



Tower Packings for High Performance

High Performance with RVT Process Equipment Tower Packings

Whatever a system, mass transfer, heat transfer or biological, selecting a tower packing that optimizes the total gas to liquid interface with a low pressure drop is sought after for optimal performance.

RVT's tower packings meet these requirements.

Available in a multitude of geometrical configurations as well as materials of construction, RVT Process Equipment provides a packing for almost every application.

Hiflow® Rings

The Hiflow Ring is a 3rd generation high performance tower packing which provides an optimal design of high mechanical stability, void fraction and superior mass transfer. When a higher performance packing is required the Hiflow Ring can handle higher capacities of gas and/or liquid than conventional packing due to its open structure

and optimized design without sacrificing mass transfer performance. The mechanical stability and light weight of the Hiflow Rings make them ideal for highly packed beds without requiring additional intermediate support grids. Due to the exceptional mechanical design the tendency for the liquid to migrate to the columns wall is minimized.

Hiflow®- Rings

type size	bulk density kg/m ³	surface area m ² /m ³	void fraction in %
Ceramics			
20-4	693	280	71
35-5	658	128	73
50-6	466	102	81
75-9	485	70	80

Weight data refer to porcelain

Plastics			
15-7	76	313	91
25-7	85	214	91
38-1	58	150	94
50-0	50	110	94
50-3	52	95	94
50-6	46	90	94
90-7	30	76	97

Weight data refer to polypropylene

Metal			
25-5	372	185	95
28-5	372	185	95
38-5	255	145	96
40-5	244	143	97
50-5	175	95	98
110-8	147	52	98

Weight data refer to stainless steel 1.4301 (AISI 304) with 0.5 mm and 0.8 mm wall thickness



Standard Materials

Ceramics: porcelain
stoneware
alumina

Plastics: PP, PPH, HDPE, PVC
C-PVC, PVDF, PFA

Metal: carbon steel, stainless steel,
titanium, hastelloy,
nickel, copper, aluminium

Raflux Rings

Raflux Rings are a second generation tower packing which are generally classified as a standard tower packing. The next evolution to the cylindrical ring, the Raflux Ring has an open structure which reduces the pressure drop while maintaining the same surface area of the packing. Raflux Rings are available in a variety of sizes and materials (ceramic, plastic and metal). Known for its balance between mass transfer performance and pressure drop Raflux Rings remain one of the most commonly used tower packings in industry.

Raflux Rings

type size	bulk density kg/m ³	surface area m ² /m ³	void fraction in %
Ceramics			
25-3	620	220	73
35-4	540	165	76
50-5	550	120	77
75-8	540	98	77
80-8	520	80	78
90-9	504	77	78
100-10	450	55	81

Weight data refer to stoneware

Plastics			
15-7	76	313	91
25-0	90	220	90
25-7	56	163	93
25-8	78	220	91
35-0	78	160	92
38-8	68	175	92
50-1	54	110	93
50-7	41	85	94
50-8	60	110	93
75-0	65	98	94
90-0	56	86	94
90-8	38	86	96

Weight data refer to polypropylene

Metal			
15-3	340	360	95
25-5	393	215	95
35-5	285	145	96
50-5	207	112	97
70-7	198	78	98
90-8	165	65	98

Weight data refer to stainless steel 1.4301 (AISI 304) with standard wall thickness between 0.3 mm and 1.0 mm

Standard Materials

Ceramics: porcelain
stoneware

Plastics: PP, PPH, HDPE, PVC,
C-PVC, PVDF, PFA

Metal: carbon steel, stainless steel,
titanium, hastelloy,
nickel, copper, aluminium





RMSR – RVT Metal Saddle Rings

The RMSR (RVT Metal Saddle Ring) is one of the industry’s highest performance metal random tower packing which has an excellent mass transfer efficiency while maintaining a very low pressure drop. Although it has an open structure the design provides a high mechanical

stability able to withstand heavy liquid loading and extremely tall bed heights. Additionally the RMSR tower packing generates a uniformly packed bed inside the column ensuring optimal gas-liquid interaction and minimal channeling.

RVT Metal Saddle Rings (RMSR)

type size	bulk density kg/m ³	surface area m ² /m ³	void fraction in %
Metal			
25-3	228	235	97
40-4	241	170	97
50-4	158	115	98
60-4	127	90	98
70-5	116	67	98

Weight data refer to stainless steel 1.4301 (AISI 304) with standard wall thickness between 0.3 mm and 0.6 mm



HiDur™ Inert Ceramic Balls

Balls are the simplest design of all packings. Refineries and petrochemical plants are the primary users for balls as they are using them as catalyst support media. While balls can technically be used for packed bed applications they are rarely utilized as they have an extremely high pressure drop with relatively low surface area.

HiDur™ Inert Ceramic Balls

type size	bulk density kg/m ³	surface area m ² /m ³	void fraction in %
Ceramics			
1/8"	1350	720	44
1/4"	1350	520	44
3/8"	1350	360	44
1/2"	1350	275	45
3/4"	1350	190	45
1"	1350	144	45
1 1/2"	1350	100	45
2"	1350	72	45

Weight data refer to stoneware

Standard Materials

Ceramics: porcelain, stoneware, mullite, alumina



Saddles

Saddles are classified as standard tower packing. Even though high performance tower packings are leading the way in terms of superior performance the saddle tower packing is still utilized in many applications due to its proven performance and cost effectiveness.

Ceramic saddles are still the number one selling ceramic product in acid industries as they have excellent mechanical and corrosion properties at uncomparable low costs. A further application is the utilization in regenerative thermal oxidizers (RTO).

Saddles

type size	bulk density kg/m ³	surface area m ² /m ³	void fraction in %
Ceramics			
1/2"	778	540	66
3/4"	682	338	67
1"	616	250	74
1 1/2"	583	164	75
2"	528	120	76
3"	520	92	78
3 1/2"	500	68	79

Weight data refer to stoneware

Plastics			
1"	105	258	89
1 1/2"	91	170	91
2"	84	120	92

Weight data refer to polypropylene

Hiflow® Saddles

type size	bulk density kg/m ³	surface area m ² /m ³	void fraction in %
Plastics			
1"	86	260	92
2"	53	83	95

Weight data refer to polypropylene

Berl Saddles

type size	bulk density kg/m ³	surface area m ² /m ³	void fraction in %
Ceramics			
3/8"	850	660	65
3/4"	750	430	68
1"	700	260	70
1 1/2"	650	178	73
2"	600	120	75

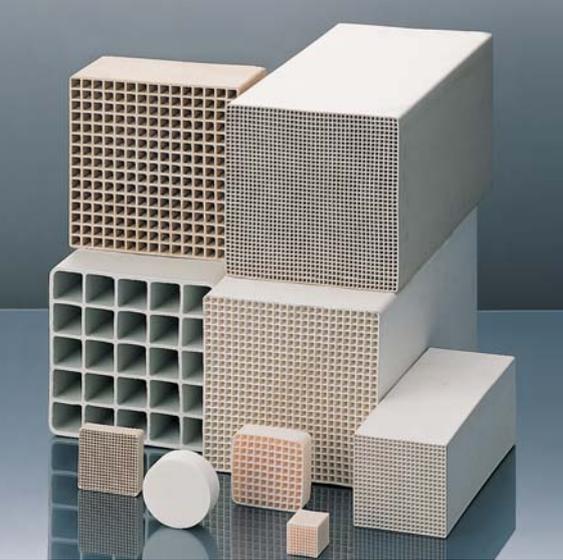
Weight data refer to stoneware



Standard Materials

Ceramics: stoneware, porcelain, mullite, alumina

Plastics: PP, PPH, HDPE, PVC, C-PVC, PVDF, PFA



Honeycomb Monoliths

Honeycomb monoliths are a structure media with high specific surface. The standard application areas are the utilization as catalyst carriers and as heat exchanging media for regenerative thermal oxidizers (RTO). In addition to the listed standard geometries honeycomb monoliths are also available in other geometric designs.

Standard Dimensions

150 x 150 x 300 mm

Standard Materials

Ceramics: alumina-porcelain C130
cordierite compact C410
and porous C520
mullite C620
quartz porcelain C110

Honeycomb Monoliths

number of channels	CSI*	width of channels mm	surface area m ² /m ³	void fraction in %
Ceramics				
25 x 5	18	4.90	540	67
40 x 40	46	3.00	825	65
50 x 50	72	2.40	1005	57

*Cells per square inch



Biological Carrier Media

In both air and water pollution control applications biological treatment systems are becoming more commonplace.

For these processes RVT offers carrier media with the appropriate specific surface area, the most suited geometry and material selected.

Bioflow

type size	bulk density kg/m ³	surface area m ² /m ³	dimensions in mm
Plastics			
Bioflow 9	145	800	9 x 7
Bioflow 30	100	320	30/35 x 29
Bioflow 40	91	305	40/45 x 35

Materials

PE-/PP-regranulate
PE, virgin black
PE, virgin natural



Cylindrical Rings

Cylindrical Rings represent the most basic form of standard packing and are available in a vast range of materials (plastic, metal and ceramic) and thicknesses. Due to the high mechanical strength and the wide range of material cylindrical rings can be adapted to almost any process or system.



Cylindrical Rings

type size	bulk density kg/m ³	surface area m ² /m ³	void fraction in %
Ceramics			
6	880	940	63
8	850	550	65
10	830	450	65
15	780	274	66
25	620	190	73
35	560	140	76
50	550	98	78
80	535	61	77
100	578	65	81

Weight data refer to stoneware

Plastics			
15-1.5	164	350	81
25-1.5	138	220	85
35-1.5	82	150	90
50-1.75	71	110	92
80-2.5	66	65	93

Weight data refer to polypropylene

Metal			
15-5	640	350	92
25-5	380	220	93
35-5	285	150	96
50-5	207	110	97

Weight data refer to stainless steel 1.4301 (AISI 30P4)

Support Systems

In acid applications, due to the aggressive nature of the gaseous and liquid components being handled, support plates of special design, manufactured from acid resistant ceramic materials, are used almost exclusively.

Depending on your specific needs, the appropriate support plate can be supplied.

Standard Materials

Ceramics: porcelain
stoneware
alumina

Plastics: PP, PPH, HDPE, PVC,
C-PVC, PVDF, PFA

Metal: carbon steel,
stainless steel,
titanium,
hastelloy, nickel,
copper, aluminium



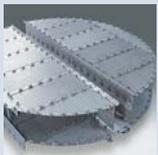
The Way to RVT Process Equipment



Tower Packings for
Mass and Heat Transfer



Column Internals



Mass Transfer Trays



Biological
Carrier Media



Turn-Key Units for
Waste Gas Scrubbing



Ammonia
Recovery Processes



Combustion Plants
for the Disposal
of Exhaust Air,
Waste Gases
and Liquid Media



Highly effective
Separator for
Fine Particles



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