These Porter brochures are available as PDF files on the Porter website, www.porterinstrument.com.
Porter's trailblazing innovations in measuring and controlling gases in critical applications reach their highest realization and effectiveness in the Porter Nitrous Oxide Sedation Systems. This unparalleled 30 year legacy of precision is your assurance of a sedation system offering the highest attainable levels of patient comfort and system safety, reliability and ease of operation. The entire Porter system, from the precision flowmeter, to the patented automatic vacuum switch, to the double mask scavenger are designed to enhance the patient experience while helping generate a desirable and dependable revenue stream for you.

Featuring an Unequaled Blend of Precision, Safety and Comfort

**Precision!**
**Porter Glass Tubes and Valve Design**
Unsurpassed for accurate visual read flow readings with .5 liter markings, Porter flow tubes have become the standard of the Dental and Medical professions. The needle valves, designed and manufactured by Porter Instrument, provide quick, accurate, one-hand adjustment of gas flows to match the patient’s breathing rate.

**Safety!**
**Porter Automatic Vacuum Switch and Failsafe**
Patented design, the AVS automatically prevents nitrous oxide/oxygen from being administered without scavenging. Whenever the “gas” flows, the vacuum is “ON.” It’s automatic and a real time saver! A dual-seal, one-piece, solid aluminum construction failsafe virtually eliminates internal gas leaks. The proportional failsafe automatically reduces/stops the flow of nitrous oxide if the oxygen line pressure is reduced or the oxygen flow is interrupted.

**Comfort!**
**Porter Double Mask Scavenger**
A soft and flexible inner liner provides a better seal around the nose, a more comfortable fit for your patient, and extraordinary, industry-leading scavenging efficiency.*

* Virginia Commonwealth University test data available, contact Porter.
These are the gas-saving flowmeters that have set the new standard for accuracy so high, they are trusted in hospitals across the country for the critical administration and regulation of anesthetic gases. The full range of exceptional performance and safety features built into the Porter Flowmeters make them the most trustworthy instruments of their kind for your practice.

Porter MXR-1 Cabinet Mount Flowmeter
Installed in the preferred 12 o’clock position behind the dentist, it affords convenient and easy access, out of the patient’s line of sight, and in the position that gives you the greatest efficiency of movement.

The cabinet mount flowmeter comes standard with a NIOSH recommended inter-connect between the delivery unit and the vacuum system for fail-safe operation.

The original gas-saving Porter MXR Flowmeter
Offers all the fail-safe and security features of the Porter cabinet mount MXR-1 to those dentists who would prefer an at-your-side vertical version. The only practical difference is that the breathing bag and bag tee are attached to the machine for ideal monitoring efficiency. Dual-seal, one-piece solid aluminum construction virtually eliminates internal gas leaks.

Outstanding Features Include:

1. **Porter Flowmeter Tubes.** Provide accurate, visual flow readings—the standard of the industry.
2. **Dual Seal Fail-Safe.** Automatically reduces and eliminates N2O if O2 is shut off or the pressure is reduced.
3. **Gas Control Block.** Virtually eliminates internal gas leaks. One-piece, solid aluminum construction.
4. **Gas Flow Adjustment Knobs.** Throttle-type knobs allow quick, accurate, one-hand adjustment of gas flows.
5. **Emergency Air In-Take Valve.** Automatically provides patient with ambient air if gas flow is interrupted.
6. **Check Valve.** Prevents rebreathing of used gases and guards against CO2 build-up in the breathing bag.
7. **Positive ON-OFF Switch.** On all models, the on-off switch eliminates the possibility of accidentally leaving the machine on.
8. **Oxygen Flush Button.** Provides an easily accessible override of all other gas flows and delivers 100% O2.
9. **Posi-Stop Needle Valves.** Spring washer design prevents overturn of needle stems and resulting damage to seats and valves.
10. **Oxygen Quick Connect.** Facilitates connection of resuscitation equipment to the central system.
11. **Total Flow Adjustment Knob.** Controls flow of both N2O and O2 at any desired concentration. Total flow can be adjusted without affecting concentration. Low flow capability means economy of operation. Available only on MXR model.
The Porter scavenging system is the only double mask (mask-within-a-mask) system. It features an outer mask and a flexible, disposable (single-use), or autoclavable (multi-use), easily removable inner liner. It is the soft inner liner that creates the complete, yet comfortable, seal around the patient’s nose, thus assuring the Porter mask’s superior scavenging efficiency. The Porter masks are available in both adult and pedo sizes; the inner liners either unscented or citrus scented. The masks are autoclavable by either steam or chemical sterilizing and the Porter scavenging system is retrofittable to most flowmeters.

In a major Dental School* study of the effectiveness of different scavenging systems used in actual pediatric dental treatment, the Porter “Double Mask” Scavenging System was found to be the only one tested to reduce the occupational exposure of nitrous oxide to acceptable levels, meeting the 25 ppm requirements set by the National Institute of Occupational Safety and Health.

* University of Medicine and Dentistry of New Jersey, New Jersey Dental School

OPTIONS FOR VACUUM HOOK-UP

The Porter Scavenger was rated No. 1 in scavenging efficiency in a study at Virginia Commonwealth University Dental School.*

*reprint available on request.
Automatic changeover to reserve tank; memory of tank usage and empty tank indicator all accomplished automatically.*

Failsafe protection - loss of oxygen supply pressure shuts down nitrous oxide supply pressure.*

Cross-protection diameter indexed tubing connections.

Swivel tubing connections allow for easy connection of piping in up or down configuration.

Pressure relief valves for operatory equipment protection.

Diameter indexed inlet fittings (DISS) with O-ring seal back-up and check valves.

*Pertains to Vanguard manifold systems (see page 10)

1. No more than 3000 cubic feet of gas in the tank room.
2. Gas stored in a locked cabinet or room.
3. At least 72 sq. inches of vent area in cabinet or room.
4. A separate regulator for each cylinder of gas.
5. A pressure relief valve set at 75 psi.
6. A check valve downstream of each regulator.
7. Line pressure gauges for each gas.
8. Type K or L, pre-cleaned, degreased capped copper piping ONLY.
9. Flexible tubing with minimum burst pressure of 1000 psig.
10. Flexible tubing must NOT go through wall or partition.

The Sentinel System provides immediate audible, and highly visible alarms, should gas supply pressure begin to fluctuate out of the normal operating zone. The compact, high precision alarms are available in on-desk or flush-mounted wall models.
Porter’s Vanguard System incorporates precise monitoring of gas pressures, providing both audible and visual alarms if line pressures fluctuate more than 20% in either direction. The Vanguard offers the additional benefit of automatic changeover 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 LED’s 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.

Typical Nitrous Oxide/Oxygen Central Piping System
Incorporating Porter’s cross-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 tampered 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, meeting NFPA 99 recommended guidelines.

Zone Valve
Required whenever using the Vanguard System.

Electrical connection

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, conceals connections. Easy to read gauges indicate system pressure. The standard combination of O₂ and N₂O tanks is generally two O₂ and two N₂O. Contact Porter to add more oxygen cylinders.

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

Fluxmount
Outlet Stations

Porter Operatory Outlet Stations

Triple Outlet Station (6255-1, 6256-3)
This is Porter’s advanced one-piece combination Clean-Air™ and Nitrous Oxide/Oxygen gas outlet station that both delivers and removes Oxygen and Nitrous Oxide in the dental operatory.

Standard Outlet Station (6200-1)
This is Porter’s performance proven, diameter indexed Nitrous Oxide/Oxygen outlet station.

Floor Mounted Outlet Station (6300-1)
Identical in operation to the Standard Outlet Station, but in a compact size for clean, un-obtrusive floor installation.

Mounting & Accessories

Porter Flowmeter Mountings and Accessories

A. Solid Wall Mount (2020)
Sturdy aluminum construction with telescoping arm that extends or retracts.

B. Cut Out Wall Mount (2022)
For use with Porter’s 6255-1 outlet station.

C. Side Cabinet Slide Mount for AVS/bag tee (2036-2, 2036-4)
Slides out for easy access and storage. For use with flushmount flowmeters for AVS/bag tee. Minimum cabinet depth needed is 18” for AVS and 12” for bag tee only.

D. Under Cabinet Slide Mount for AVS/bag tee (2037-1)

E. Flowmeter Cabinet Mount, Slide Away (2035-1)
Under the cabinet mounting for flowmeters. Measures 9 1/2” long by 3” wide with a 5” extension.

F. Flowmeter Cabinet Side Mount (2036-3)
Slides out for easy access and storage. For use with flowmeter head.

G. Compact Mobile Stand (2040)
Top of meter telescopes from 24” to 36” high.

H. Tall Mobile Stand (2042)
Top of meter telescopes from 43” to 50” high.

I. Short Portable “E” Tank Stand (2045-short)
Fits under 31” counter for storage.

J. Portable “E” Tank Stand (2045-2)
For use with two “E” tanks O₂ and two “E” tanks N₂O. Height adjusts from 43” to 50”.
Whether your patients experience cardiac or respiratory arrest, you'll be much better prepared with the Porter O-Two Demand Valve Resuscitator. In a crisis, it’s fast, easy to use and highly effective.

The Porter O-Two combines two lifesaving technologies:

1. **Positive Pressure Resuscitation**
   - It ventilates non-breathing patients with 100% oxygen.

2. **Demand Valve Oxygen Delivery**
   - It delivers 100% oxygen 'on demand' to patients suffering respiratory distress.

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### Typical Order

<table>
<thead>
<tr>
<th>Part #</th>
<th>Description</th>
<th># of Units</th>
<th>Retail</th>
<th>Totals</th>
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<tr>
<td><strong>FLUSHMOUNT MXR SYSTEM</strong></td>
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<tr>
<td>4465CAB-AV</td>
<td>MXR-D FlushMount Digital Flowmeter package complete</td>
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<tr>
<td>3465WF-AV</td>
<td>MXR-1 FlushMount Flowmeter package complete</td>
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<tr>
<td>3222CX</td>
<td>Sentinel Wall Manifold System</td>
<td>1-per system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9000-1</td>
<td>Concealed Zone Valve-Sentinel System</td>
<td>1-per system</td>
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<tr>
<td>4222CXA</td>
<td>Vanguard Wall Manifold System</td>
<td>1-per system</td>
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<tr>
<td>9000-2</td>
<td>Concealed Zone Valve-Vanguard System</td>
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**VERTICAL MXR**

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<tr>
<td>3420AV</td>
<td>MXR Flowmeter w/breathing circuit, AVS on a telescoping mount</td>
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<tr>
<td>6255-1</td>
<td>Compact triple outlet(N2O, O2, VAC)</td>
<td>1-per operatory</td>
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<td>8063</td>
<td>3 foot O2/N2O Porter/DISS hose (connects meter to outlet)</td>
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<td>5602</td>
<td>Vacuum O2/C connects scavenger exhaust line to central vac system through outlet</td>
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<tr>
<td>3222CX</td>
<td>Sentinel Wall Manifold System</td>
<td>1-per system</td>
<td></td>
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<tr>
<td>9000-1</td>
<td>Concealed Zone Valve-Sentinel System</td>
<td>1-per system</td>
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<tr>
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<td>Vanguard Wall Manifold System</td>
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<td>9000-2</td>
<td>Concealed Zone Valve-Vanguard System</td>
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All gas systems should be equipped with **Emergency Oxygen**

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<td>1506-1</td>
<td>Positive Pressure/Demand Valve</td>
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<td>1540-2</td>
<td>Bag-Valve Mask style Emergency Oxygen Delivery</td>
<td>1-per system</td>
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**PORTER NAVICOM COMMUNICATION SYSTEM**

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<td>PNC-30W Navicom Wall Stations</td>
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<tr>
<td>PNC-30D Navicom Desk Stations</td>
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<tr>
<td>PNC-PCWJ Computer Wall Jack Kits</td>
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<tr>
<td>PNC-PS1 Power Supply</td>
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<tr>
<td>PV-100 Round cable w/PVC Jacket</td>
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<tr>
<td>(100 ft.)</td>
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</tr>
<tr>
<td>PV-250 Round cable w/PVC Jacket</td>
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<tr>
<td>(250 ft.)</td>
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<tr>
<td>or</td>
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</tr>
<tr>
<td>TF-100 Round cable w/Teflon Jacket</td>
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<tr>
<td>(100 ft.)</td>
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<tr>
<td>or</td>
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<tr>
<td>TF-250 Round cable w/Teflon Jacket</td>
<td></td>
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<tr>
<td>(250 ft.)</td>
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</table>

Additional products and accessories are available in the Porter Products and Parts Catalog. Contact your Authorized Porter Full-Service Dental Dealer or visit Porter online at www.porterinstruments.com.