

Leader in Membrane Separation Processes



**Pioneer in Membrane  
Filtration Systems**

*Exclusive membrane designers*  
*Cutting-edge membrane systems*  
*Enduring customer support*  
*State-of-the-art R&D*  
*Innovations at industrial scale*



# *Vision*

*"Leader in Membrane Separation Processes"*

# *Mission*

*To provide membrane technology based environmental friendly solutions for industrial applications*

# *Philosophy*

*Membrane Technology has proven to be effective for many applications such as purification, concentration, heavy metal recovery and recycling in various industries. Membrane Technology requires minimal chemicals for operation in order to ensure a pollution free and green environment.*

*Liquid Purification Engineering International Co., Ltd (LPE) utilizes the advantages of Membrane Technology to provide total solution of water systems to customers.*

### ***LPE aims to:***

- *Specialize in membrane separation processes;*
- *Provide high quality manufacturing and engineered separation systems;*
  - *Provide solutions with latest advanced technologies;*
- *Provide continuous and reliable technical support to clients;*
  - *Test and develop technical innovations at pilot scale.*





**Prapan Ariyamethee**  
*Managing Director*

## *Company Profile*

*Liquid Purification Engineering Co., Ltd. was founded in 1992 by Mr. Prapan Ariyamethee, a senior chemist, and a team of expert engineers who were fully committed to innovative engineering technologies. In 2002, the company obtained ISO 9000 certification and changed its name to Liquid Purification Engineering International Co., Ltd to provide more organized support to its domestic and international customers.*

*LPE offers research, consulting, design and installation of the membrane systems for various industrial applications. Over the years, LPE has grown progressively and expanded its activities. There are about 100 staffs in various sections. The company has not only well equipped manufacturing and analytical laboratory facilities, but also pilot plants for developing effective membrane solutions to its customers' need.*

*With the continuous concern of the environmental issues in Thai industrial sector, LPE has been responding by promoting the membrane technology. Recently, LPE is focusing more on R&D activities by collaborating with national and international universities by conducting joint membrane research activities.*

*LPE directly deals with many of the leading membrane suppliers, and its technicians are professionally trained by these companies. LPE's professional ethics is strongly based on the concept of product quality, responsibility and untiring continuous commitment to its customers. With its team of experienced chemists, engineers, and professional technicians, LPE ensure reliable systems and high quality services to customers around the world.*



**Supporting Team**

# *Products*



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There are four basic types of membrane filtration systems namely: Microfiltration (MF), Ultrafiltration (UF), Nanofiltration (NF), and Reverse Osmosis (RO). These membranes are available in different configurations such as plate & frame, tubular, hollow fiber, and spiral wound.

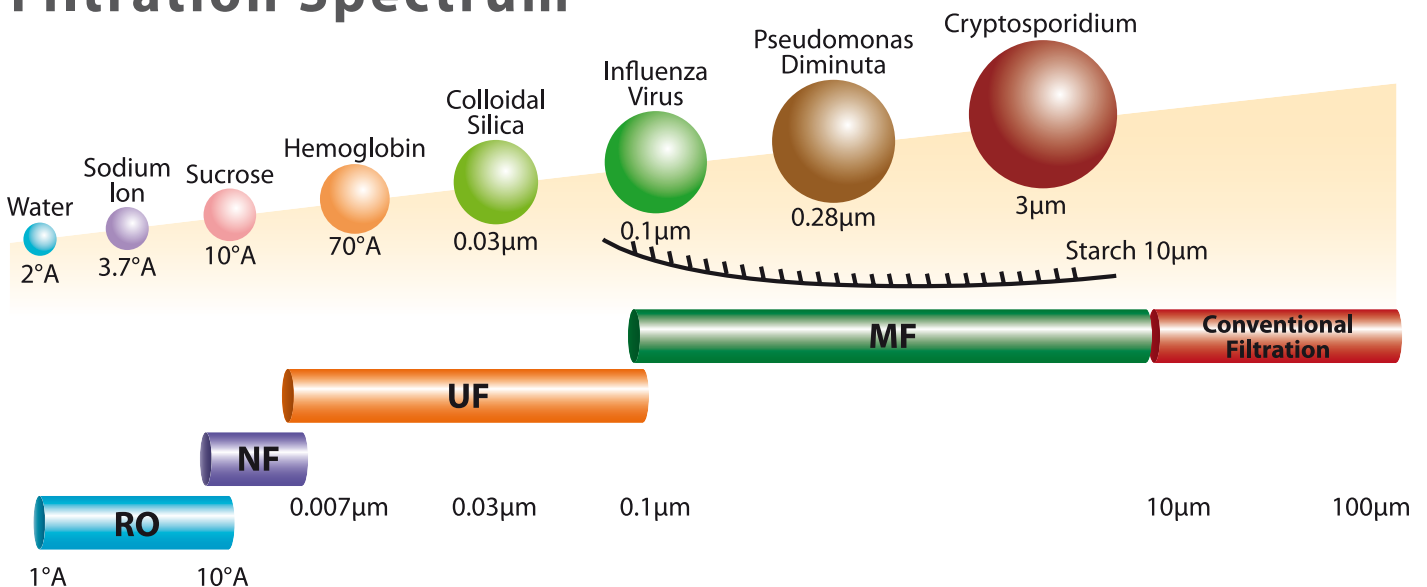
LPE selects the optimum solutions from its product range that extent throughout the filtration spectrum. Membrane configuration is selected based on the particular application, solids contents and feed characteristics.

## Microfiltration (MF) and Ultrafiltration (UF)

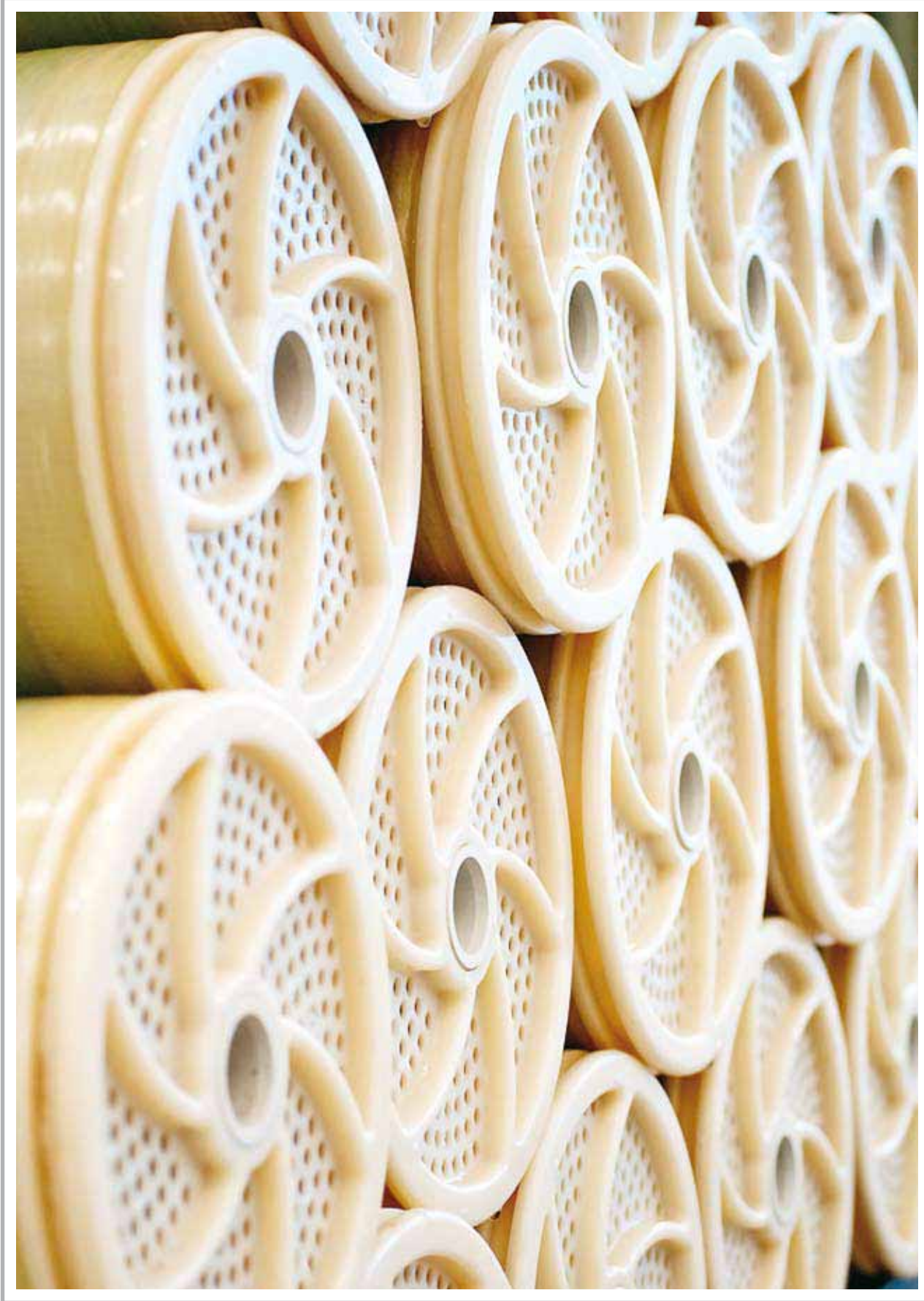
(clarification and pretreatment applications)

- Surface-water pretreatment for NF and RO systems
- Yeast/Bacteria removal
- Protein separation and concentration
- Industrial wastewater recovery
- Fruit-juice/Vinegar/Wine clarification

## Filtration Spectrum



# *Products*



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## *N*anofiltration (NF) and Reverse Osmosis (RO)

- *High purify water production for electronic & semiconductor industries*

- *Water purification for food and beverage industries*

- *Seawater desalination*

- *Desalting of dye*

- *Color removal of water/wastewater*

- *Wastewater volume reduction*

- *Heavy metal recovery*



*LPE can provide electrodionization (EDI) and advanced ion exchange system for ultrapure water production, and special customized industrial applications.*



# *Service & Support*



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## *Process Development*

*LPE develops processes for special applications to give the most appropriate solution based on customer's requirement. Using various pilot unit and quality tests, the membrane for any particular application is selected. The membrane performance is also checked using long term tests, which is scaled up to actual capacity. With its extensive expertise in membrane application along with technical support from the membrane manufacturers and working closely with the clients, technically and economically optimum are developed.*



## *Laboratory*

*Water characteristic is an important criterion to select particular filtration process design. LPE laboratory continuously provides analytical support during the early stage of the project, process development and after-sale service.*

*With new analytical equipments, the laboratory is gradually expanding its range of analyses to provide more instant and accurate results. Besides the water quality test, the laboratory is also able to test ion exchange resin capacity, moisture contents, bead cracking, membrane fouling and etc*



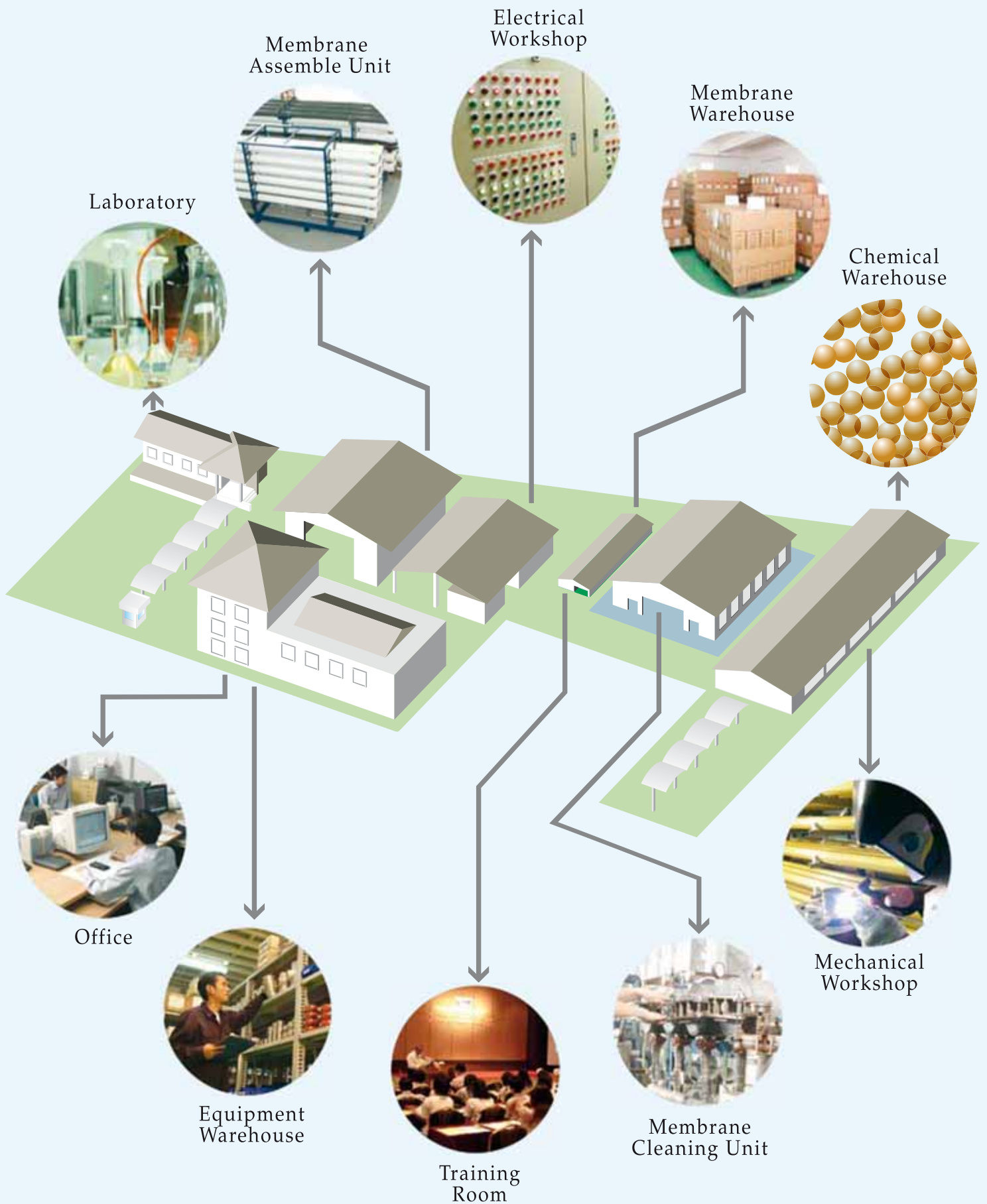
## *After Sale Service*

*LPE believes in customer satisfaction and provides continuous technical support through warranty and service contracts. LPE technicians regularly visit the customers to maintain and provide training to ensure smooth and reliable operation. Typical support provided by LPE includes:*

- *Membrane cleaning support*
- *Resin regeneration support*
- *Engineering support*
- *Spare-part and chemical support*
- *Water quality analysis*
- *Normalization of operation data*
- *Technical training for clients' staffs.*



# *LPE's Spectrum of Activities*



# Industrial Applications & Customer References

## Food & Beverage



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## Pharmaceutical & Cosmetic



## Electronic & Semiconductor

Sony Device Technology (Thailand) Co., Ltd.



## Power Plant & Petrochemical



## Miscellaneous Applications



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