

Data sheet

Monnal T60

Emergency transport ventilator



Monnal T60 was designed for mobile medical treatment in any intensive-care environment, whether in a hospital or not. Monnal T60 provides mobile medical teams with the highest possible standards of ventilation for critical-care patients: adults and children over 6 kg. With many modes and high performance NIV, Monnal T60 allows medical teams to adjust the treatment to suit different patients.

It guarantees quick, intuitive use via its large color touch-screen. Combined with complete and very accessible monitoring (etCO₂, plateau pressure, etc.), Monnal T60 provides safe ventilation throughout the patient transportation.

PHYSICAL SPECIFICATIONS

Dimensions	29x25x11 cm (lxwxh)
Weight	3.7 kg (4 kg with 2 batteries)

VENTILATION

Types	Volume controlled, Pressure controlled, Pressure support, Spontaneous
Modes	(A)VCV, (A)PCV, SIMV, PSV, PSV/NIV, CPAP
"Emergency" modes	Automatic pre-selection of ventilation parameters with the setting of the Ideal Body Weight (IBW) of the patient (infants and adults)

SCREEN

Technology	LCD color resistive touch-screen. 262k colors (18 bits)
Dimensions	8.4 inches
Display resolution	640*480 pixels
Luminosity	800 cd/m2 LED backlight Luminosity adjustment. Day / Night screen display

Technical specifications Monnal T60

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Parameter settings

Patient categories	Adult / Infant
Patient weight	Adjustable (IBW)
Tidal volume	50 to 2000 mL
Frequency	1 to 60 Bpm
PEEP	0 to 20 cmH ₂ O
FiO ₂	21 to 100 %
I:E ratio	10 to 50 % of total time
Inspiratory time	0.3 to 5 s
Inspiratory flow rate trigger	Desactivated. 0.5 to 10 l/min
Inspiratory pressure	5 to 60 cmH ₂ O
Pressure support	5 to 60 cmH ₂ O
Rise time	50 to 120 cmH ₂ O/s
P.max	80 cmH ₂ O
P.limit	90 cmH ₂ O
Expiratory trigger	10 to 90% of peak flow
Peak flow	5 to 150 l/min in volumandric mode 230 l/min in spontaneous mode
Inspiratory and expiratory pause	0 to 15 s

ALARMS

Ajustable by users	High pressure, VTi low/high, MV _i low/high, MVe low/high, VTe low/high, Frequency low/high, FiO ₂ low/high and CO ₂ low/high
Specific alarms	Disconnection, expiratory obstruction, flow sensor, power supply, battery, gas inlet and patient pre-oxygenation
Features	Adjustable volume, 4-levels of criticality

SPECIFIC FUNCTIONS

Apnea ventilation	Adjustable apnea ventilation volume, frequency and duration
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MONITORING SPECIFICATIONS

PARAMETERS MEASURED	SETTINGS RANGE	TRENDED VALUE
Expired minute volume (MVe)	0 to 99 L/min	yes
Expired tidal volume (VTe)	0 to 5000 L/min	yes
Insufflated minute volume (MVi)	0 to 99 L/min	yes
Insufflated tidal volume (V _i)	0 to 5000 L/min	yes
Frequency (f)	0 to 120 c/min	yes
Peak airway pressure (P _{peak})	0 to 120 cmH ₂ O	yes
Positive expiratory pressure (PEEP)	0 to 99 cmH ₂ O	yes
Mean airways pressure (P _{mean})	0 to 99 cmH ₂ O	yes
Plateau pressure (P _{plat})	0 to 99 cmH ₂ O	yes
Leak index (VM _i -VM _e)/VM _i)	0 to 100 %	yes
Ti/T _{tot}	1 to 99 %	yes
I:E ratio	1 / 1 to 9.9	yes
FiO ₂	15 to 105 %	yes
etCO ₂ (option)	0 to 25 %	yes
CURVES		
	Pressure, flow, volume, CO ₂ (option)	
	Adjustable scales	
TRENDS		
	80 hours	

TECHNICAL SPECIFICATIONS Monnal T60

Emergency transport ventilator

ELECTRICAL SPECIFICATIONS

Main power supply

Input voltage	100 – 240 V AC (tolerance -25% ; +15%)
Electrical power consumption	115 VA

Battery

Type	Lithium-ion
Battery capacity	2.30 hours per battery: total of 5 hours (with the standard adult ventilation configuration)
Charging time per battery	2.20 hours (machine in stand-by) 5.30 hours (machine ventilating)

PNEUMATIC SPECIFICATIONS

Type of gas fitting	NF, DISS, NIST
O ₂ pneumatic supply	2.8 – 6 bar / 280 – 600 kPa / 40 – 86 psi (HP)
O ₂ low pressure	0 – 1.5 bar / 0 – 150 kPa / 0 – 22 psi (LP)
Air supply	Integrated turbine

ENVIRONNEMENT

OPERATING CONDITIONS

Temperature	-10°C to +40°C (14°F to 104°F)
Relative humidity	0 to 95% without condensation at 40°C max.
Atmospheric pressure	600 to 1150 hPa

STORAGE CONDITIONS

Temperature	-30°C to +70°C (-22°F to +158°F)
Relative humidity	0 to 95% without condensation at 40°C max.
Atmospheric pressure	500 to 1150 hPa

PROTECTION

Protection index	IP34
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INTERFACE CONNECTION

	USB, RS-232, CO ₂ (option)
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STANDARDS

	NF EN ISO 14971:2001 and A1:2003
	CEI 60601-1:2000 and its appendices
	CEI 60601-1-2:2007
	CEI 60601-2-12:2001
	NF EN 794-3:1998, A1:2005 A2:2009
	NF EN 1789: 2010 section 6.3 and 6.4
Air ambulance (helicopter and airplane)	EN13718-1 (including the RTCA DO160G)

ACCESSORIES

	Carry bag
	Trolley for Monnal T60: support for - humidifier - cylinder - articulated arm - autoclavable basket



Contacts

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