



MAHAN MED MEYMEH KISH
MEDICAL DEVICES COMPANY



About us

Mahan Med Meymeh Kish factory area is about 32000 sq.m located in Kish island in the south of IRAN.

Building & Factory:

Production area 3000 :1# sq.m (2700sq.m high quality clean room iso8- (i.e. 100000 F209 class) ISO 14644 standard

- Hemodialysis and Fistula Needle and also dialyzer filter plastic injection part production
- Hemodialysis line fully automatic assembly
- Fistula Needle fully assembly
- Dialyzer filter auto assembly
- Chemical / physical/ microbiology laboratory – quality control department
- Raw material warehouse & packing area



● **Production area 2#:**

7000 sq.m (1500 sq.m high quality clean room iso8-D& ISO 14644 standard ,500 sq.m for hollow fiber and1000 sq.m for development plan.

- Medical & industrial hollow fiber membrane production plant
- Production before and after warehouse
- Ethylene oxide sterilization area
- Sodium hydrogen carbonate powder packing (cartridge & bag & filling)
- Chemical / physical/ microbiology laboratory – quality control department

Mission:

- Produce 8000000/year hemodialysis set
- Produce 6000000/year Fistula Needle
- Produce hollow fiber membrane 12000000km/year
- Produce 2500000/year hemodialysis filter

Full automatic assembly hemodialysis line





Interlocking Wing designed
Provide Secure grip .

Orientation dots On rotating Wing Hub
Safely & Precisely Rotate The Bevel

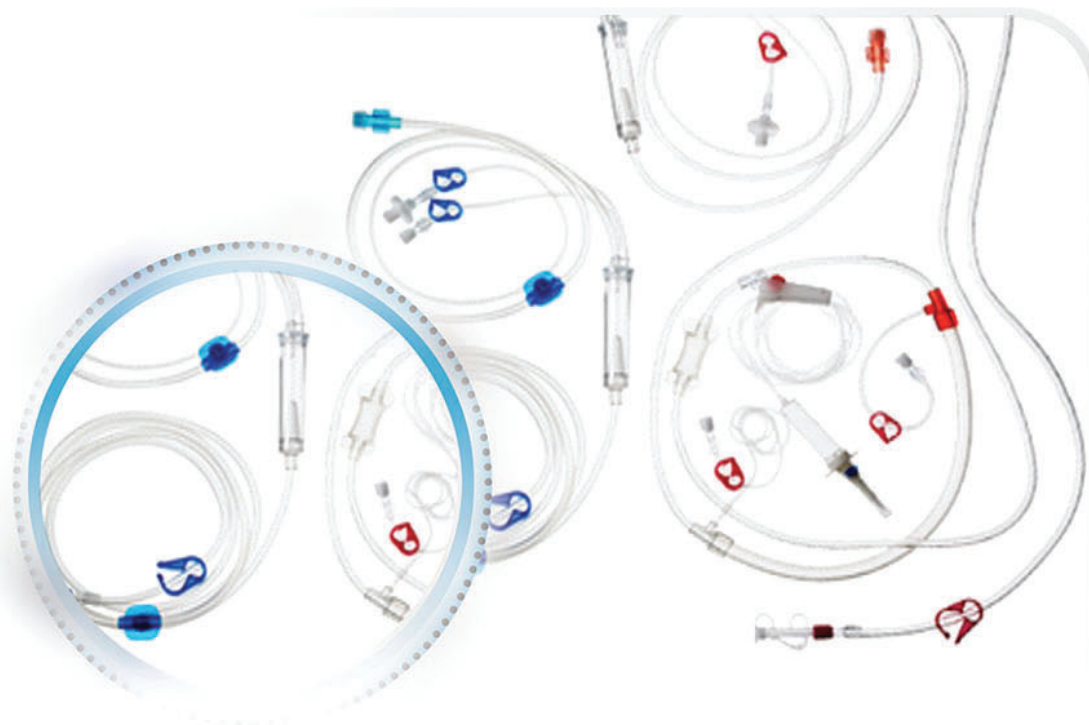
Extra thin wall needle
Superior quality of sharpness
Special lubrication lessen pain and smoothen insertion

A.V. Fistula Needle Component:

► Fistula needle is used for connecting blood lines to the blood vessel through needle when dialysis is carried out via an internal fistula.

Feature:

- Offer injection part and extrusion tube.
- Needle gauge from 17 ,16 ,15 in length of 25mm or 32mm
- Fixed or rotating wing available.
- Easy removal of lure cap.
- Medical grade materials.
- Clear kink-free tube in 15 cm or 30 cm length.
- Color coded wings for easy gauge size identification



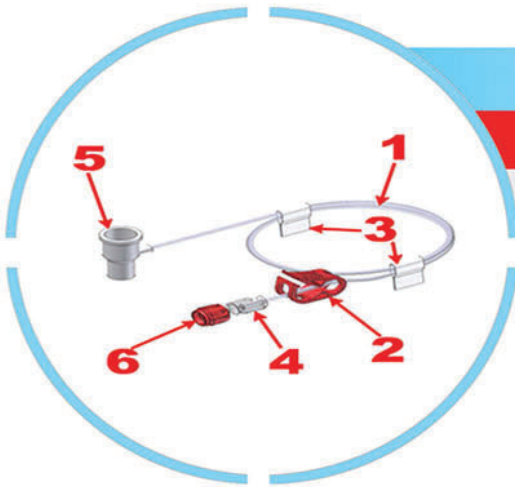
BLOOD TUBING SET:

Mahan Med Meymeh Kish produced all plastic parts & component of Hemodialysis blood lines and automatic assembled completely them that standard for Gambro/Fresenius/B.Braun/Baxter/ Nikkiso/Belco/Nipro dialysis equipment.

Feature:

- ISO standard connector
- Optimal tubes length and diameter
- High quality medical grade raw material
- Full test and quality control
- Sterilization with ETO
- Toxicological safety test
- Latex-free T-injection site

● **Full automatic assembly hemodialysis line**
Heparin line:



Part to be assembled automatically :

- PVC tubing 2.5mm, length 370mm & 1200mm
- Pump connector
- Clamp
- Cap for F.L.L connector
- Cohesive 13mm width

Control test:

- Obstruction test
- Torque test
- Solvent dispensing test
- Vision check

Product code

- a) Heparin line 37cm 12-01-01-07-20
- b) Heparin line 120 cm 12-01-02-07-20

Full automatic assembly hemodialysis line

Service line:

Part to be assembled automatically :

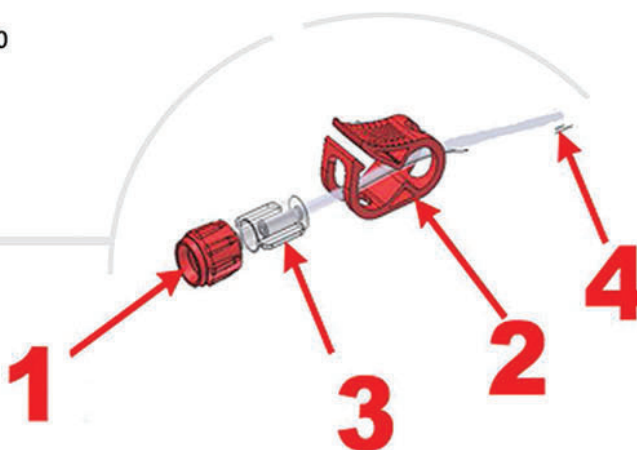
- PVC tubing OD 4.8 & 4.2 length 100mm, 150mm, 300mm
- Clamp
- F.L.L connector ID 4.1mm & 4.7 mm
- Cap for F.L.L connector

Control test:

- Solvent dispensing test
- Vision check
- Tube transparency test

Product code :

- a) 10cm 12-01-01-08-20
- b) 15cm 12-01-02-08-20
- c) 30cm 12-01-03-08-20



- **Full automatic assembly hemodialysis line**
Patient line:

Part to be assembled automatically Patient connector :

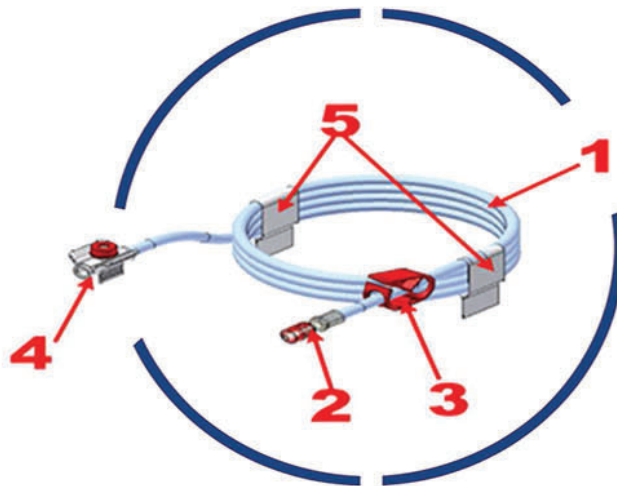
- Patient connector cap
- Clamp
- PVC tubing 6.8mm, length 400mm & 1600mm
- T- injection site
- Cohesive paper 25mm

Control test:

- Solvent dispensing test
- Vision check
- Tube transparency test

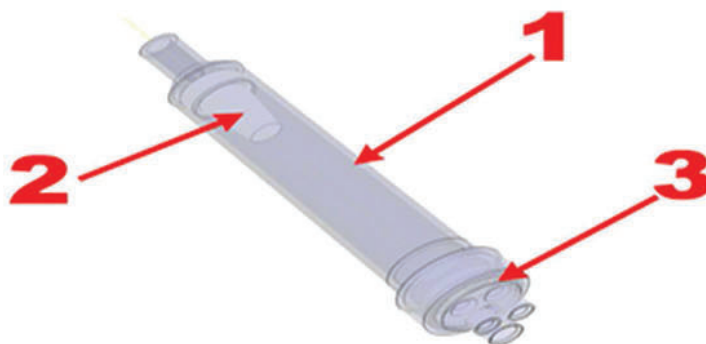
Product code:

- a) 160cm: 12-01-01-12-20
- b) 80cm: 12-01-02-12-20
- c) 40cm: 12-01-03-12-20



Full automatic assembly hemodialysis line

Blood chamber:



Part to be assembled automatically:

- Arterial chamber (without filter)
- Chamber body ($\phi 22\text{mm}$)
- Cap ($\phi 26\text{mm}$ 2 ways)

Venous chamber (with filter):

- Chamber body($\phi 22\text{mm}$)
- Filter ($\phi 16\text{mm}$)
- cap ($\phi 26\text{mm}$ 3 ways)
- cap ($\phi 26\text{mm}$ 4 ways)

Control test:

- Solvent dispensing test
- torque check

Product code:

- a) A: 12-01-01-09-20
- b) V: 12-01-02-09-20

Full automatic assembly hemodialysis line

Dialyzer line:

Part to be assembled automatically:

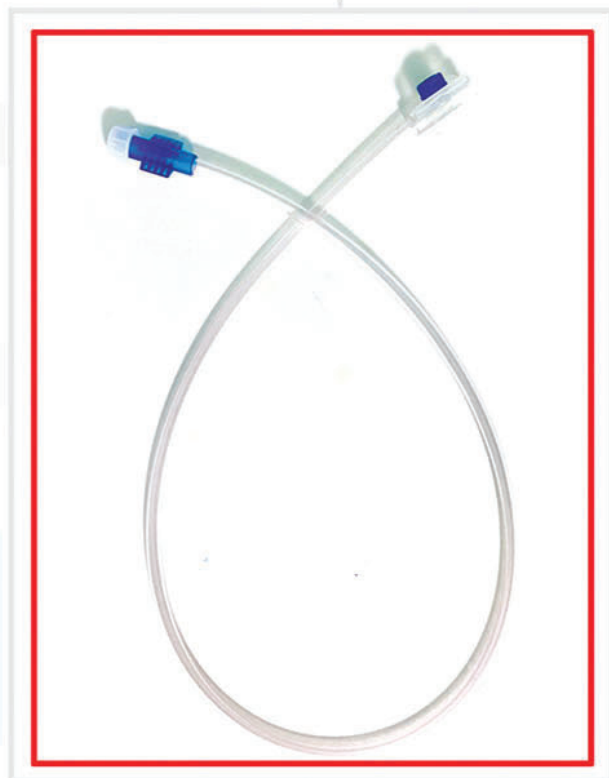
- PVC tubing OD 6.8mm, length 1000mm & 800mm
- T- injection site
- Dialyzer connector
- Dialyzer connector cap

Control test :

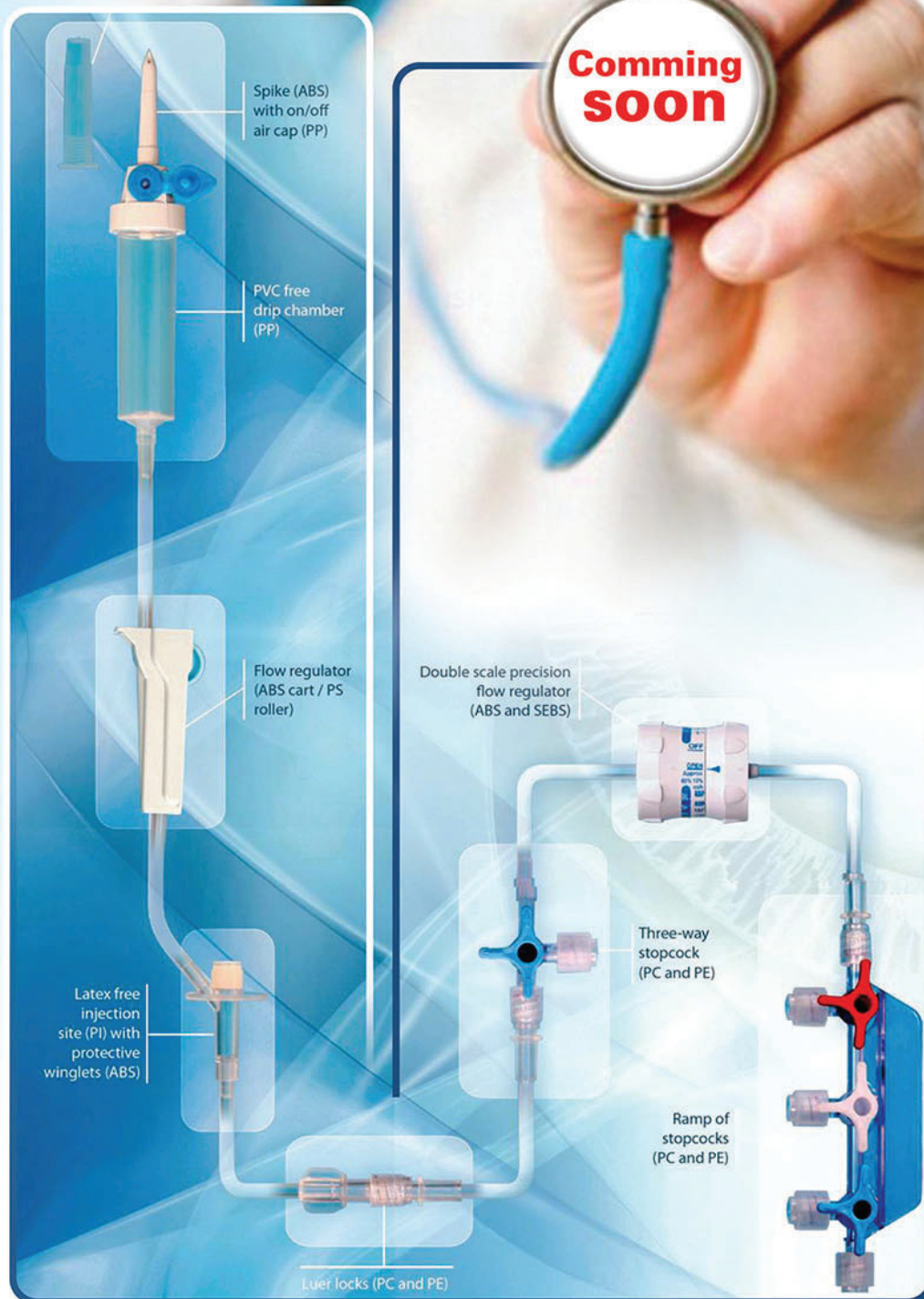
- Solvent dispensing test
- Vision check
- Tube transparency test

Product code:

- a) 100cm 12-01-01-11-20
- b) 80cm 12-01-02-11-20



Infusion set:



Oncology set:

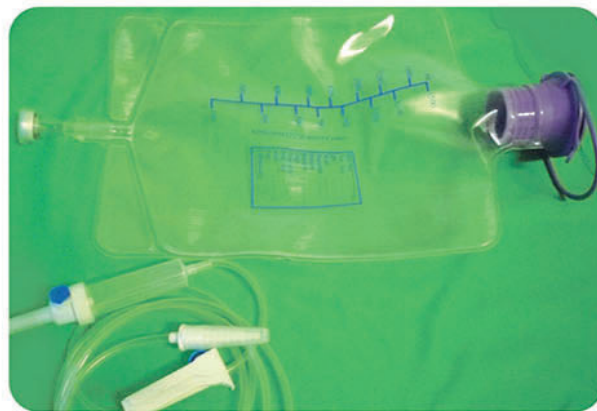


**Comming
soon**

Assemble part:

- Spike with air cap
- Clamp
- Female needle-free Y connections
- In line filter (0.2 μ m)
- Mall LL with back check valve
- Hydrophobic priming cap

Sets for enteral nutrition:



**Comming
soon**

Assemble part:

- Drip chamber
- Air cap
- Solution filter
- Roller
- Connector for nutrition
- Bag 3000 ,2000 ,250,500,1000, ml

Multiway Oncology gravity administration set:

Assemble part:

- Spike with air cap
- Clamp
- Female needle-free Y connections
- In line filter (0.2 μm)
- Mall LL with back check valve
- Hydrophobic priming cap
- in-line drip chamber with solution filter (0.2 μm)
- roller



Multiway Oncology pump administration set (for bodyguard pumps only) :

Assemble part:

- Spike with air cap
- Clamp
- Female needle-free Y connections
- In line filter (0.2 μm)
- Mall LL with back check valve
- Hydrophobic priming cap
- in-line drip chamber with solution filter (0.2 μm)
- roller



Transfusion Set:



**Comming
soon**

Assemble part:

- Drip chamber
- Vent (with air filter 3 μm) or without vent
- Blood filter 200 μm
- Injection site flashback or Y
- Luer lock fixed or rotating
- Hydrophobic cap

Arthroscopic irrigation:

Assemble part:

- Spike
- Clamp
- Drip chamber
- Luer lock
- Roller
- Connector



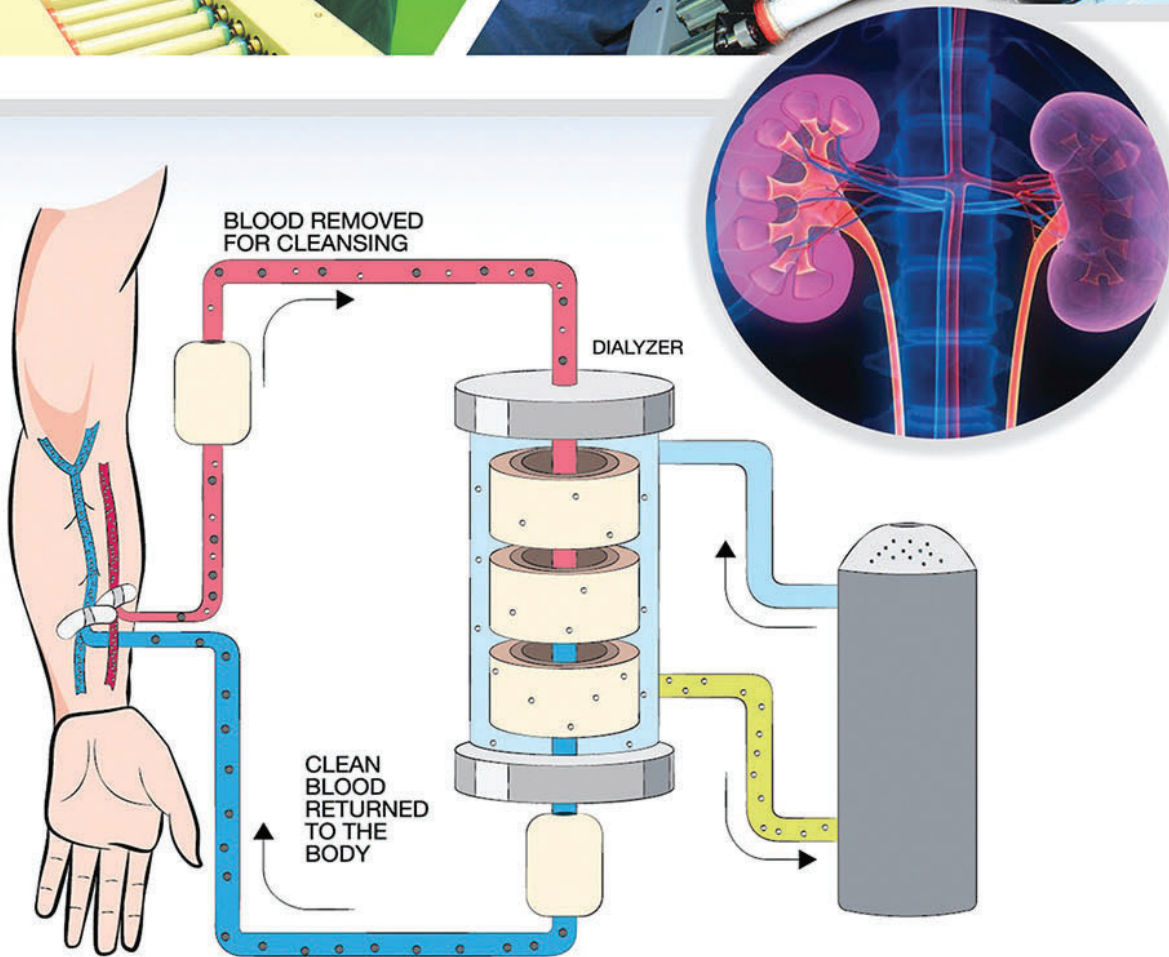
**Comming
soon**



**Full synthetic Hemodialysis filter:**

- ▶ Mahan Med Meymeh Kish produced all plastic parts of dialyzer filter and auto assembled completely in clean room ISO8-Standard.
- ISO standard connectors and ports
- High quality medical grade PC & PUR glue.
- Sterilization with ETO or Beta/Gamma ray
- Testing with ultra-pure & sterilized water
- High flux & low flux hollow fiber
- Poly Sulfone & Poly Ether Sulfone

Hemodialysis



SYNTHETIC HIGH FLUX DIALYZERS:

- TECHNICAL SPECIFICATIONS & PERFORMANCES:

eliminates middle molecular weight toxins without loss of useful proteins.

is available in 4 different surface areas, tailored to meet patient's needs.

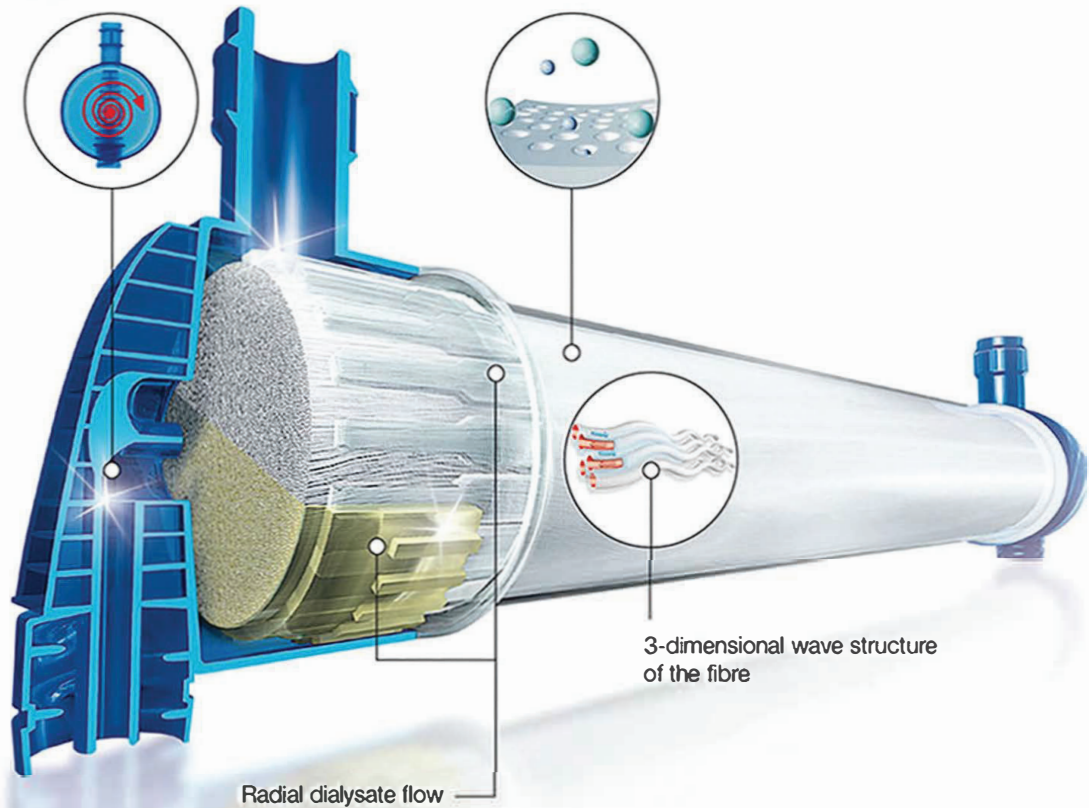


Diamed		HF M-PES 1.4	HF M-PES 1.7
SURFACE	M2	1.4	1.7
INTERNAL FIBER DIAMETER	μ	210 $\pm$ 10	
WALL THICKNESS	μ	40 $\pm$ 5	
VOLUME PRIMING	ML	90	111
CLEREANCE IN QB=200 QD=500 QF=10			
UREA	ML/MIN	191	195
CREATININE	ML/MIN	183	189
PHOSPHATE	ML/MIN	174	181
VITAMINE B12	ML/MIN	127	156
CLEREANCE IN QB=300 QD=500 QF=10			
UREA	ML/MIN	243	254
CREATININE	ML/MIN	211	216
PHOSPHATE	ML/MIN	200	205
VITAMINE B12	ML/MIN	141	173
KUF	ML/H/MMHG	312	378
TMP	MMHG	600	

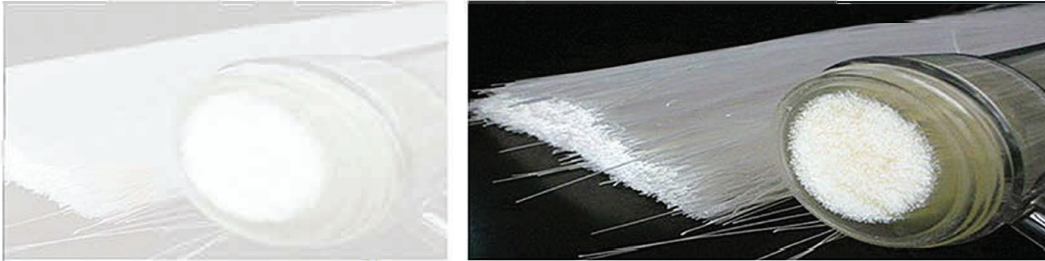
HIGH FLUX MEMBRANE
from **Mahan-Med** fiber plant
fiber nr. 6,450

Homogenous blood
flow path

Advanced
Helixone[®]plus membrane



High Performance Hollow Fiber Membrane:



Mahan Med Meymeh Kish hollow fiber Membrane production plant:

- High performance medical & industrial hollow fiber.
- About 12000000 km/year
- Poly Ether Sulfone (PES)
- High flux & low flux
- Excellent biocompatibility characteristics
- First in Iran & middle east

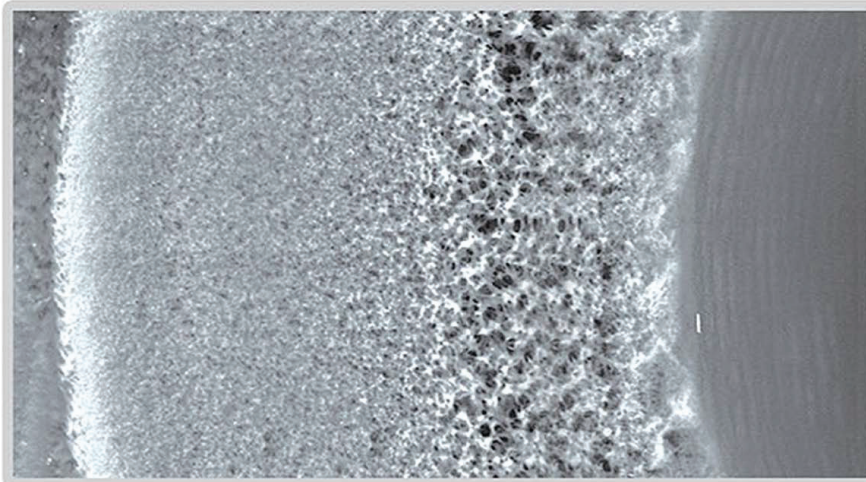
High Performance Hollow Fiber Membrane				
Poly Ether Sulfone (PES)				
Flux (l/m ² h) at 1 bar				
Thickness (mm)	10	20	30	40
100	1.5	1.2	1.0	0.8
150	1.2	1.0	0.8	0.6
200	1.0	0.8	0.6	0.5
250	0.8	0.6	0.5	0.4
300	0.6	0.5	0.4	0.3
Poly Ether Sulfone (PES)				
Flux (l/m ² h) at 1 bar				
Thickness (mm)	10	20	30	40
100	1.5	1.2	1.0	0.8
150	1.2	1.0	0.8	0.6
200	1.0	0.8	0.6	0.5
250	0.8	0.6	0.5	0.4
300	0.6	0.5	0.4	0.3

MEMBRANE SPECIFICATIONS AND DATA

Versatile™-PES is the new DIAMED hollow fiber membrane specially developed for plasma separation, it is a polyether sulfone membrane which is used for plasmapheresis and blood donation. The asymmetric structure of Versatile™-PES offers excellent filtration performances. Versatile™-PES DIAMED membrane has been designed to obtain:

An optimized diameter and wall thickness to ensure a remarkable fiber mechanical resistance and the highest filtering surface in the minimum space ;

- Very smooth internal membrane surface, ensures less damage to red blood cells in the blood stream and minimizes hemolysis risk.
- A high separation performance, in term of plasma proteins crossing the membrane (over %90);
- An optimized membrane cut off resulting in the possibility to use a significant TMP value: DIAMED guarantees a maximum TMP of 100 mmHg without any hemolysis risk.



**PLASMART:
PLASMA FILTERATERS**



NEW DIALYSIS MACHINE HD100 FAMILY:



- Peristaltic Pumps :1 or2
- HDF ON-LINE: yes (two pumps model)
- Single needle: yes (two pumps model)
- ON-LINE KT/V: yes (two pumps model)
- Battery backup for 15 min full operation
- Concentrates: basic (powder in cartridge) or acid (liquid in tank)
- Pressure sensor: 2 domes, 1 blood catcher
- Disinfection: disinfectant in tank + heat disinfection
- Connectivity: LAN + USB
- Therapy data management software: optional



- 12-inch graphic display
- Two axis rotating, to maximize operator comfort
- Resistive touch screen
- Lexan protection to allow easy cleaning procedure
- USB 2 connector to download machine log and upgrade software
- Rj45- Ethernet to remotely monitor machine while operating, through the optional therapy data management software

TECHNICAL DATA

Approximate Dimension	1500x360x460
Weight	Approx. 100 kg
Monitor / Screen	12" TFT LCD with touch screen. 45° rotation around vertical axes, 30° rotation around horizontal axes
Water supply	Inlet pressure: 1.5-6 bar Inlet temperature: 10-30°C
Electrical data	Power supply: 100 to 230 V AC, 47-63Hz
External connections	LAN (RJ 45) USB 2.0
Arterial and Pre-filter pressure monitor	Range: -500mmHg to +500 mmHg. Accuracy: <±15 mmHg at a value of ±300 mmHg; <±4 mmHg at a value of 0 mmHg. Sensor to detect incorrect closure of the dome
Venous pressure monitor and Transmembrane pressure monitor	Range: -500mmHg to +500 mmHg. Accuracy: <±15 mmHg at a value of ±300 mmHg; <±4 mmHg at a value of 0 mmHg
Arterial blood pump and (Hd101) 2" pump for single	10 to 500 ml/min ±10% Sensitivity: 10 ml/min
Air bubble detector	Sensitivity: > 0.01 ml (at flow rate of 10 ml/min)
Syringe pump	Flow rate: 0.1 to 60.0 ml/h Accuracy: <0.2 ml/h of displayed value of 5.0 ml/h Applicable syringe: 20,30, 50 ml disposable syringe. Overload alarm pressure: 40 to 140 kPa (adjusted in hardware) Fast feed flow rate: > 0.1 ml/sec. Functions: Size detection, plunger detection, end notice detection, motion detection, occlusion detection (0.2cc threshold) Bolus delivery 0.1 ml - 2.0 ml
Dialysis fluid conductivity	3.0 - 20.0 mS/cm ±0.1 mS/cm
Blood Leak Detector	Sensitivity: >blood cell concentration 0.15%, sensitivity can be decreased: 100%-90%-80%-70%-60%-50%0 (OFF)
Balancing accuracy	± 0.3% with respect to the total dialysate volume
Dialysis fluid flow range	0-700 ml/min - Steps of 100 ml/min
Ultrafiltration	0-4000 ml/h - Accuracy ±1% - Sensitivity 10ml/h
Back up battery	24 Volt, 2.2 Ah

Designed and manufactured by



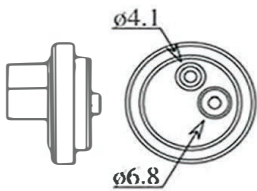
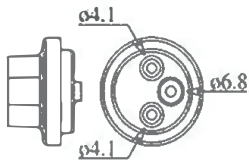


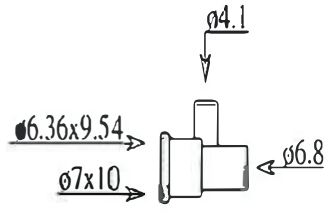
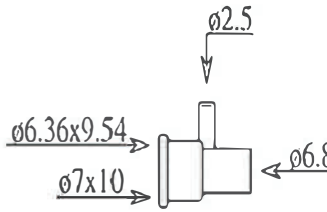
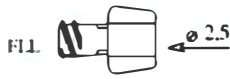
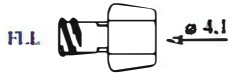
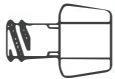
Plastic Injection Unit

MAHAN MED MEYMEH Kish produce all plastic part & component of hemodialysis line with high technology injection machine in clean room iso8- space with medical grade raw material with standard QC control.

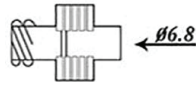
- Medical grade material
- Clean room space A100000
- Standards quality test
- Toxicological testing
- ISO standard connector

Plastic injection piece:

CODE	COLOR	RAW MATERIAL	STERILIZATION	PRODUCT DESCRIPTION	PRODUCT DRAWING
14-004-01-01-12	COLORLESS Red Blue	PVC DEHP FREE	ETO Y	2-way cover	
14-004-01-03-12				1 x 4,1 - 1 x 6,8mm for drip chambers,	
14-004-01-04-12				O.D. 30mm	
14-004-02-01-12	COLORLESS Red Blue	PVC DEHP FREE	ETO Y	3-way cover	
14-004-02-03-12				2 x 4,1 - 1 x 6,8mm for drip chambers,	
14-004-02-04-12				O.D. 30mm	

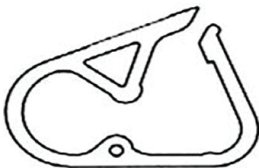
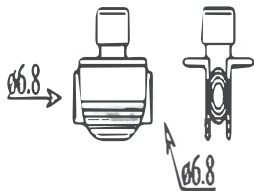
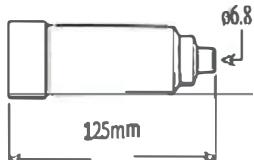
CODE	COLOR	RAW MATERIAL	STERILIZATION	PRODUCT DESCRIPTION	PRODUCT DRAWING
-006-02-01-04	COLORLESS	PVC DEHP FREE	ETO Y	PVC pump connector for tube I.D. 6,36 - O.D. 9,54mm with heparin line O.D. 2,5mm	
14-006-01-01-04	COLORLESS	PVC DEHP FREE	ETO Y	PVC pump connector for tube I.D. 6,36 - O.D. 9,54mm with service line O.D. 4,1mm	
14-013-01-01-04	COLORLESS	PVC DEHP FREE	ETO Y	Female luer lock for tube O.D. 2,5mm	
14-013-02-01-04	COLORLESS	PVC DEHP FREE	ETO Y	Female luer lock for tube O.D. 4,1mm	
14-013-03-01-05	COLORLESS	PVC DEHP FREE	ETO Y	Female luer lock for tube O.D. 4,8mm	
14-013-03-02-06 14-013-03-03-06 14-013-03-04-06	Red Blue white	HDPE	ETO Y	Closed male luer lock cap	

Plastic injection piece:

CODE	COLOR	RAW MATERIAL	STERILIZATION	PRODUCT DESCRIPTION	PRODUCT DRAWING
14-002-01-04-12 14-002-01-03-12	RED BLUE	soft PVC	ETO Y	Dialyzer connector (semi rigid type)	
14-001-01-02-12	White	PP	ETO Y	Closed cap for dialyzer connector	
14-022-02-01-12 14-022-03-01-12 14-022-04-01-12	colorless	polycarbonate	ETO	HOUSING (SIZE 1, 1.3, 1.6)	
14-021-02-03-12 14-021-03-03-12	RED BLUE	POLYCARBONATE	ETO	FLANG (SIZE 1,1.3,1.6)	

Plastic injection piece:

CODE	COLOR	RAW MATERIAL	STERILIZATION	PRODUCT DESCRIPTION	PRODUCT DRAWING
16-003-01-01-12	Colorless Blue Red	PVC/HDPE	ETO	Self-Ejecting rotating male luer lock for tube O.D. 6.8mm	 MLL
16-003-01-03-12					
16-003-01-04-12					
16-003-02-01-12	Colorless Blue Red	PVC/HDPE	ETO		
16-003-02-03-12					
16-003-02-04-12					
16-003-02-01-12	Colorless Blue Red	PVC/HDPE DEHP FRE	ETO		
16-003-02-03-12					
16-003-02-04-12					
16-003-01-01-12	Colorless Blue Red	PVC/ABS DEHP FRE	ETO		
16-003-02-03-12					
16-003-02-04-12					
14-012-01-01-04	Colorless	PP	ETO	Vented cover for rotating male luer lock	

CODE	COLOR	RAW MATERIAL	STERILIZATION	PRODUCT DESCRIPTION	PRODUCT DRAWING
14-009-01-01-06 14-009-01-02-06 14-009-01-03-06 14-009-01-04-06 14-009-01-05-06	Red Blue White Green	POM	ETO Y	On-off mini clamp for tubes O.D. 2,0- 2, 5- 3,0 - 4, 2-4.8mm	
14-009-02-02-04 14-009-02-03-04 14-009-02-03-04	Red Blue White	POM	ETO Y	On-off big clamp for tubes O.D. 5, 5 - 6,8mm	
16-001-01-04-04 16-001-01-03-04 16-001-01-01-04	Red Blue COLOURLESS	R PVC	ETO Y	Blood T injection site With protective grip for tube O.D. 6,8mm	
14-003-01-01-04	COLOURLESS	soft PVC	ETO Y	Drip chamber, O.D. 22mm total volume: 47ml	

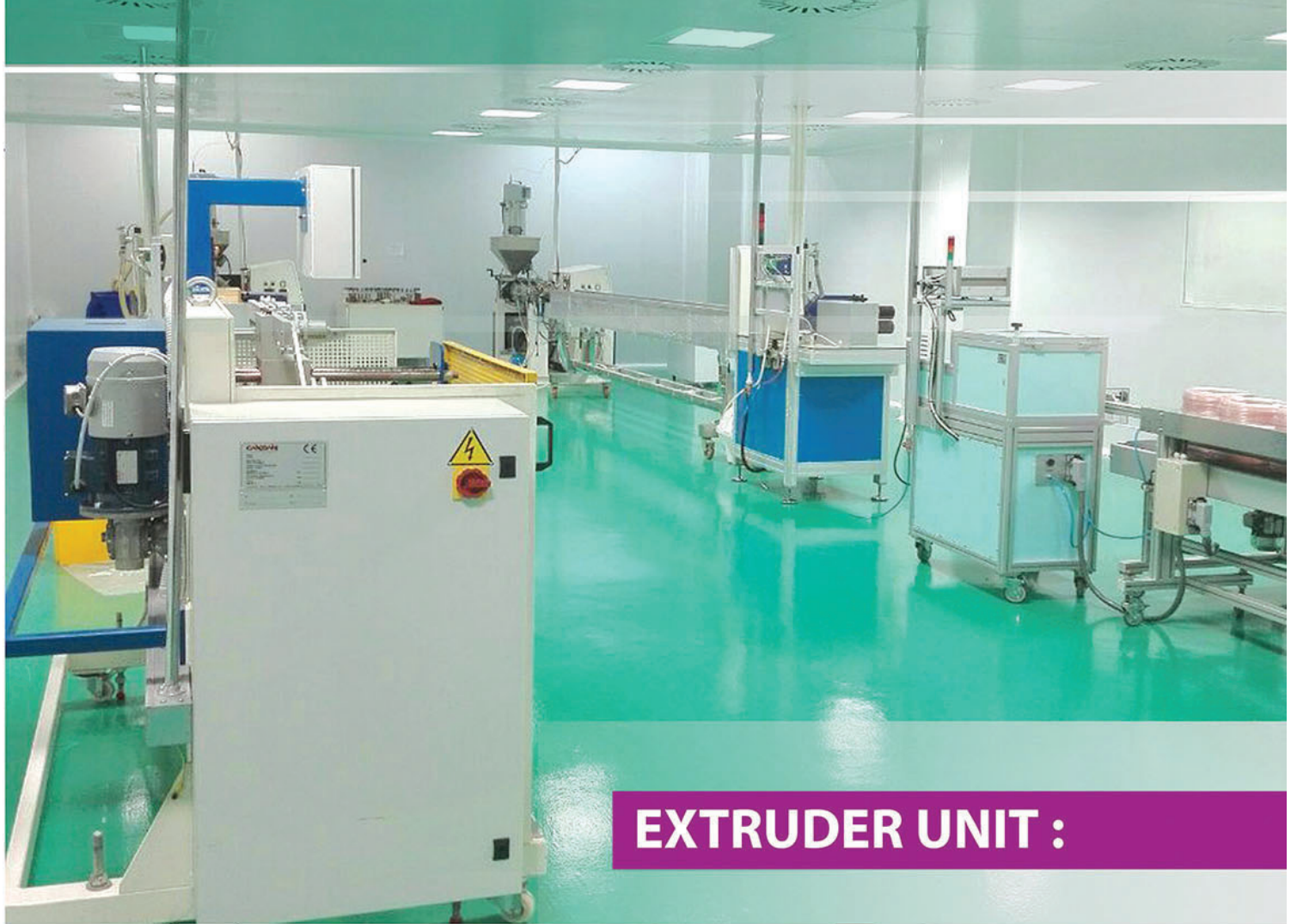
Plastic injection piece:

CODE	COLOR	RAW MATERIAL	STERILIZATION	PRODUCT DESCRIPTION	PRODUCT DRAWING
14-005-03-01-04	COLORLESS	HD-PE	ETO Y	Cone-shaped blood filter surface = 11 cm ² filter mesh = 270 µm Ø 16mm	
14-005-01-01-04	COLORLESS	HD-PE	ETO Y	Cone-shaped blood filter surface = 11 cm ² filter mesh = 270 µm Ø 16,3mm	
14-005-02-01-04	COLORLESS	HD-PE	ETO Y	Cone-shaped blood filter surface = 6 cm ² filter mesh = 270 µm Ø 16,3mm	
16-002-01-01-12	COLORLESS	PVC DEHP FREE PTFE	ETO	Transducer protector male luer lock & female luer lock (Gore membrane 0.20µm)	 FLL MLL
16-002-02-01-12	COLORLESS	PVC DEHP FREE PTFE	Y		
14-015-01-01-04 14-015-01-04-04 14-015-01-03-04 14-015-01-02-04	COLORLESS RED BLUE WITH	HD-PE	ETO	Recirculating female luer lock with protective closed cap	 FLL F.L.L.



Extruder unit product :

I.D. x O.D. mm mm	THICKNESS mm	Roll length (m)	HARDNESS (Shore - A)
1 x 2	0.5	200-1000	70-77
1 x 2.5	0.75	200-1000	70-77
1.5 x 3	0.75	200-1000	70-77
1.5 x 4.1	1.3	400	70-77
3 x 4.1	0.75	400	70-77
3.5 x 5.5	0.55	400	70-77
3.7 x 6.8	1.0	400	70-77
4 x 5.5	1.55	400	70-77
4.3 x 6.8	0.75	400	70-77
4.8 x 6.8	1.25	400	70-77
5 x 6.5	1.0	400	70-77
4 x 8	2.0	200	70-77
4.77 x 7.95	1.59	200	70-77
6.36 x 9.54	1.59	200	70-77
6.4 x 10	1.8	200	70-77
7 x 10	1.5	200	70-77
8 x 11	1.5	200	70-77
8 x 12	2.0	200	70-77
10 x 14	2.0	200	70-77



EXTRUDER UNIT :



Chemical / physical/ microbiologylaboratory – quality control department:

At MAHAN MED Laboratory , we are passionate about innovating HEMODIALYSIS and try to find ways to made hemodialysis easier for patient and Critical Care in HEMODYLISIS testing Our extensive range of products and services offer healthcare providers new ways to improve quality, efficiency and patient care.

Lab test:

- Bioburden assay
- LAL test
- Sterilely test
- Filter performance test
- Clearance test
- P test

**Packing & Sterilization unit:**

Mahan Med Meymeh Kish factory have some packaging machine for prepackaging - carton boxes packaging and

All production packaged in the cleanroom IS8-0 standard.

Mahan Med Meimeh Kish factory have a ETO. sterilizing unit. It has two chambers.

Some production sterilized with ETO inside the factory and someone transfer to other site for Beta or Gamma ray sterilization

- Safe and reliable ETO. Sterilization equipment.
- All standard testing & strictly controlled.



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