



PHILIPS

Cardiac Workstation 5000 – Technical datasheet

Change the way you think about ECGs

Philips Cardiac Workstation 5000 is a clinical breakthrough designed to improve the way you capture, access, view, analyze, store, share, and manage ECGs – to transform diagnostic cardiology.

This ergonomic leap forward streamlines workflow by delivering rich clinical information from systems across your enterprise and beyond to the point of decision. So you can confidently diagnose and treat cardiac patients. No matter where care takes place.

Discover how Philips Cardiac Workstation 5000 can help you transform care – today and as the future unfolds.

Key advantages

- 1-2-3-step operation simplifies user experience
- Smartphone-like hand gestures provide familiar interface
- Color-coded waveforms, lead checks, and preview screens ensure ECG quality
- Innovative ergonomics bring critical ECG information closer to you
- DXL Algorithm delivers interpretation and advanced diagnostic aids for up to 18 leads
- Access to Philips ECG AI Marketplace can provide additional clinical insights
- Expanded interoperability capabilities ensure tight integration into your enterprise and beyond

Cardiac Workstation 5000 (860439)

Features

Regulatory Clearances

EUMDR Clearance / CE Marked	2024
FDA 510(k) Clearance	2024

ECG Functions

Simultaneous lead acquisition	Up to 18 leads
ECG reports	• 12-lead: 3x4, 3x4 1R, 3x4 3R, 3x4 1R, 6x2, 12x1, Pan 12, H1/H2 • 15-lead: 3x5, 3x5 1R, 3x5 3R • 16-lead: 4x4, 4x4 1R • Standard and Cabrera formats • ST Maps
Cleanest 10	• Base 10-sec ECG on cleanest or last 10 seconds of signal • Resting ECG based upon cleanest or last 10 seconds of waveforms • Selection highlighted on Disclosure • ECG acquisition button blinks when cleanest 10 available
Standard measurements	• Ten interval, duration, and axis measurements • Configurable QT correction method
Rhythm strips	• 30 to 60 sec • 12, 15, 16, or 18-leads
Rhythm reports	• 30-sec and 60-sec reports • Can be previewed, enlarged, saved, printed • Transfer in PDF, DICOM General ECG, DICOM Encapsulated PDF, or XML format
Disclosure	• 12 minute history of up to 18 leads • Complete ECG report of any 10 seconds
Event marking	• 10 events can be marked for review and analysis • Event markers appear on ECG reports • Note can be added for each event
Timed ECG	Support for pharma stress protocols
Report storage and transfer	Full fidelity at 1,000 Hz of 10 seconds for up to 18 leads
Export data formats	• PDF • XML • DICOM 12-Lead ECG (D08) • DICOM General ECG (D08) • DICOM Encapsulated PDF (D08)
Pace pulse detection	• 0.02 mVms (e.g., 0.2 mV*0.1ms pulse or 0.1 mV*0.2ms pulse) • Exceeds proposed standard 5X¹

Wireless Patient Interface Module (WPIM)

Number supported	• Up to 4 WPIMs per Workstation • Selectable from Workstation • Mix and match with wired PIMs
Range	• 15 m (49 ft) unobstructed
Lead wire connectors	• 3 mm and 4 mm pin-ends for tab electrodes
Use models	• Patients under precaution • Workflow management

DXL ECG Algorithm^{2,3,4}

Interpretive statements	> 600 interpretive statements Integrated pediatric analysis
Borderline statement suppression	Three configurable settings
Nomenclature	Aligned with 2007 AHA/ACCF/HRS Recommendations, Part II
Leads used in diagnosis	Standard 12 leads plus V3R, V4R, V5R, V7, V8, and V9
Extended measurements	• 46 parameters of morphology analysis in each of 12, 15, 16, or 18 leads • 21 parameters of rhythm analysis
Reasons	Selectable explanations of all interpretive statements
Critical values	Highlights four conditions requiring immediate clinical attention

STEMI Diagnostic Aids

Graphical ST presentation	• Two ECG reports with polar ST Maps • Frontal and transverse planes
Unique right heart statements	9 statements called by right-chest leads
Unique posterior MI statements	16 statements called by posterior leads
Age and gender criteria	Based upon Fourth Universal Definition of Myocardial Infarction, 2018
STEMI-CA (Culprit Artery)	• Criteria that suggest any of four probable sites of the occluded coronary artery • Based upon 2009 AHA/ACCF/HRS Recommendations, Part VI

QT Measurements

QTc measurements	• Bazett • Hodges • Fridericia • Framingham
Correction of QT interval & QRS duration	Rautaharju

AI ECG Algorithm Support

Orders	• Can accept AI ECG orders • Can be sorted on orders worklist
Algorithms	• Can provide access to Philips ECG AI Marketplace for third-party algorithms • Can support integration of in-house AI algorithms
Local access	• Can view, print, and archive AI ECG reports

Advanced Bi-directional Network Communications⁵

Central time management	Manual or automatic synchronization to Network Time Server
Orders worklist (D01)	• Download orders worklist from up to 128 inboxes • Configurable workstation-specific worklists • Configurable lists (e.g., by location) • Ad-hoc order query based on multiple search criteria (e.g., patient ID, last/ first name) • Open Worklist with IntelliBridge Enterprise and select departmental systems • HL7 interface via IntelliBridge Enterprise • DICOM Modality Worklist
ADT (D02)	• Query, retrieve patient demographic info • Based upon user-entered or scanned search criteria (e.g., patient ID, last/first name) • HL7 interface via IntelliBridge Enterprise
Previous ECG reports (requires IntelliSpace ECG)	Automated retrieval and display of multiple previous ECG reports for side-by-side comparison with current report
Auto re-transfer	Configurable auto re-transfer of reports when WiFi is lost and then reconnected

Privacy and Security

Password frameworks	• Option 1: Role-based (256 unique roles possible) • Option 2: ECG function-based
User authentication	AD/LDAP
Data encryption at rest	SHA-256 and AES-128
Network access	Initiated by cardiac workstation only
Network communications	TLS 1.2 or greater within hospital network
Security configuration capabilities behind customer-defined password	• USB port access (on/off) • HTTP, HTTPS • Encryption at rest (on/off) • Delete archived ECG after transfer (on/off) • User Authentication (on/off) • FTP/SFTP • Secure DICOM • Consistent security across Cardiac Workstations and PageWriter TC-Series Cardiographs
Domain user accounts	Lightweight implementation for domain user accounts not defined on the Cardiac Workstation

Signal Quality Indicators

Leads-off advisory	Anatomical lead map displays the location and label of loose leads/electrodes
Lead color	Four colors indicate quality of each lead's signal
LeadCheck	20 different lead reversals detected
Heart rate	Continuous display of patient heart rate
Print preview	Full screen preview of complete 18-lead report prior to printing and/or export

User Training and Self-help

Training mode	• Integrated waveform simulation • In-app lead placement tutorial
---------------	---

User Interface

Touchscreen	• 1-2-3 operation • Context-sensitive application • Ultra-wide viewing angle • Wet finger, glove technology
Gesture & navigation	• "Swipe" to scroll ECG report list, Prior ECG list. • "Pinch" to zoom-in/zoom-out ECG preview screen. • 300% waveform enlargement
Screen adjustability	• Display Tilt: Range from -8° to 90° • Arm Tilt: Range from 0° to 90°
Digital keyboard	37 unique keyboard locales / character sets
Physical keyboard	Standard keyboard, mouse support via USB ports
Side-by-side viewing	• (L): Current ECG • (R): Previous ECG(s) • (L): Event list • (R): Event preview • (Back): Waveforms • (Front): Lead map
UI projection	HDMI output to large display for teaching

Trolleys (860452, 860453)

Height-adjustment	• 860452: Fixed height • 860453: Adjustable height (25 cm) via pneumatic switch control
Fleet coverage	Above trolleys also compatible with: • Cardiac Workstation 7000 • PageWriter TC70 • PageWriter TC50 • PageWriter TC35
Wheels	• All 4 wheels lock and swivel • Anti-static conductive caster
Desktop	Open desktop workspace
Storage	• Storage for 400 extra ECG paper sheets • Storage for cleaning products • Optional concealed drawer • Optional closable waste bin • Optional wire basket • Optional hanging leadwire holder

Device Management Dashboard (863381)

Fleet management	• Central management of device configuration and SW updates: - Edit device configurations, push to single ECG or whole fleet - Central deployment of software updates and new software tokens • Device-level visibility of archived ECG report info (patient ID, date/time recorded, export status, etc.) • Central display of device state-of-health, incl. error notification and network connection status • Supported devices: PageWriter TC20/TC30/TC35/TC50/TC70, Cardiac Workstation CW5000/CW7000
------------------	--

Technical Specifications

Display

Size	12.1 in high-resolution, multi-touch capacitive screen
Resolution	1280 (RGB) x 800 TFT-LCD Module
Colors	16,700,000
Touchscreen	Optically bonded PCAP T/P

Patient Connections

Integrated lead set	Defib-protected ECG acquisition provides 0.13 µV resolution
Long lead set (H23)	Enable greater distances between cardiograph and patient connections

End Connectors (Adaptors)

Welsh bulbs (E04)	• Six Welsh bulbs and four limb clamps
Snap/Tab adaptor (E06)	• Fits both snap and tab electrodes
Other compatible adaptors	Compatible with 4 banana adaptors, 3 widemouth adaptors

Printer

Resolution	• High-resolution, digital-array using thermal-sensitive paper • 200 dpi (voltage axis) by 500 dpi (time axis) at 25 mm/sec
------------	---

Connectivity

LAN	10/100 Base-TX IEEE 802.3 ethernet via on-board RJ45
Wireless (D24)	802.11 b/a/g/n/ac (WiFi 5)
Wireless credential (D24)	WPA3 (Personal), WPA3 (Enterprise)
FIPS	Communication supported by FIPS 140-2 certified encryption algorithm
Archive / Internal storage	1,000 ECGs
External storage	1,000 ECGs via USB device

Automated Data Input

1D / 2D barcode reader (H17)	High scan speed, motion tolerance, curved surfaces
RFID reader (H19)	13.56 MHz (HF), 125/132 kHz (LF)
1D / 2D / RFID reader (H20)	• 1D/2D: High scan speed, motion tolerance, curved surfaces • RFID: 13.56 MHz (HF), 125 KHz (LF)

Configurable Filters

AC noise	50 or 60 Hz
Signal processing	Artifact rejection and baseline wander

Presentation Filters – 10-sec and Rhythm Reports

High pass	0.02, 0.05, and 0.15 Hz
Low pass	40, 100, 150 and 300 Hz

Electrical

Battery	Lithium ion
Battery capacity ⁶	• > 12 hrs continuous operation without printing • > 90 ECG reports (6min run, 1-page print, 4min standby) • > 2.5 hrs continuous rhythm printing
Battery recharge	4 hrs from 8% to 90% capacity for 2 batteries
Main power	100-240 VAC, 50/60 Hz
Power consumption	60W max

Battery Management Statistics

Statistics	• Current status • Voltage • Expected max error (%) of charge calculation • Remaining capacity in mAh • Predicted capacity when fully charged • Current charge and state of health % • Charge current: value while charging • Discharge current: value while discharging • Cycle count: number of full charge and discharge cycles • Temperature • Battery unique ID, supplier information, device name, DOM, and SN
------------	--

Mechanical

Dimensions	• Open: < 410 mm (L) x 335 mm (W) x 455 mm (H) • Closed: < 410 mm (L) x 390 mm (W) x 175 mm (H)
Weight	< 8 kg (excludes battery, lead wires, accessories)

Environmental

Operating conditions	• 10° to 40°C (50°F to 104°F) • 10% to 90% relative humidity (non-condensing) • Up to 3,048 m (10,000 ft) altitude
Storage conditions	• -20°C to 50°C (-4°F to 122°F) • 10% to 90% relative humidity (non-condensing) • Up to 4,572 m (15,000 ft) altitude

Cleaning and Disinfecting⁷

Approved solutions	Generic cleaning solutions • Ethanol (ethyl alcohol) 70% (v/v) • Isopropyl alcohol wipes (consisting of 70% solution) • Mild soap and water Branded cleaning solutions • Metrex Caviwipes • Dr. Schumacher Cleanisept Wipes • Clinell Peracetic Acid Wipes • Gama Healthcare Clinell Universal Range • PDI Easy Screen Cleaning[†] • PDI Sani-Cloth[®] AF3 • PDI Super Sani-Cloth[®]
--------------------	---

Safety and Performance

International standards and regulations	• General Requirements for Safety IEC 60601-1: 2005+A1: 2012 • Particular Req. for Safety of Electrocardiographs IEC 60601-2-25 2011 Edition 2.0 • Electromagnetic Compatibility IEC60601-1-2 2014
---	--

1. New standards for ECG equipment. Journal of Electrocardiology 57 (2019) S1–S4.
2. AHA/ACCF/HRS Recommendations for the Standardization and Interpretation of the Electrocardiogram, Part II: Electrocardiography Diagnostic Statement List. J Am Coll Cardiology, 2007; 49:1128–135.
3. Fourth Universal Definition of Myocardial Infarction. Circulation 2018; 138 (2): pg e618–e651.
4. AHA/ACCF/HRS Recommendations for the Standardization and Interpretation of the Electrocardiogram, Part VI: Acute Ischemia/Infarction. Circulation. 2009; 119:e262–e270.
5. When networked with select hospital and departmental solutions, refer to supplier specifications.
6. Performance can vary in different environmental conditions.
7. All trademarks, logos, and brand names referenced in this documentation are the property of their respective owners.

Shanghai International Holding Corp. GmbH (Europe)
Eiffestrasse 80, 20537
 Hamburg, Germany



Specifications are subject to change without notice.

© 2025 Koninklijke Philips N.V. All rights reserved.

www.philips.com



JUN 2025