

INTERNAL VALVES**F614** 4 INCH VALVE**F620** 6 INCH VALVE**Internal Valves****F614A****Jet Level Sensor — Internal Valve Systems**

The Whittaker bottom loading system designed for aircraft refuelers utilizes the unique Jet Level Sensor in conjunction with an internal valve. This system combines automatic bottom loading with off-loading (aircraft refueling) thru one valve. Available in 4 - and 6-inch size, the internal valves are built with modular pilots to allow the use of the internal valve as a standard off-loading valve only with easy conversion to bottom loading at a later date.

Operating Description

Inlet pressure transmitted thru Jet Level Sensor opens pilot thus allowing main valve to open as determined by system flow capacity.

When the level in the compartment reaches the Jet Level Sensor, the pilot pressure drops off and the pilot spring closes the pilot causing the main piston to close due to its area overbalance.

Air pressure (50 to 150 psi) applied to power piston lifts main piston to full open position.

When air pressure is released large spring closes main piston. See Tech pages for system application schematics.

**Ground
Fueling
Products****Features**

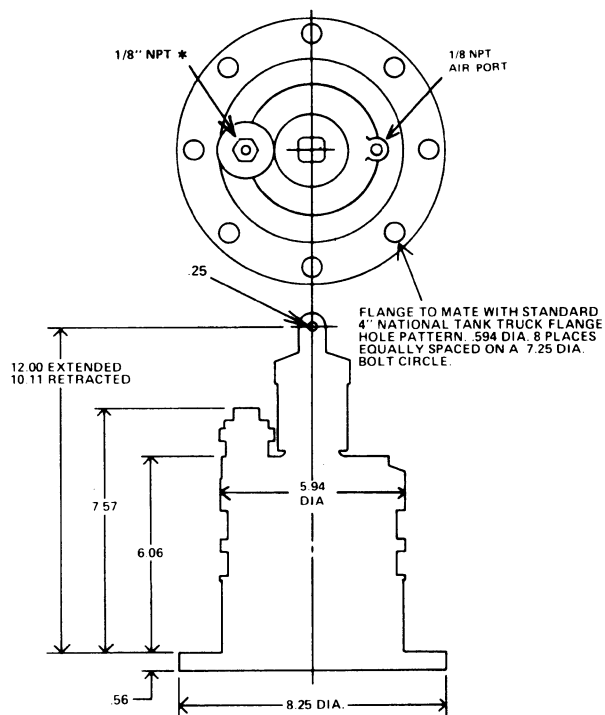
- No moving parts in high level control.
- 4-inch Internal Valve mates NTT standard flange-removable from outside. 6-inch valve furnished with steel welding ring (mounting does not mate with NTT flange). Stainless steel ring optional.
- Soft closure feature for surge control.
- Loading and off-loading thru one valve.
- Fail closed system.
- Lightweight design.
- Air operation for off-loading.
- Modular pilot construction for ease of maintenance.
- Low pressure loss:
 - Bottom Loading - 4-inch - 4.5 psi at 600 gpm
6-inch - 4.5 psi at 1200 gpm
 - Off-Loading - 4-inch - 1.5 psi at 600 gpm
6-inch - 0.75 psi at 1000 gpm
- Functions properly with inlet pressures to 200 psi.
- Internal Valves can also be used with F619 Three-Way Float Pilot Valve.

INTERNAL VALVES

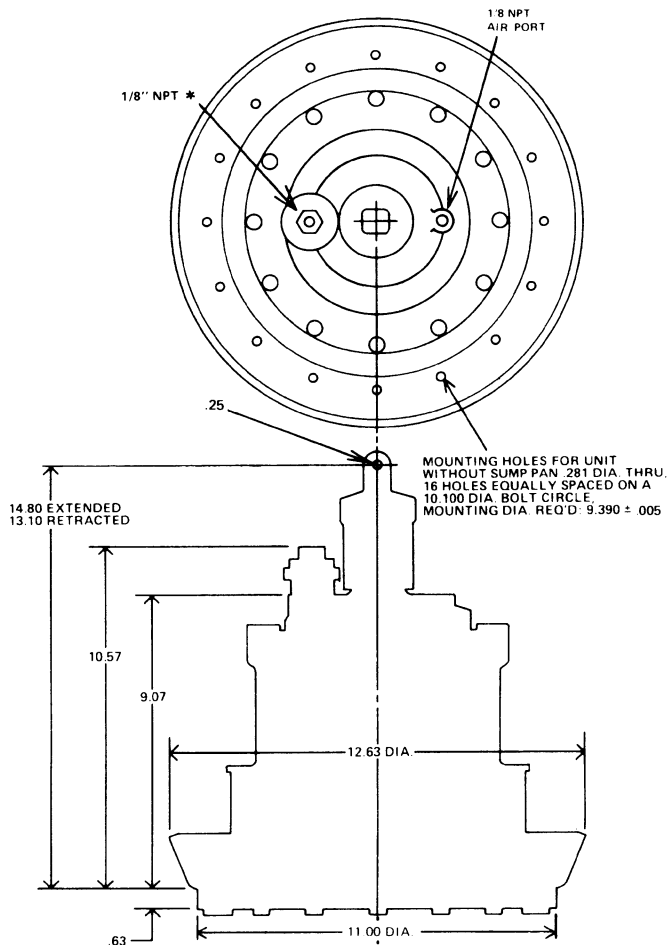
F614 4 INCH VALVE, F620 6 INCH VALVE

* MOUNTING HINT: USE FLEXIBLE TUBING FOR PILOT AND AIR LINES OF SUFFICIENT LENGTH TO ALLOW REMOVAL OF VALVE FROM THE EXTERIOR OF THE VEHICLE.

F614 MAY BE MOUNTED FROM INSIDE OR OUTSIDE OF SUMP FLANGE.



F614 MOUNTING DIMENSIONS



F620 MOUNTING DIMENSIONS