

# Parker PCK Series Colorflow In-Line Pressure Compensated Valve Service Manual

## General Description

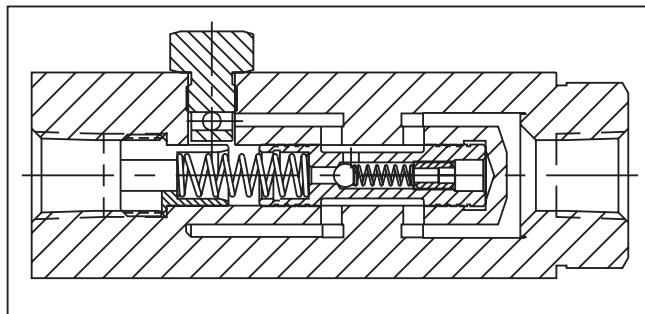
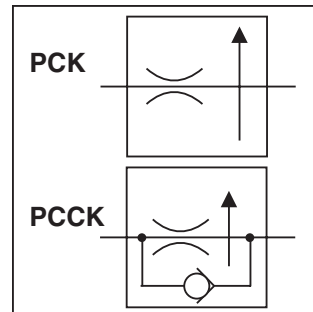
Series PCK pressure compensated flow control valves are designed to regulate flow at a selected rate, within 5%, regardless of fluctuations in inlet and outlet pressure.

## Operation

Series PCK valves are factory-set for a specified flow. The flow can be changed with a different "PCK" Orifice Plug Kit (sold separately).

## Features

- Available with reverse flow check.
- Flow precision within  $\pm 5\%$  of full flow.



## Specifications

	PC*K400S PC*K620S	PC*K600S PC*K820S	PC*K800S PC*K1020S	PC*K1200S PC*K1220S
<b>Maximum Operating Pressure</b>	207 Bar (3000 PSI)			
<b>Minimum Pressure to Compensate</b>	6.9 Bar (100 PSI)	6.9 Bar (100 PSI)	6.9 Bar (100 PSI)	10.4 Bar (150 PSI)
<b>Temperature Range of Seal Compound</b>	-40°C to +121°C (-40°F to +250°F) Nitrile (standard) -26°C to +205°C (-15°F to +400°F) Fluorocarbon			
<b>Mounting</b>	In-line			
<b>Maximum Flow</b>	11 LPM (3 GPM)	23 LPM (6 GPM)	57 LPM (15 GPM)	95 LPM (25 GPM)
<b>Minimum Flow</b>	1 LPM (0.3 GPM)	2 LPM (0.6 GPM)	6 LPM (1.5 GPM)	10 LPM (2.5 GPM)
<b>Reverse Flow, Maximum thru Check</b>	19 LPM (5 GPM)	30 LPM (8 GPM)	76 LPM (20 GPM)	132 LPM (35 GPM)
<b>Pressure Drop, <math>\Delta P</math> at Maximum Reverse Flow thru Check</b>	3 Bar (40 PSI)	3 Bar (40 PSI)	PC*K800S: 8 Bar (116 PSI) PC*K1020S: 3 Bar (40 PSI)	PC*K1200S: 8 Bar (116 PSI) PC*K1220S: 3 Bar (40 PSI)
<b>Port Size (in.)</b>	PC*K400S: 1/4 NPTF PC*K620S: 9/16-18 UNF (SAE 6)	PC*K600S: 3/8 NPTF PC*K820S: 3/4-16 UNF (SAE 8)	PC*K800S: 1/2 NPTF PC*K1020S: 7/8-14 UNF (SAE 10)	PC*K1200S: 3/4 NPTF PC*K1220S: 1-1/16-12 UN (SAE 12)

\* For optional reverse-flow check, insert "C" in model number at asterisk (\*).

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

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# Ordering Information

# Flow Control Valves Series PC\*K

**PC**  
Pressure  
Compensated  
Flow Control

Reverse  
Check

**K**  
Fixed  
Flow

Port  
Size

**S**  
Material

Flow \*

Seal  
Compound

Design  
Series

Code	Description
Omit	Without
C	Check

Code	Description
S	Steel

Code	Description
Omit	Nitrile (Standard)
V	Fluorocarbon

NOTE:  
Not required  
when ordering.

Code	Size
400	1/4"
600	3/8"
620	#6 SAE
800	1/2"
820	#8 SAE
1020	#10 SAE
1200	3/4"
1220	#12 SAE

Available Flow Settings GPM (LPM)							
PCK 400/620		PCK 600/820		PCK 800/1020		PCK 1200/1220	
GPM	(LPM)	GPM	(LPM)	GPM	(LPM)	GPM	(LPM)
0.25	(0.9)	0.50	(1.9)	2.00	(7.57)	4.00	(15.14)
0.50	(1.9)	1.00	(3.8)	3.00	(11.36)	6.00	(22.71)
0.75	(2.8)	1.50	(5.7)	4.00	(15.14)	8.00	(30.28)
1.00	(3.8)	2.00	(7.6)	5.00	(18.93)	10.00	(37.85)
1.25	(4.7)	2.50	(9.5)	6.00	(22.71)	12.00	(45.42)
1.50	(5.7)	3.00	(11.4)	7.00	(26.50)	14.00	(52.99)
1.75	(6.6)	3.50	(13.2)	8.00	(30.28)	16.00	(60.56)
2.00	(7.6)	4.00	(15.1)	9.00	(34.07)	18.00	(68.13)
2.25	(8.5)	4.50	(17.0)	10.00	(37.85)	20.00	(75.70)
2.50	(9.5)	5.00	(18.9)	11.00	(41.64)	22.00	(83.27)
2.75	(10.4)	5.50	(20.8)	12.00	(45.42)	24.00	(90.84)
3.00	(11.4)	6.00	(22.7)	13.00	(49.21)		
				14.00	(52.99)		
				15.00	(56.78)		

Note: Settings are based on using 100 SSU at +49°C (+120°F).

\* To order this valve you must indicate appropriate GPM value from table. Example: 9PCCK600S-3.50-V

## "PK" Orifice Plug Kits

**PK**  
Plug Kit

Valve Size

Flow\*

Seals

Design  
Series

Code	NPTF	SAE
4	400	620
6	600	820
8	800	1020
12	1200	1220

Code	Description
N	Nitrile (Standard)
V	Fluorocarbon

NOTE:  
Not required  
when ordering.

Model Number	Weight kg (lbs.)
PK4-*N	0.5 (0.1)
PK6-*N	0.5 (0.1)
PK8-*N	0.5 (0.1)
PK12-*N	0.5 (0.1)

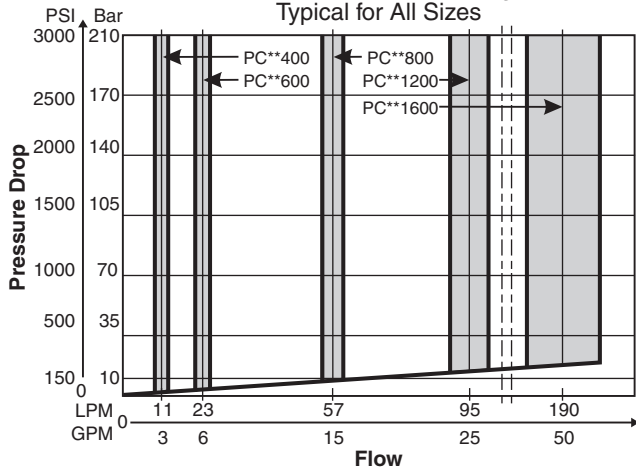
Available Flow Settings GPM (LPM)							
PCK 400/620		PCK 600/820		PCK 800/1020		PCK 1200/1220	
GPM	(LPM)	GPM	(LPM)	GPM	(LPM)	GPM	(LPM)
0.25	(0.9)	0.50	(1.9)	2.00	(7.57)	4.00	(15.14)
0.50	(1.9)	1.00	(3.8)	3.00	(11.36)	6.00	(22.71)
0.75	(2.8)	1.50	(5.7)	4.00	(15.14)	8.00	(30.28)
1.00	(3.8)	2.00	(7.6)	5.00	(18.93)	10.00	(37.85)
1.25	(4.7)	2.50	(9.5)	6.00	(22.71)	12.00	(45.42)
1.50	(5.7)	3.00	(11.4)	7.00	(26.50)	14.00	(52.99)
1.75	(6.6)	3.50	(13.2)	8.00	(30.28)	16.00	(60.56)
2.00	(7.6)	4.00	(15.1)	9.00	(34.07)	18.00	(68.13)
2.25	(8.5)	4.50	(17.0)	10.00	(37.85)	20.00	(75.70)
2.50	(9.5)	5.00	(18.9)	11.00	(41.64)	22.00	(83.27)
2.75	(10.4)	5.50	(20.8)	12.00	(45.42)	24.00	(90.84)
3.00	(11.4)	6.00	(22.7)	13.00	(49.21)		
				14.00	(52.99)		
				15.00	(56.78)		

Note: Settings are based on using 100 SSU at +120°F (+49°C).

\* To order this plug kit you must indicate appropriate GPM value from table. Example: PK6-3.50-N

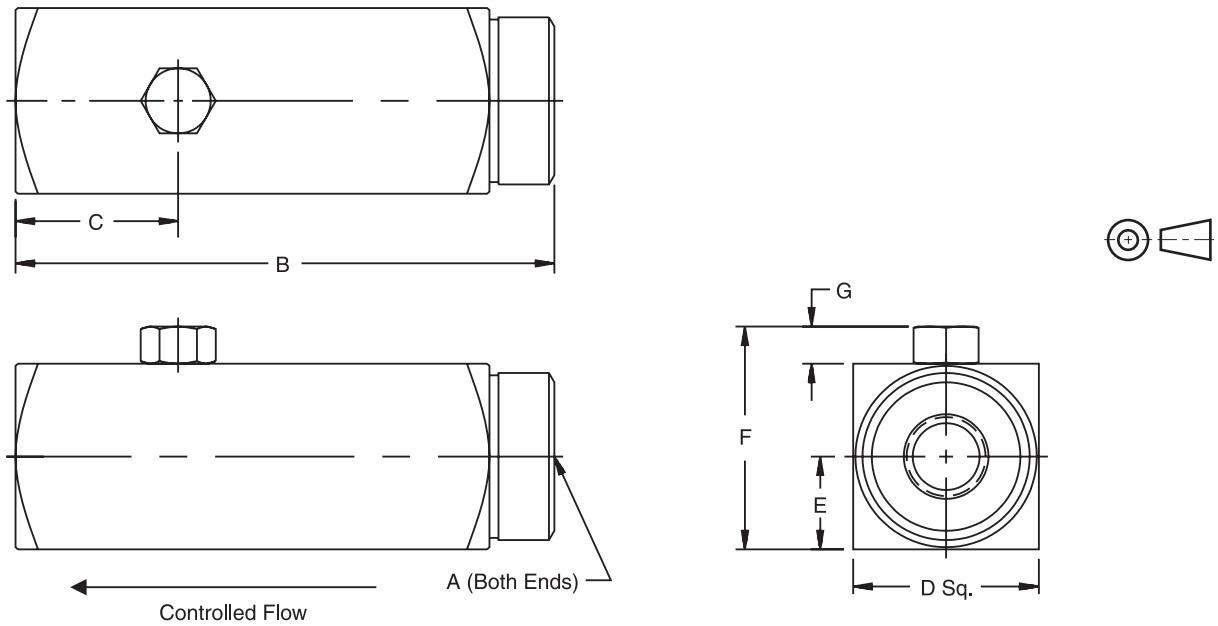
Performance Curves

**PC\*K Series**  
**Controlled Flow vs. Pressure Drop**  
at Maximum Flow Setting  
Typical for All Sizes



Dimensions

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



Model Number	Weight kg (lbs.)	A	B	C	D	E	F	G
PC*K400/620	0.03 (0.7)	1/4-18 NPTF/9/16-18 UNF	92.2 (3.63)	27.7 (1.09)	31.8 (1.25)	17.5 (0.69)	38.1 (1.50)	6.4 (0.25)
PC*K600	1.00 (2.1)	3/8-18 NPTF	105.7 (4.16)	30.2 (1.19)	38.1 (1.50)	19.1 (0.75)	44.5 (1.75)	6.4 (0.25)
PC*K 820	1.00 (2.1)	3/4-16 UNF	112.5 (4.43)	37.3 (1.47)	38.1 (1.50)	19.1 (0.75)	44.5 (1.75)	6.4 (0.25)
PC*K800/1020	1.50 (3.3)	1/2-14 NPTF/7/8-14 UNF	125.5 (4.94)	36.6 (1.44)	44.5 (1.75)	22.4 (0.88)	50.8 (2.00)	6.4 (0.25)
PC*K1200/1220	1.50 (3.3)	3/4-14 NPTF/1 1/16-12 UNF	149.4 (5.88)	27.7 (1.09)	57.2 (2.25)	28.7 (1.13)	63.5 (2.50)	6.4 (0.25)