Electrohydraulic Motion Controls

Proportional Directional & Pressure Control Valves
Servovalves, Electronics, Accessories

Catalog HY14-2550/US

aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding

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SAFETY GUIDE

For safety information, see Safety Guide SG HY14-1000 at www.parker.com/safety or call 1-800-CParker.

Cat HY14-2550-frtcvr.indd, dd

Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA

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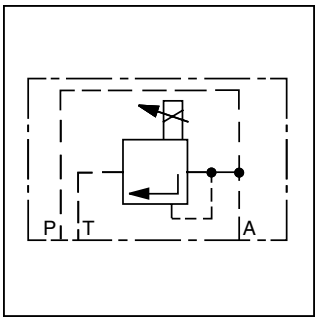
B

RE06M_W.indd, dd

Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA

General Description

Series RE06M*W proportional relief valves are direct operated proportional valves typically used as remote control valves for flow rates of below 3 LPM (0.8 GPM).

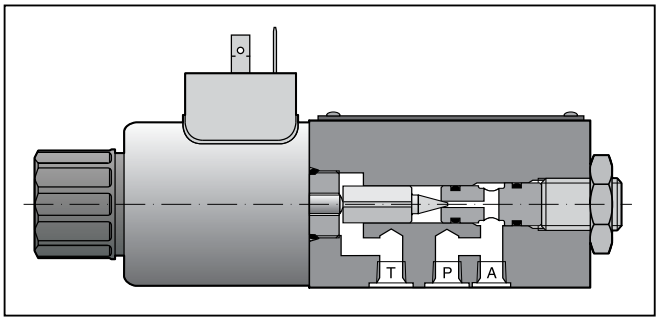


B

Function

When the pressure in port P or A exceeds the pressure setting at the solenoid, the cone opens to port T and limits the pressure in port P to the adjusted level.

The optimum performance can be achieved in combination with the digital amplifier module PCD00A-400.



Features

- Direct operated by proportional solenoid.
- Very low pressure adjustment of $p_{min.}$
- Two pressure ports, A and P.
- Subplate mounting according to ISO 6264.
- Four pressure ranges available.

Specifications

General	
Nominal Size	DIN NG6 / CETOP 3 / NFPA D03
Interface	Subplate mounting according to ISO 6264
Mounting Position	as desired, horizontal mounting prefered
Ambient Temperature [°C]	-20 ... +70 (-4°F ... +158°F)
$MTTF_D$ value [years]	150
Hydraulic	
Maximum Operating Pressure	Ports P and A up to 350 (5075 PSI); port T 30 Bar (435 PSI)
Pressure Range	105 Bar (1523 PSI), 175 Bar (2538 PSI), 250 Bar (3625 PSI), 350 (5075 PSI)
Nominal Flow [l/min]	See p/Q curves
Fluid	Hydraulic oil as per DIN 51524 ... 525
Viscosity, Recommended [cSt] / [mm²/s] **Permitted [cSt] / [mm²/s]**	30 ... 80 (139 ... 371 SSU) 12 ... 380 (56 ... 1761SSU)
Fluid Temperature [°C]	-20 ... +60; (-4°F ... +140°F)
Filtration	ISO 4406 (1999), 18/16/13
Linearity [%]	±2.8
Repeatability [%]	<±1
Hysteresis [%]	±1.5 of p_{max}
Electrical	
Duty Ratio [%]	100 ED
Protection Class	IP 65 in accordance with EN 60529 (plugged and mounted)
Nominal Voltage [V]	12 (2.3 A max. current), 16 (1.3 A max. current)
Coil Resistance [Ohm]	4 at 20°C (68°F)
Solenoid Connection	Connector as per DIN 43650
Power Amplifier, Recommended	PCD00A-400

Ordering Information

RE	06	M		W	2		1		W	
Proportional Pressure Relief Valve	Size	Manifold Mounting	Pressure Range	Offboard Electronics		Seal	Valve Open at Zero Command	Solenoid Type	Electronic Connection	Design Series

NOTE: Not required when ordering.

Code	Description
06	NG6 D03, CETOP 3

Code	Description
N	Nitrile
V	Fluorocarbon

Code	Description
10	up to 105 Bar (1522 PSI)
17	up to 175 Bar (2538 PSI)
25	up to 250 Bar (3625 PSI)
35	up to 350 Bar (5075 PSI)

Code	Solenoid Voltage
K*	12 V, 2.5 A
X**	16 V, 1.3 A

* Use with "PCD" Series Driver cards

** Order if currently using "ED" card

Code	Description
W	Socket Connector DIN 43650 without plug

Please order plug separately. See Accessories.

Bolt Kit	Qty	Size
BK209	4	10-24 X 1.25"
BK375	4	M5 x 30mm

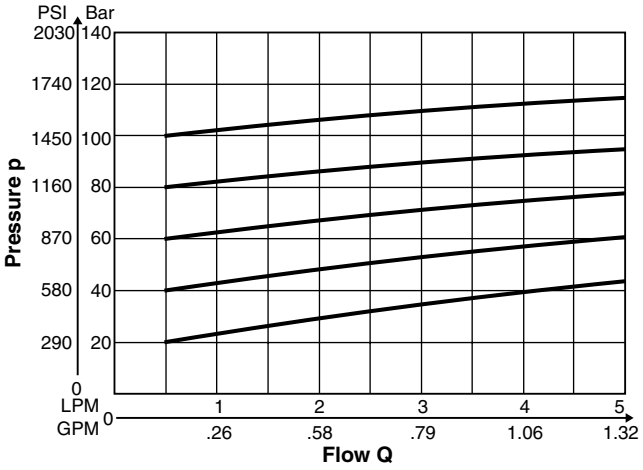
Weight: 1.8 kg (4.0 lbs.)

B

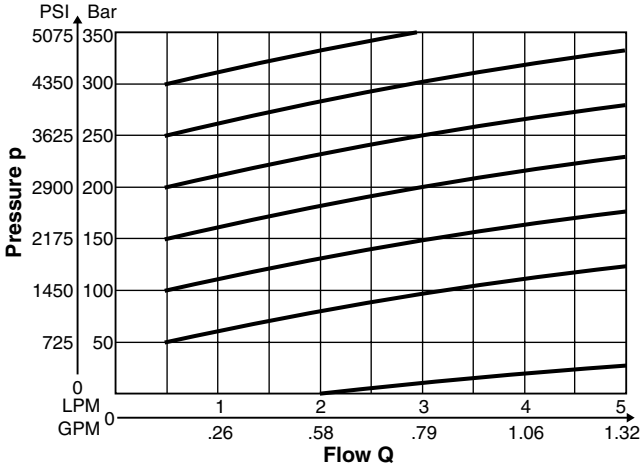
Performance Curves

p/Q Curves

Pressure Stage 105 Bar



Pressure Stage 350 Bar



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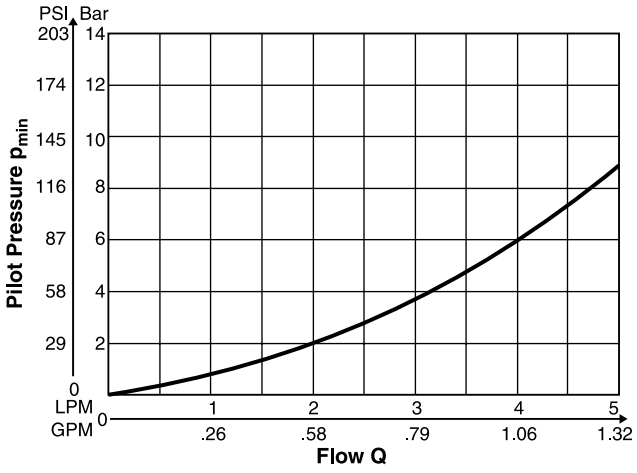
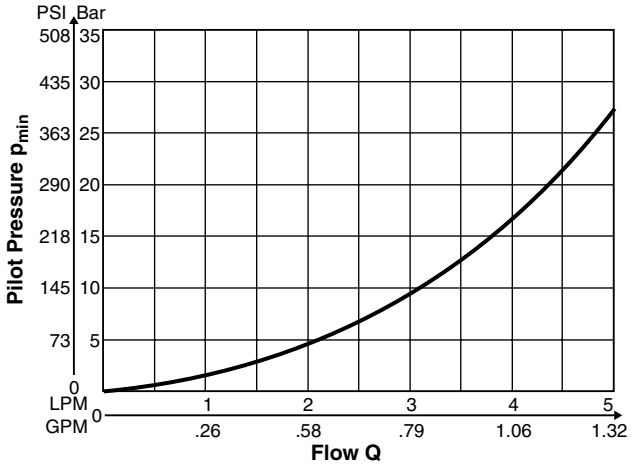
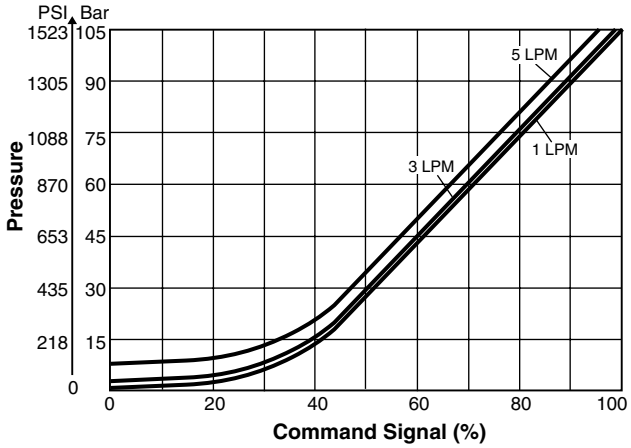
p_{min}/Q curves
Pressure Stage 105 Bar



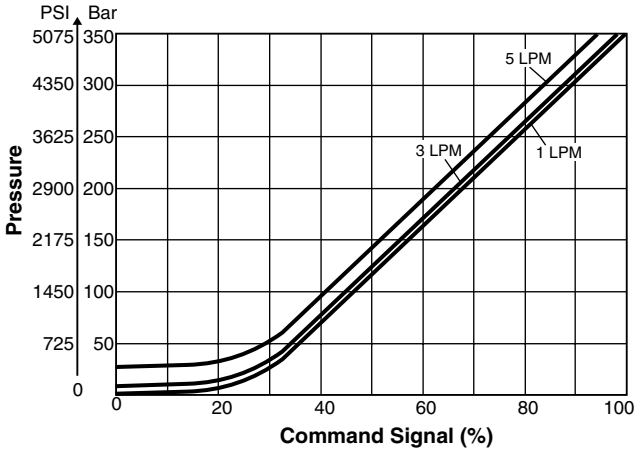
Pressure Stage 350 Bar



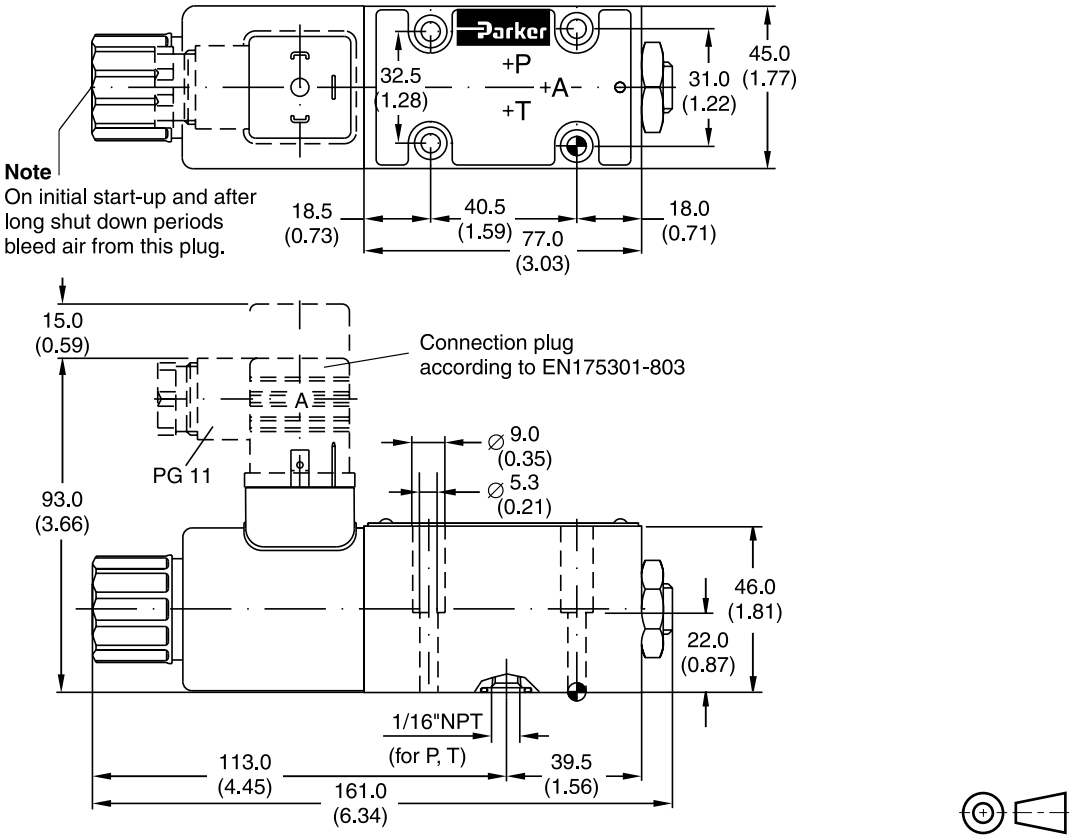
$p_{set\text{-}voltage}$ Curves
Pressure Stage 105 Bar



Pressure Stage 350 Bar



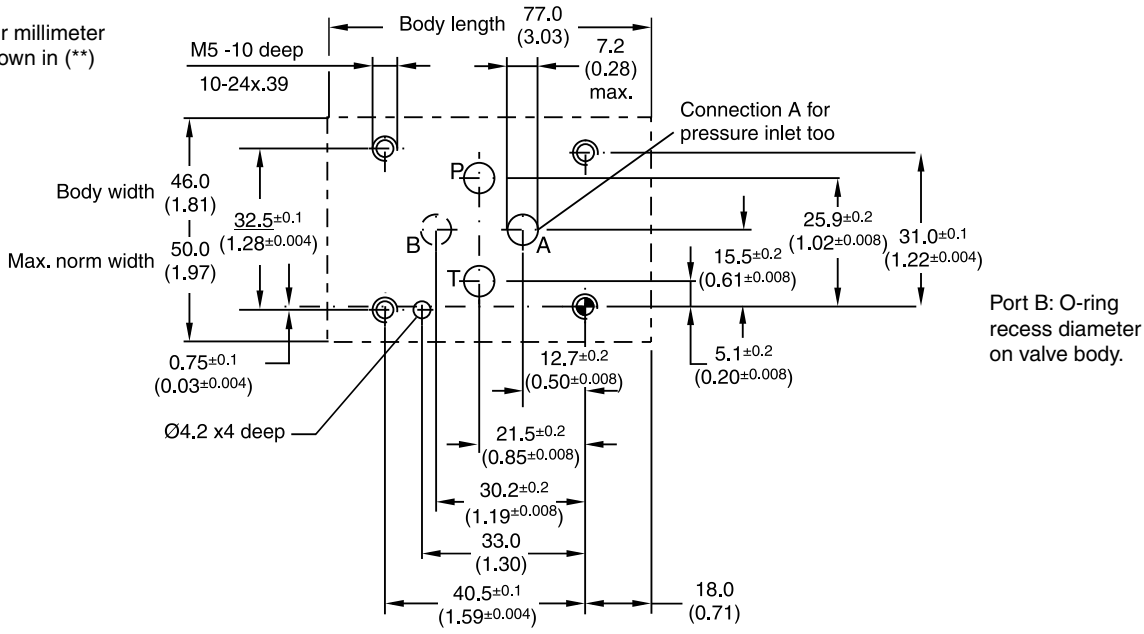
Inch equivalents for millimeter dimensions are shown in (**)



Surface Finish	Bolt Kit			Seal Kit	
				Nitrile	Fluorocarbon
$\sqrt{R_{max}6.3}$ 0.01/100	BK375 BK209	4x M5x30 DIN 912 12.9 4x 10-24x1.25	7.6 Nm (5.6 lb.-ft.) ±15%	SK-RE06MWN	SK-RE06MWV

Mounting Pattern ISO 6264-03-04-*-97

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



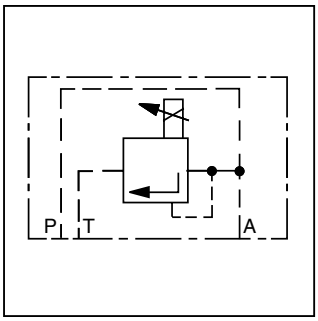
RE06M_W.indd, dd

Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA

B

General Description

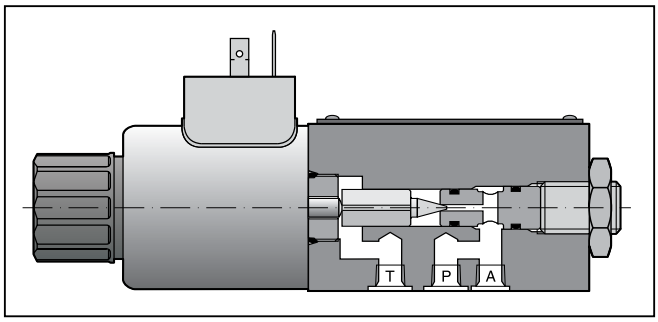
Series 4VP01 direct operated proportional pressure relief valves are equipped with one pressure port (port P). The solenoid is located on the A port side of the mounting pattern.



Function

When the pressure in port P exeeds the pressure setting at the solenoid, the cone opens to port T and limits the pressure in port P to the adjusted level.

Optimum performance can be achieved in combination with the digital amplifier module PCD00A-400.



Features

- Direct operated by proportional solenoid.
- Very low pressure adjustment of $p_{min.}$
- 1 pressure port.
- Subplate mounting according to ISO 6264.
- 4 pressure ranges.

Ordering Information

4VP01	☐	☐	G12	B	☐	☐
Proportional Pressure Relief Valve	Pressure Range	Orifice in Port P	Solenoid Voltage 12V / 2.3 A	Design Series	Seal	Options Check with Factory

Code	Description
1	up to 50 Bar (725 PSI)
2	up to 105 Bar (1523 PSI)
3	up to 210 Bar (3045 PSI)
5	up to 350 Bar (5075 PSI)

Code	Description
0	Without (Standard)
1	Ø 0.6 mm
2	Ø 0.8 mm
3	Ø 1.0 mm
4	Ø 1.2 mm

Code	Description
1	Nitrile
5	Fluorocarbon

Bolt Kits:

BK209	(4) 10-14x1.25 SHCS
BK375	(4) M5x30 SHCS

Weight: 1.8 kg (4.0 lbs.)

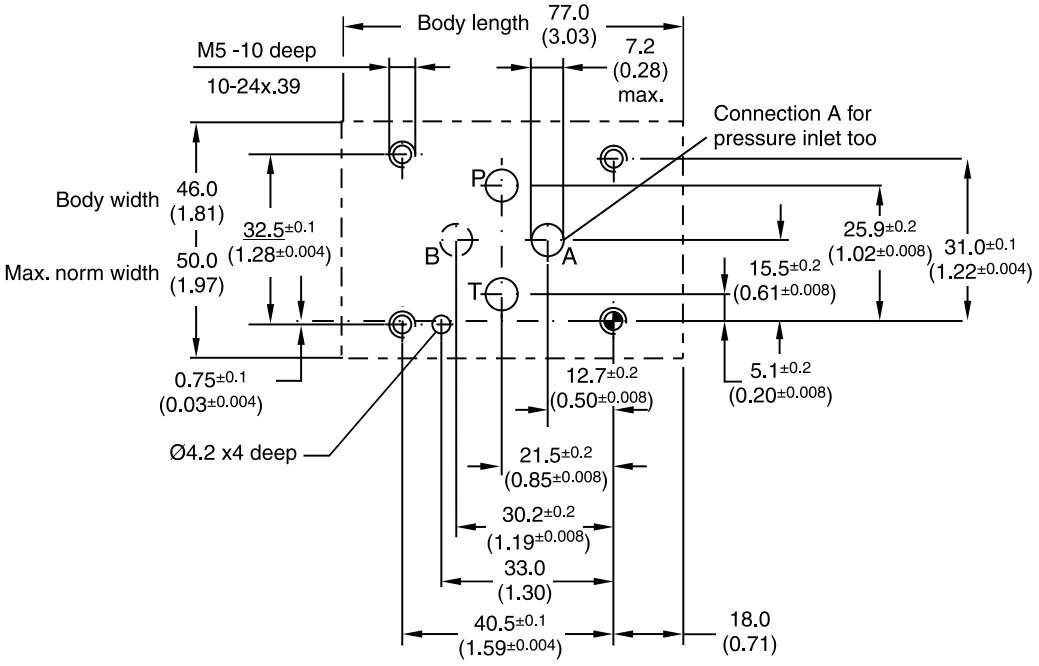
B

Specifications

General	
Size	DIN NG6 / CETOP 3 / NFPA D03
Interface	Subplate Mounting acc. ISO 6264
Mounting Position	As desired, horizontal position preferred
Ambient Temperature Range	-20°C to +70°C (-4°F to +158°F)
Hydraulic	
Maximum Operating Pressure	Port P 350 Bar (5075 PSI); Port T depressurized
Pressure Range	50 Bar (725 PSI), 105 Bar (1523 PSI), 210 Bar (3045 PSI), 350 Bar (5075 PSI)
Nominal Flow	See p/Q Curves
Fluid	Hydraulic oil as per DIN 51524 ... 51525
Fluid Temperature	-20°C to +60°C (-4°F to +140°F)
Viscosity Permitted Recommended	12 to 380 cSt / mm^2/s (56 to 1761 SSU) 30 to 80 cSt / mm^2/s (139 to 371 SSU)
Filtration	ISO Class 4406 (1999) 18/16/13
Linearity	±2.8%
Repeatability	<±1%
Hysteresis	±1.5 of p_{max}
Electrical	
Duty Ratio	100% ED
Protection Class	IP65 in accordance with EN60529 (plugged and mounted)
Supply Voltage	12 VDC
Maximum Current	2.3 amps
Coil Resistance	4 Ohm at 20°C (68°F)
Solenoid Connection	Connector as per EN 175301-803
Power Amplifier	PCD00A-400, recommended

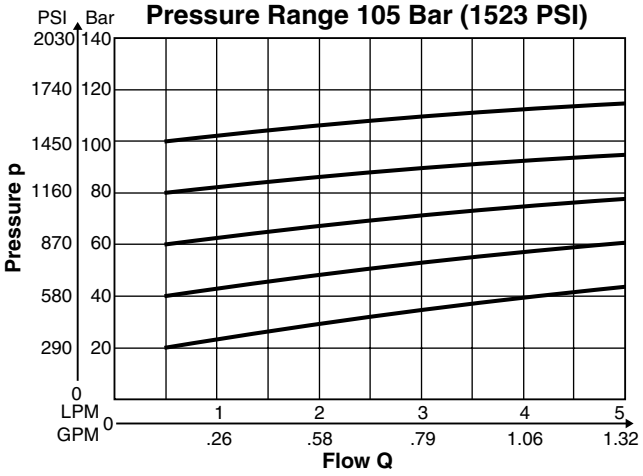
Mounting Pattern ISO 6264-03-04-*-97

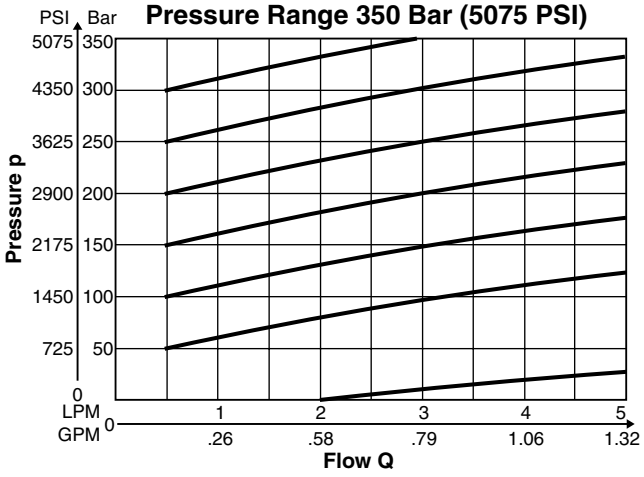
Inch equivalents for millimeter dimensions are shown in (**)



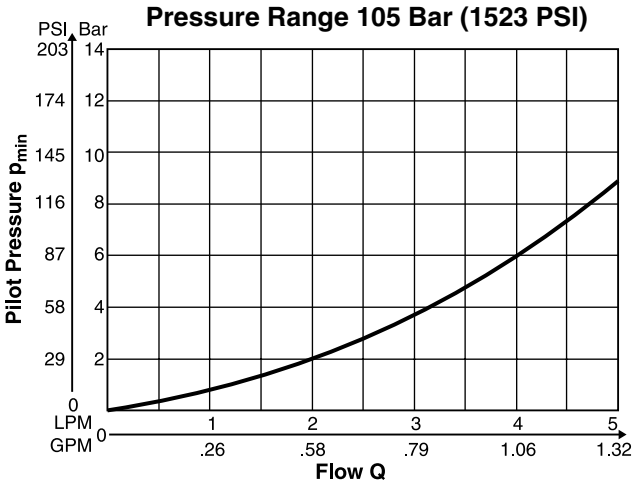
B

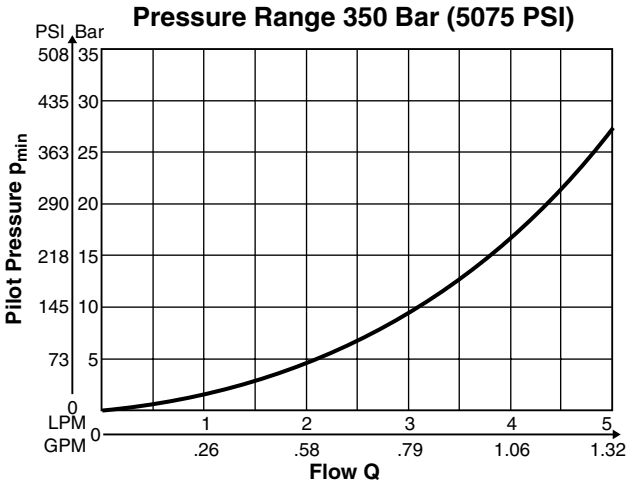
p/Q Curves



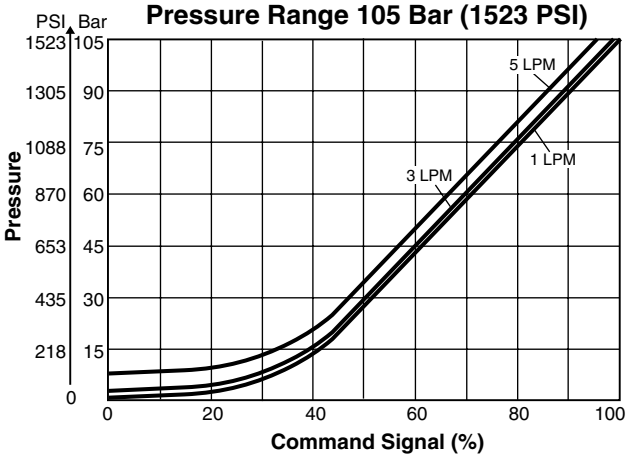


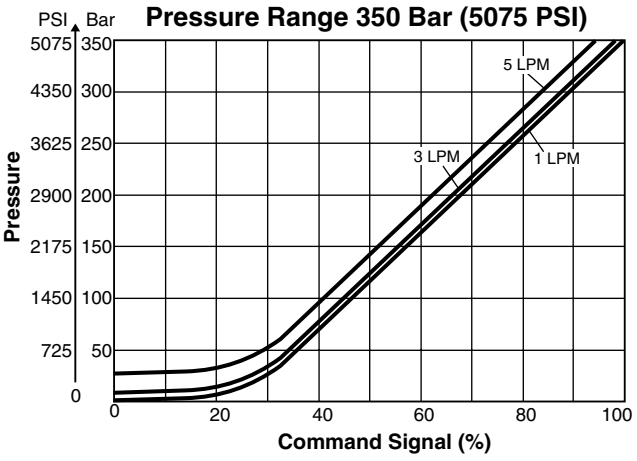
Minimum Adjusted Pressure



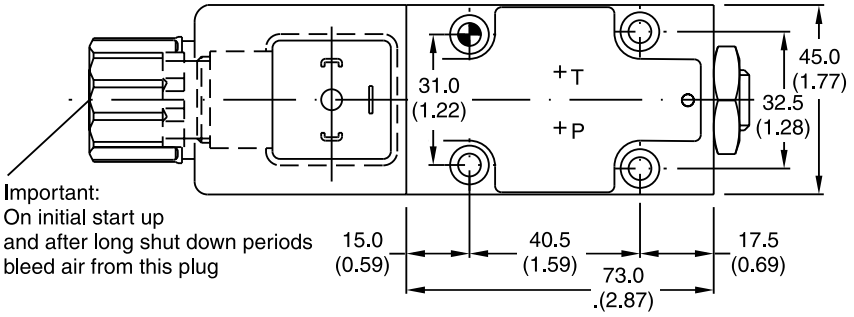


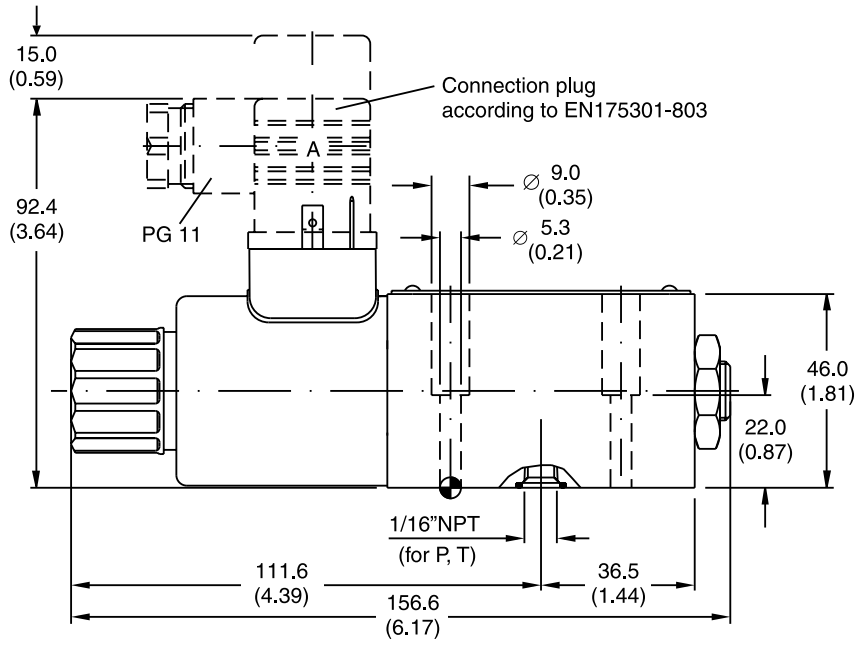
Pressure / Signal Curve

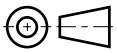




Inch equivalents for millimeter dimensions are shown in (**)







Surface Finish	Bolt Kit			Seal Kit	
				Nitrile	Fluorocarbon
$R_{max}6.3$ 0.01/100	BK375 BK209	4x M5x30 DIN 912 12.9 4x 10-24x1.25	7.6 Nm (5.6 lb.-ft.) ±15%	SK-RE06MWN	SK-RE06MWV

B

General Description

Series RE06*T (NG6) proportional pressure relief valves are direct operated proportional solenoid valves with integral control electronics.

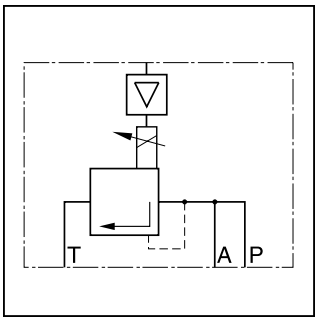
The digital onboard electronic is situated in a robust metal housing and can be used in rough environments. The nominal values of the valves are factory set. Additionally the ProPxD software permits the editing of all parameters. The software is also used for the digital electronic modules. The cable for connection to a serial RS232 interface is available as accessory.

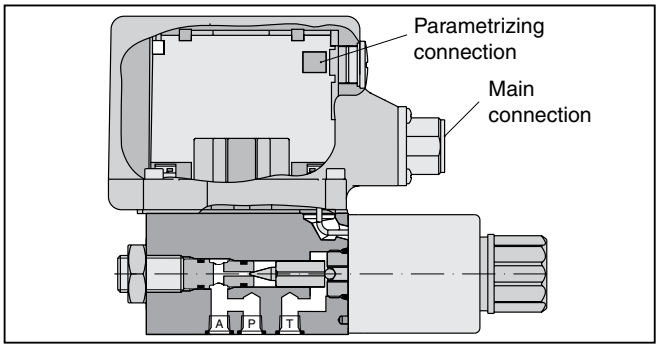
The electrical connection is available in 2 options:
Code F: 6 + PE central connection
+/- 10V command signal (preset)
+10V reference voltage output
Code R: 6 + PE central connection
4…20mA command signal (preset)

Function

When the pressure in port P or A exceeds the pressure setting at the solenoid, the cone opens to port T and limits the inlet pressure to the adjusted level.

The pressure adjustment is effected by applying current to the solenoid. The control signal is modulated to the solenoid current by the electronics.





Features

- Direct operated pressure relief valve.
- Onboard electronics.
- Very low pressure adjustment of $p_{min.}$
- Subplate mounting acc. to ISO 6264.
- 6 pressure ranges.
- 2 pressure inlet ports, A and P.

Ordering Information

RE	06	M		T	2		1		0	0	
Proportional Pressure Relief Valve	Size	Manifold Mounting	Pressure Range	Integrated Electronics	Configuration	Seal	Valve Open at Zero Command	Electronic Variations	Electronic Option	Accessory	Design Series

NOTE: Not required when ordering.

Code	Description
06	NG6 D03, CETOP 3

Code	Description
N	Nitrile
V	Fluorocarbon

Code	Description
05	50 Bar (725 PSI)
10	105 Bar (1523 PSI)
17	175 Bar (2538 PSI)
21	210 Bar (3045 PSI)
25	250 Bar (3625 PSI)
35	350 Bar (5075 PSI)

Code	Description
F	Voltage input 0...+10V with reference output +10V
R	Current input 4...20mA

Weight: NG6 2.2 kg (4.9 lbs.)

Bolt Kit	Qty	Size
BK375	4	M5x30mm
BK209	4	10-24x1.25

Please order plugs separately. See Accessories.

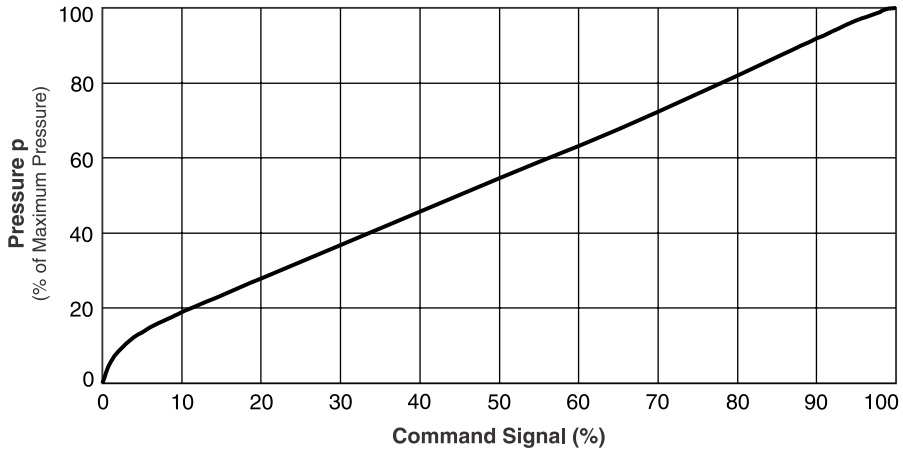
Parametrizing cable OBE => RS232
Item no. 40982923

General		
Size		DIN NG6 / CETOP 3 / NFPA D03
Interface		Subplate mounting according to ISO 6264
Mounting Position		as desired, horizontal mounting prefered
Ambient Temperature	**[°C]**	-20...+60; (-4°F ... +140°F)
$MTTF_D$ value	**[years]**	75
Vibration Strength	**[g]**	10 sinus 5...2000 Hz acc. to IEC 68-2-6 30 noise 20...2000 Hz acc. to IEC 68-2-36 15 shock acc. to IEC 68-2-27
Hydraulic		
Maximum Operating Pressure		Ports A and P 350 Bar (5075 PSI), Port T 30 Bar (435 PSI)
Pressure Range		50 Bar (725 PSI), 105 Bar (1523 PSI),175 Bar (2538 PSI), 210 Bar (3045 PSI), 250 Bar (3625 PSI), 350 (5075 PSI)
Nominal Flow		See p/Q curves
Fluid		Hydraulic oil according to DIN 51524 ... 525
Viscosity		
Recommended	**[cSt] / [mm²/s]**	30 ... 80 (139 ... 371 SSU)
Permitted	**[cSt] / [mm²/s]**	12 ... 38 (56 ... 1761 SSU)
Fluid Temperature	**[°C]**	-20 ... +60; (-4°F ... +140°F)
Filtration		ISO 4406 (1999), 18/16/13
Linearity	**[%]**	See curve
Repeatability	**[%]**	<±1
Hysteresis	**[%]**	±1.5 of p_{max}
Electrical		
Duty Ratio ED	**[%]**	100
Supply Voltage	**[VDC]**	18...30, ripple < 5% eff., surge free
Current Consumption Maximum	**[A]**	2.0
Pre-fusing	**[A]**	2.5 medium lag
Potentiometer Supply	**[V]**	+10 / ±5% max. 10mA
Command Signal **Code F Voltage** **Code R Current**	**[V]** **[mA]**	0...+10, ripple < 0.01 % eff., surge free, Ri = 100 kOhm 4...20, ripple < 0.01 % eff., surge free, Ri = 200 Ohm < 3.6 mA = enable off, > 3.8 mA = enable on (acc. NAMUR NE43)
Differential Input Voltage Max.	**[V]** **[V]**	30 for terminal D and E against PE (terminal G) 11 for terminal D and E against 0V (terminal B)
Adjustment Ranges		
Minimum Current	**[%]**	0...50
Maximum Current	**[%]**	50...100
Ramp	**[s]**	0...32.5
Interface		RS 232, parametrizing connection 5pole
EMC		EN 61000-6-2, EN 61000-6-4
Central Connection		6 + PE acc. EN 175201-804
Cable Specification	**[mm²]**	7 x 1.0 (AWG 18) overall braid shield
Cable Length Maximum	**[m]**	50 (164 ft.)

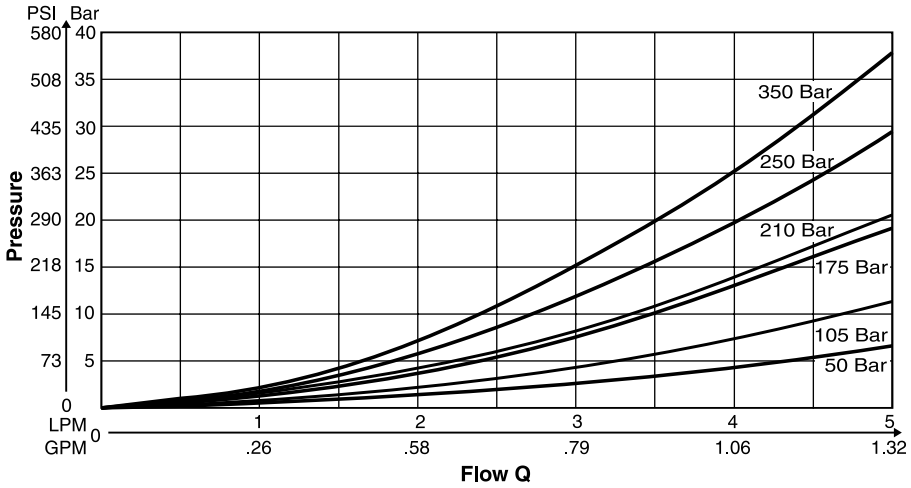
B

B

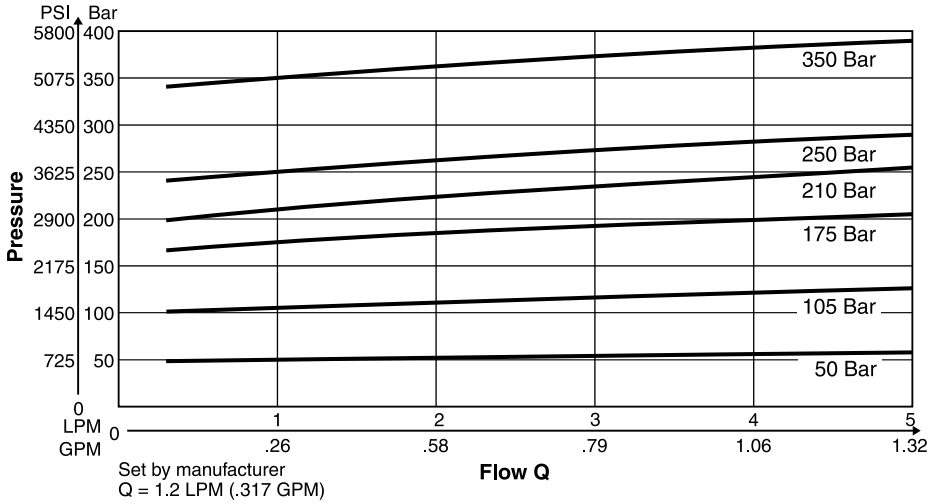
Command/Pressure Curve



p_{min}/Q Curves



P/Q Curves

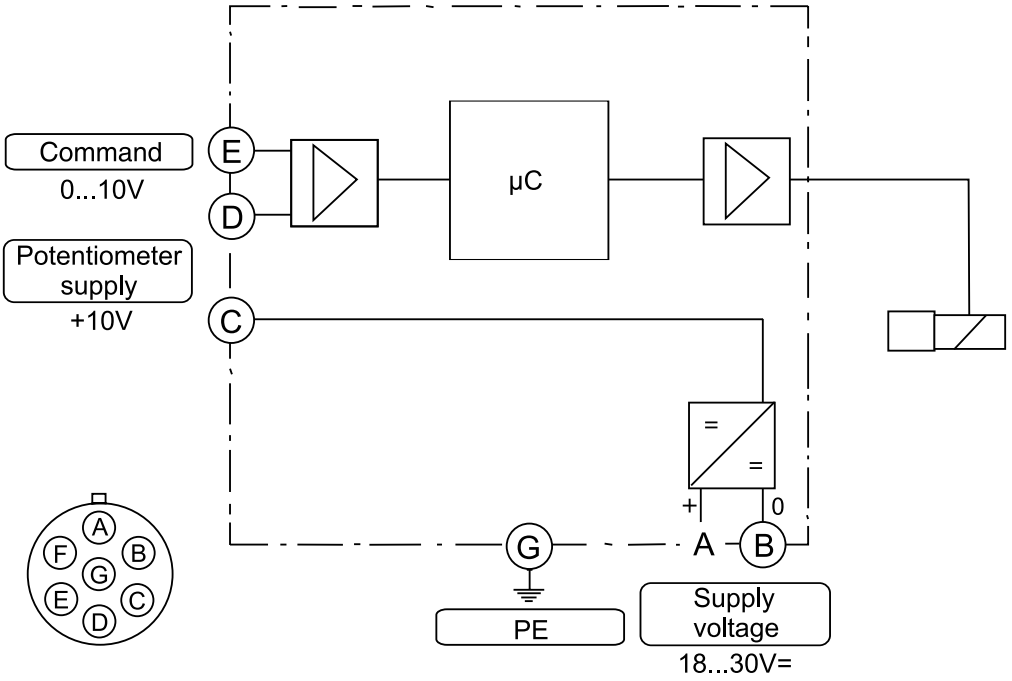


RE06M_T.indd, dd

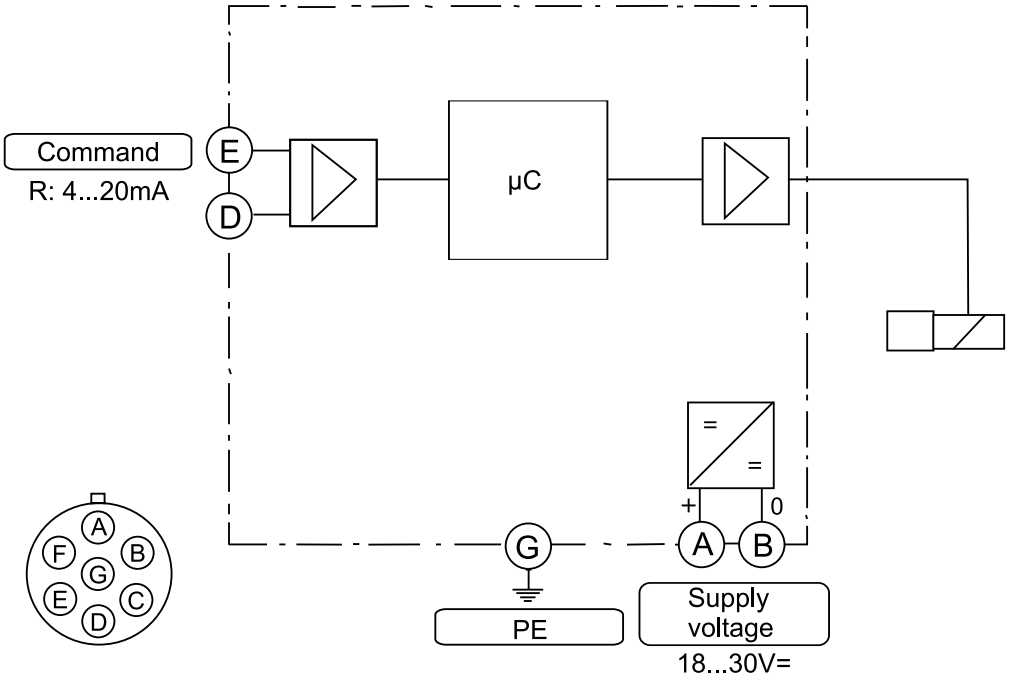
Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA

B

Code F
6 + PE acc. EN 175201-804



Code R
6 + PE acc. EN 175201-804



B

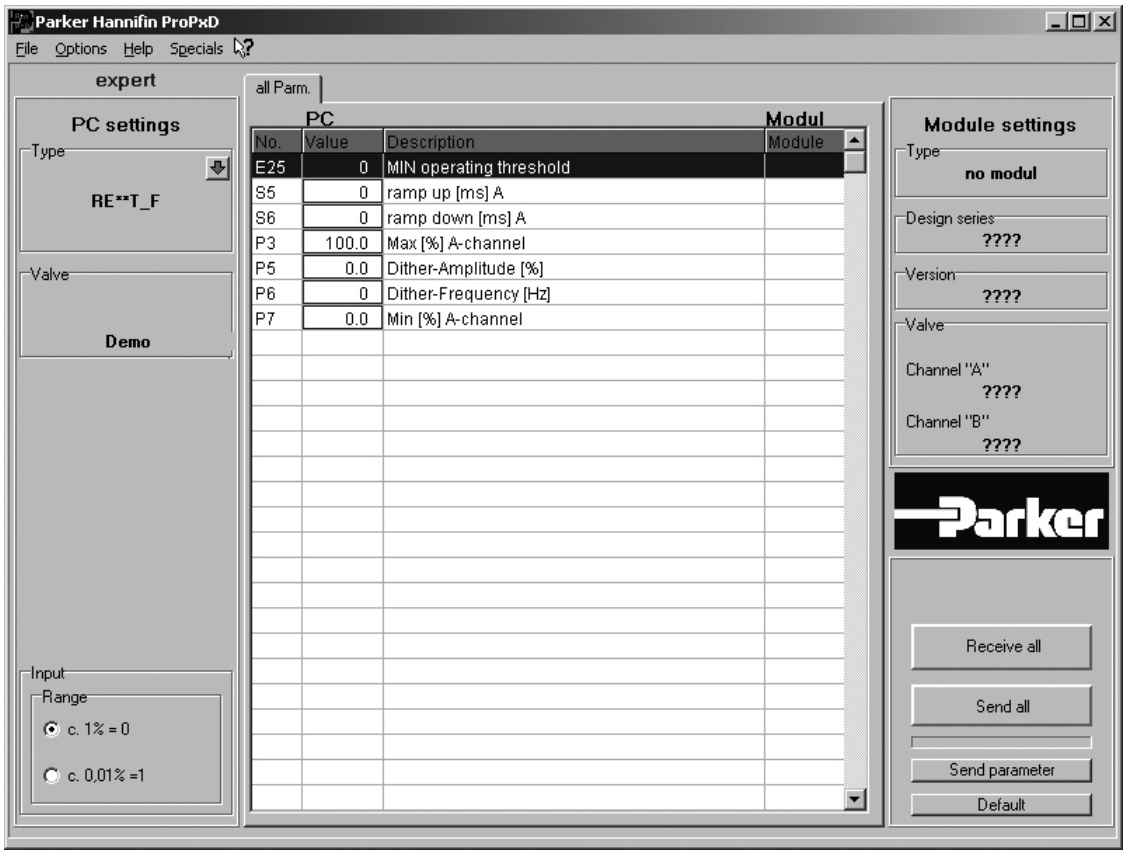
ProPxD Interface Program

The new ProPxD software permits comfortable parameter setting for the electronic modules series PCD, PWD, PZD, PID and PWDXX.

Via the clearly arranged entry mask the parameters can be displayed and modified. Storage of complete parameter sets is possible as well as printout or record as a text file for further documentation. Stored parameter sets may be loaded anytime and transmitted to the electronic module in the same manner as the basic parameters which are available for all usable valve series. Inside the electronic a nonvolatile memory stores the data with the option for recalling or modification.

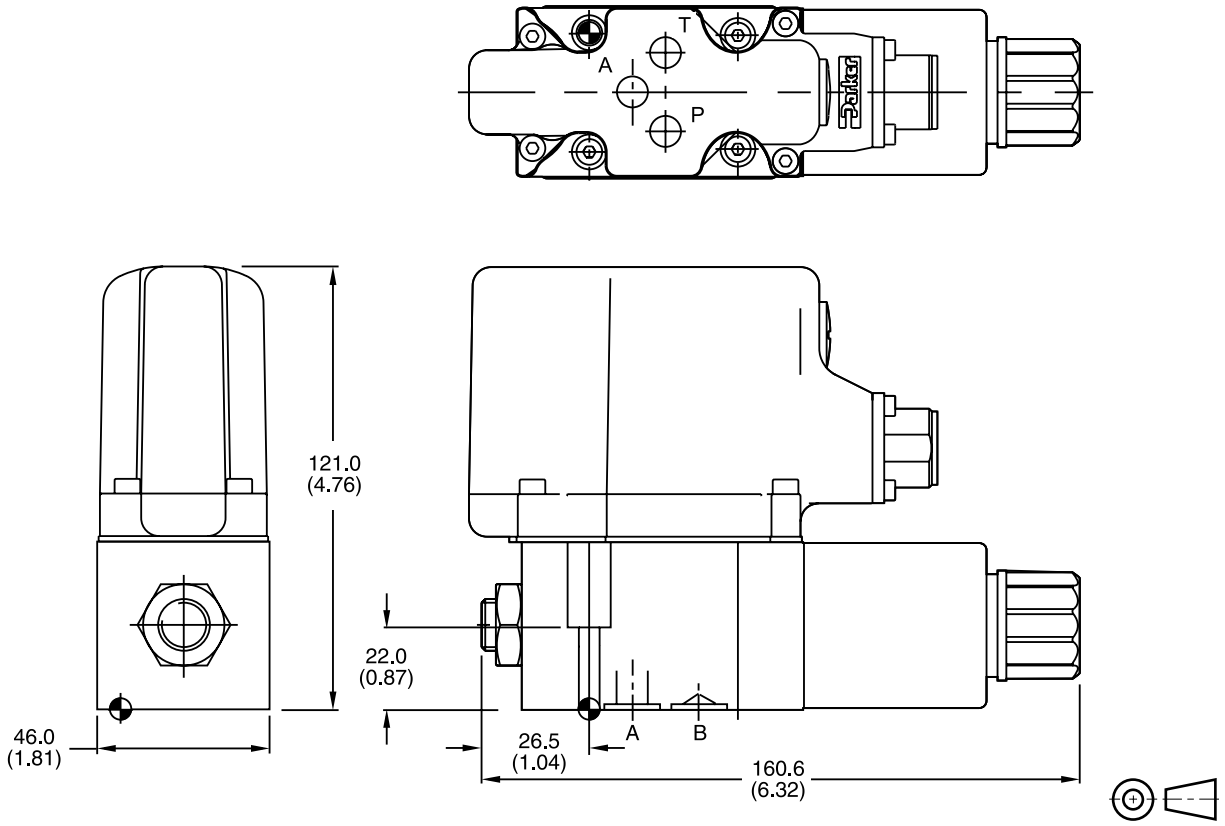
Features

- Simple editing of all parameters.
- Storage and loading of optimized parameter adjustments.
- Executable with all Windows® operating systems from Windows® 95 upwards.
- Communication between PC and electronic via serial interface RS-232 and null modem cable.
- Simple to use PC user software, free of charge: www.parker.com/euro_hcd – see "Software Downloads"



The parametrizing cable may be ordered under item no. 40982923.

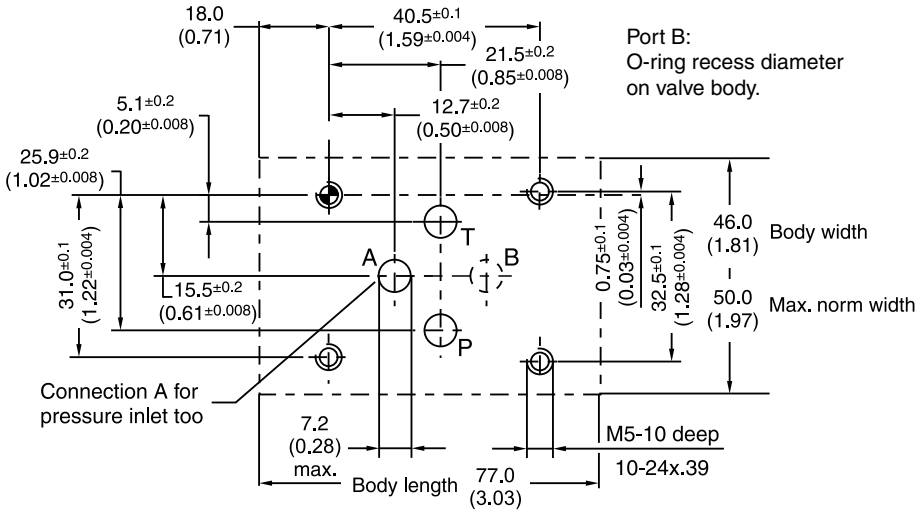
Inch equivalents for millimeter dimensions are shown in (**)



Surface Finish	Bolt Kit			Seal Kit	
				Nitrile	Fluorocarbon
$\sqrt{R_{max}6.3}$ 0.01/100	BK375 BK209	4x M5x30 DIN 912 12.9 4x 10-24x1.25	7.6 Nm (5.6 lb.-ft.) ±15%	SK-RE06MTN	SK-RE06MTV

Mounting Pattern ISO 6264-03-04-*-97

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



RE06M_T.indd, dd

Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA

B

General Description

Series R4V and R6V proportional pressure relief valves for external electronics feature a proportionally adjusted pilot stage which controls a seated type main stage. The valves are equipped with a mechanical maximum pressure stage (optional for R6V).

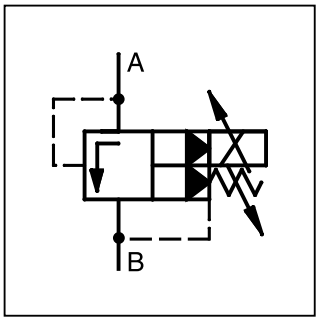
The optimum performance can be achieved in combination with the digital amplifier module PCD00A-400.

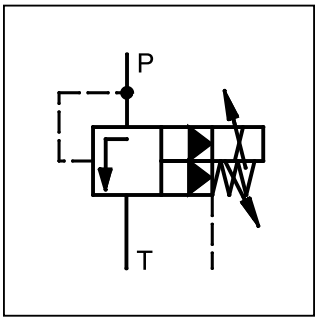
Features

- Pilot operated with proportional solenoid.
- Continuous adjustment by proportional solenoid.
- 3 pressure ranges.
- Optional mechanical maximum pressure adjustment.
- 2 interfaces
  R4V Subplate ISO 6264 (DIN 24340 Form D)
  R6V Subplate ISO 6264 (DIN 24340 Form E).

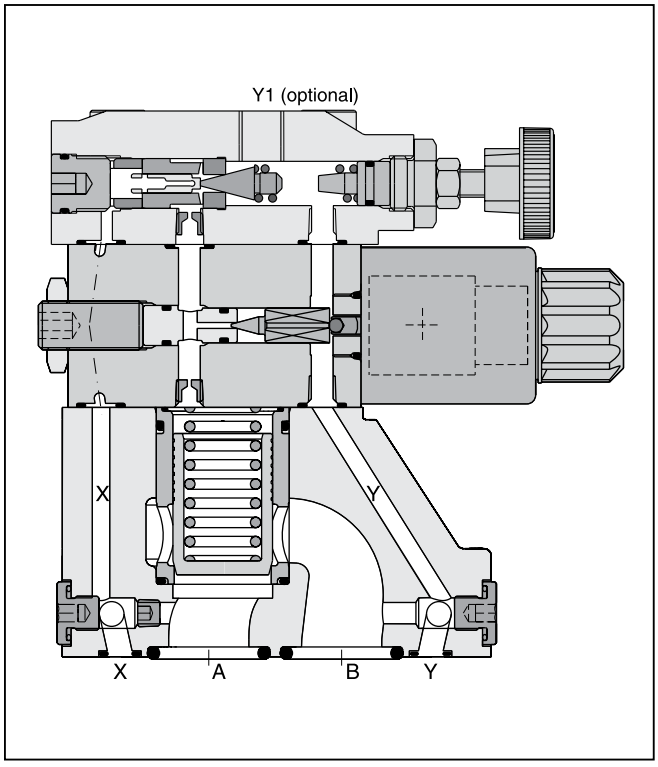
R4V

R6V

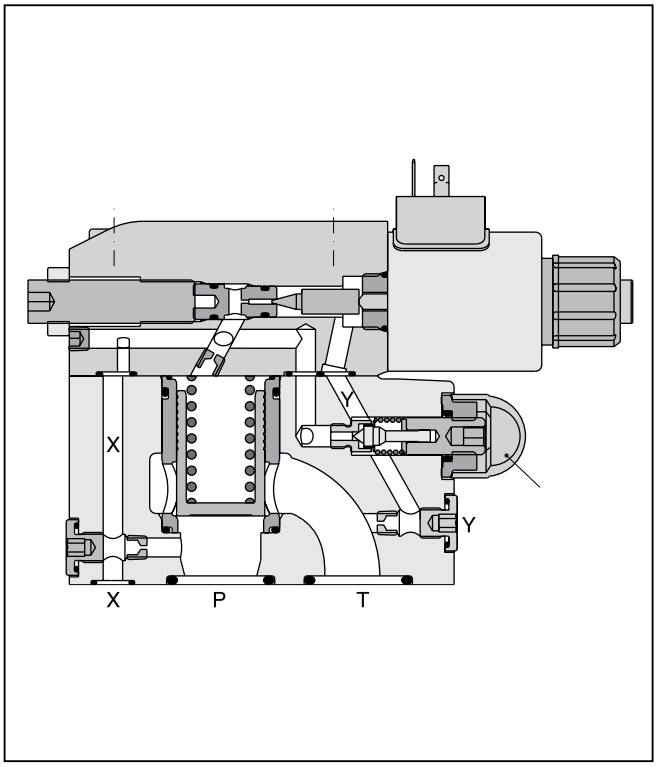




R4V



R6V



B

R		V		—	5							G0R			
Pressure Relief Valve	Interface	Relief Function	Size		Maximum Pressure 350 Bar (5075 PSI)	Drain Port	Pressure Range	Mechanical Adjustment	Pilot Oil	Options	Solenoid Voltage 12V 2.3A	Design Series	Seal	Options Check with Factory

Code	Description
03	NG10
06	NG25
10	NG32

Code	Interface	Drain
3	R4V	Y-port in mounting pattern
9	R6V	Y-port = G1/8"

Code	Description
1	Nitrile
5	Fluorocarbon

Code	Description
A	R4V
B	R6V

Code	Description
1	up to 105 Bar (1523 PSI)
3	up to 210 Bar (3045 PSI)
5	up to 350 Bar (5075 PSI)

Code	Interface	Mechanical Adj.
P [1]	R6V	Hexagon Screw with Lock Nut
1	R4V	Hand Knob
3	R4V	Acorn Nut with Lead Seal

[1] Use Code P also for valve without mechanical adjustment.

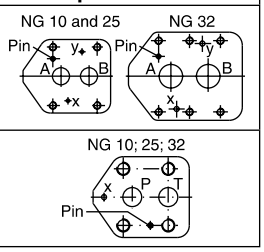
Code	Description
P2	with Mechanical maximum adjustment
PS [4]	without Mechanical maximum adjustment

[4] R6V only

Code	Drain Port
0	Internal
1 [2]	External from Subplate
2	External from Valve Body (Y-port)

[2] R4V only

Code	Description	
4	Subplate Mounting ISO 6264	NG 10 and 25 / NG 32
6		NG 10; 25; 32



Bolt Kits:

R4V03	BK505
R4V06	BK485
R4V10	BK506
R6V03	BK494
R6V06	BK366
R6V10	BK507

Weight:

R4V03	4.5 kg (9.9 lbs.)
R4V06	6.3 kg 13.9 (lbs.)
R4V10	7.8 kg (17.2 lbs.)
R6V03	5.2 kg (11.5 lbs.)
R6V06	6.4 kg (14.1 lbs.)
R6V10	8.3 kg (18.3 lbs.)

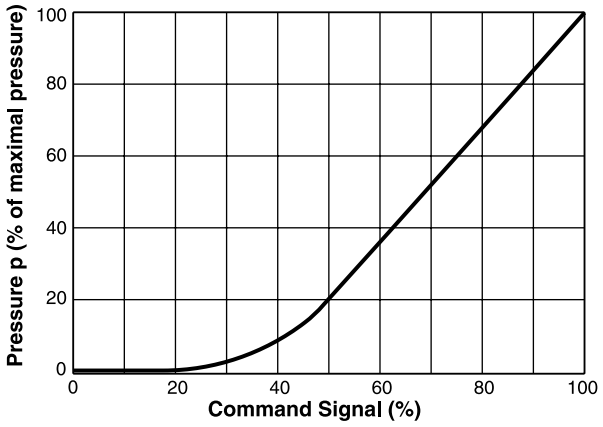
B

Specifications

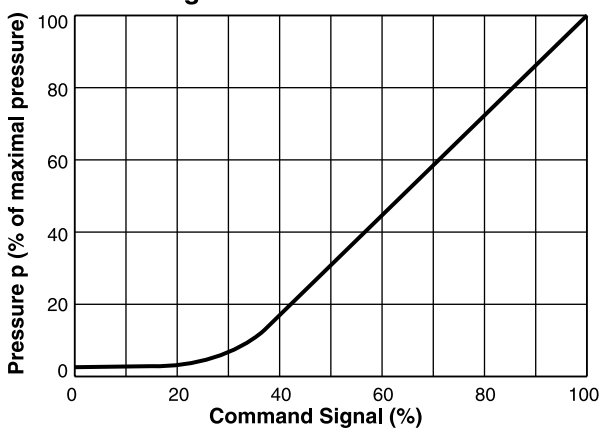
General			
Size	**NG10**	**NG25**	**NG32**
Interface	Subplate Mounting acc. ISO 6264		
Mounting Position	As desired, horizontal position preferred		
Ambient Temperature Range	-20°C to +80°C (-4°F to +176°F)		
Hydraulic			
Maximum Operating Pressure	Ports P (or A) and X 350 Bar (5075 PSI); Port T (or B) and Y depressurized		
Pressure Range	105 Bar (1523 PSI), 210 Bar (3045 PSI), 350 Bar (5075 PSI)		
Nominal Flow			
R4V	150 LPM (39.7 GPM)	350 LPM (92.6 GPM)	650 LPM (172.0 GPM
R6V	250 LPM (66.1 GPM)	500 LPM (132.3 GPM)	650 LPM (172.0 GPM)
Fluid	Hydraulic oil as per DIN 51524 ... 51525		
Fluid Temperature	-20°C to +70°C (-4°F to +158°F)		
Viscosity Permitted	20 to 380 cSt / mm^2/s (93 to 1761 SSU)		
Recommended	30 to 50 cSt / mm^2/s (139 to 232 SSU)		
Filtration	ISO Class 4406 (1999) 18/16/13		
Electrical (Proportional Solenoid)			
Duty Ratio	100% ED		
Protection Class	IP65 in accordance with EN60529 (plugged and mounted)		
Supply Voltage	12 VDC (maximum current 2.3 amps) or 16 VDC (maximum current 1.3 amps)		
Coil Resistance	4 Ohm at 20°C (68°F)		
Solenoid Connectors	Connector as per EN 175301-803		
Power Amplifier, Recommended	PCD00A-400		

Performance Curves

Signal / Pressure – R4V

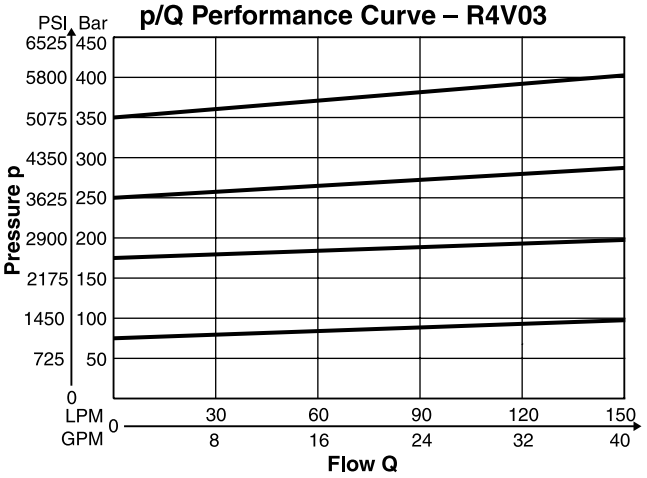


Signal / Pressure – R6V

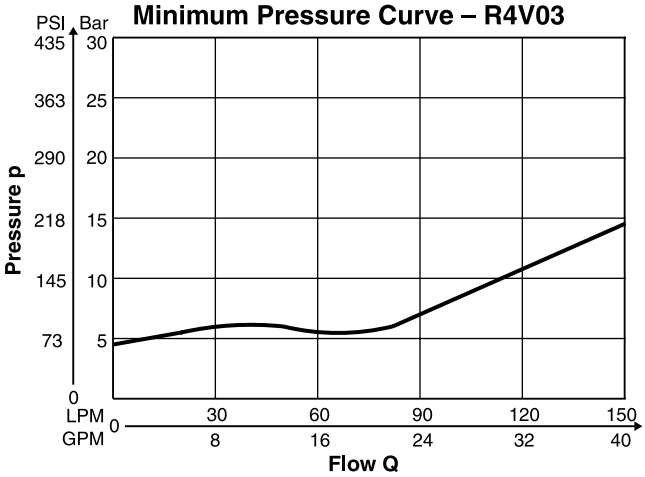


B

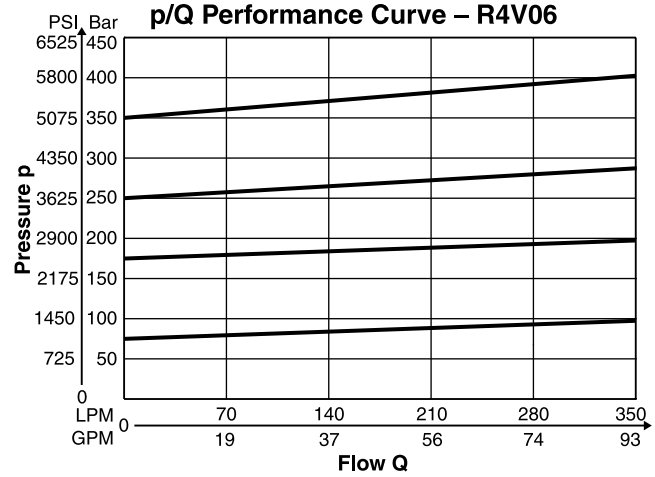
p/Q Performance Curve – R4V03



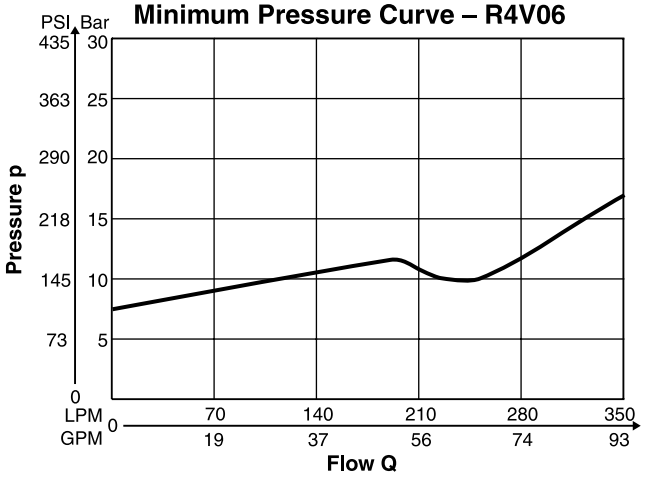
Minimum Pressure Curve – R4V03



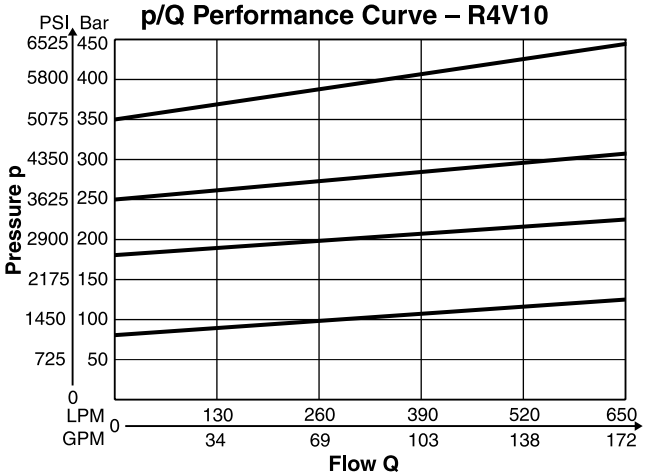
p/Q Performance Curve – R4V06



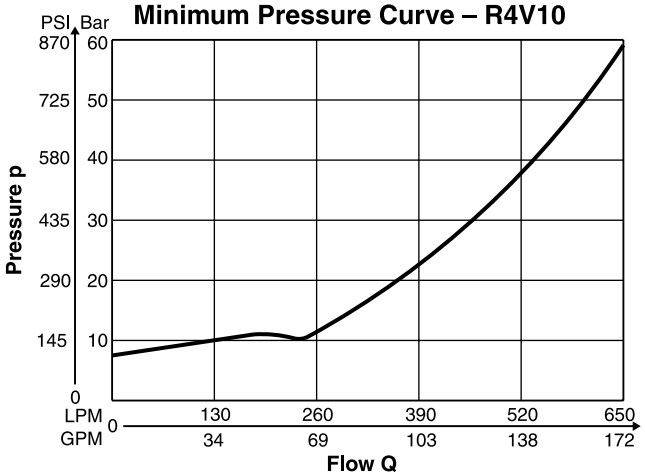
Minimum Pressure Curve – R4V06



p/Q Performance Curve – R4V10



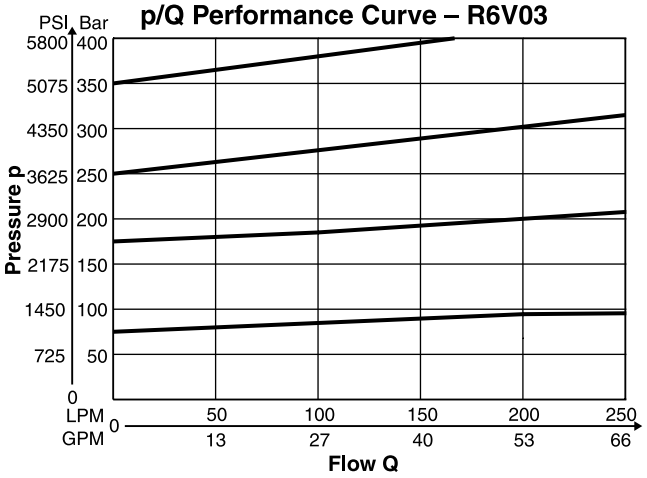
Minimum Pressure Curve – R4V10



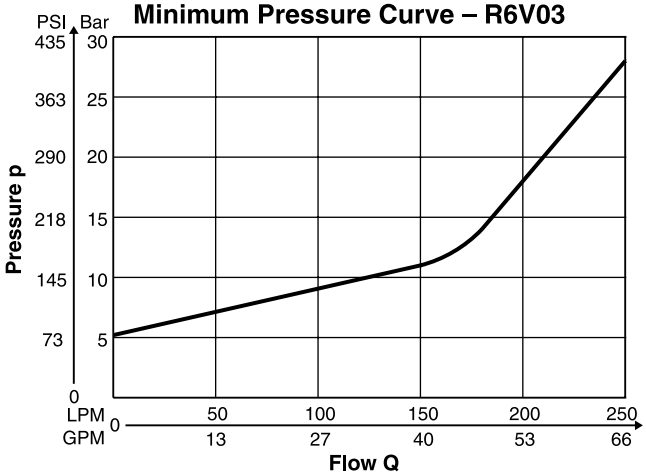
The performance curves are measured with external drain.
For internal drain the tank pressure has to be added to curve.

B

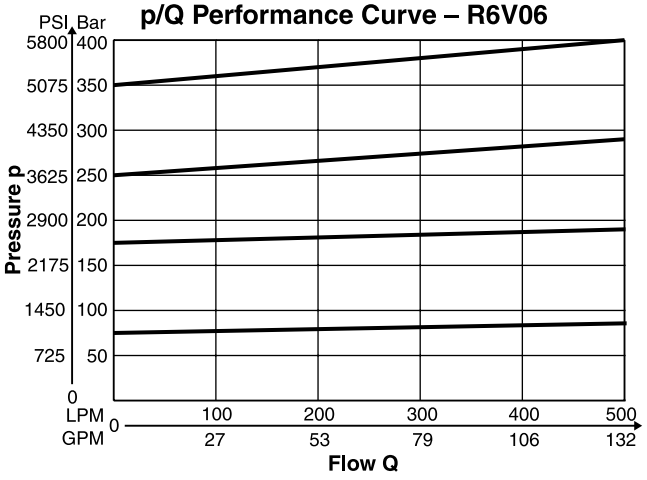
p/Q Performance Curve – R6V03



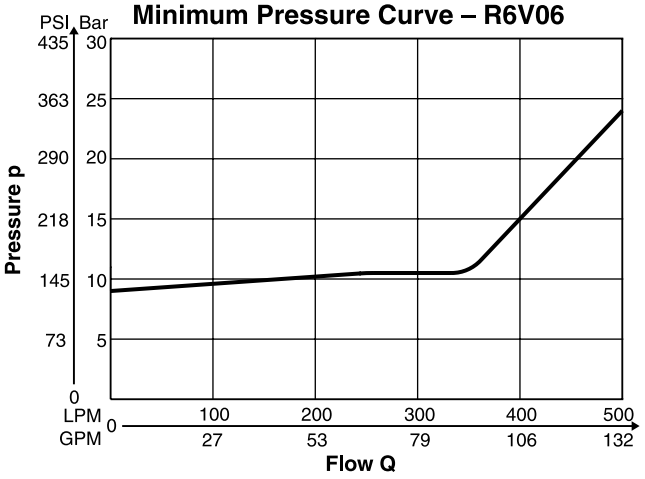
Minimum Pressure Curve – R6V03



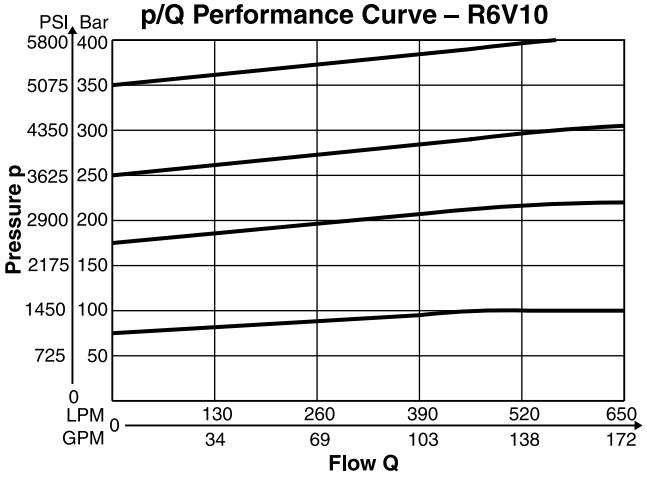
p/Q Performance Curve – R6V06



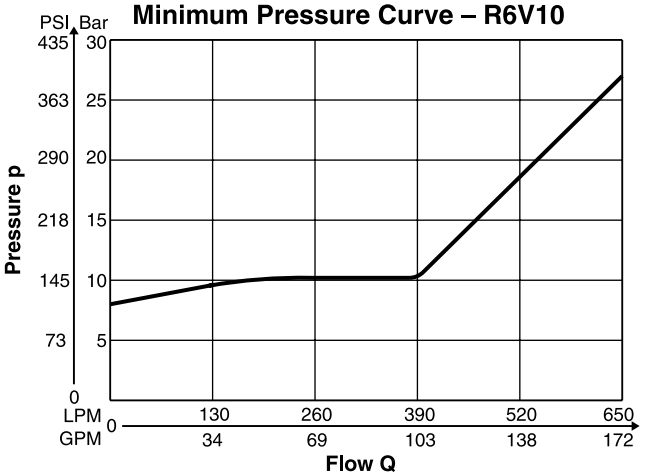
Minimum Pressure Curve – R6V06



p/Q Performance Curve – R6V10

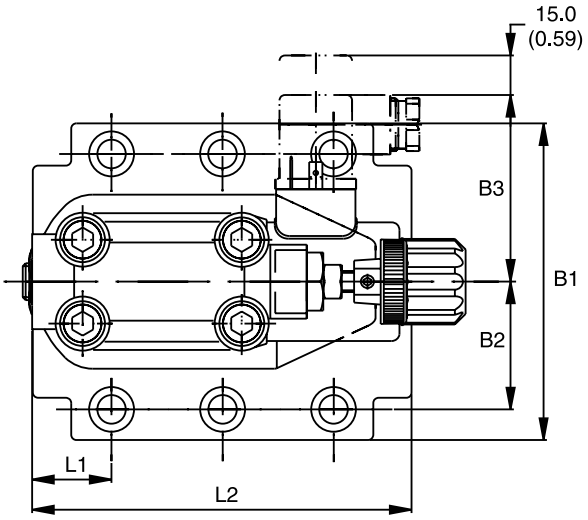


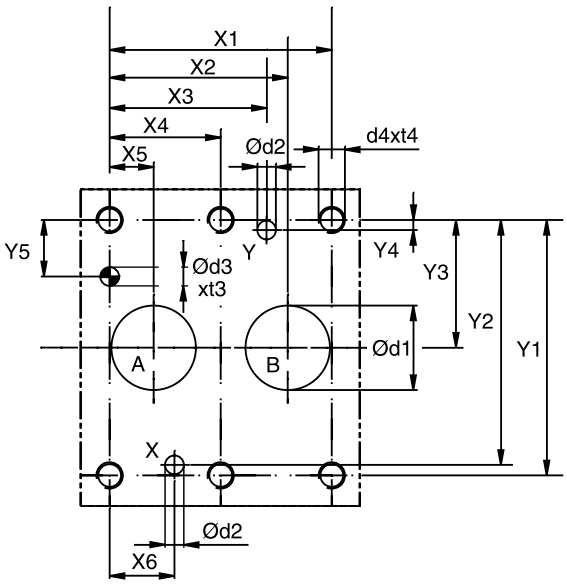
Minimum Pressure Curve – R6V10

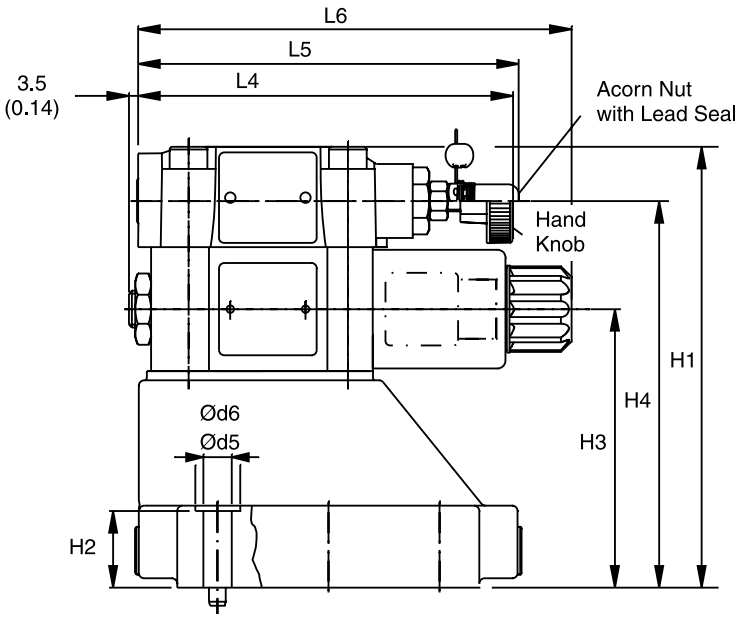


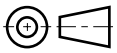
The performance curves are measured with external drain.
For internal drain the tank pressure has to be added to curve.

B


15.0
(0.59)
B3
B1
B2
L1
L2


X1
X2
X3
X4
X5
Ød2
d4xt4
Y5
Ød3
xt3
Y
Y4
Y3
Y2
Y1
A
B
Ød1
X
Ød2
X6


L6
L5
L4
3.5
(0.14)
Acorn Nut
with Lead Seal
Hand
Knob
H1
H4
H3
Ød6
Ød5
H2



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

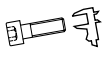
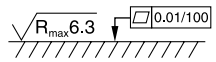
NG	ISO-code	x1	x2	x3	x4	x5	x6	x7	y1	y2	y3	y4	y5	y6
10	6264-06-07-*-97	42.9 (1.69)	35.8 (1.41)	21.5 (0.85)	–	7.2 (0.28)	21.5 (0.85)	0	66.7 (2.63)	58.8 (2.31)	33.4 (1.31)	7.9 (0.31)	14.3 (0.56)	–
25	6264-08-11-*-97	60.3 (2.37)	49.2 (1.94)	39.7 (1.56)	–	11.1 (0.44)	20.6 (0.81)	0	79.4 (3.13)	73 (2.87)	39.7 (1.56)	6.4 (0.25)	15.9 (0.63)	–
32	6264-10-15-*-97	84.2 (3.31)	67.5 (2.66)	59.5 (2.34)	42.1 (1.66)	16.7 (0.66)	24.6 (0.97)	0	96.8 (3.81)	92.8 (3.65)	48.4 (1.91)	3.8 (0.15)	21.4 (0.84)	–

Tolerance at X and Y pin holes and screw holes ±0.1, at port holes ±0.2.

B

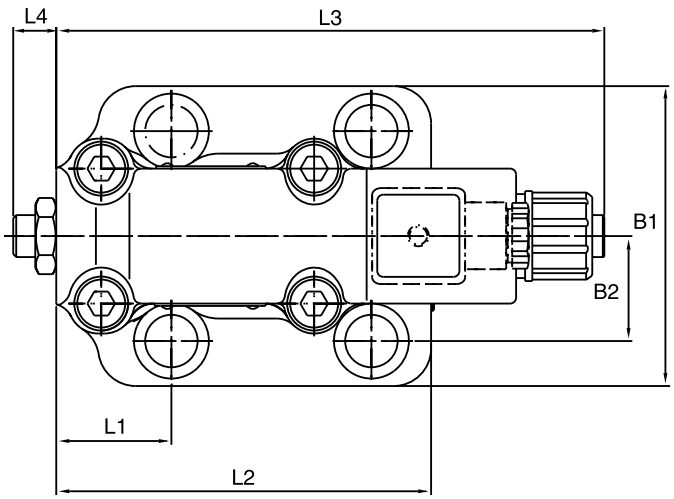
NG	ISO-code	B1	B2	B3	H1	H2	H3	H4	H6	L1	L2	L3	L4	L5	L6
10	6264-06-07-*-97	87.3 (3.44)	33.4 (1.31)	71.0 (2.80)	130.0 (5.12)	21.0 (0.83)	68.5 (2.70)	109.5 (4.31)	–	29.0 (1.14)	94.8 (3.73)	–	143.0 (5.63)	144.8 (5.70)	164.8 (6.49)
25	6264-08-11-*-97	105.0 (4.13)	39.7 (1.56)	71.0 (2.80)	156.5 (6.16)	29.0 (1.14)	95.0 (3.74)	136.0 (5.35)	–	34.7 (1.37)	126.8 (4.99)	–	143.0 (5.63)	144.8 (5.70)	164.8 (6.49)
32	6264-10-15-*-97	120.0 (4.72)	48.4 (1.91)	71.0 (2.80)	167.0 (6.57)	29.0 (1.14)	105.5 (4.15)	146.5 (5.77)	–	30.6 (1.18)	143.3 (5.68)	–	143.0 (5.63)	144.8 (5.70)	164.8 (6.49)

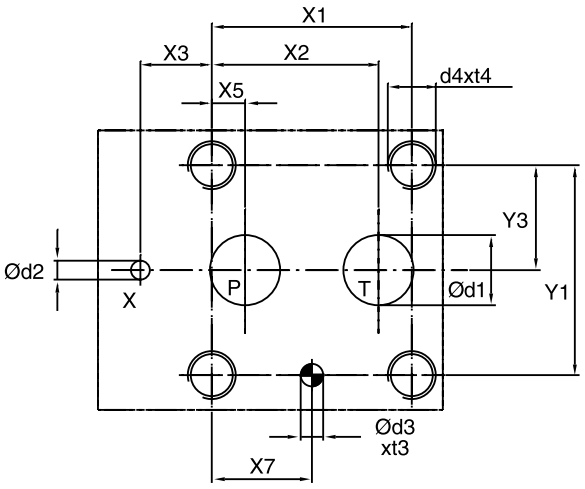
NG	ISO-code	d1max	d2max	d3	t3	d4	t4	d5	d6	Subplate
10	6264-06-07-*-97	15.0 (0.59)	7.0 (0.28)	7.1 (0.28)	8.0 (0.31)	M10	16.0 (0.63)	10.8 (0.43)	17.0 (0.67)	SPP3M6B910
25	6264-08-11-*-97	23.4 (0.92)	7.1 (0.28)	7.1 (0.28)	8.0 (0.31)	M10	18.0 (0.71)	10.8 (0.43)	17.0 (0.67)	SPP6M8B910
32	6264-10-15-*-97	32.0 (1.26)	7.1 (0.28)	7.1 (0.28)	8.0 (0.31)	M10	20.0 (0.79)	10.8 (0.43)	17.0 (0.67)	SPP10M12B910

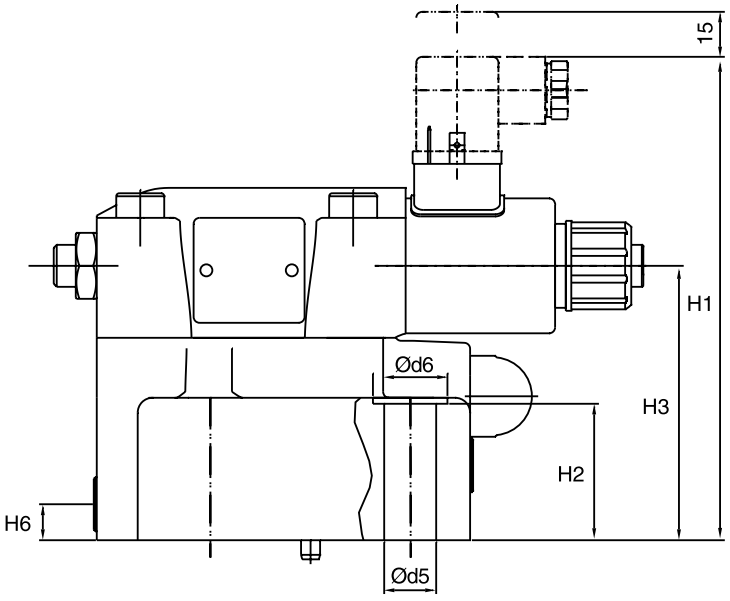
NG	ISO-code	Bolt Kit			Seal Kit		Surface Finish
					Nitrile	Fluorocarbon	
10	6264-06-07-*-97	BK505	4x M10 x 35 DIN912 12.9	63 Nm (46.5 lb.-ft.) ±15%	S26-58507-0	S26-58507-5	
25	6264-08-11-*-97	BK485	4x M10 x 45 DIN912 12.9		S26-58475-0	S26-58475-5	
32	6264-10-15-*-97	BK506	6x M10 x 45 DIN912 12.9		S26-58508-0	S26-58508-0	
Prop Section P2*					S26-58473-0	S26-58473-5	

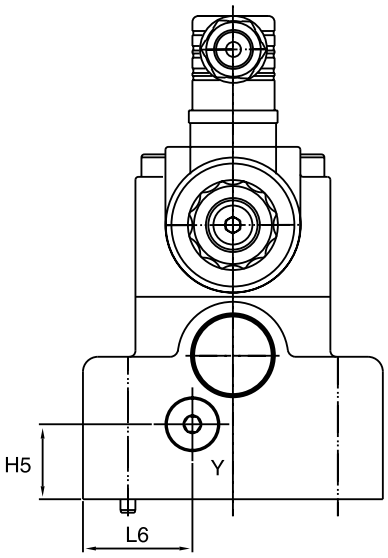
* Please combine seal kit of one size with seal kit of Prop. Section P2 for complete seal kit.

B

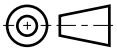








Y: external drain port G 1/8"



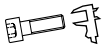
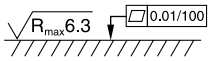
Inch equivalents for millimeter dimensions are shown in (**)

NG	ISO-code	x1	x2	x3	x4	x5	x6	x7	y1	y2	y3	y4	y5	y6
10	6264-06-09-*-97	53.8 (2.12)	47.5 (1.87)	0.0 (0.00)	–	22.1 (0.87)	–	22.1 (0.87)	53.8 (2.12)	–	26.9 (1.06)	–	–	–
25	6264-08-13-*-97	66.7 (2.63)	55.6 (2.19)	23.8 (0.94)	–	11.1 (0.44)	–	33.4 (1.31)	70.0 (2.76)	–	35.0 (1.38)	–	–	–
32	6264-10-17-*-97	88.9 (3.50)	76.2 (3.00)	31.8 (1.25)	–	12.7 (0.50)	–	44.5 (1.75)	82.6 (3.25)	–	41.3 (1.63)	–	–	–

Tolerance at X and Y pin holes and screw holes ±0.1, at port holes ±0.2.

NG	ISO-code	B1	B2	H1	H2	H3	H4	H5	H6	L1	L2	L3	L4	L5	L6
10	6264-06-09-*-97	80.0 (3.15)	26.9 (1.06)	158.7 (6.25)	27.0 (1.06)	88.0 (3.46)	–	20.5 (0.81)	25.0 (0.98)	52.5 (2.07)	118.5 (4.67)	182.3 (7.18)	14.4 (0.57)	–	29.5 (1.16)
25	6264-08-13-*-97	100.0 (3.94)	35.0 (1.38)	161.2 (6.35)	45.5 (1.19)	91.5 (3.60)	–	25.0 (0.98)	12.0 (0.47)	37.9 (1.49)	124.5 (4.90)	182.3 (7.18)	14.4 (0.57)	–	36.5 (1.44)
32	6264-10-17-*-97	120.0 (4.72)	41.3 (1.63)	166.7 (6.56)	52.0 (2.05)	97.0 (3.82)	–	26.5 (1.04)	13.5 (0.53)	45.0 (1.77)	153.0 (6.02)	182.3 (7.18)	14.4 (0.57)	–	46.5 (1.83)

NG	ISO-code	d1max	d2max	d3	t3	d4	t4	d5	d6	Subplate
10	6264-06-09-*-97	14.7 (0.58)	4.8 (0.19)	7.5 (0.30)	10.0 (0.39)	M12	20.0 (0.79)	13.5 (0.53)	20.0 (0.79)	SPP3R6B910
25	6264-08-13-*-97	23.4 (0.92)	6.3 (0.25)	7.5 (0.30)	10.0 (0.39)	M16	27.0 (1.06)	17.5 (0.69)	25.0 (0.98)	SPP6R10B910
32	6264-10-17-*-97	32.0 (1.26)	6.3 (0.25)	7.5 (0.30)	10.0 (0.39)	M18	28.0 (1.10)	20.0 (0.79)	30.0 (1.18)	SPP10R12B910

NG	ISO-code	Bolt Kit			Seal Kit		Surface Finish
					Nitrile	Fluorocarbon	
10	6264-06-09-*-97	BK494	4x M12 x 45 DIN912 12.9	108 Nm (79.7 lb.-ft.) ±15%	S26-96396-0	S26-96396-5	
25	6264-08-13-*-97	BK366	4x M16 x 70 DIN912 12.9	264 Nm (194.7 lb.-ft.) ±15%	S26-98589-0	S26-98589-5	
32	6264-10-17-*-97	BK507	4x M18 x 75 DIN912 12.9	398 Nm (293.5 lb.-ft.) ±15%	S26-96392-0	S26-96392-5	

B

General Description

Series R4V and R6V proportional pressure relief valves feature onboard electronics based on the functionality of the digital amplifier PCD00.

The digital onboard electronic is situated in a robust metal housing and can be used in rough environments.

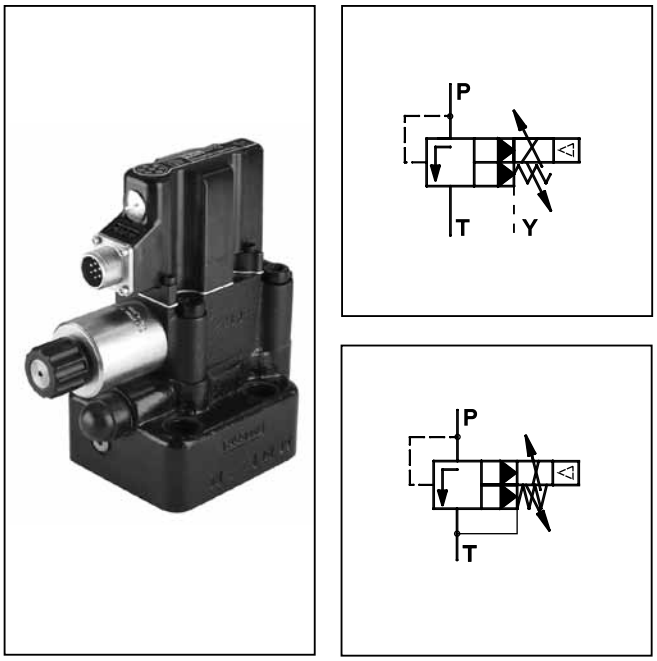
The nominal values of the valves are factory set. Additionally the ProPxD software permits the editing of all parameters. The software is also used for the digital electronic modules. The cable for connection to a serial RS232 interface is available as accessory.

The electrical connection is available in 2 options:

Code 10V: 6 + PE central connection
0...+10V command signal (preset)
+10V reference voltage output

Code 4MA: 6 + PE central connection
4…20mA command signal (preset)

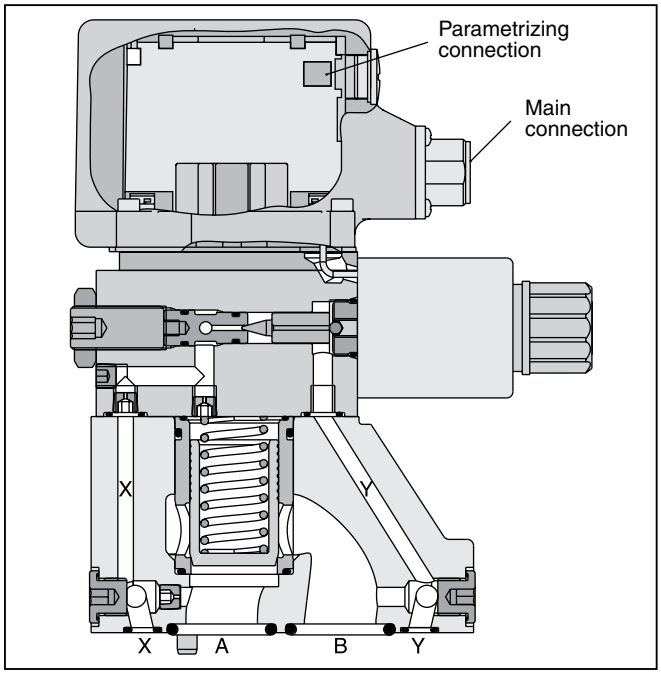
The proportional solenoid operated pilot stage with integrated electronics controls a seated type main stage. The valves are available with an optional mechanical maximum pressure adjustment.



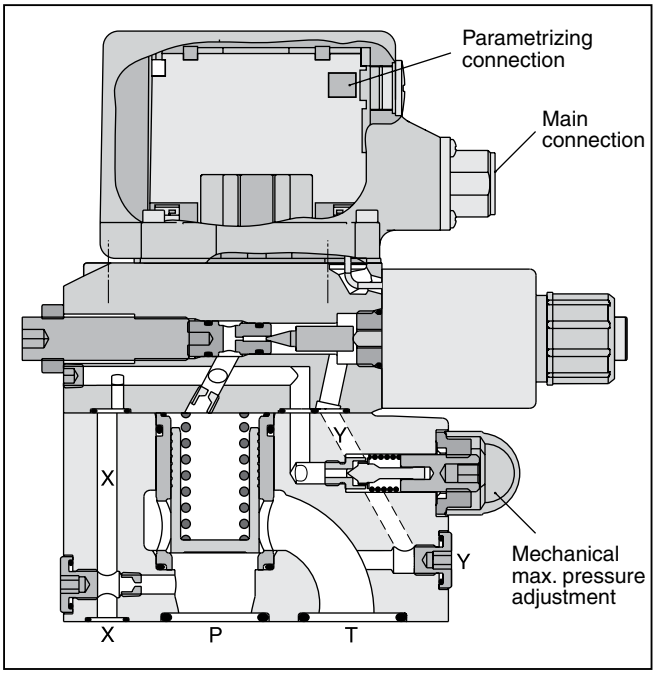
Features

- Pilot operated pressure relief valve.
- Onboard electronics.
- Factory set.
- Ramp time adjustment.
- Linearized characteristics.
- 3 pressure ranges.
- 2 interfaces:
  R4V Subplate, ISO 6264 (DIN 24340 Form D)
  R6V Subplate, ISO 6264 (DIN 24340 Form E)
- Optional mechanical maximum pressure adjustment.

R4V OBE



R6V OBE



R4V-R6V-OBE.indd, dd

Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA

B

Ordering Information

R | ☐ | V | ☐ — 5 | ☐ | ☐ | P | ☐ | ☐ | ☐ | ☐ | ☐ | ☐

Pressure Relief Valve | Interface | Relief Function | Size | Maximum Pressure 350 Bar (5075 PSI) | Drain Port | Pressure Range | Proportional Operation | Pilot Oil | Options | Input Signal | Design Series | Seal | Options Check with Factory

Code	Description
03	NG10
06	NG25
10	NG32

Code	Interface	Drain
3	R4V	Y-port in mounting pattern
9	R6V	Y-port = 1/8"

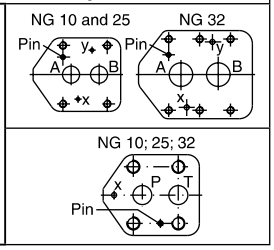
Code	Description
1	up to 105 Bar (1523 PSI)
3	up to 210 Bar (3045 PSI)
5	up to 350 Bar (5075 PSI)

Code	Description
10V `	0...+10V with ref. output +10V
4MA	4...20mA

Code	Description
A	R4V
B	R6V

Code	Description
1	Nitrile
5	Fluorocarbon

Code	Description
4	Subplate Mounting ISO 6264 — NG 10 and 25; NG 32
6	Subplate Mounting ISO 6264 — NG 10; 25; 32



Code	Drain Port
0	Internal
1 [1]	External from Subplate
2	External from Valve Body (Y-port)

[1] R4V only

Code	Description
PN	without Mechanical maximum adjustment
PM	with Mechanical maximum adjustment

Bolt Kits:

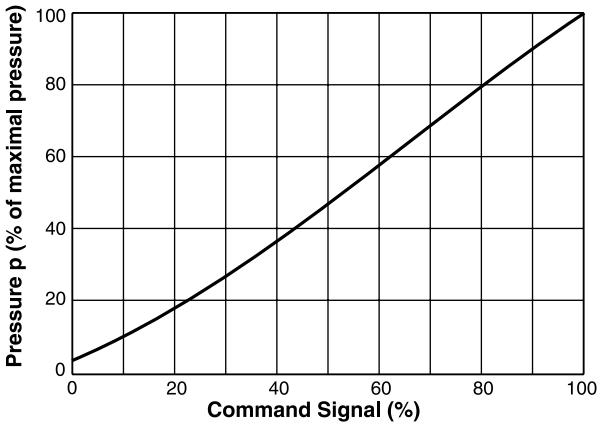
R4V03	BK505
R4V06	BK485
R4V10	BK506
R6V03	BK494
R6V06	BK366
R6V10	BK507

Weight:

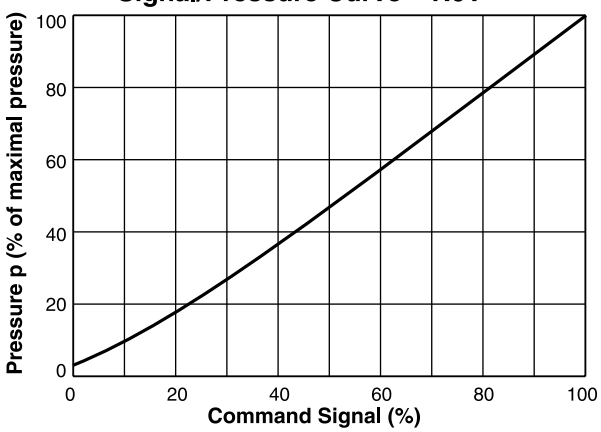
R4V03	4.5 kg (9.9 lbs.)
R4V06	6.3 kg (13.9 lbs.)
R4V10	7.8 kg (17.2 lbs.)
R6V03	5.4 kg (11.9 lbs.)
R6V06	6.6 kg (14.6 lbs.)
R6V10	8.6 kg (19.0 lbs.)

Performance Curves

Signal/Pressure Curve – R4V



Signal/Pressure Curve – R6V



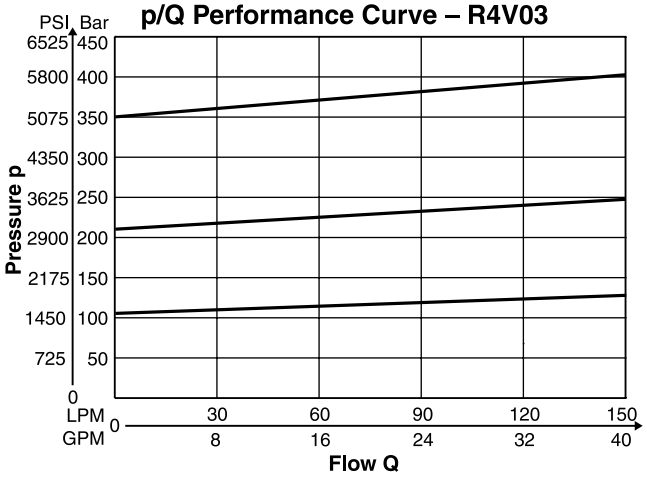
R4V-R6V-OBE.indd, dd

General				
Size		NG10	NG25	NG32
Interface		Subplate mounting acc. ISO 6264		
Mounting Position		as desired, horizontal mounting prefered		
Ambient Temperature	**[°C]**	-20...+60; (-4°F ... +140°F)		
$MTTF_D$ Value	**[years]**	50		
Vibration Strength	**[g]**	10 sinus 5...2000 Hz acc. to IEC 68-2-6 30 noise 20...2000 Hz acc. to IEC 68-2-36 15 shock acc. to IEC 68-2-27		
Hydraulic				
Maximum Operating Pressure		Ports P (or A) and X up to 350 Bar (5075 PSI), port T (or B) and Y 30 Bar (435 PSI)		
Pressure Range		105 Bar (1523 PSI), 210 Bar (3045 PSI), 350 (5075 PSI)		
Nominal Flow **Series R4V** **Series R6V**		 150 LPM (39.7 GPM) 250 LPM (66.1 GPM)	 350 LPM (92.6 GPM) 500 LPM (132.3 GPM)	 650 LPM (172.0 GPM) 650 LPM (172.0 GPM)
Fluid		Hydraulic oil according to DIN 51524 ... 525		
Viscosity **Recommended** **Permitted**	 **[cSt] / [mm²/s]** **[cSt] / [mm²/s]**	 30 ... 50 (139 ... 232 SSU) 20 ... 380 (93 ... 1761 SSU)		
Fluid Temperature	**[°C]**	-20 ... +60; (-4°F ... +140°F)		
Filtration		ISO 4406 (1999); 18/16/13		
Hysteresis	**[%]**	< 1.5		
Electrical				
Duty Ratio ED	**[%]**	100		
Supply Voltage	**VDC**	18...30, ripple < 5% eff., surge free		
Current Consumption Maximum	**[A]**	2.0		
Pre-fusing	**[A]**	2.5 medium lag		
Potentiometer Supply	**[V]**	+10 / ±5% max. 10mA		
Command Signal **Code 10V Voltage** **Code 4MA Current**	 **[V]** **[mA]**	 0...+10, ripple < 0.01 % eff., surge free, Ri = 100 kOhm 4...20, ripple < 0.01 % eff., surge free, Ri = 200 Ohm < 3.6 mA = enable off, > 3.8 mA = enable on (acc. NAMUR NE43)		
Differential Input Voltage Max.	**[V]** **[V]**	30 for terminal D and E against PE (terminal G) 11 for terminal D and E against 0V (terminal B)		
Adjustment Ranges **Minimum current** **Maximum current** **Ramp**	 **[%]** **[%]** **[s]**	 0...50 50...100 0...32.5		
Interface		RS 232, parametrizing connection 5pole		
EMC		EN 61000-6-2, EN 61000-6-4		
Central Connection		6 + PE acc. EN 175201-804		
Cable Specification	**[mm²]**	7 x 1.0 (AWG 18) overall braid shield		
Cable Length Maximum	**[m]**	50 (164 ft.)		

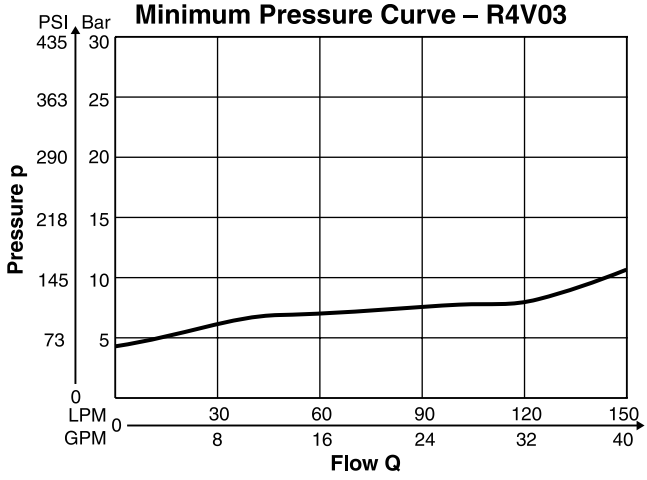
B

B

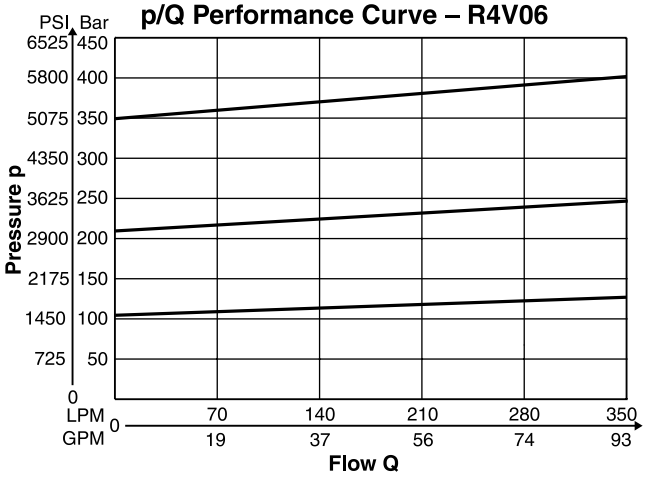
p/Q Performance Curve – R4V03



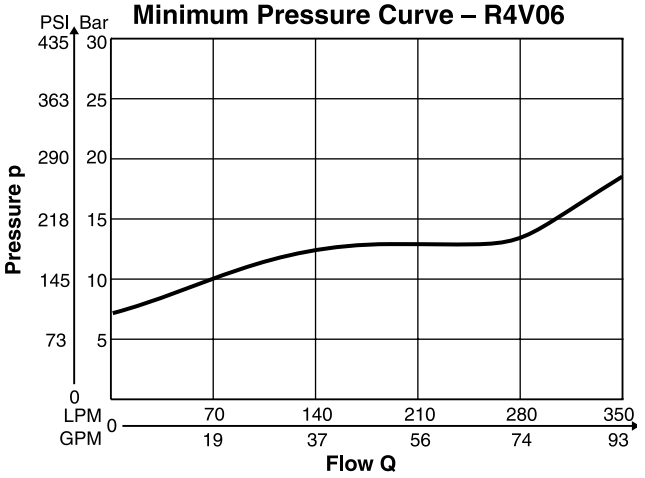
Minimum Pressure Curve – R4V03



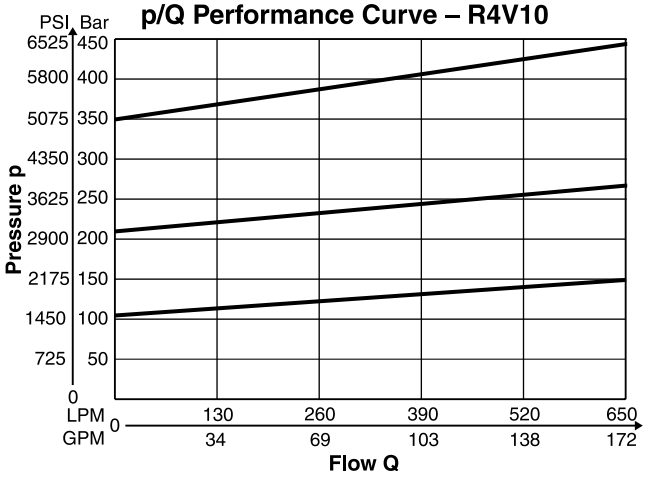
p/Q Performance Curve – R4V06



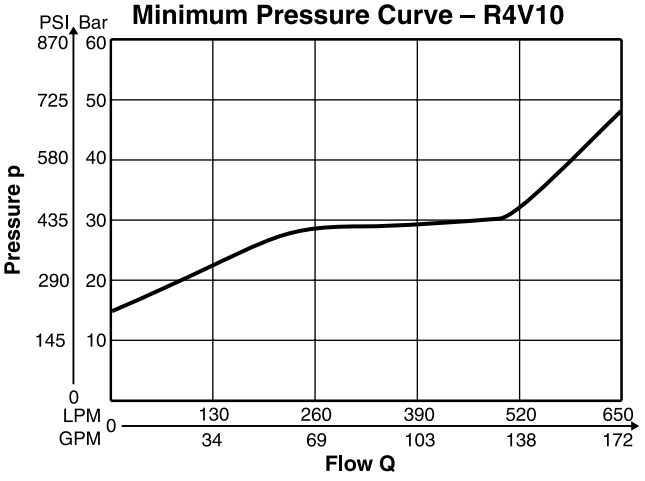
Minimum Pressure Curve – R4V06



p/Q Performance Curve – R4V10

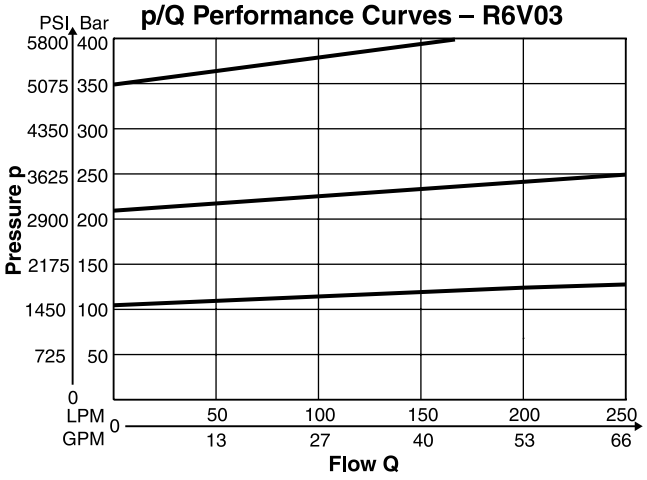


Minimum Pressure Curve – R4V10

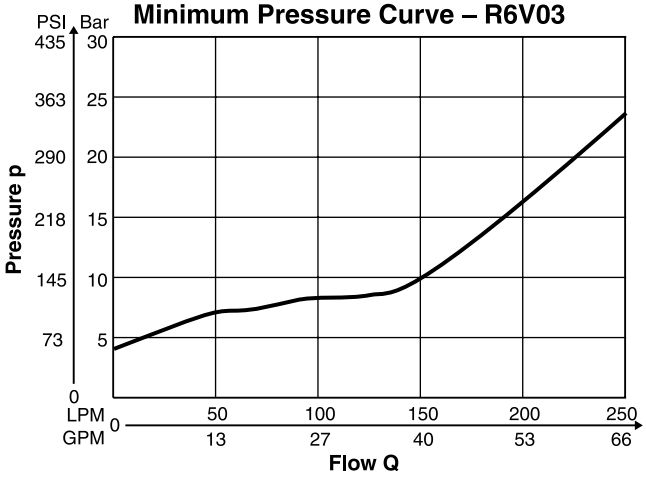


B

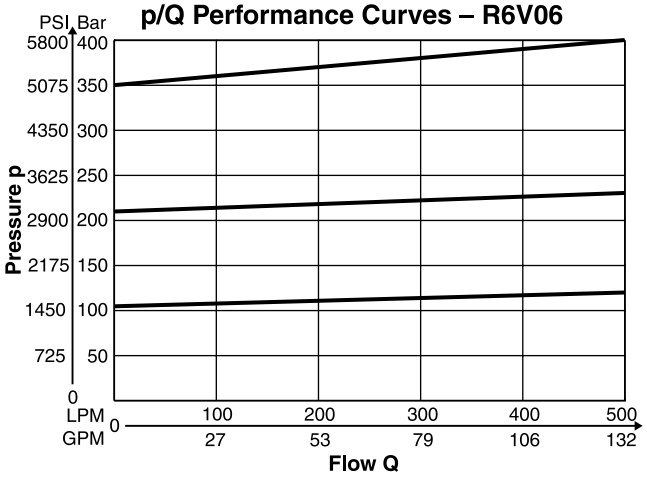
p/Q Performance Curves – R6V03



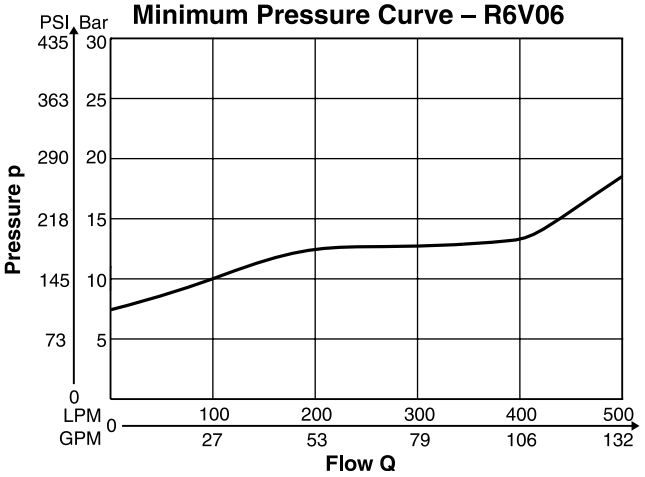
Minimum Pressure Curve – R6V03



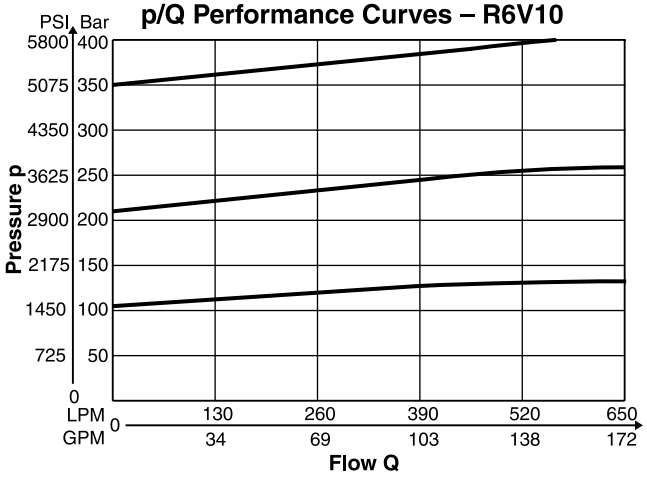
p/Q Performance Curves – R6V06



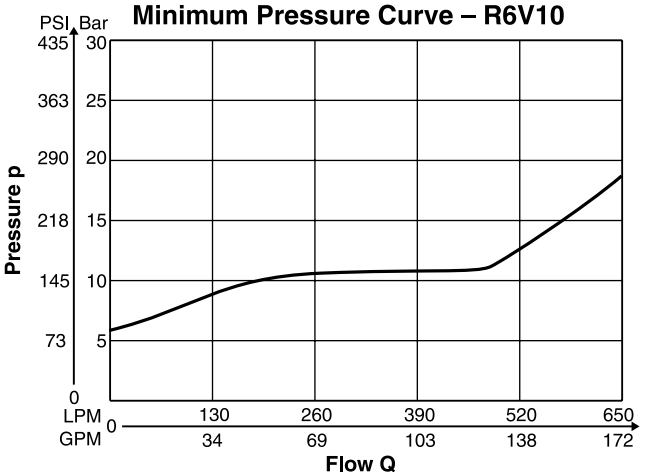
Minimum Pressure Curve – R6V06



p/Q Performance Curves – R6V10

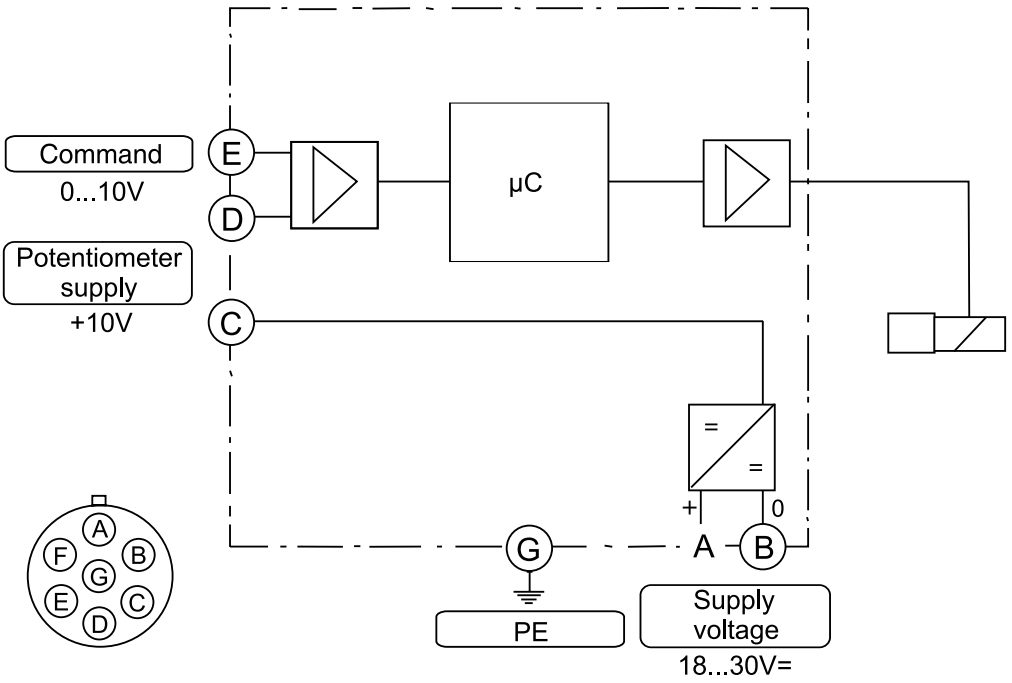


Minimum Pressure Curve – R6V10

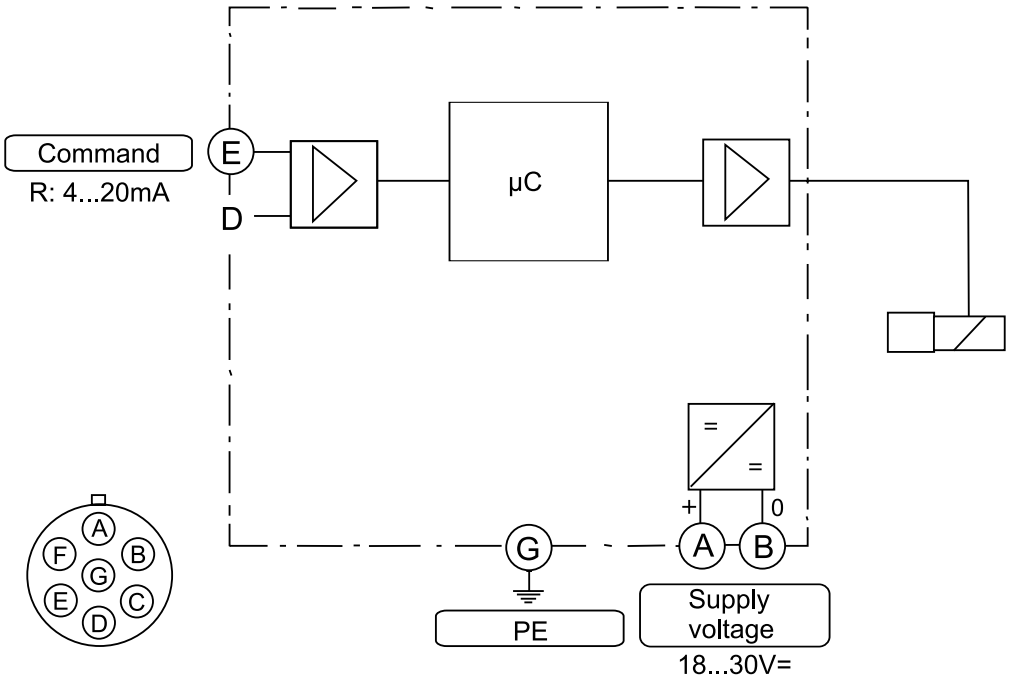


B

Code 10V
6 + PE acc. EN 175201-804



Code 4MA
6 + PE acc. EN 175201-804



B

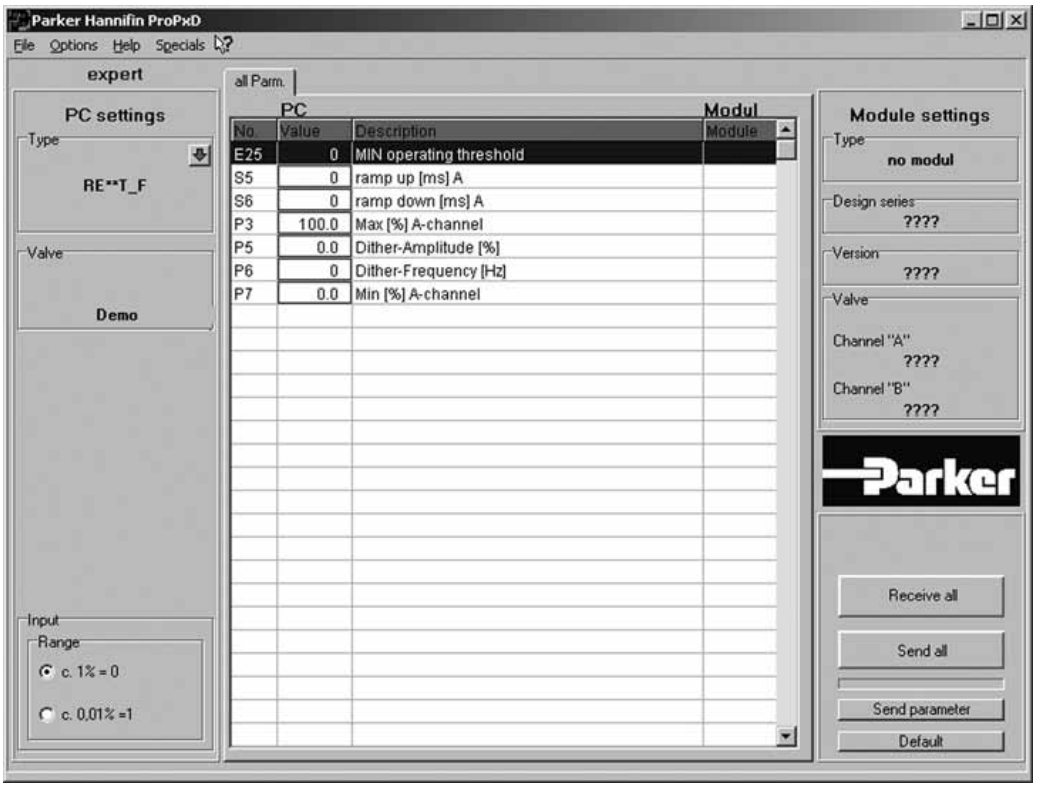
ProPxD Interface Program

The new ProPxD software permits comfortable parameter setting for the electronic modules series PCD, PWD, PZD, PID and PWDXX.

Via the clearly arranged entry mask the parameters can be displayed and modified. Storage of complete parameter sets is possible as well as printout or record as a text file for further documentation. Stored parameter sets may be loaded anytime and transmitted to the electronic module in the same manner as the basic parameters which are available for all usable valve series. Inside the electronic a nonvolatile memory stores the data with the option for recalling or modification.

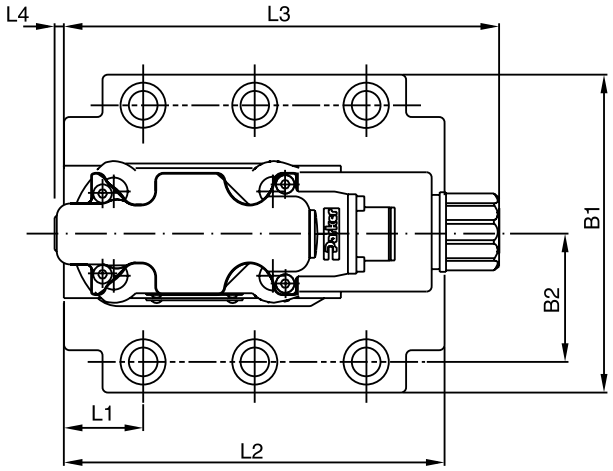
Features

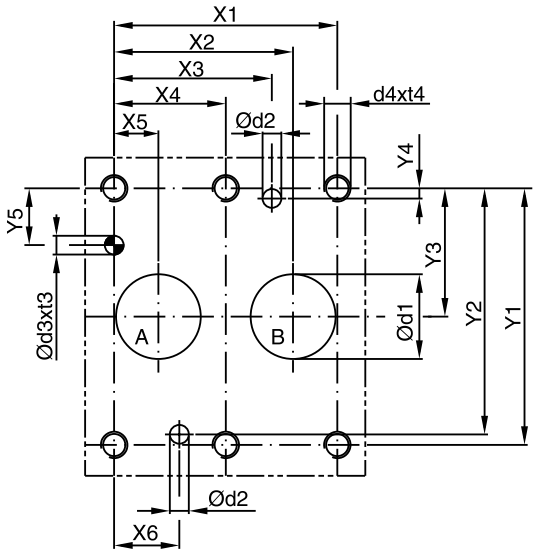
- Simple editing of all parameters.
- Storage and loading of optimized parameter adjustments.
- Executable with all Windows® operating systems from Windows® 95 upwards.
- Communication between PC and electronic via serial interface RS-232 and null modem cable.
- Simple to use PC user software, free of charge: www.parker.com/euro_hcd – see “Software Downloads”

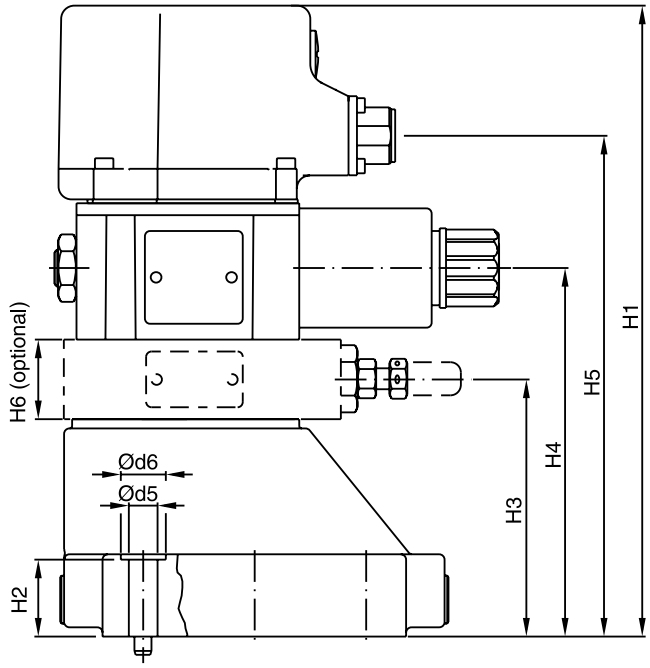


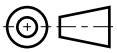
The parametrizing cable may be ordered under item no. 40982923.

B


L4
L3
B1
B2
L1
L2


X1
X2
X3
X4
X5
d4xt4
Ød2
Y4
Y5
Y3
Y2
Y1
Ød3xt3
A
B
Ød1
Ød2
X6


H6 (optional)
Ød6
Ød5
H2
H3
H4
H5
H1



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

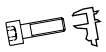
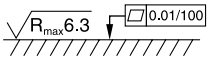
NG	ISO-Code	x1	x2	x3	x4	x5	x6	x7	y1	y2	y3	y4	y5	y6
10	6264-06-07-*-97	42.9 (1.69)	35.8 (1.41)	21.5 (0.85)	–	7.2 (0.28)	21.5 (0.85)	0	66.7 (2.63)	58.8 (2.31)	33.4 (1.31)	7.9 (0.31)	14.3 (0.56)	–
25	6264-08-11-*-97	60.3 (2.37)	49.2 (1.94)	39.7 (1.56)	–	11.1 (0.44)	20.6 (0.81)	0	79.4 (3.13)	73 (2.87)	39.7 (1.56)	6.4 (0.25)	15.9 (0.63)	–
32	6264-10-15-*-97	84.2 (3.31)	67.5 (2.66)	59.5 (2.34)	42.1 (1.66)	16.7 (0.66)	24.6 (0.97)	0	96.8 (3.81)	92.8 (3.65)	48.4 (1.91)	3.8 (0.15)	21.4 (0.84)	–

Tolerance at X and Y pin holes and screw holes ±0.1, at port holes ±0.2.

B

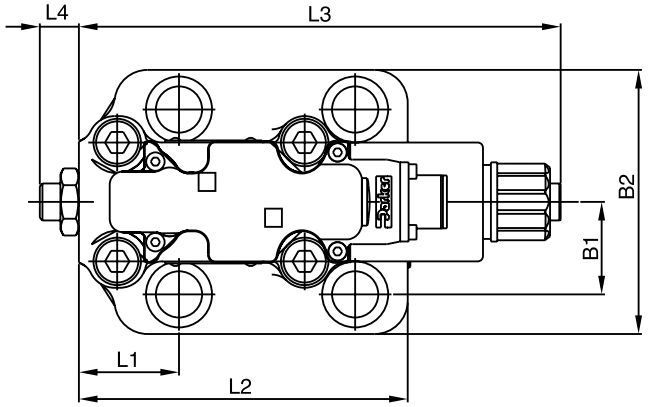
NG	ISO-Code	B1	B2	H1	H2	H3	H4	H5	H6	L1	L2	L3	L4	L5	L6
10	6264-06-07-*-97	87.3 (3.44)	33.4 (1.31)	200.3 (7.89)	21.0 (0.83)	60.0 (2.36)	102.0 (4.02)	151.0 (5.94)	30.0 (1.18)	28.3 (1.11)	94.1 (3.70)	164.2 (6.46)	4.5 (0.18)	–	–
25	6264-08-11-*-97	105.0 (4.13)	39.7 (1.56)	226.8 (8.93)	29.0 (1.14)	86.5 (3.41)	128.5 (5.06)	184.0 (7.24)	30.0 (1.18)	34.0 (1.34)	126.1 (4.96)	164.2 (6.46)	4.5 (0.18)	–	–
32	6264-10-15-*-97	120.0 (4.72)	48.4 (1.91)	237.3 (9.34)	29.0 (1.14)	97.0 (3.82)	139.0 (5.47)	194.5 (7.66)	30.0 (1.18)	29.9 (1.18)	143.6 (5.65)	164.2 (6.46)	4.5 (0.18)	–	–

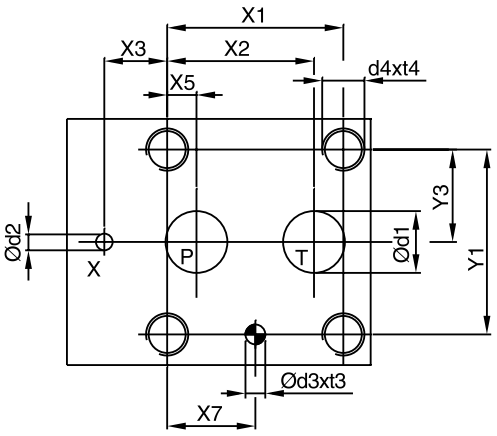
NG	ISO-Code	d1max	d2max	d3	t3	d4	t4	d5	d6	Subplate
10	6264-06-07-*-97	15.0 (0.59)	7.0 (0.28)	7.1 (0.28)	8.0 (0.31)	M10	16.0 (0.63)	10.8 (0.43)	17.0 (0.67)	SPP3M6B910
25	6264-08-11-*-97	23.4 (0.92)	7.1 (0.28)	7.1 (0.28)	8.0 (0.31)	M10	18.0 (0.71)	10.8 (0.43)	17.0 (0.67)	SPP6M8B910
32	6264-10-15-*-97	32.0 (1.26)	7.1 (0.28)	7.1 (0.28)	8.0 (0.31)	M10	20.0 (0.79)	10.8 (0.43)	17.0 (0.67)	SPP10M12B910

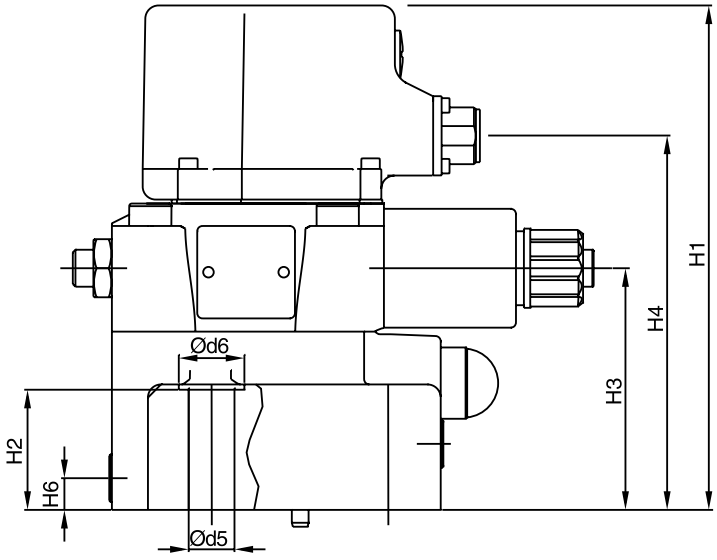
NG	ISO-Code	Bolt Kit			Seal Kit		Surface Finish
					Nitrile	Fluorocarbon	
10	6264-06-07-*-97	BK505	4x M10 x 35 DIN912 12.9	63 Nm (46.5 lb.-ft.) ±15%	S26-58507-0*	S26-58507-5*	
25	6264-08-11-*-97	BK485	4x M10 x 45 DIN912 12.9	63 Nm (46.5 lb.-ft.) ±15%	S26-58475-0*	S26-58475-5*	
32	6264-10-15-*-97	BK506	6x M10 x 45 DIN912 12.9	63 Nm (46.5 lb.-ft.) ±15%	S26-58508-0*	S26-58508-5*	
Prop. Section P2*					S26-58473-0	S26-58473-5	

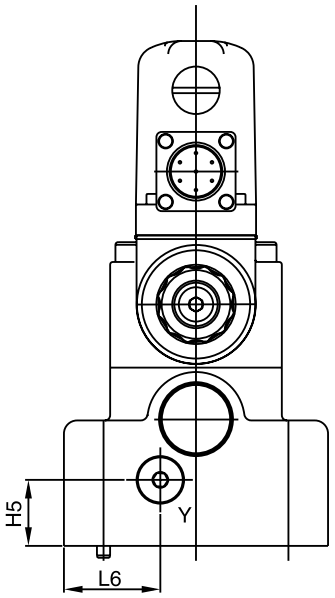
* Please combine seal kit of one size with seal kit of Prop. Section P2 for complete seal kit.

B

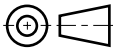








Y: external drain port G 1/8"



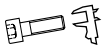
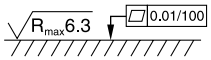
Inch equivalents for millimeter dimensions are shown in (**)

NG	ISO-Code	x1	x2	x3	x4	x5	x6	x7	y1	y2	y3	y4	y5	y6
10	6264-06-09-*-97	53.8 (2.12)	47.5 (1.87)	0.0 (0.00)	–	22.1 (0.87)	–	22.1 (0.87)	53.8 (2.12)	–	26.9 (1.06)	–	–	–
25	6264-08-13-*-97	66.7 (2.63)	55.6 (2.19)	23.8 (0.94)	–	11.1 (0.44)	–	33.4 (1.31)	70.0 (2.76)	–	35.0 (1.38)	–	–	–
32	6264-10-17-*-97	88.9 (3.50)	76.2 (3.00)	31.8 (1.25)	–	12.7 (0.50)	–	44.5 (1.75)	82.6 (3.25)	–	41.3 (1.63)	–	–	–

Tolerance at X and Y pin holes and screw holes ±0.1, at port holes ±0.2.

NG	ISO-Code	B1	B2	H1	H2	H3	H4	H5	H6	L1	L2	L3	L4	L5	L6
10	6264-06-09-*-97	80.0 (3.15)	26.9 (1.06)	185.1 (7.29)	27.0 (1.06)	88.0 (3.46)	135.8 (5.35)	20.5 (0.81)	25.0 (0.98)	52.5 (2.07)	118.5 (4.67)	182.3 (7.18)	14.4 (0.57)	–	29.5 (1.16)
25	6264-08-13-*-97	100.0 (3.94)	35.0 (1.38)	188.6 (7.43)	45.5 (1.79)	91.5 (3.60)	139.8 (5.50)	25.0 (0.98)	12.0 (0.47)	37.9 (1.49)	124.5 (4.90)	182.3 (7.18)	14.4 (0.57)	–	36.5 (1.44)
32	6264-10-17-*-97	120.0 (4.72)	41.3 (1.63)	194.1 (7.64)	52.0 (2.05)	97.0 (3.82)	144.8 (5.70)	26.5 (1.04)	13.5 (0.53)	45.0 (1.77)	153.0 (6.02)	182.3 (7.18)	14.4 (0.57)	–	46.5 (1.83)

NG	ISO-Code	d1max	d2max	d3	t3	d4	t4	d5	d6	Subplate
10	6264-06-09-*-97	14.7 (0.58)	4.8 (0.19)	7.5 (0.30)	10.0 (0.39)	M12	20.0 (0.79)	13.5 (0.53)	20.0 (0.79)	SPP3R6B910
25	6264-08-13-*-97	23.4 (0.92)	6.3 (0.25)	7.5 (0.30)	10.0 (0.39)	M16	27.0 (1.06)	17.5 (0.69)	25.0 (0.98)	SPP6R10B910
32	6264-10-17-*-97	32.0 (1.26)	6.3 (0.25)	7.5 (0.30)	10.0 (0.39)	M18	28.0 (1.10)	20.0 (0.79)	30.0 (1.18)	SPP10R12B910

NG	ISO-Code	Bolt Kit			Seal Kit		Surface Finish
					Nitrile	Fluorocarbon	
10	6264-06-09-*-97	BK494	4x M12 x 45 DIN912 12.9	108 Nm (79.7 lb.-ft.) ±15%	S26-96396-0	S26-96396-5	
25	6264-08-13-*-97	BK366	4x M16 x 70 DIN912 12.9	264 Nm (194.7 lb.-ft.) ±15%	S26-98589-0	S26-98589-5	
32	6264-10-17-*-97	BK507	4x M18 x 75 DIN912 12.9	398 Nm (293.5 lb.-ft.) ±15%	S26-96392-0	S26-96392-5	

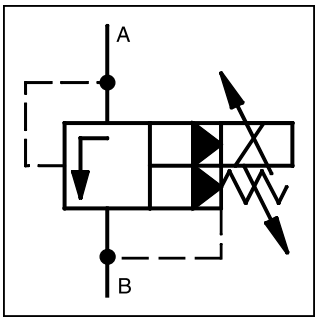
B

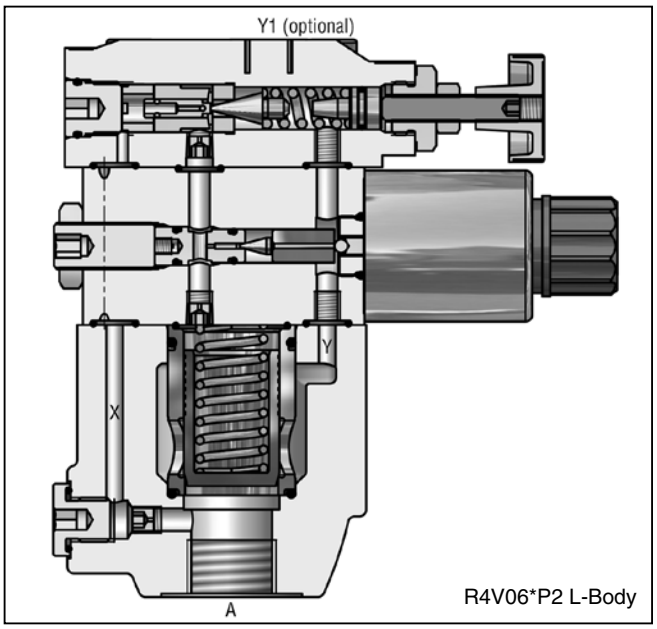
General Description

Series R4V*P2 proportional pressure relief valves are based on the mechanically adjusted Series R4V. The additional proportional unit between the mechanical pilot valve and the main stage allows continuous pressure adjustment.

The optimum performance can be achieved in combination with the digital amplifier module PCD00A-400.


R4V*P2 L-Body





R4V06*P2 L-Body

Features

- Pilot operated with manual adjustment.
- Continuous adjustment by proportional solenoid.
- 2 interfaces:
  – L-body (R4V06-G3/4", R4V10-G1 1/4")
  – T-body (R4V03-G1/2", R4V06-G1")
- 3 pressure ranges.
- With mechanical maximum pressure adjustment.

Specifications

General				
	T-Body		**L-Body**	
Size	**03 (1/2")**	**06 (1")**	**06 (3/4")**	**10 (1-1/4")**
Mounting	Threaded Body			
Mounting Position	Unrestricted			
Ambient Temp. Range	-20°C to +50°C (-4°F to +122°F)			
Hydraulic				
Max. Operating Pressure	Ports A and X up to 350 Bar (5075 PSI); Ports B and Y 30 Bar (435 PSI)			
Pressure Range	105 Bar (1523 PSI), 210 Bar (3045 PSI), 350 Bar (5075 PSI)			
Nominal Flow	60 LPM (15.9 GPM)	200 LPM (52.9 GPM)	200 LPM (52.9 GPM)	450 LPM (119.0 GPM)
Fluid	Hydraulic oil as per DIN 51524 ... 51525			
Fluid Temperature	-20°C to 80°C (-4°F to 176°F)			
Viscosity Permitted **Recommended**	10 to 380 cSt / mm²/s (46 to 1761 SSU) 30 to 80 cSt / mm²/s (139 to 371 SSU)			
Filtration	ISO Class 4406 (1999) 18/16/13 (acc. NAS 1638: 7)			
Electrical (Proportional Solenoid)				
Duty Ratio	100%			
Nominal Voltage	12 VDC			
Max. Current	2.3 amps			
Coil Resistance	4 Ohm at 20°C (68°F)			
Protection Class	IP65 in accordance with EN60529 (plugged and mounted)			
Power Amplifier	PCD00A-400			

Ordering Information

R4V	☐	—	5	☐	☐	☐	☐	P2	G0R	A	☐	☐
Proportional Pressure Relief Valve	Size		Max Pressure 350 Bar (5075 PSI)	Body	Pressure Range	Adjustment	Drain Line	Proportional Pressure Control	Solenoid Voltage 12V 2.3A	Design Series	Seal	Options Check with Factory

Code	Description
03	NG10 (G1/2")
06	NG25 (G1" – T-Body) (G3/4" – L-Body)
10	NG32 (G1-1/4")

Code	Description
0	Internal
2	External from Pilot Head (Y1)

Code	Description
1	Nitrile
5	Fluorocarbon

Code	Description
6	R4V03 T-Body R4V06 T-Body
D	R4V06 L-Body R4V10 L-Body

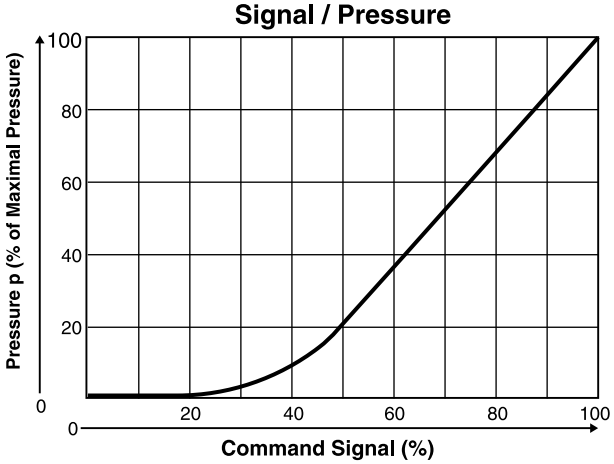
Code	Description
1	Hand Knob
3	Acorn Nut with Lead Seal

Code	Description
1	up to 105 Bar (1523 PSI)
3	up to 210 Bar (3045 PSI)
5	up to 350 Bar (5075 PSI)

Weight:

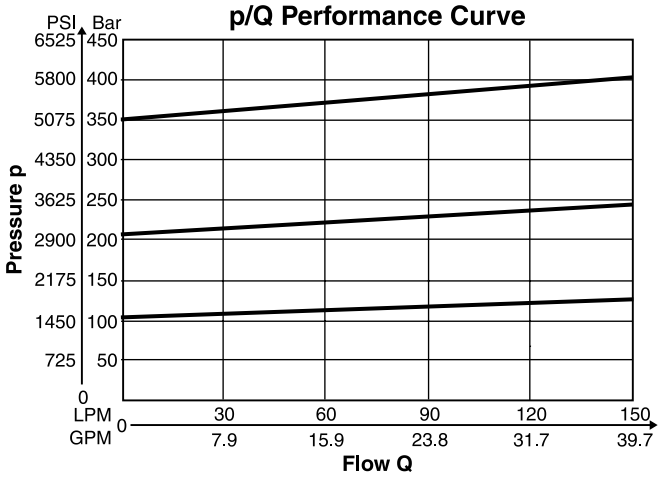
R4V03*P2	5.0 kg (11.0 lbs.)
R4V06*6*P2	5.1 kg (11.2 lbs.)
R4V06*D*P2	7.4 kg (16.3 lbs.)
R4V10*P2	8.4 kg (18.5 lbs.)

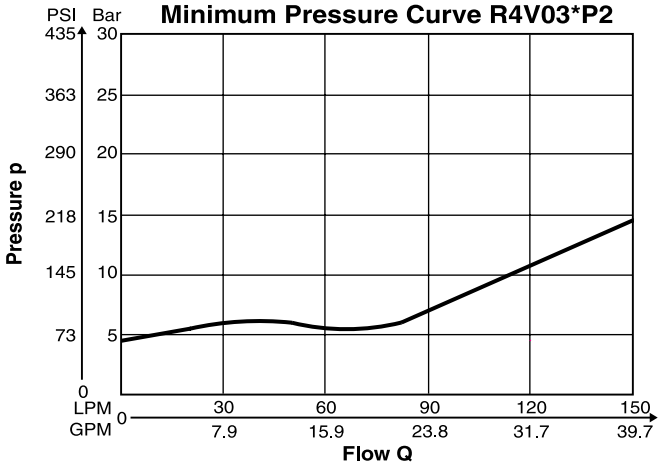
Performance Curve



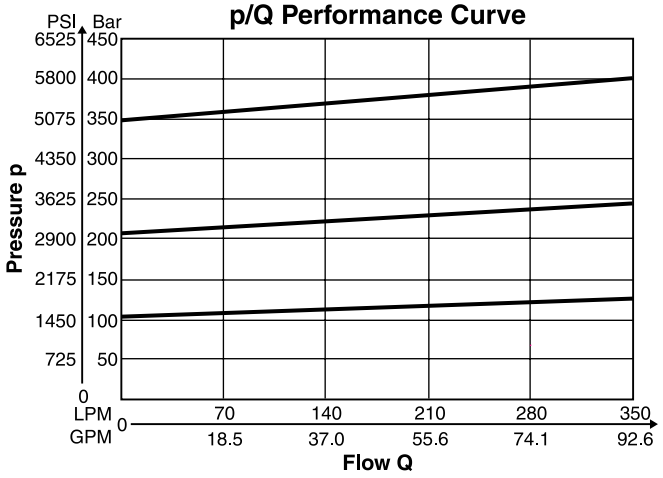
B

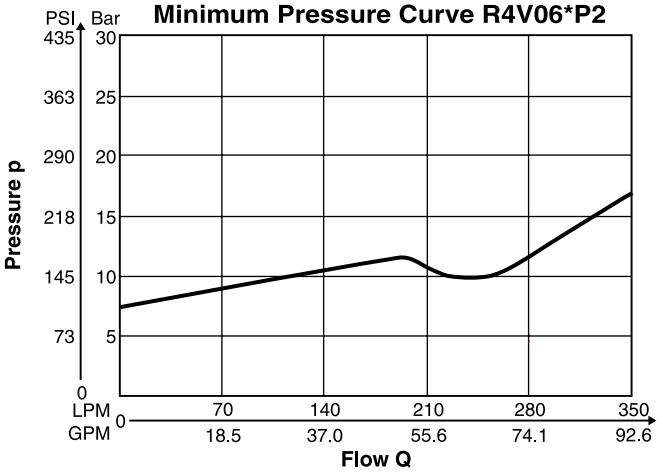
R4V03*P2 [1)]



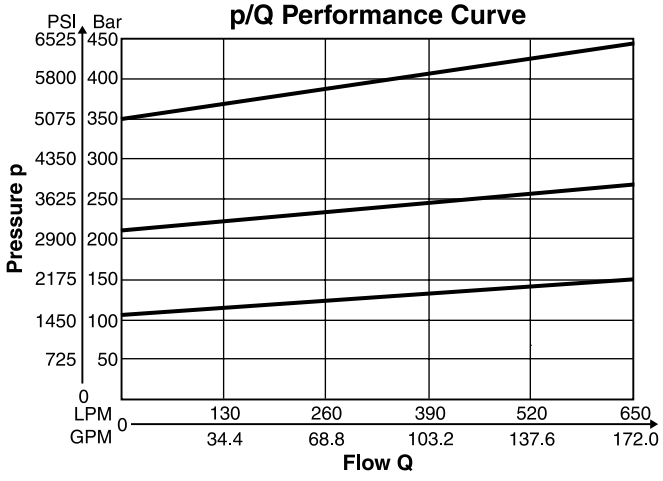


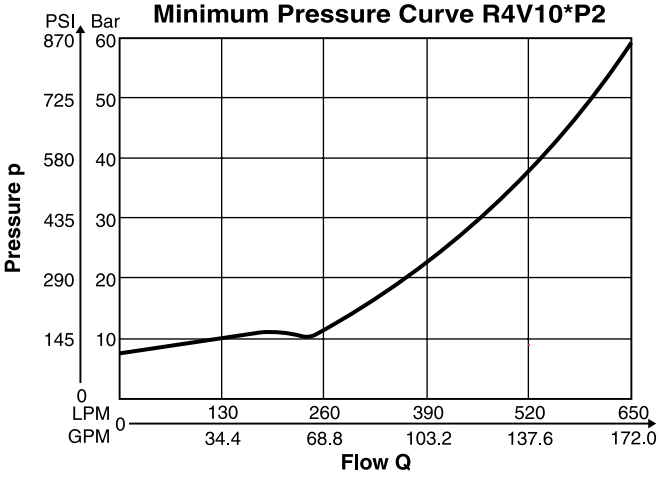
R4V06*P2 [1)]





R4V10*P2 [1)]





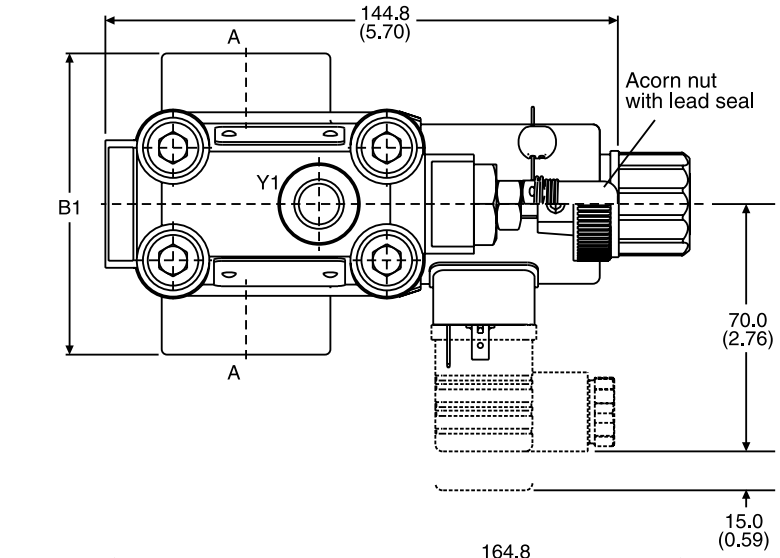
[1)] The performance curves are measured with external drain.
For internal drain, the tank pressure has to be added to the curve.

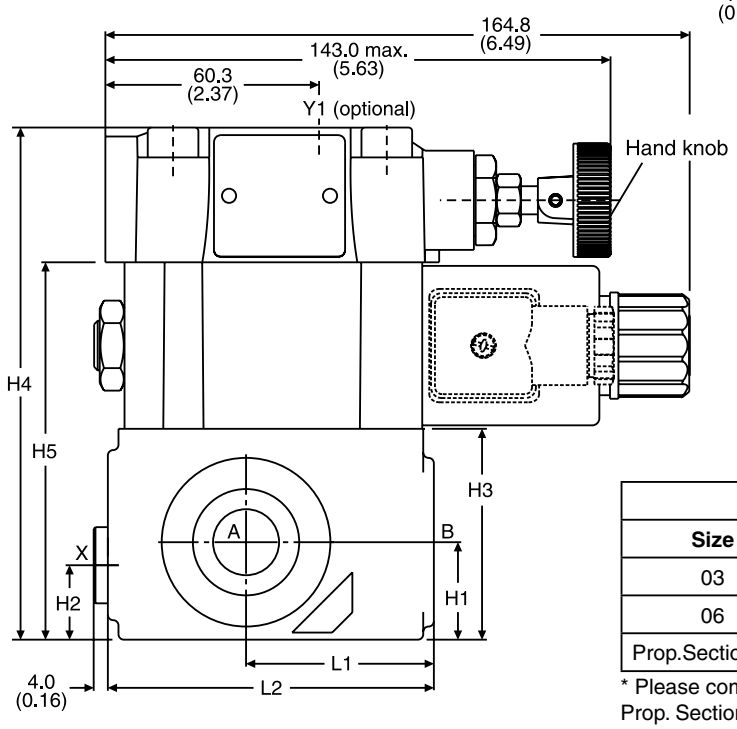
R4V_P2.indd, dd

Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA

T-Body

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





Seal Kits		
Size	**Nitrile**	**Fluorocarbon**
03	S26-58507-0	S26-58507-5
06	S26-58475-0	S26-58475-5
Prop.Section P2*	S26-58473-0	S26-58473-5

* Please combine seal kit of one size with seal kit of Prop. Section P2 for complete seal kit.

Size	Body	B1	H1	H2	H3	H4	H5	L1	L2
03	T-body	85.0 (3.35)	27.5 (1.08)	21.0 (0.83)	59.5 (2.34)	144.5 (5.69)	106.5 (4.19)	53.0 (2.09)	92.0 (3.62)
06	T-body	136.0 (5.35)	38.0 (1.50)	28.0 (1.10)	93.0 (3.66)	178.0 (7.01)	140.0 (5.51)	66.5 (2.62)	117.5 (4.63)

Ports	Function	Port Size	
		R4V03*P2 T-body	R4V06*P2 T-body
A	Pressure (inlet)	G1/2"	G1"
B	Tank (outlet)	G1/2"	G1"
X[1)]	Ext. Remote Control or Vent Connection	G1/4"	
Y1[2)]	External Drain		

[1)] Closed when supplied

[2)] Port Y1 is only available at drain line (code 2) external from the pilot head

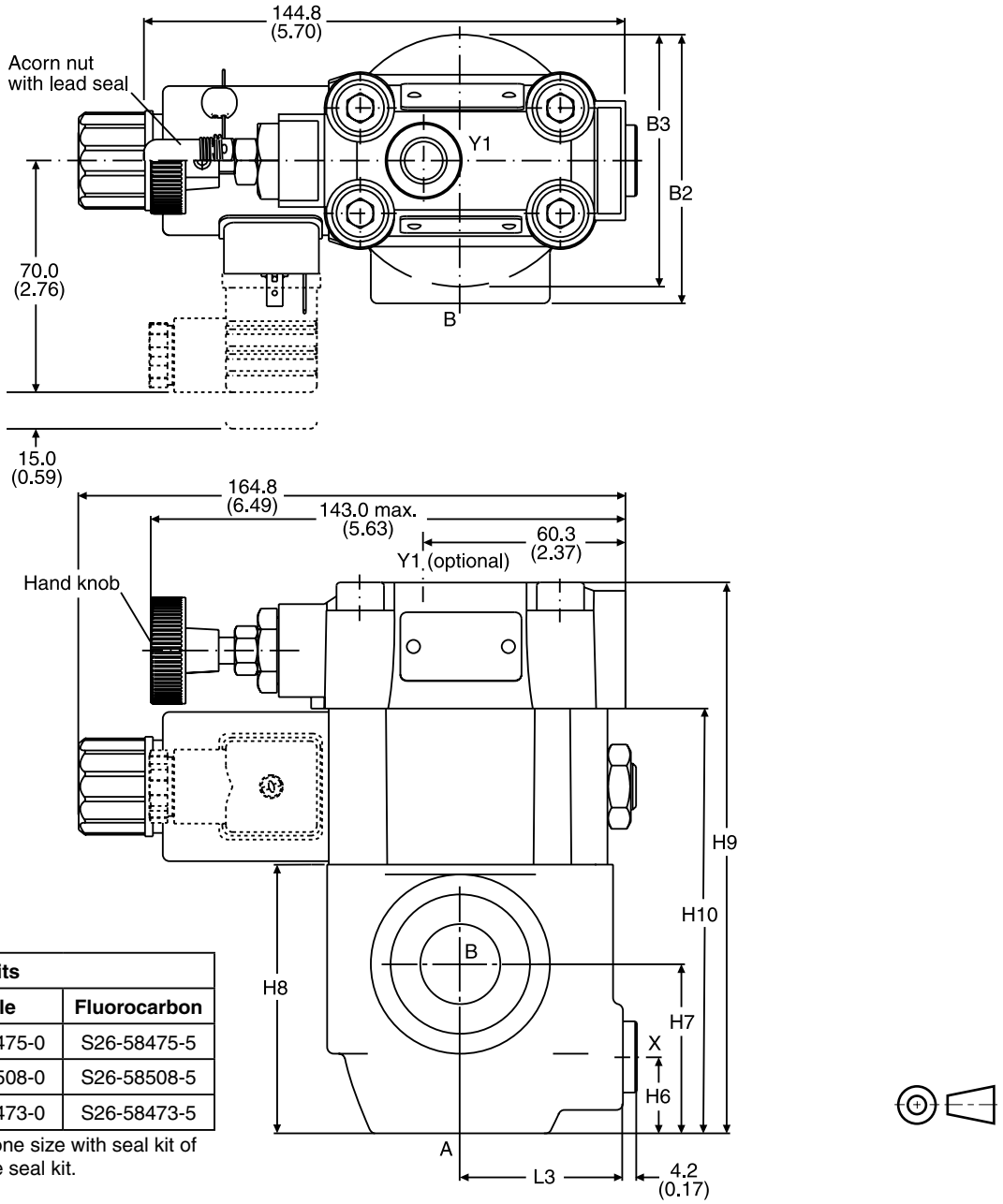
R4V_P2.indd, dd

Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA

B

L-Body

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



Seal Kits		
Size	**Nitrile**	**Fluorocarbon**
06	S26-58475-0	S26-58475-5
10	S26-58508-0	S26-58508-5
Prop.Section P2*	S26-58473-0	S26-58473-5

* Please combine seal kit of one size with seal kit of Prop. Section P2 for complete seal kit.

Size	Body	B2	B3	H6	H7	H8	H9	H10	L3
06	L-body	81.0 (3.19)	76.0 (2.99)	23.0 (0.91)	51.0 (2.01)	81.0 (3.19)	166.0 (6.54)	128.0 (5.04)	49.0 (1.93)
10	L-body	120.7 (4.75)	85.8 (3.38)	31.8 (1.25)	50.8 (2.00)	96.0 (3.78)	181.0 (7.13)	143.0 (5.63)	49.8 (1.96)

Ports	Function	Port size	
		R4V06 L-body	**R4V10 L-body**
A	Pressure (inlet)	G3/4"	G1-1/4"
B	Tank (outlet)	G3/4"	G1-1/4"
X[1)]	Ext. Remote Control or Vent Connection	G1/4"	
Y1[2)]	External Drain		

[1)] Closed when supplied

[2)] Port Y1 is only available at drain line (code 2) external from the pilot head

R4V_P2.indd, dd

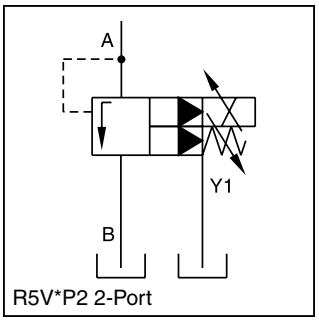
Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA

General Description

Series R5V*P2 proportional pressure relief valves are based on the mechanical adjusted Series R5V. The additional proportional unit between the mechanical pilot valve and the main stage allows continuous pressure adjustment.

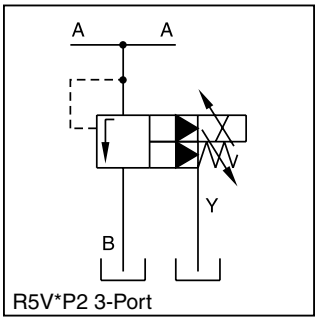
The optimum performance can be achieved in combination with the digital amplifier module PCD00A-400.


R5V*P2 2-Port



R5V*P2 2-Port

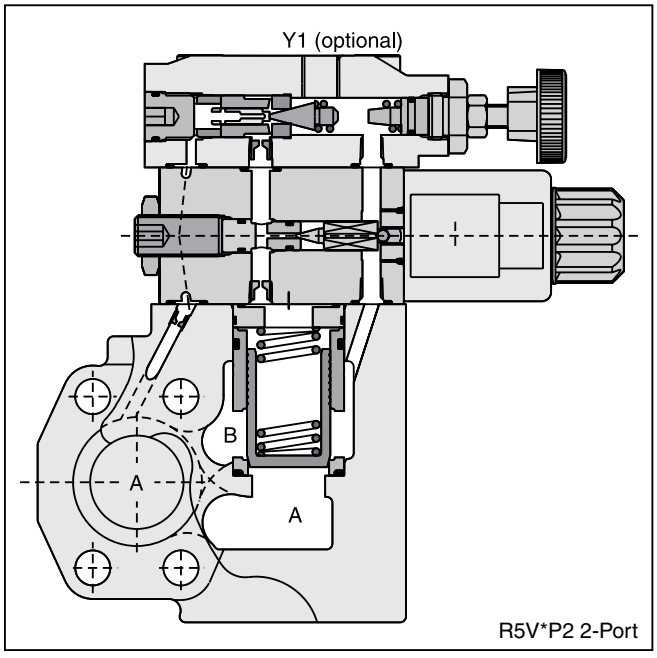

R5V*P2 3-Port



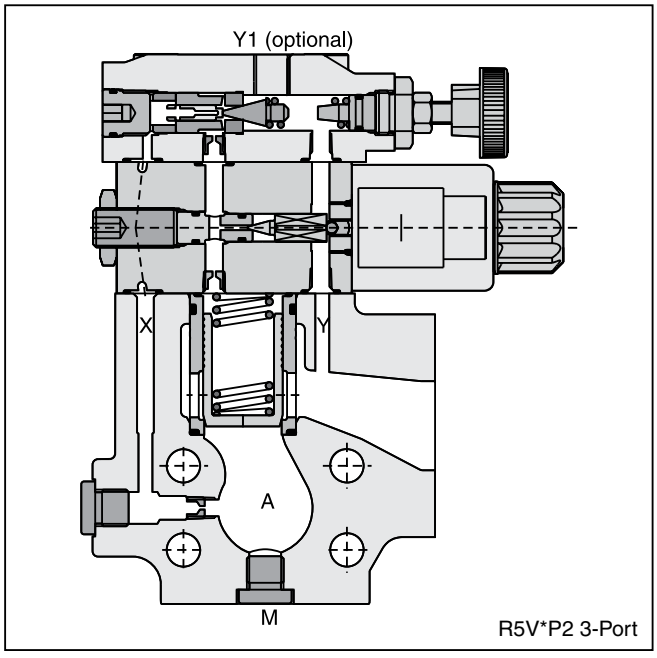
R5V*P2 3-Port

Features

- Pilot operated with manual adjustment.
- Continuous adjustment by proportional solenoid.
- R5V with 2-port body:
  – 3 sizes (SAE 3/4", 1", 1-1/4")
  – SAE 61 flange
- R5V with 3-port body:
  – 4 sizes (SAE 3/4", 1", 1-1/4", 1-1/2")
  – SAE 61 and SAE 62 flange
- 3 pressure ranges.
- With mechanical maximum pressure adjustment.



R5V*P2 2-Port



R5V*P2 3-Port

B

General					
Size		**06 (3/4")**	**08 (1")**	**10 (1-1/4")**	**12 (1-1/2")**
Mounting		Flanged according to SAE 61			
Mounting Position		Unrestricted			
Ambient Temperature Range		-20°C to +50°C (-4°F to +122°F)			
Hydraulic					
Maximum Operating Pressure	**SAE 61 Ports A, B**	350 Bar (5075 PSI)	350 Bar (5075 PSI)	280 Bar (4060 PSI)	210 Bar (3045 PSI)
	SAE 61 Port Y1	30 Bar (435 PSI)	30 Bar (435 PSI)	30 Bar (435 PSI)	30 Bar (435 PSI)
	SAE 62 Ports A, B	350 Bar (5075 PSI)	350 Bar (5075 PSI)	350 Bar (5075 PSI)	350 Bar (5075 PSI)
	SAE 62 Port Y1	30 Bar (435 PSI)	30 Bar (435 PSI)	30 Bar (435 PSI)	30 Bar (435 PSI)
Pressure Range		105 Bar (1523 PSI), 210 Bar (3045 PSI), 350 Bar (5075 PSI)			
Nominal Flow		90 LPM (23.8 GPM)	300 LPM (79.4 GPM)	600 LPM (158.7 GPM)	600 LPM (158.7 GPM)
Fluid		Hydraulic oil as per DIN 51524 ... 51525			
Fluid Temperature		-20°C to +80°C (-4°F to +176°F)			
Viscosity	**Permitted**	10 to 650 cSt / mm^2/s (46 to 3013 SSU)			
	Recommended	30 to 80 cSt / mm^2/s (139 to 371 SSU)			
Filtration		ISO Class 4406 (1999) 18/16/13 (acc. NAS 1638: 7)			
Electrical (Proportional Solenoid)					
Duty Ratio		100%			
Nominal Voltage		12 VDC			
Max. Current		2.3 amps			
Coil Resistance		4 Ohm at 20°C (68°F)			
Solenoid Connection		Connector as per EN175301-803			
Protection Class		IP65 in accordance with EN60529 (plugged and mounted)			
Power Amplifier		PCD00A-400			

Ordering Information

R5V □ — □ □ □ **P2** **G0R** **A** □ □

Proportional Pressure Relief Valve | Size | SAE Interface | Pilot Ports | Pressure Range | Adjustment | Pilot Oil | Proportional Pressure Control | Solenoid Voltage 12V 2.3A | Design Series | Seal | Options

Code	Description
06	SAE 3/4"
08	SAE 1"
10	SAE 1-1/4"
12*	SAE 1-1/2"

* R5V 3-Port only

SAE 61

Code	Size	Maximum Pressure
3	12	210 Bar (3045 PSI)
4	10	280 Bar (4060 PSI)
5	06/08	350 Bar (5075 PSI)

SAE 62

Code	Size	Maximum Pressure
6*	06/08/ 10/12	350 Bar (5075 PSI)

* R5V 3-Port only

2-Port Body

Code	Description
3*	No Ports
7	Y1 = G1/4"

3-Port Body

Code	Description
9	Y1**, X1, M = G1/4"

* 2-Port: only in combination with pilot oil code 2.

** 3-Port: Y1 only available at external drain (pilot oil code 6).

Code	Description
1	up to 105 Bar (1523 PSI)
3	up to 210 Bar (3045 PSI)
5	up to 350 Bar (5075 PSI)

Code	Description
1	Hand Knob
3	Acorn Nut with Lead Seal

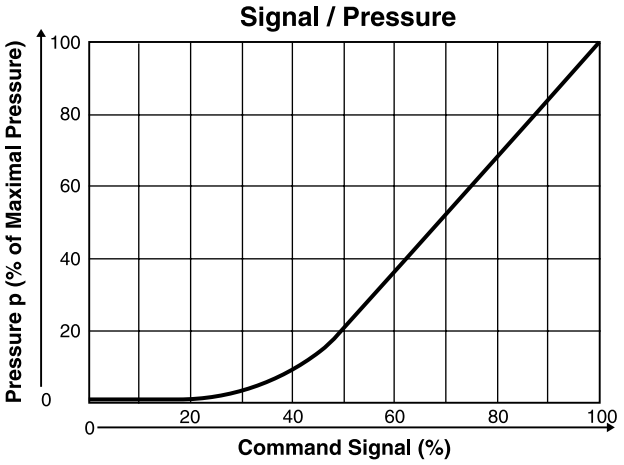
Code	Drain Line
2	Internal
6	External from Y1-Port

Code	Description
1	Nitrile
5	Fluorocarbon

Code	Description
Omit	Standard
152	3-Port body with metric threads

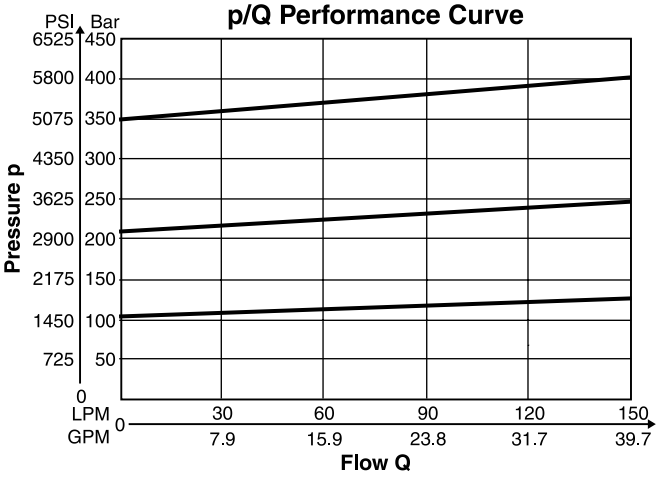
Weight:	2-Port	3-Port
R5V06*P2	5.8 kg (12.8 lbs.)	5.4 kg (11.9 lbs.)
R5V08*P2	6.4 kg (14.1 lbs.)	6.4 kg (14.1 lbs.)
R5V10*P2	7.7 kg (17.0 lbs.)	7.0 kg (15.4 lbs.)
R5V12*P2	——	9.8 kg (21.6 lbs.)

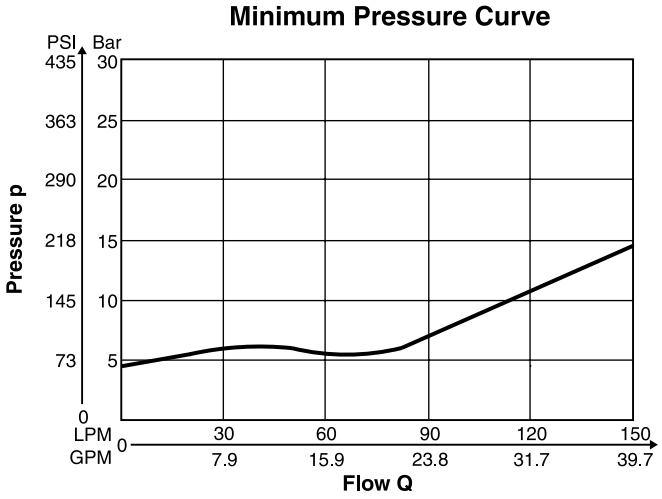
Performance Curve



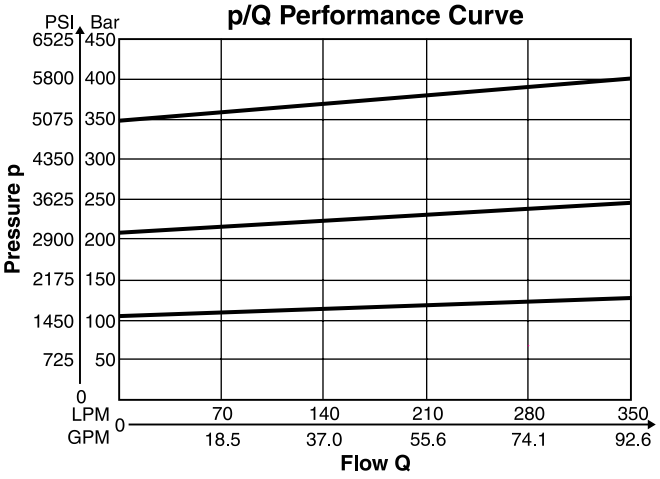
B

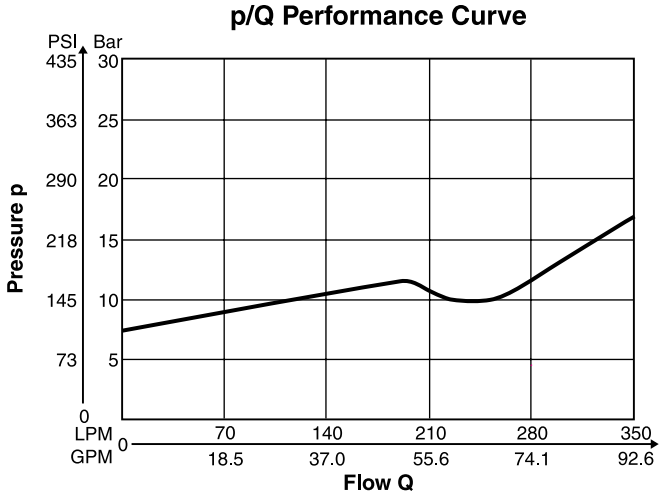
R5V06*P2 [1)]



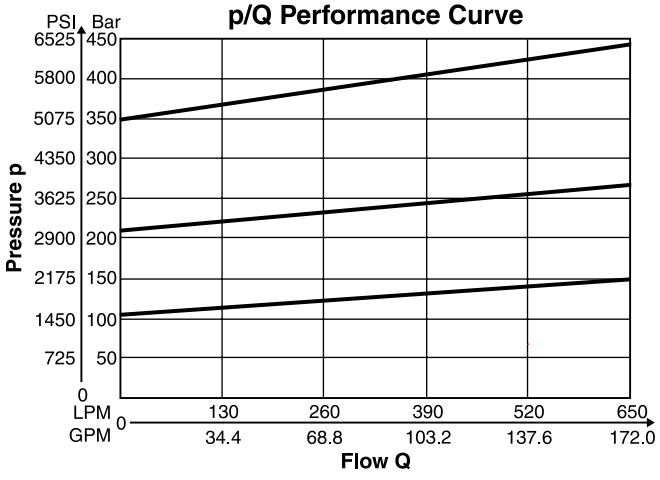


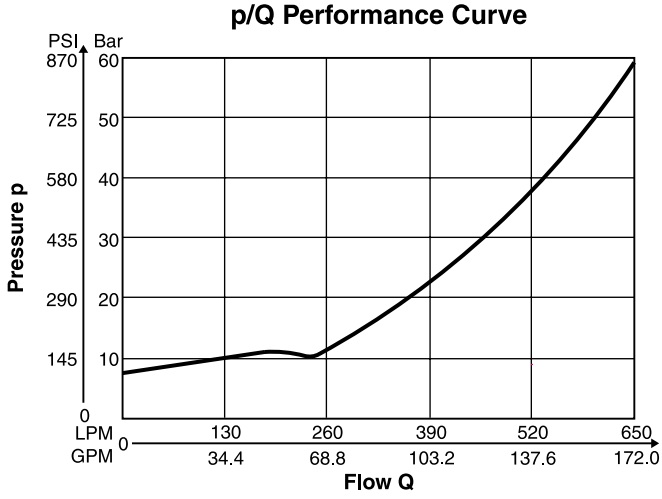
R5V08*P2 [1)]





R5V10*P2 [1)]





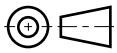
[1)] The performance curves are measured with external drain.
For internal drain, the tank pressure has to be added to the curve.

R5P_P2.indd, dd

Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA

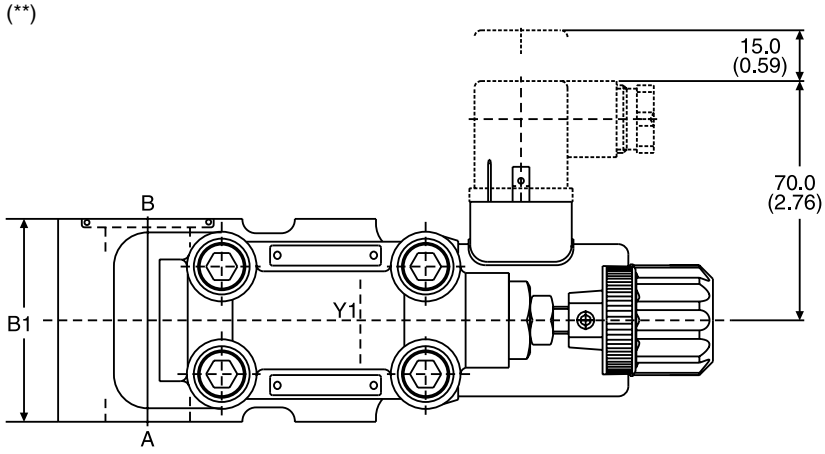
Inch equivalents for millimeter dimensions are shown in (**)

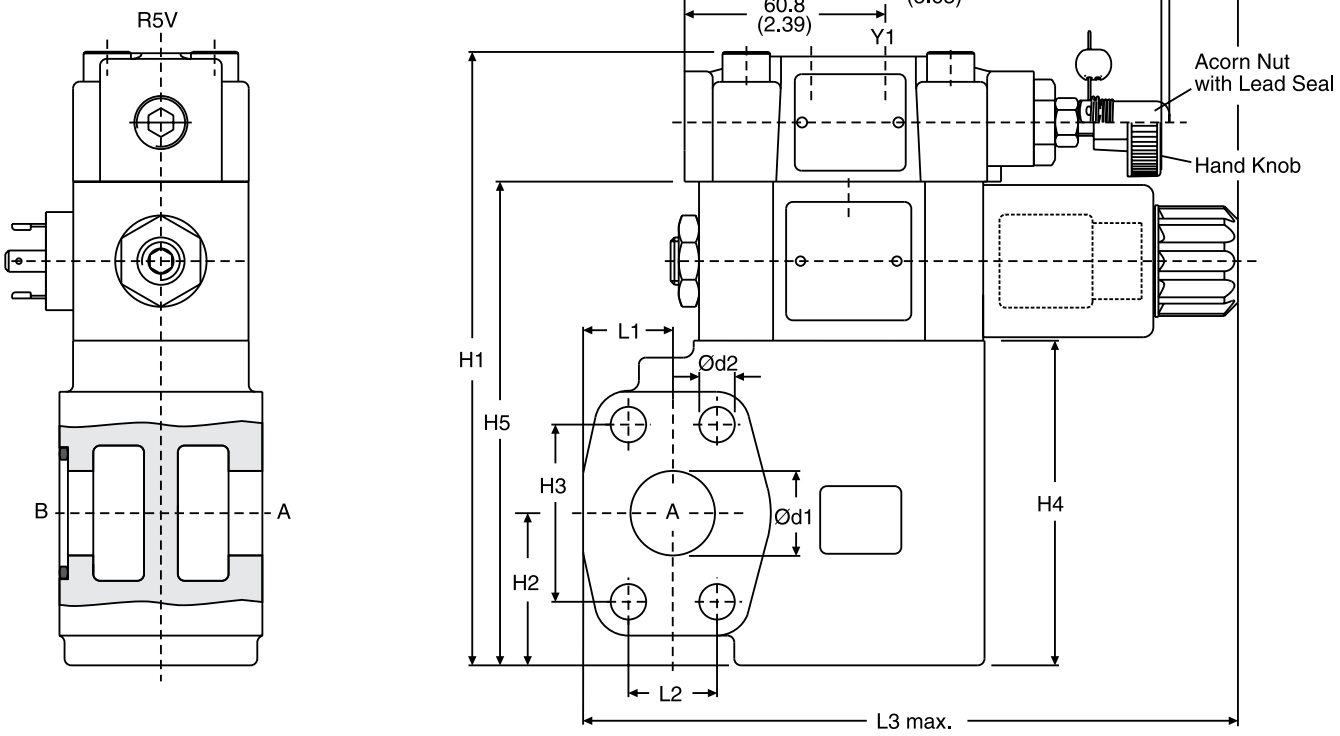
2-Port



Seal Kits		
Size	**Nitrile**	**Fluorocarbon**
06	S16-91850-0	S16-91850-5
08	S16-91851-0	S16-91851-5
10	S16-91852-0	S16-91852-5
Prop. Section P2*	S26-58473-0	S26-58473-5

* Please combine seal kit of one size with seal kit of Prop. Section P2 for complete seal kit.





SAE 61

Size	B1	H1	H2	H3	H4	H5	L1	L2	L3	d1	d2
06	60.0 (2.36)	175.0 (6.89)	37.0 (1.46)	47.6 (1.87)	90.0 (3.54)	137.0 (5.39)	24.6 (0.97)	22.2 (0.87)	174.0 (6.85)	19.0 (0.75)	10.5 (0.41)
08	60.0 (2.36)	181.0 (7.13)	45.0 (1.77)	52.4 (2.06)	96.0 (3.78)	143.0 (5.63)	26.5 (1.04)	26.2 (1.03)	193.6 (7.62)	25.0 (0.98)	10.5 (0.41)
10	75.0 (2.95)	194.0 (7.64)	48.0 (1.89)	58.7 (2.31)	109.0 (4.29)	156.0 (6.14)	34.0 (1.34)	30.2 (1.19)	201.0 (7.91)	32.0 (1.26)	12.5 (0.49)

Port	Function	Port size		
		R5V06	**R5V08**	**R5V10**
A	Pressure	3/4" SAE 61	1" SAE 61	1-1/4" SAE 61
B	Tank	3/4" SAE 61	1" SAE 61	1-1/4" SAE 61
Y1	External Drain	G1/4"		

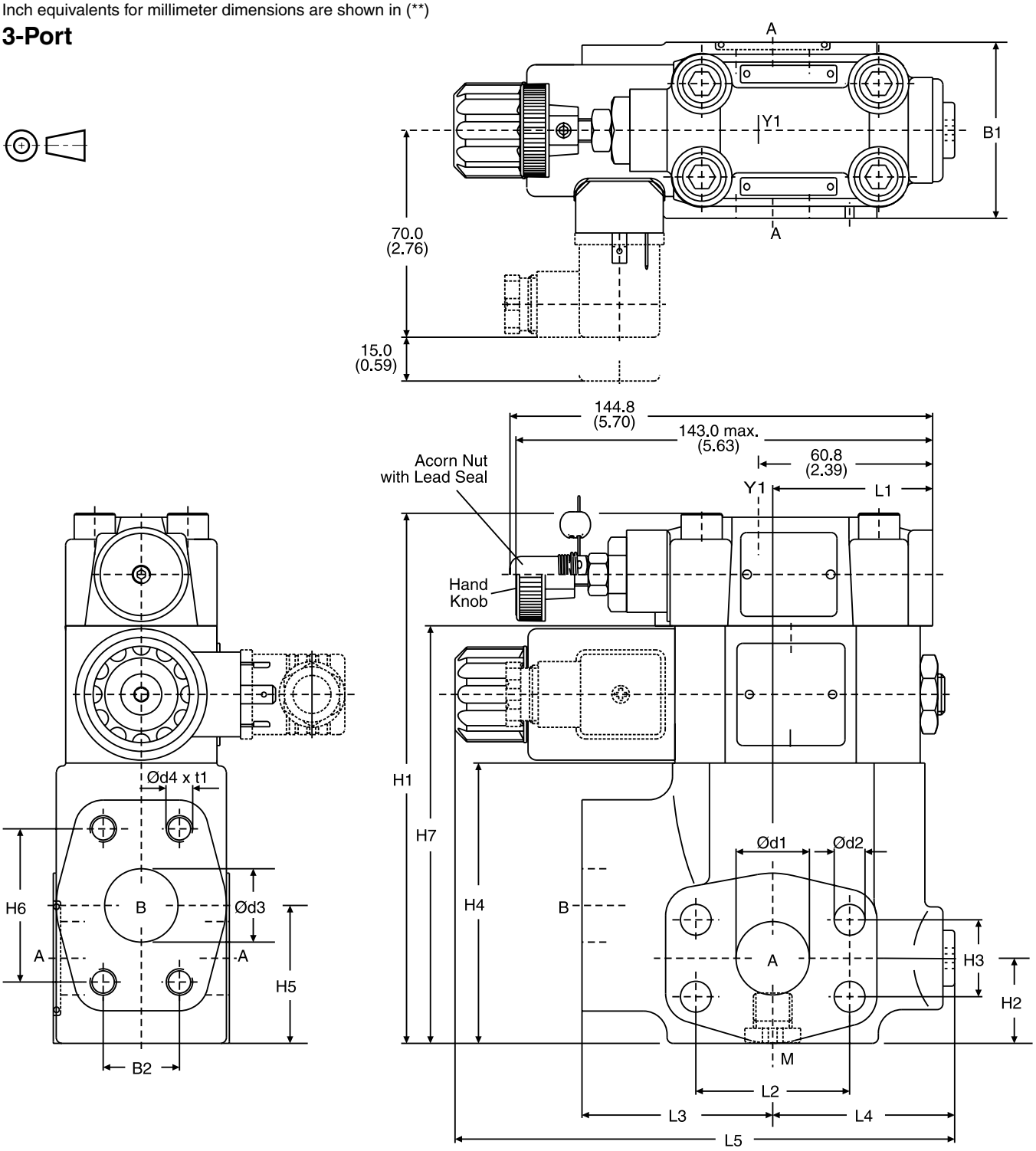
R5V_P2.indd, dd

Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA

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

3-Port

B



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

3-Port

SAE 61

Size	B1	B2	H1	H2	H3	H4	H5	H6	H7	L1	L2	L3	L4	L5	d1	d2	d3	d4 (option 152)	t1
06	60.0 (2.36)	22.2 (0.87)	166.0 (6.54)	28.0 (1.10)	22.2 (0.87)	81.0 (3.19)	41.6 (1.64)	47.6 (1.87)	128.0 (5.04)	50.3 (1.98)	47.6 (1.87)	63.0 (2.48)	56.0 (2.20)	174.6 (6.87)	19.0 (0.75)	10.5 (0.41)	19.0 (0.75)	3/8"-16 UNC (M10)	20.0 (0.79)
08	60.0 (2.36)	26.2 (1.03)	188.0 (7.40)	29.0 (1.14)	26.2 (1.03)	103.0 (4.06)	47.0 (1.85)	52.4 (2.06)	150.0 (5.91)	55.8 (2.20)	52.4 (2.06)	65.0 (2.56)	58.0 (2.28)	177.0 (6.97)	25.0 (0.98)	10.5 (0.41)	25.0 (0.98)	3/8"-16 UNC (M10)	23.0 (0.91)
10	75.0 (2.95)	30.2 (1.19)	198.0 (7.80)	34.5 (1.36)	30.2 (1.19)	113.0 (4.45)	64.0 (2.52)	58.7 (2.31)	160.0 (6.30)	57.8 (2.28)	58.7 (2.31)	61.0 (2.40)	62.0 (2.44)	179.1 (7.05)	32.0 (1.26)	12.5 (0.49)	32.0 (1.26)	7/16"-14 UNC (M12)	22.0 (0.87)
12	80.0 (3.15)	35.7 (1.41)	225.0 (8.86)	34.0 (1.34)	35.7 (1.41)	140.0 (5.51)	73.0 (2.87)	69.8 (2.75)	187.0 (7.36)	37.3 (1.47)	69.8 (2.75)	92.5 (3.64)	55.2 (2.17)	186.8 (7.35)	38.0 (1.50)	13.5 (0.53)	38.0 (1.50)	1/2"-13 UNC (M12)	27.0 (1.06)

SAE 62

Size	B1	B2	H1	H2	H3	H4	H5	H6	L1	L2	L3	L4	L5	d1	d2	d3	d4 (option 152)	t1
06	60.0 (2.36)	23.8 (0.94)	119.0 (4.69)	28.0 (1.10)	23.8 (0.94)	81.0 (3.19)	41.6 (1.64)	50.8 (2.00)	50.3 (1.98)	50.8 (2.00)	63.0 (2.48)	56.0 (2.20)	152.0 (5.98)	19.0 (0.75)	10.5 (0.41)	19.0 (0.75)	3/8"-16 UNC (M10)	20.0 (0.79)
08	60.0 (2.36)	27.8 (1.09)	141.0 (5.55)	29.0 (1.14)	27.8 (1.09)	103.0 (4.06)	47.0 (1.85)	57.2 (2.25)	55.8 (2.20)	57.2 (2.25)	65.0 (2.56)	58.0 (2.28)	149.0 (5.87)	25.0 (0.98)	12.5 (0.49)	25.0 (0.98)	7/16"-14 UNC (M12)	22.0 (0.87)
10	75.0 (2.95)	31.8 (1.25)	151.0 (5.94)	34.5 (1.36)	31.8 (1.25)	113.0 (4.45)	64.0 (2.52)	66.7 (2.63)	57.8 (2.28)	66.7 (2.63)	61.0 (2.40)	62.0 (2.44)	150.5 (5.93)	32.0 (1.26)	13.5 (0.53)	32.0 (1.26)	1/2"-13 UNC (M12)	24.0 (0.94)
12	80.0 (3.15)	36.5 (1.44)	178.0 (7.01)	34.0 (1.34)	36.5 (1.44)	140.0 (5.51)	73.0 (2.87)	79.4 (3.13)	37.3 (1.47)	79.4 (3.13)	92.5 (3.64)	55.2 (2.17)	171.2 (6.74)	38.0 (1.50)	17.0 (0.67)	38.0 (1.50)	5/8"-11 UNC (M16)	33.0 (1.30)

Port	Function	Port Size			
		R5V06	R5V08	R5V10	R5V12
A (2)	Pressure	3/4" SAE61/62	1" SAE61/62	1-1/4" SAE61/62	1-1/2" SAE61/62
B	Tank	3/4" SAE61/62	1" SAE61/62	1-1/4" SAE61/62	1-1/2" SAE61/62
Y1	External Drain	G1/4"			
M	Pressure Gauge	G1/4"			

Seal Kits		
Size	Nitrile	Fluorocarbon
06	S16-91850-0	S16-91850-5
08	S16-91851-0	S16-91851-5
10	S16-91852-0	S16-91852-5
12	S26-27421-0	S26-27421-5
Prop. Section P2*	S26-58473-0	S26-58473-5

* Please combine seal kit of one size with seal kit of Prop. Section P2 for complete seal kit.

B

General Description

Series RPDM2 pressure relief valves are direct operated proportional valves typically used as remote control valves for flow rates of below 3 LPM (0.8 GPM).

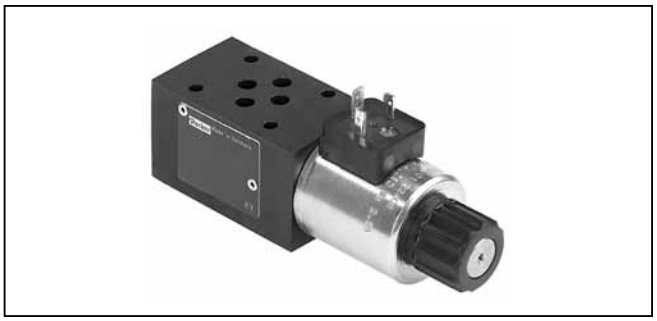
Function

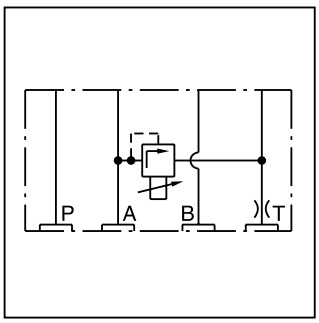
When the pressure in port P exceeds the pressure setting at the solenoid, the cone opens to port T and limits the pressure in port P to the adjusted level.

The optimum performance can be achieved in combination with the digital amplifier module PCD00A-400.

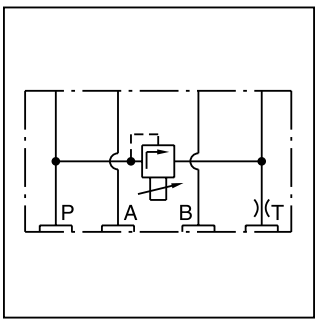
Features

- Direct operated by proportional solenoid.
- Very low pressure adjustment of $p_{min.}$
- $MTTF_D$ value 150 years.
- Sandwich style NG6 / D03 mount.
- 4 pressure ranges.





RPDM2AT



RPDM2PT

Ordering Information

RPDM	2	☐	☐	☐	V	☐
Pressure Control Valve	Size NG6 / D03	Pressure Relief	Pressure Range	Solenoid Voltage	Seal Fluorocarbon	Design Series

NOTE: Not required when ordering.

Code	Description
AT	A to T
PT	P to T

Code	Description
10	105 Bar (1523 PSI)
17	175 Bar (2538 PSI)
25	250 Bar (3625 PSI)
35	350 Bar (5075 PSI)

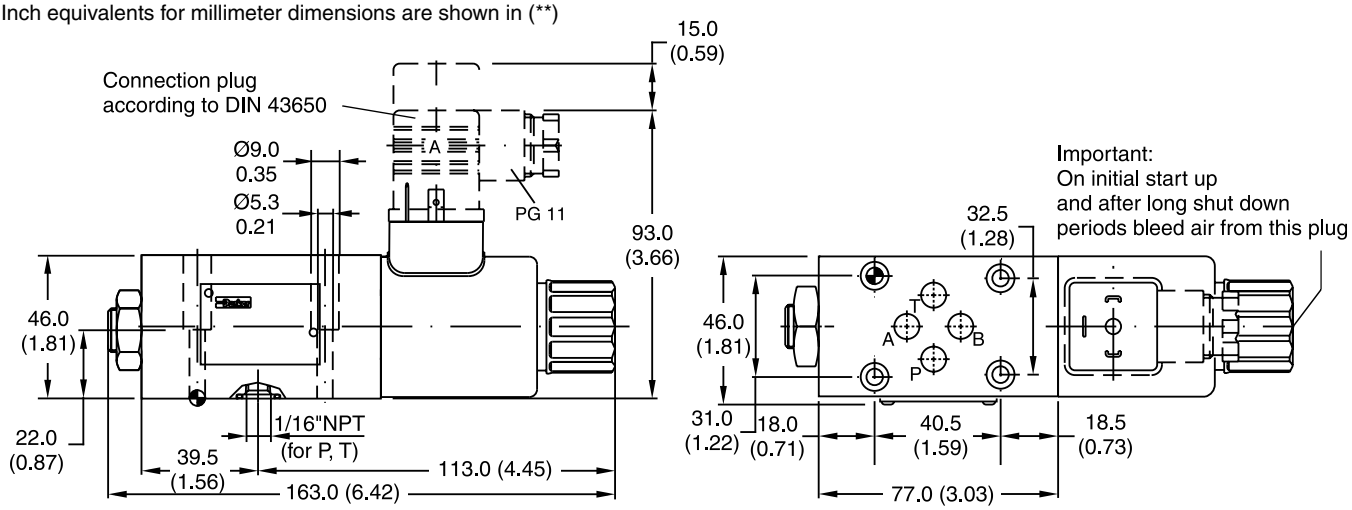
Code	Description
K	12V, 2.3A
X	16V, 1.3A

Seal Kit: SK-RPDM20

Weight: 1.3 kg (2.9 lbs.)

Dimensions

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



Please order plugs separately. See Accessories.

RPDM2.indd, dd

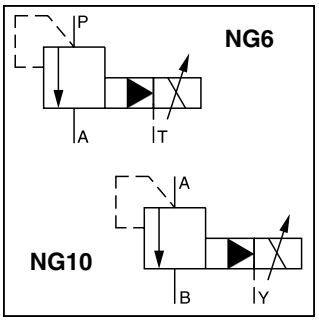
Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA

B

General Description

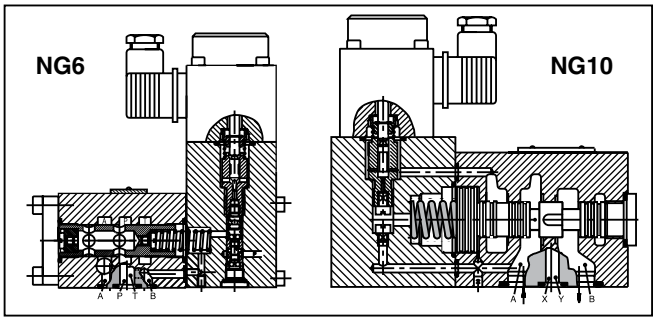
Series VBY*K pilot operated sequence valves feature proportional adjustment and an external drain. The external drain allows application as both a sequence valve and as a pressure relief valve.

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.



Specifications

General		
Size	**NG6**	**NG10**
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 depresssurized	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 51 524 to 525	
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 / mm²/s (139 to 232 SSU) 20 to 380 cST / mm²/s (93 to 1761 SSU)	
Max. Contamination Level	ISO 4406 (1999) 18/16/13	
Linearity	±3.5% at > 15% p_{nom}	
Repeatability	<±2%	
Hysteresis	<3%	
Response Time	<150 ms	<200 ms
Manufacturing Tolerance	±5% to p_{max}	
Electrical		
Duty Cycle	100% ED	
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

Ordering Information

VBY — Sequence Valve

□ — Pressure Range

Code	Description
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)

K — Linear Solenoid

Code	Description
K	9 VDC, 2.5 A

□ — Size

Code	Description
06	NG6
10	NG10

□ — Seal

Code	Description
N	Nitrile
V	Fluorocarbon

[ ] — Design Series

NOTE: Not required when ordering.

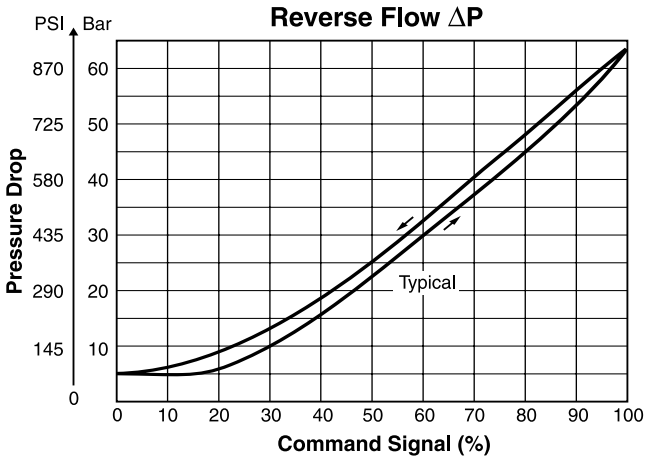
Weight:

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

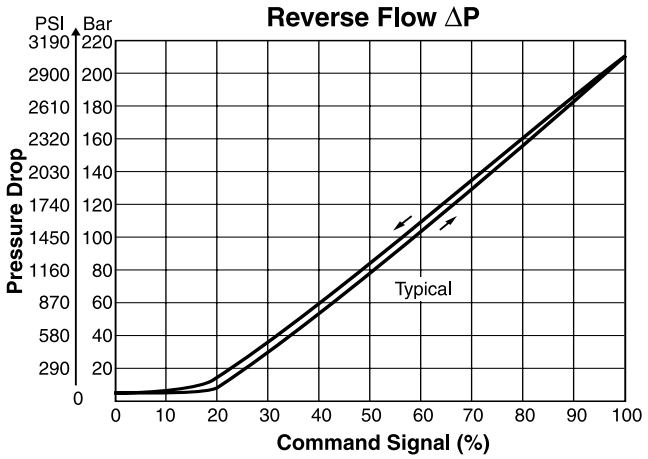
Performance Curves - NG6

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

Setting Range max. 64 Bar (928 PSI)

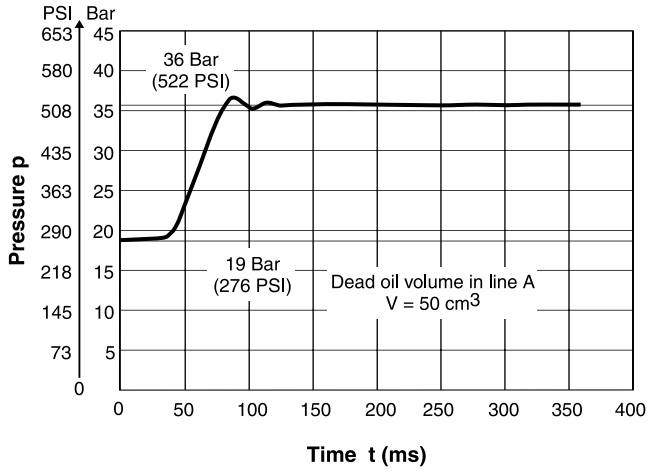


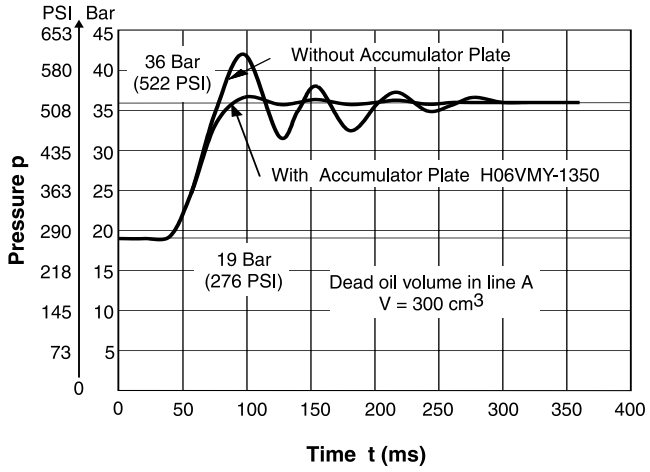
Setting Range max. 210 Bar (3045 PSI)



Step Response Signal

Setting Range max. 210 Bar (3045 PSI)



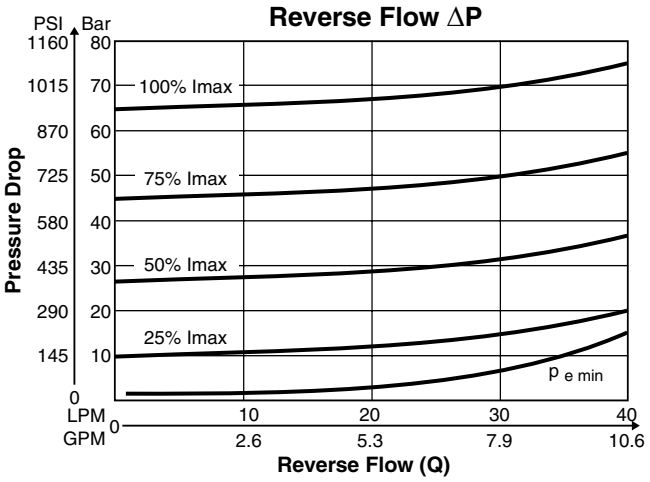


B

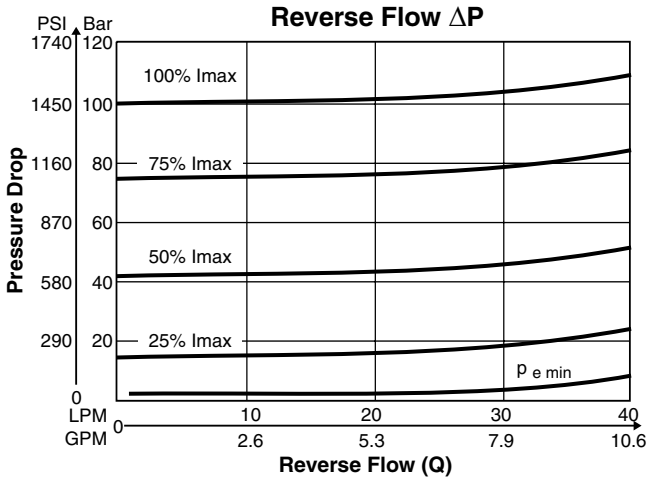
NG6

p/Q Performance Curves measured at t = 50°C (122°F) and v = 36mm²/s

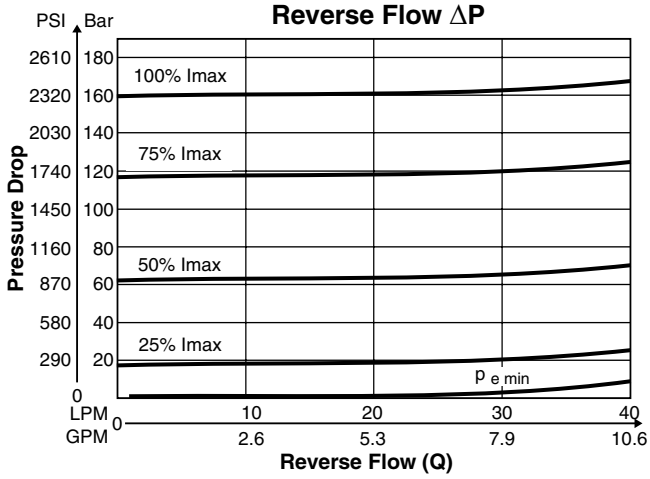
Setting Range max. 64 Bar (928 PSI)



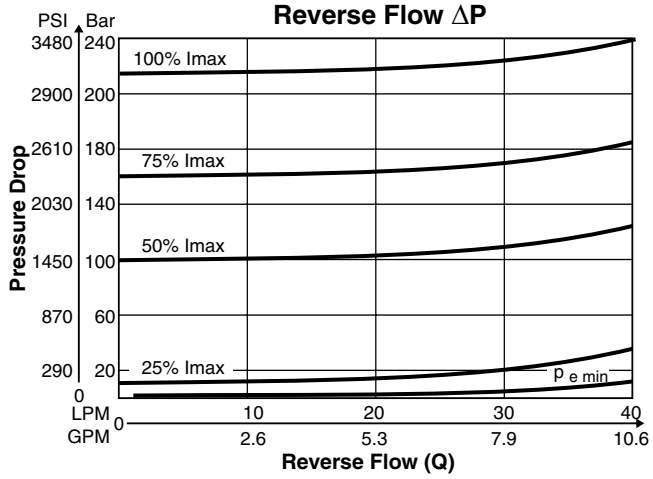
Setting Range max. 100 Bar (1450 PSI)



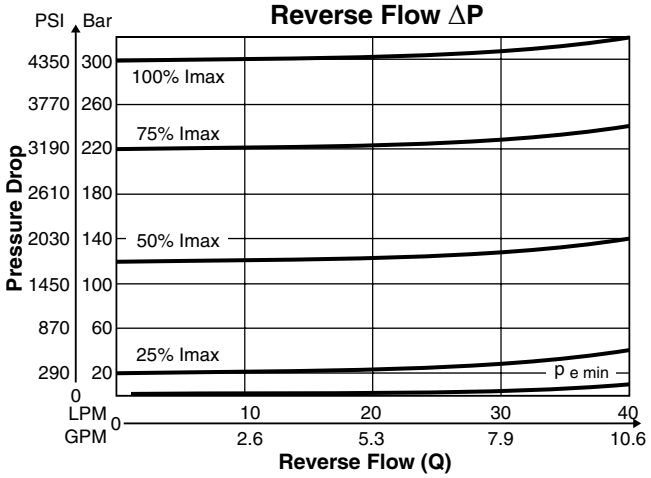
Setting Range max. 160 Bar (2320 PSI)



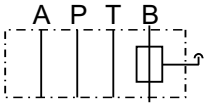
Setting Range max. 210 Bar (3000 PSI)



Setting Range max. 315 Bar (4500 PSI)



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



VBY_K.indd dd

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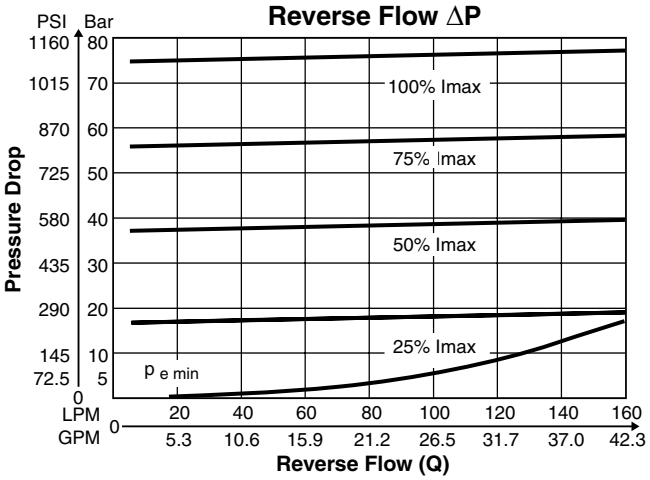
Hydraulic Valve Division
Elyria, Ohio, USA

B

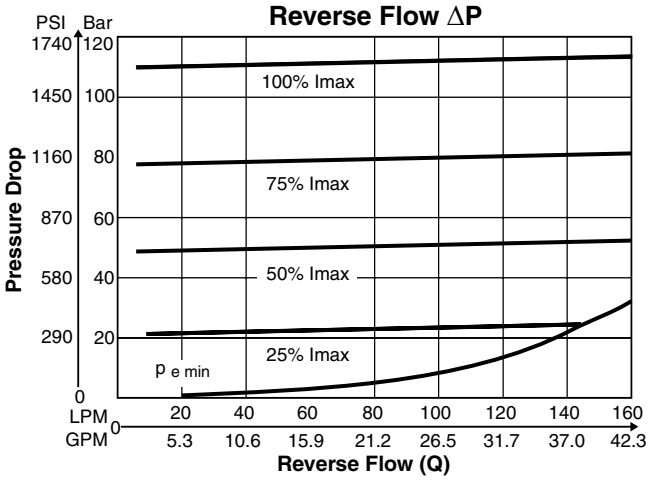
NG10

p/Q Performance Curves measured at t = 50°C (122°F) and v = 36mm²/s

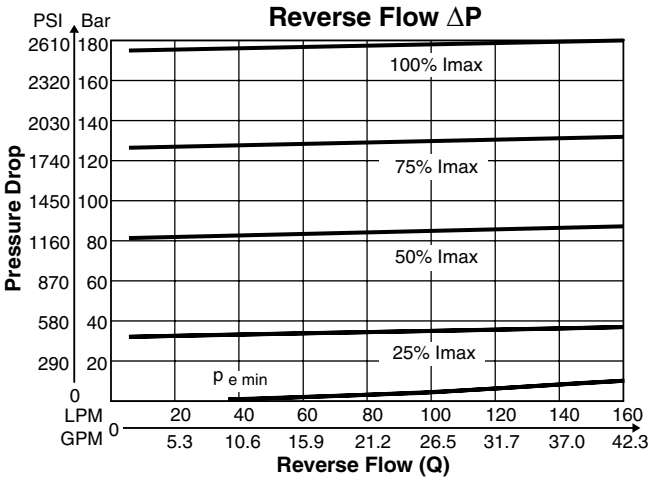
Setting Range max. 64 Bar (928 PSI)



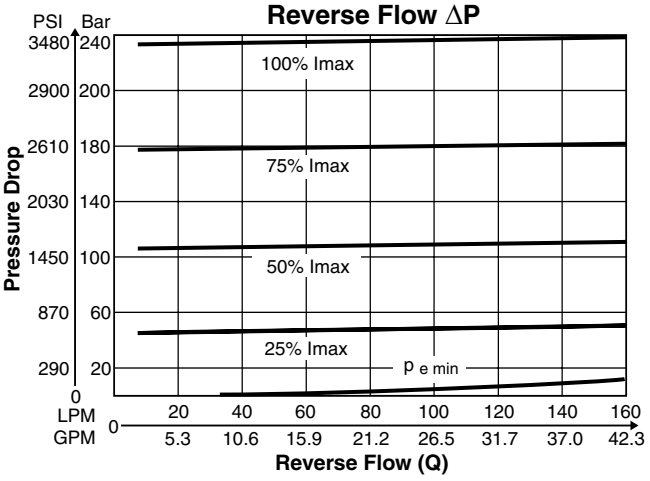
Setting Range max. 100 Bar (1450 PSI)



Setting Range max. 160 Bar (2320 PSI)



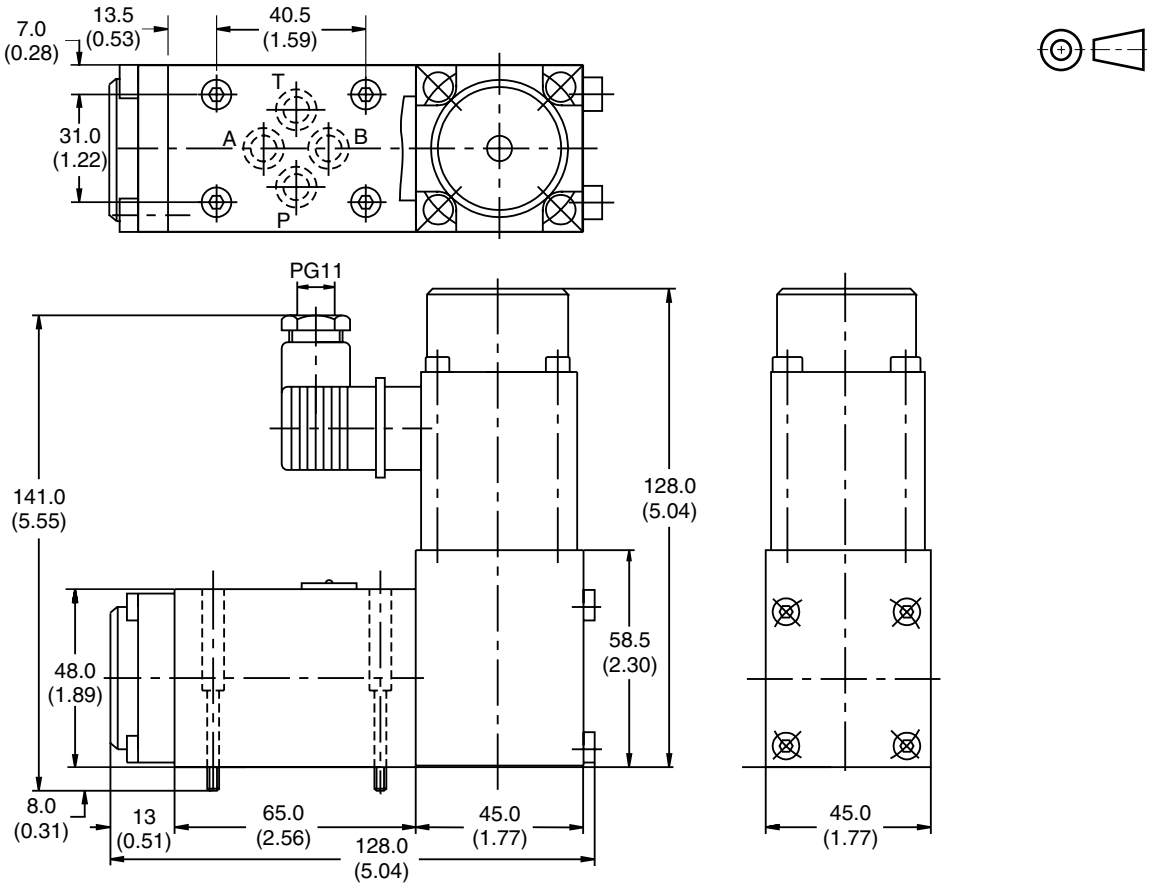
Setting Range max. 210 Bar (3045 PSI)



B

Size NG6

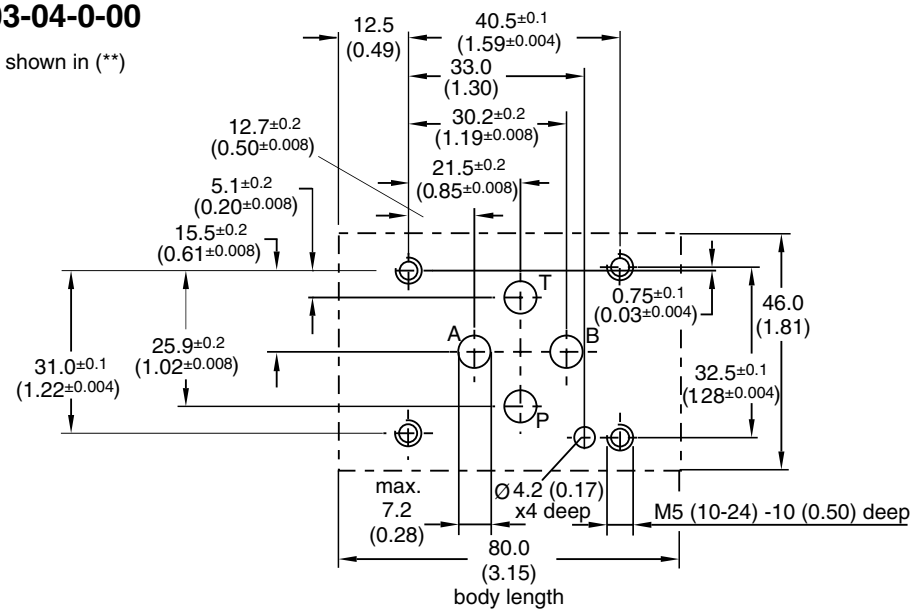
Inch equivalents for millimeter dimensions are shown in (**)



Surface Finish	Bolt Kit DIN912 12.9		Seal Kit	
			Nitrile	Fluorocarbon
R_{max}6.3 0.01/100	BK375 4x-M5x30 BK209 4x10-24x1.25"	7.5 Nm (5.5 lb.-ft.)	SK-VMY-L06-N	SK-VMY-L06-V

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

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



VBY_K.indd dd

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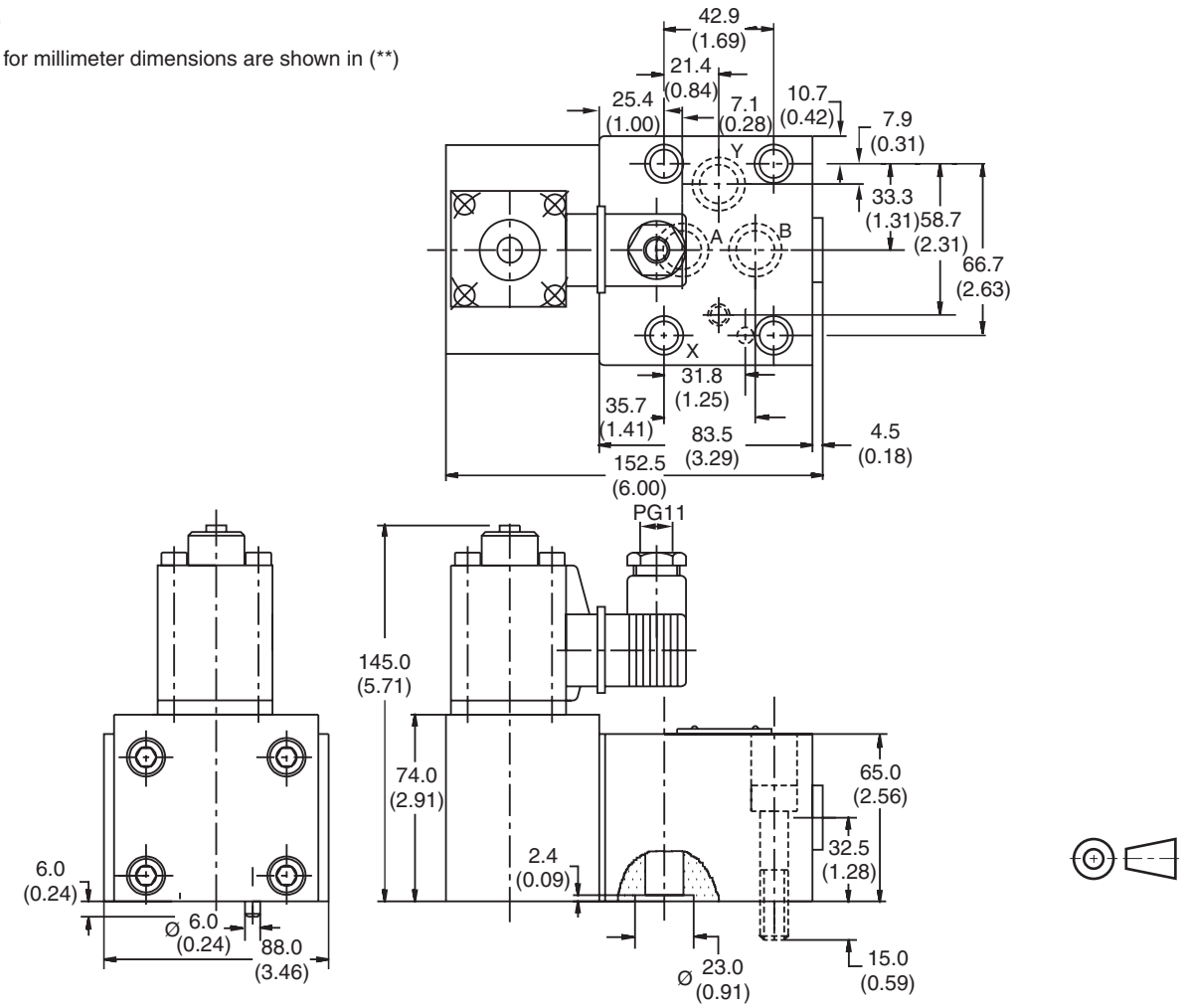
Hydraulic Valve Division
Elyria, Ohio, USA

B

Size NG10

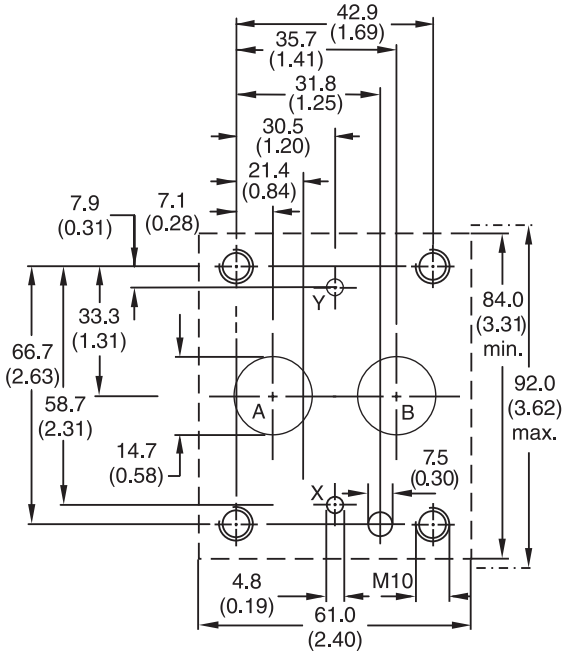
Inch equivalents for millimeter dimensions are shown in (**)



Surface Finish	Bolt Kit DIN912 12.9		Seal Kit
R_{max}6.3 ⏥ 0.01/100	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 (**)

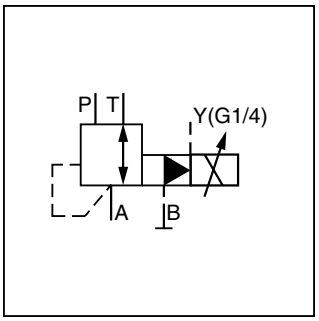


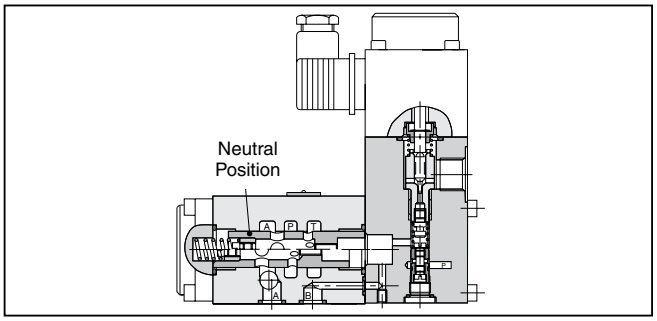
General Description

Series VMY valves consist of the main stage with valve spools and the pilot stage with the proportional solenoids. The desired pressure can be variably set corresponding to the command signal specified on the amplifier. The proportional solenoid converts the current of the amplifier into force on the valve poppet of the pilot stage.

In the pilot stage, there is a flow limiter which supplies the pilot valve with pressure-independent pilot oil flow from the pressure port P.

The proportional pressure reducing valves of the series VMY*06 allow the variable adjustment of the reduced pressure from 0 bar up to p_{max}. Typical applications are pressure systems, test equipment, or counterweight systems. The electrical control of the valve takes place using the digital amplifier module PCD00A-400. Used in closed loop pressure control circuits with the PWDXXA-400.





B

Features

- Consistent performance.
- Variable adjustment.
- Pilot operated with proportional solenoid.
- Subplate according to ISO 5781.

Function

With the proportional solenoids de-energized the main spring forces the main spool into the neutral position. Port A is connected to port T. Thus the reduced pressure only depends on the back pressure in the external drain pipe and/or the tank pressure and can accordingly be reduced down to 0 bar. The pressure present in the P line delivers the pilot oil to the pilot stage via a flow control valve.

When the proportional solenoid is energized, the pilot pressure is increased in the pilot pressure area, and the main spool moves against the spring until the connection P - A opens. The regulation of the reduced pressure on connection A takes place by the constant comparison of the actual pressure and the reference pressure of the pilot stage.

Ordering Information

VMY — Reducing Valve

☐ — Pressure Range

Code	Description
064	64 Bar (928 PSI)
100	100 Bar (1450 PSI)
160	160 Bar (2320 PSI)
210	210 Bar (3000 PSI)
315	315 Bar (4568 PSI)

K — Linear Solenoid 9V / 2.5A

☐ — Size

Code	Description
06	NG6
10	NG10

☐ — Pilot Oil

☐ — Seal

Code	Description
N*	Nitrile
V	Fluorocarbon

* Size 10 only

Design Series
NOTE: Not required when ordering.

P — High Pressure Channel

Pilot Oil

Code	Size	Pilot	Drain
Omit	10	Internal	Internal
N [1]	06	Internal	External [2]
T	06	Internal	Internal

[1] connection on port Y
[2] p_{min} = 0 Bar (0 PSI) possible

Weight:

VMY*06	2.8 kg	(6.2 lbs.)
VMY*10	5.0 kg	(11.0 lbs.)

VMY.indd, dd

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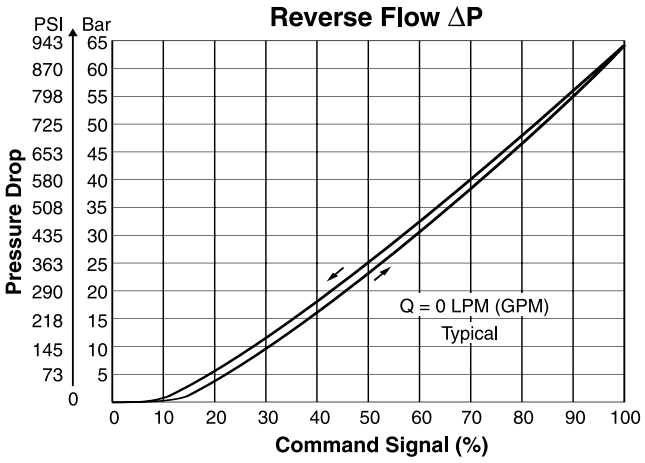
Hydraulic Valve Division
Elyria, Ohio, USA

B

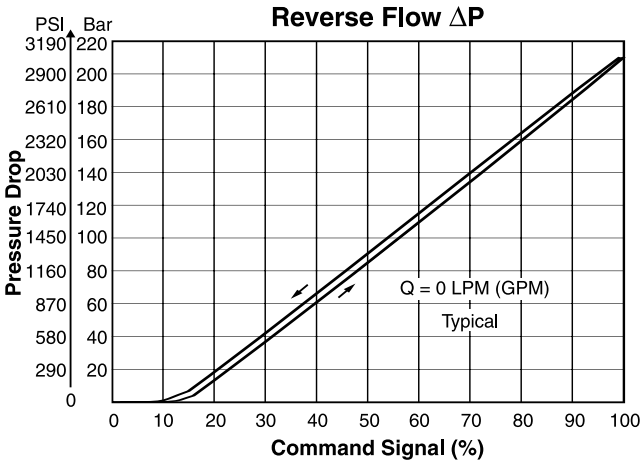
General		
Design	Proportional Reducing Valve	
Size	NFPA D03 / CETOP 3 / DIN NG6	DIN NG10
Mounting Pattern	ISO 5781	
Actuation	Proportional Solenoid	
Mounting Position	Any	
Ambient Temperature	-20°C to +80°C (-4°F to +176°F)	
Hydraulics		
Operating Pressure, Ports	P, A and B 315 Bar (4500 PSI) Port B has to be blocked Y and T depresssurized	
Flow	40 LPM (10.6 GPM)	160 LPM (42.2 GPM)
Pilot Flow	0.3 - 0.4 LPM (.08 - .011 GPM), not dependent on pressure	
Pressure Ranges	64, 100, 160, 210, 315 Bar (928, 1450, 2320, 3045, 4568 PSI)	
Fluid	Hydraulic oil as per DIN 51 524 to 535	
Fluid Temperature **Recommended** **Permitted**	 +30°C to +50°C (+86°F to +122°F) -20°C to +70°C (-4°F to +158°F)	
Viscosity **Recommended** **Permitted**	30 to 50 cSt / mm²/s (139 to 232 SSU) 20 to 380 cSt / mm²/s (93 to 1761 SSU)	
Max. Contamination Level	ISO 4406 (1999) 18/16/13	
Linearity	See Performance Curves	±3.5 at >15% p_{nom}
Repeatability	<±2%	
Hysteresis	<3%	
Response Time	<150 ms	<200 ms
Electrical		
Duty Cycle	100% ED	
Protection Class	IP65 in accordance with EN 60529 (plugged and mounted)	
Nominal Voltage	9 VDC	
Maximum Current	2.5 A	
Ambient Temperature	-20°C to +70°C (-4°F to +158°F)	
Coil Resistance	2.1 ohm at 20°C (68°F)	
Plug Connectors	2 pole + PE / connector EN 175301-803 / cable Ø 8 to 10mm	
Power Amplifier	PCD00A-400	

Presssure Curves where p = f(U_{set})

Setting Range max. 64 Bar (928 PSI)

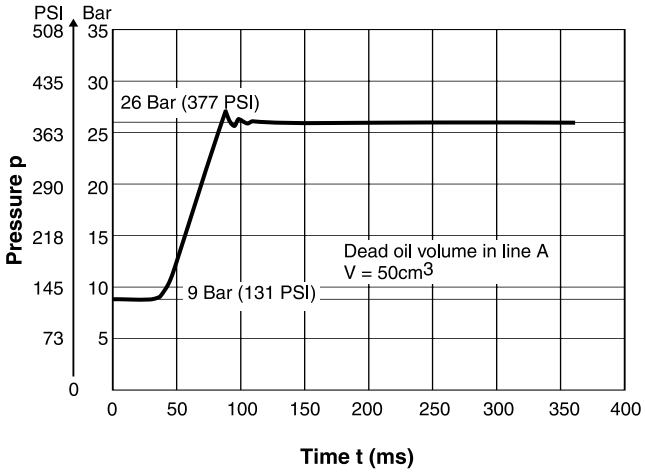


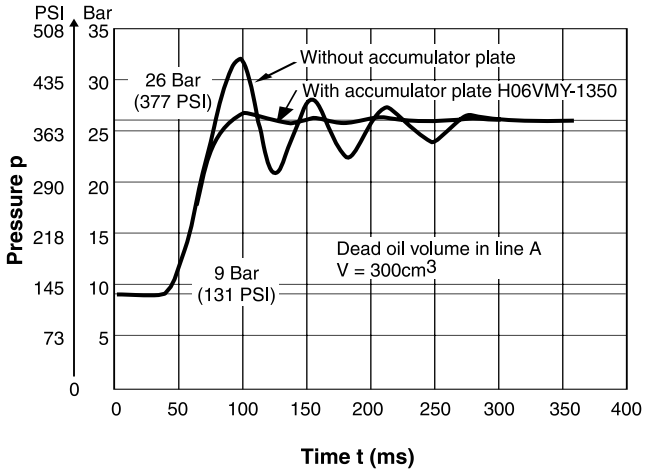
Setting Range max. 210 Bar (3045 PSI)



Step Response

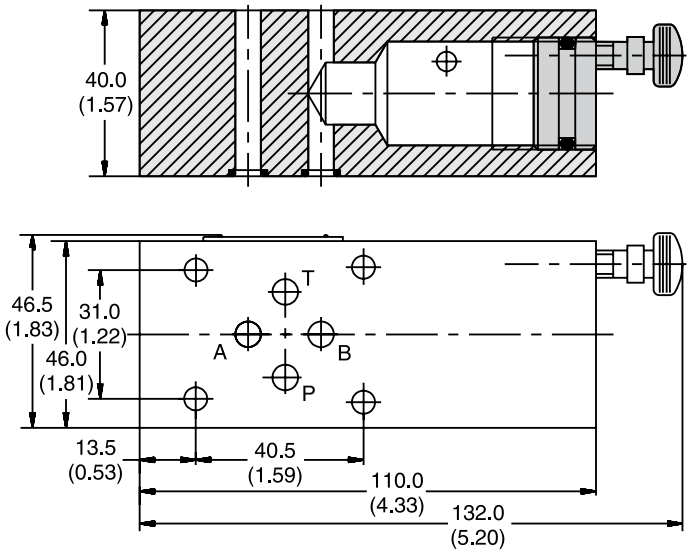
Typical Curve





Accumulator Plate H06VMY-1350

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



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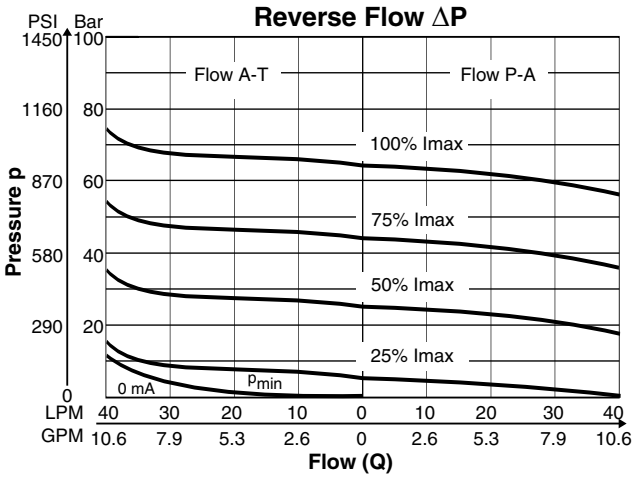
Elyria, Ohio, USA

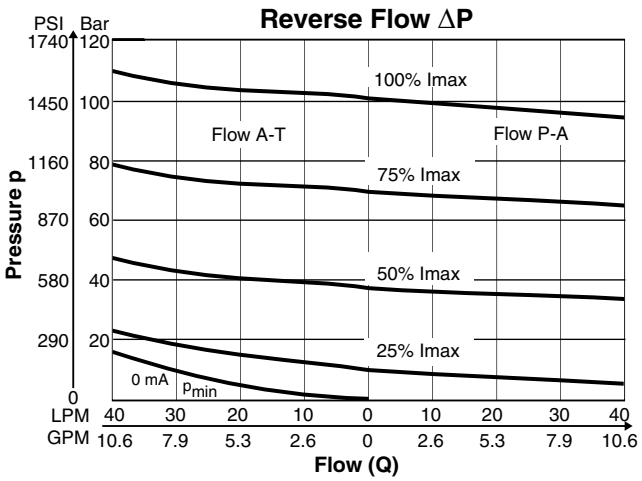
B

p/Q Performance Curves measured at t = 50°C (122°F) and v = 35mm²/s.

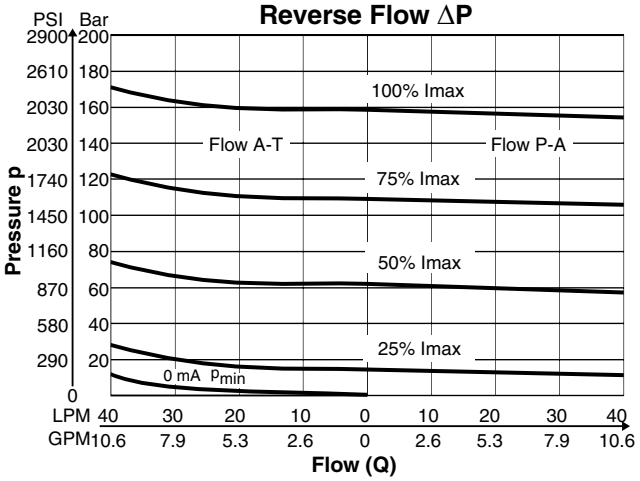
Setting Range max. 64 Bar (928 PSI)



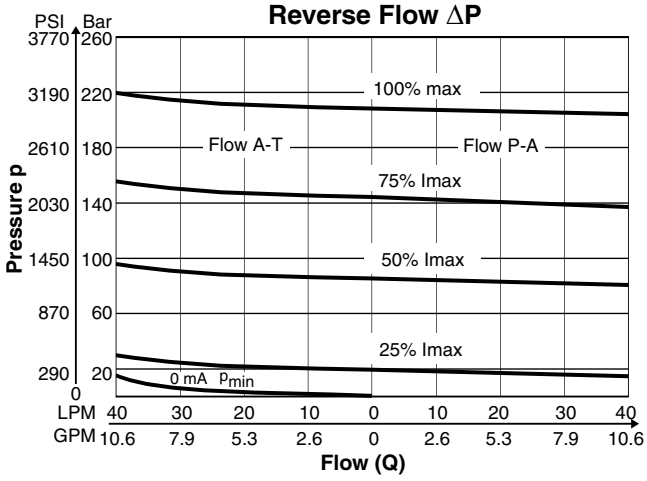
Setting Range max. 100 Bar (1450 PSI)



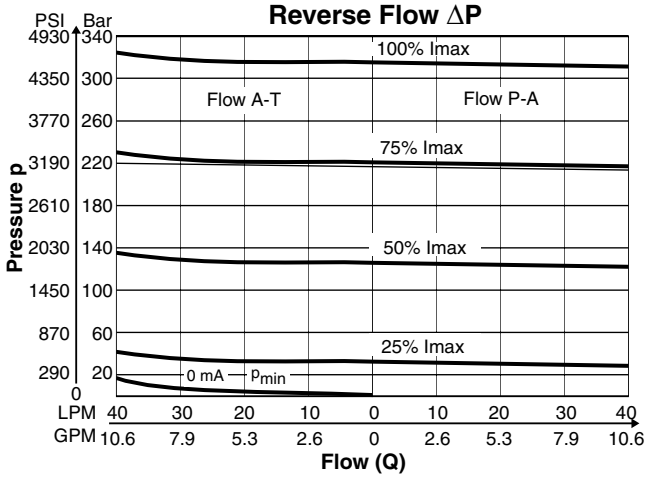
Setting Range max. 160 Bar (2320 PSI)



Setting Range max. 210 Bar (3045 PSI)



Setting Range max. 315 Bar (4568 PSI)



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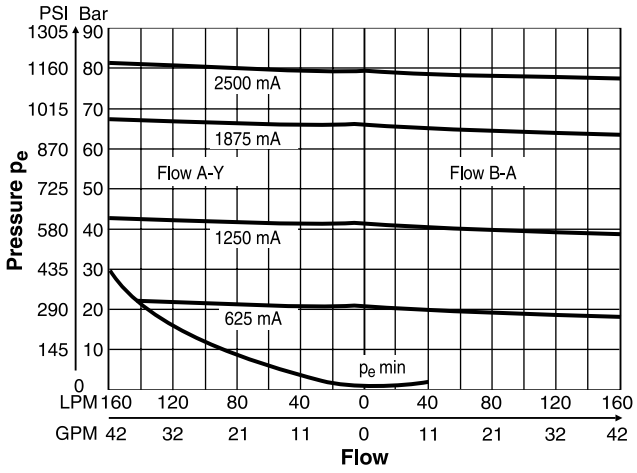
Elyria, Ohio, USA

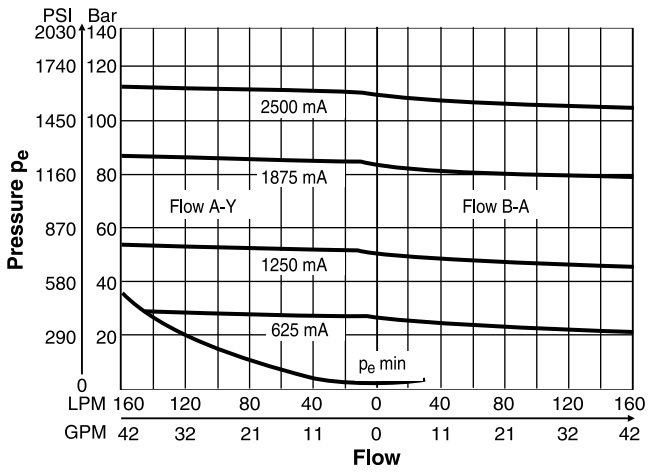
B

p/Q Performance Curves for pilot oil supply from high pressure channel P, measured with HLP46 at 50°C (122°F).

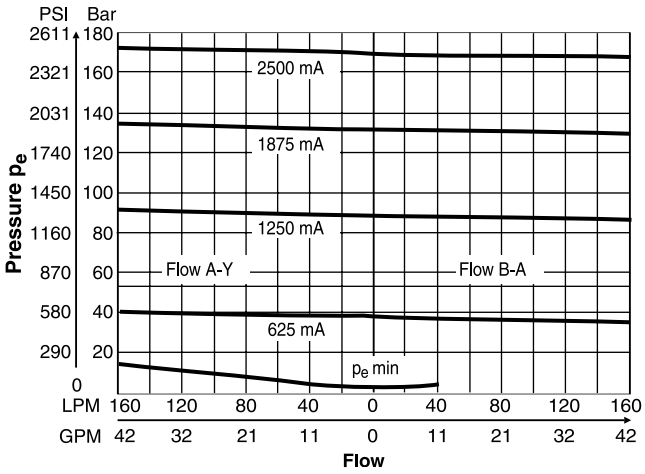
Setting Range max. 64 Bar (928 PSI)



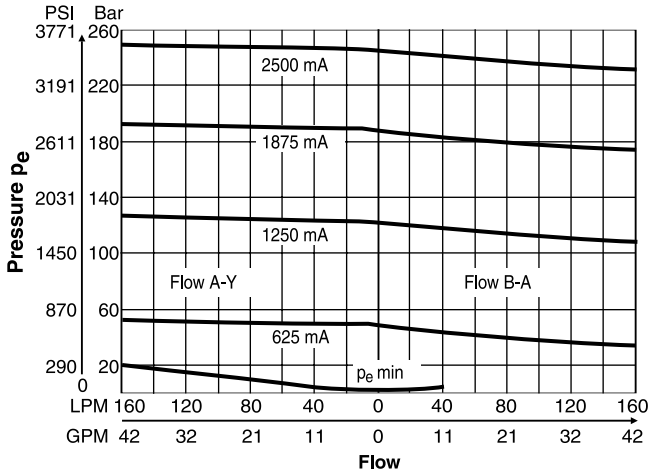
Setting Range max. 100 Bar (1450 PSI)



Setting Range max. 160 Bar (2320 PSI)



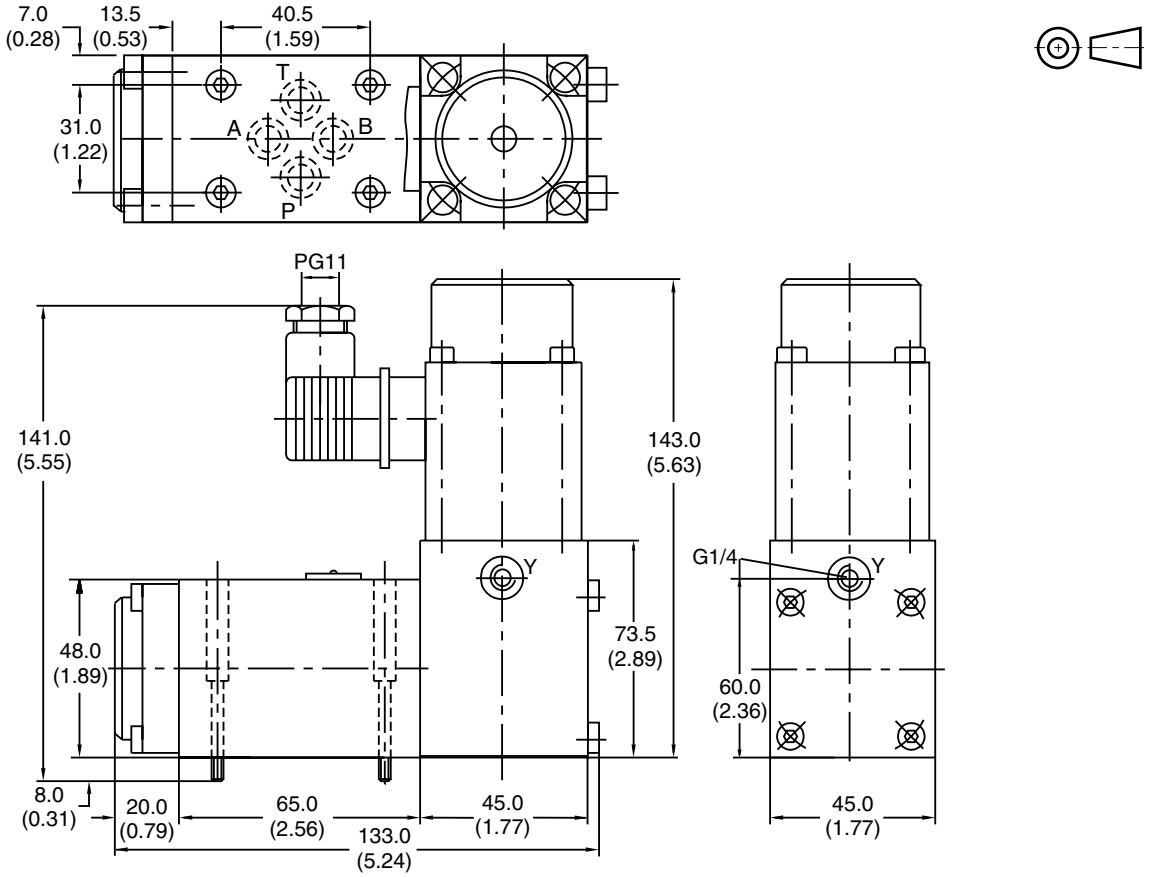
Setting Range max. 210 Bar (3045 PSI)



B

Size NG6

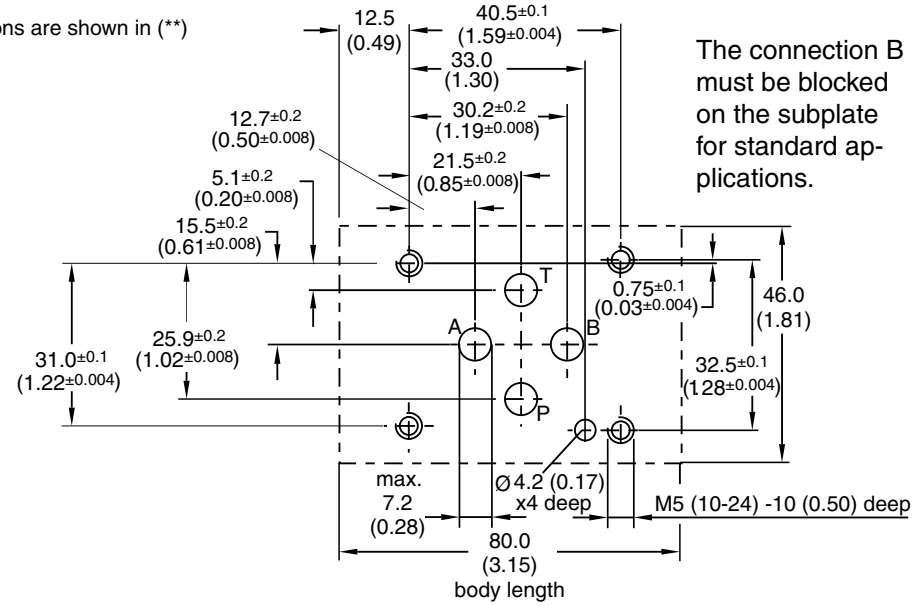
Inch equivalents for millimeter dimensions are shown in (**)



Surface Finish	Bolt kit DIN912 12.9		Seal Kit
R_{max}6.3 0.01/100	BK209 (4) 10-24x1.25 BK375 (4) M5x30	7.5 Nm (5.5 lb.-ft.)	Fluorocarbon: SK-VB/VM-A06V

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

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



The connection B must be blocked on the subplate for standard applications.

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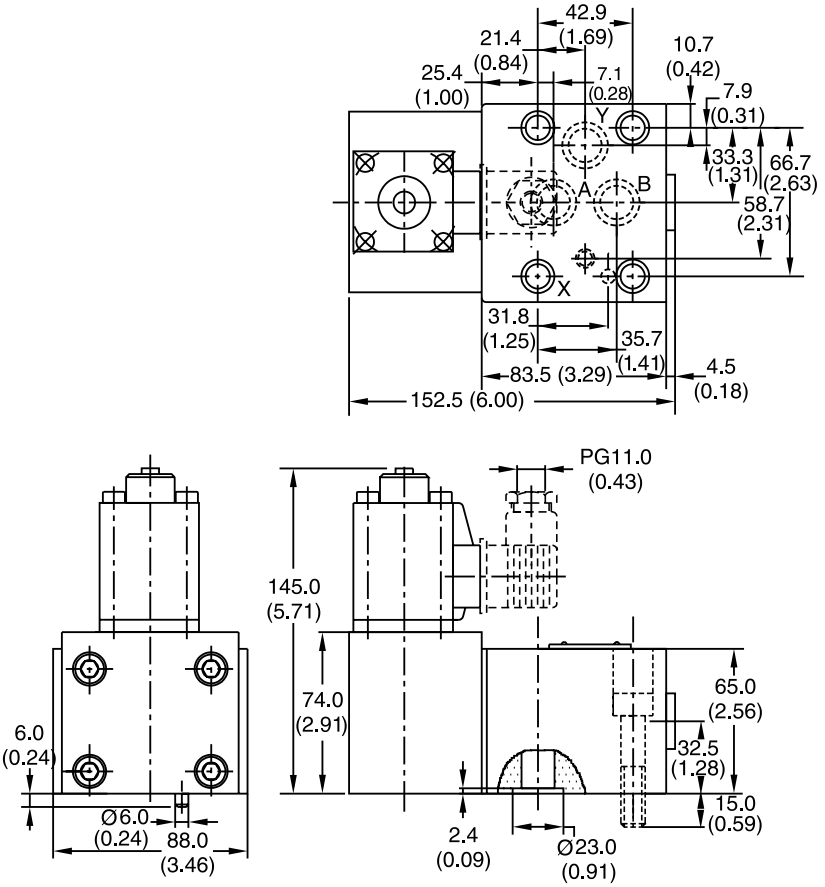
Elyria, Ohio, USA

B

Size NG10

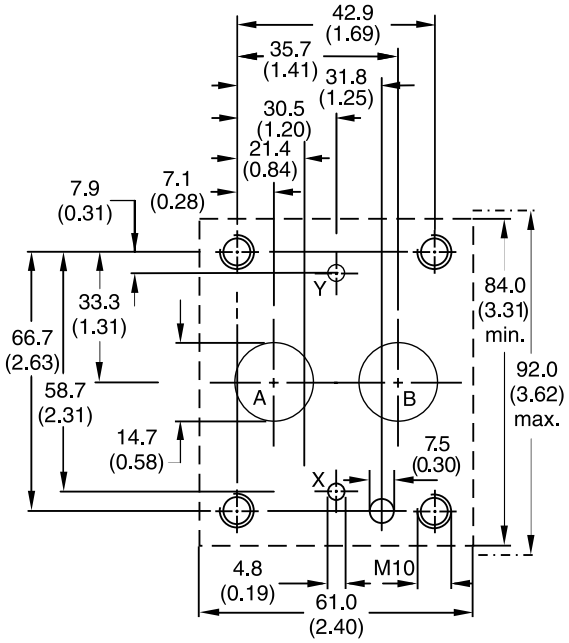
Inch equivalents for millimeter dimensions are shown in (**)



Surface Finish	Bolt kit DIN912 12.9		Seal Kit
R_{max}6.3 ⏥ 0.01/100	BK153 (4) 3/8-16x2 BK242 (4) M10x50	63 Nm (5.5 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 (**)



VMY.indd, dd

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Hydraulic Valve Division
Elyria, Ohio, USA

B

General Description

Series D1FV proportional pressure reducing valves are available with and without onboard electronics (OBE).

D1FV OBE

The digital onboard electronics is situated in a robust metal housing, which allows the usage under rough environmental conditions.

The nominal values are factory set. The cable for connection to a serial RS232 interface is available as accessory.

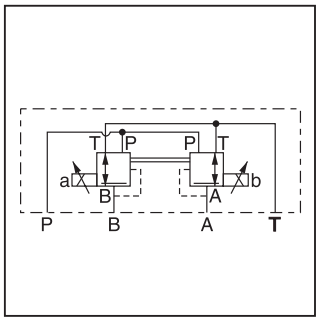
D1FV for External Electronics

The parameters can be saved, changed and duplicated in combination with the digital power amplifier PWD00A-400. The value parameters can be edited with the common ProPxD software for both versions.

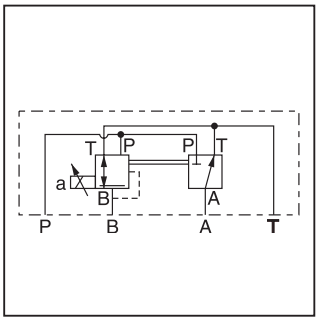
The D1FV values control the pressure in the A- or B-ports using the barometric feedback principle.

D1FV

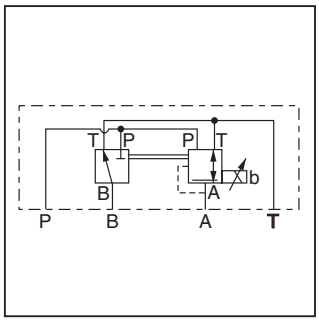
D1FV OBE



Function C



Function E

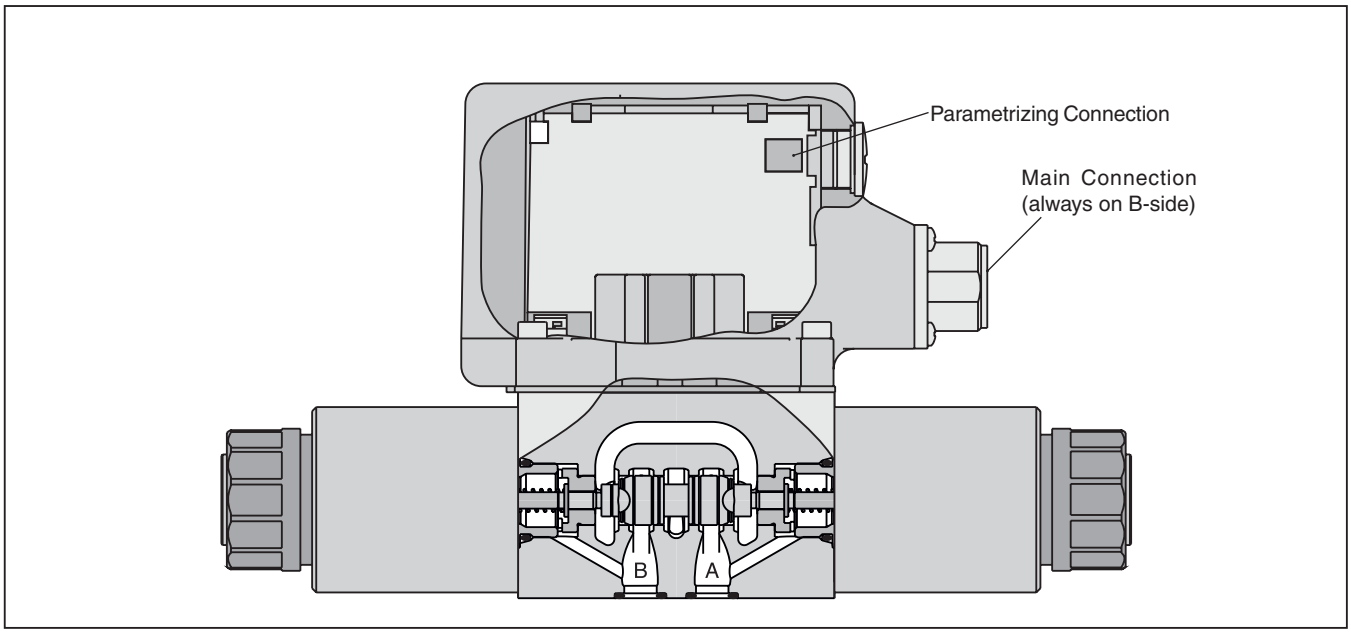


Function K

Features

- Barometric feedback.
- 3 command options for D1FV OBE: ±10V, 4...20mA, ±20mA.
- High repeatability from valve to valve.
- Low hysteresis.
- Manual override.
- Pressure ranges 25 Bar (363 PSI) and 45 Bar (653 PSI).

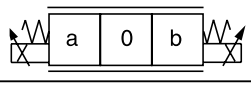
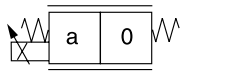
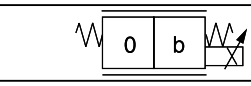
D1FV*3 OBE



D1FV Offboard Electronics

D	1	F	V	E02			0		K		3	
Proportional Pressure Reducing Valve	Size DIN NG6 CETOP 3 NFPA D03	Proportional Control		Spool Type	Pressure Range	Spool Position		Seal	Solenoid Voltage 12V 2.2A	Connector	Spool / Body Design	Design Series NOTE: Not required when ordering.

Code	Description
C	25 Bar (363 PSI)
D	45 Bar (653 PSI)

Code	Style
C	
E	
K	

Code	Description
W*	Connector as per DIN 185301-803 without plug
J*	Connector DT04-2P "Deutsch"

* Please order plugs separately. See Accessories.

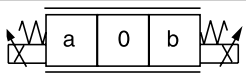
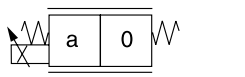
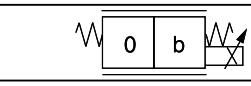
Code	Description
N	Nitrile
V	Fluorocarbon

Weight: Offboard
D1FV 2.2 kg (4.9 lbs.)

D1FV OBE

D	1	F	V	E02			0				3	
Proportional Pressure Reducing Valve	Size DIN NG6 CETOP 3 NFPA D03	Proportional Control		Spool Type	Pressure Range	Spool Position		Seal	Input Signal	Options	Spool / Body Design	Design Series NOTE: Not required when ordering.

Code	Description
C	25 Bar (363 PSI)
D	45 Bar (653 PSI)

Code	Style
C	
E	
K	

Code	Description
N	Nitrile
V	Fluorocarbon

Code	Input Signal [1]	Function	Port	Options
F0	0...+/-10V	0...+10V > P-A	6 + PE	Potentiometer supply
G0	0...+/-20mA	0...+20mA > P-A	6 + PE	—
M0	0...+/-10V	0...+10V > P-B	6 + PE	Potentiometer supply
S0	4...20mA	12...20mA > P-A	6 + PE	—
W5 [2]	0...+/-10V 4...20mA 0...+/-20mA	0...+10V > P-A 12...20mA > P-A 0... 20mA > P-A	11 + PE	Potentiometer supply & command preset channel

[1] Single solenoid always 0...+/-10V respectively 4...20mA.
[2] Factory set ± 10V on delivery.

Bolt Kit:
BK209 (4) 10-24x1.25
BK375 (4) M5x30

Weight: Onboard
D1FV 2.9 kg (6.4 lbs.)

Please order plugs separately. See Accessories.

Parametrizing cable OBE => RS232
Item no. 40982923

D1FV.indd, dd

Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA

B

General		
Design		Direct operated proportional pressure reducing valve
Actuation		Proportional solenoid
Size		NG6 / CETOP 3 / NFPA D03
Mounting Interface		DIN 24340 / ISO 4401 / CETOP RP121 / NFPA
Mounting Position		Unrestricted
Ambient Temperature	**[°C]**	-20...+40; (-4°F...+104°F)
$MTTF_D$ Value	**[years]**	150 (75)
Vibration Resistance	**[g]**	10 Sinus 5...2000 Hz acc. IEC 68-2-6 30 Random noise 20...2000 Hz acc. IEC 68-2-36 15 Shock acc. IEC 68-2-27
Hydraulic		
Maximum Operating Pressure		Ports P, A, B 350 Bar (5075 PSI) Port T 185 Bar (2683 PSI)
Maximum Pressure Drop PABT / PBAT		350 Bar (5075 PSI)
Fluid		Hydraulic oil as per DIN 51524...535, other on request
Fluid Temperature	**[°C]**	-20...+40 (-4°F...+104°F)
Viscosity **Permitted** **Recommended**	 **[cSt] / [mm²/s]** **[cSt] / [mm²/s]**	 20...380 (93...1761 SSU) 30...80 (139...371 SSU)
Filtration		ISO 4406 (1999) 18/16/13 (acc. NAS 1638: 7)
Maximum Flow		10 LPM (2.6 GPM)
Minimum Primary Pressure		30 Bar (435 PSI)
Static / Dynamic		
Hysteresis	**[%]**	<4
Temperature Drift Solenoid Current	**[%/K]**	<0.02
Electrical		
Duty Ratio	**[%]**	100
Protection Class		Standard (as per EN175301-803) IP65 in accordance with EN60529 (with correctly mounted plug-in connector); DT04-2P “Deutsch“ IP69K (with correctly mounted plug-in connector)
Supply Voltage	**[V]**	12
Current Consumption	**[A]**	2.2
Resistance	**[Ohm]**	4.4
Coil Insulation Class		F (155 °C) (311°F)
Solenoid Connection		Connector as per EN 175301-803 (code W), DT04-2P “Deutsch“ connector (code J). Solenoid identification as per ISO 9461.
Wiring Minimum	**[mm²]**	3x1.5 (AWG 16) overall braid shield (Code W), "Deutsch" connector DP4 2-Pin (Code J)
Wiring Length Maximum	**[m]**	50 (164 ft.) recommended

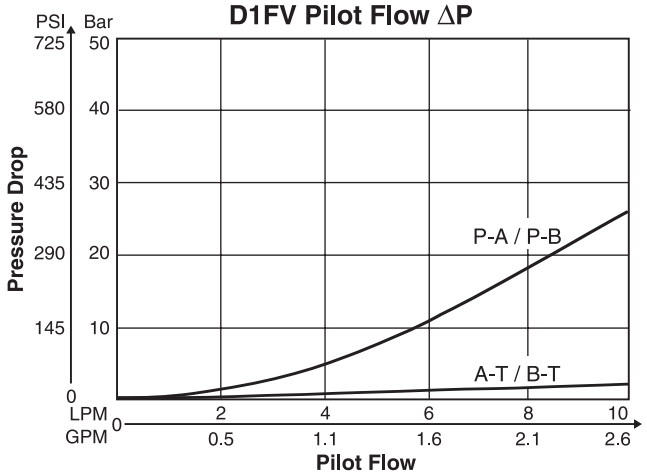
With electrical connections the protective conductor (PE ⏚) must be connected according to the relevant regulations.

B

Electrical Specifications

Electrical		
Duty Ratio	**[%]**	100
Protection Class		IP65 in accordance with EN 60529 (plugged and mounted)
Supply Voltage/ripple DC	**[V]**	18...30, ripple < 5% eff., surge free
Current Consumption Maximum	**[A]**	2.0
Pre-fusing Medium Lag	**[A]**	2.5
Input Signal		
Codes F0 & W5 Voltage	**[V]**	+10...0...-10, ripple < 0.01 % eff., surge free, Ri = 100kOhm, 0...+10V => P -> A
Code M0 Voltage	**[V]**	+10...0...-10, ripple < 0.01 % eff., surge free, Ri = 100kOhm, 0...+10V => P -> B
Codes S0 & W5 Current	**[mA]**	4...12...20, ripple < 0.01 % eff., surge free, Ri = 200Ohm, 12...20mA => P -> A < 3.6 mA = enable off, > 3.8 mA = enable on (acc. to NAMUR NE43)
Code G0	**[mA]**	+20...0...-20, ripple < 0.01 % eff., surge free, Ri = 200Ohm, 0...+20mA => P -> A
Differential input max.		
Codes F0, G0, M0 & S0	**[V]**	30 for terminal D and E against PE (terminal G) 11 for terminal D and E against 0V (terminal B)
Code W5	**[V]**	30 for terminal 4 and 5 against PE (terminal PE) 11 for terminal 4 and 5 against 0V (terminal 2)
Channel Recall Signal	**[V]**	0...2.5: off / 5...30: on / Ri = 100 kOhm
Adjustment Ranges:		
Min	**[%]**	0...50
Max	**[%]**	50...100
Ramp	**[s]**	0...32.5
Interface		RS 232, parametrizing connection 5 pole
EMC		EN 61000-6-2, EN 61000-6-4
Central Connection		
Codes F0, G0 M0 & S0		6 + PE acc. to EN 175201-804
Code W5		11 + PE acc. to EN 175201-804
Wiring Minimum		
Codes F0, G0 M0 & S0	**[mm²]**	7 x 1.0 (AWG16) overall braid shield
Code W5	**[mm²]**	11 x 1.0 (AWG16) overall braid shield
Wiring Length Maximum	**[m]**	50 (164 ft.)

Performance Curves

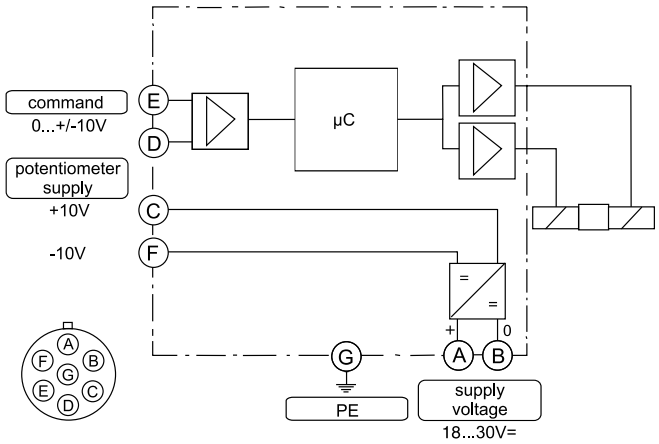


All performance curves measured with HLP46 at 50°C (122°F).

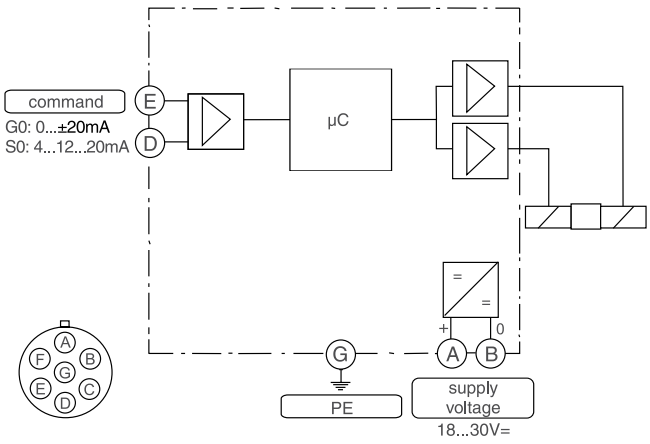
D1FV.indd, dd

B

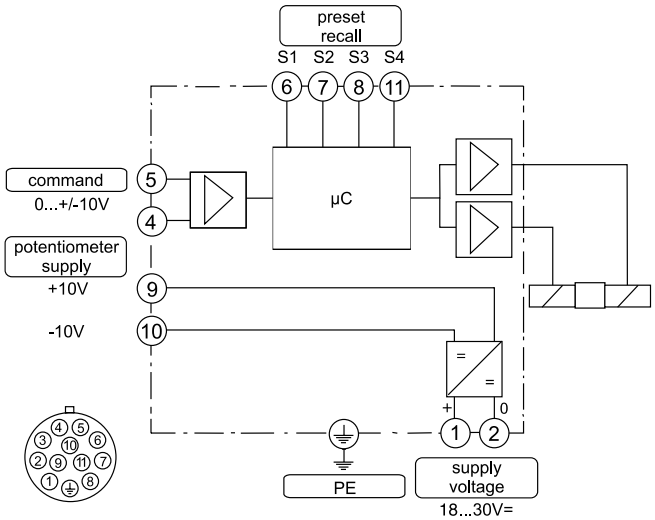
Code F0, M0
6 + PE acc. to EN 175201-804



Code G0, S0
6 + PE acc. to EN 175201-804



Code W5
11 + PE acc. to EN 175201-804



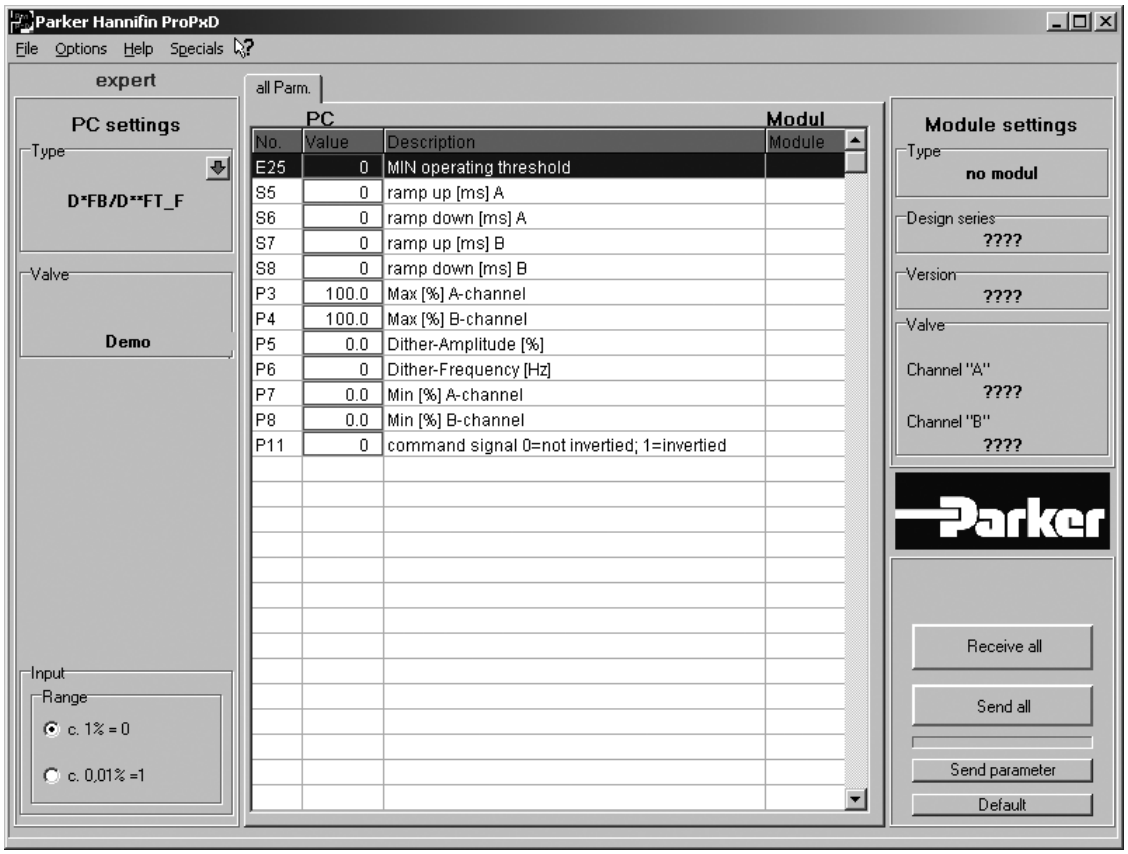
ProPxD Interface Program

The ProPxD software permits comfortable parameter setting for the module electronics. Via the clearly arranged entry mask the parameters can be noticed and modified. Storage of complete parameter sets is possible as well as printout or record as a text file for further documentation. Stored parameter sets may be loaded anytime and transmitted to other valves. Inside the electronics a nonvolatile memory stores the data with the option for recalling or modification.

Features

- Simple editing of all parameters.
- Storage and loading of optimized parameter adjustments.
- Executable with all Windows® operating systems from Windows® 95 upwards.
- Communication between PC and electronics via serial interface RS-232.
- Simple to use PC user software, free of charge: www.parker.com/euro_hcd – see "Software Downloads"

B

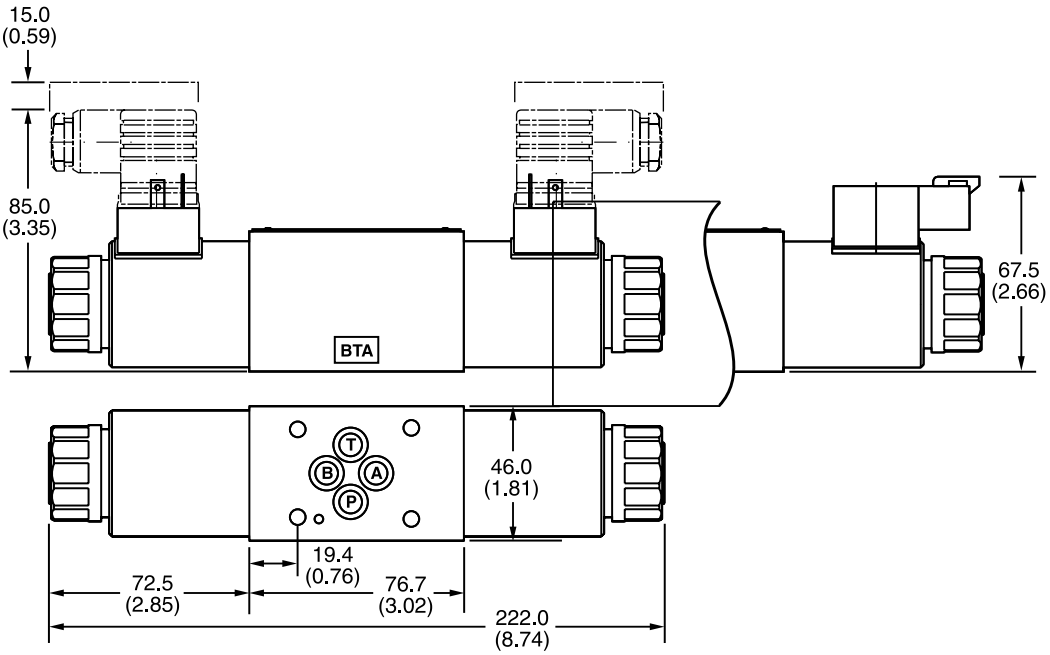


The parametrizing cable may be ordered under item no. 40982923.

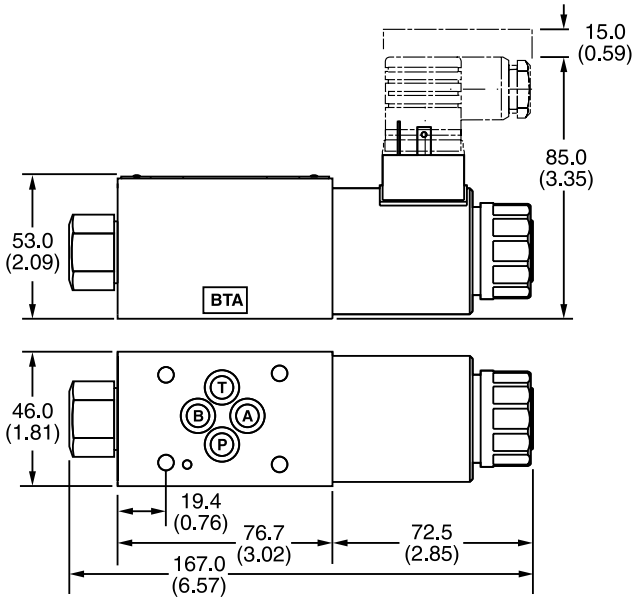
Inch equivalents for millimeter dimensions are shown in (**)

B

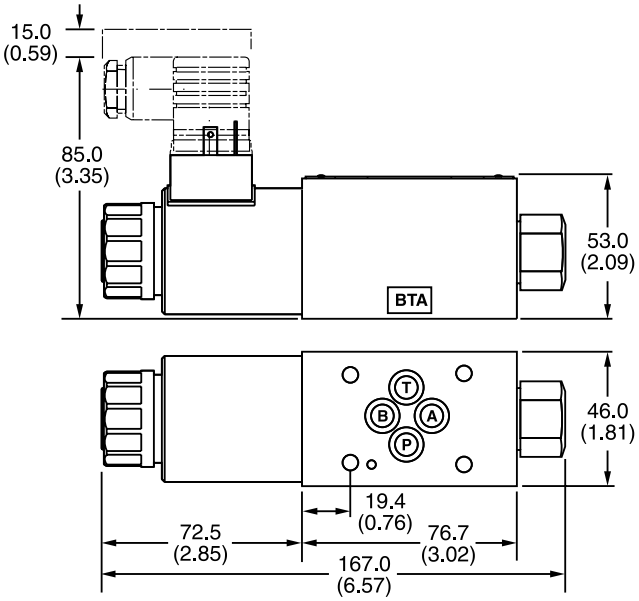
D1FV*C



D1FV*E



D1FV*K



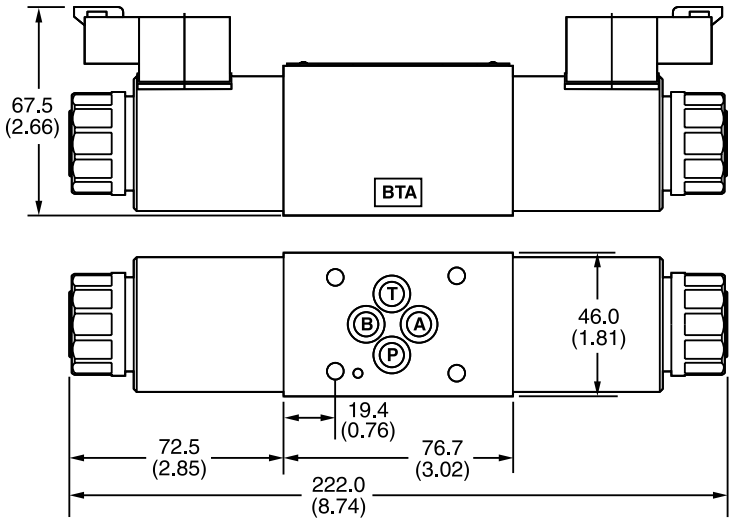
Surface Finish	Kit			Seal Kit
R_{max}6.3 ⏥ 0.01/100	BK375	4x M5x30 DIN 912 12.9	7.6 Nm (5.6 lb.-ft.) ±15 %	Nitrile: SK-D1FB-N Fluorocarbon: SK-D1FBV

D1FV.indd, dd

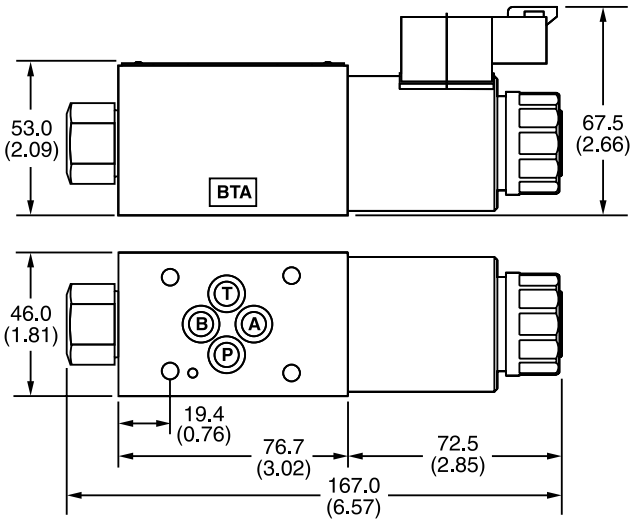
Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA

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

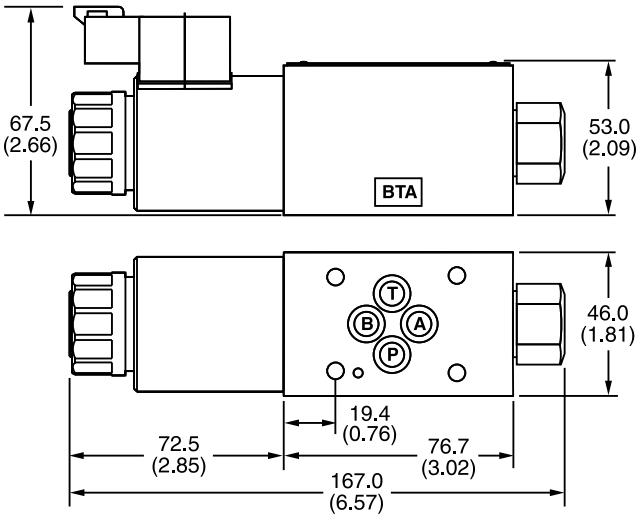
D1FV*C with DT04-2P "Deutsch" Connector



D1FV*E with DT04-2P "Deutsch" Connector



D1FV*K with DT04-2P "Deutsch" Connector

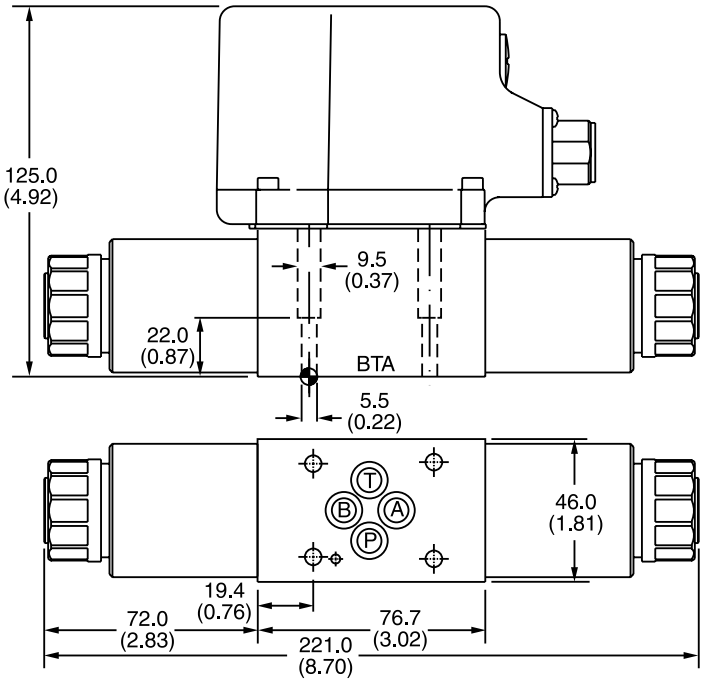


Surface Finish	Kit			Seal Kit
R_{max}6.3 ⏥ 0.01/100	BK375	4x M5x30 DIN 912 12.9	7.6 Nm (5.6 lb.-ft.) ±15 %	Nitrile: SK-D1FB-N Fluorocarbon: SK-D1FBV

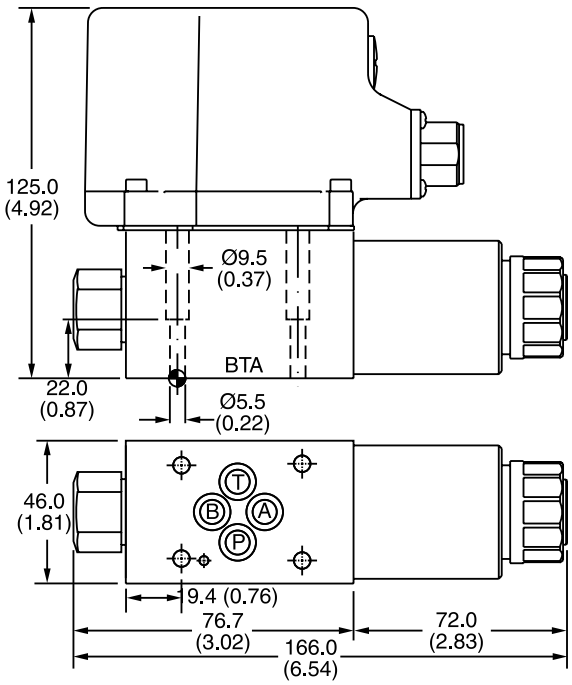
B

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

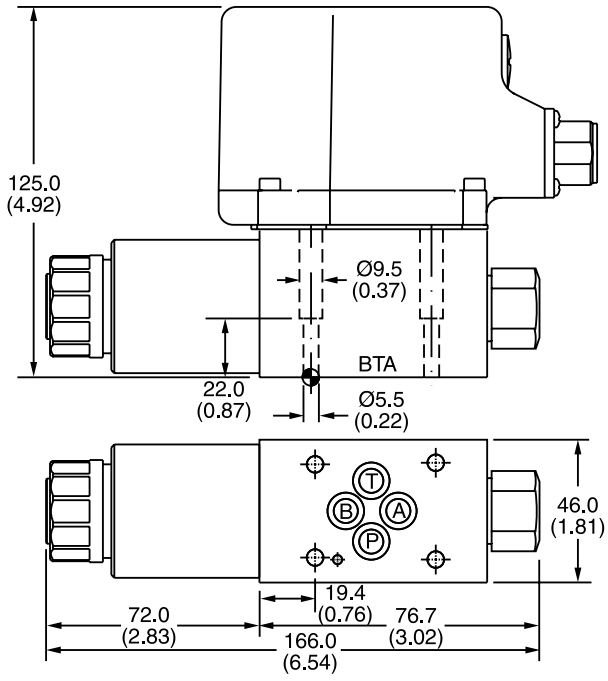
D1FV*C OBE



D1FV*E OBE



D1FV*K OBE



Surface Finish	Kit			Seal Kit
R_{max}6.3 ⏥ 0.01/100	BK375	4x M5x30 DIN 912 12.9	7.6 Nm (5.6 lb.-ft.) ±15 %	Nitrile: SK-D1FB-N Fluorocarbon: SK-D1FBV

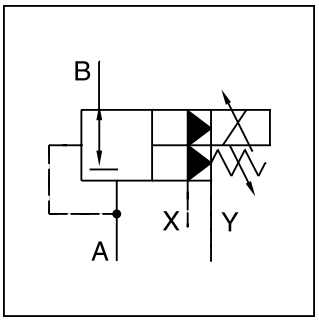
D1FV.indd, dd

Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA

General Description

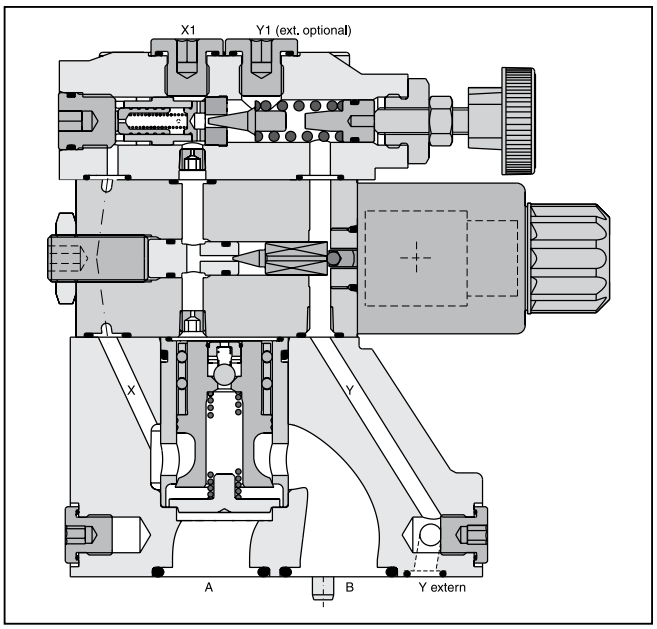
Series R4R*P2 subplate mounted proportional pressure reducing valves have a proportional solenoid operated pilot stage and a cartridge main stage.

The optimum performance can be achieved in combination with the digital amplifier module PCD00A-400.



Features

- Pilot operated with proportional solenoid.
- Continuous adjustment by proportional solenoid.
- Subplate mounting according to ISO 5781.
- 3 pressure ranges.
- Mechanical maximum pressure adjustment.



Ordering Information

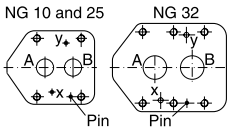
R	4	R	☐	—	5	9	☐	☐	☐	P2	G0R	B	☐	☐
Pressure Reducing Valve	Interface	Reducing Function	Size		Maximum Pressure 350 Bar (5075 PSI)	Pilot Ports G1/4"	Pressure Range	Adjustment	Drain Line Ext. from Pilot Head (Y1)	Proportional Pressure Control	Solenoid Voltage 12V 2.3A	Design Series	Seal	Options Check with Factory

Code	Description
03	NG10
06	NG25
10	NG32

Code	Pilot	Drain
1	Internal	External from Y
2	Internal	External from Y1

Code	Description
1	Nitrile
5	Fluorocarbon

Code	Description
4	Subplate Mounting ISO 5781



Code	Description
1	Hand Knob 32mm dia. Standard
3	Acorn Nut with Lead Seal

Code	Description	
1	up to 105 Bar	(1523 PSI)
3	up to 210 Bar	(3045 PSI)
5	up to 350 Bar	(5075 PSI)

Bolt Kit:

R4R03*P2	BK505
R4R06*6*P2	BK485
R4R10*P2	BK506

Weight:

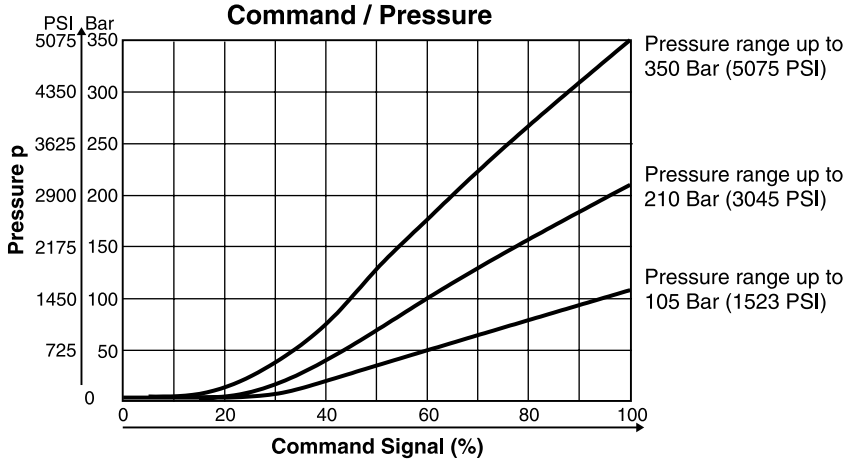
R4R03*P2	2.7 kg (6.0 lbs.)
R4R06*6*P2	4.5 kg (9.9 lbs.)
R4R10*P2	6.0 kg (13.2 lbs.)

B

Specifications

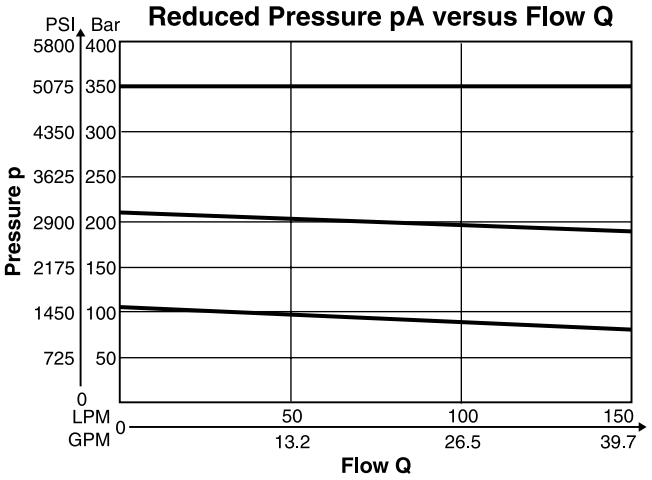
General				
Size		**NG10**	**NG25**	**NG32**
Interface		Subplate mounting acc. ISO 5781		
Mounting Position		as desired, horizontal mounting prefered		
Ambient Temperature	**[°C]**	-20 ... +80; (-4°F ... +176°F)		
$MTTF_D$ Value	**[years]**	75		
Hydraulic				
Maximum Operating Pressure		Ports A, B and X 350 Bar (5075 PSI), Port Y depressurized		
Pressure Ranges		105 Bar (1523 PSI), 210 Bar (3045 PSI), 350 Bar (5075 PSI)		
Nominal Flow		150 LPM (39.7 GPM)	350 LPM (92.6 GPM)	500 LPM (132.3 PSI)
Fluid		Hydraulic oil according to DIN 51524 ... 525		
Viscosity				
Recommended	**[cSt] / [mm²/s]**	30 ... 50 (139 ... 232 SSU)		
Permitted	**[cSt] / [mm²/s]**	20 ... 380 (93 ... 1761 SSU)		
Fluid Temperature	**[°C]**	-20 ... +70 (-4°F ... +158°F)		
Filtration		ISO 4406 (1999) 18/16/13		
Electrical				
Duty Ratio	**[%]**	100 ED		
Protection Class		IP65 in accordance with EN 60529 (plugged and mounted)		
Nominal Voltage	**[V]**	12		
Maximum Current	**[A]**	2.3		
Coil Resistance	**[Ohm]**	4 at 20°C (68°F)		
Solenoid Connection		Connector as per EN 175301-803		
Power Amplifier, Recommended		PCD00A-400		

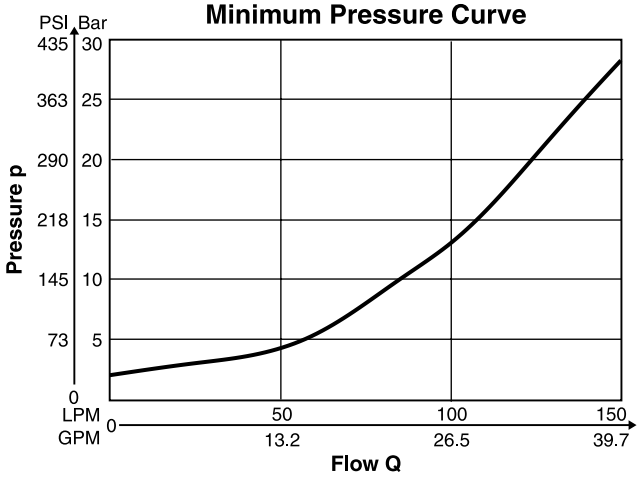
Performance Curves



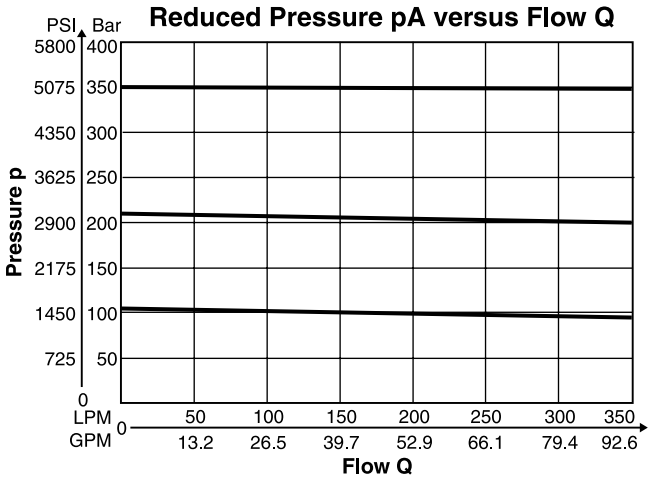
B

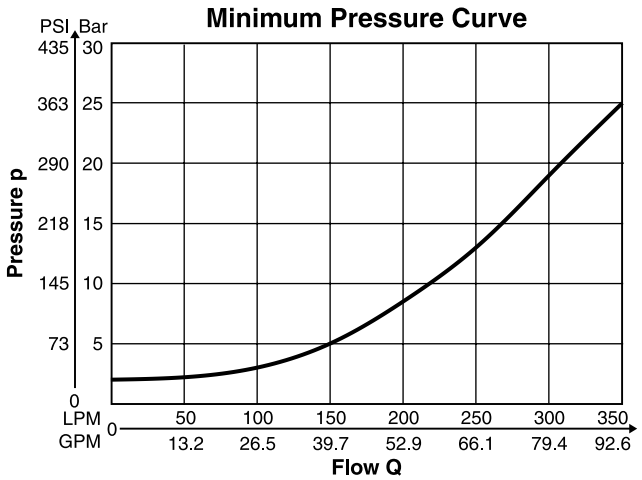
R4R03*P2 [1)]



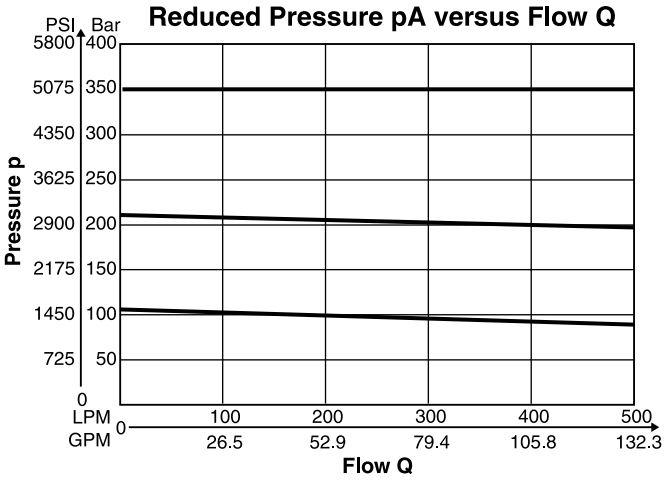


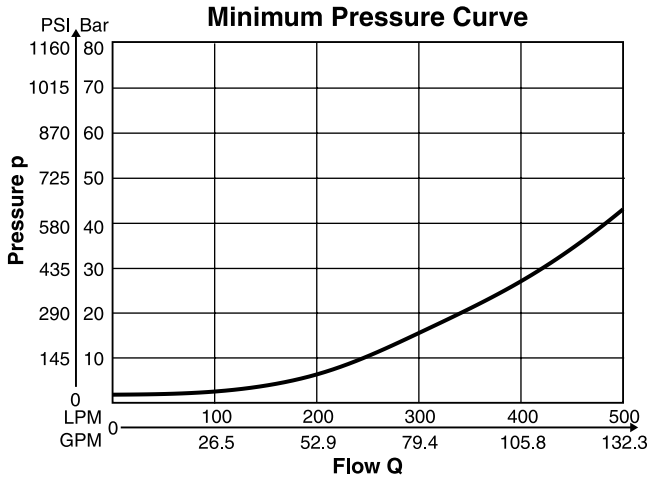
R4R06*P2 [1)]





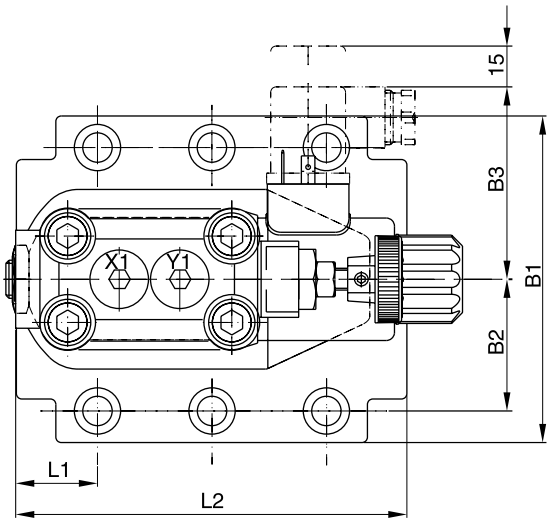
R4R10*P2 [1)]

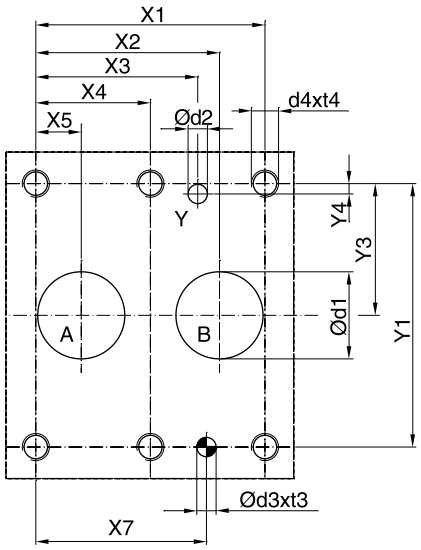


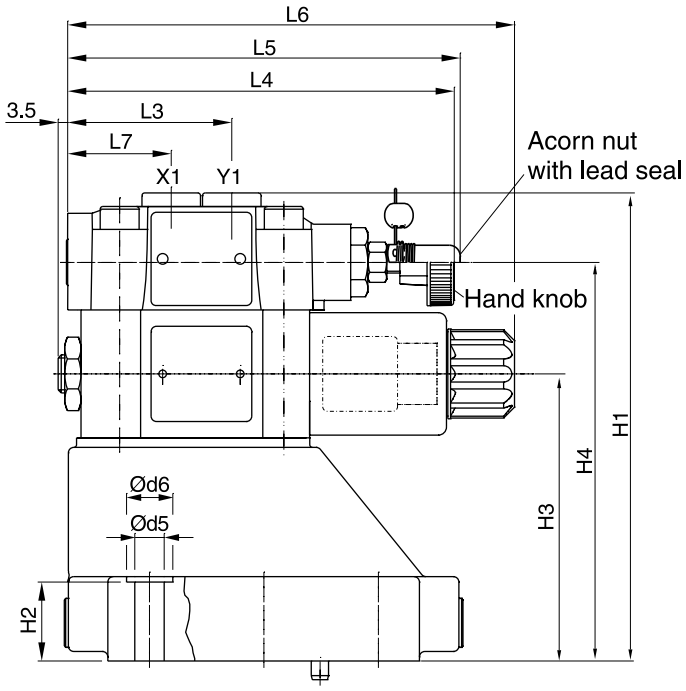


[1)] Measured at 350 Bar (5075 PSI) primary pressure pB.

B


15
B3
B1
B2
X1
Y1
L1
L2


X1
X2
X3
X4
X5
Ød2
d4xt4
Y
Y4
Y3
Y1
Ød1
A
B
Ød3xt3
X7


L6
L5
L4
3.5
L3
L7
X1
Y1
Acorn nut
with lead seal
Hand knob
H1
H4
H3
Ød6
Ød5
H2

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

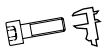
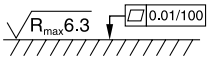
NG	ISO-Code	x1	x2	x3	x4	x5	x6	x7	y1	y2	y3	y4	y5	y6
10	5781-06-07-0-00	42.9 (1.69)	35.8 (1.41)	21.5 (0.85)	–	7.2 (0.28)	–	31.8 (1.25)	66.7 (2.63)	–	33.4 (1.31)	7.9 (0.31)	–	–
25	5781-08-10-0-00	60.3 (2.37)	49.2 (1.94)	39.7 (1.56)	–	11.1 (0.44)	–	44.5 (1.75)	79.4 (3.13)	–	39.7 (1.56)	6.4 (0.25)	–	–
32	5781-10-13-0-00	84.2 (3.31)	67.5 (2.66)	59.5 (2.34)	42.1 (1.66)	16.7 (0.66)	–	62.7 (2.47)	96.8 (3.81)	–	48.4 (1.91)	3.8 (0.15)	–	–

Tolerance at X and Y pin holes and screw holes ±0.1, at port holes ±0.2.

B

NG	ISO-Code	B1	B2	B3	H1	H2	H3	H4	L1	L2	L3	L4	L5	L6	L7
10	5781-06-07-0-00	87.3 (3.44)	33.4 (1.31)	71.0 (2.80)	134.0 (5.28)	21.0 (0.83)	68.5 (2.70)	109.5 (4.31)	29.0 (1.14)	94.8 (3.73)	60.8 (2.38)	143.0 (5.63)	144.8 (5.70)	164.0 (6.49)	38.6 (1.52)
25	5781-08-10-0-00	105.0 (4.13)	39.7 (1.56)	71.0 (2.80)	160.5 (6.32)	29.0 (1.14)	95.0 (3.74)	136.0 (5.35)	34.7 (1.37)	126.8 (4.99)	60.8 (2.38)	143.0 (5.63)	144.8 (5.70)	164.0 (6.49)	38.6 (1.52)
32	5781-10-13-0-00	120.0 (4.72)	48.4 (1.91)	71.0 (2.80)	171.0 (6.73)	29.0 (1.14)	105.5 (4.15)	146.5 (5.77)	30.6 (1.20)	144.3 (5.68)	60.8 (2.38)	143.0 (5.63)	144.8 (5.70)	164.0 (6.49)	38.6 (1.52)

NG	ISO-Code	d1max	d2max	d3	t3	d4	t4	d5	d6	Subplate
10	5781-06-07-0-00	15.0 (0.59)	7.0 (0.28)	7.1 (0.28)	8.0 (0.31)	M10	16.0 (0.63)	10.8 (0.43)	17.0 (0.67)	SPP3M6B910
25	5781-08-10-0-00	23.4 (0.92)	7.1 (0.28)	7.1 (0.28)	8.0 (0.31)	M10	18.0 (0.71)	10.8 (0.43)	17.0 (0.67)	SPP6M8B910
32	5781-10-13-0-00	32.0 (1.26)	7.1 (0.28)	7.1 (0.28)	8.0 (0.31)	M10	20.0 (0.79)	10.8 (0.43)	17.0 (0.67)	SPP10M12B910

NG	ISO-Code	Bolt Kit			Seal Kit		Surface Finish
					Nitrile	Fluorocarbon	
10	5781-06-07-0-00	BK505	4x M10 x 35 DIN912 12.9	63 Nm (46.5 lb.-ft.) ±15%	S26-58507-0*	S26-58507-5*	
25	5781-08-10-0-00	BK485	4x M10 x 45 DIN912 12.9	63 Nm (46.5 lb.-ft.) ±15%	S26-58475-0*	S26-58475-5*	
32	5781-10-13-0-00	BK506	6x M10 x 45 DIN912 12.9	63 Nm (46.5 lb.-ft.) ±15%	S26-58508-0*	S26-58508-5*	
Prop. Section P2					S26-58473-0	S26-58473-5	

* Please combine seal kit of one size with seal kit of Prop. Section P2 for complete seal kit

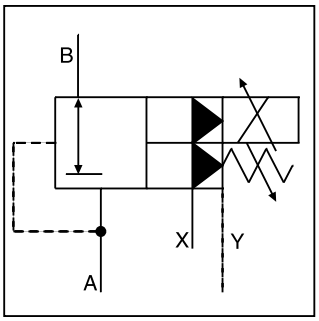
B

General Description

Series R4R*P2 proportional pressure reducing valves are based on the mechanically adjusted Series R4R. The additional proportional unit between the mechanical pilot valve and the main stage allows continuous pressure adjustment.

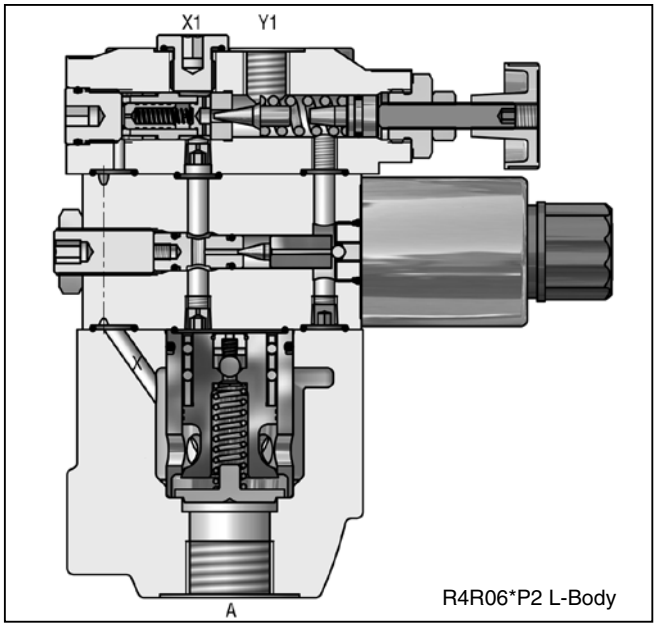
The optimum performance can be achieved in combination with the digital amplifier module PCD00A-400.


R4R10*P2 L-Body



Features

- Pilot operated with proportional solenoid.
- Normally closed to avoid undesired motion.
- Continuous adjustment by proportional solenoid.
- 2 interfaces:
  – L-body (R4R06-G3/4", R4R10-G1-1/4") BSPP
  – T-body (R4R03-G1/2", R4R06-G1") BSPP
- 4 sizes (SAE 1/2", 3/4", 1", 1-1/4").
- 3 pressure ranges.
- With mechanical maximum pressure adjustment.



R4R06*P2 L-Body

Ordering Information

R4R	☐	—	5	☐	☐	☐	2	P2	G0R	B	☐	☐
Pressure Reducing Valve	Size		Max Pressure 350 Bar (5075 PSI)	Body	Pressure Range	Adjustment	Drain Line Ext. from Pilot Head (Y1)	Proportional Pressure Control	Solenoid Voltage 12V 2.3A	Design Series	Seal	Options Check with Factory

Code	Description
03	NG10 (G1/2")
06	NG25 (G1" – T-Body) (G3/4" – L-Body)
10	NG32 (G1-1/4")

Code	Description
1	Hand Knob
3	Acorn Nut with Lead Seal

Code	Description
1	Nitrile
5	Fluorocarbon

Code	Description
6	R4R03 T-Body R4R06 T-Body
D	R4R06 L-Body R4R10 L-Body

Code	Description	
1	up to 105 Bar	(1523 PSI)
3	up to 210 Bar	(3045 PSI)
5	up to 350 Bar	(5075 PSI)

Bolt Kits:

R4R03:	BK505	(4) M10x35
R4R06:	BK485	(4) M10x45
R4R10	BK506	(6) M10x45

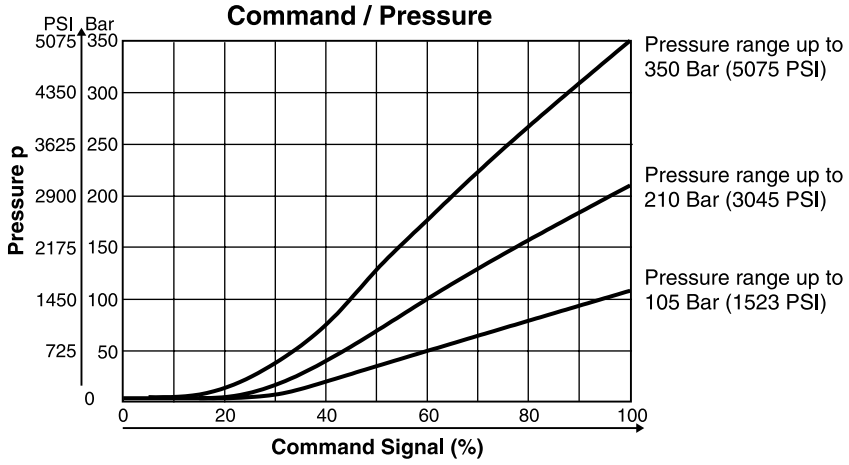
Weight:

R4R03*P2:	5.0 kg (11.0 lbs.)
R4R06*6*P2:	5.1 kg (11.2 lbs.)
R4R06*D*P2:	7.4 kg (16.3 lbs.)
R4R10*P2	8.4 kg (18.5 lbs.)

Specifications

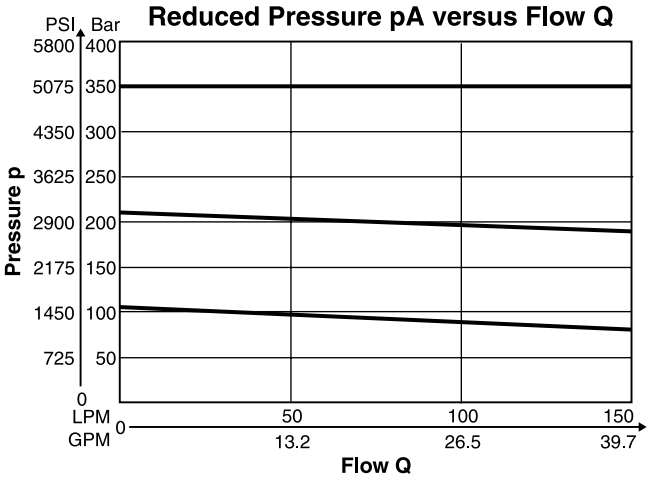
General				
Size	**T-Body**		**L-Body**	
	03 (1/2")	**06 (1")**	**06 (3/4")**	**10 (1-1/4")**
Mounting	Threaded Body			
Mounting Position	Unrestricted			
Ambient Temperature Range	-20°C to +50°C (-4°F to +122°F)			
Hydraulic				
Max. Operating Pressure	Ports A, B and X 350 Bar (5075 PSI); Port Y depressurized			
Pressure Ranges	105 Bar (1523 PSI), 210 Bar (3045 PSI), 350 Bar (5075 PSI)			
Nominal Flow	60 LPM (15.9 GPM)	200 LPM (52.9 GPM)	200 LPM (52.9 GPM)	450 LPM (119.0 GPM)
Fluid	Hydraulic oil as per DIN 51524 ... 51525			
Fluid Temperature	-20°C to +80°C (-4°F to +176°F)			
Viscosity Permitted **Recommended**	10 to 380 cSt / mm²/s (46 to 1761 SSU) 30 to 80 cSt / mm²/s (139 to 371 SSU)			
Filtration	ISO Class 4406 (1999) 18/16/13 (acc. NAS 1638: 7)			
Electrical (Proportional Solenoid)				
Duty Ratio	100%			
Nominal Voltage	12 VDC			
Maximum Current	2.3 amps			
Coil Resistance	4 Ohm at 20°C (68°F)			
Solenoid Connection	Connector as per EN175301-803			
Protection Class	IP65 in accordance with EN60529 (plugged and mounted)			
Power Amplifier	PCD00A-400			

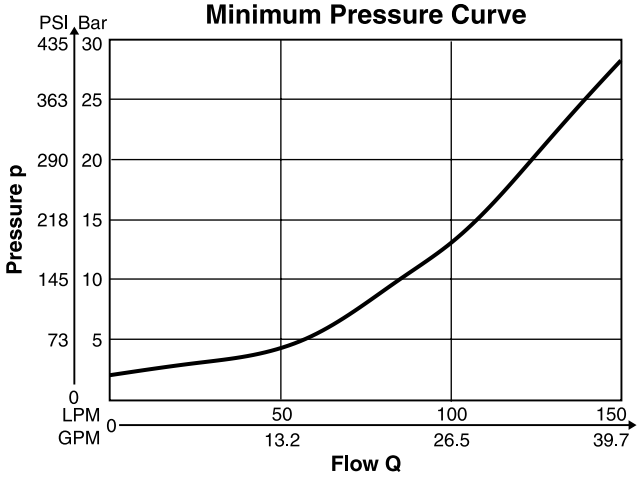
Performance Curves



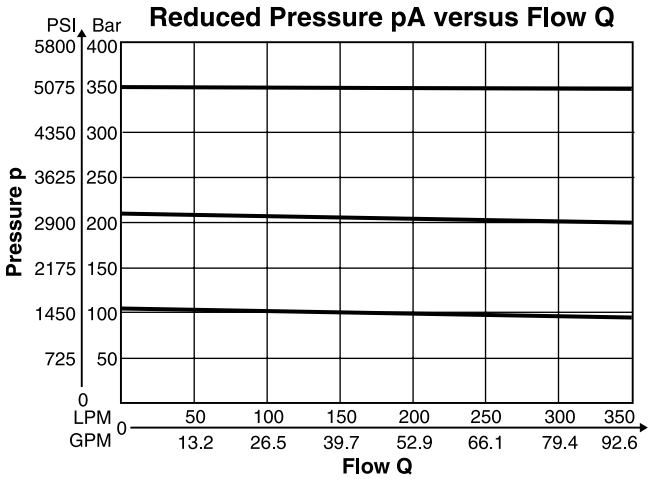
B

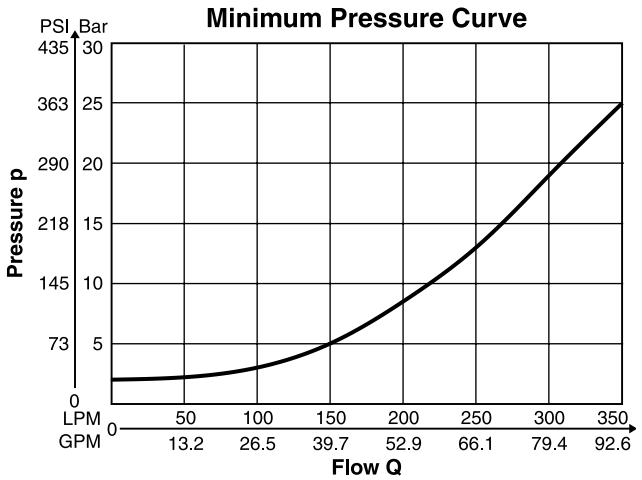
R4R03*P2 [1)]



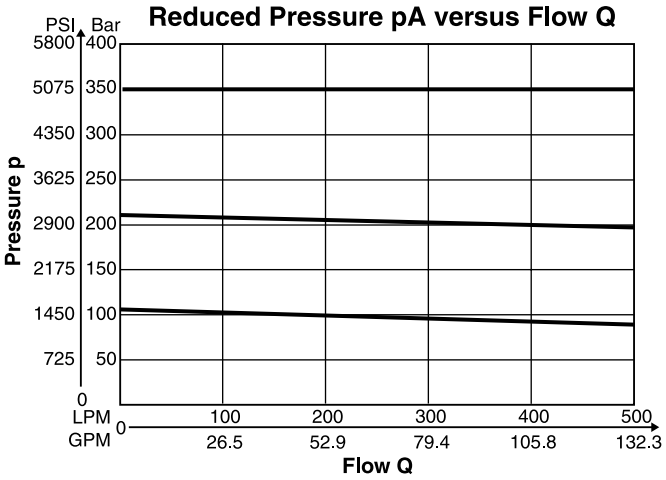


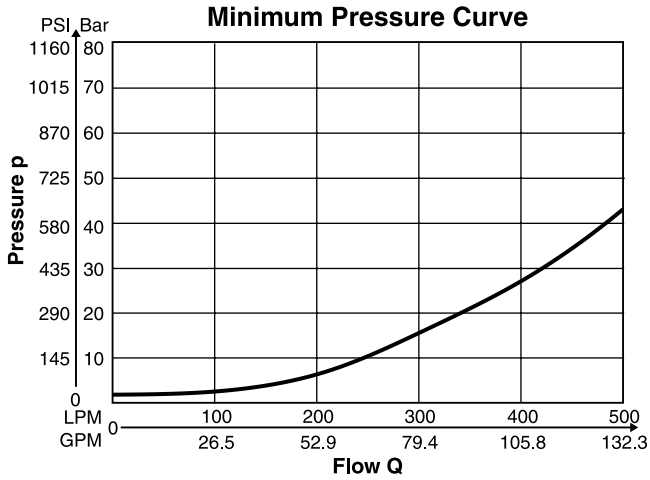
R4R06*P2 [1)]





R4R10*P2 [1)]

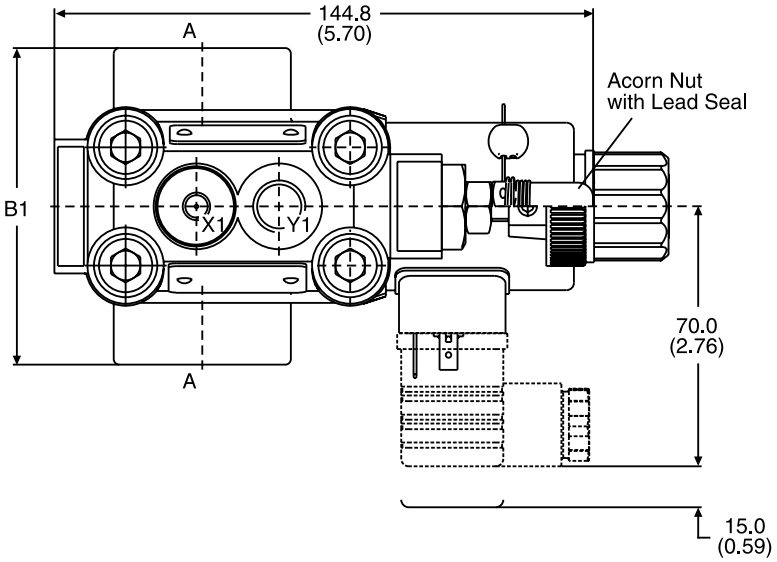


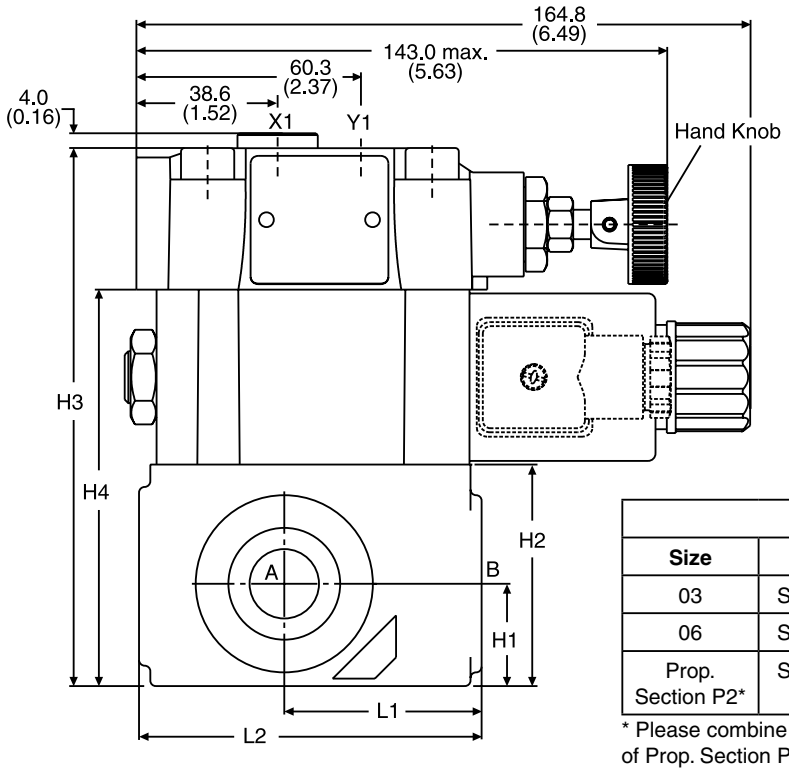


[1)] Measured at 350 Bar (5075 PSI) primary pressure pB.

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

T-Body





Seal Kits		
Size	**Nitrile**	**Fluorocarbon**
03	S26-58507-0	S26-58507-5
06	S26-58475-0	S26-58475-5
Prop. Section P2*	S26-58473-0	S26-58473-5

* Please combine seal kit of one size with seal kit of Prop. Section P2 for complete seal kit.

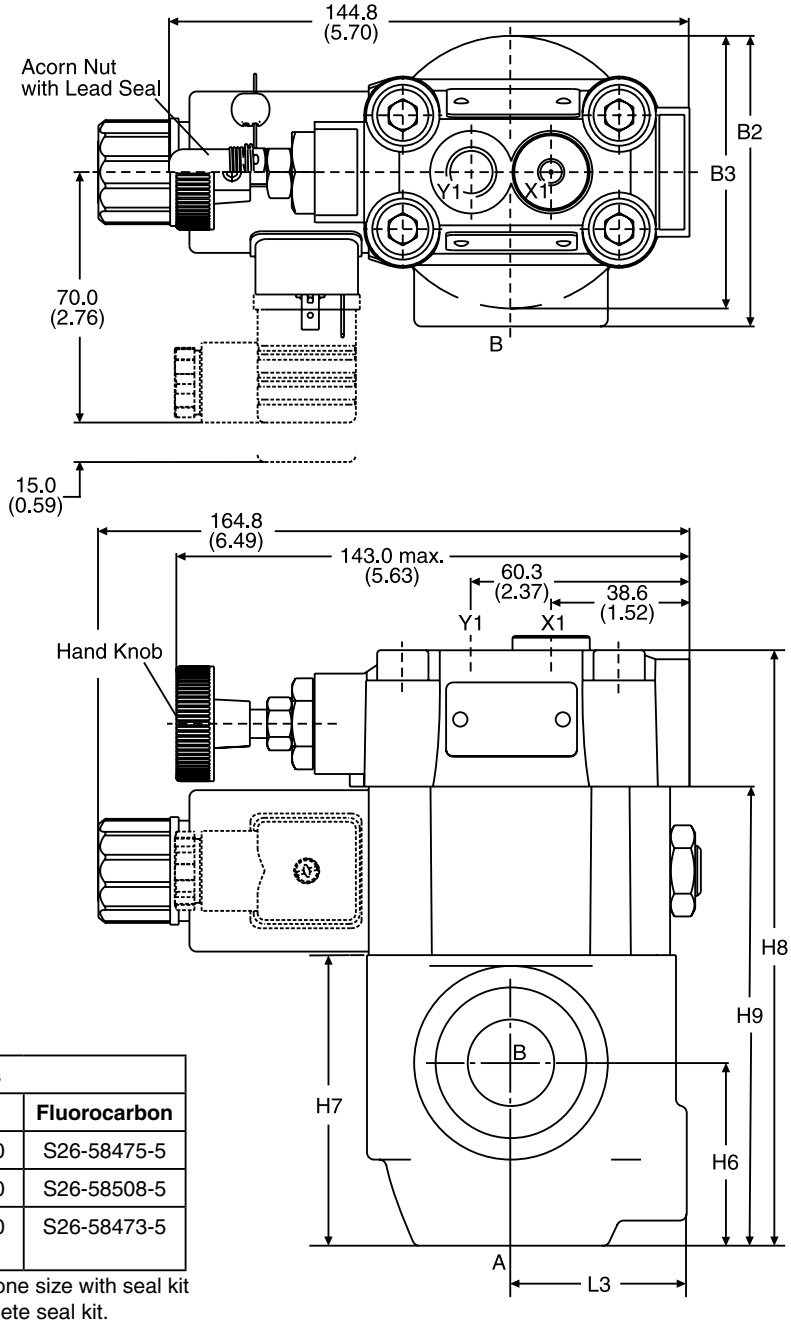
Size	Body	B1	H1	H2	H3	H4	L1	L2
03	T-Body	85.0 (3.35)	27.5 (1.08)	59.5 (2.34)	144.5 (5.69)	106.5 (4.19)	53.0 (2.09)	92.0 (3.62)
06	T-Body	136.0 (5.35)	38.0 (1.50)	93.0 (3.66)	178.0 (7.01)	140.0 (5.51)	66.5 (2.62)	117.5 (4.63)

Port	Function	Port Size	
		R4R03*P2 T-Body	**R4R06*P2 T-Body**
B	Inlet Pressure	G1/2"	G1"
A	Outlet Pressure	G1/2"	G1"
X1	External Remote Control or Vent Connection	G1/4"	
Y1	External Drain		

B

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

L-Body



Seal Kits		
Size	**Nitrile**	**Fluorocarbon**
06	S26-58475-0	S26-58475-5
10	S26-58508-0	S26-58508-5
Prop. Section P2*	S26-58473-0	S26-58473-5

* Please combine seal kit of one size with seal kit of Prop. Section P2 for complete seal kit.

Size	Body	B2	B3	H6	H7	H8	H9	L3
06	L-Body	81.0 (3.19)	76.0 (2.99)	51.0 (2.01)	81.0 (3.19)	166.0 (6.54)	128.0 (5.04)	49.0 (1.93)
10	L-Body	120.7 (4.75)	85.8 (3.38)	50.8 (2.00)	96.0 (3.78)	181.0 (7.13)	143.0 (5.63)	49.8 (1.96)

Port	Function	Port Size	
		R4R06*P2 L-Body	**R4R10*P2 L-Body**
B	Inlet Pressure	G3/4"	G1-1/4"
A	Outlet Pressure	G3/4"	G1-1/4"
X1	External Remote Control or Vent Connection	G1/4"	
Y1	External Drain		

R4R_P2-Inline.indd, dd

Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA

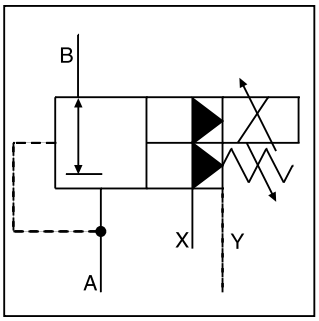
B

General Description

Series R4R*P2 proportional pressure reducing valves are based on the mechanically adjusted Series R4R. The additional proportional unit between the mechanical pilot valve and the main stage allows continuous pressure adjustment.

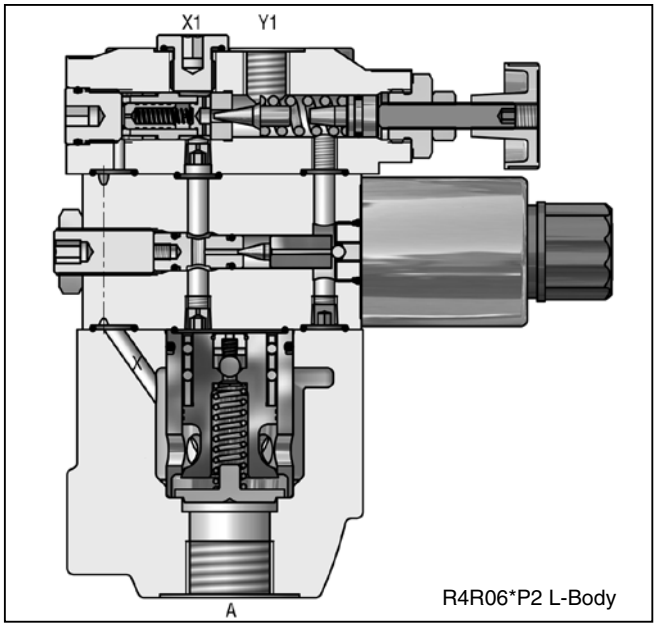
The optimum performance can be achieved in combination with the digital amplifier module PCD00A-400.


R4R10*P2 L-Body



Features

- Pilot operated with proportional solenoid.
- Normally closed to avoid undesired motion.
- Continuous adjustment by proportional solenoid.
- 2 interfaces:
  – L-body (R4R06-G3/4", R4R10-G1-1/4") BSPP
  – T-body (R4R03-G1/2", R4R06-G1") BSPP
- 4 sizes (SAE 1/2", 3/4", 1", 1-1/4").
- 3 pressure ranges.
- With mechanical maximum pressure adjustment.



R4R06*P2 L-Body

Ordering Information

R4R	☐	—	5	☐	☐	☐	2	P2	G0R	B	☐	☐
Pressure Reducing Valve	Size		Max Pressure 350 Bar (5075 PSI)	Body	Pressure Range	Adjustment	Drain Line Ext. from Pilot Head (Y1)	Proportional Pressure Control	Solenoid Voltage 12V 2.3A	Design Series	Seal	Options Check with Factory

Code	Description
03	NG10 (G1/2")
06	NG25 (G1" – T-Body) (G3/4" – L-Body)
10	NG32 (G1-1/4")

Code	Description
1	Hand Knob
3	Acorn Nut with Lead Seal

Code	Description
1	Nitrile
5	Fluorocarbon

Code	Description
6	R4R03 T-Body R4R06 T-Body
D	R4R06 L-Body R4R10 L-Body

Code	Description	
1	up to 105 Bar	(1523 PSI)
3	up to 210 Bar	(3045 PSI)
5	up to 350 Bar	(5075 PSI)

Bolt Kits:

R4R03:	BK505	(4) M10x35
R4R06:	BK485	(4) M10x45
R4R10	BK506	(6) M10x45

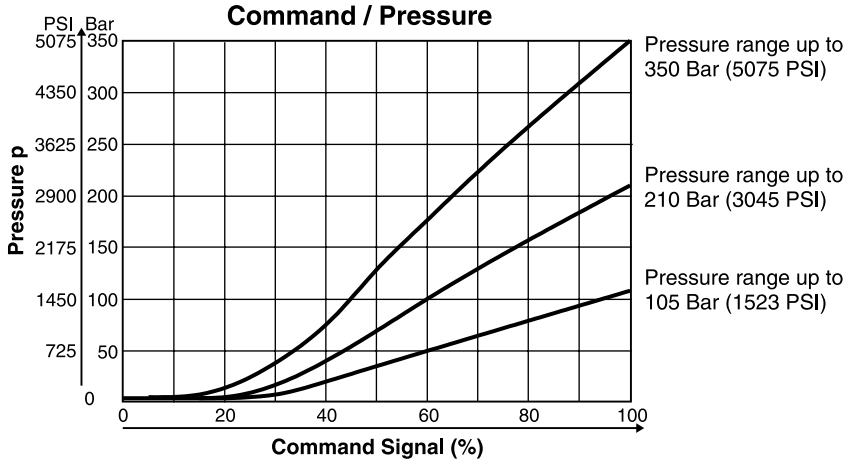
Weight:

R4R03*P2:	5.0 kg (11.0 lbs.)
R4R06*6*P2:	5.1 kg (11.2 lbs.)
R4R06*D*P2:	7.4 kg (16.3 lbs.)
R4R10*P2	8.4 kg (18.5 lbs.)

Specifications

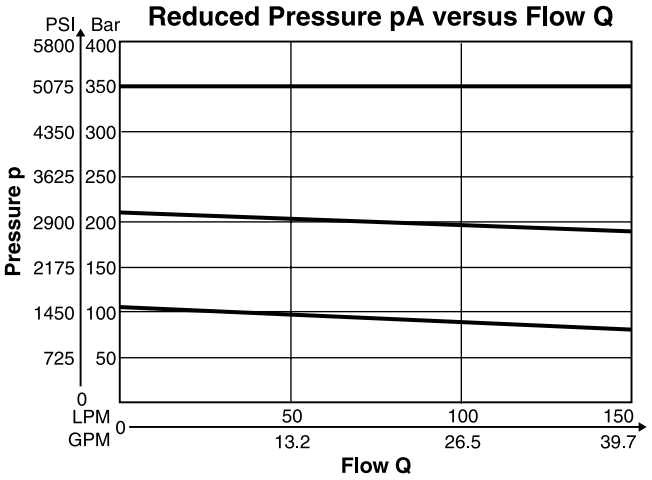
General				
Size	**T-Body**		**L-Body**	
	03 (1/2")	**06 (1")**	**06 (3/4")**	**10 (1-1/4")**
Mounting	Threaded Body			
Mounting Position	Unrestricted			
Ambient Temperature Range	-20°C to +50°C (-4°F to +122°F)			
Hydraulic				
Max. Operating Pressure	Ports A, B and X 350 Bar (5075 PSI); Port Y depressurized			
Pressure Ranges	105 Bar (1523 PSI), 210 Bar (3045 PSI), 350 Bar (5075 PSI)			
Nominal Flow	60 LPM (15.9 GPM)	200 LPM (52.9 GPM)	200 LPM (52.9 GPM)	450 LPM (119.0 GPM)
Fluid	Hydraulic oil as per DIN 51524 ... 51525			
Fluid Temperature	-20°C to +80°C (-4°F to +176°F)			
Viscosity Permitted **Recommended**	10 to 380 cSt / mm²/s (46 to 1761 SSU) 30 to 80 cSt / mm²/s (139 to 371 SSU)			
Filtration	ISO Class 4406 (1999) 18/16/13 (acc. NAS 1638: 7)			
Electrical (Proportional Solenoid)				
Duty Ratio	100%			
Nominal Voltage	12 VDC			
Maximum Current	2.3 amps			
Coil Resistance	4 Ohm at 20°C (68°F)			
Solenoid Connection	Connector as per EN175301-803			
Protection Class	IP65 in accordance with EN60529 (plugged and mounted)			
Power Amplifier	PCD00A-400			

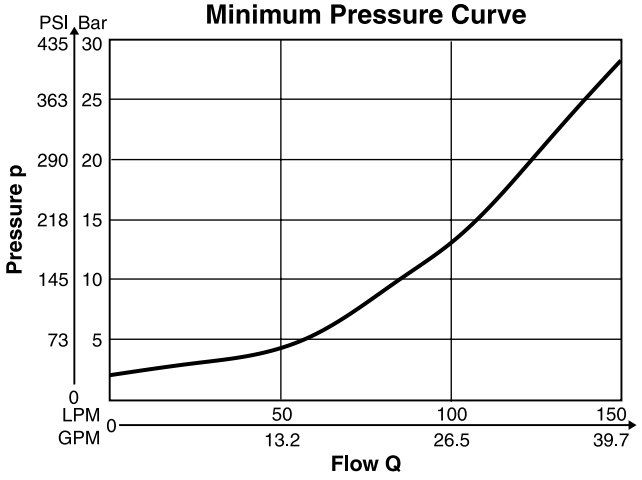
Performance Curves



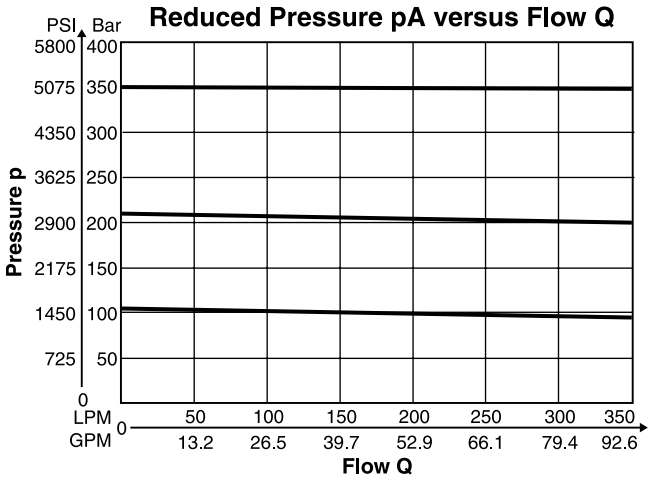
B

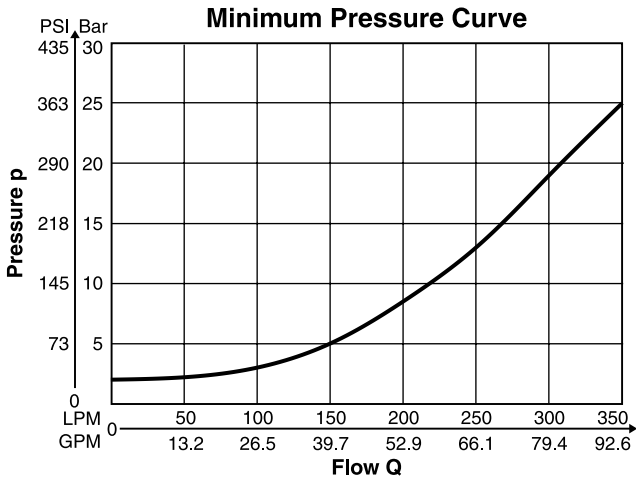
R4R03*P2 [1)]



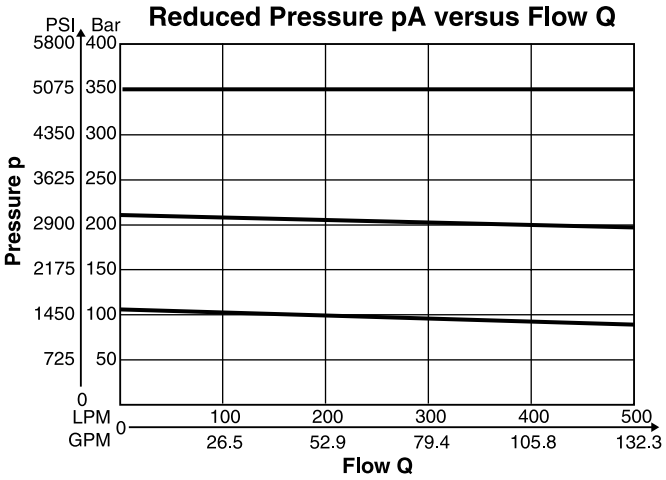


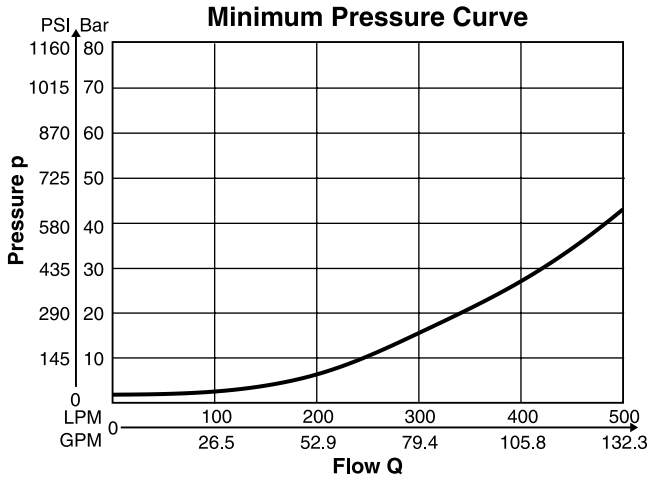
R4R06*P2 [1)]





R4R10*P2 [1)]

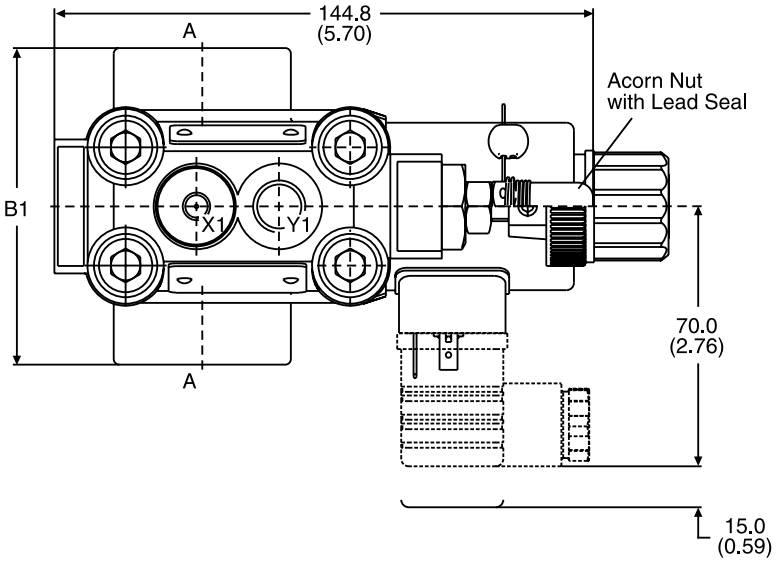


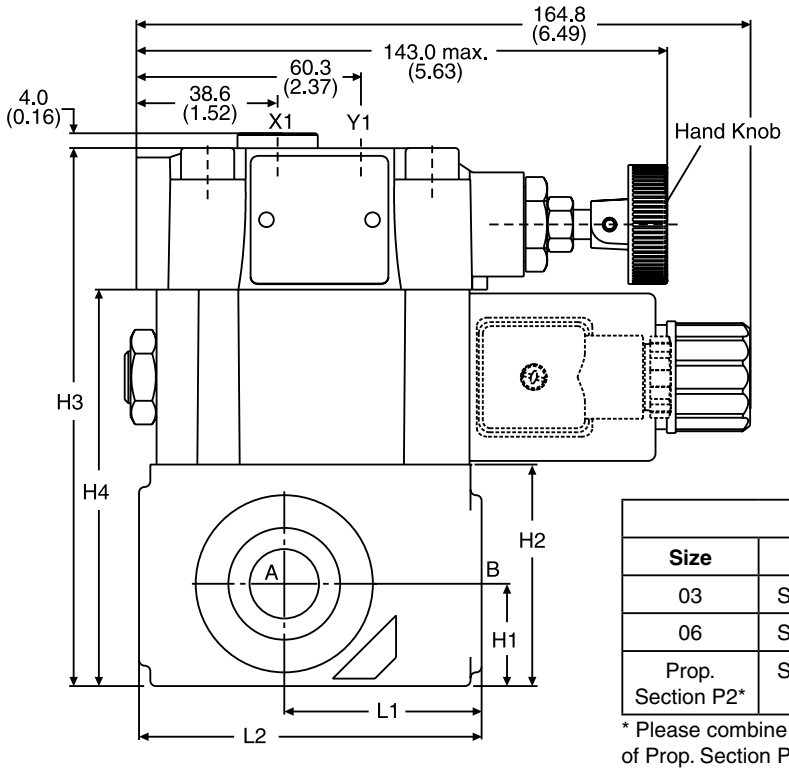


[1)] Measured at 350 Bar (5075 PSI) primary pressure pB.

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

T-Body





Seal Kits		
Size	**Nitrile**	**Fluorocarbon**
03	S26-58507-0	S26-58507-5
06	S26-58475-0	S26-58475-5
Prop. Section P2*	S26-58473-0	S26-58473-5

* Please combine seal kit of one size with seal kit of Prop. Section P2 for complete seal kit.

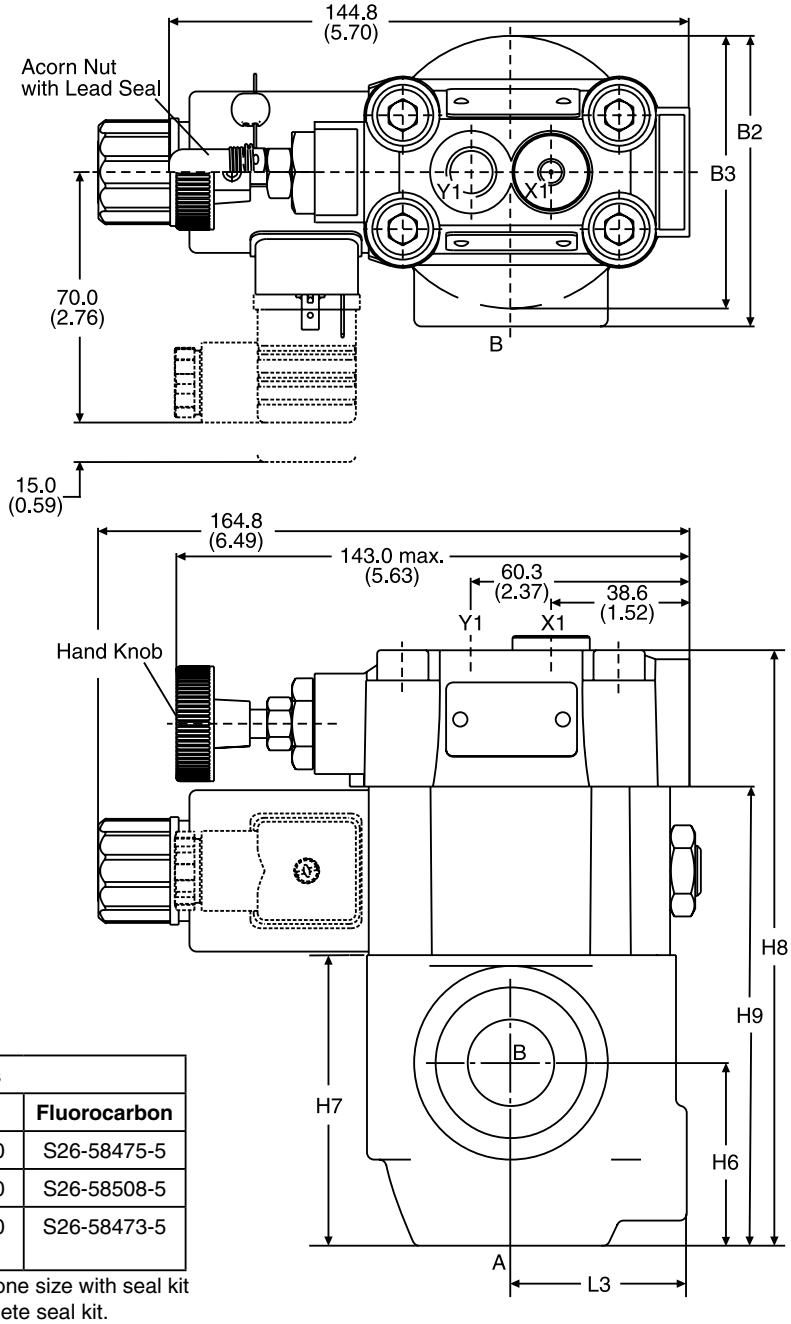
Size	Body	B1	H1	H2	H3	H4	L1	L2
03	T-Body	85.0 (3.35)	27.5 (1.08)	59.5 (2.34)	144.5 (5.69)	106.5 (4.19)	53.0 (2.09)	92.0 (3.62)
06	T-Body	136.0 (5.35)	38.0 (1.50)	93.0 (3.66)	178.0 (7.01)	140.0 (5.51)	66.5 (2.62)	117.5 (4.63)

Port	Function	Port Size	
		R4R03*P2 T-Body	**R4R06*P2 T-Body**
B	Inlet Pressure	G1/2"	G1"
A	Outlet Pressure	G1/2"	G1"
X1	External Remote Control or Vent Connection	G1/4"	
Y1	External Drain		

B

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

L-Body



Seal Kits		
Size	**Nitrile**	**Fluorocarbon**
06	S26-58475-0	S26-58475-5
10	S26-58508-0	S26-58508-5
Prop. Section P2*	S26-58473-0	S26-58473-5

* Please combine seal kit of one size with seal kit of Prop. Section P2 for complete seal kit.

Size	Body	B2	B3	H6	H7	H8	H9	L3
06	L-Body	81.0 (3.19)	76.0 (2.99)	51.0 (2.01)	81.0 (3.19)	166.0 (6.54)	128.0 (5.04)	49.0 (1.93)
10	L-Body	120.7 (4.75)	85.8 (3.38)	50.8 (2.00)	96.0 (3.78)	181.0 (7.13)	143.0 (5.63)	49.8 (1.96)

Port	Function	Port Size	
		R4R06*P2 L-Body	**R4R10*P2 L-Body**
B	Inlet Pressure	G3/4"	G1-1/4"
A	Outlet Pressure	G3/4"	G1-1/4"
X1	External Remote Control or Vent Connection	G1/4"	
Y1	External Drain		

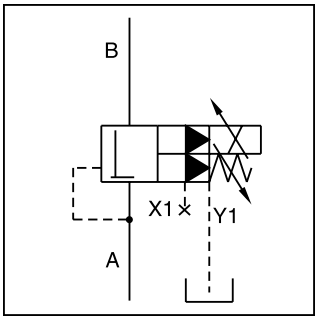
R4R_P2-Inline.indd, dd

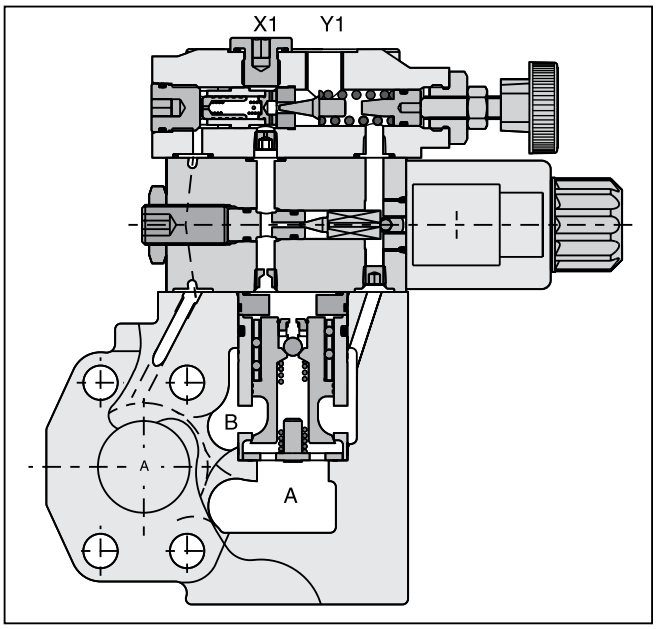
Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA

B

General Description

Series R5R*P2 proportional pressure reducing valves are based on the mechanical adjusted Series R5R. The additional proportional unit between the mechanical pilot valve and the main stage allows continuous pressure adjustment. The optimum performance can be achieved in combination with the digital amplifier module PCD00A-400.





Features

- Pilot operated with proportional solenoid.
- Continuous adjustment by proportional solenoid.
- 2-port body with SAE 61 flange.
- 3 sizes (SAE Code 61 3/4", 1", 1-1/4").
- 3 pressure ranges.
- With mechanical maximum pressure adjustment.

Ordering Information

R5R	☐	—	☐	8	☐	☐	6	P2	G0R	A	☐	☐
Pressure Reducing Valve	Size		SAE 61 Interface	Body 2-Port X1, Y1 = G1/4"	Pressure Range	Adjustment	External Drain from Y1 Port	Proportional Pressure Control	Solenoid Voltage 12V 2.3A	Design Series	Seal	Options Check with Factory

Code	Description
06	SAE 3/4"
08	SAE 1"
10	SAE 1-1/4"

Code	Description
1	Hand Knob
3	Acorn Nut with Lead Seal

Code	Description
1	Nitrile
5	Fluorocarbon

Code	Size	Max. Pressure
4	10	280 Bar (4060 PSI)
5	06/08	350 Bar (5075 PSI)

Further options on request.

Code	Description
1	up to 105 Bar (1523 PSI)
3	up to 210 Bar (3045 PSI)
5	up to 350 Bar (5075 PSI)

Weight:

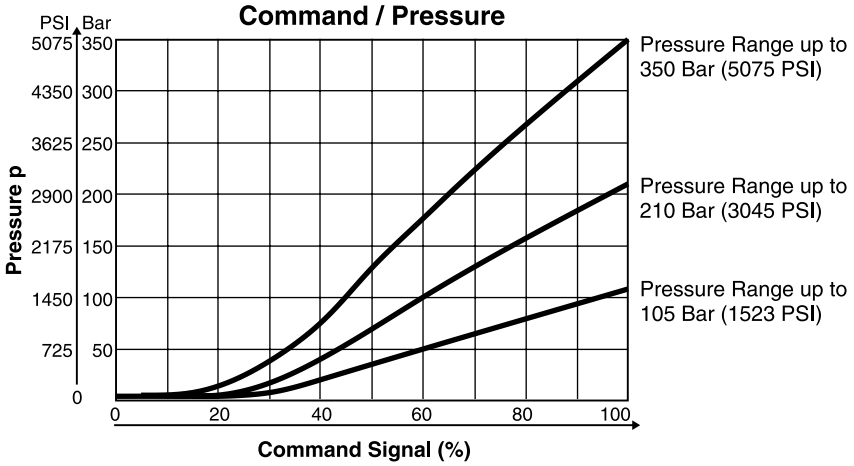
R5R06*P2	5.8 kg (12.8 lbs.)
R5R08*P2	6.4 kg (14.1 lbs.)
R5R10*P2	7.7 kg (17.0 lbs.)

B

Specifications

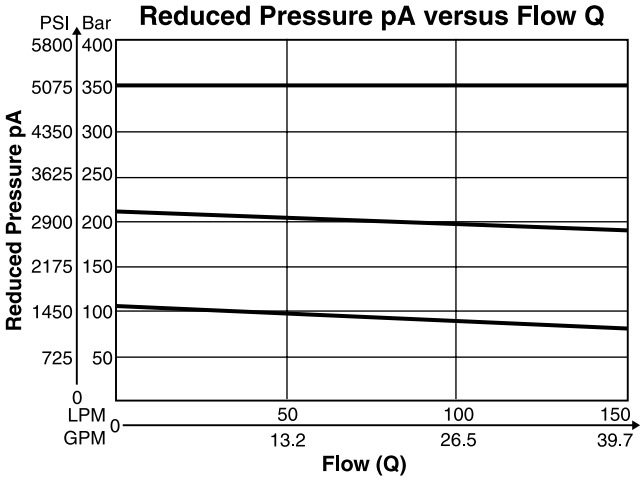
General				
Size		**06**	**08**	**10**
Mounting		Flanged according to SAE 61		
Mounting Position		Unrestricted		
Ambient Temperature Range		-20°C to +50°C (-4°F to +122°F)		
Hydraulic				
Max. Operating Pressure	**Ports A,B, X1**	350 Bar (5075 PSI)	350 Bar (5075 PSI)	280 Bar (4060 PSI)
	Port Y1	30 Bar (435 PSI)	30 Bar (435 PSI)	30 Bar (435 PSI)
Pressure Ranges		105 Bar (1523 PSI), 210 Bar (3045 PSI), 350 Bar (5075 PSI)		
Nominal Flow		90 LPM (23.8 GPM)	300 LPM (79.4 GPM)	500 LPM (132.3 GPM)
Fluid		Hydraulic oil as per DIN 51524 ... 51525		
Fluid Temperature		-20°C to +80°C (-4°F to +176°F)		
Viscosity	**Permitted**	10 to 650 cSt / mm²/s (46 to 3013 SSU)		
	Recommended	30 to 80 cSt / mm²/s (139 to 371 SSU)		
Filtration		ISO Class 4406 (1999) 18/16/13 (acc. NAS 1638: 7)		
Electrical (Solenoid)				
Duty Ratio		100%		
Nominal Voltage		12 VDC		
Maximum Current		2.3 amps		
Coil Resistance		4 Ohm at 20°C (68°F)		
Solenoid Connection		Connector as per EN175301-803		
Protection Class		IP65 in accordance with EN60529 (plugged and mounted)		
Power Amplifier		PCD00A-400		

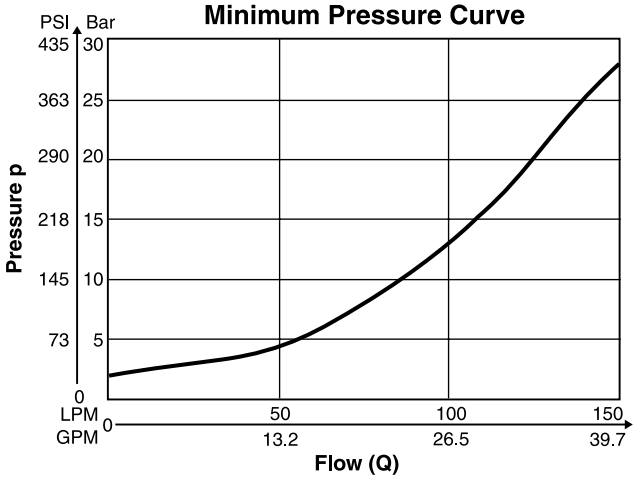
Performance Curves



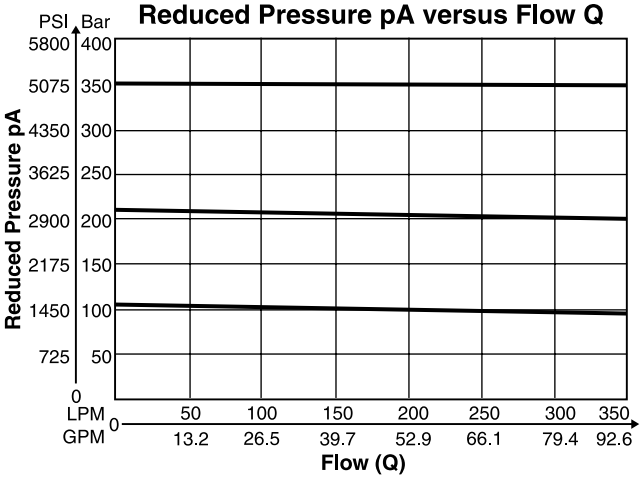
B

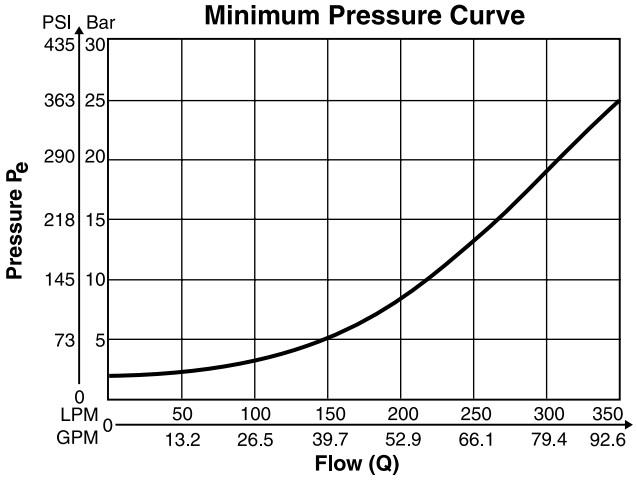
R5R06*P2 [1)]



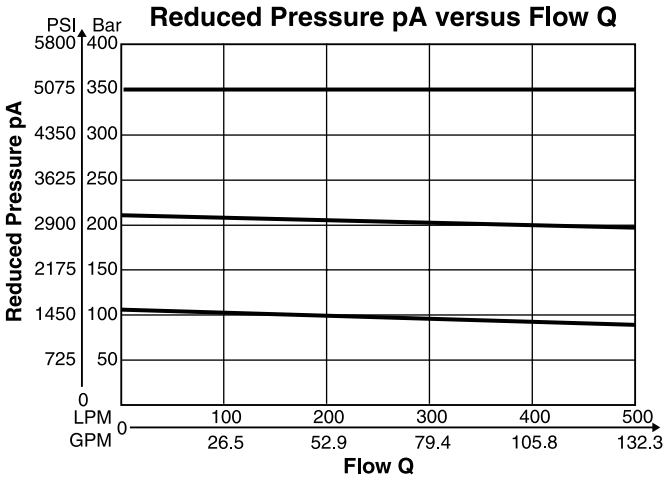


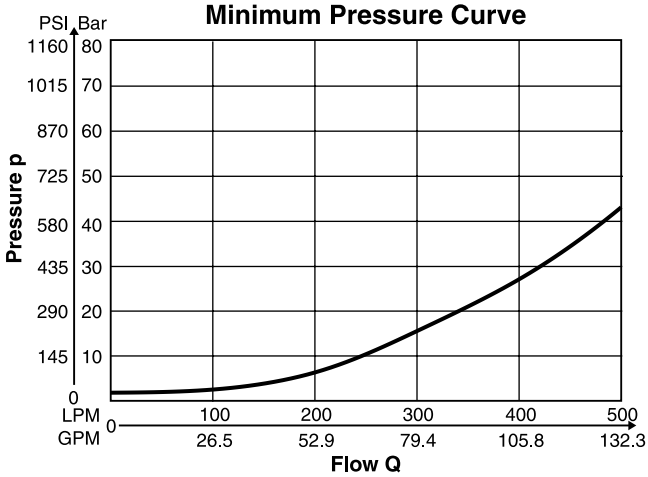
R5R08* P2 [1)]





R5R10* P2 [1)]





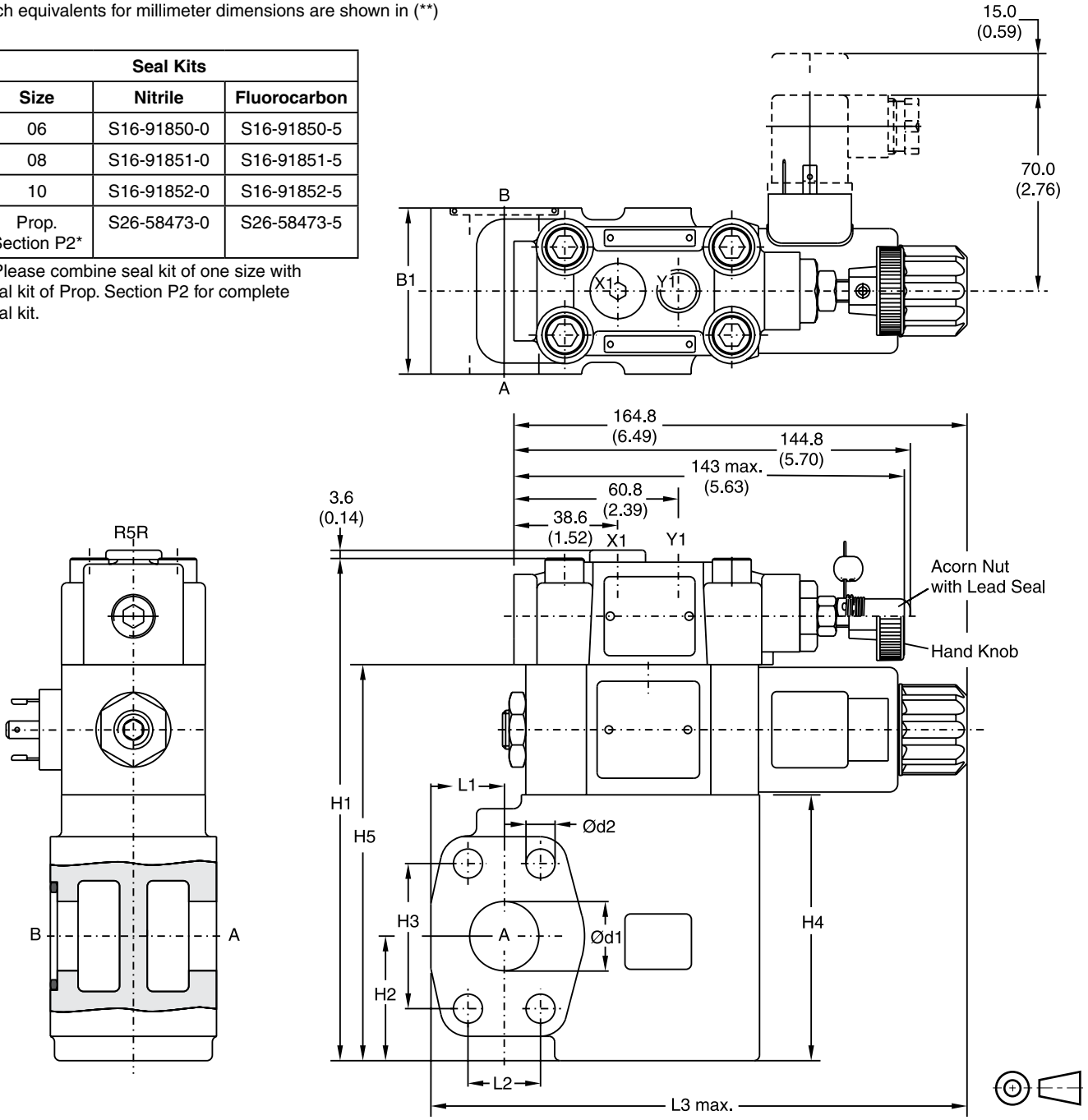
[1)] Measured at 350 Bar (5075 PSI) primary pressure pB.

B

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

Seal Kits		
Size	**Nitrile**	**Fluorocarbon**
06	S16-91850-0	S16-91850-5
08	S16-91851-0	S16-91851-5
10	S16-91852-0	S16-91852-5
Prop. Section P2*	S26-58473-0	S26-58473-5

* Please combine seal kit of one size with seal kit of Prop. Section P2 for complete seal kit.



Size	B1	H1	H2	H3	H4	H5	L1	L2	L3	d1	d2
06	60.0 (2.36)	175.0 (6.89)	37.0 (1.46)	47.6 (1.87)	90.0 (3.54)	137.0 (5.39)	24.6 (0.97)	22.2 (0.87)	174.0 (6.85)	19.0 (0.75)	10.5 (0.41)
08	60.0 (2.36)	181.0 (7.13)	45.0 (1.77)	52.4 (2.06)	96.0 (3.78)	143.0 (5.63)	26.5 (1.04)	26.2 (1.03)	193.6 (7.62)	25.0 (0.98)	10.5 (0.41)
10	75.0 (2.95)	194.0 (7.64)	48.0 (5.93)	58.7 (2.31)	109.0 (4.29)	156.0 (6.14)	34.0 (1.34)	30.2 (1.19)	201.0 (7.91)	32.0 (1.26)	12.5 (0.49)

Port	Function	Port Size		
		R5R06	**R5R08**	**R5R10**
B	Inlet Pressure	3/4" SAE 61	1" SAE 61	1-1/4" SAE 61
A	Reduced Outlet Pressure	3/4" SAE 61	1" SAE 61	1-1/4" SAE 61
Y1	External Drain	G1/4"		
X1	Pressure Gauge	G1/4"		

R5R_P2.indd, dd

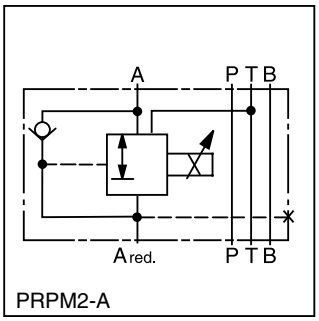
Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA

General Description

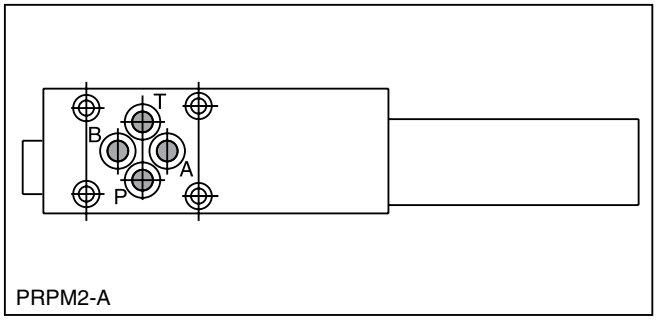
Series PRPM proportional pressure reducing valves keep a constant pressure p_{red} on the secondary, or regulated, side, independent of pressure fluctuations on the primary side. The integrated pressure relief function eliminates the need for an additional pressure relief valve on the secondary side and reliefs to tank, if p_{red} rises above the set pressure.

The proportional pressure reducing valve reduces the pressure in output port p_{red} in proportion to the solenoid current. The PRPM works practically independent of the inlet pressure p_E. In non-activated mode, the connection to the tank is fully open with a min. pressure corresponding to the spring force.

The gauge port is connected to the secondary side. Types A and B have an integrated bypass check valve. The PRPM provides optimum performance in combination with a digital amplifier module PCD00A-400.



PRPM2-A



PRPM2-A

B

Specifications

General		
Size (according to ISO 4401)	**NG6**	**NG10**
Construction	Sandwich type	
Operation	Proportional solenoid	
Mounting	4 holes for socket cap screws M5 (NG10: M6) or studs M5 (NG10: M6)	
Port	Sandwich valve	
Mounting Position	Horizontal preferred	
Ambient Temperature Range	-20°C to +50°C (-4°F to +122°F)	
Fastening Torque	M_D = 5.5 Nm (4.1 lb.-ft.) (qual. 8.8 Nm (6.5 lb.-ft.) for socket cap screws M_D = 50 Nm (36.9 lb.-ft.) for cartridges	M_D = 9.5 Nm (7.0 lb.-ft.) (qual. 8.8 (6.5 lb.-ft.) for socket cap screws M_D = 50 Nm (36.9 lb.-ft.) for cartridges
Hydraulic		
Max. Operating Pressure	350 Bar (5075 PSI)	
Pressure Range	100 Bar (1450 PSI), 200 Bar (2900 PSI), 350 Bar (5075 PSI)	
Maximum Flow	0 to 60 LPM (0 to 15.9 GPM)	
Pilot Flow	See performance curves	
Fluid	Mineral oil (other fluid on request)	
Fluid Temperature	-20°C to +80°C (-4°F to +176°F)	
Viscosity Permitted	10 to 380 cSt / mm^2/s (46 to 1761 SSU)	
Filtration	ISO Class 1406 16/13, to be achieved with $\beta_{6...10} > 75$	
Resolution	1 mA	
Repeatability	≤1% (with optimal dither signal)	
Hysteresis	≤4% (with optimal dither signal)	
Electrical		
Solenoid	Proportional solenoid, wet-pin push type, pressure tight	
Duty Ratio	100% ED	
Protection Class	IP65 in accordance with EN 60529	
Supply Voltage	12 VDC (1320 mA) / 24 VDC (680 mA)	
Solenoid Connection	Connector as per EN 175301-803	
Amplifier	PCD00A-400	

Ordering Information

PRP — Proportional Pressure Reducing Valve

M — Sandwich

☐ — Size

Code	Description
2	NG6
3	NG10

☐ — Red. Port

Code	Port
AA	A
BB	B
PP	P

☐ — Pressure Range

Code	Description
10	100 Bar (1450 PSI)
20	200 Bar (2900 PSI)
35	350 Bar (5075 PSI)

☐ — Soleoid Voltage

Code	Description
J	24V, 680 mA
K	12V, 1250 mA

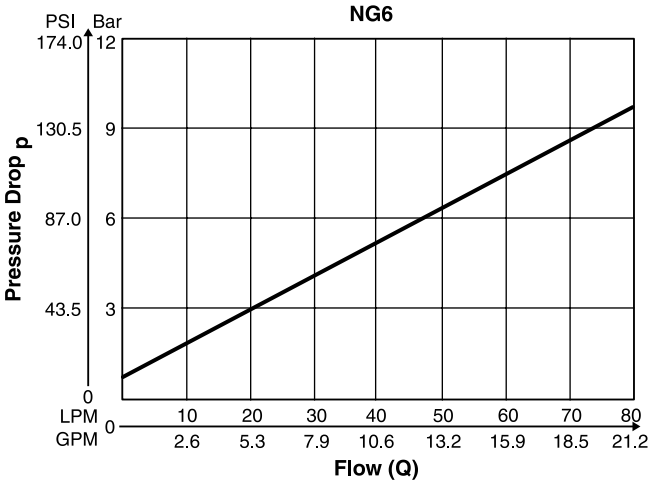
V — Seal Fluorocarbon

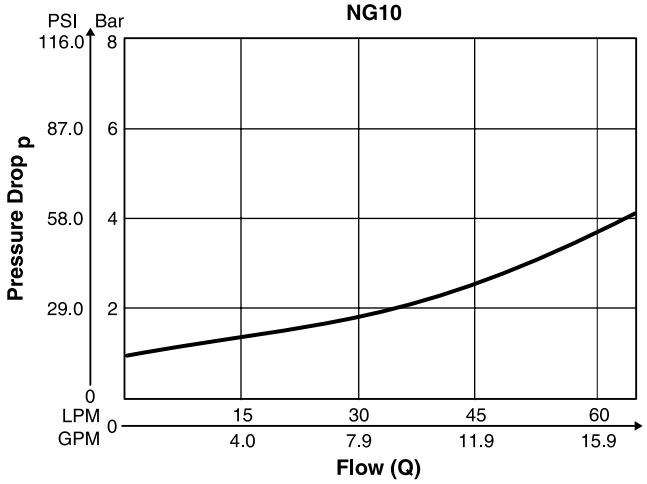
Weight:

PRPM2 0.2 kg (0.4 lbs.)
PRPM3 3.2 kg (7.1 lbs.)

Performance Curves

Pressure Drop/Flow over check valve

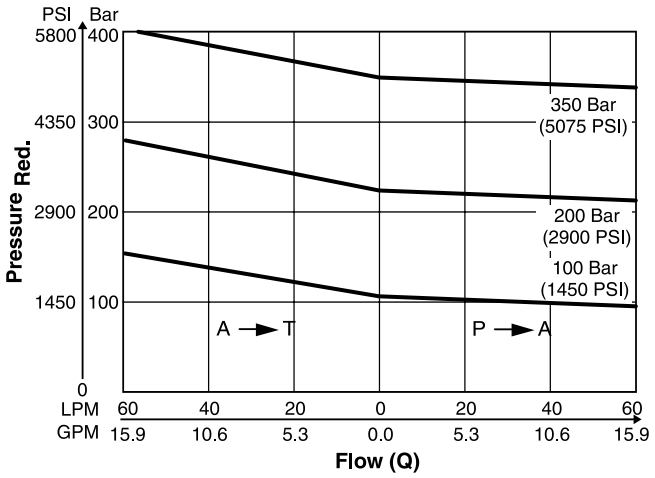




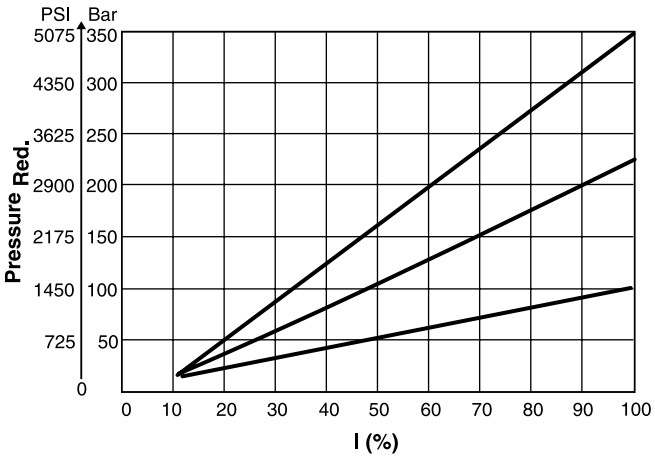
All measures taken at viscosity υ = 30mm²/s.

B

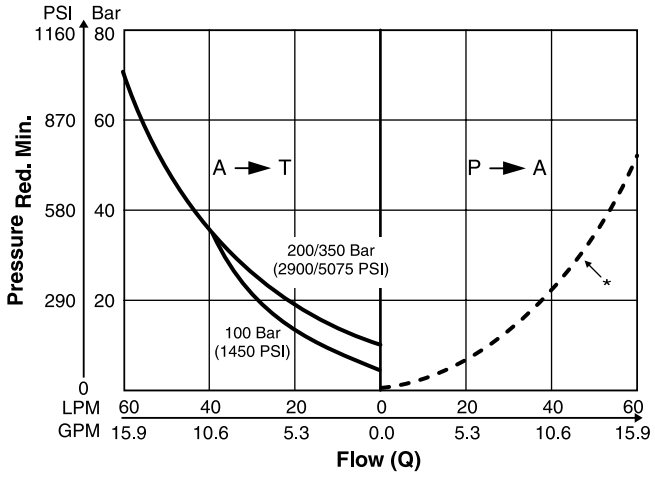
Pressure/Flow NG6/NG10 p_{red} = f(Q)



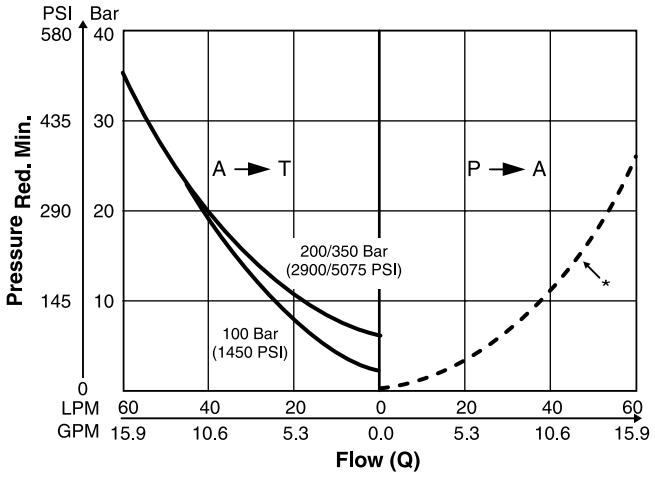
Pressure/Adjustment p_{red} = f(I), at Q=0 LPM (static)



Pressure/Flow NG6 (min. adjustable) p_{red} = f(Q)

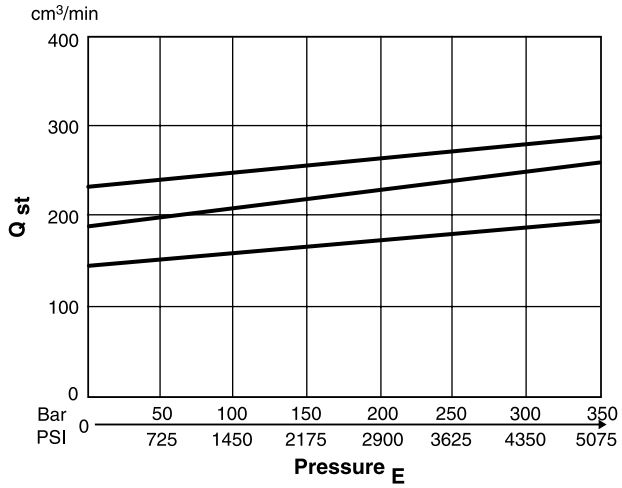


* Backpressure depends on system



* Backpressure depends on system

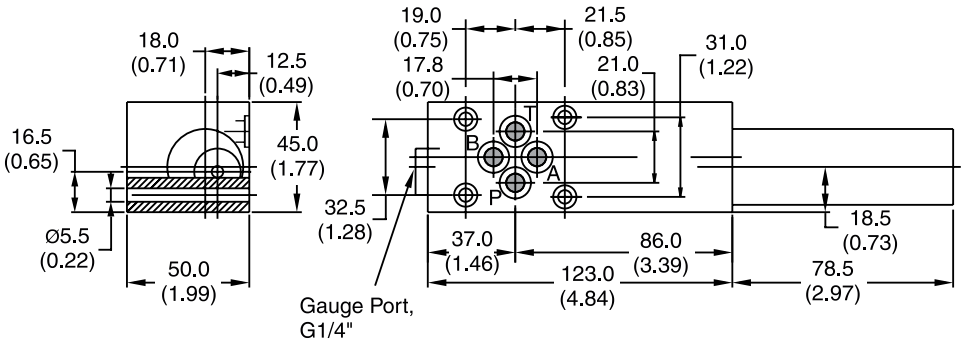
Pilot Flow NG6/NG10 p_{red} = f(Q)



B

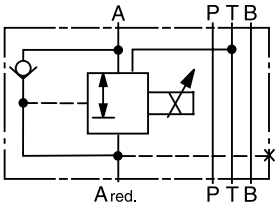
PRPM2A*, B*

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

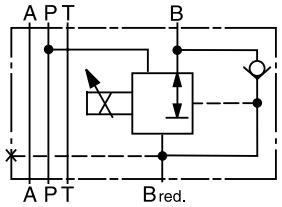


Sandwich type: Pressure reduction code B is located on cartridge side B.

Symbol PRPM2A*

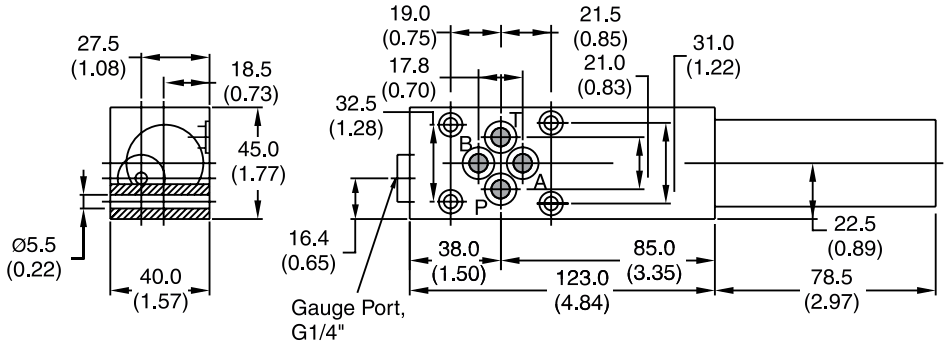


Symbol PRPM2B*

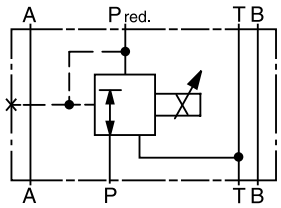


PRPM2P*

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



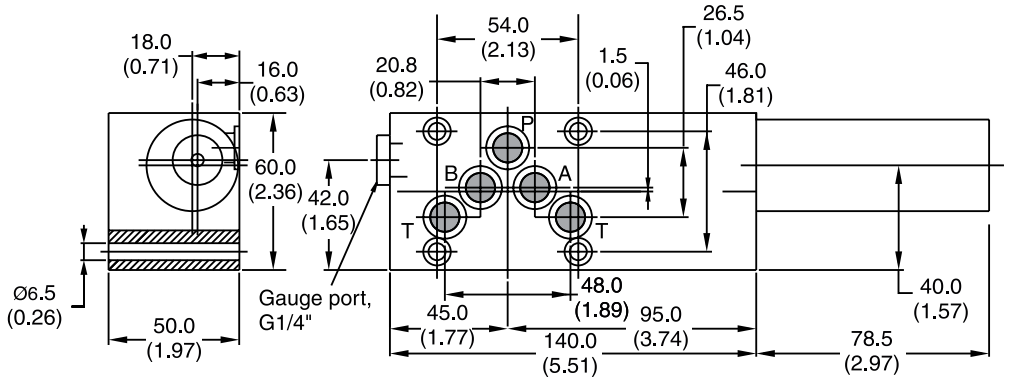
Symbol PRPM2P*



B

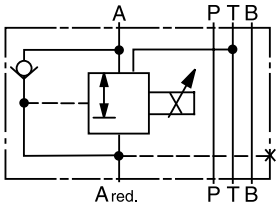
PRPM3A*, B*

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

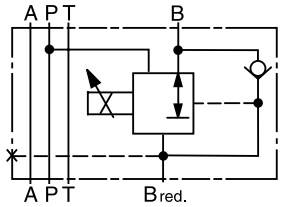


Sandwich type: Pressure reduction code B is located on cartridge side B.

Symbol PRPM3A*

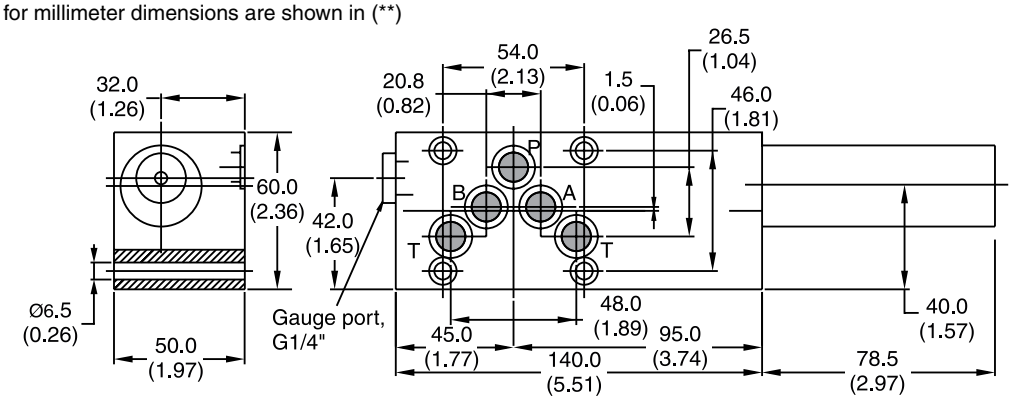


Symbol PRPM3B*

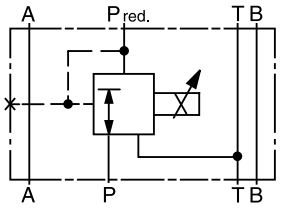


PRPM3P*

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



Symbol PRPM3P*



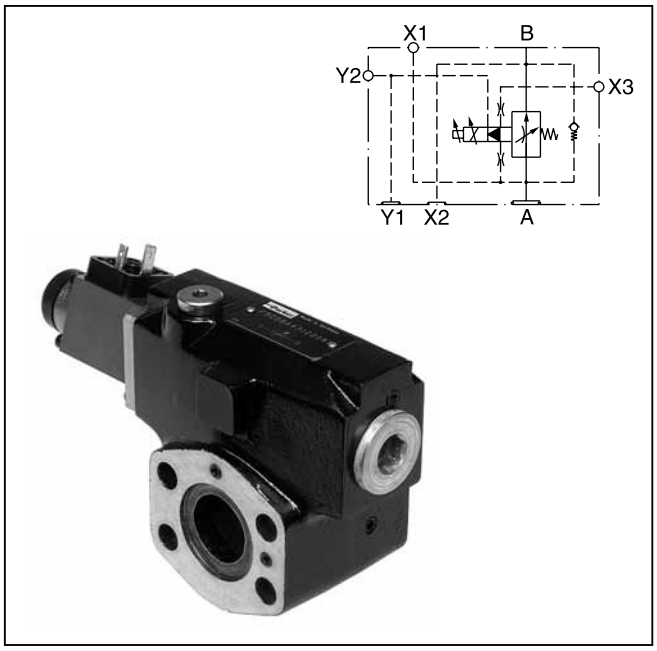
General Description

Series F5C proportional throttle valves adjust flow in proportion to the input signal. The combination of the F5C with pressure compensators R5A or R5P serves as a flow control valve, providing load compensated flow.

B

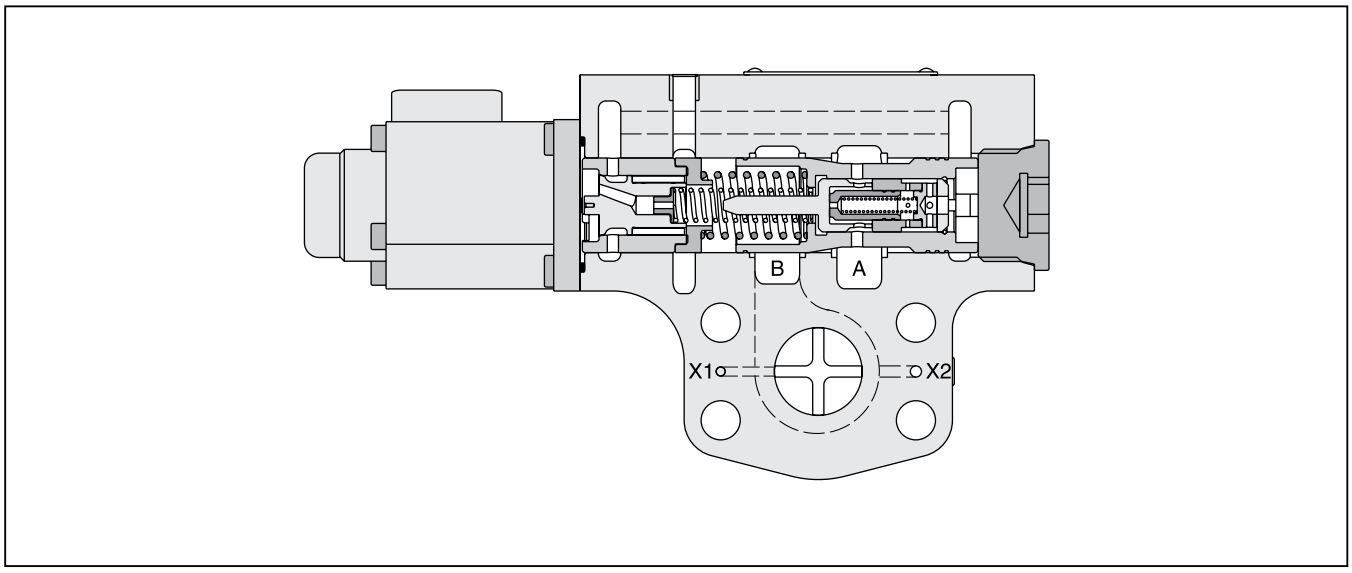
The F5C is offered with two types of response time:

Standard	350 ms at 1 LPM (0.3 GPM) pilot flow
Code A	250 ms at 2 LPM (0.5 GPM) pilot flow



Features

- Spool type proportional throttle valve.
- SAE 61 flange.
- Maximum pressure 270 Bar (3915 PSI).
- Maximum flow 380 LPM (100.5 GPM).
- 3 sizes: SAE 3/4", 1", 1 1/4".
- Load compensated flow in combination with R5A and R5P.



F5C	□	□	4	3	□	X	□	0	C	□	□
Proportional Throttle Valve	Size	Pilot Flow and Response	SAE 61 Interface	Pilot Ports G1/4"	Spool Type	Proportional Solenoid 16V / 1.05A	Pilot Connection	Accessories	Design Series	Seal	Options Check with Factory

Code	Description
06	SAE 3/4"
08	SAE 1"
10	SAE 1 3/4"

Code	Pilot Flow	Maximum Response
Omit	1 LPM (0.3 GPM)	350 ms
A	2 LPM (0.5 GPM)	250 ms

Code	Size	Maximum Flow*
A	06	23 LPM (6.1 GPM)
B	06/08	45 LPM (11.9 GPM)
1	06/08/10	95 LPM (25.1 GPM)
2	08/10	190 LPM (50.3 GPM)
3	10	380 LPM (100.5 GPM)

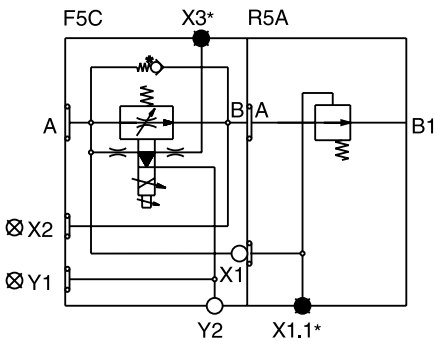
* At nominal pressure drop (Δp = 8.4 Bar (121.8 PSI)

Code	Pilot Connections	F5C without Compensators R5A, R5P	F5C for Combined with R5A	F5C for Combined with R5P
2	Internal PD (Y) Internal PP (X)			X1, X3, Y2 ● X2, Y1 ○ X2, Y1 ○
3	External PD (Y) External PP (X)		X1, X3, Y2 ○ X2, Y1 ⊗	
4	External PD (Y) External PP (X)	X3, Y2 ○ X1 ● X2, Y1 ⊗		X2, X3, Y1, Y2 ○ X1 ●
5	External PD (Y) Internal PP (X)		X1, Y2 ○ X3 ● X2, Y1 ⊗	
6	External PD (Y) Internal PP (X)	X1, X3 ● X2, Y1 ⊗ Y2 ○		X1, X3 ● X2, Y1, Y2 ○

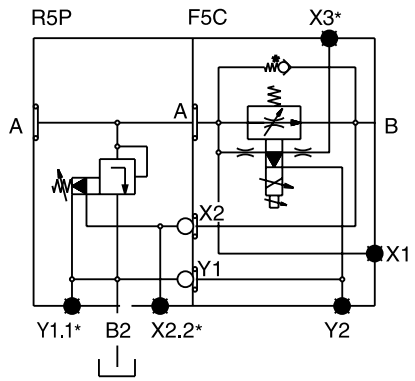
Weight:

F5C06 3.9 kg (8.6 lbs.)
F5C08 4.1 kg (9.0 lbs.)
F5C10 5.8 kg (12.8 lbs.)

F5C with R5A



F5C with R5P



* optional

○ open ● closed ⊗ closed by counterpart

F5C.indd, dd

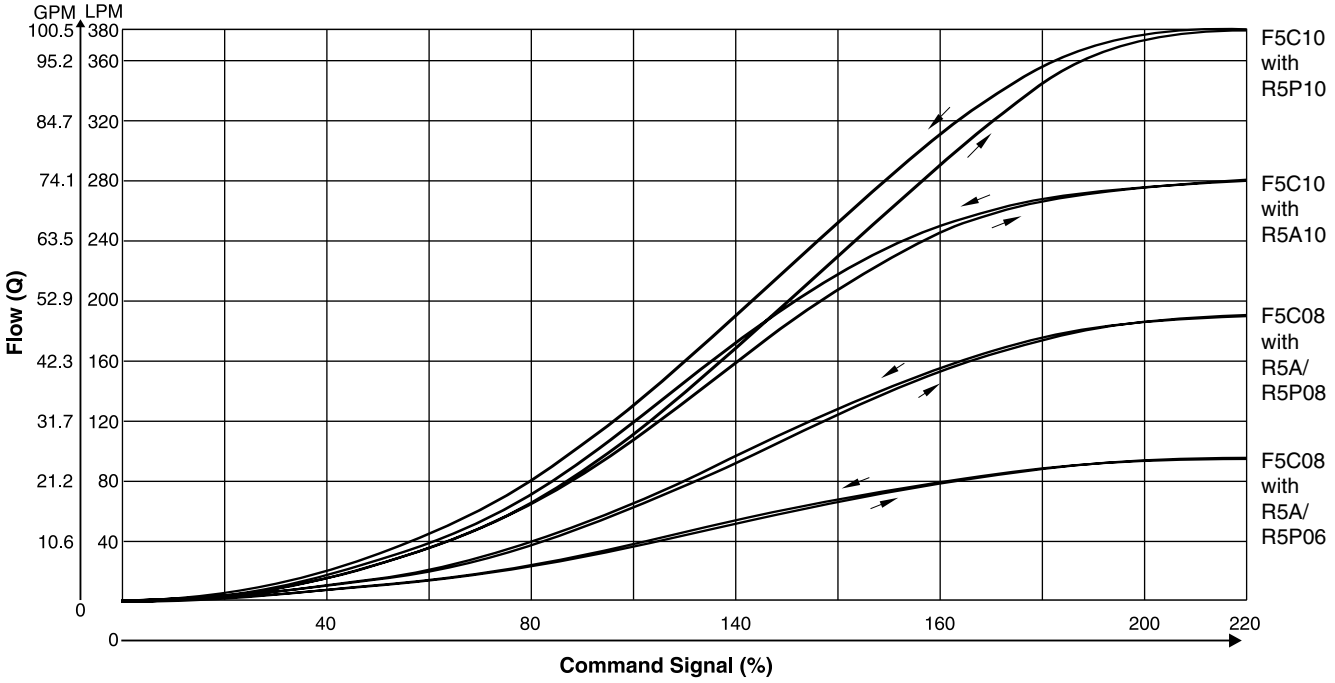
Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA

B

Specifications

General			
Size	**06**	**08**	**10**
Mounting	Flanged according to SAE 61		
Mounting Position	Unrestricted		
Ambient Temperature Range	-20°C to +50°C (-4°F to +122°F)		
Hydraulic			
Maximum Operating Pressure	Ports A, B, X1, X2, X3 270 Bar (3915 PSI) Ports Y1, Y2 70 Bar (1015 PSI)		
Maximum Pressure Drop (from A to B)	21 Bar (304.5 PSI)		
Flows	26 LPM (6.1 GPM) 45 LPM (11.9 GPM) 95 LPM (25.1 GPM)	45 LPM (11.9 GPM) 95 LPM (25.1 GPM) 190 LPM (50.3 GPM)	95 LPM (25.1 GPM) 190 LPM (50.3 GPM) 380 LPM (100.5 GPM)
Fluid	Hydraulic oil as per DIN 51524 ... 51525		
Fluid Temperature	-20°C to +80°C (-4°F to +176°F)		
Viscosity **Permitted** **Recommended**	 10 to 380 cSt / mm²/s (46 to 1761 SSU) 30 to 80 cSt / mm²/s (139 to 371 SSU)		
Filtration	ISO Class 4406 (1999) 18/16/13 (acc. NAS 1638: 7)		
Electrical			
Duty Ratio	100%		
Solenoid Connection	Connector as per EN175301-803		
Protection Class	IP65 in accordance with EN60529 (plugged and mounted)		
Supply Voltage	16 VDC		
Power Consumption	1.05A		
Resistance	11.3 Ohm		
Response Time	See Ordering information		
Coil Insulation Class	H (180°C) (356°F)		

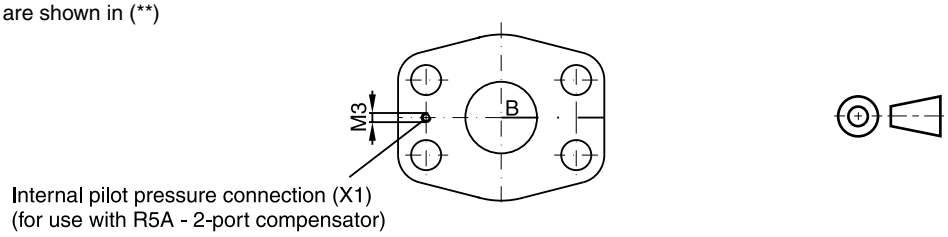
Performance Curves

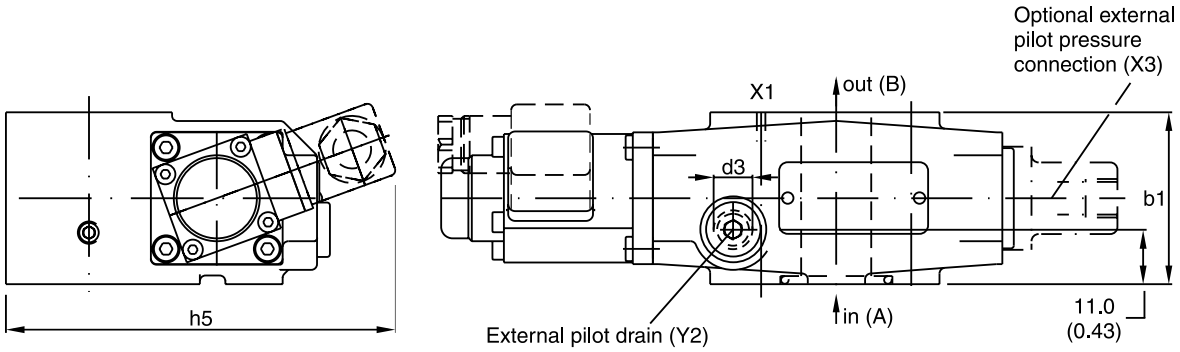


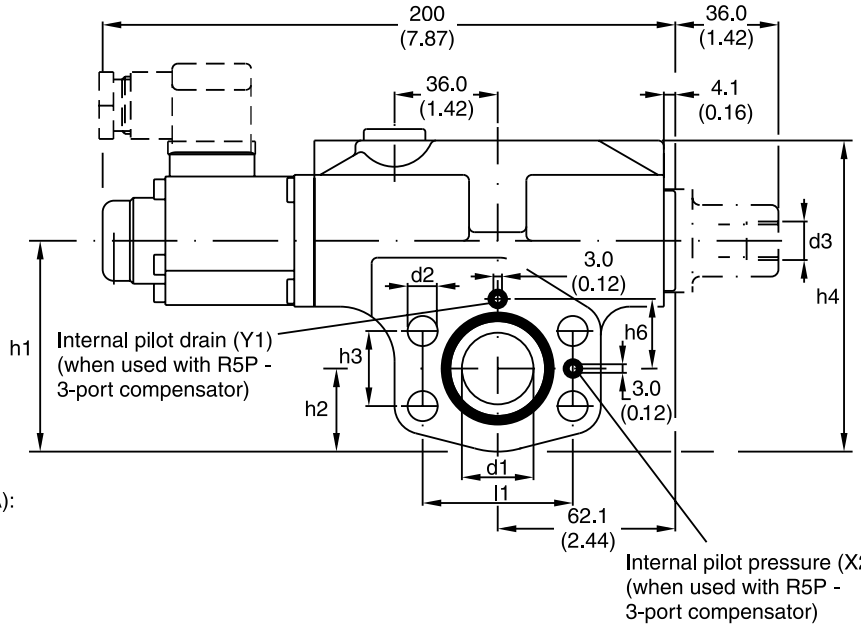
F5C.indd, dd

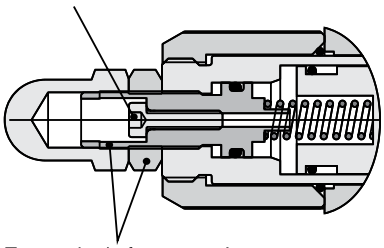
Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA

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









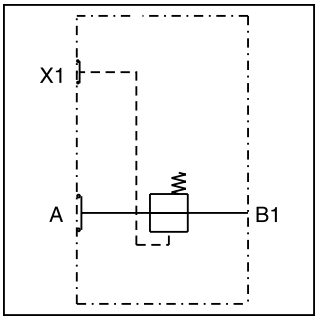
Seal Kits		
Size	**Nitrile**	**Fluorocarbon**
06 / 08 / 10	S16-91850-0	S16-91850-5

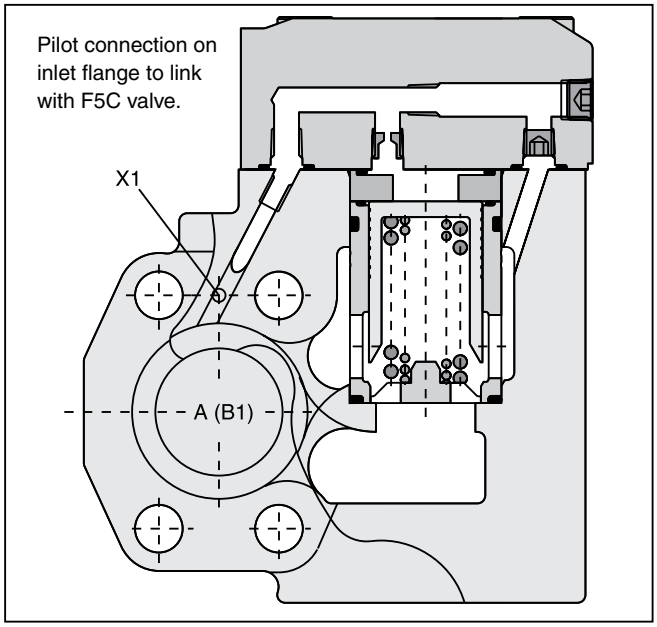
Size	l1	b1	h1	h2	h3	h4	h5	h6	d1	d2	d3
F5C06	47.6 (1.87)	60.0 (2.36)	68.2 (2.69)	26.0 (1.02)	22.2 (0.87)	103.2 (4.06)	183.0 (7.20)	20.8 (0.82)	19.0 (0.75)	10.5 (0.41)	G1/4"
F5C08	52.4 (2.06)	60.0 (2.36)	73.6 (2.90)	29.0 (1.14)	26.2 (1.03)	108.6 (4.28)	187.0 (7.36)	24.3 (0.96)	25.0 (0.98)	10.5 (0.41)	G1/4"
F5C10	58.7 (2.31)	75.0 (2.95)	83.5 (3.29)	36.5 (1.44)	30.2 (1.19)	118.5 (4.67)	198.0 (7.80)	29.3 (1.15)	32.0 (1.26)	12.5 (0.49)	G1/4"

B

General Description

Series R5A direct operated, 2-way pressure compensators can be combined with any type of fixed or adjustable flow valve (throttle) to provide a load compensated flow. The combination with the proportional throttle valve F5C serves as a compact 2-way flow control unit in SAE flange design. The R5A is typically used as meter-out compensator behind the flow resistor.





Features

- Seated type, 2-way pressure compensator.
- SAE 61 flange.
- 8.4 bar (121.8 PSI) control pressure.
- 3 sizes, SAE Code 61 3/4", 1", 1 1/4".
- Load compensated flow in combination with F5C.

Specifications

General			
Size	**06**	**08**	**10**
Subplate Mounting	Flanged according to SAE 61		
Mounting Position	Unrestricted		
Ambient Temperature Range	-20°C to +50°C (-4°F to +122°F)		
Hydraulic			
Control Pressure	8.4 Bar (121 PSI)		
Maximum Operating Pressure	350 Bar (5075 PSI)	350 Bar (5075 PSI)	280 Bar (4060 PSI)
Nominal Flow	90 LPM (23.8 GPM)	300 LPM (79.4 GPM)	600 LPM (158.7 GPM)
Fluid	Hydraulic oil as per DIN 51524 ... 51525		
Fluid Temperature	-20°C to +80°C (-4°F to +176°F)		
Viscosity **Recommended** **Permitted**	30 to 80 cSt / mm²/s (139 to 371 SSU) 10 to 650 cSt / mm²/s (46 to 1761 SSU)		
Filtration	ISO Class 4406 (1999) 18/16/13 (acc. NAS 1638: 7)		

Ordering Information

R5A	☐	—	☐	4	1	01	B	☐	☐
2-Port Compensator	Size		SAE 61 Interface	2-Port Body	Plain Cap	Pilot Connection thru Port X1	Design Series	Seal	Options Check with Factory

Code	Description
06	SAE 3/4"
08	SAE 1"
10	SAE 1-1/4"

Code	Size	Max. Pressure
4	10	280 Bar (4060 PSI)
5	06/08	350 Bar (5075 PSI)

Code	Description
1	Nitrile
5	Fluorocarbon

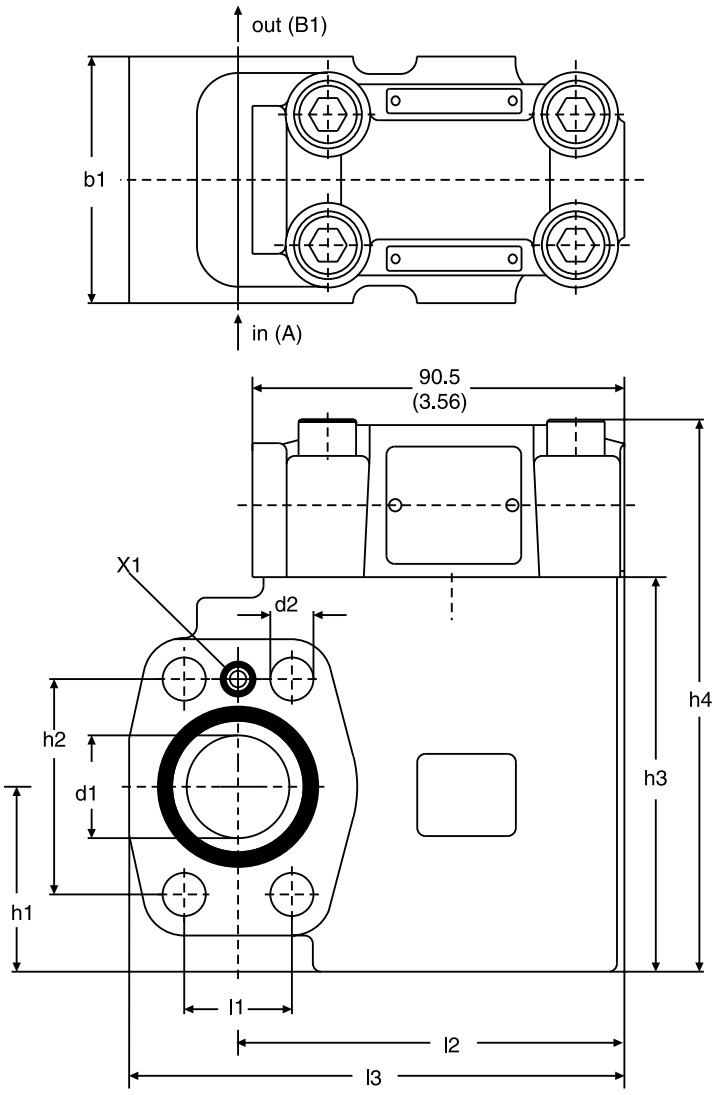
Weight

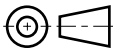
R5A06	3.6 kg (7.9 lbs.)
R5A08	4.3 kg (9.5 lbs.)
R5A10	5.6 kg (12.3 lbs.)

B

Dimensions

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





Seal Kits		
Size	**Nitrile**	**Fluorocarbon**
06	S16-91458-0	S16-91458-5
08	S16-91457-0	S16-91457-5
10	S16-91456-0	S16-91456-5

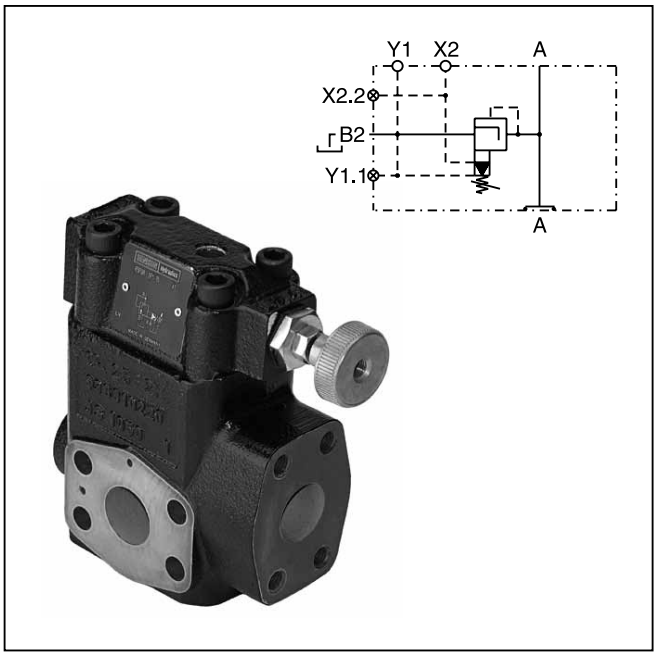
Size	l1	l2	l3	b1	h1	h2	h3	h4	d1	d2
R5A06	22.2 (0.87)	84.0 (3.31)	108.0 (4.25)	60.0 (2.36)	37.0 (1.46)	47.6 (1.87)	90.0 (3.54)	128.0 (5.04)	19.0 (0.75)	10.5 (0.41)
R5A08	26.2 (1.03)	101.0 (3.98)	128.0 (5.04)	60.0 (2.36)	45.0 (1.77)	52.4 (2.06)	96.0 (3.78)	134.0 (5.28)	25.0 (0.98)	10.5 (0.41)
R5A10	30.2 (0.44)	101.0 (3.98)	135.0 (5.31)	75.0 (2.95)	48.0 (1.89)	58.7 (2.31)	109.0 (4.29)	147.0 (5.79)	32.0 (1.26)	12.5 (0.49)

R5A.indd, dd

General Description

Series R5P direct operated, 3-way pressure compensators can be combined with any type of fixed or adjustable flow resistor (throttle) to provide a load compensated flow. The combination with the proportional throttle valve F5C serves as a compact 3-way flow control unit in SAE flange design. The R5P is typically used as meter-in compensator in front of the flow resistor.

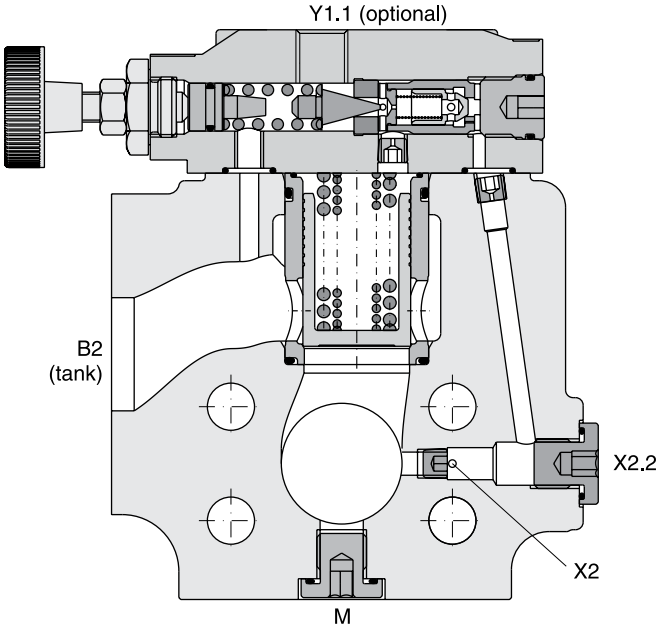
The R5P is additionally equipped with a pressure relief pilot that controls the compensator cartridge and operates a system pressure relief valve. The R5P*P2 provides a proportional relief function.



B

Features

- Seated type 3-way pressure compensator.
- SAE 61 flange.
- 8.4 Bar (121.8 PSI) control pressure.
- Pressure relief function (optionally proportional).
- With optional vent function.
- 3 sizes (SAE Code 61 3/4", 1", 1-1/4").
- Load compensated flow in combination with F5C.



B

R5P □ — □ □ □ □ □ □ □ □ **A** □ □

3-Port Compensator	Size	SAE 61 Interface	Pilot Ports	Pressure Range	Adjustment	Pilot Connection	Switching Type	Solenoid Voltage	Design Series	Seal	Options Check with Factory

Code	Description
06	SAE 3/4"
08	SAE 1"
10	SAE 1-1/4"

Code	Size	Max. Pressure
4	10	280 Bar (4060 PSI)
5	06/08	350 Bar (5075 PSI)

Code	Pilot Port	Port Y1*
3	SAE	Plugged
S	SAE	Open

* Y1 port is used in combination with F5C, when the F5C should be drained through the R5P (internal or external drain).

Code	Description
1	7 to 105 Bar (102 to 1523 PSI)
3	7 to 210 Bar (102 to 3045 PSI)
5	7 to 350 Bar (102 to 5075 Bar)

Code	Description
1	Hand Knob
3	Acorn Nut with Lead Seal

Code	Description
2	Internal PD Internal PP*
6	External PD** Internal PP*

* PP through port X1 in outlet flange.

** Through port Y1.1.

Code	Description
Omit	Standard w/o vent function
09*	Solenoid not activated unload circulation
11**	Solenoid activated unload circulation

* Solenoid de-energized: open to tank solenoid energized: vent line blocked.

** Solenoid de-energized: vent line blocked solenoid energized: open to tank.

Code	Description
Omit	Standard w/o vent function
G0R	12 VDC
G0Q	24 VDC
G0H	48 VDC
W30	110V 50Hz/ 120V 60Hz
W31	220V 50Hz/ 240V 60Hz

Code	Descripton*
1	Nitrile
5	Fluorocarbon

* Further seals on request.

Weight:	R5P	R5P with VV01
R5P06	3.7 kg (8.2 lbs.)	5.4 kg (11.9 lbs.)
R5P08	4.4 kg (9.7 lbs.)	6.1 kg (13.5 lbs.)
R5P10	5.3 kg (11.7 lbs.)	7.0 kg (15.4 lbs.)

R5P □ — □ □ □ □ □ □ **P2** **G0R** **A** □ □

3-Port Compensator	Size	SAE 61 Interface	Pilot Ports	Pressure Range	Adjustment	Pilot Connection	Proportional Pressure Control	Solenoid Voltage	Design Series	Seal	Options Check with Factory

Size

Code	Description
06	SAE ¾"
08	SAE 1"
10	SAE 1¼"

SAE 61 Interface

Code	Size	Max. Pressure
4	10	280 Bar (4060 PSI)
5	06/08	350 Bar (5075 PSI)

Pilot Ports

Code	Pilot Ports	Port Y1 [1]
3	SAE	Plugged
S	SAE	Open

[1] Y1 port is used in combination with F5C, when the F5C should be drained through the R5P (internal or external drain)

Pressure Range

Code	Description
1	7 to 105 Bar (102 to 1523 PSI)
3	7 to 210 Bar (102 to 3045 PSI)
5 [2]	7 to 350 Bar (102 to 5075 Bar)

[2] R5P10-4*5 up to 280 Bar (4060 PSI)

Adjustment

Code	Description
1	Hand knob
3	Acorn nut with lead seal

Pilot Connection

Code	Description
2	Internal PD Internal PP [4]
6	External PD [3] Internal PP [4]

[3] Through port Y1.1
[4] PP through port X1 in outlet flange

Proportional Pressure Control

P2

Solenoid Voltage

Code	Description
G0R	12V, 2.3A

Design Series

A

Seal

Code	Description
1	Nitrile
5	Fluorocarbon

Further seals on request

Options Check with Factory

B

Weight:	R5P*P2
R5P06*P2	5.5 kg (12.1 lbs.)
R5P08*P2	6.2 kg (13.7 lbs.)
R5P10*P2	7.1 kg (15.7 lbs.)

B

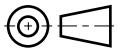
R5P

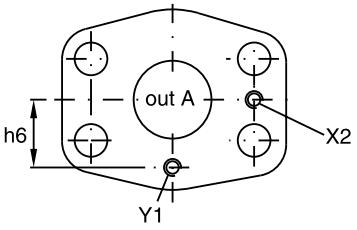
General						
Size		**06 (3/4")**		**08 (1")**		**10 (1 1/4")**
Mounting		Flanged according to SAE 61				
Mounting Position		Unrestricted				
Ambient Temperature Range		-20°C to +50°C (-4°F to +122°F)				
$MTTF_D$		150 years				
Hydraulic						
Max. Operating Pressure	**Ports A, B**	350 Bar (5075 PSI)		350 Bar (5075 PSI)		280 Bar (4060 PSI)
Pressure Ranges		105 Bar (1523 PSI), 210 Bar (3045 PSI), 350 Bar (5075 PSI)				
Nominal Flow		90 LPM (23.8 GPM)		300 LPM (79.4 GPM)		600 LPM (158.7 GPM)
Fluid		Hydraulic oil as per DIN 51524 ... 51525				
Fluid Temperature		-20°C to +80°C (-4°F to +176°F)				
Viscosity	**Permitted**	10 to 650 cSt / mm²/s (46 to 3013 SSU)				
	Recommended	30 to 80 cSt / mm²/s (139 to 371 SSU)				
Filtration		ISO Class 4406 (1999) 18/16/13 (acc. NAS 1638: 7)				
Electrical (Solenoid) R5P with VV01						
Duty Ratio		100%				
Solenoid Connection		Connector as per EN175301-803				
Protection Class		IP65 in accordance with EN60529 (plugged and mounted)				
	Code	**G0R**	**G0Q**	**G0H**	**W30**	**W31**
Supply Voltage		12 VDC	24 VDC	48 VDC	110V at 50Hz 120V at 60Hz	220V at 50Hz 240V at 60Hz
Tolerance Supply Voltage		+5...-10	+5...-10	+5...-10	+5...-10	+5...-10
Power Consumption	**Hold**	31 W	31 W	31 W	78 W	78 W
	In Rush	—	—	—	264 W	264 W
Response Time		Energized / De-energized AC 20/18ms, DC 46/27 ms				
Maximum Switching Frequency		AC up to 7200, DC 70 to 16,000 switchings/hour				
Coil Insulation Class		H (180°C) (356°F)				

R5P*P2 (Proportional)

General				
Size	**06 (3/4")**		**08 (1")**	**10 (1-1/4")**
Mounting	Flanged according to SAE 61			
Mounting Position	Unrestricted			
Ambient Temperature Range	-20°C to +50°C (-4°F to +122°F)			
$MTTF_D$	150 years			
Hydraulic				
Max. Operating Pressure **Ports A, B**	350 Bar (5075 PSI)		350 Bar (5075 PSI)	280 Bar (4060 PSI)
Pressure Range	105 Bar (1523 PSI), 210 Bar (3045 PSI), 350 Bar (5075 PSI)			
Nominal Flow	90 LPM (23.8 GPM)		300 LPM (79.4 GPM)	600 LPM (158.7 GPM)
Fluid	Hydraulic oil as per DIN 51524 ... 51525			
Fluid Temperature	-20°C to +80°C (-4°F to +176°F)			
Viscosity **Permitted**	10 to 380 cSt / mm²/s (46 to 1761 SSU)			
Recommended	30 to 80 cSt / mm²/s (139 to 371 SSU)			
Filtration	ISO Class 4406 (1999) 18/16/13 (acc. NAS 1638: 7)			
Electrical (Solenoid) R5P with VV01				
Duty Ratio	100%			
Nominal Voltage	12 VDC			
Maximum Current	2.3 A			
Coil Resistance	4 Ohm at 20°C (68°F)			
Solenoid Connection	Connector as per EN175301-803			
Protection Class	IP65 in accordance with EN60529 (plugged and mounted)			
Power Amplifier	PCD00A-400			

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

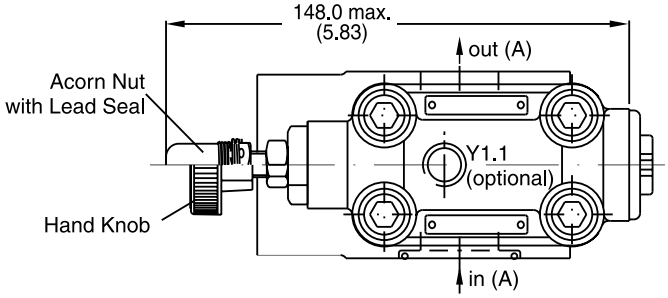


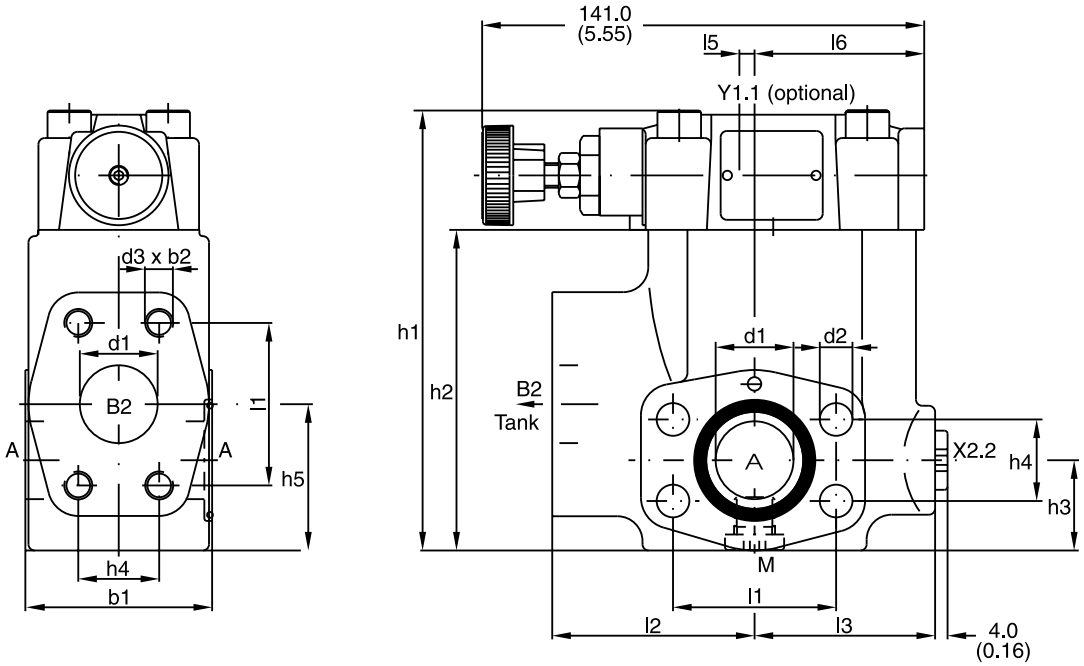


B

Seal Kits*		
Size	**Nitrile**	**Fluorocarbon**
06	S16-91461-0	S16-91461-5
08	S16-91460-0	S16-91460-5
10	S16-91459-0	S16-91459-5

* Does not inlcude P2 seal kit.





Size	l1	l2	l3	l4	l5	l6	b1	b2	h1	h2	h3	h4	h5	h6	d1	d2	d3
R5P06	47.6 (1.87)	63.0 (2.48)	56.0 (2.20)	148.0 (5.83)	1.0 (0.04)	49.0 (1.93)	60.0 (2.36)	20.0 (0.79)	119.0 (4.69)	81.6 (3.21)	28.5 (1.13)	22.2 (0.87)	41.6 (1.64)	20.8 (0.82)	19.0 (0.75)	10.5 (0.41)	3/8" UNC
R5P08	52.4 (2.06)	65.0 (2.56)	58.0 (2.28)	144.6 (5.69)	5.0 (0.20)	54.5 (2.15)	60.0 (2.36)	23.0 (0.91)	142.0 (5.59)	103.0 (4.06)	30.5 (1.20)	26.2 (1.03)	48.6 (1.91)	24.3 (0.96)	25.0 (0.98)	10.5 (0.41)	3/8" UNC
R5P10	58.7 (2.31)	61.0 (2.40)	62.0 (2.44)	146.6 (5.77)	3.0 (0.12)	56.5 (2.22)	75.0 (2.95)	22.0 (0.87)	149.0 (5.87)	111.5 (4.39)	37.5 (1.48)	30.2 (1.19)	64.1 (2.52)	29.3 (1.15)	32.0 (1.26)	12.5 (0.49)	7/16" UNC

Port	Function	Port size		
		R5P06	**R5P08**	**R5P10**
A	Inlet/Outlet	3/4"	1"	1-1/4"
B2	Tank	3/4"	1"	1-1/4"
X2	Internal Pilot Pressure	M3		
X2.2	External Pilot Pressure	G1/4"		
Y1	Internal Pilot Drain	M3		
Y1.1	External Pilot Drain	G1/4"		
M	Pressure Gauge	G1/4"		

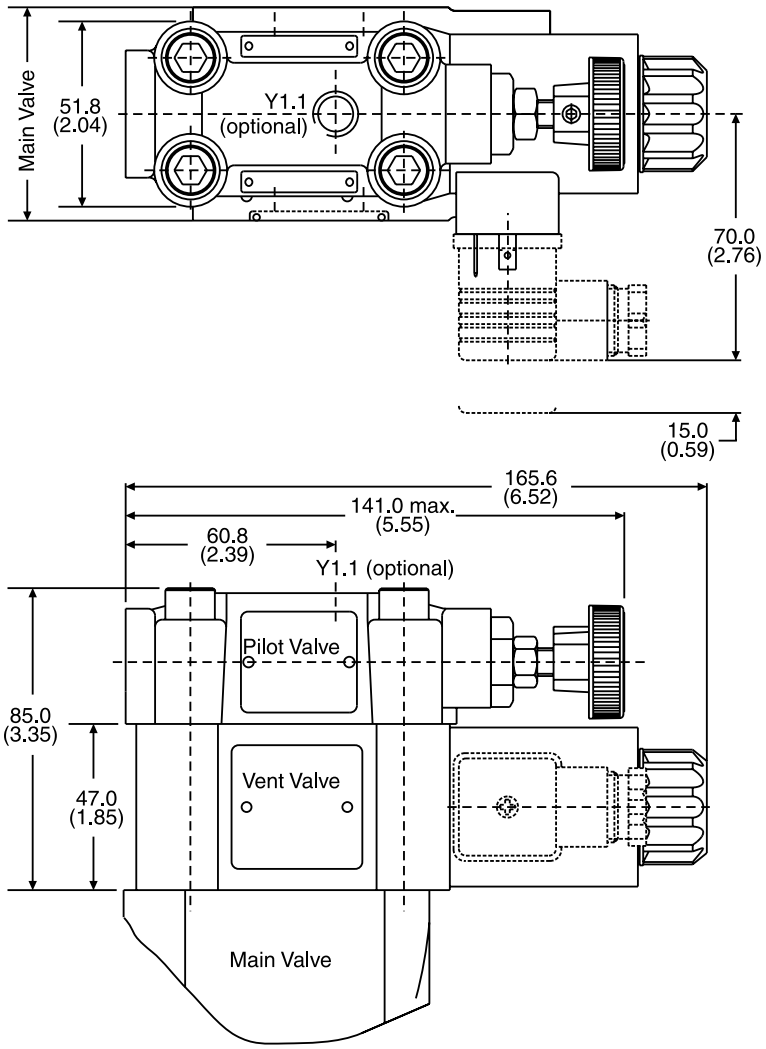
R5P.indd, dd

Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA

B

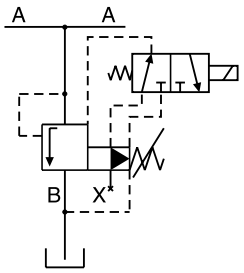
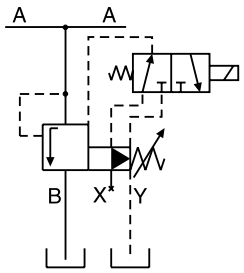
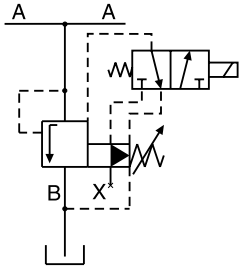
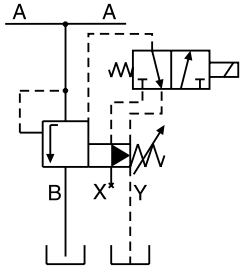
R5P with Vent Function

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



Seal Kits*	
Nitrile	**Fluorocarbon**
DC solenoid	
S26-58515-0	S26-58515-5
AC solenoid	
S26-35237-0	S26-35237-5

* For vent valve only.

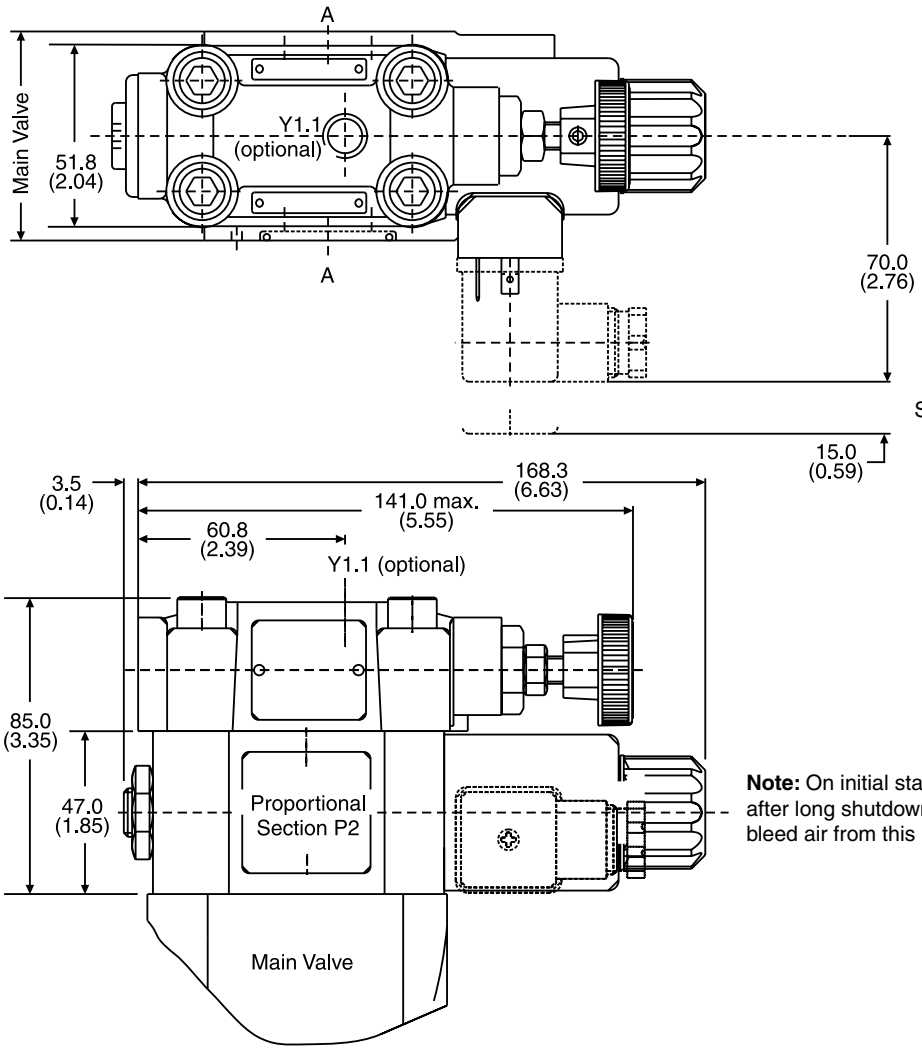
Code	Internal Drain	External Drain
11		
09		

R5P.indd, dd

Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA

R5P with Proportional Function

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

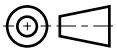


Drain line only external from the pilot head (Y1.1).

The pilot drain port must be connected to a stable low pressure tank line. Pressure variations in the drain port should be avoided.

Space for plug removal

Note: On initial start-up and after long shutdown periods, bleed air from this plug.



	Seal Kit *	
	Nitrile	**Fluorocarbon**
Prop. Section P2	S26-58473-0	S26-58473-5

* P2 seal kit only.

See previous page for full valve seal kit

B

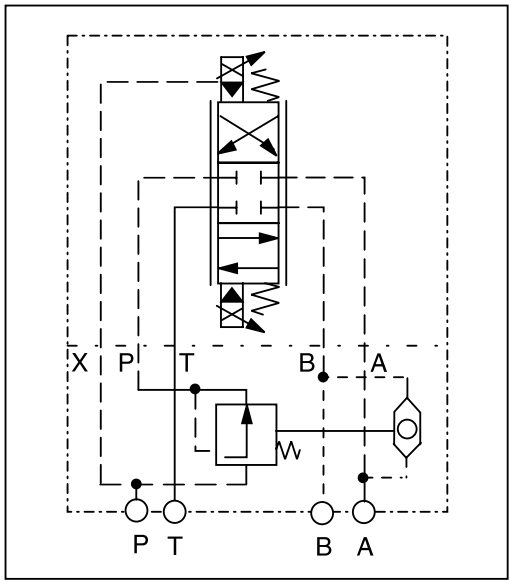
General Description

Series LCM 2-way pressure compensators are sandwich valves designed for stacking beneath a proportional directional control valve with a standardized mounting pattern.

The valve maintains a constant pressure differential between ports P and A or P and B across the directional valve. When the cross sectional opening of the directional valves is held steady, a constant flow rate is achieved, regardless of load fluctuations.

The control pressure applied to the spring side of the compensator spool is supplied from port A or B via a shuttle valve. Flow rate regulation is automatically effective in the port with the highest pressure.

Application Example



Proportional DC valve model D31FB with 2-way pressure conpensator LCM3 maintains a constant flow rate.
The diagram shows the design according to Code X

Specifications

General		
Size	**NG6**	**NG10**
Mounting Position	NFPA D03 CETOP 3	NFPA D05 CETOP 5
Maximum Flow	20 LPM (5.28 GPM)	52 LPM (13.73 GPM)
Maximum Operating Pressure	350 Bar (5075 PSI)	
Pressure Differential	10 Bar (145 PSI)	

Ordering Information

LCM — Pressure Compensator

☐ — Size

Code	Description
2	NG6
3	NG10

PP — Control Connection

☐ — Pilot Oil

Code	Description
Omit	Internal
X*	External

* NG10 only.

02 — Differential Pressure 10 Bar (14.5 PSI)

V — Seal Fluorocarbon

☐ — Design Series

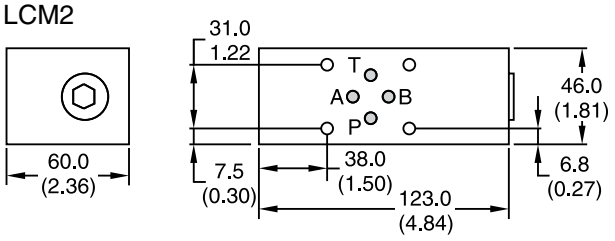
NOTE:
Not required when ordering.

Weight:

LCM2	2.5 kg (5.5 lbs.)
LCM3	3.1 kg (6.8 lbs.)

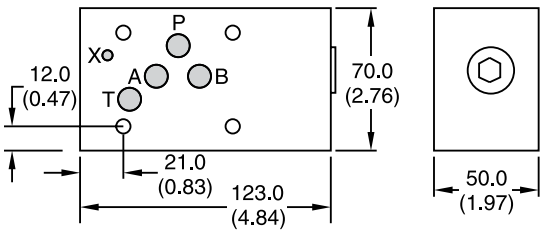
Dimensions – Inch equivalents for millimeter dimensions are shown in (**)

LCM2



Mounting Screws: BK403 (4) M5 x 90
For mounting screws connected with directional valves D1 or 2-stage valves

LCM3



Mounting Screws: BK412 (4) M6 x 90
The views show the mounting surface for the directional valve

LCM.indd, dd

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Hydraulic Valve Division
Elyria, Ohio, USA

General Description

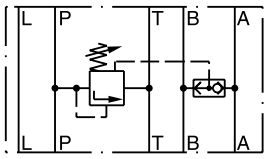
Series SPC sandwich type pressure compensators are typically used in combination with proportional directional control valves. The compensator keeps the pressure drop over the directional valve constant and thus provides load-independent flow to the actuator.

Features

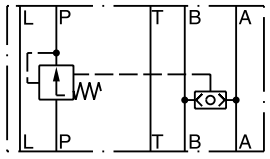
- 2-way or 3-way pressure compensators.
- Standard pressure differential 5 Bar (73 PSI).
- Adjustable differential (2 to 5 Bar) (29 to 73 PSI) and 10 Bar (145 PSI) optional.
- Sizes:

NG6 / CETOP 3	SPC01
NG10 / CETOP 5	SPC02
NG16 / CETOP 7	SPC03
NG25 / CETOP 8	SPC04

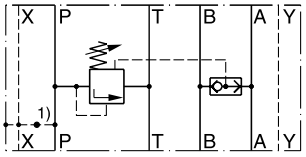
SPC*11 (2-way)



SPC*01/02 (3-way)

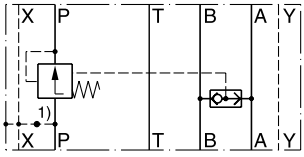


SPC*01/02 (2-way)



1) Plug for pilot connection (external or internal PP)

SPC03/06 (3-way)



1) Plug for pilot connection (external or internal PP)

SPC03/06 (2-way)

Specifications

General				
Size	**NG6**	**NG10**	**NG16**	**NG25**
Mounting Interface	DIN 24340 A6 ISO 4401 NFPA D03 CETOP 3	DIN 24340 A10 ISO 4401 NFPA D05 CETOP 5	DIN 24340 A16 ISO 4401 NFPA D07 CETOP 7	DIN 24340 A25 ISO 4401 NFPA D08 CETOP 8
Mounting Position	Unrestricted			
Ambient Temprature	-20°C to +50°C (-4°F to +122°F)			
Hydraulic				
Max. Operating Pressure **Drain Port L Connected:**	P, A, B: 350 Bar (5075 PSI) T: 210 Bar (3045 PSI) L: 10 Bar (145 PSI)	P, A, B: 315 Bar (4568 PSI) T: 210 Bar (3045 PSI) L: 10 Bar (145 PSI)	—	—
Without Drain Port:	P, A, B: 350 Bar (5075 PSI) T: 160 Bar (2320 PSI) L: 160 Bar (2320 PSI)	P, A, B: 315 Bar (4568 PSI) T: 210 Bar (3045 PSI) L: 210 Bar (3045 PSI)	P, A, B, X: 350 Bar (5075 PSI) T, Y: 105 Bar (1523 PSI)	P, A, B, X: 350 Bar (5075 PSI) T, Y: 105 Bar (1523 PSI)
Nominal Flow	30 LPM (7.9 GPM)	80 LPM (21.1 GPM)	200 LPM (52.9 GPM)	400 LPM (105.8 GPM)
Fluid	Hydraulic oil as per DIN 51524 ... 51525			
Fluid Temperature	-20°C to +80°C (-4°F to +176°F)			
Viscosity **Permitted** **Recommended**	10 to 650 cSt / mm²/s (46 to 3013 SSU) 30 to 80 cSt / mm²/s (139 to 371 SSU)			
Filtration	ISO 4406 (1999) 18/16/13 (acc. NAS 1638: 7)			

SPC.indd, dd

Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA

B

SPC — Direct Operated Pressure Compensator | Size | Function | Pressure Differential | 1 — Circuit Type | C — Load Sensing Port | 5 — Steel Body | A — Design Series | Seal

Code	Description
01	NG6
02	NG10

Code	Description
04*	2 to 5 Bar (29 to 73 PSI) Adjustable
05	5 Bar (73 PSI)
10*	10 Bar (145 PSI)

* For 3-way compensator only.

Code	Description
1	Nitrile
5	Fluorocarbon

Code	Description
01	3-Way Pressure Compensation
11	2-Way Pressure Compensation

Weight:	2-Way Compensator	3-Way Compensator
SPC01	1.5 kg (3.3 lbs)	1.6 kg (3.5 lbs)
SPC02	3.1 kg (6.8 lbs.)	3.5 kg (7.7 lbs.)

SPC01

Type	Model No.
3-Way Compensators with Shuttle Valve P-A/B	SPC0101041C5A1
	SPC0101051C5A1
	SPC0101101C5A1
2-Way Compensators with Shuttle Valve P-A/B	SPC0111051C5A1

SPC02

Type	Model No.
3-Way Compensators with Shuttle Valve P-A/B	SPC0201041C5A1
	SPC0201051C5A1
	SPC0201101C5A1
2-Way Compensators with Shuttle Valve P-A/B	SPC0211051C5A1

SPC — Direct Operated Pressure Compensator | Size | Function | Pilot Connection | Pressure Differential | C — Load Sensing Port | B — Design Series | Seal

Code	Description
03	NG16
06	NG25

Code	Description
P	Internal Pilot Pressure
X	External Pilot Pressure

Code	Description
05	5 Bar (73 PSI) Standard
10*	10 Bar (145 PSI)

Code	Description
1	Nitrile
5	Fluorocarbon

Code	Description
01	3-Way Pressure Compensation
11	2-Way Pressure Compensation

Weight:	
SPC03	8.3 kg (18.3 lbs)
SPC06	11.9 kg (26.2 lbs.)

SPC03

Type	Model No.
3-Way Compensators with Shuttle Valve P-A/B	SPC0301P05CB1
	SPC0301X05CB1
2-Way Compensators with Shuttle Valve P-A/B	SPC0311P05CB1
	SPC0311P10CB1
	SPC0311X05CB1
	SPC0311X10CB1

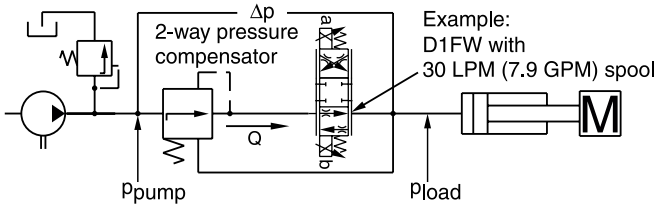
SPC06

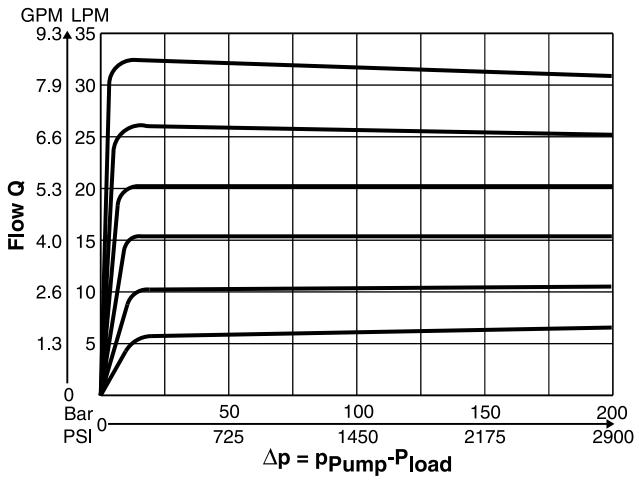
Type	Model No.
3-Way Compensators with Shuttle Valve P-A/B	SPC0601P05CB1
	SPC0601X05CB1
2-Way Compensators with Shuttle Valve P-A/B	SPC0611P05CB1
	SPC0611P10CB1
	SPC0611X05CB1
	SPC0611X10CB1

B

SPC01

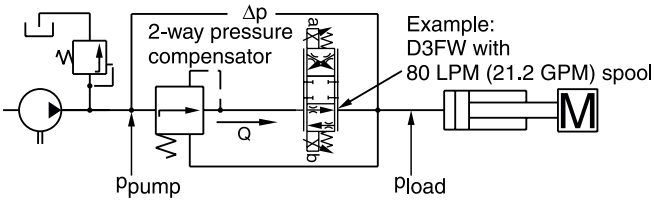
Flow Regulation Example:
2-Way Pressure Compensator at Δp = 5 Bar

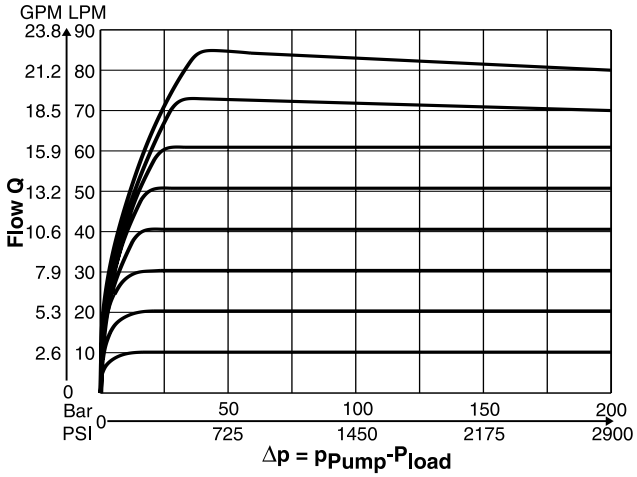




SPC02

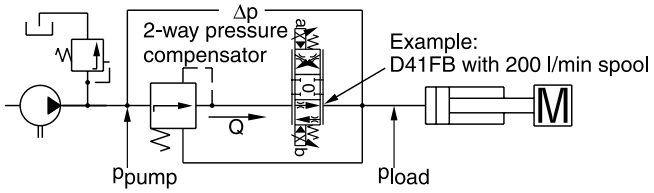
Flow Regulation Example:
2-Way Pressure Compensator at Δp = 5 Bar

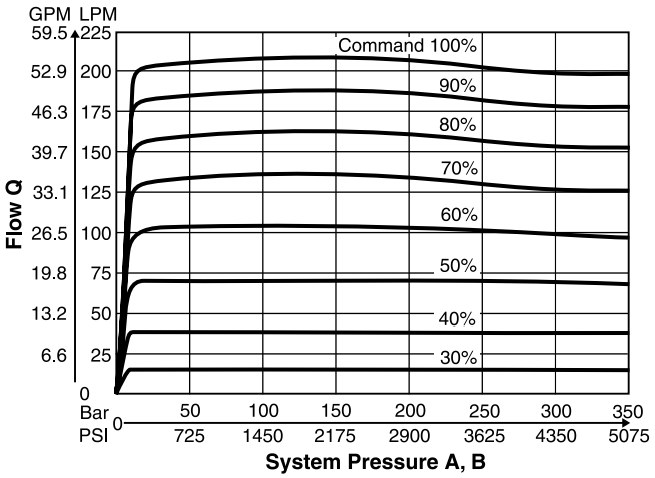




SPC03

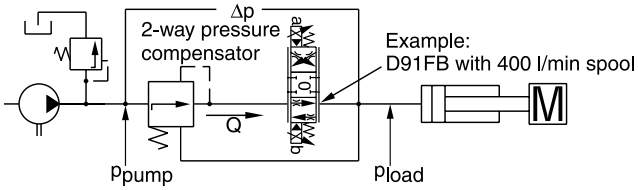
Flow Regulation Example:
2-Way Pressure Compensator at Δp = 5 Bar

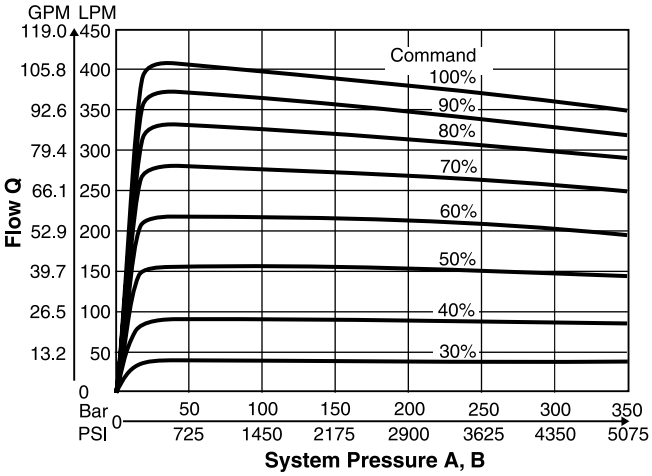




SPC06

Flow Regulation Example:
2-Way Pressure Compensator at Δp = 5 Bar





SPC.indd, dd

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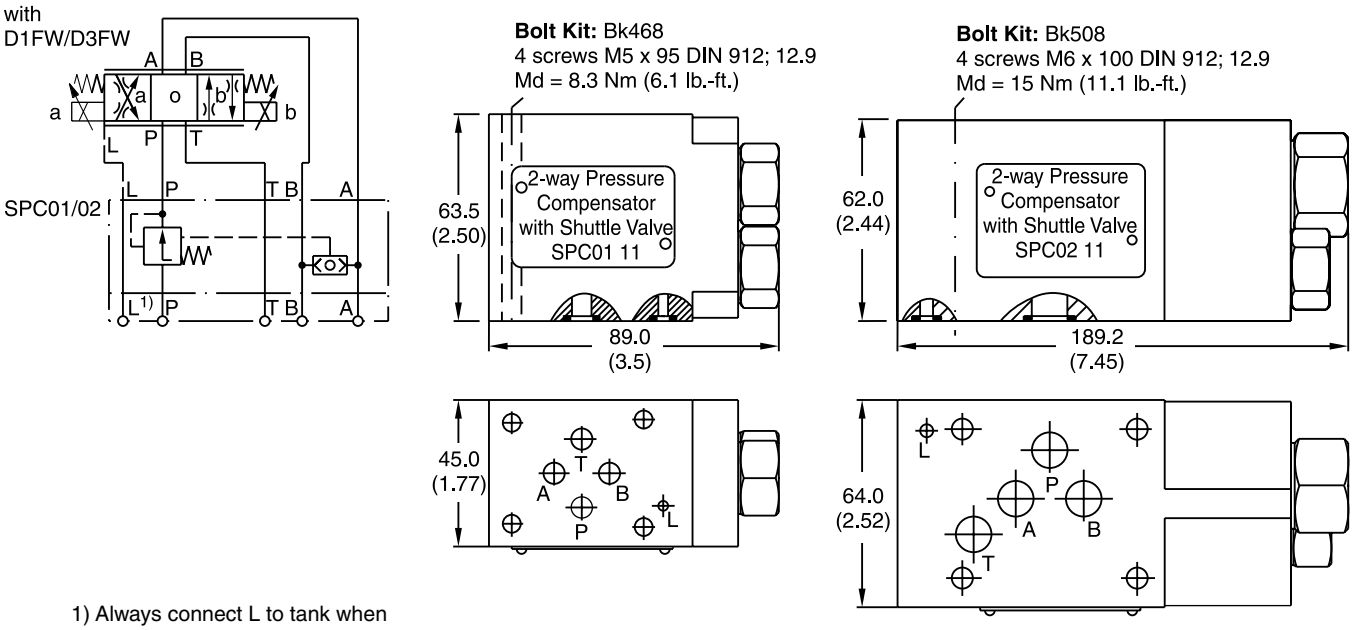
Hydraulic Valve Division
Elyria, Ohio, USA

B

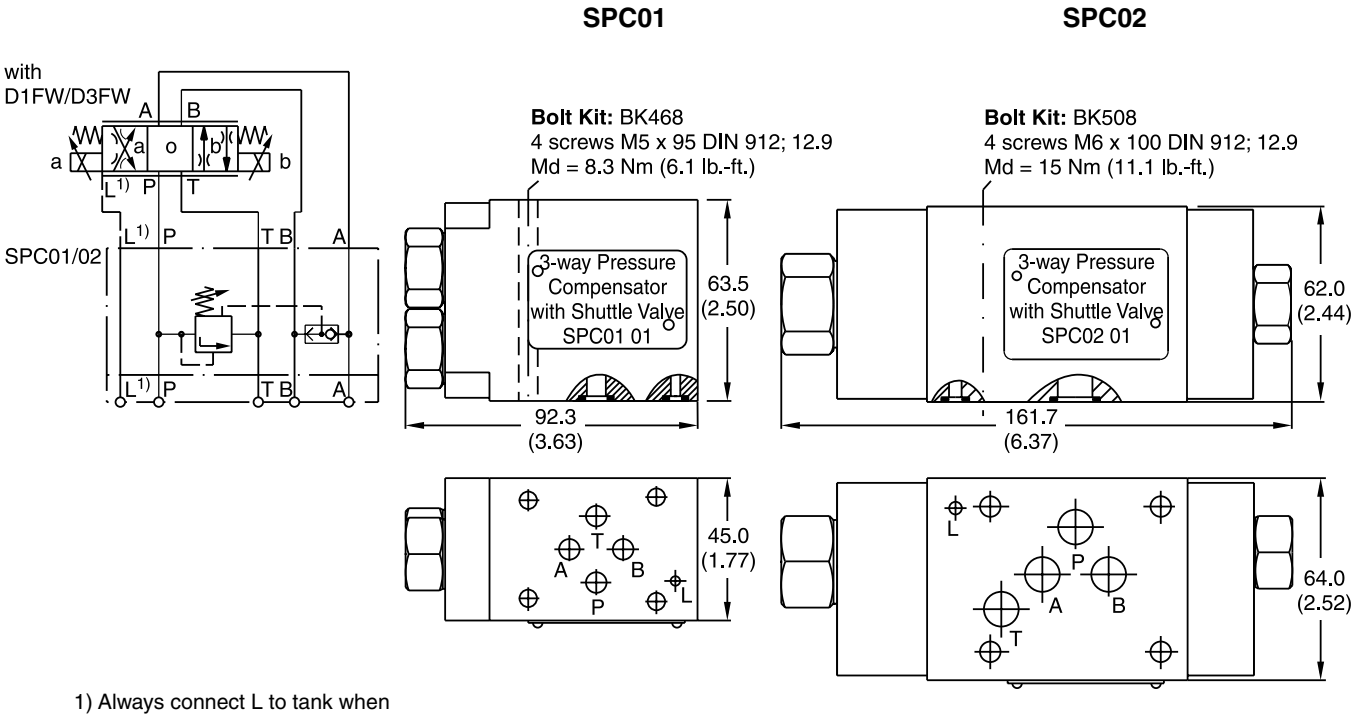
Inch equivalents for millimeter dimensions are shown in (**)

2-Way Pressure Compensator



1) Always connect L to tank when
SPC01 T > 160 Bar (2320 PSI)
SPC02 T > 210 Bar (3045 PSI)

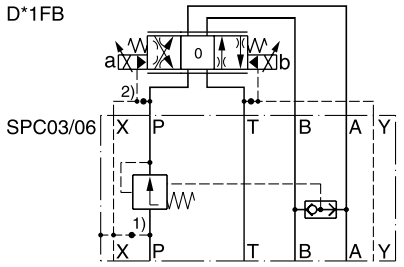
3-Way Pressure Compensator



1) Always connect L to tank when
SPC01 T > 160 Bar (2320 PSI)
SPC02 T > 210 Bar (3045 PSI)

2-Way Pressure Compensator

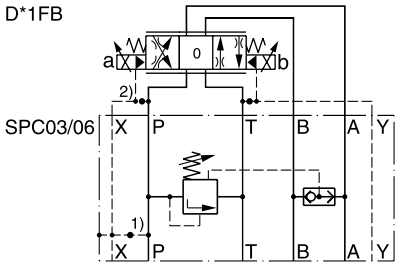
SPC03/SPC06



2)Plug in PX (obligatory for the use with pressure compensator)
1)Plug for pilot connection (external or internal PP)

3-Way Pressure Compensator

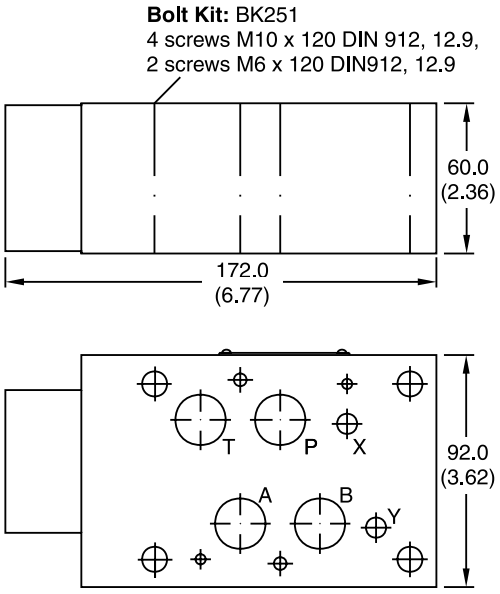
SPC03/SPC06



2)Plug in PX (obligatory for the use with pressure compensator)
1)Plug for pilot connection (external or internal PP)

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

SPC03



SPC06