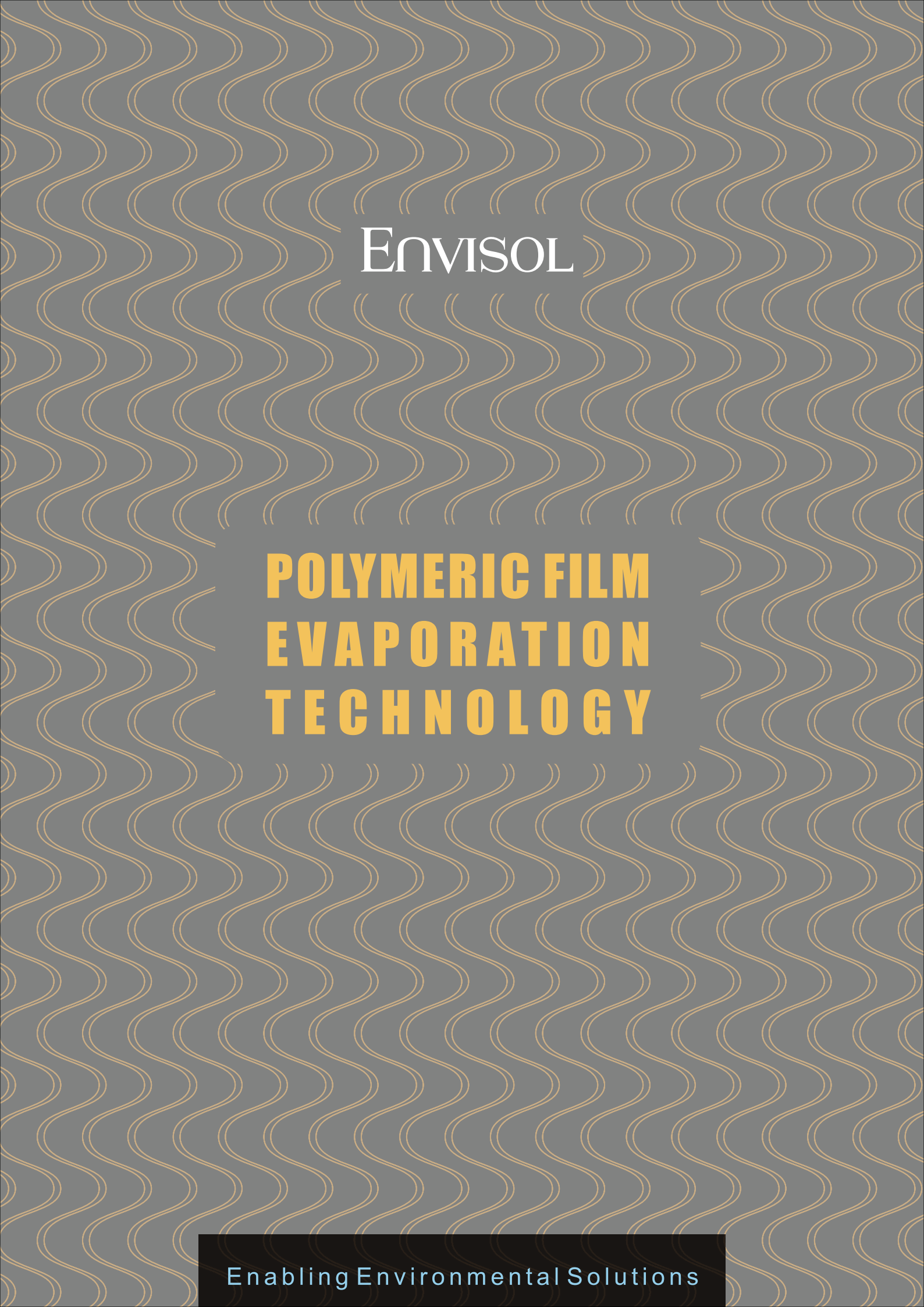


The background of the entire page is a repeating pattern of wavy, horizontal lines in a light beige or cream color, set against a dark grey background. The lines are closely spaced and create a textured, undulating effect across the entire surface.

ENVISOL

**POLYMERIC FILM
EVAPORATION
TECHNOLOGY**

Enabling Environmental Solutions

Vision Statement

LALBHAI GROUP

To Achieve
Global Dominance In
Select Businesses
Built Around Our
Core Competencies,
Through Continuous
Product And
Technical Innovation,
Customer Orientation
And A Focus On
Cost Effectiveness.

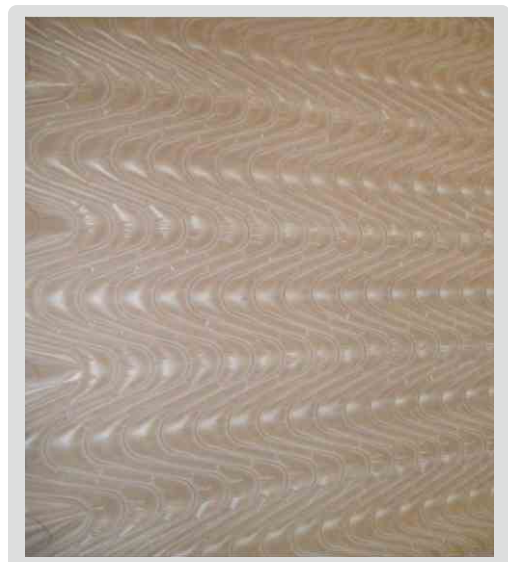


ARVIND LTD. the flagship company of Lalbhai group was established in 1931, having diversified business interest in Textile, Retail, Telecommunication, Real Estate, Heavy Engineering, Energy & Environment and Evaporator Systems.

Arvind Envisol Pvt. Ltd., a 100% subsidiary of Arvind Ltd., is in the field of Mechanical Vapour Recompression based Evaporators, crystallizers and special grade of Multi Effect Evaporators .

Our unique value proposition lies in the patented polymeric film heat exchanger we use in our evaporators. Major benefits of using Polymeric Film Evaporation Technology (PFET) are :

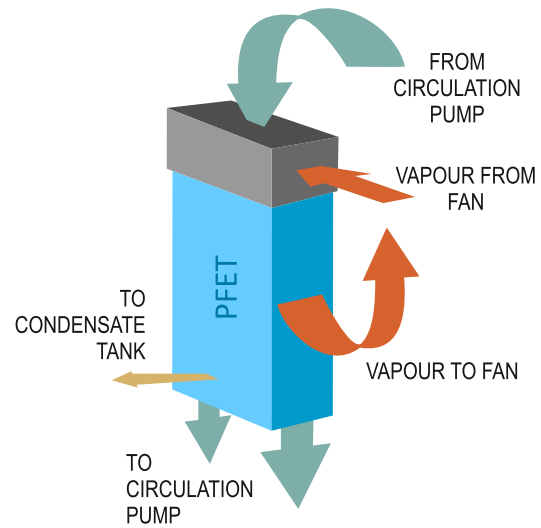
- **Less prone to scale**
- **Can operate on low pH**
- **Lower maintenance**
- **High availability of system**
- **Low Corrosion**
- **High Surface area of heat transfer**
- **No Expensive Pre-Treatment**
- **Very low operating cost**



Polymeric Heat Exchanger

The ENVISOL Polymeric Film Evaporation Technology. Never-before Concept

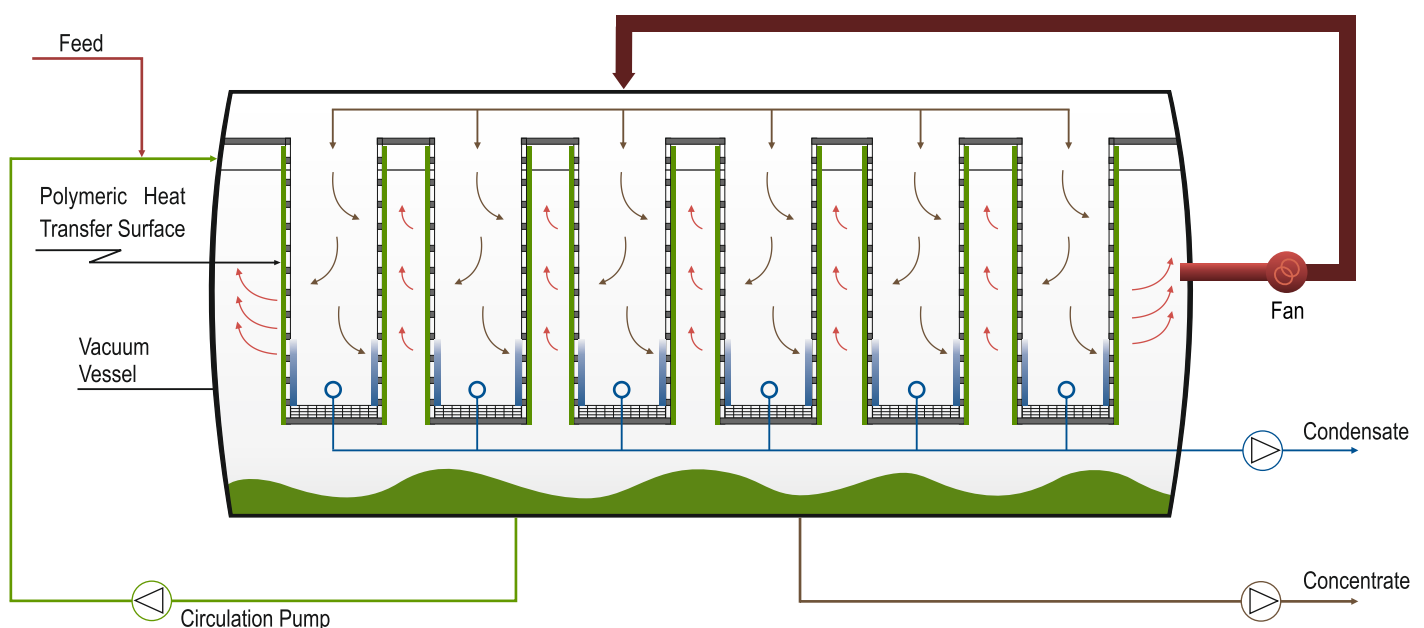
Today, plastics are utilized in areas previously considered impossible. Industrial-scale evaporation is one of them. Envisol Polymeric Film Evaporation Technology (PFET) works in exactly the same way as conventional mechanical vapour recompression or multi-effect evaporators, but with a lower temperature difference and an even lower operating cost.



Principle of Evaporation in a Polymeric Film Evaporation Technology (PFET)

The evaporator is based on the Polymeric Film Evaporation Technology. The energy source of the system is the latent heat released when the vapour evaporated from wastewater is condensed. This vapour is used as the heating medium after it is compressed and temperature is increased using a high speed centrifugal fan as the vapour recompressor.

Preheated Effluent is pumped to the horizontal cylindrical vessel and uniformly distributed on the patented heat transfer element made of polymer. The polymeric heat exchanger modules are placed one after another along the length of the vessel. As the water flows down, evaporation takes place. The vapours are drawn by a high speed centrifugal fan, which compresses the vapour and increases pressure and saturation temperature. The saturated vapours condense on the inner surface of the polymeric heat exchanger and releases latent heat to the effluent. The clean condensate is then collected in a pipe connecting all the heat exchanger modules at the bottom. The concentrated effluent is pumped out for disposal or further treatment in a crystallizer. The entire system works under vacuum and the volatile gases, if any, are removed by a vacuum pump.



Polymeric Film Evaporation Technology

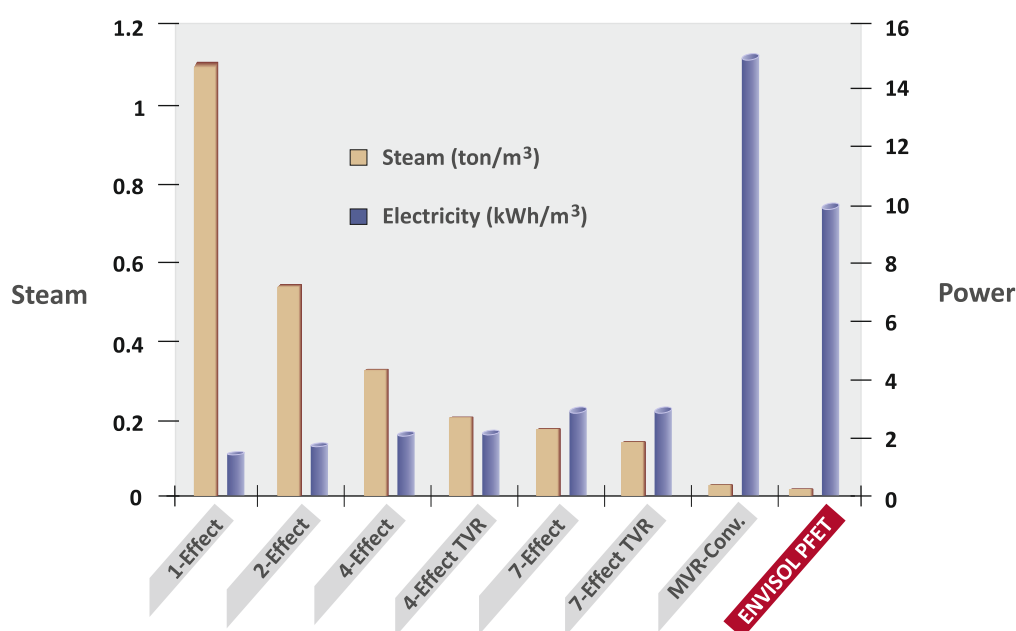
The ENVISOL PFET Advantages over Conventional Evaporators

Envisol Polymeric Film Evaporation Technology addresses major drawbacks in conventional evaporators using small quantity of steam to recycle highly concentrated effluent or RO reject. Though evaporation is logically the most efficient treatment method for wastewater, it is not preferred due to high operating cost.

Envisol Polymeric Film based Evaporator has several advantages when compared to conventional evaporators, such as :

Conventional Heat Exchanger	State of Art Polymeric Heat Exchanger (Envisol Product)	Advantages of Polymeric Heat Exchanger
Higher Temperature Difference	Lower Temperature Difference	Lower steam consumption
Lower Surface Area	Higher Surface Area	Higher availability in case of scaling
MOC : Titanium or Equivalent	MOC : Polymer	Replacement cost is very low
Higher Steam Consumption	Minimal Steam is required only for initial heating	Very low operating cost
Rough surface	Smooth Surface	Reduction in scaling due to lower bonding strength with surface
Rigid Surface	Flexible Surface	Scale removal is very easy hence no periodic stoppage for cleaning
Cleaning chemicals required	Cleaning by water only	No additional load on ETP due to chemicals

Typical Energy Consumption in Various Evaporators



ENVISOL PFET for Zero Liquid Discharge System (ZLD)

Envisol PFET saves upto 80% energy for ZLD system as compared to any other prevailing technologies. Low energy consumption is due to lower differential pressure and temperature required in our technology. It takes care of the solids in wastewater that are to be removed or recovered before release, which in turn ensures that the cleaned waste water is completely harmless. The chemical free process inside the heat exchanger, with the reduced number of stages in the process, makes the treatment system more conducive to the environment as well.

Combination of PFET system with crystallizer unit results in complete separation of liquid, i.e, pure water and solids, i.e, crystals. The recovered water can be recycled in process, boilers, cooling towers etc. Solids can be either recycled back or used in secured land filling.

Convenient Retrofitting or New Installation

Innovative design of Envisol PFET allows convenient retrofitting in existing schemes or new installation of ZLD schemes.

500 KLD PFET for ZLD





After Sales Support

With over two decades of collective experience with our customers, we understand the diverse maintenance requirements of various segments of the industry.

Our Customer Care Division, with its team of highly experienced and the best talent, in the water and waste water treatment industry, offers the following:

- ◆ Supply of genuine and high quality spares, chemicals and other consumables to help increase product reliability and longevity.
- ◆ Preventive and breakdown service management through Annual Maintenance Contracts and Operation & Maintenance Contracts.
- ◆ Reduction in operating cost, reduction in unforeseen breakdowns and increase in plant availability through the O&M contract.
- ◆ On call troubleshooting required by Effluent Recycling and Zero Liquid Discharge systems.
- ◆ Solutions based on life cycle economy, efficiency and reliability.
- ◆ Patented Polymeric Heat Exchangers made available as cassettes for easy replacement by the users.
- ◆ A structured customer contact program to ensure that we never lose contact with our customer even at times when the plant is not calling for service.

The Customer Care Division is not only Envisol's assurance of complete life cycle support to its customers but is also Envisol's commitment for providing reliable quality products and services through persistence, pragmatism and an unwavering integrity to answer your most basic need of water and clean environment.

Wherever you are, service calls are responded to within 24 hours of logging.

24x7 service support ID: ccd@arvind.in, ccd@envisol.co.in

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