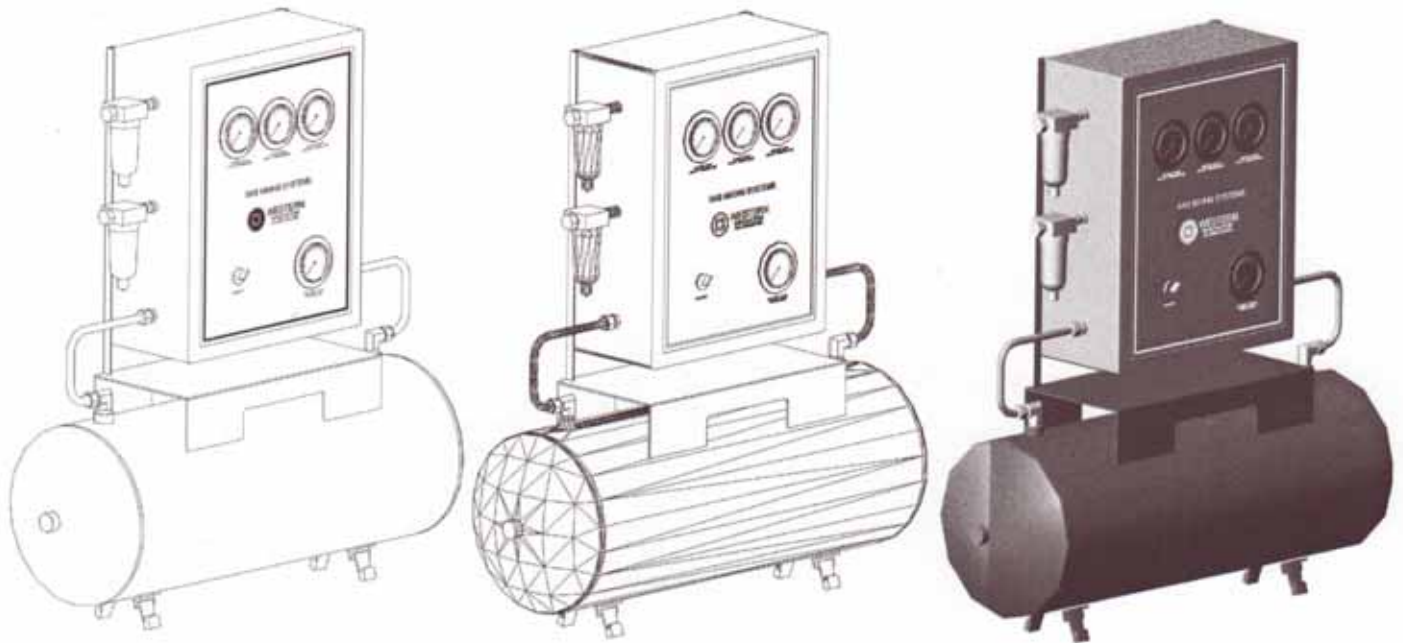


Variable Ratio Gas Mixers - 1200 scfh  
Fixed Ratio Gas Mixers - 2000 scfh

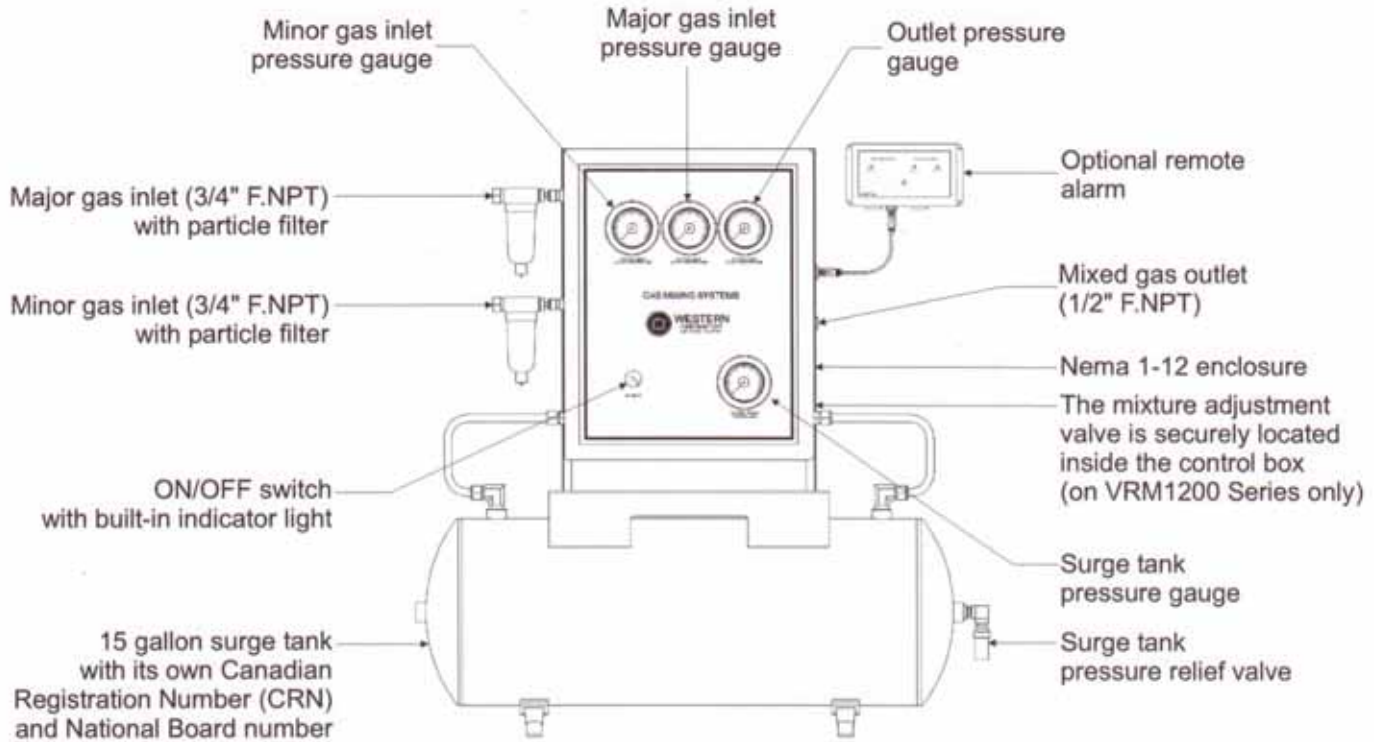


Innovative solutions for all your gas  delivery needs



**VARIABLE RATIO GAS MIXERS - 1200 SCFH  
FIXED RATIO GAS MIXERS - 2000 SCFH**

**1200 & 2000  
SERIES**



**Description - 1200 scfh mixers**

**Description - 2000 scfh mixers**

The Western VRM1200 is a variable ratio gas mixer for argon, carbon dioxide, helium, nitrogen and oxygen. The mixer is suitable for different applications such as welding, modified atmosphere packaging, process control and similar applications. The gas mixture can be changed in the field by adjusting a single calibrated dial located inside the mixer control box. The VRM1200 gas mixer will deliver constant gas mixture concentration up to 1200 scfh while the mixer is still cycling.

The Western FRM2000 is a fixed ratio gas mixer. It has the same configuration as the VRM1200, but as a result of the fixed flow device, the mixture cannot be changed in the field. It is pre-calibrated at the factory. Although the tank and overall dimensions remain the same, the internal components allow flows up to 2000 scfh while the mixer is still cycling.

**How to order - part number matrix**

**VRM1200** -  -  -  -

Series  
VRM1200 = Variable

Major gas  
See gas selection table

Minor gas  
See gas selection table

Adjustable minor gas  
concentration range

Remote alarm  
■ RA = Remote alarm  
(Leave blank if none)

**FRM2000** -  -  -  -

Series  
FRM2000 = Fixed

Major gas  
See gas selection table

Minor gas  
See gas selection table

Minor gas concentration  
setpoint

Remote alarm  
■ RA = Remote alarm  
(Leave blank if none)

**Gas selection table**

- Argon = 3
- Carbon dioxide = 4
- Helium = 5
- Nitrogen = 7
- Oxygen = 9

Refer to technical specifications for acceptable gases and related concentrations

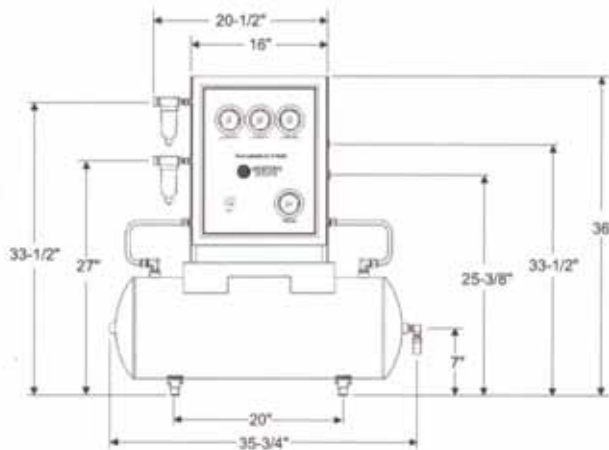


# VARIABLE RATIO GAS MIXERS - 1200 SCFH FIXED RATIO GAS MIXERS - 2000 SCFH VRM1200 & FRM2000 SERIES TECHNICAL SPECIFICATIONS

## Principle of operation

The supply gases are individually filtered at the inlet of the mixer to remove particles. The pressure of each gas is then regulated at the exact same pressure before entering their respective flow restrictors. The flow restrictors are adjusted to ensure the requested gas mixture. The gases are blended in a mixing tee before entering the surge tank. The tank is constantly monitored by a pressure switch which actuates the solenoid valve on & off to allow the mixture to fill the surge tank at a constant pressure and flow. The mixture pressure is controlled by a line regulator before entering the pipeline.

## Dimensions



## Fixed ratio vs Variable ratio mixers

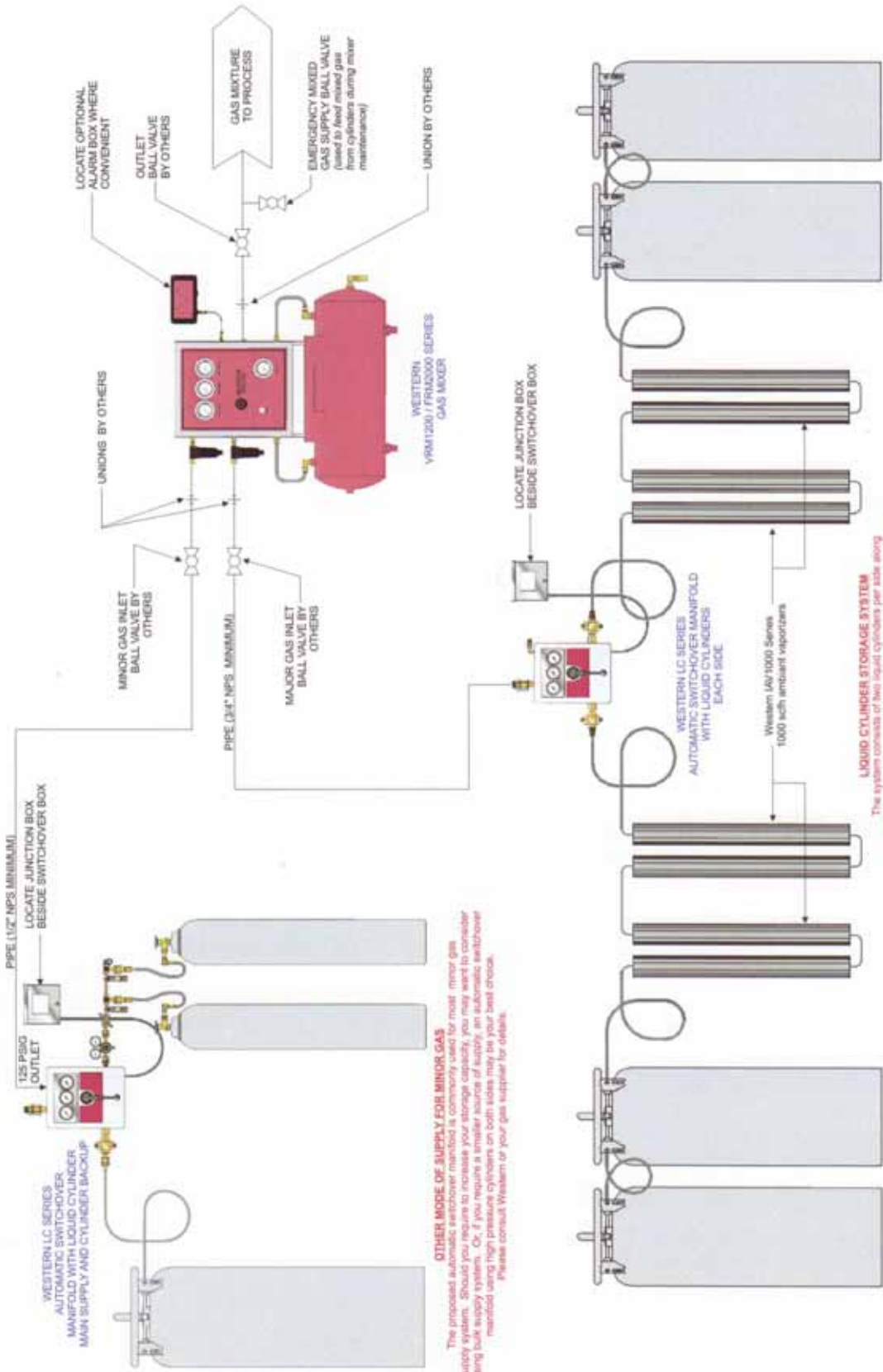
Fixed	Variable
<ul style="list-style-type: none"> <li>Greater mixture accuracy (+/- 2%) of minor gas</li> <li>Wide range of mixtures</li> <li>Prevents operators from changing mixture concentrations</li> </ul>	<ul style="list-style-type: none"> <li>Field adjustable mixture</li> <li>For applications where mixture accuracy is not critical</li> <li>Possibility of changing mixture concentrations by operators</li> </ul>

## Technical specifications

Description	Fixed - FRM2000	Variable - VRM1200
Available mixtures	0-100% CO <sub>2</sub> in Argon 0-100% Oxygen in Argon 0-100% Helium in Argon 0-100% Nitrogen in Argon 0-100% CO <sub>2</sub> in Nitrogen 0-100% Oxygen in Nitrogen 0-100% Helium in Nitrogen	0-35% CO <sub>2</sub> in Argon 0-10% Oxygen in Argon 0-50% Helium in Argon 0-50% CO <sub>2</sub> in Nitrogen Other ranges available
Flow capacity (still cycling)	2000 scfh	1200 scfh

## For both Fixed & Variable mixers

Operating temperature	-28.9°C to 37.8°C (-20°F to + 100°F)
Maximum inlet pressure	250 psig
Factory set inlet pressure	100-125 psig
Maximum outlet pressure	50 psig
Size of pressure gauges	2"
Surge tank pressure relief valve	150 psig
Outlet connection	1/2" FNPT
Inlet connections	3/4" F.NPT
Filtering element	40 micron
Tank capacity	15 gallons
Alarm	Optional
Power requirement	110 VAC, 50/60 Hz, 5 Amp
Mixture accuracy	+/- 2% of minor gas



# Typical Installation VRM1200 & FRM2000



## Western Enterprises

875 Bassett Rd, Westlake, Ohio 44145  
 Phone: (440) 871-2160, Toll Free: 1-800-783-7890, Fax: (440) 835-8283  
 Web-site: [www.westernenterprises.com](http://www.westernenterprises.com)

Hours: Monday- Friday 8:00 AM to 5:00 PM / Eastern Standard Time