

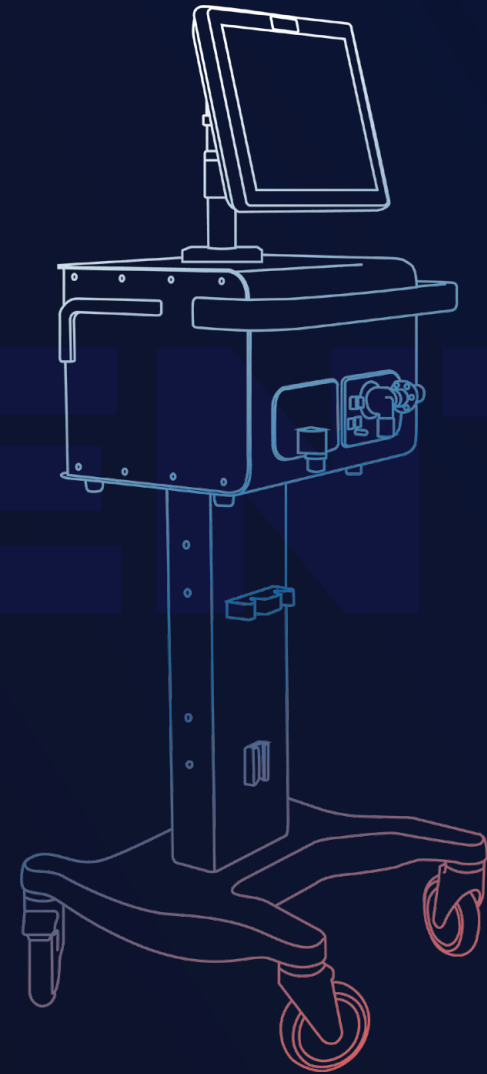
# BIYOVENT

Intensive Care Type  
Mechanical Ventilator Device





Breathe the Future ●●●



[biosysmed.com](http://biosysmed.com)



## Our Work, The Source of Life

Breathing for health, health for technology

As Biosys, since 2012, we have been providing solutions to gaps in the healthcare sector with experienced engineers and expert doctors with extensive R&D experience, starting our journey in Ankara. In our working process, we advance with the awareness that access to healthcare services is a fundamental social right and we develop our technologies with the consciousness of delivering this right to every individual.

By developing next-generation medical technologies, we turn our ideas into reality at our R&D center to meet both national and global needs in the healthcare field. We know that even the smallest task we undertake can impact an individual's health somewhere in the world, and for this reason, we carry out meticulous and in-depth work to ensure that every detail of our products is designed flawlessly. Thanks to our effective and safe production approach, we produce next-generation medical technologies with high quality and reliability, becoming a beacon of hope for healthy living.

In the technologies we develop to meet the needs and demands of the healthcare sector, we do not rely solely on our engineering expertise. Instead, we engage in a multidisciplinary approach shaped by the input of doctors at every step we take. Thus, we create medical devices that not only have high technological threshold values but also fully meet the needs, encompassing the best in design, software, and technology. With this distinctive approach, we continue to move forward confidently, aiming to touch the health of every individual and become a gateway to healthy living worldwide.

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**15000+**  
Devices



**30+**  
Countries



**20**  
Delivery in less  
than twenty days

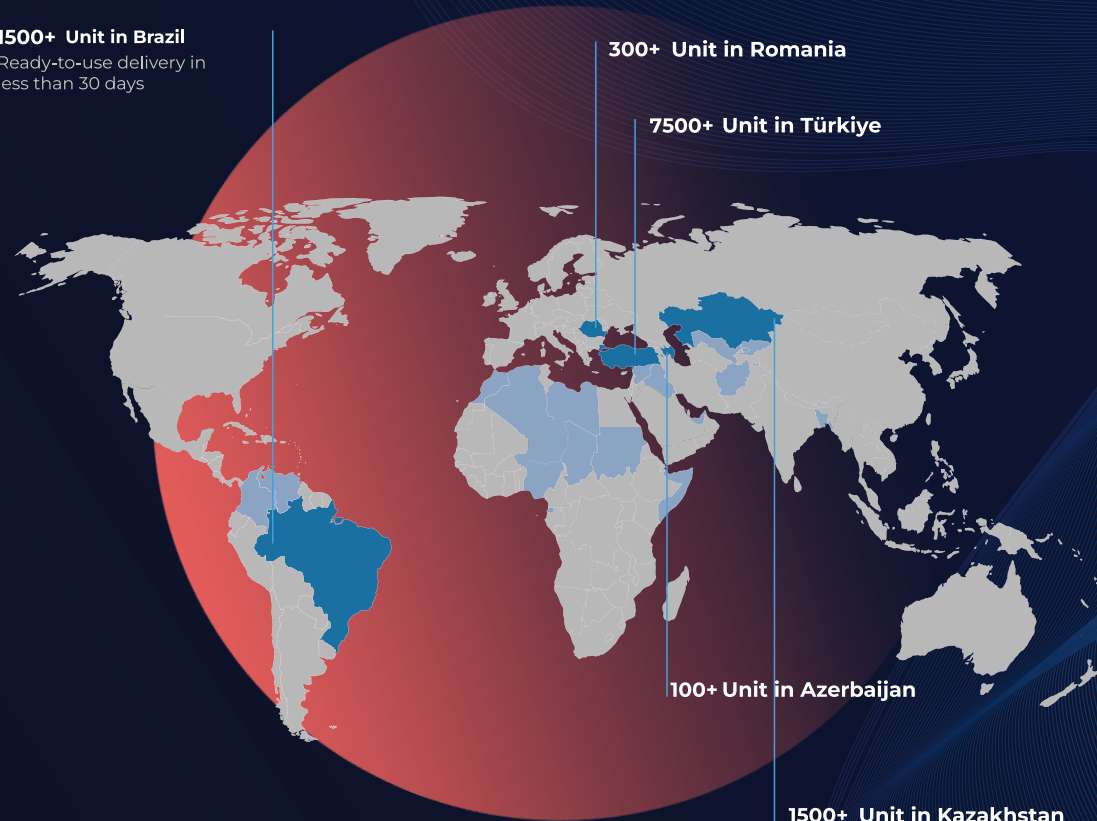
**1500+ Unit in Brazil**  
Ready-to-use delivery in  
less than 30 days

**300+ Unit in Romania**

**7500+ Unit in Türkiye**

**100+ Unit in Azerbaijan**

**1500+ Unit in Kazakhstan**





# THE NEXT STEP IN VENTILATOR TECHNOLOGY

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## DEFINITION OF **PERSONALIZED TREATMENT**

### Optimal Treatment for Every Patient's Unique Needs

Each patient's condition and needs are different. With this awareness, Biyovent offers a customizable structure based on the patient's needs. This approach provides advantages for both the patient and the doctor, ensuring the most effective treatment is applied.

Biyovent, where every detail is considered for health, assists in applying the most suitable treatment method for pediatric and adult patients by entering characteristics such as height and weight during usage.

Additionally, by recording values related to the patient's condition beyond physical characteristics, changing clinical needs can be monitored. This ensures that the most appropriate and accurate treatment is provided to each patient.

From a usability standpoint, Biyovent assists healthcare providers in accessing various necessary information while enabling the application of the required treatment method for patients. It offers the flexibility to choose between Non-Invasive, Invasive ventilation, N-CPAP, and HFO therapy types. Biyovent establishes a secure infrastructure for treatment with advanced software features, allowing adjustments such as hose settings, circuit length, thickness selection for patient use, and adjustable alarm limits, thereby enhancing safety measures to the highest standards.



**Invasive and Non-Invasive Ventilation**



**Integrated Nebulizer**



**High Flow Oxygen Therapy and N-CPAP  
(Nasal Continuous Positive Airway Pressure)**



**Suitable for Pediatric, Adult, and  
Neonatal (Optional) Patients**



**Smart Ventilation Modes**



## INNOVATIVE DESIGN, **COMPREHENSIVE SOLUTIONS**

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### Design Suitable for Quick and Easy Setup

Biyovent, with its three-part structure, can be set up quickly and easily. Its ergonomic design, consisting of base, support, and main body parts connected to the screen, facilitates ease of installation.

Biyovent, allowing the parts to be connected with eight screws, facilitates quick and solution-oriented work during device setup, thanks to a simplified installation system that goes beyond complex structuring.



- Multi-use autoclavable expiratory valve
- Nebulizer output

- Wheels with increased shock absorption
- Locking mechanism
- Safe design
- Ease of use



- Power supply for humidifier
- External nebulizer input
- Emergency valve



- 15 inch high-resolution color display
- Sensitive touch
- Easy transition between modes
- Easily adjustable mode parameters
- Capability to monitor more than 30 parameters simultaneously

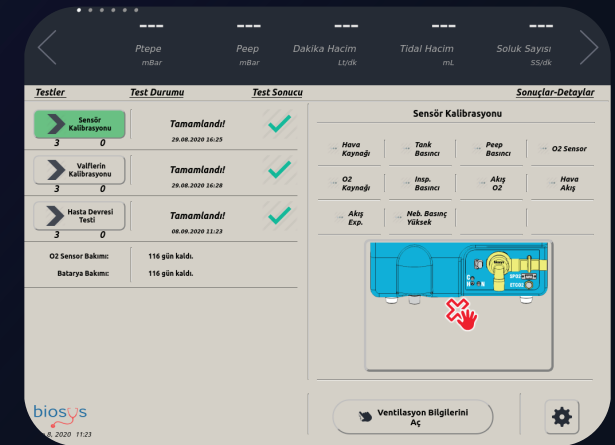




## ADVANCED SOFTWARE, EASY USE



With an easy-to-use interface design, patient information can be entered effortlessly and allows customization of parameters tailored to the patient's needs.



It allows easy calibration in 3 steps through on-screen guidance.

## USER CENTERED, SCREEN SYSTEM

Biyovent, advanced software features and a user-centered interface design, simultaneously displays 3 graphs, 3 loops, and lung dynamic status. Its visually supported interface design facilitates easy access to information, enhancing learning and application. It allows access to more than 30 parameters on the same screen, and its 15-inch high-resolution display presents information clearly and in detail.

The screen with sensitive touch capability allows adjustments to be easily made, enabling quick steps for necessary modifications in patient-specific treatment. It displays real-time measurement values graphically for monitoring sudden developments related to the patient, and alerts in case of alarms to facilitate prompt intervention. Additionally, it features a smart respiratory monitoring function with a lung diagram to visualize the dynamic status of the lungs.

It allows seeing the dynamic status of the lungs with a lung diagram that offers smart respiratory monitoring feature.



Peak cmH <sub>2</sub> O	Peep cmH <sub>2</sub> O	Minute Volume L/min	Tidal Volume mL	Resp. Rate b/min
Peak cmH <sub>2</sub> O	Peep cmH <sub>2</sub> O	Minute Volume L/min	Tidal Volume mL	Resp. Rate b/min
Plateau cmH <sub>2</sub> O	PreP cmH <sub>2</sub> O	I:E Ratio	TI s	Te s
Insp Peak Flow L/min	Exp Peak Flow L/min	Oxygen %	Min. Vol. (Spn) L/min	Resp. Rate(Spn) b/min
R Airway cmH <sub>2</sub> O/L/min	Elastance cmH <sub>2</sub> O/L	Compliance mL/cmH <sub>2</sub> O	RC Constant s	Leak %
WOB joule	WOBELV joule/L	ETCO <sub>2</sub> %	PiCO <sub>2</sub> mmHg	Residual mL
				Expiration mL
				Expiration mL
AutoPEEP cmH <sub>2</sub> O				
PiO <sub>2</sub> cmH <sub>2</sub> O/101.3	RO <sub>2</sub> cmH <sub>2</sub> O/101.3	PTP cmH <sub>2</sub> O/L	P <sub>inf</sub> cmH <sub>2</sub> O	Exp Volume L/min
				Leak Const. (a/min/cmH <sub>2</sub> O)
				Instant T Vol mL
				Resp s

Monitoring parameters through a single screen allows simultaneous monitoring of more than 30 parameters.



# PERSONALIZED SOLUTION EACH INDIVIDUAL



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## Ventilation Modes Suitable for Every Age and Condition

- Pressure Targeted Modes (P-ACV P-SIMV+PS P-CMV P-PSV P-Bilevel APRV)
- Volume Targeted Modes (V-ACV V-ACV(PRVC) V-CMV V-SIMV+PS V-SIMV(PRVC)+PS)
- Spontan Modlar (SPN-PS SPN-VS)
- Akıllı Modlar (SAV)



# TECHNICAL SPECIFICATIONS

Monitoring Parameters			
Ppeak (cmH <sub>2</sub> O)	Compliance (ml/cmH <sub>2</sub> O)	Peep (cmH <sub>2</sub> O)	RC Constant (sec)
Minute Volume (Lt/Min.)	Tidal Volume (ml)	Port (cmH <sub>2</sub> O)	Leakage(%)
Respiratory Rate (RR/Min.)	Pplato (cmH <sub>2</sub> O)t	Ti (sec)	Te(sec)
I:E Rate	Oxygen (%)	WOB (joule)	WOB/Lt (joule/Lt)
Inspiration Peak Pressure (Lt/Min)	Expiration Peak Pressure (Lt/Min)	Vexpiration (mL)	Vinspiration (mL)
Vresidual (ml)	Exhalation S(Spn) (SS/dk)	Leakage Constant(Ltr/m)/cmH <sub>2</sub> O	Minute Volume (Spn) (Lt/min)
Elastance (cmH <sub>2</sub> O/Ltr)	OtoPEEP (cmH <sub>2</sub> O)	P0.1 (cmH <sub>2</sub> O/ 0.1s)	P_nif (cmH <sub>2</sub> O)
RSBI (rr/Min)Lt	PTP (cmH <sub>2</sub> Oxsec)	rcExp (sec)	Expiration Volume/min (Lt/min)
Leakage Constant (Lt/ml/cmH <sub>2</sub> O)	Instantaneous Tidal Volume (mL)		

Pressure Targeted Modes	Volume Targeted Modes	Spontaneous Modes
P-ACV	V-ACV	SPN-PS
P-SIMV+PS	V-ACV(PRVC)	SPN-VS
P-CMV	V-CMV	Optional Features
P-PSV	V-SIMV+PS	Usage in “Neonatal” patients
P-Bilevel	V-SIMV(PRVC)+P	Smart Modes
APRV		SAV



Patient Compliance and Performance		Pressure Source Features	
Child and Pediatric	Adult	O2 Pressure: 2.5 - 7 Bar	
Respiratory rate: 1-150/min	Respiratory rate: 1-100/min	Air Pressure: 2.5 - 7 Bar	
T inspiration: 0.1-10 second	T inspiration: 0.1-10 second	Automatic changeover and alarm at the end of supply	
Tidal volume: 20-300ml	Tidal volume: 100-3000ml	Medical compressor/Ability to operate with a regulator	
Flow: 1-60 lt/min.	Flow: 2-120 lt/min.	Electrical Specifications	
<th>Working Features</th>		Working Features	Batttery Life: 2 hour + 8 hour (Optional)
		Mains Voltage: 180 - 264 VAC	
		Power Consumption: 47 - 63 Hz 100W	
		Digital Interfaces	
Inspiration pressure: 2-100 mbar	Inspiration Time: 0.1-10 Sn	USB: 4 pieces / COM: 2 pieces	
Peep pressure: 1-50 cmH2O	Breathing Rate: (ç) 1-150/dk (y) 1-100/dk	HDMI: 1 piece / LAN: 2 pieces	
Flow: (c) 1-60 lt/min (y) 2-120 lt/min	O2 Mixture: 21-100%	Display Port: 1 piece	
Spontane Pressure Support: 0-100 mBar	I/E Rate: 1:10 (x60*)-10:1 (c): Child, (a): Adult	Mic. In: 1 piece	
		Dimensions	
		B: 150 cm / D: 58 cm / G: 58 cm	
		Weight: 55 Kg	
		Screen Movement: Right or Left 150° Up or Down 15°	
		Screen: Fully touchscreen	



# BIYOVENT

## Intensive Care Type Mechanical Ventilator Device



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