

Intensive Care Ventilator Zisline MV350

For all patients, including preterm babies



ALL-IN-ONE
Ventilator



Zisline MV350 is a state of the art turbine-driven ventilator suitable for all patient groups, including extremely low weight babies. It can also be used for intrahospital transport.

Zisline MV350 allows lung ventilation in all groups of patients, including newborns and premature infants with extremely low body weight from 500 g. Also, the ventilator MV350 has all the necessary modes of non-invasive lung ventilation, respiratory support by CPAP through all available flow generators and by high-flow oxygen therapy.

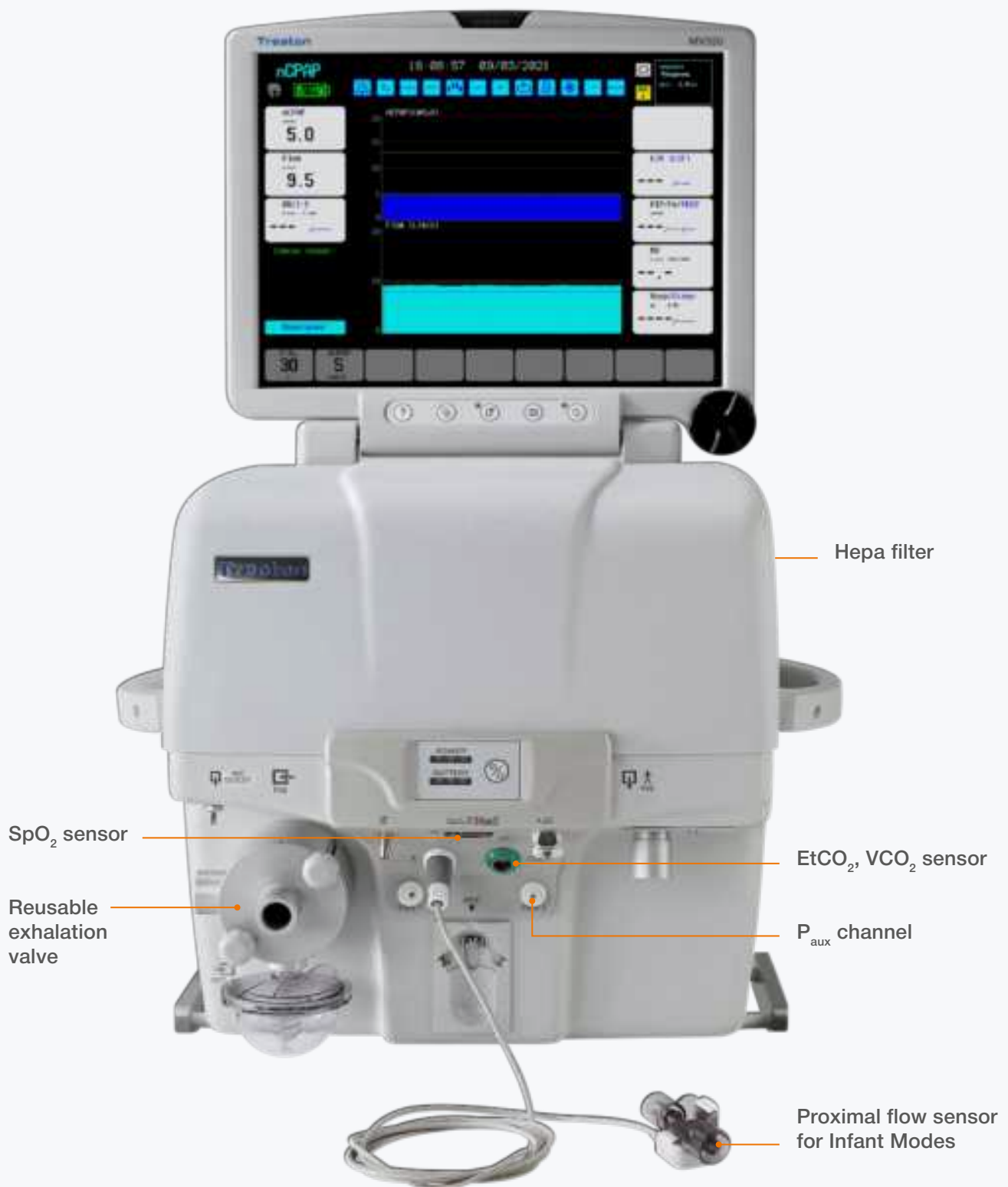
Zisline MV350 has wide range of adjustable ventilation parameters and alarm threshold ranges.

The proximal flow sensor ensures more accurate measurement of tidal volumes and provides precise flow in volume-controlled modes.

Ventilation Modes

Mandatory ventilation	with a controlled volume	CMV/VCV
	with a controlled pressure	CMV/PCV
	with a controlled pressure delivery of guaranteed volume	PCV-VG
Synchronized intermittent mandatory ventilation	with a controlled volume and support pressure of spontaneous inspiration	SIMV/VC
	with a controlled volume and support pressure of spontaneous inspiration	SIMV/PC
	with streaming trigger and pressure trigger with dual control	SIMV/DC
Modes of spontaneous breathing	with continuous positive pressure with pressure support	CPAP+PS
	with continuous positive airway pressure with the automatically set pressure support depending on the target volume	CPAP+VS
	ventilation at two levels of constant positive pressure with pressure support	BiSTEP+PS
Non-invasive ventilation	noninvasive ventilation	NIV
	non-invasive ventilation mode with continuous positive airway pressure through a nasal cannula or mask	nCPAP
	non-invasive intermittent mechanical ventilation with inspiratory pressure control and pressure support using a nasal cannula or mask	nIMV
	high flow oxygen therapy, 2-80 lpm	HF_O ₂
Intelligent ventilation	the target volume of minute ventilation at any level of patient's spontaneous respiratory activity	iSV
Apnea backup	apneustic breath	
Pressure support	pressure support function	PS

Minimum tidal volume from 1 ml for safe and efficient infant ventilation



Proximal flow sensor



MV350 has very reliable digital proximal flow sensor. The sensor measures volume and flow velocity at the ET-tube. This allows to deliver extremely precise breathing gas volumes and to respond to any breathing attempts of the patient.

The sensor measures the leakage with high accuracy.

Reusable (autoclavable) or single use flow sensors are available.

The proximal flow sensor is used in neonatal modes only. When switching to pediatric and adult mode, the flow sensor is automatically turned off.

Masimo SET pulse oximetry



MV350 has an Masimo SET® SpO₂ option. The ventilator is compatible with all types of Masimo SET® SpO₂ sensors.



SpO₂ Masimo SET® port

Technical Specification

Power	AC 100–250 V, 50/60 Hz. Built-in battery for 6 hours
Input oxygen pressure	0.15–0.6 MPa (1.5–6 bar). It is allowed to use low-pressure oxygen sources with operating pressure range: 0.05–0.15 MPa (0.5–1.5 bar)
Alarms	High, medium and low priority alarms: disconnection, apnea, occlusion, low/high Vexp, low/high minute volume, low PEEP, low PIP, low/high O ₂ concentration, maximum pressure is reached, low/high RB, low/high input O ₂ pressure, no mains voltage, low/high EtCO ₂ (option), low pulse signal (option), low/high SpO ₂ (option), low/high PR (option), high circuit resistance, high leakage, low nCPAP pressure, low flow HF_O ₂ Diagnostic messages at technical malfunctions of the device. Log of alarms and events (up to 1000 messages).
Interfaces	Ethernet, USB
Standards	Device complies with IEC 60601-1, IEC 60601-1-2 ISO 80601-2-12, ISO 80601-2-55, ISO 80601-2-61, ISO 18562
Operation from a low pressure oxygen sources (optional)	0–0.005 MPa (0–0.05 bar)
Maximum (peak) flow on inspiration	180 lpm

Ventilation Parameters

Tidal volume, V _t	1–3000 ml
Minute volume, MV	0–60 lpm
Rate of breathing, RB	0–150 lpm
Inspiratory pressure, Pi	0–100 H ₂ O (mbar)
Flow trigger, F _{trig} Pressure trigger, P _{trig}	0.1–20 lpm 0.5–20 cmH ₂ O (mbar)
I:E ratio	1:99–60:1
Positive end-expiratory pressure, PEEP	0–50 cmH ₂ O (mbar)

Extended respiratory monitoring

- SI — stress index;
- P0.1 — respiratory effort index;
- Wspont — work of the patient’s breathing;
- Rexp — resistance to exhalation;
- Cdyn — dynamic compliance.

Integrated functions

- Alveolar recruitment maneuver — short-term PEEP increasing to the set level;
- Leak compensation — full automatic leakage compensation in the circuit (if leak is too high and cannot be compensated, disconnection alarm is triggered);
- Tube resistance compensation — providing the airway pressure taking into account the resistance of the intubation tube;
- 100% oxygenation;
- Standby mode;
- Suction maneuver;
- Manual breath (manual ventilation);
- “Freezing” / analysis of graphs;
- Screen lock;
- Nebulizer;
- Mode of the deepen sigh.

Advanced patient monitoring

- Mainstream CO₂;
- volumetric CO₂;
- evaluation of patients metabolic needs;
- auxiliary pressure;
- SpO₂;
- respiratory mechanics;
- Cardiac output by Fick method.

We continuously
improve the
technological
principles and
implement
new profitable
solutions based
on market
demands



In biomedical signal processing, gas
monitoring and respiratory support
since 1989

12/5 Sibirskiy Trakt
Ekaterinburg, 620100
Russia

Quality management
system certified
as meeting
the requirements
of EN ISO 13485

Second
edition
November
2021

