




















**HEALTH  
EXPORT MANAGEMENT COMPANY**

# **PRODUCTS CATALOGUE**

**2021**

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# Introduction

**Health Export Management Company (Health EMC)**, affiliated to Salam Holding, is established with the aim of exporting knowledge-based products and services and related know-how from Iran to Global Markets and importing the required items such as raw materials, capital goods, and knowledge transfer to Iran.

The main objective of this company is to make constructive interaction with global markets, select trusted partners, and transaction of goods and services, that are competitive in the market in terms of technology, quality, price, and after-sales services and achieve customer satisfaction.

As an export agent in the field of medical equipment, pharmaceutical and health services, Health EMC has been licensed by about 30 Iranian knowledge-based companies and also companies with advanced technologies to do marketing and export their products and services to regional and trans-regional markets. we try to convey more detailed information about these products and services and possible cooperation frameworks as well.

It is our pleasure to start a long-term, win-win cooperation to respond to the interests of the two countries and local companies. We try to be a reliable partner for you and Iranian companies and we are interested in ***B2B sales, B2C sales, after-sales service provision, joint ventures, production with local brands, cobranding and knowledge transfer partnerships.***



1

## Neonatal Care





1-1

## NICU

- **Infant Cot 033**
- **Infant Incubator 111**
- **Transport Incubator 320**
- **Infant Intensive Phototherapy**
- **Infant Home Phototherapy 0271**
- **Infant Radiant Warmer 083**
- **Oxygen Hoods**



# Infant Cot 033

Infant cot model 033 is specifically designed for infants in hospital. The clear partition of each side of the bed makes it easier for the nurse to observe and watch the infant from a short distance. In addition the bed is very easily maneuvered because of the wheels on each side and the infant is at reaching distance. Furthermore the base of the bed can adjust to a 12 degrees angle.

- **Tilting patient pad:** During care, it is important base of the bed can adjust. Our infant base bed can adjust to a 12 degree easily
- **Pulled out patient:** For special treatments the patient pad can be pulled out completely.
- **Built in convenient storage:** During care it is important to have necessary items available at all times. The one basket of the infant bed is accessible easily from front side and in every situation.
- **Castors:** Smooth castors provide a stable position of the infant baby and allow easy movement. Two casters are fitted by locks.
- **Additional Specification:**

Dimension and Weight	Dimension of patient deck	66cm*30cm
	Height of of patient deck	17.5cm
	Weight	15.5Kg
	Length	98.4cm
	Width	50cm
	Height	91.5cm
Available option	Basket	
Classification according to Directive 42/93/EEC		



# Infant Incubator 111

## Incubator for warming and intensive care of new born babies

The incubator 111 helps to facilitate the baby ongoing health. it combines the climate stability of a closed ambulance with Increased access and contact possibilities offered by open care systems. The incubator 111 makes a calm environment for preterm babies in the first few months of their live.

- Always the right climate: selecting air and skin temperature, humidity and oxygen concentration
- Ergonomic design / Baby Access
- Control Panel: which displays air temperature, skin temperature, humidity control and alarms
- Height adjustment: adjusting appropriate height of the incubator by pushing the pedals
- Compartment noise: Ultra low noise level (less than 50 dB) inside the compartment
- Tilting patient pad: patient pad can be adjusted into head-up or head-down position
- Built in convenient storage: four drawers are accessible easily from front sides.
- Pulled out patient pad: For special treatments the patient pad can be pulled out completely.
- Additional Specification:

Dimension, weight	Weight	90Kg
	Dimension of patient deck	600*340 mm
	Height of patient deck	985-1190 mm
Alarms	Skin sensor failure	Audible and Visible
	Air sensor failure	Audible and Visible
	Circulation Fan failure	Audible and Visible
	Oxygen fan failure	Audible and Visible
	Cut-out	Audible and Visible
	Skin temperature overheat	Audible and Visible
	Air set deviation	Audible and Visible
	Line Interruption	Audible
	Low battery	Visible
Operating parameters	Skin Temperature	28°C to 37.5 °C
	Air Temperature	28°C to 37°C override to 39 °C
	Temperature Resolution	0.1 °C
	Humidity Range	30%-90% RH
	Humidity Resolution	0.1 °C
	Internal noise level	< 48 dB (A)
	Warm-up time	30 minutes
	Disposal filter	
Electrical parameters	Voltage , current	220A -2.4 A
	Maximum power input (with maximum power to sockets)	550 W
Classification according to Directive 93/42/EEC		





# Infant Transport Incubator 320

Incubator for warming and intensive care of new born babies during transporting  
Transport of preterm birth from one hospital to another is the most difficult start into our world. The transport incubator 320 helps to facilitate the baby ongoing health. it combines the climate stability of a closed ambience with Increased access and contact possibilities offered by open care systems.

- Always the right climate
- Monitor /operator terminal: Air & skin temperature, cabin lighting, Phototherapy, alarms and ...
- Heat control
- Ergonomic design / Baby Access: front and rear doors are easily open for easy access to the baby
- Compartment noise: Ultra low noise level (less than 50 dB) inside the compartment
- Phototherapy: phototherapy system for treating neonatal jaundice fewer than 18 mg
- Lighting inside the compartment: The lamps have natural brightness for the treatment of infants
- Oxygen Cylinder: Infant transport incubator is equipped with an 8-liter oxygen cylinder
- Additional Specification

Dimension , weight	Weight	41 Kg
	Dimension of patient deck	300*500 mm
Alarms	Skin sensor failure	Audible and visible
	Air sensor failure	Audible and visible
	Circulation fan failure	Audible and visible
	Skin temperature overheat	Audible and visible
	Thermostat Cut- out	Audible and visible
	Air set deviation (ASD)	Audible and visible
	Line Interruption	Audible
	Low battery	visible
Operating parameters	LCD touch screen	3 inches touch screen graphic display
	Intelligent battery	3 hours to fully charge the battery
	Air Temperature	28°C to 37°C
	Skin Temperature	28°C to 38.5 °C
	Temperature Resolution	0.1°C
	Oxygen cylinder	8 litter
	Internal noise level	< 40db(A)
	Cabin light	2W
	Phototherapy	450nm , 12W
Electrical parameters	Voltage (AC) , Power	100-120 Vac 50-60 Hz , 177W
	Voltage (AC) , Power	200-240 V ac 50-60Hz , 177W
	Voltage (DC) EMS , Power	12Vdc , 150W
	All 3	All power supply models meet EMC standards
Classification according to Directive 93/42/EEC		



# Infant Intensive Phototherapy

## The LED phototherapy device for outstanding performance

Neonatal jaundice is a strain for both new born babies and their parents, especially in the first few days of life. A prompt therapy with shortwave, blue radiation can prevent damage to the central nervous system and ease symptoms of jaundice, thus relieving stress for everyone involved. Intensive Phototherapy LED is the outcome of a continuous product development within phototherapy, keeping in mind both the babies' health and nursing staff's needs. This assures a high performance device which is simultaneously improving the nursing situation

- The right environment for jaundice treatment: The apparatus by light radiation in wavelength 460 nm thorough infant skins in different and special process causes bilirubin molecule which leads to infant jaundice to be broken and evacuated through kidneys.
- Control Panel: which controls, monitors and displays Skin temperature and Treatment time
- High-performance phototherapy: The Intensive Phototherapy
- Automated therapy
- Castors: Sturdy smooth castors provide a stable position and allow easy movement
- Additional Specification:

Dimension , weight	Weight	37 Kg
	Dimension of patient deck	560*460 mm
	Height of patient deck	881 mm
	Fan failure	Audible and visible
	End of Treatment	visible
	Line Interruption	visible
	Overheat	Audible and visible
	Low battery	Audible and visible
Operating parameters	LED tube	8, 12, 16 (9W)
	LED tube code	T8-600B02
	Touch screen control panel	
	Air and skin temperature measurement	
	Lifespan of the LED tube	30000 hours
	Treatment time adjustment	
	Irradiance intensity adjustment	50% or 100%
	Exposure angle	360°
Electrical parameters	Ventilation of the Enclosure	Fan for ventilation of enclosure air and cooling the electrical part
	Voltage	200-240 V
	Power	360 W
Classification according to Directive 93/42/EEC		



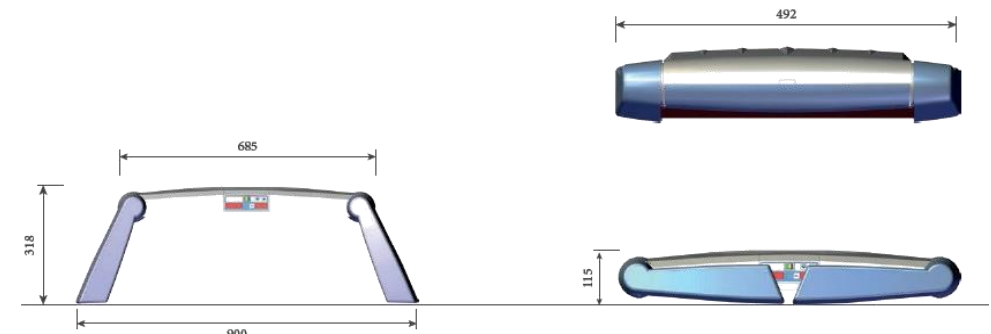
# Infant Home Phototherapy 0271

Neonatal jaundice is a strain for both new born babies and their parents, especially in the first few days of life. A prompt therapy with shortwave, blue radiation can prevent damage to the central nervous system and ease symptoms of jaundice, thus relieving stress for everyone involved. Home Phototherapy LED assures a high performance device which is simultaneously improving the nursing situation.

The apparatus by light radiation in wavelength 460 nm thorough infant skins in different and special process causes bilirubin molecule which leads to infant jaundice to be broken and evacuated through kidneys. The treatment of infant jaundice is done by light radiation in 460 wavelengths through infant skins. In Home phototherapy the time of light therapy is adjustable.. It is portable because of having movable stands and special bag moreover the treatment could be done at home near the mother with the administration of the physician. Infants with the bilirubin under 18 mg could be easily treated by this apparatus. The advantage of this apparatus is that fewer hospital beds would have been occupied because the treatment is done near mother at home.

- Control Panel: which displays Treatment time, Led lifetime and low battery
- High-performance phototherapy
- Automated therapy: Once the therapy duration runs out, the device stops the therapy automatically
- Additional Specification:

Dimension , weight	Weight	6Kg
Alarm	End of Treatment	Audible and visible
	Line Interruption	Audible
	Low battery	Audible and visible
	End of LEDs' lifespan	Audible and visible
Operating parameters	LED tube	4 (9W)
	LED tube code	T8-600B02
	Digital Display	
	Lifespan of the LED tube	30000 hours
	Treatment time adjustment	
	Exposure angle	45°
Electrical parameters	Voltage	220 V , 50Hz , 1A
	Power	50 W





# Infant Radiant Warmer 083

## Infant intensive postnatal care

During the first hours and days of life, new born and premature infants primarily need warmth, comfort and closest possible contact to their parents. The Infant Radiant Warmer 083 has been developed for these very specific conditions and offers unimpeded access for diagnostic and therapeutic measures as well as care treatments.

Long wave infrared radiation is not visible and takes smooth effect on the epidermis, the subjacent dermis and the bloodstream.

- Always the right climate
- Control Panel: which displays Skin Temperature, Treatment time, Suction, Alarms, Heater’s power
- Heat control
- Gentle soft-lift height adjustment
- Homogeneous illumination
- Focus on the patient
- Functional wall assembly: The walls can be folded up and down by one hand.
- Built in convenient storage: two drawers of the Infant warmer are accessible easily from sides
- Additional Specification:

Dimension , weight	Weight	135 Kg
	Dimension of patient deck	780*680 mm
	Height of patient deck	875-1050 mm
Alarms	Skin sensor error	Audible and visible
	Skin temperature overheat	Audible and visible
	Temperature set deviation	Audible and visible
	Power failure	Audible and visible
	Low battery	visible
	Cut-out	Audible and visible
	Line Interruption	Audible
Operating parameters	Mechanical tray tilting	Up to 12 degree front and rear
	Heat power indicator	10% to 100%
	LED Lamp	2*10 Watt
	Temperature range	28°C to 39.3°C
	Controllable temperature range	28°C to 37°C
Electrical parameters	Voltage	200-240 V
	Maximum power input (with maximum power to sockets)	1100 W
Facility	Monitor tray	
	Radiology cassette	
	Rotary head while radiology	
	Adjustable oxygen flow	
	Adjustable suction vacuum	

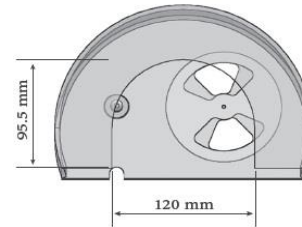


# Oxygen Hoods

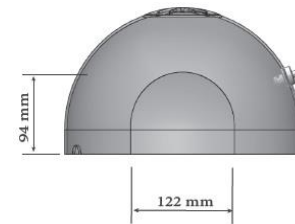
During the first hours and days of life, new born with heart or lung problems may need to breathe increased amount of oxygen to get normal levels of oxygen in their blood. Our Oxygen Hoods have been developed for these very specific conditions and oxygen therapy provides Neonatal with extra oxygen.

## ○ Additional Specification:

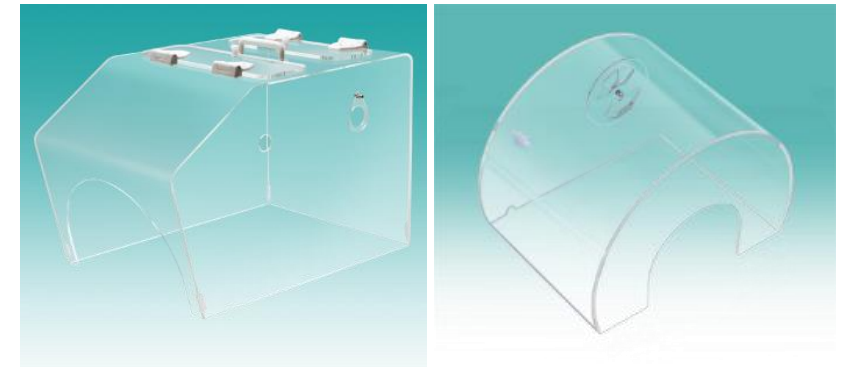
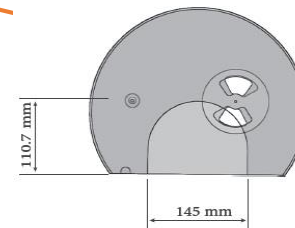
Oxygen Hood Model 041		
Dimension and Weight	Weight	530 g
	Compartment volume	4.5 litter
	Crater height	95.5 mm
	Crater width	120 mm



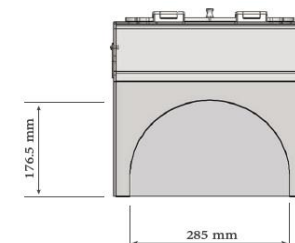
Oxygen Hood Model 042		
Dimension and Weight	Weight	340 g
	Compartment volume	6.5litter
	Crater height	94 mm
	Crater width	122 mm



Oxygen Hood Model 044		
Dimension and Weight	Weight	1000 g
	Compartment volume	12.3 litter
	Crater height	110.70 mm
	Crater width	145 mm



Oxygen Hood Model 047		
Dimension and Weight	Weight	1200 g
	Compartment volume	5 litter
	Crater height	176.50mm
	Crater width	285 mm



1-2

## Cardiovascular Diagnostic Devices

- **Infants Heart Failure Diagnostic Device**





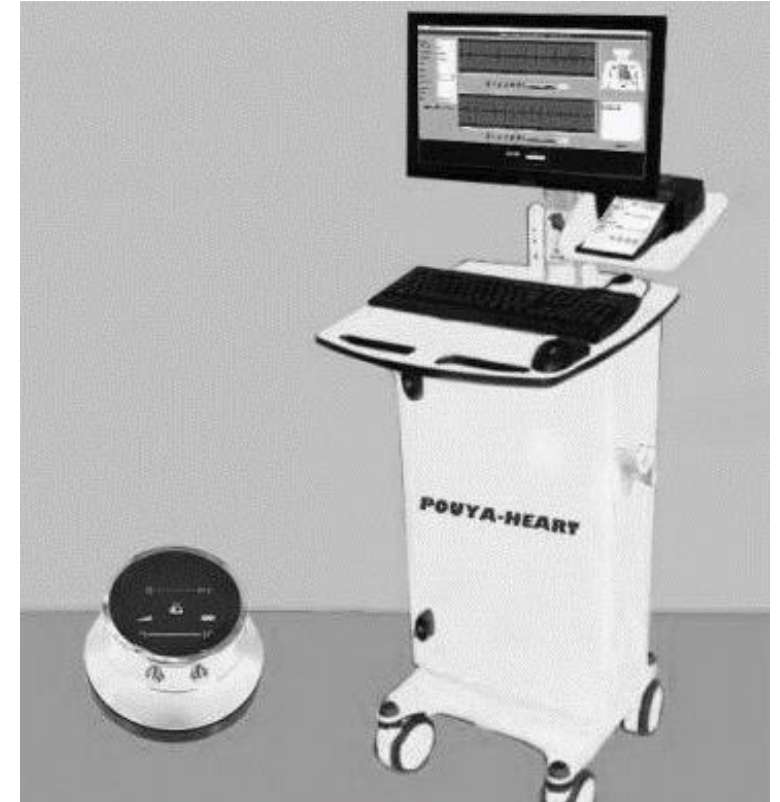
# Pouya-Heart Diagnostic Device

Automated digital phonocardiograph, POUYA-Heart is an auscultation device for automatically screening children's heart diseases. The screening accuracy of the digital phonocardiograph, POUYA-Heart, is by far higher than the accuracy of a typical pediatric cardiologist who invokes conventional auscultation or even computer-assisted auscultation.

A large number of pediatric referrals for cardiac evaluation have normal hearts. Besides, pathological symptoms are sometimes neglected during conventional auscultation due to incapability exists in human auditory system, such as masking effect. To find solution to these problems, we have done an elaborated international research and development for 21 years with close contact with engineering schools and children's university hospitals.

**Discriminating Between Different Heart Sound** Another interesting capabilities of the system is its discrimination power in distinguishing innocent murmurs from the pathological murmurs.

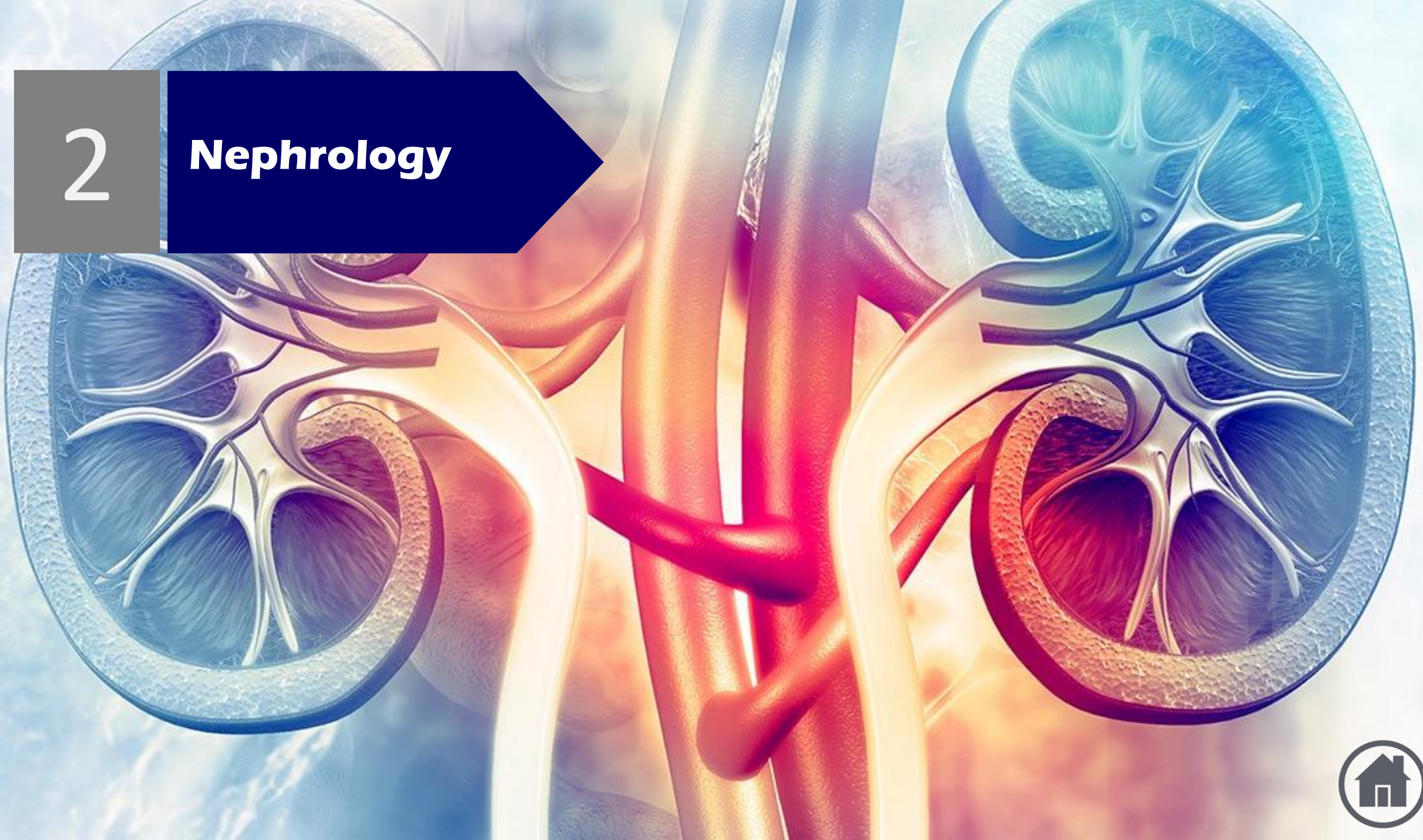
Beside automated screening, as an intelligent digital phonocardiograph, POUYA-Heart also provides different options such as, listening and playback of recorded heart sounds with adjustable intensity levels, various selectable time scales for viewing the whole or part of a sound cycle, it shows the diagnosing results, segmentations and other characteristics of the signals. POUYA-Heart also provides the possibility of recording sound signals from different locations, ULSB, URSB, LLSB, and APAX.





2

## Nephrology



## 2-1

## Dialysis Field

- **Hemodialysis Machine**
- **Central Reverse Osmosis Water Purifier Systems**
- **Portable Reverse Osmosis Water Purifier Machine**





# Hemodialysis Machine ATF1022

- Touchscreen monitor
- Blood pressure sensor on intake
- Online wireless remote monitoring of dialysis data during dialysis for networked dialysis machines
- Data logging and saving data files/log files for each dialysis session
- Printable graphic dialysis result sheet at the end of hemodialysis process
- Hematocrit module for monitoring blood viscosity/thickness
- Programmable for three types of disinfection operations (Chemical, Thermal and Combined)
- Ability to compute and measure KT/V during hemodialysis process (Online Clearance Monitoring/OCM)
- Adjustable settings for UF and Sodium profiles
- Pressure cuff for monitoring blood pressure
- BTM module for monitoring blood temperature
- Audio and voice alarms
- 45 minutes' battery backup

Comfort control	35.5-38	°C
Temperature alarm limits	34.5-38.5	°C
Conductivity range	12-16 (adjustable)	ms/cm
Flow	(100)-(800)	mL/min
Transmembrane pressure, mm Hg Rx dialysis	Up to (+500)	mmH
Bicarbonate	Yes (2.5)-(3.8)	
Ultrafiltration removal rate	(0.1)-(5)	L/h
Arterial pressure	(-300)-(+300)	mm Hg
Venous pressure	(0)-(+400)	mm Hg
Blood pump range	50-500	mL/min
Heparin pump range	0.5-10	mL/hr



# Central RO Water Purifier Systems

- Automatic washing cycles (Auto Flush)
- Recycling of produced water and prevention of excessive sewage
- Digital sensors for inlet water and sewage flow rate
- Digital sensors for pre-purifier and membrane pressure
- sensor for conductivity, TDS and water temperature
- Audio alarm and automatic function in case of disruption
- Easy access to parts for maintenance and repairs

Device Identification		
Name	Central Reverse Osmosis (R.O.) Water Purifier	
Models	AVISA-400, AVISA-800, AVISA-1200, AVISA-1600, AVISA-2000	
Nominal Capacity	400 to 2000 liter/hr. , suitable for 6 to 30 dialysis bed	
Standard	Based on Medical Equipment Standards IEC60601-1	
R.O. Main Unit		
Dimensions (Width× depth× height)	1500 mm× 660 mm× 500 mm	
Pressure Vessel	Stainless Steel or Fiberglass	
Bypass Valve	To control intake water to membrane	
Multistage Pump	High Quality Stainless Steel pump	
Produced Water Specifications		
Capacity	400 to 2000	Lit/hr
Outflow Pressure	2-4, Adjustable	Bar
Recovery percentage	70-85	%
Standards	ANSI/AAMI RD62	



# Portable RO Water Purifier Machine

Portable R.O. machine, designed for standalone hemodialysis station. This unit is suitable for Home Dialysis and/or CCU/ICU utilization. Avisia100 fulfills all requirements for microbiological purity and economic performance.

- Automatic washing cycles; at start-up of the unit and also during unit stand-up period, ensures microbiological purity.
- initial testing of all components and actuators at start-up of the unit
- Audio alarm and automatic function in case of disruption of inlet water
- Recycling of produced water and prevention of excessive sewage

Device Identification		
Name	Portable Reverse Osmosis (R.O.) Water Purifier	
Models	AVISIA-100	
Nominal Capacity	100 liter/hr. , suitable for 1-2 dialysis bed	
Standard	Based on Medical Equipment Standards IEC60601-1	
Physical Features		
Weight	40 kg	
Dimension (width × depth × height)	500 mm × 30 mm × 70 mm	
Main Body Material	Steel Sheet with electrostatic color	
Display	Touch Screen , 5.7 inch	
Produced Water Specifications		
Outflow Pressure	2-4, Adjustable	Bar
Recovery percentage	70-85	%
Standards	ANSI/AAMI RD62	



3

## Neurology





# 3-1

## Neurological Diagnostic Devices

- **EEG Devices**
  - **EEG-3840**
  - **Portable 3840**
- **EMG Devices**
  - **EMG/NCV/EP 5000Q**
  - **EMG/NCV/EP 5000Q-Pro Portable**



# EEG-3840

It is a strong, high quality, and user friendly EEG system with flexible configuration on 24 and 32 channels and optional functions such as, 8 extra channels and Surface EMG and ECG.

## Hardware:

- Routine or clinical EEG 3840 contains the following parts:
- 24 or 32 channel Head box with its cable (EEG Cable)
- Interfacing box
- Photic stimulator and its cable
- Isolation transformer (if required)
- PC in case of requires (with Microsoft Windows XP/Vista/Seven Professional operating system and EEG application software)
- Trolley (if required)
- Printer (if required)
- EEG accessories
- Optional video EEG recording (if required)

## Software:

- Programmable functions include: ~~Montage Manager~~ and figures, Montage Editor, filters, scales, time division, EEG process pattern (stimulator, and HV patterns), review and recording panels, reanalysis tools, video EEG data extraction, ASCII data extraction, editable report generator.
- Event detector and navigator, events summary and navigation at a glance.
- High Quality video recording, analog zoom, time stamp, programmable review speed, data selection and storage, easy annotation and data selection.
- Programmable systems default values such as sample rate, channels number, low and high pass filters, time scales, and sensitivities, annotation, selection, and report texts.
- Test results can be reviewed even electronically or in printed format. User has the opportunity in printing selected parts of the recorded signals.
- Brain Mapping (for selected or whole EEG data).
- Impedance Checking.
- Available with either laptop or PC.



# EEG Portable 3840

EEG Portable 3840 has all you need for a portable device: ultra-low noise, easy and fast to use in Emergency and ICU rooms. It is a strong, high quality, and user friendly EEG system with 22 EEG and 1 ECG channels.

## Hardware:

Routine or clinical EEG 3840 contains the following parts:

- 22 EEG Channel + 1 ECG Channel Head Box
- Photic stimulator and its cable
- Laptop (with Microsoft Windows XP/Vista/Seven Professional operating system and EEG application software)
- EEG accessories
- Easy cap (if required)
- Optional video EEG recording (if required)
- Hardware Specifications: CMRR > 100 dB; Sensitivity 10  $\mu$ V – 2 mV; Noise Level < 2  $\mu$ V; Frequency 0.16 – 500 Hz; Programmable Sample Rate 500 – 3000 Hz.

## Software:

- Programmable functions include: Montage Manager and figures, Montage Editor, filters, scales, time division, EEG process pattern (stimulator, and HV patterns), review and recording panels, reanalysis tools, video EEG data extraction, ASCII data extraction, editable report generator.
- Event detector and navigator, events summary and navigation at a glance.
- High Quality video recording, analog zoom, time stamp, programmable review speed, data selection and storage, easy annotation and data selection.
- Programmable systems default values such as sample rate, channels number, low and high pass filters, time scales, and sensitivities, annotation, selection, and report texts.
- Test results can be reviewed even electronically or in printed format. User has the opportunity in printing selected parts of the recorded signals.
- Brain Mapping (for selected or whole EEG data).
- Impedance Checking (also available by using a button on the head box).



# EMG/NCV/EP 5000Q

MG/NCV/EP 5000Q Manufacturing is a full featured diagnostic EMG system with a low noise high performance amplifier and state-of-the-art software features. This system can be configured for 2 channels (configuring for 4 channels is optional).

In following, there are the list of the tests which can be taken:

- Needle EMG
- Sensory NCV
- Motor NCV
- F Wave
- H reflex
- RNS (Repetitive Nerve Stimulation)
- Blink Reflex
- Visual Evoked Potential
- Auditory Evoked Potential
- Somatosensory Evoked Potential

## Technical Specifications:

- Accuracy: Time measurement error: less than 5%; Amplitude measurement error: less than 5%
- 2, 4 Channel EMG and EMG/EP Systems
- Input Impedance: >1000M OHM, < 30pF; CMRR >100dB; Noise < 5 $\mu$ V r.m.s
- Low Cut ( -6dB/octave) 0.1, 1, 3, 10,, 30,100, 200, 300, 400, 500, 1000, 2000Hz
- High Cut ( -12dB/Octave) 40, 50, 60, 80, 100, 200, 300,400, 500 Hz; 1, 2, 3, 10, 20 KHz
- Notch Filter 50Hz/60 Hz Selectable
- A-D Conversion 12 Bit ADC
- Sweep Duration 1ms to 1s per channel
- Average Double buffer averaging with choice of display modes
- Display Customer option; Display Sensitivity 0.2 $\mu$ V to 30mV/div
- Power Requirements: Input 100-220 volts 50Hz/60HZ
- Approx. 500VA max (dependent on configuration)





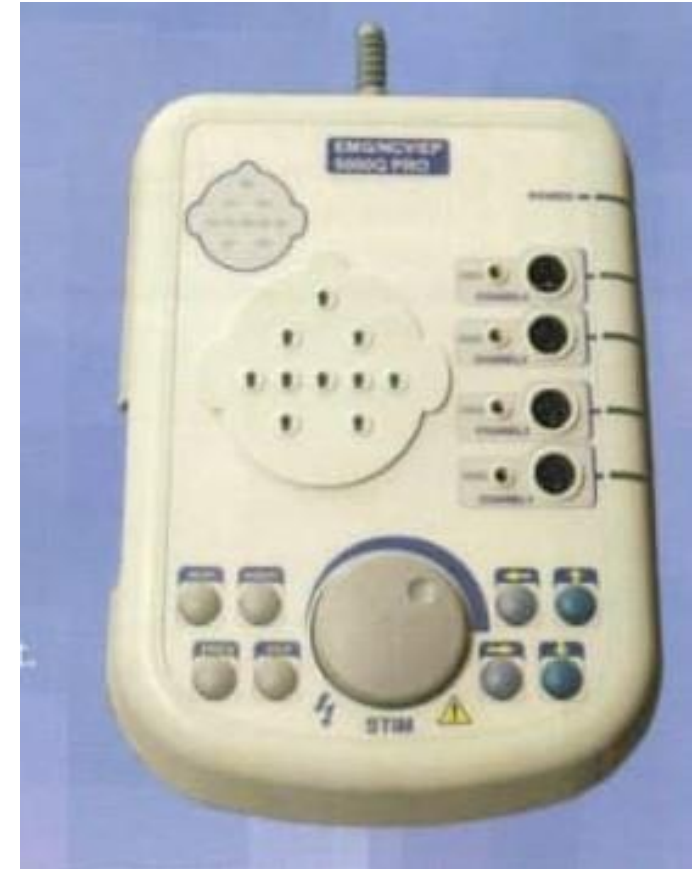
# EMG/NCV/EP 5000Q & 5000Q-Pro Portable

## EMG/NCV/EP 5000Q Portable Features:

- Ultra Slim Portable EMG system with light weight and easy to port
- 2-channel Low noise amplifier
- Easy to setup and state-of-the-art software development.
- Generating customize report in Word, PDF, or Video.

## EMG/NCV/EP 5000Q-Pro Portable Features:

- Portable EMG system with Light weigh and easy to port
- 2 or 4 channel Low noise amplifier
- Designed to achieve the high flexibility, portability.
- Easy to setup and State of the Art software Development.
- Generating customize report in world, PDF, or Video.
- Compact and efficient user interface



BACK



CONTACT US

4

## Cardiology



4-1

## Cardiovascular Surgery

- **Open Heart Surgery**
  - **ACT Kit**
  - **Sternum Sutures**





# ACT Kit (Activated Clotting Time Kit)

ACT Kit (Activated Clotting Time Kit) is one of the most used Point of Care (POC) type tests, which in cases such as open-heart surgery with an oxygenator pump, angioplasty, electrophysiology and some other cardiovascular interventions, in order to monitor the effect of anticoagulant heparin is used. For this purpose, devices and kits are made by the world's leading brands, such as Medtronic, which accelerates and increases the accuracy of this test.

One of the most critical and key technologies for this test is the diagnostic kit, consisting of a polymer cartridge set, containing an activating reagent within a cuvette.



BACK



CONTACT US



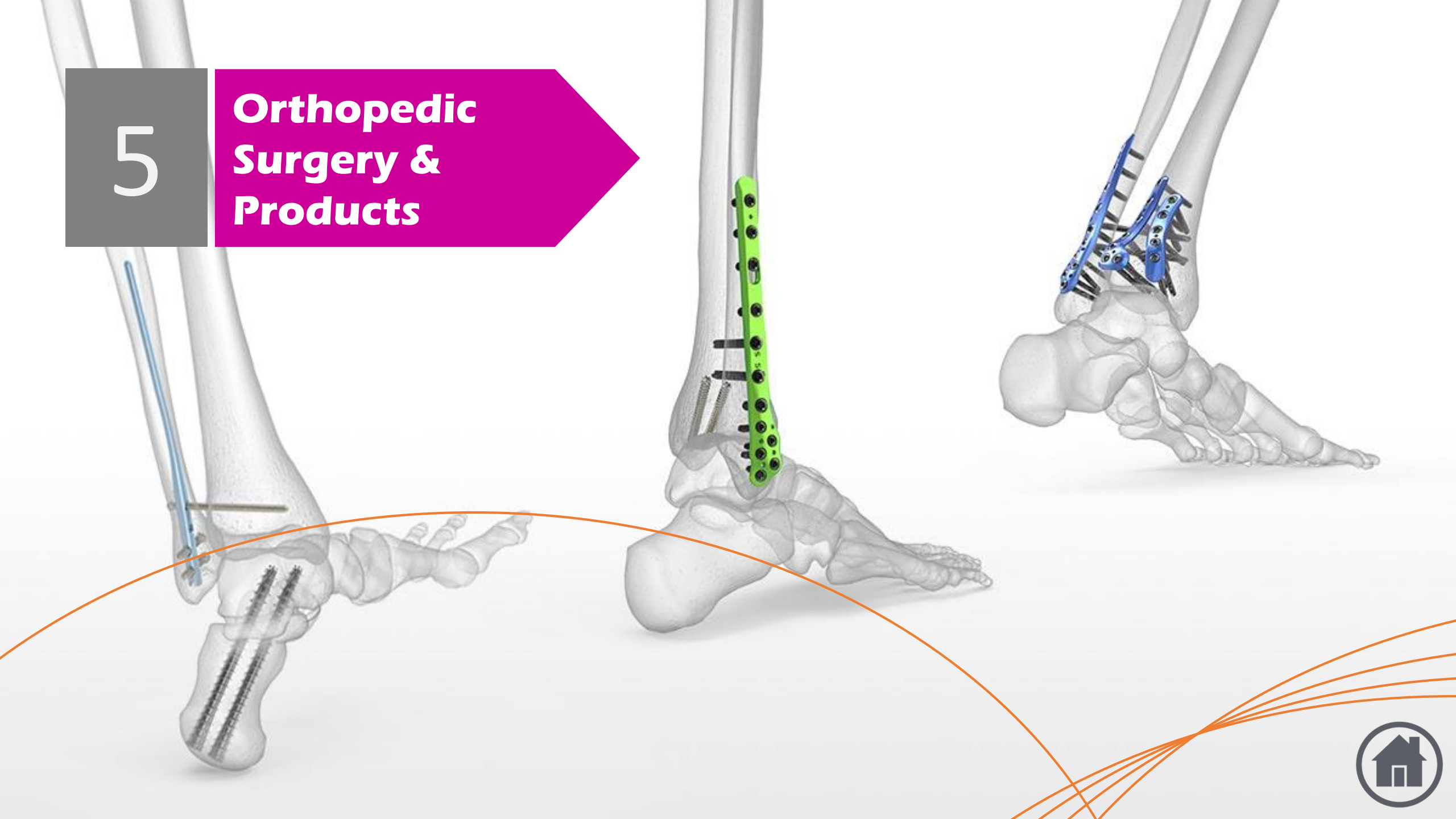
# Sternal suture (steel suture)

The most common tool used for clamping the chest sternum in open heart surgery is a non-absorbable metallic suture, known as Sternal Suture. This suture often remains in the patient's body for life, thus it requires to be resistant to corrosion and maintain long-term tensile strength. Bio-compatibility, non-sensitivity, non-poisonous, and non-infectious are also other important factors in its function. These metallic sutures can be monitored by X-rays.



5

## Orthopedic Surgery & Products



- **Spine Surgery**
  - **Set Screw & Rod**
  - **Thoracolumbar Products**
  - **Cervical Anterior Plate**
  - **Domino**
  - **Cervical Peek Cages**
  - **TLIF & PLIF Peek Cages**



# Set Screw & Rod

## Set Screw (Nut)

Ref. No	Size
106-10-00	10 mm



## Rod

- Diameter: 5.5 mm
- Hex Head

Ref. No	Size
108-55-08	L 8
108-55-10	L 10
108-55-12	L 12
108-55-14	L 14
108-55-16	L 16
108-55-18	L 18

Ref. No	Size
108-55-20	L 20
108-55-30	L 30
108-55-40	L 40
108-55-50	L 50
108-55-60	L 60



BACK



CONTACT US



# Thoracolumbar Products

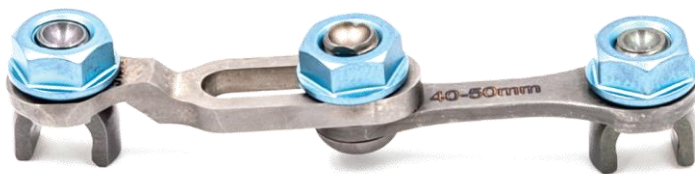
## Cross Link

Ref. No	Range	Size
103-27-00	25-30 mm	27.5 mm
103-35-00	30-40 mm	35 mm
103-45-00	40-50 mm	45 mm
103-55-00	50-60 mm	55 mm
103-65-00	60-70 mm	65 mm



## Cross Link

Ref. No	Range	Size
104-27-00	25-30 mm	27.5 mm
104-35-00	30-40 mm	35 mm
104-45-00	40-50 mm	45 mm
104-55-00	50-60 mm	55 mm
104-65-00	60-70 mm	65 mm



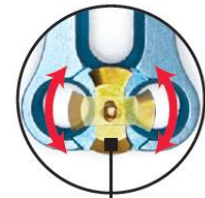
BACK



CONTACT US

# Cervical Anterior Plate

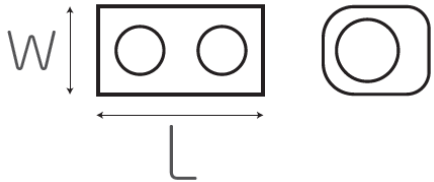
- Low profile
- Biocompatible titanium material
- Designed in accordance with lordosis of neck
- Wide measurement range
- Easy and quick locking
- Implantation of the desired angles
- 2 mm thickness



# Domino

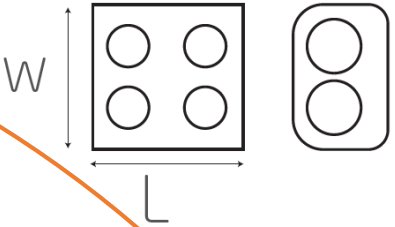
## Domino 1 Hole

Ref. No	Size
D.1608.01	W 8.6 / L 16



## Domino 2 Holes

Ref. No	Size
D.1615.02	W 15.1 / L 16

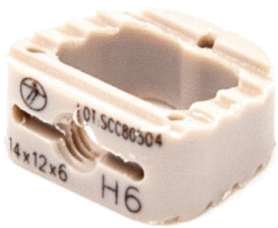
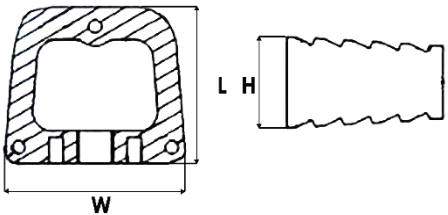


# Cervical Peek Cages

## Cervical Peek Cage

- Titanium markers.
- Maximum graft area.
- Trial and openers.
- Implantation at one time.

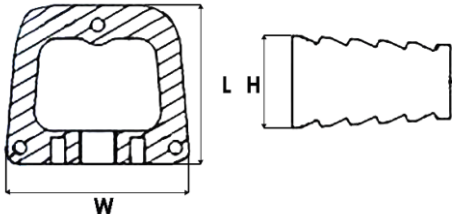
Ref. No	Width	Length	Height
C.1214.05	14 mm	12 mm	5 mm
C.1214.06	14 mm	12 mm	6 mm
C.1214.07	14 mm	12 mm	7 mm
C.1214.08	14 mm	12 mm	8 mm



## Locking Cervical Cage (With Blade)

- 7o Angle
- Titanium markers
- Maximum graft area
- Trial and openers
- Implantation at one time
- User handle friendly
- Special blade design

Ref. No	Width	Length	Height
C.1214.05	14 mm	12 mm	5 mm
C.1214.06	14 mm	12 mm	6 mm
C.1214.07	14 mm	12 mm	7 mm
C.1214.08	14 mm	12 mm	8 mm

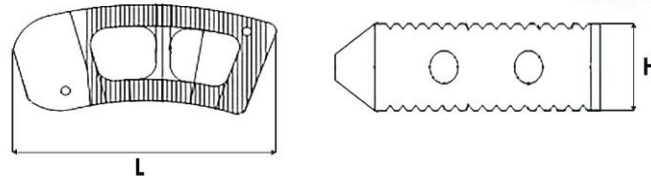




# TLIF & PLIF Peek Cages

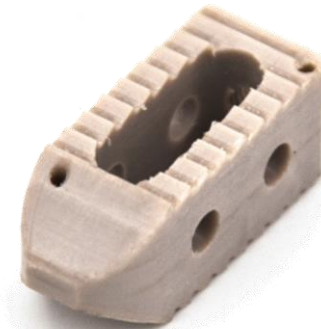
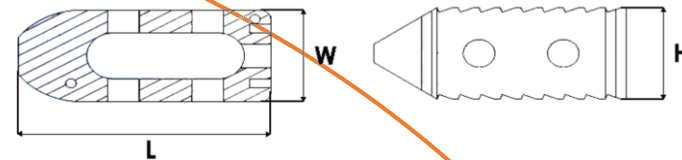
## PLIF Peek Cage

- Implantation at one time
- Strong and sturdy body structure
- Special tooth form
- Maximum graft area
- Excellent anatomic design



## PLIF Peek Cage

- Safe and fast implantation
- Easy use with the anatomical structure
- Angle measurement option



6

## Ophthalmology



## 6-1

# Eye Surgery

- **Lens Injection Systems**
- **Brilliant Blue**
- **Endo illumination Probe**
- **PFCL (Decaline)**
- **Tamponade**
- **Retractor**



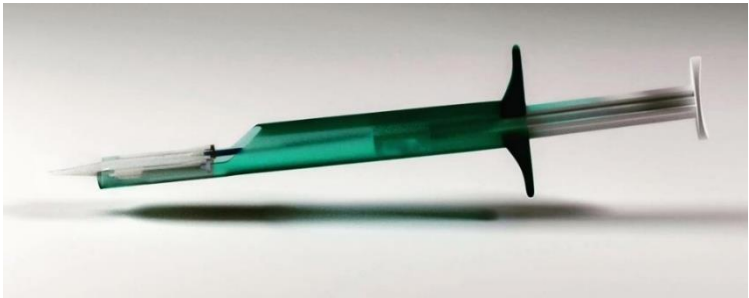
# Lens Injection Systems



the Butterfly injector and cartridge system (Sunject, packed, sterilized) represents yet another advancement for safe and effective micro-incision cataract surgery. Not only the surgeons but also the theater nurses can do the loading of the lens easily and smoothly. The unique design of this injector and cartridge ensures the accurate positioning of the lens and therefore lead into a secure and precise position for a perfect lens delivery into the eye. Lens insertion is gentle and even without the lens wedging or twisting. Sunject guarantees a gradual controlled release, and consequently a correct positioning in the eye. Sunject provides maximum safety with remarkably improved efficiency.

The lens can be loaded quickly and precisely via guiding rails. Sunject single-use injector-sets with or without lock come sterile packed in dispenser boxes of 10 sets.

	Size 2.2 mm	Size 2.8 mm	Size 3.2 mm
Hydrophilic power	0 -25		0-34
Hydrophobic power	o - 22	0 - 30	0 -34



	Size 1.8mm	Size 2.2 mm	Size 2.8 mm	Size 3.2 mm
Hydrophilic power	0 -28	0 — 34	0 — 34	0-34
Hydrophobic power	o - 22	0 - 25	0 - 30	o -34

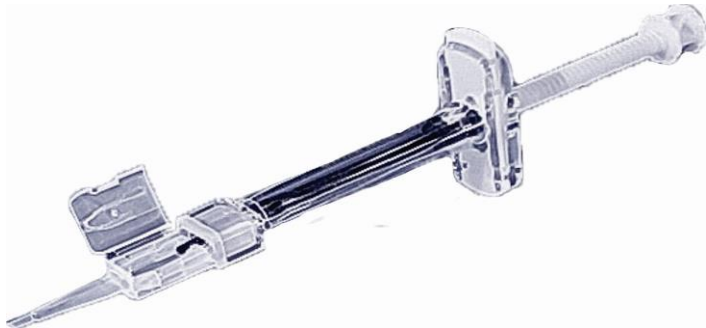




# Lens Injection Systems

Eyesun preloaded ject's latest addition to the PRELOADED JECT family is the PRELOADED JECT SCREW injection system. This is a single-use screw-type injector with a new design plunger and is available for incisions of 2.2 mm to 3.2 mm and it can be used for Hydrophobic IOLs as well.

With a further enhancement of the PRELOADED J ECT Injection System, we introduce the newly developed loading chamber which includes a supreme technology for back loading any type of hydrophobic lens.



	Size 2.2 mm	Size 2.8 mm	Size 3.2 mm
Hydrophobic power	-5 to 22	-5 to 28	-5 to 34

# Brilliant Blue

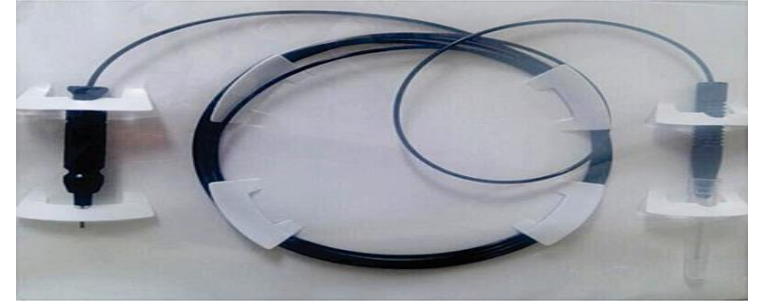
Brilliant Blue G is used in an ophthalmic solution for staining the internal limiting membrane (ILM) of the eye during ophthalmic procedures. This membrane is thin and translucent, making it difficult to identify during eye surgeries that require high levels of visual accuracy.

- Precise and intense staining of the ILM due to fast sinking dye
- Safe application under air and BSS Quick and easy application (Ready-to-use)
- Physiological osmolality
- Sterilized
- Biocompatible



# Endoillumination Probe

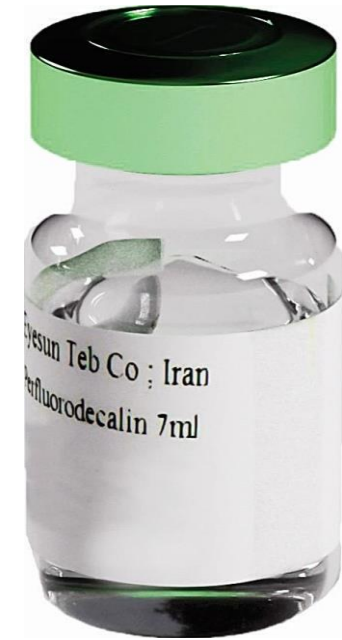
- **Used in vitrectomy Surgery**
- **20 & 23 gauges**
- **Light Pipe ( Standard ) - Wide Pipe - Chandelier for ALCON -DORC- & High quality ; 10 / BOX**
- **Sterile : EO**



# PFCL (Decaline)

Perfluorocarbon Liquid or PFCL is labeled for use in primary or recurrent RD complicated by giant retinal tear, proliferative vitreoretinopathy, and penetrating ocular trauma. It is also used in other conditions to stabilize the retina and to identify breaks in regular RD, to float a dislocated crystalline lens or intraocular lens, and to evacuate hemorrhage from the subretinal or suprachoroidal space.

- Perfluorodecaline fluid
- Used for vitrectomy surgery High quality
- 7 ml & 5 ml ; Sterile





# Tamponade (Sf6 Gas)

Sulphur Hexafluoride ( $\text{SF}_6$ ) is a man-made gas comprising of one Sulphur and six fluoride atoms. Key properties of the gas are that it is extremely chemically stable and has a relatively high density. At the end of the vitrectomy surgery, the ophthalmologist is required to fill the space left by the vitreous gel. This can be achieved by injecting a small amount of  $\text{SF}_6$  gas into the eye, in order to maintain the pressure required to allow the retina to remain in place and adequately heal. Due to the high density of the  $\text{SF}_6$  gas the body is unable to absorb it for 3-4 weeks. In comparison, air takes only 1-3 weeks, which does not allow the eye sufficient time to repair.

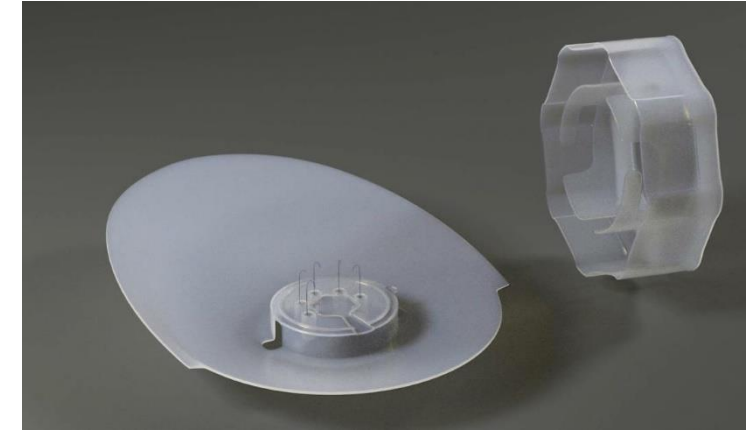
- Sulfur Hexafluoride 99.99%
- Medical gas
- Used for Vitrectomy surgery
- Capacity: 50 ml & 80 ml
- Sterile: EO



# Retractor

Flexible iris retractors are used for temporary retraction (pupil enlargement) of the iris where dilation cannot be achieved pharmacologically. This technique minimizes further iris prolapse and damage to the iris by the phacoemulsification needle, as well as increasing the space accessible by the phacoemulsification needle.

- Iris Retractors / Iris Hooks Flexible Hooks used to increase pupillary diameter during surgery.  
The attached silicon stopper allows better grip and easy adjustment of pupil size.
- provided in a sterile pack of 5 pcs



7

**Dental**



# 7-1

## Dental Materials

- **Alum-Stop (Aluminum Chloride 25%)**
- **Calcium Hydroxide**
- **Cera-Etch (Hydrofluoric Acid Gel)**
- **17% EDTA Solution & Gel**
- **Hypo-Endox**
- **Endo-Cal (Calcium Hydroxide Paste)**
- **Eugenol**
- **Morva Etch**
- **Morva Prep (EDTA Cream)**
- **Morva-Sept (Chlorhexidine 2%)**
- **Tempo-Cem**
- **Zinc Oxide**
- **ZOE (Zinc Oxide-Eugenol)**





# Alum-Stop (Aluminum Chloride 25%)

Tissue management is a key challenge during indirect procedures. The right choice of dental hemostatic agents can make all the difference. Hemoban™ Gel 25% Aluminum Chloride Hemostatic Solution provides a clinically better way to achieve fluid control and reduce the risk of secondary bleeding.

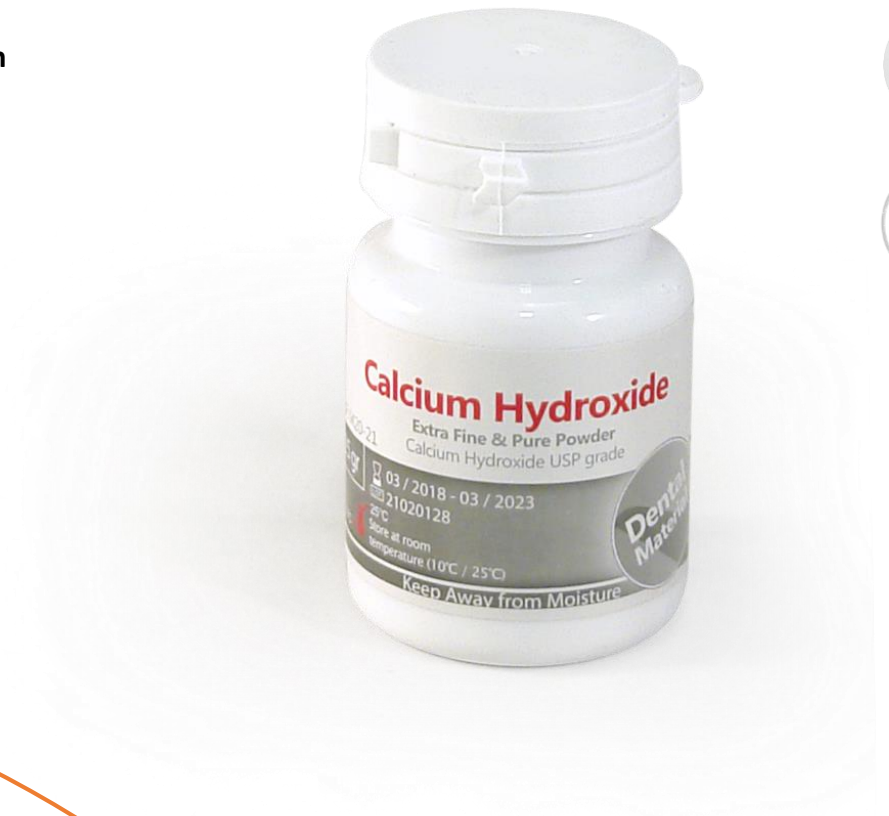
- Colorless gel for better performance
- without leaving any stains or Colors
- Good viscosity without spreading
- No interaction with bonding agent



# Calcium Hydroxide

Calcium Hydroxide is used as a cavity liner, cement base, root canal filling material, direct and indirect pulp capping material in restorative dentistry. This material also helps in the formation of reparative dentine.

- Calcium Hydroxide
- Powder for root canal treatment Ideal for use as a temporary root canal filler
- Fine powder
- USP Grade
- Antibacterial



# Cera-Etch (Hydrofluoric Acid Gel)

Hydrofluoric Acid (HF) acid usually is used to etch the internal surface of the ceramic restoration. This acid increases surface relief in micromechanical bonding of resin cement to ceramic restoration. In dentistry, Cera-Etch gel (Hydrofluoric Acid gel) is used for porcelain and ceramic restorations inside of the mouth. Its use should be done with caution.

- Suitable yellow pigment with easy cleaning ability
- Appropriate gel viscosity for injection



# 17% EDTA Solution & Gel

Intended for chemo-mechanical root canal preparation, EDTA 17 % solution is an effective calcium binding or chelating agent used to facilitate instrumentation of root canals and for smear layer removal. The solution decalcifies the canal walls making it easier to enlarge and shape the canal with files and reamers.

- 17% EDTA Solution and gel
- For irrigation during endodontic therapy
- Chelating effect of EDTA make root canal softened calcium dissolved DTA%17 Solution
- Easy to enlarge the canal and clean it
- Excellent for final rinse



# Hypo-Endox

## Hypo-Endox 5.25% solution Sodium Hypochlorite 5.25%

- Effective Disinfectant
- Efficient and significant reduction of microorganism
- Dissolve the organic matter present in the root canal
- During mechanical canal widening %s.2S it removes the non-vital pupl debris e
- Removal of dead tissues
- Effective destruction of microbial biofilms and old biofilms
- It can be dissolved necrotic tissue and abscess and can be disinfected deep layers





# Endo-Cal (Calcium Hydroxide Paste)

- Ready to use and contains Radiopack material
- Suitable for filling infected dental canals
- Strong antibacterial activity up to 72 hours
- Continuous release of Calcium ions into the root canal tissue
- Appropriate paste viscosity for channel injection
- Stay in the mouth for up to 10 days



# Eugenol

- Pure USP grade
- Antiseptic, Analgesic and Sedative essential.
- Antisepsis of the root-canal
- Treatment of dry socket that may develop after extraction
- Temporary obscuration of the root-canal where pulp is partially exposed
- Treatment of exposed pulp



# Morva Etch

Acid etching is the use of an acidic substance to prepare the tooth's natural enamel for the application of an adhesive. The acid roughens the surface microscopically, increasing retention of resin sealant. Etching of dental enamel with acid removes the smear layer and opens enamel tubules.

- (Phosphoric Acid gel) Total Etching gel
- Suitable blue pigment with easy cleaning ability with water
- Appropriate gel viscosity for injection
- Easy to use for the dentist without prior preparation



# Morva Prep (EDTA Cream)

- Contains of 15% EDTA, 10% Urea Hydrogen Peroxide
- Root canal cleaning, widening and Chemo-mechanical preparation
- Removal of smear layer in canal
- Ideal product for cleansing and preparation of canal by using of files
- Appropriate for tight canals in posterior tooth
- Softening of dentin canal



# Morva-Sept (Chlorhexidine 2%)

## Morva-Sept solution and gel (Chlorhexidine 2%) Effective Disinfectant

- Effective elimination of dangerous *Candida albicans* colonies in 30 seconds
- Effective rinsing within the root canal
- Removal of dead and pus tissues
- Effective destruction of microbial biofilms and old biofilms
- Significant and effective reduction of micro-organisms
- No toxic effect on soft gum tissue
- Persistence of antimicrobial efficacy in root canal for up to 72 hours and up to 2 weeks
- Ability to absorb and attach live tooth tissue and efficacy during treatment





# Tempo-Cem

2-part temporary cement-Zinc Oxide paste with Eugenol gel

- Zinc oxide based paste with resin and accelerator and an Eugenol gel based on eugenol a EBA
- Non-interference with permanent cement
- Easy removal unlike high bond strength
- Chew-resistant seal, repair, prevent penetration
- Easy handling



# Zinc Oxide

powder For making and filling dental paste

- Fine powder
- USP grade
- Mild antibacterial effect



# ZOE (Zinc Oxide-Eugenol)

Zinc oxide eugenol (ZOE) is a material created by the combination of zinc oxide and eugenol contained in oil of cloves. An acid-base reaction takes place with the formation of zinc eugenolate chelate. The reaction is catalysed by water and is accelerated by the presence of metal salts. ZOE can be used as a dental filling material or dental cement in dentistry. It is often used in dentistry when the decay is very deep or very close to the nerve or pulp chamber.

- Temporary dental cement that has analgesic properties
- Quick setting time
- Pulp protection
- Temporary dressing and temporary filler
- High resistance
- Low solubility



# 8

## Hospital Furniture, Infrastructure, Logistics & Services



## 8-1

## Cleaning & Disinfection

- **Endoscope Washer**
- **Automatic Bedpan Washer**
- **Waste Paper Shredder**
- **Washer & Disinfector**
- **Dental Instrument Washer & Disinfector**
- **Drying & Storage Cabinet for Endoscopy**
- **Pulp Dishes**
- **Medical Refrigerators**





# Endoscope Washer

No.	Features	Description
1	Function	Leak test 1.Washing by cold water & detergents inside & outside the endoscope 2.Immersion in high level Liquid & disinfection inside & outside the endoscope 3.Final rinse inside and outside the endoscope device 4.Alcohol injection to speed up drying of the work & air channel 5.Use filtered air (HEPA) in endoscope work & air channel
2	Cabin	1.Structure : Stainless Steel profile 20 * 20 (mm) 2.Cabinet : AISI 304 sheet 3.Sink and Front Panel : Anti-acid ABS 4.Door : Plaxy Glass
3	Fitting & pipes	AISI and Brass
4	Nozzle	Spray Arm To wash all endoscope points
5	Operation Of Door	1.Electric jack 2.Lower ocular for easy opening of the door without interference by hand or foot involvement
6	Chambers	2 Stainless steel separate chambers for detergents and high level liquid
7	Dimensions	Height 110 , Depth 72, Length 68 CM
8	Consuming water	20 to 40 liters of water depending on the choice of different program
9	Alarms	1.Door openness 2.Lack of liquid detergent and disinfectant 3.Blockage 4.Expire time of disinfectant 5.Counter of the number of times the disinfectant is used 6.Disrupt the internal channel washing function. SV – inlet 7.Disconnect the internal channel wash and disinfection connector
10	Leak test	Digital control of internal channel air pressure and audible error notification
11	Accessories	1.Printer for record device performance 2.Alcohol chamber 3.Foot sensor for operating of door 4.Leakage test 5.portable
12	weight	85kg
13	Power	220V single phase & 1 KW max



# Automatic Bedpan Washer

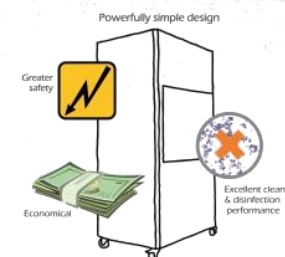
No	Feature	Description
1	Function	<ul style="list-style-type: none"> <li>•Washing with cold water</li> <li>•Washing with warm water</li> <li>•90° steam disinfection</li> <li>•Cold water rinse</li> </ul>
2	structure	Profil (20*20) AISI profil (30*20)
3	cabin	AISI304
4	Water tank	AISI304
5	Piping system	High pressure hose up to 10 times
6	Water pump	PEDROLLO (1hp) /Pentax pump
7	Water level controller inside the tank	Adjustable electrical controler for up / down level
8	Electrical controler system	Programmable micro controler . PLC delta model
9	Display and control panel	Touch HMI, Water and scratch resistant display dimension 3/5 inch
10	Ped pan holder and pipe holder	Steel rebar with chromium coating
11	Boiler	AISI304, 3litre
12	Element	3 kw
13	Tempreture controler	Tempreture cars PLC delta thermocouple sensor
14	Holder stand	Adjustable and fixed
15	Drain pipe	Springe pipe ( 6 cm diameter )
16	Power input voltage	220 v, 50Hz , 1 phase
17	Power consumption	3kw
18	Electrical door	Jack 8.4m/sec – 3000N – 24 vdc
19	Foot pedal	For opening and closing door with out hand interference
20	Electrical protection system	2 separate fuse for fase and nul input
21	Water tank dimension	42 (height) 20(depth) 20(length)
22	Boiler dimension	Dia 10cm height 27 cm
		145 (height) 44(depth) 62 (length)

## BEDPAN WASHER & DISINFECTOR

For Hospitals & Clinics  
Model : TT. 8W - 2001



T.T.S. 2001 is a compact bed-pan washer with a modern design have been constructed on the basis of EN ISO15883 has specially been developed for hospitals, nursing homes, private clinics, etc. The machine is also suitable for isolation rooms where there is a need of washing and disinfection.



# Waste Paper Shredder

No	Features	Description
1	function	<ul style="list-style-type: none"><li>•Dewatering by cold&amp; warm water</li><li>•Crushing cycle</li><li>•Discharge</li><li>•Wash chamber</li></ul>
2	Electric control	PLC controler
3	Door	Foot pedal
4	Spring of door	8.4 m/sec – 3000N – 24vdc
5	capacity	2Bedpans or 2 unit bottles or 2 receivers
6	structure	Iron profil
7	Cabin `s cover material	Door and front tray made of formed ABS      Body made of scratched AISI
8	The blade material	AISI 316 ,3mm thick
9	Dimension /close door	550mm *750mm * 105mm
10	Dimension /open door	550 mm* 750 mm * 120mm
11	Water consumption	About 8 litre
12	weight	75 kg
13	Engine power	1/1 kW , 1400 RPM , clutch
14	chamber	AISI 316 , thich 2mm
15	Installation requirements	<ul style="list-style-type: none"><li>-Two tap of warm &amp; cold water , 2cm diameter , 1 meter from the ground</li><li>-Drain 80-100mm on the ground from the wall, 400mm</li><li>-Power outlet , 1 phase , separate power phase , minimum 10amp</li><li>Fan for room `s air conditioning</li><li>-floor washing for washing space around the machine</li></ul>

## WASTE PAPER SHREDDER

Basin, Urine tube, Receivers &...  
Model : TT . DR



Paper containers, is shredded on the water by steel blades. Paper containers for liquids remaining pulp waste water (sewage) are discharged.



**Operation**



Time (S)	0	30	90	130	180
Water (30 S)	Start	End			
Maceration (100 S)		Start	End		
Drain (50 S)			Start	End	



# Washer & Disinfector

No	Features	Description
1	Function	1.Designed & manufactured to ISO15883 2.Initial wash & disinfection with cold water 3.Disinfection with warm water & disinfectants in different times 4.Use of neutralizer in different times 5.Use medicinal liquid in order to speed up drying instrument 6.Final rinse & use soft water 7.Drying 8.Double Door
2	Device cabin	Stainless steel 304
3	Wash chamber	Stainless steel Ti – 316 , sheet thickness 2 mm
4	calibration	Ability to fix temperatures fault & concentration of chemicals
5	Input voltage	3 PH . 30A . 50Hz
6	Power	P max 21 kW - P min 2w
7	Water pump	LEO , 2/2 kW , 2"
8	Washing liquid & disinfection pump	Dosing pump , accurate to 1cc per second & 5 vdc
9	Motorize valve , 2- ports	Faber stainless steel anti – acid , 1 inch
10	Doors	The door automatically slides up & down with photocell sensor
11	Dimensions with wheels	107(L) × 77(W) × 196(H) cm
12	Dimensions of chamber	55(L) × 57(W) × 97(H) cm
13	Dryer element	6 kW
14	Capacity	8 Baslacet for 8 set
15	weight	390 Kg
16	Amount of water consumed	Minimum 100 litre (in normal program) Maximum 160 liter (in special program )
17	Piping system	Use stainless steel fittings & high pressure silicone hoses
18	Operation time	40-70 min depending on different programmes
19	Motorize 2- parts	Faber brand stainless steel anti – acid . 1/5 inch (one & one second )
20	Alarms	1.Finishing disinfectant & polishers alarm 2.Counter at nozzles rotation 3.Open doors alarms 4.High inlet cold water temperature s' alarm 5.Hot water alarm 6.Drain alarm 7.Hitter alarm





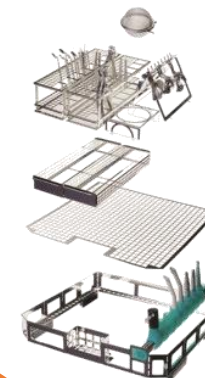
# Dental instrument Washer & Disinfector

No	Features	Description
1	function	<ul style="list-style-type: none"> <li>•Dewatering by cold&amp; warm water</li> <li>•Crushing cycle</li> <li>•Discharge</li> <li>•Wash chamber</li> </ul>
2	Electric control	PLC controler
3	Door	Foot pedal
4	Spring of door	8.4 m/sec – 3000N – 24vdc
5	capacity	2Bedpans or 2 unit bottles or 2 receivers
6	structure	Iron profil
7	Cabin `s cover material	Door and front tray made of formed ABS      Body made of scratched AISI
8	The blade material	AISI 316 ,3mm thick
9	Dimension /close door	550mm *750mm * 105mm
10	Dimension /open door	550 mm* 750 mm * 120mm
11	Water consumption	About 8 litre
12	weight	75 kg
13	Engine power	1/1 kW , 1400 RPM , clutch
14	chamber	AISI 316 , thich 2mm
15	Installation requirements	<ul style="list-style-type: none"> <li>-Two tap of warm &amp; cold water , 2cm diameter , 1 meter from the ground</li> <li>-Drain 80-100mm on the ground from the wall, 400mm</li> <li>-Power outlet , 1 phase , separate power phase , minimum 10amp</li> <li>Fan for room `s air conditioning</li> <li>-floor washing for washing space around the machine</li> </ul>

## DENTAL INSTRUMENTS WASHER & DISINFECTOR Bench type

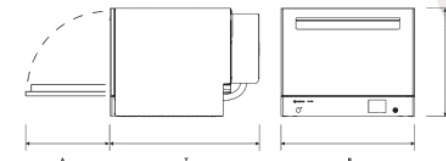


Model : T.T.IW - 74



### DENTAL INSTRUMENTS WASHER & DISINFECTOR (Bench type) Model: T.T.IW - 74

The stainless-steel cabinet for the DENTAL WASHER & DISINFECTOR allows simple installation in an existing space in your sterilization line. You can easily store your process chemicals or a further basic basket in the base cabinet. It is also suitable for Gynecology , Dermatology , Podiatry , ENT, and Proctology.



Design & manufacturing is according to iso 15883





# Drying & Storage Cabinet for Endoscopy

No	Features	Description
1	Cabin	AISI304
2	Hanger	Pelaxiglas thickness 15mm
3	Capacity	6 Endoscopic devices
4	Controller	Delta PLC Programmable
5	Display	HMI delta, 3/4 Inch touch, Programmable
6	Circulation fan	2100 rpm, 88W
7	Air compressor	Oil free, 160W, 240 L/min
8	Electrical specifications	220V, Single phase, 1100W, 50Hz
9	Dimension (Height)*(Width)*(Length)	Closed door : 98*60 *216 cm Opended door : 115 cm
10	Weight	180 kg
11	Air filter	Hepa filter (H13)
12	Door	Glass with steel frame
13	Drying	Purge by filtered air
14	Holder structure	Adjustable height & fix
15	installation	Max 16 A
16	Capabilities	<ul style="list-style-type: none"> <li>• Expiration alarms, Hepa filter to swap</li> <li>•Programmable</li> <li>•Saving time control in separate for each endoscopic by touch key in HMI</li> <li>•24hours functionality with out shut down</li> <li>•Noise 70db&lt;</li> <li>•Positive pressure in chamber for preventing of contamination</li> <li>•Teflon holds for protection of endoscopy `s lens</li> <li>•Usable hanger for all endoscopy brands</li> </ul>
17	lighting	Green& red halogen to indentify device status
18	sensor	Open door alarming sensor
19	Hanger	6 Hanger



# Pulp Dishes

Disposable pulp containers are waterproof with no leaks. These containers include bedpan, urine bottle & receiver. New paper is used to make these containers that it has been approved for use in the hospital and infection control & can be a replacement for plastic containers and stainless steel these purpose of using these containers is to prevent the transmission of infection and reduce environmental infection multipurpose containers usually do not became disinfected after use and cause infection transmission. This infection spreads to the environment, but these containers are destroyed after use with the contents & excreted through the hospital sewage.



# Medical Refrigerators

No.	Features	Description
1	Function	Cold air circulation in the floors
2	Cabin insulation	Polyurethane foam
3	Cabin	AISI 304
4	Controller	Programmable microcontroller, delta plc model
5	Display panel	Touch HMI, scratch resistant, with display dimensions 4.3
6	Temperature controller	Delta PLC temperature card and K sensor
7	Holder base	Adjustable and fixed
8	Electrical	220 v , 50 Hz single phase , 185 W (max)
9	Dimension	Internal: height 70 * depth 45 * length 55 (cm) Exterior: height 130 * depth 60 * length 65 (cm)
10	Capacity	150 L
11	Floors	4
12	Environment operating temperature	10° – 32° c
13	Temperature range	1° – 6° c
14	Floors temperature difference	1.5° c
15	Sensor accuracy	0.1° c
16	Installation	1.Suitable temperature condition for environment (5° -40° c) 2.Turn on the device one hour after moving 3.Installation place should not be open Area and exposed to direct sunlight 4.Do not expose to water 5.The installation environment must have emergency power 6.Dimension: height 150 * depth 80 * length 80 (cm)
17	Recordable	USB port to record temperature information at night and day
18	Options	1.Ability to adjust and control the temperature depending on the type of blood or drug use according to the user 2.Graph performance report 3.Audible and visible alarm 4.Auto defrost system 5.Switch door lock

## PHARMACY REFRIGERATORS

Model : TT.MR.150/300



**Pharmacy refrigerator**  
**Model: TT-MR - 150**  
Designed to store pharmaceuticals, medicines and other related products. Applicable for hospitals, drug stores, pharmaceutical companies.



**Multi Air Flow**



**Touch screen**



**Perfect NO Frost**





## 8-2

## Stainless Steel Hospital Furniture

- **Trolleys**
- **Sinks**
- **Cabinets**
- **Tables**
- **Examination Beds**
- **Poles**
- **Other Products**



# Trolleys

Our Hospital Trolleys are categorized into:

- Anesthesia Trolleys
- Emergency Trolleys
- Medicine Trolleys
- Instrument Trolleys
- Electrocardiography Trolleys
- Wound Dressing Trolleys
- Safety Box Trolleys
- Single & Double Bowl Stand Trolleys
- Laundry & Linen Trolleys
- Chart File Trolleys
- Hospital Food Trolleys
- Conventional Trolleys

Features:

- Made of 304 stainless steel
- Stabilized with a main structure, in case, to extend product lifetime
- Easy Handling & Moving
- Capability of utilizing for operating theater
- Special Design
- Comprised of required accessories for easy usage
- Comprised of anti-static lockable hospital casters



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CONTACT US



# Sinks

Our Hospital Sinks are categorized into:

- Scrub Sinks
- Single, Double & Triple-step Processing Sinks
- Infant Bath Sinks
- Plaster Sinks
- Clinical Sinks (Suction Bottle Discharge Sink)

Features:

- Made of 304 stainless steel (and Corian materials in Corian sinks)
- Having unique design for preventing from water splash
- Ability to be used with lever or pedal faucet or automatic hands-free faucet
- Ability to add a tray or shelf above the sink for drying tools
- Facilitated with water jet gun (or the ability to add specialized water jet gun and compressor)



BACK



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# Cabinet

Our Hospital Cabinets are categorized into:

- Operating Room Cabinets
- Medicine Cabinets
- Balloon Stent Cabinets
- Catheter Cabinets
- Laparoscopy & Urology Instrument Cabinet
- Floor Cabinets
- Wall-Mounted Cabinets
- Portable Units
- Fixed Units

Features:

- Made of 304 stainless steel
- Equipped with main structure, in case, for high resistance, longevity and balance
- Specially designed to control nosocomial infection
- Equipped with sloped roof, in case, for hospital infection control
- Capability of utilizing for clean and dirty utility room and treatment room
- Capability of utilizing in different hospital sections such as operating room, emergency departments, CSSD section of hospitals and CSR in clinics, urology and laparoscopic surgical room, hospital pantries and other public areas, based on application.
- With special Anti-static hospital casters, in case.
- With double-layered full stainless steel sheet with foam reinforcement, in case.



# Tables

**Our Hospital Tables are categorized into:**

- **Falcate Tables for Operating Theater**
- **Surgical Tables**
- **Fixed & portable Mayo Tables**
- **Working Tables**
- **Packing Tables**
- **Linen Inspection Tables**
- **Wall-mounted Folding Tables**

**Features:**

- **Made of 304 stainless steel**
- **Capability of utilizing in general and specialized operating rooms, resuscitation and orthopedic plaster room, CSSD section of hospitals and CSR in clinics, based on application.**
- **With special Anti-static hospital casters, in case.**
- **height adjusting mechanism, in case.**
- **Comprised of two double-layer and water-resistant sheets for hospital infection control, in case.**
- **Reinforced with waterproof foam, in case.**



BACK



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# Examination Beds

## Examination Bed (Full Stainless Steel)

- Made of 304 stainless steel
- Capability of utilizing for medical offices in clinics and hospitals
- Capability of utilizing for emergency departments, check-up and injection rooms
- Capability of utilizing for orthopedic plaster rooms
- Facilitated with roll jar for using disposal bed sheet
- Equipped with basis insole made of Zellamid® which will protect bed from slipping and movement while using
- Including special mattress made of cold foam and resisting plastic
- Capability of tolerating 300 kg weight

## Examination Bed (Iron)

- Made of ST37 steel with anti-bacterial electrostatic coating
- Capability of utilizing for medical offices in clinics and hospitals
- Capability of utilizing for emergency departments, check-up and injection rooms
- Capability of utilizing for orthopedic plaster rooms
- Facilitated with roll jar for using disposal bed sheet
- Equipped with basis insole made of Zellamid® which will protect bed from slipping and movement while using
- Including special mattress made of cold foam and resisting plastic
- Capability of tolerating 300 kg weight



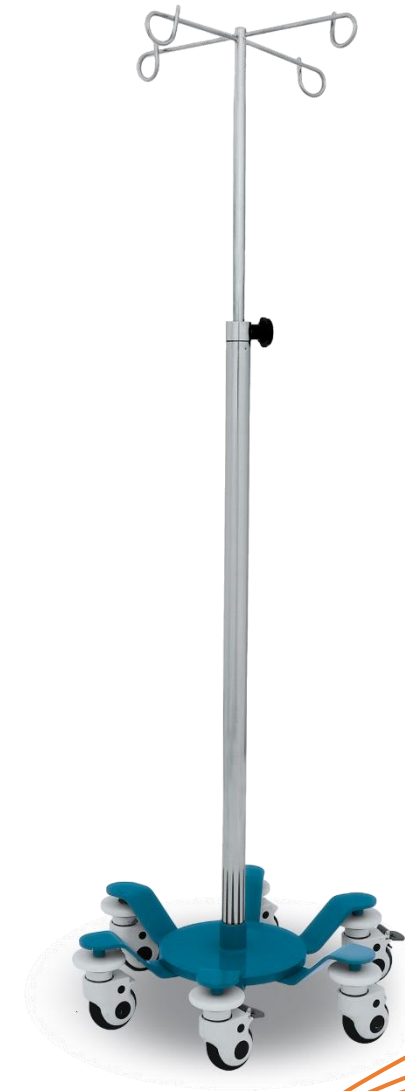
# Poles

Our Poles are categorized into:

- Wall-Mounted IV Poles
- Ceiling Mounted IV Poles
- Floor stand Portable IV Poles

Features:

- Made of 304 stainless steel
- Capability of utilizing for all units of hospitals
- With height adjustment, in case.
- With special Anti-static hospital casters (in stand portable IV poles)
- Including a unique design, light weight and balance stability while moving
- With a unique design on base part for balance when moving and hanging several serums with high weights (in stand portable IV poles)
- With color category variability for base part for assigning to different departments of hospital



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# Other Products

Our other stainless steel hoteling products consist of:

- Wheeled Waste Bin for Operating Theater
- Single & Double Foot Steps
- Slipper Cabinets (with Caster)
- Wall Mounted Slipper Cabinet
- Pedal Bucket (Double-Layer)
- Entrance Stand for Operating Theater (Small Plate)
- Dispenser
- Wall-Mounted Instrument Shelf
- Blood sampling tray
- Laboratory Sampling Racks
- Handles
- And other products upon requests



9

## Pharmaceutical & Food Additives



9-1

## Human Pharmaceutical

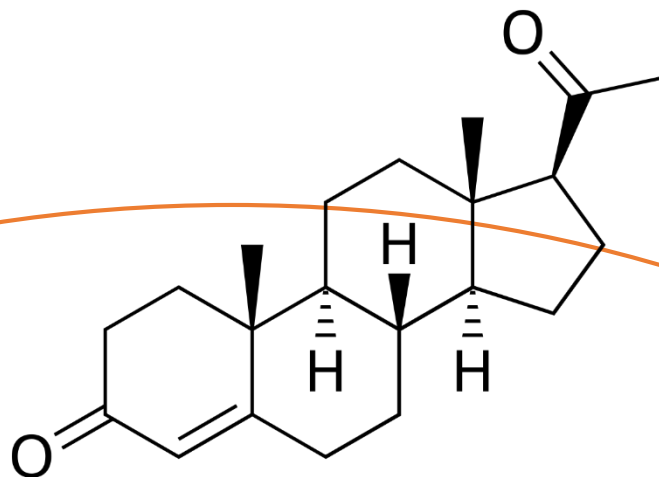
- **Corticosteroid APIs**
- **Anti-Cancer Drugs**
  - **SinaCurcumin**
  - **SinaDoxosome**



# Corticosteroid APIs

Corticosteroids are a class of drugs based on hormones formed in the adrenal gland or derived synthetically. They are created from cholesterol and divided into two major groups: glucocorticoids and mineralocorticoids. These products comply with the latest international standards of USP, BP pharmacopeia and GMP certification of Food and Drug Administration.

- **Betamethasone Valerate**
- **Hydrocortisone**
- **Medroxyprogesterone**
- **Progesterone**





# SinaCurcumin

## Nano-Micellar Soft gel (80 mg Curcumin)

Curcumin, the yellow pigment in curry spice, Turmeric, is the principal curcuminoid in the rhizome of *Curcuma longa* Linn. The plant is belonging to ginger family (Zingiberaceae) and is native in India and south-east Asia. Curcumin is the prototypical curcuminoid and has effects similar to other polyphenols (diarylheptanoid). In combination with other main curcuminoids including desmethoxycurcumin, bis-desmethoxycurcumin and cyclo-curcumin, they form 3-5% of dried turmeric powder.

### Pharmacological effects and Indications:

There are more than 3000 studies based on cell culture, animal and clinical, indicating anti-oxidant, anti-inflammation and anti-cancer effect of Curcumin and there is high interest in using Curcumin as supplement in different conditions such as:

- Anti-inflammatory
- Supplement in treatment of Depression disorders, Cardiovascular problems, Anti-lipid Agent, Hepatic disorders and improvement of liver function and Neuropathy and Retinopathy in diabetic patient.

### Advantages of SinaCurcumin:

Curcumin is a lipophilic agent and its absorption from GI with normal dosage forms such as powder, capsules and tablets is very low.

SinaCurcumin is Nano-micellar form of Curcumin in 10 nm average size. The active ingredient, Curcumin, is concentrated inside the micelle which is lipophilic and the hydrophilic part of the micelles increases the solubility in water.

The soft gels of Curcumin are completely dissolve in acidic condition of stomach and the Nano-micelles are released which are stable up to 6 hours in this conditions. The Nano-micelles are delivered to intestine and absorbed there.





# SinaDoxosome

## (Doxorubicin HCl Liposome Injection 2 mg/ml)

Doxorubicin HCl is a drug used in cancer chemotherapy. Doxorubicin is commonly used in the treatment of a wide range of cancers, including hematological malignancies, many types of carcinoma, and soft tissue sarcomas. Doxorubicin's most serious adverse effect is life-threatening heart damage, which limits its application. Therefore, various efforts have been made to reduce its side effects, including encapsulating it in nanoparticle systems such as nanoliposomes. The nano-liposomal form of doxorubicin HCl (Doxil®/Caelyx®) has entered the global market during the past few years by the approval of FDA.

Unique features of SinaDoxosome® are as follow:

- The polyethylene glycol coating (stealth polymer) reduces the uptake of liposomes by RES cells, therefore increasing the life span of liposome in the blood (half-life about 53 hours).
- The particle diameter of approximately 100 nm enables the nanoparticles to target the tumor tissues by enhanced permeation and retention mechanism.
- The lipid matrix with high phase transition temperature and low permeability provides stable encapsulation of the doxorubicin in nanoliposomes and the internal aqueous buffer phase provides high loading efficiency for the Doxorubicin.

### Advantages

- **Slow Release:** reduced peak levels of free drug and prolonged tumor exposure
- **Change in Biodistribution:** avoiding drug deposition in certain tissues will reduce tissue-specific toxicities
- **Tumor Targeting:** passive accumulation by enhanced permeability and retention (EPR) effect
- Effectively reduce the side effects of drugs



- **Natural & Herbal Products**

- **Immuno Propophyt**
- **Immuno Echinamol**
- **Hepamarin**
- **Lavar Ren**
- **Neuro Calm**
- **Mito Fade Plus**
- **Anti-Ammonium Extra**
- **Cocci Phyt**



# Immuno Propophyt

Immuno Propophyt is a 100% natural solution for oral administration and improves the immune response.

**Composition:** Propolis extract, Echinacea purpurea extract, Licorice extract

**Mechanism of action:**

Propolis is a natural resinous mixture produced by honey bees. Due to the many biological activities of propolis, such as antimicrobial, anti-inflammatory, antioxidant and immune stimulatory, which are attributed to its chemical composition, including flavonoids, aromatic acids, diterpene acids and phenolic compounds. propolis have an immune stimulating effect by increasing antibody production and by activating B and T lymphocytes. Also Propolis is a powerful antioxidant. This effect is due to the high concentration of phenolics and other antioxidant compounds.

Echinacea is antibacterial, antiseptic, antiviral, anti-inflammatory and stimulates the immune system. This plant stimulates cell-mediated immunity and improves immune function by increasing T lymphocytes, phagocytes, leukocytes function and increasing the synthesis of interferon.

Licorice (*Glycyrrhiza glabra*) has a long history of medicinal use against respiratory and gastrointestinal diseases. Glycyrrhizic acid and its metabolites are most effective component in licorice extract. Glycyrrhizic acid pharmacological effects include anti-inflammation, anti-ulcer, immune modulatory, anti-allergic, antibacterial and anti-viral effects.

**Use advantages:**

- Immune system stimulant
- Improve immune system function against pathogens and diseases
- Provide better vaccination efficiency
- Relief of respiratory tract inflammations
- Enhance gastrointestinal ulcers healing
- Decrease mortality
- Improve FCR

**Indication of use:** for Poultry & Pets

**Recommended dosage:** 250 ml/1000 L of drinking water for Poultry and 0.5 ml per 10 kg of body weight for Pets.

**Packaging:** 30 & 250 ml bottles

**Storage conditions:** keep in dry place at 25°C

**Expiry date:** 2 years from production date



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# Immuno Echinamol

Immuno Echinamol is a 100% herbal solution for oral administration and improves immunity and respiratory health.

## Mechanism of action:

Immuno Echinamol contains natural plant extracts such as Echinacea and Thyme. Echinacea is antibacterial, antiseptic, antiviral, anti-inflammatory and stimulates the immune system.

This plant stimulates cell-mediated immunity and improves immune function by increasing T lymphocytes, phagocytes, leukocytes function and increasing the synthesis of interferon.

Thyme is attributed with antioxidant, antiviral, antifungal and antimicrobial effects. This plant is mucolytic (expectorant), reduce the thickness of bronchial secretions thus increasing mucus flow that can be removed more easily. Thymol and carvacrol are active ingredients and these components have antibacterial and antifungal effects. They are effective in respiratory collapse and increase lung capacity. Immuno Echinamol will provide better vaccine efficiency and reduce the side effects of vaccination and secondary infections.

## Indications:

- improve immunity
- Prevent respiratory diseases
- Increase appetite
- prevent mucus membrane dryness and irritation
- Reduce side effects of respiratory complex diseases
- Chronic respiratory disease (CRD)
- Mucolytic and expectorant
- Infectious Bronchitis, Influenza, Laryngotracheitis, Infectious Coryza and Pneumonia

## Recommended dosage:

### Poultry:

via drinking water: To prevent respiratory diseases and increase immunity before and after vaccination, environmental stress: 250 ml/1000 L of drinking water

To reduce the side effects of respiratory diseases: 500 ml/1000 L of drinking water

via spray: For every 1,000 m<sup>2</sup>, dissolve 250 ml in 10 L of water and spray.

Pets: 0.5 ml per 10 kg of body weight

**Packing:** 30 & 250 ml bottles

**Storage conditions:** keep in dry place at 25°C



# Hepamarin

Hepamarin is 100% herbal product and a solution for oral administration which improves Liver function.

**Composition:** The most important substances in this product include silymarin.

**Mechanism of Action:**

Milk Thistle is known for its high pharmaceutical value among the people of the world. Silymarin is the main ingredient of milk thistle and due to its properties such as anti-inflammatory and anti-oxidant effects will improve liver function and helps to treat liver and gallbladder disorders in poultry.

**Indications:**

- Supportive treatment in chronic inflammatory liver diseases
- Fatty liver syndrome
- Liver and gallbladder complaints
- Liver function disorders
- After intensive antibiotic treatment
- Prevent and supportive treatment of hepatotoxicity associated with poisoning like mycotoxicosis and drug poisoning
- Free radical scavenger and have hepatoprotectant properties
- High doses of fat in feed

**Recommended dosage:**

**Poultry:**

250 ml/1000 L of drinking water

**Pets:**

0.5 ml per 10 kg of body weight

**Packing:** 30 & 250 ml bottles

**Storage conditions:** keep in dry place at 25°C

**Expiry date:** 2 years from production date





# Lavar Ren

Lavar Ren is a solution for oral administration and improves kidney function.

## Mechanism of action:

Lavar Ren contains natural plant extracts such as Nettle extract. The various components of plant extracts will enhance the beneficial effects of each other.

The most important substances in this product include phenolic compounds, quercetin, caffeine, malic acid and chlorogenic acid.

People from different countries have long recognized the nettle as a valuable herb. Nettle is very effective in reducing inflammation and urinary tract infection, and by increasing the volume and flow of urine, it prevents urinary retention in the urethra and results in the removal of urinary deposits from the kidneys.

It is also rich in iron and vitamin c and can act as an antioxidant and anti-stress agent.

## Indications:

- Disinfection of the urethra
- Diuretic
- After treatment with antibiotics
- In cases of viral diseases (such as bronchitis and infectious bursal disease) and bacterial infections that cause inflammation and necrosis of the kidneys
- Ascites syndrome
- Gout
- Supportive care
- Following stresses such as beak trimming and heat stress
- Fatigue and metabolic diseases

## Recommended dosage:

### Poultry:

To prevent renal failure and after antibiotic administration: : 250 ml/1000 L of drinking water

In order to treatment (gout , metabolic problems ,kidney infections): 500 ml/1000 L of drinking water

### Pets:

0.5 ml per 10 kg of body weight

**Packing:** 30 & 250 ml bottles

**Storage conditions:** keep in dry place at 25°C



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# Neuro Calm

Neuro Calm is a 100% herbal product and a solution for oral administration which acts as an Anti-Stress composition.

## Mechanism of action:

Neuro Calm contains natural plant extracts such as Valerian and Lemon balm. The various components of plant extracts will enhance the beneficial effects of each other. Valerian and lemon balm are used as anti-stress for a long time. These plants naturally affect the nervous system and cause relaxation and restlessness. Today, these plants are also used to reduce anxiety and stress.

## Indications:

- Exposure to environmental stresses such as heat stress, light and noise
- Exposure to mechanical stresses such as transportation and personal movements
- During peak production and nutrition stresses
- Stresses caused by insects, mite and predators like mice
- Before and after vaccination
- In the case of cannibalism

## Recommended dosage:

Poultry:

250 – 500 ml/1000 L of drinking water

Pets:

0.5 ml per 10 kg of body weight

**Packing:** 30 & 250 ml bottles

**Storage conditions:** keep in dry place at 25°

**Expiry date:** 2 years from production date



# Mito Fade Plus

Mito Fade Plus is a Herbal Product against the poultry Red Mite.

**Composition:** Each 100 g contains: 5 g Garlic+ 4 g Eucalyptus + 3 g Thyme + 3 g Chamomile

## **Mechanism of action:**

Mito Fade Plus is a carefully balanced combination of Eucalyptus, Thyme, Chamomile and Garlic. Cineole which is rich in Eucalyptus species has mucolytic effects. It is exhibited anti parasite activity. Thymol the main ingredient of Thyme, by stimulating blood circulation and regulates its flow, and its antibacterial and anti-parasitic function keeps parasites away. The Apigenin content in Chamomile can help in improving cardiovascular conditions, stimulate immune system and provides faster epithelialization and enhance wound healing caused by mites. Garlic has been used as medicine for thousands of year. Allicin is the major biologically active component of Garlic. It has natural anti parasitic effects and also stimulating the immune system.

## **Indications:**

- Reduce more than 90% of red mite
- Improve flock performance
- Reduce microbial load in feed
- Improve immune responses
- Reduce ammonia and moisture content of litter
- Reduce mortality
- Reduce the number of dirty eggs
- Reduce feather pecking and cannibalism
- Reduce insects and larvae in litter
- Improve anemia and sever skin conditions caused by mites
- Reduce transmission of bacterial (Salmonella, Pasteurella, Chlamydia) and viral (Newcastle Disease, Fowl Pox) infections

**Recommended dosage:** 1 – 2.5 kg / ton of feed

**Storage conditions:** Keep in dry place and store at less than 25°C, away from direct light and in closed door sachets.

**Compatibility:** Mito Fade Plus is compatible with other commonly used feed additives and there is no any drug interaction

**Expiry Date:** 2 years after production

**Packaging:** 5 & 25 kg Aluminium sachets & Packets



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# Anti-Ammonium Extra

**Premix for pathogen control in feed:** For Veterinary Use Only

**Composition:** Plant extracts, Organic acids and Mineral compounds

**Mechanism of action:**

Anti-Ammonium extra is a unique product contains plant extracts, minerals and organic acids. Anti-Ammonium extra is a premix which provides pathogen control in feed. In addition to reduce the transit time of feed through the digestive tract, this product has the antimicrobial effects. Also with reducing the number of harmful bacteria and more water absorption in the intestine will lead to reduced moisture and ammonia of litter.

**Use advantages:**

- Prevent the growth of pathogens in feed
- Reduce feed microbial count (Bacteria & fungi)
- Ammonia reduction of litter and consequently reduce respiratory disease
- Reduce ammonia and odor emissions in manure and litter
- Reduce the PH of manure and litter
- Reduce litter humidity and increase the dry matter of litter
- Reduce insects and larvae in litter
- Reduce the number of flies specially at climate change on different seasons
- Reduce the number of coliforms in manure
- Reducing enteritis
- Reducing coccidiosis
- Reducing dirty feathers and pseudo dermatitis

**Indication of use:** poultry

**Recommended dosage:** 0.5 to 1 kg/ton of feed

**Stability:** stable in premixes, concentrates as well as mash, pelleted or expanded feed

**Compatibility:** compatible with other commonly used feed additives like enzymes, prebiotics and probiotics

**Drug interaction:** There is not any drug interaction

**Expiry date:** 9 month after production

**Storage condition:** keep in dry place and store less than 25 °C, away from direct light and in closed packets

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**Packaging:** 10 kg and 25 kg packets





# Cocci Phyt

**Against Coccidiosis & Gut Health Enhancer**

**Composition:** Quercus infectoria, Artemisia annua and Allium sativum

**Mechanism of action:**

Cocci Phyt is a Nature friendly product containing natural herbs, Quercus infectoria (Oak Gall), Artemisia annua and Allium sativum (Garlic). It acts as a potent Eimeria spp inhibitors and therefore benefits the animal by improving the gut environment.

Tannins in the Oak Gall inhibit the life cycle of coccidia by decreasing the sporulation of the oocyste of Eimeria spp.

Artemisinin in Artemisia annua has anticoccidial action by inhibiting sporulation and cell wall formation in Eimeria species through inducing oxidative stress.

Garlic and its sulfur compounds, allicin, alliin, ajoene, diallyl sulfide, dithiin, and allylcysteine, inhibit the parasite life cycle and also possess broad antimicrobial activities which can eliminate negative factors of microbial infections.

**Use advantages:**

- Help to prevent coccidiosis
- Inhibit the growth and reproduction of Eimeria parasites
- Improves immunity
- Improve uniformity in livestock
- Improve growth rate
- Improve feed efficiency
- Improve intestinal environment & digestive function

**Indication of use:** For veterinary use only

**Recommended dosage:** 0.5-1 kg / Ton of feed (0.1 g/kg of body weight)

**Stability:** Cocci Phyt is stable in premixes, concentrates as well as mash, pelleted or expanded feed.

**Compatibility:** Cocci Phyt is Compatible with other commonly used feed additives.

**Drug interaction:** There is not any drug interaction

**Expiry date:** 2 years from production date

**Storage condition:** keep in dry place and store less than 25 °C, away from direct light and in closed packets.

**Packaging:** 10 & 25 kg Packets





10

## Health Services



10-1

## Dialysis Field

- **Dialysis Centers**
  - **BOO Contract**
  - **BOT Contract**

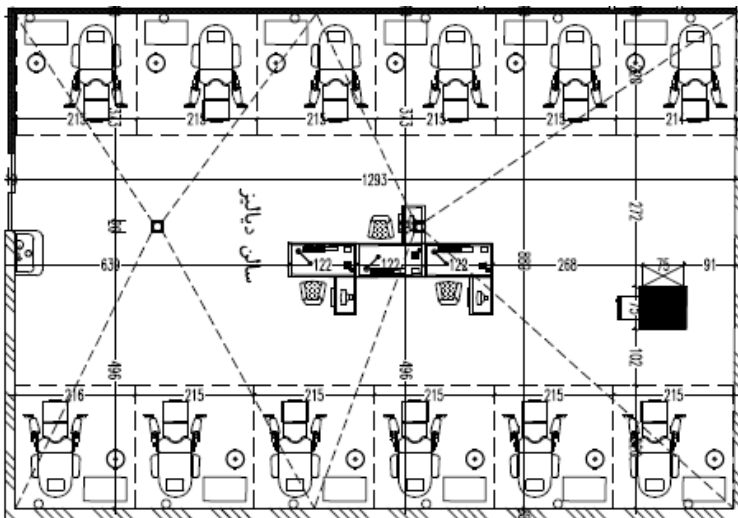


# Cooperation in Dialysis Centers

Health EMC is ready to cooperate in establishment, equipping, and operation of Dialysis Centers both in BOO and BOT contractual formats . In addition to creating dialysis clinics, this company provides training to physicians, nurses, and caregivers for patients and their families.

Moreover, Health EMC has a smart offer for management a dialysis center. We have developed an executive procedure for the processes in Dialysis Centers, and turning it into comprehensive software for management of dialysis clinics, which contains the subsystems for treatment, insurance, warehouse, financial and accounting, infection control subsystems, CRM, infrastructure management and management of the chain of dialysis centers.

We have already established 7 dialysis centers with more than 100 active dialysis beds, and we have planned to increase this number to 300 until the end of 2021.



- **Food Testing & Analysis**
  - **GMO Test**
  - **Halal Food**
  - **Vegetable Oil Origin Detection**
  - **Identification of fish specie**
  - **Saffron fraud**
  - **Meat origin detection**
  - **Diagnosis of pistachio and fava beans mix**
  - **Diagnosis of almonds and peanuts mix**





# Food Testing & Analysis

General	<ul style="list-style-type: none"> <li>○ Animal origin detection in raw and processed meat (Types of sausages, burgers, sausages, nuggets, etc.)</li> <li>○ Identify the origin of protein foods (types of kebabs and kebab chickens)</li> <li>○ Identify the origin of the animal in animal feed (meat powder, bone powder, fish powder)</li> <li>○ Identify fish sails in canned tuna</li> <li>○ GMO detection in crops and snacks</li> <li>○ Scientific advice and research projects, including the identification of medicinal plants</li> </ul>
Specific	<ul style="list-style-type: none"> <li>○ Animal origin detection in Dairy products (yogurt, cheese, milk, etc.), powdered milk and curd</li> <li>○ Halal detection (pigs, cattle, fish and aquatic) in gelatin products such as: pharmaceutical capsules, gelatin powder, stabilizers, jellies, etc</li> <li>○ Identification of genus and species of fish and shrimp (processed and unprocessed products)</li> <li>○ Determining the authenticity of saffron including tracing of safflower, corn cob and turmeric in saffron by genetic method (national invention)</li> <li>○ GMO detection in crude and refined oils</li> <li>○ Detection of pistachio and bean mixing by genetic method (national invention)</li> <li>○ Detection of almond and peanut mixing by genetic method (national invention)</li> <li>○ Identification of mixing 7 vegetable oils (rapeseed, corn, soybean, hazelnut, sunflower, olive and sesame) (national invention)</li> <li>○ Mixing determination of rice genotypes</li> </ul>
Educational	<ul style="list-style-type: none"> <li>○ Food fraud detection by genetic method</li> <li>○ Specific primers design</li> <li>○ Bioinformatics</li> <li>○ Determining the affinity of species from sequencing to drawing a phylogenetic tree</li> <li>○ Real-Time PCR method in food fraud and GMO detection</li> <li>○ Holding various educational workshops in the field related to the mentioned activities in theory, practice and virtual</li> </ul>





# GMO Food

**Genetic Modified Organisms (GMO) detection in following products:**

- Soybean, Canola, Maize and Sunflower seeds and products containing them, Corn flex, soy milk, soy protein etc.
- Vegetable oils
- Feed of livestock and poultry produced from agricultural products Conventional animals



# Halal Food

## Detection of halal food, gelatin, product including gelatin and gelatin capsules

- checking specific gene for pig and cow identification
- detecting the species of fish in the above cases



# Vegetable Oil Origin Detection

Oils origin detection specially vegetable oils:

Soybean, Canola, Maize, Sunflower, Sesame, Olive, Hazelnut and Argan oils origin detection through DNA tracing. Also, we can determine the oils fraud which is mixed.



# Identification of fish specie

## Identifying the type of fish and marine

Detection of fish (Tilapia, Salmon, Trout, Anchovy, Tuna fish, Shark and catfish etc.) and aquatic (Shrimp, Crab, Snail, Shellfish, Octopus and etc.) in meat, fish canned, gelatin powder, gelatin drug capsules and etc.



# Saffron fraud

## Saffron fraud identification by using specific primers

The saffron flower (*Crocus sativus*) is one of the oldest and most expensive spices in the world.

Safflower is a common substitute sometimes sold as saffron. Also curcuma and maize tassel be used as a fraud. We can detect these frauds by using the specific primers through PCR.





# Meat origin detection

## Meat origin detection

We use precise molecular and genetic techniques in raw and processed meat products to be able to identify the following:

- Conventional animal and bird such as cow, goat, sheep, buff, camel, deer, chicken, ostrich, duck, turkey etc.
- Unconventional animal and bird such as horse, pig, dog, donkey, Cat, dove, rabbit, mouse etc.



# Diagnosis of pistachio and fava beans mix

## Diagnosis of pistachio and fava beans mix by the molecular method

Pistachios are rich in copper, magnesium and all kinds of vitamins in group B, which strengthen the immune system and prevent many diseases. Pistachio consumption also helps to make red blood cells properly. Pistachio, on the other hand, is one of the best sources of potassium, with its potassium content smaller than potassium orange.

People with Favism disease should refrain from eating or even smelling beans. The high nutritional value of pistachios has led to the importance of this product and its high price. Therefore, the profiteers sometimes mix pistachios with beans at much lower prices, and it is very difficult for consumers to identify their appearance. The bean is forbidden for people who have glucose-6-phosphate and hydrogenase deficiency (people with phytatement) because they have mixtures of vitamin, covariant and isauramil and may cause death.

We have the ability to identify beans during pistachio used in various types of confectionery, ice cream, ham, pistachios, halvah, sugar, desserts, Muscat, etc., and has been licensed by the Food, Drug and Patent Organization This is the method.

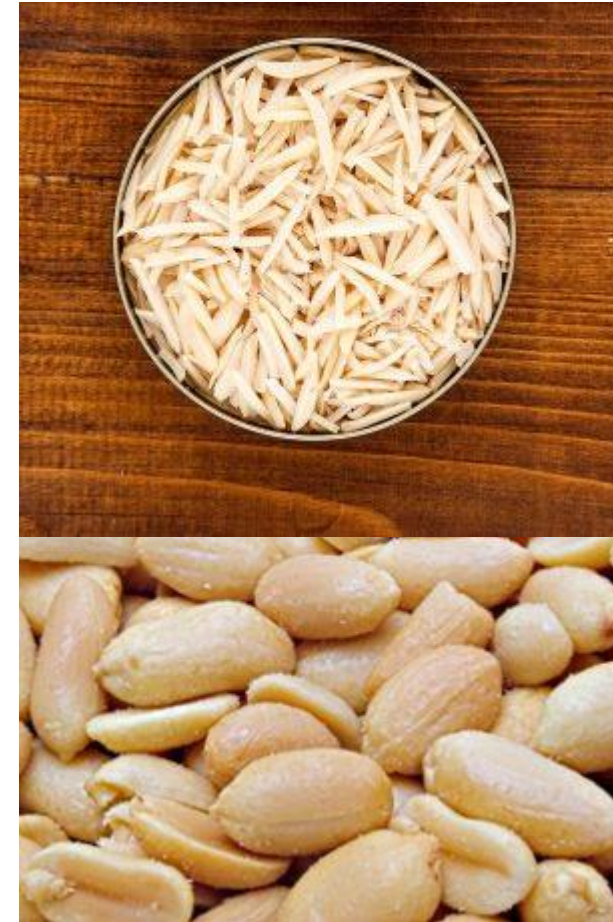


# Diagnosis of almonds and peanuts mix

## Diagnosis of almond and peanut mixing by the molecular method

Almonds are one of the most important dry crops in Iran. The nutritional, pharmaceutical, and health benefits of almonds and its products have led to the high importance of this product and its high price. On the other hand, peasants are mixing almonds with peanuts that are much lower. It is also difficult to identify consumers, and this kind of fraud, in addition to financial damage, will also lead to consumer health threats. Because peanut allergy is one of the most common causes of severe allergic attacks, and symptoms of peanut allergy can also lead to death (anaphylaxis). Also, in some people who are allergic to peanut, even a small amount of it leads to a serious reaction.

We are able to identify peanuts used in the almonds used in varieties of shrimps, desserts, halvah sugar, etc., and has been licensed by the Food and Drug Administration and has patented this method.





11

# Biotechnology



11-1

## Stem Cell Technology

- **Woundcare**
  - **Amniosin**
  - **Cell-Amniosin**
  - **Amniodisk**





# Cell-Amniosin

Cell-Amniosin™ is a cryopreserved cellular human amniotic membrane-derived biological dressing. Human placental membranes are a rich source of MSCs, collagen matrix, and growth factors and also they contain different bioactive factors such as Fibronectin, Laminin, Proteoglycan and glycosaminoglycan, therefore they can support tissue regeneration and repair

## Indications and Clinical use

Cell-Amniosin™ has been demonstrated in clinical trials to improve the healing of different wounds in different size such as:

- Dressing and cover the burn wounds
- Diabetic ulcers
- Chronic wounds
- Urology surgeries
- ENT (Ears, Nose, Throat) surgeries

Cell-Amniosin™ is indicated for use in the treatment of full-thickness diabetic foot ulcers greater than 6 weeks duration. Cell-Amniosin™ should be used in conjunction with standard wound care regimens and in patients who have adequate blood supply to the involved wound.

Cell-Amniosin™ is supplied frozen in a clear bag containing one piece of 2×2, 3×3, 5×5, 5×10 or 10×10 cm for a single-use application. The product can be stored frozen for up to 2 years at -75 C ± 5° C and up to 1 year at -20° C and is delivered to the customers in shipping containers packed with dry ice.



# Amniosin

Amniosin™ is a cryopreserved acellular human amniotic membrane-derived biological dressing. Due to containing of different biological factors, Amniosin™ has an important reconstructive role as a biological dressing.

Amniosin™ has proved to provide two elements to the chronic wound repair process:

1. Supply of different bioactive extracellular matrix components such as collagen, Fibronectin, Laminin, Proteoglycan and glycosaminoglycan.
2. Function as a permissive, performed, normal human matrix for keratinocyte and fibroblast migration and proliferation.

Indications and Clinical use:

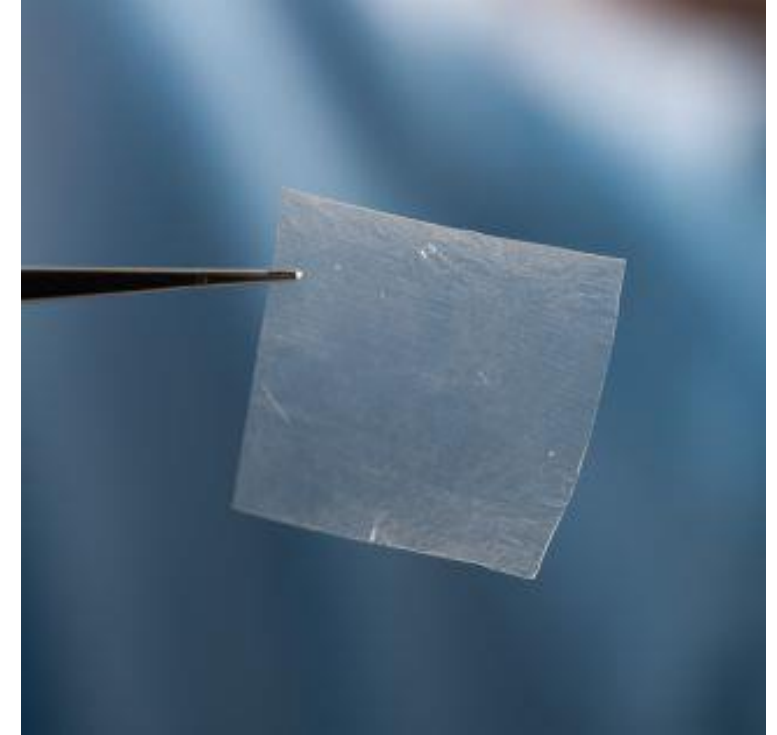
Amniosin™ has been demonstrated in clinics for Corneal and conjunctival diseases:

Observed Clinical Effects:

- Facilitate epithelialization
- Reduce vascularization
- Maintain normal epithelial phenotype
- Reduce scarring
- Reduce inflammation

As a graft for corneal diseases:

- Persistent corneal epithelial defect with or without ulceration
- Painful bullous keratopathy with erosion
- Stevens- Johnson syndrome & Toxic Epidermal Necrolysis
- Partial limbal stem cell deficiency
- Chemical burns
- Sterile corneal stromal thinning descemetocoele & perforation
- Band keratopathy, scar or tumor



# Amniodisk

Amniodisk is a human amniotic membrane allograft tissue that has undergone several stages of preparation, drying and sterilization.

Amniotic membrane (amnion) is a non-vascular thin membrane that is the innermost layer of the fetal membrane that surrounds the fetus during pregnancy and it is involved in protecting and nurturing the fetus.

Amnion produces important proteins that are involved in the development of the fetus. These proteins have immune modulatory, anti-fibrotic, anti-inflammatory, antiangiogenic, non-tumorigenic, and tissue repair properties.

When maintained well, its positive effects, such as reducing inflammation and neovascularization and promoting wound healing, are maintained and can be used to enhance the process of tissue repair. This tissue derived from embryonic cells does not express HLA antigens, as a result, the risk of immunization is very low.

It has a unique collagen structure and consists of several parts:

- An epithelial cell layer
- A thick basement membrane
- A stromal matrix without vessels

Indications and Clinical use:

Amniodisk has been demonstrated in clinical trials to improve the healing of different wounds such as: Treatment of corneal ulcers, conjunctival and epithelial damages and eye burns.



12

## Nanotechnology



# 12-1

## Technological Apparatus

- **Microscopes**
  - **Transmission Electron Microscope (TEM)**
  - **Atomic Force Microscope (AFM)**
- **Nano Fabrication Equipment:**
  - **Oxidation & Diffusion Furnace**
  - **Physical Vapor Deposition**
  - **Sputtering**
  - **DRIE**





# Transmission Electron Microscope (TEM)

Aimed for: Biology, Medical Science, Material Science & Engineering Applications.

Key Features:

- High contrast imaging
- High quality imaging of biological specimens
- Motorized and robust control of apertures
- Motorized X-Y specimen stage
- Thermionic tungsten electron source
- Top entry sample holder

Resolution (nm) at 80 kV	
point	0.50 nm
Lattice	0.34 nm
Acceleration voltage	
Range	50 kV, 80 kV
Stability	$8 \times 10^{-6}$
Magnification	
Range	200X to 400,000X
Steps	16
Diffraction	
Selected area	>1.5 $\mu\text{m}$ diameter, selected apertures (SAD)
	>3 $\mu\text{m}$ diameter, selected by micro-beam illumination
Illumination system	
Electron Gun	Pre-centered tungsten hairpin filament
Beam Alignment	Electromagnetic beam alignment system
Double condenser	Factory aligned double condenser system specimen
	Illumination adjustable from 3 $\mu\text{m}$ to 2 mm diameter



# Atomic Force Microscope (AFM)

inability of optical microscope in imaging sizes smaller than wavelength of visible light resulted in invention of Nanoscopes in the last decades. AFM is the top in the list due to its low price and multi-applications.

Nowadays AFM is the main tool in Nano research works. Apart from 3-dimensional Nanoimaging, AFM is capable of determining various properties of the sample in Nano scale. AFM could also perform Nano-manipulations and nanolithography.

## AFM Standard Operational Modes:

- Contact (Static, DC)
- Non-Contact (Dynamic, AC)
- Tapping (Semi-Contact, Intermittent-Contact)

## Optional AFM kits:

- Fly Kit Operational Modes:
- Magnetic Force Microscope (MFM)
- Electrostatic Force Microscope (EFM)
- Phase Imaging
- Pro-Contact Kit Operational Modes:
- Force Spectroscopy
- Force Distance Microscopy
- Chemical Nanolithography
- Mechanical Nanolithography
- Experts Kit Operational Modes:
- Conductive AFM (C-AFM)
- Force Modulation Microscopy (FMM)
- Kelvin Probe Force Microscopy (KPFM)
- Piezoresponce Force Microscopy (PFM)



# Atomic Force Microscope (AFM)

## Features:

- All-in-one Computer
- High magnification OM
- Developed tip fixing procedure
- Simplified procedure for Nano-imaging
- New generation of the controller
- LAN feature
- Fast Approach
- Time saving in approach
- Fantastic compact design
- Direct online communication with users
- Developed image making software
- Tip putting up straight and easy
- Elegant and innovative appearance and modest volume
- Extremely user friendly; eliminating strains on users
- Robustness

## Main applications:

- Quality control of high tech technologies
- Solar cells, semiconductors and integrated circuits
- Surface engineering- material science
- Pathology and medicine synthesis- medical science
- Bio technology researches
- Nano scale Mechanical and electrical properties
- Ceramics and coatings
- Polymers and chemical products



# Atomic Force Microscope (AFM)

<b>Scanner:</b> XY scanner 50 $\mu\text{m}$ Maximum Scan Range 1 nm Resolution Z Scanner 4 $\mu\text{m}$ Maximum Scan Range 0.1 nm Resolution	<b>Electronics:</b> 4 Channel ADC 24bit 4 Channel DAC 24bit Signal processing 40MHz frequency zinc processor Integrated Functions 10, 100, 1000 Mb/s LAN
<b>Stage</b> XY Stage Software-controlled motorized stage for sample positioning 15 mm Stage travel Range 40 nm XY Stage Steps Z Stage 15 mm Stage Z travel range 40 nm Z Stage Steps Automatic engage of the cantilever to the sample surface (Auto Fast Approach)	<b>Software:</b> Data acquisition Real-time 100 Mb/s Windows 10 compatible Integrated optical view window for both sample and probe vision Image processing Independent software for image processing, data analysis and presentation Capability of exporting different data of images Build in with all Microsoft OS
<b>Sample Mount:</b> 20 mm Maximum Sample Diameter 10 mm Maximum Sample thickness Includes slight magnetic sample holder -10V to +10V bias voltage range applied to the sample	<b>Dedicated Computer Configuration:</b> 21.5" All in One PC Core i5-7500 CPU 8GB DDR4 RAM 1920*1080 Resolution
<b>Top view Microscope:</b> 8 megapixel, Color 60X to 600X Optical Zoom Integrated Lighting 260 $\mu\text{m}^2$ to 2.6mm $^2$ Field of view	<b>AFM Unit:</b> Dimension 300 mm $\times$ 400 mm $\times$ 300 mm Weight 20 Kg without packing
<b>Head:</b> High precision adjustment by micrometer screws 670 nm laser Frequency 5 mW Maximum laser diod power	<b>Options/Accessories:</b> Plug and Play Microscope Dimmer Standard test samples, Sample mounting kit, Sample substrate Tip changing kit including vacuum pen, tweezers, magnet box



BACK



# Oxidation & Diffusion Furnace

## Oxidation Furnace:

Thermal Oxidation is a simple route to cover a silicon substrate with oxide. In microdevices oxide may be used for a variety of purposes from chemical attachment and modifiability of surfaces to using oxide as a filter material in gaps etc. In micro fluidic channels with submicron accuracy level or making microcantilevers. Based on the type of oxidation thermal oxide may be categorized as dry and wet oxides.

## Diffusion Furnace:

In order to adjust the conductivity of semiconductors, small amounts of dopants are injected in the bulk material. The dopant is inserted in the silicon by diffusion in a diffusion furnace. Doping can be achieved by Phosphorus Oxychloride  $\text{POCl}_3$ .

Wafer size	100mm, 75mm or any custom size
Wafer load	FP: +100 RD: 25 to 50 (typical)
Heating system	3 or 5 Zone
Flat zone	FP: up to 750 mm (30") RD: down to 300 mm (12") $\pm 1^\circ\text{C}$ across flat zone
Process temperature	Up to $1100^\circ\text{C}$
Power supply	2 to 5 line with 220V, 40A, 50 or 60Hz
Options	wafer handling automation Wafer gripper Water cooling system





# Physical Vapor Deposition

Evaporation is a common method of thin-film deposition. The source material is evaporated in vacuum. Evaporation is commonly used in microfabrication to deposit metal films.

**Application:**

- Thin Film Physics
- Sensors and actuators
- MEMS technology
- Solar Cells
- Plasma Sterilization
- Plasma surface activation
- Plasma Based High End Lithography (RIE and Plasma Etching)
- Metallization for contacts
- Magnetic thin films
- Ceramic coatings

Wafer size	100mm, 75mm or any custom size
Wafer number	3
Evaporation material	Au, Cr, Ni, Ag, Al,...
Thermal source	3
Process temperature	Up to 300°C
Ultimate pressure	≤ 10E-6
option	Graphite substrate heating system wafer fully rotational stage



# Sputtering

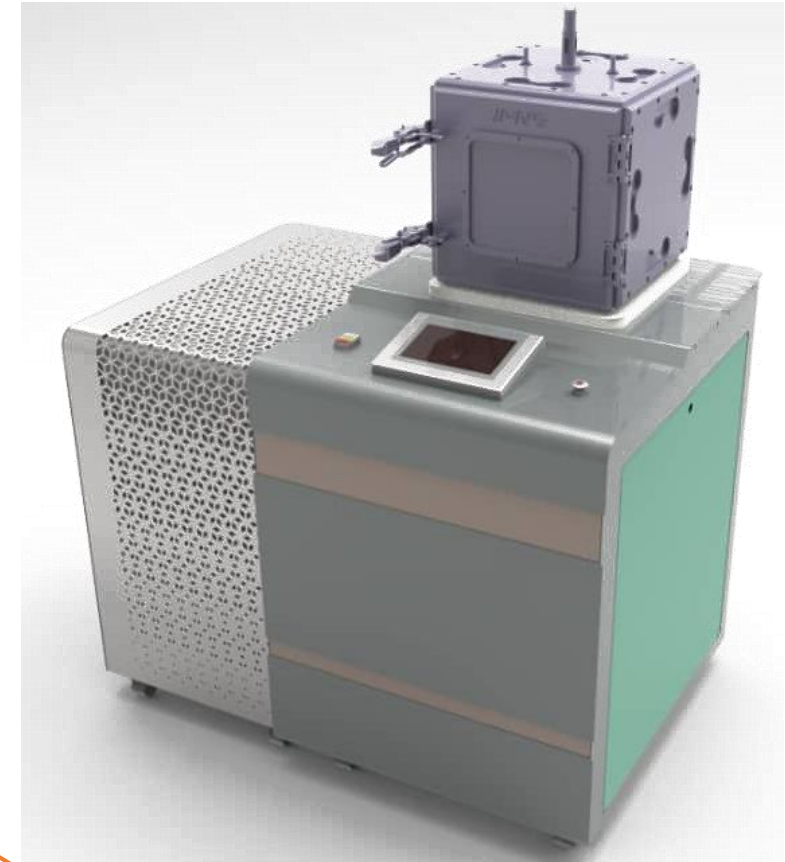
Design and manufacture of Sputtering with the following feature:

## Substrate:

- Ability to rotate in two axes for layer uniformity
- Ability to load 5 wafers (4inch) simultaneously
- Graphite substrate heater
- Ability to adjust the sub layer temperature up to 300°C

## Vacuum system

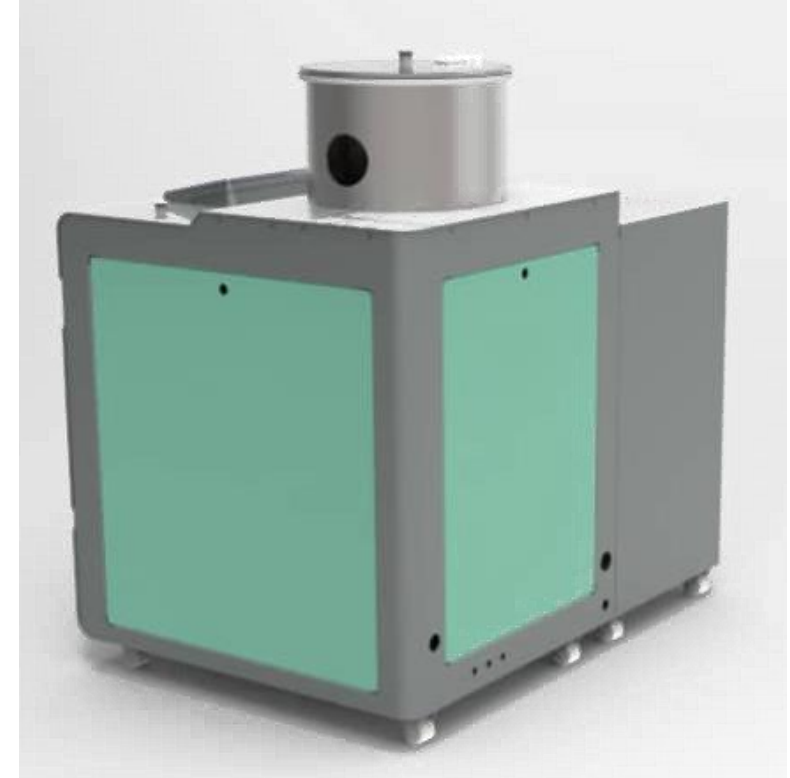
- Equipped with turbo and rotary pump
- Equipped with rough and fore line vacuum valves
- Automatic vacuum system control
- Equipped with wide range and Pirani gauge



# DRIE

**Deep Reactive Ion Etching design with the following feature:**

- **Equipped with ICP and CCP system**
- **Equipped with turbo and rotary pump**
- **Automatic vacuum system control**
- **Ability to process 4inch wafer**
- **High uniformity etching**
- **Highly directional deep etching**



BACK



CONTACT US

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## Micro & Nanotechnology-powered Products

- **AFM Tip**
- **TCD Sensors**
- **Micro Needle**
- **Micro GC**



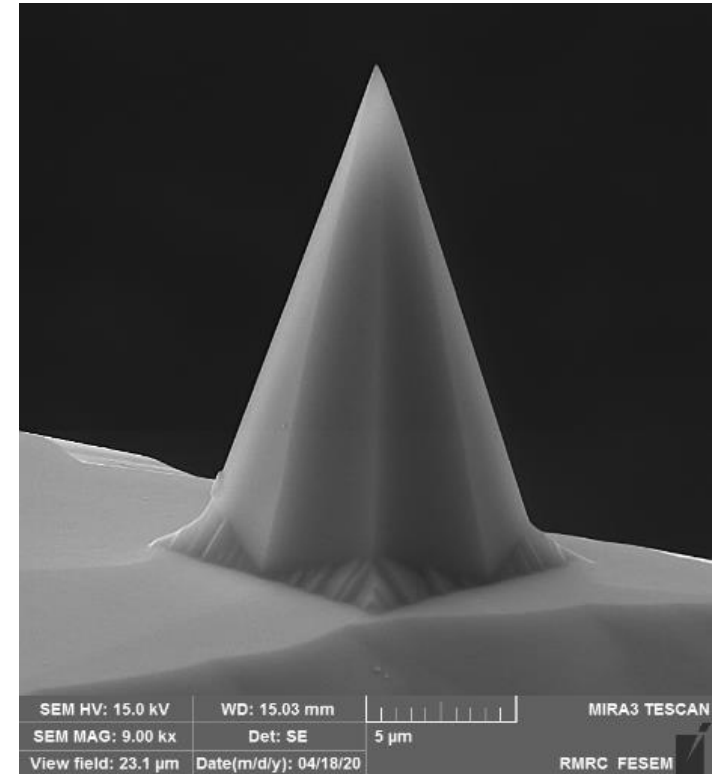
# AFM Tip

**Shape: tetrahedral**

**Height: 10 to 20  $\mu\text{m}$**

**Properties:**

- **Compatible with the most of commercial AFM devices**
- **High reflective chemically stable Au backside coating**
- **The base silicon is highly doped to avoid electrostatic charges**
- **High aspect ratio tips**
- **Probes are available with no coating**
- **Probes are available tipples**
- **Probes packaged in boxes with 15, 50, 400 chips and One 4inch wafer**
- **Probes with conductive and magnetic coatings are available**
- **Thick cantilevers possible**
- **Monolithic design**
- **Semi-contact/Noncontact Probes**





# TCD Sensors

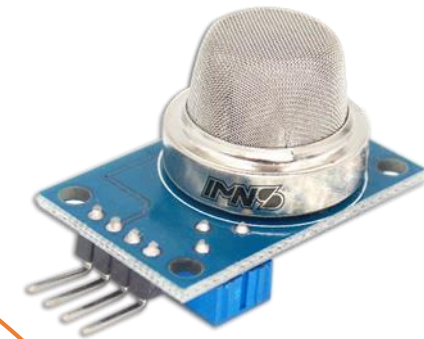
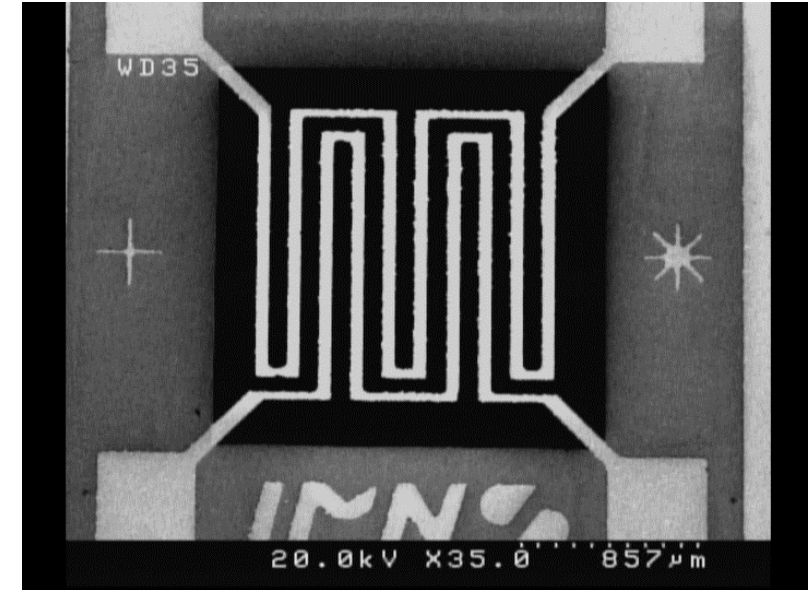
Fabricated 350 pieces of TCD Sensors in a 4-inch wafer.

## Features:

- Extremely low power consumption
- Operate in high temperature environment
- Very stable long-term operation
- Minimal field maintenance required

## Applications:

- Replace traditional TCD in gas chromatography (GC)
- Leak detection for Natural Gas (CH<sub>4</sub>), Hydrogen (H<sub>2</sub>), and refrigerant gases
- Natural gas quality control
- Natural gas engine combustion control
- Fuel cell applications
- Carbon Dioxide (CO<sub>2</sub>) monitoring for Indoor Air Quality (IAQ)
- Methane (CH<sub>4</sub>) detection for mining safety
- Pirani vacuum gauge
- Measurement of concentration of Helium, Hydrogen, etc. in air and other gases.
- Measurement of thermal conductivity and gas type
- Measurement of binary gas-mixture composition.



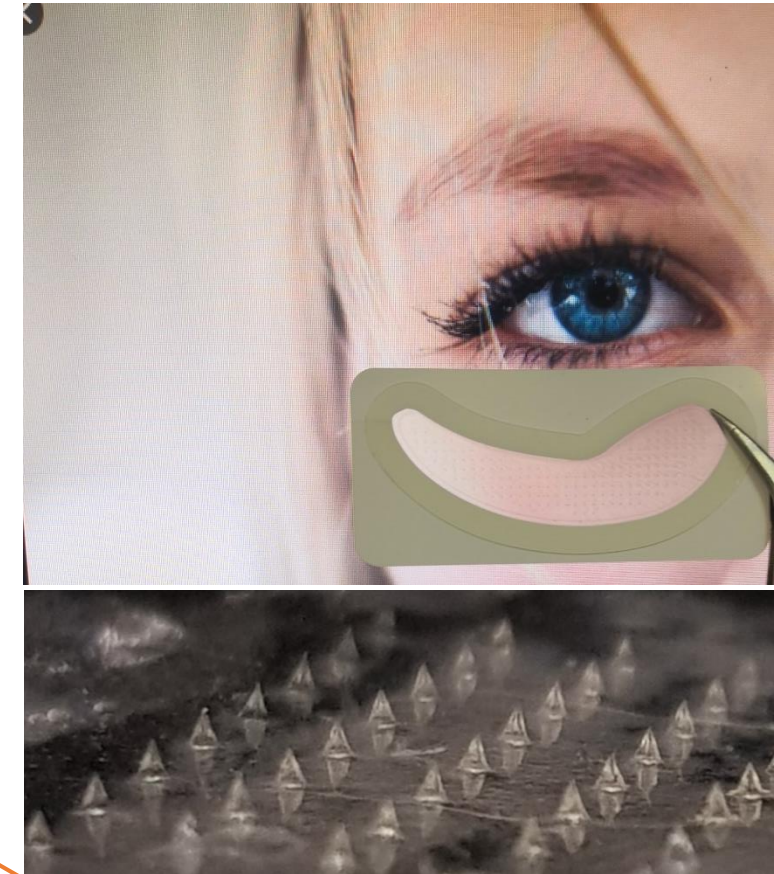
# Micro Needle

Microneedling patches are great options to enhance delivery and potentially the future of not just skin care but medicine.

- Producing original masks with special sizes to respond to the anatomical features of face (the areas around the eyes and smile line)
- In addition to excellent biocompatibility, the use of CMC material in the back substrate of CMC micro-needle has greatly expanded in the cosmetics industry due to the lack of sensitivity and unpleasant feeling towards the skin.

## Applications:

- Cosmetic application
- Disease diagnosis
- Disease treatment
- Immunobiological administration



# Micro GC

A gas chromatograph is a chemical analysis instrument for separating chemicals in a complex sample.

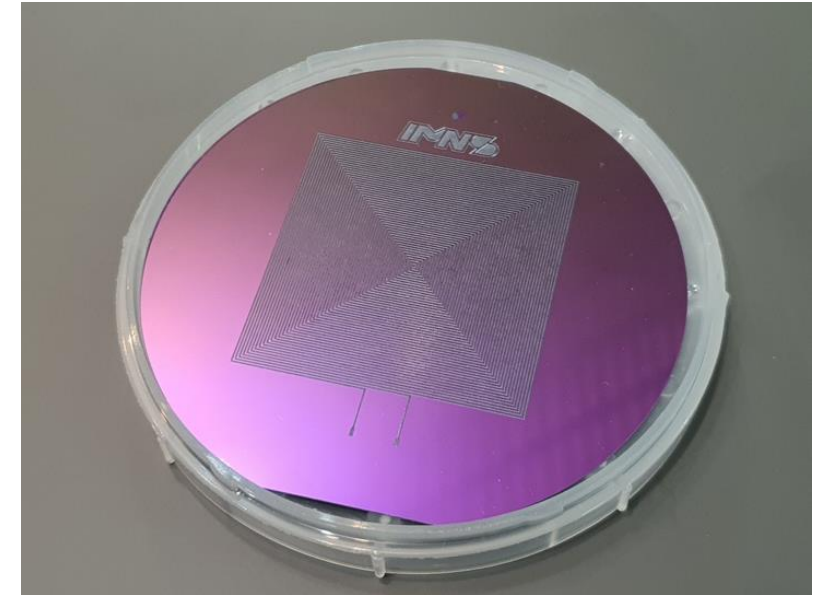
A microfabricated GC system requires a number of components to function properly: preconcentrator, micro-valves for injecting the sample into the carrier gas, microfabricated columns well-functionalized for the specific use, heaters and temperature sensors for controlling column temperature, and detectors for detecting the arrival of different types of molecules.

## Application:

- Natural gas and extended natural gas analysis
- H<sub>2</sub>S and odorant in natural gas
- SO<sub>2</sub> and H<sub>2</sub>S gas monitoring
- Permanent gases and olefins in refinery gas
- Syngas, fuel cell, landfill gas and biogas
- Impurities in petrochemical products and specialty gases
- Solvent/VOC gas monitoring
- Catalyst research for alternative energy
- Mud logging in oil and gas exploration
- Mine gas
- Carbon Monoxide diffusing capacity in the mouse lung

gas chromatography column fabricated on (4 inch) silicon wafer.

Length	5 meter
Width	250 micron
Depth	150 micron
Detector	TCD, FID,...





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## Laboratory



13-1

## **Diagnostic Test Kits**

- **Drug of Abuse Tests**
- **Thin Layer Chromatography (TLC)**
- **Fertility Tests**

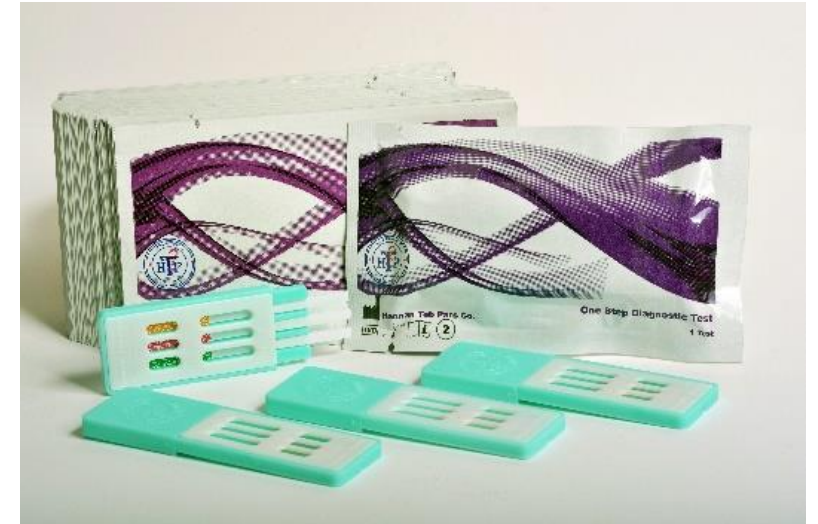




# Drug of Abuse Test Kits

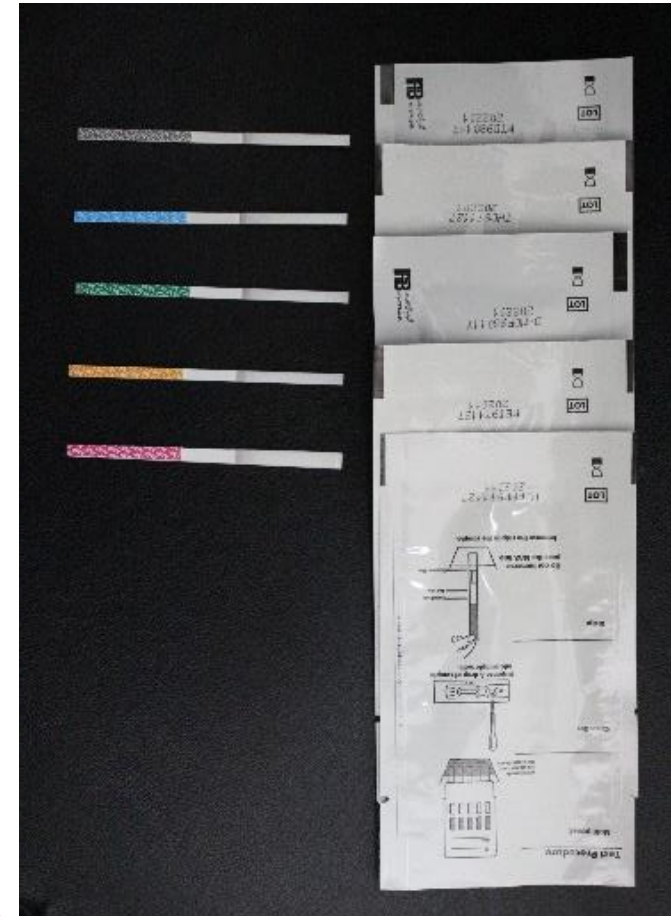


Test Name	Description	Specimen	Format	Pack	Cut-OFF
<b>MOP</b> (MORPHINE)	Morphine is opioid analgesic comprise a large of substances which control pain by depressing the central nervous system. Large doses of morphine can produce higher tolerance levels and physiological dependency in users and may lead to substance abuse. Morphine is extracted unmetabolized, and is also the major metabolic product of codeine and heroine. Morphine is detected in the urine for several days after an opiate does.	Urine	Strip Cassette	150	300 ng/ml
<b>AMP</b> (AMPHETAMINE)	Amphetamines are a class of potent sympathomimetic agent with therapeutic applications. Acute higher doses lead to enhanced stimulation of the central nervous system and induce euphoria, the effects of amphetamines generally last 2-4 hours. Following use, and the drug has a half - life of 2-4 hours in the body. About 30% of amphetamines are excreted in the urine. In unchanged form , with the remainder as hydroxylated and delaminated derivation.	Urine	Strip Cassette	150	500 ng/ml
<b>MET</b> (METAMPHETAMINE)	Methamphetamine is an addictive simulant drug that strongly activates certain system in the brain. Methamphetamines are closely related chemically to amphetamine but the central nervous system effect of methamphetamine are greater.	Urine	Strip Cassette	150	500 ng/ml
<b>MTD</b> (METHADONE)	Methadone is a narcotic pain reliever for medium to several pain. It is also used in the treatment of heroin. Methadone is partially stored in the liver for later use. Methadone acts more like Heroine.	Urine	Strip Cassette	150	300 ng/ml
<b>THC</b> (MARIJUANA)	Tetrahydrocannabinol, the active ingredient in the marijuana plant, is detectable in oral fluid shortly after use. The detection of the drug is thought shortly after use. The detection of the drug is thought to be primarily due to the direct exposure of the tube primarily due to the direct exposure of the drug in the buccal cavity. It is topical studies have shown a window of detection for the in saliva of up to 14 hours after drug use.	Urine	Strip Cassette	150	50 ng/ml



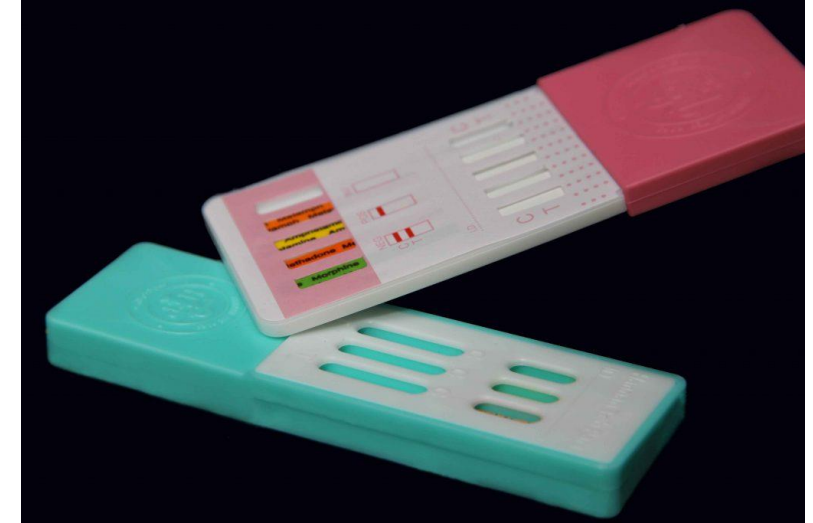
# Drug of Abuse Test Kits

Test Name	Description	Specimen	Format	Pack	Cut-OFF
<b>TML</b> (TRAMADOL)	Tramadol is a synthetic analog of codeine. But have a low binding affinity to the mu-opioid but have a low binding affinity to the mu-opioid receptors. Large dose of tramadol can develop tolerance and physiological dependency and lead to its abuse.	Urine	Strip Cassette	150	100ng/ml
<b>COC</b> (COCAINE)	Cocaine is a potent central nervous system stimulant and local anesthetic. Initially, it brings about extreme energy. cocaine has a longer biological half-time (5-8 hours) and generally by detected for 24-48 hours after cocaine exposure.	Urine	Strip Cassette	150	300 ng/ml
<b>BUP</b> (BUPRENORPHINE)	Buprenorphine is a potent analgesic often used in the treatment of opioid addiction. Buprenorphine is as effective as Methadone but demonstrates a lower of physical dependence.	Urine	Strip Cassette	150	10 ng/ml
<b>BZO</b> (METAMPHETAMINE)	Benzodiazepines are medications that are frequently prescribed the symptomatic treatment of anxiety and sleep disorders. Benzodiazepines have replaced barbiturates in the treatment of both anxiety and insomnia.	Urine	Strip Cassette	150	300 ng/ml
<b>BAR</b> (BARBITURATE)	Barbiturates are central nervous system depressants barbiturates are almost always taken orally as capsules or tablets. The detection period for the barbiturates in the urine is 4-7 days.	Urine	Strip Cassette	150	300 ng/ml
<b>PCP</b> (PHENCYCLIDINE)	Phencyclidine is use in power, capsule, and table form. after low does , the user thinks and acts swiftly and experiences mood swings from euphoria to depression.	Urine	Strip Cassette	150	25 ng/ml
<b>TCA</b> (TRICICCLE ANTIDEPRESSANT)	Tricyclic Anti-depressant are commonly used for the treatment of depressive disorders. TCA overdoses can result in profound central nervous. System depression. TCA overdose is the most common cause of death from prescription drugs.	Urine	Strip Cassette	150	1000 ng/ml
<b>OXY</b> (OXYCODONE)	Oxycodone is a semi- synthetic opioid with a structural similarity to codeine. The window of detection for oxycodone in urine is expected to be similar to that of other opioids such as morphine.	Urine	Strip Cassette	150	100 ng/ml



# Drug of Abuse Test Kits

Test Name	Description	Specimen	Format	Pack
<b>MULTI DRUG 2 TEST PANEL</b>	Multidrug 2 tests for use the detection drug of abuse in human urine. Test strips included any combination of the drugs: Morphine(mop) and Methamphetamine (MET).	Urine	Cassette	40
<b>MULTI DRUG 3 TEST PANEL</b>	Multidrug 3 tests for use the detection drug of abuse in human urine. Test strips included any combination of the drugs: Morphine(mop) ,Methamphetamine ( MET) and Amphetamine (AMP).	Urine	Cassette	40
<b>MULTI DRUG 4 TEST PANEL</b>	Multidrug 4 tests for use the detection drug of abuse in human urine. Test strips included any combination of the drugs: Morphine(mop) ,Methamphetamine (MET), Amphetamine( AMP) and Methadone(MTD).	Urine	Cassette	40
<b>MULTI DRUG 5 TEST PANEL</b>	Multidrug 5 tests for use the detection drug of abuse in human urine. Test strips included any combination of the drugs: Morphine (MOR) ,Methamphetamine( MET), Amphetamine (AMP) ,Methadone(MTD) and Marijuana (THC).	Urine	Cassette	40
<b>MULTI DRUG 6 TEST PANEL</b>	Multidrug 6 tests for use the detection drug of abuse in human urine. Test strips included any combination of the drugs: Morphine (MOR) ,Methamphetamine( MET), Amphetamine (AMP) ,Methadone(MTD), Marijuana (THC) and Tramadol (TRA).	Urine	Cassette	40
<b>MULTI DRUG 8 TEST PANEL</b>	Multidrug 6 tests for use the detection drug of abuse in human urine. Test strips included any combination of the drugs: Morphine (MOR) ,Methamphetamine( MET), Amphetamine (AMP) ,Methadone(MTD), Marijuana (THC), Tramadol (TML) and Buprenorphine(BUP), Benzodiazepine(BZO)	Urine	Cassette	40
<b>MULTI DRUG 10 TEST PANEL</b>	Multidrug 6 tests for use the detection drug of abuse in human urine. Test strips included any combination of the drugs: Morphine (MOR) ,Methamphetamine( MET), Amphetamine (AMP) ,Methadone(MTD), Marijuana (THC), Tramadol (TML), Buprenorphine(BUP), Benzodiazepine(BZO), Tricyclic Antidepressant(TCA) and Phencyclidine(PCP).	Urine	Cassette	30



# Thin Layer Chromatography (TLC)

Thin layer chromatography (TLC) technique is used to separate non volatile mixtures and also can be used to monitor the progress of a reaction , identify compounds present in a given mixture, and determine the purity of a substance.

TLC is used for screening and confirmation diagnosis Morphine, Amphetamine, Methamphetamine, Codeine, Tramadol, Methadone, Buprenorphine and Ecstasy in sample urine. It is designed to be used in diagnosis drug of abuse psychiatrics industrial.

Test Name	Description	Specimen	Pack
LEB-TLC	for use in detection drug of abuse in human urine. Test included any combination of the drugs: Morphine (MOR) ,Methamphetamine( MET), Amphetamine (AMP) ,Methadone(MTD), Codeine, Tramadol (TML), Buprenorphine(BUP) and Ecstasy .	Urine	20
MP-TLC	for use the detection drug of abuse in human urine. Test is designed to be used in detection of Synthetic Psychedelic Drugs.	Urine	20
MAM-20	for use in detection drug of abuse in human urine. Test included any combination of the drugs: Methamphetamine (MET) and Amphetamine (AMP).	Urine	20
MCMT-TLC	for use in detection drug of abuse in human urine. Test included any combination of the drugs: Morphine (MOR) ,Codeine, Methadone(MTD) and Tramadol (TML).	Urine	20





# Fertility Tests

The HCG pregnancy rapid test is a rapid chromatographic immunoassay for the qualitative detection of human chorionic gonadotropin in urine or serum to aid in the early detection of pregnancy.

Luteinizing Hormone (LH) or also known as Lutropin, Interstitial Cell Stimulating Hormone or ICSH is a hormone associated with reproduction. Its stimulation of either ovary or testicles results in the release of an egg from the ovary (ovulation) in women or testosterone production in men. This test measures the amount of luteinizing hormone in the blood.

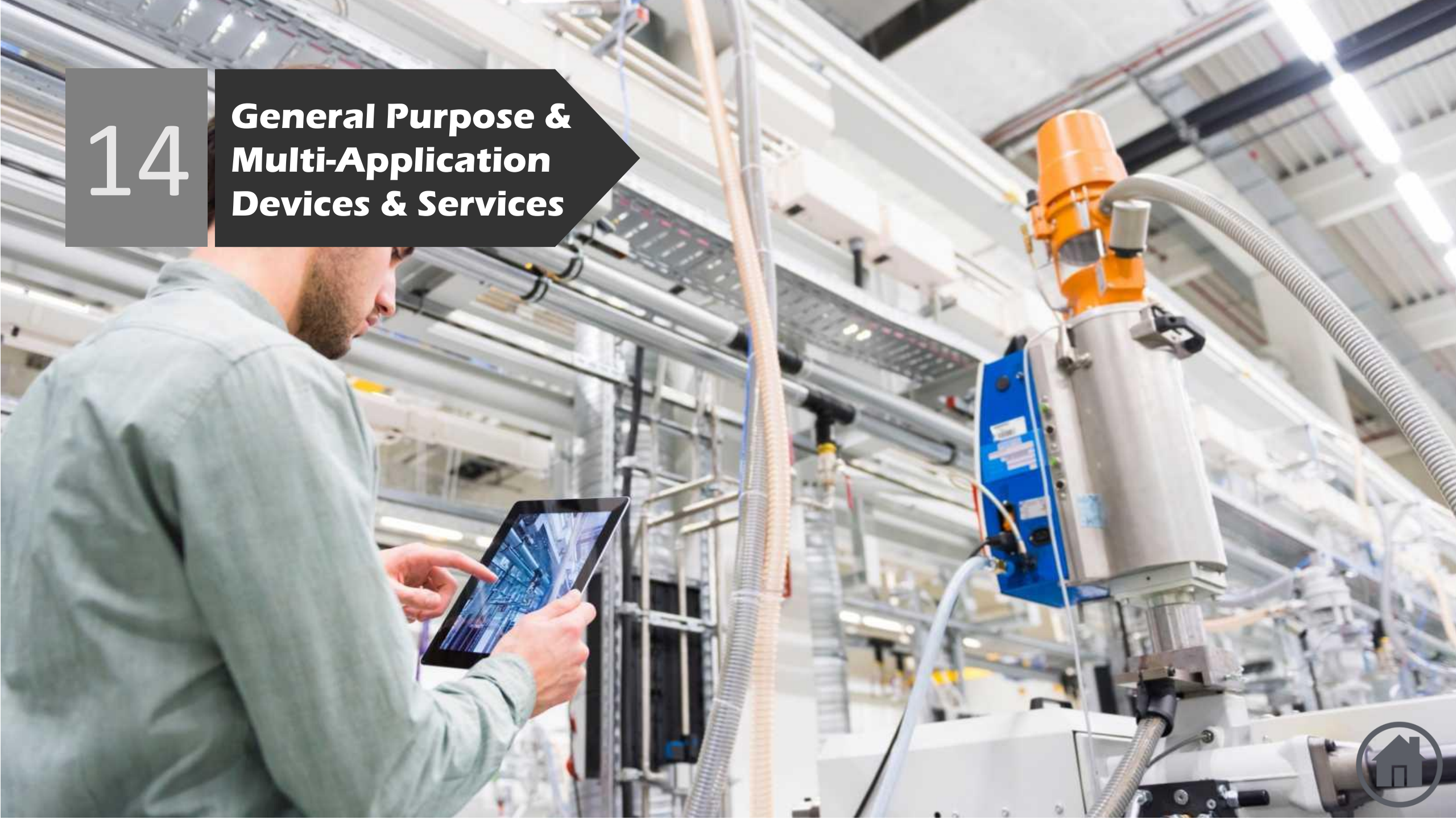
Test Name	Specimen	Format	Pack	Cut- OFF
LH	Urine	Strip	5 Pcs/Box- 500 Pcs/Cartoons	25mIU/ml
LH	Urine	Cassette	1 Pcs/Box- 500 Pcs/Cartoons	25mIU/ml
LH	Urine	Midstream	1 Pcs/Box- 500 Pcs/Cartoons	25mIU/ml
HCG	Urine	Strip	1 Pcs/Box- 500 Pcs/Cartoons	25mIU/ml
HCG	Urine	Cassette	1 Pcs/Box- 500 Pcs/Cartoons	25mIU/ml
HCG	Urine	Midstream	1 Pcs/Box- 500 Pcs/Cartoons	25mIU/ml





14

## **General Purpose & Multi-Application Devices & Services**



14-1

## Hot Air Tools & Blowers

- **Heaters**
  - **HP100 & HP200**
  - **MP100 & MP200**
- **Automatic Welding Machines**
  - **SMT Wedge**
  - **Tent**
- **Hi-Tech Industrial & Refractory Ceramics**



# Heater HP100 & HP200

HP100 & HP200 are used in order to weld thermoplastics production include HPDE, PVC, LDPE, PP, PE, PA, ABS, PC pipes and sheets that are used to floor covering manufacturing the plating tanks.

Handy Welding Tool Type HP100	
Voltage	220~50/60 Hz
Power	1600 W
Temperature	40-600°C infinitely controlled
Air flow	220 l/min

Handy Welding Tool Type HP200	
Voltage	220~50/60 Hz
Power	3400 W
Temperature	40-600°C infinitely controlled
Air flow	520 l/min



# Heater MP100 & MP200

MP100, MP200 are used in order to make tunnel shrink with the specific feature of lowest power consumption.

Also by installing them on production line machinery it's possible to produce hot air during process like Titanium Coating, PE Foam Welding or Wrapping Profiles.

Heater Type MP100	
Voltage	220~50/60 Hz
Power	1600 W
Temperature	40-600°C infinitely controlled
Air flow	External Air Blower Needed

Heater Type MP200	
Voltage	220~50/60 Hz
Power	3400 W
Temperature	40-600°C infinitely controlled
Air flow	External Air Blower Needed





# Automatic Welding Machine

## SMT WEDGE

SMT Wedge is used to welding Geo-membrane sheets Including HDPE and LDPE in order to construct artificial pool and saving and storage water lagoons and also tunnel lining and isolation.

Automatic Welding Machine Type SMT WEDGE	
Voltage	220~50/60 Hz
Power	1700 W
Temperature	40-500°C infinitely controlled
Speed	1-3 m/min
Pressure roller force	100-1100 N





# Automatic Welding Machine TENT

Automatic welding machine type TENT is used to welding different kind of Thermoplastic sheets like tarpaulin, tents, and floor covering (sportive, hospital, automotive and wagons)

Automatic Welding Machine Type TENT	
Voltage	220~50/60 Hz
Power	3000 W
Temperature	40-500°C infinitely controlled
Air Flow	270 - 540 l/min adjustable
Speed	1-6 m/min
Welded Width	30 mm



# Hi-Tech Industrial & Refractory Ceramics

## Advantages:

- Thin walls
- Electrical shockability
- Electrical & Heat insulation
- High heat resistance

## Target industries:

- Printing and packaging industry
- Medical industries
- Automotive industries
- Rail industries
- Oil, gas and petrochemical industries
- Textile industries
- Electrical, electronics, and telecommunications industries

## Application in industries:

- Refractory ceramics
- Complex heating element (can be used in heaters, blowers and industrial hair dryers)
- The elements used in tetra pack plants
- Insulator ceramics in high frequency and power systems
- Ceramic catalysts used in the oil, gas and petrochemical industries



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## Software



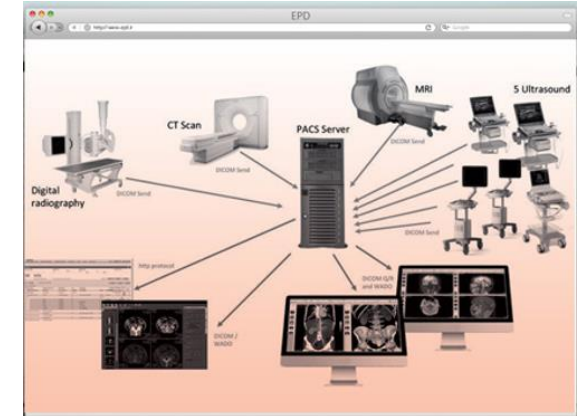
## Picture Archiving & Communication System

PACS is a comprehensive solution for storing, transmitting, and processing medical images based on DICOM 3 standard. This program has different components, each with its own functions:

- PACS Server
- Web-Based Viewer
- Windows-Based Diagnostic Viewer (Standalone Mini PACS)
- DICOM Work List
- DICOMMIZER
- CD Robot Software
- Print Server

## Cost-Benefit Analysis:

- Elimination of the consumable physical film
- Elimination of printer and related consuming materials
- Elimination of the envelopes
- Elimination of maintenance and handling fees
- Elimination of damaging or loss of the films
- Timely access to the required physicians at any place while reducing the specialized costs.
- Reduction of medical errors
- Reduction of problems related to the quality of photos taken with the help of software processing
- A great help to the environment by removing the film and printing associated materials





## Healthcare Information System

This modular system is suitable for all healthcare center with any sizes, from small clinics to complex multi hospitals hub. During past 3 years by using the most advanced technologies, some part of this software is now available in SaaS rather than client server versions.

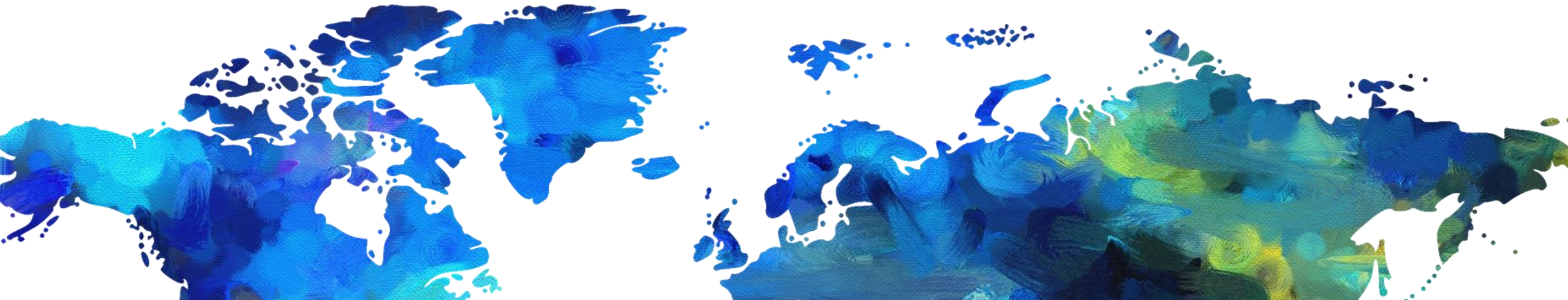
This technology (Cloud Computing SaaS Software Services in e-health) enables to use software services without full license purchase. This method eliminates many responsibilities for the user, including purchasing servers, operational systems, etc. The user will be only responsible for paying for the services that they are using. Cloud computing software as a services (SaaS), are compatible with all operational systems and hardware (PC, mobile, and tablet), and any operational system like: windows, android, IOS, Linux and ...

HIS has 4 major applications, each of which is composed of different parts:

- 1) HIS Basic Applications: such as Patient registration and administration, Clinical Information System (CIS), Electronic Medical Record (EMR), emergency wards (inpatient, outpatient, under observation), wards and patient displacement, the operating rooms, pregnant mother follow up childbirth & birth certification, death certification, medical documents ward, discharge and ...
- 2) HIS Para clinic applications: such as Pharmacy Information System (PIS), Laboratory Information System (LIS), Pathology Information System, Blood Bank Information System (BBIS), Radiology Information System (RIS), Dialysis Information System, Physiotherapy Information System and Dental Information System.
- 3) Data Interoperability: such as identity inquiry, referral system, and ...
- 4) Additional and Auxiliary software: such as Medical Error Information System, Ticketing and ...





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