

# 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.

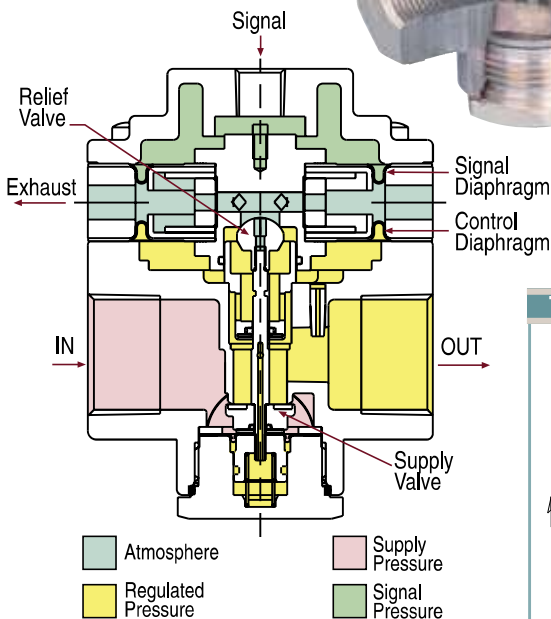
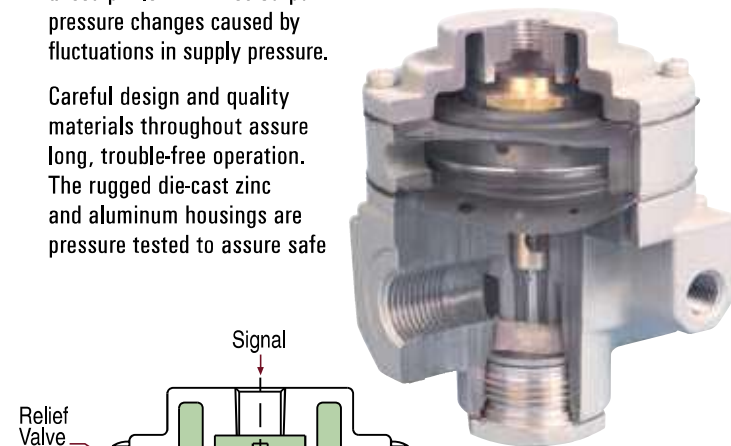
A version of the Type 79 for valve control applications is available. The Type 79V utilizes soft exhaust seats to minimize air consumption, increased deadband to ignore valve oscillations, and an integral bypass valve that can be 'tuned' for optimum valve response.

### Applications

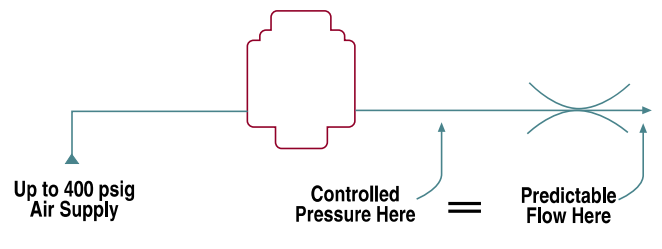
- Clutch and Brake Controls
- Gas Flow Control
- Cylinder Bucking Control
- Tension Control
- Dancer (Calendar) Roll Loading
  - Volume Boosting
  - Valve Motor Loading



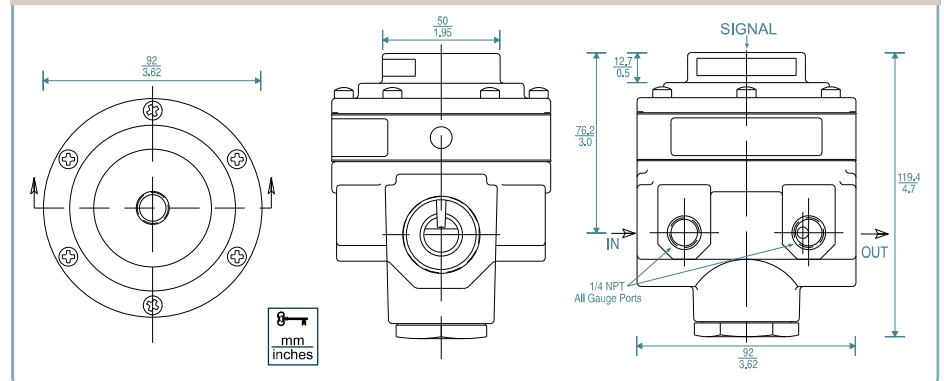
**Type 79**  
High Flow Air Relay



### Type 79 Application Diagrams



### Type 79 Dimensional Drawing



## Volume Booster Ordering Information

	Ratio	Port Size (NPT)	Set Point Range		Part Number
			BAR	PSIG	
Type 20 Precision Relay	1:1	1/8	0.1-8.3	2-120	961-004-000
		1/4	0.1-8.3	2-120	961-005-000
		3/8	0.1-8.3	2-120	961-006-000
Type 20HR Precision Relay High Relief Capacity	1:1	1/8	0.1-8.3	2-120	961-001-000
		1/4	0.1-8.3	2-120	961-002-000
		3/8	0.1-8.3	2-120	961-003-000
Type 20 EXHR	1:1	1/8	0.1-8.3	2-120	961-009-000
		1/4	0.1-8.3	2-120	961-010-000
		3/8	0.1-8.3	2-120	961-011-000
Type 72 Positive Bias Booster Relay	1:1	3/8	0-0.7	0-10	961-062-000
		3/8	0-2.1	0-30	961-063-000
		3/8	0.07-4.1	1-60	961-064-000
		3/8	0.1-10.3	2-150	961-065-000
		1/4	0-0.7	0-10	961-052-000
		1/4	0-2.1	0-30	961-053-000
		1/4	0.07-4.1	1-60	961-054-000
		1/4	0.1-10.3	2-150	961-055-000
Type 72 HR High Relief Positive Bias Booster Relay	1:1	3/8	0-0.7	0-10	961-182-000
		3/8	0-2.1	0-30	961-183-000
		3/8	0.07-4.1	1-60	961-184-000
		3/8	0.1-10.3	2-150	961-185-000
		1/4	0-0.7	0-10	961-178-000
		1/4	0-2.1	0-30	961-179-000
		1/4	0.07-4.1	1-60	961-180-000
		1/4	0.1-10.3	2-150	961-181-000
Type 75 Precision Relay	1:1	1/4	0-10.3	0-150	961-058-000
	1:1	3/8	0-10.3	0-150	961-066-000
	1:2	1/4	0-10.3	0-150	961-059-000
	1:2	3/8	0-10.3	0-150	961-067-000
	1:4	1/4	0-10.3	0-150	961-060-000
	1:4	3/8	0-10.3	0-150	961-068-000
	1:6	1/4	0-10.3	0-150	961-045-000
	1:6	3/8	0-10.3	0-150	961-069-000
Type 75 Precision Relay Fixed Negative Bias (4 PSI)	1:1	1/4	0-10.3	0-150	961-090-000
	1:1	3/8	0-10.3	0-150	961-091-000
	1:2	1/4	0-10.3	0-150	961-092-000
	1:2	3/8	0-10.3	0-150	961-093-000
	1:4	1/4	0-10.3	0-150	961-094-000
	1:4	3/8	0-10.3	0-150	961-095-000
	1:6	1/4	0-10.3	0-150	961-096-000
	1:6	3/8	0-10.3	0-150	961-097-000
Type 75HR Precision Relay	1:1	1/4	0-10.3	0-150	961-144-000
	1:1	3/8	0-10.3	0-150	961-145-000
	1:1	1/2	0-10.3	0-150	961-146-000
	1:2	1/4	0-10.3	0-150	961-147-000
	1:2	3/8	0-10.3	0-150	961-148-000
	1:2	1/2	0-10.3	0-150	961-149-000
Type 75HR Precision Relay Fixed Negative Bias (4 PSI)	1:1	1/4	0-10.3	0-150	961-150-000
	1:1	3/8	0-10.3	0-150	961-151-000
	1:1	1/2	0-10.3	0-150	961-152-000
	1:2	1/4	0-10.3	0-150	961-153-000
	1:2	3/8	0-10.3	0-150	961-154-000
	1:2	1/2	0-10.3	0-150	961-155-000
Type 79 High Flow Capacity	1:1	3/8	0-13.8	0-200	961-156-000
		1/2	0-13.8	0-200	961-157-000
		3/4	0-13.8	0-200	961-158-000
		1	0-13.8	0-200	961-159-000
Type 79 HR High Relief High Flow Capacity	1:1	3/8	0-13.8	0-200	962-378-000
		1/2	0-13.8	0-200	962-378-100
		3/4	0-13.8	0-200	962-378-200
		1	0-13.8	0-200	962-378-300
Type 79V	1:1	3/8	0-13.8	0-200	961-200-000
		1/2	0-13.8	0-200	961-201-000
		3/4	0-13.8	0-200	961-202-000
		1	0-13.8	0-200	961-203-000

## Type 20 Option Ordering Matrix

Replace last three digits of part number with digits from table below.

Option	
8	Pressure Gauge

## Type 72 Option Ordering Matrix

Replace last three digits of part number with digits from table below.

Option		3	5	7	8	9
3	Square Head	003	053	073	083	
5	Epoxy Finish		005	075	085	095
7	Mounting Bracket			007	087	097
8	Pressure Gauge				008	098
9	Tamper-Resistant Cover					009

## Type 75 Option Ordering Matrix

Replace last three digits of part number with digits from table below.

Option		5	7	8
5	Epoxy Finish	005	075	085
7	Mounting Bracket		007	087
8	Pressure Gauge			008

## Type 79 Option Ordering Matrix

Replace last three digits of part number with digits from table below.

Option		1	2	5	6	7
1	Low Bleed	001		051	061	071
2	Non-Relieving		002	052	062	072
5	Epoxy Finish			005	065	075
6	Tapped Vent				006	076
7	Tapped Supply Port					007

## Relay Options and Accessories

**Pressure Gauge**

Dual scale (English and Metric) 2 inch (50.8 mm) gauges are available

**Epoxy Finish** - Gray epoxy coating for greater corrosion resistance.**Mounting Bracket**

Zinc-plated steel bracket for side mounting.

(For Type 79 order part number 607-293-000)

(For Type 75 order part number 607-000-047)

**Tamper Resistant Cover**

A cover placed over the adjusting screw to prevent ordinary hand adjustments.

**Low Bleed**

Reduces steady-state air consumption by approximately 50%.

**Non-Relieving**

Used in applications where it is desirable to relieve pressure downstream of the relay. Non-relieving relays should not be used for low or no flow applications.

**Tapped Vent (Exhaust)**

1/4 NPT tapped port to allow for installation of plumbing to capture exhaust air.

**Tapped Supply Gauge Port**

1/4 NPT tapped port is offered as a pressure tap for monitoring the inlet or upstream pressure supplied to the regulator. (Type 79 only)

**BSPP or BSPT**

British Standard Threads can be ordered by adding either "BSPT" or "BSPP" to the end of the part number.