Structured packings
For mass and heat transfer processes
RVT Process Equipment GmbH provides a broad range of innovative and conventional structured packings in both metallic and thermoplastic materials for different applications.

Lattice structured packing
Hiflow® PLUS

Corrugated sheet structured packing
made of PTFE

Corrugated sheet structured packing
made of PP

Corrugated sheet metal structured packing
RMP
RVT Metal Structured Packings

RMP is RVT’s corrugated sheet metal structured packing line.

Conventional structured packings, characterized by a constant corrugation angle of 45° (Y-type) or 60° (X-type) to the horizontal, are represented by RVT’s RMP N whereas the high capacity line RMP S and SP are characterized by a smooth transition of the 45° corrugation angle in the center to an almost vertical, 90° corrugation angle at each end of the metal sheet.

Packings with other specific surfaces are also available on request.

<table>
<thead>
<tr>
<th>Packing size</th>
<th>RMP N</th>
<th>Specific surface area (m^2/m^3)</th>
<th>RMP S</th>
<th>Specific surface area (m^2/m^3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>64 X/Y</td>
<td>64</td>
<td>125</td>
<td>125</td>
<td></td>
</tr>
<tr>
<td>90 X/Y</td>
<td>90</td>
<td>250</td>
<td>250</td>
<td></td>
</tr>
<tr>
<td>125 X/Y</td>
<td>125</td>
<td>350</td>
<td>350</td>
<td></td>
</tr>
<tr>
<td>170 X/Y</td>
<td>170</td>
<td></td>
<td>350</td>
<td></td>
</tr>
<tr>
<td>200 X/Y</td>
<td>200</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>250 X/Y</td>
<td>250</td>
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<td></td>
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</tr>
<tr>
<td>350 X/Y</td>
<td>350</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Packing size</th>
<th>RMP SP</th>
<th>Specific surface area (m^2/m^3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>250 - 1</td>
<td>250</td>
<td></td>
</tr>
<tr>
<td>250 - 2</td>
<td>250</td>
<td></td>
</tr>
</tbody>
</table>

View of a packing layer before assembly into the column
The typical application fields for metal structured packings are processes with following operating conditions:

- low irrigation densities
- high gas loads
- low pressure drop
- high separation efficiency required

These operating conditions are common in many vacuum distillation and rectification processes in the chemical and petrochemical industry, as well as in amine scrubbers, C3-, C4-splitters and applications in the field of fine chemicals.

The RMP packings are available in different specific surface areas and corrugation angles as well as in several finishing varieties:

- smooth or textured surface
- perforated or unperforated
- X (60°) or Y (45°) corrugation angles
- standard (type N) or high-capacity (type S) corrugation geometry
- 0.1 to 0.4 mm (0.004 to 0.016 in) metal sheet thickness
- materials: carbon steel, stainless steel, others on request

Distillation performances of several RMP N packing types have been measured at the Separation Research Program (SRP) under a wide range of operating conditions and pressures. Following diagrams show the distillation performance results of the most commonly used structured packings RMP N 250Y.
RPP

RVT Plastic Structured Packings

The RPP structured packing line is RVT’s family of corrugated sheet structured packings made of thermoplastics. The conventional, N and high capacity, S packing geometries as described for the metal structured packings are also available in the RPP line.

The RPP packings are available in PE, PP and PVDF (other’s on request).

<table>
<thead>
<tr>
<th>RPP N</th>
<th>Packing size</th>
<th>Specific surface area m²/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>250 Y</td>
<td>250</td>
<td></td>
</tr>
</tbody>
</table>

RPP S

<table>
<thead>
<tr>
<th>Packing size</th>
<th>Specific surface area m²/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>250</td>
<td>250</td>
</tr>
</tbody>
</table>

Packings with other specific surfaces are also available on request.

Hiflow® PLUS

Lattice Plastic Structured Packing

Hiflow® PLUS is a product that combines the advantages of random tower packing and conventional structured packings while reducing the limitations of these two mass transfer components.

This lattice structured packing type is particularly suitable for applications that require high capacities at high liquid loads.

The development of Hiflow® PLUS was inspired by the Hiflow® ring, which has a long and successful history with industrial applications.

<table>
<thead>
<tr>
<th>Hiflow® PLUS</th>
<th>Specific surface area m²/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td># 1</td>
<td>180</td>
</tr>
<tr>
<td># 2</td>
<td>100</td>
</tr>
<tr>
<td># 3</td>
<td>80</td>
</tr>
</tbody>
</table>

Available raw materials:
PP, PE, PPH, others on request.
For applications with particular operating conditions, RVT Process Equipment offers structured packings made of highly resistant plastics such as PTFE. Typical applications are HCl absorbers, SO2 absorbers as well as extraction processes with operating temperatures up to a maximum of 130°C.

Ceramic structured packings are mainly used for even higher temperatures and corrosive process conditions. RVT Process Equipment offers conventional ceramic structured packings in both X (60°) and Y (45°) corrugation angles as well as with specific surface areas from 125 to 450 m²/m³.

The main performance characteristics and advantages of Hiflow® PLUS are:
- lower pressure drop than random tower packing
- improved cross flow compared to conventional structured packings
- economic production due to reduced raw material requirement
- no wall wipers required
- easy installation and installable in a horizontal or vertical column, consequently reducing packing transportation costs and installation time and cost at jobsite,
- standard liquid distributor as designed for random packing can be used
- significantly improved resistance against fouling in comparison to conventional structured packings

Structured packing made of PTFE in corrugated sheet structure, spec. surface area 300 m²/m³ (packings with other specific surface areas available on request)
The way to RVT Process Equipment

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Structured packings
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Regensburg
München
Stuttgart
Stuttgart
Saalfeld
Kulmbach
Exit Naila
Bad Berneck
Exit Bad Berneck
Pegnitz
Schweinfurt
Bayreuth
Würzburg
Bamberg
Intersection Bamberg
Nürnberg