

Montz-Pak Type A3

Special wire mesh packing to fractionate thermally instable substances under vacuum

Montz-Pak Type A3 in particular fulfils the special requirements demanded by the fractionation of thermally instable substances under vacuum. This is primarily achieved by a special wire mesh with a capillary effect whose corrugated lamellae form the packing layers. With its low pressure drop and its high separation efficiency this type of packing is also ideal for very low liquid loads.

Characteristics

- ideal for vacuum columns
- very low liquid loads (<100 l/m²/h) are possible
- low pressure drop per theoretical stage
- high separation efficiency thanks to the good wettability of the packing surfaces
- capillary effect of the special wire mesh

Applications

The main fields of application are in the fractionation of thermally instable substances which are rectified under vacuum from approx. 1 mbar.



Applications include:

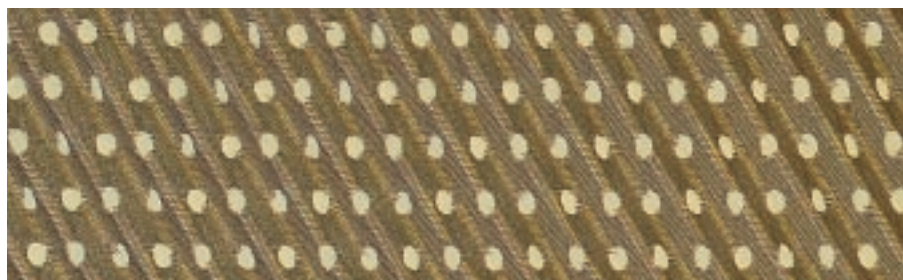
- ethereal oils
- isomer mixtures
- fatty acids
- fatty alcohols
- deodorizing of edible oils
- degassing of transformer oils
- pilot columns

Materials

- stainless steels such as 304, 410 S, 316, 316 Ti, 316 L, 904 L.
- Hastelloy C4, aluminium, copper, titanium, monel, etc.
- other materials are available on request

Column Data

- diameters from 40 mm up to 7 m and more
- liquid load from 20 l/m²/h
- operating pressures from approx. 1 mbar.
- minimal liquid hold-up



▲ Detail shot of a lamella of Montz-Pak Type A3-500.

Angle of inclination of the corrugation:

- standard type with 60°
- 45° or other angles on request

Fractionating stages

If using mixtures with good wetting properties, approx. 5 to 12 theoretical stages per meter are obtained in technical columns, depending on the packing surface.

Assembly

The packing layers are manufactured either as one piece or in segments. The installation in the column is optionally effected through shell flanges or through manholes.



◀ Structure of a Montz-Pak Type A3-500 with a diameter of 3000 mm

Pak-Type	Specific surface m ² /m ³
A3-500	500
A3-750	750
A3-1000	1000
A3-1200	1200
A3-1500	1500
A3-1900	1900

Other surface sizes are available on request

Montz-Pak Type B1

The efficient metal sheet packing

Montz-Pak Type B1 is the result of many years of experience and developments in the field of thermal fractionating technology with structured packings. Montz-Pak Type B1 has proven its reliability in many technical applications. The excellent characteristics are ensured by the regular arrangement and the special Montz surface structure.

Characteristics

- high throughput
- high flexibility
- high separation efficiency almost up to capacity limits
- low pressure drop
- liquid loads from 0.2 to >250 $\text{m}^3/\text{m}^2/\text{h}$
- can be adapted to any fractionating task by a variable specific surface

Applications

- vacuum columns
- normal and high-pressure columns
- absorption of components and pollutants from gas and air flows
- natural gas drying with glycols
- refinery columns (atmospheric and under vacuum)
- petrochemical columns
- exhaust air washing in aluminium rolling mills
- recovery of lube and rolling oil
- wastewater treatment with stripping columns
- revamping existing tray or random rings columns to improve the performance and capacity





◀ Montz-Pak Type B1: 45° and 60° angle of inclination of the corrugation (left to right)

Standard type (45°)

Pak-Type	spec. surface m ² /m ³
B1- 65	65
B1-125	125
B1-150	150
B1-200	200
B1-250	250
B1-300	300
B1-350	350
B1-500	500

Type for high throughputs (60°)

Pak-Type	spec. surface m ² /m ³
B1- 65.60	65
B1-125.60	125
B1-150.60	150
B1-200.60	200
B1-250.60	250
B1-300.60	300
B1-350.60	350
B1-500.60	500

Other surface sizes available on request

Materials

- stainless steels such as: 304, 410 S, 316, 316 Ti, 316 L, 904 L
- Carbon-steel
- Hastelloy C4, aluminium, copper, titanium, monel, etc.
- other materials are available on request

Column Data

- column diameter 70 mm up to 11 m and more
- liquid load from 20 l/m²/h
- operating pressures from vacuum up to 100 bar
- minimal liquid hold-up

Revamping

The performance and capacity of existing columns such as crude-oil columns, natural gas dryers, vacuum distillations (for fatty alcohols, fatty acids, methyl ester etc.) can be increased by revamping.

Angles of inclination of the corrugations:

- standard type with 45°
- 60° for particularly high throughputs (suitable to increase the capacity of existing columns)

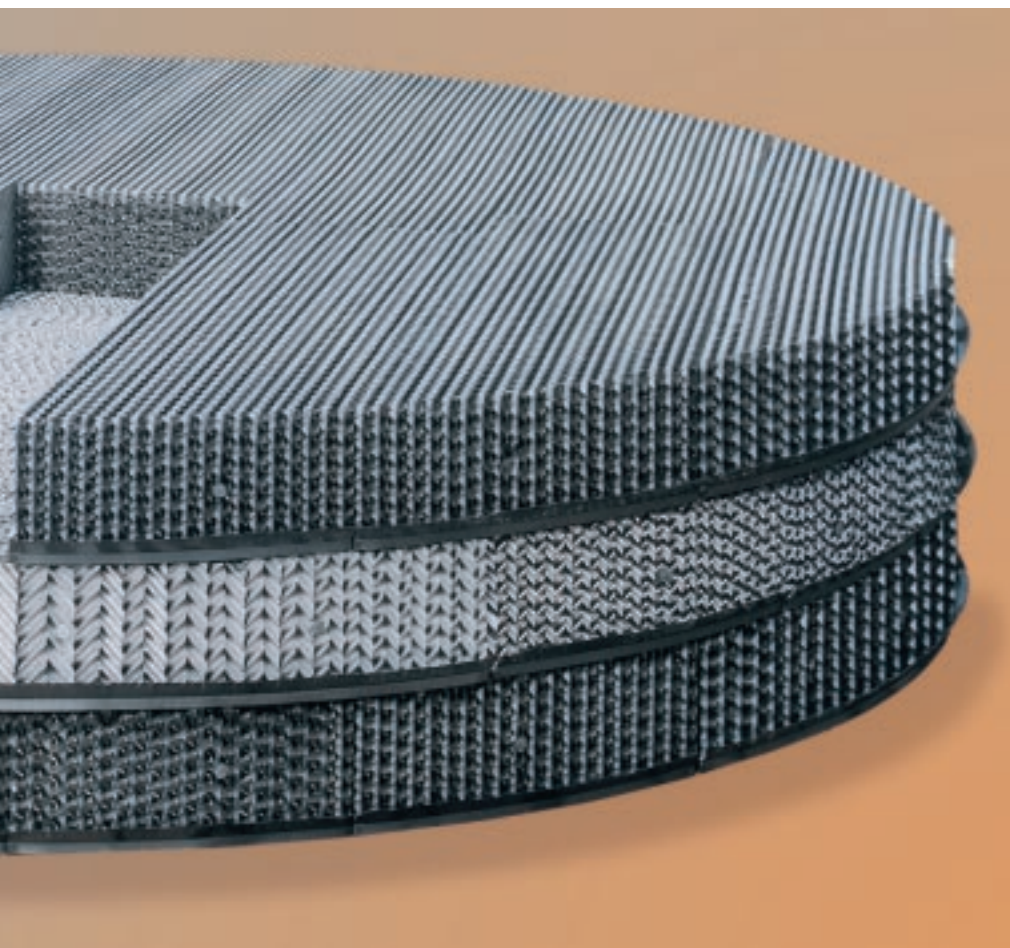
Separation stages

More than five theoretical stages per meter are possible depending on the design.

Assembly

The packings are manufactured as one piece or in segments. Installation in the column is effected optionally through shell flanges or manholes.

◀ Montz-Pak Type B1-250, Diameter 4000 mm



Montz-Pak Type BSH

High-performance packing for thermal mass transfer

The BSH-packing combines the essential features and characteristics of metal sheet and wire mesh packing. A remarkable characteristic of the BSH-packing is the special surface structure. This consists of rhombic perforations with alternating burred-up edges. This structure ensures an excellent and uniform wetting under lowest and high liquid loads. Turbulences caused by the burred-up rims of the orifice ensure a permanent mixing of the liquid film on the packing surface.

- liquid loads 0.2 to > 150 m³/m²/h
- low pressure drop
- solutions for any fractionating problem thanks to a variable specific surface

Applications

- vacuum columns
- normal-pressure and high-pressure columns
- absorption
- natural gas drying
- refinery columns
- petrochemical columns
- wastewater stripping columns
- fractionating columns for the chemical industry
- columns for dealcoholizing of beer
- revamping of existing tray or random rings columns to improve their capacity

Characteristics

- high capacity and flexibility
- good wettability, thus ensuring excellent contact surfaces between vapour and liquid
- high fractionating efficiency almost up to capacity limit

Montz-Pak Type C1

Plastic packing made of PTFE to fractionate corrosive substances

Montz-Pak Type C1 is made of pure PTFE and is a structured mass transfer packing featuring a specific surface of 300 m²/m³. The C1 packing is manufactured as cylindrical packing elements for small diameters, and in segments for larger diameters. The individual packing layers are stiffened with a metallic basket.

Characteristics

The packing structure of Montz-Pak Type C1 is very similar to that of the B1 packing so that the pressure drop and fractionating characteristics are comparable too.

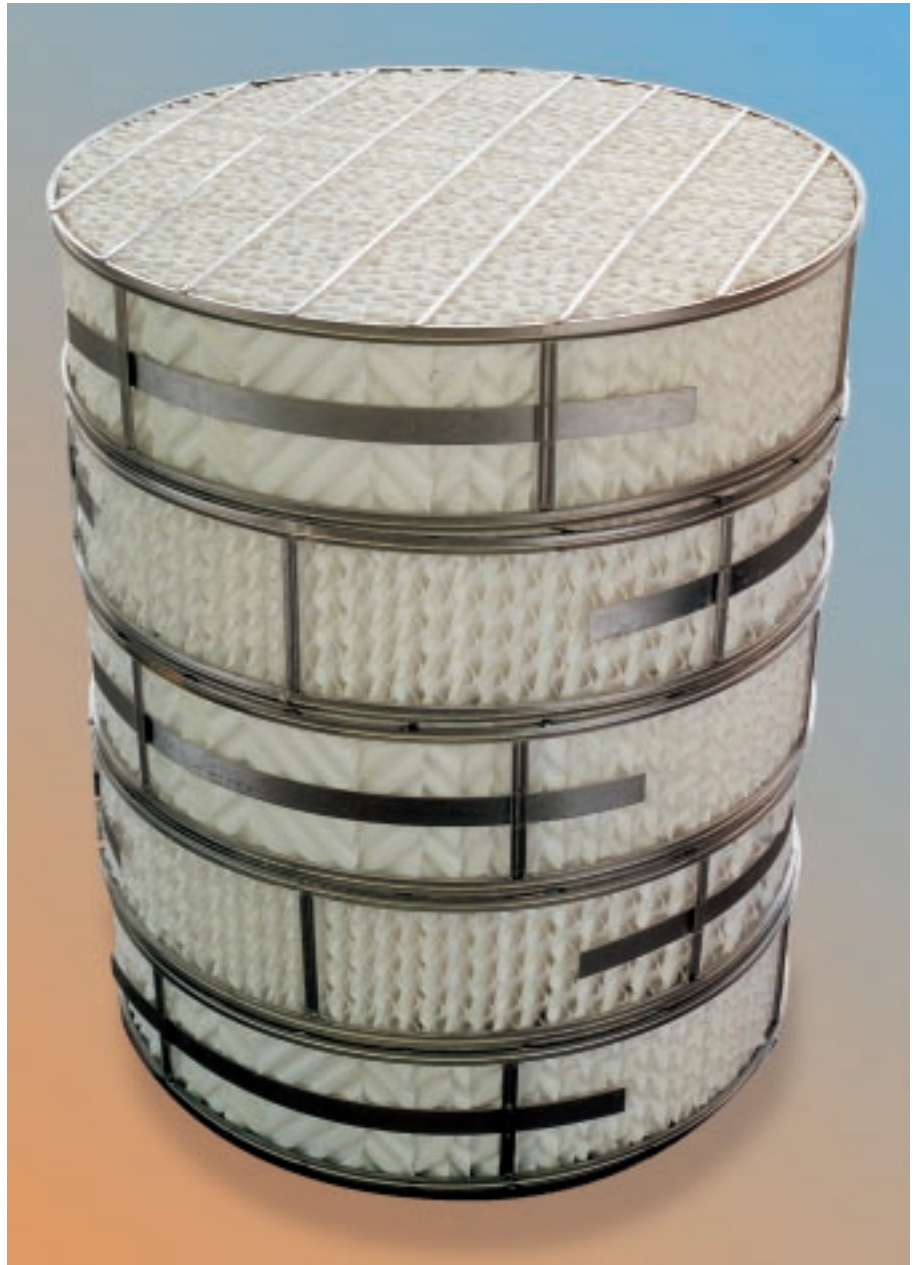
Applications

The C1 packing can be used in columns for

- distillation
- absorption
- desorption
- liquid-liquid extraction

Material

Distributor and support systems for C1 packings are made e.g. of Hastelloy C4 or B2, titanium or tantalum.



Montz-Pak Type C1

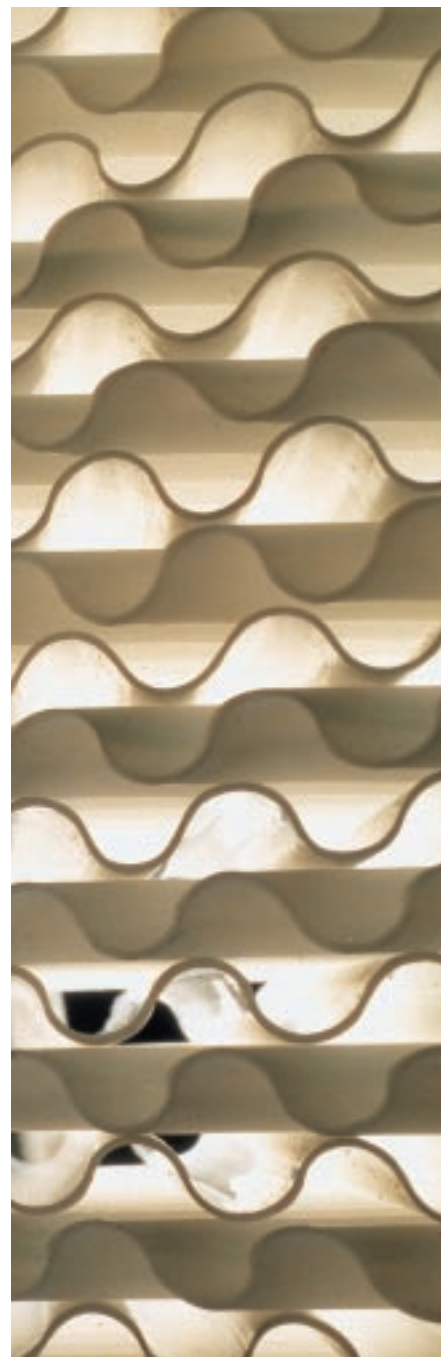
Column data

- operating temperature up to 130°C
- liquid loads approx. 2 to 150 m³/m²/h
- specific surface 300 m²/m³
- the smallest diameter is approx. 60 mm. Up to a diameter of approx. 1500 mm the packing elements can be produced as one piece. Production in segments possible from approx. 800 mm diameter.

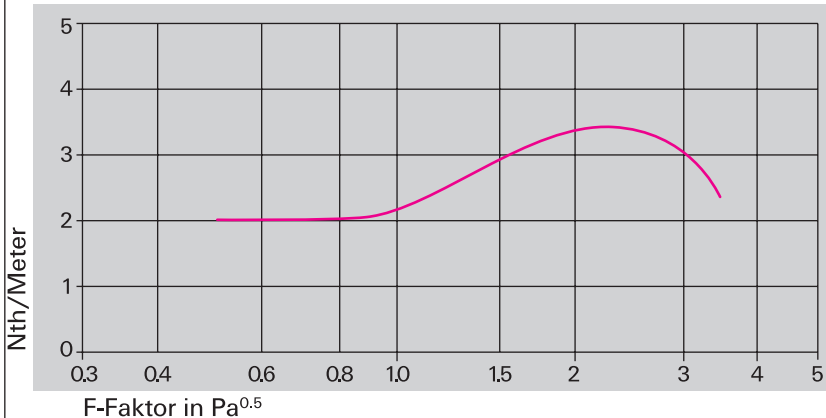
Separation stages and dimensioning

More than two theoretical stages per meter are possible in technical columns. The separation efficiency of C1 packings depends largely on the wettability and liquid load.

Please contact Montz to determine the separation stages and diameters for a specific fractionating problem.



Trennleistung



Structure of Montz-Pak Type C1

Druckverlust

