



# Type 6100

## High Flow Capacity Volume Booster

Rapid Stroke Capability

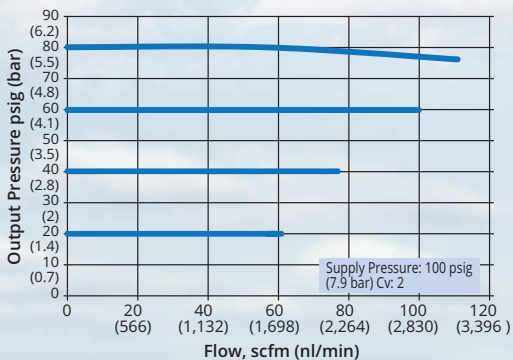
The ControlAir Type 6100 aluminum volume booster is a 1:1 signal to output relay that is utilized in applications that require high forward flow and exhaust capacities. Typically they are used to increase throttling speed of large volume valve actuators. They are suitable for either diaphragm or piston actuators. A fixed deadband and adjustable bypass valve combine to allow small incremental downstream adjustment without opening the main booster valve. The bypass valve is used to adjust dynamic response to provide stable operation over a wide range of actuator sizes.

### Features

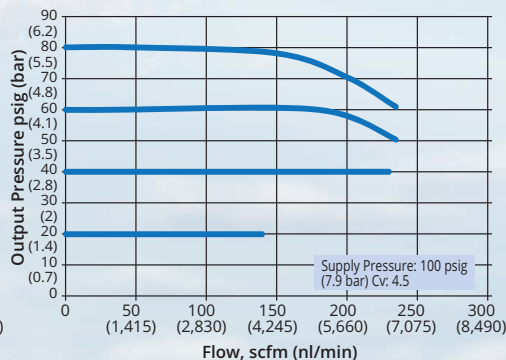
- **1/4", 1/2" or 3/4" NPT Porting**
- **Integral Adjustable Bypass Valve**  
Allows small incremental signal changes without opening the primary valve
- **High Flow Capacity**  
For rapid actuator stroking
- **Soft Valve Seat Design** Provides tight shutoff and eliminates leakage in steady state operation
- **High Temperature Operation**  
Up to 200°F (93°C)
- **2 High Output Exhaust Vents**  
1/4" NPT exhaust vents optional
- **2 1/4" NPT Gauge Ports**
- **Balanced Supply Valve**  
Minimizes the effect of supply pressure variation



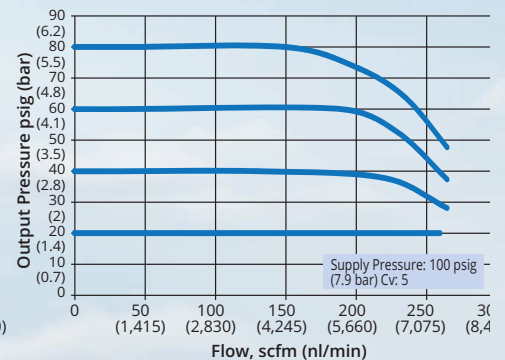
Regulated Pressure vs Flow: 1/4" Type 6100



Regulated Pressure vs Flow: 1/2" Type 6100

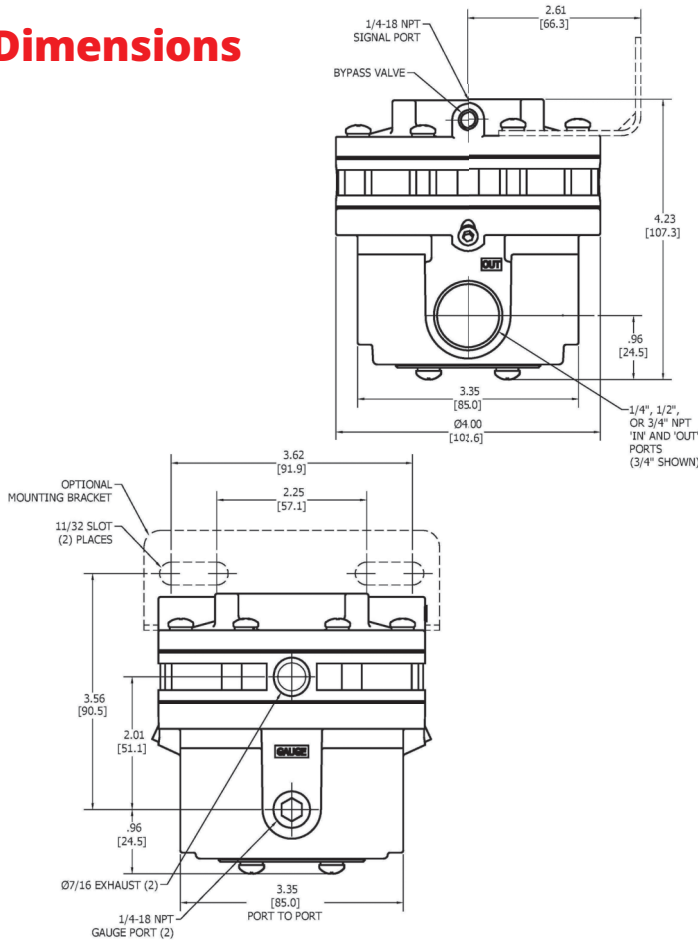


Regulated Pressure vs Flow: 3/4" Type 6100

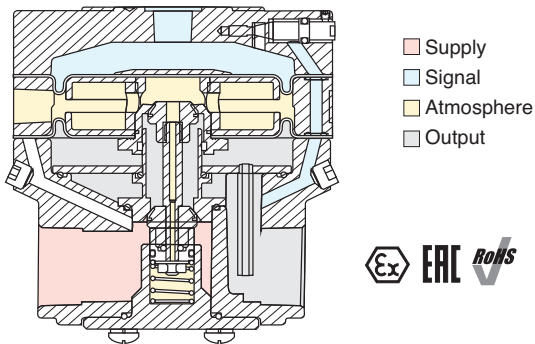


# Type 6100 High Flow Capacity Volume Booster

## Dimensions



## Principles of Operation



**Warranty** ControlAir, Inc. products are warranted to be free from defects in materials and workmanship for a period of eighteen months from the date of sale, provided said products are used according to ControlAir, Inc. recommended usages. ControlAir, Inc.'s liability is limited to the repair, purchase price refund, or replacement in kind, at ControlAir, Inc.'s sole option, of any products proved defective. ControlAir, Inc. reserves the right to discontinue manufacture of any products or change products materials, designs or specifications without notice. Note: ControlAir does not assume responsibility for the selection, use, or maintenance of any product. Responsibility for the proper selection, use, and maintenance of any ControlAir product remains solely with the purchaser and end user. Drawing downloads available at [www.controlair.com](http://www.controlair.com)

## Specifications

<b>Signal/Output Ratio</b>	1:1		
<b>Supply Pressure</b>	250 psig (17.0 bar) Maximum		
<b>Signal Pressure</b>	150 psig (10.0 bar) Maximum		
<b>Temperature Limits</b>	-40 to 200 °F (-40 to 93 °C)		
<b>Maximum Flow Coefficients (Cv)</b>	<b>Port</b>	<b>Forward</b>	<b>Exhaust</b>
	3/4"	5.0	3.5
	1/2"	4.5	3.5
	1/4"	2.0	2.5
<b>Exhaust Capacity</b>	3/4"	80 scfm (2,264 NL/min)	
5 psig (0.35 bar) above	1/2"	75 scfm (2,123 NL/min)	
20 psig (1.38 bar) setpoint	1/4"	35 scfm (991 NL/min)	
<b>Output Accuracy</b>	1.0% of 100 psi output span		
<b>Sensitivity</b>	1" H <sub>2</sub> O (2.54 cm)		
<b>Deadband</b>	Under 0.2 psig (.01 bar)		
<b>Supply Pressure Effect</b>	0.1 psig (.007 bar) for a 25 psig (1.7 bar) change		
<b>Signal Port</b>	1/4" NPT		
<b>Supply/Output Port</b>	1/4", 1/2", or 3/4" NPT		
<b>Exhaust Port</b>	Ø7/16" or 1/4" NPT option		
<b>Gauge Port (2)</b>	1/4" NPT		
<b>Weight</b>	2.5 lbs (1.13 kg)		

## Materials

<b>Housing</b>	Aluminum
<b>Bolting</b>	Zinc Plated Steel
<b>Other trim</b>	Aluminum
<b>Internal components</b>	Aluminum
<b>Elastomers</b>	Nitrile

## Ordering

Part Number	Porting
6100-BA	1/4" NPT
6100-DA	1/2" NPT
6100-EA	3/4" NPT

**Options** Add proper letter at end of model number.

<b>R</b>	EAC TR-CU
<b>S</b>	Stainless Steel Trim
<b>T</b>	1/4" NPT Tapped Exhaust (2)
<b>X</b>	ATEX 2014/34/EU

### Accessories

**Mounting Bracket (zinc plated steel):** P/N 449-542-045

**1/4" NPT Exhaust Screen/Muffler Fitting:**

Plated Steel: P/N 445-761-008

(Unit must have 'T' tapped exhaust option)



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