

TechnoVent



TECHNOCRATS HEALTHCARE
Enhancing Life



EXCELLENT IN PRE & IN-HOSPITAL

TechnoVent



* Next Gen High Performance turbine provides seamless flow deliveries for Adult to Neonatal Patients

* For ICU, PICU, NICU & ALS Ambulance

* 12 inches adjustable Touchscreen

* 12 modes of Invasive Ventilation

* 11 modes of non Invasive Ventilation

* HFNC (O2 Therapy) & nCPAP also available

* With Neonatal flow Sensor

* Standard EtCO2 & SPO2 interfaces

* High & Low Pressure oxygen inlet

Physical Specifications

Specifications

Dimensions(WxHxD) 323mmx392mmx255mm

Ventilation Specifications

Specifications

Patient Type Adult, Pediatric, Neonatal

Invasive Ventilation Mode

- VC-ACV (Volume Controlled – Assist Control Ventilation)
- PC-ACV (Pressure Controlled – Assist Control Ventilation)
- PVC-ACV (Pressure Volume Controlled-Assist Control Ventilation)
- VC-SIMV (Volume Controlled – Synchronized Intermittent Mandatory Ventilation)
- PC-SIMV (Pressure Controlled – Synchronized Intermittent Mandatory Ventilation)
- PVC-SIMV (Pressure Volume Controlled – Synchronized Intermittent Mandatory Ventilation)
- CPAP/PSV (Continuous Positive Airway Pressure/Pressure support ventilation)
- Apnea Ventilation

Optional:

- PC-Dual PAP (Pressure Controlled-Duo Positive Airway Pressure)
- PC-APRV (Pressure Controlled – Airway Pressure Release Ventilation)
- CPAP-VG (Continuous Positive Airway Pressure-Volume Guarantee)
- AMV (Adaptive minute ventilation)

Non-invasive Ventilation Mode

- PC-ACV (Pressure Controlled – Assist Control Ventilation)
- PVC-ACV (Pressure Volume Controlled-Assist Control Ventilation)
- PC-SIMV (Pressure Controlled – Synchronized Intermittent Mandatory Ventilation)
- PVC-SIMV (Pressure Volume Controlled – Synchronized Intermittent Mandatory Ventilation)
- PC-Dual PAP (Pressure Controlled-Duo Positive Airway Pressure)
- PC-APRV (Pressure Controlled – Airway Pressure Release Ventilation)
- CPAP/PSV (Continuous Positive Airway Pressure/Pressure support ventilation)
- CPAP-VG (Continuous Positive Airway Pressure-Volume Guarantee)
- Apnea Ventilation

Optional:

- NHFC (Nasal high-flow humidification oxygen therapy)
- nCPAP (Neonatal continuous positive airway pressure ventilation mode)

Ventilator System

Parameter	Range	Unit
FiO ₂	21-100	%
VT (Tidal Volume)	100-2000 (Adult) , 20-400 (Pediatric) 5-200 (Neonatal) , 2-200 (Optional)	mL
P _{insp}	(PEEP+5) to 90	cmH ₂ O
P _{high}	(P _{low} +5) ~ 80	cmH ₂ O
P _{low}	0 ~ 40	cmH ₂ O
P _{supp}	0 ~ 80	cmH ₂ O
PEEP	0 ~ 50	cmH ₂ O
FiO ₂	21 ~ 100	%
Rate	1 ~ 100	bpm
I:E	4:1 ~ 1:10	/
T _{insp}	0.3 ~ 12.0	s
T _{exp}	0.3 ~ 12.0	s
T _{pause}	OFF · 5 ~ 60	%
T _{high}	0.3 ~ 30.0	s
T _{low}	0.3 ~ 30.0	s
Trigger	Pressure: OFF · -1 ~ -10 Flow: OFF · 1 ~ 15	cmH ₂ O L/min
T _{slope}	0.00 ~ 2.00	s
Exp%	OFF · 5 ~ 95	%

Controlled Parameters(O₂ Therapy)

Parameter	Range	Unit
Continuous Flow	2.0 to 50.0	L/min
O ₂ Concentration	21 to 100	%
P _{max}	10 to 95	cmH ₂ O

Parameter monitoring accuracy

Parameter	Range	Unit
P _{peak}	-5 to +105	cmH ₂ O
P _{mean}	-5 to +105	cmH ₂ O
P _{plat}	-5 to +105	cmH ₂ O
PEEP	0 to 40	cmH ₂ O
P _{tracheal}	-10 to 110	cmH ₂ O
P _{output}	-10 to 110	cmH ₂ O
P _{ambient}	0 to 3000	cmH ₂ O
P0.1	-105 to 5	cmH ₂ O
V _{Te mand}	0 to 2500	mL
V _{Te spon}	0 to 2500	mL
V _{Ti mand}	0 to 2500	mL
V _{Ti spon}	0 to 2500	mL
M _{Ve}	0 to 100	L/min
M _{Ve spon}	0 to 100	L/min
M _{Vi mand}	0 to 100	L/min
M _{Vi spon}	0 to 100	L/min
T _{insp}	0 to 100	s
T _{exp}	0 to 100	s
PIF	0 to 200	L/min
PEF	-200 to 0	L/min
V _{t Leak}	0 to 5000	mL
R _{total}	0 to 250	bpm

RR spon	0 to 250	bpm
FiO ₂ Cal	21 to 100	Vol.%
FiO ₂ Measu	21 to 100	Vol.%
Rlung	5 to 300	cmH ₂ O/L/s
Cdynamic	0.5 to 100	mL/cmH ₂ O
RSBI	0 to 10000	bpm/min/L
PTP(Transpulmonary Pressure Monitoring)	0 to 10	cmH ₂ O·s

Monitored Parameters

Numeric

Paw	MVi spon	FiO ₂
P-peak	VT _e	Rlung
P-plat	VT _e spon	Cdynamic
P-mean	VT _i	PTP
PEEP	VT _i spon	EtCO ₂
PIF	Rtotal	FiCO ₂
PEF	RR spon	awRR
MVe	I:E	SpO ₂
MVe spon	Tinsp	PR
MVi	Texp	

Real Time Graphics

Pressure-time Waveform	Flow-Pressure Loop
Flow-time Waveform	Flow-Volume Loop
Volume-time Waveform	Pressure-Volume Loop
EtCO ₂ -time Waveform	
SpO ₂ (Pleth)-Time Waveform	

Alarm

Parameters

Pressure high/low	Apnea	Tube leak
VT _i high/low	SpO ₂ high/low	Hose disconnected
VT _e high/low	PR high/low	Airway obstructed
O ₂ supply failure	Battery low	AMV: cannot meet target
PEEP high/low	System down/fan broken	Paw sensor malfunction
Rtotal high/low	Battery disconnect	No Pressure sensor
Airway Obstructed	AC disconnect	No O ₂ sensor
FiO ₂ high/low	Power down	CO ₂ communication stopped
EtCO ₂ high/low	Vt Limited	CO ₂ sample-line occluded
awRR high/low	Pressure limited	SpO ₂ Sensor off

O₂ Therapy

Specifications	O %	Flow
Controlled Parameters	21-100% (Increments of 1%)	
Controlled Accuracy 0-80L/min	± (3vol.% + 1% of Setting)	±(2L/min+10% of Setting) (BTPS)

Trends Record

Specifications

Type	Tabular, Graphic
Length	24 hours
Content	Monitor Parameters
Event Log	5000

Environmental Specifications

Specifications	Operating	Storage and transport
Temperature	5-40°C	-20 to +60°C(O ₂ Sensor: -20 to +50°C)
Relative Humidity	10-95%	10-95%
Barometric Pressure	62-106kPa	50-106kPa

Gas Supply

Specifications	
Gas Supply	Medical-grade Oxygen
Pipe Connector	NIST or DISS
Gas Supply Pressure	280-600kPa

Low-pressure oxygen inlet

Specifications	
Pressure range	Less than 100 kPa
Maximum flow	15 L/min (STPD)
Connector	CPC quick connector

Power & Battery Backup

Specifications	
External AC Power Supply Input Voltage	100-240V
Input Frequency	50/60Hz
Overcurrent protection	10 ± 5 %A
Fuse	T10AH/250 V
Number of Batteries	Two
Battery Type	Build-in Lithium-ion Battery, 14.8VDC, 5200mAh
Battery Running Time	6 hours (2 Qty Battery)

Communication interface

Specifications	
Communication Interface	RJ45, RS232, USB, Nurse call, CO ₂ Module Connector, SpO ₂ Module Connector

Value Added Functions

Specifications	
O ₂ therapy	Screen-lock
Nebulization	Sigh
Manual Breath	SPO ₂
Inspiratory Hold	CO ₂
Expiratory Hold	RSB
PEEPi	Compliance
P0.1	Calibrate
ATC	O ₂ suction

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