

# Prima

## Технические характеристики

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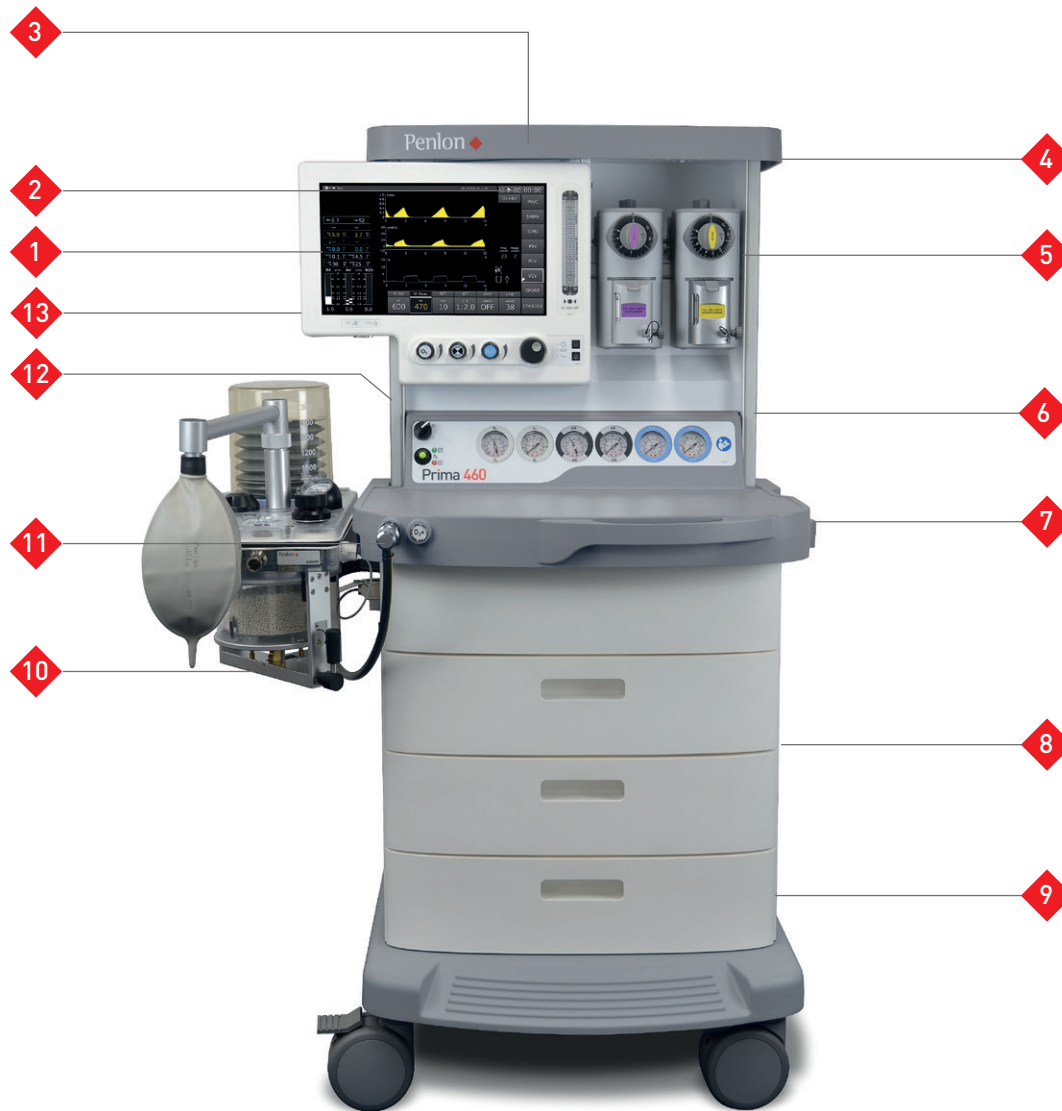
# Penlon Prima 460 Anaesthetic Machine

## ANAESTHESIA SOLUTIONS

- ◆ 15.6" high-definition touchscreen display
- ◆ Virtual flowmeter
- ◆ Eight ventilation modes with PEEP, including PRVC
- ◆ Suitable for adult, paediatric and neonates
- ◆ Optional Anaesthetic Gas Monitoring
- ◆ HIS connectivity



# Penlon Prima 460 Anaesthetic Machine



## The features and options you need

- 1 15.6" high-definition touchscreen display with intuitive user interface and virtual flow display
- 2 Eight ventilation modes with PEEP in all modes
- 3 Versatile top shelf with secure GCX™ mounting system for patient monitors
- 4 Electrical outlet options
- 5 Selectatec® compatible backbar (two station)
- 6 Up to three cylinders
- 7 Illuminated work space
- 8 GCX™ compatible aluminium uprights for additional accessory mounting
- 9 Standardised large capacity drawer units
- 10 Integrated CO<sub>2</sub> absorber and bellows unit with heater fitted as standard
- 11 Optional backlit Auxiliary Common Gas Outlet
- 12 Optional oxygen therapy flowmeter
- 13 Optional anaesthetic gas monitoring

# The Penlon Prima 460 is the latest update to the Penlon anaesthetic machine range, providing the ideal solution for today's busy operating room

Clinician-focused choices and benefits, including intuitive 15.6" high-definition touchscreen display with virtual flow display and user-selectable waveform and respiratory loop displays



## Flow Control and Visualisation

15.6" high-definition touchscreen display provides virtual flow display, O<sub>2</sub> concentration and gas mixture.



## Enhanced Patient Safety

Accurate mechanical anti-hypoxic device, total flow display and backup O<sub>2</sub> gas delivery system.



## Waveforms and Respiratory Loops

Airway Pressure plus two user-selectable waveform or respiratory loop displays.



## Dual Flow Sensors

Inspiratory and expiratory volume measured and displayed on the screen.



## Patient Profiles

Suitable for adult, paediatric and neonatal patient profiles.



## Monitoring

Anaesthetic gas, oxygen, pressure and flow monitoring with flexible GCX™ mounting for patient monitors.



## Alarms

Audible and visual alarms with colour coding to highlight alarm levels.



## Electrical Power

Wide choice of territory-specific electrical power outlets.



## Battery BackUp

Provides power to the machine for up to 75 minutes, in the event of an AC mains power failure.



## Gas Supply Options

Up to three cylinder yokes and three central pipeline connections for O<sub>2</sub>, N<sub>2</sub>O and Medical Air.



## Optional Auxiliary Common Gas Outlet (ACGO)

Illuminated switch and front outlet provide visual indication of open breathing circuit.



## Active AGSS

Disposes of waste gas and prevents possible health hazards to operating room staff.



## Maintenance and After-Sales Support

Comprehensive warranty provides peace of mind and after-sales support. Additional services and warranties can be purchased to meet your particular needs.



## Standards Compliant

Fully compliant to ISO 80601-2-13 and the Restrictions of Hazardous Substances (RoHS) Directive.

## 1 Ventilation Modes

Seven ventilation modes are available (VCV, PCV, PSV, SPONT, SIMV, SMMV, PRVC and Manual) with PEEP available in all modes except Manual.

## 2 CO<sub>2</sub> Absorber

A high performance absorber with a ventilator interface as standard that provides ventilator mode switching, triggered by the bag/ventilator control. The unit has a built-in heater and all the main components are autoclavable.

## 3 Anaesthesia Vaporizers

The award winning Sigma Delta and the new Sigma EVA desflurane vaporizers offer multiple agent and filler system options to suit all clinical requirements.

## 4 Penlon Patient Monitors

Simple intuitive user interface enables clinical staff to concentrate on improved patient outcomes with accurate physiological data, and to respond immediately to any change in condition.



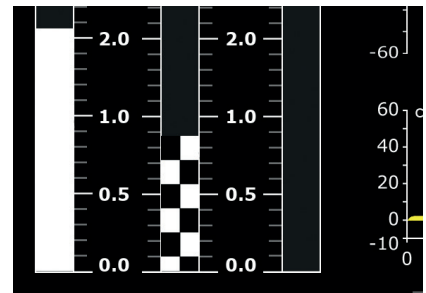
## Ventilation Modes

Seven ventilation modes are available as standard (VCV, PCV, PSV, SPONT, SIMV, SMMV, PRVC and Manual) with PEEP available in all ventilation modes except Manual.



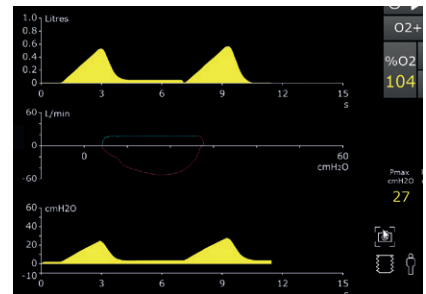
## Fresh Gas Control

Fresh gas flow is controlled using a proven conventional control system and mechanical anti-hypoxic device. Gas mixture is displayed using a colour-coded virtual flow display on the touchscreen.



## Waveform Display

Airway Pressure plus two user-selectable waveform or respiratory loop displays with a choice of Flow Rate, Tidal Volume, P-V Loop, V-F Loop or P-F Loop.

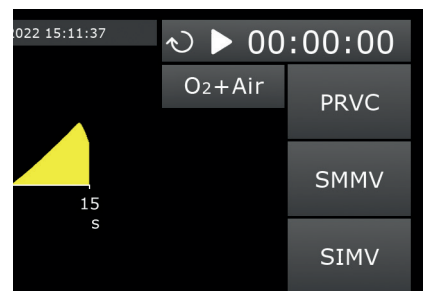


## Patient Details

Patient details can be entered via the on-screen keyboard. Automatic average weight calculations are adjusted when height and weight are changed. Compatible with HL7 hospital information system (HIS).

## Graphical User Interface

Clear, easy to use graphical user interface (GUI) with high-definition display of settings, and new stopwatch function.



**The Penlon Prima 460 anaesthetic machine provides PEEP in all ventilation modes, accurate control, and a virtual flow display in a familiar and easy-to-use workstation.**

# Features and Benefits



Features	Benefits
Rotameters combined with a virtual flowmeter	Accurate gas delivery with measured flows
Multi-mode ventilator with eight ventilation modes	Suitable for multiple patient types and clinical cases
Anaesthetic gas monitoring	Monitor anaesthetic gases without the need for a separate monitor, optional paramagnetic O <sub>2</sub> monitoring
Integrated heater and water trap on the CO <sub>2</sub> absorber	Reduces condensation risk and improves patient comfort
Absorber CO <sub>2</sub> bypass	Can change absorbent while ventilating a patient
Selectatec back bar	Can be used with any compatible vaporizer
Mechanical anti-hypoxic device and total flow display	Enhanced patient safety
Maintenance and after-sales support	Customer peace of mind
Integrated on-screen stopwatch function	Provides accurate timekeeping during procedures
HL7 connectivity	Provides Hospital Information Systems (HIS) capability
Territory-specific power outlets	Power external devices
AGS (anaesthetic gas scavenging) system	Alleviates contamination in theatre
Improved cable and hose management	Reduces clutter and trip hazards
Oxygen therapy flowmeter	For recovery and added safety
Side mounted suction controller kit	Keeps airways clear

# Penlon Prima 465 Anaesthetic Machine

## ANAESTHESIA SOLUTIONS

- ◆ Electronic gas mixer with electronic anti-hypoxic device and digital flowmeters
- ◆ Improved 12.1" touchscreen user interface
- ◆ Eight ventilation modes
- ◆ Suitable for adult, paediatric and neonates
- ◆ Multiple anaesthetic gas monitoring options



# Penlon Prima 465 Anaesthetic Machine



## All the features and options you need to configure a system to your exact requirements

- 1 12.1" TFT touchscreen display with intuitive user interface, electronic gas mixer and digital flowmeters
- 2 Eight ventilation modes
- 3 Versatile top shelf with secure GCX™ mounting system for patient monitors
- 4 Electrical outlet options
- 5 Selectatec® compatible backbar (two station)
- 6 Up to three cylinders
- 7 Illuminated work space with pull-out writing surface
- 8 GCX™ compatible aluminium uprights for additional accessory mounting
- 9 Large capacity drawer units
- 10 Integrated CO<sub>2</sub> absorber and bellows unit with ventilator interface
- 11 Backlit Auxiliary Common Gas Outlet (ACGO)
- 12 Oxygen therapy flowmeter



# The Penlon Prima 465 is the latest high-end anaesthetic machine from Penlon, providing the ideal solution for today's busy operating room

Clinician-focused choices and benefits, including intuitive 12.1" TFT touchscreen with electronic gas mixer, digital flowmeters and optional anaesthetic gas monitoring



## Flow Control and Visualisation

12.1" touchscreen display provides electronic gas mixer with selectable gas combinations, adjustable O<sub>2</sub> concentration and control of fresh gas flow rate.



## Enhanced Patient Safety

Accurate electronic anti-hypoxic device and a backup O<sub>2</sub> gas delivery system.



## Waveforms and Respiratory Loops

Choice of up to 10 waveform and respiratory loop displays.



## Dual Flow Sensors

Inspiratory and expiratory volume measured and displayed on the screen.



## Patient Profiles

Suitable for adult, paediatric and neonatal patient profiles.



## Monitoring

Anaesthetic gas monitoring option with EtO<sub>2</sub> automatic anaesthetic agent identification, agent consumption, and Masimo® SpO<sub>2</sub>.



## Alarms

Audible and visual alarms with colour coding to highlight importance.



## Electrical Power

Wide choice of territory-specific electrical power outlets, and a forward facing socket.



## Battery BackUp

Provides power to the machine for up to 1.5 hours, in the event of an AC mains power failure.



## Gas Supply Options

Up to three cylinder yokes and three central pipeline connections for O<sub>2</sub>, N<sub>2</sub>O and Medical Air.



## Auxiliary Common Gas Outlet (ACGO)

Illuminated switch and front outlet provide visual indication of open breathing circuit.



## Active AGSS

Disposes of waste gas and prevents possible health hazards to operating room staff.



## Maintenance and After-Sales Support

Comprehensive warranty provides peace of mind and after-sales support. Additional services and warranties can be purchased to meet your particular needs.



## Standards Compliant

Fully compliant to ISO 80601-2-13 and the Restrictions of Hazardous Substances (RoHS) Directive.

## 1 Ventilation Modes

Eight ventilation modes are available (VCV, PCV, PRVC, SPONT/PSV, SIMV-V, SIMV-P, SIMV-PRVC, and Manual) with PEEP available in all modes except Manual.

## 2 CO<sub>2</sub> Absorber

A high performance absorber with a ventilator interface as standard that provides ventilator mode switching, triggered by the bag/ventilator control. The unit has a built-in heating system and the main components are autoclavable.

## 3 Anaesthesia Vaporizers

The award winning Sigma Delta and the new Sigma EVA desflurane vaporizers offer multiple agent and filler system options to suit all clinical requirements.

## 4 Penlon Patient Monitors

Simple intuitive user interface enables clinical staff to concentrate on improved patient outcomes with accurate physiological data, and to respond immediately to any change in condition.



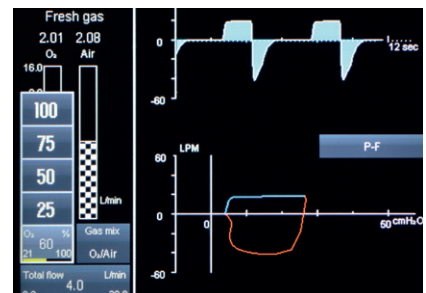
## Ventilation Modes

Eight ventilation modes are available as standard (VCV, PCV, PRVC, SPONT/PSV, SIMV-V, SIMV-P, SIMV-PRVC, and Manual) with PEEP available in all ventilation modes.



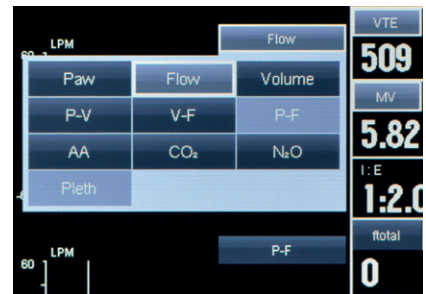
## Fresh Gas Control

Fresh gas flow can be selected using the preset defaults or set manually by using the multifunction control knob. Gas mixture can be adjusted using touchscreen display.



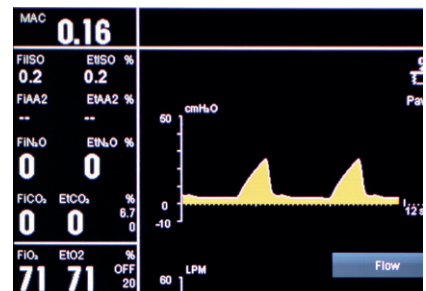
## Waveform Display

Two user-selectable waveform displays with a choice of Airway Pressure, Flow Rate, Tidal Volume, P-V Loop, V-F Loop, P-F Loop, Anaesthetic Agent, CO<sub>2</sub>, N<sub>2</sub>O, or Pleth.



## Anaesthetic Gas Monitoring

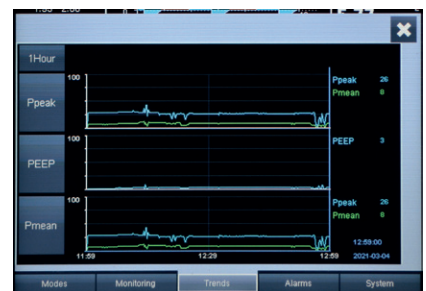
Single or twin anaesthetic agent gas bench options with MAC, Anaesthetic Agent (Fi and Et), N<sub>2</sub>O (Fi and Et), O<sub>2</sub> (Fi and Et) display fields, automatic anaesthetic agent identification option and agent consumption.



The Penlon Prima 465 anaesthetic machine provides advanced ventilation modes, accurate control and detailed monitoring capabilities in a single, easy-to-use workstation.

## Trends Data

Trend review of parameter values within a specific time period up to 24 hours. User selectable parameter and time scale options.



## Features and Benefits



Features	Benefits
Electronic gas mixer and digital flowmeters	Accurate gas delivery
Multi-mode ventilator	Suitable for multiple patient types and clinical cases
Integrated heater and water trap on the CO <sub>2</sub> absorber	Reduces the risk of condensation
Absorber CO <sub>2</sub> bypass	Can change absorbent while ventilating a patient
Eight ventilation modes	Comprehensive choice provides optimum patient care
Selectatec back bar	Can be used with any compatible vaporizer
Electronic anti-hypoxic device and backup O <sub>2</sub>	Enhanced patient safety
Maintenance and after-sales support	Customer peace of mind
Integrated Sidestream anaesthetic gas monitoring	Ensures safe levels of anaesthetic agent delivery
Masimo® SpO <sub>2</sub> monitoring	Reliable monitoring with high levels of accuracy
HL7 connectivity	Provides Hospital Information Systems (HIS) capability
Air or O <sub>2</sub> drive gas	Ensures continuous use of ventilator
Territory-specific power outlets	Power external devices
AGS (anaesthetic gas scavenging) system	Alleviates contamination in theatre
Patient cable management arm	Reduces cable clutter
Oxygen therapy flowmeter	For recovery and added safety
Side mounted suction controller kit	Keeps airways clear

# Penlon Prima 451 MRI Anaesthetic Machine

## ANAESTHESIA SOLUTIONS

- ◆ Approved for use with 1.5 and 3 tesla scanners, up to 1000 gauss<sup>†</sup>
- ◆ Electronic touch screen ventilator
- ◆ Designed specifically for use in an MRI environment
- ◆ Compact footprint, optimum manoeuvrability
- ◆ Total system compatibility
- ◆ Designed and manufactured in the UK



# Penlon Prima 451 MRI Anaesthetic Machine



## Feature-rich specification for your complete solution for safe, advanced anaesthesia in the MRI suite

- 1 Six ventilation modes, and patient support for spontaneous breathing
- 2 Auxiliary oxygen flowmeter (option)
- 3 Sigma Delta vaporizer with interlock, four agent and two filler block options
- 4 Large workspace
- 5 Enclosed construction – no hidden storage areas promotes MRI-safe operation
- 6 Lockable castors - assists stability
- 7 GCX™ compatible aluminium uprights for secure accessory mounting
- 8 Integrated CO<sub>2</sub> absorber with ventilator interface

# The Penlon Prima 451 is a compact MRI anaesthetic machine, with advanced patient support modes, and has been designed for use with 1.5 and 3 tesla scanners

Prima 451 is a sophisticated design, tested for performance stability and effect on image, and built for the special requirements of the anaesthetist working in the MRI suite.

## MRI compatibility

The Prima 451 is an MR-conditional anaesthetic machine, approved for use with 1.5 and 3 tesla MRI scanners, up to 1000 gauss<sup>†</sup>.

- Tested as a complete system\*, as illustrated
- Distinctive colour scheme and labelling

## Platform

The Prima 451 Anaesthetic Machine has a strong core specification including integrated AV-S Ventilator and A200SP Absorber.

- Two station Selectatec compatible backbar\*
- Fully compliant to ISO 80601-2-13 standard, and to the Restrictions of Hazardous Substances (RoHS) Directive.
- GCX™ compatible, secure top mounting system for patient monitor\*
- Enclosed construction – no hidden storage areas promotes MRI-safe usage
- Cylinder\* and pipeline gas supply inlets

## Options

- Front or rear-mounted common gas outlet
- Wide choice of territory-specific electrical power outlets

## Accessories

Penlon supplies side-mounted accessories suitable for use in the MRI suite, with provision for secure mounting on the side of the machine.

- AGSS (anaesthetic gas scavenging system) receiver
- Suction controller kit
- Therapy flowmeter
- Sigma Delta
- Diamond MRI Fibrelight Laryngoscope

## System components

Ultra low-flow anaesthesia, from a reliable platform, combining advanced features and value for money. The Prima 451 is easy to use and maintain, with proven performance and low life costs.

### 1 AV-S Ventilator

An easy to use, multifunction anaesthesia ventilator, designed for adult, paediatric and neonatal patient profiles. Standard specification includes three advanced spontaneous support modes and electronic PEEP. The AV-S has integrated oxygen monitoring and spirometry, plus seamless integration with both the absorber and anaesthetic machine.

### 2 A200SP Absorber

A high performance absorber with a ventilator interface as standard that provides ventilator mode switching, triggered by the bag/ventilator control. The unit has a quick-release canister, and the main components are autoclavable.

### 3 Sigma Delta Vaporizer with interlock

Award winning, high performance market leader, offering multi-choice agent and fill system options.

### 4 Flowmeter bank

Anti-hypoxic system giving enhanced patient safety. Cascade flow tubes as standard.

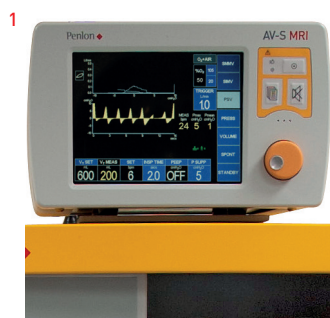
## Maintenance and after-sales support

Penlon is committed to a successful, long term relationship with all our customers. Comprehensive warranty provides user peace of mind and after-sales support.

Additional services and warranties can be purchased to meet your particular needs.

<sup>†</sup>Conditions apply.

\*Do not place any object on or in this machine unless it is specifically labelled to be used in an MRI scanning room and on the Prima 451 MRI Anaesthetic Machine.



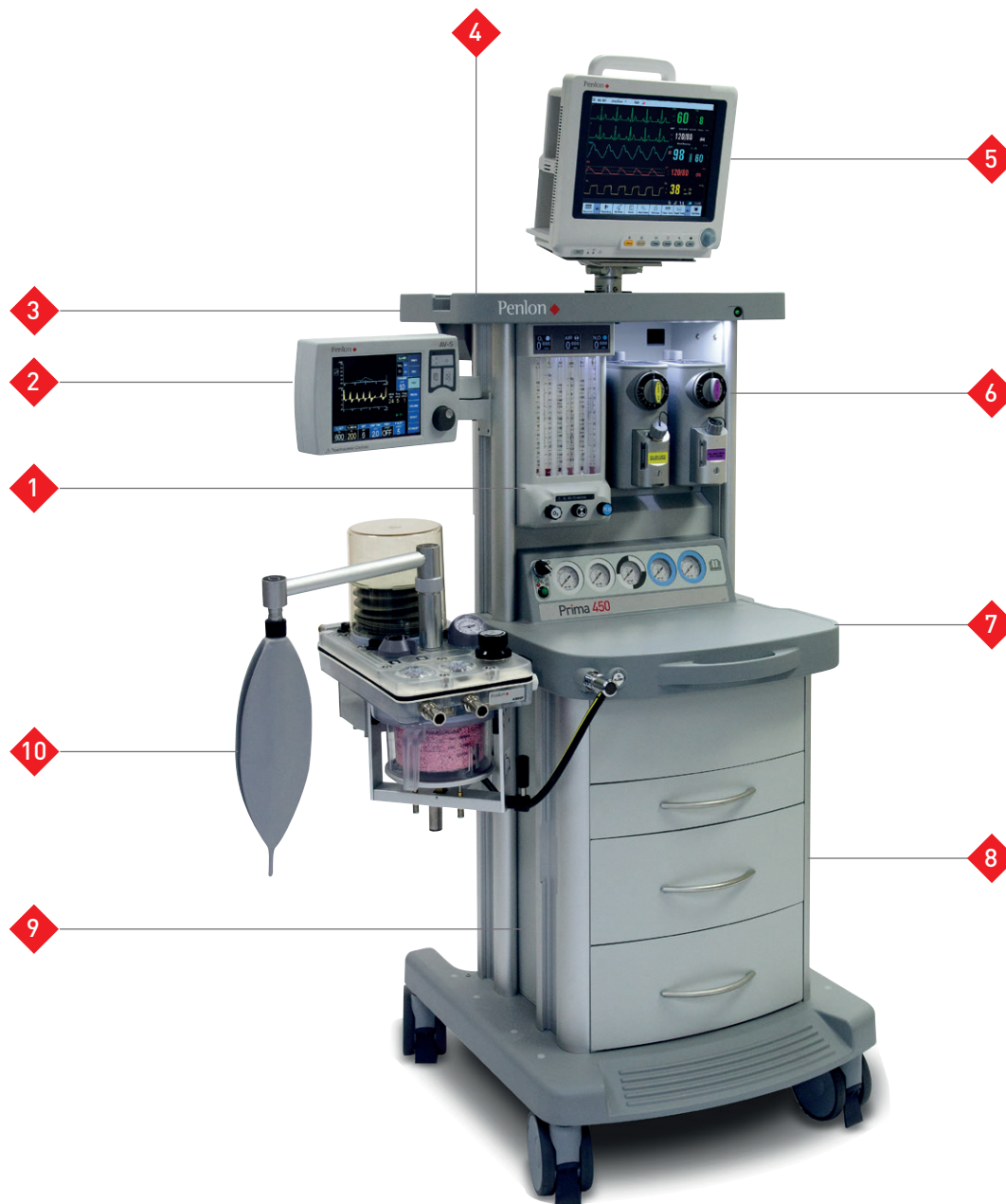
# Penlon Prima 450 Anaesthetic Machine

## ANAESTHESIA SOLUTIONS

- ◆ Electronic flow display and conventional flowmeter options
- ◆ Fully integrated ventilator and absorber
- ◆ Designed and manufactured in the UK
- ◆ HIS connectivity
- ◆ Intuitive design in a compact footprint
- ◆ Low life costs



# Penlon Prima 450 Anaesthetic Machine



All the features and options you need to configure a system to your exact specification

- ❖ 1 Electronic flow display and conventional flowmeter options are available
- ❖ 2 Six ventilation modes
- ❖ 3 New top shelf with secure GCX™ mounting system for patient monitors
- ❖ 4 Territory-specific electrical outlet options
- ❖ 5 SP M5 Patient Monitor
- ❖ 6 Selectatec® compatible backbar (one or two stations)
- ❖ 7 Illuminated work space
- ❖ 8 Large capacity drawer units
- ❖ 9 GCX™ compatible aluminium uprights for additional accessory mounting
- ❖ 10 Integrated CO<sub>2</sub> absorber and bellows unit with ventilator interface



# The Penlon Prima 450 is a compact system for induction or operating rooms where space is at a premium.

Clinician-focused choices and benefits, including electronic flow display options, and a functional top shelf module with power outlets and GCX compatible monitor mount.

## Platform

The Prima 450 Anaesthetic Machine has a strong core specification including integrated AV-S Ventilator and A200SP Absorber. Choose a one or two station backbar (two station backbar illustrated).

- Fully compliant to ISO 80601-2-13 Standard and to the Restrictions of Hazardous Substances (RoHS) Directive.

## Flow control and visualisation

The Prima 450 offers a wide range of options:

- Standard/cascade flow tubes
- Cascade flow tubes with electronic flow display providing numeric representation of gas flow

All models utilise a proven conventional control system with a mechanical anti-hypoxic system giving enhanced patient safety.

Models with an electronic flow display also have Hospital Information Systems (HIS) capability\*.

## Options and accessories

Wide choice of territory-specific electrical power outlets, and a forward facing socket. Penlon also supplies an AGS system (Anaesthetic Gas Scavenging), a patient cable management arm, an oxygen therapy flowmeter, and a side mounted suction controller kit.

## Patient monitoring

12.1" colour display with up to 12 waveforms, available with touchscreen control; up to 13 module slots (optional satellite module rack required); Nellcor™ or Masimo™ SpO<sub>2</sub> module options; Multi-parameter modules; Multi-Gas module with optional O<sub>2</sub> and BIS; and Sidestream, Mainstream or Microstream CO<sub>2</sub> modules.

## System components

A reliable platform, combining advanced features and value for money. The Prima 450 is easy to use and maintain, with proven performance.

### 1 AV-S Ventilator

An easy to use, multifunction anaesthesia ventilator, designed for adult, paediatric and neonatal patient profiles. Standard specification includes three advanced spontaneous support modes and electronic PEEP. The AV-S has integrated oxygen monitoring and spirometry, plus seamless integration with both the absorber and anaesthetic machine, and HIS capability\*.

### 2 A200SP Absorber

A high performance absorber with a ventilator interface as standard that provides ventilator mode switching, triggered by the bag/ventilator control. The unit has a quick-release canister, and the main components are autoclavable. A heater unit is offered as an option.

### 3 Sigma Delta Vaporizer

Award winning, high performance market leader, offering multi-choice fill system options.

### 4 SP M5 Patient Monitor

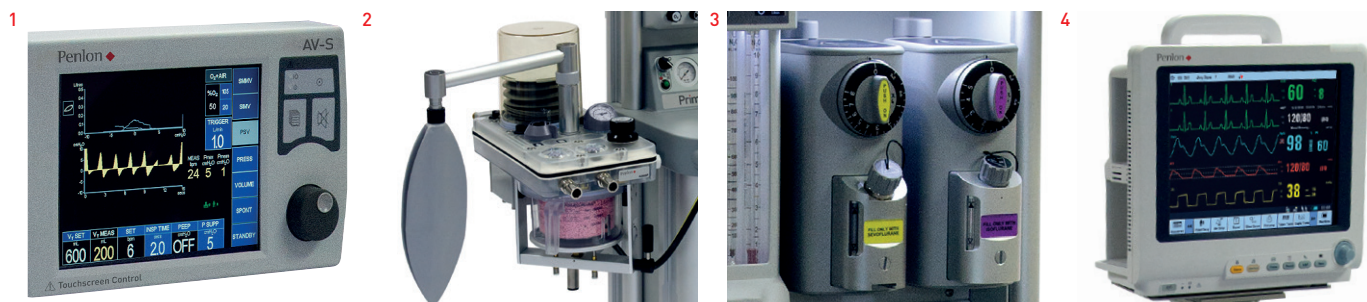
A lightweight and compact patient monitor with a 12.1" colour display, extensive parameter options, rechargeable Li-ion battery and optional wireless networking.

## Maintenance and after-sales support

Penlon is committed to a successful, long term relationship with all our customers. Comprehensive warranty provides user peace of mind and after-sales support.

Additional services and warranties can be purchased to meet your particular needs.

\*Relevant system interface is required



# Penlon Prima 440/445 Anaesthetic Machine

ANAESTHESIA SOLUTIONS

- ◆ Ultra compact design
- ◆ O<sub>2</sub>, N<sub>2</sub>O and Air flowmeter with integrated AHD
- ◆ Auxiliary O<sub>2</sub> and Air outputs
- ◆ Central gas supply or cylinder
- ◆ Table-top or rail mounted option
- ◆ Designed and manufactured in the UK



# Penlon Prima 440/445 Anaesthetic Machine



The Prima 440 and Prima 445 are ultra compact, portable anaesthetic machines for induction or operating rooms where space is at a premium

- ◆ Intuitive design – easy to use and maintain
- ◆ Optimum performance, and enhanced patient safety
- ◆ Lightweight construction, with integrated carry handle
- ◆ Selectatec® compatible backbar
- ◆ Proven mechanical anti-hypoxic system
- ◆ Ultra compact footprint, only 500 mm wide
- ◆ Fully compliant to ISO 80601-2-13 standard
- ◆ Designed and manufactured in the UK
- ◆ Sigma Delta vaporizer offers multi-choice fill system options

## Platform

The versatile Prima 440 table top model and Prima 445 rail-mounted model both use a proven flow tube control system to deliver accurate concentrations and flows of anaesthetic gases into a patient breathing system. Each model comes with a single-station backbar for use with a Sigma Delta, or other Selectatec® compatible vaporizer.

Prima 440/445 provides optimum performance in an ultra compact footprint and is fully compliant to ISO 80601-2-13 Standard and to the Restrictions of Hazardous Substances (RoHS) Directive.

## Construction

Lightweight frame, 500 mm wide, with integrated carry handle. Designed and manufactured in the UK.

## Gases

Oxygen, nitrous oxide, and air via territory-specific inlet connectors. An easily accessible Common Gas Outlet (CGO) with dedicated oxygen flush button. Oxygen and air auxiliary outlets are fitted as standard.

## Safety

Audible and visual warning if there is a reduction of oxygen supply pressure. A proven mechanical anti-hypoxic system provides enhanced patient safety.

## Maintenance and after-sales support

Penlon is committed to a successful, long term relationship with all our customers. Comprehensive warranty provides user peace of mind and after-sales support.

Additional services and warranties are available to meet your particular needs.

## Features.

- 1 Flow control and visualisation**  
A proven conventional control system with a mechanical anti-hypoxic device giving enhanced patient safety
- 2 Selectatec® compatible backbar**  
Single-station backbar for use with a compatible anaesthesia vaporizer.
- 3 Common Gas Outlet (CGO)**  
An easily accessible Common Gas Outlet (CGO) with oxygen flush.
- 4 Oxygen supply failure warning**  
Audible/visual warning system.



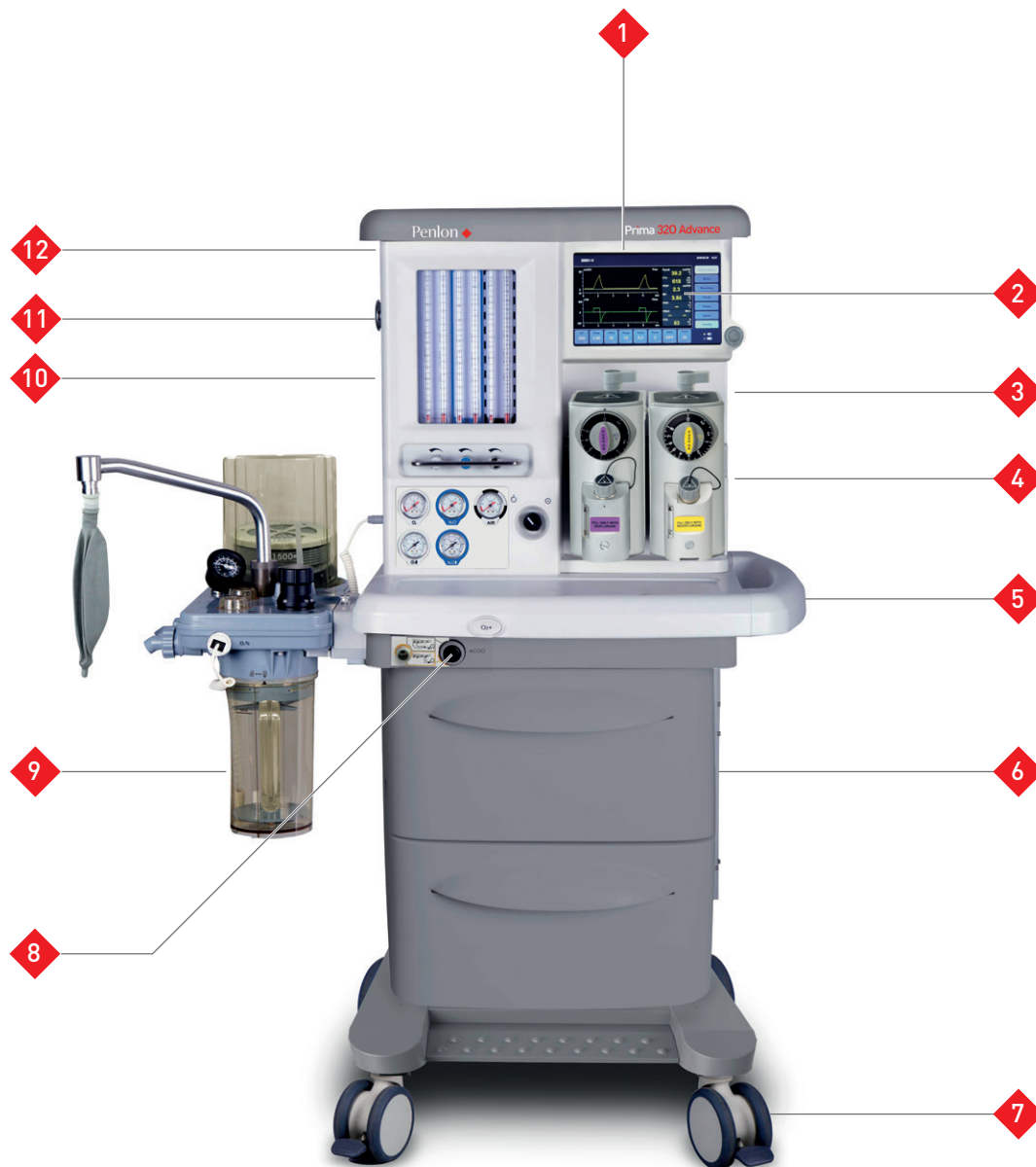
# Penlon Prima 320 Advance Anaesthetic Machine

## ANAESTHESIA SOLUTIONS

- ◆ 10.4" TFT colour touchscreen
- ◆ Eight ventilation modes
- ◆ Optional Anaesthetic Gas, CO<sub>2</sub> and SpO<sub>2</sub> monitoring
- ◆ Integrated CO<sub>2</sub> absorber and bellows unit with ventilator interface
- ◆ Selectatec compatible back bar
- ◆ Switchable front facing common gas outlet



# Penlon Prima 320 Advance Anaesthetic Machine



All the features and options you need to configure a system to your exact requirements

- 1 10.4" TFT colour touchscreen
- 2 Eight ventilation modes
- 3 Optional Anaesthetic Gas, N<sub>2</sub>O, CO<sub>2</sub> and SpO<sub>2</sub> monitoring
- 4 Selectatec® compatible backbar (two stations)
- 5 LED illuminated work spaces
- 6 Large capacity drawer units
- 7 Optional central brake
- 8 Switchable front facing common gas outlet for open and closed circuit operation
- 9 Integrated CO<sub>2</sub> absorber and bellows unit with ventilator interface
- 10 GCX™ compatible aluminium uprights for additional accessory mounting
- 11 Optional auxiliary O<sub>2</sub> outlet
- 12 Three electrical outlets

# The Penlon Prima 320 Advance is a high specification anaesthetic machine providing the ideal solution for today's busy operating room

Clinician-focused choices and benefits, including intuitive 10.4" TFT touchscreen ventilator display with eight ventilation modes and optional Anaesthetic Gas, CO<sub>2</sub> and SpO<sub>2</sub> monitoring



## Ventilator Control and Visualisation

10.4" TFT colour touchscreen ventilator display with navigator wheel and audio/visual indicators.



## Enhanced Patient Safety

Accurate mechanical anti-hypoxic device and automatic drive gas switching function.



## Waveforms and Respiratory Loops

Choice of up to 10 waveform and respiratory loop displays.



## Dual Flow Sensors

Inspiratory and expiratory volume measured and displayed on the screen.



## Patient Profiles

Suitable for adult, paediatric and neonatal patient profiles.



## Additional Monitoring

Optional Sidestream or Mainstream Anaesthetic Gas, and Sidestream CO<sub>2</sub> and SpO<sub>2</sub> monitoring.



## Alarms

Audible and visual alarms with colour coding to highlight importance.



## Electrical Power

Three electrical power outlets to meet your requirements.



## Battery BackUp

Provides power to the machine for up to 2 hours, in the event of an AC mains power failure.



## Gas Supply Options

Two cylinder yokes (O<sub>2</sub> and N<sub>2</sub>O) and three central pipeline connections (O<sub>2</sub>, N<sub>2</sub>O and Air). O<sub>2</sub>/Air ventilator drive gas options.



## Auxiliary Common Gas Outlet (ACGO)

Control switch and front outlet for connecting an open breathing circuit.



## Active AGSS

Disposes of waste gas and prevents possible health hazards to operating room staff.



## Maintenance and After-Sales Support

Comprehensive warranty provides peace of mind and after-sales support. Additional services and warranties can be purchased to meet your particular needs.



## Standards Compliant

Fully compliant to ISO 80601-2-13, ISO 80601-2-55 and IEC 60601-1.

## 1 Ventilation Modes

Eight ventilation modes are available (VCV, PCV, PRVC, SPONT/PSV, SIMV-V, SIMV-P, SIMV-PRVC, and Manual) with PEEP available in all modes except Manual.

## 2 CO<sub>2</sub> Absorber

A high performance absorber with a ventilator interface as standard that provides ventilator mode switching, triggered by the bag/ventilator control. The unit has a built-in heating system and the main components are autoclavable.

## 3 Anaesthesia Vaporizers

The award winning Sigma Delta and the new Sigma EVA desflurane vaporizers offer multiple agent and filler system options to suit all clinical requirements.

## 4 Penlon Patient Monitors

Simple intuitive user interface enables clinical staff to concentrate on improved patient outcomes with accurate physiological data, and to respond immediately to any change in condition.



## Ventilation Modes

Eight ventilation modes are available as standard (VCV, PCV, PRVC, SPONT/PSV, SIMV-V, SIMV-P, SIMV-PRVC, and Manual) with PEEP available in all ventilation modes except Manual.



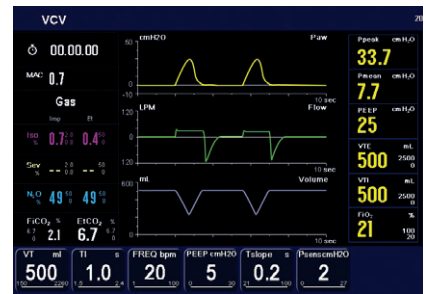
## Waveform Display

Two user-selectable waveform displays with a choice of Airway Pressure, Flow Rate, Tidal Volume, P-V Loop, V-F Loop, CO<sub>2</sub> or Pleth.



## Monitoring

All measured parameters are grouped on-screen in an easily accessible display window, including Anaesthetic Gas, N<sub>2</sub>O, CO<sub>2</sub>, SpO<sub>2</sub> and age-related MAC.



## Trends Data

Trend review of parameter values within a specific time period up to 24 hours. User selectable parameter and time scale options.



The Penlon Prima 320 Advance anaesthetic machine provides advanced ventilation modes, accurate control and monitoring capabilities in a cost-effective workstation.

## Alarms

User adjustable high and low alarm limits for all measured parameters and 100 event alarm log.



## Features and Benefits



Features	Benefits
Cascade flow tubes	Accurate gas delivery, particularly at low flow rates
Multi-mode ventilator	Suitable for multiple patient types and clinical cases
Optional Anaesthetic Gas, N <sub>2</sub> O, CO <sub>2</sub> and SpO <sub>2</sub> monitoring	Comprehensive gas monitoring for enhanced economy and patient safety
Integrated heater and water trap on the CO <sub>2</sub> absorber	Reduces the risk of condensation
Absorber CO <sub>2</sub> bypass	Can change absorbent while ventilating a patient
Eight ventilation modes	Comprehensive choice provides optimum patient care
Selectatec back bar	Can be used with any compatible vaporizer
Mechanical anti-hypoxic device and automatic drive gas switching	Enhanced patient safety
Maintenance and after-sales support	Customer peace of mind
Air or O <sub>2</sub> drive gas	Ensures continuous use of ventilator
Territory-specific power outlets	Power external devices
AGS (anaesthetic gas scavenging) system	Alleviates contamination in theatre
Patient cable management arm	Reduces cable clutter
Oxygen therapy outlet	For recovery and added safety
Optional side mounted suction controller kit	Keeps airways clear



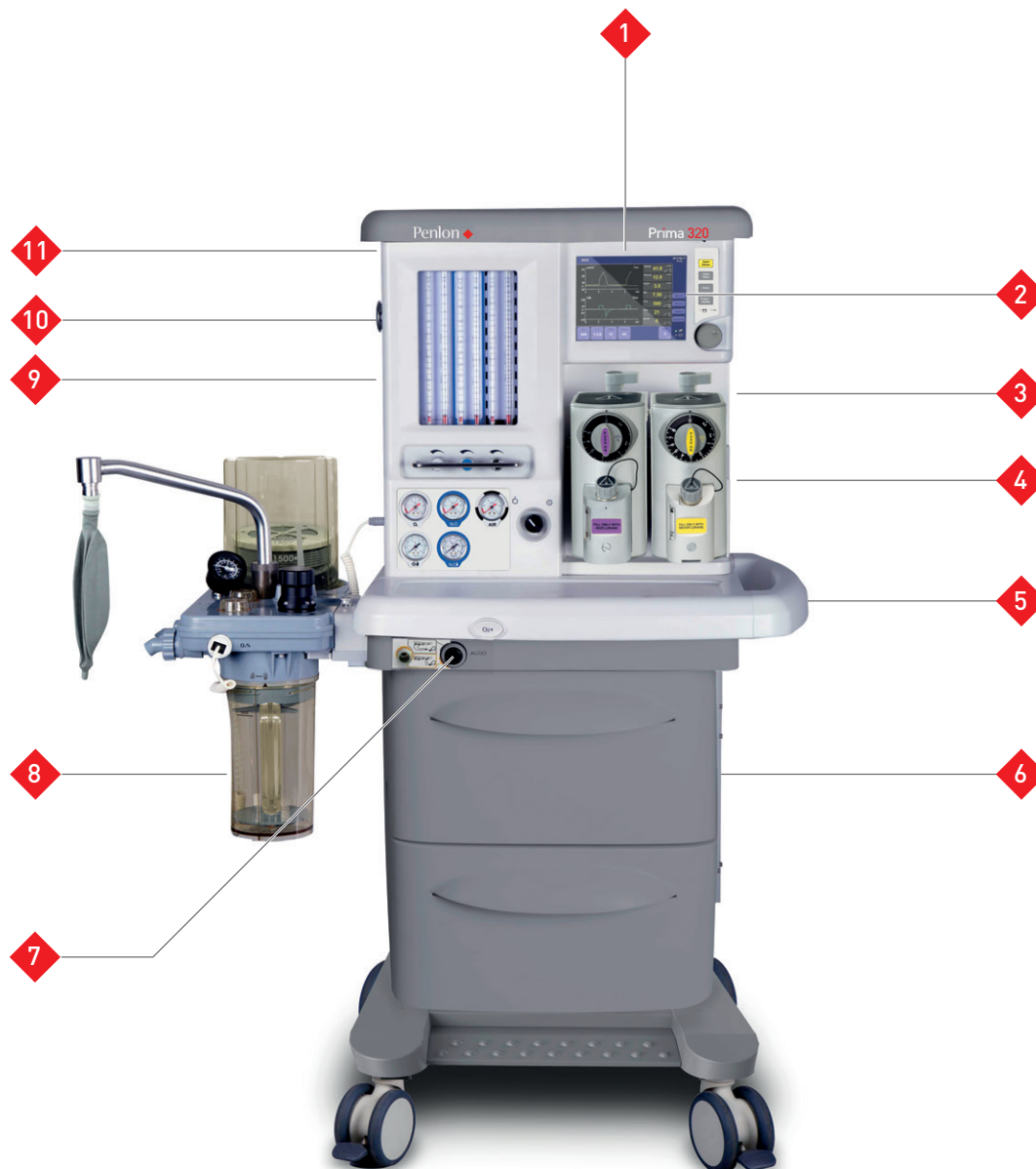
# Penlon Prima 320 Anaesthetic Machine

## ANAESTHESIA SOLUTIONS

- ◆ 8.4" TFT colour touchscreen
- ◆ Up to six ventilation modes
- ◆ Optional CO<sub>2</sub> and SpO<sub>2</sub> monitoring
- ◆ Integrated CO<sub>2</sub> absorber and bellows unit with ventilator interface
- ◆ Selectatec compatible back bar
- ◆ Switchable front facing common gas outlet



# Penlon Prima 320 Anaesthetic Machine



All the features and options you need to configure a system to your exact specification

- 1 8.4" TFT colour touchscreen
- 2 Up to six ventilation modes
- 3 Optional CO<sub>2</sub> and SpO<sub>2</sub> monitoring
- 4 Selectatec® compatible backbar (two stations)
- 5 LED illuminated work spaces
- 6 Large capacity drawer units
- 7 Switchable front facing common gas outlet for open and closed circuit operation
- 8 Integrated CO<sub>2</sub> absorber and bellows unit with ventilator interface
- 9 GCX™ compatible aluminium uprights for additional accessory mounting
- 10 Optional auxiliary O<sub>2</sub> outlet
- 11 Up to three electrical outlets

# The Penlon Prima 320 is a versatile anaesthetic Machine providing the ideal solution for today's operating room.

Clinician-focused choices and benefits, including colour touchscreen display, up to six ventilation modes and optional CO<sub>2</sub> and SPO<sub>2</sub> monitoring.

## System

The Prima 320 anaesthetic machine has an integrated ventilator with up to six ventilation modes; CO<sub>2</sub> absorber with heater and large capacity absorbent canister; and a two station Selectatec™ compatible backbar.

## Flow control and visualisation

The Prima 320 offers:

- Six conventional flow tubes for accurate control, particularly at low flow rates.
- A conventional control system with a mechanical anti-hypoxic device giving enhanced patient safety.
- 8.4" TFT colour touchscreen ventilator display with navigator wheel, push button control and audio/visual indicators.
- Switchable, front facing common gas outlet for open and closed circuit operation.
- Pipeline and cylinder supply pressure gauges.

## Features and accessories

The territory-specific electrical power outlets can be used for ancillary medical devices. The mains power to internal components is supplemented by a backup battery able to maintain power for up to 90 minutes. A convenient and easily accessible O<sub>2</sub> outlet, for attaching an auxiliary flowmeter (order separately), is available as an option. Additional accessories can be mounted using the GCX™ compatible aluminium uprights.

## Additional monitoring

For improved patient safety additional Sidestream CO<sub>2</sub> and SpO<sub>2</sub> monitoring options are also available.

## System components

A versatile anaesthetic machine, combining advanced features and value for money. The Prima 320 is easy to use and maintain, with superb performance.

### 1 Anaesthesia Ventilator

An easy to use, multifunction anaesthesia ventilator with 8.4" TFT touchscreen, designed for adult, paediatric and neonatal patient profiles. Standard specification includes up to six ventilation modes including advanced spontaneous support modes and electronic PEEP. The ventilator has integrated oxygen monitoring and spirometry, plus seamless integration with both the absorber and anaesthetic machine.

### 2 CO<sub>2</sub> Absorber

A high-performance absorber with a ventilator interface as standard that provides ventilator mode switching, triggered by the bag/ventilator control. The unit has a quick-release canister, and the main components are autoclavable. A heater unit is supplied as standard.

### 3 Sigma Delta Vaporizer

Award winning, high-performance market leader, offering multi-choice fill system options.

### 4 Flow Control

The Prima 320 comes with six conventional flow tubes to provide accurate control, particularly at low flow rates. The system has pipeline gas supply inputs for O<sub>2</sub>, N<sub>2</sub>O and Air; and backup cylinder supply inputs for O<sub>2</sub> and N<sub>2</sub>O.

## Maintenance and after-sales support

Penlon is committed to a successful, long-term relationship with all our customers. Our comprehensive warranty provides user peace of mind and after-sales support.

Additional services and warranties can be purchased to meet your particular needs.



**По вопросам продаж и поддержки обращайтесь:**

Алматы (7273)495-231	Калининград (4012)72-03-81	Омск (3812)21-46-40	Сыктывкар (8212)25-95-17
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