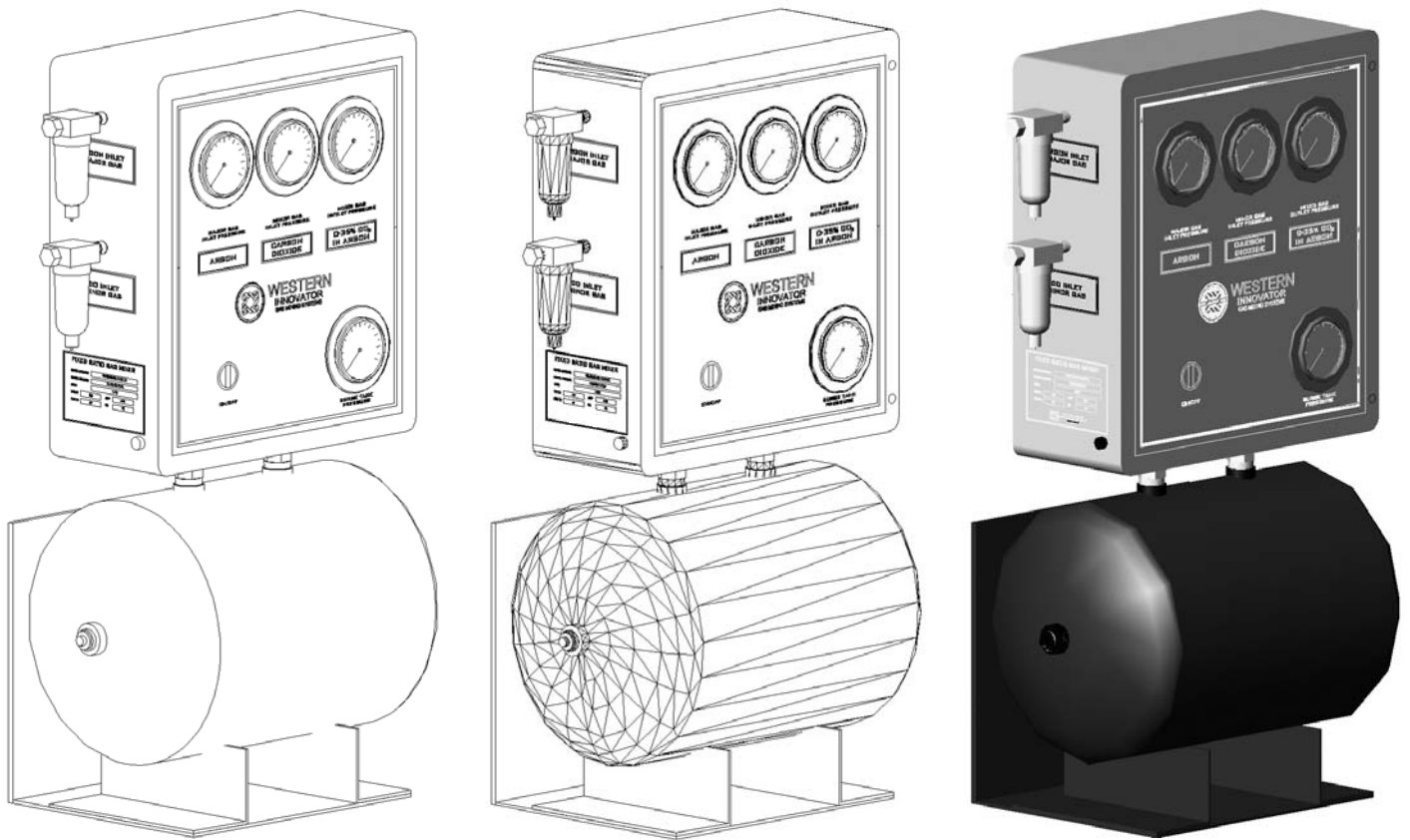


Fixed & Variable Ratio Gas Mixers - 800 scfh

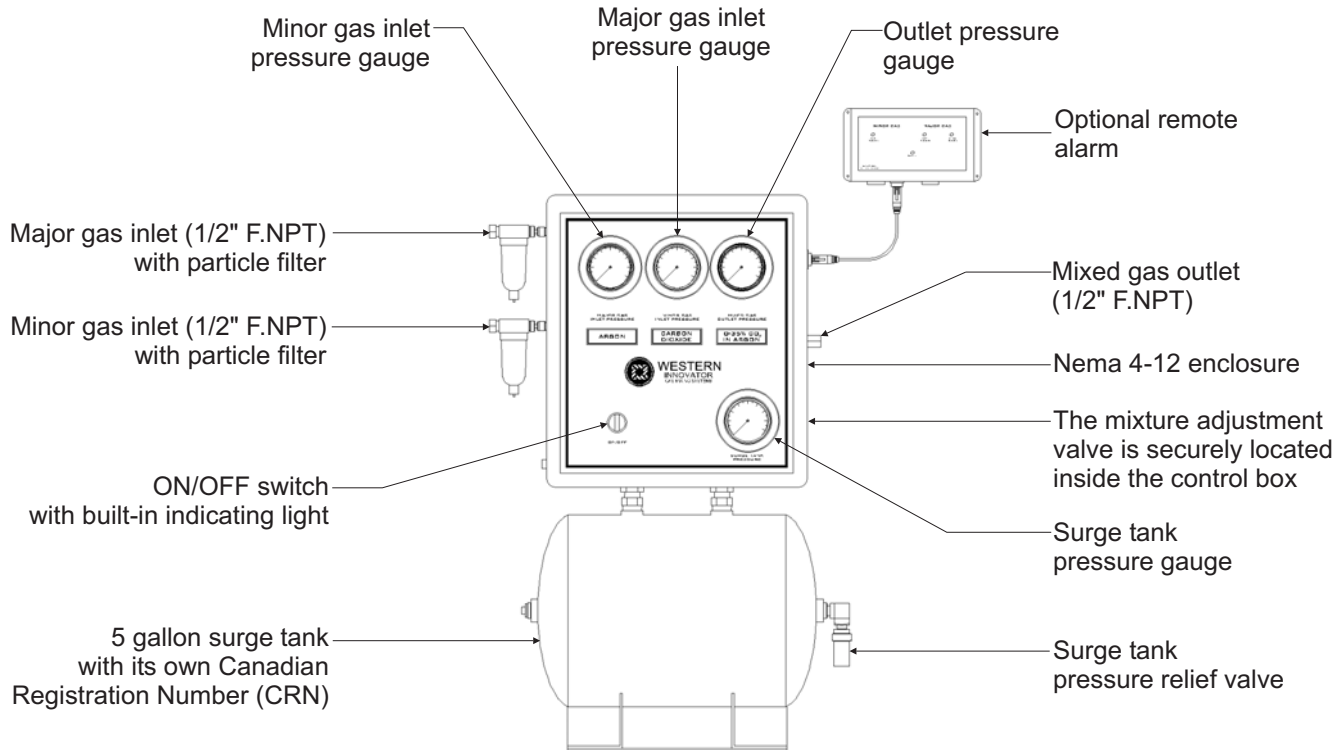


Innovative solutions for all your gas delivery needs



FIXED & VARIABLE RATIO GAS MIXERS - 800 SCFH

800
SERIES



Description

The 800 Series gas mixers are commonly used for argon, carbon dioxide, helium, nitrogen and oxygen. The mixer is suitable for different applications such as welding, modified atmosphere packaging, process control and other similar applications.

Fixed ratio mixers:

The gas mixture is preset at the factory.

Variable ratio mixers:

The gas mixture can be adjusted by the end user. The mixture adjustment knob is located inside the lockable control box.

Key Features

- Mixer is still cycling at 800 scfh (see table on back page for maximum flow rates)
- Optional remote alarm for low supply gas pressure
- Provides an economical supply of mixed gases
- Accurate mixing of two gases
- Simple and reliable construction
- Fabricated in accordance with the following standards: CGA, CSA, CRN, NFPA, ASME

How to order - part number matrix

FRM800 - [] - [] - [] - []

Series
FRM800 = Fixed

Major gas

Minor gas

Minor gas concentration range

Remote alarm

- RA = Remote alarm (Leave blank if none)

Gas

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

VRM800 - [] - [] - [] - []

Series
VRM800 = Variable

Major gas

Minor gas

Minor gas concentration range

Remote alarm

- RA = Remote alarm (Leave blank if none)

Refer to technical specifications for acceptable gases and related concentrations

Contact Technical Sales 800.783.7890



FIXED & VARIABLE GAS MIXERS - 800 SCFH FRM800 & VRM800 SERIES TECHNICAL SPECIFICATIONS

Principle of operation

The supply gases are individually filtered at the inlet of the mixer to remove particulates. 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.

Materials of construction

Description	
Tank	Steel (painted burgundy)
Enclosure	16 gauge steel (Beige powder coating)
Fittings	Brass (CDA 36000 & CDA 37700)
Tubing	Copper (ASTM B280, B819) and Nylon
Regulator	Bonnet: Aluminum Seat disc: Neoprene or EPDM Diaphragm: Neoprene or EPDM or Nitrile Body: Aluminum or Zinc Valve: Brass and Nitrile Elastomers: Nitrile Bottom plug: Brass or Nylon
Filter	Body & bowl: Zinc Element: Sintered polypropylene Elastomers: Neoprene & nitrile

Fixed vs Variable mixers

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

Technical specifications

Description	Fixed	Variable
Available mixtures	0-100% CO ₂ in Argon 0-100% Oxygen in Argon 0-100% Helium in Argon 0-100% Nitrogen in Argon 0-100% CO ₂ in Nitrogen 0-100% Oxygen in Nitrogen 0-100% Helium in Nitrogen	0-35% CO ₂ in Argon 0-10% Oxygen in Argon 0-50% Helium in Argon 0-50% CO ₂ in Nitrogen Other ranges available

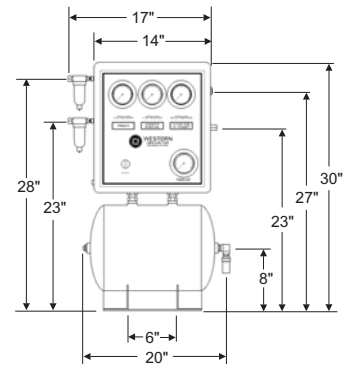
For both Fixed & Variable mixers

Flow capacity (still cycling)	800 scfh
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 (1034 Kpa)
Outlet connection	1/2" FNPT
Inlet connections	1/2" F.NPT
Filtering element	40 micron
Tank capacity	5 gallons
Alarm	Optional
Power requirement	110 VAC, 50/60 Hz, 0.5 Amp

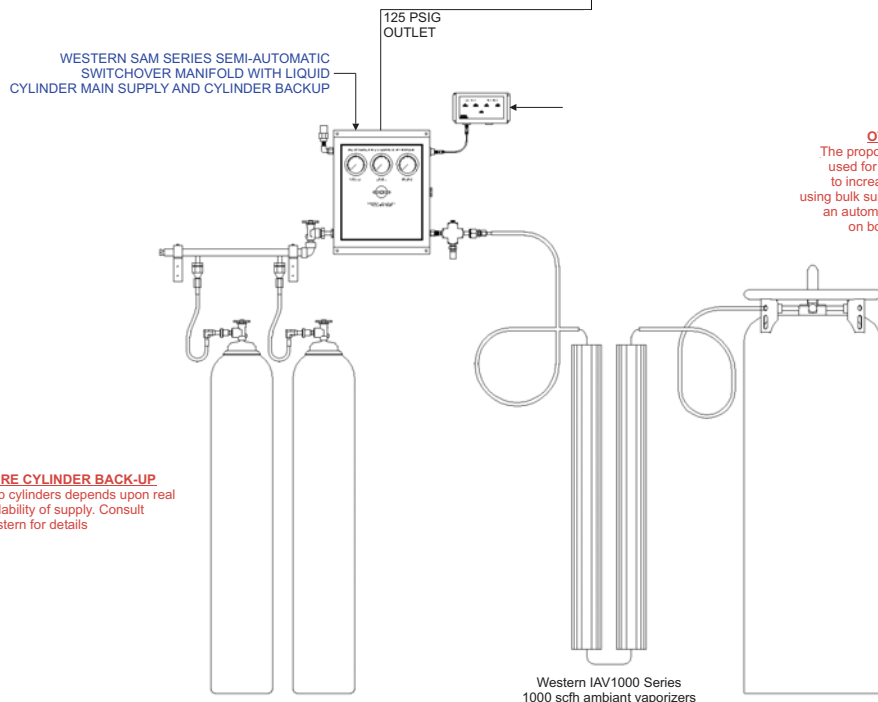
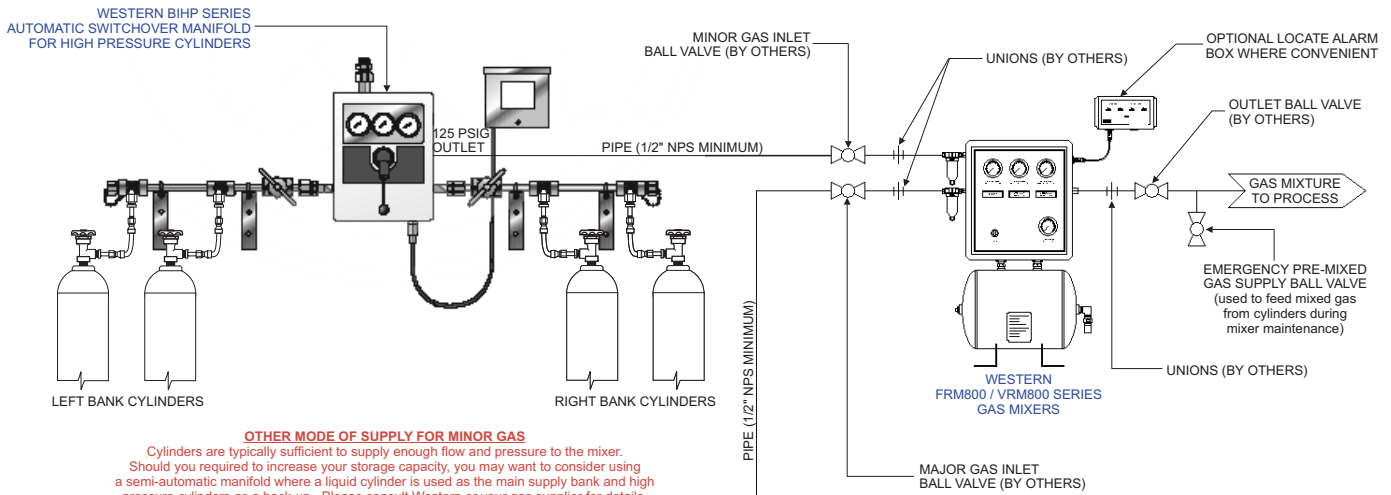
Flow rates (in scfh)

GAS MIXTURE	Flow Rates			Total Flow	No. of welders suggested
	Argon 800 scfh	CO ₂	(% CO ₂ bal. Argon)		
Carbon Dioxide in Argon Mix	Argon 800 scfh	CO ₂	(25% CO ₂ bal. Argon)	1066 scfh	26
	Argon 800 scfh	CO ₂	(15% CO ₂ bal. Argon)	941 scfh	23
	Argon 800 scfh	CO ₂	(8% CO ₂ bal. Argon)	869 scfh	21
Oxygen in Argon Mix	Argon 800 scfh	O ₂	(2% O ₂ bal. Argon)	816 scfh	20
Helium in Argon Mix	Argon 800 scfh	He	(10% He bal. Argon)	888 scfh	22

Dimensions



Typical installation



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