

# Type 79

## High Flow Air Relays

### Features

- Balanced pintle
- High flow capacity
- Field serviceable
- Large port sizes available
- Air piloted or dome loaded
- 200 PSIG output
- Also available in a high relieving version (Type 79HR)

### Description

The Type 79 1:1 Ratio High Flow Precision Air Relay brings additional precision and control to the Bellofram line of precision control products.

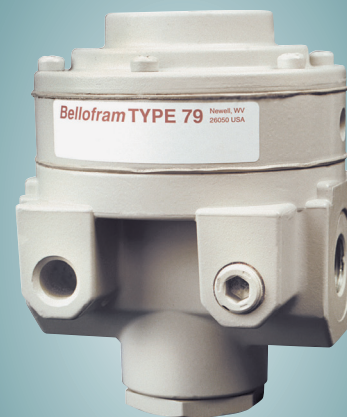
The Type 79 relay is designed for applications where a precise control of flow is needed. This regulator offers low droop, high accuracy and fine adjustment sensitivity. The use of a Bellofram rolling diaphragm provides greater sensitivity and improved accuracy. The balanced pintle minimizes output pressure changes caused by fluctuations in supply pressure.

Careful design and quality materials throughout

assure long, trouble-free operation. The rugged die-cast zinc and aluminum housings are pressure tested to assure safe operation. The Type 79 is designed to withstand harsh and abusive environments. This is attributed to a chemical conversion coating of all cast components, and a vinyl paint finish.

The Type 79 can achieve flow rates of well over 200 SCFM (5695 LPM). This relay can be pipe or bracket mounted.

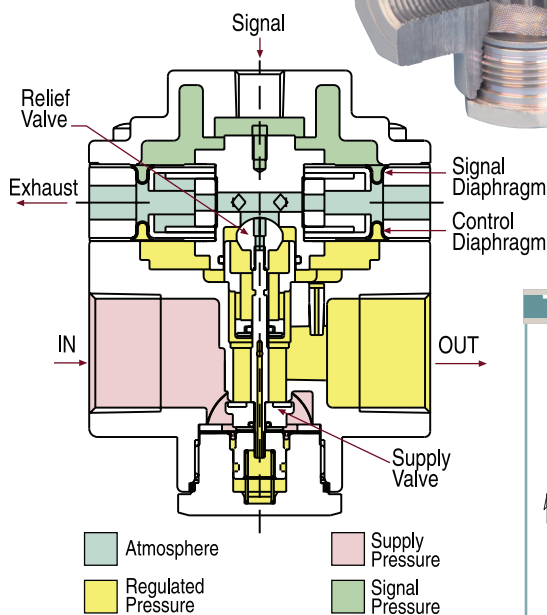
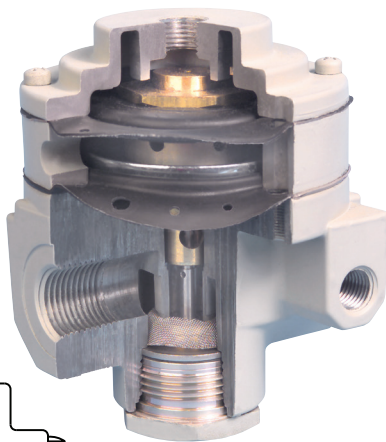
A version of the Type 79 for valve control applications is available. The Type 79V utilizes soft exhaust seats to minimize air consumption, increased deadband to ignore valve oscillations, and an integral bypass valve that can be 'tuned' for optimum valve response.



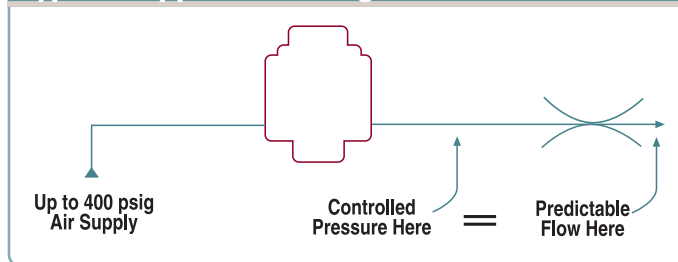
**Type 79**  
High Flow Air Relay

### Applications

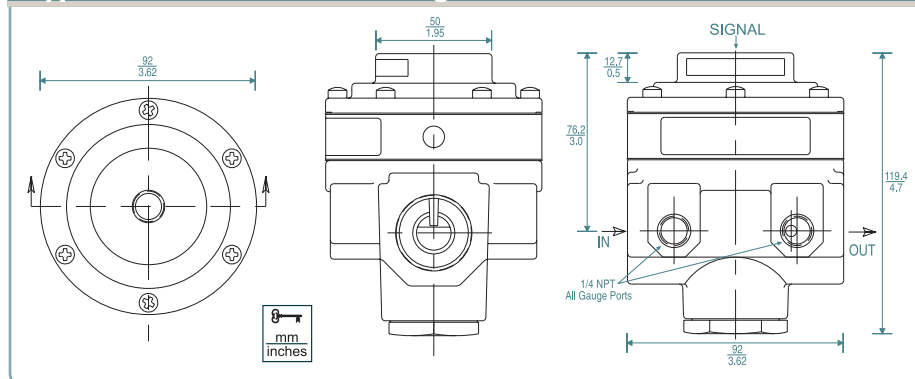
- Clutch and Brake Controls
- Gas Flow Control
- Cylinder Bucking Control
- Tension Control
- Dancer (Calendar) Roll Loading
- Volume Boosting
- Valve Motor Loading



### Type 79 Application Diagrams

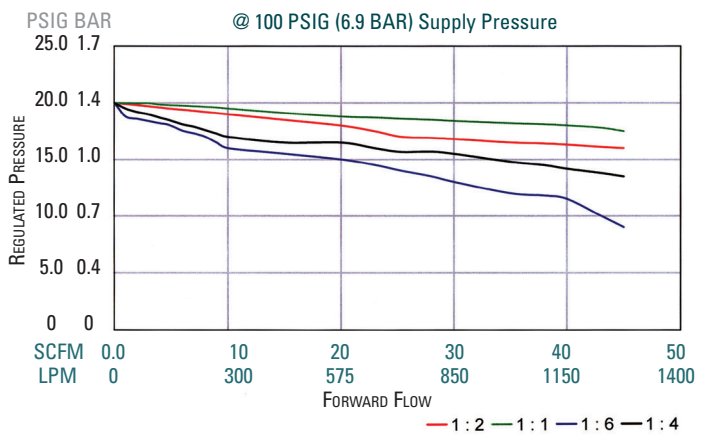


### Type 79 Dimensional Drawing



	Type 72	Type 72 HR	Type 75	Type 75 HR	Type 79/79V	Type 79HR
<b>Maximum Supply Pressure</b>	250 PSIG (17.2 BAR)	250 PSIG (17.2 BAR)	250 PSIG (17.2 BAR)	250 PSIG (17.2 BAR)	400 PSIG (27.6 BAR)	400 PSIG (27.6 BAR)
<b>Sensitivity</b>	1/4" H <sub>2</sub> O (6.4mm)	1/4" H <sub>2</sub> O (6.4mm)	1/4" H <sub>2</sub> O (6.4mm)	1/4" H <sub>2</sub> O (6.4mm)	1" H <sub>2</sub> O (25mm)	1" H <sub>2</sub> O (25mm)
<b>Supply Pressure Sensitivity</b>	< 0.6 PSIG (0.01 BAR) per 50 PSIG (1.4 BAR) change in supply pressure	< 0.6 PSIG (0.01 BAR) per 50 PSIG (1.4 BAR) change in supply pressure	< 0.6 PSIG (0.04 BAR) per 50 PSIG (6.9 BAR) change in supply pressure	< 0.6 PSIG (0.04 BAR) per 50 PSIG (3.5 BAR) change in supply pressure	< 0.35 PSIG (0.02 BAR) per 100 PSIG (3.5 BAR) change in supply pressure	< 0.35 PSIG (0.02 BAR) per 100 PSIG (3.5 BAR) change in supply pressure
<b>Flow Capacity</b>	40 SCFM (1150 LPM) @ 20 PSIG (1.4 BAR) signal and 100 PSIG (6.9 BAR) supply	40 SCFM (1150 LPM) @ 20 PSIG (1.4 BAR) signal and 100 PSIG (6.9 BAR) supply	40 SCFM (1150 LPM) @ 20 PSIG (1.4 BAR) signal and 100 PSIG (6.9 BAR) supply	40 SCFM (1150 LPM) @ 20 PSIG (1.4 BAR) signal and 100 PSIG (6.9 BAR) supply	>125 SCFM (3500 LPM) @ 20 PSIG (1.4 BAR) signal and 100 PSIG (6.9 BAR) supply	>125 SCFM (3500 LPM) @ 20 PSIG (1.4 BAR) signal and 100 PSIG (6.9 BAR) supply
<b>Exhaust Capacity</b>	6 SCFM (170 LPM) @ 10 PSIG (0.69 BAR) above a 20 PSIG (1.4 BAR) setpoint	15 SCFM (425 LPM) @ 10 PSIG (0.69 BAR) above a 20 PSIG (1.4 BAR) setpoint	6 SCFM (170 LPM) @ 10 PSIG (0.69 BAR) above a 20 PSIG (1.4 BAR) setpoint	15 SCFM (425 LPM) @ 10 PSIG (0.69 BAR) above a 20 PSIG (1.4 BAR) setpoint	31 SCFM (875 LPM) @ 5 PSIG (0.35 BAR) above a 20 PSIG (1.4 BAR) setpoint	39 SCFM (3500 LPM) @ 5 PSIG (0.35 BAR) above a 20 PSIG (1.4 BAR) setpoint
<b>Temperature Limits</b>	-40 to 200°F (-40 to 93°C)	-40 to 200°F (-40 to 93°C)	-40 to 200°F (-40 to 93°C)	-40 to 200°F (-40 to 93°C)	-40 to 200°F (-40 to 93°C)	-40 to 200°F (-40 to 93°C)
<b>Air Consumption</b>	<12 SCFH (5.7 LPM)	<12 SCFH (5.7 LPM)	<12 SCFH (5.7 LPM)	<12 SCFH (5.7 LPM)	<12 SCFH (5.7 LPM)	<12 SCFH (5.7 LPM)
<b>Port Size</b>	1/4", 3/8", 1/2" NPT, BSPP, BSPT	1/4", 3/8", 1/2" NPT, BSPP, BSPT	1/4", 3/8" NPT, BSPP, BSPT	1/4", 3/8", 1/2" NPT, BSPP, BSPT	3/8", 1/2", 3/4", 1" NPT, BSPP, BSPT	3/8", 1/2", 3/4", 1" NPT, BSPP, BSPT
<b>Output Pressure Range</b>	0-150 PSIG (0-10.3 BAR)	0-150 PSIG (0-10.3 BAR)	0-150 PSIG (0-10.3 BAR)	0-150 PSIG (0-10.3 BAR)	0-200 PSIG (0-13.8 BAR)	0-200 PSIG (0-13.8 BAR)
<b>Maximum Signal</b>	150 PSIG (10.3 BAR)	150 PSIG (10.3 BAR)	150 PSIG (10.3 BAR) for 1:1 ratio	150 PSIG (10.3 BAR) for 1:1 ratio	200 PSIG (13.8 BAR)	200 PSIG (13.8 BAR)
<b>Weight</b>	1.75 lb. (0.8 kg.)	1.75 lb. (0.8 kg.)	1.3 lb. (0.6 kg.)	1.3 lb. (0.6 kg.)	4.5 lb. (2.0 kg.)	4.5 lb. (2.0 kg.)
<b>Ratio of Accuracy for a 12 psig span</b>	< 2%	< 2%	< 2% (1:1)	< 2% (1:1)	< 1.5%	< 1.5%

**Type 75: Regulated Pressure VS. Flow**



**Type 79 and 79 HR: Regulated Pressure VS. Flow**

