

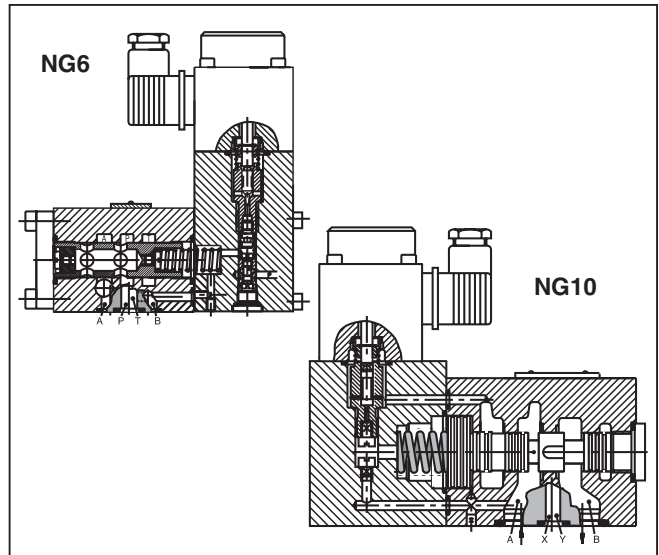
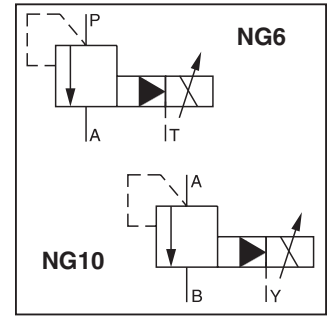
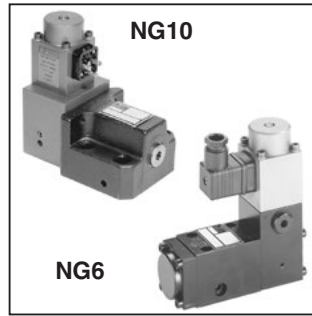
**General Description**

Series VBY\*K pilot operated sequence valves feature proportional adjustment and an external drain. The external drain allows application as both a sequence valve and as a pressure relief valve.

These valves can also be used as a pressure relief valve. Please observe hydraulic connection.

**Features**

- Proportional adjustment
- Manifold mounting acc. to ISO 5781
- External drain
- Main stage spool type valve
- Pilot stage seated type valve



**Ordering Information**

<b>VBY</b>	Sequence Valve
<b>[ ]</b>	Pressure Range
<b>Code</b>	<b>Description</b>
064	64 Bar (928 PSI)
100	100 Bar (1450 PSI)
160	160 Bar (2320 PSI)
210	210 Bar (3000 PSI)
315	315 Bar (4500 PSI)

<b>K</b>	Linear Solenoid
<b>Code</b>	<b>Description</b>
K	9 VDC, 2.5 A

<b>[ ]</b>	Size
<b>Code</b>	<b>Description</b>
06	NG6
10	NG10

<b>[ ]</b>	Seal
<b>Code</b>	<b>Description</b>
N	Nitrile
V	Fluorocarbon

**[ ]**  
 Design Series  
 NOTE:  
 Not required when ordering.

**Weight:**  
 VBY\*K06 2.4 kg (5.3 lbs.)  
 VBY\*K10 4.5 kg (8.9 lbs.)

**! WARNING:** This product can expose you to chemicals including Lead, Nickel (Metallic), or 1,3-Butadiene which are known to the State of California to cause cancer, and Lead or 1,3-Butadiene which is known to the State of California to cause birth defects and other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).  
 B01\_Cat2550.indd, ddp, 04/19

## Specifications

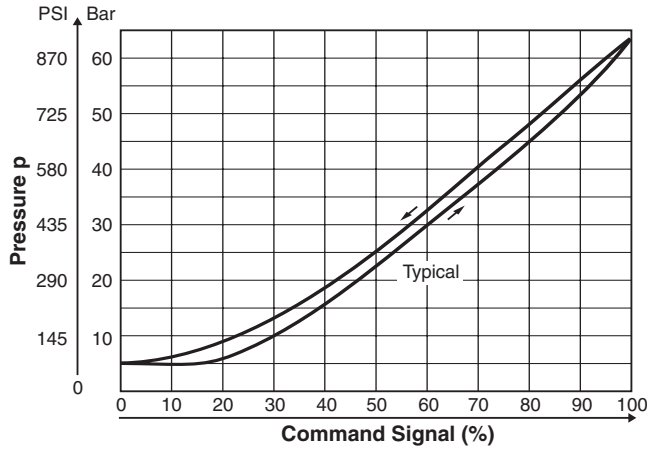
General		
Size	NFPA D03 / NG6 / CETOP 3	NFPA D05 / NG10 / CETOP 5
Design	Proportional Pressure Valve	
Mounting Pattern	ISO 5781	
Actuation	Proportional Solenoid	
Mounting Position	Any	
Ambient Temperature	-20°C to +70°C (-4°F to +158°F)	
Hydraulics		
Operating Pressure, Ports	P, A 315 Bar (4500 PSI) T depressurized	A, B 315 Bar (4500 PSI) Y depressurized
Flow	40 LPM (10.6 GPM)	160 LPM (42.3 GPM)
Pressure Ranges	64, 100, 160, 210, 315 Bar (928, 1450, 2320, 3045, 4568 PSI)	
Fluid	Hydraulic oil as per DIN 51524...51535, other on request	
Fluid Temp. Recommended Permitted	+30°C to +50°C (+86°F to +122°F) -20°C to +70°C (-4°F to +158°F)	
Viscosity Range Recommended Permitted	30 to 50 cST / mm <sup>2</sup> /s (139 to 232 SSU) 20 to 380 cST / mm <sup>2</sup> /s (93 to 1761 SSU)	
Filtration	ISO 4406 (1999) 18/16/13 (acc. NAS 1638: 7)	
Linearity	±3.5% at > 15% p <sub>nom</sub>	
Repeatability	<±2%	
Hysteresis	<3%	
Response Time	<150 ms	<200 ms
Manufacturing Tolerance	±5% to p <sub>max</sub>	
Electrical		
Duty Cycle	100% ED; CAUTION: Coil temperature up to 150°C (302°F) possible	
Protection Class	IP54 at DIN 40050 (plugged and mounted)	
Nominal Voltage	9 VDC	
Maximum Current	2.5 A	
Coil Resistance	21 ohm at 20°C (68°F)	
Plug Connectors	2 pole + PE / connector EN 175301-803 / cable Ø 8 to 10mm	
Power Amplifier	PCD00A-400	

B

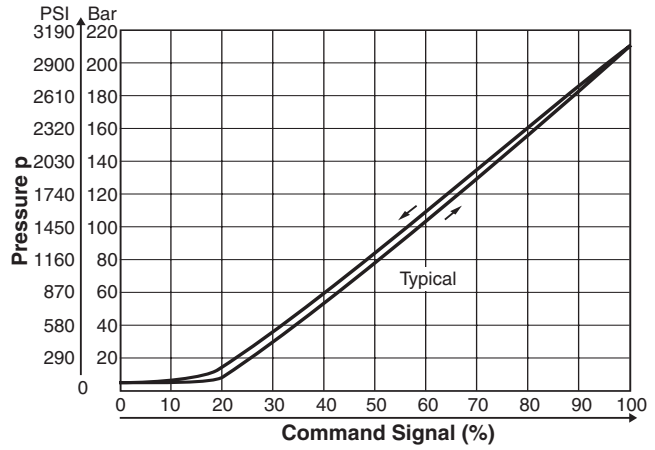
**Performance Curves - NG6**

Pressure Curves where  $p = f(U_{set})$

**Setting Range max. 64 Bar (928 PSI)**

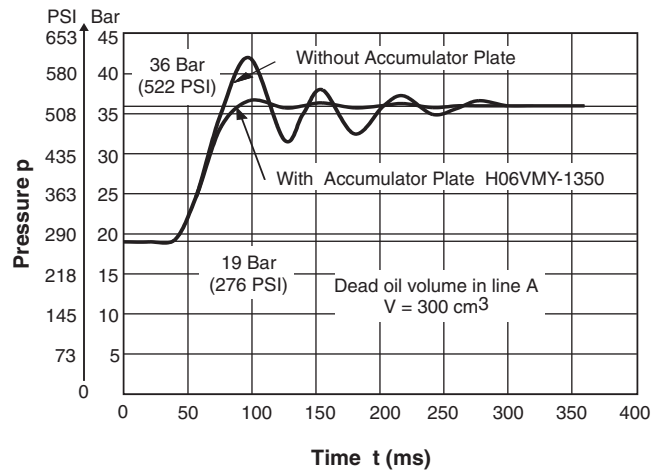
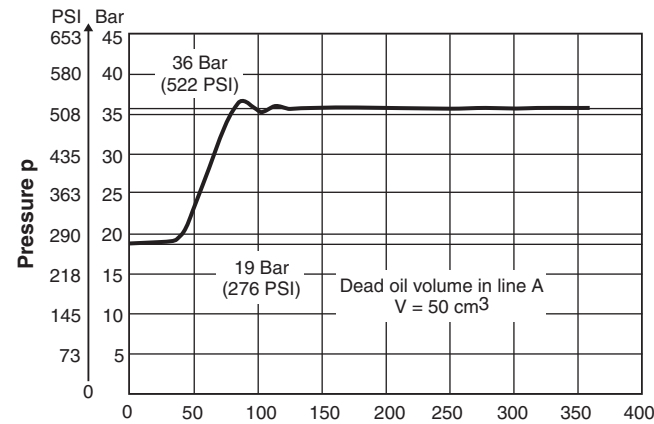


**Setting Range max. 210 Bar (3045 PSI)**



**Step Response Signal**

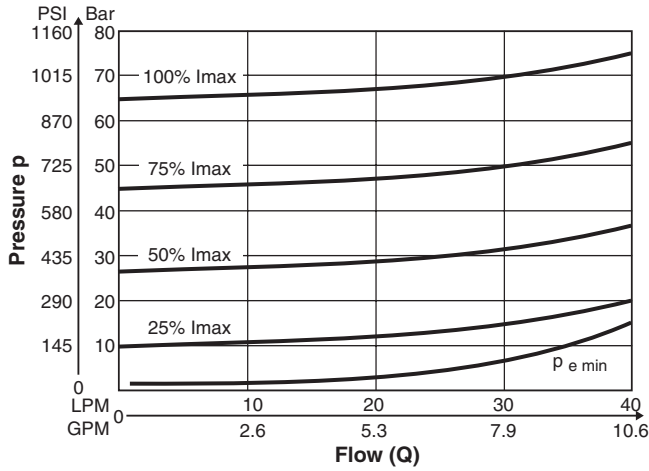
**Setting Range max. 210 Bar (3045 PSI)**



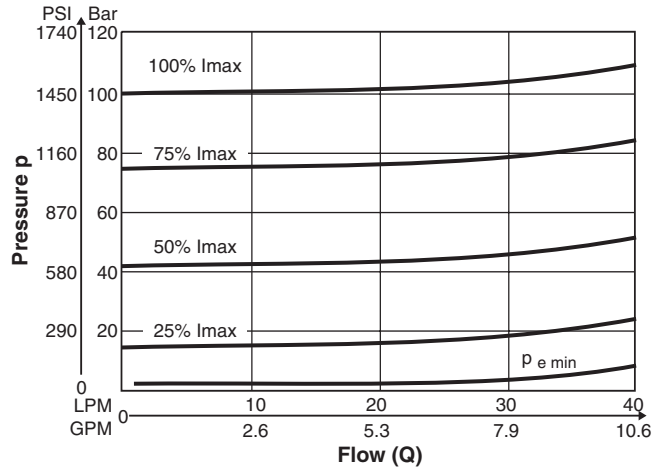
**NG6**

p/Q Performance Curves measured at  $t = 50^{\circ}\text{C}$  ( $122^{\circ}\text{F}$ ) and  $v = 36\text{mm}^2/\text{s}$

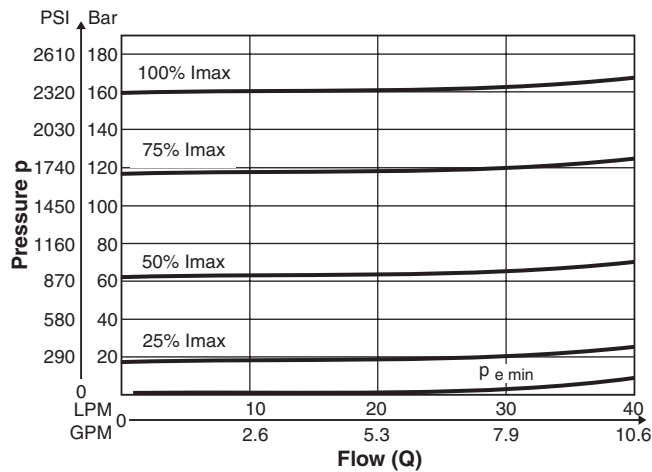
**Setting Range max. 64 Bar (928 PSI)**



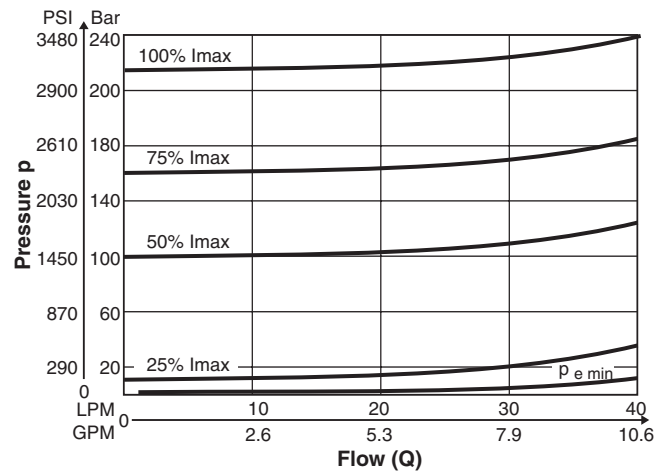
**Setting Range max. 100 Bar (1450 PSI)**



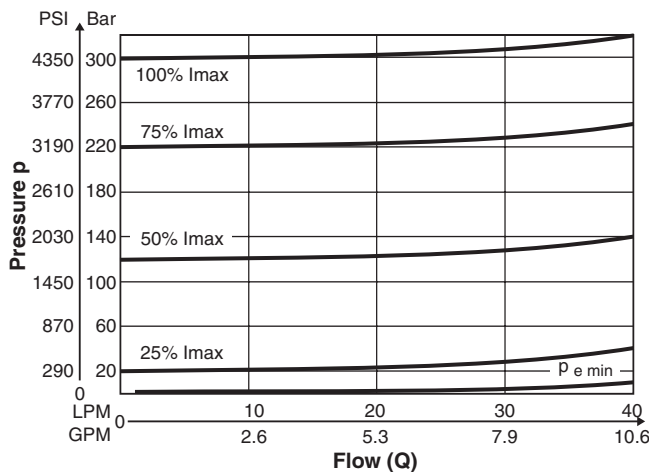
**Setting Range max. 160 Bar (2320 PSI)**



**Setting Range max. 210 Bar (3000 PSI)**



**Setting Range max. 315 Bar (4500 PSI)**



**Note:**  
 Accumulator Plate  
 H06VMY-1350  
 Height: 40 mm (1.58 in.)

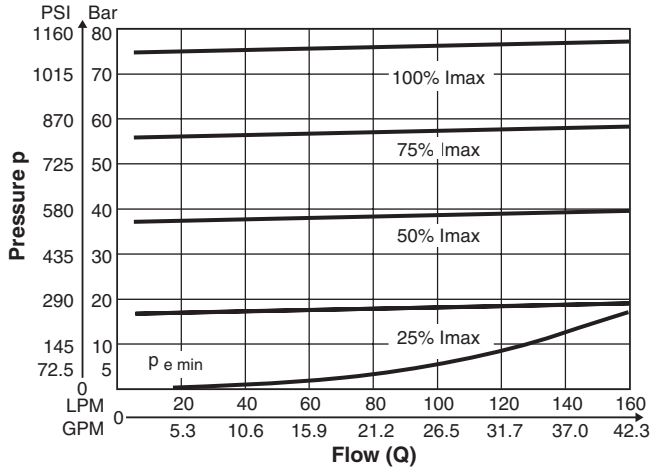


**B**

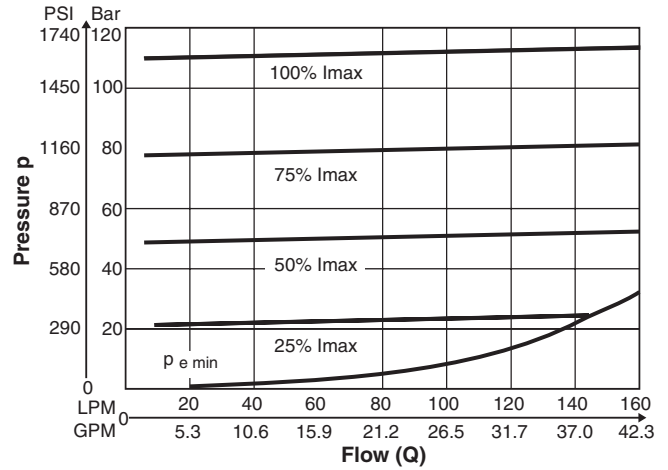
**NG10**

p/Q Performance Curves measured at  $t = 50^{\circ}\text{C}$  ( $122^{\circ}\text{F}$ ) and  $v = 36\text{mm}^2/\text{s}$

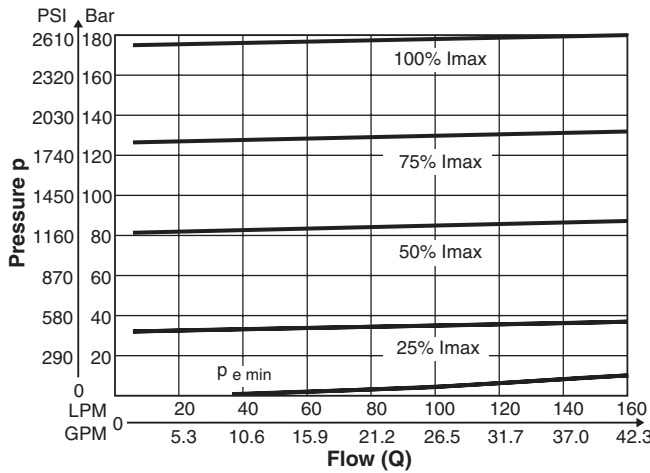
**Setting Range max. 64 Bar (928 PSI)**



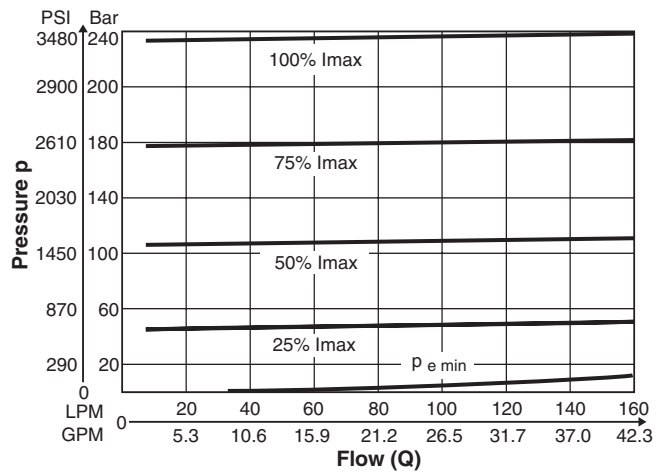
**Setting Range max. 100 Bar (1450 PSI)**



**Setting Range max. 160 Bar (2320 PSI)**

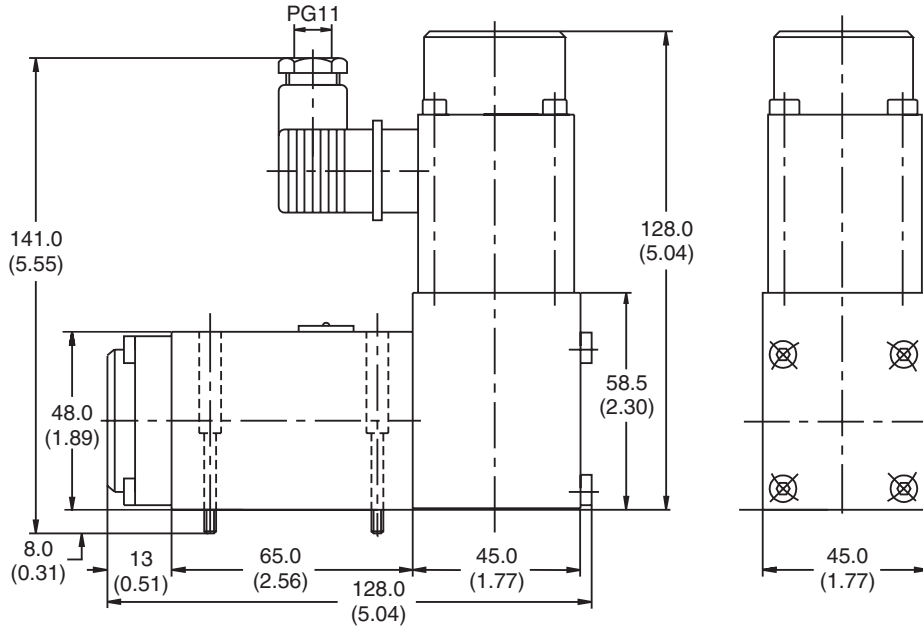
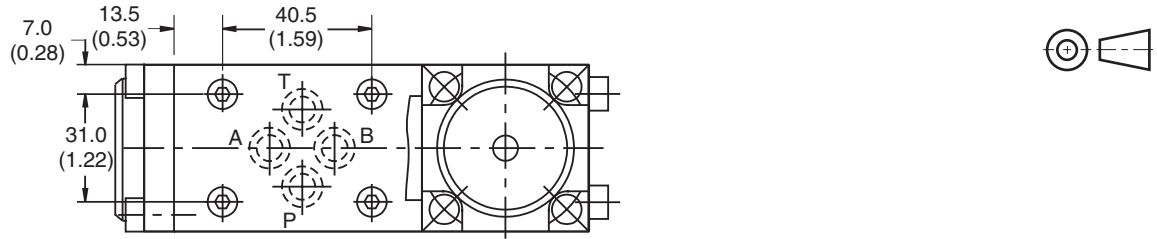


**Setting Range max. 210 Bar (3045 PSI)**



**Size NG6**

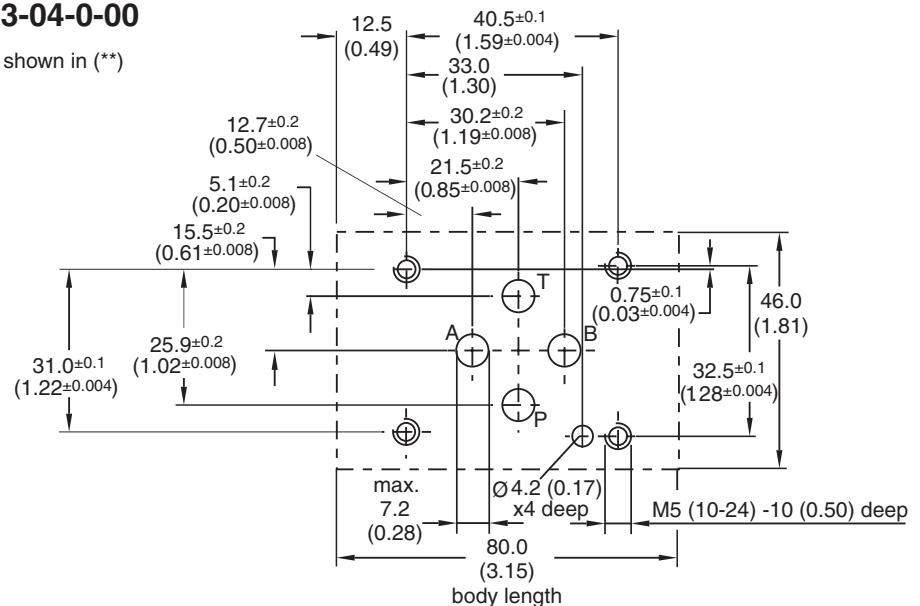
Inch equivalents for millimeter dimensions are shown in (\*\*)



<b>Surface Finish</b> 	<b>Bolt Kit</b> <b>DIN912 12.9</b> BK375 4x-M5x30 BK209 4x10-24x1.25"	 7.5 Nm (5.5 lb.-ft.)	<b>Seal Kit</b>	
			<b>Nitrile</b> SK-VMY-L06-N	<b>Fluorocarbon</b> SK-VMY-L06-V

**Mounting Pattern ISO 5781-03-04-0-00**

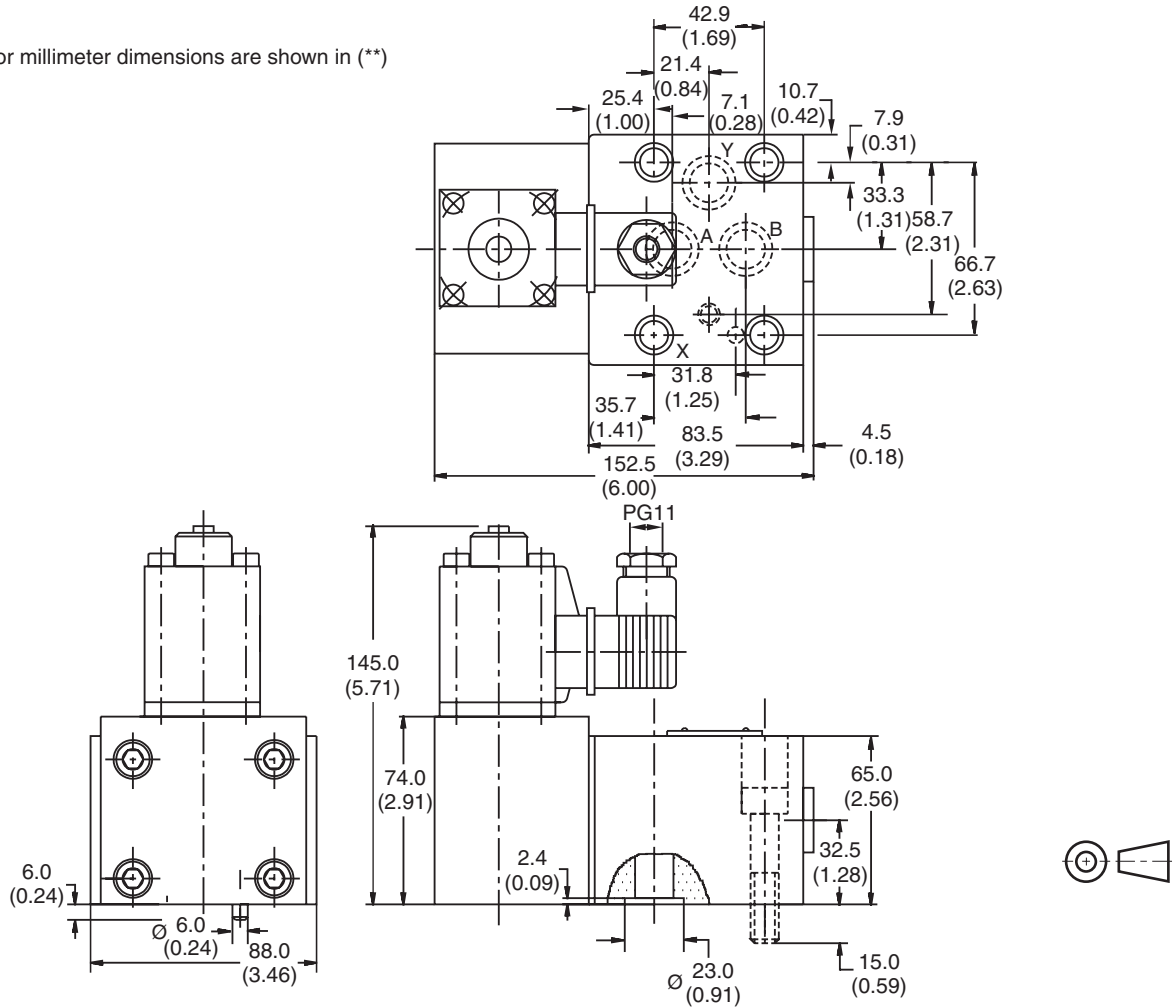
Inch equivalents for millimeter dimensions are shown in (\*\*)




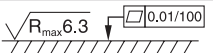


**Size NG10**

Inch equivalents for millimeter dimensions are shown in (\*\*)

**B**



Surface Finish	Bolt Kit  DIN912 12.9		Seal  Kit
	BK389 4xM10x50 BK242 4x3/8-16x2	65 Nm (47.9 lb.-ft.)	Nitrile: SK-VB/VM-A10 Fluorocarbon: SK-VB/VM-A10V

**Mounting Pattern ISO 5781-06-07-0-00**

Inch equivalents for millimeter dimensions are shown in (\*\*)

