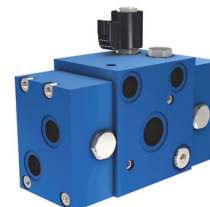


# 3-WAY AND 4-WAY FLOW DIVIDERS

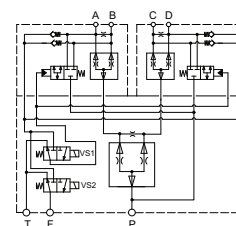
- Modular
- Compact
- Energy efficient



## Operation

FD-M4 (FD-M3) is a four (three) way medium-duty flow divider that assures parallel operation of wheels of the same axle or between different axles by dividing or combining the flow. It can operate in open or closed loop circuits. FD-M4 (FD-M3) is equipped with normally opened by-pass that can be controlled electric or hydraulic.

## Hydraulic symbol



Electric by-pass control with charge check valves



If you have to add a flushing valve in a closed loop circuit equipped with a flow divider, you have to install the flushing valve between the pump and the flow divider.

## Features

Hydraulic		FD-M3	FD-M4
Max. pressure	bar [PSI]	350 [5075]	420 [6000]
Max. flow	l/min [gal/min]	150 [39.6]	
Dividing/combining accuracy		from +/- 5% to +/- 10% according to flow range	
Type of hydraulic connections		ISO 1179-1 (BSPP)	ISO 1179-1 (BSPP) ISO 11926-1 (UNF)
Weight	kg [lbs]	13 [28.6]	21 [46.3]
Surface treatment		Phosphate coating	Zn plating Fe/Zn8/Cn//T2 (DIN 50979)
Fluid temperature	°C [°F]	-20 to +90 [-4 to +200]	
Fluid viscosity	mm <sup>2</sup> /s [SSU]	15 to 380 [75 to 1760]	
Fluid contamination	ISO 4401:1999	max 20/18/14	

Electrical		FD-M3	FD-M4
Solenoid supply voltage	V DC	12, 24; ±10%	
Solenoid power consumption	W	17,2 (12V DC), 16,6 (24V DC)	
Solenoid duty cycle		100% ED	
Max. ambient temperature	°C [°F]	70 [158]	

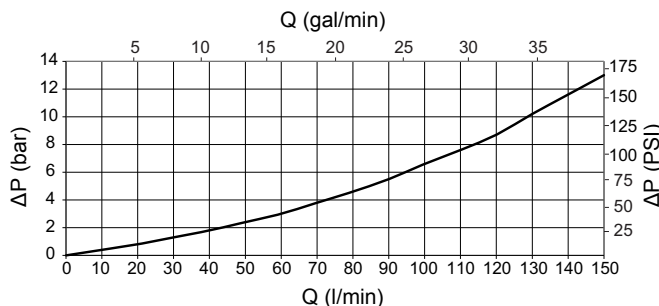
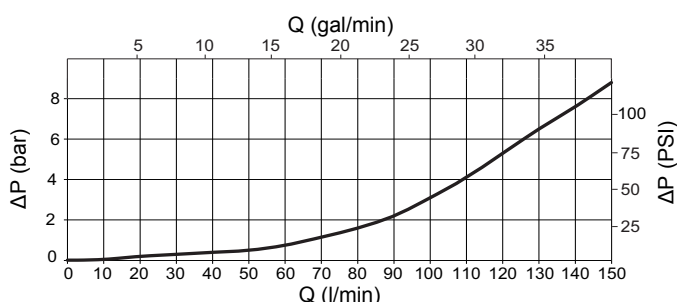
## Pressure drop

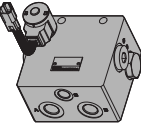
Test conditions: HV 46 hydraulic fluid at 40°C (104°F)

Measured at 50 °C [122 °F] and viscosity of 32 mm<sup>2</sup>/s [148 SUS].

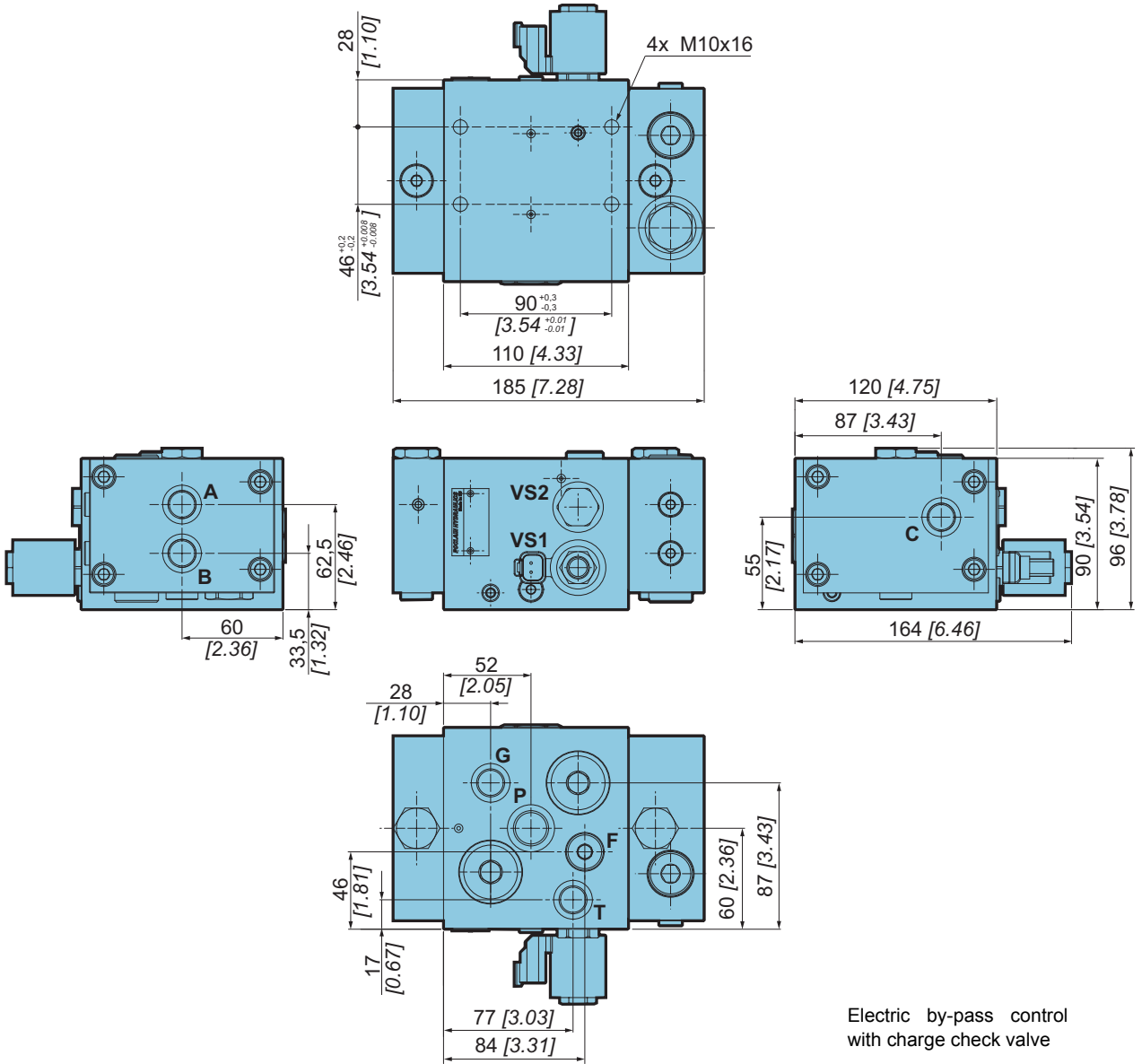
### By-pass mode FD-M3

### By-pass mode FD-M4

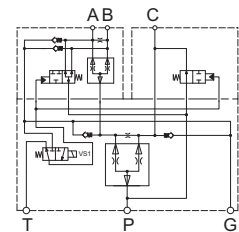




Dimensions for FD-M3

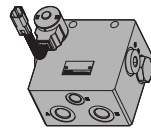


Electric by-pass control with charge check valve

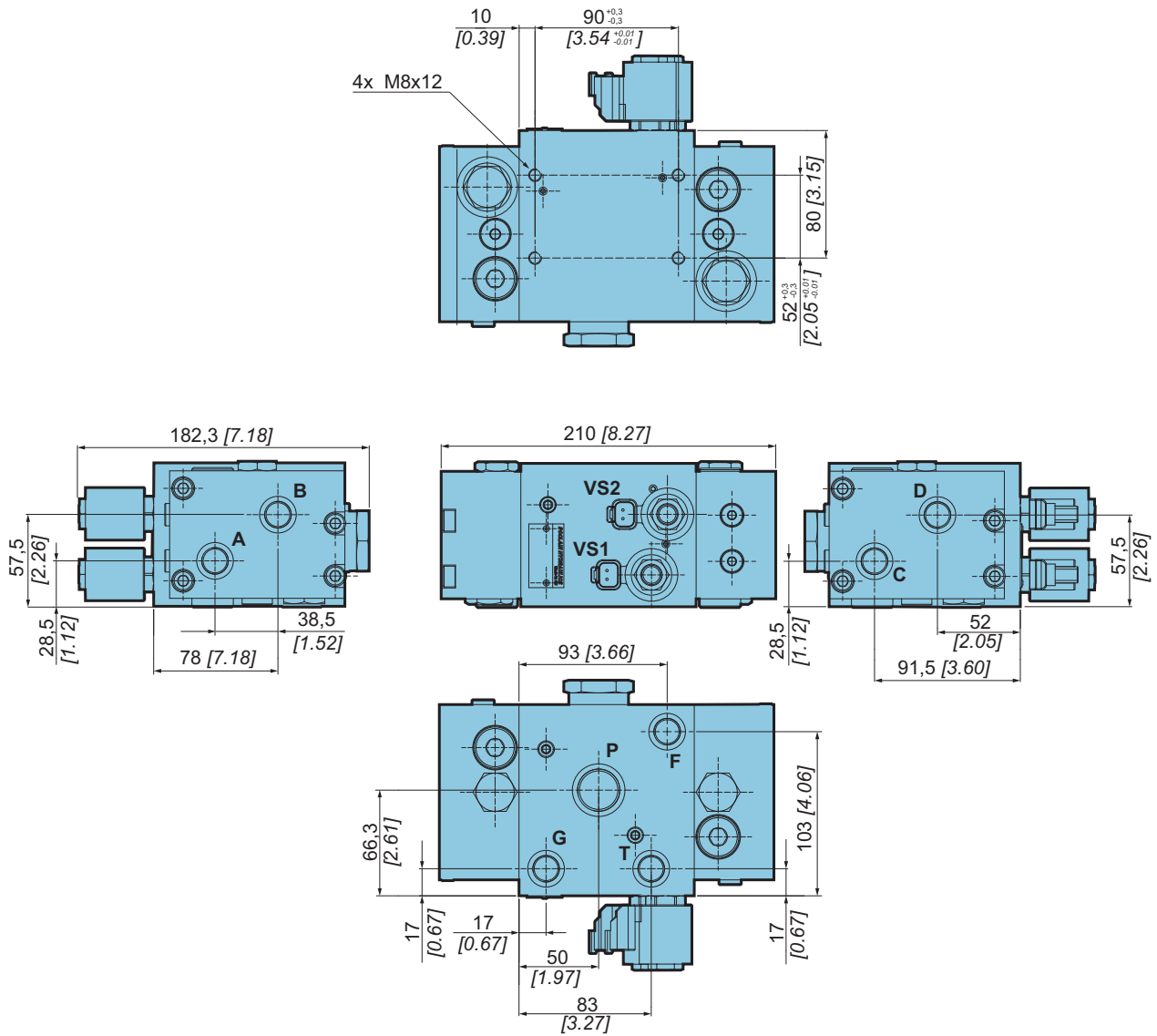


FD-M2

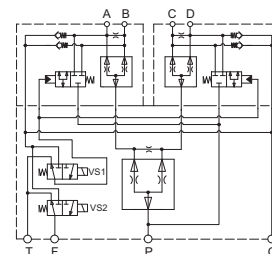
FD-M3 and FD-M4

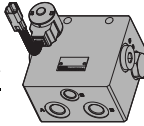


Dimensions for FD-M4



Electric by-pass control with charge check valve





## Connections



### FD-M3

Port	Function	Connection	Max. pressure bar [PSI]	Max. pressure bar [PSI]
		BSPP ISO 1179-1		
P	Main flow inlet-outlet	1/2"	350 [5075]	
A B	Divided flow outlet - combined flow inlet	3/8"	350 [5075]	
G	Charge flow inlet	3/8"	50 [725]	8 [116]
T	Drain	3/8"	5 [73]	

### FD-M4

Port	Function	Connection		Max. pressure bar [PSI]	Max. pressure bar [PSI]
		BSPP ISO 1179-1	UNF ISO 11926-1		
		BSPP ISO 1179-1	UNF ISO 11926-1		
P	Main flow inlet-outlet	1/2"	1"1/16-12	420 [6000]	
A B	Divided flow outlet - combined flow inlet	3/8"	3/4"-16	420 [6000]	
G	Charge flow inlet	3/8"	3/4"-16	50 [725]	8 [116]
T	Drain	3/8"	3/4"-16	5 [73]	

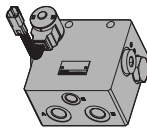
## Installation

Type		Class	 (*) N.m [lb.ft]
FD-M3	4xM10	8.8	49 [36]
FD-M4	4xM8	10.9	36 [27]

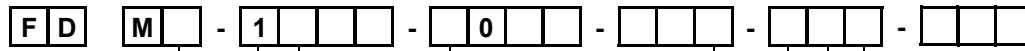
(\*) As per standard DIN 912

FD-M2

FD-M3 and FD-M4



**Model code**



**Number of outlets**

4 outlets	4
3 outlets	3

**By-pass flow**

Without by-pass	0
to 150 l/min [39.6 gal/min]	1

**Division ratio (flow split %)**

25-25-25-25	2
30-30-20-20	3
33.5-33.5-16.5-16.5	4
33-33-33	B*

\*Division ratio available only for FD-M3

**Options**

Without	0
By-pass - normally closed	1
ZN-plating (STANDARD)	B
Special painting	D
Specific name plate	P
Customized*	F

\* Further description on interface drawing

**Electric connector**

0	Without
3	Deutsch DT04-2P
4	DIN 43650
5	AMP Jr. Timer

**Voltage**

A	Without solenoid
1	12 V DC
2	24 V DC

**Hydraulic connections**

A	UNF ports*
3	BSPP ports

\* Hydraulic connections only available for FD-M4

**Charge check valves**

A	Without
B	With

**Max. flow always goes through port A.**

**Flow range in division mode\***

15-60 l/min [3.9-15.9 gal/min]	06**
23-90 l/min [5.3-23.8 gal/min]	09**
20-60 l/min [5.3-15.9 gal/min]	06
30-90 l/min [7.9-23.8 gal/min]	09
35-120 l/min [9.2-31.7 gal/min]	12

\* Input Q = code x10 (FD-M4 max=120l/m; FD-M3 max=90 l/m)

\*\* Flow range only available for FD-M3

**Optimal work is located between 40% and 60% of max. dedicated flow.**

**By-pass control**

Electric control	E
Without	A

**Auxilliaries**

Without	0
Solenoid	1

**Transfer restrictor diameter**

Without	00
Ø 0,8 mm [0.0315 in]	AB
Ø 0,7 mm [0.0275 in] Ai-Bi	

**Relief valves setting\***

00	Without
30	300 bar [4351 PSI]
35	350 bar [5076 PSI]
38	380 bar [5511 PSI]
40	400 bar [5801 PSI]

\*ΔP between A (B) and G at 10 L/min

**Contact us for other diameters.**