



Design Concepts

Eaton's Carter product line includes a variety of inline and bypass control valves. Models 64501 and 64511 are the latest innovation in 3 and 4-inch bypass air reference pressure-operated control valves. They replace earlier Model 64082 3-inch and Model 64002 4-inch bypass pressure control valves.

These valves utilize the direct operating design concept with a control module added to the basic valve. This control valve is mounted to the main valve body with one bolt. The new control module gives the unit finer control and eliminates exterior tubing from the valve. The control module picks up a signal from a venturi and send a signal to the main body, positioning the piston to obtain the desired fueling pressure.

Fueling pressure will be approximately 30 psi (2.068 bar) lower than the regulated air pressure being sent to the control module. The operation of the bypass valve is similar to an inline valve. However, a conventional bypass valve functions as a normally open valve.

The same control module is used on both the 3 and 4-inch air-operated bypass control valves. The bypass valve is usually used as a source of primary pressure control in most systems.

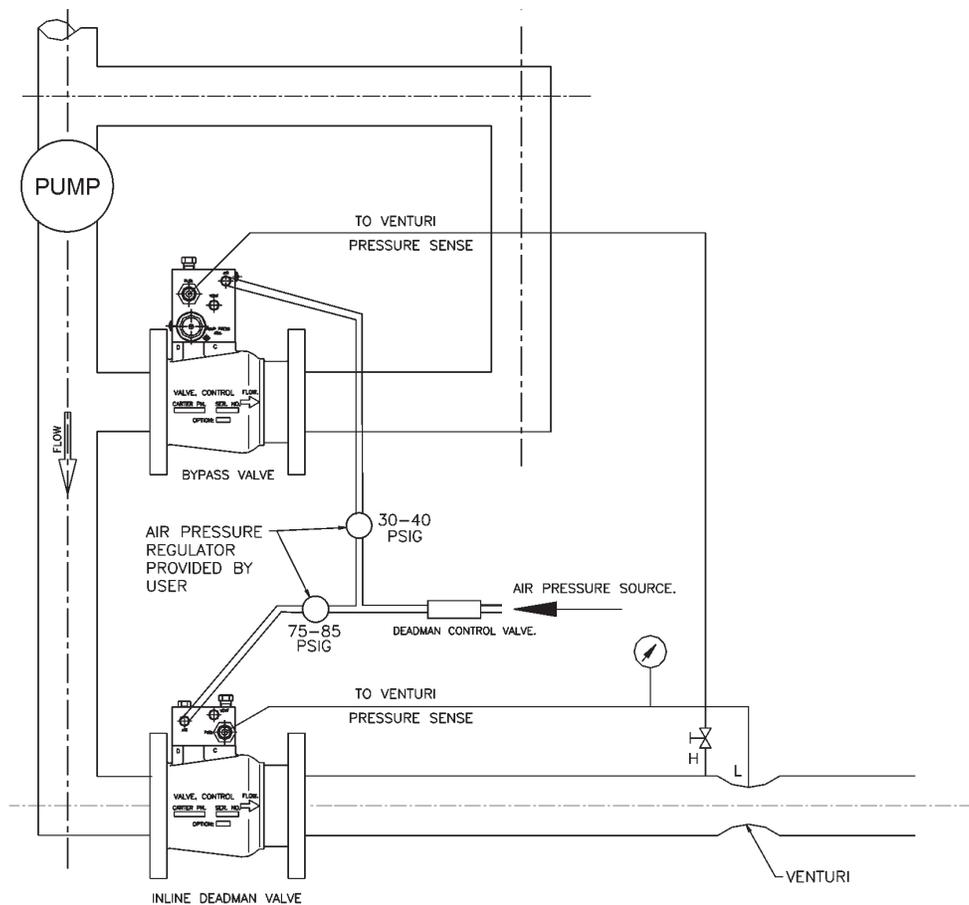
Most of the seals in the main body of the 3 and 4-inch valves are the same, thus minimizing the spares required for any type of maintenance. The control module incorporates a unique bleeder that requires no tools to facilitate bleeding. The control module has a vent to prevent fuel from entering the air system.

Features

- Standard 150 lb ANSI inlet and outlet flanges
- Victaulic adapters available
- Bleeding and pressure control adjustment simple
- No expensive servos to adjust
- Spare parts required for maintenance are kept to a minimum due to lack of complicated servos. Many are common to same size inline valves.
- Many spares also common to Eaton's hydrant couplers

Air Reference Controlled Pressure Control Systems

A typical air reference pressure controlled refueler pressure control system:



Note: The inline and bypass valves shall be installed in such a way that the pressure sense ports shall be located in the top position of both valves to achieve satisfactory bleeding of trapped air

Ordering Data

Both Model 64501 and Model 64511 have two available options to be added to the basic part number when desired.

Option	Description
D	Victaulic adapter on inlet
E	Victaulic adapters on inlet and outlet

Note: It is not recommended to use Option E on a valve without additional support to keep it from turning in the piping

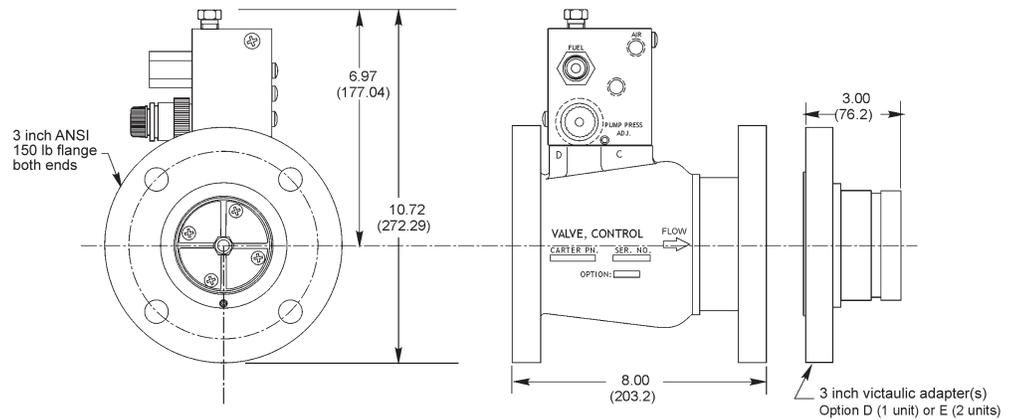
Operating Characteristics

	64501 – 3-inch	64511 – 4-inch
Working pressure	Up to 200 psi (13.793 bar)	Up to 200 psi (13.793 bar)
Rated flow	Up to 800 gpm (3028 l/min)	Up to 1200 gpm (4542 l/min)
Pressure drop	4.9 psi (.338 bar) @ 600 gpm (2271 l/min)	4.3 psi @ 1000 gpm (3785 l/min)
Pressure control	25 to 75 psi (1.724 to 5.171 bar) nominal	25 to 75 psi (1.724 to 5.171 bar) nominal
Overshoot	Valve opens wide on deadman release	Valve opens wide on deadman release
Opening time	5 to 10 seconds	5 to 10 seconds
Closing time	2 to 5 seconds — (see overshoot)	2 to 5 seconds — (see overshoot)
Repeatability	±3 psi (.207 bar)	±3 psi (.207 bar)
Surge control	Valve opens wide on surge release	Valve opens wide on surge release
Operating temperature	-40°F to +125°F (-40°C to +52°C)	-40°F to +125°F (-40°C to +52°C)

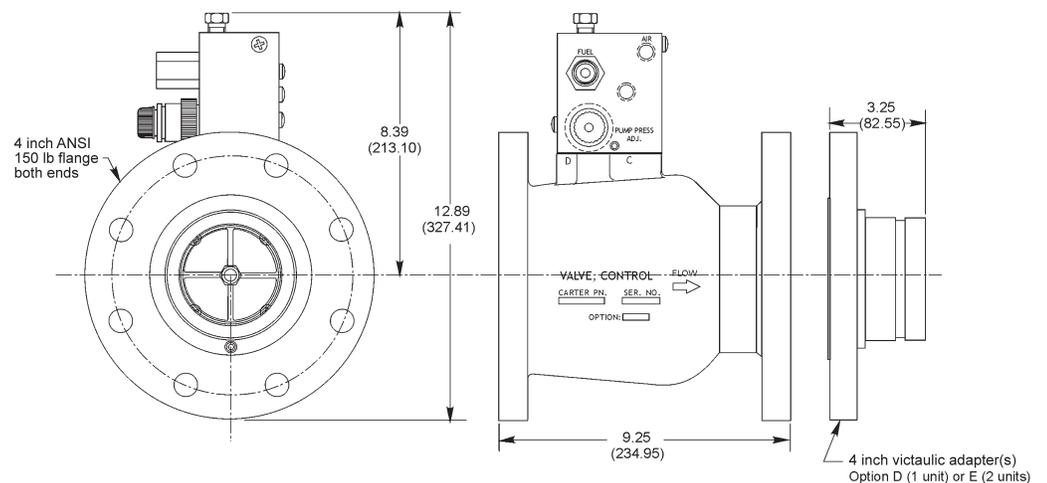
Envelope Dimensions

Dimensions shown in inches (millimeters)

Model 64501



Model 64511



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