

NKV-330 VENTILATION SYSTEM

TREASURE EVERY BREATH®



Improving patient safety, quality of care and outcomes, while also managing costs are critical goals in today's acute care environment. Medical devices making a positive contribution towards these goals will be crucial to the health care of the future.

IMPROVING PATIENT CARE

01. Offers multiple non-invasive ventilation and high flow oxygen therapy modes
02. Provides 72 hours of full-disclosure clinical data to determine the best treatment
03. Offers increased patient comfort with a formfitting NPPV mask
04. Adaptive triggering and cycling to address challenges with changing patient conditions

FLEXIBILITY

01. Provides ventilation for patients ≥ 12.5 kg with tidal volumes as low as 100 mL
02. Adapts easily from urgent, to acute, to alternative care environments
03. Highly configurable alarms to fit your hospital's workflow
04. Detects CO₂ and SpO₂ parameters automatically with Smart Cable™ System
05. Easily adaptable for in-house transports

MANAGING PATIENT SAFETY

01. Provides prompt notification of critical ventilator events with easily visible alarms
02. Ensures continuous operation with a "hot swap" main battery and internal backup battery
03. Incorporates dual HEPA filter protection for both patient and ventilator
04. Continuous CO₂ monitoring with cap-ONE® during NPPV therapy

NKV-330 VENTILATION SYSTEM SPECIFICATIONS

PATIENT TYPE

ADULT AND PEDIATRIC PATIENTS WHO HAVE SPONTANEOUS BREATHING BUT NEED MECHANICAL VENTILATION (PATIENTS WITH A TIDAL VOLUME OF 100 ML OR MORE)

Display Size/Type	12.1" TFT color LCD Height: 13.39" Width: 12.99"
Viewing	9.75" (H) X 7.26" (V) Height: 6.89" Weight: 16.75 lb
Gas Supply Air	Integrated Turbine
High Pressure O₂ supply	41 to 87 PSI V 200 L/min
Low Pressure O₂ supply	11 PSI V 12 L/min

VENTILATION AND OXYGEN MODES

SPONT-PS	Continuous positive airway pressure with pressure support
S/T	Spontaneous with timed backup
PCV	Pressure control ventilation
PRVC	Pressure regulated volume control ventilation
PPV	Proportional pressure support ventilation
O₂ Therapy	High flow oxygen therapy

MONITORING WAVEFORM DATA

PARAMETER	DISPLAY RANGE
Paw	-5 to 60 cmH ₂ O
Flow	-200 to +200 L/min
Volume	-50 to 3,500 mL
Plethysmogram (Pleth)	-
CO₂	0 to 150 mmHg

POWERS

Mains (AC Power)	100 to 240 V, 50 to 60 Hz
Main Battery	Li-ion, 14.4 V Run time: 4 hrs. (fully charged)
Backup Battery	Rechargeable nickel metal hydride -12 V Run time: 1 hr. Total run time: 5 hrs.

DATA

Event Logs	Alarm and operation logs: 32,768
Storage	Trend graphs and trend lists: 72 hrs.

NUMERIC DATA

PARAMETER	MEASUREMENT RANGE
PIP (Peak Inspiratory Pressure)	0 to 99.9 cmH ₂ O
PEEP (Positive End Expiratory Pressure)	0 to 99.9 cmH ₂ O
F_{I-PEAK} (Peak Inspiratory Flow)	0.0 to 200.0 L/min
F_{E-PEAK} (Peak Expiratory Flow)	-200.0 to 0.0 L/min
MV_I (Total Inspiratory Minute Volume)	0 to 99.9 L/min
MV_{I SPONT} (Spontaneous Inspiratory Minute Volume)	0 to 99.9 L/min
MV (Total Expiratory Minute Volume)	0 to 99.9 L/min
MV_{SPONT} (Spontaneous Expiratory Minute Volume)	0 to 99.9 L/min
VT_I (Inspiratory Tidal Volume)	0 to 3,500 mL
VT (Expiratory Tidal Volume)	0 to 3,500 mL
VT/kg (Expiratory Tidal Volume per body weight)	0.0 to 50.0 mL/kg
RR_{TOT} (Total Respiratory Rate)	0 to 150 /min
RR_{SPONT} (Spontaneous Respiratory Rate)	0 to 150 /min
T_I/T_{TOT} (Inspiratory duty cycle)	0 to 90 %
I:E ratio*¹ (I:E)	0.0 to 99.9
T_I (Inspiratory Time)	0.00 to 99.99 s
T_E (Expiratory Time)	0.00 to 99.99 s
Leak_{TOTAL} (Total leakage flow)	0 to 200 L/min
Leak_{PATIENT} (Patient leakage flow)	0 to 200 L/min
Leak % (Leakage volume ratio)	0 to 100 %
Pt. Trig (Spontaneous breathing ratio)	0 to 100 %
O₂ Gas Usage	0 to 99 L/min
Flow Rate	0 to 99 L/min
FI_{O2}	15 to 100 %
SpO₂	70 to 100 %
PR	30 to 300 /min
PI	0.00 to 99.99 %
CO₂ (I)	0.0 to 150.0 mmHg
CO₂ (E)	0.0 to 150.0 mmHg
RR (CO₂)	0 to 150 /min
SpO₂ Measurement	Display range: 0 to 100 % Nominal range: 70 to 100 %
CO₂ Measurement	Calculation method: TG-900P/TG-920P: Semi-quantitative TG-980P: Quantitative
Measurement range	TG-900P/TG-920P: 0 to 100 mmHg TG-980P: 0 to 150 mmHg

*¹ This measurement fixes "I" to one (1) and measures "E"

ALARM SETTINGS

ALARM	SETTING
High PIP	6 to 50 cmH ₂ O
Low PIP	OFF, 4 to 39 cmH ₂ O
High PEEP	EPAP/CPAP setting + 5 cmH ₂ O
Low PEEP	EPAP/CPAP setting - 3 cmH ₂ O @ ≤ 5 cmH ₂ O EPAP/CPAP setting - 4 cmH ₂ O @ 6 to 11 cmH ₂ O EPAP/CPAP setting - 5 cmH ₂ O @ ≥ 12 cmH ₂ O
High MV	0.2 to 30.0 L/min, OFF
Low MV	OFF, 0.1 to 29.9 L/min
High VT	10 to 3,500 mL, OFF
Low VT	OFF, 5 to 3,495 mL
High RR	2 to 150 /min, OFF
Low RR	OFF, 0 to 149 /min
Apnea	5 to 60 sec
High FI_{O2}	FI _{O2} setting + 7 % (when "O ₂ Source" is set to "HPO")
High FiO₂	High range is 22 to 100%, OFF

ALARM	SETTING
Low FiO₂	Low range is 18 to 99% When high pressure O ₂ is used, the High/Low FI _{O2} alarm is +/- 7% of O ₂ setting. When low pressure O ₂ is used, the High/Low O ₂ alarm settings are set by the clinician.
High SpO₂	51 to 100 %, OFF
Low SpO₂	OFF, 50 to 99 %
High PR	31 to 300 /min, OFF
Low PR	OFF, 30 to 299 /min
High EtCO₂	2 to 99 mmHg, OFF
Low EtCO₂	OFF, 1 to 98 mmHg
High FiCO₂	1 to 99 mmHg, OFF
High RR (CO₂)	2 to 150 /min, OFF
Low RR (CO₂)	OFF, 0 to 149 /min
Apnea (CO₂)	5 to 40 sec, OFF



NKV-330 VENTILATION SYSTEM SPECIFICATIONS (CONTINUED)

CONTROL SETTINGS

CONTROL SETTING	RANGE	VENTILATION MODE					
		SPONT-PS	S/T	PCV	PRVC	PPV	O ₂ THERAPY
EPAP / CPAP	4 to 25 cmH ₂ O	✓	✓	✓	✓	✓	-
IPAP	5 to 40 cmH ₂ O	-	✓	✓	-	-	-
PS (above PEEP)	0 to 36 cmH ₂ O	✓	-	-	-	-	-
T _I	0.3 to 7.5 sec	-	✓	✓	✓	-	-
T _I Max	0.3 to 7.5 sec	✓	✓	-	✓	✓	-
T _I Min	0.3 to 7.5 sec	✓	✓	-	✓	✓	-
I:E	1:1.0 to 1:20.0	✓	✓	✓	✓	-	-
RR	4 to 60 /min	-	✓	✓	✓	-	-
FiO ₂	21 to 100 %	✓	✓	✓	✓	✓	✓
Slope	1 to 6	✓	✓	✓	✓	-	-
Press. Release	OFF, 1 to 3	✓	-	-	-	-	-
Ramp Up Time	OFF, 5 to 45 min	✓	✓	✓	-	-	-
Max P	6 to 40 cmH ₂ O	-	-	-	✓	✓	-
Min P	5 to 39 cmH ₂ O	-	-	-	✓	-	-
VT	100 to 2000 mL	-	-	-	✓	-	-
Max VT	100 to 2000 mL	-	-	-	-	✓	-
PPV %	0 to 100 %	-	-	-	-	✓	-
Max E	0 to 100 cmH ₂ O/L	-	-	-	-	✓	-
Max R	0 to 50 cmH ₂ O/L/sec	-	-	-	-	✓	-
Flow Rate	1 to 60 L/min	-	-	-	-	-	✓
Apnea Ventilation	OFF, ON	✓	-	-	-	✓	-
Trigger type	Advanced, Flow	✓	✓	✓	✓	✓	-
Trigger sensitivity (Advanced)	Auto, 1 to 7	✓	✓	✓	✓	✓	-
Trigger sensitivity (Flow)	0.1 to 10.0 L/min	✓	✓	✓	✓	✓	-
Expiratory trigger % (ET%)	5 to 80 %	✓	✓	-	✓	✓	-

NIHON KOHDEN
MORE IS POSSIBLE

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FOR 24/7 VENTILATOR SUPPORT, PLEASE CALL US AT 1-855-550-VENT OR EMAIL VENTILATOR@NIHONKOHDEN.COM

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