cardiolife
TEC-5600



Improving quality of resuscitation

Designed for improving quality of resuscitation, Nihon Kohden's cardiolife TEC-5600 with 6.5-inch colour TFT LCD display is a professional biphasic monitor/defibrillator. It supports basic life support (BLS) and advanced life support (ALS) teams in hospitals and clinics with its intuitive, fast, easy-to-transport, and effective operation – from early detection, to resuscitation, to post-cardiac-arrest management.

Cardiolife TEC-5600 has a compact, lightweight design and delivers the highest performance for resuscitation and emergency teams. To enhance its usability, it has the Smart Cable™ System for ECG, SPO_2, and CO_2 sensors which can be interchanged with cardiolife TEC-8300 series defibrillators and Nihon Kohden's patient monitors – saving precious time while changing the cables and sensors on the patient.

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Saving life, restoring life, sustaining life

Cardiolife TEC-5600 has an effective solution to improve the quality of life, resuscitation and patient monitoring throughout the process.

- Multiple mode options: AED, manual defibrillation, synchronised cardioversion, non-invasive pacing, and monitoring as standard features
- Fast defibrillation is available in both manual and AED mode.
- Intuitive three-step-operation design.
- High-resolution 6.5″ TFT colour LCD display

Innovative key technologies:

- Nihon Kohden's unique **ActiBiphasic technology**
- **cap-ONE ETCO$_2$** sensor which is the world's smallest, lightest, fastest, and most durable mainstream CO_2 sensor for oral and nasal breathers. Designed for intubated and non-intubated patients.
- **ec1 arrhythmia analysis**, which improves accuracy of arrhythmia analysis and reduces false alarms by 80%.
- **Smart Cable™ System**
- Optional **iNIBP** with special cuffs for enhanced patient comfort

Saving life: shock efficiency on demand

Cardiolife TEC-5600 supports effective management of early defibrillation by shock efficiency on demand.

- Cardiolife TEC-5600 takes less than four seconds to charge 200 J with either AC power or a fully charged new battery. Faster charging helps deliver energy more quickly when VF is observed. The ECG baseline recovers within three seconds after defibrillation. This enables defibrillation result and patient condition to be confirmed quickly.
- In AED mode, "**Continuous VF analysis**" analyses the ECG waveform even during CPR, so energy charging can start before the shock advisory message. This allows quick shock delivery and reduces the pre-shock pause.

Restoring life: assuring effectiveness of resuscitation

- Effective resuscitation by assured advanced airway management and high-quality CPR.
- Minimisation of CPR pauses with Nihon Kohden's unique noise reduction pads, which provide quick and clear underlying ECG information.

Sustaining life: post-cardiac-arrest management

Cardiolife TEC-5600 supports effective post-cardiac-arrest management by capturing and analysing vital sign parameters.

- Innovative **capONE ETCO$_2$** sensor and **BluPRO SpO$_2$** technology assist in monitoring key patient vitals with supreme accuracy.
- **ec1 arrhythmia analysis** for improved detection rate of arrhythmia and reduced number of false alarms.
- Decision support of post cardiac arrest with optional viewer software and monitoring function.

Specifications

TEC-5600 (TEC-5601, TEC-5611, TEC-5621, TEC-5631)

Dimensions and weight

Dimensions	311 (W) x 288 (H) x 242 (D) mm +/-10%
Weight	TEC-5601: 6.4 kg (Including 1 battery, external paddle) TEC-5611: 5.7 kg (Including 1 battery) TEC-5621: 6.8 kg (Including 1 battery, external paddle) TEC-5631: 6.9 kg (Including 1 battery, external paddle)

Display

Display size	6.5 inch colour TFT LCD
Resolution	640 (H) x 480 (V) pixels
Number of trace	maximum 4 traces
Display parameters	Heart rate, SpO_2 (%), Pulse rate, $ETCO_2$, Respiration rate
Display indications	ANALYSING, CHARGING, CHARGED, times of discharge after Power ON, same message as voice in AED mode, SYNC, AED MODE, AED MODE (CHILD), FIXED MODE, DEMAND MODE, Pacing rate, Pacing current, ~ (AC operation), battery mark (remaining operation time), TIME, Connection strength for Bluetooth, recorder status, SD card status

Power Requirement

AC line voltage	100 to 240 V
AC line frequency	50 or 60 Hz
AC line power input	150 VA or less (continuous load) 300 VA or less (intermittent load)

Battery

Type	Ni-MH battery
Power voltage	12.0 V (9.0 to 18.0 V)
Capacity	2800 mAh
Operation time	*With a fully charged new battery, at 20 ℃* - Minimum 100 times discharges at 270 J - Minimum 180 minutes continuous monitoring (without option) - Minimum 120 minutes continuous pacing (TEC-5631 without option) *With fully charged new battery, at 0 ℃* - Minimum 50 times discharges at 270 J
Charging time	Less than 4 seconds to 200 J and 5 secs for 270 J (in both AC and fully charged battery operation)

Parameters

ECG	3 or 6 lead available
Heart rate count range	0, 15 to 300 bpm +/-3%+/-1 bpm (defibrillation mode and monitor mode) 0, 15 to 220 bpm (pacing mode)
Baseline recovery time	Less than 3 seconds after 270 J defibrillation
Pacing pulse rejection	Available
QRS detection level	Input conversion 0.5 mV or more (at x 1 sensitivity)
Alarm	Yes
SpO_2	Yes, optional
Measurement range	0 to 100 %
Measurement accuracy	+/-2 % SpO_2 (80%≤SpO_2≤100% SpO_2) +/-3 % SpO_2 (70%≤SpO_2 <80% SpO_2) (Measuring accuracy assured at ambient temperature between 18 and 40 ℃.)
Pulse rate counting range	30 to 300 bpm
Pulse rate counting accuracy	+/-3 % +/- 1 bpm
Sensitivity control	1/8, 1/4, 1/2, 1, 2, 4, 8, AUTO
Alarm setting	Yes
NIBP	Yes, optional
CO_2	Yes, optional
Measurement range	TG-900P, TG-920P: 0 to 100 mmHg TG-970P: 0 to 150 mmHg
Measurement accuracy	*TG-900P, TG-920P (at 1 atmospheric pressure, no condensation):* +/-3 mmHg (0 ≤CO_2 ≤10 mmHg) +/-4 mmHg (10 < CO_2 ≤40 mmHg) +/-10 % reading (40 < CO_2 ≤100 mmHg) *TG-970P (at 1 atmospheric pressure, no condensation):* +/-2 mmHg (0 _ CO_2 _40 mmHg) +/-5 % reading (40 < CO_2 _70 mmHg) +/-7 % reading (70 < CO_2 _100 mmHg) +/-10 % reading (100 < CO_2 _150 mmHg)
Respiration rate counting range	TG-900P, TG-920P: 3 to 150 breaths/min TG-970P: 0 to 150 breaths/min
Alarm	Yes, with apnea alarm
AED (Automated External Defibrillation)	Yes, standard, except for TEC-5601. AED mode with Adult/Child mode is available with voice.
Non-invasive Pacing	Yes, optional

Environment

Operating temperature	-5 to 45 °C
Operating humidity	15 to 95 %
Operating atmospheric pressure	620 to 1060 hPa
Storage temperature	-25 to 70 °C
Storage humidity	10 to 95 %
Storage atmospheric pressure	500 to 1,060 hPa IT has high waterproof properties and high dust resistance based on IP44*. (*with either paddle connector cable or internal paddle, and all cables connected.)

Interface

Output	Defibrillation report, alarm report, event report and data which are saved in SD card or internal memory can be output by Bluetooth module.
SD card	ECG data with surrounding sound, defibrillation report, alarm report and event report can be saved in SD card. Software upgrade available by SD card.
External ECG input	External ECG signal can be input and displayed as 1/1000.

Recorder

Recorder	Thermal, 50 mm roll
Recorded waveforms	ECG, ECG + SpO_2, ECG + CO_2 (selectable; SpO_2 or CO_2 available when SpO_2 or CO_2 is measured)
Recording Modes	*Manual recording* Real time recording, delayed recording, event recording, trend report, self-test result, basic check result, operation history/device condition history *Automatic recording* Alarm report, defibrillation recording, periodic list report

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