

Multi-Functional
Non-Invasive
Respiratory Care System

OmniOx

HFT700



OmniOx, a full featured NIV

From High Flow Nasal Cannula Therapy to BiPAP S/T

Humidifier

R.H. 100 %

Monitoring

SpO₂, RR

O₂ Blender

21 ~ 100 %

HFNC

1 ~ 60 LPM

BiPAP S/T

4 ~ 40 cmH₂O



Multi-Functional Non-Invasive Respiratory Therapy System

OmniOx, leading solution

Compact

Design for mobility and easy installation

3 in 1 Device HFNC, CPAP, BiPAP S/T

Built in Oxygen Blender and Humidifier

Touch-Screen 5" Color TFT LCD

Comfort

Improve patient's comfort and safety

HFNC is a proven therapy for hypoxia, which is more patient-friendly because it uses a lightweight and comfortable interface compared to other NIVs. OmniOx's NIV technology allows leak compensation up to 60 LPM, so any kind of NIV mask can be used.

EasyCare

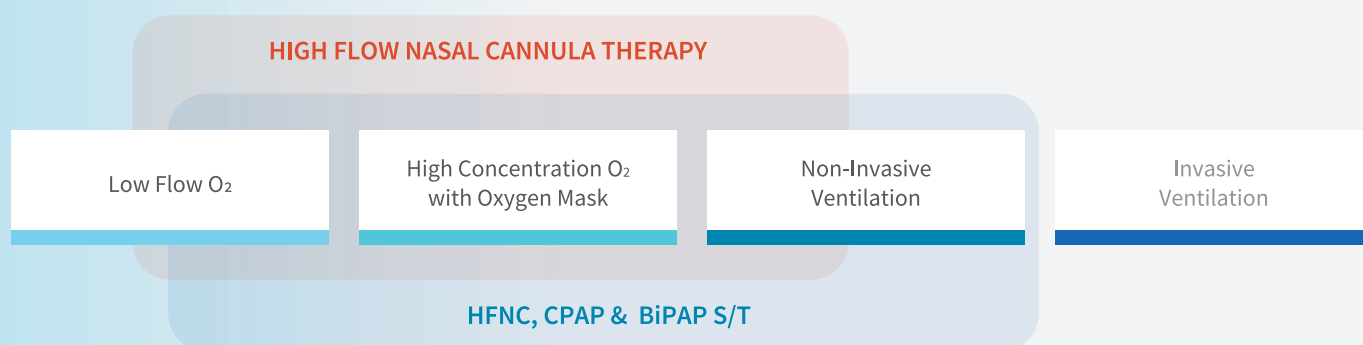
Focus on easy operation for clinician

One device to a variety of applications

It is essential to have a reliable device that is versatile and applicable to all level of patient acuity while meeting various respiratory requirements. MEKICS makes respiratory care easier for patient by helping a wide range of ventilation therapies from High Flow Nasal Cannula Therapy to Non-invasive ventilation. The patient can maintain the respiratory care without changing Non-invasive ventilator to other one.

Monitoring

A clinician not only checks easily the therapy information in real time : FiO_2 , Flow Rate, RR, Airway temp. and SpO_2 , PR, S/F ratio but also ensure patient interface well placed.



All levels of respiratory patient acuity

How to help physician's challenge in sub-acute respiratory care?



OmniOx is a multifunctional non-invasive respiratory therapy device with HFNC, CPAP & BiPAP S/T mode.

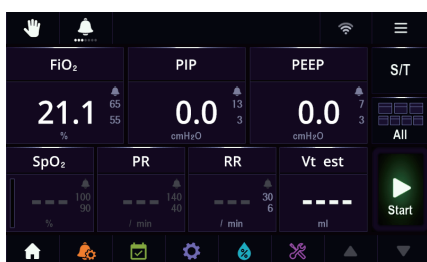
It is equipped with a humidifier and oxygen blender, which are essential components for respiratory care procedure. It also has a monitoring function such as SpO₂, heart rate and respiration rate to assure safe patient care.

HFNC

OmniOx, with the excessive flow of inspiratory requirement, the heated and humid oxygen is delivered via nose and reduces the unnecessary inspiratory work. And it optimizes the mucosal state within nasal and upper airway with appropriate humidity. In anatomical dead space, there is a lower possibility of not fully exhaled gas. In the end, it is a non-invasive respiratory therapy, which reduces the patient's ventilatory work and improves the oxygenation in blood.

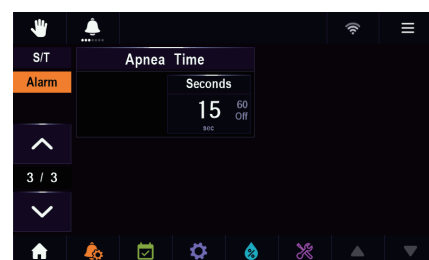
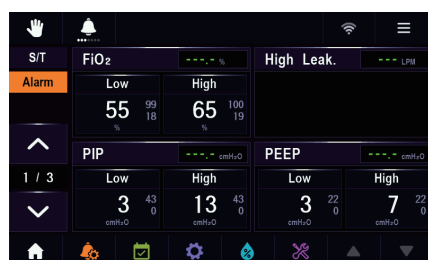
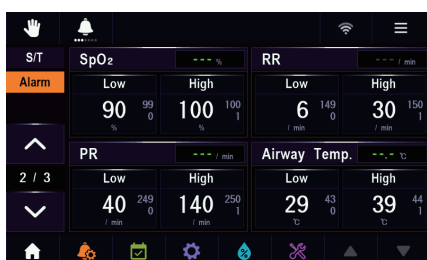
BiPAP S/T

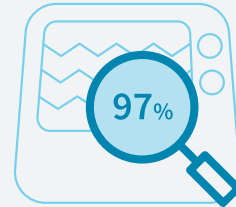
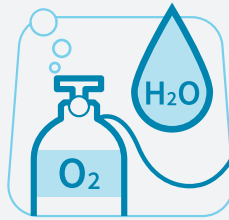
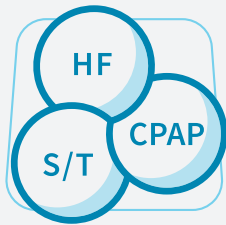
S/T mode of OmniOx delivers pressure support with PEEP. The device triggers Inspiratory Positive Airway Pressure (IPAP) in response to spontaneous inspiratory flow effort and cycles to Expiratory Positive Airway Pressure (EPAP) during passive exhalation phase.



S/T Mode ensures that patient will receive minimum set of breaths per minute if their spontaneous breathing rate drops below the RR setting. If the patient fails to initiate an inspiration within the interval determined by the Rate control, the device triggers a timed breath resulting in a pressure-control (machine-triggered, pressure-limited, time-cycled) breath at the set IPAP level.

The rate of timed breaths can be adjusted from 2 to 60 BPM and the duration of each breath is controlled by an Inspiratory Time control.





Leak Compensation

This function compensates unintended and deviated leaks from baseline range between the patient breathing and interface. When the leakage amount changes, the triggering sensitivity is maintained because the base flow is re set in consideration of the leakage amount. The maximum leak compensation is 60 LPM.

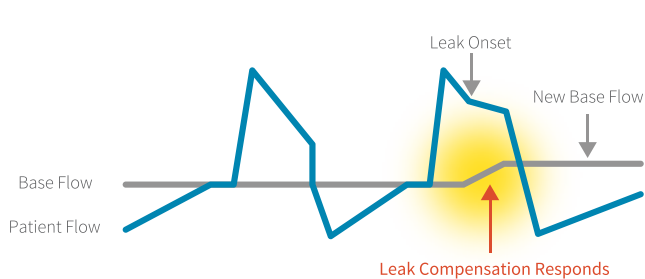
Functional goal

Under circumstances of flow leakage, the leak compensation will minimize the asynchrony by correcting and adjusting the stable patient trigger sense by internal algorithm.

The rise time adjustment minimized asynchrony by meeting patient demand flow rates.

By adjust the flow cycle control, the asynchrony is minimized by ensuring that the exhalation takes place according to the patient's exhalation demand.

Trigger-Sync with Leak compensation

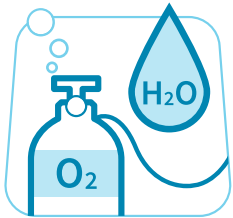


Reset Baseline Leak Flow Rate



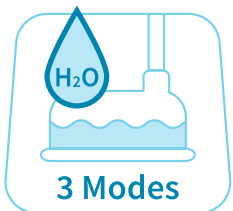
Rise Time & Flow Cycle Control

Do you need a device with various functions? Solution is *OmniOx*



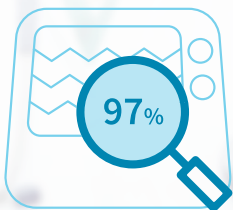
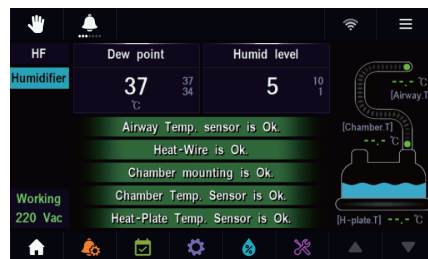
Built-in Blower & Oxygen Blender

Built-in blower which is a flow generator, it can be used in places where high-pressure air is not supplied. The oxygen blender is built in, it can adjust the oxygen concentration from 21 to 100% independently of the flow rate setting.



Adaptive Controlled Humidifier

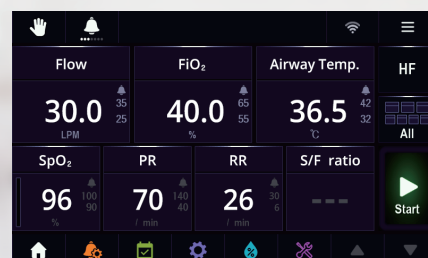
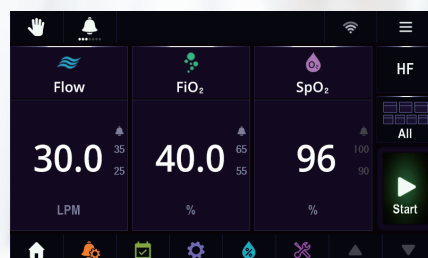
Optimal humidity over 3 respiratory modes are supported by adaptive control algorithm. You can check each connection and operation status related to humidifier in one screen at a glance, and you can change the setting easily.



Essential Monitoring

Flow, RR, FiO₂, SpO₂, PR, S/F ratio, Airway temperature

Safe respiratory care needs essential monitoring functions. It can fulfill clinician's Easy Care.

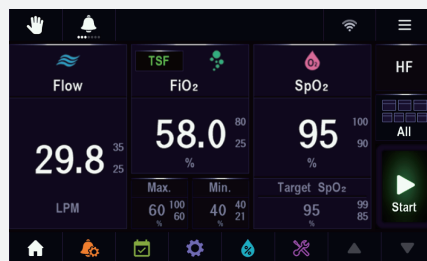




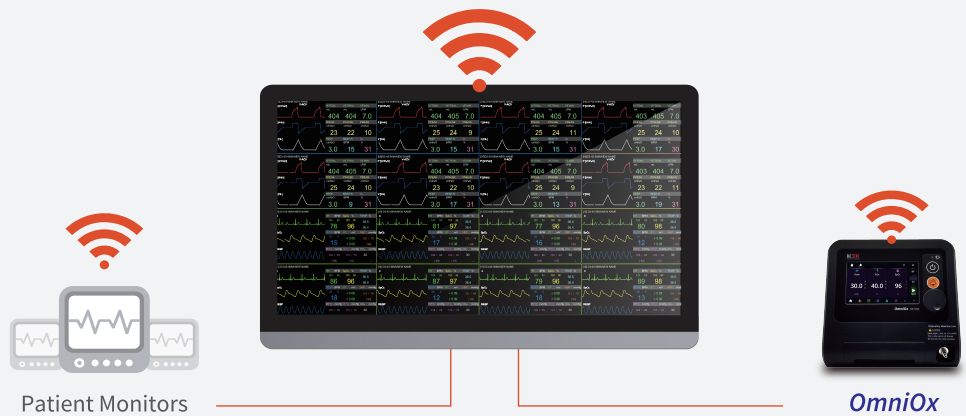
Pulse Oximeter with Target SpO₂ Feedback(TSF) control by FiO₂

Goal of TSF

- Maximize time within the target SpO₂ range
- Especially minimizing high/Low SpO₂ episodes
- Reduce modulation of SpO₂
- Reduce the workload of the bedside caregiver



Central Monitoring System



16 + 16
Patient Monitor or *OmniOx*

10 Days
Graphic Trends

6
Waveforms Display

OmniOx

HFNC (High Flow Nasal Cannula)

| | |
|------------------|------------|
| Flow Rate | 1 ~ 60 LPM |
| FiO ₂ | 21~100 % |

CPAP (Continuous Positive Airway Pressure)

| | |
|----------------------------|--|
| CPAP | 4 ~ 20 cmH ₂ O ±(1.7 + 4 % of the set value) cmH ₂ O |
| Pressure Assist + (PA(+)) | OFF, 1 ~ 3 cmH ₂ O |
| Pressure Assist - (PA(-)) | OFF, -3 ~ -1 cmH ₂ O |
| Trigger Sensitivity | 3 ~ 20 LPM |
| FiO ₂ | 21~100 % |
| Exp.Sensitivity (Ex_Sense) | 10 ~ 80 % |

S/T (Bi-Level Positive Airway Pressure Spont/Timed)

| | |
|----------------------------|--|
| IPAP | 4 ~ 40 cmH ₂ O ±(1.7 + 4 % of the set value) cmH ₂ O |
| EPAP | 4 ~ 20 cmH ₂ O ±(1.7 + 4 % of the set value) cmH ₂ O |
| Pressure Assist - (PA(-)) | OFF, -3 ~ -1cmH ₂ O |
| Respiration Rate | OFF / 2 ~ 60 /min |
| Inspiratory Time (Ti) | 0.5 ~ 3.0 sec |
| Trigger Sensitivity | 3 ~ 20 LPM |
| FiO ₂ | 21~100 % |
| Exp.Sensitivity (Ex_Sense) | 10 ~ 80 % |
| Rise time | Fast / Medium / Slow |

Humidifier

| | |
|----------------------|--|
| Airway Temperature | HF : 34 ~ 40 °C, CPAP & S-T : 31 ~ 40 °C |
| Humidification level | Level 1~5 (Adjusting the heater plate temperature) |

Pulse & SpO₂

| | |
|------------|---|
| Range | 0 ~ 100 % |
| Accuracy | ±2 % for readings 100 ~ 70 %, ±3 % for readings 69 ~ 51 % / Unspecified : 50 ~ 0 % |
| Pulse Rate | Range : 20 ~ 300 BPM ±1 BPM |

As MEKICS's products are ceaselessly improved, the actual product may differ from the descriptions, specifications, and the pictures in this publications.



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