

# Meditec Neptune<sup>PLUS</sup>

## Anaesthesia Workstation



Meditec England

At Meditec England we recognize the demands and requirements of the Anaesthetist in the Operating Theatre, and have taken these into consideration when developing the all-new NeptunePLUS Anaesthesia Workstation. The NeptunePLUS excels in performance and offers complete flexibility to the Anaesthetist.

## Advanced Technology, Modular Design, Open Architecture, Ease of Use

With an integrated design and excellent quality, each anaesthesia system is custom built to meet your requirements.

- Cascaded 6 tube flow meter
- Twin Selectatec mounting for agent specific temperature and pressure compensated vaporisers
- NIST inlets for piped medical gases for O<sub>2</sub>, N<sub>2</sub>O & Air as standard
- Single Bi-stable system ON / OFF switch for gases & power supply
- Pull out writing table with folding lock
- Common gas outlet (CGO)
- Open/Close change over switch for convenient switch-over from open to closed system
- Suitable for open, semi-open & closed circuit system application
- Provision for document holder
- Electrical outlets for running other medical equipment
- Auxiliary O<sub>2</sub> outlet with flowmeter as standard
- Rotameter backlit illumination
- Work surface lighting
- Supports Low-Flow Anaesthesia

## Optional Features

- Aspirator suction (Gas Powered)
- AGSS system (Active or Passive)
- Additional pin indexed yokes for O<sub>2</sub> and N<sub>2</sub>O
- Side arm for patient monitor
- 12.1" display screen
- Basal flow for oxygen
- Anaesthetic gas module
- Neonatal mode (5ml V<sub>T</sub>)
- EtCO<sub>2</sub> monitoring
- Air/N<sub>2</sub>O interlock
- Event log up to 1000 events
- Waveform freeze
- Atmospheric gas as ventilator driving gas
- Trend data

## Patient Safety Features

- Mechanical Anti Hypoxic Device ensures a minimum of 25% O<sub>2</sub> at all times and cuts off N<sub>2</sub>O supply if O<sub>2</sub> Fails
- Audio Visual Alarm for O<sub>2</sub> failure
- O<sub>2</sub> Flush 30-70 LPM O<sub>2</sub> Flow
- System Pressure Relief at 125 cmH<sub>2</sub>O



Active AGSS System (Optional)

## Vaporiser (Optional)

- Calibration range : 0 to 5%, 0 to 6% and 0 to 8% using a Laser Refractometer
- Easy to turn dials for Safety Lock to prevent accidental turn on
- Agent specific vaporisers designed to provide constant output
- Available Screw fill, Meditec Fill™ or Quik Fil™
- Interlock mechanism to lock in series with other Vaporisers
- Individually calibrated for each specific anesthetic drug
- Agent Capacity: 250±25ml
- Available for Halothane, Isoflurane, Sevoflurane



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## Integrated Ventilator

Integrated microprocessor based sophisticated pneumatically driven and electronically controlled ventilator incorporating simplicity with all the advantages of modern ventilators. It provides optimum patient care and includes in-built battery backup in case of mains failure.

### Features

- High-luminance and wide display
- 10.1" Touch Screen
- Ventilation Modes A/C-P, A/C-V, VCV, PCV, SIMV-V, SIMV-P, PSV/SPONT, PLV & Manual
- Monitoring Parameters (Measured values) VT, Pmean, Freq, Fspont, FiO<sub>2</sub>, Ppeak, MV, MVspont, PEEP, Cdyn, Pplat & Pmean
- Tidal volume range from 20ml to 1600ml suitable for Adult, Pediatric & Neonates
- Volume compensation and electronic PEEP. Automatically compensates for system leak and the compliance change in the circuit
- Fresh gas flow compensation
- Ascending bellows provides immediate visual information on the adequacy of fresh gas flow and gives an indication of any system leak
- Cardiac By-Pass mode
- Integrated Pressure, Volume and Oxygen monitoring
- Self test, leak test and compliance test
- Adult to pediatric mode
- Waveforms: Flow-Time, Volume-Time, Pressure-Time
- Spirometry Loops: Flow-Volume, Volume-Pressure, Pressure-Flow
- Setting Parameters  
VT (Tidal Volume), Frequency, I:E ratio, Tip (Inspiratory pause time), Pmax, PEEP, Vtr (Triggering flow sensitivity), SIGH, Tapn, Ptrig (Pressure trigger) PLimit, Psupp.
- Alarm Parameters  
Sustained pressure, Airway pressure (high & low), FiO<sub>2</sub> (high & low), MV (high & low), Frequency (high & low), Apnea, A/C failure, Battery low, Self-test failure, O<sub>2</sub> failure alarm

## Integrated Circle Breathing System

- Bypass allows canister change during ventilation
- Bag/ventilator switch - Easy changeover from ventilator to bag & vice versa
- Integrated airway pressure manometer
- Moisture drain valve
- Quick release soda lime canister system
- Fully calibrated APL valve (Range 0-70cmH<sub>2</sub>O)
- Built-in oxygen monitor sensor port
- Automatic ventilator switching from circle absorber
- Single / Dual canister system
- Autoclavable
- Heated Circuit (optional)

### Patient Monitoring (Optional)

The Neptune range offers a wide choice of Monitoring Systems with availability of optional extended parameters such as AGM, BIS, ICG, CO, 4 x IBP, EEG, Para-magnetic O<sub>2</sub>, NMT



ECG | NIBP | SpO<sub>2</sub> | 2xTEMP | RESP | EtCO<sub>2</sub> | AGM | CO | IBP | BIS | NMT | ICG | EEG



## TECHNICAL SPECIFICATIONS

Storage Space	Two spacious drawers to hold essential anaesthesia kit and accessories
Castors	Large roller bearing anti-static castors with front brakes
Writing Surface	Pull out writing table on top of the drawers
Monitor Shelf	Wide monitor shelf at eye level with securing provision for extra monitor
Cylinder Yokes	Color coded gas specific (pin indexed) yokes with sliding stainless steel clamping bars for easy handling. Holding O <sub>2</sub> and N <sub>2</sub> O, 5Ltr water capacity cylinders
Non-return / Pressure Relief Valve	Minimises risk of back flow of gases, blows off when pressure exceeds 125 CmH <sub>2</sub> O
Regulators	Designed for higher efficiency, long service life and reliability for O <sub>2</sub> and N <sub>2</sub> O
Oxygen Flush	Emergency oxygen flush switch at table level to give 30-70 Ltrs/min for emergencies
O <sub>2</sub> Failure Warning Alarm	Self activated electro-pneumatic audio visual warning device to indicate drop in O <sub>2</sub> pressure below 2.5 Bar
Hypoxic Guard	Mixing device to proportion the N <sub>2</sub> O in such a way that minimum of 25% O <sub>2</sub> is always delivered in the gas mixture
Common Gas Outlet (CGO)	Conveniently located CGO with ISO tapers for 22 & 15mm connections
Basal flow with On/off Switch	250 ± 50 ml basal flow of Oxygen as soon as machine is switched on (optional)
Pipe Line Gas Inlets	Non-interchangeable screw threaded (NIST) pipeline inlets one each for O <sub>2</sub> , N <sub>2</sub> O and Air. In case of drop in piped gas pressure the pin index cylinders take over automatically
Pressure Gauges	Large diameter, color coded gauges fitted at convenient angle for better visibility and clarity. One for each of the pin indexed yokes and one each corresponding to piped gas inlet
Selectatec Brackets	Twin Selectatec Block
Breathing Circuits	Bains Circuit & Circle Absorber Y-Circuit provided as standard
Communication port	RS232 & LAN Port

### CASCADE FLOWMETER

Oxygen Low Flow	0.05–1 Lpm
Oxygen High Flow	1–10 Lpm
N <sub>2</sub> O Low Flow	0.05–1 Lpm
N <sub>2</sub> O High Flow	1–12 Lpm
Air Low Flow	0.05–1 Lpm
Air High Flow	1–15 Lpm

### PHYSICAL SPECIFICATION

Dimensions (h x w x d)	1430 x 760 x 720 mm
Top Shelf	560 mm x 370 mm
Work Surface	560 mm x 120 mm
Drawer	2 Drawers - 460 mm x 430 mm
Weight	95 kg
Temperature	Operation: 10°C–40°C Storage : (-)20°C–55°C
Humidity	Operation : <80% Storage : <93%
Power	100–240V AC, 50/60 Hz, 6.5A (Max.)
Power Consumption	110W
Battery Backup on Ventilator	120 minutes

### VENTILATOR TECHNICAL PARAMETERS

Tidal Volume	20–1600 ml
Frequency	1–100 bpm
I : E Ratio	4:1–1:8
PEEP	OFF, 1.0 – 30 cmH <sub>2</sub> O
Patient Flow Trigger (Fixed)	(-)2 kPa – PEEP
Alarm Mute	120s
Compliance	<4ml/100Pa
Inspiratory Pause	0 – 50% of Ti
Flow	<180L/min
Pressure Limiting (Pmax)	5 – 100 cmH <sub>2</sub> O
Drive Mode	Pneumatically driven electronically controlled

Recommended for use with Meditec ME-SORB™ CO<sub>2</sub> absorbent.



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