

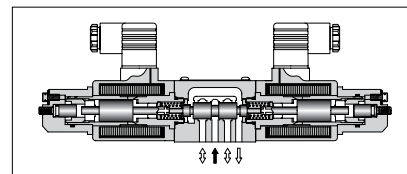
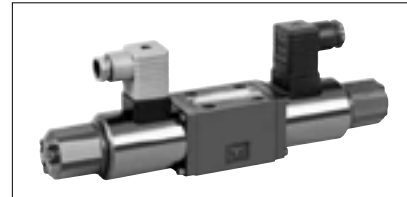
Shockless Type Proportional Electro-Hydraulic Directional and Flow Control Valves

These valves are well accepted by industrial users as shifting time adjustable type shockless valves. By employing the basic design concept of the “G series solenoid operated directional valves”, we have been successful developing the shifting time adjustable shockless valves with high performance which makes the speed setting possible at any high speed operation.

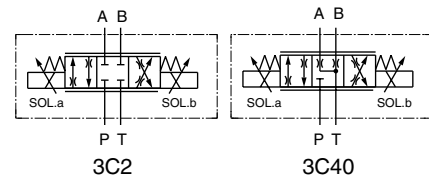
In combination with the newly developed digital amplifiers, the further enhancement of maneuverability and repeatability of the valves can be realized.

Specifications

Model No.		EDFG-01
Description		
Max. Operating Pressure	MPa (PSI)	25 (3630)
Max. Flow	L/min (U.S.GPM)	30 (7.9)
Max. Tank Line Back Pressure	MPa (PSI)	14 (2030)
Rated Current		1100 mA
Coil Resistance		10.8 Ω
Hysteresis		5% or less
Repeatability		1% or less
Step Response (Typical Rating) (0 ↔ 100%)		100 ms or less
Frequency Response (50% ±25%)	Phase	20 Hz (-90 degree)
	Gain	25 Hz (-3 dB)
Approx. Mass	kg (lbs.)	2.4 (5.3)



Graphic Symbols



Model Number Designation

F-	EDF	G	-01	-30	-3C2	-XY	-50	*
Special Seals	Series Number	Type of Mounting	Valve Size	Rated Flow L/min (U.S.GPM)	Spool Type	Direction of Flow	Design Number	Design Standards
F: Special Seals for Phosphate Ester Type Fluid (Omit if not required)	EDF: Shockless Type Proportional Directional and Flow Control Valve	G: Sub-plate Mounting	01	30 (7.9)	3C2 3C40 	XY: Metre - In • Metre - Out	50	Refer to ★1

★1 Design Standards: None Japanese Standard "JIS" and European Design Standard 90 N. American Design Standard

Attachment

Mounting Bolts

Descriptions	Soc. Hd. Cap Screw	Qty.
Japanese Standard "JIS" European Design Standard	M5 × 45 Lg.	4
N. American Design Standard	No.10 - 24 UNC × 1-3/4 Lg.	4

Sub-plate

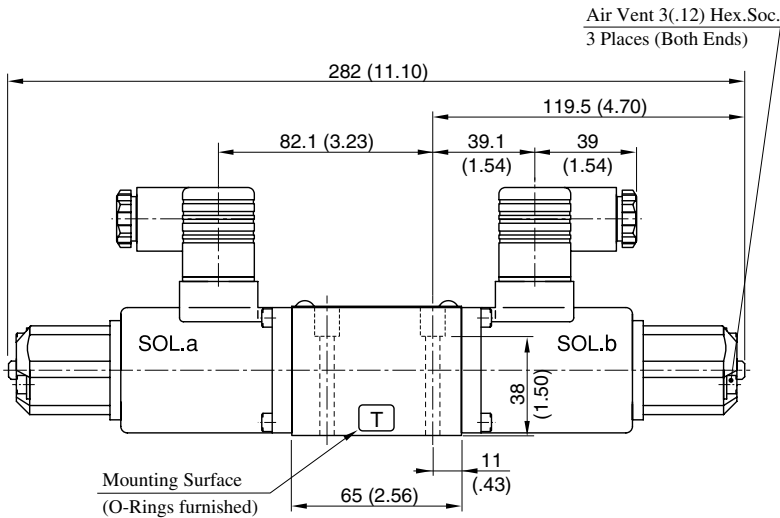
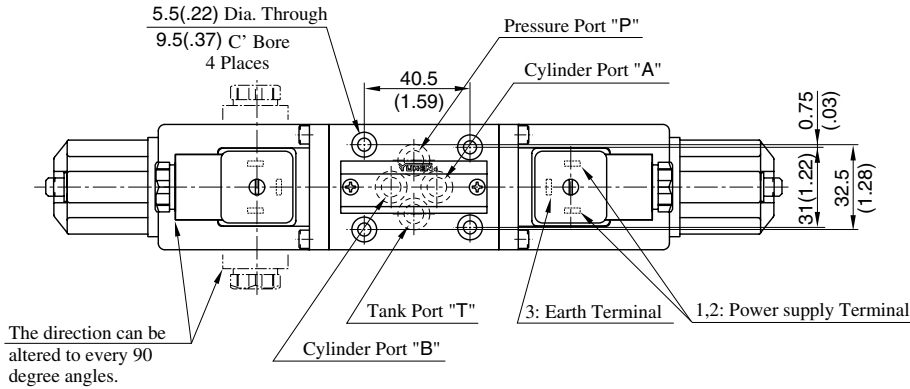
Piping Size	Japanese Standard "JIS"		European Design Standard		N. American Design Standard		Approx. Mass kg (lbs.)
	Sub-plate Model Numbers	Thread Size	Sub-plate Model Numbers	Thread Size	Sub-plate Model Numbers	Thread Size	
1/8	DSGM-01-31	Rc 1/8	DSGM-01-3180	1/8 BSPF	DSGM-01-3190	1/8 NPT	0.8 (1.8)
1/4	DSGM-01X-31	Rc 1/4	DSGM-01X-3180	1/4 BSPF	DSGM-01X-3190	1/4 NPT	0.8 (1.8)
3/8	DSGM-01Y-31	Rc 3/8	—	—	DSGM-01Y-3190	3/8 NPT	0.8 (1.8)

- 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.
- Sub-plates are those for 1/8 solenoid operated directional valves. For dimensions, see page 356.

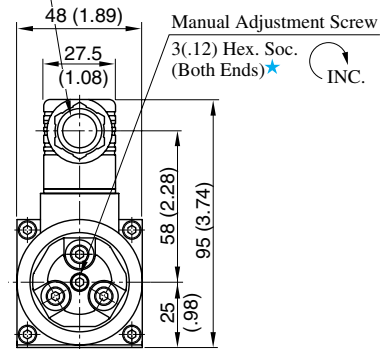
EDFG-01-30-3C*-XY-50/5090

Mounting Surface
ISO 4401-AB-03-4-A

**DIMENSIONS IN
MILLIMETRES (INCHES)**

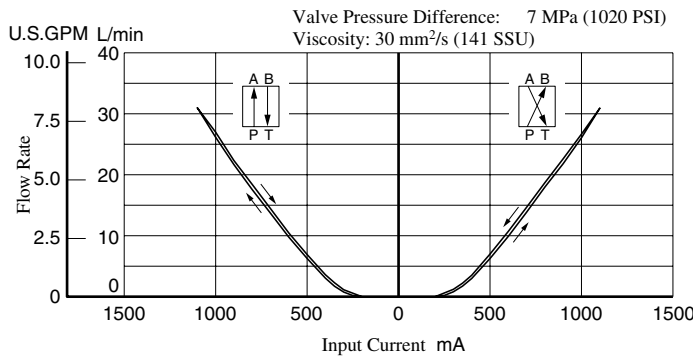


Cable Departure
Cable Applicable:
Outside Dia ... 8-10mm(.31-.39in.)
Conductor Area ...
Not Exceeding 1.5mm²(.0023 sq.in.)

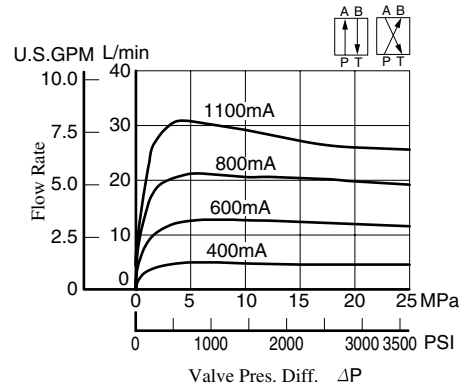


★ Under normal conditions, however, this screw must be kept in its original position.

Input Current vs. Flow

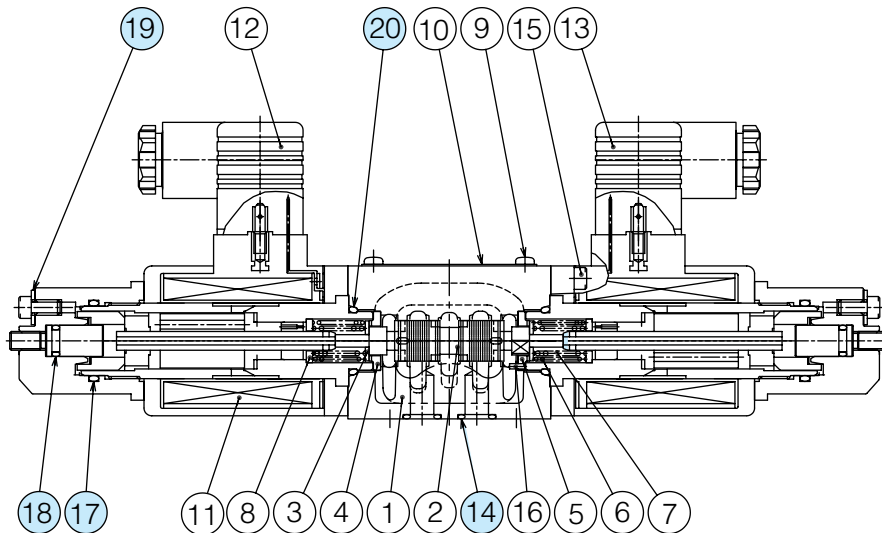


Valve pressure Difference vs. Flow



■ List of Seals and Solenoid Ass'y

EDFG-01-30-* -XY-50/5090



● List of Seals

Item	Name of Parts	Part Numbers	Qty.	Remarks
14	O-Ring	SO-NB-P9	4	Included in Seal Kit Kit No.: KS-EDFG-01-50
17	O-Ring	SO-NB-P22	2	
18	O-Ring	SO-NB-P7	2	
19	Fastner Seal	SG-FCF-4	6	
20	O-Ring	SO-NB-P18	2	

Note) O-ring (Item 17, 18, 20) and the fastner sael (Item 19) are included in the solenoid assembly.

● Solenoid Ass'y

Valve Model Numbers	⑪ Solenoid Ass'y	Qty.
EDFG-01-30-* -XY-50/5090	E318-Y05M2-28-6103	2

Note) The connector assembly GDM-211-* -11 (Item 12, 13) is not included in the solenoid assembly.

Power Amplifiers For Shockless Type Directional and Flow Control Valves

These power amplifiers are used to drive the shockless type proportional and flow control valves.

Model Number Designation

AMN	-G	-10
Series Number	Type of Function	Design Number
AMN	G: Shockless Directional and Flow Control Type	10
	W: DC Input Type	10



Applicable to Valve

Name of Valve	Model Numbers
Shockless Type Proportional Directional and flow Control Valves	EDFG-01

Specifications

Model Numbers		AMN-G-10	AMN-W-10
Description			
Max. Output Current		1.3 A (10 Ω Solenoid)	
Setting Resolution		0 – 99 % (1 % Units)	—
Number of Preselection Pattern		SOLa : 3 Patterns SOLb : 3 Patterns	—
Sequence Input	Input Current	10 mA/24 V	—
	Voltage Range	10 – 28 V	—
Maximum Input Voltage		—	-10 V DC : SOLa +10 V DC : SOLb
Input Impedance		—	10 kΩ
Maximum Gain		—	1.3 A/-5 V : SOLa 1.3 A/+5 V : SOLb
Dither		Variable (Internal)	
Slope Adjustment Range		0 – 99 %/Max. slope time	—
Maximum Slope Time		1 – 99 s	—
Delay Time Adjustment Range		—	0.1 – 3 s
Temperature Drift		0.2 mA /°C	
Power Supply		24 V DC (Power Supply Range : 20 – 30 V)	
Power Input		25 W	
Ambient Temperature		0 – 50°C (32 – 122°F)	
Ambient Humidity		90 % RH or less	
Approx. Mass		0.2 kg (.4 lbs.)	

Instructions

Power supply of the outside setting adjuster

When DC input type (AMN-W) power amplifier is used, power supply for the setting adjuster can be provided from this power amplifier, but for only one. However, please use the variable resistor or potentiometre of which impedance is 1 kΩ for the setting adjuster.

Supply Switch

The power amplifier has no power supply switch. As soon as it is connected to a power supply, it comes to be alive. Provide a power switch externally.