



Optimum Engineers

Ultimate Way To Heat
& Mass Transfer Solution

Sales and services
of heat exchanger &
solvent recovery systems.

Mfg. of structure
and random packing,
column internals and supports.

Static Mixer

(A) HEAT EXCHANGER:

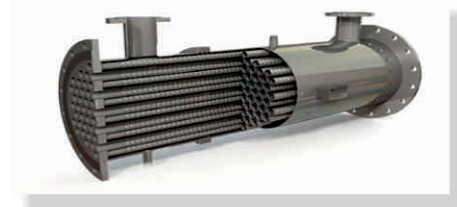
• Shell and Tube

We manufacture shell and tube type heat exchanger in a wide range of size and in different materials (as per requirement) fabricated as per TEMA / ASME standard codes or as per consumer requirement and specifications.

The Heat Exchanger is carefully inspected throughout the water spray test, flashlight and mirror test and different techniques. Our silent features are high durability with low maintenance and excellence at operation.

• Services of Heat Exchanger

Services of Shell and Tube Heat Exchanger are done by an expert team.



(B) TOWER PACKINGS:

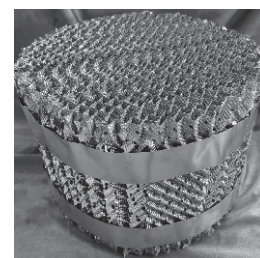
► Structure Packings

1. Sheet Metal:

Sheet metal packing can handle a wide range of vapour & liquid rates and process services.

2. Wire Mesh:

Wire mesh structured packing is patterned by the woven wire mesh to provide high surface area. For separation of the closed boiling mixture that requires a large number of separators.



Types Available:-

TYPES	SPECIFIC SURFACE (M ² /M ³)
Wire mesh - X	500
Wire mesh - Y	750

► Random Packing

As we provide good range random packing which is listed as follow. Metal packings are available in MOCs: - SS316, SS304, SS-Alloys, MS, and aluminium, etc. widely applicable to solvent recovery plants, fertilizer, and multi-purpose distillation units.



1. Pall Rings

SIZE	NOS. / CU. M.	PACKING SURFACE (m ² /m ³)	VOIDAGE	PACKING FACTOR F
16 mm	2,10,000	344	93.1	71
25 mm	51,000	207	94.8	48
38 mm	13,500	130	96	28
50 mm	6,500	99	95.9	20
75 mm	1,820	70	96.1	18

2. Saddles

SIZE	NOS. / CU. M.	PACKING SURFACE (m ² /m ³)	VOIDAGE	PACKING FACTOR F
15 mm	3,47,000	290	95.6	51
25 mm	1,36,200	225	96.6	41
40 mm	50,150	150	97.6	24
50 mm	14,750	100	98	18
70 mm	4,620	58	98.6	12



3. Raschig Rings

SIZE	NOS. / CU. M.	PACKING SURFACE (m ² /m ³)	VOIDAGE	PACKING FACTOR F
13 mm	4,00,000	430	87	73
16 mm	2,10,000	344	90.1	71
19 mm	1,00,000	250	91.1	63
25 mm	51,000	207	93	137
38 mm	13,500	131	94.9	82
50 mm	6,500	99	95.9	57
75 mm	1,820	70	96.1	45



(C) PACKING SUPPORT:

The primary purpose of the support plates is to support the Structured / Random packing and operate the “liquid holdup” in packed beds. It serves distribution to both streams.

► Structured Packing Grid Support

The open grid type support allows free and uniform passage of the liquid and vapour so the capacity is not limited.



► Random Packing Multi-beam Supports

Designed to support the desired packing, under the specific operating conditions. While not limiting the capacity of the packing.

(D) BED LIMITERS:

The primary function is to prevent the expansion of the bed and retain the packing in its position. Under the turbulent condition of liquid or vapour flow.



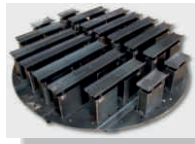
(E) LIQUID DISTRIBUTORS:

We developed high-performance liquid distributors with attributes to maximize packed tower performance; the liquid distributor provides a sufficient gas passage create to avoid a high-pressure drop or liquid entrainment.



▶ Pan Type Distributors

The simple looking device for small towers is actually a high-performance distributor consisting of critically sized orifices, uniformly laid out on the base of the pan.



▶ Deck Distributors

The riser deck distributor is a deck type distributor where orifices are located on the base/deck of the distributors

▶ Spray Nozzle Distributors

Distributors consist of spray nozzle arranged on pipes. General application on heat transfer operation, scrubbing and vapour handling section. It can also handle low liquid flow rates.



(E) LIQUID COLLECTOR

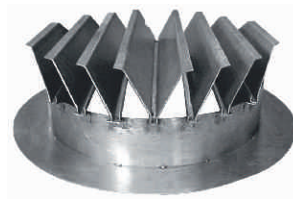
It collects liquid from distributor above the bed and feeds to the Re-distributor. Collector trays are used to collect liquid which resides in between the packed beds (or tray transition).

▶ Type Of Liquid Collector Tray

1. Chimney Collector Tray:



2. Lamella vane type:



(F) DEMISTER OR MIST ELIMINATOR

Metal wire pads with maximum opening and contacts surface which is helpful to trace the liquid droplets which are carrying the vapour. It prevents acidic or corrosion mist droplets to vent of the scrubber or to the top condenser.

