

EFBG

Proportional Pressure Relief and Flow control valves
Pilot Operated Type EFBG...
Sizes : 02, 03, 06, 10
Max flow: 60, 160, 250, 500 L/min
Max. pressure: 315 Bar (245 Bar for EFBG10)

Revised 09.24



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Introduction

- Pressure and flow is proportional to the input signal of the proportional solenoids.
- This proportional valve adopts two electrical loops to control pressure and flow of hydraulic system respectively.
- The power losses is very low and overall efficiency high, hence reduced power consumption.
- Using very small pressure drop to track load pressure and control the pump pressure.
- This relief and flow control valve is energy saving type that provide flow and pressure as per programmed for actuator / drive.
- It is an high efficiency and energy-saving valve.

Ordering code

EFB G - * / * - * - 90 - *

Type : Proportional electro-hydraulic control P-Q Valve

Sub-plate mounting = G

Specification

02 series = 02
03 series = 03
06 series = 06

02 Specification:

Flow range:
40LPM = 40
60LPM = 60

03 Specification:

63LPM = 63
80LPM = 80
125LPM = 125
160LPM = 160

06 Specification:

250LPM = 250

Working pressure

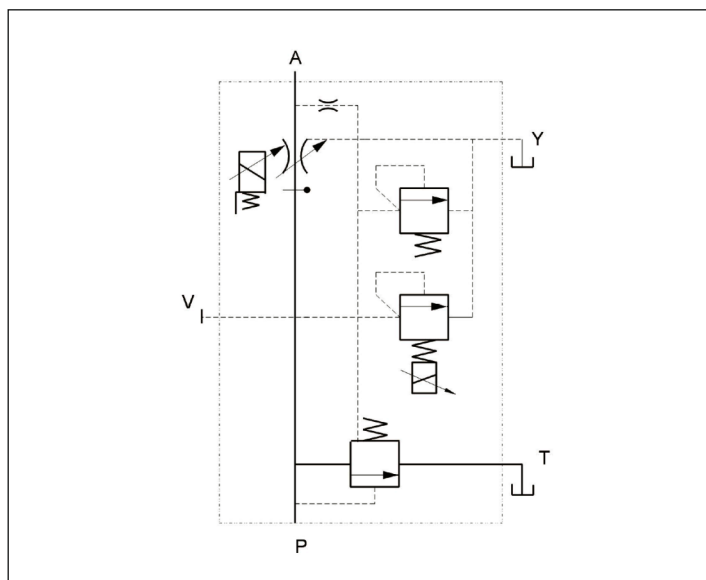
160kgf/cm² = C
250Kgf/cm² = H

Design serial number

Remarks



Hydraulic Symbol



Technical Specifications

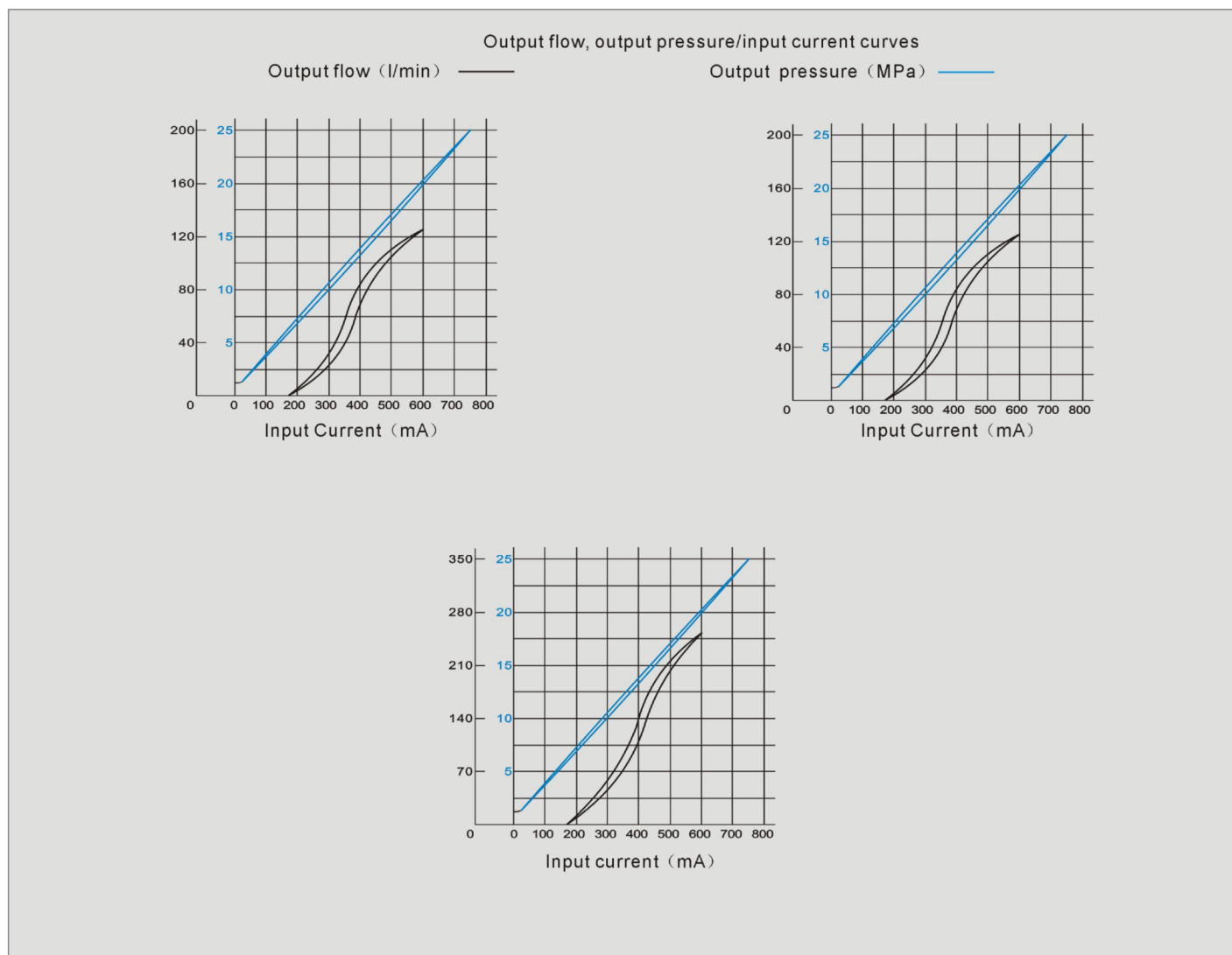
Model			EFBG-02-*-*	EFBG-03-*-*	EFBG-06-250-*
Maximum pressure (bar)			315		
Maximum flow (l/min)			60	160	250
Flow Range (l/min)			1-60	1-160	2.5-250
Flow Control	Rated current (mA)		800		
	Coil resistance (Ω)		19.5	43.5	43.5
	P Differential (bar)		0.6	0.6	0.7
	Hysteresis (%)		<5	<7	<7
	Repeatability (%)		<1		
Pressure control	Pressure Adjustment range	Adjustment range: C	12~160 kgf/cm ²	14~160 kgf/cm ²	15~160 kgf/cm ²
		Adjustment range: H	12~250 kgf/cm ²	14~250 kgf/cm ²	15~250 kgf/cm ²
	Rated current (mA)		800		
	Coil Resistance (Ω)		10	10	10
	Hysteresis (%)		<3		
	Repeatability (%)		<1		
	Weight (kg)		7	16	30



Performance data

02,03,06 ($\nu = 36 \times 10^{-6} \text{ m}^2/\text{S}$ $t = 50^\circ\text{C}$)

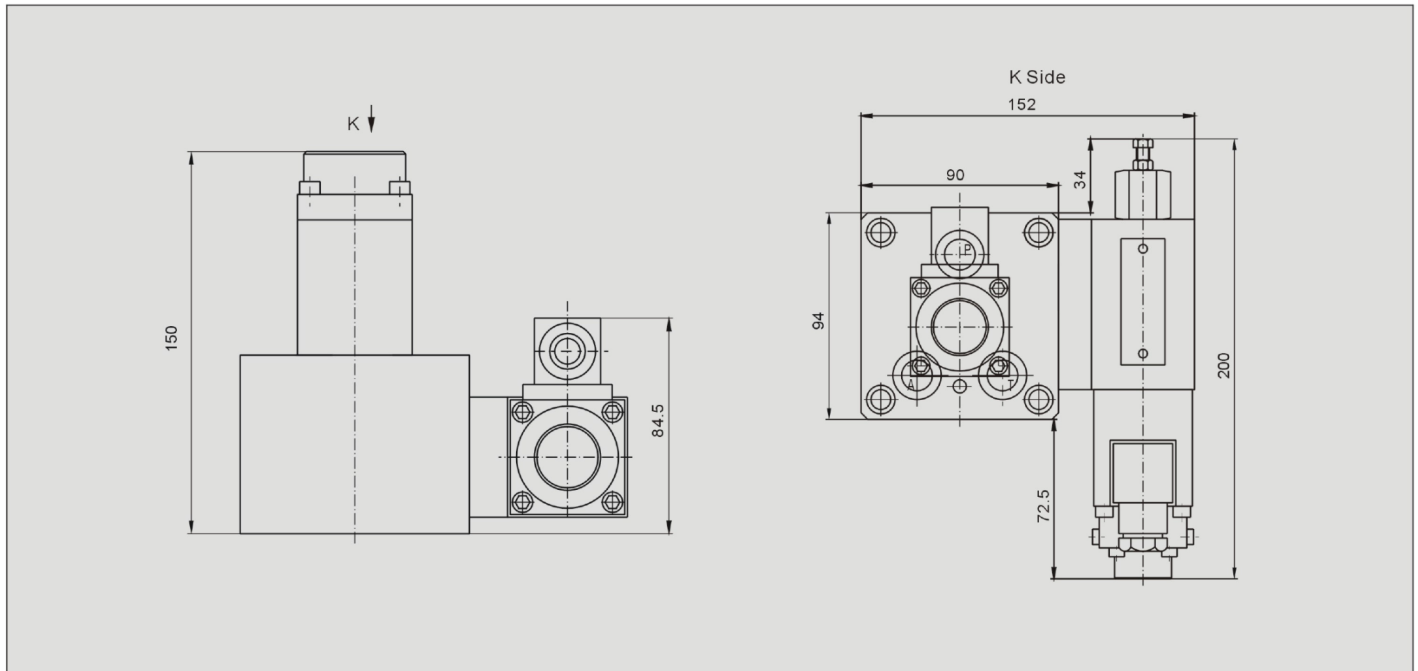
Model Characteristic Curves (Testing Condition $\nu = 36 \times 10^{-6} \text{ m}^2/\text{S}$ $t = 50^\circ\text{C}$)





Unit Dimensions EFBG-02

(Dimensions in mm)

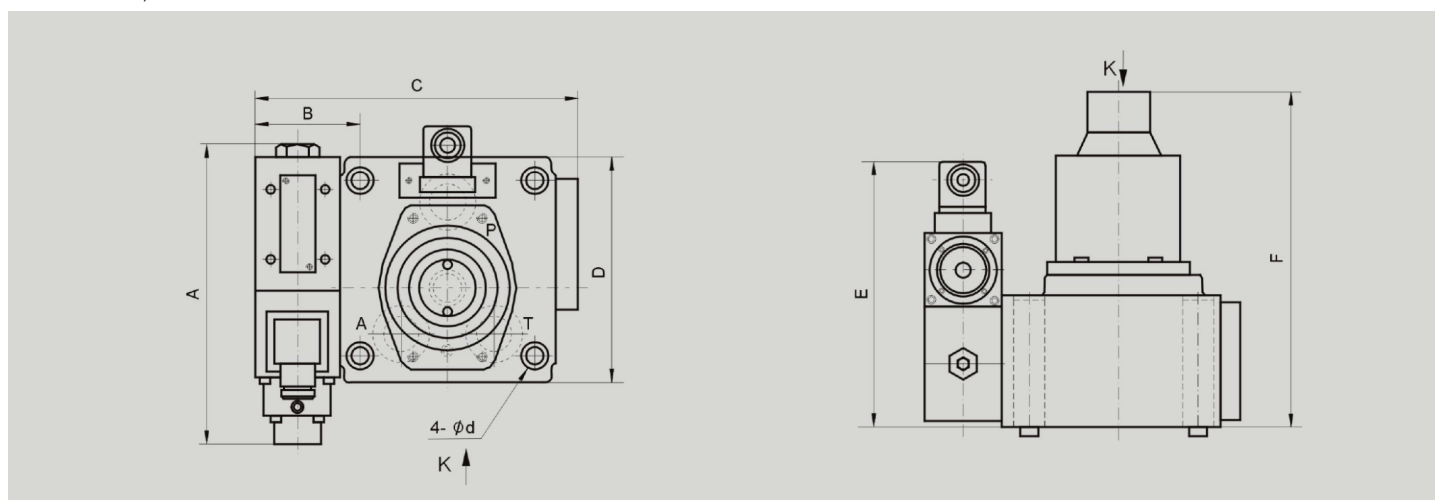




Unit Dimensions of EFBG 03, 06

(Dimensions in mm)

EFBG-03, 06

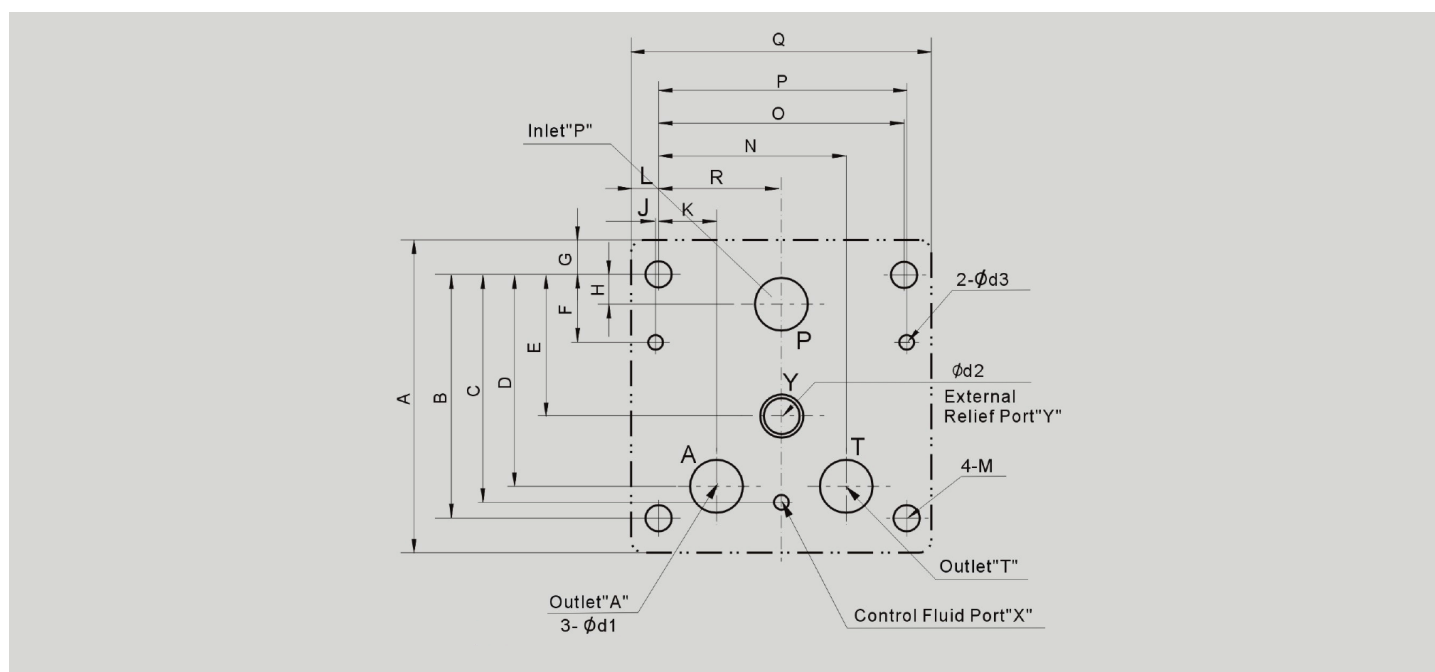


Dimension of EFBG-03 and EFBG-06

Model	A	B	C	D	E	F	d
EFBG-03	171	61.7	188	130	171	216	11
EFBG-06	171	67	247	174	199.5	248	17.5

Sub-plate Mounting Dimensions

(Dimensions in mm)



Sub-plate Dimensions

Model	A	B	C	D	E	F	G	H	J	K	L	R	N	O	P	Q	M	d1	d2	d3
EFBG-02	84	76	70	65	43	21.5	9	10	1	16.5	9	36	55.5	72	73	90	M8	14	10	7x7L
EFBG-03	130	101.6	95.3	88.9	59	28.6	14.2	12.7	0.8	23.8	11.7	50.8	77.8	101.6	102.4	125	M10	23	11	7x7L
EFBG-06	174	133.4	133.4	107	82.2	41.3	24	12.7	1.6	28.1	17	73.1	118.1	146.1	144.5	180	M16	29	14	17.5x10L

Notes:

- Discharge back pressure ≤ 2 bar
Return back pressure ≤ 5 bar
- Minimum stable flow under controlled pressure:
Nominal size 03, 06 ≥ 10 l/min
- Vent hole orientation can be adjusted freely. Put it upward to vent off the air from the piping



EFBG-10

Features

- Pressure and flow is proportional to the input signal of the proportional solenoids.
- This proportional valve adopts two electrical loops to control pressure and flow of hydraulic system respectively.
- The power losses is very low and overall efficiency high, hence reduced power consumption.
- Using very small pressure drop to track load pressure and control the pump pressure.
- This relief and flow control valve is energy saving type that provide flow and pressure as per programmed for actuator / drive.
- It is an high efficiency and energy-saving valve.

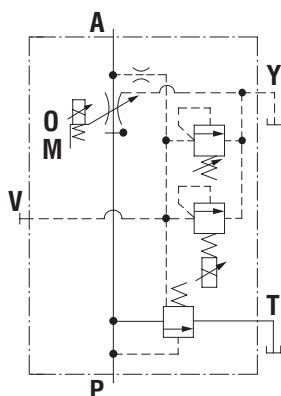


Technical Data

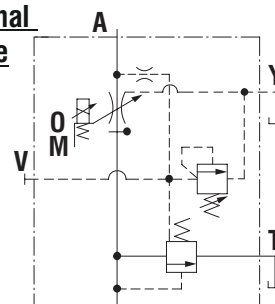
Max. Operating pressure		Bar	245
Max. Flow		L/min	500
Flow Adjustment Range		L/min	5-500
Flow controls	Rated current	mA	700mA
	Coil Resistance	Ω	45 Ω
	Differential Pressure	Bar	9
	Hysteresis		7% or less
	Repeatability		1% or less
Pressure controls	Pressure adj. range	Bar	C:16-137 H:16-206
	Rated Current	mA	C: 690mA H: 690mA
	Coil Resistance	Ω	10 Ω
	Hysteresis		3% or less
	Repeatability		1% or less
Weight		Kg	60 Kg Approx.

Graphic Symbol

With Proportional Pilot Relief Valve



Without Proportional Pilot Relief Valve

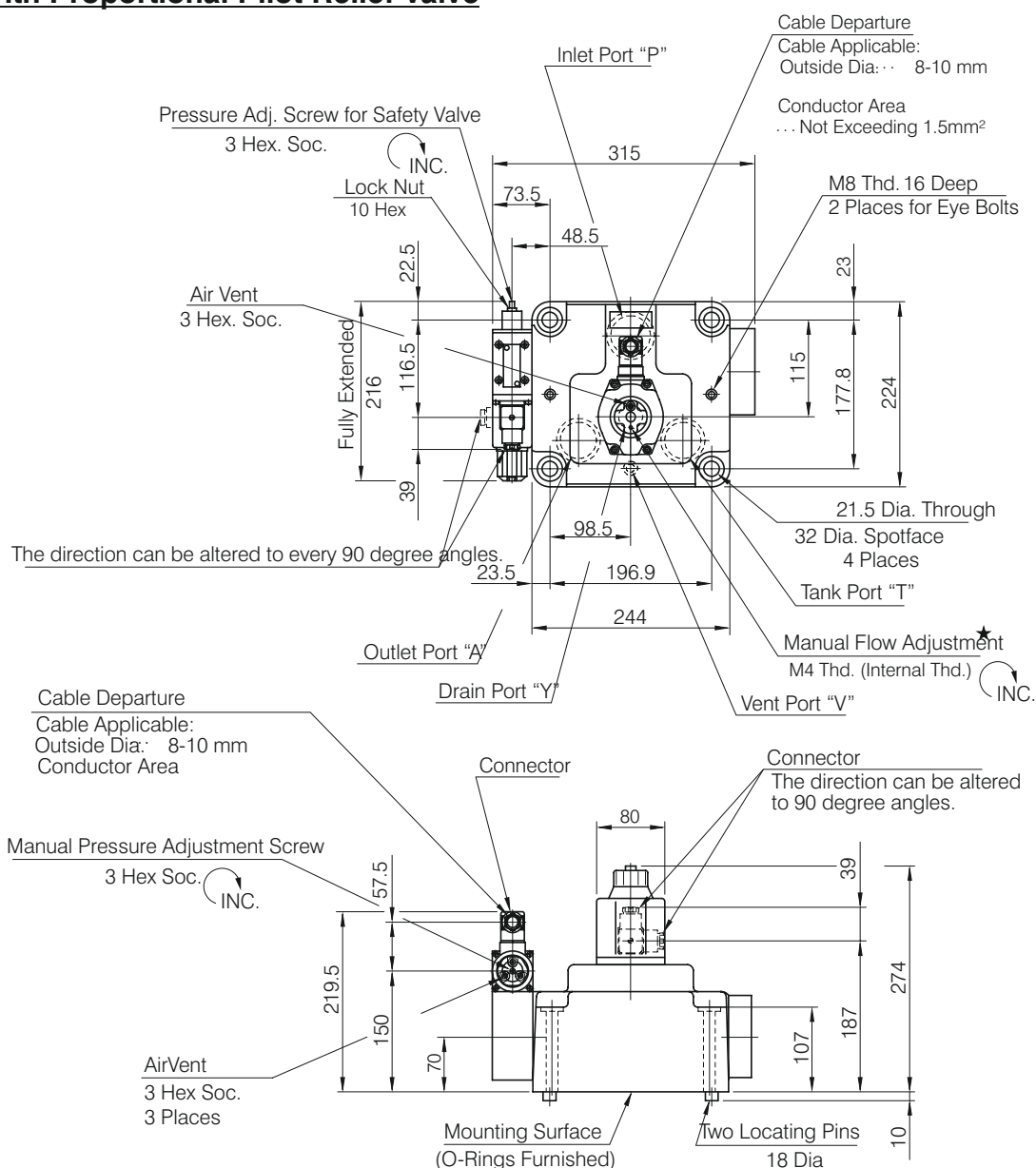




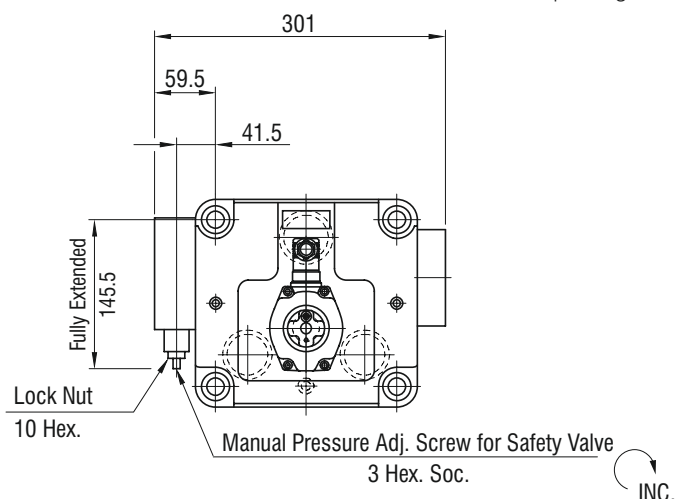
Unit Dimensions EFBG-10

(Dimensions in mm)

With Proportional Pilot Relief Valve



Without Proportional Pilot Relief Valve



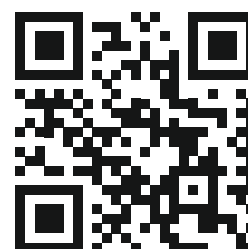
★ Manual adjustment can be done by screwing for example an M4 20 L screw in the M4 thread or pushing in a rod etc. there.

The specified data is for product description purposes only and may not be deemed to be guaranteed unless expressly confirmed in the contract.



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