

# Manifold Systems

## Porter Vanguard Manifold System

Porter's Vanguard System incorporates precise monitoring of gas pressures, providing both audible and visual alerts if the pressures fluctuate more than 20% in either direction. The Vanguard offers the additional benefit of automatic change over of gas supply from empty to reserve tanks.



### Vanguard Wall Alarm

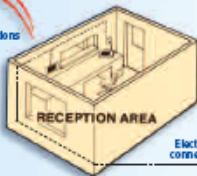
Just press a button and gas supply is delivered from the manifold system. Provides automatic changeover from empty to reserve tank. Audible alarm monitors the gas supply and LEDs indicate line pressure and on-line tank status.



### Vanguard Desk Alarm

All the features of the Vanguard wall alarm, but in a convenient desk model.

Alarm Options



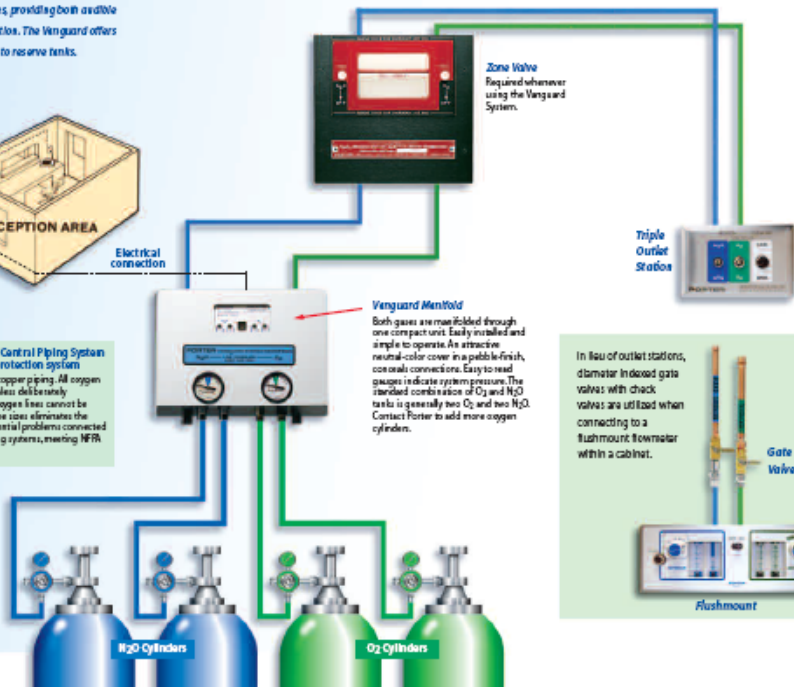
RECEPTION AREA

Electrical connection

### Typical Nitrous Oxide/Oxygen Central Piping System Incorporating Porter's cross 54 protection system

All nitrous oxide lines are 3/8" O.D. copper piping. All oxygen lines are 1/2" O.D. copper piping. Unless deliberately tapered with nitrous oxide and oxygen lines cannot be crossed. The use of two different pipe sizes eliminates the greatest cause for concern and potential problems connected with the installation of central piping systems, ensuring NFPA 99 recommended guidelines.

## Porter System Schematic



Zone Valve  
Required whenever  
using the Vanguard  
System.

Triple  
Outlet  
Station

### Vanguard Manifold

Both gases are manifolded through one compact unit. Easily installed and simple to operate. An attractive neutral-color cover in a pebble-finish, concealed connections. Easy to read gauges indicate system pressure. The standard combination of O<sub>2</sub> and N<sub>2</sub>O tanks is generally two O<sub>2</sub> and two N<sub>2</sub>O. Contact Porter to add more oxygen cylinders.

In lieu of outlet stations, diameter In dexed gate valves with check valves are utilized when connecting to a flushmount flowmeter within a cabinet.



Flushmount



PORTER

H<sub>2</sub>O Cylinders

O<sub>2</sub> Cylinders