



MEDITECHSYS



Meditechsys

member of the ICD Group

NIXAMED

PHARMED
Medical Industries



smart

**Med
Way**
Teb Pouyan

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MEDITECHSYS

www.meditechsystem.com
info@meditechsystem.com

Meditechsys Company

Member of the ICD Group

Meditechsys Company was established in 2002. It prioritizes the production of dialysers which are produced in Iran in compliance with ISO 13485:2016 standards and meet European Union CE mark requirements. The company has managed to avail itself of the proficiency, experience, and technical partnership from pioneering allies in France, Germany, and Canada. Having about 15 years' experience, the company is the exclusive private sector manufacturer of varied high-flux and low-flux dialysers, and satisfies a considerable amount of the country's therapeutic demands. Achieving self-sufficiency is regarded as the company's primary objective and ensuring the increase in production, it has initiated the export of dialysers and aims at exporting products to the international markets.



MEDITECHSYS

Meditechsys Quality Management System

Quality management standard has been established in compliance with ISO 13485:2016 regulations and the entire processes of the company are continuously monitored to meet these regulations. Additionally, Meditechsys Company has managed to obtain the CE mark by adhering to European Union requirements. Utilizing improved laboratory equipment and skillful and experienced workforce, the company assures its products' compatibility with international standard requirements including BS EN ISO 8637 and BS EN ISO 8638. Improving the quality systems as well as products' quality has been accomplished through close interactions between the R&D and QA departments, and the company's perdurable objective.



Allmed Medical GmbH
Germany



Quality Assurance

Professionals having specialized knowledge hold a job in the quality assurance department of Meditechs Company who also attend to monitoring and assessing all production processes and plan for improving the quality system. The aim of such monitoring and assessment is to keep quality assurance systems stable and to recognize the cases which require improvement. The quality assurance department is comprised of quality control unit, documentation unit, laboratories, and GMP monitoring units.

GMP

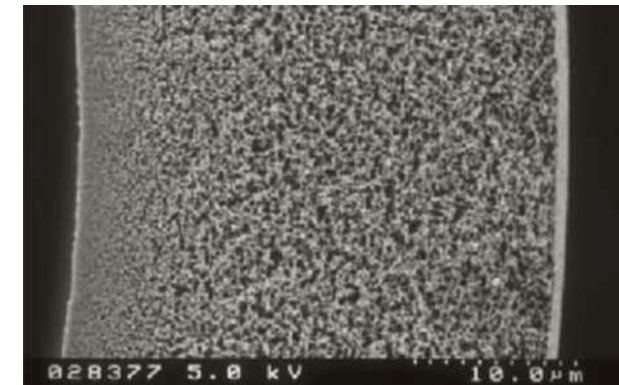
The GMP department has been working with professional and skillful staff in order to establish and maintain proper manufacturing conditions and to manufacture high-quality products. Its activities which are aimed at establishment and maintenance of appropriate production infrastructures including machinery, environment, equipment and personnel are significant in manufacturing practices. By maintaining standard requirements, customer needs are guaranteed in terms of quality, safety, and functionality.

Polyethersulfone Dialysers

PUREMA®

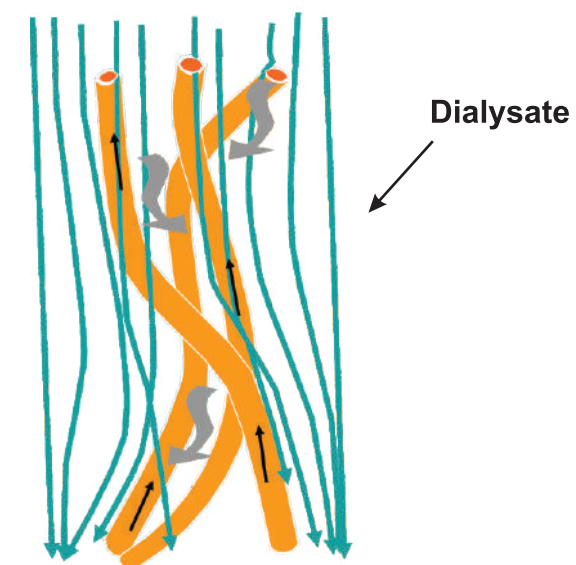
Unique process technology influence separation profile of membrane formation

- Thicker separation layer
- Sharpened sieving profile (S.E.T)
- Optimized dialysate side distribution (P.E.T)
- Higher mechanical strength resulting in low albumin loss
- High middle molecule removal
- Maximum low molecular clearance



Cross Section of Membranes

Undulation of Capillary Membranes

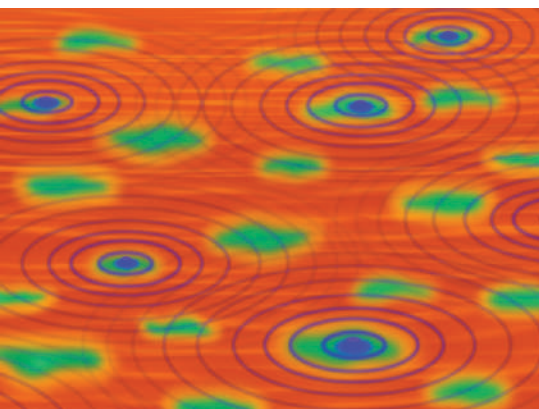




P.E.T.[®] : Performance Enhancing Technology

Polyethylene terephthalate spacer yarns consist of multifilament threads integrated into the fiber bundles:

- Improves dialysate distribution throughout the dialyzer
- Increases clearance values
- Maintains consistent performance:
 - Throughout the entire treatment
 - From dialyser to dialyser



S.E.T. : Sieving Enhancing Technology PUREMA[®] Blood Side Surface

This is a unique patented technology in which a lot of active hydrophobic and hydrophilic foci are formed which bring about water loss on one hand and prevent protein loss on the other. Accordingly, the dialysers which are produced according to this technology, distinguish between the material which shall or shall not be disposed.

- Active surface management
- Low protein loss
- Wider pores
- More uniform pore distribution

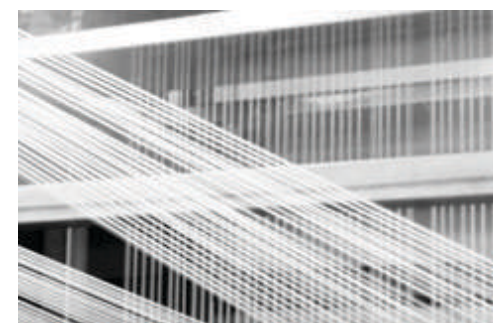
These features would result in:

- Steeper sieving curve
- More selective removal



Polysulfone Dialysers

Superior knowledge of membrane fabrication has guaranteed the production of premium polysulfone membranes which can be used for low- and high- flux dialysers. Allmed Medical Industries hollow fiber membranes ensure the most efficient removal of uremic toxins in low- and medium-molecular ranges and thus guarantee the highest patient compatibility. The unique pore structure of the membranes as well as the excellent hemo-compatability provide a highly sufficient toxin-removal performance making the dialysis process as comfortable as possible for the patient suffering from kidney disease. Unprecedented Micro-Undulation technology prevents single membranes from clustering up during the dialysis process. Therefore, the Micro-Undulation guarantees an enhanced and steady blood-dialysate contact. A wall thickness of 40 µm of membranes adds to an enhanced clearance for an optimized dialysis effectiveness.



Allmed
Medical Industries



Operational Specifications of Ploysulfone Dialysers

| Polysulfone Dialysers | | | | | | | | | | | | | | |
|-----------------------|--|---------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|---------------------------------|--------------------------------------|
| Type | UF Coefficient (Ultrafiltration) (ml/mmHg.h) | KoA ml/min | Clearances (ml/min) | | | | | | | | | | Blood Priming Volume (ml) | Surface Area (m ²) |
| | | | Urea | | Creatinine | | Phosphate | | VitaminB ₁₂ | | Inulin | | | |
| | | | Q _B = 200 | Q _B = 300 | Q _B = 200 | Q _B = 300 | Q _B = 200 | Q _B = 300 | Q _B = 200 | Q _B = 300 | Q _B = 200 | Q _B = 300 | | |
| PS 10 LF | 6.8 | 637 | 183 | 231 | 164 | 196 | 140 | 158 | 73 | 78 | – | – | 59 | 1.0 |
| PS 13 LF | 8.8 | 746 | 191 | 243 | 176 | 218 | 150 | 178 | 86 | 93 | – | – | 69 | 1.3 |
| PS 16 LF | 12.9 | 1064 | 195 | 266 | 184 | 237 | 161 | 192 | 111 | 125 | – | – | 86 | 1.6 |
| PS 18 LF | 17.0 | 1292 | 205 | 276 | 206 | 259 | 180 | 211 | 129 | 144 | – | – | 105 | 1.8 |
| PS 100 HF | 32 | 778 | 184 | 246 | 168 | 205 | 156 | 186 | 105 | 118 | 72 | 78 | 59 | 1.0 |
| PS 130 HF | 43 | 836 | 189 | 251 | 175 | 221 | 170 | 205 | 120 | 135 | 86 | 95 | 69 | 1.3 |
| PS 160 HF | 55 | 1145 | 195 | 270 | 191 | 252 | 183 | 233 | 142 | 165 | 108 | 120 | 86 | 1.6 |
| PS 180 HF | 59 | 1265 | 196 | 275 | 193 | 260 | 187 | 242 | 149 | 176 | 116 | 131 | 105 | 1.8 |

Performance data were measured in vitro according to standards BS EN ISO 8638 and BS EN ISO 8637



Characteristics of Polysulfone Dialysers

Micro-Undulation Technology

- Wave like structure of hollow fibers affects dialysate flow within the dialyser
- Enhances the blood-dialysate contact surface area
- Optimized dialyser rheology for excellent performance

Truly High performance

Less prime volume, Less Hypotension

Thin wall for membrane (40 μm)





Operational Specifications of Ployethersulfone Dialysers

| Polyethersulfone Dialysers | | | | | | | | | | | | | | |
|----------------------------|--|---------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|---------------------------------|--------------------------------------|
| Type | UF Coefficient (Ultrafiltration) (ml/mmHg.h) | KoA ml/min | Clearances (ml/min) | | | | | | | | | | Blood Priming Volume (ml) | Surface Area (m ²) |
| | | | Urea | | Creatinine | | Phosphate | | VitaminB ₁₂ | | Inulin | | | |
| | | | Q _B = 200 | Q _B = 300 | Q _B = 200 | Q _B = 300 | Q _B = 200 | Q _B = 300 | Q _B = 200 | Q _B = 300 | Q _B = 200 | Q _B = 300 | | |
| PES 10 LF | 8.4 | 518 | 171 | 214 | 155 | 185 | 134 | 154 | 91 | 99 | – | – | 59 | 1.0 |
| PES 13 LF | 10.4 | 629 | 181 | 230 | 169 | 207 | 149 | 176 | 108 | 121 | – | – | 71 | 1.3 |
| PES 16 LF | 12.1 | 757 | 188 | 244 | 178 | 224 | 158 | 188 | 117 | 131 | – | – | 90 | 1.6 |
| PES 18 LF | 22.0 | 1123 | 213 | 269 | 206 | 252 | 178 | 208 | 124 | 141 | – | – | 119 | 1.8 |
| PES 130 HF | 54 | 916 | 191 | 257 | 186 | 241 | 177 | 221 | 136 | 156 | 99 | 107 | 72 | 1.3 |
| PES 160 HF | 62 | 1167 | 194 | 271 | 191 | 254 | 184 | 237 | 148 | 172 | 111 | 124 | 89 | 1.6 |
| PES 180 HF | 78 | 1321 | 198 | 277 | 195 | 263 | 189 | 245 | 153 | 180 | 118 | 133 | 110 | 1.8 |

Performance data were measured in vitro according to standards BS EN ISO 8638 and BS EN ISO 8637



Characteristics of Polyethersulfone Dialysers

Incorporating PUREMA, unique and worldwide known fibers (for high flux dialysers)

Excellent Biocompatible Polymer

- Ensures less dialysis complications

Three Layers Asymmetric Structures

- Separation, support and control layer
- Thinnest wall available for synthetic membranes (35 µm)
- Thicker separation layer

Performance Enhancing Technology (P.E.T)

- Improves dialysate distribution throughout the dialyser resulting in increased clearance values and maintains consistent performance

Sieving Enhancing Technology (S.E.T)

- More uniform pore distribution
- Active surface management
- More selective removal
- Highest middle molecular removal (i.e. β 2m)
- Higher clearance and ultrafiltration rate in comparison with similar dialysers

Sales and Customer Care Services

Sales, distribution, and customer care services are exclusively carried out by Medway Teb Pouyan Company.

- Customer care service department is available 24 hours 7 days a week
- Customer satisfaction is our number one priority
- All complaints and suggestions shall be taken care of in the earliest time span
- Recommendations would be of great benefit for improving the products' quality



Office

1st Floor, No.44, Sa'adat Abad,
Tehran. P.O.BOX: 19988366791
Sales and Marketing: +98 (21) 22149688
Tel: +98 (21) 22143501
Fax: +98 (21) 22361067
www.medwayteb.com
sales@medwayteb.com

Office

5th Floor, No.44, Sa'adat Abad St.,
Tehran, Iran. P.O.BOX: 19988366794
Tel: +98 (21) 22074001
Fax: +98 (21) 22073101

Factory

3th Tangestan, West Hafez Blvd, Eshtehard
Industrial Zone Eshtehard, Iran.
P.O.Box: 3188114366
Tel: +98 (26) 37773870
www.meditechsys.com

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