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Neonatal · Pediatric · Adult

# BIYOVENT

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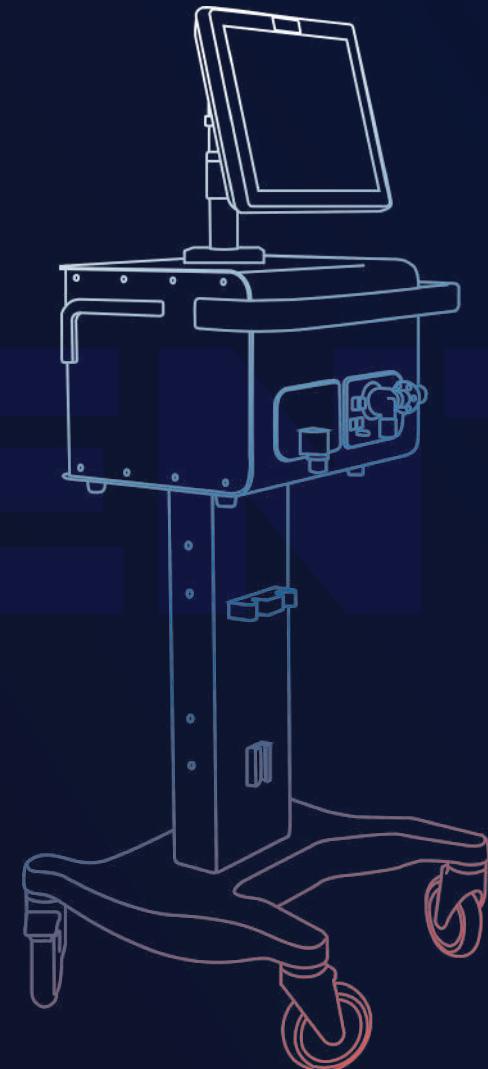
Intensive Care Type  
Mechanical Ventilator Device



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Breathe the Future



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## 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.



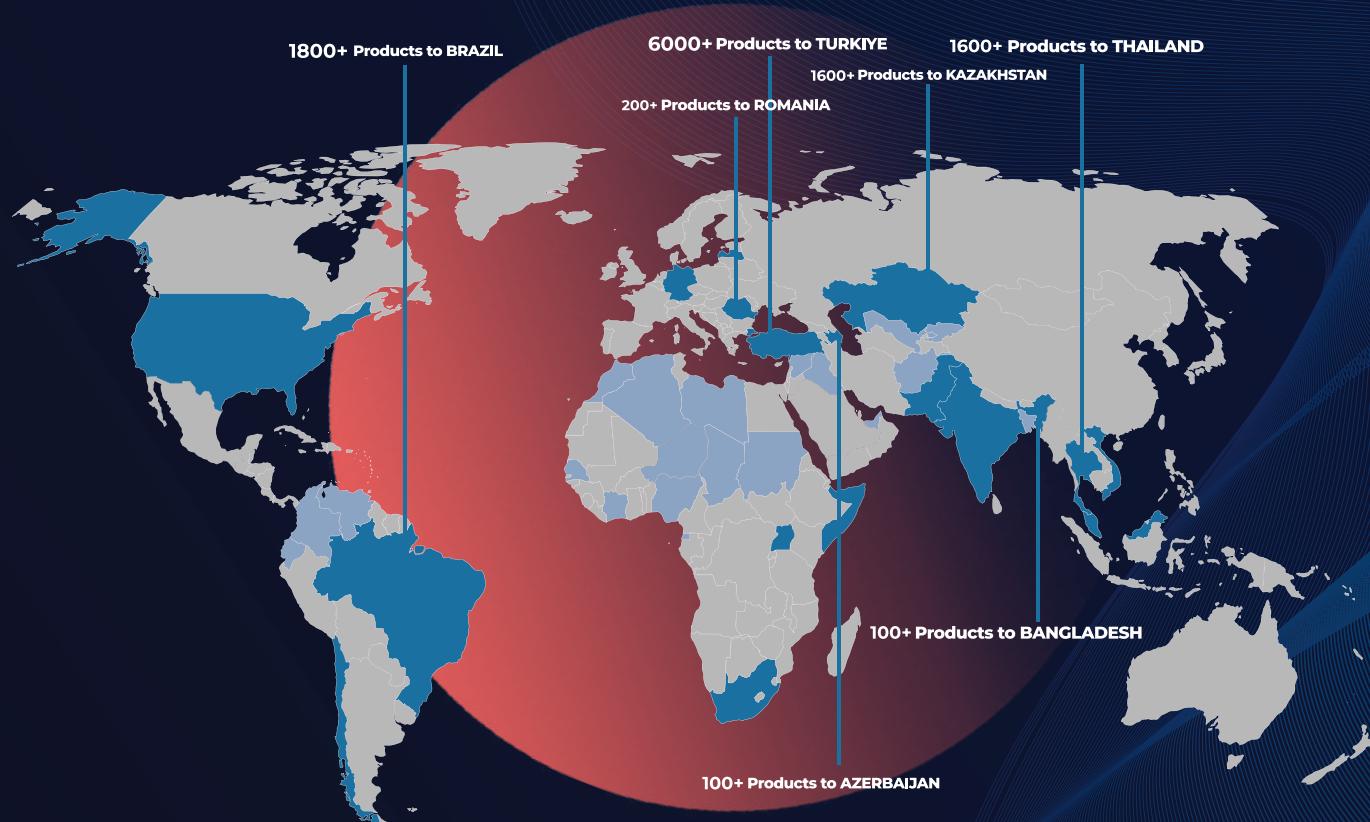
**18000+**  
Devices



**40+**  
Countries



**20**  
Delivery in less  
than twenty days



## 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, designed with every detail considered for health, helps to apply the most suitable treatment method for pediatric, adult, and neonatal patients. By recording values related to the patient's condition, 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 provides healthcare providers with access to 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 circuit length, patient-specific circuit thickness selection, leak trigger compensation, and adjustable alarm limits. It elevates safety measures to the highest standards.



## INNOVATIVE DESIGN, **COMPREHENSIVE SOLUTIONS**

### 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 simplifies solution-oriented work with a streamlined and quick installation system that goes beyond complex configurations.





**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 Patients**



**Smart Ventilation Modes**



**Leak and Trigger Compensation**



- Multi-use autoclavable expiratory valve
- Nebulizer output



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

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



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

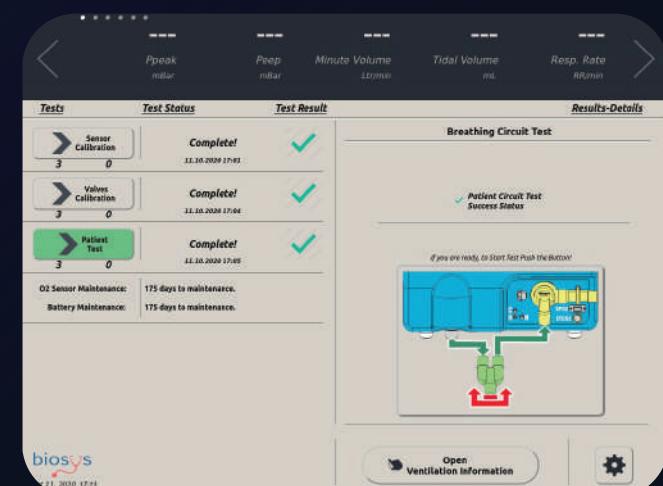


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## ADVANCED SOFTWARE, EASY USE



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.

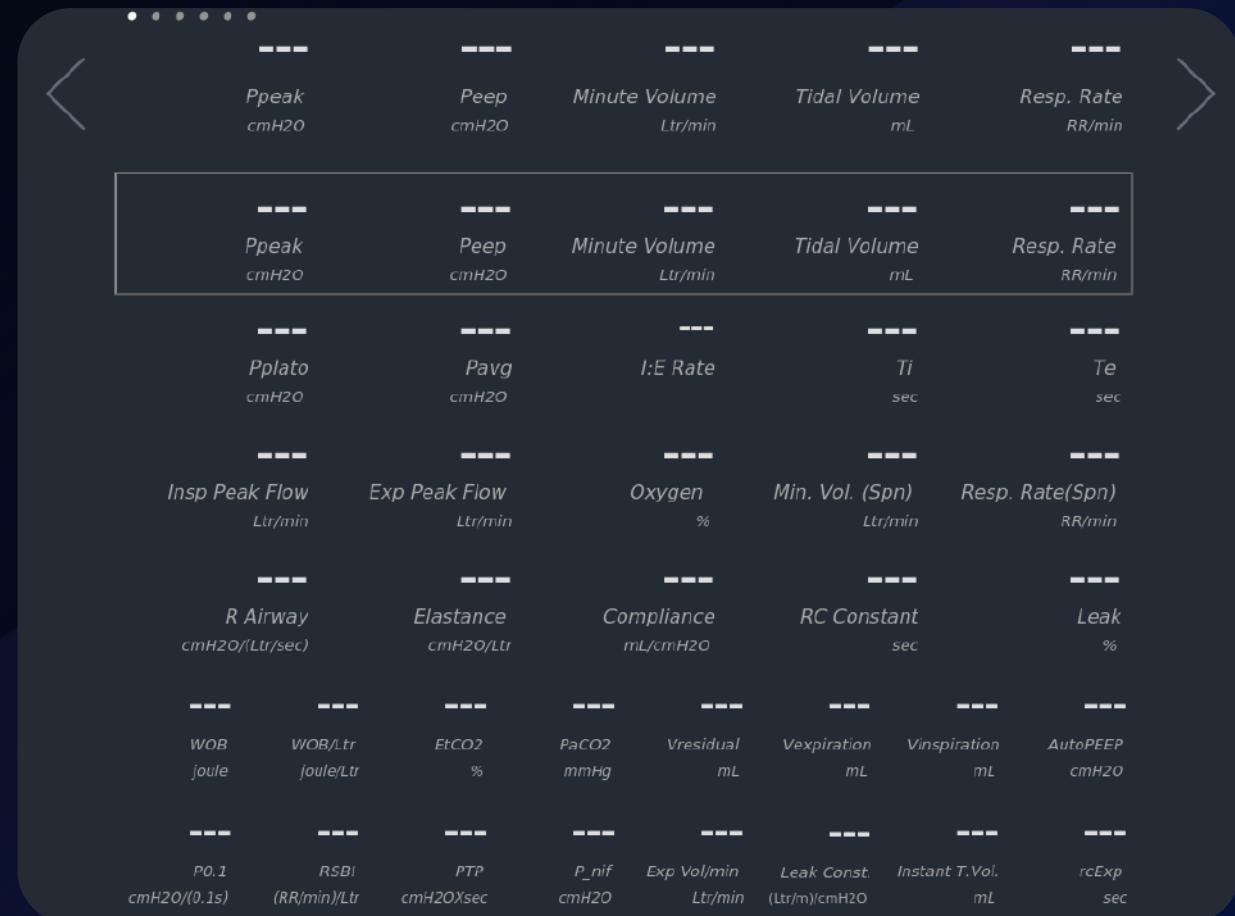
## USER CENTERED, SCREEN SYSTEM

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.



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

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



## ENHANCE YOUR BIYOVENT EXPERIENCE

BioAqua humidifier aligns with invasive and non-invasive mechanical ventilation. It can also be used during a HFO therapy provided by a ventilator. BioAqua has invasive, non-invasive and HFO treatment modes provided with different temperatures accordingly.

The special exterior design of the design enables monitorization of parameters easily when the BioAqua is attached to the ventilator.

The device provides the nebulizer feature with standard configuration of humidification. With different modes of nebulizer flow rate, accurate treatment is achieved.



## Ventilation Modes Suitable for Every Age and Condition

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	Smart Modes
P-PSV	V-SIMV+PS	SAV
P-Bilevel	V-SIMV(PRVC)+P	
APRV		



# 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 (L/min.)	Tidal Volume (mL)	Port (cmH <sub>2</sub> O)	Leakage(%)
Respiratory Rate (RR/min.)	Pplato (cmH <sub>2</sub> O)t	T <sub>i</sub> (sec)	T <sub>e</sub> (sec)
I:E Rate	Oxygen (%)	WOB (joule)	WOB/Lt (joule/Lt)
Inspiration Peak Pressure (L/min)	Expiration Peak Pressure (L/min)	Vexpiraton (mL)	Vinspiration (mL)
Vresidual (mL)	Exhalation S(Spon) (s/min)	Leakage Constant(Ltr/m)/cmH <sub>2</sub> O	Minute Volume (Spn) (L/min)
Elastance (cmH <sub>2</sub> O/Ltr)	OtoPEEP (cmH <sub>2</sub> O)	P <sub>0.1</sub> (cmH <sub>2</sub> O/ 0.1s)	P <sub>nif</sub> (cmH <sub>2</sub> O)
RSBI (rr/min)Lt	PTP (cmH <sub>2</sub> O×sec)	rcExp (sec)	Expiration Volume/min (L/min)
Leakage Constant (L/mL/cmH <sub>2</sub> O)	Instantaneous Tidal Volume (mL)		



Patient Compliance and Performance		Pressure Source Features
Neonatal	Adult & Pediatric	O2 Pressure: 2.5 - 7 Bar Air Pressure: 2.5 - 7 Bar Automatic changeover and alarm at the end of supply Medical compressor/Ability to operate with a regulator Electrical Specifications Battery Life: 2 hours + 8 hours (Optional) Mains Voltage: 180 - 264 VAC Power Consumption: 47 - 63 Hz 100W
Respiratory rate: 1-150/min T inspiration: 0.1-10 second Tidal volume: 2-300ml Flow: 1-60 lt/min	Respiratory rate: 1-100/min T inspiration: 0.1-10 second Tidal volume: 100-3000ml Flow: 2-120 lt/min.	
Working Features		Digital Interfaces USB: 4 pieces / COM: 2 pieces HDMI: 1 piece / LAN: 2 pieces Display Port: 1 piece 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
Inspiration pressure: 2-100 mbar Peep pressure: 1-50 cmH2O Flow: (c) 1-60 lt/min (a) 2-120 lt/min (c): Child, (a): Adult Spontane Pressure Support: 0-100 mBar	Inspiration Time: 0.1-10 second Breathing Rate: (c) 1-150/min (a) 1-100/min O2 Mixture: 21-100% I/E Rate: 1:10 -10:1	

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