

Pneumatic Actuated Igniter and Smaller Main Oil Burner Systems

System Description

The Scotch Trifecta is a valve system with all components housed within a single valve body. Conventional systems require at least three valves and actuators to accomplish what we provide with a single valve system. We perform all key functions including fuel sequencing, atomizing, and purging of the down stream piping.

Model T505 is a fail-in-last-position precision-built switching valve system, while Model T506 is designed to fail in the closed position. Both offer Trifecta's proven performance advantages over separate valves or packaged multiple valve systems, including:

- Prevention of out-of-sequence operation, eliminating contamination of the atomizing or purging media.
- Purge sequence is an integral part of our valve closure, allowing almost instantaneous switching from firing to purging modes.

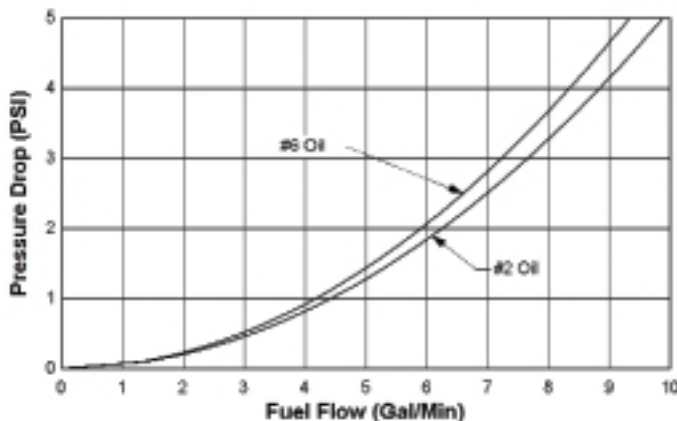
Application

The compact T500 valves are used with oil fired igniters and smaller main burners requiring steam or air atomization. Both models are completely self contained, and all necessary accessories are provided, including position indication switches and junction box.

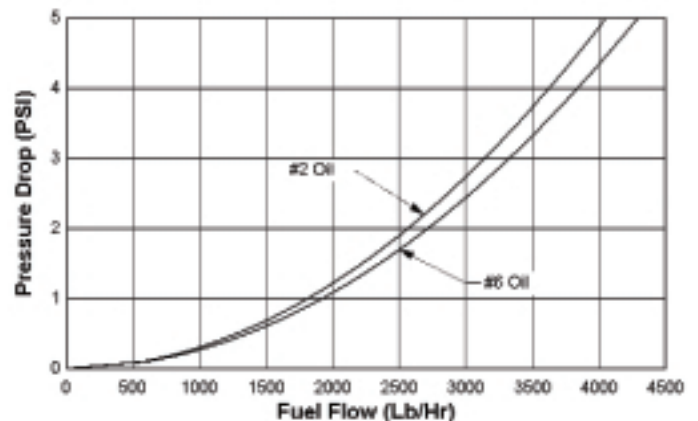
When incorporating appropriate options/accessories, model T506 is Factory Mutual approved for use as a "combination oil safety shutoff, atomizing, and purge valve."



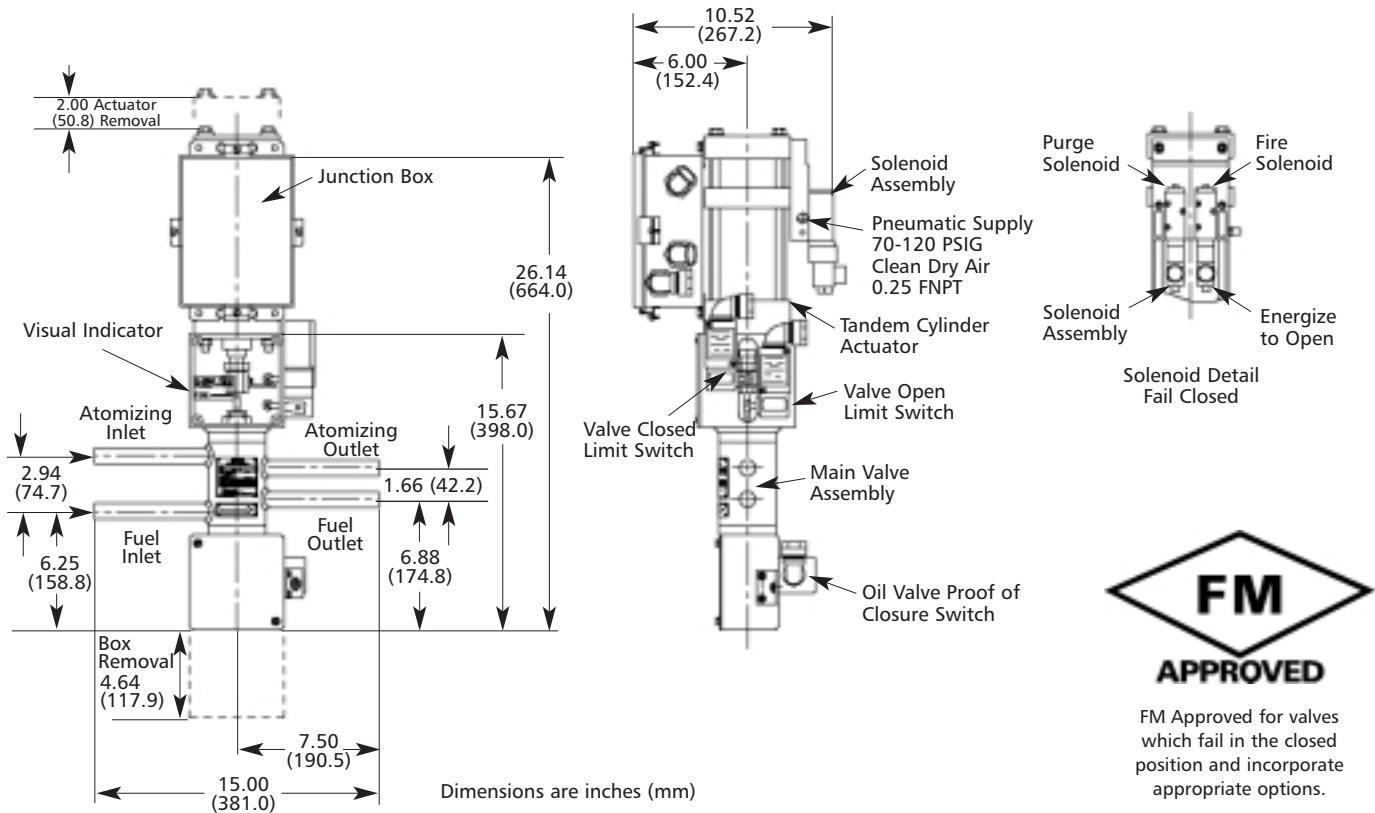
T505/T506 Valve Systems



T505/T506 Valve Systems



Dimensional Specifications for the T505/506



Specifications for the T505/T506

Design Pressure and Temperature

Standard Valve: 300 PSIG @ 450°F

Maximum Differential Pressure:

Equal to design rating

Sizes: 1/2"

End Connections:

Sch. 40 or 80 Spigot, Butt Weld,
Male NPT in Sch. 80, Socketweld

Flow Orientation:

Left-to-right or right-to-left
Field reversible (consult factory)

Failure Mode:

Closed or last position upon electric or pneumatic failure.

Shutoff Classification:

Per ANSI/FCI 70-2
Atomizing seat – Meets or exceeds CL. IV
Purge seat – Meets or exceeds CL. IV
Fuel seat – Meets or exceeds CL. VI

Total Stroke:

7/8" for both models

Operating Speed:

Opening – Approximately 0.6 seconds, maximum determined by speed control option.

Closing – Oil valve closure in approximately 1 second, full closure in approximately 2 seconds

Ambient Temperature Rating:

Standard: 140°F (FM approved)
Optional: 180°F (non-FM approved)

Electrical Rating:

Standard: Nema 1, 3, 4, 13
Optional: Nema 7 (Class 1 Div 2, consult factory)

Switch Rating: 10 Amps at 125 VAC

Solenoid Supply Voltages:

110 VAC, 220 VAC, 50/60 Hz
12, 24, 48, 125 VDC

Air Supply Pressure:

70-120 PSIG – Clean, dry air

Weight:

Approximately 42 lbs per valve assembly

Cv Ratings:

Atomizing Cv – 4.2
Purge Cv* – 1.8
Fuel Cv – 4.0

*Note Total Atomizing flow in Purge position is limited to the atomizing Cv.