CONTINENTAL CONTROLS CORPORATION

– A VALVE YOU CAN TRUST –

FT10 FUEL TRAIN

FUEL SHUTOFF MANIFOLD

BENEFITS

- True block and bleed design maximizing safety
- All stainless steel piping and tubing
- Pre-assembled and pressure tested
- Closes in <200 milliseconds
- Fail-safe closed, spring return
- Safety Integrity Level (SIL) 2–3
- Normally-open vent valve for block and bleed
- Fuel temperature range -40°C to +85°C
- Better than Class VI shutoff
- Compliant with CSA, ATEX, PED, API
- Certified for ASME Section IX and ASME B31.1
- Certified for use in explosive atmosphere
- Operates from line pressure
- Designed for gaseous fuels

APPLICATION

The FT10 Fuel Train is designed to provide extremely fast shutoff of gaseous fuel flow to an industrial gas turbine engine. Gas flow is stopped when the isolation valves are closed or when pilot pressure is removed, with zero leakage from inlet to outlet. It is designed to perform reliably in temperatures ranging from -40°F to +185°F (-40°C to +85°C).

The isolation valves can achieve ANSI Class IV shutoff capability. The normally-closed valves may be used for emergency and normal shut down operation. Stainless steel construction provides high corrosion resistance.

This product is suitable for use on industrial turbines up to 5,820 hp output range with single or multiple combustion fuel manifold systems.

DESCRIPTION

The FT10 is a double block and bleed. The Fuel Train's dual isolation valves shut down the gas turbine by rapidly shutting off the natural gas supply. The gas pressure between the two shutoff valves is then vented to a safe area. The valves are pilot operated and are plumbed to use the existing supply pressure. The entire Fuel Train is fail-safe closed. If power or pressure is removed, the two shutoff valves close, and the vent opens. The Fuel Train is bubble-tight, and certified fire-safe with a Safety Integrity Level (SIL) of 2–3.

FT10
FUEL TRAIN



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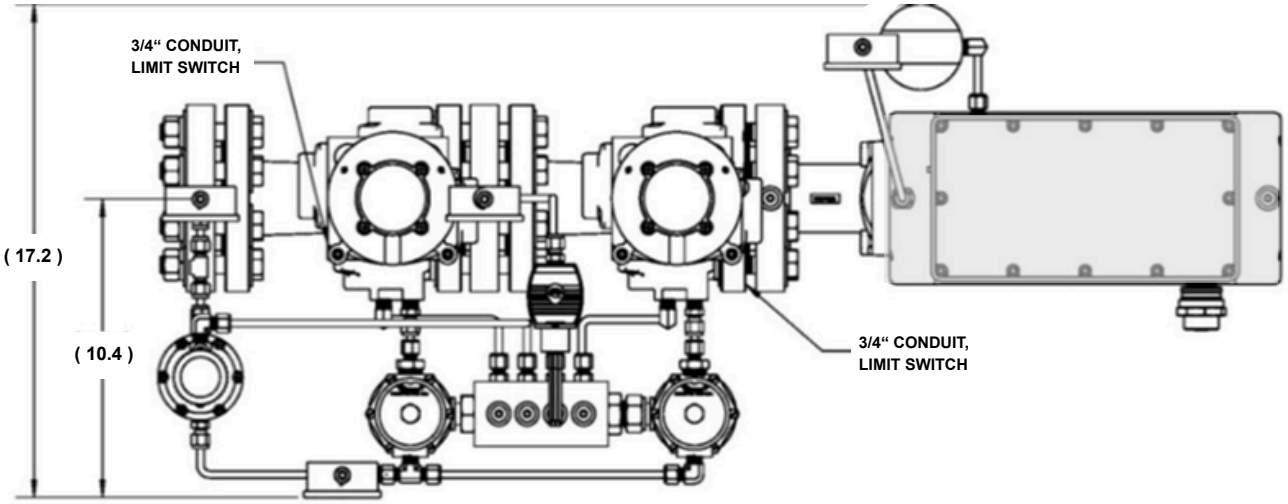
FT10 SPECIFICATIONS

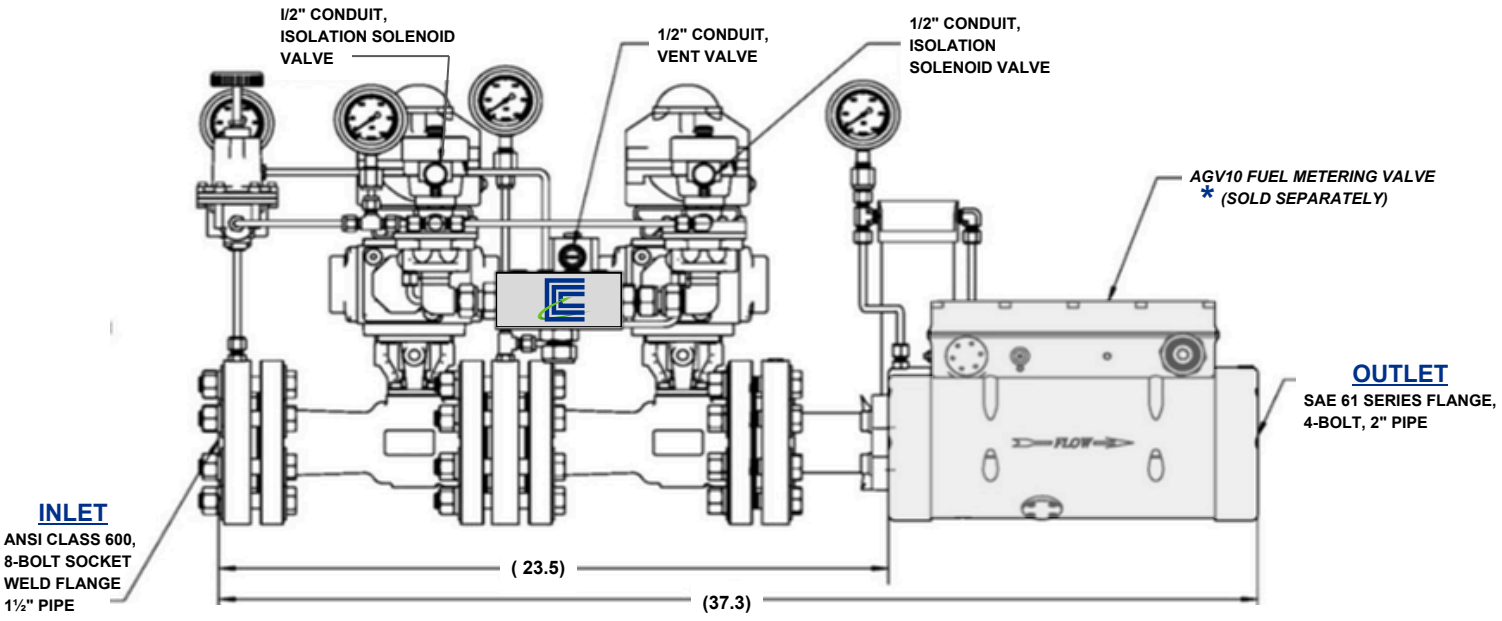
Performance:	Closing time within 0.200 seconds
Operating Conditions / Environment	
Chemical compatibility:	NACE compliant for all typical gas fuels
Operating temperature:	-40°C (-40°F) to +85°C (+185°F)
Fuel types:	Natural gas, propane, ethane, methane
Fuel supply pressure:	Normal operation 150–500 psig
Fuel solid particle contaminant:	<10 µm diameter, 30 ppm by volume
Pilot filtration:	10 µm
Electrical Specifications	
Voltage available:	24 VDC, 2.0 A
Wiring interface:	½–14 NPT conduit entry
Mechanical Specifications	
Inlet:	1½" socket weld flange per ANSI B16.5; 600#
Outlet:	SAE Series 61, 1½", 4-bolt flange
Regulatory Compliance	
CSA:	CSA Certified for Class I, Div 1 and Div 2, Groups C & D: T4
ATEX:	Declared to 94/9/EEC
PED:	PED 97/23/EC Module H
API:	API 607, ISO 10497
Safety Integrity Level (SIL):	IEC 61508-2 SIL 2/3
Valve design:	ANSI B16.34, API 6D / ISO 14313, ISO 17292
H2S:	NACE MR-0175, ISO 15156-1/2/3

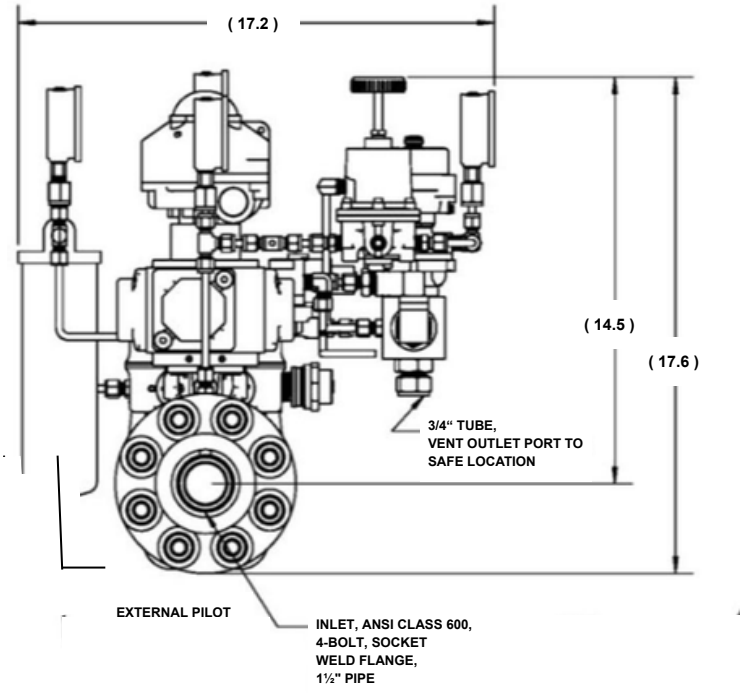
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ISO 9001 CERTIFIED

MECHANICAL CONSTRUCTION *







LEAKAGE TESTING

Habonim refers to the international standards for valve testing:

- API 598
- ISO 15848-2
- API6D
- EN 12266-½
- ISO 5208
- BS 6364

Strength/Valve Shell Leak Test:

- Tested per quality system procedures by usage of compressed air, nitrogen, or water

In-Line Leak Test:

- 100% of valves are tested by compressed air, nitrogen or helium at 5-7 bar pressure
- Pass Criteria: Rate A result (bubble tight shutoff) for soft seated valves

Functional Test:

- 100% of valves are tested
- Torque is tested to design limits