## BIPHASIC DEFIBRILLATION

GURVICH PULSE SINCE 1967







imPulse AND-P04

imPulse LCD AND-P05 imPulse PRO AND-P01

**imPulse** 

Zelenograd innovation-technology center of medical equipment

Technical specification	ImPulse AND-P04	imPulse LCD AND-P05	imPulse PRO AND-P01	
Defibrillator				
Operation mode	semi-automatic		semi-automatic, async manual and sync manual	
Waveform	fixed duration biphasic quasi-sinusoidal (Gurvich pulse), with automatic impedance compensation			
Maximum energy	180J at 50Ω			
Energy sequence in semi-automatic m	node (first – second – third and all sul	bsequent shocks)		
with adult pads	130J – 180J – 180J			
with pediatric pads	50J – 70J – 70J			
Energy in manual mode	_		10J, 15J, 20J, 30J, 50J, 70J, 90J, 110J, 130J, 150J, 180J	
Maximal energy in manual mode with pediatric pads	_		70J	
Charge time	180J in less than 9 seconds with new nonrechargeable battery pack		180J in less than 8 seconds with new rechargeable battery pack	
Safety classification	IEC 60601-1, internally powered equipment			
Electrical protection	type BF input protection against defibrillator according to IEC 60601-1			
Automatic defibrillation protocol	ERC 2005			
Controls	On/Off, Help, Shock		On/Off, Help, Shock, Up, Down, OK, Energy, Charge	
Display				
Screen	_		color TFT LCD, LED backlight 320 pixels × 240 pixels, 73 × 55 mm	
Sweep speed	_	25 mm/sec		
ECG size	_	10 mm/mV	10 mm/mV ×0.5; ×1.0; ×1.5; ×2.0; ×3.0	
Displayed information	highlighted guiding pictograms: connect cable, apply pads, do not touch patient; flashing Shock button	elapsed time, heart rate, selected energy, number of shocks, ECG waveform, ECG scale (always ×1.0), 1mV signal pulse, time from the CPR beginning, text prompts, battery status, memory card status, flashing Shock button	elapsed time, operation mode, heart rate, selected energy, number of shocks, ECG waveform, ECG scale, 1mV signal pulse, R-peak marks, time from the CPR beginning, text prompts, battery status, memory card status, flashing Shock button	
Status display	defibrillator is ready or defibrillator is faulty, battery is charged or battery is unloaded or is absent			
Battery				
Туре	Li-MnO2 nonrechargeable battery pack		Li-lon rechargeable battery pack	
Capacity	21V, 2.4 amp-hour		14.8V, 4.8 amp-hour	
Typical performance	150 180J discharges or 16 hours of operating time		220 180J discharges or 20 hours of operating time	
Physical characteristics				
Dimension	8.4 × 22.5 × 24.0 cm			
Weight with battery pack	2.3 kg			
Environmental				
Operating temperature		0 to +50 °C		
Relative humidity	5 to 95% (non-condensing)			
Storage temperature	-30 to +60 °C			
Protection from dust/water	IP55 according to IEC 60529, with battery pack installed			
Options	carry bag			
Accessories	_		charger with ac adapter for rechargeable battery pack	

