

AXION

MEDICAL EQUIPMENT

since 1970



AXION



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Resuscitation
Cardiology
Neonatology
Surgery
Physiotherapy

LLC Concern Axion Medical Equipment



50 years of experience in medical equipment design and manufacturing



mass production: over 50,000 pcs of sophisticated medical equipment are manufactured by the factory annually



certificates of conformity with the Russian and international quality standards for all products



team of medical equipment designers and engineers



cooperation with the leading Russian hospitals and research institutes

- Professional confidence: 70% of ambulances in Russia are equipped with Axion electrocardiographs; over 10,000 Axion defibrillators are used in Russian ambulances, healthcare centers and paramedical and midwifery stations
- reliable participant of the programs of state deliveries for the Main Military Medical Directorate, the Federal Agency for State Reserves and the RF Healthcare Ministry
- wide geography of sales - 182 dealers in 85 regions of Russia, more than 20 CIS and non - CIS countries

RESUSCITATION

Portable Ventilator A-IVL-E-03 "Axion"	4
Apnea Breathing Therapy Apparatus ADT-01 "Axion"	6
Defibrillator DKI-N-12 "Axion"	8
Defibrillator - Monitor DKI-N 11 "Axion"	12
Defibrillator Monitor DK-N-10 "Axion"	14
External Automatic Defibrillator DA-N "Axion"	16
Portable Pulse Oximeter PP - 01 "Axion"	18
Syringe dispenser DO1 "Axion"	20

CARDIOLOGY

Three/Six-Channel Electrocardiograph EK3TC-3/6-04 "Axion"	22
Single/Three-Channel Electrocardiograph EK1T-1/3-07 "Axion"	24

NEONATOLOGY

Heated changing table SPO-01 " Axion"	26
Unit of Newborn Warming-up with Phototherapy Function UON-03F "Axion"	28
Newborn Warming Unit UON-04 "Axion"	30
Phototherapy irradiator OFTN-420/470-02 "Axion"	32
Phototherapy Radiator OFTN- 03 "Axion"	34
Medical-Purpose Electric Mattress MEM-01 "Axion"	36

SURGERY

Medical Surgical Suction Unit OMH-5/80-01 "Axion"	38
Medical Portable Suction Machine OMP-5/80 "Axion"	40
Gynecologic Vacuum Aspirator OG-10/90 - 01 "Axion"	42

PHYSIOTHERAPY

Vacuum Massage Apparatus VM-01 "Axion"	44
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Emergency Lung Ventilator
A-IVL-E-03 "Axion"

Portable device "A-IVL-E-03" - High-tech device to maintain respiratory function of adult patients and children for disaster medicine, ambulances, field hospitals, as well as for intrahospital transportation.



DEVICE FEATURES

- easy of use: electronic control is equipped with mechanical knobs to adjust minute volume and frequency of ventilation, which increases the responsiveness of the nursing staff to changes in the patient's condition
- Reusable patient breathing circuit suitable for 30 cycles of sterilization and reuse
- Oxygen can be supplied from a cylinder as well as from a hospital oxygen or air network (with an adapter)
- Safe use for the patient due to audible and visual alarms
- Ability to disable/enable voice announcement
- Durable ABS plastic control box housing and aluminum case ensure reliable use of the device in the ASHL environment

Parameters Modes	Ventilation frequency setting range, 1/min	Minute volume setting range, l/min	Inspiratory-toexpiratory ratio	Respiratory pressure range in the patient connection port, cmH2O	Trigger start at a pressure of minus (1 0.5) cmH2O during the patient's breath attempt waiting period	Breathing volume, ml.
IPPV mandatory ventilation	10/15/20/30/40 /50/60/70/80 ±5%	0,5/3/6/9/11 /13/15/20/25 /30 ±20%	1:4/ 1:3/ 1:2/ 1:1/ 2:1/ 3:1 / 4:1 ±10%	15/20/25/30/35/40 /45/50/55/60 ±10%		
SIMV mandatory/ assisted ventilation	10/15/20/25/30 ±5%	0,5/3/6/9/11 /13/15/20/25 /30 ±20%	1:4/ 1:3 1:2/ 1:1	15/20/25/30/35/40 /45/50/55/60 ±10%	at ventilation rate 10 to 30 l/min	
PSV assisted ventilation				5/10/15/25/30/35 /40/45/50/55/60 ±10%	• after (9±2) seconds from the moment of the last triggering of the patient's breath trigger; • after (9±2) seconds from the moment of the mode activation	
Manual mode		15/20/25/30 /35/40/45/50 /55/60 ±10%		15/25/30/35/ /40/ 45/50/55/60 ±10%		
REAN (resuscitation)				He 6onee 45		100,200,300 366,433,500 666,833,1000 ±20%

Specifications	Parameters
Main	
Trigger type	by pressure
Settings	
Respiratory volume in IPPV mode	50-300 ml
Frequency of breathing cycles	10-80 br/min
Inspiratory time	0.15-4.8 sec
Breathing time in mode (PS4P)	1-60 cm H ₂ O
Pressure trigger	1 ±0,5 cm H ₂ O
O concentration	60-100%
Limits of the set pressure	5-60 cm H ₂ O
Maximum safe pressure	70 ±10 cm H ₂ O
Audible and visual announcement	
High pressure of the gas mixture in the breathing circuit	alarm
Low gas pressure at the device inlet	alarm
Low battery charge	alarm
Display	
Type, diagonal	LCD color display, 2.7"
Resolution	320x240 pixels
Power supply	
Battery power supply	2.9Ah/14.8V, Li-Ion
AC power supply	220 +33-55 V frequency 50±2.5 Hz
DC power supply	10.2-15 V
Dimensions	
Dimensions (WxHxH) set	470x305x140 mm
Set weight	max 12 kg

- Package:**

 - control unit, Li-Ion rechargeable battery
 - reducer
 - 2 liter oxygen cylinder
 - reusable patient breathing circuit (hose + patient valve)
 - set of face masks (adult, teen, child)
- carrying bag
 - case for mounting of control unit and oxygen cylinder
 - oxygen hose
 - power supply unit, power cable for connection to the car mains
 - bracket for transport and wall mounting
 - adapter for connection to hospital oxygen network

Apnea Breathing Therapy Apparatus ADT-01 "Axion"

A breathing therapy apparatus is medical equipment for maintaining a patient's independent breathing process in case of respiratory insufficiency or difficulty. The device consists of a control unit with a breathing circuit consisting of a breathing hose, a reusable nasal mask and a breathing hose connector and is used in breathing therapy with continuous positive air pressure in the respiratory tract. (CPAP) for obstructive sleep apnea syndrome in patients with irregular breathing. The apparatus is designed to maintain independent breathing of a patient weighing at least 40 kg in hospitals or medical institutions, by specially trained personnel, as well as at home.

NEW



DEVICE FEATURES

- The low noise level of the device does not disturb the patient's sleep. The alarm system will alert to all events in the operation of the machine and in the course of the session
- A state-of-the-art LCD display is used to display and monitor all required therapy parameters. Control of the device is becoming more and more adaptive and intuitive, configuration is simple and easy to understand
- The sealed humidifier does not dry out the respiratory tract during therapy, making it easier to get used to therapy, making the sessions more comfortable. Heating function eliminates the possibility of discomfort inhalation of cold air and condensation in the breathing circuit
- Automatic leakage compensation and gradual pressure increase function directly affects the comfort of using the device

Specifications	Parameters
Main	
Adjusted sound power level	not more than 45 dBA
Air temperature in the patient connection port	max 41 °C
Maximum air flow rate	at least 120 l/min
Relative humidity in the patient connection port	not less than 50% at (27±2) °C
Time of operation mode establishment	no more than 5 minutes
Alarms	Apnea, High Leak, Mask Holes Blocked (Mask lock)
Display	
Type	color, TFT
Memory	
External Card	SD card 4 GB
Data Recording	365-day therapy record
Additional Features	
Humidifier	option availability
Humidifier heating	option availability
Humidification modes	8 modes with automatic level support
Water tank capacity	290 ml (maximum level)
IPR function	IPR level (Intelligent Pressure Relief) Options: OFF / 1 - 3
Autostart function	option availability
Auto Stop function	smooth pressure adjustment
Auto RAMP function	automatic smooth pressure adjustment
Power supply	
AC power supply	100 to 240 V and frequency (50±1) Hz
Power supply unit	220/24 V 2.5 A
Current consumption	not more than 2 A
Dimensions	
Overall dimensions	236x156x125 mm
Weight	max 1.6 kg

Packaget:

- controlunit, power supply unit 220/24
- breathing hose connector
- Classic 19 CPAP Tubing breathing hose for breathing circuits
- Reusable nasal mask with holder, retainer and patient valve VMS-NM

Accessories:

- SD card
- air filter 2 pcs
- Resvent carrying bag



CPAP mask

Defibrillator
DKI-N-12 "AXION"

The new DKI-N-12 defibrillator is designed for use in medical institutions, as well as for equipping ambulance and emergency medical teams. DKI-N-12 is used for emergency defibrillation of patients in cardiac arrest. The device is equipped with reusable electrodes that combine the ability to switch between adult and child modes

NEW



DEVICEFEATURES

- Ready for operation - no more than 3 seconds
- The initial energy level of the adult mode - 150 J
- High energy level blocking when using children's electrodes
- Average MTBF of the product - not less than 3000 pulses of maximum energy per 50 ohm load
- Effective defibrillation by biphasic truncated exponential pulse, improved treatment pulse shape
- Power supply from removable battery, AC mains and external power supply

Specifications	Parameters
General	
Pulse type	biphasic truncated exponential
Energy level for adults, J	10/25/50/100/150/200/250/300/360
Energy level for children, J	10/25/50/100 blocking the release of energy over 100
Energy take-up time 200 J / 360 J	4 seconds/ 6 seconds
Energy retention time	30 seconds
Number of discharges 360 J	NLT 150
Continuous operating time of the device in monitoring mode: from replaceable battery from DC power supply (12-15) V	NLT 3 hours NLT 168 hours
Automatic stabilisation of output parameters depending on the patient's chest resistance	between 25 and 200 Ohms
Power	
Аккумуляторная батарея Li-Ion	14.8 V / 4400 mA/h
От сети постоянного тока	12-16,8 V
От сети переменного тока	190-250 V frequency 50 / 60 Hz
Dimensions	
Dimensions(WxHxL)	345x230x345 mm
Weigh with battery	NMT 5 kg

Package:

- defibrillator unit with electrodes
- 14.8V 4,400mAh Li-Ion rechargeable battery
- power adapter
- power cord
- carrying bag
- operating manual



Reusable adult electrodes



Control Panel

Defibrillator monitor with automatic external defibrillation function
DKI-N-11 "AXION"

Professional monitor defibrillator ДКИ-Н-11 with the possibility of automatic operation became an indispensable device for ambulance teams, use in medical in-patient departments, cardiologic dispensaries and feldsher's/obstetric stations. Thanks to its high reliability, monitor defibrillator DKI-N-11 Axion is popular among end users: over 10,000 devices have been supplied in the past 5 years to medical/preventive treatment facilities and for ambulance vehicles in Russia.



BEST SELLER

DEVICE FEATURES

- The device is equipped with reusable electrodes that combine the ability to switch between adult and child modes
- Effective defibrillation is achieved by a biphasic truncated exponential pulse
- Synchronous and asynchronous operating modes
- Built-in thermal printer, ECG channel availability
- Fast availability: Energy of 200 J is accumulated within 6 seconds, 360 J – within 10 seconds
- Patient safety: Automatic limitation and blocking of defibrillation energy output, and automatic stabilization of pulse output parameters depending on patient's body resistance

Specifications	Parameters
Defibrillation	
Pulse type	biphasic, trapezoidal shape
Energy level for adults, J	5/10/25/50/75/100/150/200/250/300/360 additional energy set operation over 200
Energy level for children, J	5/10/25/50/75/100/150 blocking of energy output over 150
Energy charge time 200 J / 360 J	6 seconds / 10 seconds
Energy retention time	30 seconds
Number of discharges 200 J / 360 J	70 / 40
Automatic external defibrillation mode	100-360 J
ECG	
ECG receiving channel	defibrillation electrodes separate electrocardiographic cable
ECG channel sensitivity	5, 10, 20 mm/mV
HR measurement range	30-300 bpm
ECG monitoring via a 4-channel ECG cable	I...III,aVR...aVF
ECG monitoring via a 10-channel ECG cable	I...III,aVR...aVF, v1...v6
Absolute error of heart rate measurement	±2 bpm
Display	
Type	colour TFT display
Resolution	800x480 pixels
Diagonal	7 "
Monitor recovery time after defibrillation	not more than 6 sec
BLOOD PRESSURE CHANNEL – OPTIONAL	
Blood pressure measurement range	20 to 280 mm Hg
Absolute cuff blood pressure measurement error	±3 mm Hg
Pulse Measurement – Option	
SpO2 measurement range	0-100 %
Absolute SpO2 measurement error within 75-100%	±3 %
Pulse rate measurement range	30 to 240 bpm
Absolute error of pulse rate measurement	±3 bpm
Cardiac pacing - Option	
Pacing types	External (EKSН), Endocardial (ENDO), Throesophageal (TES)
Operation modes with pacing	fixed, overstimulation, on demand
External pacing	
Frequency mode fixed and on demand	от 40 до 180 ppm
Overstimulation frequency mode	от 40 до 250 ppm
Pulse duration setting	от 20 до 40 ms
Pulse current setting	от 10 до 180 mA
Authorized load range	100-500 Ohm

Endocardial pacing		
Frequency mode fixed and on demand	от 40 до 180 ppm	
Overstimulation frequency mode	от 40 до 900 ppm	
Pulse duration setting	0,5; 1 ms	
Pulse current setting	4-20, at a pitch of 2 mA	
Authorized load range	400-600 Ohm	
Transesophageal pacing		
Frequency mode fixed and on demand	от 40 до 180 ppm	
Overstimulation frequency mode	от 40 до 900 ppm	
Pulse duration setting	5; 10 ms	
Pulse current setting	4-20, at a pitch of 2 mA	
Authorized load range	700-1300 Ohm	
Power supply		
Replaceable NiCd battery	14.4 V / 1900 mA/h	
Dc power supply	12-18 V	
Ac power supply	190-250 V at 50 / 60 Hz	
Monitoring with a removable battery	at least 3 hours	
Continuous AC operation time	at least 168 hours	
Power consumption from the mains	max 210 VA	
Printer		
Print speed	12.5; 25; 50 mm/s	
Thermal paper width	58 mm	
Laying out the coordinate grid	at 1 mm pitch	
Dimensions		
Dimensions (WxHxD)	345x230x345 mm	
Weight	max 7 kg	
Resistance to mechanical impacts	GOST R 50444 group 5	



Reusable adult electrodes

- Standard set:**
- defibrillator monitor with integrated power supply unit, charger and thermal printer
 - NiCd rechargeable battery
 - power cord
 - disposable ECG monitoring electrodes
 - adult and pediatric reusable electrodes
 - ECG cable with 4 electrodes
 - carrying bag
 - operational documentation, paper

- Optional equipment::**
- 12-18 V mains power adapter
 - ECG thoracic electrode - 6 pcs
 - extremity ECG electrode
 - disposable external pacing electrodes
 - ECG cable for 10 electrodes with a 4-mm pin
 - cuff, medium size, for adults
 - pulse oxymetry cable
 - endocardial pacing set
 - transesophageal pacing set

- Displaying information on the monitor**
- set energy value
 - three ECG leads
 - replacement battery status
 - upper and lower limits of heart rate alarms and current values
 - energy storage process
 - current time and date
 - recurrent current and resistance of the patient's chest
 - photoplethysmogram
 - pulse rate, SpO2 value
 - value of systolic and diastolic blood pressure
 - parameters of the pacing channel
 - duplication of voice messages accompanying the operator's actions and the work process



Reusable children electrodes



Built-in thermal printer

6 configuration options:

DKI-N-11 Defibrillator Monitor	Full configuration		Medium configuration		Minimum configuration	
		with AED function		with AED function		with AED function
Defibrillation						
Manual mode	+	+	+	+	+	+
Semi-automatic mode	-	+	-	+	-	+
Monitoring						
ECG / built-in thermal printer	+	+	+	+	+	+
NIBP	+	+	+	+	-	-
SpO2	+	+	+	+	-	-
Electrocardiac pacing						
- external (EKSН) - endocardial (ENDO) - transesophageal (TES) (ENDO and TES kit on request)	+	+	-	-	-	-

Defibrillator monitor
DKI-N-10 "AXION"

Portable monitor defibrillator DKI-N-10 Axion is a reliable device widely used in medical in-patient departments, cardiologic dispensaries, by ambulance and emergency medical teams for resuscitation and electrical cardioversion for patients with heartbeat arrhythmia.

Device reliability has made it popular among medical professionals: over 15,000 monitor defibrillators DKI-N-10 Axion have been made in 10 years.



DEVICE FEATURES

- limitation, blocking of defibrillation energy output, as well as automatic stabilization of output parameters depending on patient's body resistance, discharge blocking when electrodes are opened or closed
- Automatic stabilization of output pulse parameters depending on the patient's chest resistance in the range from 25 to 200 Ohms
- Synchronous and asynchronous operating modes
- Voice and visual support of operator's action and work process
- The charger allows for simultaneous charging of 2 storage batteries
- Built-in thermal printer

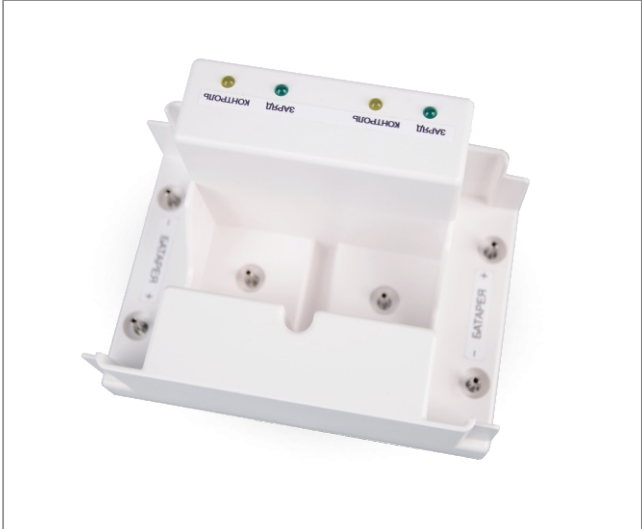
Specifications	Parameters
Main	
Pulse type	biphasic, trapezoidal shape
Energy level for adults, J	5/10/25/50/75/100/150/200/250/300/360 additional energy set operation over 200
Energy level for children, J	5/10/25/50/75/100/150 blocking of energy output over 150
Energy charge time 200 J / 360 J	6 seconds / 10 seconds
Energy retention time	30 seconds
Number of discharges 200 J / 360 J	at least 70 / 40
ECG	
ECG receiving channel	defibrillation electrodes separate electrocardiographic cable
ECG channel sensitivity	5, 10, 20 mm/mV
HR measurement range	от 30 до 300 bpm
Display	
Type	LCD
Resolution	320x240 pixels
Diagonal	5,7 "
Power supply	
NiCd rechargeable battery	14.4 V / 1.9 mA/h
Dc power supply	12-18 V
Ac power supply	190-250 V at 50 / 60 Hz
Monitoring with a removable battery	at least 3 hours
Continuous AC operation time	at least 168 hours
Battery charge time	not more than 4 hours
Printer	
Print speed	12,5; 25; 50 mm/s
Thermal paper width	58 mm
Dimensions	
Dimensions (WxHxD)	380x175x280 mm
Weight	not more than 6 kg

- Package:**

 - defibrillator monitorunit
 - battery charger
- mains converter
 - paper registration tape
 - rechargeable battery pack
- carrying case
 - operating manual



Reusable children electrodes



Charger

Automatic external defibrillator
DA-N "AXION"

DA-N line of portable automatic external defibrillators is designed for resuscitation of a patient with cardiac rhythm disturbance in ambulance conditions, field hospitals, rescue operations, in paramedic obstetrical stations and medical institutions, as well as for placement in crowded places to provide publicly available defibrillation. The defibrillator automatically analyzes the patient's ECG and indicates whether a defibrillation-eligible rhythm is detected and provides voice prompts for timely discharge and cardiopulmonary resuscitation.



DA-N-05

DEVICE FEATURES

- automatic analysis of heart rhythm and discharge recommendation when a rhythm is detected, preparation for defibrillation
- high operating time without recharging
- automatic daily self-test and self-diagnosis of performance at startup
- recording up to 1,000 recent events, including ECG, to an external microSD card for subsequent transfer to a personal computer for analysis
- waterproof interface
- availability of 3 modifications of the device for specialists with different levels of medical training:
 - ✓ for intensive care physicians and cardiologists (DA-N-02)
 - ✓ for paramedics and EMERCOM specialists (DA-N-01)
 - ✓ for public defibrillation (DA-N-05)

Specifications		Parameters	
Model	DA-N-01	DA-N-02	DA-N-05
Operation mode	automatic	automatic, manual, cardioversion	automatic
Pulse energy in automatic mode for adults	100/150/170/200/300/360 J		200 J
Pulse energy in automatic mode for children	10/15/20/30/50/70/100 J		50 J
Time of energy gain	no more than 9 sec		
Number of discharges from the battery	at least 200		
Pulse shape	biphasic trapeze		
Impedance measurement range	20 – 200 Ohm		
Arrhythmia detection	in accordance with GOST R IEC 60601-2-4, AAMI DF 80		
ECG			
Monitoring with flexible electrodes	+	+	-
Monitoring from a separate input	-	+	-
Sweep speed	25 mm/sec		-
HR measurement range	15-300 bpm		-
Measurement error	±1% or ±1 bpm, the higher of the values		-
Electrode type	disposable (adults and children)		
Display			
Type	colour TFT display		-
Resolution	800x480 pixels		-
Diagonal	7"		-
Power supply			
Battery type	non-rechargeable Li-MnO ₂	rechargeable lithium-ion	non-rechargeable
Charge time	-	No more than 4 hours	-
Dimensions			
Dimensions (LxWxH)	295x230x87 mm		
Weight with battery	not more than 3 kg		



DA-N-01

DA-N-02

Portable pulse oximeter
PP-01 "AXION"

Portable pulse oximeter "PP-01" -A compact device for rapid measurement of arterial blood hemoglobin oxygen saturation (SpO₂), patient pulse rate, observation of photoplethysmogram and recording of current results for cardiovascular diagnostics.

The device is used to monitor the patient's condition under anesthesia and in postoperative resuscitation, to perform a comprehensive pulmonological examination, in case of hypoxia in pathologies of internal organs, circulatory system, respiratory failure, apnea, as well as when transporting patients to a hospital in an ambulance or emergency vehicle.



DEVICE FEATURES

- user-friendly interface that simplifies the operation of the device
- audible and visual alarms that can be configured and deactivated
- can be attached in ambulance and in hospital, as well as on the patient's arm with a cuff or on a clip on the patient's clothing
- the device can be used to monitor patients of any age: from newborns and infants to adult patients
- Integration with PC using proprietary software, transferring data to PC via USB or microSD card for subsequent analysis and storage

Specifications	Parameters
Main	
SpO ₂ and heart rate display update rate	100 ms
Red light wavelength	660 нм ± 10 нм
Infrared light wavelength	905 нм ± 10nm
Saturation level (SpO ₂)	70 to 100% ± 2% at 1% pitch from 60 to 69% ± 3% at 1% pitch from 0 to 59% - not normalized
Pulse rate (PR)	18 to 300 beats per minute with an absolute error of ±1, relative error of ±3%
Perfusion	display range 0 % to 20 % with an increment of 0.1 % or as a column the height of which is proportional to the perfusion level
Audio signals	
Setting the SpO ₂ alarm	65-98% at 1% pitch
Setting the Alarm by Emergency	18-240 beats per minute at 1 pitch
Display	
Type	color, TFT
Memory	
External Card	micro SD or micro SDHC up to 32 GB
Data Recording	patient ID, patient category, SpO ₂ and pulse rate values, current time
Power supply	
AA-size, 3-cell batteries	1,5 V
3 rechargeable AA size Ni-Cd or Ni-Mh batteries	1,2 V
DC power supply	5 V, connectable via USB connector
Continuous battery operation time	no more than 24 hours for a 2,000 mAh battery
Battery charge time	no more than 10 hours for a 2,000 mAh battery
Dimensions	
Overall dimensions	135x61x33 mm
Weight	160 g (without batteries)

Package:

- pulse oximeter
- SpO₂ sensor for adults, cuff type
- operating manual
- Upon the request
- reusable SpO₂ sensors (for patients of different ages)
- software CD
- expansion cable, USB 2.0 cable
- microCD card
- clamp
- mountingbracket
- cuff



Reusable "clothespin" sensor



Display

Syringe dispenser
D-01 "Axion"

The D-01 syringe dispenser is used in ambulance and hospital settings to administer drugs at a constant low rate over a long period of time.

The D-01 syringe dispenser provides safety for the patient due to visual and audible alarms when approaching the end and end of infusion, when there is no connection to the network, incorrectly inserted syringe, blockage of the infusion line, low battery level, inactivity of the dispenser for more than 30 minutes.



DEVICE FEATURES

- ease of use due to low weight, compact size, and the possibility of fastening with a clamp to the infusion rack
- continuous battery operation time – 5 hours
- compatible with all foreign and Russian-made syringes of 5, 10, 20, 30, 50 ml
- 5 infusion modes: fixed rate mode, time mode, mode by dose and patient weight, bolus infusion mode, "open vein" mode
- connection to a control station or PC via USB connector
- manual and automatic key locking capability
- ease of use, due to the intuitive interface

Specifications	Parameters
Main	
Operation mode	by infusion rate, by infusion time, by patient weight
Selecting the interface language	Russian/English
The incrementality of the set speed	0.1 ml/hour
Deviation of the infusion rate	not more than 2%
Adjustable levels of occlusion	low, medium, high
Set speed range KVO	0.1 – 5 ml/hour
Residual volume of medication	not more than 5 %
Total volume of administered medications	0.1 – 9999.9 ml
Additional Features	
Bolus speed function	option availability
Open vein mode	option availability
Keypad lock function	option availability
Automatic detection of the nominal capacity of the syringe	option availability
Syringe installation error	sound option
Blockage in the infusion tube	sound option
End of infusion	sound option
Approaching the end of the infusion	sound option
Low battery power	sound option
Display	
Type	TFT-LCD color display
Resolution	320x240 pixels
Diagonal	2,8"
Power supply	
Battery life	at least 5 hours
AC power supply	220±22 V, 50 Hz
DC power supply	12 V, 2 A
Dimensions	
Dimensions (LxWxH), excluding clamp	240x200x80 mm
Weight	max 2 kg



Syringe mounting

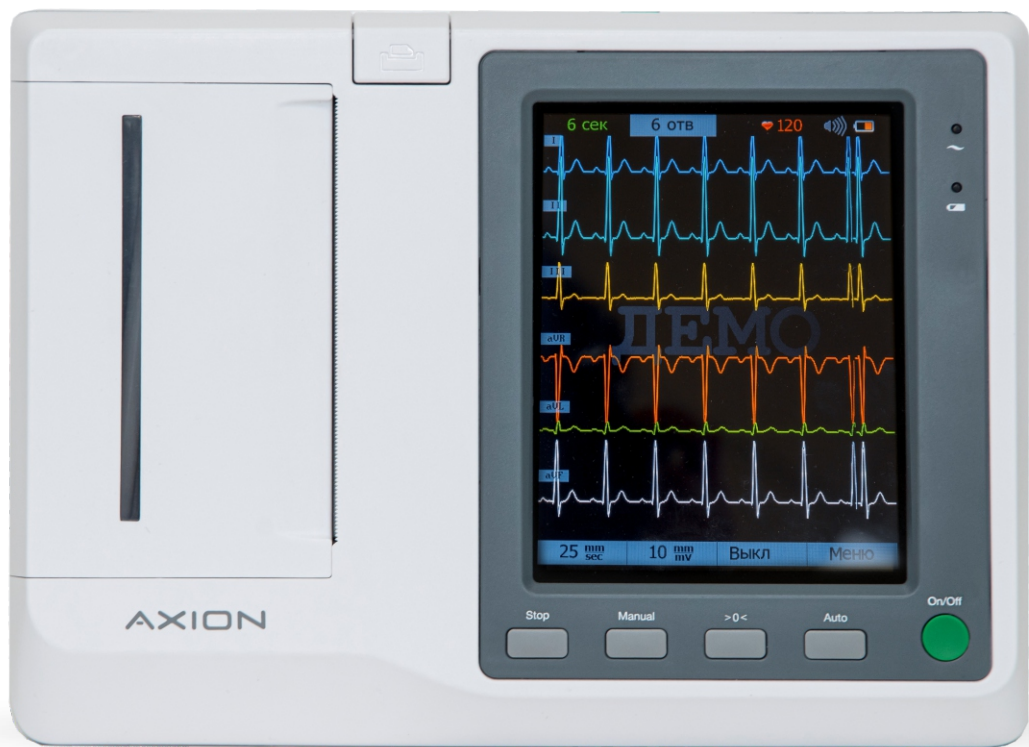
- Package:**
- functional block
 - power cord
 - power cord 1.8 m
 - clamp
 - operating manual

Three/six-channel electrocardiograph
EK3TTs-3/6-04 "Axion"

Three/six-channel EC3TTs-3/6-04 "Axion" electrocardiograph with microprocessor control, automatic ECG processing and with the function of ECG data transfer via GSM channel is designed to measure and record the heart bioelectric potential in diagnosing the condition of human cardiovascular system in medical institutions, medical offices of organizations, in providing medical care at home, in ambulances.

Provides synchronous recording of 12 commonly used leads in standard sequence or Cabrera with 3/4/6/12 channel printing on the built-in printer (12 channels across the thermal paper) as well as three Nehb leads.

Features ECG transmission via GSM network + automatic syndromic report function.



DEVICE FEATURES

- pacemaker definition, construction of typical cardiac cycles
- automatic and manual modes for cardiographic lead recording
- automatic recording if arrhythmia detected
- printing 3/6/12 leads on the built-in or external printer
- long duration of autonomous operation: up to hours in the monitoring mode, recording of minimum 100 ECG on thermal paper
- defibrillation protection, synchronous registration in automatic mode
- rhythm strip, bar graph, scattergram generation in heart rate monitoring

Specifications	Parameters
Main	
ECG registration in 12 standard leads	standard sequence, by Cabrera, by Neb, by user's choice
Registration time in automatic mode	3, 4, 6, 8, 10, 16 sec or 4 RR-intervals
Automatic measurement of ECG elements	9 parameters or 131 in the interpolated version
Autodetection on recording	1, 2, 3 sec
Processing	
ECG signal sampling frequency	4 kHz/channel
Input voltage range	0.03 to 10 mV
ADC effective number of bits	24
HR measurement range	от 30 до 300 bpm
Common-mode rejection	at least 100 dB
Recording media movement speed	5; 10; 12.5; 25; and 50 mm/s
Sensitivity	2.5; 5; 10; 20; and 40 mm/mV
Adjustable frequency range	0.05 to 150 Hz
Display	
Type	color, TFT
Resolution	640x480 pixels
Diagonal	5,7 "
Screen output	Virtual alphanumeric keyboard
Memory	
Built-in memory	up to 100 ECGs
External memory	external Flash memory up to 16 GB
Recorder	
Printer	built-in
Printout of data	program type, version, date and time, paper speed, sensitivity, department name, filter status, ECG interpretation, typical cardiac cycles
Recording medium	112 mm wide thermal paper, roll or Z-fold stack
Power supply	
Battery type	rechargeable lithium-ion
Battery charge time	not more than 5 hours
Typical operating time in monitoring mode	at least 6 hours
AC power supply	220 V ± 22 V/50 Hz
Replaceable rechargeable battery power supply	14.8 V
Vehicle's on-board power supply	10.5 V to 15 V
Dimensions	
Overall dimensions	265x195x70 mm
Weight	max 1.5 kg

- Package:**
 - electrocardiograph
 - patient cable
- power cord
 - set of reusable electrodes
 - carrying case
- operating manual
 - 2 rolls of thermal paper

4optionsdependingontheavailability ofoptions

Package options	p. 1	p. 2	p. 3	p. 4
Function of ECG transmission via GSM network	—	—	+	+
Function of automatic construction of a syndromic conclusion	—	+	—	+

Single/triple-channel electrocardiograph EK1T-1/3-07 "Axion"

Single/triple-channel electrocardiograph EK1T-1/3-07 "Axion" with the transmission through communication channels (GSM) with a combined power supply - a modern device for recording of the heart bioelectrical potentials when diagnosing the condition of the human cardiovascular system.

The device is included in the standard equipment of medical and preventive treatment facilities, ambulance vehicles, feldsher's/obstetric stations, maternity welfare centres, general practice rooms, private clinics, and is also suitable for outpatient use.



DEVICE FEATURES

- high battery life of the device
- automatic and manual modes for cardiographic lead recording
- synchronous recording of leads in the standard Cabrera sequence, three Nehb leads
- printing of 1/3 leads on a built-in printer or 12 leads successively
- ECG data transmission to cardiogram collection server via GSM-channel
- ECG data transfer to PC (USB), ECG transmission via communication channels
- rhythmogram, histogram, scattergram for heart rhythm monitoring, automatic registration when arrhythmia is detected
- construction of typical cardiocycles, synchronous registration in automatic mode

Specifications	Parameters
Main	
ECG registration in 12 standard leads	standard sequence, by Cabrera, by Neb, by user's choice
Registration time in automatic mode	3, 4, 6, 8, 10, 16 sec or 4 RR-intervals
Automatic measurement of ECG elements	9 parameters
Autodetection on recording	1, 2, 3 sec
Processing	
ECG signal sampling frequency	4 kHz/channel
Input voltage range	0.03 to 10 mV
ADC effective number of bits	24
HR measurement range	30-300 bpm
Common-mode rejection	at least 100 dB
Recording media movement speed	5; 12.5; 25; and 50 mm/s
Sensitivity	2.5; 5; 10; 20; and 40 mm/mV
Adjustable frequency range	0.05 to 150 Hz
Display	
Type	color, TFT
Resolution	320x240 pixels
Diagonal	2,8 "
Display lead number	1
Memory	
External memory	microSD card up to 16 GB
Recorder	
Printer	built-in
Printout of data	program type, version, date and time, paper speed, sensitivity, department name, filters, typical cardiac cycles, table of measured parameters
Paper width	58 mm, roll
Power supply	
Battery type	rechargeable lithium-ion
Battery charge time	not more than 3.5 hours
Typical operating time in monitoring mode	3 hours
AC power supply	220 V ± 22 V/50 Hz
Replaceable rechargeable battery power supply	7,4 V
Power consumption	max 25 VA
Dimensions	
Overall dimensions	240x190x80 mm
Weight	max 1.4 kg

Package:

- electrocardiograph
 - patient cable
 - power cord
 - set of reusable electrodes
 - carrying case
- maintenance documentation package
 - audio headset with microphone
 - CD with PC software
 - 2 rolls of thermal paper

Heated changing table SPO-01 "Axion"

Designed for sanitation, examination, changing and other procedures with newborns. It is recommended for use in maternity hospitals, perinatal centers, children's hospitals and laboratories.



DEVICE FEATURES

- safety of the newborn due to the light and sound alarm in case of power failure during operation, malfunction in the temperature sensor of the table mattress surface, reaching the temperature of the table mattress surface above 39°C, in case of failure in the temperature control system of the table mattress surface
- comfortable temperature of the procedures due to the bottom heating, realized through a flexible heating element integrated into the table mattress
- hygienic use due to the availability of removable mattress cover
- durable frame made of powder-coated metal profile
- convenient movement thanks to four rubber-coated rotary self-orienting wheels with a braking system
- shelf for medications, medical tools and other items

Specifications	Parameters
Main	
Continuous run time	24 hours
Mattress surface warm-up temperature	+25 °C to +37 °C
Mattress warm-up time	max. 15 min
Temperature setting range	+35 °C to +38 °C, with increment of 0.5 °C
Potential temperature deviation	no more than ± HS
Light and sound alarm	
Unauthorized de-energizing	sound option
Faulty sensors	sound option
Mattress temperature of over 39 °C	sound option
Failure of temperature control system	sound option
Power supply	
AC power supply	220 V ± 22 V / 50 Hz
Power consumption	max 90 VA
Dimensions	
Overall dimensions	980x650x1,100 mm, without rotary mechanisms
Weight	max 42 kg

Package:

- product
 - mattress, cove
- power cord
 - operating manual



Control Panel

Newborn baby heater with phototherapy function

UON-03F "Axion"

Combines 2 devices – a phototherapy irradiator and a heating device, while saving useful space and creating comfortable conditions for sanitary-medical procedures and phototherapy for newborns.

It is recommended to use in intensive care units of maternity homes, perinatal centres and children's hospitals.



DEVICE FEATURES

- Infant's safety due to monitoring of heating temperature by means of a skin sensor, as well as sound and light alarm when patient's temperature exceeds 38.5°C, deviation from the specified temperature by ±1°C, malfunction in the sensor circuit and at loss of supply voltage
- high accuracy of maintaining the set temperature of ±0.1 ° C, the error in the accuracy of measurement is not more than ±0.3 ° C
- Comfortable hammock for newborn's convenients during treatment procedures
- Heating source – upper infrared ceramic heater with the power of 850 W
- Convenient movement thanks to four rubber-coated rotary self-orienting wheels with a braking system
- 2 in 1: possibility of comfortable sanitary-medical procedures and phototherapy simultaneously with heating of the newborn
- Easy device control

Specifications	Parameters
Main	
Continuous operation time	at least 4 days
Tray-to-heater distance	850 ± 50 mm
Patient-level illumination	at least 500 lux
Blue radiation intensity	at least 1,200 μW/cm²
Temperature control range	+30 °C to +38 °C
Temperature measurement error	max. ±0.3 °
Temperature setting increment	0.1°
Power supply	
AC power supply	220 V ± 22 V / 50 Hz
Power consumption	max 1000 VA
Dimensions	
Overall dimensions	770x1150x1950 mm
Weight	max. 70 kg

Package:

- device
- phototherapy bed
- heating pad, hammock
- skin temperature sensor
- cable, power cord
- fuse (3.15A)
- fuse (5A)
- operating manual



Control Panel



LEDs

Newborn heating device
UON-04 "Axion"

Used to maintain a comfortable temperature for newborns with infrared rays. It is used in intensive care units of maternity homes, perinatal centres and children's hospitals.

The use of the device creates convenience for medical personnel in carrying out daily procedures with newborns.



DEVICE FEATURES

- Newborn's safety due to monitoring of heating temperature by means of a skin sensor, as well as sound and light alarm when patient's temperature exceeds 38.5°C, deviation from the specified temperature by ±1°C, malfunction in the sensor circuit and at loss of supply voltage
- Heating unit with imported ceramic heating element with the power of 850 W
- Possibility to adjust the heating unit height in order to set an optimal distance to the patient
- Convenient device moving thanks to four rubber-coated wheels, two of which have brakes
- Automatic maintaining of heating temperature

Specifications	Parameters
Main	
Operation time	at least 4 days
Temperature control range	+30 °C to +37 °C
Temperature measurement error	max. ±0.3 °C
Temperature maintaining error	max. ±1 °C
Temperature setting increment	0.1 °C
Patient-level illumination	500 lux
Device height adjustment range	1,560 to 1,800 mm
Power supply	
AC power supply	220 V ± 22 V / 50 Hz
Power consumption	max 1000 VA
Dimensions	
Overall dimensions	650x900x1800 mm
Weight	max 35 kg

- Package:
- product
 - operating manual

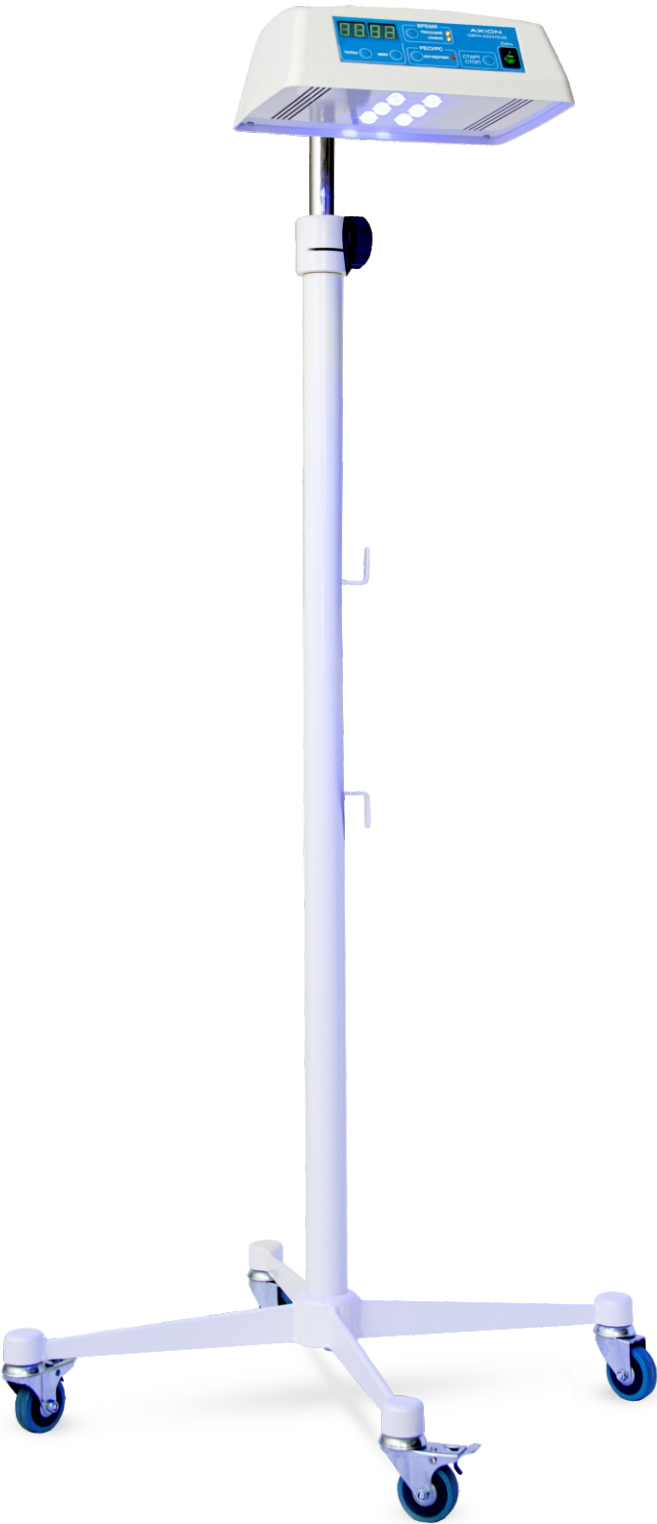


Control Panel

Phototherapeutic irradiator
OFTN-420/470-02 "Axion"

Designed irradiation of newborns with blue light with the maximum spectral intensity of 450 to 465 nm for treatment of neonatal icterus.

It is included in the standard equipment of maternity homes, perinatal centres, neonatal intensive care units, children day care institutions.



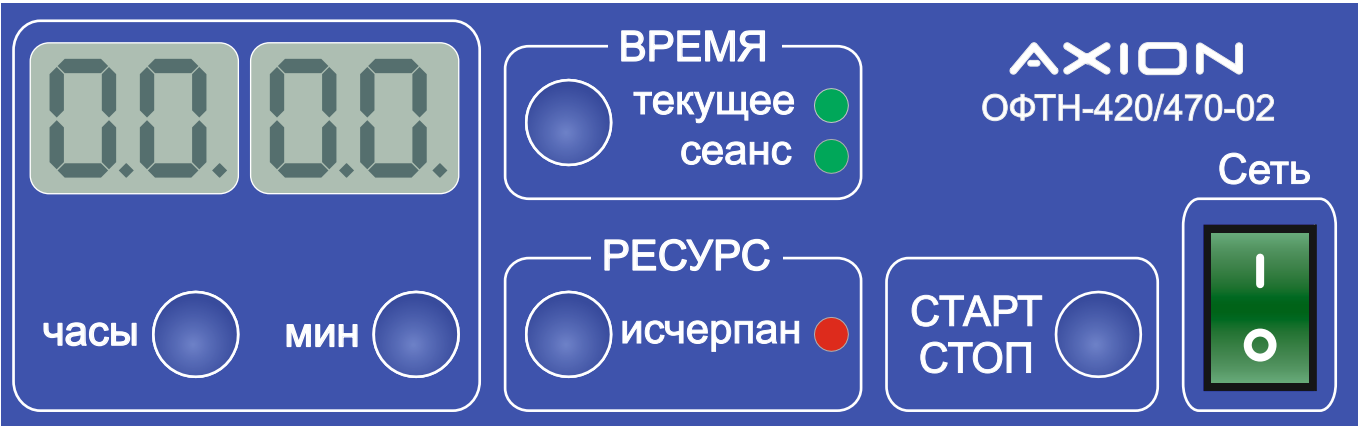
DEVICE FEATURES

- easy operation of the device on the front side of the irradiator unit
- possibility to adjust height and angle of irradiator inclination up to 90°
- for optimal placement above the bed
- automatic switch-off and sound alarm upon irradiation session completion
- supply voltage loss warning system
- use of hyper-luminous light-emitting diodes increases the operation time to 50,000 hours and reduces the power consumption
- convenient movement thanks to four rubber-coated rotary self-orienting wheels with a braking system
- indication of the life of the LEDs on the control panel for their timely replacement

Specifications	Parameters
Main	
Phototherapy duration	up to 100 hours
Radiation intensity	540 to 2,200 $\mu\text{W}/\text{cm}^2$
Radiation wavelength	400 to 550 nm
Radiation unit angle variation range	up to 90°
Device height adjustment range	1,290 to 1,690 mm
Power supply	
AC power supply	220 V \pm 22 V / 50 Hz / 60 Hz
Power consumption	max 45 VA
Dimensions	
Overall dimensions	720x700x1690 mm
Weight	max 13 kg

Package:

- Phototherapeutic irradiator
- OFTN- 420/47002 "Axion"



Control Panel

Phototherapeutic irradiator OFTN-03 "Axion"

Phototherapy irradiator OFTN-03 "Axion" is intended for comfortable treatment of neonatal icterus with blue light with the intensity of 450 to 465 nm.

Recommended for use in maternity and perinatal centers, neonatal intensive care units, children's outpatient facilities, can be used at home.



DEVICE FEATURES

- easy device control with keyboard at the bed base
- comfortable conditions: removable soft fabric hammock ensures convenience and safety of phototherapy session for the newborn, replaceable hammocks (2 pcs) are included
- indication of the set session time and the current session time on the display with a deviation of not more than 0.5% of the set time
- automatic switch-off and sound alarm upon irradiation session completion
- compact sizes and light weight for convenient device handling at the medical treatment facility
- use of hyper-luminous light-emitting diodes increases the operation time to 50,000 hours and reduces the power consumption
- supply voltage loss warning system

Specifications	Parameters
Main	
Phototherapy duration	up to 100 hours
Radiation intensity	600 to 1,600 $\mu\text{W}/\text{cm}^2$
Radiation wavelength	4400 to 550 nm
Power supply	
AC power supply	220 V \pm 22 V / 50 Hz / 60 Hz
Power consumption	max 40 VA
Dimensions	
Overall dimensions	675x350x180 mm
Weight	max. 7.5 kg

- Package:**
- product
 - frame
 - hammock
 - power cord
 - operating manual



Control Panel

Electric medical mattress
MEM-01 "Axion"

Electric medical mattress MEM-01 Axion is intended for maintaining an optimal body temperature of newborns and for creating comfortable conditions for development of premature babies with a weakened thermoregulatory function.

It is used in intensive care units of maternity homes, perinatal centres and children's hospitals, outpatient facilities.



DEVICE FEATURES

- safety of newborn's life and health due to automatic temperature maintaining and alarm signals in case of malfunctions
- sound and light alarm signals will notify the personnel in case of power interruption, temperature sensor malfunction, bed temperature rise above +39° C, failure of the temperature regulation system and bed temperature deviation from the specified one by more than ±1° C
- compact sizes allow for use both separately and in a bed equipped with cuvette bath type KN05.13 (the unit is suspended onto the bed side)
- high accuracy of temperature setting 0.1 °C and temperature maintaining accuracy ±0.7 °C
- removable flannel casing is easy to wash, thus ensuring hygienic use of the device, a replacement casing is available
- flexible heating element is insulated in the mattress and protected against ingress of liquids

Specifications	Parameters
Main	
Continuous operation time	at least 4 days
Time of warm-up to the specified temperature	max. 30 minutes
Heating temperature setting range	+35 °C to +38 °C
Temperature setting increment	0.1°
Power supply	
AC power supply	220 V ± 22 V / 50 Hz
Power consumption	max 60 VA
Dimensions	
Tray overall dimensions	680x400x160 mm
Unit overall dimensions	180x310x210 mm
Device weight	control unit: 4 kg; tray: 1.8 kg

Package:

- tray
- controlunit
- fiber covered roll
- maintenance documentation package



Control unit



Control unit side view

Medical surgical aspirator OMKh-5/80-01 "Axion"

Electrical surgical suction device OMKh-5/80 Axion is intended for removal of liquid biological material (blood, mucus, pus, particles of other tissues) from wounds and cavities during surgical operations.

Recommended for use in operating rooms of medical institutions.



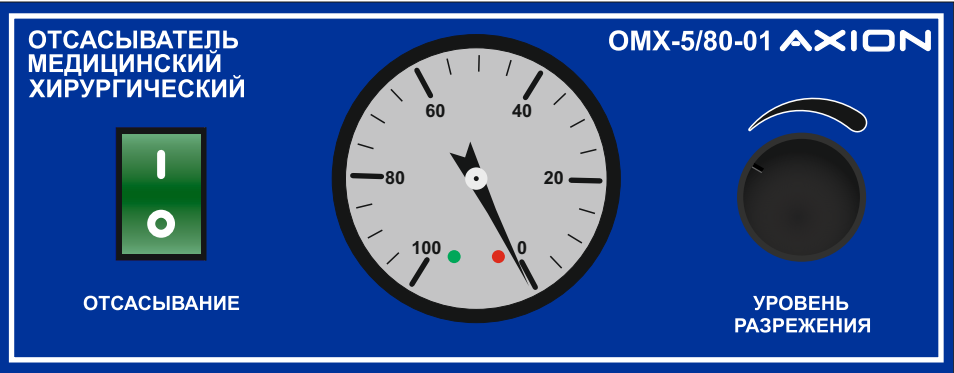
DEVICE FEATURES

- easy rarefaction adjustment on the control panel with vacuum level indication
- plastic adapter for mating tubes of different diameters when using tips – included
- unbreakable plastic containers with measuring marks, total volume – 4 litres
- easy sterilization of containers and connecting tubes, including by autoclave treatment
- microfiltration membrane for compressor protection against ingress of suction products – in the set
- two-stage overflow protection: stage 1 – floating locking device in the collection jar, stage 2 – trap jar
- 2 modifications – portable and movable (with a frame with four rubber-coated rotary selforienting wheels with a braking system)

Specifications	Parameters
Main	
Operation mode	continuous
Collection container capacity	2x2 l
Set rarefaction	-5 to -80 kPa
Air performance	at least 15 l/min
Length of the patient communication tube	at least 2 m
Low noise level	not more than 65 dB
Power supply	
AC power supply	220 ± 22 V / 50 Hz
Power consumption	max 100 VA
Continuous operation period	7 hours, followed by a break of 1 hour
Dimensions	
Control unit	260x230x280 mm
Frame	480x530x740 mm
Weight with frame	not more than 20 kg

Package:

- control unit
- filter
- exudate collection jar (2 pcs.)
- frame
- trap jar
- connecting tube 8.0x2.0 (100±5) mm
- connecting tube 8.0x2.0 (400±5) mm
- connecting tube 10.0x2.0 (400±5) mm
- connecting tube 8.0x2.0 (20,000±5) mm
- tool box
- PVS-AP cable-connector
- fasteners
- microfiltration membrane (20 pcs.)
- fuse link (2 pcs.)
- adapter



Control Panel

Medical portable aspirator OMP-5/80 "Axion"

Portable electric medical aspirator OMP-5/80 is used to remove biological fluids (blood, pus, mucus, etc.) and air from the oral cavity, nasopharynx, tracheobronchial tree, also for other manipulations, based on the vacuum.

It is included in the standard equipment of ambulance crews, and can also be used in medical treatment facilities and for provision of medical care at home.



DEVICE FEATURES

- standard dimensions for placement into a special area inside an ambulance
- convenient and easy transportation due to its light weight, compact dimensions, and a carrying handle
- high battery life of at least 50 minutes from a fully charged battery
- float overflow protection system
- plastic adapter for mating tubes of different diameters when using tips – included
- shatterproof polycarbonate container is resistant to external influences
- microfiltration membrane for compressor protection against ingress of suction products – 20 pcs in the set

Specifications	Parameters
Main	
Maximum air performance	not less than 15 l/min but not more than 25 l/min
Operating mode setting time	not more than 2 min
Pressure control range	-5 to -80 kPa
Volume of the secretion collection vessel	1 l
Power supply	
AC power supply	220 V ± 22 V / 50 Hz
Vehicle's on-board power supply	12 V
Replaceable built in battery power supply	12 V, 4.5 Ah
Power consumption	max 80 VA
Continuous operation period	not more than 60 min
Break in the work	at least 45 min
Built-in battery life	at least 50 min
Dimensions	
Overall dimensions	190x280x270 mm
Device weight	max 5,9 kg

Package:

- controlunit
 - filter
 - collectioncontainer
 - cover
 - connectingtube (30±2) mm
 - connectingtube (280±2) mm
 - patient communicationtube (280±2) mm
- power cord
 - power adapter
 - adapter
 - microfiltrationmembrane (20 pcs.)
 - fuse link (2 pcs.)



Control Panel

Gynecological vacuum aspirator OG-10/90-01 "Axion"

Electrical gynaecological suction device OG-10/90-01 Axion is used for abortion, removal of uterus contents after delivery, intake of biomaterial for laboratory studies and in other gynaecological manipulations.

It is used in operation rooms of gynaecological units of maternity homes, hospital and clinics, in maternity welfare centres, in family planning centres.



DEVICE FEATURES

- automatic maintaining of the specified vacuum level
- ability to significantly reduce the risk of blood loss due to the performance and speed of the machine
- easy control by means of a control panel and remote foot pedal
- high performance and promptness
- easy sterilization of containers and connecting tubes
- overfill protection – automatic collection jar filling monitoring
- possibility of supply as a set with a transport trolley with four rubber-coated rotary selforienting wheels with a braking system
- availability of reusable gynaecological tips of four standard sizes with a diameter of 6, 8, 10, 12 mm

Specifications	Parameters
Main	
Air performance	at least 25 l/min
Set rarefaction	-10 to -90 kPa (-0.1 to -0.9 atm)
Time to reach maximum vacuum	not more than 15 sec
Vacuum level adjustment	-10 to -90 kPa, with discharge level indication
time of operation mode establishment	not more than 1 min
Collection jar capacity	1 l
Length of the patient communication tube	at least 1.5 m
Reusable gynecological tips	of four sizes - diameter 6, 8, 10, 12 mm
Power supply	
AC power supply	220 V ± 22 V / 50 Hz
Power consumption	max 280 VA
Continuous operation period	5 minutes with a subsequent 15-minutes break
Dimensions	
Overall dimensions	400x230x280 mm
Device weight	max 15 kg

Basic configuration:

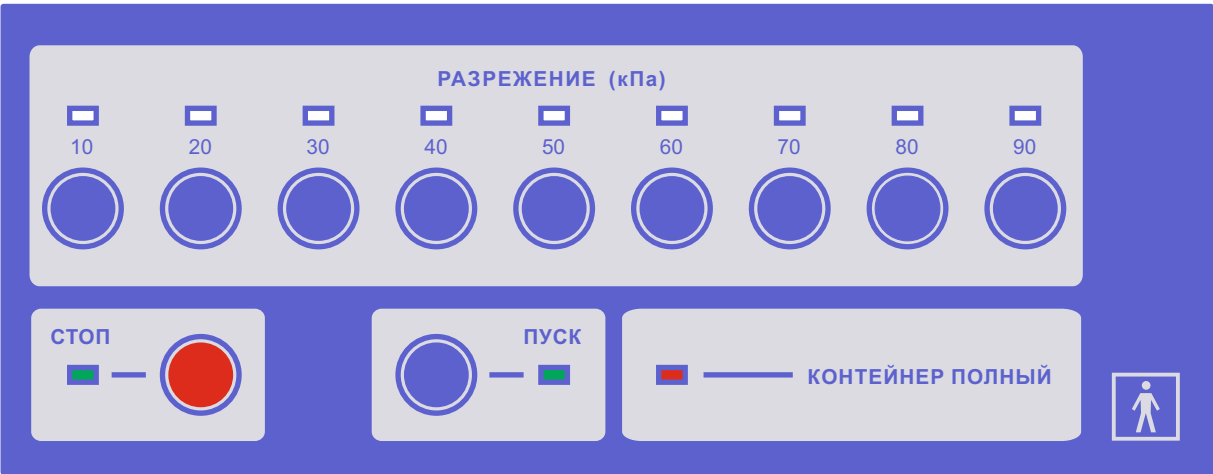
- vacuum aspirator for gynecological interruption of pregnancy with foot remote controlOG-10/90-01
- collectionjar trap jar
- connectingpipes
- adapter handle
- filte
- power cord
- pedal
- reusable gynecological tips in 4 sizes with diameters of 6, 8, 10 and 12 mm
- cap
- fusible link VP1-1 3.15A
- vinyl alcohol acetate resin membrane Ø 52 mm
- operating manual

Optional equipment:

- trolley
- collectionjars (4 pcs.)
- trap jars (4 pcs.)
- glasses (16 pcs.)



Reusable gynecological tips



Control Panel

Vacuum massage device
VM-03 "Axion"

Electrical vacuum masseur VM-03 Axion is widely used for treatment of osteochondrosis and associated diseases of the peripheral nervous system and the locomotor apparatus. The therapeutic action is carried out with the help of a vacuum created in the plastic nozzles. Recommended for use in physiotherapy and massage rooms of medical hospitals, clinics, sanatoriums.



DEVICE FEATURES

- simple control accompanied with light indication of all parameters of rarefaction pulses and operation modes
- high performance and promptness
- two operation modes: "Preparation" – setting rarefaction parameters, and "Operation" – automatic procedure performance as per pre-set values
- set of vacuum nozzles (24 pcs) for massage on different body areas
- possibility to order separate nozzles in case of breakage
- a wide range of speeds for vacuum decay and rise

Specifications	Parameters
Main	
Operation mode	repeatedly-short-term, not more than 30 min
Discharge measurement range	-5 to -65 kPa
Dwell times at minimum and maximum vacuum levels	up to 9 sec
Number of vacuum nozzles	24 pcs.
Power supply	
AC power supply	220 V ± 22 V / 50 Hz
Power consumption	max 200 VA
Dimensions	
Overall dimensions	270x300x260 mm
Device weight	max 12 kg

Package:

- air ducts - 8 pcs.
- power cord - 1 pc.
- vacuum nozzles - 6 pcs.
- vacuum nozzles VN - 18 pcs.
- shock absorbers - 4 pcs.
- rings - 4 pcs.
- fusible link VP 1-1 1,0A - 4 pcs.
- adapter - 4 pcs.
- medical polyvinylchloride PM-1/42 tube 4,0x1,0 4 pcs.
- operating manual



Vacuum nozzles



Control Panel

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