This value is reachable only in steady conditions; for dynamic working conditions see the pages from 49 to 52.

Standard threads

ALL PORTS	BSP (ISO 228/1)	UN-UNF (ISO 11926-1)
DFE052	G 3/8	3/4-16 UNF-2B (SAE 8)
DFE10	G 1/2	7/8-14 UNF-2B (SAE 10)
DFE20	G 3/4	1 1/16-12 UN-2B (SAE 12)
DRAIN PORT		
L	G 1/4	7/16-20 UNF-2B (SAE 4)

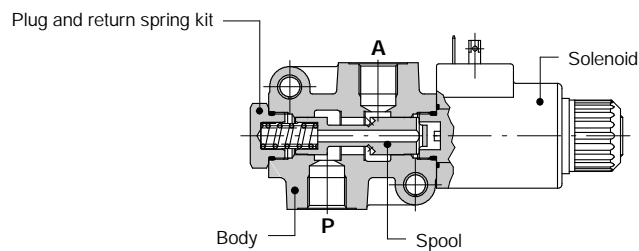
with solenoid control

DFE

Hydraulic circuit

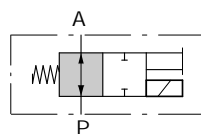
2-way

Available as body only in **DFE052/2** execution; for other executions 3-way body is used.



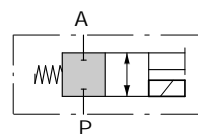
Spool type A

1 2



Spool type B

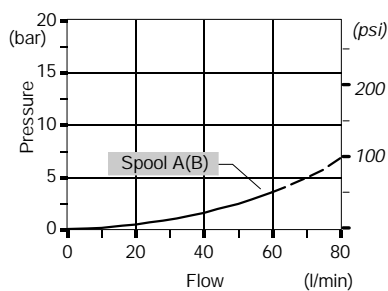
1 2



Performance data

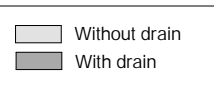
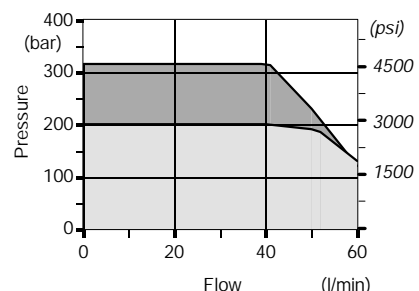
Pressure drop versus flow

P→A



Minimum dynamic conditions

(supply = $V_n - 10\%$, coil at 70 °C)



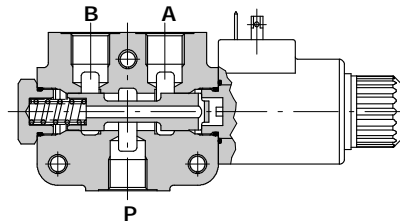
DFE

with solenoid control

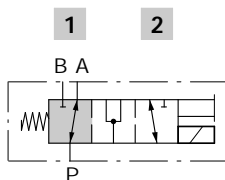
Hydraulic circuit

3-way

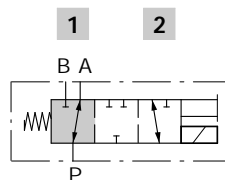
It's possible to obtain 2-way diverter valve plugging port A or B.



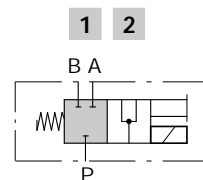
Spool type A



Spool type B

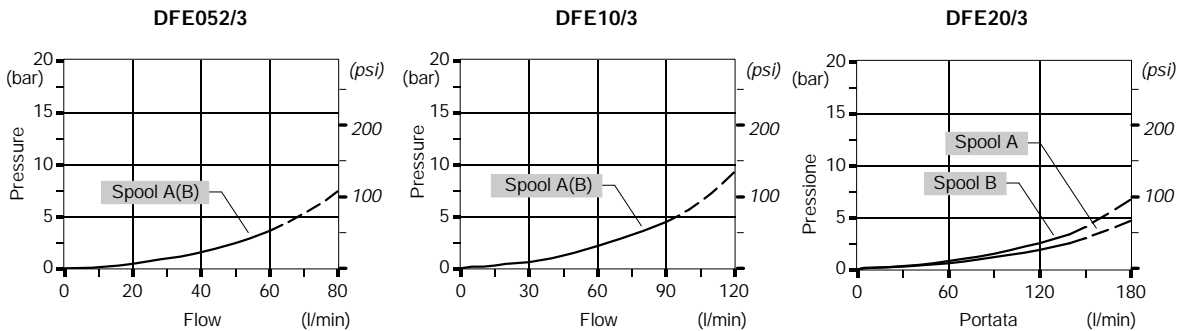


Spool type D

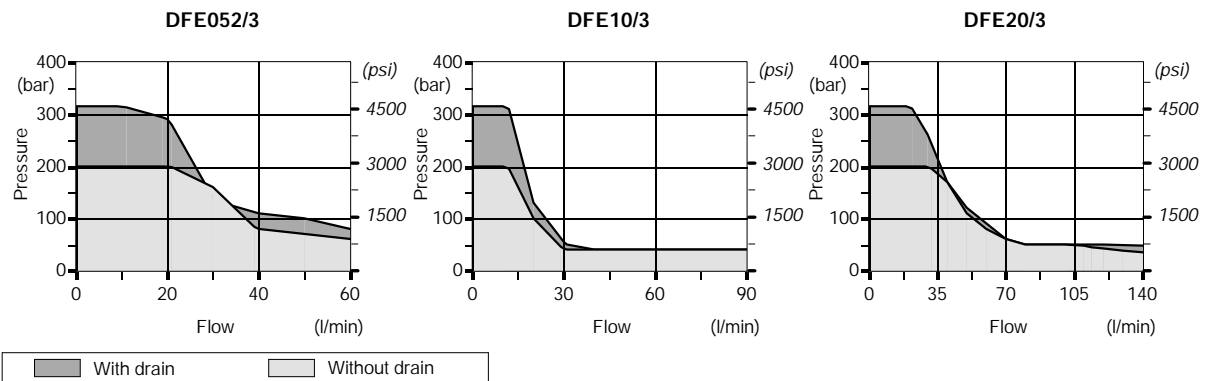


Performance data

Pressure drop versus flow: P→A(B)



Minimum dynamic conditions: (supply = Vn-10%, coil at 70 °C)

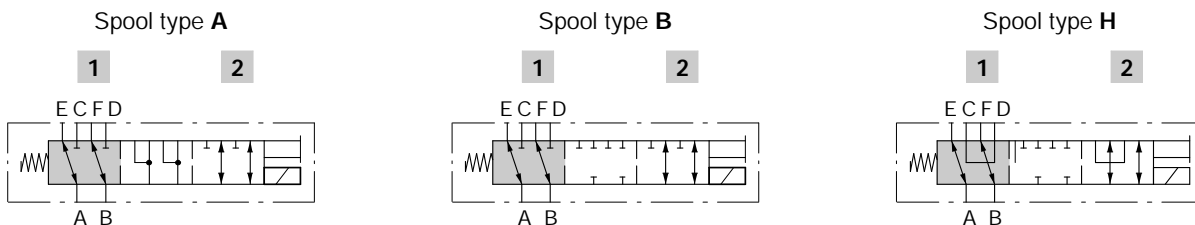
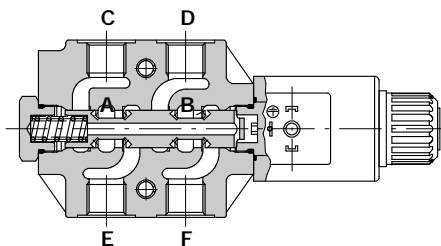


with solenoid control

DFE

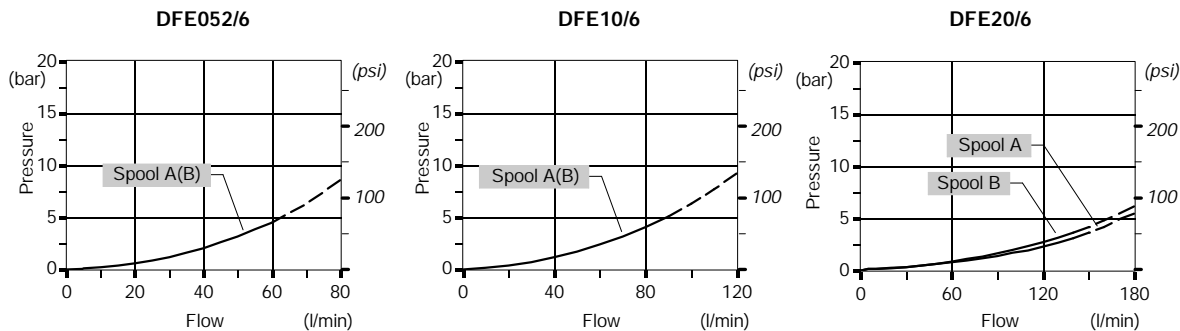
Hydraulic circuit

6-way

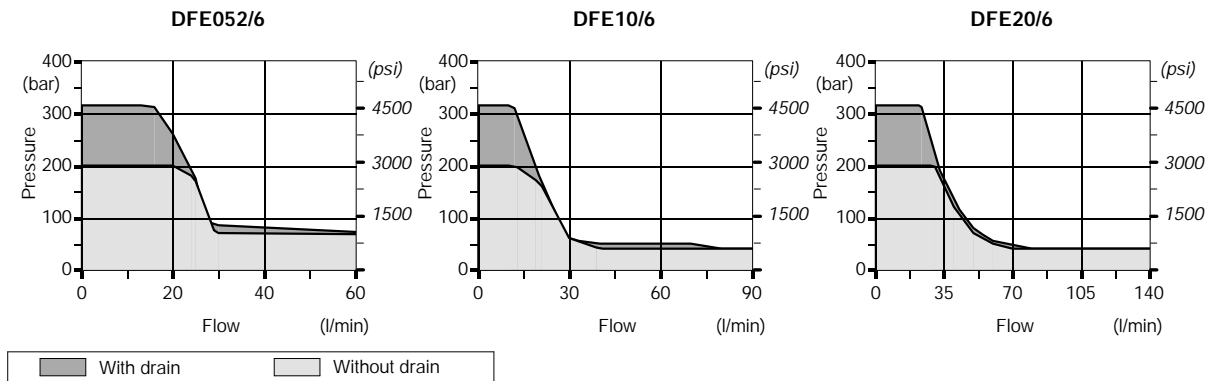


Performance data

Pressure drop versus flow: A→E(C).



Minimum dynamic conditions: (supply = Vn-10%, coil at 70 °C)

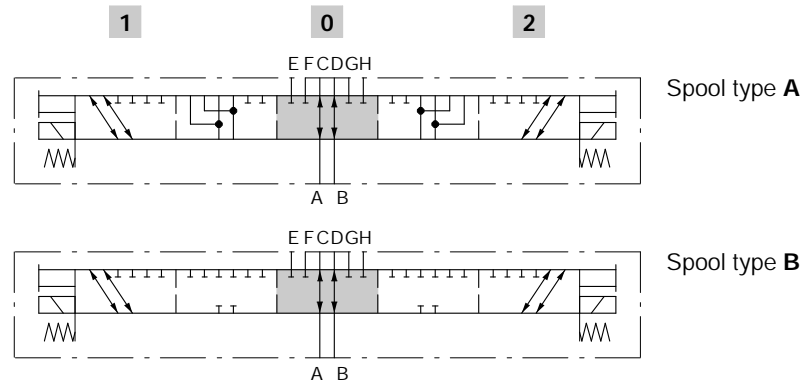
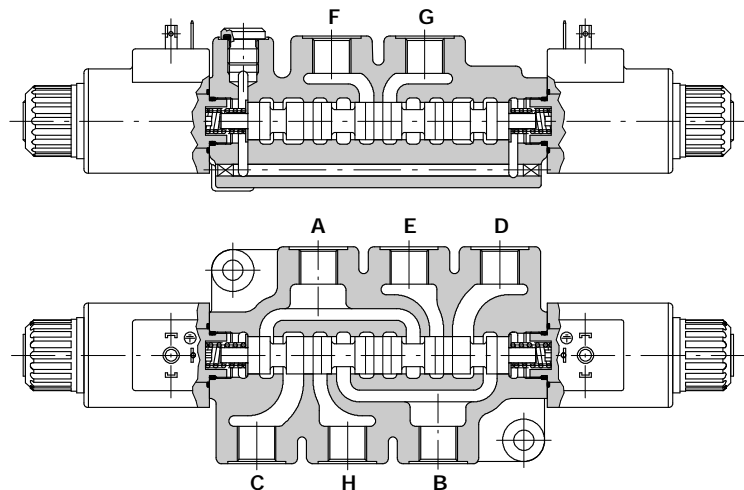


DFE

with solenoid control

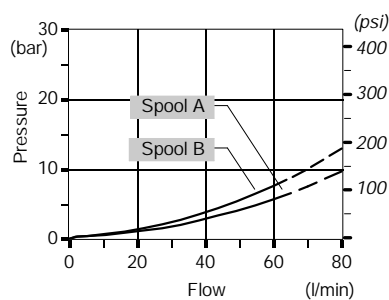
Hydraulic circuit

8-way



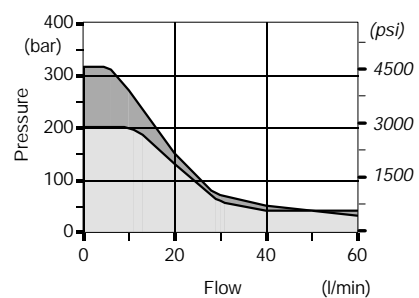
Performance data

**Pressure drop versus flow
A→C**



Minimum dynamic conditions

(supply = $V_n - 10\%$, coil at 70 °C)



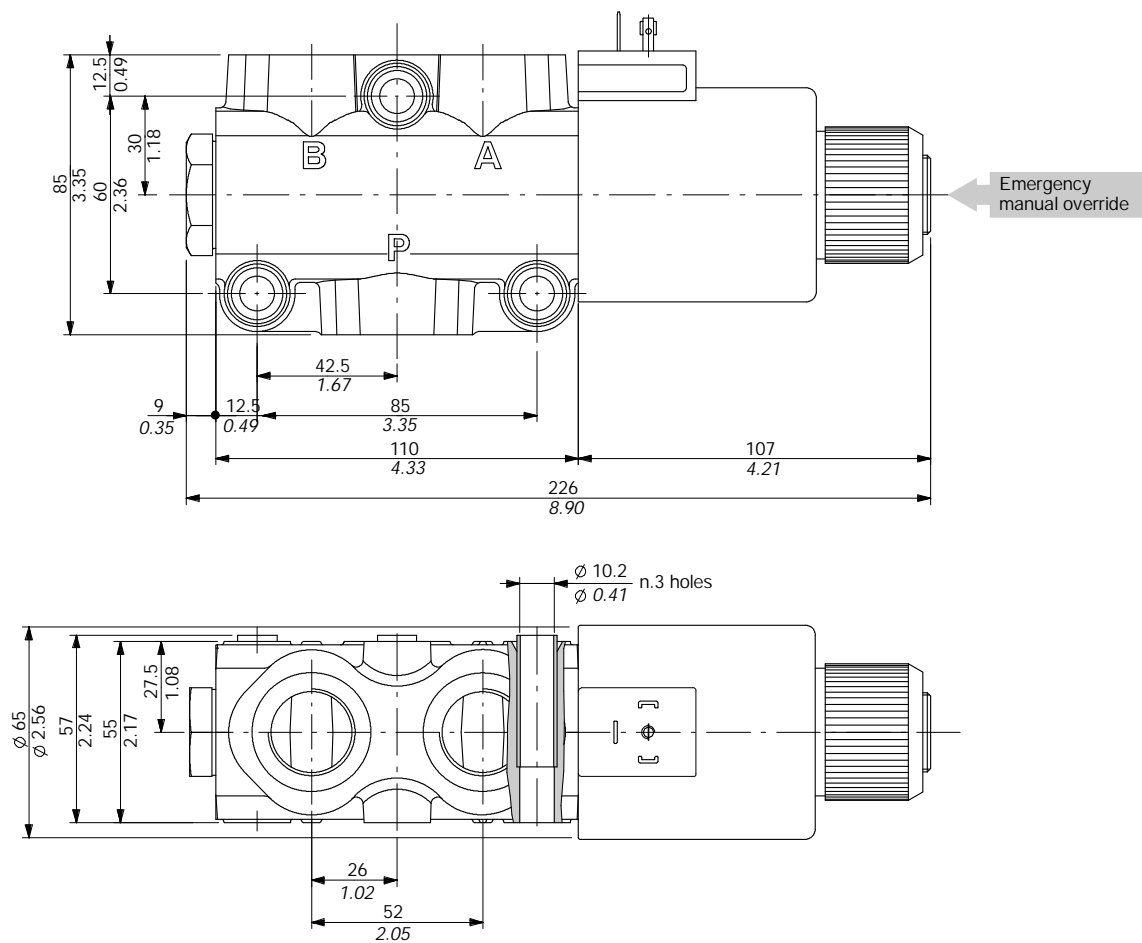
■ With drain □ Without drain

DFE20

with solenoid control

Dimensional data

3-way DFE20/3 valve

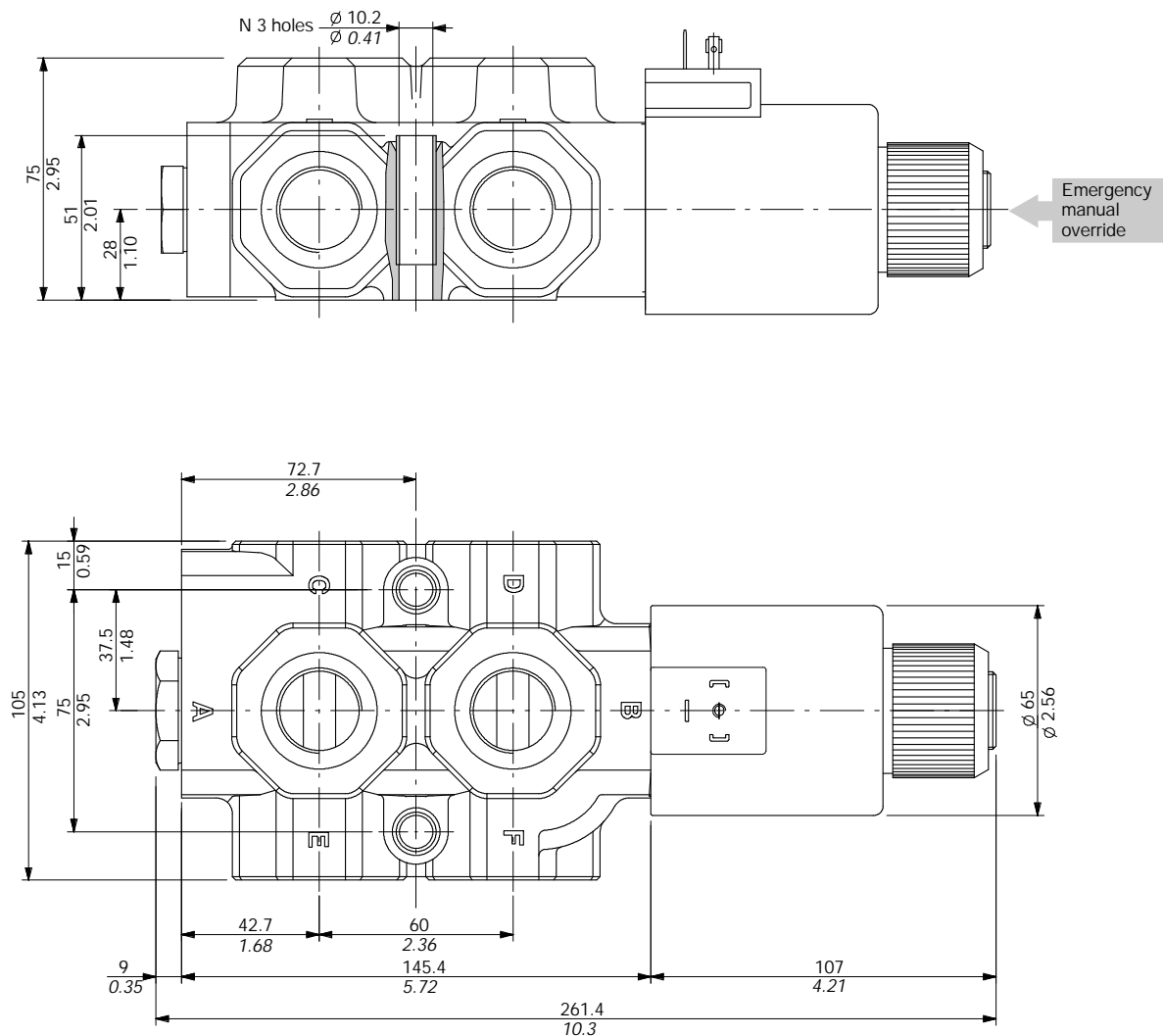


with solenoid control

DFE20

Dimensional data

6-way DFE20/6 valve



DFE20

with solenoid control

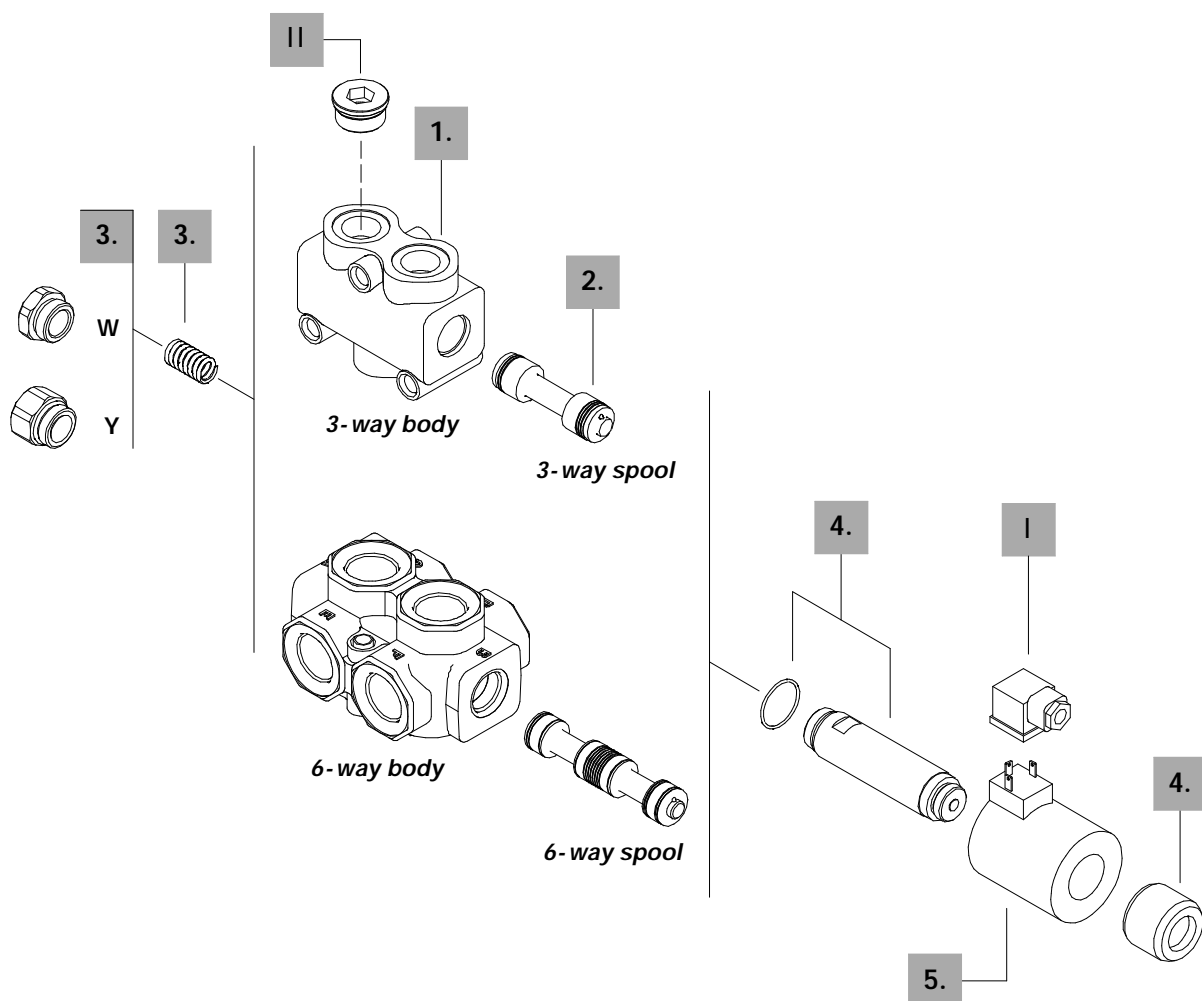
Ordering codes

Description example :

Diverter valve DFE20/3 A 18 ES - W 201-12VDC - <CVN>

1 2 3 4 3. 5

Valve is supplied painted as standard, with one coat of Primer black antirust paint



with solenoid control

DFE20

Ordering codes

3 - way

1. Body *

TYPE	CODE	DESCRIPTION
DFE20/3	3CO2261320	Standard body, BSP threaded

2. Spool options

TYPE	CODE	DESCRIPTION
A	3CAS120341	3-way, 2 positions with ports connected in transit position
B	3CAS120441	3-way, 2 positions with ports closed in transit position

6 - way

1. Body *

TYPE	CODE	DESCRIPTION
DFE20/6	3CO2263820	Standard body, BSP threaded

2. Spool options

TYPE	CODE	DESCRIPTION
A	3CAS120641	6-way, 2 positions with ports connected in transit position
B	3CAS120741	6-way, 2 positions with ports closed in transit position
H	3CAS120841	6-way, 2 positions, D↔C in position 1, F↔E in position 2, ports closed in transit position

3. Positioner kits page 70

TYPE	CODE	DESCRIPTION
18...W	5TAP003	Spring return in position 1
18...Y	5GIU007 *	Spring return in position 1, with G1/4 drain port

4. Tube assembly page 70

TYPE	CODE	DESCRIPTION
ES	5SOL519001	Spring return in position 1 (without coil)

5. Coil options page 70

TYPE	CODE	DESCRIPTION
101		Without coil (only with tube kit)
VDC supply (connector C02)		
201-12VDC	4SOL519112	Coil with 12VDC nominal voltage
201-24VDC	4SOL519124	Coil with 24VDC nominal voltage
VAC supply (connector C04)		
201-20VDC	4SOL519020	Coil with 20VDC nominal voltage (for 24VAC)
201-94VDC	4SOL519094	Coil with 94VDC nominal voltage (for 110VAC)
201-192VDC	4SOL519192	Coil with 192VDC nominal voltage (for 220VAC)

I Optional connectors page 80

TYPE	CODE	DESCRIPTION
C02	2X1001010	According to ISO4400
C04	2X1001040	According to ISO4400 with rectifier

II Ports plug

TYPE	CODE	DESCRIPTION
G3/4	3XTAP732200*	Body conversion from 3-way to 2-way circuit

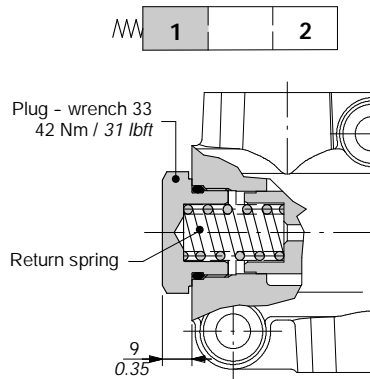
DFE20

with solenoid control

Positioner kits

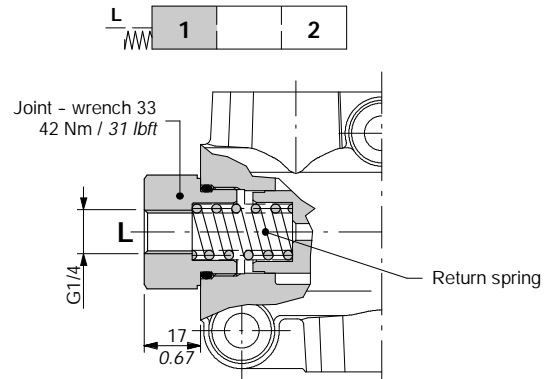
18W kit

Spring return in position 1 with plug.



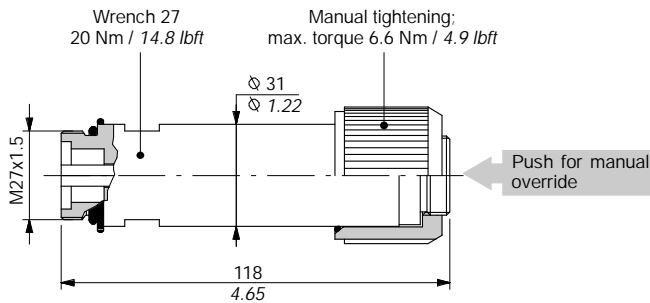
18Y kit

Spring return in position 1, with G1/4 joint for drain.



Solenoid parts

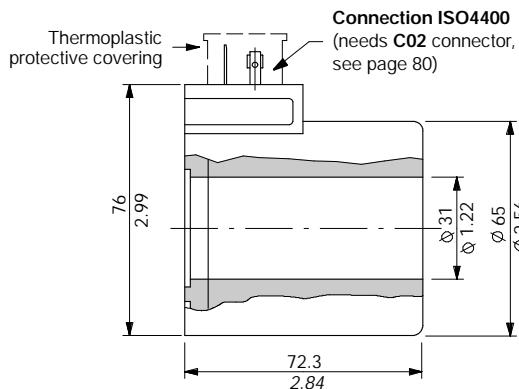
ES tube assembly



Operating features

Plunger stroke 10.2 mm / 0.40 in

Coil options



Operating features

Nominal voltage 12-20-24-94-192VDC
Nominal voltage tolerance ±10%
Power rating 60 W
Duty cycle 100%
Weather protection IP66
Coil insulation Class H