



DFE110

Solenoid control monoblock diverter valve for special applications

- 12 ways configuration
- Designed for Front-end Loader Applications

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		12
Max. flow rating		90 l/min (23.7 US gpm)
Max. pressure	without drain	200 bar (2900 psi)
	with drain	315 bar (4600 psi)
Available supply voltage	VDC	see reference page 114
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
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.

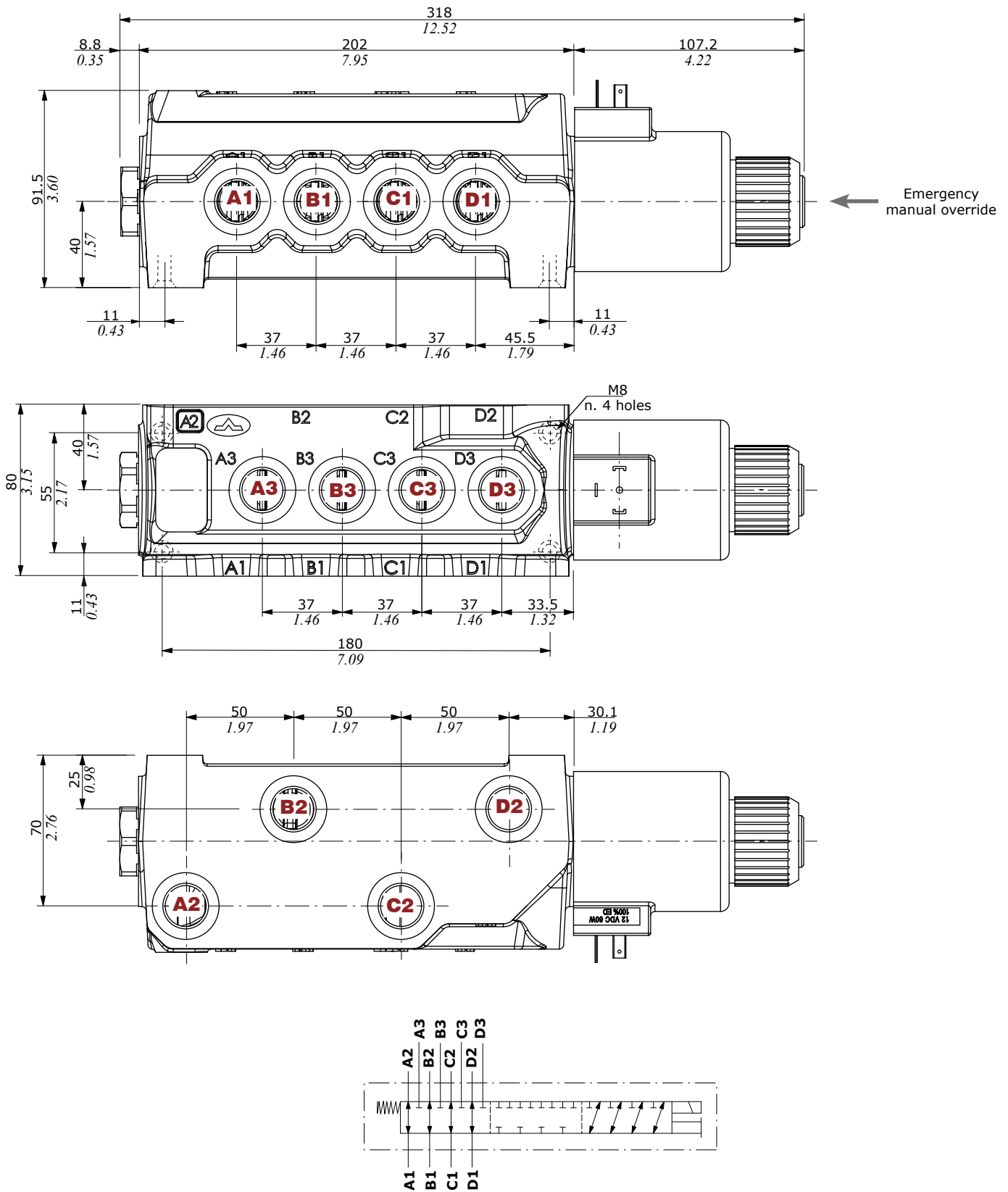
Available threads

PORTS THREAD				
ALL PORTS	BSP	UN-UNF	METRIC* (ISO 9974-1)	METRIC* (ISO 6149)
DFE110	G 1/2	7/8-14 (SAE 10)	M22x1.5	M22x1.5
PILOT PORTS				
L	G 1/4	9/16-18 (SAE 6)	M12x1.5	M12x1.5

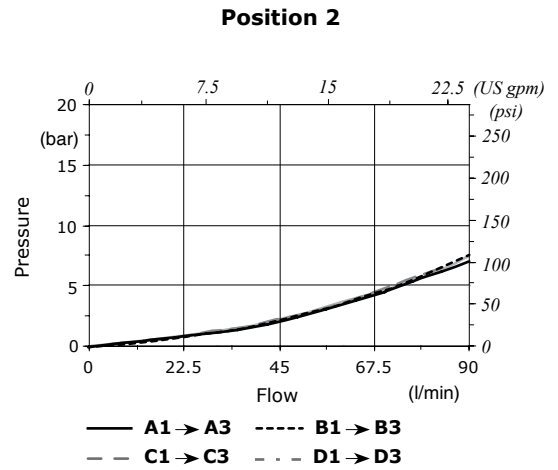
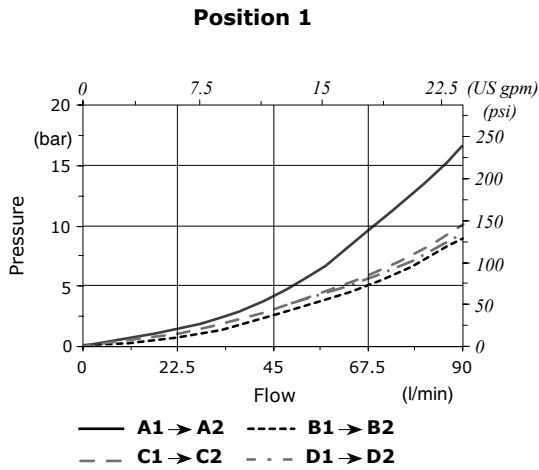
(*) Optional threads
for availability contact Sales
Department

Dimensional data and hydraulic circuit

12 ways

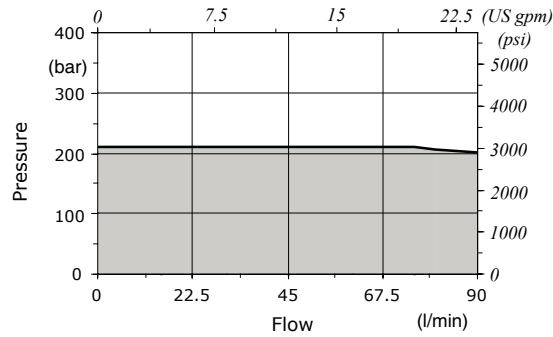


Pressure drop versus flow



Minimum dynamic conditions

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



■ Without drain

Part ordering codes

Example:

For description composition
see the text below

DFE110/12 **B** **18** **ES** - **W** **2 0 0 - 12VDC** - **SAE** - **(CVN)**

1
 2
 3
 4
 -
 3
 4
 5
 -
 6
 Painted with one layer of black Primer antirust

... **2 0 0 - 12VDC - ...**

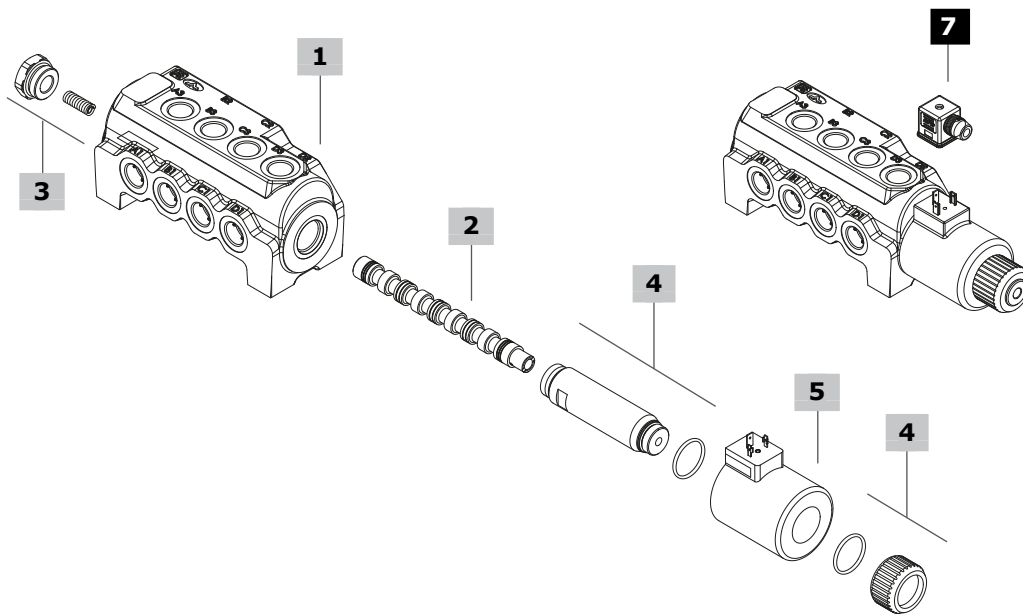
Coil
1 = without coil
2 = with coil

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

Bellow
0 = bellow not available

Coil voltage

(*) - For connector options see coils table on page 114



1 Body kit* page 113

TYPE	CODE	DESCRIPTION
DFE110/12	3CO2243720	12 ways body kit

2 Spool page 113

TYPE	CODE	DESCRIPTION
B	3CAS108H40	A1->A2, B1->B2, C1->C2, D1->D2 in pos. 1, A1->A3, B1->B3, C1->C3, D1->D3 in pos. 2. Ports closed in transit position

3 Positioner kit page 113

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 113

TYPE	CODE	DESCRIPTION
ES	5SOL519003	Tube assembly without protective bellow

5 Coil

For list of available coils see pages 114

6 Body threading

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

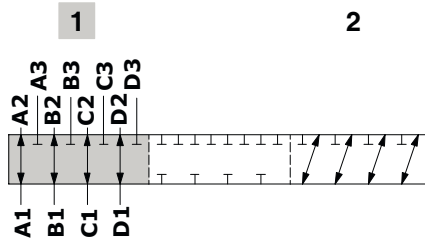
7 Accessories

For list of available connectors see pages 114

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

Spool circuit

Type B
Ports closed
in transit position



Spool stroke
Position 2: + 5.8 mm (0.23 in)

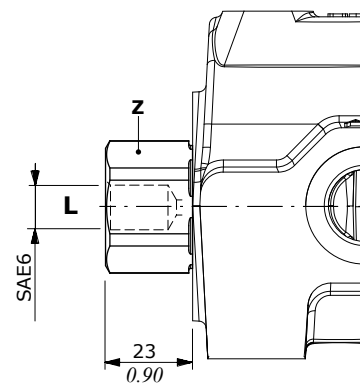
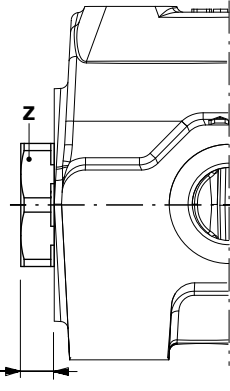
Positioner kit

With spring return in position 1

Type 18W
With plug



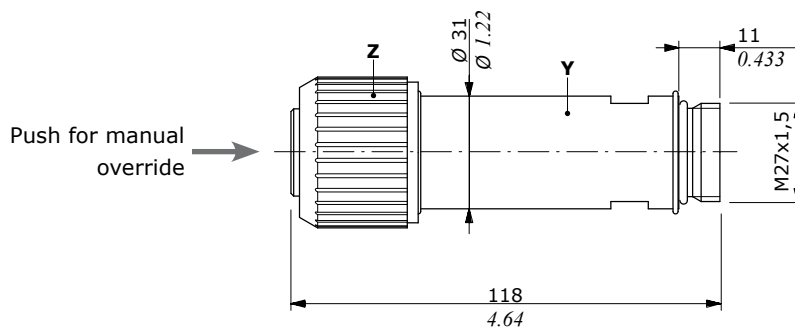
Type 18Y
with SAE6 drain port



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)

Coil and accessories

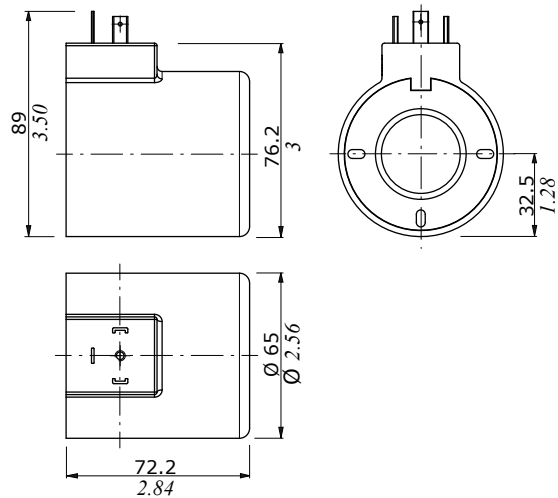
Type	Voltage	Ordering codes					Flying leads without connector
		ISO4400	Deutsch DT	AMP JPT	Packard Weatherpack	Packard Metri-pack	
D19	12 VDC	4SOL519112	4SOL519402 ⁽⁶⁾	-	-	-	-
	20 VDC	4SOL519120	-	-	-	-	-
	24 VDC	4SOL519124	4SOL519404 ⁽⁶⁾	-	-	-	-
	94 VDC	4SOL519194	-	-	-	-	-
	192 VDC	4SOL519292	-	-	-	-	-
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: $\pm 10\%$
 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)

