

## Umschaltventile

– DF20/6 –



– mit Hebel –

Bestellnr.	Typ	Code
254-190-01000	DF20/6A12L	126082040
254-190-01050	DF20/6A17L	126084040
254-190-01100	DF20/6A17SLP	126084020
254-190-01150	DF20/6A12NASL-BSP1	126080012
254-190-01200	DF20/6A12NALB3	126084041
254-190-01250	DF20/6A17C	126084050
254-190-01300	DF20/6A17IA2	126084080
254-190-01350	DF20/6A17IA2	126084082
254-190-01400	DF20/6A17PSLC	126084130
254-190-01450	DF20/6A17IB2	126084291
254-190-01500	DF20/6A18PNL	126085141
254-190-01550	DF20/6A18EI1SLP-KE1S0-24VDC	126085725
254-190-01600	DF20/6A8PNSLC	126080004
254-190-01650	DF20/6B12L	126092040
254-190-01700	DF20/6BC17C	126094050
254-190-01750	DF20/6B17MEIB2	126094090
254-190-01800	DF20/6B18EI1L-KE1S0-24VDC	126095740
254-190-01850	DF20/6A18IB1L-BSP1	126485240
254-190-01900	DF20/6A18EI1SLP-KE1R0-24VDC-BSP1	126485727

254-190

DF

with mechanical control

### Working conditions

This catalogue shows technical specifications and diagrams measured with mineral oil of 46 mm<sup>2</sup>/s - 46 cSt viscosity at 40°C temperature.

		DF5	DF10	DF20	DF25
N. of available ways		2-3-6	2-3-6	2-3-6	3
Nominal flow rating		60 l/min	90 l/min	140 l/min	280 l/min
Operating pressure (maximum)		315 bar 4600 psi	315 bar 4600 psi	315 bar 4600 psi	315 bar 4600 psi
Internal leakage A(B)→T	Δp=100 bar 1450 psi with fluid and valve at 40°C	5 cm <sup>3</sup> /min 0.31 in <sup>3</sup> /min	5 cm <sup>3</sup> /min 0.31 in <sup>3</sup> /min	8 cm <sup>3</sup> /min 0.49 in <sup>3</sup> /min	8 cm <sup>3</sup> /min 0.49 in <sup>3</sup> /min
Hydraulic fluid		Mineral base oil			
Fluid temperature		with NBR seals from -20° to 80°C			
		with FPM seals from -20° to 100°C			
Viscosity		operating range from 15 to 75 mm <sup>2</sup> /s - from 15 to 75 cSt			
		minimum 12 mm <sup>2</sup> /s - 12 cSt			
		maximum 400 mm <sup>2</sup> /s - 400 cSt			
Max. level of contamination		19/16 - ISO 4406			
Ambient temperature		from -40° to 60°C			

NOTE - For different working conditions please contact Customer Service.

### Standard threads

ALL PORTS	BSP (ISO 228/1)	UN-UNF (ISO 11926-1)
DF5	G 3/8	3/4-16 UNF-2B (SAE 8)
DF10	G 1/2	7/8-14 UNF-2B (SAE 10)
DF20	G 3/4	1 1/16-12 UN-2B (SAE 12)
DF25	G 1	1 5/16-12 UN-2B (SAE 16)
PILOT PORTS		
Pneumatic	NPT 1/8-27	NPT 1/8-27
Hydraulic	G 1/4	9/16-18 UNF-2B (SAE 6)

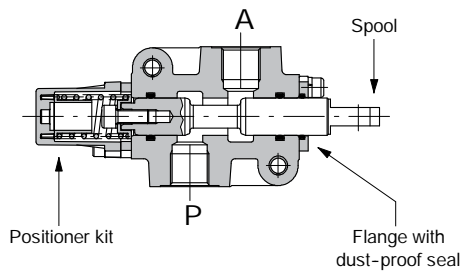
with mechanical control

DF

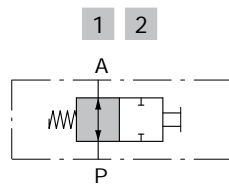
Hydraulic circuit

2-way

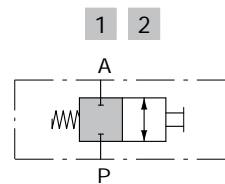
Available as body only in DF5/2 execution; for other executions 3-way body is used.



Spool type A

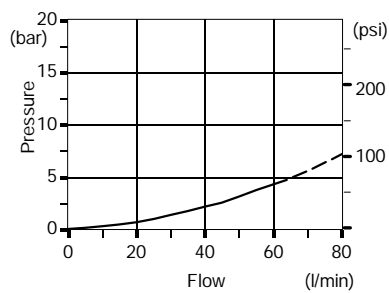


Spool type B



Performance data

Pressure drop versus flow  
P→A



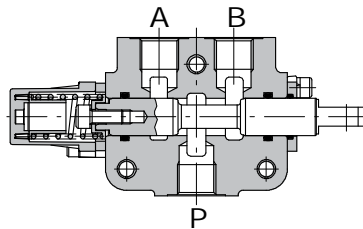
DF

with mechanical control

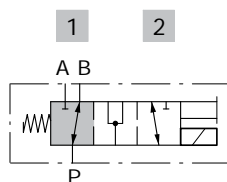
Hydraulic circuit

3-way

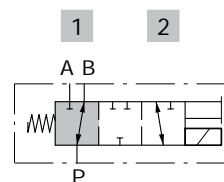
It's possible to obtain 2-way diverter valve plugging port A or B.



Spool type A



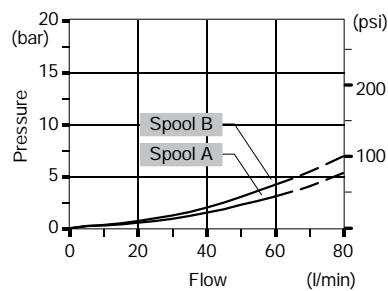
Spool type B B



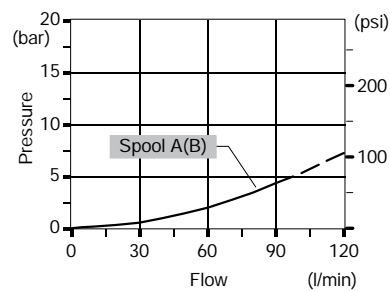
Performance data

Pressure drop versus flow: P→A(B)

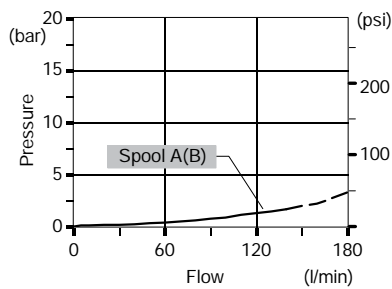
DF5/3



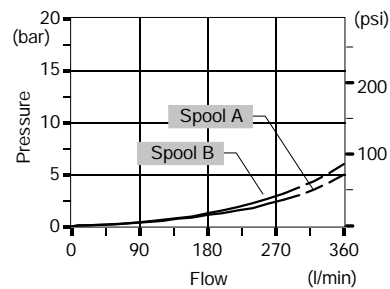
DF10/3



DF20/3



DF25/3

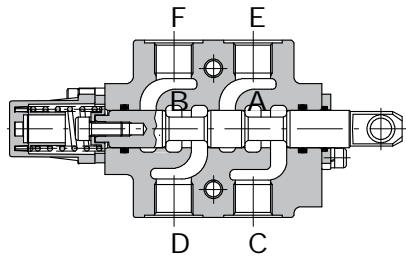


with mechanical control

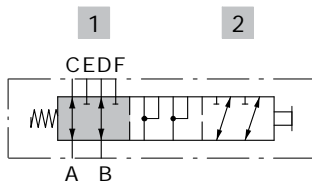
DF

Hydraulic circuit

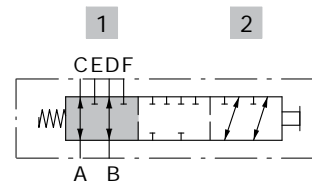
6-way



Spool type A



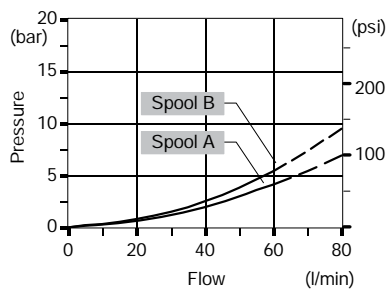
Spool type B



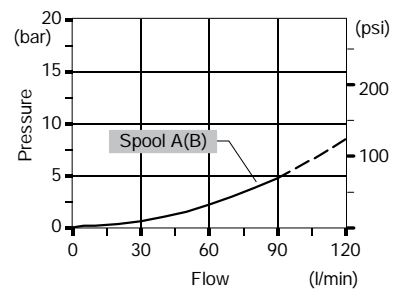
Performance data

Pressure drop versus flow: A→C(E).

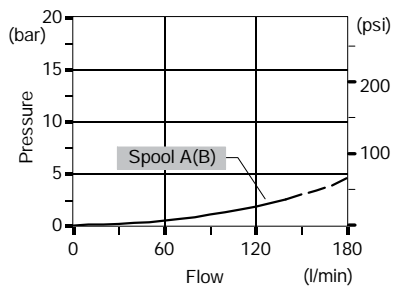
DF5/6



DF10/6



DF20/6

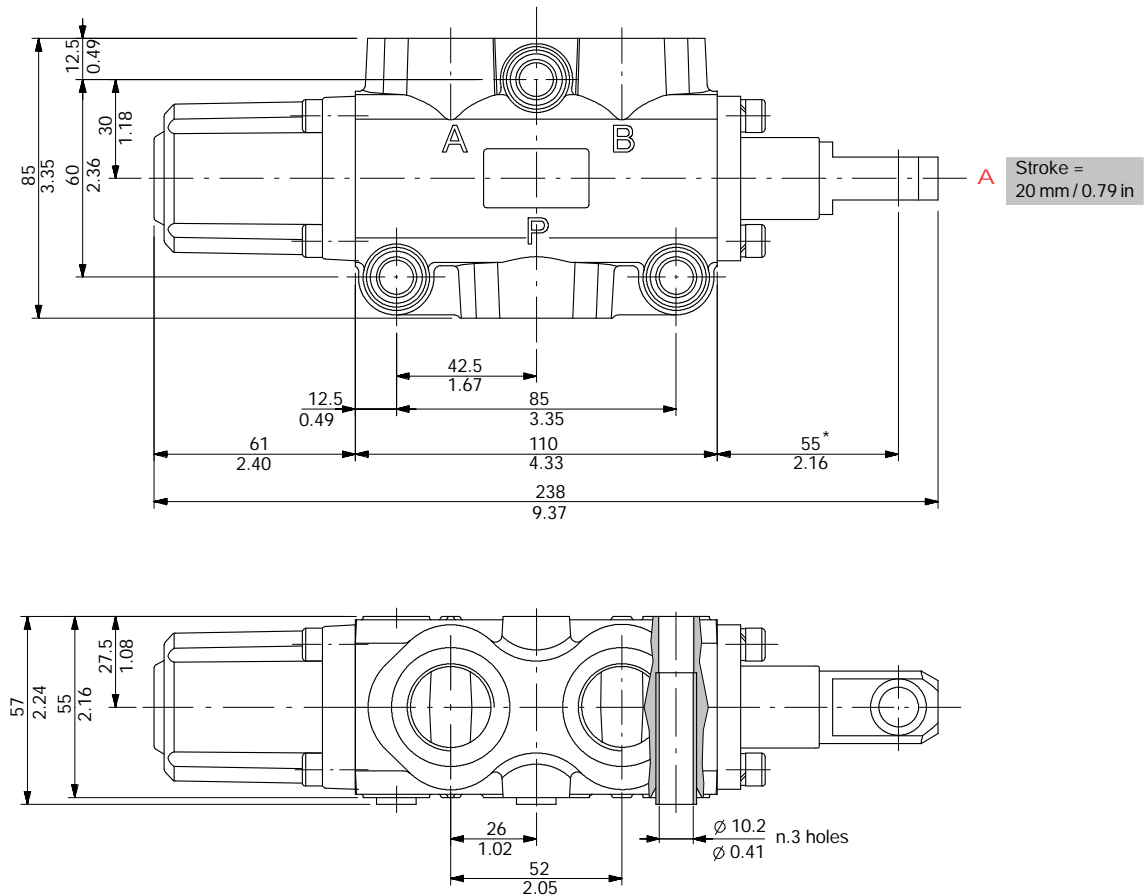


DF20

with mechanical control

Dimensional data

3-way DF20/3 valve



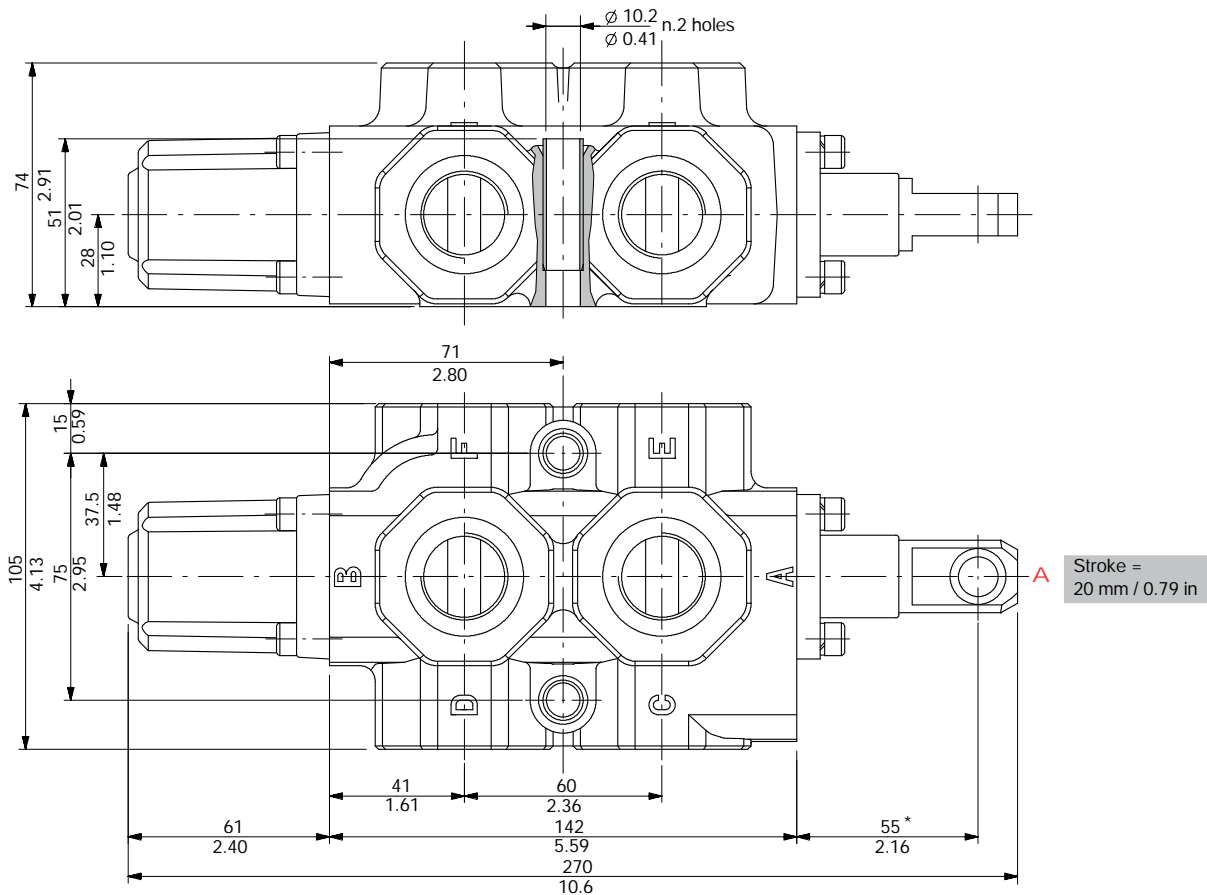
254-190

with mechanical control

DF20

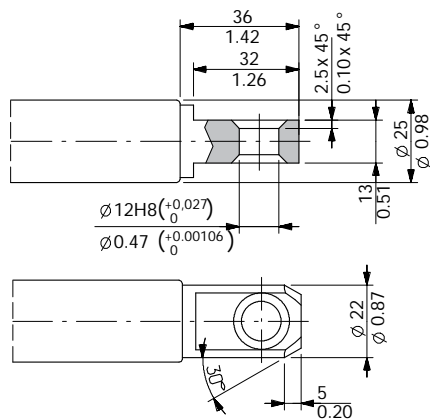
Dimensional data

6-way DF20/6 valve

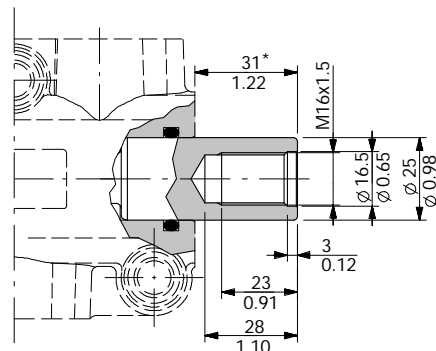


Spool end

Standard end



Rotary cam prearrangement



NOTA (\*) - With spool out (positioner kit type 17)

254-190

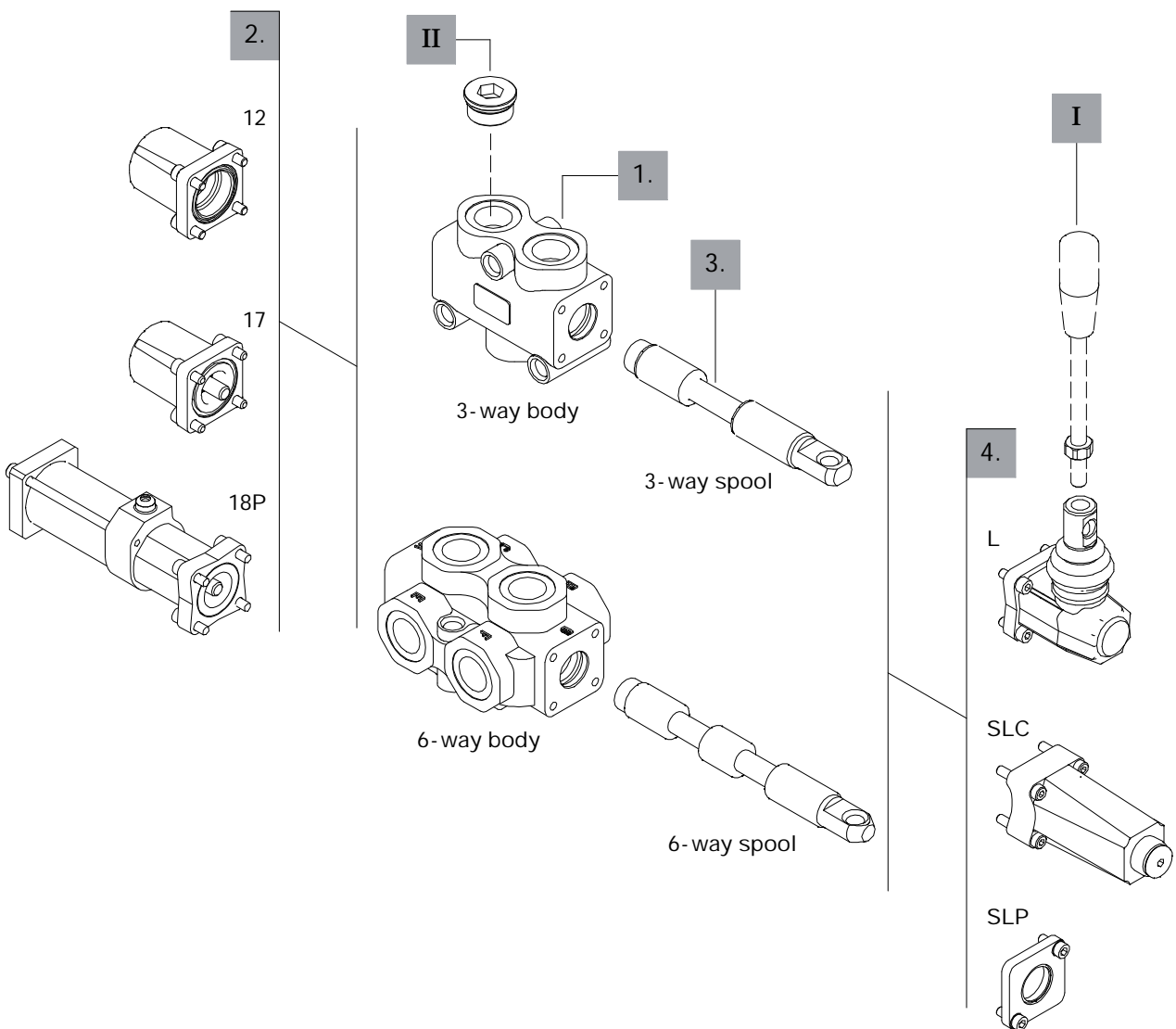
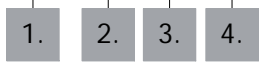
DF20

with mechanical control

Ordering codes

Description example:

Diverter valve DF20/3 A 17 SLP





with mechanical control

DF20

Ordering codes

### 3 - way

#### 1. Body kit \*

TYPE	CODE	DESCRIPTION
DF20/3	5CO2261300	Standard body kit, BSP threaded

Include body and seals

#### 2. Spool options

TYPE	CODE	DESCRIPTION
A	3CAS120310	3-way, 2 positions with ports connected in transit position
B	3CAS120410	3-way, 2 positions with ports closed in transit position
AC	3CAS120320	As type A prearranged for cam control
BC	3CAS120420	As type B prearranged for cam control

### 6 - way

#### 1. Body kit \*

TYPE	CODE	DESCRIPTION
DF20/6	5CO2262300	Standard body kit, BSP threaded

Include body and seals

#### 2. Spool options

TYPE	CODE	DESCRIPTION
A	3CAS120610	6-way, 2 positions with ports connected in transit position
B	3CAS120710	6-way, 2 positions with ports closed in transit position
AC	3CAS120620	As type A prearranged for cam control
BC	3CAS120720	As type B prearranged for cam control

#### 3. Positioner kits page 34

TIPO	CODICE	DESCRIZIONE
12	5V12120000	Detent in positions 1 and 2
17	5V17120000	Spring return in position 1
18MB	5V18120000	Spring return in position 2
18P	5V18120700	ON/OFF pneumatic kit with spring return in position 2
18IA1	5V18120820*	ON/OFF high pressure hydraulic kit with spring return in position 2
18E11	5V18120350	12VDC ON/OFF electro-hydraulic kit with spring return in position 2
	5V18120351	24VDC ON/OFF electro-hydraulic kit with spring return in position 2

#### 4. Control kits page 37

TYPE	CODE	DESCRIPTION
SLP	5COP120000	Without lever box with dust-proof plate kit
SLC	5COP220000	Without lever box with endcap
L	5LEV120000	Standard lever box
IA2	5IDR520000*	ON/OFF high pressure kit
CB	5CAM120020	Cam kit

#### I Optional handlever

TYPE	CODE	DESCRIPTION
AL01/M10x200	170013020	For lever L, height 200 mm / 7.87 in

#### II Ports plug

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

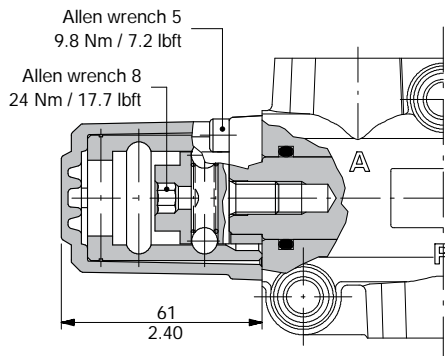
**DF20**

with mechanical control

**Positioner kits**

**12 kit: with detent**

Detent in positions 1 and 2.

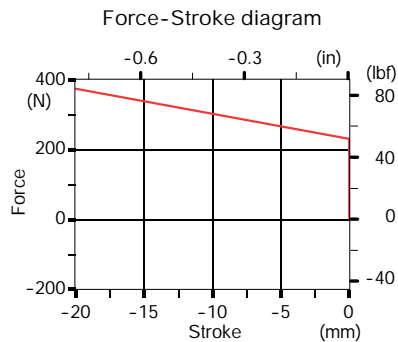
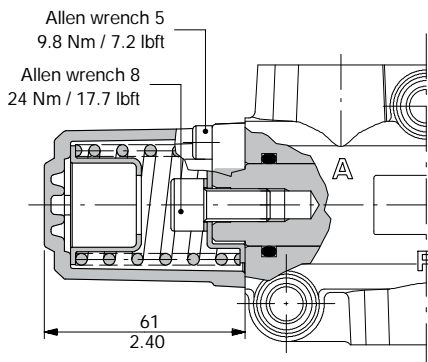


Operating features  
Locking and unlocking force . . . . . : ±10%

**With spring return**

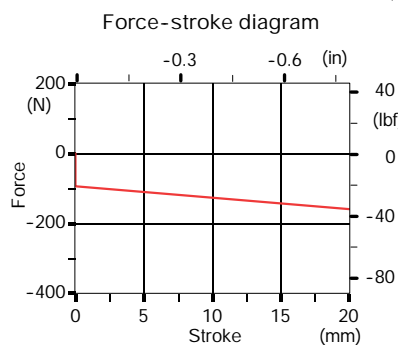
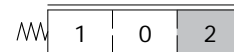
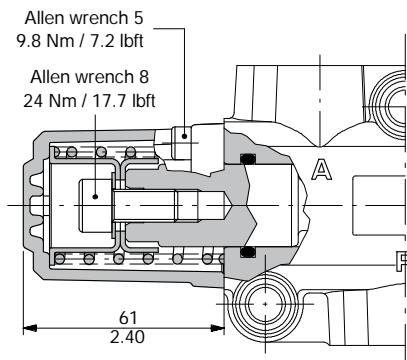
**17 kit**

Spring return in position 1.



**18MB kit**

Spring return in position 2.



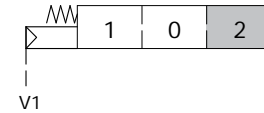
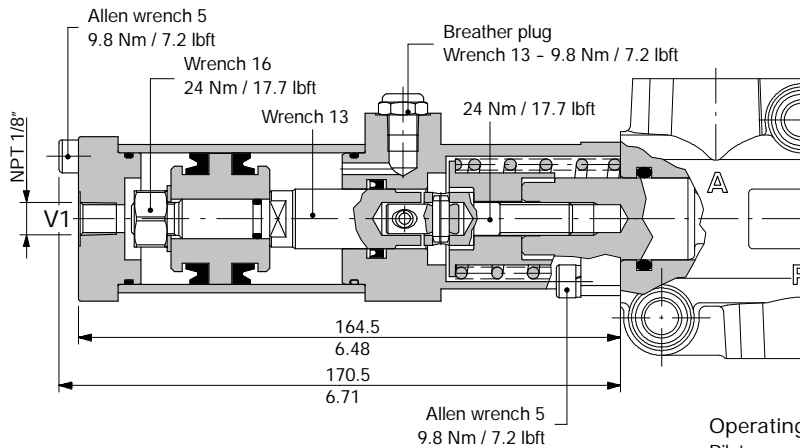
with mechanical control

DF20

Positioner kits

**18P: ON/OFF pneumatic kit**

With spring return in position 2.

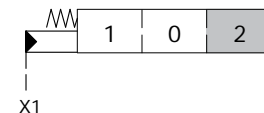
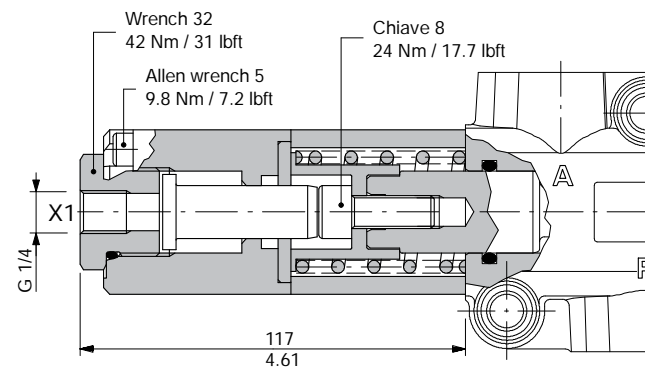


**Operating features**

Pilot pressure ..... : min. 6 bar / 87 psi  
max. 10 bar / 145 psi

**18IA1: ON/OFF hydraulic kit**

With high pressure pilot and spring return to position 2.



**Operating features**

Pilot pressure ..... : min. 30 bar / 435 psi  
max. 250 bar / 3600 psi

**DF20**

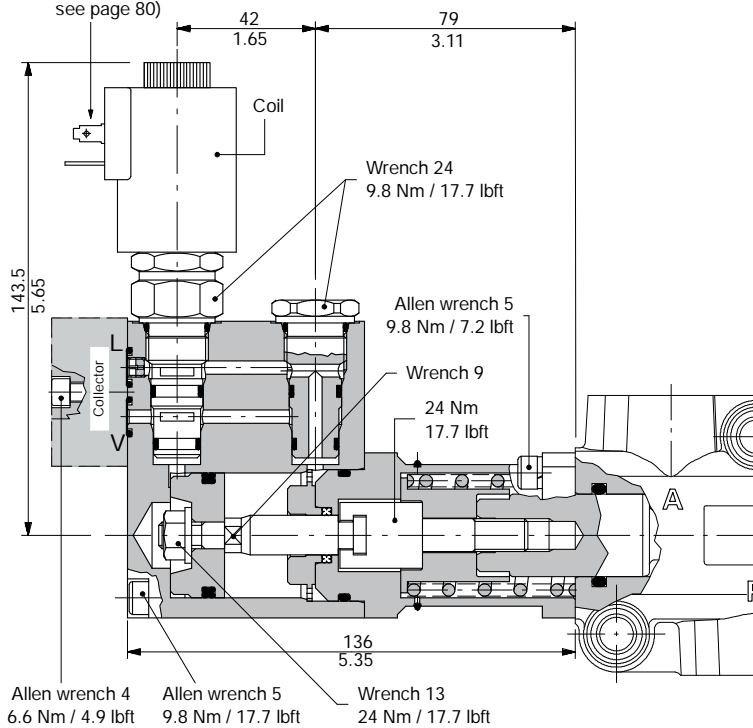
with mechanical control

**Positioner kits**

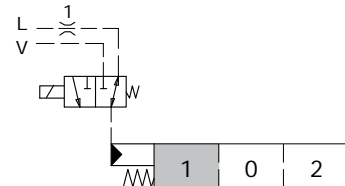
**18E11: ON/OFF electro-hydraulic control**

External pilot and drain, with spring return in position 2.

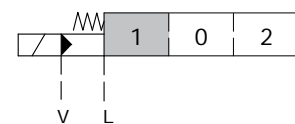
Connection ISO4400  
(needs C02 connector,  
see page 80)



Scheme



Scheme ISO 1219



Operating features

Pilot pressure ..... : min.10 bar / 145 psi  
: max.50 bar / 725 psi

Max. backpressure on  
drain port L ..... : 4 bar / 58 psi

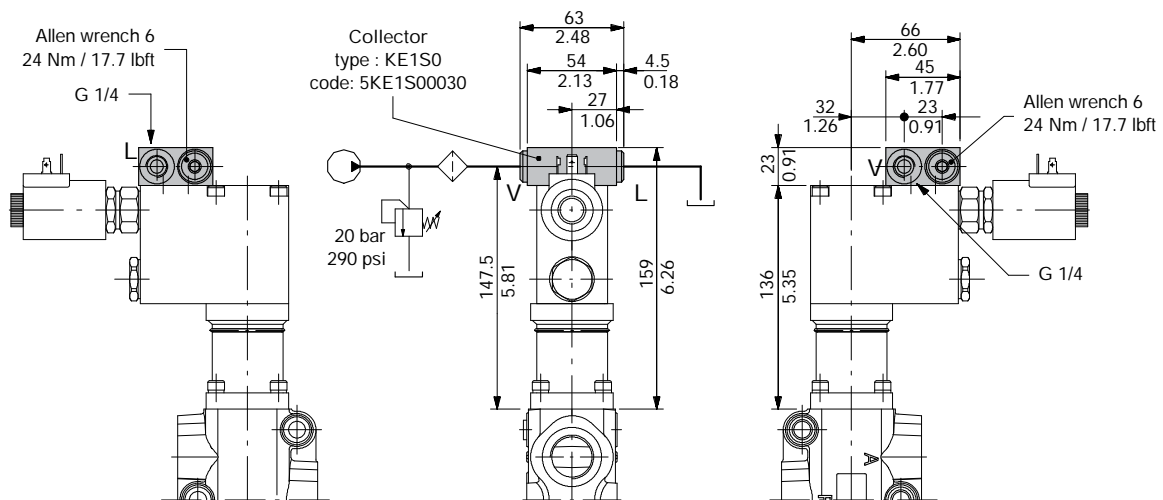
Solenoid operating features

Voltage tolerance ..... : ±10%  
Power rating ..... : 21 W  
Duty cycle ..... : 100%

Ordering codes

CODE	DESCRIPTION
2S0EJ08002013	3-way solenoid valve
2X4350012	12VDC coil
2X4350024	24VDC coil

Collector kit for external pilot and drain



Ex: DF20/3A18E11SLC/KE1S0-12VDC

with mechanical control

DF20

Control kits

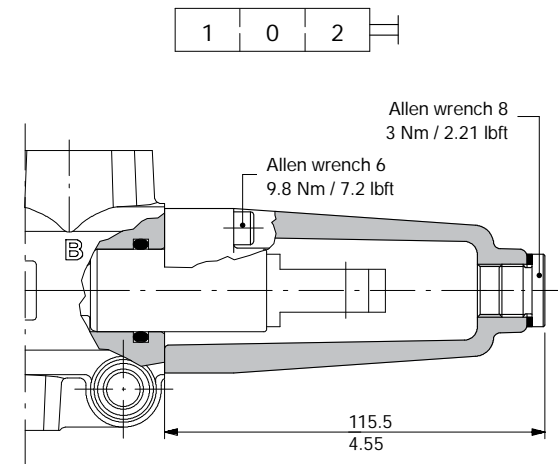
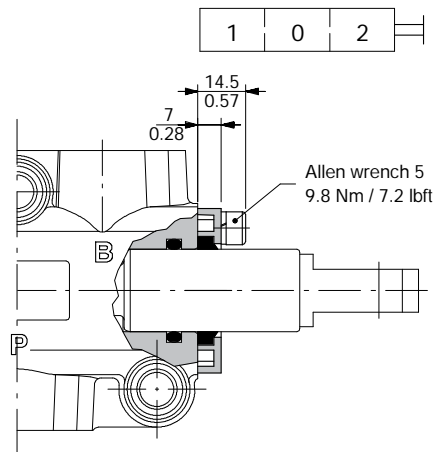
Controls prearranged

SLP kit

Mechanical control with dust-proof plate.

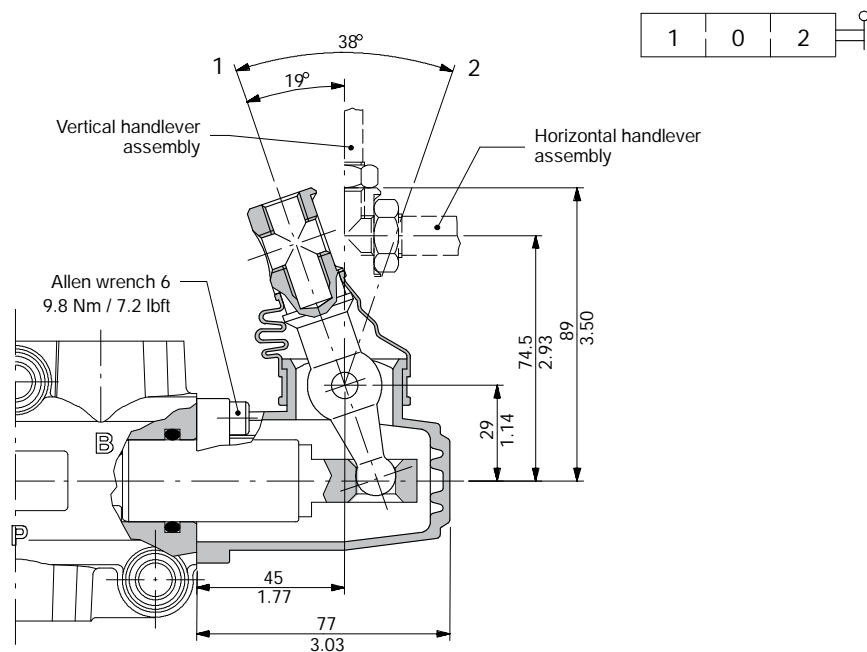
SLC kit

Protection cap usable with pneumatic and hydraulic spool positioner kits.



L lever control

Alumium with protection boot lever pivot box; it can be rotated 180° (execution L180).



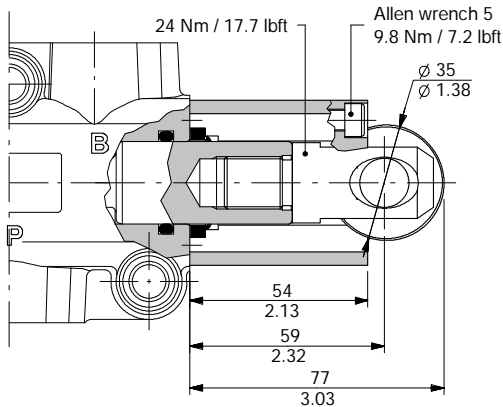
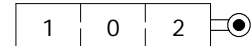
DF20

with mechanical control

**Control kits**

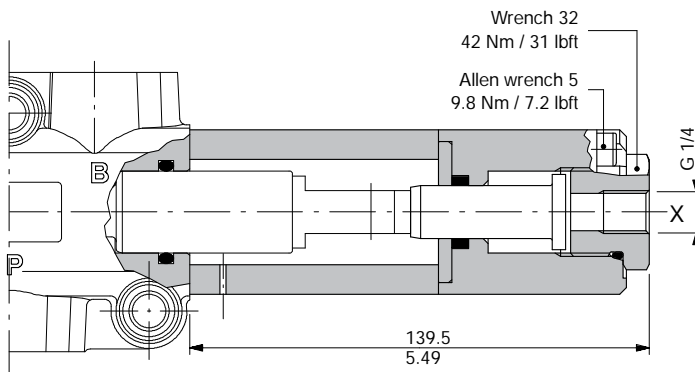
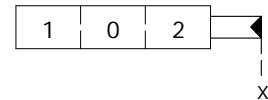
**CB cam control**

With bronze bearing; it must be coupled to 17 kit.



**IA2: ON/OFF hydraulic control**

With high pressure pilot; it must be coupled to 17 kit.



Operating features

Pilot pressure ..... : min. 30 bar / 435 psi  
max. 250 bar / 3600 psi