

Proportional Valves

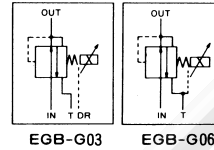
EGB Series

Electro-hydraulic Proportional Reducing and Relief Valve (EGB)

This is a combination of the electro-hydraulic proportional pilot relief valve (EPR Series) and a reducing valve with a relief and is used to perform pressure reducing control of the pressure in a hydraulic system in proportion to the input current. Since a

relief function is provided, the outlet side pressure can be maintained practically constant even when a reaction force acts on the valve outlet side. Owing to this feature, the response performance are very good.

Hydraulic symbol



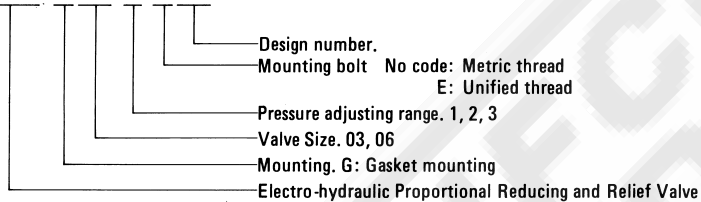
Specifications

Item	Model	EGB-G03 ※-※10	EGB-G06 ※-※10
Max. operating pressure kgf/cm ² (psi)		210 (3000)	
Rated flow ℓ/min (gpm)		50 (13.2)	100 (26.4)
Pressure adjusting range kgf/cm ² (psi)		B: 3 ~ 25 (43 ~ 357) Note (1) 1: 7 ~ 70 (100 ~ 1000) 2: 9 ~ 140 (129 ~ 2000) 3: 15 ~ 210 (214 ~ 3000)	
Rated current (mA)		800	
Coil resistance (Ω)		20 (20°C) (68°F)	
Hysteresis		3% or less (Note 2)	
Weight kgf (lbs)		5.5 (12)	7.8 (17)

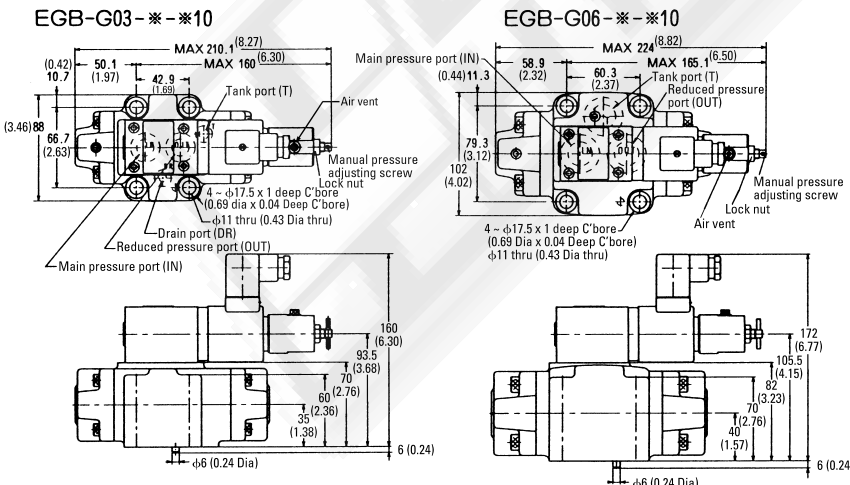
Note 1) The G03 model is only available, but the flow is restricted to 20 ℓ/min (5.3 gpm).
Note 2) This is the hysteresis value when NACHI's amplifier is provided for the valve. (With dither)

Model Code

EGB-G03-2-※10



Installation Dimensions



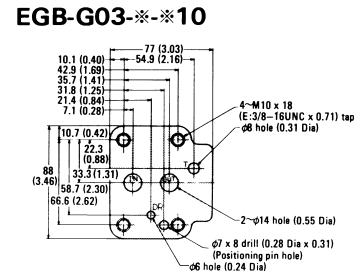
Handling

- Air Bleeding**
Loosen the air vent to bleed the air thoroughly and fill oil in the solenoid at the start of operation to obtain good pressure control.
- DR Port Piping**
Please take care in piping so that the DR port (in case of G06 size, T port) is always filled up with oil.
- Manual Pressure Adjusting Screw**
When there is no input current supplied to the valve as in the case of initial adjustment or due to an electrical fault, the valve pressure can be controlled temporarily by turning the manual adjusting screw. In normal operation, this manual adjusting screw must be retracted completely and fixed with the locknut.
- Load Capacity**
Use this valve with a load capacity (Valve outlet side capacity) of 5 ℓ (305 in³) or more.
- Mounting bolts**

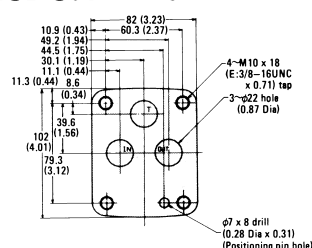
Model	Bolts Size	Quantity
EGB-G03	M10 x 75ℓ (E: 3/8-16 UNCx3")	4
EGB-G06	M10 x 85ℓ (E: 3/8-16 UNCx3 3/8")	4

- Oil temperature**
-20 ~ 70°C (-4°F ~ 158°F)
- Oil viscosity**
12 ~ 400 cSt
15 ~ 60 cSt is recommended.

Installation Gasket Dimensions



Installation Gasket Dimensions



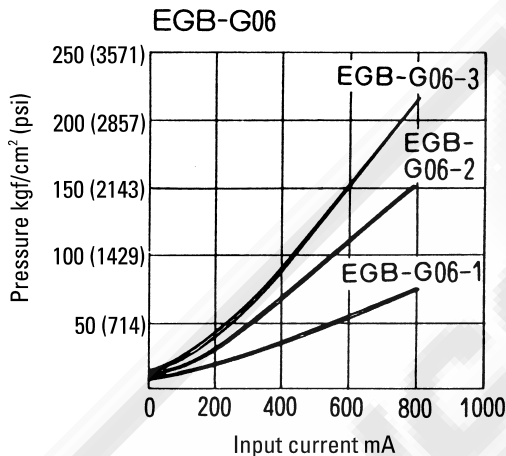
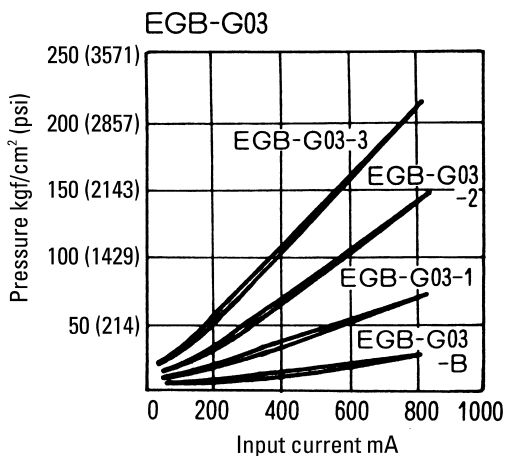
Proportional Valves

EGB Series

Performance Curve

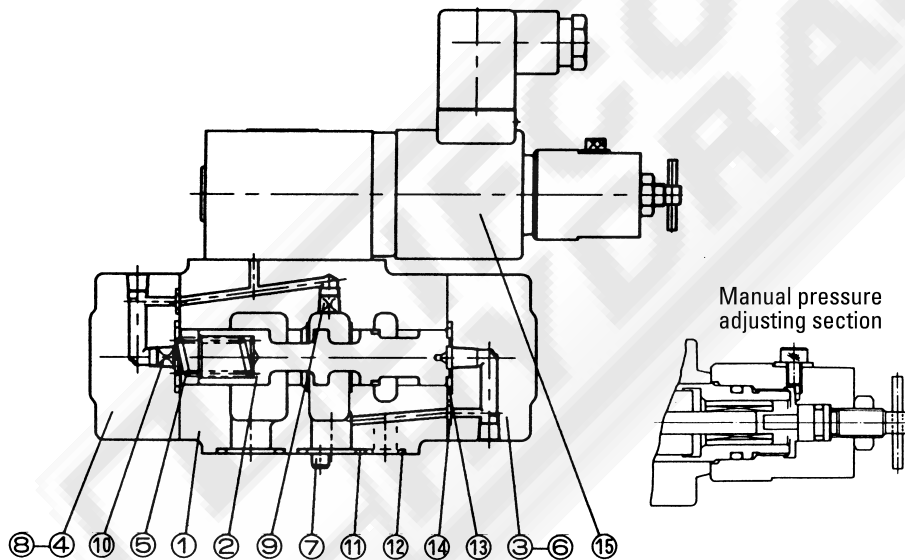
Oil viscosity = 32 cSt

Input current—Pressure characteristics



Cross Section Drawing

EGB-G※※-※-※10



Combination with EPR valve

Model	EPR valve model
EGB-G03-B-10	EPR-G01-B-0000-11
EGB-G03-1-10	1-0013-11
EGB-G03-2-10	2-0012-11
EGB-G03-3-10	3-0011-11
EGB-G06-1-10	EPR-G01-1-0013-11
EGB-G06-2-10	2-0012-11
EGB-G06-3-10	3-0012-11

List of Seals

No.	Name of part	ER-G03-※-※10		ER-G06-※-※10	
		Number of part	Q'ty	Number of part	Q'ty
11	O ring	RO-P20-90	2	RO-P26-90	3
12	O ring	RO-P10A-90	2	—	—
13	O ring	RO-P22-90	2	RO-G03-90	2
14	O ring	RO-P6-90	2	RO-P6-90	2

No.	Name of part
1	Body
2	Piston
3	Cover
4	Cover
5	Spring
6	Screw
7	Pin
8	Pin
9	Orifice
10	Orifice
11	O ring
12	O ring
13	O ring
14	O ring
15	Pilot relief valve

Coil = EA64-D2-1A