

MILANO™

Blood Donation Monitor

MILANO™ is an electronic blood donation monitor and mixer with bidirectional data communication, carefully designed for powerful, versatile and intuitive use.

MILANO™ complies all kinds of blood bags and of desired process thanks to its wide tray and extreme flexibility to tailored custom configurations.

In fact, MILANO™ offers an enhanced ergonomics and it is optimised for blood collections in resident and mobile donation centres. The device can work according one default basic workflow or executing workflows stored into the internal memory. More than 50 workflows can be created ex-novo and completely customized, according to local requirements.

MILANO™ monitors the collections progress, shows and checks the blood weight/volume and other collection parameters with visual and audible alerts, performs auto tare, automatic tube retention and clamp at the beginning and end of donation.

Device settings and the most relevant program parameters can be edited by MILANO™ user interface while new program creation is managed from the DelcoNet™ dedicated software, Core level, running on PC with Microsoft Windows® (not included).

DelcoNet™ software upper levels (options) are also dedicated to full data management, merging internal process data (collection time, actual volume, flow, etc.) with external data entered locally.

Data can be just dispatched to the managing software (DM level) or can be used for bi-directional program management (BM level).

Data can be acquired using barcodes (reader is an option) or RFID (built-in antenna is an option). RFID version is allowing also data writing, with tag information update with actual process data.

DelcoNet™ is also managing the data communication with LIMS (Laboratory Instruments Managing Software) exporting process results and importing the working list in case of bi-directional mode.

Delcon S.r.l.

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DELCON®
Our technology your health

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Standard Equipment features:

- 2D mixing system with adjustable shaking speed, continuous or with programmable intervals.
- High contrast backlighted graphic colour display showing target/actual volume, actual blood flow, elapsed time, analog proportional bar, status bar (battery and connection status). User friendly icon-based GUI.
- Touch screen glass upper panel with sound feedback and bounce prevention.
- Touch panel and case preventing liquid intrusion and with smoothed surface, for easy cleaning.
- Clamp with tube retention and detectors for tube and clamp position. The automatic clamp close after tube insertion can be enabled. The tube is retained in proper position during the donation.
- Multicolour indicator light for 360° display to operators and to donors.
- Removable-rechargeable back-up battery (option) with capacity up to 100 collections. Technology is safe against fire and explosion and it is not harmed by environment heat. Battery is charged while MILANO™ is DC powered by its external medical wall plugged power supply.
- Volume-based (ml) or weight-based (g) data with custom defined conversion rate, in order to adapt to different population blood. Range of net value (g or ml) is 0 to 990 units.
- Scale mode, for weight/volume measurement on the spot, with tare and net-weight.
- Up to 4 customizable volume pre-sets allowing 1-key selection. More than 50 different workflows.
- Target weight can be edited in steps of 1 unit. With automatic step adjustment.
- Check of post-venepuncture bleeding time with dedicated warning.
- Customized double timeout management: TM1 (i.e.12 min) for 1st class products and TM2 (i.e. 15 min) for max time preventing to discard the unit.
- Predictive logic, warning for esteemed completion time exceeding maximum time TM1 or TM2. Smart stop decision at TM1, upon 90% of target achievement, can be enabled.
- Multiple pauses possible during collection. Maximum total pause time of 60 secs. Residual countdown time shown on display during pause.
- Custom defined thresholds for both low and high flow alerts, with latency/pre-alerts/warning logic.
- Optical pre-alerts and optical/audible warnings, self-resetting, with adjustable levels of loudness or muting.
- If high flow warning is enabled with clamp closing, the warning status is self-resetting after a while, leading the average flow within the optimum range.
- Buffer memory retaining >1000 process data if automatic data transfer is not enabled.
- Informative summary page at collection end, showing actual collected volume, total time, average flow and pause total time.
- Integrated CCD barcode reader and optional RFID tag reader/writer.
- USB slot for process data download.
- Ethernet data transmission (wired LAN and wireless Wi-Fi) for networks connecting up to 250 devices.
- Flexible managing software for device configuration and monitoring devices' status and collection progress (standard features), for full data collection (option), with powerful bidirectional communication features (option). Running in MS Windows® environment.
- Flexible programming of barcode format check, crossmatch, consistency check (option). For barcodes that could result unreadable, it is possible to key in codes manually, in keyboard emulation.
- Bi-directional protocol allowing to show on the screen text messages sent by managing software (i.e. donor's ID or personal information, for positive identity check).
- DelcoNet™ management software is offering real time monitoring dashboard for all the devices in the network.

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1. COMMERICAL AND REGULATORY DATA

• **Tradename:**	MILANO™	• **Manufacturer:**	Delcon S.r.l.
• **Sales code:**	HMIX4.*vers.* (as per following list)		
• **Class of protection:**	II (According to IEC 60601-1)	• **Applied part:**	Type CF (According to IEC 60601-1)
• **Classification – MDR 2017/745:**	Class 1 Medical device	• **Reference standards:**	Safety: IEC 60601-1, EMC: IEC 60601-1-2
• **FDA Clearance & Class**	BK190429, Class 2 (in accordance with 21 CFR 864.9195)		

2. TECHNICAL DATA

• **Net dimensions**	240W x 210D x 432H mm (9,4 x 8,3 x 17 inch)	• **Net weight:**	3,3 Kg (battery included) (7,3 lbs battery included)
• **Power supply:**	24 V DC input from 100-240 V AC external adapter (wall plugged)	• **Weighing range:**	10 – 990 units (ml or g) (0,02 – 2,18 lbs)
• **Accuracy:**	± 3 g < 300 g; ± 1% 300 ÷ 1000 g	• **Line frequency:**	50-60 Hz
• **Power consumption:**	30 VA max	• **Battery capacity:**	Up to 100 donations
• **Charge time:**	4 hours (device off) 20 hours (device on)	• **N. of programs (workflow):**	>50
• **Internal memory capacity:**	>1000 donations	• **Display and user interface:**	4.0” graphic colour LCD with touch screen glass panel
• **Mixing type:**	2D programmable motion		
• **Environmental conditions for use:**	Temperature: +10°C to +40°C (50 ~ 104 F) Humidity: 10 to 90% non-condensing Altitude: -380 to 5000 m (-1246 ÷ 16404 ft)		
• **Environmental conditions for storage and transportation:**	Temperature: 0°C to +40°C (32 ~ 104 F) Humidity: 10 to 90% non-condensing Altitude: -380 to 5000 m (-1246 ÷ 16404 ft)		

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3. VERSIONS

- **HMIX4.01** MILANO - RFID Version *(Black and grey)*
- **HMIX4.11** DELCON X5 - RFID Version *(White and red)*
- **HMIX4.21** Worldwide MILANO - RFID Version *(White and red)*
- **HMIX4.31** MILANO - RFID Version *(White and grey)*
- **HMIX4.41** MILANO - RFID Version *(White and green)*
- **HMIX4.51** MILANO - RFID Version *(White and blue)*
- **HMIX4.02** MILANO - Basic Version *(Black and grey)*
- **HMIX4.12** DELCON X5 - Basic Version *(White and red)*
- **HMIX4.22** Worldwide - Basic Version *(White and red)*
- **HMIX4.32** MILANO - Basic Version *(White and grey)*
- **HMIX4.42** MILANO - Basic Version *(White and green)*
- **HMIX4.52** MILANO - Basic Version *(White and blue)*

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