

■ Proportional Electro-Hydraulic Flow Control (and Check) Valves

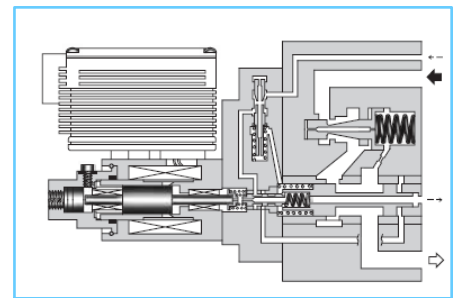
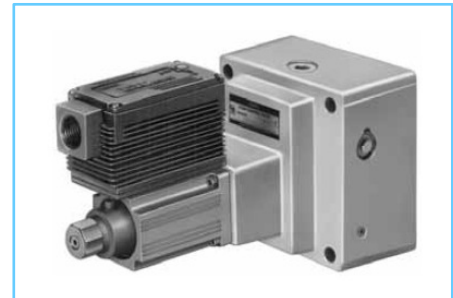
The system flow rate can be controlled remotely as desired by regulating input voltage. Further, since pressure and temperature compensation functions are provided the preselected flow rate is not affected by pressure (load) or temperature (fluid viscosity).

■ Specification

Model Number Description	EHF※G-03-	EHF※G-06-250
Max. Operating Pres. Kg/cm ²	210	250
Max. Metred Flow L/min.	60: 60 125: 125	250
Min. Metred Flow L/min.	1	2.5
Min. Differential Pressure *1 Kg/cm ²	10	
Free Flow L/min. (only with check valves)	130	280
Pilot Flow	At Normal	0.5 L/min.
	At Transition	2.6 L/min.
Min. Pilot Pressure Kg/cm ²	1	1.5
Frequency Response	Refer to Frequency Response on page 666	
Hysteresis	3% or Less *2	
Repeatability	1% or Less	
Coil Resistance Ω	10	
Supply Electric Power	24V DC (21 to 28V DC included Ripple)	
Power Input (Max.) W	28	
Input Signal Voltage	Max. Metred Flow / 5 V DC	
Input Impedance kΩ	10	
Ambient Temperature	0 - 50°C (With Circulated Air)	

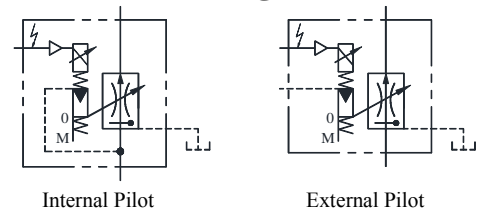
*1 Minimum differential pressure means fine pressure compensation at inlet and outlet port.

*2 The repeatability of the valve is obtained by having it tested independently On the conditions similar to its original testing.

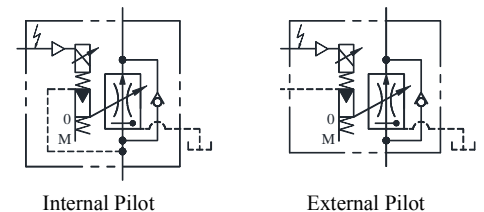


Graphic Symbols

● EHFG



● EHFCG



■ Model Number Designation

F-	EHF	-G	-03	-60	-E	-50
Special Seals	Series Number	Type of Mounting	Valve Size	Max. Metred Flow L/min.	Pilot Connection	Design Number
F: Special Seals for Phosphate Ester Type Fluid (Omit if not required)	EHF: Proportional Electro-Hydraulic Flow Control Valve	G: Sub-Plate Mounting	03	60: 60 125: 125	None: Internal Pilot E : External Pilot	50
	EHFC: Proportional Electro-Hydraulic Flow Control and Check Valve		06	250: 250		

EH Series

Proportional Electro-Hydraulic Flow Control and Check Valves

Mounting Bolts

Model Number	Socket head cap Screw	Qty	Bolt Kit Model Number
EHFG-03 EHFCG-03	M10 x 80Lg.	4	BKEHFG-03-50
EHFG-06 EHFCG-06	M16 x 130Lg.		BKEHFG-06-50

Sub-Plate

Sl. No.	Model Number	Sub-Plate Model Numbers	Thread size	Mass Kg.
1	EHFG-03 EHFCG-03	EFGM-03Y-2080	3/8 BSP.F	5.7
		EFGM-03Z-2080	1 BSP.F	5.6
2	EHFG-06 EHFCG-06	EFGM-06Y-2080	1 BSP.F	12.5
		EFGM-06Z-2080	1 1/4 BSP.F	16

- Sub-plates are available. Specify sub-plate model number from the table above. When sub-plates are not used, the mounting surface should have a good machined finish.
- For Sub-plates details please refer page no. 583.

Instructions

Drain Back Pressure

Check that the drain back pressure does not exceed 2 Kg/cm².

Pilot Type Selection

This valve is constructed so as to operate at a predetermined pilot pressure, for the 03, a pilot pressure of 10 Kg/cm² or higher is required. For the 06, the required pilot pressure is 15 Kg/cm² or higher.

To obtain such a required pilot pressure, select the pilot type according to the circuit examples on the right.

①②

Use the external pilot type (type symbol E) whether a meter-in or meter-out circuit is employed.

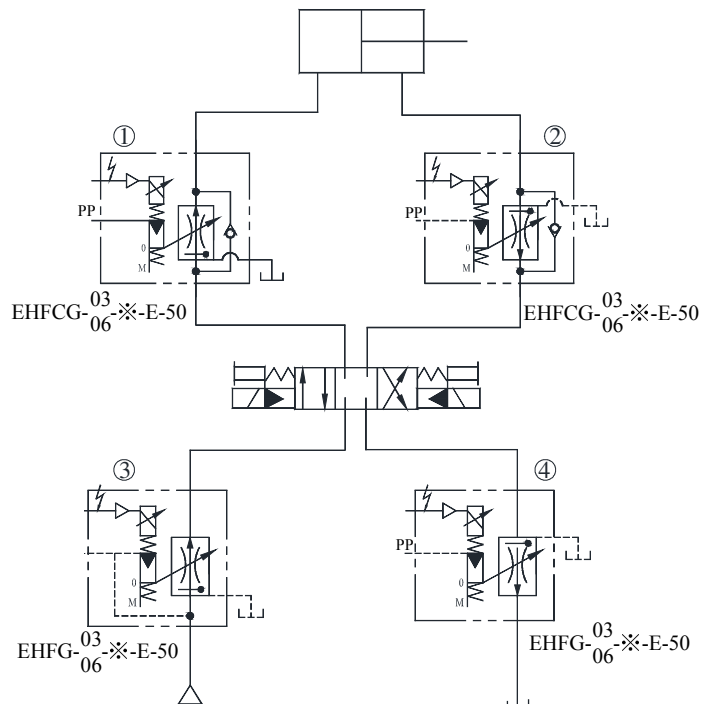
③

Use the internal pilot type (type symbol: None)

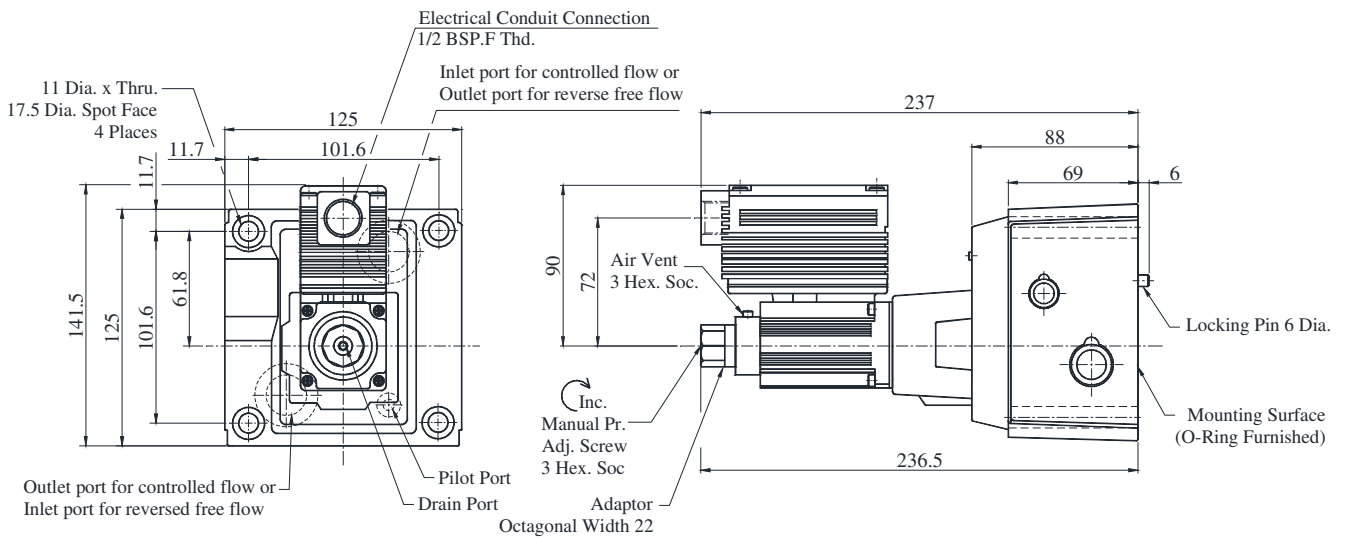
④

Use the external pilot type (type symbol: E)

Example of Circuit

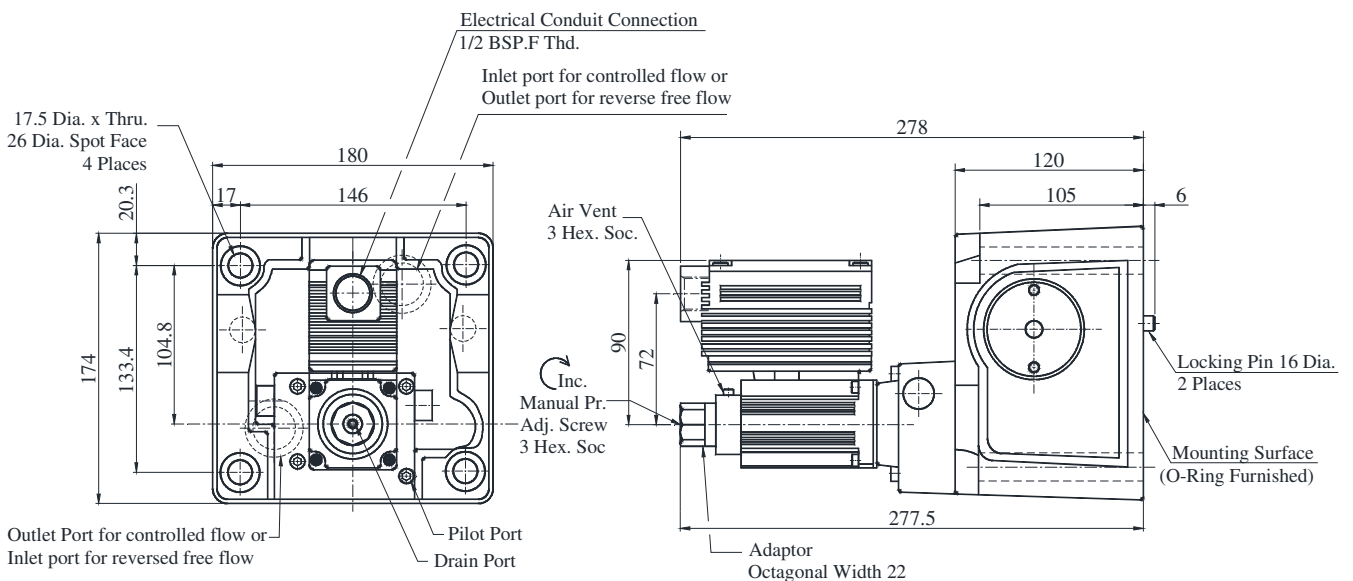


- **EHFG -03**
- **EHFCG**

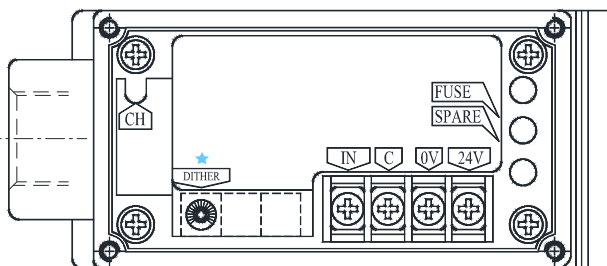


DIMENSIONS IN MILLIMETRES

- **EHFG -06**
- **EHFCG**



Detail of Amplifier
● **Connecting Terminal**



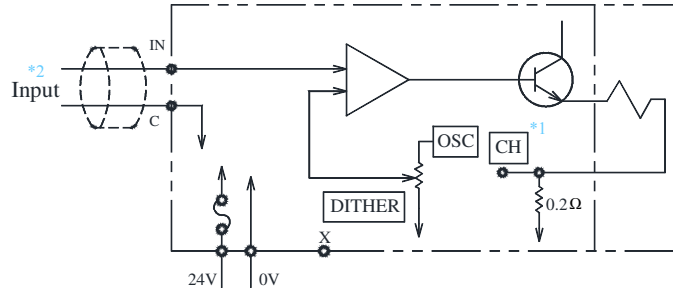
Terminal	Name
IN	Input Signal (+)
C	Input Signal (COM)
0 V	} Power Supply
24 V	
CH	Output Current Check (to C)

★. DITHER
Use as it is since they are factory preset to the optimum position.
(Do not touch is in normal condition)

EH Series

Proportional Electro-Hydraulic Flow Control and Check Valves

Circuit Schematic



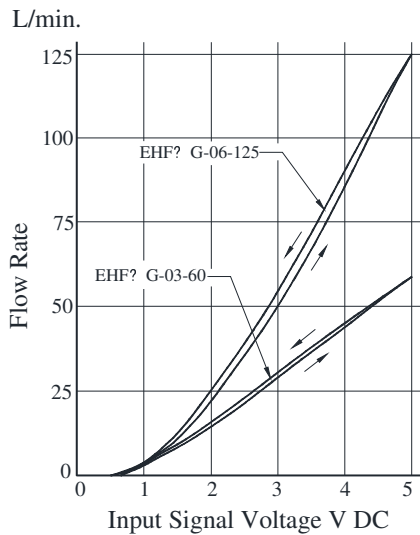
*1 For “CH” terminal, external instruments should have input impedance of more than 10 kΩ.

*2 Use shielded cable for “Input” connection. The ground of the shielded cable must be connected to input signal side.

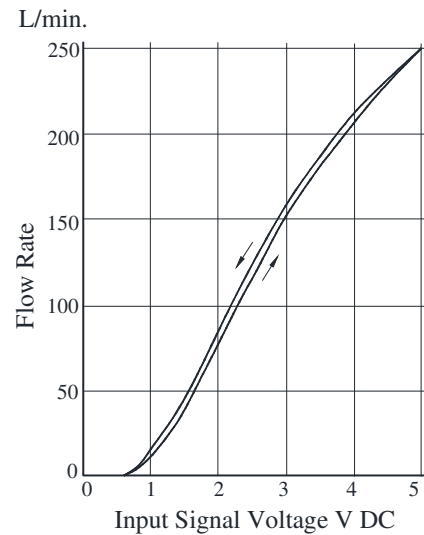
Input Signal Voltage Vs. Flow Rate

Viscosity : 30 cSt

- EHFG 03
- EHFCG 03

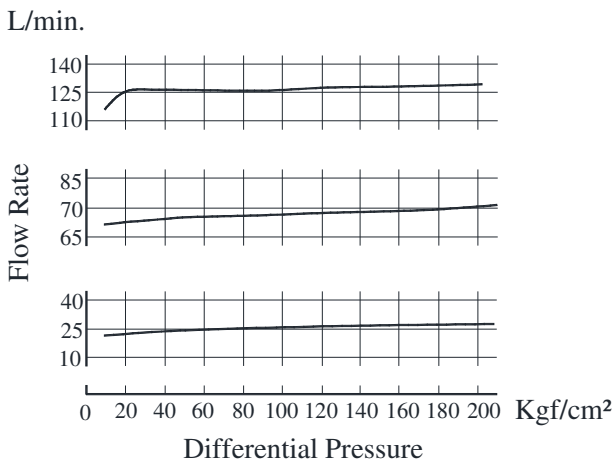


- EHFG 06
- EHFCG 06

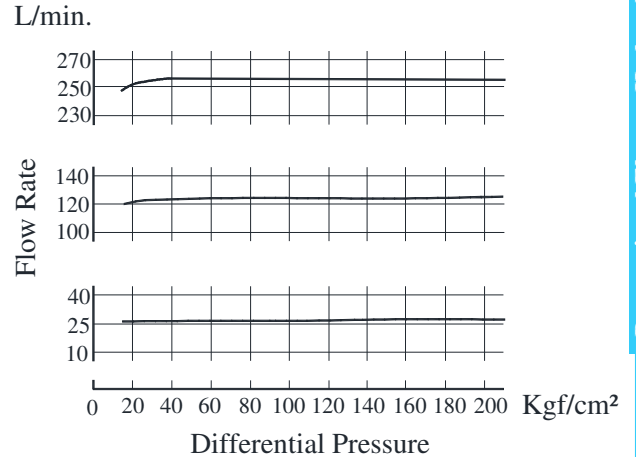


Differential Pressure Vs. Flow Rate

- EHFG 03
- EHFCG 03



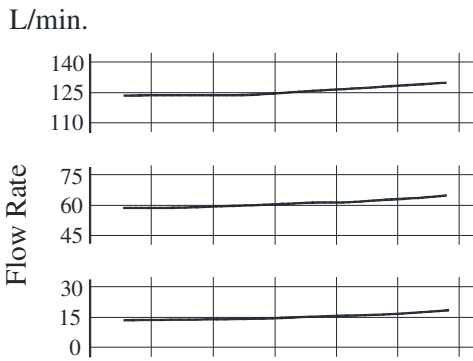
- EHFG 06
- EHFCG 06



Viscosity Vs. Flow Rate

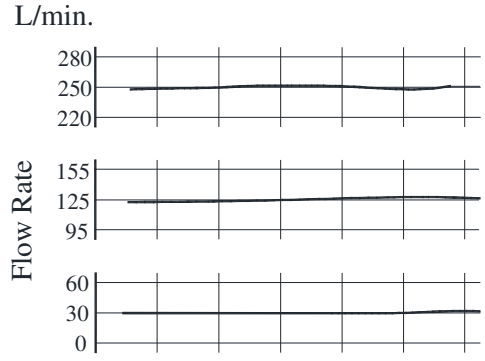
Oil : ISO VG 46 Oil.

- EHFG 03
- EHFCG 03



Temperature 10 20 30 40 50 60 70 °C
 Viscosity 240 120 75 45 30 20 5 cSt

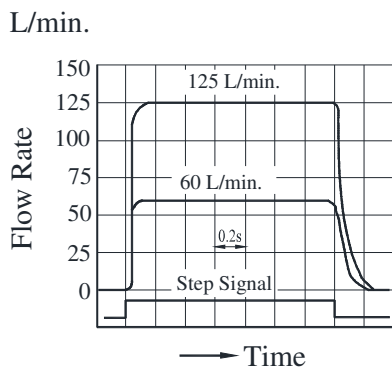
- EHFG 06
- EHFCG 06



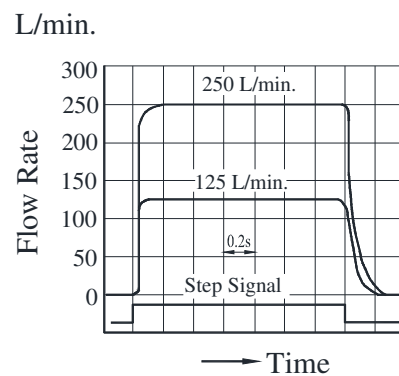
Temperature 10 20 30 40 50 60 70 °C
 Viscosity 240 120 75 45 30 20 5 cSt

Step Response (Example)

- EHFG 03
- EHFCG 03



- EHFG 06
- EHFCG 06



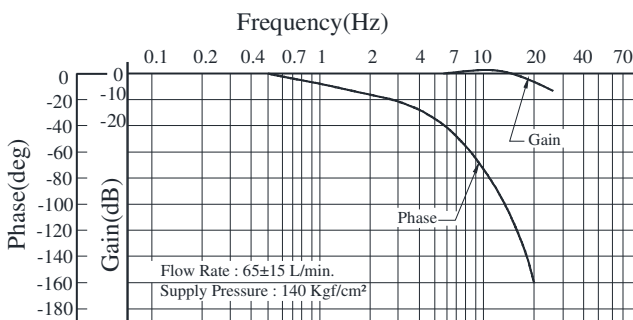
The step response right are those obtained when the valve itself is tested independently.
 The step responses may differ from them when the valve is used in combination with other control valves.

Frequency Response

Trapped Oil Volume : 1 L

Viscosity : 30 cSt

- EHFG 03
- EHFCG 03



- EHFG 06
- EHFCG 06

