

VFD120-E Series

Variable Priority Flow Dividers with Electric Motor Drive

Aimed at mobile and industrial applications the VFD120-E can be used for controlling hydraulic motor and cylinder speeds by applying voltage to the valve which in turn controls the flow rate.

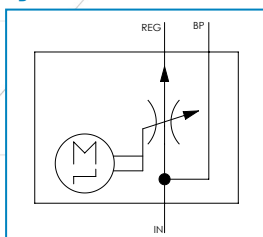
Variable priority flow dividers split a single input (P) flow into a priority (REG) flow and an excess or by-pass (BP) flow which can be returned directly to the oil reservoir or used to power a second system. This is possible due to the valve's adaptive pressure compensation characteristics meaning both the priority and by-pass flows can be used to drive separate circuits, even under varying loads. In many instances this dispenses with the need for another pump to operate a second system.

The VFD120-E design has also been optimised to reduce energy wastage by minimising the pressure losses across the valve, resulting in a significant reduction in running costs.

Specifications

Maximum Rated Pressure:	Up to 420 bar, 6000 psi
Total Flow:	Up to 120 L/min, 32 US gpm
Maximum Priority (REG) Flow:	Up to 110 L/min, 30 US gpm
Fluid Temperature Range:	-30 to 120 °C, -22 to 248 °F
Ambient Temperature Range:	-30 to 50 °C, -22 to 122 °F
Porting:	BSPP, SAE, NPTF, METRIC
Material:	Steel components in cast Ductile Iron body painted black Drive Mechanism mounted on aluminium plate and mild steel bracket.
Weight:	2.75 kg, 4.4 lb
Mounting:	2 Bolts - M8 or 5/16"
Peak Current:	1 A

Symbol:



Make it **BLUE**

Features

- Remotely controlled by a toggle or rocker switch (Not supplied).
- No external control box needed. All Electronics are self-contained inside the canister.
- Pressure compensated permitting both 'Priority' and 'By-Pass' to be used simultaneously at varying pressures without affecting the 'Priority' flow rate.
- Designed to meet IP66.

Sales Order Code

Please contact our technical sales team to discuss any special order requirements.

TYPICAL CODE	DESCRIPTION	SEE TABLE	YOUR CODE
VFD120	Basic Valve	-	VFD120
080	Priority (REG) Flow Capacity	Table 1	
J	Porting	Table 2	
E12	Motor Drive - Electric	Table 3	

Table 1: Priority (REG) Flow Capacity*

CODE	FLOW SIZE	
	L/min	US GPM
030	0** -11	0** - 3
050	0** - 19	0** - 5
080	0** - 30	0** - 8
120	0** - 45	0** - 12
160	0** - 60	0** - 16
200	0** - 76	0** - 20
250	0** - 95	0** - 25
300	0** - 110	0** - 30

Notes:

*Input flow will affect the maximum seen priority flow capacity. To achieve the given flow capacity, the input flow needs to be greater.

**Minimum flow of 0 - 0.5 L/min, 0 - 0.1 US gpm.

Table 2: Porting

CODE	PORT THREAD TYPE
J	3/4" BSPP
G	1-1/16" -12UN # 12 SAE ORB
A	3/4" NPTF ****
M	M22 X 1.5 ***

Notes:

*** M22 threads only available in flow codes 030 to 120.

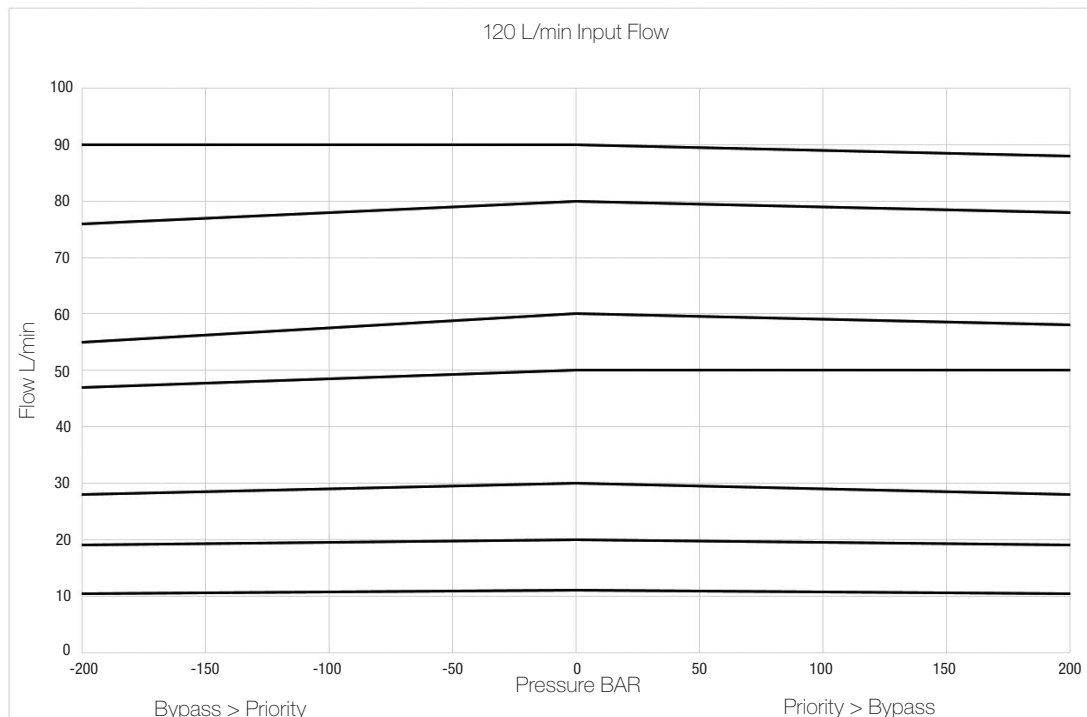
**** All NPTF threads are to ANSI B1.20.3 -1976 Class 1. As stated in the standard it is recommended that "sealing is accomplished by the means of a sealant applied to the thread". NPT fittings may also be used to connect to NPTF ports (also with a sealant applied to the thread).

Table 3: Motor Drive - Electric

CODE	POWER SUPPLY
E12	12 Vdc
E24	24 Vdc

Priority (Reg) Flow vs. Load

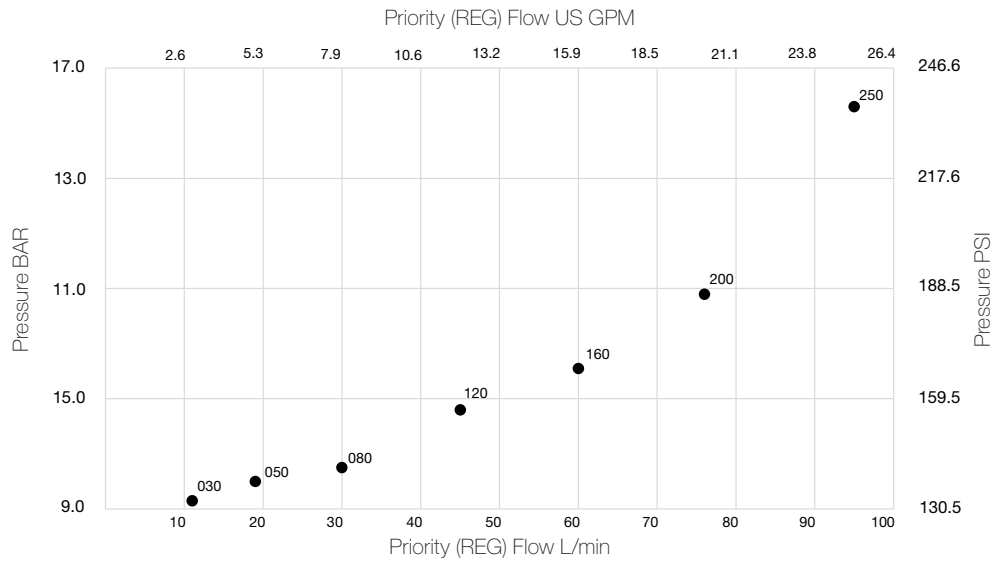
All tests completed using ISO32 Mineral oil at 40 degrees C (32 cSt)



Max Pressure Drop Between Inlet (P) and priority (REG) port

All tests completed using ISO32 Mineral oil at 40 degrees C (32 cSt)

Inlet Flow - 120 L/min, REG port 100 Bar, BP port to tank



Installation Details Dimensions in mm [inches]



Supplied cable length: 550 mm approx. (not shown on drawing)

