

In-Line Pressure Control Valve



- **Deadman Operated**
- **Externally Sensed Pressure Regulation**
- **Various Pilot Options (Air, Fuel, Electric)**
- **Deadman Pressure Setting Controls Delivery Pressure**
- **4-Inch ANSI 150 Flanges**
- **Victaulic Adapters Available**
- **Lightweight Aluminum Body**
- **Internal Pistons are Stainless Steel for better performance**
- **1,200 Gallons per minute maximum required flow rate**

Technical Data

Parameter	Value
Design Pressure	225 psig (15.5 bar)
Burst Pressure	400 psig (27.58 bar)
Rated Flow	1,200 gpm (4500 l/min)
Pressure Drop	4.7 psid @ 1,000 gpm
Opening Time	5 - 10 sec. (factory set)
Closing Time	2 - 5 sec. (adjustable)
Overshoot	< 5% of flow
Repeatability	± 3 psig (.21 bar)
Surge Pressure Control	< 120 psig (8.27 bar)
Operating Temperature	-40 - 120°F (-40 - 48.9C)

The Cla-Val Model 354GF Valve is used to control fuel pressure delivered into an aircraft thru an under wing refueling nozzle, The 354GF is intended for use on various forms of aircraft refueling vehicles.

Model 354GF In-line Pressure Control Valve is a direct acting piston valve controlled by an external deadman device. When the deadman signal is “On” (applied), the valve opens to delivery fuel downstream. Opening times vary by application and are preset to be between 5 and 10 seconds. When the deadman signal is release/removed, the valve closes. Closing time is adjustable, but is set at the factory for between 2 and 5 seconds. Closing speed can also be adjusted to control overshoot (the volume of fuel that passes through the valve after the deadman signal is removed and when the valve fully closes).

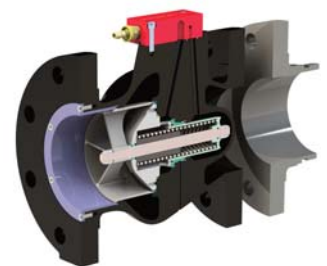
Principles of Operation

A Pilot Block on the top of the 354GF provides a connection point for the deadman supply pressure (fuel or compressed air) and for the Fuel Sense line. The Cla-Val Model 354GF In-line Pressure Control Valve provides a means of controlling (regulating) fuel pressure at a remote sensing point on the refueling vehicle, such as a Venturi. The desired delivery pressure is set by the deadman pressure source. There is an approximately 20 psid difference (bias) between the deadman pressure supplied and the resulting delivery pressure. For instance, a deadman pressure of 70 psig will result in a delivery pressure setting of about 50 psig.

The 354GF not only controls delivery pressure, but also reacts quickly to control pressure surges. Components within the Pilot Block assure steady pressure regulation without hunting, yet can react to surges in delivery pressure by causing the 354GF to close quickly to limit delivery pressure surges to below 120 psig. This simple, yet effective design replaces the need for complicated servos used on competing products.

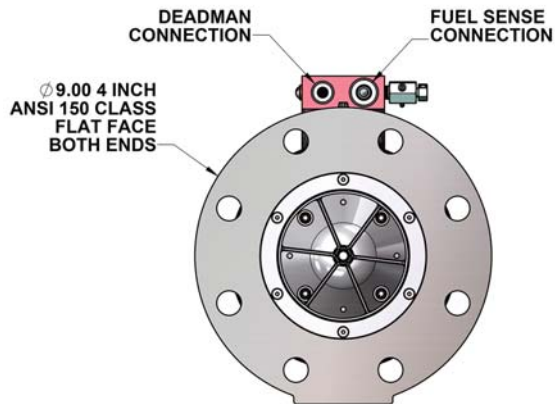
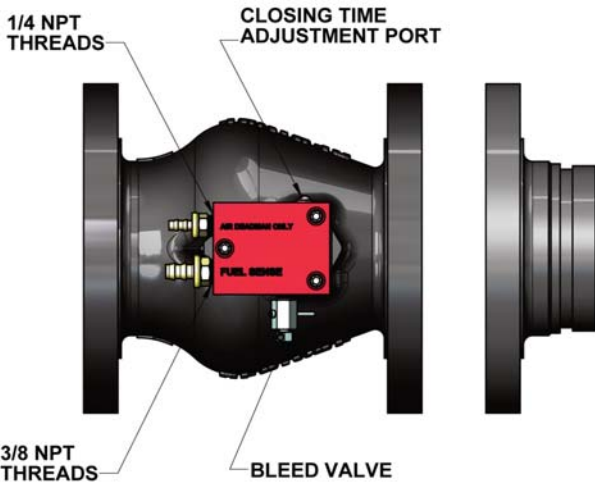
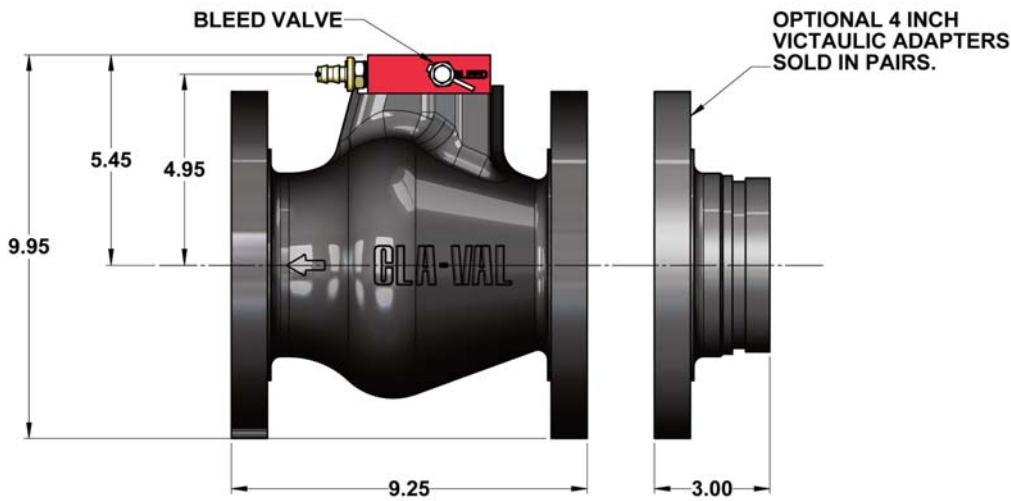
This 4 inch In-line Valve is rated for 1,200 gpm maximum. As an added environmental protection, the 354GF In-line Pressure Control Valve features a manual bleed valve on the Pilot Block to which a bleed hose can be easily attached so that bleeding air from the Valve does not result in a fuel spillage.

The Cla-Val Model 354GF In-line Pressure Control Valve is constructed of aircraft-grade Aluminum and Stainless Steel. This very rugged design can withstand a high level of abuse and still reliably function in critical applications. As an example, the internal Pistons of the 354GF are made from cast 303 Stainless Steel.



354GF In-line Pressure Control Valve

Dimensions (inches)



Exploded View

