

Random Packing Mass Transfer Technologies

Random packing has been used for fractionation, absorption and stripping operations in gas, refinery and chemical plants for many years and the benefits are well established.

Furthermore, ease of replacement and storage make random packing the ideal choice for systems with heavy fouling or corrosion where packing is frequently replaced.

Rosenberg-process.com



RosePak™ range, high performance mass transfer technology

Rosenberg offers **RosePak™** Random Packing for mass transfer and separation systems that require high performance and durability.

Random Packing options



Product Model	P-Pak™	C-Pak™	H-Pak™	I-Pak™
Type	Random Packing	Random Packing	Random Packing	Random Packing
Materials	Metals	Metals	Metals	Metals
Remarks	High capacity Pall ring equivalent	Equivalent to the widely used Cascade Mini-Rings (CMR)	Higher efficiency than the P-Pak due to ribbed construction	3rd Gen packing high efficiency and capacity



Product Model	R-Pak™	P-Pak Plastic™	C-Pak Plastic™
Type	Random Packing	Random Packing	Random Packing
Materials	Metals	Plastics	Plastics
Remarks	1st Gen packing	Used in low temperature corrosive environments	Used in low temperature corro- sive environments

Rosenberg P-Pak™

Random Packing

How it works

P-Pak™ have cylindrical dimensions but punched rows of windows increase the performance by increasing the surface area of the packing. They are suited for low pressure drop and high capacity applications. They have a degree of randomness and a relatively high liquid hold up, promoting a high absorption, especially when the rate of reaction is slow. The cross structure of the Pall ring makes it mechanically robust and suitable for use in deep packed beds.

Product specifications

Product	P-Pak™
Type	Random Packing
Material	Metals
Remarks	• Equivalent to the widely used Pall Ring with largest collection of performance data available



P-Pak™ 50

Available sizes

Product Model P-Pak		15mm	25mm	40mm	50mm	90mm
Specific surface area	m2/m3	350	222	144	112	64
Void fraction	%	95	95	97	97	98

Rosenberg C-Pak™

Random Packing

How it works

C-Pak™ random packing utilizes an aspect ratio of 1:3 (height of the cylinder is 1/3 of the diameter). As a result, the packing elements preferentially orient themselves with the cylindrical axis tending towards vertical. This preferential orientation better exposes both the interior and exterior surfaces of the rings to the liquid and vapor, providing more efficient use of the packing surface. At the same time, this orientation allows a less restricted flow for the vapor, resulting in increased capacity while reducing pressure drop.

Product specifications

Product	C-Pak™
Type	Random Packing
Material	Metals
Remarks	• Equivalent to the widely used Cascade Mini-Rings (CMR) • Excellent mechanical strength • C-Pak ar good for fouling systems



C-Pak™ 50

Available sizes

Product Model P-Pak		25mm	40mm	50mm	70mm
Specific surface area	m2/m3	244	188	141	101
Void fraction	%	95	95	97	97

Rosenberg H-Pak™

Random Packing

How it works

H-Pak™ random packing (Hy-Pak® equivalent) is an excellent substitute for traditional Pall Rings and is considered to be one of the most efficient ring-type random packings. At almost the same efficiency, it provides lower pressure drop than a Pall Ring. It also increases the interfacial area available for gas-liquid contact. It's unique design incorporates strength reinforcing ribs that allow for lower thickness and taller beds, thus reducing procurement costs when compared to traditional Pall Rings.

Product specifications

Product	H-Pak™
Type	Random Packing
Material	Metals
Remarks	



H-Pak™

Available sizes

Product Model H-Pak™		30mm	45mm	60mm	90mm
Specific surface area	m2/m3	Proprietary	Proprietary	Proprietary	Proprietary
Void fraction	%	97	98	98	98

Rosenberg I-Pak™

Random Packing

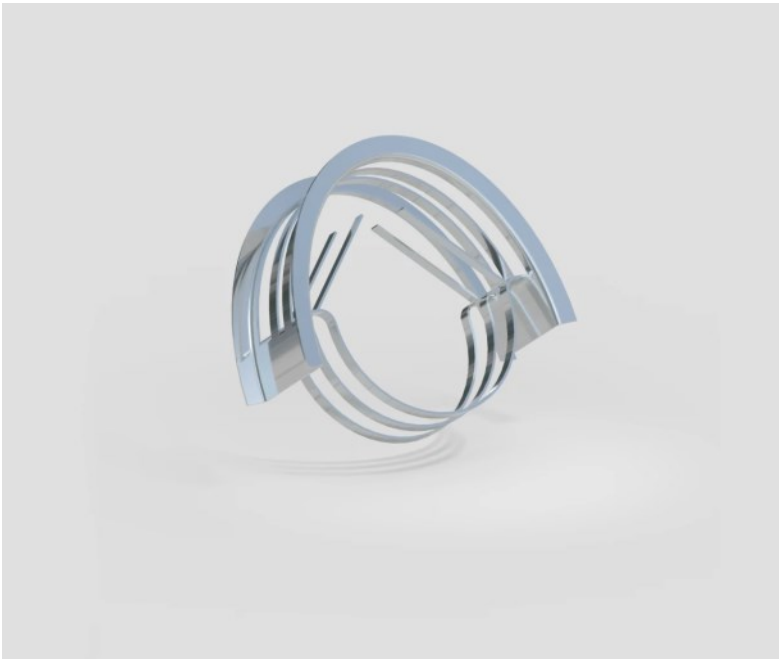
How it works

The enhanced geometry of the third-generation type packings exhibits more specific area in a more accessible way and so provides higher efficiency for mass-transfer applications and higher capacity than previous generation packing.

I-Pak™ Random Packing minimises liquid hold-up and provide up to 30% lower pressure drop than previous generation packing.

Product specifications

Product	I-Pak™
Type	Random Packing
Material	Metals
Remarks	•Equivalent to IMTP Rings • Low liquid hold-up



I-Pak™ 50

Available sizes

Product Model I-Pak™		15mm	25mm	40mm	50mm	70mm
Specific surface area	m2/m3	305	225	150	100	60
Void fraction	%	97	97	98	98	98

Rosenberg P-Pak™ Plastics

Random Packing for corrosive environments

How it works

Plastic tower packing can be made from heat resistant and chemical corrosion resistant plastics, including polyethylene (PE), polypropylene (PP), reinforced polypropylene (RPP), polyvinyl chloride (PVC), chlorinated polyvinyl chloride (CPVC), polyvinylidene fluoride (PVDF) and Polytetrafluoroethylene (PTFE). The temperature in media ranges from 60 Degree C to 280 Degree C.

Product specifications

Product	P-Pak™ Plastics
Type	Random Packing
Material	Plastics
Remarks	Used in low temperature corrosive environments



P-Pak Plastics

Available sizes

Product Model P-Pak Plastics™		16mm	25mm	40mm	50mm	75mm
Specific surface area	m2/m3	188	175	115	93	73
Void fraction	%	91	90	89	90	92

Rosenberg C-Pak™ Plastics

Random Packing for corrosive environments

How it works

Plastic C-Pak is made from heat resistant and chemical corrosion resistant plastics, including polyethylene (PE), polypropylene (PP), reinforced polypropylene (RPP), polyvinyl chloride (PVC), chloridized polyvinyl chloride (CPVC) and polyvinylidene fluoride (PVDF).

It was developed in Britain during the 90's called CMR. It has not only change traditional equal length and diameter, but also cone-shaped flanging at one edge.

This special structure has shorten distance which gas passing through wall's out surface, but also reduced the resistance when air passing through bed layer and increased voidage.

Product specifications

Product	C-Pak™ Plastics
Type	Random Packing
Material	Plastics
Remarks	Used in low temperature corrosive environments



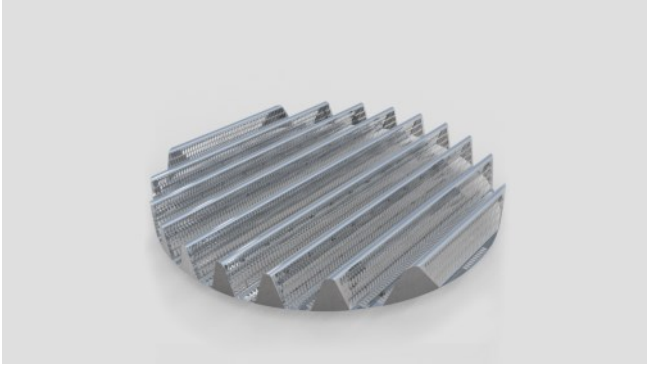
P-Pak

Available sizes

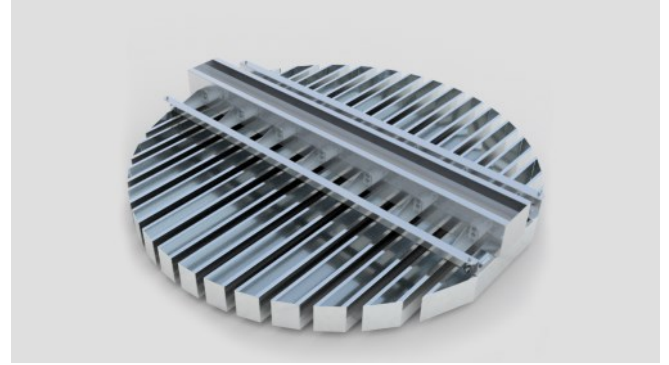
Product Model C-Pak Plastics™		15mm	25mm	40mm	50mm	75mm
Specific surface area	m2/m3	370	228	133	114	90
Void fraction	%	85	90	91	92	93

Rosenberg internals

Full range of packed tower internals



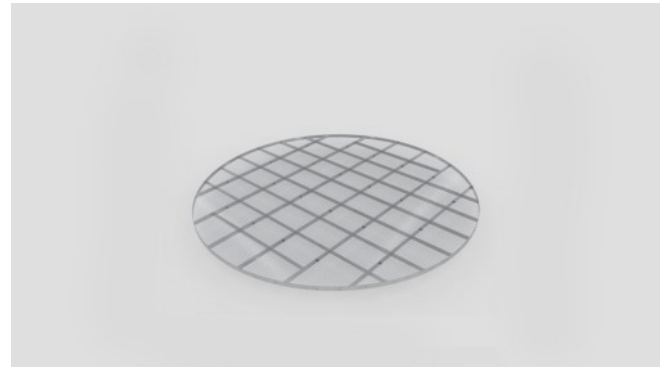
Random Packing Support Grid



Trough Distributor



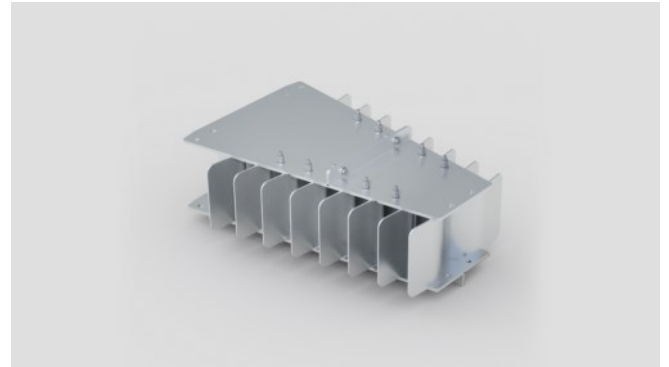
Spray Distributor



Bed Limiter



Half open pipe



Vane Inlet device



Vapour distributor

||| Rosenberg internals

Full range of packed tower internals





Mass Transfer Technologies

Rosenberg offers a broad range Mass Transfer equipment for multiple industries including oil, gas and chemicals

Copyright © Rosenberg Process Technology Ltd, 2023. This brochure is a general presentation. It does not provide any warranty or guarantee of any kind. Please, contact us for a description of the warranties and guarantees offered with our products. Directions for use and safety will be given separately. All information herein is subject to change without notice.

Rosenberg Process Technology is a company registered in England 09969976
Contact us ask@rosenberg-process.com

