

Taema



HORUS 4 **Always Giving More**



Electrocare



AIR LIQUIDE

Santé

HORUS 4

Much more than a ventilator



Insist on
NIV key



■ Its ventilation performances

- ensure complete ventilation treatment: from the infant to adult.
- offer wide patient interface: from invasive to non invasive ventilation.

■ A high technology design which

- guarantees a multi-purpose use: from recovery to intensive care:
- reduces maintenance costs : a limited number of components.

■ Back-up ventilation

- The option to set in PS-PEEP a guaranteed minimum breathing rate and/or tidal volume provides the patient with optimum protection against hypoventilation.
This is particularly useful in the ventilation-weaning phase or in the post-operative recovery phase.
- A Pmaxi alarm and a VTmaxi alarm respectively avoid barotraumas and volotraumas. Indeed, as soon as the previously set limits are reached, this security alarm stops insufflation.

■ Precious time saving for the practitioner

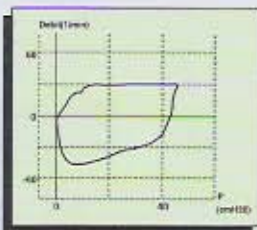
- Rapid implementation
Whilst you are preparing the patient for ventilation start-up, the ventilator's controls and calibration are being automatically carried out.
- Automatic alarm levels settings
Once you press the "automatic alarm" button, the alarm levels are accordingly positioned with the measured values.
- May you directly access the alarm's historical data, you are instantly informed on their chronology.

■ Loops - an essential diagnostic tool

- The superimposing of successive loops shows you over time the evolution of the patient's ventilation mechanism for a more efficient monitoring of his disorder.

■ Low Inflation flow to simplify the P/V quasi-static curves

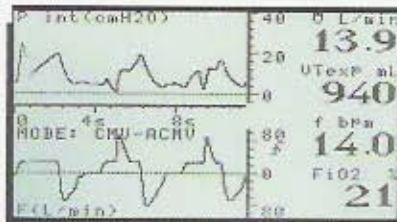
- By activating a special button, you can perform low inflation flow with a simultaneous display of the curve and measure the patient compliance. This information is easily obtained and will provide you with a precise view of the mechanical characteristics of each patient at any given moment. This will therefore help you to adjust set the ventilation parameters.



Classic Modes

■ CMV-ACMV

To ensure the patient's proper adaptation once the sedation effect has gone and upon the patient's request, **HORUS 4** adapts the insufflated flow.



■ SIMV

This mode combines controlled and spontaneous cycles in synchronization with the patient's pulmonary activity.

■ PS-PEEP

The patient's muscular fatigue is considerably reduced thanks to a remarkable short response time of the inspiratory and expiratory valves, and a very low expiratory resistance.

■ PCMV-APCMV

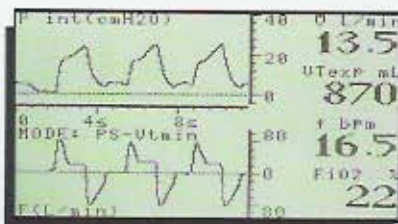
Particularly adapted to pediatrics, this pressure mode ventilation reduces the inspiratory effort to a minimum and limits the risks of barotraumas.



Advanced Modes

■ PS-Vt mini

This mode is really userfriendly. In real time during insufflation, the pressure regulation can be transformed into flow regulation in order to guarantee a minimum tidal volume.



■ PRVC

Pressure Regulated Volume Control ventilation is an assisted pressure controlled ventilation where the insufflation pressure level is adjusted from cycle to cycle. Hence the tidal volume is equal to the preset value.

■ MRV

Mandatory Rate Ventilation

Automatic adjustment of the pressure support according to the patient's respiratory rhythm, appeases the latter's ventilation. This is a useful mode for patient weaning from long term ventilation treatment.

■ APRV-Bi Level

Spontaneous airway pressure release ventilation

This pressure release mode enables better CO₂ elimination and a drop in the average intrathoracic pressure.



Optional :

Air Supply unit (imported Compressor) assembled in India to international Standards.

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SPECIFICATIONS HORUS 4 RESPIRATOR

Applications

Adult - Child - Infant
Resuscitation - Intensive Care Units - Recovery -
Post-operative Treatment - Emergency Units

Technical specifications

Electrical supply..... 100 to 240 V; 50 to 60 Hz 75 VA, Class I, Type B
Medical gases..... 2.8 - 6bar
Weight of ventilator..... 14kg
Weight of castor base..... 24kg
Dimensions, ventilator (HxWxD)..... 200 x 430 x 440 mm
Dimensions, ventilator and castor base..... 1300 x 585 x 610 mm

Performances

Tidal volume..... 20 to 2000 mL
Inspiratory flowrate..... 1 to 200 L/min
Maximum inspiratory flowrate..... > 200L/min
Frequency..... 5 to 80 cycles/min
SIMV frequency..... 1 to 60 cycles/min
Inspiratory plateau..... 0 to 60 % of Ti
Inspiratory time..... 10 to 80 % of total time
PEEP..... 0 to 25 cm H₂O
Pressure support..... 0 to 35 cm H₂O
Insufflation pressure..... 0 to 60 cm H₂O
Maximum inspiratory pressure..... 90 cm H₂O
Pressure support slope..... 50 to 150 cm H₂O/sec
FiO₂..... 21 to 100%
Inspiratory flowrate trigger..... 0.1 to 5 L/min
Inspiratory pressure trigger..... 0.5 to 5 cm H₂O
Expiratory flow rate trigger..... 0 to 30 L/min
Inspiratory pause..... 0 to 5 s
Expiratory pause..... 0 to 10 s
Sustained exhalation..... 0 to 2 min

Ventilation Monitor "MdV"

586 PC microcomputer
10.4" LCD colour touch screen
Customisable screen configuration
Additional monitoring parameters: weaning index f/VT,
respiratory effort...
Extended data logging capacity:
-24 h for pressure, flowrate and volume curves
-4-day trend for each parameter
-30 loop curves
Cursors, curve freeze, zoom function...

Ventilation modes

Volume Controlled/Assisted Controlled..... CMV - ACMV
Pressure Controlled/Assisted Controlled..... PCMV - ACPMV
Synchronized Intermittent Mechanical Ventilation..... SIMV
Spontaneous with Pressure Support and PEEP..... PS - PEEP
Pressure Regulated Volume Control*..... PRVC
Mandatory Rate Ventilation*..... MRV
Airway Pressure Release Ventilation*..... APRV
Spontaneous with Guaranteed MinimumVT,*..... PS - VT min
Non-Invasive Ventilation, NIV..... CMV - ACMV (NIV)
..... PCMV - ACPMV (NIV)
..... SIMV (NIV)
..... PS - PEEP (NIV)

Patient Monitoring

Real-time curves
Trends
Alarm history
Ventilation parameters
Resistance/Cmpliance
Auto PEEP
Plateau pressure

Alarms

P max
VT min/max
FiO₂ min/max
Patient disconnection
f min/max
Apnea ventilation
V min/max
Power Supply failures
Automatic alarm threshold setting

Other functions

Nebulization (flowrate and times adjustable)
Suction facility
Automatic checking and calibration
Emergency ventilation
"User Configuration" menu
Low inflation flow
Communication with hemodynamic monitor through RS 232 connector

* Optional

Marketed by: **Electrocare Systems & Services Pvt. Ltd.**



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