Thechnology Licensee From

Bhabha Atomic Research Center

Government of India

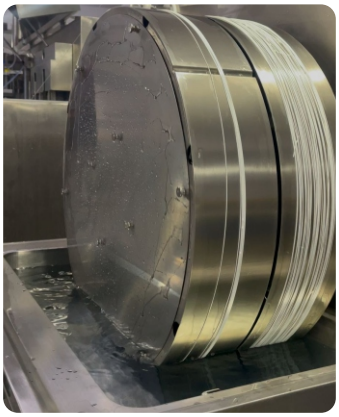
mopoo

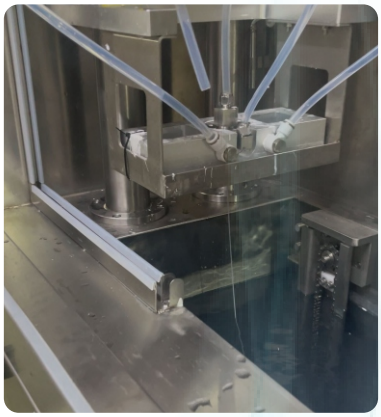
SEPARATION (BHARAT) PVT. LTD.

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 fibre 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 fibre membranes in the world."



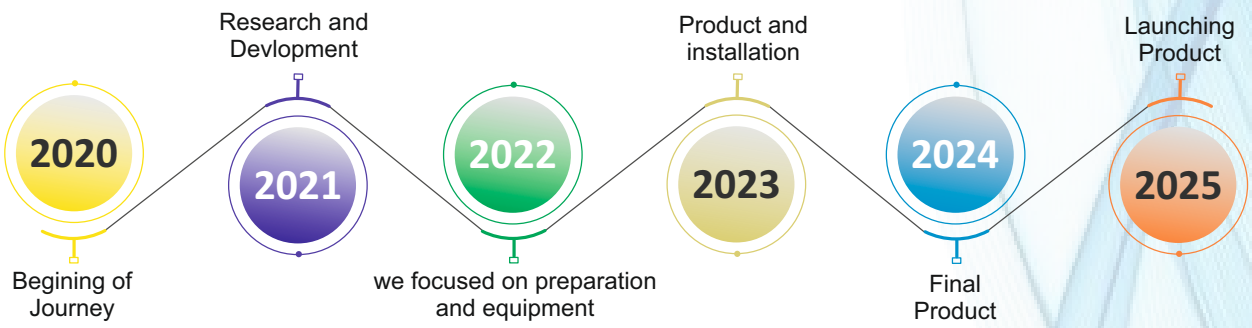


Manufacturing capacity

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.

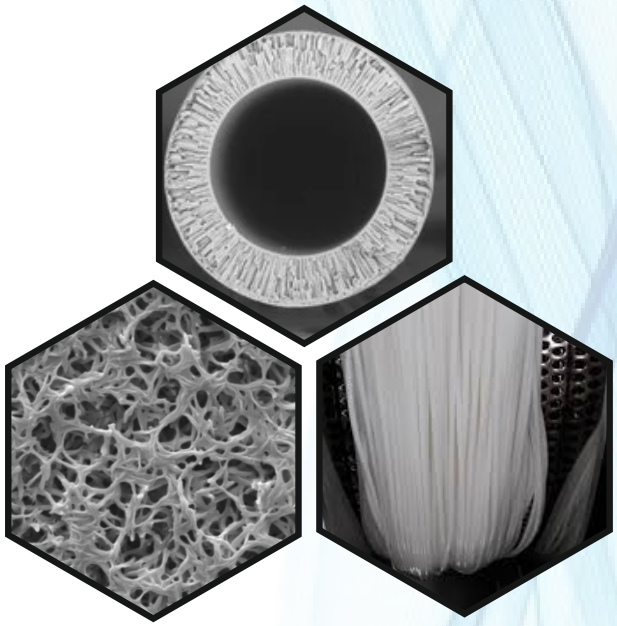
Vission

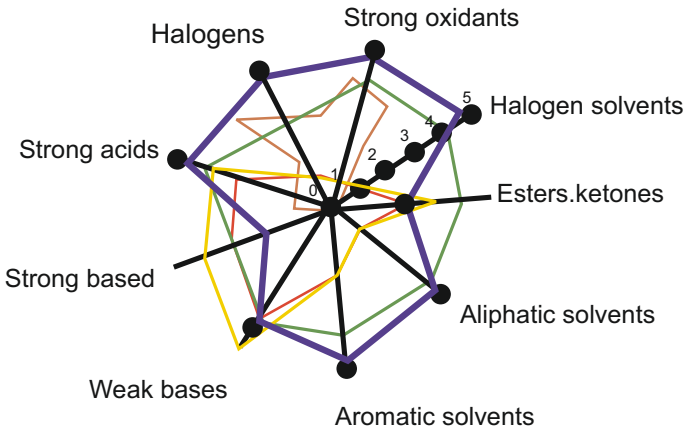
Mopoo's motto is Integrity, Creativity, Precision, Efficiency and Win-win. We would like to present to our customers extraordinary product quality and excellent customer services. We strive for the development of our company and the improvement of the environment and human health through cooperation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





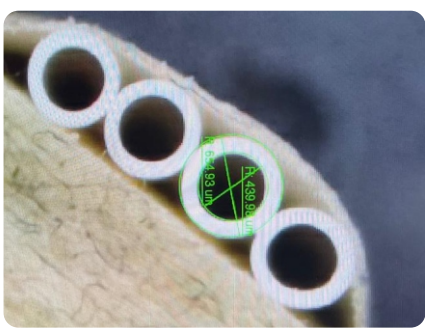
Material		Remark
	PVDF	extremely good
	PES	good
	PP	limited
	PVC	poor
	HDPE	extremely poor

laboratory










MOPOO-1.3

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/m²• 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, portable 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, phyogens, 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
- Portable 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 0.01-0.1m. it can purify, separate and consentrate the solution. Mopoo PES UF (Ultrafiltration) Membrane modules as designed and manufactured as equivalents, which are used for production of process, portable water and reclaimed water. Major application are the filtration of surface water, portablewater, 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, phyogens, bacteria, virus and other impurities to protect downstream processes.

Application

- Surface Water
- Well Water
- Pre treatment of sea water desalination
- Portable 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 m
- 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 servicelife. 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.

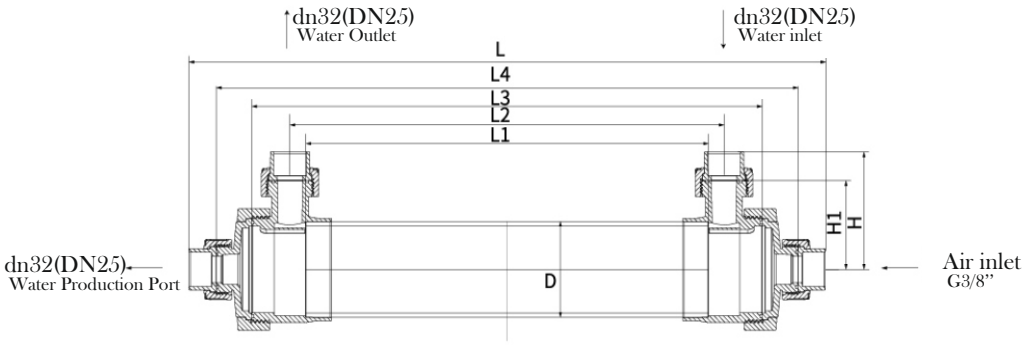
Brief introduction of UF membrane

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.

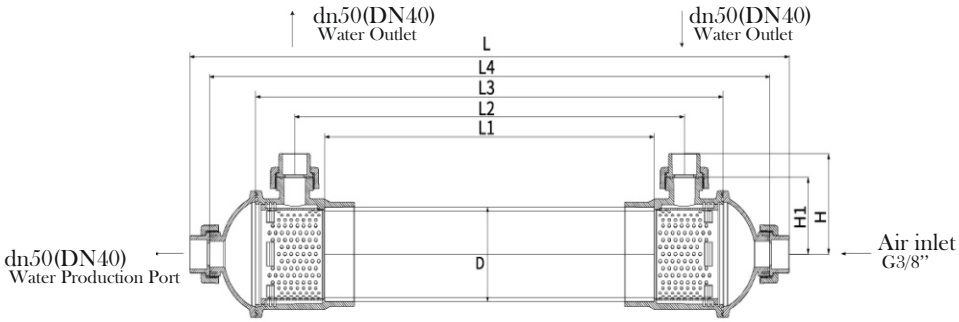
At present, the commonly used ultrafiltration membranes in industrial production are plate and frame type, circular tube type, spiral wound type, hollow fiber type, and capillary type. Various industries must choose different types of ultrafiltration membranes according to their needs to give full play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

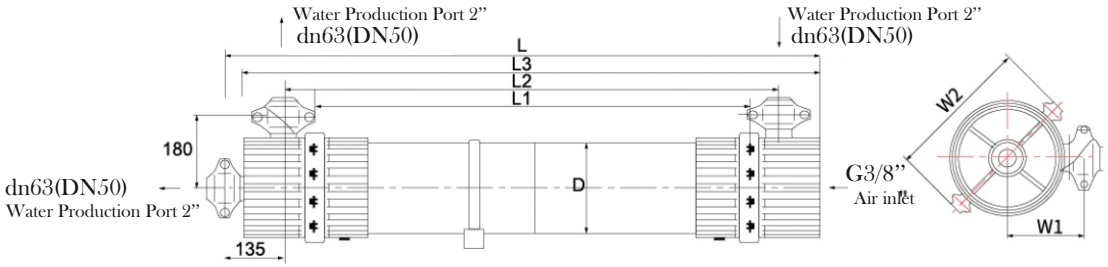
Industrial UF modules



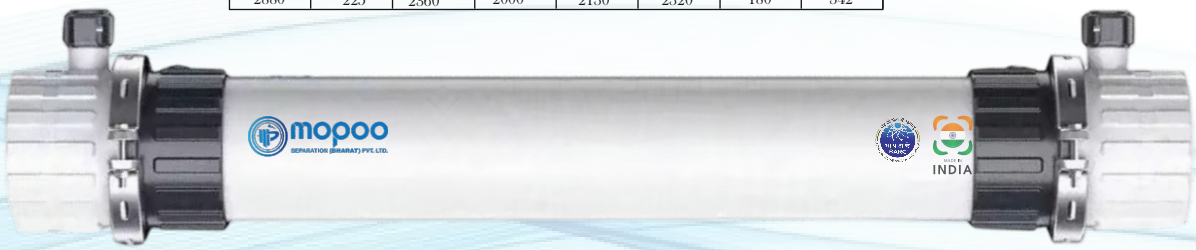
Model	D	L	L1	L2	L3	L4	H	H1
4060	90	1124	894	925	1000	1070	110.5	83.5



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
Tamperature range	5-45°C			
ph range	2-10		2-12	2-10
Operation module	Cross Flow or dead-end			
Maximum permeate Flux	120L/m²-h		150L/m²-h	120L/m²-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/m²-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_2O_2(500PPM), NaOH(pH≤12), HCl(pH≥2)		NaClO H_2O_2(2000PPM), NaOH(pH≤12), HCl(pH≥2)	$NaClO_2H_2O$ (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.

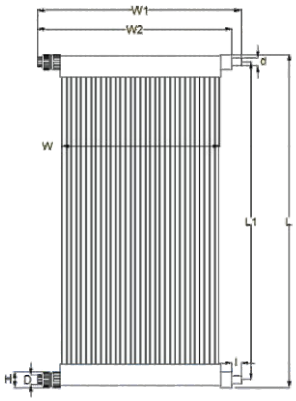
Chemical Cleaning

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.

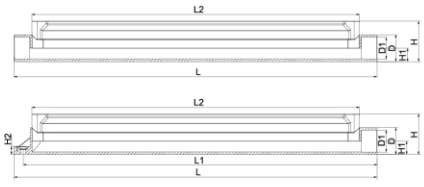
Physical Cleaning

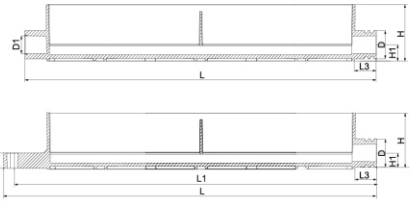
1. Backwashing: Perform a backwash cycle to remove any remaining debris.
2. Forward flushing: Perform a forward flush cycle to remove any remaining debris.
3. Vibration: Apply mechanical vibrations to the module to dislodge any remaining debris.

MBR Series



Moduel Model	MP4010T	MP6015T	MP8020T
Effective membrane Area(m2/ft2)	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 △TMP (Mpa/Psi)	-0.05/ -7.25		
Operation Temp . Range(C/F)	5 -40/41 - 104		
Optimal Operation pH Range	6 - 9		
Recommedended 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 Customer's Request
Specification	2110*1560*2520 mm	Trademark	India
Origin	India	HSN	8421999000

Features of Immersed Membrane Moudle:

* 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 there pore size is normally between 0.2micron to 1micron So our 0.01micron filter can fliter out all the small partical in the raw water making sure the water you drink is healthy.

Reduce 99% of Bacteria
Friendly to Senstive Stomach

0.01 micron pore size

Material : PVDF
Pore Size : 0. 1-0. 01μm
Flow rate : 3500L/H
Life time : 4years

Size : 508mm, D : 117mm
Fiber Area : 6m²
Working Pressure : 0. 1-0. 8MPa
Working Temperature : 4-45

Material : PES
Pore Size : 0. 1-0. 01μm
Flow rate : 200L/H-400L/H
Life time : 9000Ltr.

Size : 251/500mm, D : 65.0mm
Fiber Area : 0.45m²/100m²
Working Pressure : 0. 1MPa
Working Temperature : 4-45

Material : PES
Pore Size : 0. 1-0. 01μm
Flow rate : 200L/H
Life time : 9000Ltr.

Size : 235mm, D : 19.5mm(Connector)
Fiber Area : 0.6m²
Working Pressure : 0. 1MPa
Working Temperature : 4-45

Material : PVDF
Pore Size : 0. 1-0. 01μm
Flow rate : 3500L/H
Life time : 4years

Size : 508mm, D : 117mm
Fiber Area : 6m²
Working Pressure : 0. 1-0. 8MPa
Working Temperature : 4-45

Material : PES
Pore Size : 0. 1-0. 01μm
Flow rate : 10L/H
Life time : 5000Ltr

Size : 71.0mm, D : 36.2mm
Fiber Area : 0.14m²
Working Pressure : 0. 1-0. 8MPa
Working Temperature : 4-40

Material : PES
Pore Size : 0. 1-0. 01μm
Flow rate : 200L/H
Life time : 5000Ltr

Size : 200mm, D : 46mm
Fiber Area : 0.45m²
Working Pressure : 0. 1MPa
Working Temperature : 4-40

Material : PVDF (10”)	Size : 251mm, D : 65mm
Pore Size : 0. 1-0. 01μm	Fiber Area : 0.8m²
Flow rate : 200L/H	Working Pressure : 0.1-0.4MPa
Life time : 9000Ltr	Working Temperature : 4-45

Material : PES	Size : 71.0mm, D : 36.0mm
Pore Size : 0.1-0.01μm	Fiber Area : 0.24m²
Flow rate : 100L/H	Working Pressure : 0.1 - 0.3MPa
Life time : 3000Ltr	Working Temperature : 4-40

Material : PES	Size : 225mm, D : 57mm
Pore Size : 0.1-0.01μm	Fiber Area : 0.65m²
Flow rate : 300L/H	Working Pressure : 0.1 - 0.3MPa
Life time : 6000Ltr	Working Temperature : 4-40

Material : PES	Size : 189mm, D : 16.6mm(Connector)
Pore Size : 0.1-0.01μm	Fiber Area : 0.55m²
Flow rate : 200L/H	Working Pressure : 0.1 - 0.3MPa
Life time : 7000Ltr	Working Temperature : 4-40

Startupindia

CERTIFICATE NO:
DIPP193661

#startupindia

Government of India
Ministry of Commerce & Industry
Department for Promotion of Industry and Internal Trade

CERTIFICATE OF RECOGNITION

This is to certify that ***MOPOO SEPARATION (BHARAT) PRIVATE LIMITED*** *incorporated as a* ***Private Limited Company*** *on* ***28-04-2024****, is recognized as a startup by the Department for Promotion of Industry and Internal Trade. The startup is working in 'Technology Hardware' Industry and 'Manufacturing' sector as self-certified by them.*

This certificate shall only be valid for the Entity up to **Ten** years from the date of its incorporation only if its turnover for any of the financial years has not extended ₹ **100 Cr.**

26-02-2025
DATE OF ISSUE

Scan to Verify

27-04-2034
VALID UPTO

MSME

भारत सरकार
Government of India
सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय
Ministry of Micro, Small and Medium Enterprises

UDYAM REGISTRATION CERTIFICATE

UDYAM REGISTRATION NUMBER: UDYAM-GJ-22-0417940

NAME OF ENTERPRISE: MOPOO SEPARATION (BHARAT) PRIVATE LIMITED

TYPE OF ENTERPRISE *

SNo.	Classification Year	Enterprise Type	Classification Date
1	2024-25	Micro	19/09/2024

MAJOR ACTIVITY: MANUFACTURING

SOCIAL CATEGORY OF ENTREPRENEUR: GENERAL

NAME OF UNIT(S)

S.No.	Name of Unit(s)
1	MOPOO SEPARATION (BHARAT) PRIVATE LIMITED

OFFICAL ADDRESS OF ENTERPRISE

Flat/Door/Block No.	C 53-54,	Name of Premises/ Building	SAI EMBRO IND. VIBHAG-1
Village/Town	NEAR BRTS DEPOT	Block	KOSAD
Road/Street/Lane	SHREE RAM CHOWKDI	City	SURAT
State	GUJARAT	District	SURAT , Pin 394107
Mobile	[illegible]	Email:	[illegible]

DATE OF INCORPORATION / REGISTRATION OF ENTERPRISE: 28/04/2024

DATE OF COMMENCEMENT OF PRODUCTION/BUSINESS

NATIONAL INDUSTRY CLASSIFICATION CODE(S)

S.No.	NIC 2 Digit	NIC 4 Digit	NIC 5 Digit	Activity
1	37 - Sewerage	3700 - Sewerage	37003 - Treatment of waste water or sewer by means of physical, chemical or biological processes	Manufacturing
2	28 - Manufacture of machinery and equipment n.e.c.	2819 - Manufacture of other general-purpose machinery	28195 - Manufacture of filtering and purifying machinery or apparatus for liquids and gases	Manufacturing
3	28 - Manufacture of machinery and equipment n.e.c.	2819 - Manufacture of other general-purpose machinery	28199 - Manufacture of other general purpose machinery n.e.c. (fans intended for industrial applications, exhaust hoods for commercial, laboratory or industrial use; calendering or other rolling machines other than for metals or glass; gaskets and similar joints made of a combination of materials or layers of the same material and other general purpose machinery including manufacture of parts and accessories for general purpose machinery and equipment.)	Manufacturing
4	32 - Other manufacturing	3250 - Manufacture of medical and dental instruments and supplies	32502 - Manufacture of laboratory apparatus (laboratory ultrasonic cleaning machinery, laboratory sterilizers, laboratory type [illegible])	Manufacturing
5	32 - Other manufacturing	3250 - Manufacture of medical and dental instruments and supplies	[illegible]	Manufacturing
6	36 - Water collection, treatment and supply	3600 - Water collection, treatment and supply	36000 - Water collection, treatment and supply	Manufacturing
7	37 - Sewerage	3700 - Sewerage	37001 - The operation and maintenance of sewer systems	Manufacturing
8	08 - Other mining and quarrying	0893 - Extraction of salt	[illegible]	Manufacturing
9	28 - Manufacture of machinery and equipment n.e.c.	2825 - Manufacture of machinery for food, beverage and tobacco processing	28251 - Manufacture of machinery for the dairy industry	Manufacturing

DATE OF UDYAM REGISTRATION: 19/09/2024

BE A CHAMPION with the Ministry of MSME

GST

Government of India
Form GST REG-06
[See Rule 10(1)]
Registration Certificate

Registration Number : 24AASCM0637N1Z0

1.	Legal Name	MOPOO SEPARATION (BHARAT) PRIVATE LIMITED
2.	Trade Name, if any	MOPOO SEPARATION (BHARAT) PRIVATE LIMITED
3.	Additional trade names, if any	
4.	Constitution of Business	Private Limited Company
5.	Address of Principal Place of Business	Floor No.: C53-54, Kosad Chorayasi Building No./Flat No.: Shiv Name Of Premises/Building: Sai Embro Industrial Road/Street: Amroli Sayan Road Nearby Landmark: Sai Embro Vibhag Locality/Sub Locality: Shree Ram Chokdi City/Town/Village: Surat District: Surat State: Gujarat PIN Code: 394107
6.	Date of Liability	
7.	Period of Validity	From 16/08/2024 To Not Applicable
8.	Type of Registration	Regular
9.	Particulars of Approving	Centre

Signature

Signature Not Verified
Digitally signed by DS GOODS AND SERVICES TAX NETWORK

Name	BALWANT SINGH HADA
Designation	Superintendent
Jurisdictional Office	VADODARA
Date of issue of Certificate	16/08/2024

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.

COI

GOVERNMENT OF INDIA
MINISTRY OF CORPORATE AFFAIRS

Central Registration Centre

Certificate of Incorporation

[Pursuant to sub section (2) of section 7 and sub section (1) of section 8 of the Companies Act, 2013 (18 of 2013) and rule 18 of the Companies (Incorporation) Rules, 2014]

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

The Corporate Identity Number of the company is **U28195GJ2024PTC151078**

The Permanent Account Number (PAN) of the company is **AASCM0637N***

The Tax Deduction and Collection Account Number (TAN) of the company is **SRTM15629E***

Given under my hand at Manesar this TWENTY EIGHTH day of APRIL TWO THOUSAND TWENTY FOUR

Signature Not Verified
Digitally signed by DS MINISTRY OF CORPORATE AFFAIRS , CRC MANESAR 1
Date: 2024.04.28 13.02.35 IST

Pankaj Srivastava
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

Disclaimer: This certificate only evidences incorporation of the company on the basis of documents and declarations of the applicant(s). This certificate is neither a license nor permission to conduct business or solicit deposits or funds from public. Permission of sector regulator is necessary wherever required. Registration 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:

MOPOO SEPARATION (BHARAT) PRIVATE LIMITED

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Amroli Sayan Road, Kosad, Surat-394107 (Gujarat) India.

mopoobharat@gmail.com mopoobharat.com +91 98251 25556 +91 99251 25625