

# **WILKERSON®**

Richland, Michigan 49083

**FRL-SIF-602**

**P17 Series**

**High Precision Regulator**

**P19 Series**

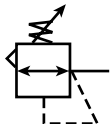
**High Flow Precision Regulator**

**ISSUED: July, 2004**

**Supersedes: None**



## P17 High Precision Regulator



The P17 are high precision, multi-stage pressure regulators. This pressure controller provides the highest level of regulation accuracy and repeatability available and is ideal for applications that call for the utmost in control and maximum stability under variable operating conditions. A stainless steel measuring capsule is used as a sensing element to activate the high gain servo balanced control mechanism in which the main valve is controlled by a pilot valve. This allows for greater accuracy and eliminates many of the problems associated with conventional regulators using range springs and diaphragms.

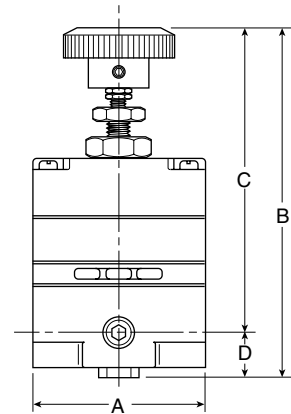
### Features

- Accurate Pressure Regulation. Controls Output Pressure to within 0.1% Accuracy.
- Multi-Stage Regulation for Maximum Control and Stability.
- Two Full Flow Gauge Ports.
- Super Sensitive Relief. Downstream Pressure Buildup, Down to 0.005 PSIG Above the Set Pressure, is Automatically Vented through Internal Relief Valve.
- P17-02-FH0 has High Exhaust Relief Capacity.

### Applications

The P17 regulators are well suited for any process that requires very precise regulation of air pressure in pipes and vessels. These regulators are often used, but not limited to the following applications:

- Air Gauging
- Gas Mixing
- Calibration Standards
- Air Hoists
- Web Tensioning
- Gate Actuators
- Roll Loading
- Valve Operators
- Cylinder Loading



**P17 Regulator Dimensions**

A	B	C
2.06 52mm	4.35 110mm	3.82 97mm
D		
0.53 13.5mm		

### **⚠ WARNING**

**Do not connect regulator to bottled gas.**

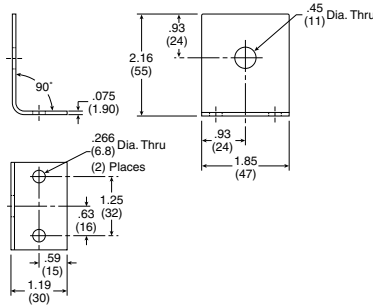
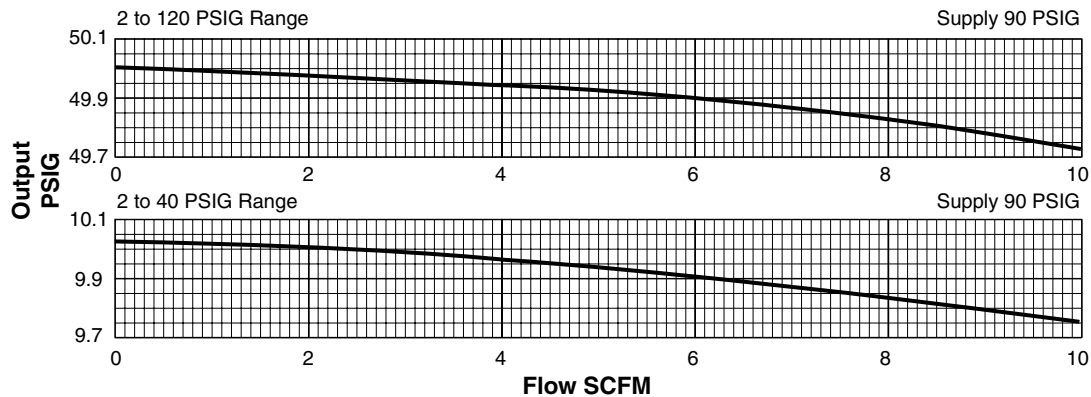
**Do not exceed maximum primary pressure rating.**

**Product rupture can cause serious injury.**

## Ordering Information

Relieving		Reduced Pressure Range (PSIG)		
		2 to 40	2 to 120	2 to 120 High Relief
In / Out Ports	1/4"	P17-02-B00	P17-02-F00	P17-02-FH0

## Technical Information



Mounting Bracket: 446-707-045

## P17 Regulator Kits & Accessories

### Mounting Bracket Kits

Pipe Mounting .....	SA200YW57
Right Angle Mounting .....	446-707-045

### Service Kits

2-40 PSIG .....	RKR210A*
2-120 PSIG .....	RKR210C*
2-120 PSIG (High Relieving) .....	RKR220C*

\* Parts in Kit

## Materials of Construction

Adjusting Stem & Capsule .....	Stainless Steel
Body .....	Zinc
Control Knob .....	Plastic
Diaphragm(s) .....	Buna-N
Seals .....	Buna-N
Springs .....	Stainless Steel
Valve Poppet .....	Stainless Steel

## Specifications

**Constant Bleed Rate** ..... Less than 0.08 SCFM (0.15m<sup>3</sup>/hr)  
(Equals Bleed Rate plus other consumption)

**Total Air Consumption** ..... 6 SCFH (0.21m<sup>3</sup>/hr.)

**Effect of Supply Pressure Variation**  
of 25 PSIG (1.7 bar) on outlet: ... Less than 0.005 PSIG (0.0003 bar)

### Exhaust (Relief) Capacity

At 5 PSIG (0.34 bar) above 20 PSIG (1.38 bar) Setpoint

**Standard Model** ..... 3 SCFM (3.4m<sup>3</sup>/hr)

**High-Relief Model** ..... 11 SCFM (17m<sup>3</sup>/hr)

### Flow Capacity

At 100 PSIG (6.89 bar) Supply,  
20 PSIG (1.38 bar) Outlet ..... 14 SCFM (25m<sup>3</sup>/hr)

**Gauge Ports** ..... 1/4" NPTF  
(Can be used as additional full flow 1/4" outlet ports)

Operating Pressure Range:	PSIG	bar
<b>PRIMARY – Maximum</b>	150	10.34

### SECONDARY – Spring Pressure

	40 PSIG	120 PSIG
<b>Minimum</b>	2	2
<b>Maximum</b>	40	120
	0.14	0.14
	2.76	8.27

**Operating Temperature Range** ..... -18°C \* to 65°C (0°F\* to 150°F)

\* Temperatures below 0°C (32°F) require moisture free air.

**Repeatability / Sensitivity** ..... 0.005 PSIG (0.0003 bar)  
Inches of Water Column = 1/8"

**Weight** ..... 1.4 lb (0.64 kg)