



DFE140

Solenoid control sectional diverter valves

- 6 - 8 - 10 ways configuration
- Galvanized body
- Antishock valve block stackable with the diverter valve

This catalogue shows technical specifications and diagrams measured with mineral oil of 46 mm²/s (46 cSt) viscosity at 40°C - (104°F) temperature.

WORKING CONDITIONS		
N. of available ways		6 - 8 - 10
Max. flow rating		80 l/min (21.1 US gpm)
Max. pressure	without drain	200 bar (2900 psi)
	with drain	315 bar (4600 psi)
Available supply voltage	VDC	see reference page 148
Nominal power		60 W
Internal leakage A(B)⇒T	Δp = 100 bar (1450 psi)	10 cm ³ /min (0.61 in ³ /min)
Fluid		Mineral based oil
Tie rod tightening		25 Nm (18.4 lbft)
Fluid temperature	with NBR (BUNA-N) seals	from -20°C to 80°C (from -4°F to 176°F)
	with FPM (VITON) seals	from -20°C to 100°C (from -4°F to 212°F)
Viscosity	operating range	from 15 to 75 mm ² /s (from 15 to 75 cSt)
	min.	12 mm ² /s (12 cSt)
	max.	400 mm ² /s (400 cSt)
Max. level of contamination		20/18/15 - ISO 4406 - NAS 1638 - class 9
Ambient temperature for working conditions		from -20°C to 50°C (from -4°F to 122°F)

NOTE - For different working conditions please contact Sales Dept.

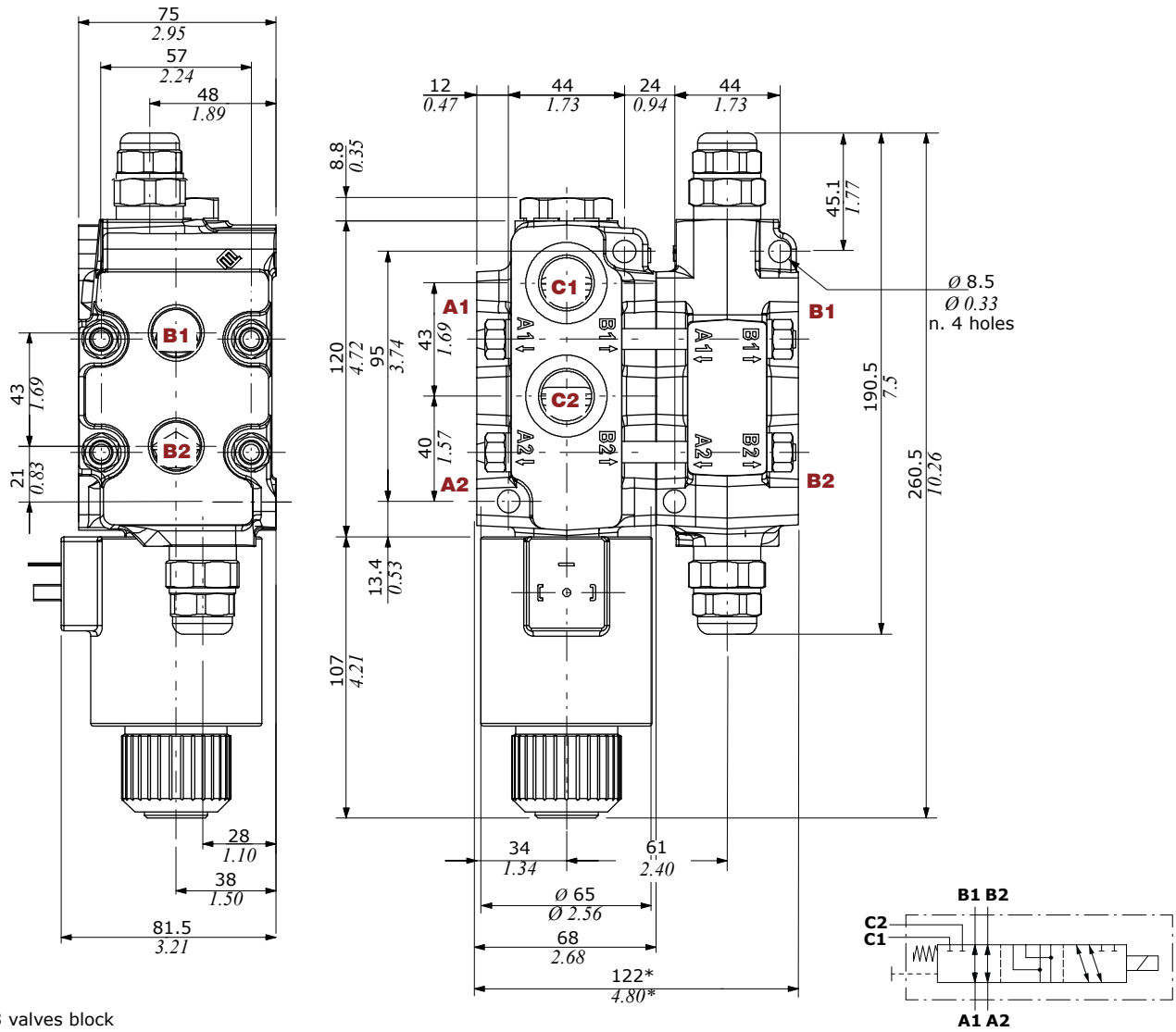
Available threads

PORTS THREAD		
ALL PORTS	BSP	UN-UNF
DFE140	G 1/2	7/8-14 (SAE 10)
PILOT PORTS		
L	G 1/4	9/16-18 (SAE 6)

Dimensional data - hydraulic circuit - performance data

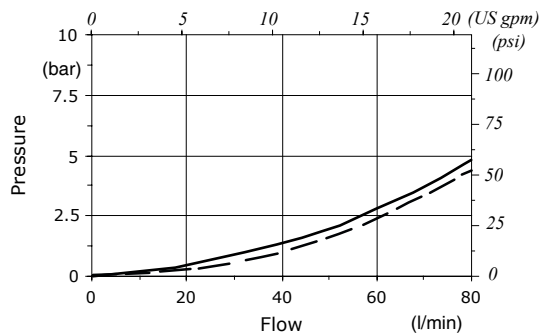
6 ways

The drawing below show diverter valve in 6-way configuration with anti-shock valves block



(*) - with P3 valves block

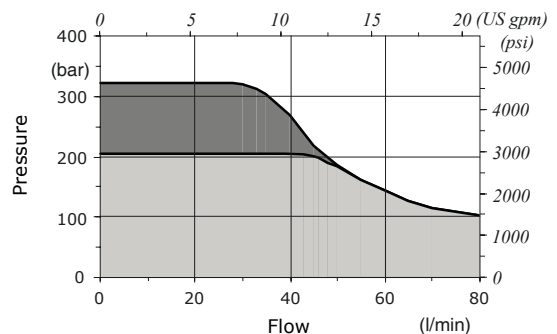
Pressure drop versus flow



— A1 → B1
 - - A1 → C1

Minimum dynamic conditions

(Supply = Vn-10%, coil at 70 °C - 158 °F)

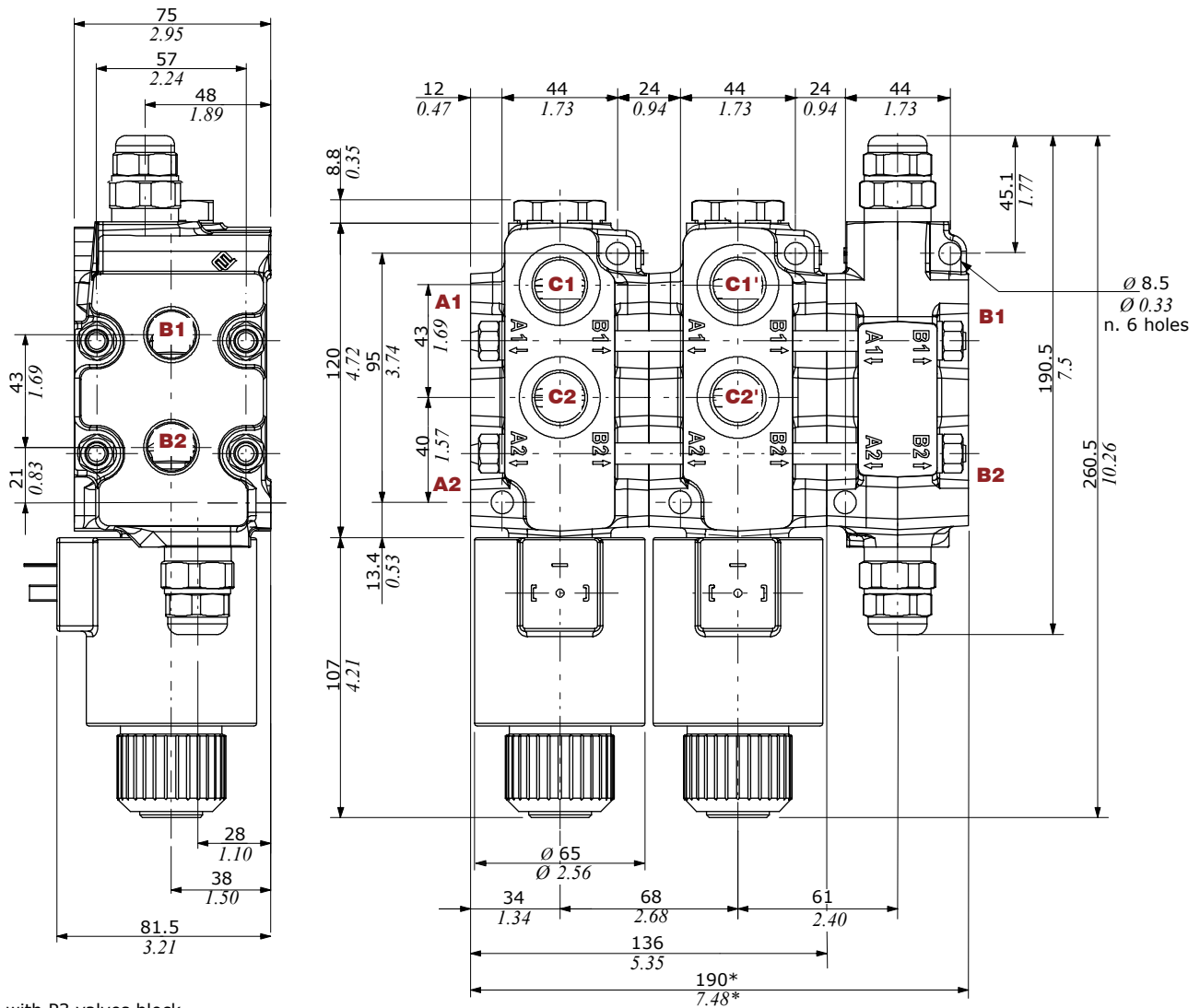


■ With drain
 ■ Without drain

Dimensional data - hydraulic circuit - performance data

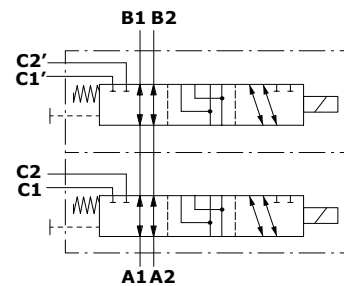
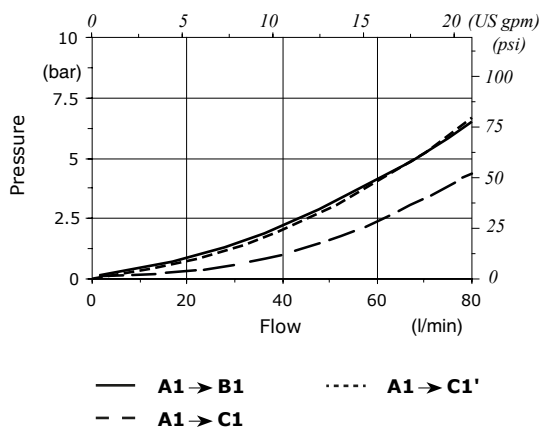
8 ways

The drawing below show diverter valve in 8-way configuration with anti-shock valves block



(*) - with P3 valves block

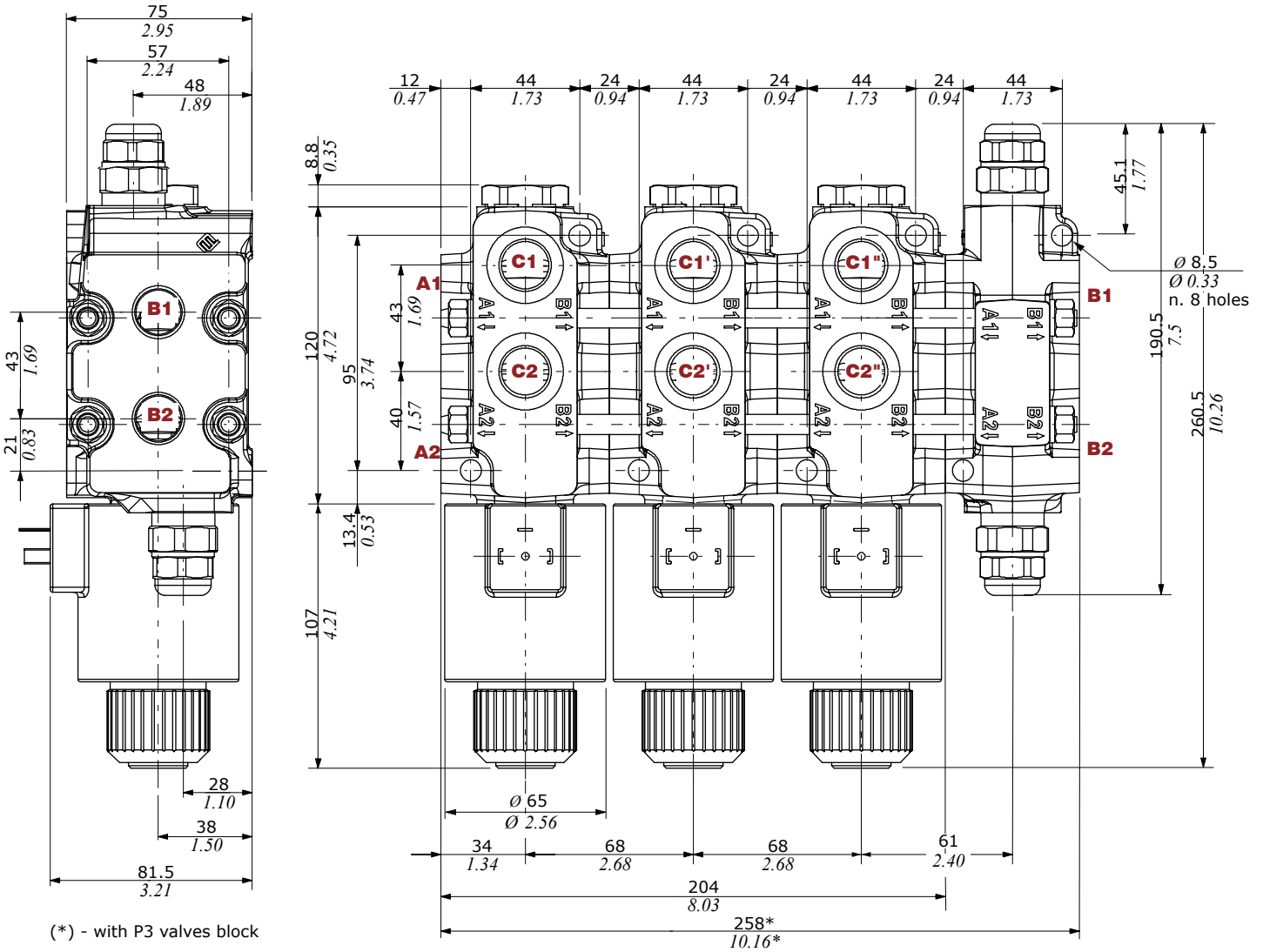
Pressure drop versus flow



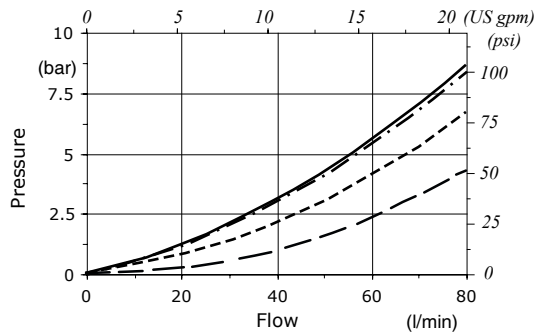
Dimensional data - hydraulic circuit - performance data

10 ways

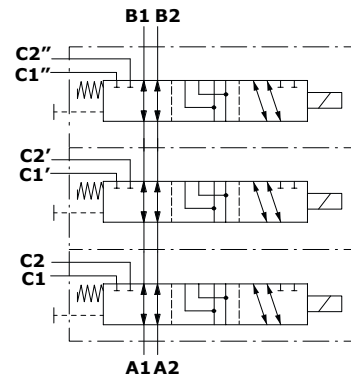
The drawing below show diverter valve in 10-way configuration with anti-shock valves block



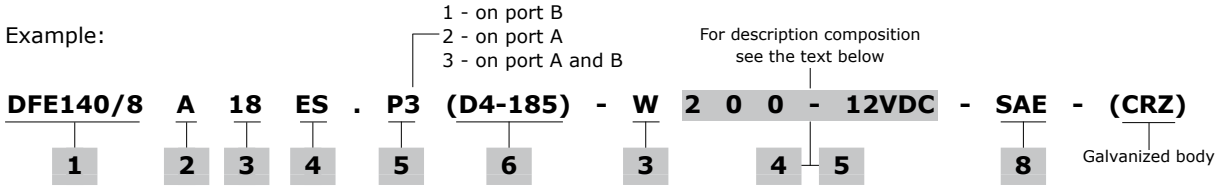
Pressure drop versus flow



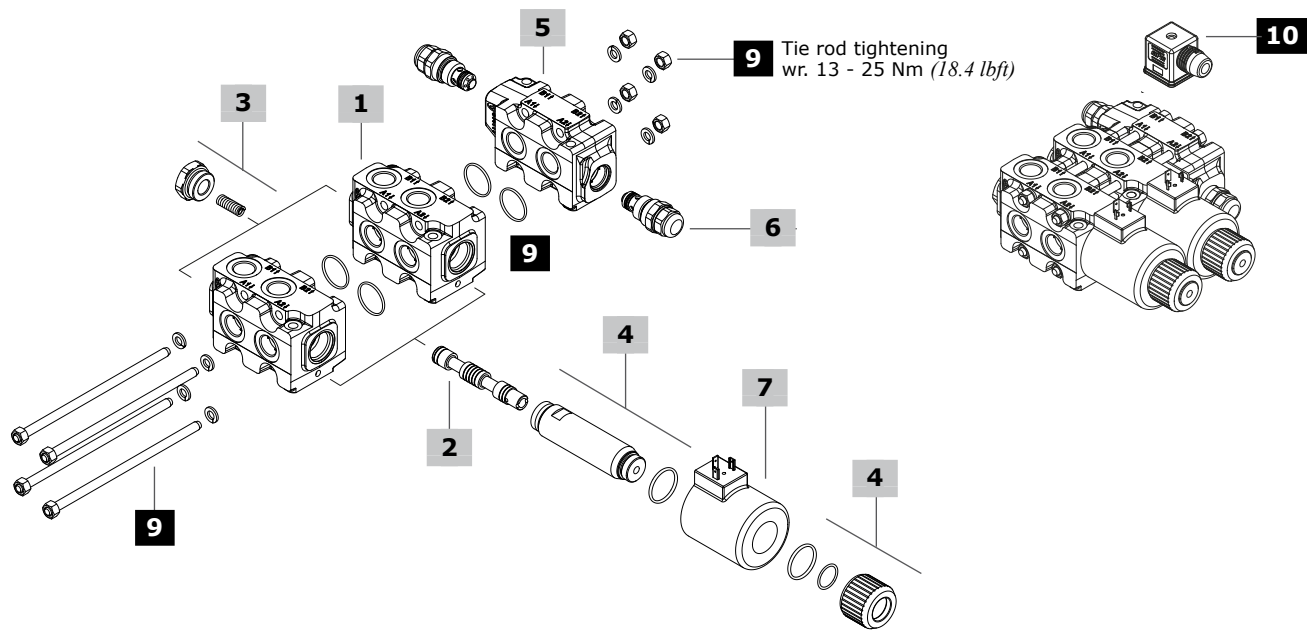
- A1 → B1
- A1 → C1'
- - - A1 → C1
- · - · A1 → C1''



Part ordering codes



- Coil
1 = without coil
2 = with coil
- ... **2 0 0** - **12VDC** - ...
Coil voltage
- Bellow
0 = bellow not available
- Connection*
0 = ISO (Std)
2 = AMP-JPT
3 = Deutsch DT06
4 = Deutsch DT04-2P Male
5 = Deutsch DT04-4P Female
6 = Metri-Pack Female
7 = Metri-Pack Male
8 = WeatherPack Male
9 = WeatherPack Female
- (*) - For connector options see coils table on page 148



Part ordering codes

1 Body kit*

TYPE	CODE	DESCRIPTION
DFE140/6-8-10	3CO2280703	6 ways body kit

2 Spools **page 145**

TYPE	CODE	DESCRIPTION
A	3CAS110640	A1/A2 in B1/B2 in pos. 1. A1/A2 in C1/C2 in pos. 2. Ports connected in transit position
B	3CAS110740	A1/A2 in B1/B2 in pos. 1. A1/A2 in C1/C2 in pos. 2. Ports closed in transit position
H	3CAS110845	A1/A2 in B1/B2 in pos. 1. A1/A2 in C1/C2 in pos. 2. Port connected to drain in transit position
N	3CAS110941	As type B, for right inlet

3 Positioner kit **page 146**

TYPE	CODE	DESCRIPTION
18...W	5TAP005	Spring return in pos. 1
18...Y	5GIU011*	Spring return in pos. 1, with SAE6 drain port

4 Solenoid kit **page 146**

TYPE	CODE	DESCRIPTION
ES	5SOL519003	Tube assembly without protective bellow

5 Valves block* **page 147**

TYPE	CODE	DESCRIPTION
P3	3CO2780700	Cross-over antishock valve body

6 Antishock valves **page 147**

With fixed setting: setting is referred to valve opening

TYPE	CODE	DESCRIPTION
P(D2-80)	X005125095	Setting 80 bar (1150 psi)
P(D2-110)	X005125110	Setting 110 bar (1590 psi)
P(D3-125)	X005125145	Setting 125 bar (1800 psi)
P(D3-140)	X005125155	Setting 140 bar (2050 psi)
P(D3-170)	X005125190	Setting 170 bar (2450 psi)
P(D4-185)	X005125216	Setting 185 bar (2700 psi)
P(D4-210)	X005125245	Setting 210 bar (3050 psi)
P(D4-240)	X005125270	Setting 240 bar (3500 psi)
P1T - P2T	3XTAP524290	Blanking plug P1-P2

7 Coil

For list of available coils see pages 148

8 Body threading

Specify threading always when it is different from **BSP** standard

9 Tie rods kit and O-ring seals

CODE	DESCRIPTION
5TIR108134	For DFE140/8 diverter valves
5TIR108202	For DFE140/10 diverter valves
with valves block:	
5TIR108121	For DFE140/6.P3 diverter valves
5TIR108189	For DFE140/8.P3 diverter valves

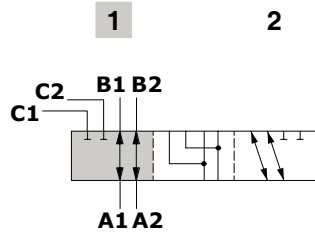
10 Accessories

For list of available connectors see pages 148

(*) - Codes are referred to **UN-UNF** thread

Type A

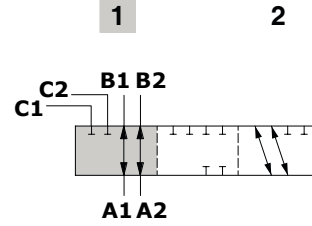
A1/A2 in B1/B2 in pos. 1.
Ports connected in transit position



Spool stroke
Position 2: + 5.8 mm (0.22 in)

Type B

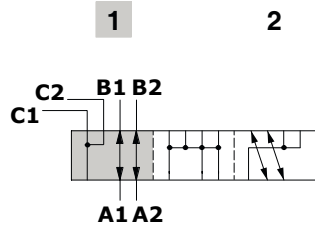
A1/A2 in B1/B2 in pos. 1.
Ports closed in transit position



Spool stroke
Position 2: + 5.8 mm (0.22 in)

Type H

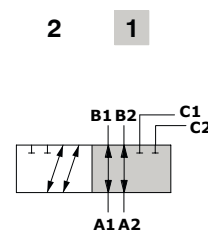
A1/A2 in B1/B2 in pos. 1.
Port connected to drain in transit position



Spool stroke
Position 2: + 5.8 mm (0.22 in)

Type N

As type B, for right inlet



Spool stroke
Position 2: + 5.8 mm (0.22 in)

Positioner kit

With spring return in position 1

Type 18W

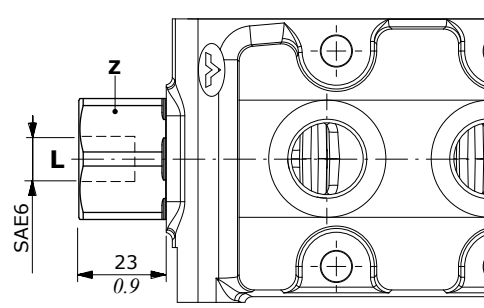
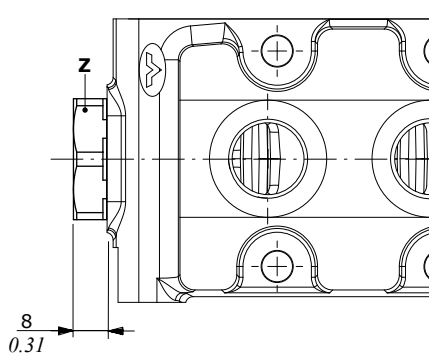
With plug

Type 18Y

With SAE6 drain port

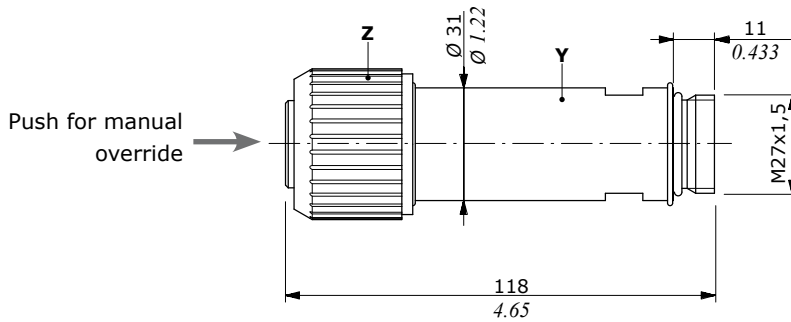
Wrenches and tightening torque

Z = wrench 32 - 42 Nm (31 lbft)



Solenoid kit

ES tube assembly kit

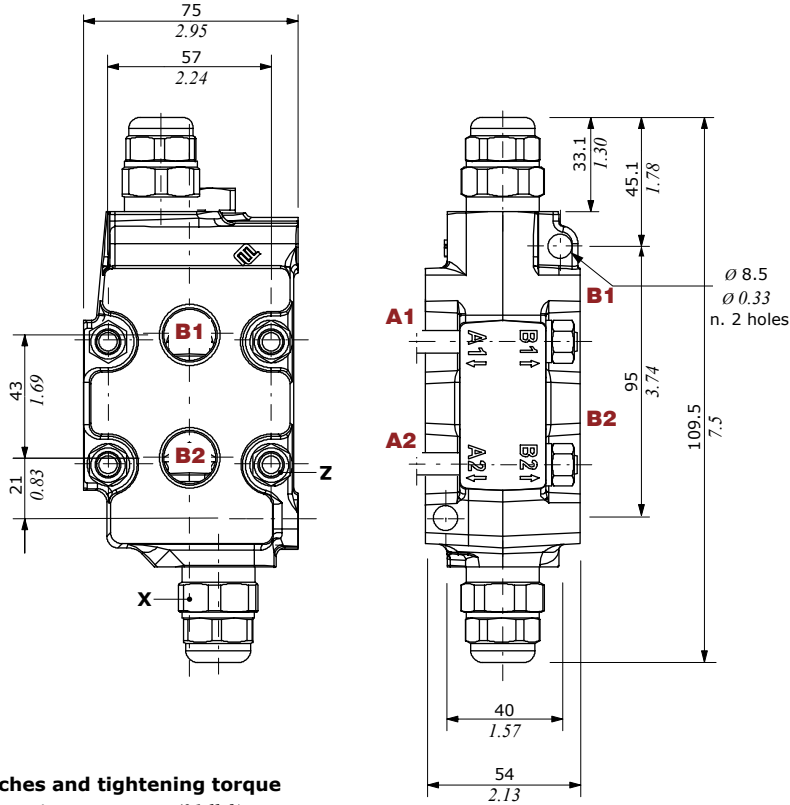


Wrenches and tightening torque

Y = wrench 27 - 24 Nm (17.7 lbft)

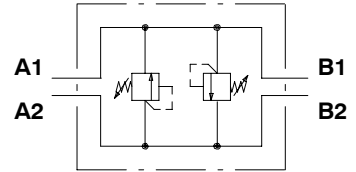
Z = 24 Nm (17.7 lbft)

P3 block complete with antishock valves

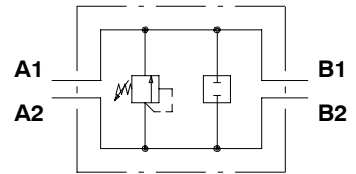


Wrenches and tightening torque
X = wrench 27 - 42 Nm (31 lbf^t)
Z = wrench 13 - 24 Nm (17.7 lbf^t)

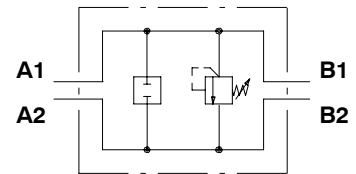
Configuration with valve on each workport (P3)



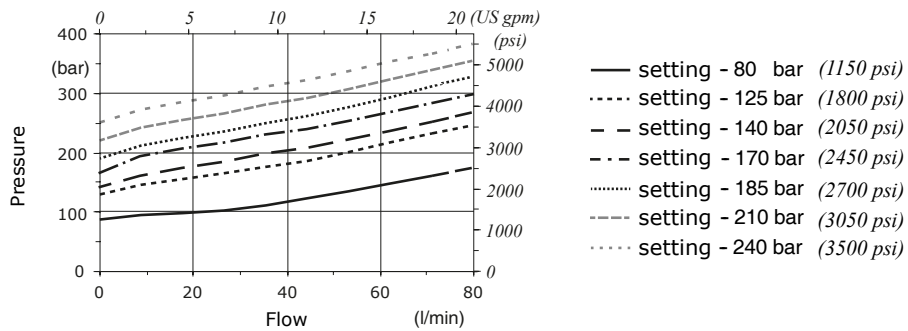
Configuration with valve on workport A (P2)



Configuration with valve on workport B (P1)



Antishock valves performance data



Coils and accessories

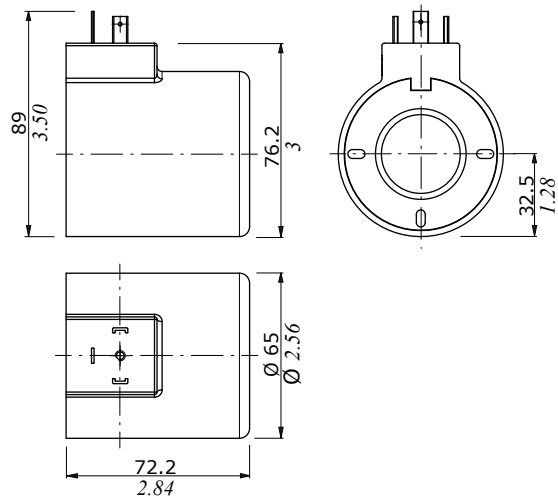
Type	Voltage	Ordering codes					Flying leads without connector
		ISO4400	Deutsch DT	AMP JPT	Packard Weatherpack	Packard Metri-pack	
D19	12 VDC	4SOL519112	4SOL519402 ⁽⁶⁾	-	-	-	-
	20 VDC	4SOL519120	-	-	-	-	-
	24 VDC	4SOL519124	4SOL519404 ⁽⁶⁾	-	-	-	-
	94 VDC	4SOL519194	-	-	-	-	-
	192 VDC	4SOL519292	-	-	-	-	-
Mating connectors		4CN1009995	5CON140031	-	-	-	-

Notes: ⁽¹⁾ supply with AC and use only with rectifier connector - ⁽²⁾ with flying leads - ⁽³⁾ with bidirectional diode - ⁽⁴⁾ with unidirectional diode ⁽⁵⁾ integrated perpendicular type - ⁽⁶⁾ integrated parallel type

Features

Nominal voltage tolerance: ±10%
 Nominal power.....: 60 W
 12/20/24/94/192 VDC
 Nominal current.....: 5 A @ 12 VDC
 : 3 A @ 20 VDC
 : 2.5 A @ 24 VDC
 : 2.5 A @ 94 VDC
 : 0.31 A @ 192 VDC
 Insulation.....: Class H (180°C - 356 °F)
 Weather protection..... : IP65 - ISO4400
 : IP69K - Deutsch DT
 Insertion.....: 100%

ISO4400 connector



DEUTSCH DT04 connector (Parallel type)

