

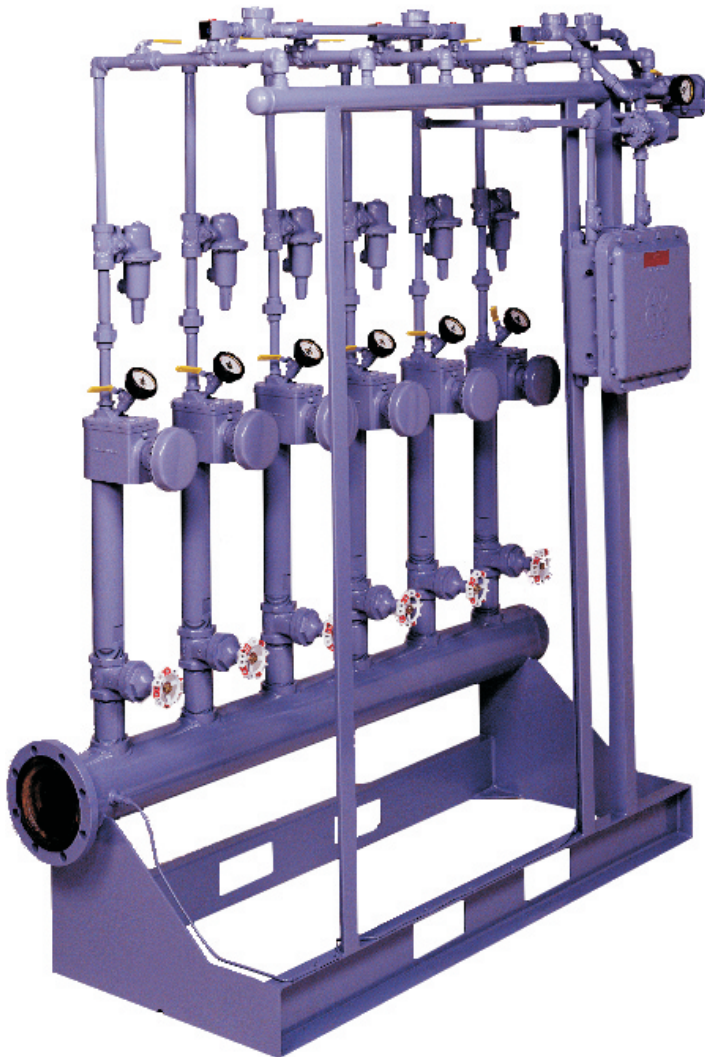
Algas-SDI™

...Innovative liquid vaporizing and gas mixing solutions

ISO 9001
Certified

M-Series

Venturi LPG/Air Mixer; Models M21.0 through M250.0



- *Mixed gas delivery pressures available up to 15 psig for propane and 8 psig for butane without air assist.*
- *Mixed gas delivery pressures available up to 40 psig with air assist.*
- *Provides an LPG/Air mixture to supplement or replace your natural gas.*
- *No modifications to your equipment are necessary.*
- *No orifices to change and no sooting or fouling of combustion equipment.*
- *Connects directly to existing natural gas fuel lines.*
- *Complies with Class I, Division 1, Group D requirements as specified by NFPA Pamphlet 58 and 70.*

Specifications

Capacity [†] Million BTU/Hr.	Delivery Pressure ^{††}						LPG Vapor Inlet (FNPT)	LPG/Air Outlet
	5 psig	8 psig	10 psig	12 psig	15 psig	15-40 psig		
21	M21-5 ¹	M21-8		M21-12			1"	6"-150# FLG
26			M26-10				1"	
28	M28-5 ¹	M28-8		M28-12	M28-15	M28-PA	1"	
35	M35-5	M35-8		M35-12			1½"	
39			M39-10				1½"	
42	M42-5 ²	M42-8		M42-12	M42-15	M42-PA	1½"	
52			M52-10				1½"	
56	M56-5 ²	M56-8		M56-12	M56-15	M56-PA	1½"	
65			M65-10				2"	
70	M70-5	M70-8		M70-12	M70-15	M70-PA	2"	
78			M78-10				2"	
84	M84-5	M84-8		M84-12	M84-15	M84-PA	2"	
100	M100-5	M100-8		M100-12	M100-15	M100-PA	2"	8"-150# FLG
125	M125-5	M125-8		M125-12		M125-PA	2½"	
150	M150-5	M150-8		M150-12	M150-15	M150-PA	3"	
175	M175-5	M175-8		M175-12		M175-PA	3"	
200	M200-5	M200-8		M200-12		M200-PA	3"	
225	M225-5	M225-8		M225-12		M225-PA	3"	10"-150# FLG
250	M250-5	M250-8		M250-12		M250-PA	3"	

¹ Models M21-5 and M28-5 have a 1-½"NPT vapor inlet.

² Models M42-5 and M56-5 have a 2"NPT vapor inlet.

³ M21 through M84 require a 240 gallon surge tank. M100 and above as well as all 15 PSI units require the 500 gallon surge tank.

[†] Capacity ratings based on a mixed gas gross heating value of 1450 BTU/SCF with commercial grade propane.

^{††} Delivery pressures shown are valid up to 2000 ft elevation. Contact factory for information regarding applications at higher elevations.

Contact factory for shipping weights.

Features

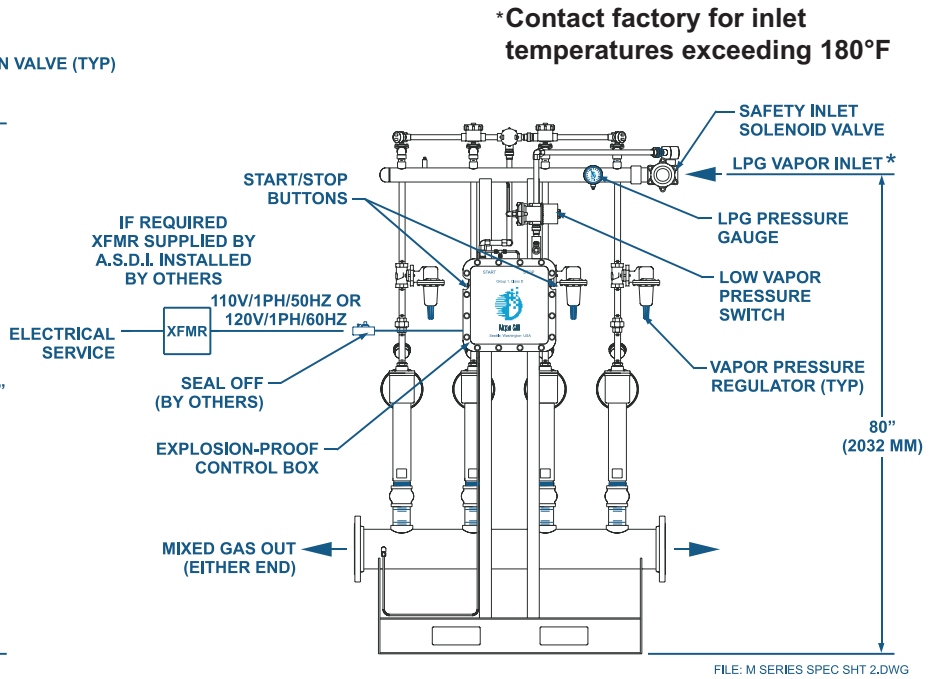
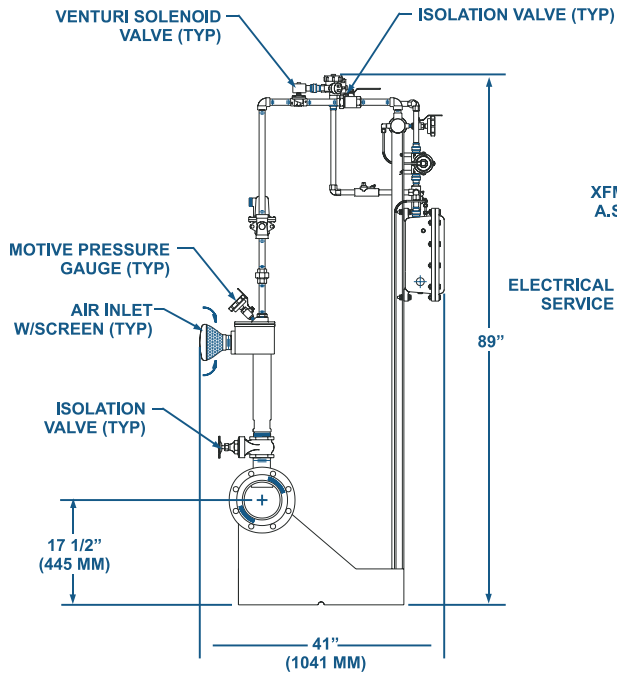
- ◆ Solid state progressive sequencer performs pre-programmed logic On/Off switching functions to accurately match each venturi to any flow demand (21-250 MMBTU/hr).
- ◆ Adjustable mixed gas delivery pressures are available between: 4-5 psig, 6-8 psig, 9-10 psig, 11-12 psig, and 13-15 psig. Consult factory for adjustable range on air assist models.
- ◆ Low vapor pressure safety switch prevents rich mixtures from developing due to inadequate motive pressure (i.e., delivery pressure of unmixed LPG to the venturi nozzle).
- ◆ 100% turndown capability.
- ◆ High mixed gas pressure safety switch prevents over pressurization of gas accumulator.

- ◆ Mixed gas outlet can be on either end.
- ◆ Two or more units can easily be operated in parallel to meet the growing requirements of your business.
- ◆ All external metal surfaces are mechanically cleaned, primed, and painted.
- ◆ 120V/1ph electrical system (220V/1ph optional).
- ◆ Shipped complete with all operating and safety controls.

Options:

- Air intake silencers.
- Mixed gas accumulator tank.
- Air assist option for mixed gas pressure between 15-40 psig.

Dimensions

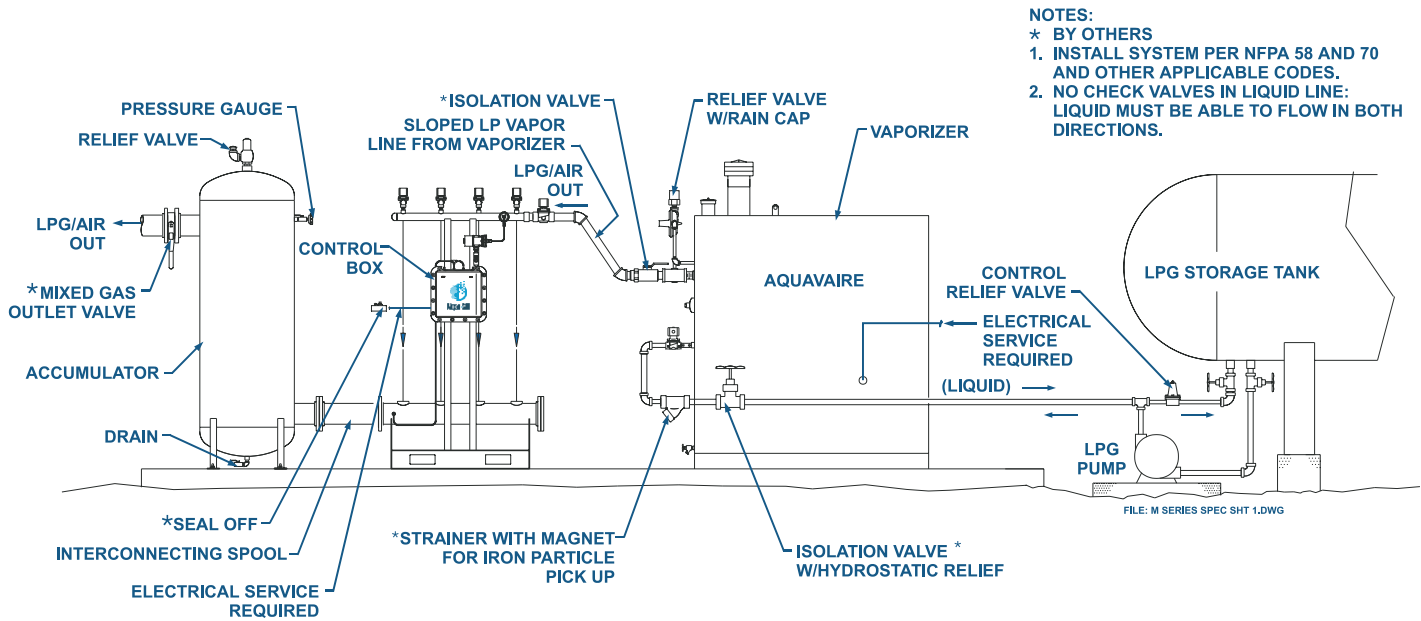


Venturi Operation

Mixed gas is produced by the M-Series[®] venturi assembly. LPG vapor enters the M-Series[®] vapor inlet. The venturi solenoid valves energize upon command from the controller and admits LPG to the venturis. The controller is a solid state switching device linked to a pressure transducer that monitors accumulator tank pressure. When pressure falls, the controller sequentially energizes the number of solenoid valves necessary to re-establish the proper mixed gas pressure. LPG vapor flows through a regulator and pressure is reduced to the proper motive pressure desired for the venturi nozzle. The regulated LPG vapor enters the venturi nozzle, accelerates, and creates a suction at the air inlet. The gas/air mixtures are propelled into the diffuser where it decelerates and gains pressure as it fills the accumulator tank. The mixed gas remains in the accumulator tank at the pressure set by the sequencer until withdrawn through the mixed gas discharge valve. The high mixed gas pressure safety switch monitors mixed gas pressure within the accumulator tank. If this pressure exceeds the normal mixed gas delivery pressure, the inlet safety solenoid valve will close, restricting LPG vapor flow into the mixer.

LPG Vapor Pressure Requirement Data For Propane

Mixed Air/Propane Delivery Pressure (psig)	Minimum Inlet Vapor Pressure (psig)
5	31 - 51
8	70 - 76
10	99 - 109
12	110 - 120
15	160
For Butane	
8	95
For Pressure Assist	
15 - 40	70 - 90
Contact factory for additional information	



M-Series® is a registered U.S. trademark of **Algas-SDI**.



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