



# JSC "Ural instrument-engineering plant"

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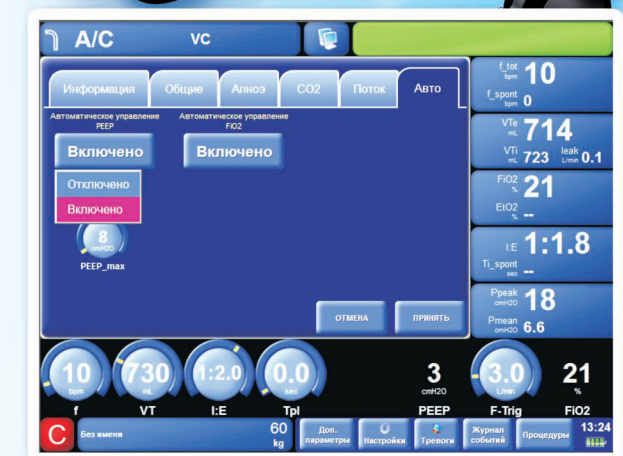


## New High-class lung ventilator "AVENTA-M"

### New opportunities for autoadaptive control

High-class portable lung ventilator with a built-in flow generator and modern touch screen management.

The screen displays all digital parameters, as well as respiratory graphics, including  $FiO_2$ ,  $EtCO_2$  monitoring in real-time mode. The ventilator is applicable for adults and pediatric patients weighting at least 5 kg .



# High-class lung ventilator "AVENTA-M"

High-class portable lung ventilator with a built-in flow generator (turbine) and modern touch screen management. The screen displays all digital parameters, as well as respiratory graphics. The ventilator is applicable for newborns 3kg, children and adults.

## Features:

- High sensitive correction of the ventilation in case of independent breathing efforts of the patient;
- Automatic adjustment of ventilation parameters and alerts limits with due account for patient's weight;
- Maneuver of therapeutic bronchoscopy;
- Automatic selection of pressure increasing optimal rate (Pramp - AUTO);
- Sensitive smart trigger does not miss real breathing attempts and minimizes the probability of false alarm even under conditions of leaks and NIV ventilation;
- Automatically controlled Exhalation trigger (Esens-Auto);
- Automatically controlled FiO2;
- Automatically controlled PEEP;
- Auto maintenance (support) of set Minute Ventilation in all modes;
- Automatic leakage compensation;
- Expiratory valve (unit) installed inside the lung ventilator;
- 5 hours internal battery;
- Ventilation pattern adjustment to the individual lungs characteristics (AUTO-MVG);
- EtCO2 and FiO2 monitoring;
- Wireless data transfer;
- Ventilation map (display of relation between Minute ventilation and breath rate, FiO2 level and PEEP rate, Spontaneous breath rate (f\_spont) and Inspiratory pressure (Pi));
- Multiscreen (simultaneous display of real lung's image, Paw, Flow and VT graphics);
- Rapid shallow breath index (RSBI);
- Standards rapid shallow breath index (RSBN). Standards RSBN index of the patient's ideal body weight (IBW)

## Performance specifications:

Breath rate (f)	1-150 bpm
SIMV breath rate	
Respiratory volume (VT)	10-3000 ml
Inhalation Peak flow (Peak flow)	180 l/min
Plateau time(Tpl)	0-2c
PEEP (including newborns ≥5kg)	0-50 c m H <sub>2</sub> O
CPAP	
FiO2	21 – 100%
Inspiratory pressure (Pi)	0-100cmH <sub>2</sub> O
Threshold pressure drop	
Inspiratory time (Ti)	0.2 -15 c
I : E Ratio	(1:10) - (4:1)
Pressure support(PS)	0-100 cmH <sub>2</sub> O
Flow-trigger (F-trig)	0.5-25 l/min, OFF
Pressure trigger (P-trig)	0.5-25cmH <sub>2</sub> O, OFF
Inspiratory pause	
Expiratory pause	
FiO2 increasing	(100% O <sub>2</sub> for 2 min)
Color TFT touch-screen display 12 inches	
Block of touch panel	
WOB_tot Shows the total work performed by the device and the patient on inhalation	

WOB_pat Shows the work performed by the patient on inhalation	
WOB_imp Shows the work performed by the patient on inhalation triggering (overcoming the breathing circuit resistance)	
Pause time	15-60 sec
Time of pressure increasing (Pramp)	50-500mc, AUTO
Built-in nebulizer providing < 3 microns and can be used in both TURNED OFF and TURNED ON positions	
SpO2 and PR	

## Monitoring parameters:

- Exhaled Tidal Volume (Vte)
- Inspired Tidal Volume (Vti)
- Minute volume (MV, Mv\_spont, MV\_mand)
- Breath rate (f, f\_spont, f\_mand)
- Inspiratory time (Ti)
- Expiratory time (Te)
- I :E Ratio
- Spontaneous minute control
- Inhalation time constant (Tc\_i)
- Exhalation time constant (Tc\_e)
- End exhalation pressure (Pe\_end)
- Peak Inspiratory pressure (Ppeak)
- Mean Airway Pressure (Pmean)
- Plateau pressure (Pplat)
- Positive End Expiratory Pressure (PEEP)
- FiO2
- Compliance (Cstat, Cdyn)
- Resistance (R stat)
- Summery frequency
- Trends (changed parameters) of up to 50 parameters with 60 seconds resolution

## Parameters displayed

Accumulator capacity, patient data, alarms, settings, clock, modes (regimes) etc.

## Graphic system displays the following graphics:

- Waves (Stream, Pressure, Volume);
- loops (Flow/Volume, Pressure/Volume, Flow/Pressure) trends (up to 7 days)

## Gas source

- compressed gas distribution system, oxygen Concentrator, balloon (O<sub>2</sub>)
- internal turbine (AIR)

## Ventilation modes:

A/C-VC (controlled volume)  
A/C-PC (controlled pressure)  
SIMV-VC  
SIMV-PC  
SIMV-PS (pressure support)  
SIMV-P/S-V/G  
CMV  
PEEP  
CPAP (Spont.), CPAP/PS  
CPAP/PS-VG  
Dual-Level (biphase breathing)  
Dual-Level/PS-VG  
NIV (noninvasive ventilation)  
Auto MVG  
Apnoe /additional ventilation  
APRV