

Anesthesia Delivery System

Technical Specifications

PHYSICAL

Construction: Tabular, Rigid Thermostat moulded with large drawer for storage. Four large diameter anti-static castor wheels providing easy mobility. Front castors have brakes.

GAS INLETS

Cylinder yokes: Gas specific, pin indexed yokes with sliding steel clamping bar for O₂ and N₂O as per model below: 2XO₂, 2XN₂O

Pipeline inlets: O₂, N₂O and Air pipeline inlets

PRESSURE REDUCING REGULATORS

Highly efficient and reliable PRESSURE regulators (2 stage in PRIMA) for O₂ and N₂O. N₂O regulators are activated only if O₂ regulators are pressurized. N₂O regulators cut off on O₂ supply failure

PRESSURE GAUGE

* Pressure gauge cylinder: O₂ and N₂O: 0 to 250 kg/cm²

Pipeline systems: O₂/N₂O/AIR, diameter-indexed

O₂/N₂O piping station block with pressure gauge and 5m hose (Optional)

FLOWMETER

5 Tube long (230 mm) flowmeters calibrated in double scale for accuracy and clarity in reading. 3 gas: O₂, N₂O, Air (PRIMA). Anti-hypoxia system: Minimum 25-30% O₂ at about 3kg/cm² (PRIMA). Scale: O₂: 0.1-1 LPM, 1-10 LPM
N₂O: 0.1-1 LPM, 1-10 LPM
AIR: 0.1-10 LPM

N₂O SAFETY CUT-OFF VALVE FOR OXYGEN SUPPLYING FAILURE

When the pressure of the supplying oxygen drops below about 2.5kg/cm², nitrous oxide will be automatically shut off to protect a patient from the danger of hypo-oxygenation

OXYGEN FLUSH VALVE

Self-returning push Button
Flow: 35-75 LPM at 4 kg/cm²

ALARM FOR OXYGEN SUPPLYING FAILURE

Audio visual Alarm with buzzer and LED indicator, for more than 7 seconds to warn a danger when the pressure of supplying oxygen drops below about 2.5kg/cm²

VAPORIZER

Designed to install up to maximum TWO Selectatec vaporizers.

Breathing Attachment: Standard Bains breathing Circuit

INTELLIGENT BREATHING SYSTEM

GSM absorber with Integrated Bellows & Sodalime Canister system offering highest absorption efficiency offering advance features like Inbuilt APL Valve, Pressure Manometer for breath to breath Airway pressure display, integrated O₂ Sensor offering FIO₂ Monitoring, Inspiratory & expiratory flow sensors ensuring accurate delivery & monitoring of Volume.

INTEGRATED ANESTHETIC VENTILATOR

A) Vent VII B) Vent VIII C) Vent X
Microprocessor controlled pneumatically driven integrated ventilator with ascending bellows for Adult, pediatric & neonatal application.

GENERAL

Operating Power: 100 to 240 VAC, 50/60Hz, 6.5A
Battery: 12V DC, Battery backup: 2 Hrs (full charge Time: 4 Hrs)

DISPLAY

A) Vent VII: Screen Size 7" Color LCD Display
B) Vent VIII: Screen Size 8.4" Color LCD Display
C) Vent X: Screen Size 12.1" Color LCD Display

DISPLAY PARAMETERS

- Real time display of P-T, F-T, V-T waveforms (in Vent VII, Vent VIII and Vent X)
- Real time display of P-V, F-V loops (in Vent X)
- Simultaneous display of 3 waveforms (in Vent VII and Vent VIII)
- Simultaneous display of 3 waveforms and 2 loops (in Vent X)

CONTROL

- Pressure, Volume and Time controlled Ventilator
- Modes of Ventilation:
 - A) Vent VII: VCV, SIMV, ACMV, Manual, Standby
 - B) Vent VIII: VCV, PCV, SIMV, ACMV, Manual, Standby
 - C) Vent X: VCV, PCV, SIMV, PSV, ACMV, Manual, Standby
- Breath Rate: 1-100 bpm
- Tidal Volume: 40-1500 mL (in Vent VII) and 20-1500 mL (in Vent VIII and Vent X)
- I : E ratio : 4:1 - 1:10
- PEEP: Integrated Electronic PEEP: 4 - 30cmH₂O
- Flow Trigger: 1 - 15 L/min
- Insp. Time: 0.1 - 10 sec (Increment: 0.1 sec)
- Pressure Limit : (PEEP+5) - 70 cmH₂O
- Pressure Control: 5 - 70 cmH₂O
- Pressure Support: 5 - 60 cmH₂O
- Inspiratory Pause: 5 - 50 %

MONITORING

- Insp tidal Volume: 0 to 1500ml
- Exp tidal Volume: 0 to 1500ml
- Minute Volume: 0 to 60L
- Spontaneous Minute Volume: 0 to 60L
- Frequency : 0 to 100bpm
- Spontaneous frequency: 0 to 99 bpm
- I:E ratio: 3:1 to 1:6
- Peak Pressure: -12 to 100 cmH₂O
- Mean Pressure: 0 to 100 cmH₂O
- Insp Plat pressure : 0 to 100 cmH₂O
- Insp O₂ : 21% to 100%
- Compliance : 0 to 200mL/cmH₂O
- Resistance: 0 to 200cmH₂O(L/S)

ALARMS SETTINGS

- Tidal Volume: 20 to 1500ml
- Minute Volume: 1 to 40L
- Frequency : 1 to 60bpm
- Airway Pressure: -12 to 100 cmH₂O
- Insp O₂ : 21% to 100%
- High Continuous Airway Pressure: Alarm when airway pressure exceeds (PEEP + 15) cmH₂O for 15 seconds
- Negative Pressure : Alarm when airway pressure exceeds -10cmH₂O
- Alarms for Apnea, O₂ failure, Mains Failure, low battery.

MODELS

A) Asteros Royale Vent VII
B) Asteros Royale Vent VIII
C) Asteros Royale Vent X

OPTIONAL SYSTEMS & ACCESSORIES

TEMPERATURE COMPENSATED VAPORIZER (Optional)

It is possible to use SELECTATEC Vaporizers of choice : Halothane / ISOFLURANE / ENFLURANE / SEVOFLURANE additionally installed with manifold for SELECTATEC Vaporizers.

Concentration increments

0-2 vol% in 0.2 intervals
2-6 vol% in 0.5 intervals

3 vol% safety lock

Agent capacity : 300 ± 10ml

Non-contamination-baffle in the anesthetic agent reservoir can prevent chamber inside from contaminating due to accidental tilting or inverting

Mounting type : Selectatec

Weight : 6.6kg

GAS ATTACHMENT (OPTIONAL)

Mox regulator with High Pressure Tubing for connecting to 10 Litres H₂O capacity cylinder .
AGSS (OPTIONAL)
Active Gas Scavenging System can be attached separately(optional)



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Corporate office

MEDION HEALTHCARE PVT. LTD

201, Shiv Ind. Estate, K.B.B. Marg,
Chinchpokli (east),
Mumbai 400 012, INDIA.
Tel. : + 91 - 22 - 2377 1737
Fax : + 91 - 22 - 2377 1734

Email : sales@medion.co.in
http://www.medion.co.in

Formerly : Meditronics sales & services pvt. ltd.

Authorised Representative



NOTE : specification subject to change without prior notice

Asteros Royale

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ASTEROS ROYALE A new generation anesthesia workstation offers intuitive usability and extensive flexibility providing the highest level of anesthesia delivery.

ASTEROS ROYALE is designed to grow to meet changing needs in anesthesia ensuring quality and high level patient safety it offers outstanding feature of low flow anesthesia, thereby ensuring cost efficiency and reliability

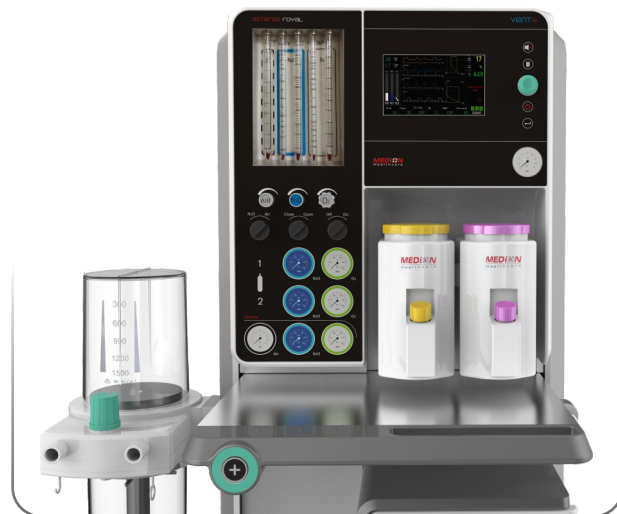
Asteros Royale

Features

- Expandable from basic anesthesia to high level ventilation parameters
- Modular design, Light weight & Compact
- Outstanding mobility.
- Strengthened safety system.
- Convenient View safety system.
- Low Flow through dual cascaded tubes of O2 and N2O.
- Supports wide range of vapourisers.
- Internationally designed GSM circle absorber system of effective recycling of gases.
- Ergonomic design ventilator.
- Top space for mounting patient monitoring system.



Ventilator options



Vent VII



Vent VIII



Vent X

Panel



- Intuitive design front panel displaying at convenient viewing range Consist of panel pressure gauges for O2, N2O & AIR main ON/OFF switch, Fresh Gas out let Emergency Flush and O2 Failure Alarm.
- Tube rotameter with backlight available for low flow selection of O2 & N2O Gas+Air.
- Choice of temperature compensated vaporizer, easy selectatec compatible vaporiser

Vaporiser (optional)



- Wide range of vaprisers of choice Halothane, isoflurane, sevoflurane, Desflurane, Enflurane.