WEBTEC
HYDRAULIC MEASUREMENT AND CONTROL

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.

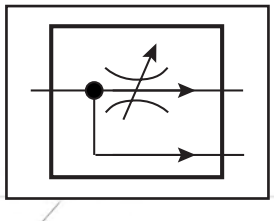
Variable priority flow dividers split a single input (P) flow into a priority (REG) flow and an excess or by-pass (BP) flow which can be returned directly to the oil reservoir or used to power a second system. This is possible due to the valve's adaptive pressure compensation characteristics meaning 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 Working Pressure: 420 bar (6000 psi)
Total flow capacity: 120 lpm (32 US gpm)
Regulated flow capacity: See table 2, ordering codes
Materials: Steel components in cast Ductile Iron body painted black
Drive Mechanism mounted on aluminium
plate and mild steel bracket.
Weight: 2.75 Kg
Power Supply: See Table 3, ordering codes
Peak Current: 1 A

Symbol



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

Ordering Codes

Typical Code VFD120 80 J - E12

Basic Type

Regulated Flow Capacity (Table 1)

Porting (Table 2)

Motor Drive – Electric (Table 3)

Table 1: Regulated Flow (gpm refers to US gpm

Code	Regulated Flow
030	0* – 11 lpm (3.0 gpm)
050	0* – 19 lpm (5.0 gpm)
080	0* – 30 lpm (8.0 gpm)
120	0* – 45 lpm (12.0 gpm
160	0* – 60 lpm (16.0 gpm)
200	0* – 76 lpm (20.0 gpm)
250	0* – 95 lpm (25.0 gpm)
300	0* – 110 lpm (30.0 gpm)

* 0 to 0.5 lpm (0 to 0.1 gpm)

Table 2: Porting[1]

Code	Port Threads Inlet Regulated Flow and Excess Flow
J	3/4" BSPP
G	1-1/16" -12UN #12 SAE ORB
A	3/4" NPTF[2]
M	M22 x 1.5

Note: M22 only available in flow code 030 to 120

[1] Other Threads available to special order

[2] 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

Code	Motor Type
E12	12 Vdc
E24	24 Vdc

Installation Details

Dimensions in millimetres [inch].

Mounting: Two bolt – M8 or 5/16"

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