

## ELECTRONIC REGULATOR & PROPORTIONAL VALVE



Wilkerson's electro-pneumatic series products consist of the ER1, the ER2, and the *NEW* EPV. The ER1/ER2 are an integrated pressure controller and booster capable of delivering accurate pneumatic pressures over a wide range of flow conditions. The *NEW* EPV is a stand-alone highly accurate pressure controller. This integral system of two control valves and a feedback transducer, provides highly accurate and repeatable closed-loop control through instantaneous pressure adjustment.

The ER1/ER2 and EPV are powered by 12-28 VDC, supplied by either a programmable logic controller (PLC) or by the optional 12V plug-in-the-wall external power adapter for stand-

alone operations. The units accept a variety of control inputs that include 0-10 VDC, 4-20 mA, or input from the internal integrated variable resistor.

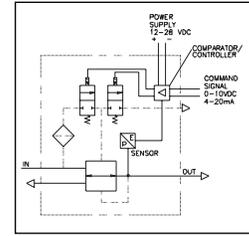
An on-board LCD panel that reads true P2 pressure in either PSI or bar is standard. This display is conveniently located in the top cap which can be removed for panel mounting or rotated 180° to suit specific requirements. The LCD panel is particularly useful for monitoring programmed pressures or for setting pressures in manual applications. The output signal is 0-10 VDC for feed back or SPC data.



**WILKERSON**  
OPERATIONS

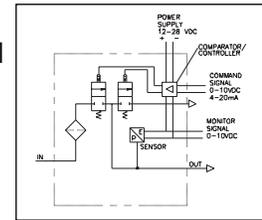
# WILKERSON'S ELECTRONIC REGULATOR & *NEW* PROPORTIONAL VALVE

Wilkerson electronic regulators provide internal 5-micron filtration to the controller and flows in excess of 94,3 dm<sup>3</sup>/s (200 SCFM) without requiring volume-booster options. For the size, the ER1 and ER2 are among the smallest, highest performing electro-pneumatic units on the market today, and among the least expensive.



ER1/ER2

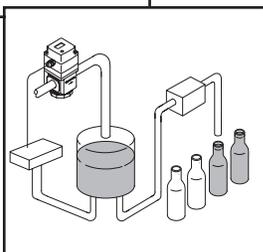
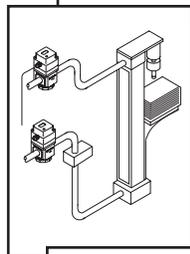
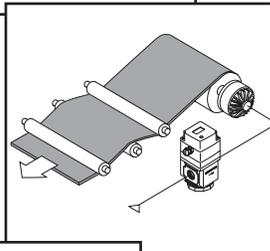
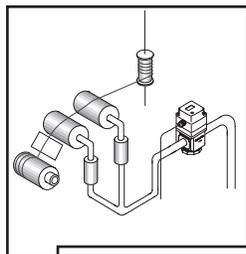
The ER1 and ER2 are available in a variety of sizes, from 1/4" to 3/4" ports, in both NPT and G-series threads. In addition, the ER1 and ER2 utilize the same convenient modular connection method as Wilkerson's innovative 18/28 FRL system.



EPV

The *NEW* EPV provides highly accurate pressure for static and low flow applications. In addition, the *NEW* EPV are available in both 1/8" NPT or G-series outlet ports on three sides and has a unique compact design which allows for easy installation.

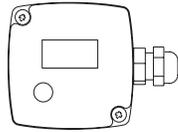
## TYPICAL APPLICATIONS



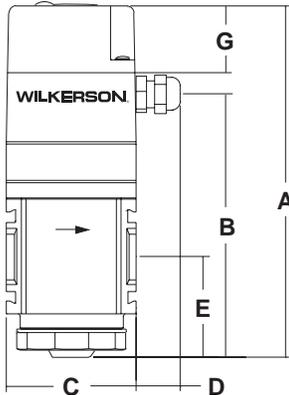
- Tip pressure control for resistance welding
- Cylinder force control
- Force control for electronic component assembly operations
- Force control for grinding applications
- Control of feed rollers on sheet feed devices
- Flow control for diaphragm pumps
- Liquid flow control for pharmaceutical or food product dispensing
- Air pressure control for glue flow in lamination processes
- Flow control for mixing precise product formulations
- Control of air and fluid in spray painting processes
- Control of system pressures for conveying dry materials
- Regulation of thickness in plastic film manufacturing
- Control of various processes in the production of rubber and rubber tires
- Control of ride level in semi-truck trailers
- Control of bottled gas flow through a fixed orifice
- Control of pressure required for leak testing containers
- Accurate edge guiding in web systems
- Web tension control systems
- Tension control for thread settings in textile manufacturing
- Control of air pressure to simulate altitude and water depth for testing applications
- Control of rodless cylinders to operate robotic arms in case loading operations
- Pressure control for plastic blow-molding operations

# DIMENSIONS & CHARTS

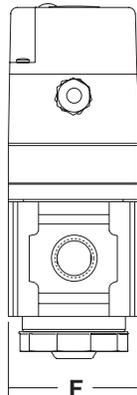
## ER1/ER2 & EPV



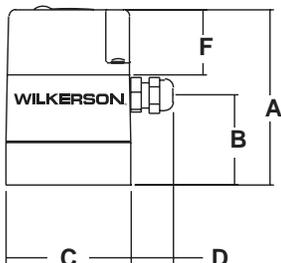
TOP VIEW



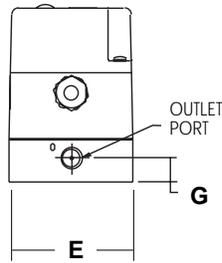
FRONT VIEW



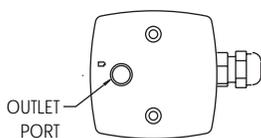
SIDE VIEW



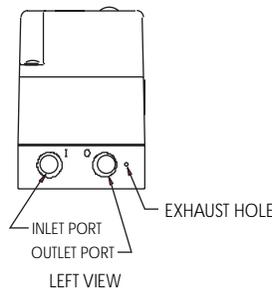
FRONT VIEW



RIGHT VIEW



BOTTOM VIEW



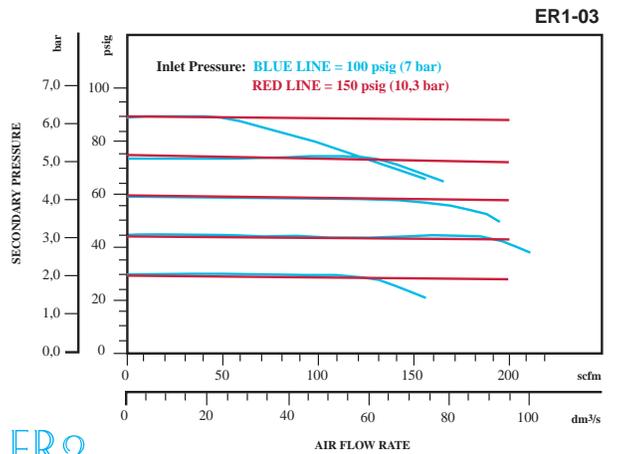
LEFT VIEW

mm  
Inches

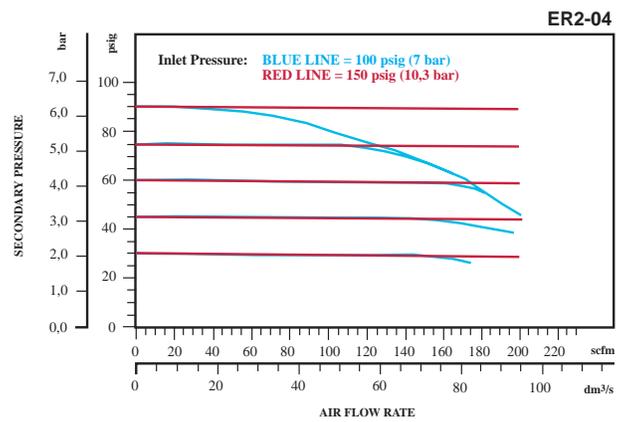
### DIMENSIONS

Models	A	B	C	D	E	F	G
ER1	160 6.31	120 4.71	60 2.35	20 .79	45 1.79	60 2.35	30 1.20
ER2	160 6.31	120 4.71	73 2.88	20 .79	45 1.79	73 2.88	30 1.20
EPV	83 3.28	43 1.69	60 2.35	20 .79	60 2.35	30 1.20	11 .45

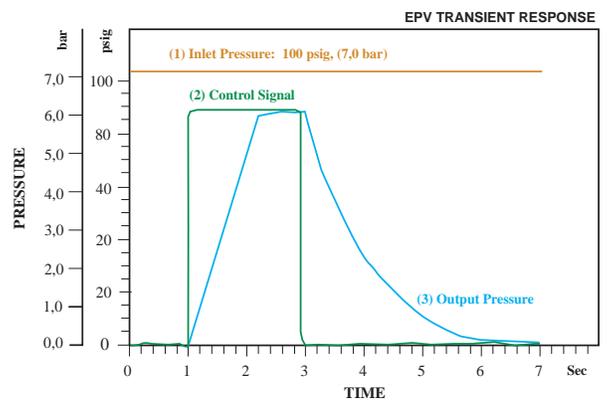
### ER1



### ER2



### EPV



# SPECIFICATIONS

## ER1/ER2

	<i>Min</i>	<i>Max</i>	<i>Nom</i>	<i>Units</i>
<b>Supply Voltage</b>	12	28	24	VDC
<b>Supply Current</b>	-	250	80	mA
<b>Control Signal</b>				
Voltage	0	10	-	VDC
Impedance	-	-	200	KOHM
Current	4	20	-	mA
Impedance	-	-	600	OHM
Internal	-	-	-	-
<b>Monitor Output</b>	0	10	-	VDC
<b>Overall Accuracy</b>	-	-	1.5%	SCALE
<b>Response*</b>	0	100	50	mSEC
<b>Step Response**</b>	-	-	1100	mSEC
<b>Supply Pressure</b>	1,4 (40)	10,3 (150)	-	bar (PSIG)
<b>Output Pressure</b>	0,0 (0)	- -	2,0/4,0/6,0/8,6 (30/60/90/125)	bar (PSIG)
<b>Temperature</b>	4,4 (40)	51,6 (125)	-	°C (°F)

<p><b>Flow Rate</b> [10,3 bar (150 psig) inlet &amp; 6,0 bar outlet with less than a a 0,2 bar pressure drop (5 psid)]</p> <p>ER1 .....94,3 dm<sup>3</sup>/s (200 SCFM)</p> <p>ER2 .....94,3 dm<sup>3</sup>/s (200 SCFM)</p>
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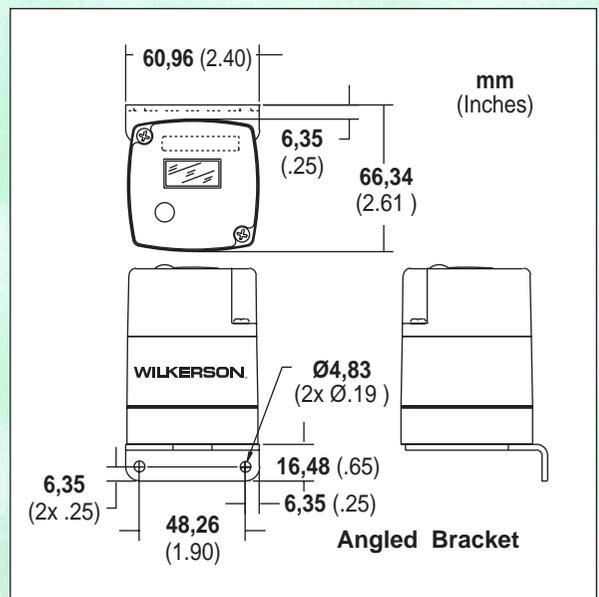
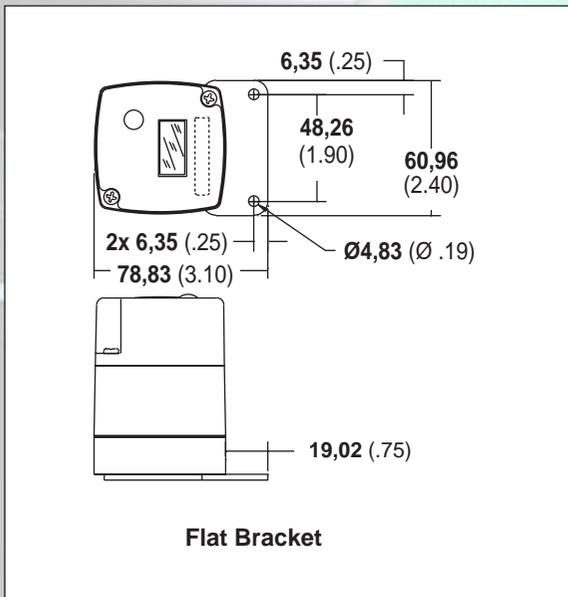
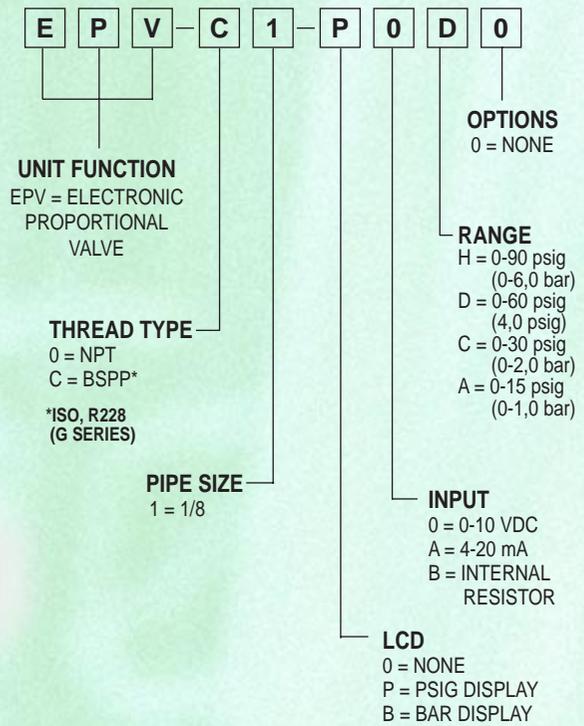
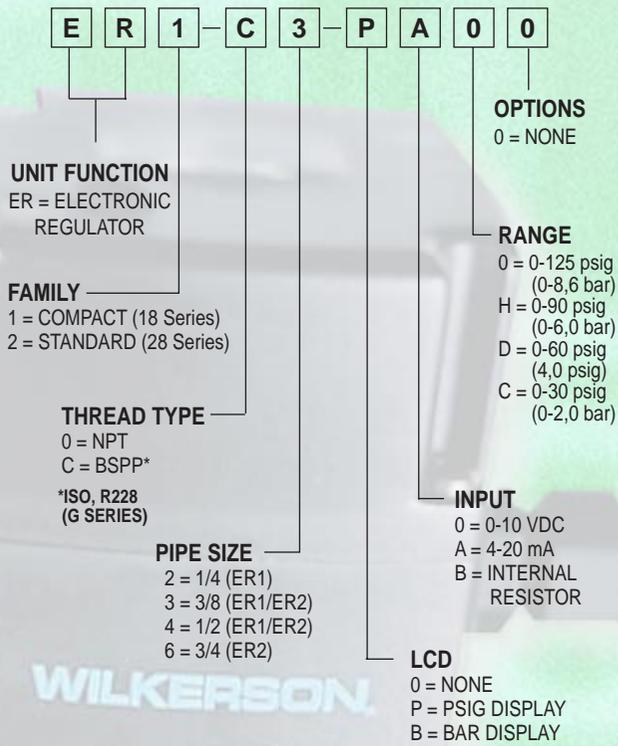
**Note:** For optimum operation inlet pressure should be a minimum of 1,0 bar (15 psig) above the controlled pressure.

## EPV

	<i>Min</i>	<i>Max</i>	<i>Nom</i>	<i>Units</i>
<b>Supply Voltage</b>	12	28	-	VDC
<b>Supply Current</b>	-	250	80	mA
<b>Control Signal</b>				
Voltage	0	10	-	VDC
Impedance	-	-	200	KOHM
Current	4	20	-	mA
Impedance	-	-	600	OHM
Internal	-	-	-	-
<b>Monitor Output</b>	0	10	-	VDC
<b>Overall Accuracy</b>	0.6%	1.0%	0.8%	SCALE
<b>Response*</b>	0	100	50	mSEC
<b>Step Response**</b>	-	-	600	mSEC
<b>Supply Pressure</b>	-	10,3 (150)	-	bar (PSIG)
<b>Output Pressure</b>	0,0 (0)	- -	1,0/2,0/4,0/6,0 (15/30/60/90)	bar (PSIG)
<b>C<sub>v</sub></b>	-	-	.02	-

\*Response time for the unit to recognize and correct for a change in set value or conditions.  
 \*\* Step response is the time to go from 10-90% of set value with a 4,0 bar (60 psig) step input.

# ORDERING INFORMATION

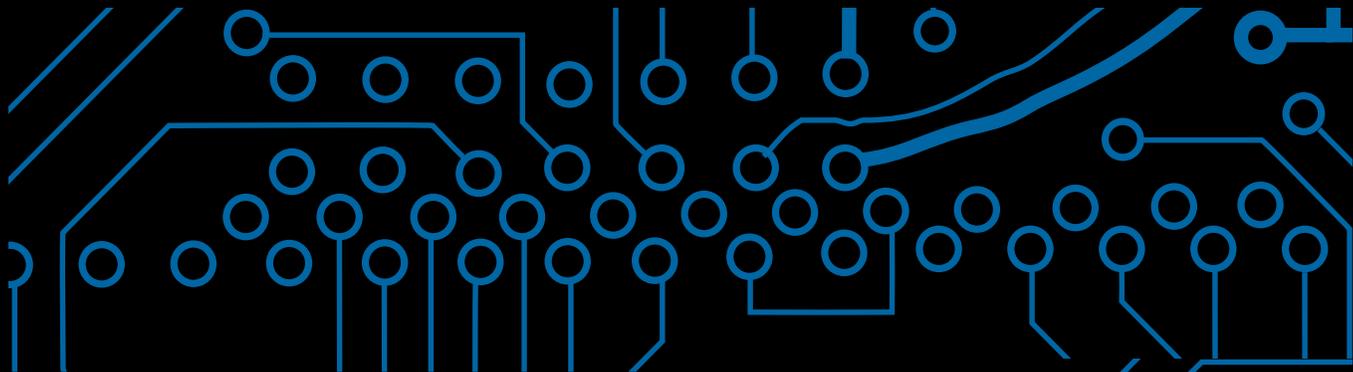


## EPV MOUNTING BRACKETS

Wilkerson offers two styles of mounting brackets for the EPV:

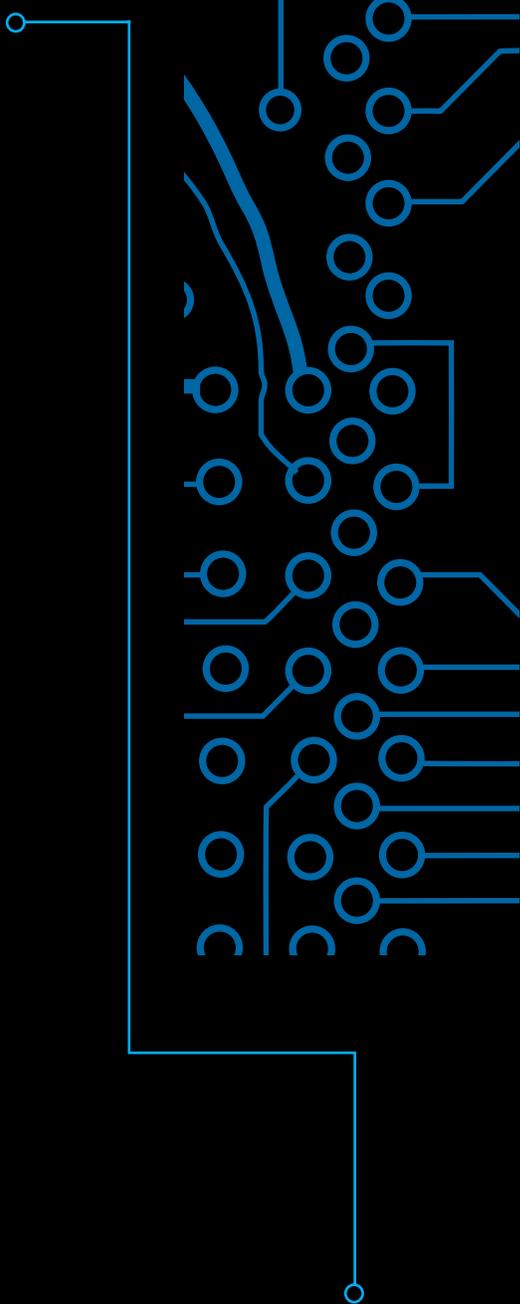
Flat Bracket Kit .....EPP-95-351

Angled Bracket Kit .....EPP-95-352



Wilkerson Operations offers a complete line of innovative fluid power products with features and operation characteristics that meet customer expectations of quality, performance,

reliability and value. Wilkerson representatives are located in most major cities throughout the world with additional manufacturing and sales affiliates in North and South America, Europe, Africa, Asia and the Pacific Rim Basin.



**WILKERSON**  
OPERATIONS

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