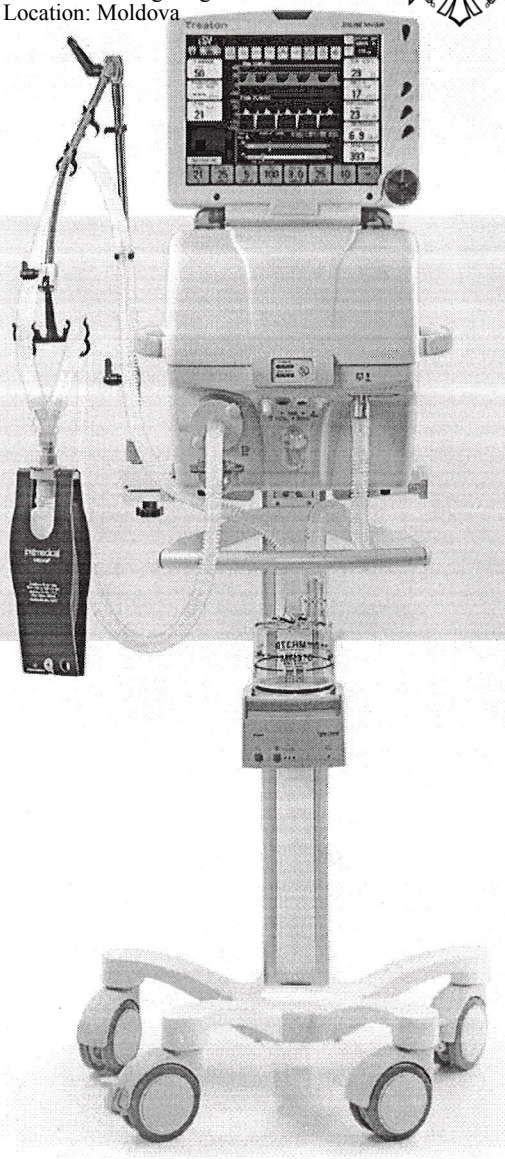
Intensive Care Ventilator MV200
Intensive Care Ventilator MV300



Intended use:

Ventilator is intended for controlled and assisted artificial ventilation of lungs for all patient groups with tidal volume from 10 ml in resuscitation units, surgery and intensive care departments, and also at transportation within professional medical facilities.
Patient age groups: adults, children, infants.

Display: 12.1" (MV200) or 15" (MV300), touchscreen, color, viewing angle adjustment.
Gas supply: built-in turbine; oxygen from central gas pipeline, cylinder or O_2 concentrator.
Power: 100–250 V, 50/60 Hz, built-in battery, up to 6 h of operation.
Interface: USB, Ethernet.

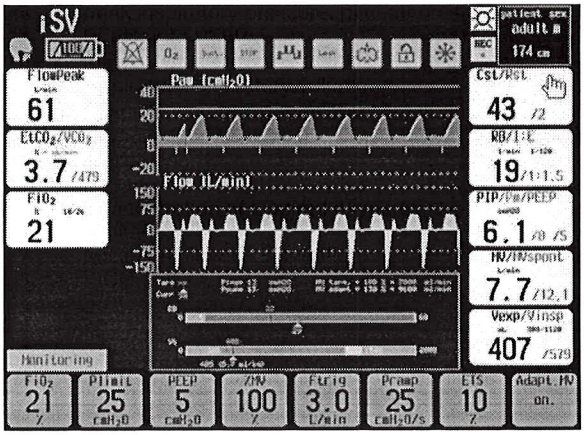
Ventilation parameters

Tidal volume, ml	10–3000
Breathing rate, bpm	1–120
Tinsp, sec	0.2–10
Flow trigger sensitivity, lpm	0.5–20
Pressure trigger sensitivity, cmH_2O	0.5–20
PEEP, cmH_2O	0–50
$Flow_{max}$, lpm	180
Inspiratory pressure, cmH_2O	0–100
Pressure support, cmH_2O	0–80
I:E ratio	1:99–60:1

Ventilation modes

Mandatory ventilation	volume controlled	CMV VCV
	pressure controlled	CMV PCV
	pressure controlled, volume guaranteed	PCV VG
Synchronized intermittent mandatory ventilation	volume controlled	SIMV VC (+PS)
	pressure controlled	SIMV PC (+PS)
	double-controlled	SIMV DC (+PS)
Spontaneous breathing	with continuous positive airway pressure	CPAP (+PS)
	two levels of PEEP	BiSTEP (+PS)
	airway pressure release ventilation	APRV (+PS)
Noninvasive ventilation	noninvasive ventilation with a mask	NIV
Adaptive ventilation	intellectual support ventilation with auto-control of ventilation	iSV
Reserve mode	apnea / backup ventilation	Apnea / backup

Monitoring of ventilation parameters



Graphical monitoring:

- Curves: simultaneous displaying up to three curves (flow, pressure, volume, CO_2, SpO_2, VCO_2, P_{aux}, iSV).
- Monitoring parameters: simultaneous displaying up to 8 windows depending on user's choice.
- Loops: pressure–volume, flow–volume, flow–pressure, volume–auxiliary pressure.
- Controls: 8 parameters are displayed depending on ventilation mode.
- Hot keys: 9 icons for the fast access to special functions of ventilator.

Basic monitoring:

- Peak inspiratory pressure, plateau pressure, average pressure, PEEP, auto PEEP.
- Minute volume of respiration.
- Inspiratory, expiratory volume.
- Respiratory rate, spontaneous breaths frequency.
- Compliance C.
- Resistance R.
- I:E ratio.
- Concentration of inspired oxygen FiO_2.
- Leakage.
- Maximum flow on inspiration.
- $EtCO_2$, $FiCO_2$.

Advanced monitoring:

- AutoPEEP, total PEEP.
- Inspiratory time constant, expiratory time constant.
- Stress index.
- Index of respiratory effort.
- Work the patient's breathing, work of ventilator breathing.
- Inspiratory time.
- Coefficient of spontaneous breathing.
- Resistance to exhalation.
- Dynamic compliance.
- Circuit resistance.
- Circuit compliance.
- Shallow breathing index.
- SpO_2, pulse rate.
- Cardiac output.
- Volume of alveolar ventilation ($V_{alv\ min}$).

Features and advantages

Evaluation of metabolic needs	The method of indirect calorimetry. Continuous measurement: oxygen consumption (VO_2), carbon dioxide elimination (VCO_2), respiratory quotient (RQ), resting energy expenditure (REE)
Advanced monitoring of alveolar ventilation parameters	Volumetric capnography (VCO_2), airway dead space volume (V_d), alveolar minute ventilation volume (MV_{alv})
Auxiliary pressure monitoring	Measurement of esophageal pressure/trachea via esophageal catheter and transpulmonary pressure measuring channel via balloon catheter
Stress index	Integral parameter indicating correctness of PEEP and tidal volume VT settings
Adaptive ventilation (iSV)	Mode of intellectual adaptive ventilation supporting patients with any level of breathing activity. It automatically determines the parameters of control and support ventilation pressure. This mode is ideal from weaning of patient from the ventilator
Mainstream capnometry	Monitoring of $EtCO_2$, $FiCO_2$ and respiratory rate. Quick response QuRe® sensor provides the highest precision of capnogram waveform for true clinical diagnostics and allows working even in HF ventilation mode up to 200 bpm
Integrated calculator of cardiac output by Fick method	Calculation of the cardiac output parameter (CO) based on the data of alveolar ventilation monitoring
Pulse oximetry	Measurement of oxygen saturation of arterial blood hemoglobin SpO_2, pulse rate (PR), photoplethysmogram