Ambani
METALS

RELIABLE FOUNDATION, REMARKABLE FUTURES!

DEMISTER PAD

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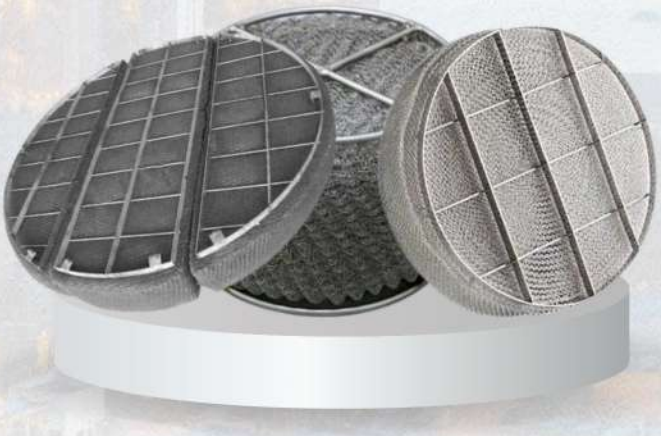
Ambani Metals, established with a vision to deliver excellence inseparation and filtration solutions, has over 25+ years of experience inmanufacturing and exporting demister pads, knitted wire mesh, and othercritical packing materials for industrial applications.

We maintain a strict quality control system, backed by ISO 9001 certification and a dedicated internal QC department, ensuring that every demister pad delivered meets our high standards of performance and reliability.

Our product range is available in varied specifications, with filtration fineness reaching as low as 3 µm to 5 µm. Alongside standard and popular sizes, we also offer customized solutions tailored to meet specific project requirements and unique application needs.

Thanks to our commitment to quality, service excellence, and technical expertise, Ambani Metals has built a strong customer base across Australia, America, Canada, New Zealand, the UK, and several European countries.

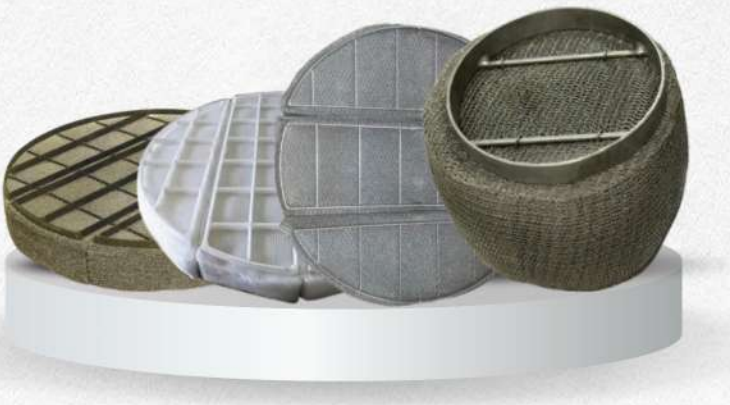
We strive to provide the best quality products, the most reliable customer support, and the most professional technical guidance to all our clients worldwide.



WHY WE NEED DEMISTER PAD

In the chemical processing industry, it is common for gases and liquids to come into contact during various operations. This interaction often leads to the entrainment of fine liquid droplets within the gas stream. These entrained particles can cause significant problems, including product loss, reduced efficiency, equipment corrosion, and operational disruptions.

To address these issues, mist eliminators are used to mechanically separate liquid from gas. The key component within a mist eliminator is the demister pad, which captures and removes the entrained liquid particles. By incorporating demister pads into the system, industries can achieve higher gas purity, extend equipment lifespan, and improve overall process efficiency.



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DROP FORMATION

There are many factors in a process that can cause liquid entrainment. Here are some common reasons:

Interaction between gas and liquid phases during mass transfer or condensation processes

For example, liquid droplets can form due to bubble bursting or jetting at the gas-liquid interface, which commonly occurs in evaporators, bubble columns, and distillation columns.

Changes in the system's thermodynamic conditions.

For instance, when saturated gas in a condenser or heat exchanger is cooled, steam condenses, and the gas may become supersaturated, leading to the formation of droplets.

Moreover, if the gas flows at a high velocity, it can prevent droplets from settling by gravity, causing them to become entrained in the gas or steam.

SPECIFICATION

Type	Wire diameter (mm)	Bulk Density (kg/m^3)	Voidage	Specific Surface Area (m^2/m^3)
Flat Wire	0.11× 0.40	168	0.9770	475
Round Wire	0.24			320
Flat Wire	0.11 × 0.30	186	0.9760	626
Round Wire	0.20			484
Flat Wire	0.11 × 0.40	134	0.9874	313
Round Wire	0.24			217
Round Wire	0.07–0.23	128	0.9840	403

PRODUCTION LINE

- Mesh Knitting
- Cutting to Size
- Mesh Layering
- Mesh Wrapping
- Crimping
- Bottom Grid Installation
- Top Grid Installation
- Final Assembly

MATERIALS

Metals

Stainless Steel	Duplex / S.Duplex	Hastelloy	Aluminium	Carbon Steel
Monel	Titanium	Inconel	Nickel	Brass

Steel + Fibre

SS + PP	SS + GF	SS + PTFE	SS + PES	SS + PES
CS + Fibre	CS + Fibre Composites			

Non Metal

PP	PVDF	PTFE	PES	Glass Fibre

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MATERIAL TYPE COMPARISON

METALLIC MATERIALS

Material	Max Temp (°C)	Corrosion Resistance	Mechanical Strength	Typical Applications
Stainless Steel 304/316/316L	304: ~316°C 316/316L:~482°C	High (316 > 304)	High	Oil & gas, marine, chemical plants
Carbon Steel (CS)	~260°C	Low	High	Budget-friendly, general-purpose systems
Brass / Copper	~250°C	Moderate	Moderate	Cooling towers, vapor separation
Monel 400	~480°C	Excellent (seawater, acids)	High	Offshore platforms, acidic media
Inconel 600 / 625	>1000°C	Excellent (oxidation & extreme heat)	Very High	Power plants, harsh chemical environments
Hastelloy C22 / C276	~600°C	Exceptional (oxidizers,acids,chlorides)	High	Fertilizers,pharma, Flue gas scrubbers
Duplex / Super Duplex	~600°C	Very High (chloride cracking resistant)	Very High	Offshore rigs, marine exhaust systems
Titanium (Gr 2 / Gr5)	~600°C	Excellent (chlorides, seawater)	High	Chlor-alkali, marine pharmaceutical
Nickel	~600°C	High (caustic alkalis)	High	Electrochemical, alkaline systems
Alloy 20 (Fe-Ni-Cr-Mo- Cu)	~600°C	Excellent (sulfuric acid)	High	Acid recovery units, towers,reactors

NON-METALLIC MATERIALS

Material	Max Temp (°C)	Corrosion Resistance	Mechanical Strength	Typical Applications
Polypropylene (pp)	100°C	Moderate	Low	Scrubbers, low-temp water treatment
Polyester (PES)	120°C	Fair	Low	General gas-liquid separation
PVDF	140°C	High	Low	Chemical processing, high-purity towers
PTFE (Teflon)	260°C	Excellent	Low	Acid/alkali towers, pharma, specialty chemicals
Glass Fibre (GF)	400°C	Good	Moderate	High- temperature exhaust or acid towers
PTFE Coated Glass Fibre	260°C	Excellent	Moderate	Harsh acid gas towers, non- stick applicaions

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HYBRID COMPOSITES (METAL + FIBRE)

Material	Max Temp (°C)	Corrosion Resistance	Mechanical Strength	Typical Applications
SS + Polypropylene (PP)	100°C	Moderate	Moderate	Scrubbers, low - corrosion industrial systems
SS + PTFE	260°C	Excellent	High	Harsh chemical towers pharma - grade units
SS + Glass Fibre (GF)	400°C	Good	High	High-temp towers, acid vapor recovery units
SS + Polyester (PES)	120°C	Fair	Moderate	General- purpose gas-liquid separation
CS + PP / PES	100°C	Low to Moderate	Moderate	Budget-friendly, mild service conditions

TECHNICAL SPECIFICATION

Item	Density (kg/m^3)	Free volume (%)	Surface area (m^2/m^3)	Other companies model					
				Becoil	Metex	Knitmesh	Vico-tex	Koch	York
AMB-DEM-1	80	99.0	158	954	Hi-Thruput	4536	160	511	931
AMB-DEM-2	120	98.5	210						422
AMB-DEM-3	144	98.2	280		Nu-Standard	9030	280	911	431
AMB-DEM-4	128	98.4	460				415	706	326
AMB-DEM-5	193	97.5	375	890	Xtra-Dense	9033	380	1211	421
AMB-DEM-6	300	96.2	575						
AMB-DEM-7	390	95.0	750						
AMB-DEM-8	220	97.2	905						
AMB-DEM-9	432	94.5	1780		Multi-Strand		800		333
AMB-DEM-10	220	97.2	428		Wound				
AMB-DEM-11	160	96.7	5000						371

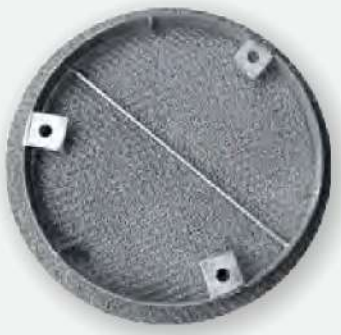
[1] density 80 is suitable for both metal materials and plastic materials.
Other models is only suitable for metal materials.

ORDERING INFORMATION

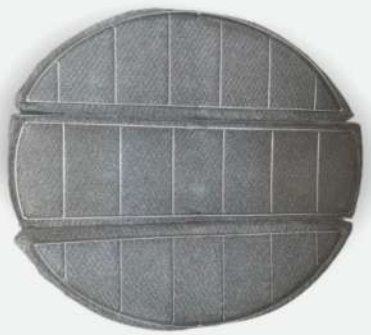
Please provide the following details when placing an order to ensure accurate design and fabrication of the demister pad.

SR.NO	Parameter	Details to Specify
1	Model Number	e.g., AMB-DEM-316L-100-80-M
2	Material of Construction	SS / Monel / Inconel / Hastelloy / PP / Others
3	Wire Diameter	e.g., 0.11 mm / 0.20 mm / Custom
4	Mesh Density	e.g., 80 kg/m³ / 100 kg/m³ / 120 kg/m³ / Custom
5	Mesh Surface Area	e.g., 250 m²/m³ / 400 m²/m³ / As required
6	Pad Dimensions	Outer Diameter × Height (e.g., Ø1500 mm × 186 mm)
7	No. of Segments	1 / 2 / 3 / 5 segments (based on vessel access and handling)
8	Grid Type	Top Grid / Bottom Grid / Both / Not Required
9	Grid Material	SS 304 / SS 316 / SS 316L / FRP / Others
10	Vessel Orientation	Vertical / Horizontal
11	Operating Temperature	Specify maximum design temperature (°C)
12	Operating Pressure	Specify maximum design pressure (bar / psi)
13	Application / Service	KO Drum / Vapor-Liquid Separator / Scrubber / Column / Custom
14	Quantity Required	Total number of units
15	End-User / Project Name	(Optional – for documentation & tagging)

For diameters exceeding 500 mm, the demister pad will be fabricated in segmented sections, each ranging between 300 mm and 400 mm.



Integral



Sectional

Without Grid

With Grid

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APPLICATIONS

AMB-DEM demister pads are engineered to separate entrained liquid droplets from gas streams, playing a vital role in improving mass transfer efficiency, minimizing product loss, and protecting downstream equipment such as compressors. Typically installed at the top of process towers, these pads effectively remove fine mist droplets as small as 3–5 microns. In many systems, they are also integrated between tower trays to enhance separation performance and reduce tray spacing. Beyond tower-based applications, demister pads are used in gas filtration systems such as air filters and as shielding components in sensitive instruments to prevent electromagnetic interference from radio waves.

- Chemical Processing
- Oil and Gas
- Power Generation
- Water Treatment
- Food & Beverage
- Petroleum Refineries
- Pulp and Paper
- Automotive

and many more

PACKAGING

At Ambani Metals, we understand the importance of safe and secure transportation for precision-engineered products like demister pads. That's why our **AMB-DEM** demister pads are packaged using industry-standard, durable methods that ensure product integrity during transit and storage.




Contact Us

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