

# ESSE-1515&ESMT-1000

## Professional Stress ECG Solution



### General Introduction

ESSE-1515&ESMT-1000 is the proven solution for stress ECG test. The powerful software ESSE-1515 provide comprehensive and streamlined workflow, which helps clinician always informed. The medical computer trolley ESMT-1000 is configured with multiple-port to connect with sampling box, ergometer, treadmill and printer. With cutting-edge technology of sampling and signal filtering, this solution can always give clinician a clearer tracings.

### Sampling Box

 <p><b>DP12</b> Wired Sampling Box Support 9/12-lead ECG Support Resting &amp; Stress ECG</p>	 <p><b>DX12</b> Wireless Sampling Box Support 9/12-lead ECG Support Resting &amp; Stress ECG</p>
 <p><b>DE15</b> Wired Sampling Box Support 9/12/15/16-lead ECG Support Resting &amp; Stress ECG</p>	 <p><b>DE18</b> Wired Sampling Box Support 9/12/15/18-lead ECG Support Resting ECG</p>



## Sampling Box Specification

<b>Dimensions</b>	DE18/DE15	139mm× 96mm × 25mm, ± 5mm
	DP12	148mm (L) ×100 mm (W) × 40mm (H) , ± 2mm
	DX12 transmitter	63mm(L)×107mm(W) ×23mm(H), ± 2mm
	DX12 receiver	155mm(L)×100mm(W)×30mm(H), ± 2mm
<b>Weight</b>	DE15/DE18	Approx. 215g
	DP12	Approx. 210g
	DX12 transmitter	Approx. 113g (not including battery)
	DX12 receiver	Approx. 173g
<b>Acquisition Mode</b>	DE18	Simultaneously 18 leads
	DE15	Simultaneously 16 leads
	DP12/DX12	Simultaneously 12 leads
<b>Sample Frequency</b>	DE18/DE15/DP12	1kHz (Analysis) 16kHz (Sampling)
	DX12	0.5kHz (Analysis) 10kHz (Sampling)
<b>A/D</b>	DE18/DE15/DP12	24 bits
	DX12	18bits
<b>Resolution</b>	DE18/DE15/DP12	0.1575uV/LSB
	DX12	2.52uV/LSB
<b>CMRR</b>	DE18/DE15/DP12	≥123dB (AC OFF)
	DX12	≥100dB (AC OFF)
<b>Frequency Response</b>	DE18/DE15/DP12	0.01Hz~300Hz (-3dB)
	DX12	0.05Hz~150Hz (-3dB)
<b>Input Impedance</b>	DE18/DE15/DP12	≥100MΩ
	DX12	≥20MΩ
<b>Input Circuit Current</b>	DE18/DE15/DP12	≤10nA
	DX12	≤0.05μA
<b>DC Offset Voltage</b>	DE18/DE15/DP12	±600mV
	DX12	±500mV
<b>Noise</b>	DE18/DE15/DP12	≤12.5μVp-p
	DX12	≤15μVp-p
<b>Pacemaker Detection</b>	DE18/DE15/DP12	±750uV ~ ±700mV, 50us ~ 2.0ms
	DX12	±2mV ~ ±500mV, 0.1ms ~ 2.0ms



## Sampling Box Specification

Filter	AC	DE18/DE15/DX12/DP12	50Hz/60Hz/Off
	EMG	DE18/DE15/DX12/DP12	25Hz/35Hz/45Hz/Off
	DFT	DE18/DE15/DP12	0.01Hz/0.05Hz/0.32Hz/0.67Hz
		DX12	0.05Hz/0.32Hz/0.67Hz
	LOWPASS Filter	DE18/DE15/DP12	300Hz/270Hz/150Hz/100Hz/150Hz/100Hz/75Hz
DX12		150Hz/100Hz/75Hz	
Input Voltage Range		$\leq \pm 5\text{mVp-p}$	
Time Constant		$\geq 3.2\text{s}$	
Gain		2.5, 5, 10, 20, 10/5, AGC (mm/mV)	
HR Range		30 bpm ~300 bpm	
Accuracy		$\pm 1$ bpm	
Calibration Voltage		1mV $\pm$ 2%	
Minimum Amplitude		20 $\mu\text{Vp-p}$	
Recovery Time After Defibrillation		<5 s	
Multichannel crosstalk		$\leq 0.5\text{mm}$	
DX12 Bluetooth	Transmitting Frequency	2402 MHz ~ 2480 MHz	
	Frequency Band	2402 MHz ~ 2480 MHz	
	Modulation Type	FHSS, GFSK, DPSK, DQPSK	
	Transmitting Power	$\geq 0$ dBm	

## Computer Trolley

	<b>Operate system</b>	Windows 10 professional, 64 bit	
	<b>CPU</b>	Intel® Celeron® CPU 3865U@1.8GHz	
	<b>RAM</b>	4 GB	
	<b>Hard Drive</b>	1 T	
	<b>Optical Drive</b>	DVD-RW	
	<b>Input Devices</b>	Alphanumeric Keyboard & Wireless Mouse	
	<b>External Interface</b>	5 USB; 1 RJ45 Network Ports; 1 RS232 Serial Port	
	<b>Power Supply</b>	110V 2.0A / 220V 1.0A; 50 Hz / 60 Hz	
	<b>Built-in Keyboard</b>		<b>BP Monitor Arm</b>
	<b>Accessories Basket</b>		<b>Drawer</b>



## Computer Trolley Specification

<b>Physical Specifications</b>	Display	21.5" IPS-LCD (1920 × 1080)
	Dimensions	640 × 510 × 1235 mm (length × width × high)
	Weight	≤70 kg (with safe working load)
	Features	Wire accessory basket Printer tray Drawer for paper 4 trolley casters with lock pedal BP monitor fixing plate
	Load capacity	Basket: 5 kg Printer tray: 7.5 kg Drawer: 3.5 kg
<b>Safety Specifications</b>	Standards Compliance	IEC 60601-1:2005/A1:2012 EN 60601-1:2006/A1:2013 IEC 60601-1-2:2014 EN 60601-1-2:2015
	Anti-electric Shock Type	Class I equipment
	EMC	CISPR 11 Group 1 Class A
<b>Environment Specifications</b>	Temperature	Transport and Storage: -20 °C ~ +55 °C (-4°F ~ +131 °F) Working: +5 °C ~ + 40 °C ( +41 °F ~ +104 °F)
	Relative Humidity	Transport and Storage: 25% RH ~ 93% RH (non-condensing) Working: 25% RH ~ 80% RH (non-condensing)
	Atmospheric Pressure	Transport and Storage: 70 kPa ~ 106 kPa Working: 86 kPa ~ 106 kPa

## Optional Treadmill

	<p><b>Trackmaster TMX428</b></p> <p>United States CE Certificated FDA Registered</p>		<p><b>Runner RUN 2011/T</b></p> <p>Italy CE Certificated</p>
	<p><b>Lode Valiant 2 cpet</b></p> <p>Netherland CE Certificated FDA Registered</p>		<p><b>WolfMedica CardioMed</b></p> <p>Greece CE Certificated</p>

More Treadmills are also supported including:

**Runner** – RUN 2011/PC; RUN 7410; RUN 7411

**Trackmaster** – TMX425; TMX425C; TMX425CP; TMX428CP

And other brand that support above protocols.

**h/p/cosmos** – Mercury Med; Quasar Med

**Lode** – Valiant Plus; Valiant Rehab

## Optional Treadmill

	<p><b>Ergosana SANA BIKE 500</b></p> <p>Germany CE Certificated</p>		<p><b>Lode Corival cpet</b></p> <p>Netherland CE Certificated</p>
	<p><b>Runner RU1400/T</b></p> <p>Italy CE Certificated</p>		<p><b>Ergoline Ergoselect 4</b></p> <p>Germany CE Certificated</p>

More Ergobikes are also supported including:

**Runner** – RUN 700T

**Ergosana** – SANA Bike 1000 easy

And other brand that support above protocols.

**Ergoline** – Ergoselect Series

**CardioWise** – XRCISE CYCLE MED