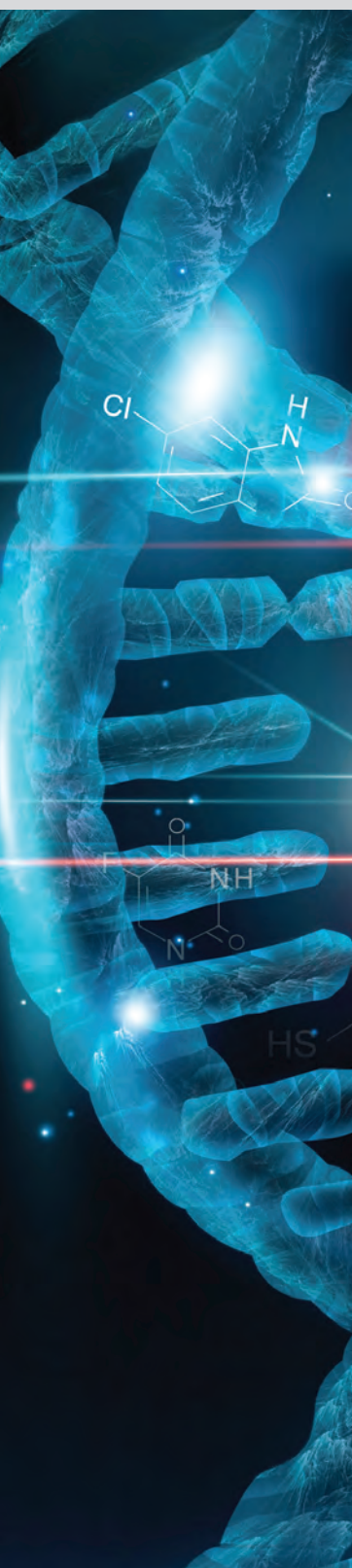


HEALTH CARE AND CRISIS EQUIPMENT



CONTENTS

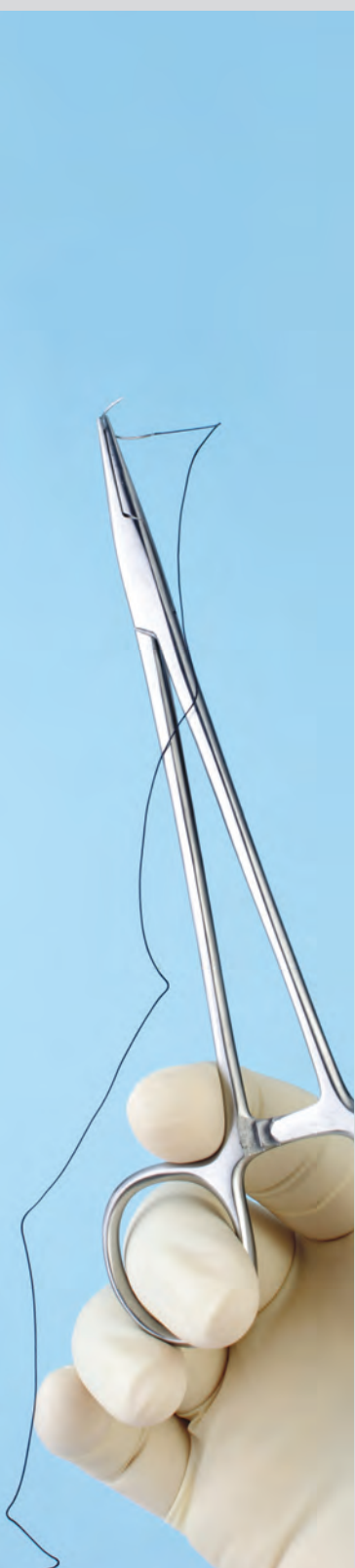


NO	Title	Page
1	Particulate Matter Sampler BASS - 01	6
2	Developed Coupled Detector of Microbial Particulate BAWIS-04	6
3	Smart Detector of Biological Agents in the Air BAWS-04	7
4	Warner and Detector of Biological Agent in the Air BAWS-06	8
5	Developed All-Automatic Alarm System of Biological Agents BAWS-08	8
6	Mobile Sample Collector and Detector of Biological Agents ...	9
7	Detector of Microbial Agents in the Air BIS- 03	9
8	Modern Defense Fire Engine (HAZMAT)	10
9	Fire Fighting Systems	11
10	Fire Fighting Systems and Decontamination	12
11	Ambulance for Transporting Victims of Biological Incidents	13
12	ICU Isolated Tent	14
13	NBC Pollution Removal Tent	15
14	Biological Agents Detectors Using REAL-TIME PCR Method with Kits	16
15	Mobile Biological Laboratory Stage 3	17
16	Negative Pressure Isolated Stretcher	18
17	Portable POCT Laboratory Tent	19
18	Hospital Pollution Removal Tent	20
19	Biological Pollution Disinfection Fogger M8	21
20	Modern Defense Mobile Emergency and Disinfection System	22
21	NBC Body Bag	22
22	Positive-Pressure Biological Pollution Outfit	23
23	Industrial Poisonous Gases Measurement Kit	23
24	Rasa earplugs	24
25	Mobile Hospital	25
26	Trailer Mobile Hospital	25
27	Trailer of Mobile Operating Room	26
28	Trailer & Mobile Structures	27
29	Blood Bags and Related Equipment	28
30	Mobile Training System Chemical Agents, CS Based	28
31	Trailer of Command Center	29
32	Group Tents	30
33	Mesh Walls (Optional)	30
34	Concrete Cloth	31
35	Composite Shelter	31

NO	Title	Page
36	Shelter Filter BSF 400	32
37	Mobile Filtration System (GFU 8000)	32
38	Unite For Filtrating and Packaging Fresh Water	33
39	Clean Room	33
40	Decontamination System	34
41	Protection Shelter to H2S	35
42	Microbiological and Chemical Protection Systems	36
43	Armored Filter FPC-100 IR	37
44	HEPA Filters	37
45	Industrial Filters	38
46	IF1 Filter	38
47	Self-Contained Breathing Apparatus Air Respirator	39
48	IM2 Protective Mask	40
49	National Broad Vision Mask (IM4)	40
50	Wide-View Mask	41
51	Portable Leakage Mask Examiner (POLMEX)	41
52	NBC Protective Boot	42
53	Protective Gloves NBC	42
54	Chemical, Biological and Nuclear Protective Clothing	43
55	NBC Self Aid Kit User Manual	43
56	N95 Mask (M930)	44
57	Having permitted limit of FFP2 level of EN-149 standard as below	44
58	Salt-filter Mask (SF4)	44
59	Medical Disposable Suit	45
60	ISOLATION STRETCHER	45
61	Cardioset ARAD P10+	46
62	Cardioset ARAD P10	46
63	Cardioset FX7	47
64	Cardioset LX110	48
65	Cardioset SINA 5	48
66	BIS Monitoring IOA Vision	49
67	Capnograph Mi-Cap C1	49
68	Monitor Accessories	50
69	Nellcor / Nonin SpO2	50
70	IBP	50

CONTENTS

NO	Title	Page
71	ECG	50
72	NIBP CUFFs	50
73	Temp	50
74	Battery	50
75	Trolleys & Stands	51
76	Monitor Trolley	51
77	Central Station	51
78	Live W110	51
79	Monitor Stand	51
80	Telemedicine Solution	52
81	HealthCare SADRA A15	52
82	TeleMonitoring Solution (SAMA)	52
83	Web Based Patient Monitoring	53
84	Cardiopack T220	53
85	Cardiopack T110	54
86	Defibrillator/Monitor	54
85	RELIVE DM5	54
88	OEM Modules	55
89	ElectroEncephaloGram	55
90	Neuroset E24	55
91	Neuroset E110	56
92	EEG Accessories	56
93	Operation Room Equipment	56
94	Surgical light	56
95	Medical Suction	58
96	MEDICA C55F	58
97	MEDICA C25	58
98	MEDICA MC10	58
99	Suction Accessories	59
100	Suction Trolley	59
101	Cardioset ASA 9	59
102	Cardioset VINA 9	60
103	PARS	60
104	Cardioset X110	60
105	Cardioset S110	60







► Particulate Matter Sampler BASS - 01

Product Description:

An all-automatic sampler of a particulate and biological agent in the air is used to collect 1-micron to 10-micron particulate matters and biological pollutant agents (microbes, spores, poisons). This device segregates and collects samples of 1-micron to 10-micron particulate matters in the air by cyclones or wet walls. Samples are collected from the air at an approximate size of 15 milliliters and in the form of vials for the upcoming tests. After turning on the device, it collects samples in vials using a strong sucking fan, and then these samples are injected into the vials. All the sampling and pollution reduction process is done automatically and is checked by PLC afterward. Sample vials can be sent to the laboratories for more analysis.

Technical Details:

- Size: 50x30x50 cm
- Weight: 35 Kg
- Size of particulate matters collected: 1-10 micrometers
- Size of the sample liquid collected: 10-15 ml
- Source of energy: Utility power
- Sampling volume: 1000 liters per minute

Notes:

1 year of guaranty and 10 years of after-sale service



► Developed Coupled Detector of Microbial Particulate BAWIS-04

Product Description:

The automatic warner and detector of microbial agents consist of two parts, namely the warner and the detector. The warner part partially collects samples of the surrounding air and activates its detector part simultaneously to detect the type of probable particulate and notifies the user by sending audio/ light signals. Sampling is done cyclonically with wet walls and detection is done utilizing the immunochromatography method. The detector detects six types of biological agents or poisons at the same time.

Technical Details:

- 1-micron to 10-micron particulate frequency measurement warning detection technique
- Measures up to 1,000,000 particulates per minute
- Controls the adjustable sample air volume
- Constant automatic or manual functioning
- Detector sampling air volume: 300 liters per minute

- Warner sampling time: 3 minutes
- Detector sampling time: 5 minutes
- Approximate size: 28x52x60 cm
- Wet weight: 25 Kg

Notes:

1 year of guaranty and 10 years of after-sale service



▶ Smart Detector of Biological Agents (Living Micro-Organisms) in the Air BAWS-04

Product Description:

BAWS-04 is designed and created to warn against biological and terrorist attacks or the unusual increase of biological pollution in urban or hospital areas. The device collects samples of a specific volume of air automatically using a sucking pump and evaluates its particulate matters at the same time in an ultraviolet interaction process. An advanced photovoltaic cell is designed and created to do this. If the particulate matter is under biological radiation, fluorescence light reflects it. As a result, it is received by the optical receiver and it is processed by the electronic analyzer.

Technical Details:

- Size: 55x41x30 cm
- Weight: ~ 30 Kg (together with the accompanying battery)
- Automatic function needless to consumables
- Range of measurable particulate: 1-10 micrometers
- The density of sample particulate: up to 1 million particulate per minute

Notes:

1 year of guaranty and 10 years of after-sale service





► Warner and Detector of Biological Agent in the Air BAWS-06

Product Description:

BAWS-06 is designed and created to warn against biological and bioterrorist attacks or the unusual increase of biological pollutants in the surrounding environment. The device starts sampling from the air using a sucking pump and collects its particulate matters on a glass lam placed in the optical interaction cell. The above-mentioned sample is immediately analyzed in the optical process and the result is shown using visual signals. In case of a warning situation, an audio signal is made by the device and the user is notified. At the same time, a signal is sent to run the sample collector and detector. The device is assembled in a portable, anti-shock case which functions as the body of the device at the same time.



Technical Details:

- Size: 42×32×20 cm
- Weight: 10 Kg
- Works with utility power supply and the rechargeable battery inside the device
- Sensitivity: 100 biological agents per air liter
- Response time: 30 seconds after sampling

Notes:

1 year of guaranty and 10 years of after-sale service

► Developed All-Automatic Alarm System of Biological Agents BAWS-08

Product Description:

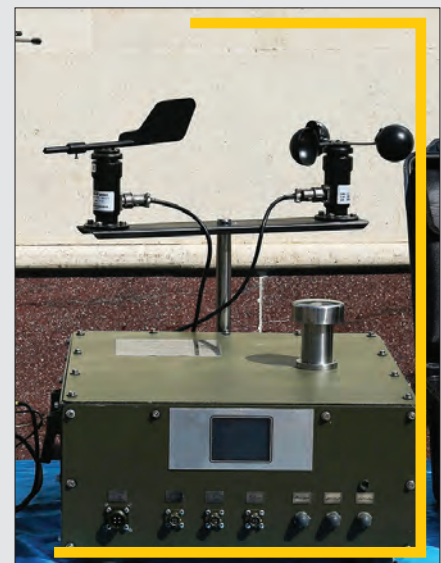
BAWS-08 is designed and created to warn against biological and bioterrorist attacks or the unusual increase of biological pollutants in the surrounding air.

Technical Details:

- Size: 42×40×20 cm
- Weight: ~ 25 Kg
- Works with utility power and the rechargeable battery in the device
- Respond time: 30 seconds after sampling

Notes:

1 year of guaranty and 10 years of after-sale service



► Mobile Sample Collector and Detector of Biological Agents in the Air Using Microbial Cultivation Method BIS-01

Product Description:

This device collects the sample and detects bacterial pathogens in the air. The detection time is more than 7 hours for various bacterial samples. It can detect colonies of any of the types below with different colors in each step (the types can be increased)

Enterococcus - Stenotrophomonas - Acinetobacter - Pseudomonas - Proteus Klebsiella - E. Coli - Candida Albicans - Step B - S. Saprophyticus - S. Epidermidis - S. Aureus - Vibrio V. parahaemolyticus, V. vulnificus, V. alginolyticus, and V. cholerae - Yersinia - Listeria - Salmonella-Salmonella, Shigella - Bacillus - Staphylococcus aureus and -Staphylococcus sciuri - Pseudomonas

Technical Details:

- Mobile biological sample collector and detector
- Cultivation of bacteria and pathogenic yeasts
- The stainless steel sample collector
- Transferring samples collected from the air to the cultivation environment
- Incubator 37°C, 42×40×20 cm
- Culture medium cartridge and raw materials, culture medium agar-well
- Detectable agents: 9 agents – The number can be increased to detect more agents
- Size: 42×30×18 cm
- Weight: 10 Kg
- Portable bag
- Works with utility power and its rechargeable battery

Notes

1 year of warranty and 10 years of after-sale service



► Detector of Microbial Agents in the Air BIS- 03

Product Description:

This device is created to detect biological agents in the air. It also notifies the user by audio and visual signals. Sampling is done cyclonically with wet walls and samples are detected using immunochromatography. This system can detect 6 living biological agents or poisons at the same time (the number can be increased for newer, accessible tape kits). The result is announced in audio or visual form by an LED. A text also appears on the LCD. The device is all-automatic and it does all



the steps including removal of pollution from different parts before and after each sampling, collecting samples from the surrounding air, processing, and announcing the result.

Technical Details:

- Size: 42x40x70 cm
- Weight: ~ 47 Kg
- Sample air volume: 1450 liters per 20 minutes
- Size of particulate matters collected: +1 micron

Notes:

1 year of guaranty and 10 years of after-sale service



► Modern Defense Fire Engine (HAZMAT)

Product Description:

Equipping an emergency vehicle with CBRN defensive system items as a defensive action allows for protecting relief workers as well as assisting particular injured people and effectively control such conditions.

Technical Details:

Equipment required for a modern defensive system to protect relief workers when facing CBRN accidents





► Fire Fighting Systems

Supplying and equipping fire fighting system on types of vehicles with different capacities and operations including industrial workshop, airport,...

► ARAS 3/4 Tactical Vehicle



Specifications		
Content	Detail	Technical Data
ARAS 3/4 tactical vehicle	Gross Vehicle Weight	3800 Kg
	Length & Wheel Base	OAL= 5170mm & W.B: 3110mm
	Width	2050mm
Engine	Environmental standard	Eura 5
	Model	CYQD32TI
	Max Output	170 hp/3600 rpm
Gearbox	Model	4WD
	No.of Gear	R 1+5
P.T.O (Power Takeoff)	Split Shaft	-
PUMP	Standard	Tohatsu Portable Pump Model: Vf53as
	Performance at Tank Suction Operation	1200 L/min at 6bar
	Priming Pump	double piston priming pump
	Pressure Outlets Size/No	1.5"/3 - 2"/1(for Roof turret)
Water & Foam Tank	Capacity	Water: 800lit/Foam: 100lit (PP)
	Material	stainless steel/304L
	Manhole	removable ø450mm cover
	Tank Level Indicator	fludometer
	Tank Heating	220volt/1kw controlled thermostatically
Superstructure	Material	AL Alloy
	Paint	As per - ASTM standard - class A
	Roller Sutter	AL Alloy
Subframe	Material	ST-37
	Paint	As per - ASTM standard - class A
Equipment	Standard	EQU 08 List



► Fire Fighting Systems and Decontamination

This system has been designed for decontamination of equipment, personnel, facilities as well as conventional fire-fighting operation and equipped with a system of decontamination and a fire fighting system independently of each other.

This fire fighting system has the basic specification of a fire engine, such as a high-pressure pump, water tank, and foam, foam maker team, monitors, etc.

Features

- Equipped with stairs for easy access to the cab roof
- Equipped with floodlights
- Equipped with the cabin of hose and nozzles to the desired length
- Has a water tank and a foam tank
- Independent shelves
- Fire sprinkler monitors
- Equipped with a rear camera and a monitor in the cabin
- Has decontamination nozzles for mass decontamination with pressure control

2- Technical Specifications of decontamination system:

Decontamination system is a complete, independent, and portable decontamination unit with various facilities including the creation of high-pressure water, hot steam, and saturated steam, mixing water and other materials, and is capable of connecting to different peripheral devices. The cabin system has been designed so that parts and accessories are easily available.



► Ambulance for Transporting Victims of Biological Incidents

Product Description:

Ambulances are among the vital parts of any medical emergency system. They are used to transfer the injured people to medical centers. Due to their difference in the type of emergency or initial treatment needed, biological incidents need a special kind of ambulance which is equipped with tools required for transforming and treating those injured at biological incidents as well as ambulance disinfection tools.

Currently, various counties are equipped with such kind of ambulances to overcome CBRN terrorist attacks.

Technical Details:

An ambulance with biological filters and quick disinfection tools





► ICU Isolated Tent

Product Description:

The isolated tent for hospitalizing biological patients is 3x2 meters and its height is 2.2 meters. It is designed for the sake of hospitalizing infectious patients on a medical bed as well as including other devices and equipment needed for patient treatment. The tent can be dismantled for the ease of movement, with its parts placed in special covers. The size of covers allows for easily moving them between different sections of hospitals.

The tent fabric is air-proof to limit the emission of biological pollutants. Outside, a clean air filtration system is coupled with a tent. The filtration device sucks the polluted air inside the tent, and after cleaning it using a HIPPA filter, it directs the air outside the treatment space using a flexible pipe. As long as the filtration system is on, the proportion of air inside the isolated tent to the outside air is negative.

The isolated tent can be installed and set up in 30 minutes with no specific prior knowledge. To do this, the main framework of the tent should be installed first. Then, the tent itself should be installed following the manual.

After that, the equipment and the bed are moved into it. The filtration system is placed outside the tent and is connected to the interior part of the tent using the coupling technique. The filtration system is powered by utility power.

The isolated tent can be sold in the hinged door and magnetic fabric door types.

Technical Details:

Negative air pressure filtration system

Electrical/power supply: utility power

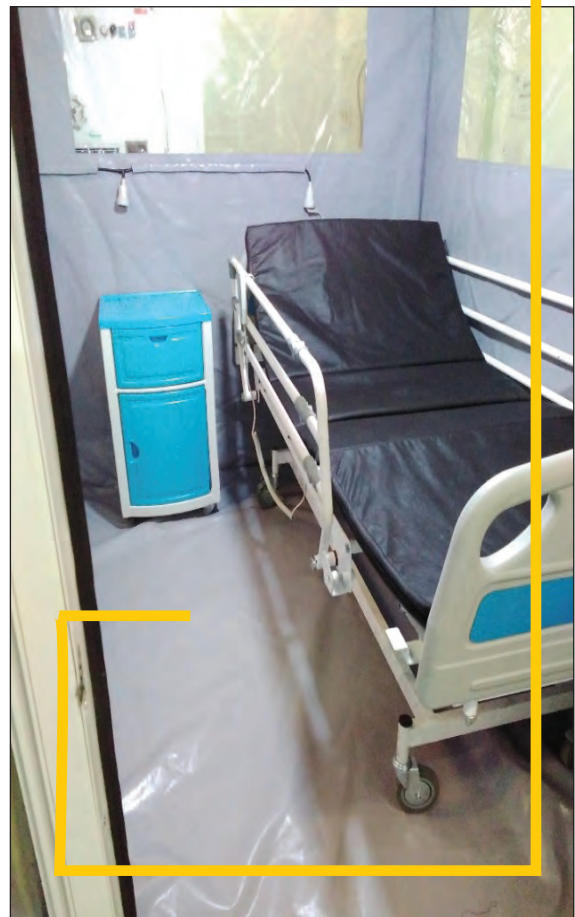
Framework: 5 foldable mental poles

Filtration system weight: ~ 30 Kg

Filtration system weight: ~ 15

Note:

It can be used for medical centers, hospitals, emergency wards and hospitalization of patients with special needs



► NBC Pollution Removal Tent

Product Description:

Deliberate or indeliberate chemical, microbial, or radiant incidents are known in the world as potential terrorist incidents these days, and various equipment is created to face such incidents. The pollution removal tent is used for washing the body or clothes of those affected with CBRNE incidents. Since the pollution of such incidents probably spreads, the wastewater is properly collected in reservoirs. In this tent, a pollution removal liquid is sprayed on the individuals' bodies by special nasals, and the wastewater is directed to the wastewater reservoir to obliterate, using a little pool and a foam suction pump. This tent is sold in two types, i.e. with air-filled poles and with metal poles.

Note:

Military and law enforcement forces in operation and maneuvers, relief workers, firefighters, hospitals and medical centers





► Biological Agents Detectors Using REAL-TIME PCR Method with Kits

Product Description:

This device is an ultimate solution for detecting bacterial and viral pathogens in various biological samples (water, blood serum, food items, etc.)

Technical Details:

Accurate detection of multiple biological agents in about 65 minutes

Manufactured on demand





► Mobile Biological Laboratory Stage 3

Product Description:

This smart system is a self-relying mobile biological laboratory in a standard, auto-drop container. It is equipped for various biological tests on stage 3 samples.

This laboratory is equipped with the most advanced equipment for detecting biological agents.

Since it is mobile, all its components are logically placed where they should. All the equipment and sections enjoy stage 3 safety. To prevent or reduce pollution development, air pressure is monitored and adjusted automatically in its various parts.

All the internal parts of the system are supplied by HIPPA and ULPA filters, the air pressure is adjusted, and the sections are connected only by stabilization of air pressure.

The system is equipped with all the safety and monitoring tools and is made of fire-proof, pollution-reducing stainless materials.

A mobile laboratory system can be evacuated, installed, and set up in less than 30 minutes.

Technical Details:

- Standard portable 40' container
- Cleanroom
- Laminar hood connected to glove box level 3
- Pass box
- Pollution removed shower
- Monitoring room and smart door system
- A room for facilities and diesel generator (20 kW/h)
- Equipped with an air pressure monitoring and controlling system at zones with a clear air filtration system
- Warm and cold air conditioner system
- Pollution reduction and removal
- Water and wastewater reservoirs
- Equipped with a septic reservoir
- Fire alarm and sprinkler system
- Equipped with hydraulic jacks for loading and supplying





► Negative Pressure Isolated Stretcher

Product Description:

An isolated stretcher contains a covered area that is designed for carrying and protecting victims of biological incidents. Three NBC filters are placed above the head and three others are placed at the bottom of the stretcher to provide clean air and any kind of polluted air goes out of the stretcher after being filtered. For the ease of providing clean air inside the stretcher and more comfort for the injured person, a sucking pump is installed on the stretcher. The pump works with its rechargeable battery. The injured person can be treated using the gloves placed over the stretcher. The stretcher has two handles on each of its ends to help to carry the injured person.

Technical Details:

- Saves the lives of relief workers when carrying infectious patients
- Prevents from spreading pollution
- Facilitates on-time reaction in microbial incidents at sensitive national centers
- Especially improves the defensive level of the country against biological threats
- Negative pressure
- The air pump is equipped with NBC filters for taking the air inside the stretcher in and out with rechargeable battery
- Flexible and comfortable portable package

Note:

This product is useful for military and law enforcement forces at operations and maneuvers, relief workers, firefighters, infectious patients, hospital wards and medical centers as well as ambulances



► Portable POCT Laboratory Tent

Product Description:

The portable POCT laboratory tent's size is 4x5.5x2.2 meters and is equipped with all the measuring equipment to collect samples and to do tests as fast as possible.

For the sake of moving the laboratory, the tent can be dismantled and its parts can be placed in special covering cases.

The tent's fabric is air-proof to limit biological pollution being spread. An air filtration system is also coupled with a tent. The filtration system sucks the polluted air and moves it out of the treatment section through flexible pipes.

The tent is equipped with specialized laboratory equipment that is placed on foldable tables inside the tent. Selected devices are as portable as possible and enjoy faster response times.

The laboratory can be installed in less than 45 minutes with no prior knowledge. First, the framework is installed according to the manual. Then, the table and equipment are moved into it. The filtration system is placed outside the tent and is connected to the space inside the tent by coupling. The filtration system uses utility power.

The equipment inside use utility power as the source of energy. The tent is washable and the pollution can be taken off from its surface. It also has UV lights for disinfection purposes. A glove box and a PCR workstation are placed in the laboratory for preparing samples. Samples are measured and analyzed by devices in the laboratory after being prepared. They are autoclaved after evaluation.





Technical Details:

- Air filtration system
- Electrical supply: Utility power
- framework
- Dimensions: 5.5x4x2.2 meter
- portable and moveable
- removes pollution
- equipped with sample preparation and measurement equipment
- Tent and framework weight: ~80 Kg
- Filtration system weight: ~ 40 Kg



► Hospital Pollution Removal Tent

Product Description:

Measured 4x5.2x2.2 square meters, the hospital pollution removal tent is designed to be installed at hospitals so that the medical staff can walk through it when going out of the polluted sections to change or disinfect their clothes and personal protection equipment. The tent is water-proof and consists of three sections, i.e. a changing room, a disinfection section, and a section for putting on the clothes. In the changing room, a shooting window for polluted clothes and equipment is placed. The disinfection section consists of a shower and nasals which pour disinfection materials on the person from above and around to cover all the body or the clothes that a person wears. This section consists of a pump mechanism as well as disinfection solution storages. It also directs the wastewater to secondary storage. Finally, the section for putting on the clothes is a place for drying and putting on clean clothes

Technical Details:

- Dimensions: 4x5.2x2.2 square meters
- Tent and framework weight: ~ 70 Kg
- Disinfection equipment weight: ~ 40 Kg (with empty storages)
- Capacity: 230 liters
- Framework: Foldable metal

Note:

Medical centers, hospitals, emergency wards, military forces and law enforcement forces





► Biological Pollution Disinfection Fogger M8

Product Description:

This device is designed to remove pollution from the exterior surface of equipment, facilities, and places. The equipment - including liquid storages, energy supply resources, the fogging system, lance, etc. - are placed on a separate chassis and can be loaded on the cabin of a pickup truck using the clips which are put on it. This way, the system can be evacuated from behind the car and moved to the reservoir. The system can be installed and set up quickly when needed, and it is very easy to use.

Technical Details:

- Fogging system with a throwing power of 15 meters
- Lance and hose: 10 meters
- The capacity of the disinfection solution storage: 500 liters
- Disinfection materials fogging volume: 40 liters per minute
- Firefighting capsule
- It can be installed on pickup trucks
- Equipped with a generator system for energy supply
- Equipped with a separate cabin and chassis for evacuation using the crane and storage





► Modern Defense Mobile Emergency and Disinfection System

Product Description:

- a. Checking the pollution status
Detection and evaluation of pollution, creating incident direction, initial evaluation of pollution transferring and zoning, detecting signs and indexes of CBRN incidents, determining the type of CBRN incident, and the dangerous materials used
- b. Pollution removal and washing

Technical Details:

1. Initial estimation of the number of victims and the resources needed
Initial triage, disinfection, secondary triage, medical treatment, transmission, and estimation of the resources needed
2. Selecting a proper pollution removal method
Estimations reveal that the cleaning phase can solely remove up to 90% of pollutions on the surfaces Washing is the most crucial phase in the process of disinfection and pollution removal.



► NBC Body Bag

Product Description:

NBC's body bag is used to transmit corpses polluted with such materials. In such cases, the existence of pollutants or discharged materials like blood and saliva and their effects on bodies can increase the risk of spreading pollution or inflicting other people with pollution. Therefore, normal covers cannot be used. These body bags are air-proof and water-proof and can be disinfected to be used again.

Technical Details:

- Strong, water-proof body
- Transmission handles
- Air-proofing zipper
- Three-layer fabric
- Weight: 3 Kg
- Dimensions: 30x65x200 cm
- Disinfection feature





► Positive-Pressure Biological Pollution Outfit

Product Description:

This outfit provides full protection against the penetration of dangerous liquids and particulate matters. Panorama mask, easy breathing using air filters, liquid proofing, two-layer resilient sleeves, and other features are some of the features of this outfit. It can be used for protection against dangerous particulates pollution.

Technical Details:

- The outfit's seams are sewn and a cover is placed on them to improve its strength against the penetration of particulates
- Featured with four exit holes for carbon dioxide
- Panorama design for good sight
- Maximum weight with filter and pump: 2 Kg
- Easy to use
- International standard and certificate



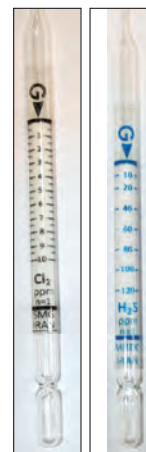
► Industrial Poisonous Gases Measurement Kit

General details

Fast detection and measurement using manual calorimetry
High Easy to use and maintain
sensitivity and accuracy in reporting results

Kit parts

- Sucking capacity: 100 milliliters
- Equipped with a sucking complement sign
- It can break the two ends of a pipe
- Chlorine gas measurement pipe for low densities of 0-10 ppm
- Chlorine gas measurement pipe for medium densities of 10-120 ppm
- Hydrogen sulfide gas measurement pipe for low densities of 0-120 ppm
- Hydrogen sulfide gas measurement pipe for high densities of 100-1200 ppm
- Ammoniac vapor measurement pipes 0-100 ppm





► Rasa earplugs

Dual-Protection Earplug

Hearing loss due to noise is almost entirely preventable by the use of hearing protection. The level-dependent technology used in the Rasa earplugs has been tested and found to be protective up to approximately 160 dB for outdoor exposures. Rasa earplugs protect your hearing without interfering with your ability to hear routine sounds or conversations.

Sounds, at safe levels, are allowed to pass through into the ear canal, while potentially harmful noise (above 85 dB) is reduced via a proprietary design that incorporates a special noise-reducing filter. Rasa earplugs include attached filter caps, which can be inserted for additional protection.

Open/Low-Level Sound Critical Mode:

This earplug's patented design gives wearers a better ability to hear low-level sounds critical to mission safety – conversation. When needed, the plug's filter provides attenuation of high-level noises like weapons fire and explosions.

Closed/Constant Protection Mode:

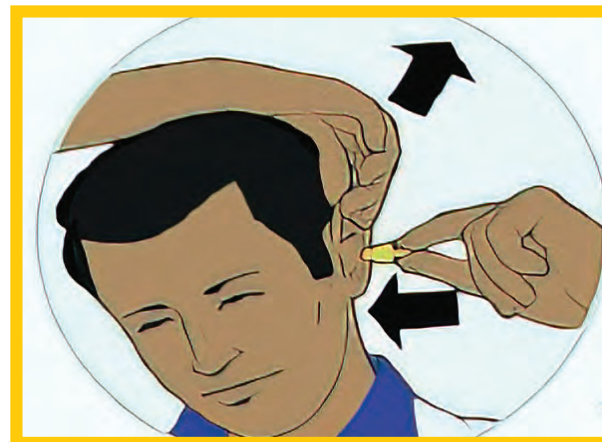
For attenuation of constant noise (aircraft, armored vehicles, etc) without hear-through.

How To Use?

Hands and plugs should be clean before use. Reach behind your head and pull your ear out to straighten the ear canal; insert the earplug with your free hand. Your voice will also sound low-toned, muffled even more so in the Closed mode.

CAUTION:

If the plugs do not appear to be blocking any sound, try again to reinsert them. If they still do not appear to be working, have a person trained in earplug fitting recheck you for the correct size. Remember, if you don't have them in correctly, it is as if you do not have them in at all.



► Mobile Hospital

Mobile hospital set is the best option for rendering remedial and medical services at the time of natural disasters and events and occurrences.

The sets presented in veracious models according to the event type and continental features are capable to cover all sanitary and remedial requirements.



► Trailer Mobile Hospital

Hospital Trailer: These types of structures are used as basic structures in mobile hospitals. The operational characteristics and transportation power have changed these structures to products of high popularity in the area of relief and medical services.

Trailer structures are designed and produced using sandwich panel walls and metal chassis according to road standards and they display special medical and sanitary characteristics.

Each of these products could encompass some part(s) of the hospital complex and supply the logistic needs related to them.

Mobile hospital sets are the best choice for rendering remedial and medical services at the time of natural disasters and supervening events occurrence.

Rapid transition and setting up of hospital sets and their accommodation with the structural requirement in medical services are the most significant specifications which have to be considered during their design.

The last updated hospital structures among mobile sets are trailer hospitals that provide high-speed servicing.

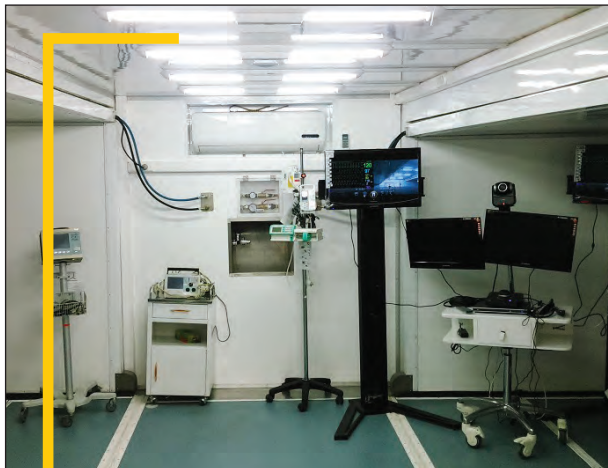




► Trailer of Mobile Operating Room

This product consists of a 30-foot container with a 3-meter height that is installed on the two-axle trailer insole with a 13.6-meter length. This container can be opened from sides to create a large space. Double expandable trailers are transported to a place by the puller. The container box is put in a steady position with tools embedded on the trailer to be set up and prepared. After that, the puller is separated from the container. First, generator diesel is set up to provide the necessary energy for opening containers and other power consumptions.

Initial action should be done concerning the designs that are intended to open mobile boxes. For example, we can open the lock of rail holder clamps, then the opening system of the container is set up, this task can be electrical, mechanical, or hydraulic. After this step, there should be indices to ensure the users that this step of the operation is done accurately. This structure can be used for healthcare cases such as operating room, sterilization unit, recovery unit, ICU, laboratory, radiology, wards, mammography, ophthalmology, dentistry, obstetrics, and gynecology, etc. Also, this structure can be used in some managerial tasks such as command centers, meeting rooms, and crisis management as well as a general application such as a mobile library, cinema, or shop center.



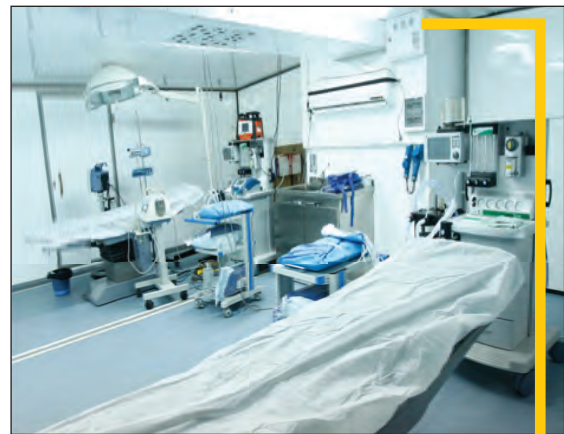


▶ Trailer & Mobile Structures

These structures are produced according to customer requirements and climatic conditions of use and also they have all chemical requirements such as water, power, heating, and cooling, etc. In general, they are completely self-contained and require no external resources.

Health structures include:

- Double Trailer Operating Room
- Mobile Blood Taking System
- Clinical Mobile Structures: Dental / Obstetrics / Radiology / Laboratory / Disinfecting and Laundry / Trailer Ambulance / CT and Ultrasound / Ophthalmology / Shower Headquarter
- Telecommunications shelters
- Rest Headquartered





► Blood Bags and Related Equipment

Blood bags are sterile, non-toxic flexible plastic containers, and free of fever-causing substances, usually made of vinyl polymer containing anticoagulants solutions or preservatives.

These containers are used for collection, storage, transportation, and processing of donors' blood and for providing blood products in a closed system and completely safe. Based on blood bank needs these bags are made in different types and different volumes such as single, double, triple, and quadruple bags with the volumes of 350, 450, and 550 ml, and are equipped with various accessories such as sampling arms, leukocyte reduction filters, and protective needle coating.

Types of products

Single/ double/ triple/ quadruple normal blood bags 450 ml with sampling arm- two normal CPD-SAGM bags or with sampling arms- quad frozen plasma bags - single, double, triple transfer Bags- Blood phlebotomy Bag- Umbilical cord blood collection bags- Filtered blood bags- Bag containing 45% sodium citrate solution- Bag containing ACDA solution- transfer set- frozen plasma set- filtered bedside set- washing set RBC- blood washing set with sodium chloride solution- PRP bags



► Mobile Training System Chemical Agents, CS Based

Mobile NBC room has been designed to make warriors familiar with masks and NBC filters performance. It will also lessen their tension during a chemical attack and meanwhile, they will know how to use personal protective equipment and decontamination procedure. The construction of this room is equipped with a metal structure (14×2.5×2.8m). This structure has been divided into three parts: gas unit, control unit, and installation one. The assembly is fixed on a trailer unit and so the transfer of the assembly becomes easily possible by this facility.

Also, the compatibility of this system with a universal standard makes the transportation of it possible without the use of road escort. The control unit is in a way that it is equipped with these characteristics: controlling and decontamination order gas spray and other similar agents in the form of aerosol particles, controlling and decontamination order of the test unit, supervising the trainer activities in the test unit



▶ Trailer of Command Center

Being prepared for natural disasters (e.g. earthquake, flood, hurricane, fire, etc.) and unnatural events (e.g. war, industrial accidents, terrorist events, etc.) is the duty of departments associated with crisis management and is needs of many ministries and authorities. There should exist the command center, so the authorities without worry can provide services for injured people. The trailer of the command center is one that can be suitable for crisis management.

The trailer of the command center has the necessary space to provide comfort and proper working conditions in crises. After installation, the structure of the command center has all necessary infrastructures and equipment according to technical specifications to manage crises and other defined missions.

Application

It is used for crisis management in natural disasters such as earthquake, flood, hurricane, fire, etc. It is used for management purposes in unnatural events such as industrial accidents, terrorist events, and the outbreak of diseases.

It can be applied to conduct certain missions

It is used in camps and cantonments





► Group Tents

Group Tents with simple and elegant design is the perfect place for the temporary residence of individuals in different geographical areas. The design of the tent is following the principles of psychology to be visually similar to home so that the people in crises of war or other unforeseen events stay in a suitable environment.

Usage

Accommodation households in disaster and unforeseen events

Command and management rooms in conditions of crisis and military warehouse

Field and camp hospitals

Specifications

Quick set-up

With a sturdy skeleton

Waterproof floor

Easy transport

The use of computers software in the design of the tent's skeleton

The use of the equipment in the design and production of tents

The possibility of installing lighting inside the tent

Sewn with water-resistant fabric



► Mesh Walls (Optional)

The designed mesh walls are designed to increase ventilation of tents in hot weather. So that by rolling up the outer wall, the inner mesh wall helps the passing of more air and prevent the entry of insects into the tent.

Ability to expand and connect to multiple tents:

Dimensions of each tent are designed according to the respective requirements. For example, dimensions of 2x3 and 3x4 are suitable to accommodate small groups, but as the hospital warehouse and accommodation for more people are intended, larger tents are needed.

Large tents with dimensions such as 9/3 x 8/12 are designed to be connected to other tents in the longitudinal direction. So tents with a capacity of 100, 150, 200 persons respectively are presented.





► Concrete Cloth

This type of fabrics can be used without the need for the concreting machine (by two persons in two hours) to implement easily and quickly shelters, bunkers and concrete relief base in crises such as war and earthquakes



Applications of Concrete Cloth

- Presenting a new generation of concrete technology in the construction of housing
- Use as safe and durable structures in crises
- Rapid creation of pools (in agriculture)
- Rapid construction of roads and passages for the passage of vehicles (on the Road Construction)
- Fast creation of water channels (no leaks)
- Use as normal shelters
- Rapid construction of runways for airplanes and helicopters
- Cover and concealment of installations and equipment
- Rapid construction of roads and passages for the passage of equipment (land and sea)

Technical and operational characteristics

- The ease of use
- Fire resistance
- Diversity of dimensions
- Flexibility
- Stability and durability
- Strength
- Moisture and water insulation
- Speed



► Composite Shelter

This type of shelter is designed in line with collective protection against all kinds of military attacks so that it provides its residents' needs independently for up to 3 days. After installing these structures must be resistant to the pressure of 120mm mortar shell explosion, and also ground moisture must not penetrate structures. RC8 composite shelter has certain characteristics that set it apart from other conventional protective structures. Of the above features are as following:

- Self-sufficient with all the backup systems
- Quick installation and operation
- The ability to accommodate to the shelter needs
- Modular functionality and extensibility
- Compliance with the standard IDS 448
- Reducing the likelihood of detection and identification of the Shelter
- Living facilities for 3 days
- Ability to transport structures
- The ability to move and change the installation location

Civilian applications

- Saferoom in the factories of hazardous materials
- Safe room in case of fire
- Shelter for nuclear power plants
- Officials residence in critical condition





► Shelter Filter BSF 400

Despite the special protection of a person that is usually possible in connection with military personnel and even by using the special clothing resistant to chemical gases in military and civilian areas, applying a method is essential for individuals collectively as the NBC shelter. Shelter filters have been designed and built to protect military and civilian shelters against chemical, biological factors, and the particles from the nuclear explosion with maximum efficiency. In this type of filter, the filtration system is processed for aerosol particles and activated carbon filtration systems with high efficiency, and they are used in combination with gas absorption. They can be installed on NBC protective facilities such as shelters, NBC tents, trenches, headquarters, etc.



► Mobile Filtration System (GFU 8000)

This system is used for remediation of contaminated air to nuclear, biological, and chemical particles (NBC) and for providing clean air for military bunkers and command trenches.

This system is suggested to provide a spacious area of 200 cubic meters and a maximum of 80 people.





► Unite For Filtrating and Packaging Fresh Water

Water is one of the strangest phenomena of creation. Water is composed of two agents that are gas at normal temperatures. Hydrogen is an agent that burns and oxygen are necessary for burning, while water is used to extinguish the fire.

Water is the best drink but heavy water is a toxic substance composed of deuterium (stable hydrogen isotope) rather than hydrogen.

It is necessary to provide healthy water in critical conditions; since this device is transportable and deployable, it can be used in critical places very easily. It can take water to filtrate and produces 1-liter, 2-liter, 5-liter, and 10-liter packages and provide the people of the damaged region with healthy water. That disinfecting water in this machine is done by the lamp of .V. that can remove all microbial and chemical pollutions. Furthermore, all electricity (power) of this machine is provided by itself. Since this machine is completely automatic, this machine does not need any expert and specialized personnel. One good feature of this machine is that it can be moved easily.

It is worth noting that this machine can produce 500 1.5-liter packages of healthy water for an hour.



► Clean Room

A cleanroom is a space in which the concentration of particles in the air is under control and it is designed and used so that to have the minimum of input, output, and retention of particles inside the room as well as other relevant parameters such as temperature, pressure, and humidity are strictly controlled, if necessary.

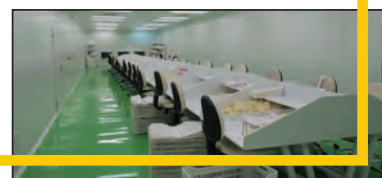
These spaces are used to manufacture the parts required in electronics and computer industry, aerospace Industry, industrial instrumentation, calibration, the production of micro machines and also the process of producing a variety of medications, medical equipment, medical applications, operating room, ICU, laboratory, medical and industrial research.

This industry can design and construct clean rooms in different classes of a fixed and mobile trailer. Clean rooms based on airflow
Clean room with mobile and indirect flow

Cleanroom with calm and direct flow

Cleanroom with positive pressure

Clean room with negative pressure





► Decontamination System

Decontamination system for decontamination of all types of chemical, biological or nuclear weapons from outer surfaces of buildings, vehicles, equipment, roads, people, bomb holes, and so on ...

This system produces hot water, steam, mixed materials of decontamination and surfaces peeling, removes and cleans infection of the sh, m, h factors by physical and chemical techniques. The system may also be used in firefighting systems because it is capable of splashing water with high-pressure jets of water flow.

Features :

- Ability to decontaminate people in the decontamination shower tent
- Ability to decontaminate the clothes by steam in a specific tent Equipped with a sprinkler monitor system with the separate motor and pump
- Fitted with water sprinkler nozzles at the front and rear of the vehicle
- Ability to use four-gun nozzles simultaneously
- Equipped with a flexible water tank with the capacity of 3000 liters
- Equipped with control system inside and outside the vehicle cabin
- Ability to generate dry water vapor at temperatures up to 210°C
- Ability to mix water and decontamination material in nozzles
- Has a water tank with a capacity of 5000 liters
- Equipped with a 270-liter tank for decontamination material
- Equipped with a two-stroke diesel engine, 17 hp, 3000 rpm
- Equipped with warning strips for the contaminated area and AC fire extinguishers
- Equipped with alternators to generate electricity with 220 V



► Protection Shelter to H2S

This type of shelter is equipped with alarm and security systems to protect workers against H2S toxic gases and other pollutants.

Drilling, tunneling, mining coal, gold, lead...

production of chemicals industry (paints, adhesives, paper, rubber and plastics, fertilizers)

Sewers, swamps and volcanic gases

Anaerobic fermentation and decomposition processes of materials

Oil & Gas industry

Main Specifications of H2S shelter

- Entirely airlock container structures, antistatic and fire-resistant
- Powered by air banks to supply clean air and positive pressure inside the Shelter With airlock area equipped with a complete airlock magnetic doors
- Equipped with gas detectors of CH₄, H₂S, CO₂, O₂ in the airlock area, inside and outside the shelter
- Equipped with PLC control system with visual and audio alarms
- Equipped with UPS source, ventilation, heating, and cooling systems
- Equipped with fire extinguisher systems and CO₂ cylinders
- Equipped with individual protection equipment, H₂S detectors, escape masks and respirators





► Microbiological and Chemical Protection Systems

Microbiological and chemical hoods are special types of clean environments designed and built-in various industries (pharmaceutical, medical, veterinary, food industry, etc.) for general applications.

The hoods of the Besat industry are manufactured and provided based on standard and in three classes 1,2,3, and has the right conditions following customer requirements and based on GMP

Class 1

To protect the sample or product of airflow in one-way (vertical or horizontal)

Class 2

Product, samples and user protection against air pollutants

Class 3

To protect the sample, product, users and the environment and working with unknown and dangerous factors

Besat industry, as the manufacturer, has started production of microbiological and chemical hoods (Fume Hood) within the country and in different classes to meet domestic and foreign consumption.

In addition to testing raw materials and continuous and effective control during production, the control unit controls and tests the quality of the final product following the latest version of international standards of BSN 12469, ISO146614-1





► Armored Filter FPC-100 IR

The Model NBC Ft-7 filter is the protective filter designed and made to prevent the entry of contaminated gases and germs and dust caused by a nuclear explosion in the cabin of tanks, personnel carriers, and military vehicles.

The absorption of these agents by these filters is based on physical and chemical absorption. This type of filter is available for tanks with a capacity of 7-persons and personnel carriers with a capacity of 15 people.



► HEPA Filters

One of the most important factors to achieve a very clean environment is using HEPA filters in the direction of airflow. These filters are designed and manufactured to collect suspended particles of air and germs to clean the interior of the building or table and prevent from escaping destructive aerosols (namely biotic and abiotic).

Due to the extraordinary sensitivity of this product from the human and economic, all factors affecting product quality must be considered when choosing a filter.

Materials used in filter include media or paper/separator (foil, etc.) sealing adhesive / protective grid and frame. Frames can be made of aluminum, galvanized steel, stainless steel, or MDF. Important factors affecting quality are, in addition to the basic quality and reasonable process, quality control test for verification and validation of the product.

Besat HEPA filter is generated based on the DIN/EN1822 standard and is tested by the DOP method in %100





► Industrial Filters

1. Industrial filters are protective devices against various industrial gases and are used in various industries.
2. The filters, according to the internal structures and the type of absorbents used in the construction, can absorb various gases.
3. Industrial-manufacturing filters are produced in different models and can be presented in combination and separately for gases of the groups A, B, E, K, NO, Hg, Co, Reactor.

A	Gases and vapors of organic compounds at temperatures greater than 65 ° C	
AX	Gases and vapors of organic compounds at temperatures below or equal to 65 ° C	
B	Gases and vapors of inorganic compounds such as chlorine, hydrogen sulfide, and hydrogen cyanide	
E	Sulfur dioxide, hydrogen chloride	
K	Ammonia and derivatives of ammonia	
CO	Carbon monoxide	
Hg	Mercury vapor	
NO	Nitrogen gases including nitrogen monoxide	
Reactor	Radioactive iodine including radioactive methane	
P	Particle absorption	



► IF1 Filter

IF1 Filter is a combined filter type designed and manufactured to protect the user respiratory system against common NBC agents and it also can absorb a variety of toxic gases and industrial pollutants. This filter can be installed on the IM2 mask and the similar ones. It would supply clean air for inhalation without nuclear, biological, and chemical contamination of weapons. The structure of absorbent is as follow:

1. Gas absorbent: It consists of an activated carbon bed and absorbs gas pollutions.
2. Particle absorbent: It is made of HEPA paper and can absorb biological agents and nuclear dust.

**Filter parts are:**

- Case
- Chemical filter (activated carbon)
- Dust filter
- Particle filter
- Air distributor
- Filter inlet cap
- Filter outlet cap
- Air stabilizer



► Self-Contained Breathing Apparatus Air Respirator

Breathing apparatuses completely isolate the user and his/her respiratory tract from the surrounding atmosphere and offer the safest type of protective equipment for all rescue, emergency, and maintenance operations which are to be carried out in polluted or lacking-in-oxygen areas.

The single-cylinder apparatus which are carried over the wearer's shoulder can be equipped with cylinders of different capacities, thus allowing various types of autonomy and providing a greater range of choices according to the times required for different kinds of operations.





► IM2 Protective Mask

Protective Hood, keeping head and neck away from aerosols, chemical vapors, biologic particles, and nuclear dust, is utilized as a complementary for the IM2 mask. The protective hood can improve mask efficiency. Meanwhile, it makes more security area and lessens the contamination from mask surface in contact with aforesaid agents, and consequently, the decontamination procedure would become easier.

Introduction

The protective mask is a secure instrument to protect the respiratory system and covers the entire face and completely protect face skin, eyes, and respiratory system against NBC weapons' application and radioactive dust while using the filter.

This mask is designed in such a way to provide the user with maximum desirability and minimum limitation

The main parts of the mask

- Face
- Mouth
- Headstrap
- Audio
- Lens
- Filter seat
- Drink tube



► National Broad Vision Mask (IM4)

It is designed and built state-of-the-art

Features

- Designed following Iranian ergonomic
- Wide field of view
- Simultaneous using two filters
- Easier breathing due to lower breathing resistance
- Using six fin tensile head strap
- Drink tube attached to the mask
- Compliant with helmet



► Wide-View Mask

SCA protective mask being respiratory and full-face protective mask with broad vision is designed to protect against environmental contamination. This mask can be attached to all standard filters; hence it can protect the respiratory system, face, and eyes against all contaminants. The body of this mask is made of a rubber compound that has compatibility with face skin as well as appropriate mechanical properties. The Headband of this mask is a band with six woven tongues of tensile fiber attached to the mesh (cloth) pad, so it provides the user with easiness.

It is made of chloroprene rubber. The designing of the mask is in a way that preserves high strength in addition to full facial sealing and exclusion of military NBC. Filter, industrial also can be used for this mask. Users can employ this mask in chemical conditions like acid, alkalis, oils, aliphatic, aromatics, and alcohol.



► Portable Leakage Mask Examiner (POLMEX)

The respiratory protective mask is one of the main protective equipment against NBC agents which protects users against microbiological and nuclear agents.

According to the significance of this appliance and its role to maintain users healthy, it is essential to assure the correct performance of the mask before application. Therefore it is important to consider the interval inspection program for quality evaluation of it. The most significant feature which has to be evaluated is the impermeability of the appliance.

For this sake tightness test of mask in the scheduled intervals and after each stage of being operational, is advised. POLMEX apparatus is a portable tester that evaluates protective masks possible in the case of tightness.





► NBC Protective Boot

Boot cover, keeping feet away from NBC agents, is a type of individual protective cover and has to be worn on the boots. It is made of elastic polymeric materials which have a good abrasion resistance. This cover is designed as a complementary of covers and individual protective equipment against chemical agents and covering boots. The protective cover cast as an integrated form without any crack or split is made of PVC and NBR caoutchouc compounds.

Weightless

Optimal safety factor

Incredible flexibility and compatibility with the user body are protective Gloves' advantages.



► Protective Gloves NBC

Protective gloves are part of a set of personal equipment that protects user forces' hands against military factors especially chemical ones. These gloves are produced with chloroprene polymer latex with very high resistance to military factors.

To raise efficiency, there are cotton gloves individually with them that wearing them under the main gloves prevents from skin sweating and irritation in certain individuals

Specifications of this type of gloves

- Low weight
- The high degree of confidence
- Outstanding flexibility
- Compatibility with the physical and functional conditions





► Chemical, Biological and Nuclear Protective Clothing

Chemical, Biological, and Nuclear Protective Clothing protects the whole body completely against the penetration of the chemical and biological agents and nuclear dust through the skin. Moreover, it allows body heat and moisture vapor from perspiration to exit from clothing. And yet prevents the entrance of the chemical, biological and nuclear agents into the clothing in the form of vapor, gas, or aerosol. Chemical, biological, and nuclear protective clothing is made up of two main layers. The outer fabric has the property of water repellent and stable oil and acts as an initial layer of protection from the arrival of drops and stains of the chemical, biological and nuclear agents as the liquid to the clothing. The clothing cotton is provided in two blend types of cotton- cotton polyester- nylon. The second layer is the filter of the clothing that is offered in two types of foam carbon smeared and carbon fabric. The advantage of foam carbon smeared is the lower price and the advantage of carbon fabric is lower thickness and weight and more protection.



► NBC Self Aid Kit User Manual

1. Atromil and combomil auto-injector.
2. Nitromil (inhalation ampule).
3. Decoderm (skin decontamination powder).
4. Decomil (cloth and weapon decontamination powder)
5. Promil (protection cream).
6. Lpdamil (potassium iodine tablet).
7. Chloromil (chlorid tablet).
8. Cleaning wipes.

Store kit in a cool, dry place and keep away from direct sunlight.





► **N95 Mask (M930)**

- EN 149: 2001+A1:2009 FFP2 and NIOSH N95
- Protection against solid and liquid toxic and non-toxic aerosol particulates
- Protection against dust, mist, gases, bacteria, and viruses
- Filtration efficiency: 95%
- High efficiency activated carbon filtration interlayer
- Breathable and skin-friendly
- Adjustable nose clip
- Face shape



► **Having permitted limit of FFP2 level of EN-149 standard as below**

The Inhalation resistance at 30 l/min and 95 l/min continuous flow meet the permitted limit of 0.6-2.1 bar. The Exhalation resistance at 160 l/min continuous flow using a breathing machine adjusted to 25 cycles/min and 2.0 l/stroke meet permitted limit of 0.6 -2.1 bar.

The filter penetration of the sodium chloride aerosol test at 95 l/min meets the permitted limit.

The filter penetration of the oil and sodium chloride aerosols test at 30 l/min continuous flow with a particle size of 0.3-micron meet permitted limit of 5%.

► **Salt-filter Mask (SF4)**

- Protection against solid and liquid toxic and non-toxic aerosol particulates
- Protection against dust, mist, bacteria, and viruses
- Four interlayers of melt-blown and one interlayer of salt filter
- Outlayers of SMS material
- Breathable and skin-friendly
- Adjustable nose clip
- Face shape





► Medical Disposable Suit

- Convenient for hazardous biological environments
- Resistance to penetration by infective agents
- Resistance to penetration by solid particles
- Protective against variety range of chemical agents
- Low weight and suitable flexibility
- Anti-static feature
- In two models (with insulation gasket & without insulation gasket)
- In different sizes and colors
- Together with footwear
- Water absorber internal layer & hydro proof external layer



► ISOLATION STRETCHER

Isolation stretcher helps relief teams to exit patients and injured people from the infected area rapidly without exposure to infectious agents.

The equipment which has implemented in isolation stretcher also prevents infection of contagious illnesses to aid teams while transferring the patients to hospitals and clinics.

Parts of Isolation Stretcher:

1. Isolation Box
2. Metal Structure
3. Electrical & Control system
4. Filtration system





► **Cardioset ARAD P10+**

Parameters

- Waveforms: ECG (3, 7, 12 leads), RESP, Pleth, EEG (One line), IBP Waveform
- Numeric Parameters: HR, RR, SpO2%, PR, NIBP, Temp, IBP (2 channels)

Options

- Arrhythmia Analyzer
- ST Segment Detection
- EMG & BIS
- CO2 (SideStream)
- Multigas Analyzer (N2O, O2, AA1, AA2)
- ECG Out
- 2.0" Thermal Recorder
- Remote Patient Monitoring

Key Features

- Intuitive 19" Wide Multi Touch Display
- Wi-Fi / Bluetooth Communication Support
- New Graphical User Interface
- Full HD External Display Support
- Full Customizable Screen Views
- Dynamic Auto Size Waves
- Dual Bed Monitoring



Reliable PACS & HIS Support

► **Cardioset ARAD P10**

Parameters

- Waveforms: ECG (3, 7, 12 leads), RESP, Pleth, EEG (One line), IBP Waveform
- Numeric Parameters: HR, RR, SpO2%, PR, NIBP, Temp, IBP (2 channels)

Options

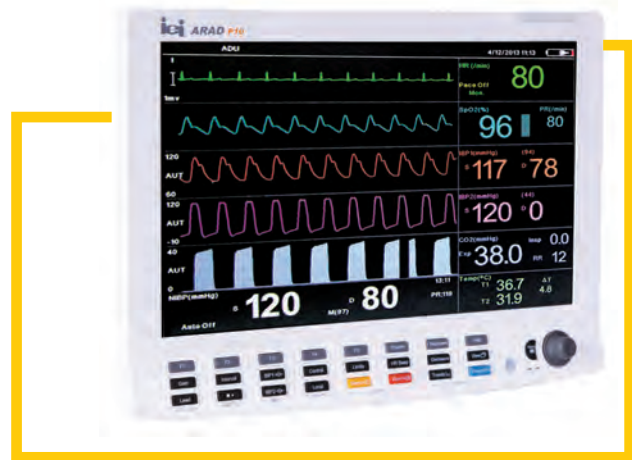
- Arrhythmia Analyzer
- ST Segment Detection
- EMG & BIS
- CO2 (SideStream)
- Multigas Analyzer (N2O, O2, AA1, AA2)
- ECG Out
- 2.0" Thermal Recorder
- Remote Patient Monitoring



Key Features

- 19" Wide Screen Display
- User Friendly Software
- Convenient Rotary Knob & Shortcut Keys
- ECG Recording, NIBP Report and Trend for All Parameters
- Printable Disclosure
- Lightweight (< 5 Kg Including Battery)

All You Expect from a Vital Signs Monitor



► Cardioset FX7

Parameters

- Waveforms: ECG (3, 7, 12 leads), RESP, Pleth, IBP (2 channels)
- Numeric Parameters: HR, RR, SpO2%, PR, NIBP, Temp, IBP (2 channels)

Options

- Arrhythmia Analyzer
- ST Segment Detection
- CO2 (Sidestream)
- 2.0" Thermal Recorder
- Remote Patient Monitoring

Key Features

- 15" color TFT Display
- Simple and User Friendly Operation
- ECG Recording, NIBP Report and Trend for All Parameters
- Lightweight (< 5 Kg Including Battery)

Fast boot in about 5 seconds





► **Cardioset LX110**

Parameters

- Waveforms: ECG (3, 7, 12 leads), RESP, Pleth, IBP (2 channels)
- Numeric Parameters: HR, RR, SpO2%, PR, NIBP, Temp, IBP (2 channels)

Options

- Arrhythmia Analyzer
- ST Segment Detection
- CO2 (Sidestream)
- 2.0" Thermal Recorder

Key Features

- 12.1" color TFT Display
- ECG Recording, NIBP Report and Trend for All Parameters
- Lightweight (< 5 Kg Including Battery)



Compact & Impressive Design

► **Cardioset SINA 5**

Parameters

- Waveforms: ECG (3, 7 leads), Pleth, RESP, IBP (2 channels)
- Numeric parameters: HR, RR, SpO2%, PR, NIBP, Temp, IBP (2 channels)

Options

- Arrhythmia Analyzer
- ST Segment Detection
- CO2 (Sidestream)
- GPS / GPRS
- 2.0" Thermal Recorder

Key Features

- 5" color TFT Display
- ECG Recording, NIBP Report and Trend for All Parameters
- Extra Lightweight (< 2 Kg Including Battery)



Minimum Size, Maximum Portability



► BIS Monitoring IOA Vision

Measurement

- Index of Consciousness - SQL, ESR, EMG and BIS Measurement

Technical Highlights

- Compliance with Europe Standards
- Offered Accessories And Peripherals by SAIRAN Medical Equipment Industries - Easy Installation and Utilization
- Bluetooth Interaction with SAIRAN Patient Monitors - Waveform Display on Patient Monitor and Saving as Trend
- Graphical Low Consumption LCD - Minimum 6 Hours

Operation Time Using External Rechargeable Battery



► Capnograph Mi-Cap C1

Measurement

- Mainstream Sensor Type - Non-Dispersive Infrared Gas Analysis Technique
- Compact Multi-Channel Infrared Detector

Technical Highlights

- CO2 Measurement Range: 0 -19.7%, 150 mmHg, or 0-20 kPa
- CO2 Resolution: 0.1 mmHg
- CO2 Measurement Accuracy:
0 - 40 mmHg ± 2 mmHg
41 - 70 mmHg $\pm 5\%$ of Reading
71 - 100 mmHg $\pm 8\%$ of Reading
101 - 150 mmHg $\pm 10\%$ of Reading
- Respiration Rate: 3-150 bpm
- Respiration Rate Accuracy: $1\% \pm 1$ bpm
- Circumstance Pressure: 86 to 106 kPa
- Power Demand: $5\text{ V} \pm 5\%$ (max ripple 200 mVp-p)
- Power Consumption: $<150\text{mA}$
- Storage Condition: -40% to 70%, $<90\%$ RH, Non-Condensing
- Operating Condition: 5% to 50%°, 10 to 90% RH, Non-Condensing



Analyze Each Cycle of Respiration System



● Monitor Accessories

▶ Nellcor / Nonin SpO2

- Adult, Pediatric and Neonate
- Adhesive, Reusable and Multisite Sensors



▶ NIBP CUFFs

- Cuff for Adult, Pediatric and Neonate
- Single Use Cuffs



▶ IBP

- Periodical Reusable Transducers
- Dome, Clamp and Bracket
- Extension Cable



▶ Temp

- Temperature Probe-Skin (Adult, Pediatric and Neonate), YSI Compatible
- Temperature Probe-Rectal (Pediatric), YSI Compatible



▶ ECG

- ECG Patient Cable 3,5,10 Wires
- Extension Cable (3m, 5m)



▶ Battery

- Li-ion 12 v / 2.3 Ah
- Sealed Acid 12 v / 2.3 Ah





● Trolleys & Stands

▶ Monitor Trolley

- Left and Right Rotation
- Bracket Horizontal/Vertical



▶ Monitor Stand

- Easy to Use
- Excellent Quality Material & Design



● Central Station

▶ Live W110

Displaying Parameters

- Vital Signs of 16 Telemetry Systems or Bedside Patient Monitors through Wireless Network/LAN
- Up to 5 Graphs Simultaneously for Each Patient Including ECG (I, II, III, aVL, VR, aVF, V), Spo2%, RESP, IBP1 and IBP2
- Patient Information, Continuous Records History and Nurse Calls

Key Features

- Wide 20" Touch Screen Display
- Two-Way Communication with Patient Monitors
- Arrhythmia Analyzer - Portable Thermal Recorder & LaserJet Printer Support
- User Friendly & Elegant Interface

Intensive Care of All Patients Simultaneously





● Telemedicine Solution

► HealthCare SADRA A15

Parameters

- IBP, Temp, CO2, SpO2%, NIBP, ECG (3, 7, 12 leads), RESP
- Glucose, Lipid and PCG Measurement

Key Features

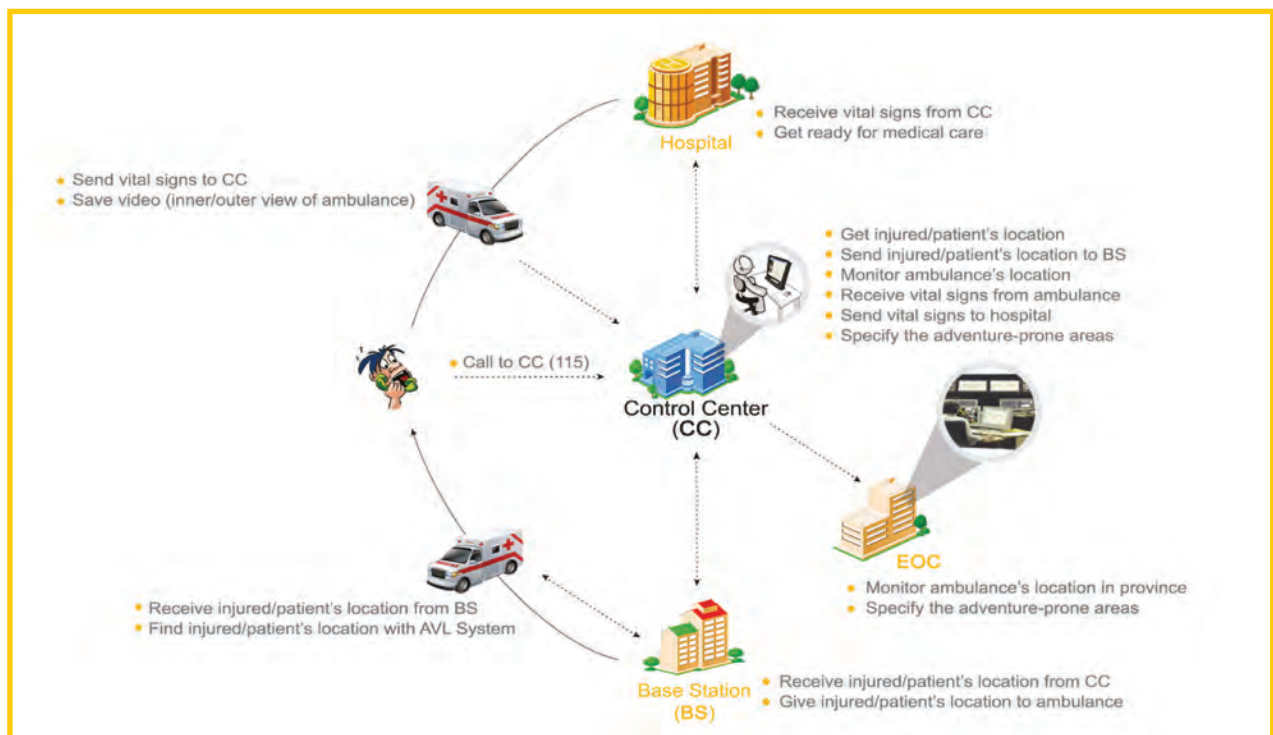
- Touch Screen 10.1" Color TFT Display
- Real Time Patient Monitoring
- GSM (2G, 3G, 4G), LAN and Wi-Fi Data Interface
- Support all UVC Standard Otoscopes
- One Channel Audio-In for Connecting Stethoscope
- Video Telephony and Consultation
- Real-Time Transmit Information to Central Viewer Station



Transfer Information Instead of Moving Patient

► TeleMonitoring Solution (SAMA)

Extend Patients Care Anywhere





► Web Based Patient Monitoring

Technical Highlights

- Access to Web Monitoring from www.sairanmed.ir Website
- Showing All Vital Signs from SAIRAN Patient Monitors
- Define Permission and Accessibility for the User
- 24 Hours Patient Care

Monitor Patients around the World



► Cardiopack T220

Telemetry Monitoring System

- Transmission of ECG Graph (I, II, V)
- Storing Data for 48 Hours on microSD Memory (up to 16 GB)
- 24 hours Operating Time for Transmission ECG Using Only 1*AA Battery
- Provides a Graphical Screen to Display All Monitored ECG Leads
- Nurse Call Button on the Transmitter
- Enhances Patient Comfort with a Compact, Lightweight Design
- Up to 16 Telemetry Transmitters Can Be Used Simultaneously in a Cardiac Care Center
- 8 Channels Receivers with Internal Antenna
- Frequency/Power Settings Can Be Modified in Accordance with the Local Country Regulations
- High Reliability, Narrowband Wireless Transmission and Digital Modulation
- In Accordance with EN60601-2-27, ANSI/AAMI EC13, IEC 60601-1, IEC 60601-2 Standards



Don't Confine Patient for Cardiac Care



► **Cardiopack T110**

Telemetry Monitoring System

- Transmission of ECG Graph (I, II, III), SpO2%, Pulse Rate, Plethysmograph,
- Provides a Graphical Screen to Display All Monitored ECG Leads
- Nurse Call Button on the Transmitter
- 8 Channels Receivers with Internal Antenna
- High Reliability, Narrowband Wireless Transmission and Digital Modulation
- Up to 16 Telemetry Transmitters Can Be Used Simultaneously in a Cardiac Care Center.
- In Accordance with EN60601-2-27, ANSI/AAMI EC13, IEC 60601-1, IEC 60601-2 Standards
- 48 Hours Operating Time for Transmission of Both ECG and SpO2 Using Only 2*AA Batteries

More Vital Signs Are Available Now with Cardiopack



● **Defibrillator/Monitor**

► **RELIVE DM5**

Technical Highlights

- Energy: 1-200 J
- Waveform: Biphasic Truncated Exponential
- Mode: Manual, Cardioversion, AED
- Charging Time: Less than 6 Seconds

Noninvasive Pacing

- Waveform: Rectilinear, Constant Pulse
- Current: 0 - 200 mA
- Rate: 30 - 80 ppm
- Refractory Period: 340 ms (30-80 ppm); 240 ms (90-180 ppm)
- Mode: Demand or Fixed Rate

Monitoring Parameters

- Waveform: ECG, Pleth, IBP (2 channels), Co2
- Numerical Values: HR, PR, SpO2%, Temp, IBP (2 channels), NIBP, EtCO2

Saving Life Is our Pleasure





► OEM Modules

- Mainboard

- IBP & Temp Module:

2,4 channels IBP and 2 channels Temp

- ECG & Respiration Module:

3,10 channels high CMRR ECG amplifier

3,7,12 Leads

- Thermal Recorder

- EEG Amplifier Module:

21 Channels high CMRR EEG amplifier



● ElectroEncephaloGram

► Neuroset E24

Technical Highlights

- Compact & Portable (Laptop System)
- 21 Channels EEG + 3 Extra Amplifier Channels
- FFT Analysis
- Programmable Photic Stimulator
- Color Brain Map
- Impedance Check Measurement
- USB and Serial Communication
- Compact and Portable Design
- Multi Languages Support



EEG, Opening a Window to Neuroscience



► Neuroset E110

- 21 Channels EEG + 3 Extra Amplifier Channels
- 15" Monitor (Laptop System)
- Thermal Printing on 216 Mm Wide Continuous Paper Same as Analog EEGs
- FFT and Brain Mapping Software Analysis
- Remontage and Digital Filtering
- Impedance Check Measurement
- USB and Serial Communication
- Compact and Portable - Persian and English Languages Support
- Laser Color and Monochrome Printer Support

EEG Portability Is Possible Now



► EEG Accessories

EEG

- EEG Wire
- EEG Electrodes
- Patient Head cap



● Operation Room Equipment

► Surgical light

Luminous LED 5

- Multicolor Medical LEDs
- Capability of Imaging Surgery Area Using Full HD Camera (Optional)
- Light Focus Adjustment
- Controllability Using Smart Hospital System
- Color Temperature Adjustment
- Integrated Laser Pointer
- Emergency Battery Backup (Optional)
- Monitor display for showing surgery required images
- Video conferencing
- Controllability using mobile, tablet and remote control



Luminous LED 3

- Multicolor Medical LEDs
- Light Focus Adjustment
- Controllability Using Smart Hospital System
- Color Temperature Adjustment
- Integrated Laser Pointer
- Emergency Battery Backup (Optional)
- Monitor display for showing surgery required images
- Controllability using mobile, tablet and remote control



Shadowless Operating Table, Surgeons Dream

Technical Data of SAIRAN LED5 and LED3 Surgical Light			
Parameter	Model	LED5	LED3
Illuminance (KLUX)		160	130
Color Temperature (Kelvin)		3500•3750•4000•4250•4500•4750	3500•3750•4000•4250•4500•4750
Focusable Light Field Size(mm)		180-300	170 - 270
Color Rendering Index (Ra)		92	92
Working Distance (cm)		70 - 140	70 - 140
Number of LEDs		45	30
Life Time of LEDs		Up to 50000	Up to 50000
Mount		Ceiling	Ceiling
Power Consumption (W)		180	160
Operating Voltage AC (V)		220	220
Camera with Interface Board for LED5(Optional)			
Objective system		10-Fold Optical Zoom 12-Fold Digital Zoom F=3.8 mm (wide) to 38 mm (telephoto) F 1.8 to F 3.4	
Video Signal		1080 p/50	
Video Output		HDMI	
Focusing System		Automatic & Manual	
Minimum Object Distance		10 mm (wide) to 800 mm (telephoto)	
Resolution (Megapixel)		2.38	
Power Consumption (W)		6	
Dimension (mm)		45.6 *48.8 *78	
Weight (g)		260	



● Medical Suction

▶ MEDICA C55F

Technical Highlights

- High Vacuum: 90 kPa, 675 mmHg
- High Flow: 50 L/min
- Dimension: 965x510x480 mm
- Weight: 17kg - Safety Classification: IPX1
- In Accordance with EN1079-1, EN60601-1, EN60601-2 Standards
- Fast Vacuum Build Up - Quiet in Operation
- Hygienic and Easy to Use

Application

- Plastic Surgery
- General Surgery
- Neurosurgery
- Outpatient Surgery Centers
- Emergency Units



Extreme Vacuum Is Now Available

▶ MEDICA C25

Technical Highlights

- High Vacuum: 80 kPa, 600 mmHg
- High Flow: 20 L/min
- Dimension: 350x180x300 mm
- Weight: 6 kg
- Safety Classification: IPX1
- In Accordance with EN1079-1, EN60601-1, EN60601-2 Standards
- Small, Lightweight and Portable Design
- Various Vacuum Levels - Quiet in Operation
- Easy to Use Operating Elements



First Device in Emergency Condition

▶ MEDICA MC10

Technical Highlights

- High Vacuum: 40 kPa, 300 mmHg
- High Flow: 16 L/min
- Dimension: 350x180x300 mm





- Weight: 6 kg
- Safety Classification: IPX1
- Small, Lightweight and Portable Design
- Various Vacuum Levels - Quiet in Operation
- Easy to Use Operating Elements

When Children Need Their Own Suction Unit

▶ Suction Accessories

- Jar 1, 2, 3 Liter
- Lid 1, 2, 3 Liter
- Over Fill Protection
- Suction Bag & Canister
- Patient Tube
- Jar Holder
- Bacterial Filter
- Pedal Switch



▶ Suction Trolley

- Extremely Impact Resistant
- Antistatic Wheels



▶ Cardioset ASA 9

- 19" Diagonal Display
- ECG + HR
- SpO2% + PR
- RESP + RR - NIBP
- 2 Temp + 2 IBP
- CO2 (Mainstream)

Options

- Arrhythmia Analyzer
- ST Segment Detection
- 2.0" Thermal Recorder
- CO2 (Sidestream)
- BIS





► **Cardioset VINA 9**

- 15" Diagonal Display
- ECG + HR
- SpO2% + PR
- RESP + RR
- NIBP
- 2 Temp + 2 IBP
- CO2 (Mainstream)

Options

- Arrhythmia Analyzer
- ST Segment Detection
- 2.0" Thermal Recorder
- CO2 (Sidestream)
- BIS



► **PARS**

- 15", 17", 19" and 21" Color TFT Display (User Selectable)
- ECG/RESP, SpO2%, NIBP, 2 Channels IBP, 2 Channels Temp, Multi-Gas/CO2/O2
- Depth of Anesthesia
- Sidestream CO2, ST/Arrhythmia
- Thermal Recorder, 12 Leads ECG



► **Cardioset X110**

- 10.4" color TFT Display
- ECG/RESP, SpO2%, 2 Channels IBP, 2 Channels Temp, NIBP
- CO2, Thermal Recorder



► **Cardioset S110**

- 6.7" color TFT Display
- ECG/RESP, SpO2%, NIBP

