

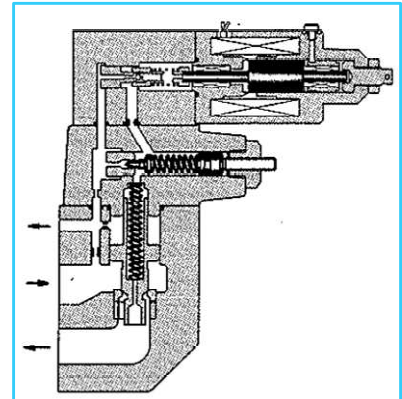
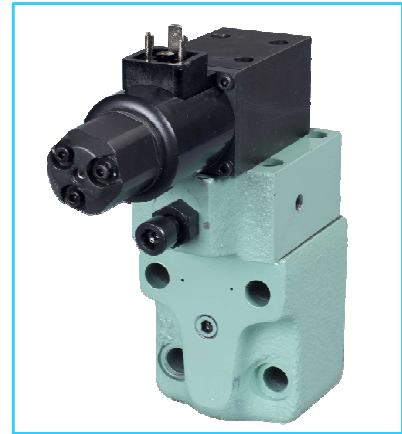
■ Proportional Electro-Hydraulic Relief Valves

The electro hydraulic relief valve is designed for compactness and high efficiency. The valve provides fast proportional response to the input current. For linear pressure control a special venting feature is incorporated with good stability & low hysteresis.

■ Specification

Model Number		EBG-03	EBG-06
Item			
Max. Operating Pres.	Kgf/cm ²	210	
Rated Flow	L/min.	80	170
Pressure Adjustment Range	Kgf/cm ²	Refer Model No. Designation	
Rated Current	mA	EBG-03-C : 750 EBG-03-H : 850	EBG-06-C : 700 EBG-06-H : 800
Coil Resistance	Ω	10	10
Hysteresis *1		Less than 3%	Less than 3% (Note1)
Repeatability *2		Less than 1%	
Frequency Response	Hz	Refer Page 561	
Mass (Approx.)	Kg.	5.6	6.3

Note : 1. Under the condition of using with YUKEN amplifier.
2. The figure is only valve under the same condition.



■ Model Number Designation

EB	G	-03	-C	-11
Series No.	Type of Mounting	Valve Size	Pr. Adjustment Range Kgf/cm ² *1	Design No.
EB: Prop. Electro Hydraulic Relief Valve	G: Sub Plate Mounting	03	Note C: ※ ~ 140 H: ※ ~ 210	11
		06		11

*1. For Min. Adj. Pressure Please refer Page No.561

■ Attachment

● Mounting Bolts

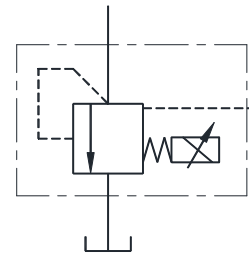
Model No.	Socket Head Cap Screw	Qty.	Bolt Kit Ordering Code
EBG-03	M12 x 70Lg.	02	BKBG-03-10
	M12 x 95Lg.	02	
EBG-06	M16 x 60Lg.	02	BKBG-06-10
	M16 x 80Lg.	02	

■ Power Amplifier For EBG

Model No.

- PW100-※-H11 (YIL make) Refer EIC-H-1008
- AME-D-10-※-20
- AME-D2-1010-11
- SK1022-※-※-11
- SK1015-11 (For DC Power supply)
- AMN-D-10 (For DC Power supply)

Graphic Symbol



● Sub-Plate

Valve Model Number	Sub-Plate Model number.	Piping BSP.F	Mass Kg.
EBG-03	BGM-03-30	3/8	2.4
	BGM-03x-30	1/2	3.1
EBG-06	BGM-06-30	3/4	4.7
	BGM-06x-30	1	5.7

- When ordering , please specify model number according to the above table. When not using sub-plate, please make suitable mounting surface.
- Sub-Plates are same as applicable to pilot operated relief valve. Ref. EIC-C-1002.

● **Note**

● **Mounting**

Air vent should be in the top position
(Bleed position of air vent can be changed.
Refer below drawing).

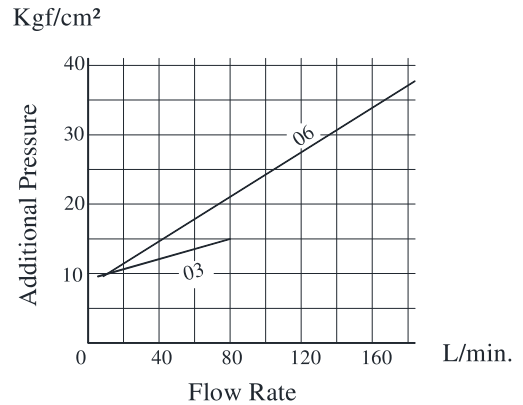
● **Air Vent**

The valve solenoid is of oil immersed design. To give better flow rate stability, fill the oil cavity in the solenoid body by loosening the air vent. Bleed all air from the inside of the solenoid.

● **Low Flow Rates**

A flow rate of 6 L/min or higher should be used to avoid preselected pressure instability.

- Safety valve setting pressure is given additional pressure 15 Kgf/cm² (03 size) or 39 Kgf/cm². (06 size) Max. at rated flow when maximum operation pressure. Further safety valve setting pressure is determined by max. operation pressure plus additional pressure in the graph.



● **Tank Piping**

Do not connect to the other tank line. Connect directly to the tank and end of piping should be immersed in the oil.

● **EBG-03**
EBG-06

Positions of Cable outlets can be indexed in steps of 90°



Cable Outlets Suitable Cable OD...8 Dia. ~ 10 Dia.

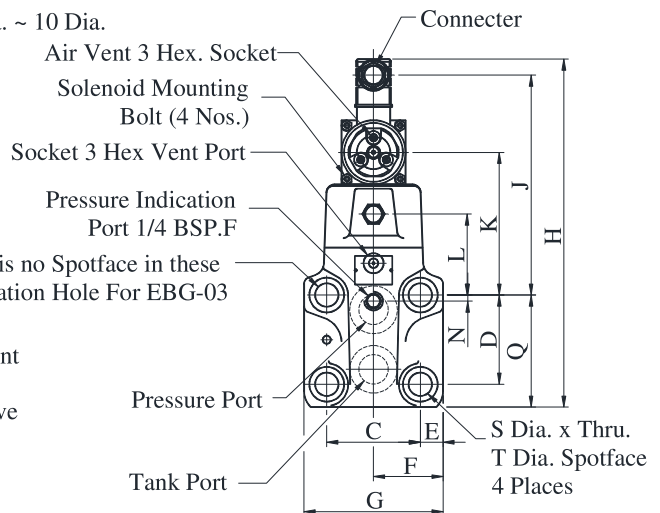
Air Vent and Cable Connection can be indexed in Steps of 90° Increments when changing. Remove 4Nos. of Solenoid Mounting Bolt and then set in New Positions

Mounting Surface O-Ring Furnished

Locating Pin 6 Dia.

Safety Valve Adjustment Screw Nut ... 14 Hex Screw 16mm Groove

There is no Spotface in these Installation Hole For EBG-03



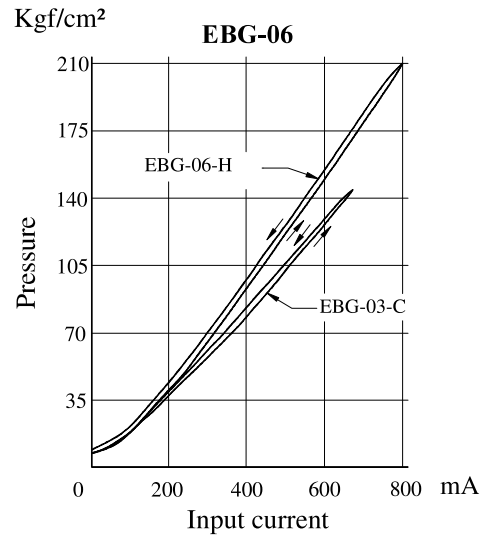
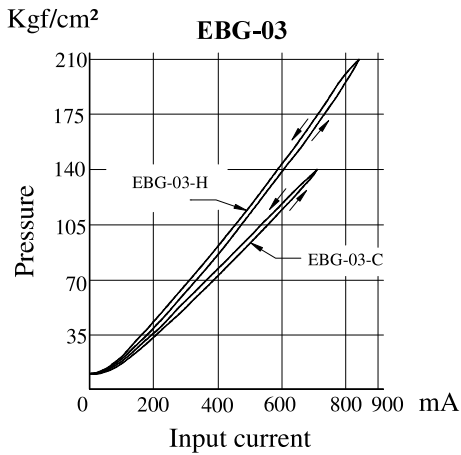
Model No.	A	B	C	D	E	F	G	H	J	K	L	N	Q	S	T
EBG - 03	57	78	53.8	53.8	14.1	41	82	231.5	142	85	40	22	77	13.5	21
EBG - 06	40	60	70	66.7	17	52	104	225.5	159.5	102.5	57.5	4.5	88.5	17.5	26

Note : Valve Mounting Surface Dimension is the same as BG-03, BG-06
Sub Plate for EBG-03 ----- BGM-03 or 03X
EBG-06 ----- BGM-06 or 06X

E Series

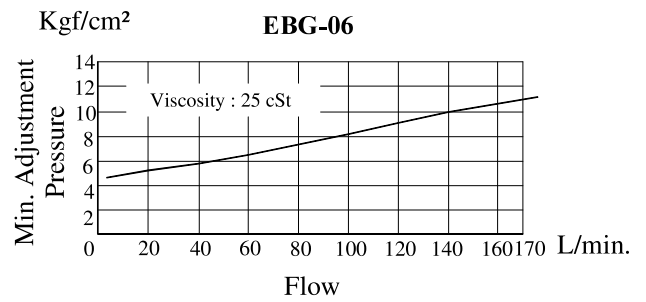
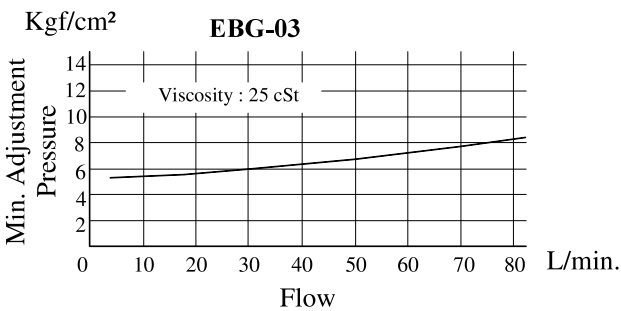
Proportional Electro-Hydraulic Relief Valve

Input Current vs Pressure

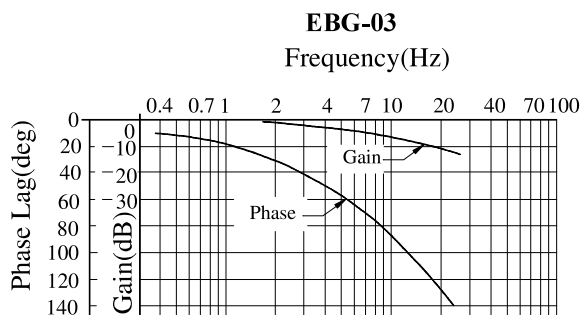


Note : Input current Error : Rating Input Current
50 mA at Rated Flow

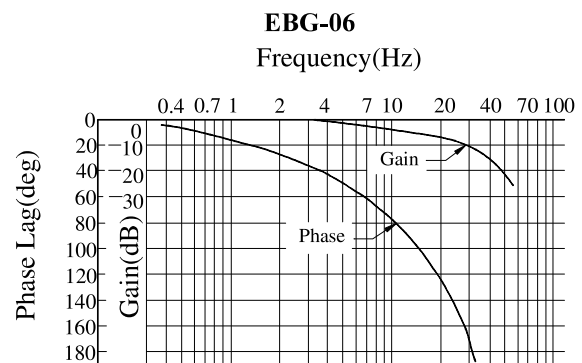
Min. Adjustment Pressure



Frequency Response



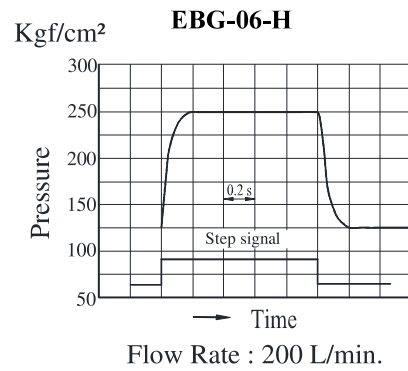
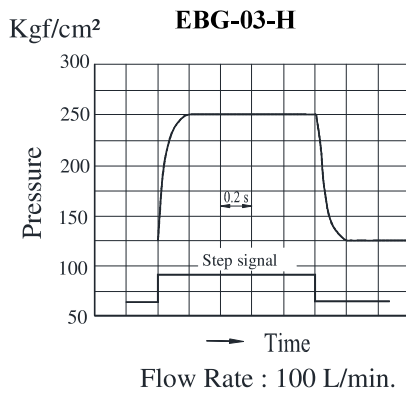
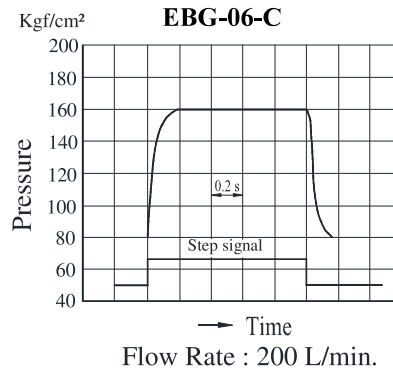
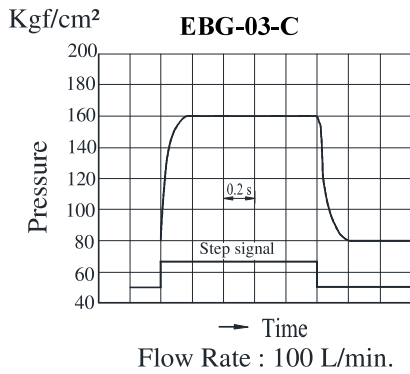
Input Current : 430 mA ± 80 mA
Loading Flow : 80 L/min.
Loading Volume : 3/4" Rubber Hose 1.5 m



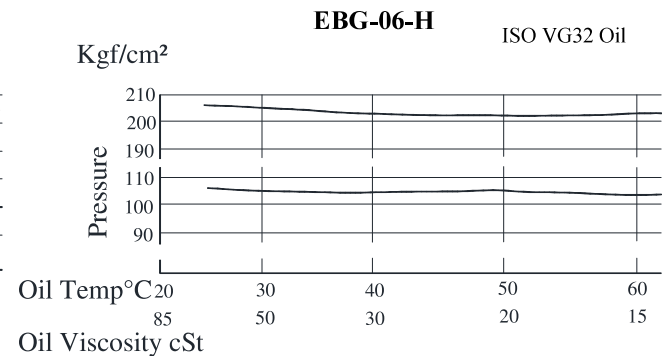
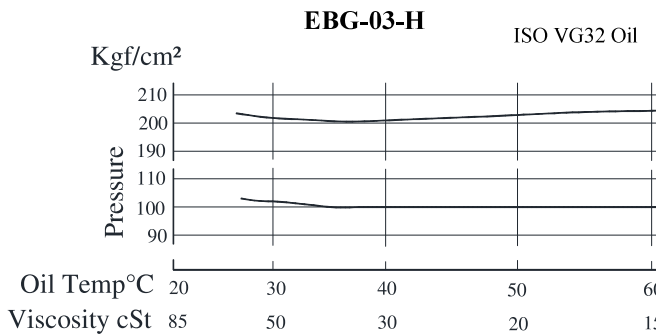
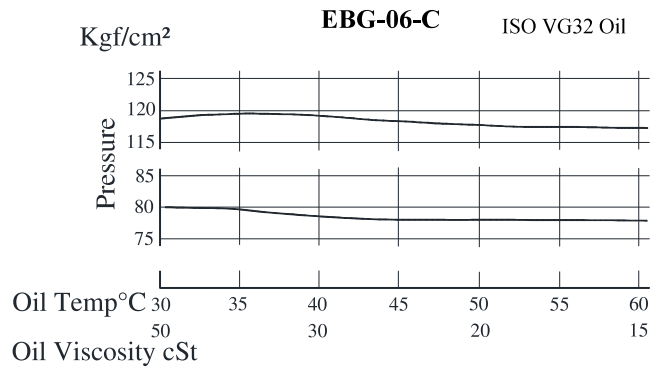
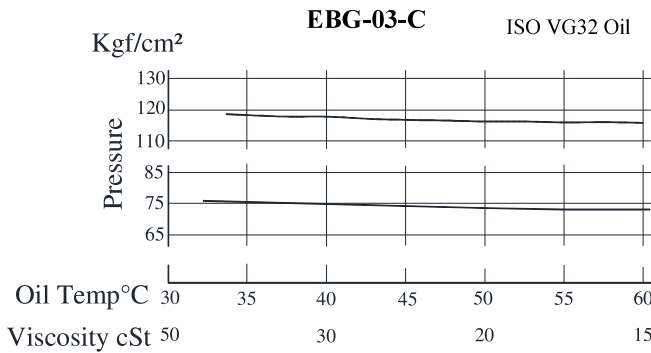
Input Current : 430 mA ± 80 mA
Loading Flow : 80 L/min.
Loading Volume : 3/4" Rubber Hose 1.5 m

Step Response Characteristic (Example)

(These characteristics are measured for valve itself so it is not much different in different circuit)



Viscosity vs Pressure Characteristic



■ Spare Parts List

● List of Seals

Sl. No.	Name of Parts	Part Number	Quantity	
			EBG-03	EBG-06
1	O-Ring	SO-NA-P9	1	1
2	O-Ring	SO-NB-P9	3	2
3	O-Ring	SO-NB-P11	-	1
4	O-Ring	SO-NB-P18	2	-
5	O-Ring	SO-NB-P28	-	2
6	O-Ring	SO-NB-P32	1	1

Note: When ordering the seals, please specify the seal kit number from the table below.

● List of Seal Kit

Model Numbers	Seal Kit Numbers
EBG-03	KS-EBG-03-11
EBG-06	KS-EBG-06-11