

Алматы (7273)495-231
 Ангарск (3955)60-70-56
 Архангельск (8182)63-90-72
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 Благовещенск (4162)22-76-07
 Брянск (4832)59-03-52
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 Казань (843)206-01-48
 Калининград (4012)72-03-81
 Калуга (4842)92-23-67
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 Киров (8332)68-02-04
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 Кострома (4942)77-07-48
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 Орел (4862)44-53-42
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 Саранск (8342)22-96-24
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 Тула (4872)33-79-87
 Тюмень (3452)66-21-18
 Улан-Удэ (3012)59-97-51
 Ульяновск (8422)24-23-59
 Уфа (347)229-48-12
 Хабаровск (4212)92-98-04
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 Челябинск (351)202-03-61
 Череповец (8202)49-02-64
 Чита (3022)38-34-83
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 Ярославль (4852)69-52-93

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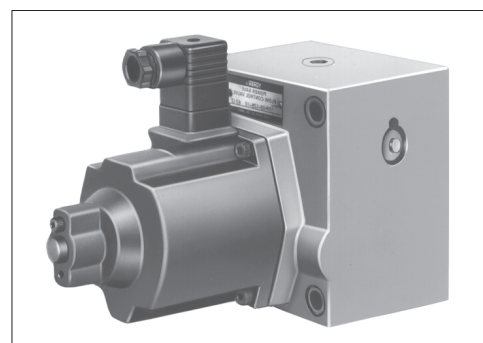
Киргизия +996(312)96-26-47

yuken@nt-rt.ru || <https://yuken.nt-rt.ru>

40Ω Series Proportional Electro-Hydraulic Flow Control (and Check) Valves

Since the preselected flow rate continuously varies in proportion to the current input to the valve, the system flow rate can be remote-controlled as desired by regulating the amplifier current output. Further, since pressure and temperature compensation functions are provided, the preselected flow rate is not affected by pressure (load) or temperature (fluid viscosity).

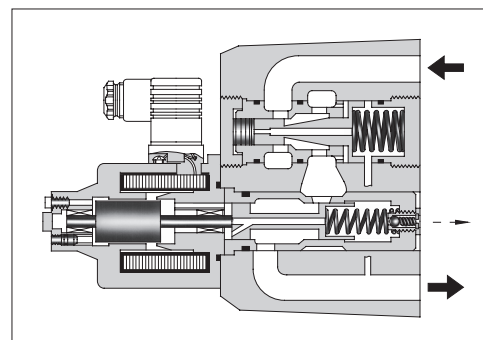
This valve is ideal for use where actuator startup, stop, and speed changes are to be implemented without producing a shock. Note that this valve is used in conjunction with the applicable power amplifier.



Specifications

Model No.	EFG -02-10 EFCG -30	EFG -03-60 EFCG 125	EFG -06-250 EFCG	EFG -10-500 EFCG
Max. Operating Pres. MPa	20.6	20.6	20.6	20.6
Metered Flow Adjustment Range L/min	10: 0.3-10 30: 0.3-30	60: 2-60 125: 2-125	3-250	5-500
Min. Differential Pres.* MPa	0.6	1.0	1.3	2.0
Free Flow (EFCG Models Only.) L/min	40	130	280	550
Rated Current mA	600	600	600	600
Coil Resistance Ω	45	45	45	45
Hysteresis	5% or less	7% or less	7% or less	7% or less
Repeatability	1% or less	1% or less	1% or less	1% or less
Mass kg	8.2	12.5	25	51

* Min. pressure difference required between inlet and outlet ports to maintain function as pressure compensator.



Model Number Designation

EFC	G	-02	-10	-N	-31
Series Number	Type of Mounting	Valve Size	Max. Metered Flow L/min	Pres. Compensator Stroke Adjustment	Design Number
EF: Proportional Electro-Hydraulic Flow Control Valve	G: Sub-Plate Mounting	02	10 30	N: Applicable only for Press. Compensator Stroke Adjustment (Option - Omit if not required)	31
EFC: Proportional Electro-Hydraulic Flow Control and Check Valve		03	60 125		26, 2603*
		06	250		22
		10	500		11

Note: If you are going to use the model with pressure compensator stroke adjustment screw, consult your Yuken representative in advance.

* Only for the "EFG-03- *-N," the design number is "2603."

Accessories

Mounting Bolts

Valve Model Numbers	Socket Head Cap Screw	Qty.
EFG EFCG-02	M8 × 75 L	4
EFG EFCG-03	M10 × 100 L	4
EFG EFCG-06	M16 × 130 L	4
EFG EFCG-10	M20 × 160 L	4

Applicable Power Amplifiers

For stable performance, it is recommended that Yuken's applicable power amplifiers be used (for details see page H-178).

Model Numbers : AME-D- * - * -50

AME-DF- * - * -52

AME-T-S- * -22

Sub-Plates

Valve Model Numbers	Sub-Plate Model Numbers	Thread Size Rc	Mass kg
EFG EFCG-02	EFGM-02X-20	3/8	2.3
	EFGM-02Y-20	1/2	3.1
EFG EFCG-03	EFGM-03Y-3001	3/4	5.7
	EFGM-03Z-3001	1	5.6
EFG EFCG-06	EFGM-06X-3001	1	12.5
	EFGM-06Y-3001	1-1/4	16
EFG EFCG-10	EFGM-10Y-10*	1-1/2, 2 Flange Mounting	37

● Sub-plates are available. Specify the sub-plate model number from the table above. When sub-plates are not used, the mounting surface should have a good machined finish. (1/4)

● When ordering the EFGM-10Y, please order “F3” Series Pipe Flange Kits separately. Please inquire separately for details on the “F3” Series Pipe Flange Kits.

Models with Pressure Compensator Stroke Adjustment Screw

A models with pressure compensator stroke adjustment screw is optionally available to minimize the actuator protrusion (jumping) at startup. For the details, please consult us or your Yuken distributors.

Instructions

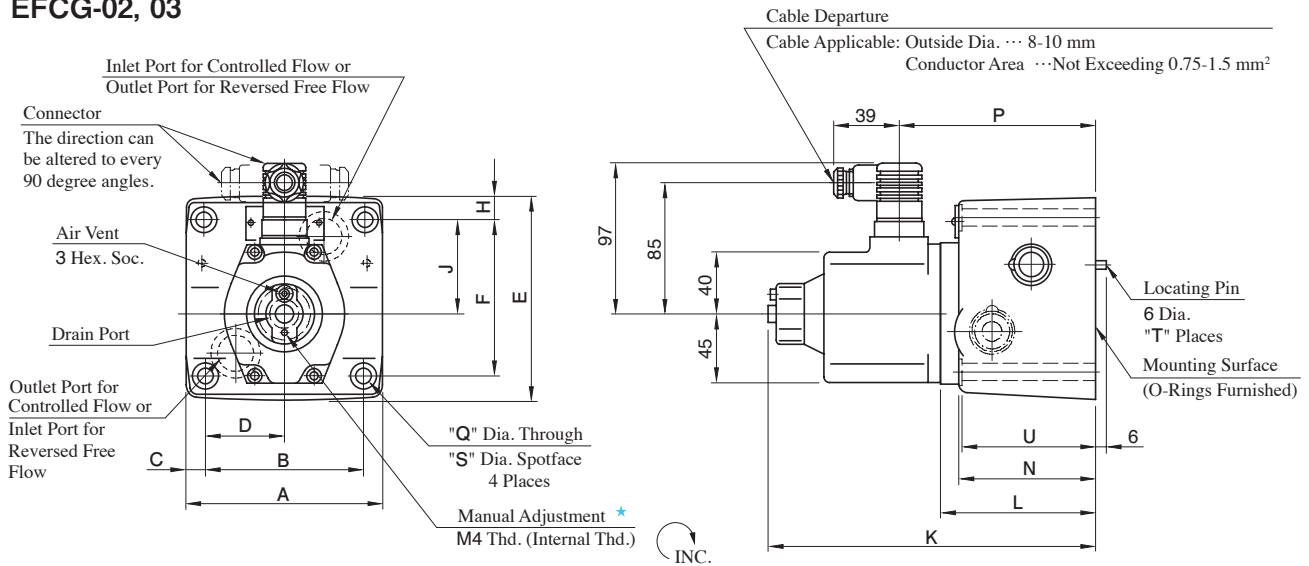
Drain Back Pressure

Check that the drain back pressure does not exceed 0.2 MPa.

Models with Check Valve

A models with check valve makes it possible to obtain a free flow in the direction opposite that of the controlled flow without respect to the input current.

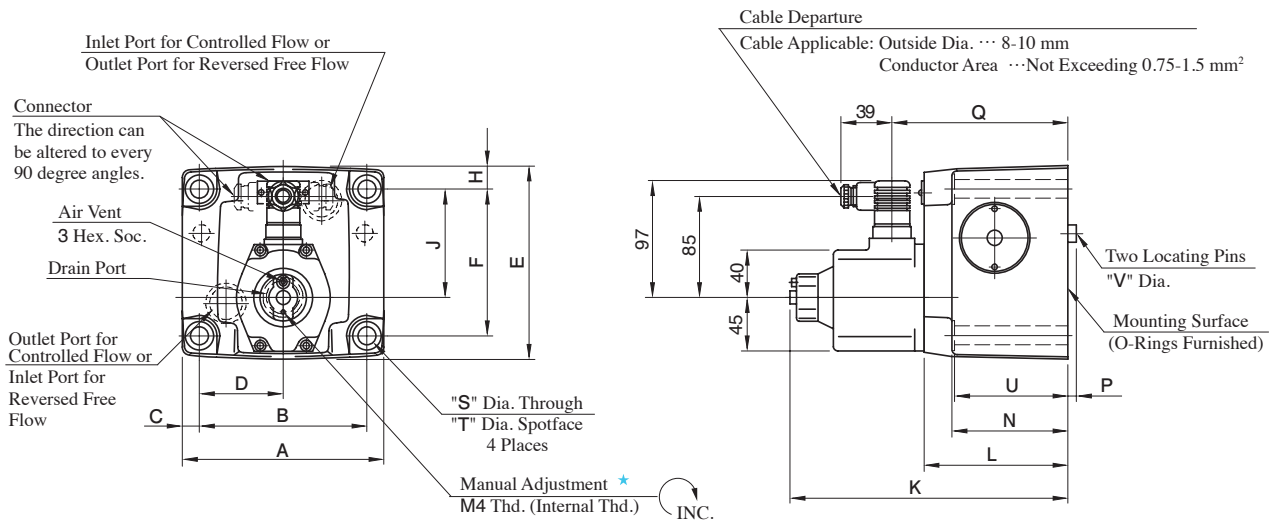
EFG-02, 03
EFCG-02, 03



★ Manual adjustment can be done by screwing for example an M4 × 20 L screw in the M4 thread or pushing in a rod etc. there.

Model Numbers	Dimensions mm															U
	A	B	C	D	E	F	H	J	K	L	N	P	Q	S	T	
EF*G-02	96	76.2	9.9	38.1	106	82.6	11.7	46.3	195	81	66	108	8.8	14	1	65
EF*G-03	125	101.6	11.7	50.8	130	101.6	14.2	61.8	212	98	85	125	11	17.5	2	84

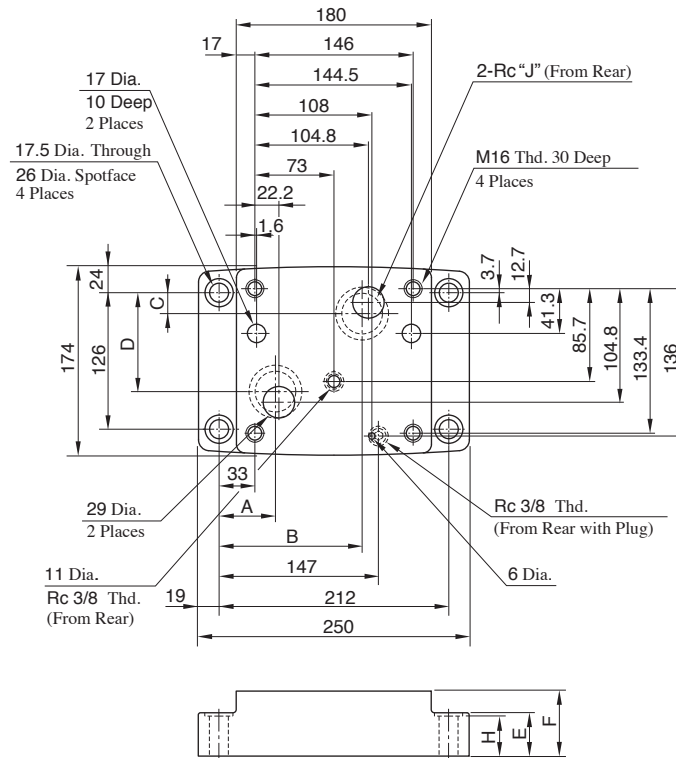
EFG-06, 10
EFCG-06, 10



★ Manual adjustment can be done by screwing for example an M4 × 20 L screw in the M4 thread or pushing in a rod etc. there.

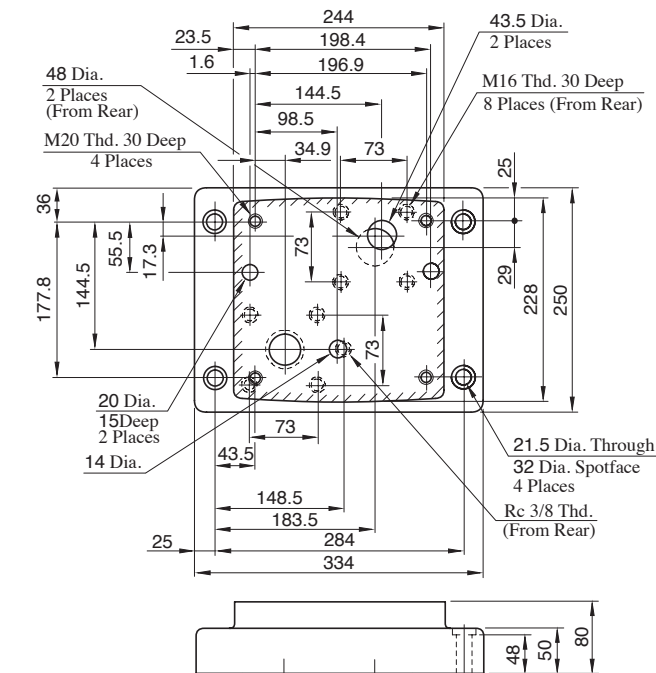
Model Numbers	Dimensions mm																
	A	B	C	D	E	F	H	J	K	L	N	P	Q	S	T	U	V
EF*G-06	180	146.1	17	73.1	174	133.4	20.3	99	244	130	105	7	157	17.5	26	103.5	16
EF*G-10	244	196.9	23.5	98.5	228	177.8	25	144.5	274	160	137	10	187	21.5	32	135	18

Sub-Plate
EFGM-06X, 06Y (3001D)



Sub-Plate Model Numbers	A	B	C	D	E	F	H	J
EFGM-06X-3001	55.2	137.8	14.3	101.1	35	45	34	1
EFGM-06Y-3001	52	132	19.3	91.3	40	60	39	1-1/4

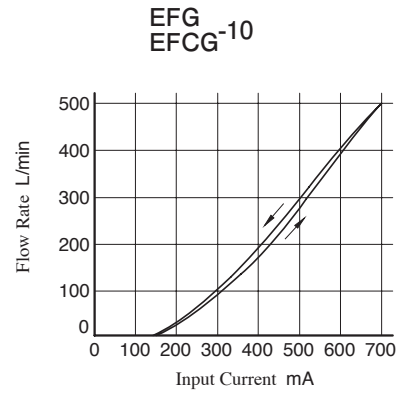
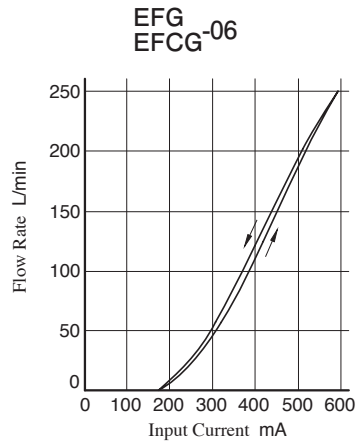
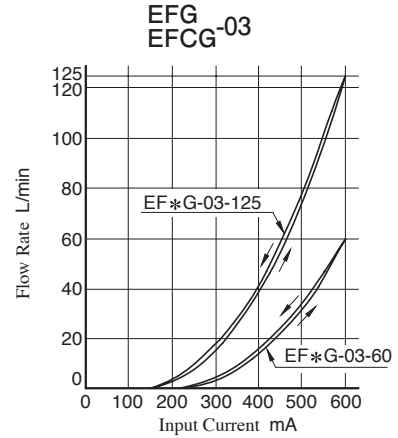
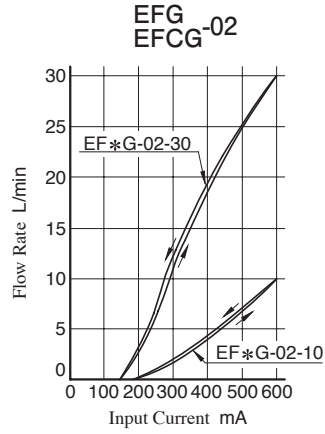
EFGM-10Y



"F3" Series Pipe Flange Kits
(For the details, please consult us or your Yuken distributors.)

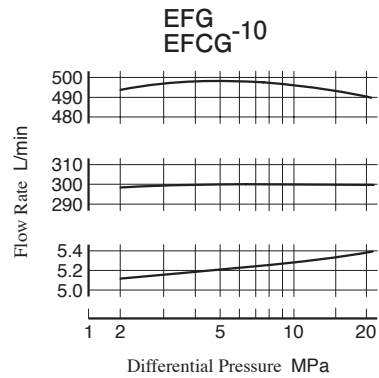
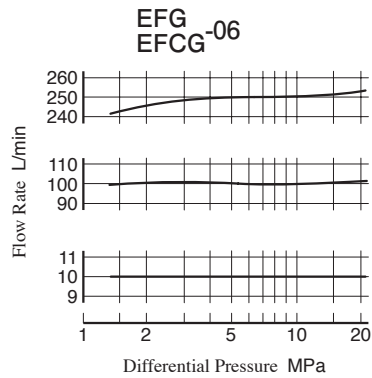
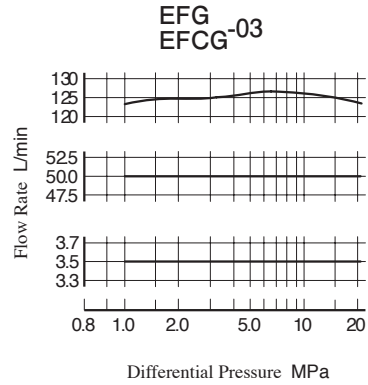
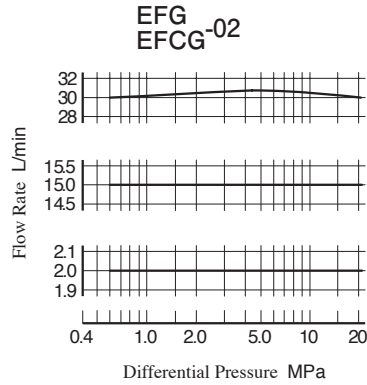
Input Current vs. Flow

Viscosity: 30 mm²/s



Differential Pressure vs. Metered Flow

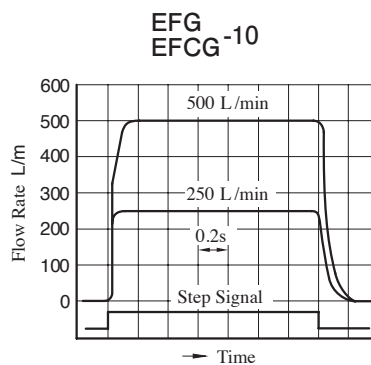
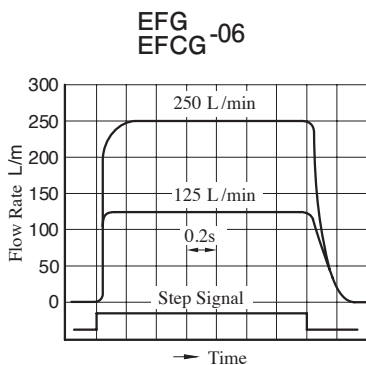
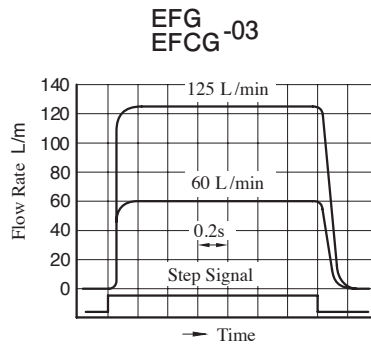
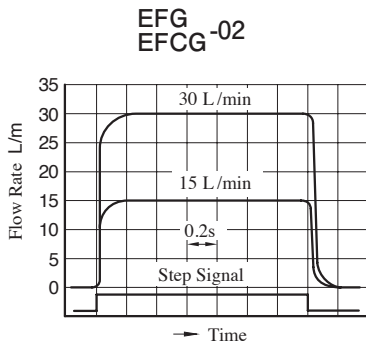
Viscosity: 30 mm²/s



Step Response

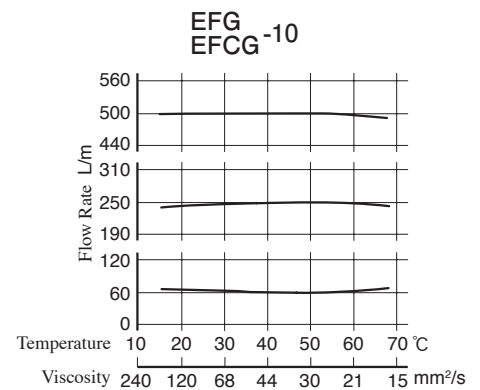
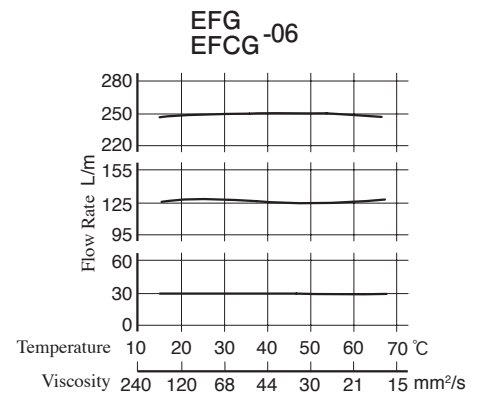
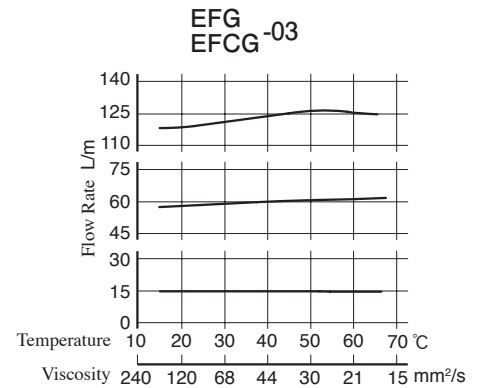
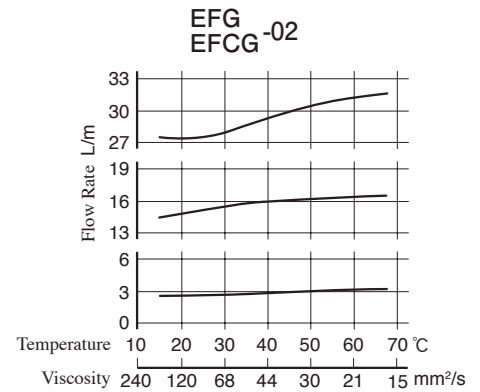
Viscosity: 30 mm²/s

These characteristics have been obtained by measuring on each valve.
Therefore, they may vary according to a hydraulic circuit to be used.



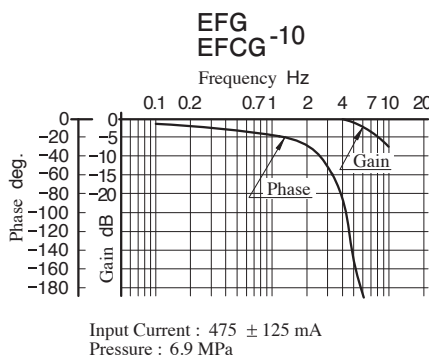
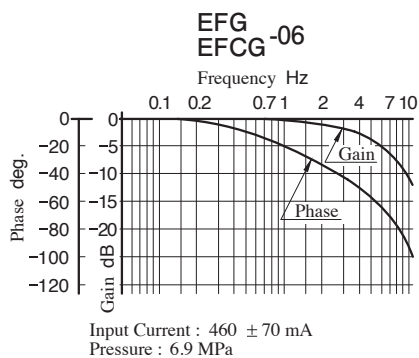
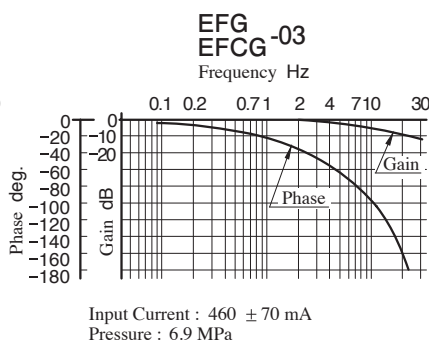
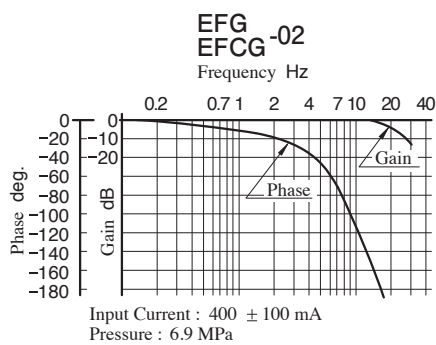
Viscosity vs. Flow

Oil: ISO VG 46



Frequency Response

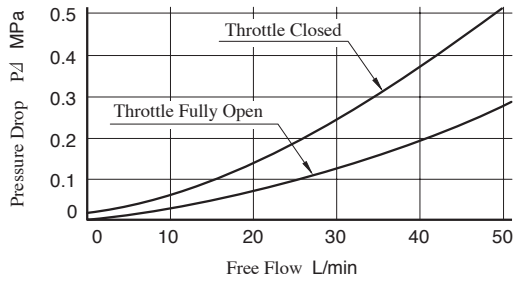
Viscosity: 30 mm²/s



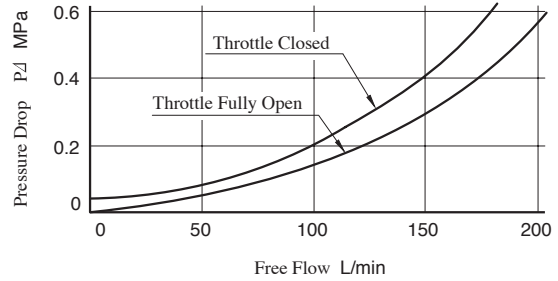
Pressure Drop for Reversed Free Flow (Only for "EFCG" Models)

Oil Viscosity: 35 mm²/s
Specific Gravity: 0.850

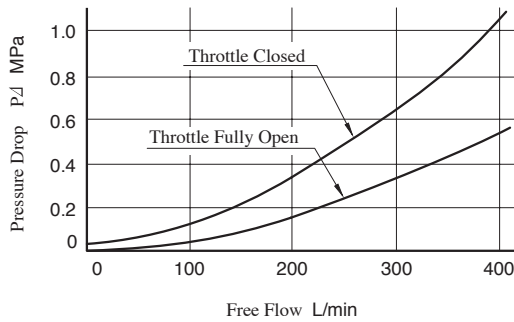
EFCG-02



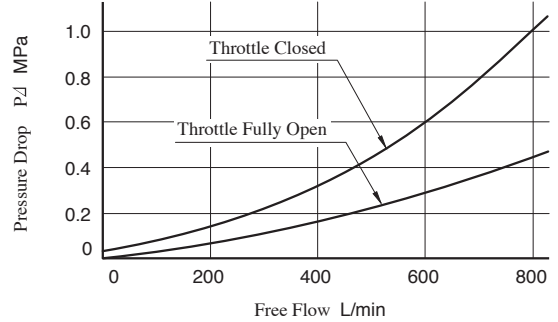
EFCG-03



EFCG-06



EFCG-10



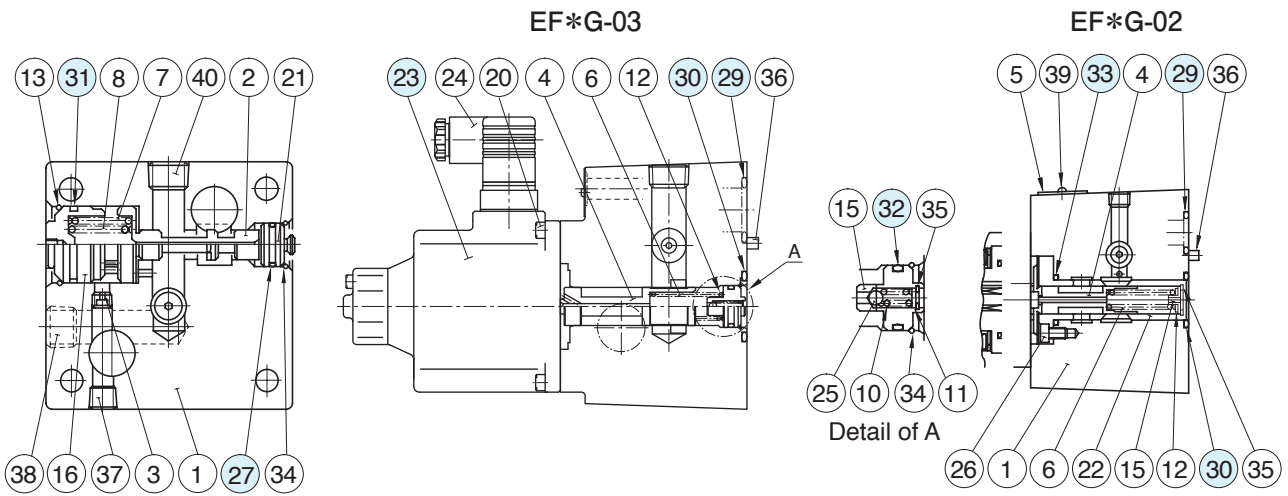
● For any other viscosity, multiply the factors in the table below.

Viscosity mm ² /s	20	40	60	80	100
Factor	0.87	1.03	1.14	1.23	1.30

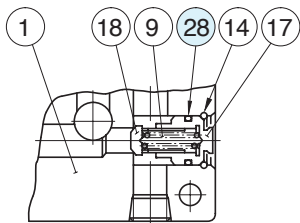
● For any other specific gravity (G'), the pressure drop ($\Delta P'$) may be obtained from the formula below.
 $\Delta P' = \Delta P (G'/0.850)$

■ List of Seals and Solenoid Ass'y

EFG
EFCG -02, 03



With Check Valve (EFCG-02, 03)



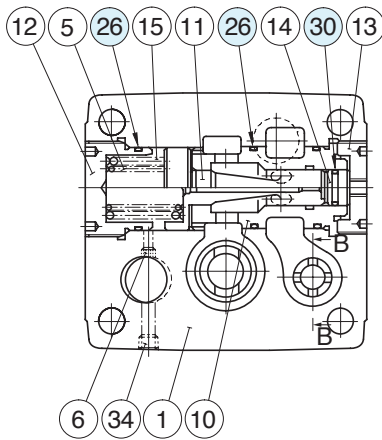
● List of Seals and Solenoid Ass'y

Item	Name of Parts	Part Numbers		Qty.
		EF * G-02	EF * G-03	
23	Solenoid Ass'y	E321-45-20	E321-45-20	1
27	O-Ring	OR NBR-90 P18-N	OR NBR-90 P18-N	1
28	O-Ring	OR NBR-90 P10A-N	OR NBR-90 P21-N	1
29	O-Ring	OR NBR-90 P18-N	OR NBR-90 P28-N	2
30	O-Ring	OR NBR-90 P22-N	OR NBR-90 P31-N	1
31	O-Ring	OR NBR-90 G25-N	OR NBR-90 G35-N	1
32	O-Ring	—	OR NBR-90 P18-N	1
33	O-Ring	OR NBR-90 P22-N	—	1

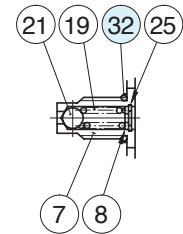
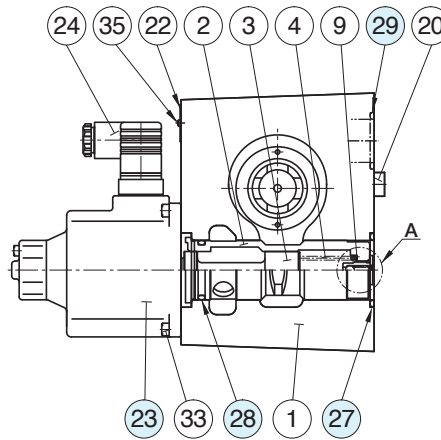
Note 1: The connector assembly GDM-211-B-11 (Item 24) is not included in the solenoid assembly.

List of Seals and Solenoid Ass'y

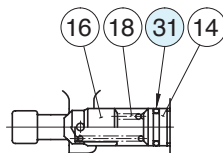
**EFG
EFCG -06, 10**



With Check Valve (EFCG-06, 10)



Detail of A



Section B-B

List of Seals and Solenoid Ass'y

Item	Name of Parts	Part Numbers		Qty.
		EF * G-06	EF * G-10	
23	Solenoid Ass'y	E321-45-20	E321-45-20	1
26	O-Ring	OR NBR-90 P50-N	OR NBR-90 G75-N	3
27	O-Ring	OR NBR-90 P44-N	OR NBR-90 G60-N	1
28	O-Ring	OR NBR-90 P34-N	OR NBR-90 P50-N	1
29	O-Ring	OR NBR-90 P32-N	OR NBR-90 P48-N	2
30	O-Ring	OR NBR-90 P21-N	OR NBR-90 P34-N	1
31	O-Ring	OR NBR-90 P21-N	OR NBR-90 P26-N	1
32	O-Ring	OR NBR-70-1 P10-N	OR NBR-70-1 P10-N	1

Note 1: The connector assembly GDM-211-B-11 (Item 24) is not included in the solenoid assembly.

По вопросам продаж и поддержки обращайтесь:

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