

# HEDO

DIGITAL BLOOD COLLECTION MONITOR



*Scan*



**HEDO2™ is a digital blood collection monitor, designed to controlling and monitoring the Blood collection Process; intended to perform simple, accurate and reliable operations.**

#### **TRACEABILITY OF FULL DETAILS OF DONATION PROCESS**

HEDO2™ is equipped with an internal memory to store safely all the blood donations data. Using a friendly software "Hedo2Management" is possible to manage donation data (sent in encrypted mode) and send them to a Blood Central Bank for a full traceability and control of donations.

#### **BATTERY OPERATION (STAND ALONE MODE)**

HEDO2™ can also work in stand alone mode (autonomy for a full work day). Rechargeable batteries and chargers are included.

#### **COMPLETE DONATION CONTROL**

HEDO2™ is able to control the entire process of donation. Hedo2™ can verify, in real time, the amount collected, the blood flow, the placement of the tube in the clamp, and many other parameters of the donation.

#### **GREAT DIGITAL DISPLAY**

HEDO2™ has a great display that enhances readability even over long distances. All information relating to the actual donation appear intuitive and updated in real time, in order to give to the operator the control of the donation.

# CAPABILITY

## CONVENIENCE OF USE

HEDO2™ is **simple and intuitive**:



- **Full Viewing donation parameters instantly updated**
- **Easy and complete navigation** in the various friendly menus
- The **tube sensor** presence warns the operator of an accidental release of the tube in the clamp
- Real time **monitoring of flow**, displayed in a clear display. This allows the operator to monitoring the evolution of the donation.



- A status bar give **information of the donation progress**. The progressive bar indicates the amount of blood collection (in percentage), the operator can view the progress of the donation without interpret the numbers of the quantity collected displayed.



- The **removable tray** enables a simple and safe cleaning avoiding damaging
- **Stand alone mode**. Is possible to move HEDO2™ without worrying about the power cord. An icon display the level of battery and an alarm of low battery indicate when the operator must recharge the battery.



- **Suitcase transport** carriers to be used as **desktop support** to perform donation with a stable support.
- HEDO2™ can be **connected to the car cigarette charger** to recharge the battery

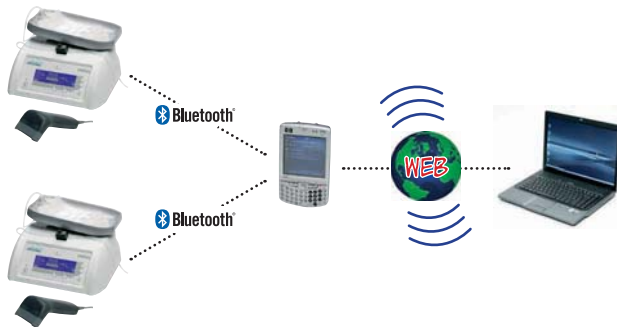


# CONNECTIVITY

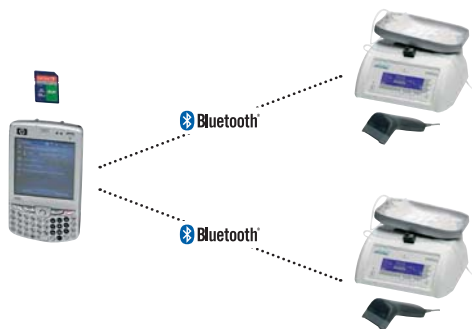
## DONATION DATA TRANSFER

Three different modes of data transfer:

### A) STAND-ALONE MODE: USE OF PDA FOR THE DATA COLLECTION

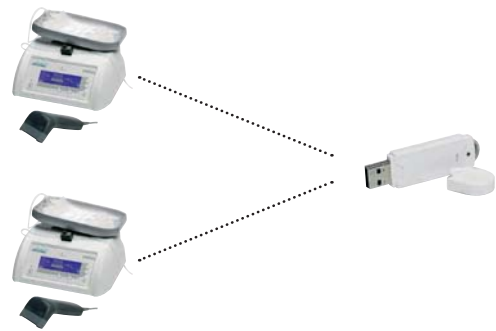


HEDO2™ can be used to perform donations even where there are no dedicated buildings. Using a PDA is possible to send data to a central server. Using any browser (i.e. explorer) is possible to access, in protected mode, the web page and verify the data. Alternatively, using the PDA is possible to download the data and have them immediately available on the SD Card.



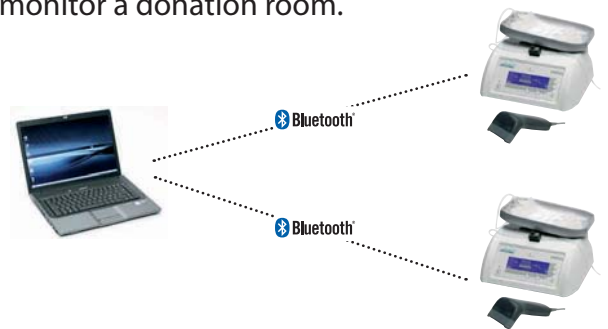
### B) DOWNLOAD DATA INTO A USB MEMORY

HEDO2™ can be used to make donations in rooms where no PC are available. Data can be copied on a "key" USB inserted into the back of HEDO2™. USB memory can be sent with the bags to the medical centre while the HEDO2™ can be sent to other buildings for new donations.



### C) HEDO2™ CONNECTED TO A NETWORK

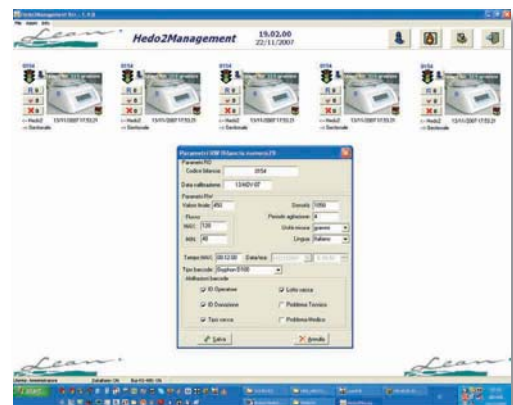
HEDO2™ can be connected to a wired or wireless network. For increase security, data is sent at the end of each donation. "Hedo2 Management" is a software created to monitor a donation room.



### The main features are:

- Monitoring the status of each donation
- Sending data to a Central Blood Bank to ensure full traceability of data donation according to the most recent regulations.
- Check the status of every HEDO2™ (all the parameters of every scale)

"Hedo2Management" makes available a number of tools to analyze donation data. Is possible to filter the data in different ways to make estimates and evaluations.



TRAY EASILY REMOVABLE  
FOR EASY CLEANING

SENSOR TUBE  
PRESENCE

WIRED OR WIRELESS  
INTERFACE NETWORKING

STAND ALONE MODE  
(RECHARGEABLE  
BATTERY OPERATED)

AUTOMATIC CLAMP  
CLOSING AT THE END  
OF THE DONATION

READING AND VERIFICATION  
OF BAR CODES WITH BARCODE  
READER (IE IBST 128)



AUTOMATIC  
TARE CALCULATION

REAL TIME MONITORING  
OF THE DONATION SHOWN  
ON DIGITAL DISPLAY

Visual and sonorous alarms for **flow beyond** the limits set,  
Alarm for **maximum time** donation and accidental **escape of the tube**

**Intuitive instructions menus** with "step by step" actions

**Automatic tray balancing** during the donation

**Suspension donation** mode in the emergency event

**LED clamp** mounted on the front of the keyboard

Setting different **languages**

Automated data management via **integrated software** on PC

**Transport suitcase** to be used as table

**HEDO**

## FEATURES

Large backlighted graphic LCD with continuous readout, during the blood donation, of:

- Actual Weight (or Volume) of blood (grams or ml),
- Set Weight (or Volume) of blood (grams or ml)
- Donation time
- Donation Progress
- Actual Blood Flow
- Date and hour
- Power Status (battery and external power)

**User friendly interface and intuitive menu of formulation parameters with step by step instructions.**

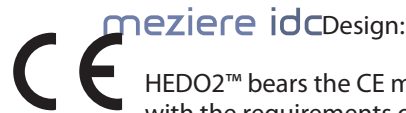
**Automatic data management with integrated PC software "Hedo2 Management"**

**Bar Code Reading Function.**

**Standard RS232 or RS485 interfaces for networking.**

**Wireless Net Connection**

- Tube sensor and automatic check of the tube presence in the clamp during the donation.
- Waterproof keypad.
- Automatic mixing movement with possibility to change the frequency of the cycles; default : 1 cycle every 8 seconds.
- Automatic tare of the bags.
- Automatic tube clamp at the end of donation (preset blood amount reached).
- Pause function for standby blood collection (i.e. arrest of emergency,...)
- Immediate default donation characteristics reset
  
- *Visual and acoustical alarms for:*
  - end of donation
  - max elapsed time
  - low blood flow
  - high blood flow
  - battery level or charging status
  - unexpected increase of weight (i.e. undesired parts falling on the vessel, hits,...)
  - casual escape of the tube from the clamp during the donation
  
- *Possible pre-set instructions:*
  - measure in grams or milliliter
  - weight or volume of blood (0-999g / 0-999 ml)
  - blood collection time (3 to 60 minutes)
  - frequency of mixing movement
  - alarms for max and minimum flow
  - Date and hour.



HEDO2™ bears the CE mark; in fact it complies with the requirements of Directive 93/42/EEC for medical devices.

### **Lean Conformity Certificates.**

#### **EN ISO 9001:2000**

Design, manufacturing, distribution and service of electro-mechanical devices.

#### **EN ISO 13485:2003**

Design, manufacturing, distribution and service of electro-medical devices.

### **ACCESSORIES:**

1. Calibration weight (500 g.)
2. Suitcase transport
3. Alarm lamp pool
4. "Hands free" Barcode Reader
5. Data transfer Software "Hedo2Management"
6. Wireless Connection module
7. Wired connection module (RS 485)
8. Palm for data download from Hedo2 (wireless mode)
9. USB key solution for data download

### **TECHNICAL DATA**

Power Supply	Battery operation for mobile use 8 hours autonomy. Integrated battery charger. External 12Vdc Medical Grade Power Supply (Input 100 - 240 V ac / 50 - 60 Hz). Can be attached to an automobile cigarette lighter.
Max Power cons.	60 W
Weighing Range	0 ÷ 999 g
Resolution	1 g
Weighing Accuracy	± 3 g
Operating Temperature	10°C ÷ 40°C
Dimensions	mm 315 L x 260 W x 150 H
Net Weight	4 Kg

manufactured by:

**Lean s.r.l.**

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