

NEW PRODUCTS

CATALOG OF MANUFACTURED PRODUCTS



SOLUTION
SCIENTIFIC AND TECHNICAL CENTER

000 STC «SOLUTION»

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DEAR PARTNERS!

The scientific and technical center «Solution» specializes in the development and manufacture of mannequins and medical simulators of any complexity for completing training centers, school classes, driving schools, medical educational institutions.

In assortment of the company there is a wide range of medical mannequins to test the ability of first aid for injuries, burns, any foreign objects in the upper respiratory tract, techniques, cardiovascular pulmonary resuscitation, simulators and training systems for different sections of medicine (cardiology, dentistry, proctology, gynecology, etc.)

Our specialists carried out extensive work on the study of world experience in the field of educational equipment for the training of health workers in various specialties, because of which our own samples of educational products were developed. Our products in quality and functional characteristics are equal to foreign analogues.

The use of training complexes in the process of training medical workers allows for practical training of the skills of conducting most basic medical procedures in conditions close to real ones, which is achieved through the use of modern materials that simulate human living tissue.

The product range of STC «Solution» is constantly updated with new developments and solutions for an effective educational process.

The company STC «Solution» offers its customers the development and manufacture of simulators of any complexity according to an individual project. If you could not find the right equipment in the company's assortment, our specialists will develop a unique product for you directly for your goals and objectives.

We hope for fruitful cooperation and ask you to inform us about your interest. We are pleased by your interest in our production.

With best regards,
Director of STC «Solution»
P. A. KASHIN



**STC «SOLUTION» offers cooperation in the production
and supply of SPECIALIZED EDUCATIONAL EQUIPMENT**

M1095

OSTOMY CARE TRAINER (PUT ON)

It is a model of a fragment of the anterior abdominal wall with intestinal stomas placed on it.

The simulator allows you to practice skills:

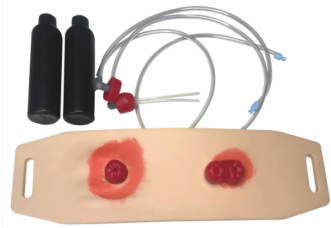
- stoma care;
- bandaging;
- placement of a colostomy bag.

The physical properties of the material of the simulator are close to real values. To create a realistic working environment, each stoma can be simulated to expel urine or feces from both sides. All elements are removable, which allows you to set various training scenarios. The simulator allows you to acquire the skills of proper care in order to maintain healthy skin and develop good hand-eye coordination.

There are 4 types of stomas on the model:

- double-barreled colostomy;
- ileostomy;
- colostomy;
- urostomy.

The simulator is intended for use in educational institutions of a medical profile, as well as for self-education of patients.



Dimensions: 440x130x190 mm



Weight: 1,2 kg

Equipment:

- ostomy Trainer (Put on);
- velcro belt;
- stent (2 pcs.);
- artificial feces;
- artificial urine;
- 35 ml syringe with luer lock.
- passport of product.

M1097

GASTRIC ENDOSCOPIC SUBMUCOSA DISSECTION TRAINER

The simulator is a model of the stomach with the distal part of the esophagus installed in a specialized case and designed to practice the technique of submucosal dissection. The anatomically correct inner surface of the organ was reproduced, the folding of the structures was highlighted. The material of the inserts for dissection in its physical properties is close to real values. In addition, the design of the simulator involves the installation of fragments of the pork stomach.



Functional features:

- the model of the stomach is removable and installed in a sturdy case;
- the body has an opening cover that gives access to the model of the stomach;
- the model of the stomach has holes in which soft tissue sections are fixed for dissection;
- the simulator allows for endoscopic examination of the stomach and submucosal resection using real endoscopic equipment;
- the inner surface of the model of the organs of the gastrointestinal tract corresponds in color to the corresponding structures of the human body.

The simulator is intended for use in medical educational institutions.



Dimensions: 320x240x230 mm



Weight: 3 kg

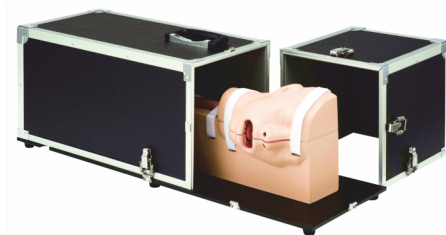
Equipment:

- gastric Endoscopic Submucosal Dissection Trainer;
- gastric Dissection Mounts;
- shipping box;
- passport of product;
- user manual.

M1096

ESOPHAGOGASTRODUODENOSCOPY TRAINING SIMULATOR

The simulator is a model of the head with the esophagus, stomach and duodenum installed on a stable base with a container fixation system. The anatomically correct oral cavity and the inner lining of the organs were reproduced, the folding of the structures was highlighted. The physical properties of the material of the simulator are close to real values. The simulator is designed to practice the skills of endoscopic examination of the walls of the esophagus, stomach and duodenum.



Functional features:

- transoral and transnasal introduction of the endoscope;
- the color of the imitation of the mucous membrane is close to real;
- a curved nasal septum makes it difficult to insert the endoscope transnasally;
- reproduced stomach and duodenal ulcers, early stages of stomach cancer;
- installation of polyps is possible;
- the head of the simulator can be opened along the sagittal line in order to demonstrate the anatomical structures of the oral cavity, nose and larynx;
- the container allows you to cover the esophagus and stomach.

The simulator allows you to perform:

- zophagogastroduodenoscopy;
- examination of the Fatter's papilla.

The simulator is intended for use in medical educational institutions.



Dimensions: 270x800x290 mm



Weight: 8 kg

Equipment:

- esophagogastroduodenoscopy training simulator;
- polyp models (5 pcs.);
- shipping box;
- passport of product;
- user manual.

M1101

OBSTETRIC EXAM PHANTOM

The simulator is a model of a pregnant woman's torso with proximal fragments of the lower extremities. The relief and anatomical structure of the anterior abdominal wall is reproduced, the natural significance of the physical properties of the model is provided. The simulator allows you to practice antenatal diagnostic methods, including Leopold's techniques, fetal auscultation and pelviometry.



Functional features:

- palpable fetal head, buttocks and torso;
- anatomical landmarks: pubic symphysis, navel, xiphoid process, iliac crest, greater trochanter;
- the distance from the fetal head to the pubic symphysis is adjustable;
- the ability to simulate several options for the location of the fetus, its presentation;
- fetal heartbeat sounds recorded from real patients;
- the heart rate is regulated in the range from 60 to 180 bpm.

The simulator is intended for use in medical educational institutions.



Dimensions: 600x300x300 mm



Weight: 12 kg

Equipment:

- phantom for obstetric examination
- passport of product;
- user manual.

M1098

EXERCISE MACHINE FOR EXTERNAL EXAMINATION OF MALE GENITAL ORGANS

The simulator is a vertical model of a man's lower torso with proximal fragments of the thighs. Replaceable blocks with male genital organs are easy to install, making it possible to demonstrate normal anatomy and various pathologies. The physical properties of the model material are close to natural values.

The simulator allows you to work out the technique of physical examination of the penis, the scrotum with the testicles located in it, and their appendages.

Functional features:

- the model includes anatomical landmarks: anterior superior iliac spine, pubic symphysis, and pubic tubercles;
- penis with the possibility of displacement of the foreskin;
- the scrotum, which contains the testicles with the epididymis and the vas deferens;
- can be used while lying and standing.



Pathology:

- penile cancer;
- orchitis/epididymo-orchitis;
- oblique inguinal hernia;
- epididymis cyst;
- hydrocele;
- phimosis and paraphimosis.
- varicocele;

The simulator is intended for use in medical educational institutions.

Equipment:

- exercise machine for external examination of the male genital organs;
- replaceable insert (8 pcs.);
- passport of product;
- user manual.

M1099

A SET OF SIMULATORS FOR PRACTICING BLADDER CATHETERIZATION SKILLS IN WOMEN AND MEN

The set consists of two simulators, each of which is a model of the lower torso of a man and a woman (respectively) with proximal fragments of the thighs. The simulators are designed to practice bladder catheterization skills. The physical properties of the material of the models are close to natural values.

The simulator allows you to work out the technique of catheterization of the bladder of men and women.

Functional features:

- Each trainer consists of a universal platform with removable crotch modules.
- Anatomically correct male urethra, including constrictions and curves.
- The male perineal anatomy module reproduces:
 - the opening of the urethra; soft penis; removable foreskin.
- The female perineal anatomy module reproduces:
 - separated labia; the opening of the urethra; the entrance to the vagina.
- Palpable imitation of the pubic bone.
- For suprapubic catheterization, the female perineum module has an opening in the suprapubic region.



The simulator is intended for use in medical educational institutions.

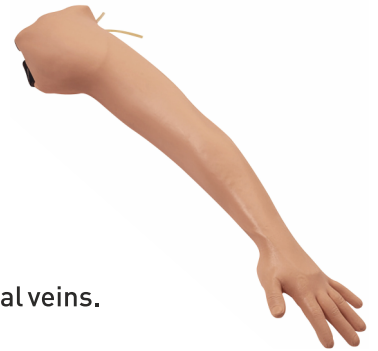
Equipment:

- set of simulators for bladder catheterization for women and men;
- passport of product;
- user manual.

M1102

PHANTOM OF THE UPPER LIMB FOR VENIPUNCTURE AND INJECTIONS

The simulator is a model of the upper limb and is intended for practicing the technique of various types of injections. The physical properties of the model material are close to real values. The complex vasculature of the upper limb is reproduced, the veins are well palpated.



The simulator includes:

- Basilica;
- Basilic Mediana;
- Cephalica Mediana;
- venous arcade of the rear of the hand;
- Cephalica;
- Antebrachia Mediana;
- Cubitalis;
- Dorsalis Metacarpi;
- vein of the thumb;
- intercarpal and interdigital veins.

Functional features:

- feeling of failure when inserting the needle;
- reverse blood flow when traction of the syringe plunger towards itself;
- a tight insert in the deltoid region defines and limits the site for intramuscular injections;
- dense insert in the shoulder area mimics bony structures, defines and limits the injection site;
- the intradermal injection site is located on the forearm. Intradermal injections with the introduction of a liquid cause the appearance of a characteristic cutaneous «button».

The simulator is intended for use in medical educational institutions.



Dimensions: 770x140x150 mm



Weight: 4 kg

Equipment:

- upper limb phantom for venipuncture and injections;
- artificial blood infusion container;
- passport of product;
- artificial blood
- user manual.

M1104

MODEL FOR PRACTICING LAPAROSCOPIC CHOLECYSTECTOMY

The model is an organocomplex that includes a liver with a gallbladder, a stomach, and a transverse colon. The anatomy of the gallbladder with a portion of the cystic duct and the cystic artery has been reproduced in detail, for the complete development of all stages of laparoscopic cholecystectomy. The material of the model provides real sensations when palpating organs and performing surgical procedures.



The gallbladder simulator has the following anatomical landmarks:

- cystic artery;
- gallbladder;
- cystic duct;
- Kahlo's triangle.

The simulator provides an opportunity to train the following skills:

- study of the anatomical and topographic features of the organs of the upper floor of the abdominal cavity;
- release of the cystic duct;
- visualization of the Kahlo triangle;
- clipping of the cystic artery;
- isolation of the cystic artery;
- clipping of the cystic duct;
- removal of the gallbladder from the liver bed.

The simulator is intended for use in educational institutions of a medical profile



Dimensions: 200x150x200 mm



Weight: 2,5 kg

Equipment:

- model for practicing laparoscopic cholecystectomy;
- passport of product;
- cholecystectomy insert (10 pcs.);
- user manual.

M1103

SIMULATOR FOR PRACTICING INGUINAL HERNIA REPAIR

The simulator is a model that simulates the lower part of the anterior abdominal wall with groin areas and proximal fragments of the thighs with removable inserts. The simulator is designed to practice the skills of inguinal hernia repair.

The material of the inserts is close to natural values in terms of its physical properties.

The inserts reproduce the layered structure of the groin area:

- leather;
- subcutaneous fat;
- aponeurosis of the external oblique muscle of the abdomen;
- spermatic cord;
- transverse fascia;
- peritoneum.

The model has the following anatomical landmarks:

- inguinal fold;
- pubic tubercle;
- outer groin ring.

The simulator provides the ability to practice the following stages of the operation:

- skin incision;
- dissection of the subcutaneous fatty tissue;
- isolation and dissection of the aponeurosis of the external oblique muscle;
- isolation and opening of the spermatic cord;
- isolation of the hernial sac and determination of its contents;
- suture and dislocation of the hernial sac;
- installation and fixation of a mesh implant;
- suturing the aponeurosis of the external oblique muscle;
- suturing of the skin.

The simulator is intended for use in medical educational institutions.

Equipment:

- inguinal hernia repair simulator;
- insert for performing the operation on the right (3 pcs.);
- insert for performing the operation on the left (3 pcs.);
- passport of product;
- user manual.



M1105

TRAINER FOR PRACTICING THE SKILLS OF INTRODUCING DRUGS INTO THE VENOUS PORT

The simulator is a model of the right half of the chest and part of the neck and is intended for practicing the technique of injecting drugs into the venous port. The design of the simulator includes a platform, a fluid supply system, replaceable port systems, replaceable skin.

Skills to be practiced:

- treatment of the injection site and maintenance of the port staging area;
- palpation and puncture of the implanted port system;
- blood sampling;
- infusion of fluids;
- fixation of the catheter.

The simulator is fixed on a flat surface by means of suction cups.

The simulator is intended for use in medical educational institutions.

Equipment:

- table tripod;
- a simulator for practicing the skills of introducing drugs into the venous port;
- capacity for filling the vascular system;
- a set of interchangeable training port systems (3 pcs.);
- removable skin (5 pcs.);
- passport of product;
- artificial blood.
- user manual.



M1106

MODEL OF THE KIDNEY FOR PRACTICING THE SKILLS OF PERCUTANEOUS PUNCTURE PROCEDURES UNDER ULTRASOUND GUIDANCE

The simulator is a model of the lumbar region and is intended for practicing the technique of puncture interventions on the kidney.

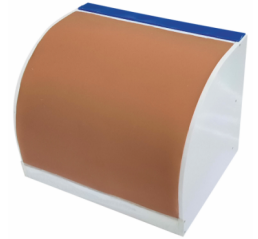
Functional features:

- anatomically correct kidney;
- the model is made on the basis of materials that provide a realistic ultrasound picture;
- the internal structure of the kidney model reproduces 6 renal cups of different diameters for working out scenarios of varying degrees of complexity;
- control of the drainage procedure is carried out due to the fact that each cup is filled with solutions of different colors;
- the kidney model contains tumor-like formations intended for practicing puncture biopsy skills.

The simulator is intended for use in medical educational institutions.

Equipment:

- kidney model for practicing the skills of percutaneous puncture procedures under ultrasound guidance;
- passport of product;
- user manual.



M1107

SKULL MODEL FOR TREPANNING SKILLS

The model is a life-size left half of the skull, designed to practice trepanning skills and study the normal anatomy of bones, including sutures. The outer shell imitates the cortical layer of the bone, inside – the imitation of the spongy structure. The material of the model is suitable for use with real cutting tools and drills.

The simulator is intended for medical educational institutions.



Dimensions: 200x150x50 mm



Weight: 0,3 kg

Equipment:

- skull Model for Trepanning Skills;
- passport of product.



M1119

UPON REQUEST

The simulator is an imitation of the human torso and is intended for practicing the technique of laparocentesis under ultrasound guidance. The front wall of the simulator is removable, which allows you to combine various options for organizing the organs.

Simulator skills:

- obtaining and interpreting the information of the ultrasound picture;
- laparocentesis;
- installation of drainage systems.

The simulator is intended for use in medical educational institutions and for the accreditation of specialists.

Equipment:

- laparocentesis Skills Trainer;
- passport of product;
- user manual.



M1109

AN OPEN CHEST DUMMY WITH IMITATION OF THE VESSELS OF THE VENOUS AND ARTERIAL SEGMENTS OF THE HEART FOR CANNULATION

The simulator is a human torso and has an imitation of an open chest with access to the vessels of the heart.

The vessels are a set of 4 crossed tubes imitating:

- superior and inferior vena cava;
- aorta;
- pulmonary trunk;
- pulmonary veins.

The tubes have technological holes for setting cannulas, which are formed into a single network for connection to a heart-lung machine. Near each hole for installing cannulas there is an imitation of a purse string suture in the form of two threads fixed to the tube wall.

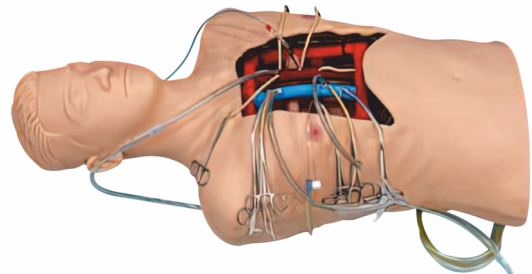
This equipment allows:

- to work out the skills of placing cannulas in the vessels of the venous and arterial segments of the heart;
- carry out a set of measures to connect to the heart-lung machine.

The simulator is intended for use in educational institutions of a medical profile and for the accreditation of specialists in the field of cardiovascular surgery.

Equipment:

- open chest dummy;
- passport of product;
- user manual.



M1110

MODEL OF THE KNEE JOINT FOR PRACTICING THE SKILLS OF FLUID ASPIRATION AND INJECTION UNDER ULTRASOUND GUIDANCE

The simulator is a fragment of the lower limb and is designed to practice the skills of arthroscopy and drainage of the knee joint:

- under the control of ultrasound;
- «Blind» method.

The material of the model is close to real values in terms of its physical and acoustic properties.

The anatomy of the simulator includes:

- cruciate ligaments;
- capsular and extracapsular ligaments;
- patella;
- menisci;
- quadriceps tendon;
- distal femur;
- proximal tibia;
- subcutaneous adipose tissue;
- articular cartilage.

The simulator is intended for use in educational institutions of a medical profile and for accreditation of specialists in the field of traumatology and orthopedics.

Equipment:

- ultrasound Guided Knee Model for Fluid Aspiration and Injection;
- passport of product;
- user manual.



M1115

ADVANCED GYNECOLOGICAL SIMULATOR

The simulator is a model of the lower half of the female torso with proximal fragments of the thighs and is intended for mastering the practice of gynecological examination.

The material from which the simulator is made, in terms of its physical properties, is close to natural values, which creates maximum realism when performing manipulations. Replaceable components have a modular system, so the simulator can be used with various combinations of pathologies and create your own training tasks.

Depending on the selected configuration, the simulator includes:

- uterus in anteversion position;
- retroverted uterus;
- transparent uterus for IUD insertion;
- uterus of a pregnant woman: 6-8 weeks; 6-8 weeks with short ovarian ligaments; 10-12 weeks; 20 weeks.
- 5 necks of the uterus without pathologies;
- 6 uterine necks with pathologies;
- cervix of a pregnant woman: 3 pcs. with a period of 6-8 weeks; 3 pcs. with a period of 10-12 weeks.

Functional characteristics:

- palpable, realistic models of the uterus with ovaries and fallopian tubes;
- laparoscopic imaging and occlusion of the fallopian tubes;
- realistic urethra and bladder for practicing catheterization skills;
- probing of the uterus using real instruments;
- replaceable vulva for additional kits;
- smooth elastic skin;
- ischium and tailbone;
- realistic models of the uterus and cervix.

The simulator allows you to practice skills:

- research using mirrors;
- bimanual examination;
- mini-laparotomy;
- bladder catheterization;
- uterine sounding;
- the introduction of the IUD.

Equipment:

- advanced gynecological simulator;
- passport of product;
- user manual.



M1117

TRAINER FOR PRACTICING VASCULAR PUNCTURE SKILLS UNDER ULTRASOUND CONTROL

It is a unit with integrated vessels and for teaching the collection and interpretation of information during the movement and orientation of the ultrasonic transducer.

The vessels are located at different depths and allow puncture in both transverse and longitudinal sections.

The simulator is intended for use in medical educational institutions and for the accreditation of specialists.

Equipment:

- ultrasound-guided vascular puncture training simulator;
- passport of product;
- user manual.



M1116

TRAINER FOR PERFORMING A PUNCTURE OF THE THYROID GLAND UNDER ULTRASOUND CONTROL

The machine is a model of the upper torso, including the neck and lower jaw. The replaceable unit located in the neck area is intended for practicing the skills of a puncture of the thyroid gland and sampling of material. Reproduced detailed ultrasound anatomy of organs, including skin, superficial muscles, thyroid gland, laryngeal cartilage and trachea. The material from which the simulator is made, in terms of its physical properties, is close to natural values, which creates maximum realism when performing manipulations.



Anatomical landmarks:

- sternocleidomastoid muscles;
- thyroid cartilage;
- ragged tenderloin.

The model contains various variants of combinations of simulated neoplasms localized in all lobes of the thyroid gland.

The simulator is intended for use in medical educational institutions and for the accreditation of specialists.

Equipment:

- ultrasound-guided thyroid puncture simulator;
- passport of product;
- user manual.

M1118

COLONOSCOPY SKILLS TRAINER

The simulator is a model of the human lower torso and includes detailed clinical anatomy of all parts of the colon. The model contains various pathologies – polyps and neoplasms. The material from which the simulator is made is close to natural values in its physical properties.



The elasticity of the material allows for various options for laying the colon, which makes it possible to practice the skills of colonoscopy of varying degrees of complexity. With the help of a manual pump, it is possible to reproduce the contraction of the anus, which gives a realistic picture when performing manipulations.

Simulator skills:

- conducting an endoscope through the colon, including the hepatic and splenic angles;
- polypectomy;
- biopsy of neoplasms.

The simulator is intended for use in medical educational institutions and for the accreditation of specialists.

Equipment:

- colonoscopy Skills Trainer;
- passport of product;
- user manual.

M1119

SIMULATOR FOR PRACTICING LAPAROCENTESIS SKILLS

The simulator is an imitation of the human torso and is intended for practicing the technique of laparocentesis under ultrasound guidance. The front wall of the simulator is removable, which allows you to combine various options for organizing the organs.

Simulator skills:

- obtaining and interpreting the information of the ultrasound picture;
- laparocentesis;
- installation of drainage systems.

The simulator is intended for use in medical educational institutions and for the accreditation of specialists.

Equipment:

- laparocentesis Skills Trainer;
- passport of product;
- user manual.



M1120

SIMULATOR FOR PRACTICING THE SKILLS OF FEMORAL VESSELS CATHETERIZATION UNDER ULTRASOUND CONTROL

The simulator is a fragment of the groin area and thigh and is intended for practicing the technique of femoral vein catheterization. The replaceable tab of the simulator contains imitation of arteries and veins, vessels that have different ultrasound anatomy, including pulsation, which gives a realistic picture of the manipulation.

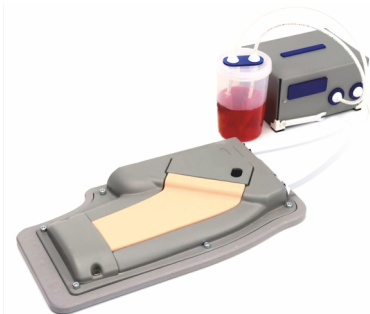
Simulator skills:

- obtaining and interpreting the information of the ultrasound picture;
- femoral vein catheterization.

The simulator is intended for use in medical educational institutions and for the accreditation of specialists.

Equipment:

- ultrasound Guided Femoral Vascular Catheterization Trainer;
- passport of product;
- user manual.



M1122

TRAINER FOR PRACTICING INTRAUTERINE CONTRACEPTION SKILLS

The simulator is a model of the uterus with appendages and vagina in frontal section. The simulator allows you to practice the skills of setting an intrauterine device. The front surface of the uterus model is transparent, which makes it possible to observe all stages of the setting of intrauterine contraceptives.

The simulator is intended for use in medical educational institutions and for the accreditation of specialists.

Equipment:

- Intrauterine contraception training simulator;
- passport of product;
- user manual.



M1123

INTRAUTERINE CONTRACEPTION TRAINER

The simulator consists of 3 models of the uterus installed on a stand:

- not pregnant;
- 6-7 weeks retroverted uterus;
- pregnancy 6-7 weeks in the position of anteversion.

Hollow models of the uterus are designed to accommodate the embryo and allow you to work out the technique of curette insertion and curettage.

The simulator is intended for use in medical educational institutions and for the accreditation of specialists.

Equipment:

- intrauterine contraception training simulator;
- passport of product;
- user manual.



M1134

TRAINING COMPLEX FOR PRACTICING THE SKILLS OF ENDOSURGICAL MANIPULATIONS

The simulator is a universal complex that includes a manipulation box with port holes for the introduction of laparoscopic instruments, a platform for placing soft tissues, a high-resolution camera, a control tablet computer and a screen mounted on a movable mobile stand.

The simulator provides an opportunity to train the following skills:

- psychomotor skills;
- the use of laparoscopic instruments;
- performing basic surgical procedures followed by an objective assessment.

The box body provides the ability to conduct training in two modes:

- with the possibility of direct optical control;
- with the operating field closed from direct observation.

The design of the manipulation box provides quick and easy access when replacing components used in the classroom for laparoscopic operations. The body has 12 ports for endosurgical instruments located on both side surfaces of the box. The pallet of the box is equipped with a fastening system that allows you to fix various simulators for endosurgical exercises, including biological materials.

The high-resolution digital camera is equipped with a mount that allows you to change the angle of inclination and the location of the shooting inside the manipulation box.

The supplied software and the built-in video capture system allow assessing the subject's actions through such indicators as (for the right and left hands separately):

- total distance (cm);
- speed (cm/s);
- tremor (mm/s);
- total time (s);
- dominance (percentage);
- time of movement of the tool outside the panel (s);
- twitching (cm);
- tool distance (cm).

The stand for the monitor and the junction box is equipped with a bracket that allows you to change the height, angle, and tilt of the monitor screen, as well as ports for connecting a high-resolution digital camera and a junction box.

The complex is intended for use in medical educational institutions.

Equipment:

- a training complex for practicing the skills of endosurgical manipulations;
- endosurgery simulator set;
- passport of product;
- user manual.



M1128

MODEL OF THE SHOULDER JOINT FOR ARTHROSCOPIC PROCEDURES

The simulator is a fragment of a human torso that recreates a model of the shoulder joint and is intended for practicing arthroscopy skills. The physical properties of the model material are close to real values. The simulator is fixed by means of fastening in any position convenient for arthroscopy.

The anatomy of the simulator includes:

- humerus and bone skeleton of the girdle of the upper limb;
- deltoid, supraspinatus, infraspinatus, small and large round muscles;
- coracohumeral and coracoacromial ligaments.

Skills to be practiced:

- arthroscopic approach to the shoulder joint;
- diagnostic arthroscopy;
- surgical treatment of the ligaments of the shoulder joint.

The simulator is intended for use in medical educational institutions and for the accreditation of specialists.

Equipment:

- Arthroscopic Shoulder Model;
- passport of product;
- user manual.



M1130

TRAINER FOR PRACTICING THE SKILLS OF APPLYING A PLASTER CAST ON THE LOWER LIMB

The simulator is a collapsible model of a human lower limb, installed on a support. In the area of the knee joint and below, the model is made of transparent material, which allows demonstrating the normal anatomy of the bone skeleton and various types of fractures: with and without displacement.

The anatomy of the simulator includes:

- tibia;
- fibula;
- skeleton of the foot.

Skills to be practiced:

- study of pathological displacement of bones in fractures;
- schematic representation of the procedure for reposition of bone fragments;
- the imposition of a plaster cast.

The simulator is intended for use in medical educational institutions and for the accreditation of specialists.

Equipment:

- trainer for practicing the skills of applying a plaster cast on the lower limb
- replaceable shins (2 pcs.)
- passport of product;
- user manual.



M1133

PHANTOM FOR PRACTICING CRICOTHYROIDOTOMY

The simulator is a model of the anterior fragments of the chin section of the head and neck with a reconstructed external relief of the organs. The phantom is designed to teach conicotomy skills to an adult patient and a teenage patient. Thyroid and cricoid cartilages and upper tracheal cartilages serve as the necessary landmarks for this operation. The manipulation area is highlighted in the form of an easily replaceable plug-in unit. The correctness of performing cricothyroidotomy is confirmed by inflation of the simulating lung.

The simulator is intended for use in medical educational institutions.

Equipment:

- phantom for practicing cricothyroidotomy;
- removable neck skin (6 pcs.);
- replacement trachea for adults (6 pcs.);
- child's replaceable trachea (6 pcs.);
- passport of product;



- user manual.

M1124

SIMULATOR FOR PRACTICING PLEURAL PUNCTURE AND THORACOSTOMY UNDER ULTRASOUND CONTROL

The simulator is a model of a part of the torso, a proximal fragment of the upper limb. The replaceable block, located in the area 2-4 of the intercostal space along the midclavicular line, is designed to practice the skills of puncture of the pleural cavity in pneumothorax. The block, located in the area 5-9 of the intercostal space along the mid-axillary line, is intended for practicing the skills of puncture of the pleural cavity with hydrothorax under the control of ultrasound. Reproduced detailed ultrasound anatomy of organs, including skin, intercostal muscles, ribs, pleural cavity, lung.

The material from which the simulator is made, in terms of its physical and ultrasonic properties, is close to natural values, which creates maximum realism when performing manipulations.

Skills development:

- pleural puncture and drainage of the pleural cavity under the control of ultrasound and «blind» method;
- needle navigation;
- placement of a catheter in patients with exudative pleurisy;
- orientation and movement of the sensor;
- recognition of the anatomy of the chest, atelectatic lung, pleural effusion;
- finding a pocket with liquid contents suitable for catheterization.

The simulator is intended for use in medical educational institutions and for the accreditation of specialists.

Equipment:

- Simulator for practicing pleural puncture and thoracostomy under ultrasound control;
- passport of product;
- user manual.



M1135

GASTROINTESTINAL TRACT PHYSICAL EXAMINATION SKILLS TRAINER

The simulator is a model of the anatomically accurate torso of an adult from the upper thighs to the upper chest.

Bone anatomical and topographic landmarks include:

- ribs;
- the edges of the edge arcs;
- xiphoid process;
- pubic ridge;
- anterior superior iliac spines.

The simulator provides an opportunity to teach the skills of physical examination of the abdominal organs – palpation, auscultation and percussion, for which the package includes:

- 3 replaceable liver models: slightly enlarged, enlarged with a smoothed lower edge and enlarged with an irregularly shaped lower edge;
- 2 replaceable spleen models: slightly enlarged and significantly enlarged;
- 2 interchangeable kidney models of different sizes;
- distended bladder 2 replaceable models of the aorta: normal and with aneurysm;
- a set of 6 abdominal lesions, including: 4 smooth formations: two sizes, each size is made in two versions – dense and soft consistency; 2 formations of dense consistency of irregular shape.
- imitation of aortic aneurysm;
- kit for simulating changes in abdominal volume – for the diagnosis of ascites using the percussion technique, to identify migratory dullness or fluid fluctuations.



The simulator provides the ability to detect ascites – the definition of migratory dullness and fluid fluctuations. The design of the simulator provides for the possibility of changing the position of the liver and spleen – on inhalation and exhalation.

The model has a built-in MP3 player for teaching auscultation of sounds arising from intestinal obstruction, as well as renal or aortic sounds of various localization.

The simulator is intended for use in medical educational institutions.

Equipment:

- complete Gastrointestinal Physical Examination Trainer;
- passport of product;
- user manual.

M1121

SIMULATOR FOR PRACTICING THE SKILLS OF CLINICAL PALPATION OF THE BREAST UNDER ULTRASOUND CONTROL

The simulator is a fragment of a woman's torso, placed on a stand. Replacement kits for mammary glands include neoplasms of various sizes, densities and shapes. The materials of the model are close to real values in terms of their physical and ultrasonic properties.

Simulator skills:

- obtaining and interpreting information from the ultrasound picture of the mammary glands;
- physical examination of the mammary glands.

The simulator is intended for use in medical educational institutions and for the accreditation of specialists.

Equipment:

- simulator for practicing the skills of clinical palpation of the breast under the guidance of ultrasound;
- passport of product;
- user manual.



M1136

PLEURAL PUNCTURE SIMULATOR

The simulator is a model of the chest of an adult male with the proximal thirds of the arms raised.

The chest wall has the following layers:

- leather;
- muscles;
- ribs;
- lungs.

There are two openings on the right side of the chest to demonstrate the anatomical structure.

The physical properties of the model material are close to real values.

Functional features:

- in the upper left part of the chest in the second intercostal space along the midclavicular line, there is a site for decompression with tension pneumothorax;
- area for surgical introduction of a drainage tube for hydrothorax in the fifth intercostal space along the middle axillary line on the left;
- the possibility of filling the bag with a liquid that simulates pleural effusion;
- the ability to change the color, volume and density of the liquid by adding a powder that imitates blood;
- pressure to simulate tension pneumothorax is generated mechanically.

The simulator is intended for use in medical educational institutions.

Equipment:

- pleural Puncture Trainer;
- passport of product;
- user manual.



M1137

ASPIRATION AND TUBE FEEDING TRAINER

The simulator is a life-size model of an adult torso with a head. The removable left half of the facial region allows the oral and nasal cavities to be demonstrated, as well as the advancement of the probe along them. The mannequin's skin is made of materials that resemble human skin in appearance and in tactile sensations. The design features of the simulator allow filling imitation organs and cavities with liquids for subsequent aspiration. In the neck of the mannequin there is an imitation of a tracheostomy opening. In the abdomen of the mannequin there is an imitation of the gastrostomy opening leading to the stomach.

The model has the following anatomical structures:

- tongue;
- teeth;
- oral cavity;
- nasal cavity;
- nasopharynx;
- oropharynx;
- esophagus;
- stomach;
- trachea;
- main bronchi.

The simulator provides an opportunity to practice the following skills:

- aspiration from a nasal cavity;
- aspiration from a oral cavity;
- aspiration from a tracheostomy opening;
- installation of a nasogastric tube;
- gastrostomy care.

The simulator is intended for use in medical educational institutions.

Equipment:

- Suction & Tube Feeding Trainer Assembly;
- passport of product;
- user manual.



TRAINER FOR PRACTICING CPR SKILLS WITH COMPUTER REGISTRATION OF INDICATORS «VOLODYA-08»

The simulator is a full-length human model and is designed to practice cardiopulmonary resuscitation skills, including detecting a person without signs of consciousness. Feedback from the simulator is achieved through a remote controller, an anatomical scoreboard and a computer animated program. Communication with these components is carried out via Bluetooth (when connected to a computer) or via a USB cable.

The robot simulator allows you to carry out the following medical measures related to first aid in two modes – «adult» or «child»:

- diagnosis of the victim's condition;
- release of the respiratory tract from a foreign object;
- cardiopulmonary resuscitation;
- immobilization of limbs;
- transportation of the victim.

Anatomical landmarks of the robot simulator:

- thyroid cartilage;
- xiphoid process of the sternum;
- large pectoral muscles.

Functional features of the robot simulator:

- torso size and proportions are similar to the physique of an adult;
- possibility of extension of the head;
- the possibility of lifting the chin;
- respiratory failure as a result of ingestion of a foreign body into the upper respiratory tract;
- imitation of blue nasolabial triangle;
- the facial mask, made of elastic material, is close to natural values in its tactile properties, which allows to press the wings of the nose when performing a ventilator;
- visual monitoring of the chest excursion when performing a ventilator;
- the appearance of a pulse on the carotid arteries in case of correct CPR.

Hygienic safety when working with a robot simulator is ensured by using an individual training face mask with a one-way valve, which prevents the risk of cross-infection, as well as a set of sanitary napkins for artificial lung ventilation.

The anatomical tableau, controller and software included in the package allow you to evaluate:

- the position of the hands;
- compression depth;
- decompression correctness;
- compression frequency;
- ventilator volume (sufficient, insufficient, excessive);
- ventilator speed (inhalation speed);
- the effectiveness of CPR.

These parameters are presented in the software in the form of graphical display and digital values, which makes it possible to evaluate all stages of CPR activities in real time. The simulator software allows you to work with it in training mode and in exam mode, when only the time allotted for CPR activities is displayed on the screen.

CPR skills training is provided in 4 different modes:

- resuscitation by one lifeguard (2:15);
- resuscitation by two rescuers (1:5).

Modes recommended by the European Resuscitation Council and the American Heart Association:

- intensive care mode (2:30);
- intensive care mode (30:2).

The key indicators of CPR activities are focused on the standards of leading cardiological associations and associations of resuscitators around the world, taking into account the latest recommendations.

The results of the exercises are recorded in the database, so that the teacher has the opportunity to evaluate the actions performed, the dynamics of changes in the errors and shortcomings performed.

The software also makes it possible to demonstrate theoretical materials, control their development with the help of tests, get acquainted with photo and video materials of stages and various methods of performing CPR and providing emergency medical care to victims at the scene.



Dimensions: 1850x600x260 mm



Weight: 21 kg

Equipment:

- mannequin;
- software;
- anatomical tableau;
- controller;
- sanitary napkin for artificial lung ventilation (100 pcs.);
- training mask with one-way valve (3 pcs.);
- skin antiseptic in a spray bottle;
- polyurethane foam mat;
- set of clothes;
- shipping bag;
- a power adapter with an output voltage of 12 V (for powering the robot simulator);
- passport of product;
- user manual.



M1139

PAD FOR PRACTICING THE SKILLS OF STITCHING AND TYING KNOTS

The simulator is a three-layer manipulation platform that simulates the skin, subcutaneous fat and muscles. The material of the model is close to its natural values in terms of its physical properties.



The following manipulations are performed using the model:

- performing a skin incision;
- application and removal of nodular skin sutures;
- tying surgical knots;
- mechanical seam (applying and removing staples);
- use of adhesive-based patches and bandages.

The simulator is intended for use in medical educational institutions.

Equipment:

- a pad for practicing suturing and knotting skills;
- passport of product.

M1140

SINGLE-LAYER GUT MODEL

The model is a realistic single-layer dummy of a small intestine fragment, designed to practice the skills of applying an endoscopic and open suture, applying manual and hardware end-to-end and end-to-side anastomoses.



The simulator is intended for use in medical educational institutions.

Equipment:

- single-layer gut model;
- passport of product.

M1141

SIMULATOR FOR PRACTICING CYSTOSTOMY SKILLS UNDER ULTRASOUND CONTROL

The simulator is a model of the lower torso with proximal fragments of the thighs on a stand. The material of the model is close to the natural values by its physical properties. The operating area is highlighted as a removable round insert. The simulator provides realistic sensations when inserting a puncture needle and conducting a catheter.



Functional features:

- anatomically correct bladder;
- palpable imitation of the pubic bone.

The simulator provides an opportunity to practice the following skills:

- cystostomy;
- placement and removal of the Foley catheter;
- care for the perineal area.

The simulator is intended for use in medical educational institutions.

Equipment:

- simulator for practicing cystostomy skills under ultrasound control;
- passport of product;
- user manual.

M1142

SIMULATOR FOR CLINICAL EXAMINATION OF FEMALE PELVIC ORGANS WITH A SET OF PATHOLOGY MODELS

The simulator is a model of the lower half of the female torso with proximal fragments of the thighs, it is designed to master the practice of gynecological examination.

The material from which the simulator is made is close to natural values in its physical properties, which creates maximum realism when performing manipulations. Replaceable components have a modular system, that allows the simulator to be used with various combinations of pathologies and to create custom training tasks.

Depending on the selected configuration, the simulator includes:

- norm (cervix of the nulliparous woman);
- large fibroma (cervix of the nulliparous woman with ectropion);
- small fibroma (the cervix of an nulliparous woman with a polyp);
- ovarian cysta (the cervix of a multiparous woman);
- uterus in retroversion (the cervix of a multiparous woman);
- uterus at 10-12 weeks of pregnancy;
- uterus at 14-16 weeks of pregnancy.



Functional characteristics:

- palpable, realistic models of the uterus with ovaries and fallopian tubes;
- laparoscopic visualization and fallopian tube occlusion;
- realistic urethra and bladder for practicing catheterization skills;
- probing of the uterus using real instruments;
- replaceable vulva for additional sets;
- smooth, elastic skin;
- the ischium and coccyx;
- realistic models of the uterus and cervix.

The simulator allows you to practice your skills:

- learning the anatomy of the female pelvis and corresponding landmarks;
- finger examination of the vagina;
- bimanual vaginal and abdominal examination;
- taking swabs from the cervix;
- pelvic rectal examination;
- cervix examination in speculum.

The simulator is intended for use in medical educational institutions.

Equipment:

- simulator for clinical examination of female pelvic organs with a set of pathology models;
- passport of product;
- user manual.

M1146

SIMULATOR-PLATFORM FOR SUTURING TRAINING

Simulator represents various types of wounds and allows to practice following skills:

- suturing;
- use of surgical staples;
- handle different gaps and structures in a confined space.

The simulator is intended for use in medical educational institutions.

Equipment:

- simulator-platform for suture training;
- passport of product .



M1143

CHEST MODEL FOR PRACTICING CARDIAC SURGERY SKILLS

The simulator is a model of a human torso with a reproduced sternotomy. The unique material from which the simulator is made is as close as possible to natural values in its visual properties, which creates a high degree of realism when performing cardiac manipulations. Anatomically accurately recreated heart with coronary vessels, includes the system of circulation vessels: upper and lower vena cava, pulmonary trunk, pulmonary arteries and aorta. The main distinguishing feature of the model is the imitation of myocardial contraction: systoles and diastoles for the atria and ventricles alternately, which allows to train surgery bypass on coronary vessels with a working heart.



Functional features:

- the model supports the use of real retractors;
- removable skin covers;
- the kit includes a compressor and a heartbeat controller that sets 4 heart rate modes: 60, 90, 120 and 160 beats/min;
- accurately imitates systole and diastole;
- enlarged heart for bypass surgery;
- the modular system of the simulator allows you to combine various options for surgical interventions on the vessels and valve apparatus of the heart.

Skills to be practiced (depending on the configuration):

- coronary bypass surgery on a working heart;
- mitral valve prolapse plastic surgery;
- implantation of an artificial aortic valve;
- application of anastomosis on small vessels.

The simulator is intended for use in medical educational institutions.

Equipment:

- chest model for practicing cardiac surgery skills;
- compressor;
- passport of product;
- heartbeat controller;
- user manual.

M1147

UTERUS MODEL WITH APPENDAGES (ADNEXA) FOR PRACTICING SURGICAL SKILLS

The simulator is a model of the uterus with appendages (adnexa) placed in imitation of the bony pelvis. The material from which the simulator is made is close to natural values in its physical properties.

The anatomy of the simulator includes:

- uterus;
- ovaries;
- fallopian tubes;
- ligamentous apparatus.

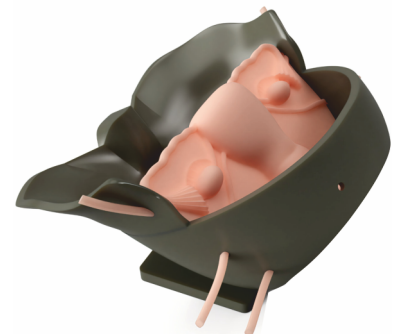
Skills being developed:

- removal of fallopian tubes;
- extirpation;
- suturing of the vagina stump.

The simulator is intended for use in educational institutions of medical profile.

Equipment:

- a model of the uterus with appendages for practicing surgical skills.;
- passport of product ;
- user manual.



M1144

SIMULATOR FOR PERFORMING FINGER RECTAL EXAMINATION

The simulator is a model of the lower torso of a man with proximal fragments of the thighs and external genitals based on a stand. The material of the model is close to its natural values in terms of its physical properties, that provides realistic sensations during the examination of the rectum and prostate.

Functional features:

- anatomically correct rectum;
- replaceable models - perineal inserts with various pathologies.
- the simulator can be installed in any position suitable for conducting the study.

Variants of pathologies:

- rectal cancer;
- rectum polyp;
- prostate carcinoma of various stages;
- prostatitis;
- prostatic hyperplasia;
- rectum and prostate without pathologies.

The simulator is intended for use in medical educational institutions.

Equipment:

- simulator for performing a finger rectal examination assembled;
- passport of product ;
- user manual.



M1145

SIMULATOR FOR PRACTICING SKILLS OF MAMMARY GLAND ULTRASOUND EXAMINATION

The simulator is a model of a woman's torso fragment, including the mammary gland, based on a stand. The material of the model is close to its natural values in terms of its physical and ultrasonic properties.

Precise ultrasound anatomy, including pathologies and neoplasms:

- imitation of malignant and benign tumors;
- a cyst;
- Cooper's ligaments;
- premammary and retromammary fiber;
- glandular tissue;
- axillary lymph nodes;
- mammary gland duct, muscle tissue.

Skills developed on the simulator:

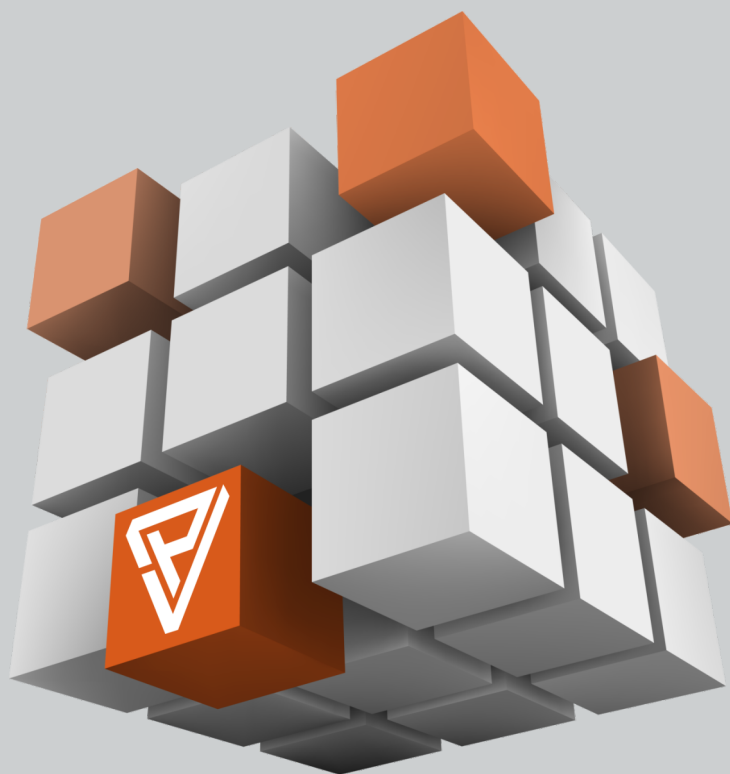
- full ultrasound scan of the mammary gland with real equipment;
- ultrasound visualization of key anatomical landmarks;
- identification of mammary gland ducts;
- visualization of pathological formations;
- detection and measurement of cysts and tumors.

The simulator is intended for use in medical educational institutions.

Equipment:

- simulator for practicing mammary gland ultrasound skills;
- passport of product ;
- user manual.





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