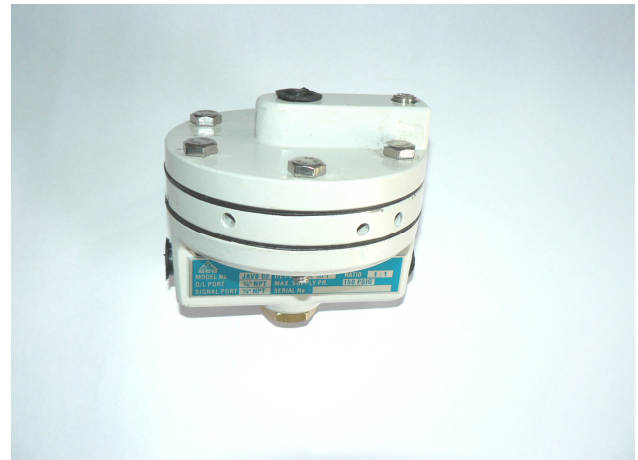


**TYPE JVBR - 90 SERIES PNEUMATIC
 VOLUME BOOSTER**



DESCRIPTION

A Type JVBR- 90 Series Volume Booster (Figure 1) is used in conjunction with a positioner on a throttling control valve to increase stroking speed of Pneumatic Control Valve. It is designed to use a pneumatic signal to produce an output pressure which has high flow capacity. The unit is most useful for systems requiring the conversion of a low flow control signal to the higher flow requirements of an operating system. Using an independent supply pressure for greater volume, the JVBR series gives upto 50 SCFM flow to a final control element such as a valve actuator.



The Booster incorporates soft seat construction, and an integral bypass restriction to adjust positioner speed so as to eliminate hunting of control valve and to increase the speed of the control valve system. Adjustment of the integral bypass restriction is necessary for system stability.

The Volume Booster, is used in conjunction with a positioner to improve stroking speed. If the volume booster is to be used only with an actuator for on-off control, the integral bypass restriction on the booster must be closed

FEATURES

- FAST RESPONSE** : Booster delivers the volume needed for rapid actuator stroking When large output changes suddenly occur.
- ADJUSTABLE RESPONSE** : Integral bypass restriction tunes the booster response so that Smooth actuator motion follows the slow signal takes place.
- EFFICIENT OPERATION** : Soft seats provide shutoff to reduce unnecessary air consumption and eliminate saturation of positioner relays.
- MAINTAINS ACCURACY** : Booster permits high actuator stroking speeds upon demand Without reducing the positioner steady-state accuracy.
- HIGH FLOW CAPACITY** : Allows flows upto 50 SCFM
- STABLE OUTPUT** : Venturi aspirator maintains output pressure under varying flow Condition.
- HIGH EXHAUST CAPACITY** : Large relief valve provided 15 SCFM Flow capacity

APPLICATIONS

The Type JVBR is used extensively for increased flow capacity, or remote pressure control applications. This includes control valve actuators, I/P volume boosting, cylinder actuation, clutch and brake control, and gas flow control.

SPECIFICATIONS

Supply Pressure Ranges

When used in conjunction with a positioner or other pneumatic accessory, always pipe the positioner and volume booster with one common supply through a regulator (see figure 3).

When normally used with Diaphragm Actuators - Upto 40 psig (2.8 bar) 3 Kg/Sq.cm
When normally used with Piston Actuators – Upto 150 psig (10.3 bar) 10.6 Kg/Sq.cm

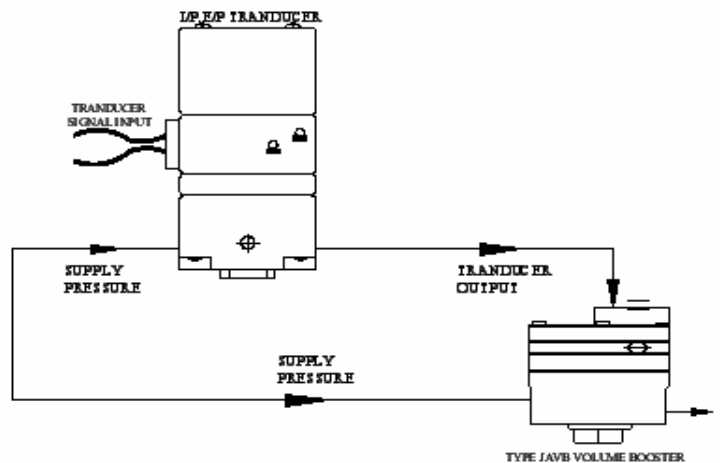
Input Signal Pressure	: 3 – 15 psig/0-7 kg/sq.cm
Maximum Inlet Pressure to the Volume Booster	: 150 psig (10.3 bar) / 30 PSI (2 BAR)
Fixed Input – to – output Pressure Ratio	: 1 : 1
Nominal Deadband	: 5% of output span whichever is greater
Ratio Accuracy	: 1% of output span with 3-15 psig signal
Flow Capacity	: 50 scfm For 100 psig supply pressure and output Pressure of 20 psig
Body Material	: Die Cast Aluminum Alloy
Diaphragm	: Nylon impregnated Nitrile / Neoprene
Main Valve	: SS
O – Rings	: Nitrile
Other Internal Trim Materials	: Stainless Steel / Aluminium
Operative Temperature Limits	: - 40 to 160 ⁰ F (-40 to 120 ⁰ C) (Higher Temperature on request)
Input Signal Connection	: 1/4" NPT/BSP
Supply and Output Connection	: 1/4", 1/2" NPT/BSP

Model Nos.:

JVBR 090A : 1/4" Input and 1/4" Supply Output Connections

JVBR 090B : 1/4" Input and 1/2" Supply and output connections

Approximate weight - Aluminium
 Body: 650 g



PRINCIPLE OF OPERATION

When pressure is introduced through the signal port of the JVBR-090, a downward force on the upper diaphragm area is created. This force is balanced by the output pressure acting against the lower control diaphragm area. The ratio of signal pressure to output pressure is determined by the ratio of the effective areas of the upper and lower diaphragms. If signal pressure is increased above the output pressure there is a net downward force on the diaphragm assembly causing the supply valve to open. Output pressure increases until equilibrium is achieved. When signal pressure is decreased below the output pressure, the diaphragm assembly rises, allowing output air to exhaust through the exhaust port on the side of the relay.

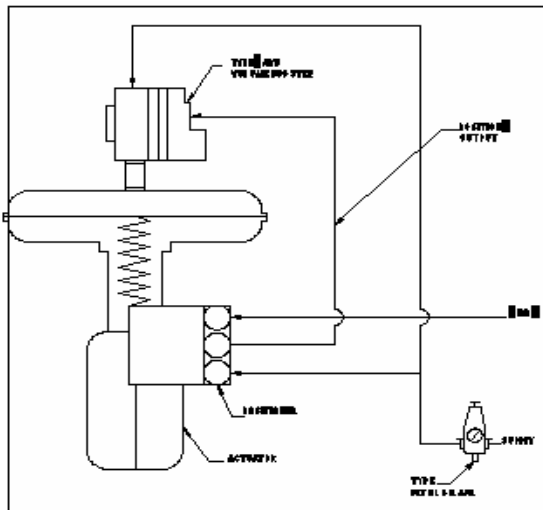
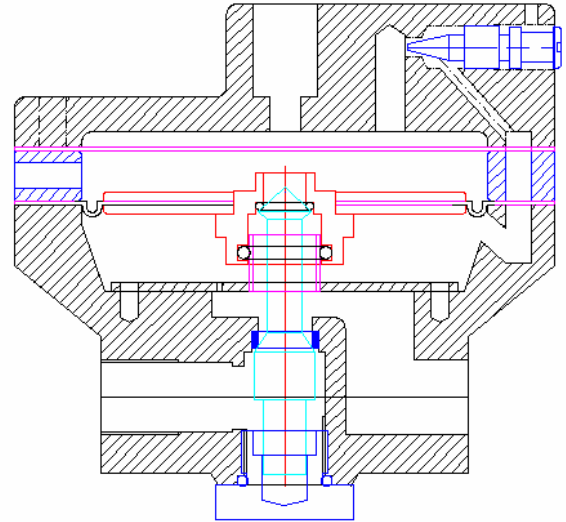
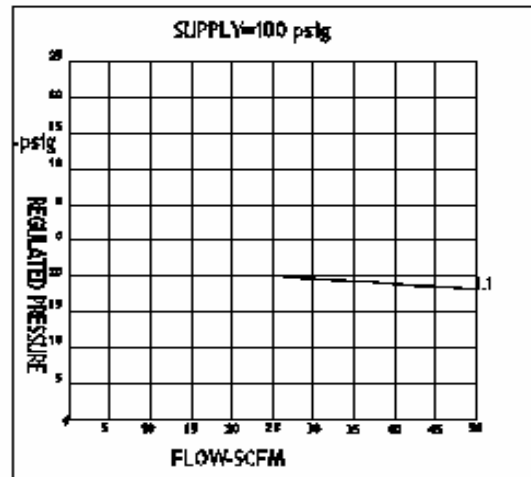


Figure 3

FLOW CHARACTERISTICS



DIMENSIONAL DRAWING

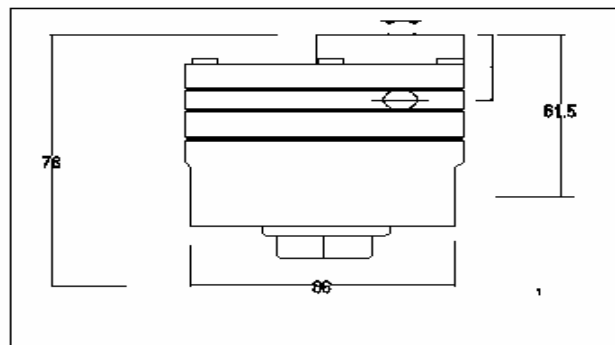
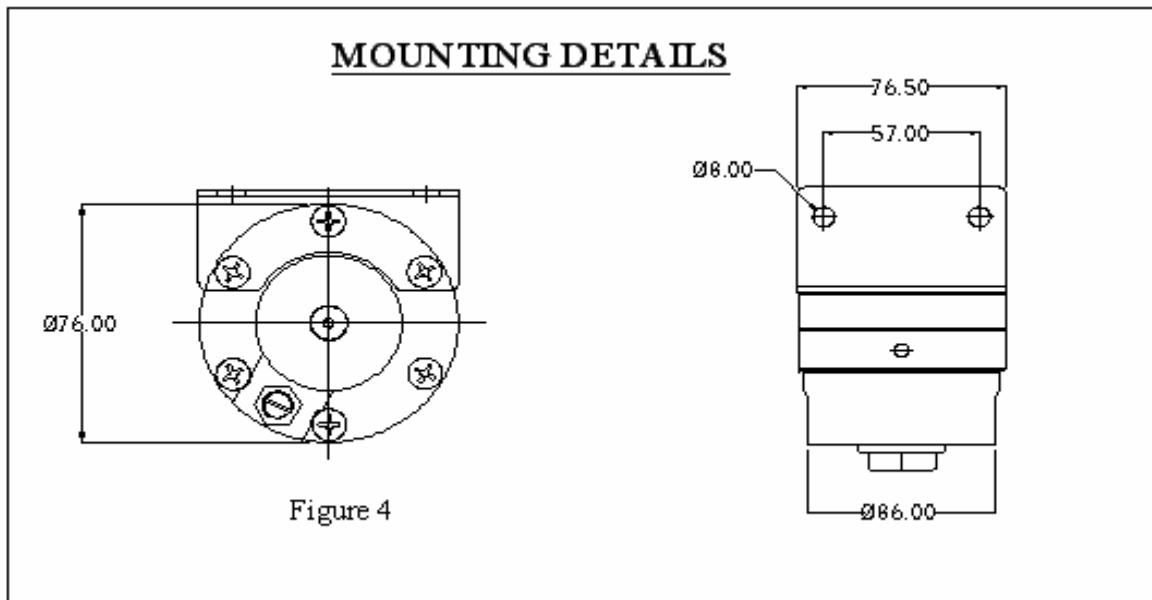


Figure 5



BRIEF PROFILE

The Company **J R U CONTROL** was started in the year 1984. It is located 25 km from Chennai Airport by the main Grand Trunk Road. It has a land area of 21/2 acres with a built up area of 10,000 Sq.ft. The products manufactured are Air Filter Regulator, Lubricator, Air Lock-up Relay, Volume Booster, Orifice Plates, Rotameters (Glass tube and Metal Tube), Electronic and Pneumatic displacement type Level Transmitters and Controllers. The factory is equipped with all modern testing facilities for inspection, measuring and testing for quality control. The products are approved by **EIL, BHEL, DAE, ONGC, HPCL, BPCL, IPCL, CPCL, BALCO, NALCO, GSFC , NPCIL** and many more. We are an ISO 9001: 2000 certified company. We adhere to strict quality systems.

OUR OTHER PRODUCTS



PRECISION AIR REGULATOR



AIR VOLUME BOOSTER



AIR LOCK-UP RELAY



FRL'S

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