



Technology Licensee From
Bhabha Atomic Research Center
Government of India



mopoo
SEPARATION (BHARAT) PVT. LTD.

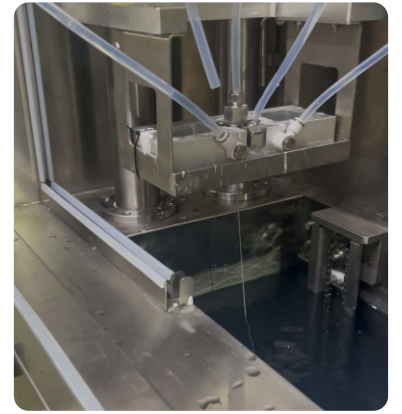
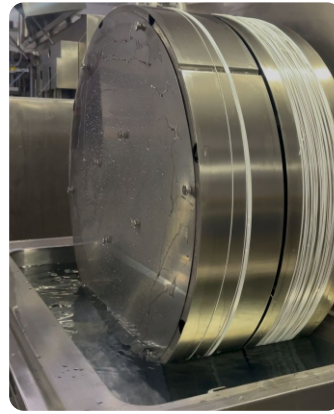


mopoo

SEPARATION (BHARAT) PVT. LTD.

About Us

“Mopoo separation (Bharat) Pvt.Ltd. is a high-tech company, specializing in the manufacture and application of hollow fiber membranes and membrane products. The company has a strong R&D capability, With its R&D strength, advanced manufacturing technology and competent management, Mopoo has become one of the few leading manufacturers of high performance hollow fiber membranes in the world.”

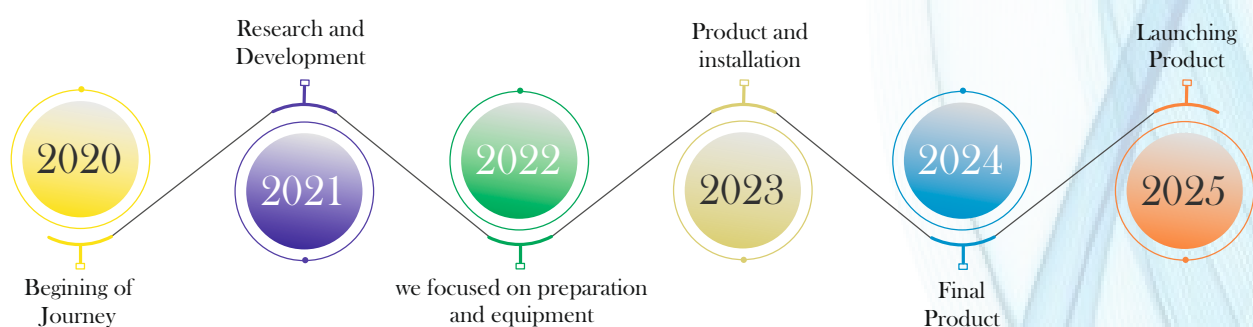


Manufacturing capacity

Mopoo has developed its own NIPS (Non-solvent Induced Phase Separation) & TIPS (Thermal Induced Phase Separation) technologies for fabricating hollow fibre membranes. At the same time, Mopoo has an experienced management team and strict production management systems in place. The company has established advanced production lines for hollow fibre membranes and membrane modules in india, with an annual production capacity of 2 million square metres of PVDF(polyvinylidene fluoride) and PES (polyether sulfone) Microfiltration/Ultrafiltration (MF/UF) membranes.

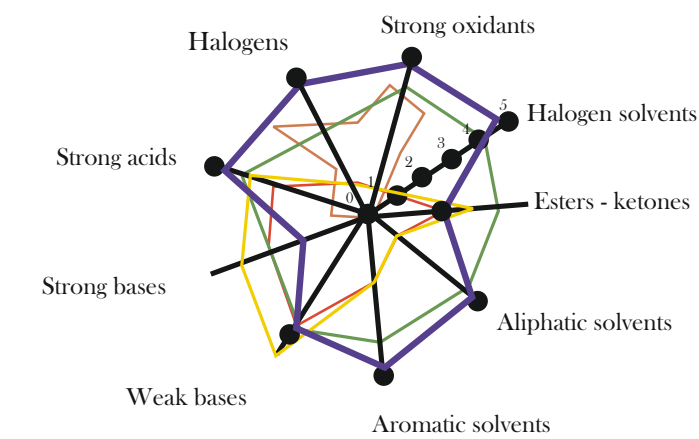
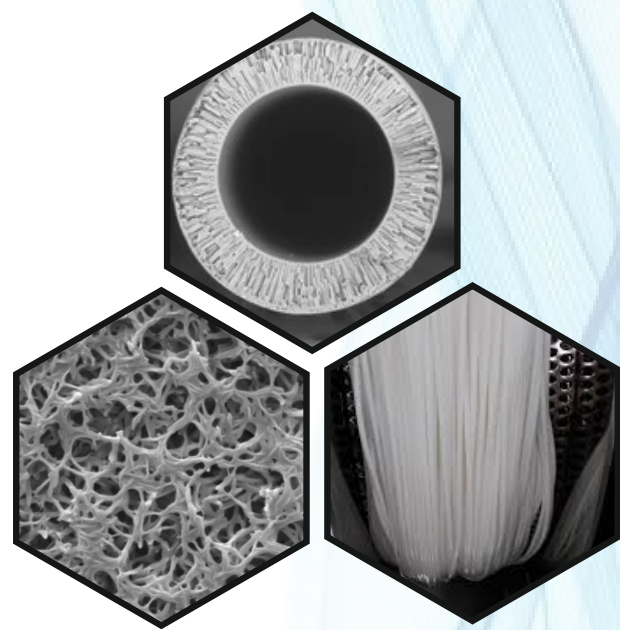
Vision

Mopoo's motto is Integrity, Creativity, Precision, Efficiency and Win-win. We would like to present to our customers extraordinary product quality and excellent customer services. We strive for the development of our company and the improvement of the environment and human health through cooperation with all interested parties in the industry.



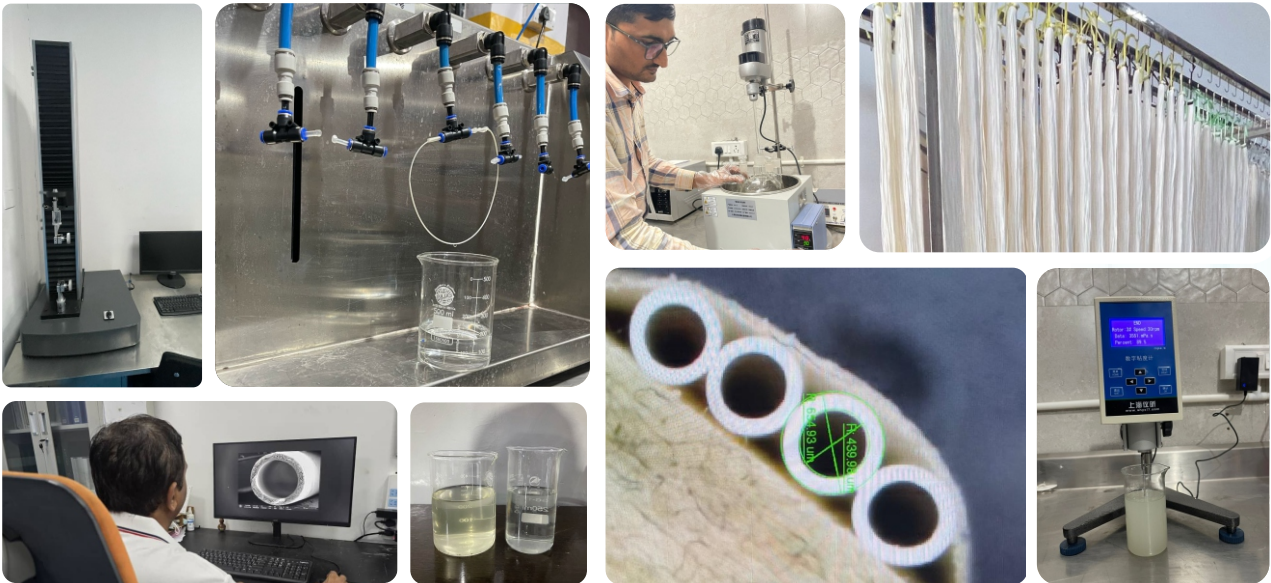
R & D Strength

- Internationally known membrane scientists and experts
- The state of arts facilities for research and development
- Dozens of invention & application patents
- Collaboration with famous research institutions on R&D projects



Material	Remark
PVDF	extremely good
PES	good
PP	limited
PVC	poor
HDPE	extremely poor

Laboratory



Description

MOPOO uses PVDF as raw material, which is characterized as high mechanical strength, large flux and strong anti-fouling, etc. The product is applicable to municipal wastewater advance treatment, reuse of reclaimed water, RO/NF system pre-treatment, etc.

Characters

Premium permeate	Pores of fibers are evenly distributed with high permeation accuracy, the turbidity of production is less than 1NTU;
Strong fouling resistance	Gradient pore structure, strong fouling resistance and simple for cleaning;
Long lifespan	The special composite technology of reinforced fiber enables it has higher strength, erosion resistance and oxidative resistance.
Simple maintenance	Dry fibers, easy for storage, transportation and maintenance.

Specifications

Internal Diameter	0.7±0.05 mm	External Diameter	1.3±0.05mm
Strength	> 3N	Flux	≥250 L/m ² •h
Initial Bubbling Point	≥ 0.25 MPa (Alcohol)	Breaking Point	≥ 0.4MPa (Alcohol)

Note: fiber length and quantity of single bundle can be made according to demands of customers.

PVDF UF Membrane Modules

Mopoo UF (Ultrafiltration) Membrane modules are pressurized modules, which are designed and manufactured for the filtration of surface water, Potable water, seawater and industrial waste water etc. Mopoo UF module are applied in new systems as well as existing systems as replacements. Mopoo PVDF UF providing high quality filtrate by removing suspended solids, colloids, pathogens, bacteria, virus and other impurities to protect downstream processes. The mode of operation is feed and bleed with dead end or a minor cross flow with regular backwash, chemically enhanced backwash and clean in place recovery cleaning.

Application

- Surface Water
- Well Water
- Pre treatment of seawater desalination
- Potable water
- Beverage clarification
- Pre-treatment of industrial water
- RO pre treatment
- Industrial wastewater
- Water Recycling on Cooling tower, swimming pools, etc.
- Special Separation in Biopharmaceutical, petroleum, chemical and power generation

Features

- Out to inside flow direction
- High chemical tolerance for cleaning.
- Turbidity 0.1 NTU, Typical Filtrate Quality SDI 2.5
- Uniform pore sizes with new generation technology equipment.



Mopoo PES UF Membrane Modules

Ultrafiltration (UF) is a pressure-driven membrane separation technology, which is between microfiltration and nanofiltration, with a membrane pore size range of about 0.01-0.1μm. It can purify, separate and concentrate the solution. Mopoo PES UF (Ultrafiltration) Membrane modules are designed and manufactured as equivalents, which are used for production of process, Potable water and reclaimed water. Major applications are the filtration of surface water, Potable water, sea water and industrial waste water. Mopoo PES ultrafiltration modules are made of naturally hydrophilic PES hollow fiber UF Membrane with High Fouling Resistance and Hydrophilicity. The mode of operation is feed and bleed with a minor cross flow or dead end with regular backwash and chemically enhanced backwash. Mopoo PES UF providing high quality filtrate by removing suspended solids, colloids, pathogens, bacteria, virus and other impurities to protect downstream processes.

Application

- Surface Water
- Well Water
- Pre treatment of sea water desalination
- Potable water
- Beverages clarification
- Pre treatment of industrial waste water
- RO pre treatment
- Industrial Waste Water.

Features

- Inside to Outside Flow direction
- Nominal pore size 0.01 μm
- High Performance and very good anti fouling characteristic
- Turbidity 0.1 NTU, Typical Filtrate Quality SDI 3.
- Uniform pore sizes with new generation technology equipment.



Products & Applications

Mopoo hollow fiber membranes are characterized by unique surface properties that offer high flux, strong strength, antifouling, ease of cleaning and long service life. Mopoo industrial modules are widely applied for water treatment in various industries, such as petroleum, chemical, power generation, metallurgy, biochemistry, food/beverage, pharmaceutical and mineral processing, as well as treatments for municipal tap-water and wastewater.

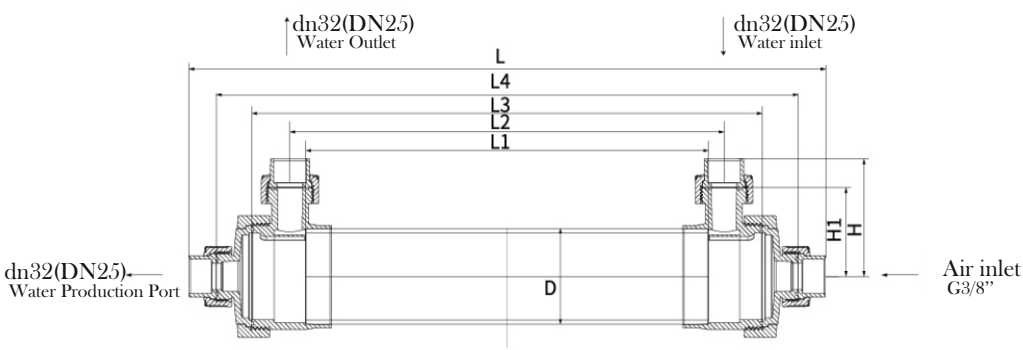
Brief introduction of UF membrane

Ultrafiltration is one membrane filtration process that serves as a barrier to separate harmful bacteria, viruses, and other contaminants from clean water. An ultrafiltration water system forces water through a .02 micron membrane. Suspended particles that are too large to pass through the membrane stick to the outer membrane surface. Only fresh water and dissolved minerals pass through.

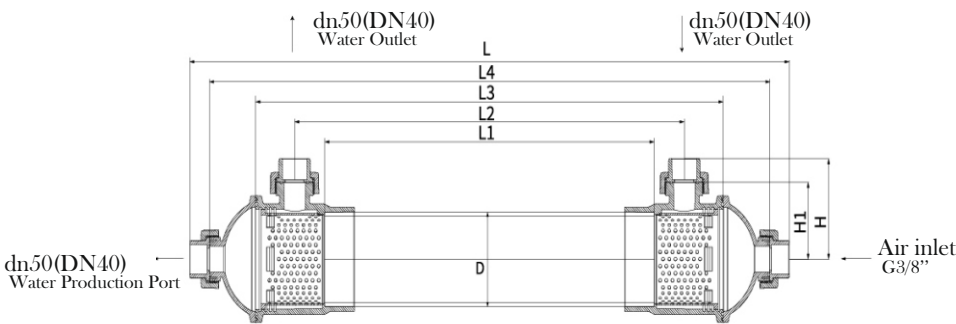
At present, the commonly used ultrafiltration membranes in industrial production are plate and frame type, circular tube type, spiral wound type, hollow fiber type, and capillary type. Various industries must choose different types of ultrafiltration membranes according to their needs to give full play to their performance.

The development of membrane technology has brought great convenience to the treatment of production water and the concentration and separation of substances in various industries. With the continuous advancement of science and technology, ultrafiltration membrane technology has been continuously improved, occupying a leading position in the market with its unique properties.

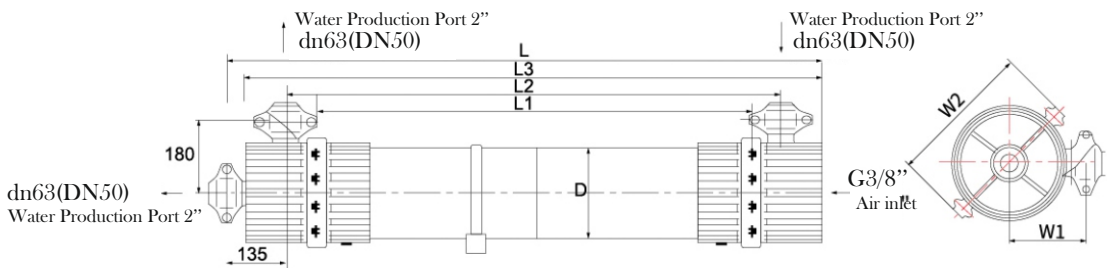
Industrial UF modules



Model	D	L	L1	L2	L3	L4	H	H1
4060	90	1124	894	925	1000	1070	110.5	83.5



Model	D	L	L1	L2	L3	L4	H	H1
6060	160	1813	1265	1387	1545	1733	170	130



Model	D	L	L1	L2	L3	W1	W2
2860	225	1860	1500	1630	1820	180	342
2880	225	2360	2000	2130	2320	180	342



Parameters :

Material	PES		PVDF	PAN
Module	Inside-out	Outside-in	Outside-in	Inside-out
Membrane Diameter ID/OD (mm)	0.7/1.3		0.7/1.3	0.7/1.3
Pore size	0.03			
Maximum feed turbidity	<50NTU		<100NTU	<80NTU
Maximum Chlorine resistance	Continuously 50ppm Instantaneously 500ppm		Continuously 200ppm Instantaneously 2000ppm	Continuously 5ppm Instantaneously 100ppm
Temperature range	5-45 °C			
ph range	2-10		2-12	2-10
Operation module	Cross Flow or dead-end			
Maximum permeate Flux	120L/m ² -h		150L/m ² -h	120L/m ² -h
Maximum feed pressure	0.5Mpa			
Maximum trans membrane Pressure	0.2Mpa			
Maximum back wash pressure	0.25Mpa			
Back wash frequency	15-60 Min			
Back wash duration	30-60sec			
Back wash flux	100-360L/m ² -h			
Chemical enhanced backwash frequency	1-15days			
Chemical enhanced backwash duration	1-10min			
Chemical cleaning frequency	30-180days			
Chemical cleaning duration	90-480min			
Module	4060 (4"), 4060 (6"), 2860, 2882 (8")			
Chemical cleaning chemicals	NaClO H ₂ O ₂ (500PPM), NaOH(pH≤12), HCl(pH≥2)		NaClO H ₂ O ₂ (2000PPM), NaOH(pH≤12), HCl(pH≥2)	NaClO ₂ H ₂ O (100PPM), NaOH(pH≤12), HCl(pH≥2)

UF Module Cleaning Process

Pre-Cleaning Steps

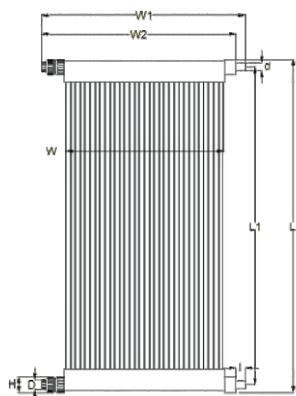
1. Shutdown and depressurization: Shut down the UF system and depressurize the module.
2. Drainage: Drain the module and associated piping.
3. Pre-cleaning flush: Perform a pre-cleaning flush with clean water to remove any loose debris.

Chemical Cleaning

1. Chemical selection: Select a cleaning chemical compatible with the module and membrane materials.
2. Chemical preparation: Prepare the cleaning solution according to the manufacturer's instructions.
3. Cleaning cycle: Circulate the cleaning solution through the module for a specified time (typically 30 minutes to 1 hour).
4. Rinsing: Rinse the module with clean water to remove residual cleaning solution.

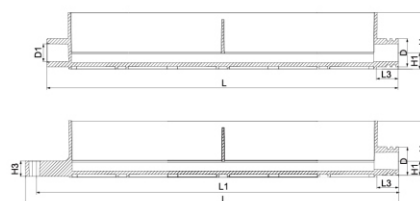
Physical Cleaning

1. Backwashing: Perform a backwash cycle to remove any remaining debris.
2. Forward flushing: Perform a forward flush cycle to remove any remaining debris.
3. Vibration: Apply mechanical vibrations to the module to dislodge any remaining debris.



MBR Series

Module Model	MP4010T	MP6015T	MP8020T
Effective membrane Area(m ² /ft ²)	10 / 107 .64	15 / 161 .46	20 / 215 .28
Membrane Material	PVDF (With PET Supporting Layer)		
Pore Size (um)	0.1		
Fiber ID/OD (mm/inch)	0.9 (0.035) / 2.2 (0.087)		
L1 (mm/inch)	1,000/39.37	1,500 / 59.05	2,000 / 78.74
L (mm/inch)	1,025/40.35	1,525 / 60.04	0,025 / 79.72
W (mm/inch)	480 / 18.9	480 / 18.9	480 / 18.9
W1 (mm/inch)	620 / 24.4	620 / 24.4	620 / 24.4
W2 (mm/inch)	591.7 / 23.30	591.7 / 23.30	591.7 / 23.30
I (mm/inch)	28.3 / 1.11	28.3 / 1.11	28.3 / 1.11
H (mm/inch)	48 / 1.89	48 / 1.89	48 / 1.89
Permeate Port D	G1/2" FNPT		
End Cap Size d (mm)	Φ 24		
Filtration Mode	Suction with Negative Pressure		
Design Flux (LMH)	10 - 30		
Module Gross Weight (kg/b)	4.7 / 10.36	5.8 / 12.79	6.6 / 14.55
Sealing Material	PU		
Permeate Collecting Tube Material	ABS		
Recommended Flux (L/H)	100 - 300	150 - 450	250 - 750
Max ΔTMP (Mpa/Psi)	-0.05/- 7.25		
Operation Temp . Range(C/F)	5 -40/41 - 104		
Optimal Operation pH Range	6 - 9		
Recommended pH Range	2 - 10		
Max. Active Chlorine (ppm)	1,000		



Water collecting pipe	L	L1	L2	D	D1	H	H1	H2
Water Collector I	536	/	485	32	39.6	60	20	/
Water Collector II	536	523	485	32	39.6	60	20	12
Water Collector III	572	542	485	27	/	60	20	/

Water collecting pipe	L	L1	L2	L3	D	D1	H	H1	H2
Water Collector I	785	-	725	30	40	25	80	23	/
Water Collector II	816	800	725	30	40	/	80	23	22



UF Membrane MBR Sewage Treatment System for Municipal Wastewater

Model NO.	Mopoo-s	Type	Ultrafiltration
Method	Physical Treatment	Usage	Industrial, Municipal Wastewater Treatment
Membrane Type	Immersed, Outside-in	ID/Od of Fiber	1.0/2.0 mm
Nominal Pore Size	0.02 Micron	pH Range	1-13
Max. Suction Pressure	- 60 Kpa	Max. Operation Temperature	40 Degrees Celsius
Membrane Material	PVDF, Hollow Fiber UF Membrane	Transport Package	as Per Customers Request
Specification	2110*1560*2520 mm	Trademark	India
Origin	India	HSN	8421999000

Features of Immersed Membrane Module:

- High and stable flux to reduce the operational quantity of modules to reduce investment cost
- Suppress sludge accumulation on the membrane fiber by unique module structure and efficient aeration to reduce operation cost
- Strong tensile strength and excellent chemical resistance fiber to realize long service life
- Reinforced hollow fiber with 0.02 micron nominal pore size intercepts suspended solids and microorganism effectively

Domestic UF Module



Can Ultrafiltration membranes filter out the bacteria and viruses in the water?

Yes, Raw water contains all sorts of bacteria, and harmful micron organisms. And their pore size is normally between 0.2micron to 1micron So our 0.01micron filter can filter out all the small particle in the raw water making sure the water you drink is healthy.

Reduce 99% of Bacteria Friendly to Sensitive Stomach

0.01 micron pore size



Sediment



Heavy
metals



Rust



Taste&odor



Chlorine



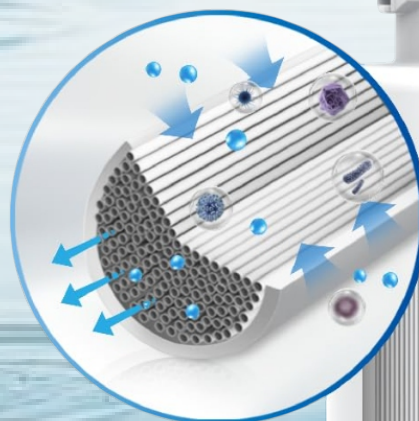
PFOS



PFOA



Bacteria





Material : PVDF (20")

Pore Size : 0.1-0.01 m

Flow rate : 3000L/H

Life time : 4years

Size : 508mm, D : 117mm

Fiber Area : 6m²

Working Pressure : 0.1-0.5MPa

Working Temperature : 4-45

Material : PVDF (20")

Pore Size : 0.1-0.01 m

Flow rate : 1000L/H

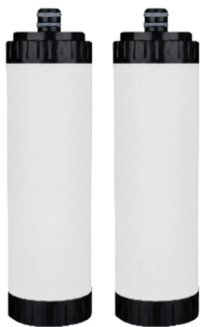
Life time : 9000Ltr.

Size : 510mm, D : 72.0mm

Fiber Area : 2m²

Working Pressure : 0.1- 0.5MPa

Working Temperature : 4-45



Material : PVDF (10")

Pore Size : 0.1-0.01 m

Flow rate : 200L/H

Life time : 9000Ltr.

Size : 235mm, D : 19.5mm(Connector)

Fiber Area : 0.8m²

Working Pressure : 0.1- 0.4MPa

Working Temperature : 4-45

Material : PVDF (20")

Pore Size : 0.1-0.01 m

Flow rate : 3000L/H

Life time : 4years

Size : 508mm, D : 117mm

Fiber Area : 6m²

Working Pressure : 0.1-0.5MPa

Working Temperature : 4-45



Material : PVDF (10")

Pore Size : 0.1-0.01 m

Flow rate : 200L/H

Life time : 9000Ltr

Size : 251mm, D : 65mm

Fiber Area : 0.8m²

Working Pressure : 0.1-0.4MPa

Working Temperature : 4-45

Material : PVDF (10")

Pore Size : 0.1-0.01 m

Flow rate : 200L/H

Life time : 9000Ltr

Size : 251mm, D : 65mm

Fiber Area : 0.8m²

Working Pressure : 0.1-0.4MPa

Working Temperature : 4-45



Material : PES

Pore Size : 0.1-0.01 m

Flow rate : 100L/H

Life time : 3000Ltr

Size : 71.0mm, D : 36.0mm

Fiber Area : 0.24m²

Working Pressure : 0.1 - 0.3MPa

Working Temperature : 4-40

Material : PES

Pore Size : 0.1-0.01 m

Flow rate : 300L/H

Life time : 6000Ltr

Size : 225mm, D : 57mm

Fiber Area : 0.65m²

Working Pressure : 0.1 - 0.3MPa

Working Temperature : 4-40



Material : PES

Pore Size : 0.1-0.01 m

Flow rate : 200L/H

Life time : 7000Ltr

Size : 189mm, D : 16.6mm(Connector)

Fiber Area : 0.55m²

Working Pressure : 0.1 - 0.3MPa

Working Temperature : 4-40



GOVERNMENT OF INDIA
Ministry of Micro, Small and Medium Enterprises



MSME
Micro, Small and Medium Enterprises

UDPYAM REGISTRATION CERTIFICATE

UDPYAM C-2-2047740

MSME REGISTRATION NUMBER: UDPYAM C-2-2047740

NAME OF ENTERPRISE *

TYPE OF ENTERPRISE *

INDUSTRY ACTIVITY

INDUSTRY CLASSIFICATION

NAME OF OWNER

SNo.	Classification No.	Language Type	Classification No.
1	000000	English	000000

MANUFACTURING

GENERAL

A No.	UDPYAM CATEGORY: UDPYAM PRE-REGISTERED
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Mailbox Block No. 2, C-2, B-1
 Plot No. 12A, B-1, INDUSTRIAL ESTATE
 Industrial Area,
 Phase-1, Sector-1, Gurgaon
 Haryana
 PIN CODE: 122002

State: Haryana District: Gurgaon Taluq: Post Office: PIN CODE: 122002

Date: Time: Signature of the owner:

OFFICE ADDRESS OF ENTERPRISE

DATE OF THE REGISTRATION / REGISTRATION OF ENTERPRISE

DATE OF COMMENCEMENT OF PRODUCTION / BUSINESS

28-04-2024

S.No.	SR Stage	SR Stage	SR Stage	Actions
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
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Government of India Firm GST REG-66 740-508-7757 Registration Certificate				
Registration Number : 24AAACM063N179				
1. Legal Name	MORFO SEPARATON ON (BHARAT) PRIVATE L Y TED			
2. Trade Name, if any	MORFO SEPARATON ON (BHARAT) PRIVATE L Y TED			
3. Additional trade names, if any				
4. Constitution of Business	Private Limited Company			
5. Address of Principal Place of Business	Floor No. C35-54, Kold Chouras Building No./Flat No.: 51/v Name Of Premises/Building: 50 system industrial Road/Street: Ashwini Street Road, Nearest Landmark: 56 Engrs Vohda Locality/Sub Locality: Shree Sri Chandi City/Town/Village: Saur District: Saur State: Gujarat PIN Code: 394410			
6. Date of Liability				
7. Period of Validity	From	16/08/2024	To	Not Applicable
8. Type of Registration	Regular			
9. Participation of Approving	Consent			
Signature Name Designation Jurisdictional Office Date of issue of Certificate BALVANTI SINGH HADA Superintendent VANCOBJRA 06/08/2024				
NOTE: The registration certificate is required to be prominently displayed at all places of business in the State.				

This is a system generated digitally signed Registration Certificate issued based on the approval of application granted on 16/08/2024 by the jurisdictional authority.

GOVERNMENT OF INDIA
MINISTRY OF CORPORATE AFFAIRS
 Central Registration Centre
Certificate of Incorporation

(Pursued by sub-section (2) of section 7 and sub-section (1) of section 8 of the Companies Act, 2013 (18 of 2013); and rule 3(1) of the Companies (Incorporation) Rules, 2013 [No. 34])

I hereby certify that **MOPO SEPARATION (BHARAT) PRIVATE LIMITED**, is incorporated on this **TWENTY EIGHTH** day of **APRIL** **TWO THOUSAND TWENTY FOUR** (once the Company is incorporated on Act, 2013 (18 of 2013) and that the company is Company limited by shares.

The Corporate Identity Number of the company is **U28186GJ2024PTC151678**

The Permanent Account Number (PAN) of the company is **AASCM06957H**

The Tax Deduction and Collection Account Number (TAN) of the company is **SKTIN16629E**

Given under my hand and the Seal of the Registrar of Companies on this **TWENTY EIGHTH** day of **APRIL**, **TWO THOUSAND TWENTY FOUR**

Signature Not Verified
 Digitally signed by /
 DE MINISTRY OF CORPORATE
 AFFAIRS - CIRC MANNPUR 1
 Date: 2024.04.26 15:02:35 IST

Public: Signature

Assistant Registrar of Companies/Deputy Registrar of Companies/ Registrar of Companies
 For and on behalf of the Jurisdictional Registrar of Companies
 Registrar of Companies
 Central Registration Centre

I declare that this certificate is only a document of incorporation of the company on the basis of documents and declarations of the applicant(s). This certificate is neither a contract nor a guarantee of market business or other prospects or future worth public. Possession of this certificate is necessary evidence required. Incorporation status and other details of the company can be verified on mca.gov.in

Mailing Address as per record available in Registrar of Companies Office.

MOPO SEPARATION (BHARAT) PRIVATE LIMITED
 204/1 CHENNAI ROAD-984031081, NAME-CHENNAI SEAVAN 4/1 Kottur, Chennai, Tamil Nadu-600017, India
 65 95460 by Income Tax Department



Technology Licensee From
Bhabha Atomic Research Center
Government of India



Technology Licensee From
Bhabha Atomic Research Center
Government of India

Hollow Fiber Membranes & Modules
PVDF, PES, PAN-UF & NF, MBR



MOPOO SEPARATION (BHARAT) PVT.LTD

C-53/54, Sai Embro Industries-1, Shree Ram Chokadi, Nr. BRTS Depot,
Amroli Sayan Road, Kosad, Surat-394107 (Gujarat) India.



mopobharat@gmail.com



mopobharat.com



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