

# Nitrous Oxide Sedation Systems - Comparison of Flowmeter Administration Units



**Accutron Digital Ultra Series**  
Country of Origin : United States

Touch Control and Digital display for administration of O<sub>2</sub> & N<sub>2</sub>O flow control.

Auto compensation of O<sub>2</sub>/N<sub>2</sub>O % flow rate.

Display shows readings in different colour (that follow AS3840) to provide distinction between Total Flow rate and O<sub>2</sub>/N<sub>2</sub>O % mixture.

Digital readout of gives total flow and N<sub>2</sub>O % mixture. Secondary readouts also provide individual O<sub>2</sub> & N<sub>2</sub>O flow rates at all times to instantly allow operator to verify accuracy of gas flow administration.

O<sub>2</sub> dose can be set to very low flow ( $\leq 1$ l.min); suitable for paediatric care.

No lag time between adjustment of flow rates at flowmeter controls and administration to patient. Modern control valve technology.

Integrated low gas flow alarm.

Gas mixture control based on N<sub>2</sub>O %

Integrated Oxygen outlet allows connection of O<sub>2</sub> demand resuscitation mask or O<sub>2</sub> therapy flowmeter and mask set. The O<sub>2</sub> outlet is still active in event of power connection interruption to unit.

Removable bag tee with gas shutoff prevents misuse of unit.

Optional remote handset control

2 year warranty.



**Accutron Ultra PC% Series**  
Country of Origin : United States

Faster movement for administration of O<sub>2</sub> & N<sub>2</sub>O flow controls to adjust dosage.

Correctly marked O<sub>2</sub> and N<sub>2</sub>O flow tubes to Australian Standard 3840

O<sub>2</sub> dose can be set to very low flow ( $\leq 1$ l.min); suitable for paediatric care

Gas mixture control based on N<sub>2</sub>O % for subliminal awareness of sedative gas dose.

Clearly laid out controls for both total flow rate and N<sub>2</sub>O % mixture.

Flow Rate control also switches off unit when not required for use.

Clean Surface structure enhances Infection Control Disinfection procedures

Integrated Oxygen outlet allows connection of O<sub>2</sub> demand resuscitation mask or O<sub>2</sub> therapy flowmeter and mask set.

Compact size compared to other models

2 year warranty.



**Porter 3000 Series MXR**  
Country of Origin : United States

Fast movement for administration of O<sub>2</sub> & N<sub>2</sub>O flow controls to adjust dosage.

Correctly marked O<sub>2</sub> and N<sub>2</sub>O flow tubes to Australian Standard 3840

O<sub>2</sub> and N<sub>2</sub>O connection hose fittings do not meet Australian standard 2896-2011

O<sub>2</sub> dose can be set to very low flow ( $\leq 1$ l.min); suitable for paediatric care.

Gas mixture control based on N<sub>2</sub>O % for subliminal awareness of sedative gas dose.

Flowmeter design unchanged for many years. Many crevices and edges can cause infection control disinfection issues

Integrated Oxygen outlet allows connection of O<sub>2</sub> demand resuscitation mask or O<sub>2</sub> therapy flowmeter and mask set.

Compact size compared to other models

1 year warranty.



**Matrx MDM**  
Country of Origin : United States

Multiple movements for administration of O<sub>2</sub> & N<sub>2</sub>O flow controls to adjust dosage. Increases time to administer flow rate.

Auto compensation of O<sub>2</sub>/N<sub>2</sub>O % flow rate.

Correctly marked O<sub>2</sub> and N<sub>2</sub>O flow tubes to Australian Standard 3840

O<sub>2</sub> dose can be set to very low flow ( $\leq 1$ l.min); suitable for paediatric care

Gas mixture control based on O<sub>2</sub> %

Flow controls cannot be easily barrier protected for Infection Control Protocol.

Control for O<sub>2</sub> % mixture rotates inside apparatus for potential risk of cross contamination issue.

Flowmeter Design unchanged for many years. Many crevices and edges can cause infection control disinfection issues

1 year warranty.



**Matrx MDM Digital**  
Country of Origin : United States

Touch Control and Digital display for administration of O<sub>2</sub> & N<sub>2</sub>O flow control.

Auto compensation of O<sub>2</sub>/N<sub>2</sub>O % flow rate.

Display shows all reading in one colour that can cause lack of distinction between Total Flow rate and O<sub>2</sub>/N<sub>2</sub>O % mixture.

Digital readout of only gives total flow and O<sub>2</sub> % mixture by default; extra actions required by operator to verify accuracy of individual O<sub>2</sub> & N<sub>2</sub>O flow rates.

O<sub>2</sub> dose can be set to very low flow ( $\leq 1$ l.min); suitable for paediatric care

Lag time of ~4 seconds between adjustment of flow rates at flowmeter controls and administration to patient.

Integrated low gas flow alarm.

Gas mixture control based on O<sub>2</sub> %

Requires constant power connection, will cease to function if power interrupted.

More Complicated internal control mechanism than other digital systems.

1 year warranty.



**Ambulanc® All5000**  
Country of Origin : China

One movement for administration of each O<sub>2</sub> & N<sub>2</sub>O flow control to adjust dosage. Longer range of movement required compared to similar unit types.

No colour coded marking of O<sub>2</sub> and N<sub>2</sub>O flow tubes or O<sub>2</sub> flush control; as required by Australian Standard 3840

O<sub>2</sub> and N<sub>2</sub>O connection hose fittings do not meet Australian standard 2896-2011

O<sub>2</sub> dose can be set to very low flow ( $\leq 1$ l.min).

Gas mixture control based on N<sub>2</sub>O %

Integrated Oxygen outlet

Not FDA listed in spite of claims unit meets US ADA guidelines.

1 year warranty.

*This information for comparison purposes only and is subject to change.*

*Every effort has been made to provide an accurate assessment between products.*

# Nitrous Oxide Sedation Systems - Comparison of Scavenging Hood Circuits



**Accutron Clearview Breathing Circuit**

**Country of Origin : United States**

Double Hood System with outer hood acting as scavenging device.

Clear outer nose piece allows dentist to see patient breathing to monitor condition.

Smaller overall hood size compared to other single scavenging hood types.

Silicone material provides better facial fit and more comfort for patient.

Disposable Type Hood sets for both outer and inner nosepieces (supplied as a set).

Disposable Hood set available in scented flavour and coloured types.

Diameter indexed connection tubing minimises incorrect assembly of administration and scavenging tubing sets.

Autoclavable Smooth tubing.

Supplied with Scavenging Control with gauge for accurate adjustment of vacuum flow rate.

Rated 95% by Dental Advisor Magazine April 2014 - [click here are details](#).

Double Hood System Consistently provides lower trace levels of Nitrous Oxide in surgery for minimised exposure to operators—refer clinical studies in JCDA and General Dentistry Magazines.\*

Clearview Hoods can be retrofitted to other brand tubing sets.



**Accutron PIP+ Breathing Circuit**

**Country of Origin : United States**

Single Hood System requires outer cone for scavenging with increased distance between hood edge and scavenging intake device

Scavenging cone is clear to allow dentist to see patient breathing to monitor condition.

Silicone material provides better facial fit and more comfort for patient.

Autoclavable & Disposable type hoods available

Disposable Hood set available in scented flavour and coloured types.

Diameter indexed connection tubing prevents incorrect assembly of administration and scavenging tubing sets.

Autoclavable Smooth tubing.

Supplied with Scavenging Control with gauge for accurate adjustment of vacuum flow rate.

PIP+ Hoods can be retrofitted to other brand tubing sets.



**Porter Breathing Circuit**

**Country of Origin : United States**

Double Hood System with outer hood acting as scavenging device.

Smaller overall hood size compared to other single scavenging hood types.

Silicone material provides better facial fit and more comfort for patient.

Autoclavable and Disposable type inner hoods available. Outer Hood is autoclavable only.

Diameter indexed connection tubing prevents incorrect assembly of administration and scavenging tubing sets.

Autoclavable Smooth tubing.

Supplied with simplified Scavenging Control allowing some adjustment of vacuum flow rate.

Double Hood System Consistently provides lower trace levels of Nitrous Oxide in surgery for minimised exposure to operators—refer clinical studies in JCDA and General Dentistry\*



**Matrix Breathing Circuit**

**Country of Origin : United States / China**

Single Hood System requires outer cone for scavenging with increased distance between hood edge and scavenging intake device.

Larger overall hood size compared to Double Hood types due to scavenging cone assembly.

Silicone material provides better facial fit and more comfort for patient.

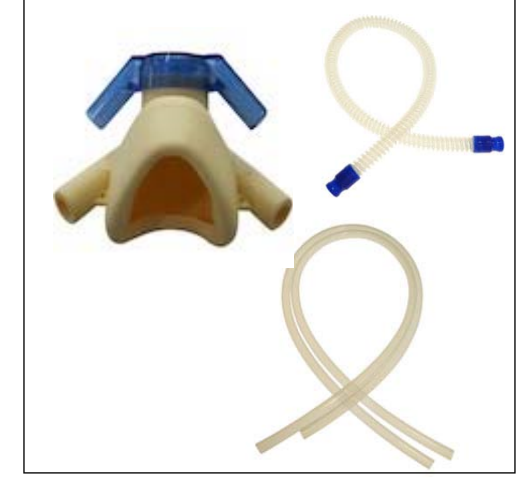
Autoclavable & Disposable type hoods available

Hood exchange requires disconnection of scavenging cone; more time consuming than other types.

Autoclavable Smooth tubing.

Same Diameter connection tubings mean incorrect assembly of administration and scavenging tubings is possible.

Not Supplied with Scavenging Control Device meaning accurate setting of vacuum flow rate is difficult.



**Ambulanc® Breathing Circuit**

**Country of Origin : China**

Single Hood System requires outer cone for scavenging with increased distance between hood edge and scavenging intake device.

Larger overall hood size compared to other types due to scavenging cone assembly.

Same Diameter connection tubings mean incorrect assembly of administration and scavenging tubings is possible.

Autoclavable type hoods available.

Autoclavable Smooth tubing.

Hood exchange requires disconnection of scavenging cone; more time consuming than other types.

Not Supplied with Scavenging Control Device meaning accurate setting of vacuum flow rate is difficult.

*This information for comparison purposes only and is subject to change.*

*Every effort has been made to provide an accurate assessment between products.*

\* Clinical Studies available on request— email [office@ritterdental.com.au](mailto:office@ritterdental.com.au)

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