



DFE20

Solenoid control monoblock diverter valves

- 3 - 6 ways configuration
- Galvanized body

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 | | 3 - 6 |
| Max. flow rating | | 140 l/min (36.9 US gpm) |
| Max. pressure | without drain | 200 bar (2900 psi) |
| | with drain | 315 bar (4600 psi) |
| Available supply voltage | VDC | see reference page 102 |
| Nominal power | | 60 W |
| Internal leakage A(B)⇒T | Δp = 100 bar (1450 psi) | 15 cm ³ /min (0.91 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) |

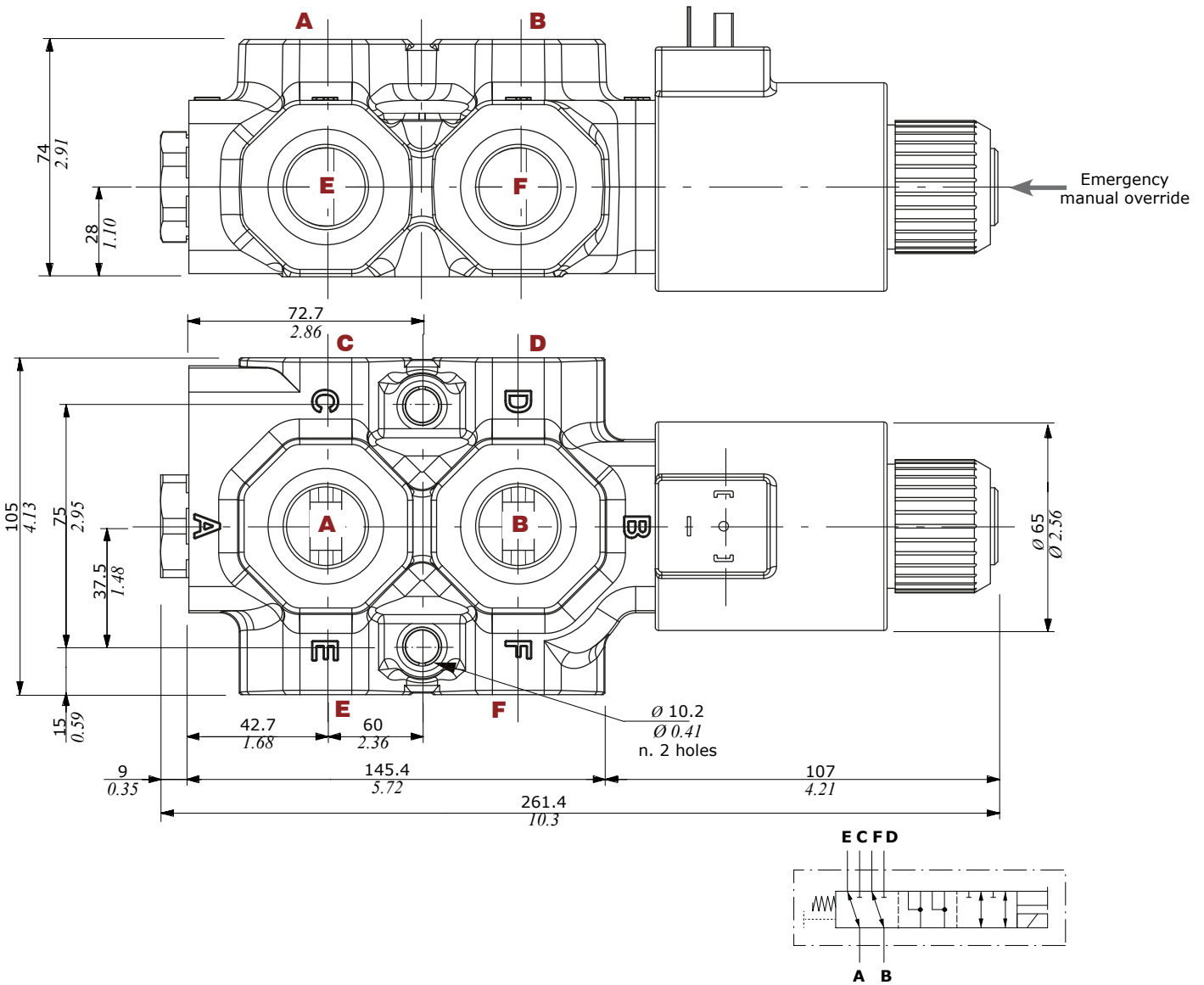
NOTE - For different working conditions please contact Sales Dept.

Available threads

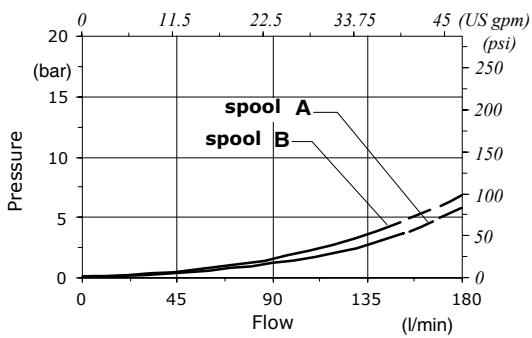
| PORTS THREAD | | |
|--------------|-------|---------------------|
| ALL PORTS | BSP | UN-UNF |
| DFE20 | G 3/4 | 1" 1/16-12 (SAE 12) |
| PILOT PORTS | | |
| L | G 1/4 | 7/16-20 (SAE 4) |

Dimensional data - hydraulic circuit - performance data

6 ways

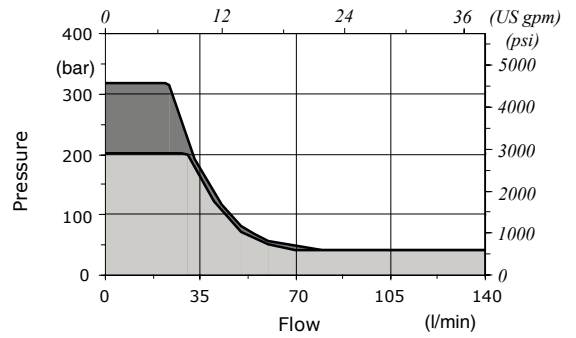


Pressure drop versus flow



Minimum dynamic conditions

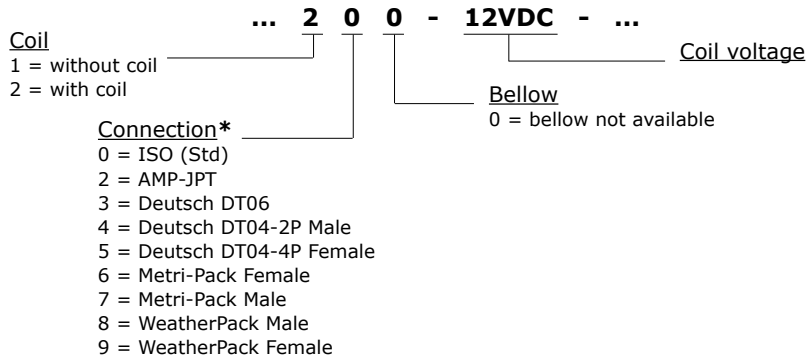
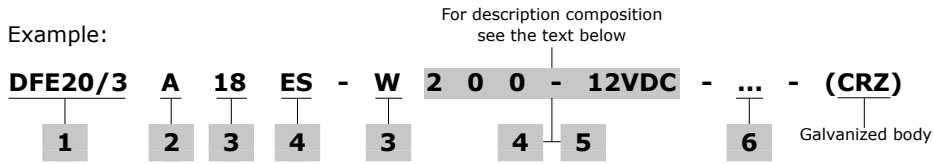
(Supply = Vn-10%, coil at 70 °C - 158 °F)



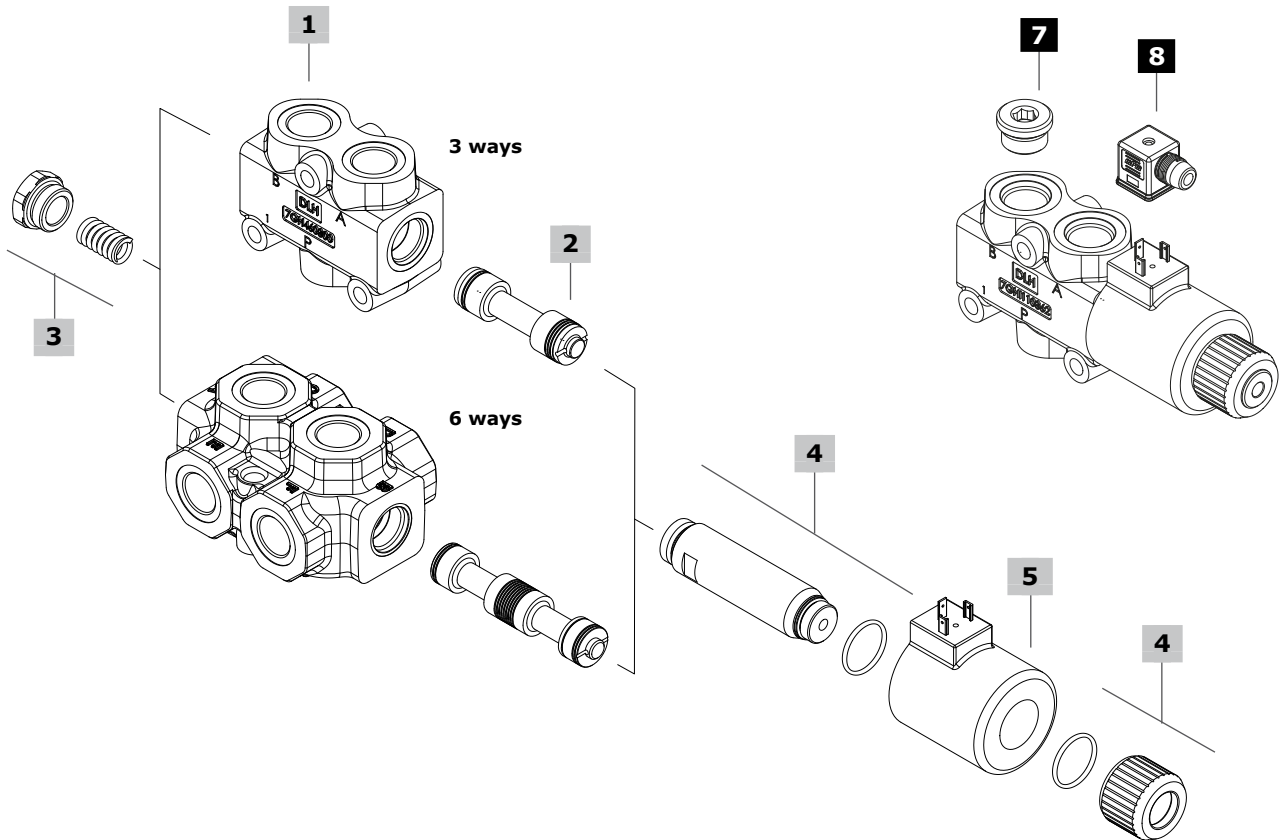
With drain
Without drain

Part ordering codes

Example:



(*) - For connector options see coils table on page 102



1 Body kit*

| TYPE | CODE | DESCRIPTION |
|----------------|-------------|-----------------|
| DFE20/3 | 3CO2261321Z | 3 ways body kit |
| DFE20/6 | 3CO2263320Z | 6 ways body kit |

2 Spools **page 100**

| TYPE | CODE | DESCRIPTION |
|---------------------|------------|--|
| for DFE20/3: | | |
| A | 3CAS120341 | Flow in A in neutral. Ports connected in transit position |
| B | 3CAS120441 | Flow in A in neutral. Ports closed in transit position |
| for DFE20/6: | | |
| A | 3CAS120641 | Flow in E and F. C and D closed in pos. 1 Ports connected in transit position |
| B | 3CAS120741 | Flow in E and F. C and D closed in pos. 1 Ports closed in transit position |
| H | 3CAS120841 | D<->C in pos. 1, F<->E in pos. 2 Ports closed in transit position |

3 Positioner kit **page 101**

| TYPE | CODE | DESCRIPTION |
|---------------|-----------|---|
| 18...W | 5TAP003 | Spring return in pos. 1 |
| 18...Y | 5GIU007Z* | Spring return in pos. 1, with G1/4 drain port |

4 Solenoid kit **page 101**

| TYPE | CODE | DESCRIPTION |
|-----------|------------|---|
| ES | 5SOL519003 | Tube assembly without protective bellow |

5 Coil

For list of available coils see pages 102

6 Body threading

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

7 Port plugs*

| It's possible to obtain 2 ways diverter valve plugging port of DFE20/3 | |
|--|-------------|
| CODE | DESCRIPTION |
| 3XTAP732200 | G3/4 plug |

8 Accessories

For list of available connectors see pages 102

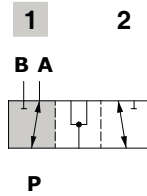
(*) - Codes are referred to **BSP** thread

Spool circuits

3 ways

Type A

Ports connected in transit position

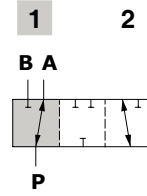


Spool stroke

Position 2: - 4.5 mm (- 0.18 in)

Type B

Ports closed in transit position



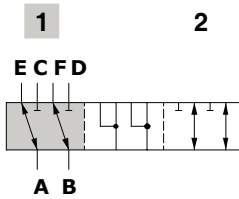
Spool stroke

Position 2: - 4.5 mm (- 0.18 in)

6 ways

Type A

Flow in E and F. C and D closed in pos. 1
Ports connected in transit position

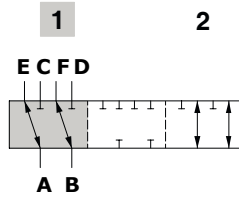


Spool stroke

Position 2: - 4.5 mm (- 0.18 in)

Type B

Flow in E and F. C and D closed in pos. 1
Ports closed in transit position

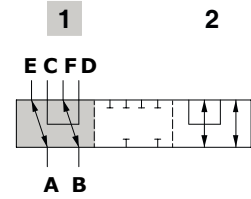


Spool stroke

Position 2: - 4.5 mm (- 0.18 in)

Type H

D<->C in pos. 1, F<->E in pos. 2
Ports closed in transit position



Spool stroke

Position 2: - 4.5 mm (- 0.18 in)

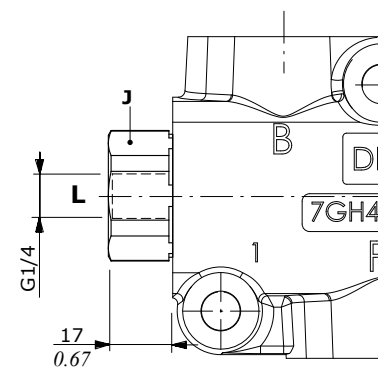
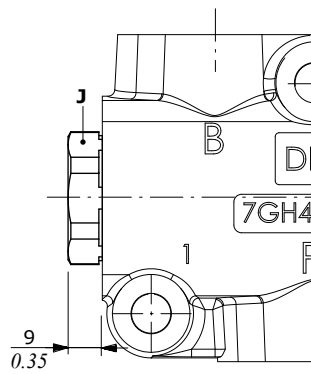
Positioner kit

With spring return in position 1

Type 18W
With plug

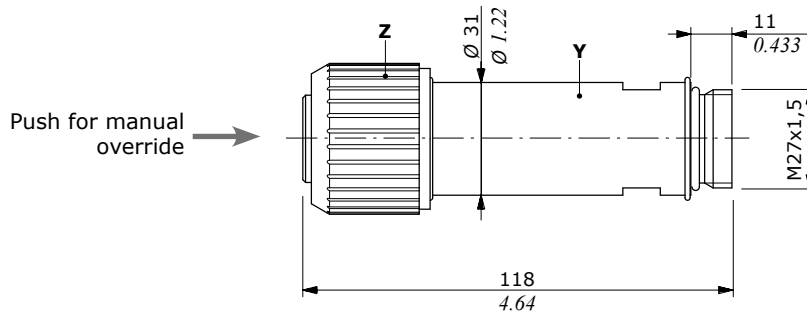
Type 18Y
With G1/4 drain port

Wrenches and tightening torque
J = wrench 32 - 42 Nm (31 lbf^t)



Solenoid kit

ES tube assembly kit



Wrenches and tightening torque
Y = wrench 27 - 24 Nm (17.7 lbf^t)
Z = 24 Nm (17.7 lbf^t)

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: ±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

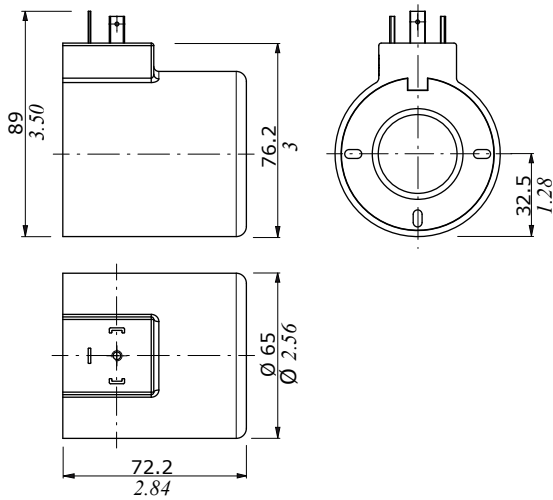
Insulation.....: Class H (180°C - 356 °F)

Weather protection.....: IP65 - ISO4400

: IP69K - Deutsch DT

Insertion.....: 100%

ISO4400 connector



DEUTSCH DT04 connector

(Parallel type)

