



## JINTAI Ceramic Random Packing:

JINTAI Group has developed the following high-efficiency ceramic random packing for the most demanding conditions:

- JINTAI Ceramic Saddle : **JT-CS**
- JINTAI Ceramic Supper Saddle : **JT-CSS**
- JINTAI Ceramic Raschig Ring : **JT-CRR**
- JINTAI Ceramic Pall Ring : **JT-CPR**
- JINTAI Ceramic Cross Partition Ring : **JT-CCPR**
- JINTAI Ceramic Berl Saddle : **JT-CBS**
- JINTAI Ceramic Cascade Ring : **JT-CCR**

### *Brief introduction*

JINTAI High-efficiency Ceramic Random Column Packing is highly suitable for the conditions of higher temperature and lower temperature and can be much more resistant to all kinds of organic acid, inorganic acid and solutions except for the hydrofluoric acid than metal packing. Random Ceramic Packing or Column Ceramic packing is widely used in drying tower, absorbing tower and cooling tower in the fields of chemical, petrochemical etc industries.

JINTAI High-efficiency Ceramic Random Column Packing is made of high quality China-clay material, which has 99.8% acid resistance. Therefore, our ceramic random packing products are widely used in refineries, chemical engineering, acid plants, gas plants, oxygen plants, steel plants and pharmaceutical plants. Ceramic packings are mainly used as ballast and support media of reaction vessel in washing towers, cooling towers, reclaiming towers, desulphurization towers, drying towers and absorbing towers.

### *Typical Chemical Composition for JINTAI Ceramic Random Packing*

TYPICAL CHEMICAL ANALYSIS		TYPICAL PHYSICAL PROPERTIES	
<i>Al<sub>2</sub>O<sub>3</sub> + SiO<sub>2</sub></i>	>90%	<i>Specific gravity (g/cm<sup>3</sup>)</i>	2.3-2.4
<i>CaO</i>	1.0%	<i>Water Absorption, wt. %</i>	< 1
<i>TiO<sub>2</sub></i>	0.5%	<i>Acid resistance</i>	>99.8%
<i>K<sub>2</sub>O + Na<sub>2</sub>O</i>	4.5%	<i>Operation temp.(max)</i>	1100°C
<i>MgO</i>	0.5%	<i>Moh's hardness (scale)</i>	>6.5
<i>Fe<sub>2</sub>O<sub>3</sub></i>	1.0%		

JINTAI Group

Email: [biz@jintai-group.cn](mailto:biz@jintai-group.cn)

Web: [www.ceramic-honeycombs.com](http://www.ceramic-honeycombs.com)

Tel: +86-799-6886565 Fax: +86-799-6810066

## JINTAI Ceramic Saddle (JT-CS)

JINTAI Ceramic Saddle is improved from the arc saddle, it changes the both arched surface to rectangular surface and makes the interior and exterior radius of curvature different, this construction overcomes the problem of nesting basically, it makes porosity distributed even and improves the distribution of the fluid, and greater capacity and lower pressure drop than Raschig ring.



**JT-CS**

### *Technical Parameter*

Size	Weight kg/m <sup>3</sup>	Number pc./ m <sup>3</sup>	Surface m <sup>2</sup> / m <sup>3</sup>	Free Vol. %
1/2"(12mm)	780	610,000	647	68
5/8"(16mm)	710	269,000	535	71
3/4"(19mm)	670	146,000	350	72
1"(25mm)	630	59,000	254	73
1.5"(38mm)	580	19,680	180	75
2"(50mm)	550	8,243	120	76
3"(76mm)	530	2,400	91	77

**Typical physical properties of JT-CS**

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## JINTAI Ceramic Supper Saddle (JT-CSS)

JINTAI Ceramic Super Saddle is the improvised version of the original saddle. It's designed to give enhanced internal gas and liquid distribution. The unique scalloped edge is the key to the product's high performance in terms of greater capacity, low pressure drop and high rates of mass transfer. It overcomes the problem of nesting that is found in ordinary saddles.



JT-CSS

### Technical Parameter

Size	Weight Kg/m <sup>3</sup>	Surface Area m <sup>2</sup> /m <sup>3</sup>	Number pc./m <sup>3</sup>	Void Fraction (%)
1''	645	260	52000	77
1.5''	600	210	16000	78
2''	570	140	7300	79
3''	580	105	1600	77

Geometric Properties for JT-CSS

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## JINTAI Ceramic Raschig Ring (JT-CRR)

JINTAI Raschig ring is a form of random packing and is used in commercial fractional distillation columns to reduce pressure loss (versus using trays), while maintaining good efficiency and economy. JINTAI Raschig Ring Packing is proven in a wide range of mass transfer applications.



JT-CRR

### Technical Parameter

Size ( inch/ mm )		D*H* $\delta$ mm	Specific surface ( $m^2/m^3$ )	Void volume ( $m^3/m^3$ )	Bulk number ( $n/m^3$ )	Bulk density ( $kg/m^3$ )	Dry packing (factorm-1)
1/4"	$\Phi 6$	6*6*2	789	0.73	3110000	737	2030
	$\Phi 10$	10*10*2	440	0.70	720000	700	1280
	$\Phi 15$	15*15*2	330	0.70	250000	690	960
1"	$\Phi 25$	25*25*3.5	190	0.78	50000	680	400
	$\Phi 35$	35*35*4.5	150	0.76	18500	650	320
1.5"	$\Phi 40$	40*40*5	126	0.75	13200	630	305
2"	$\Phi 50$	50*50*5.5	93	0.81	6400	600	177
3"	$\Phi 80$	80*80*9.5	90	0.68	1950	500	234
4"	$\Phi 100$	100*100*10	70	0.70	1000	700	172
6"	$\Phi 150$	150*150*15	50	0.68	295	790	142

Geometric Properties for JT-CRR

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## JINTAI Ceramic Berl Saddle (JT-CBS)

JINTAI Berl saddle is an opening packing shaped like a saddle without inside and outside, the berl saddle performs better as compared to Raschig rings in the aspects of even fluid distribution and low resistance. And it makes lower pressure against the inner wall of the tower than the ring packing.



**JT-CBS**

### *Technical Parameter*

Size	Weight (kg/m <sup>3</sup> )	Number pc / m <sup>3</sup>	Surface m <sup>2</sup> / m <sup>3</sup>	Free Vol. (%)
3/4" (19mm)	725	83950	225	58
1" (25mm)	640	43250	206	61
1.5" (38mm)	617	12775	110	72
2" (50mm)	650	7900	95	72

**Geometric Properties for JT-CBS**

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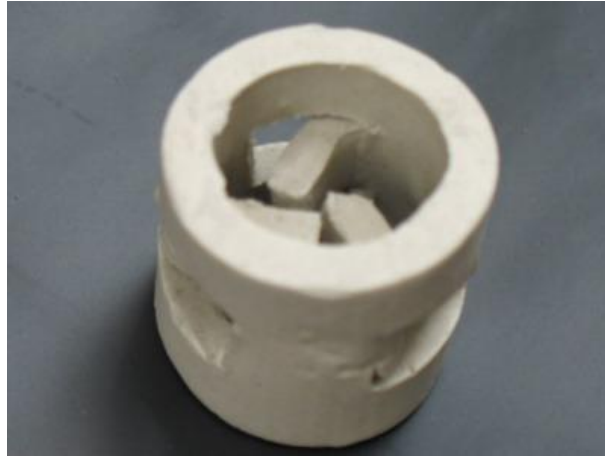
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## JINTAI Ceramic Pall Ring (JT-CPR)

JINTAI Pall ring is a kind of new type and high efficient packing that is improved on the basis of the Rasching ring. JINTAI pall ring is a proven design that provides higher capacity and lower pressure drop than trays and other random packings. The opened cylinder walls and inward bent protrusions of the Pall Ring allow greater capacity and lower pressure drop than standard cylindrical rings.



JT-CPR

### Technical Parameter

Size	OD*H*T (mm)	Weight kg/m <sup>3</sup>	Number pc / m <sup>3</sup>	Surface m <sup>2</sup> / m <sup>3</sup>	Free Vol. %
1"(25mm)	25*25*3	600	50000	220	75
1.5"(38mm)	38*38*4	540	13400	150	78
2"(50mm)	50*50*5	555	6400	120	78
3"(80mm)	80*80*8	520	1500	75	80

Geometric Properties for JT-CPR

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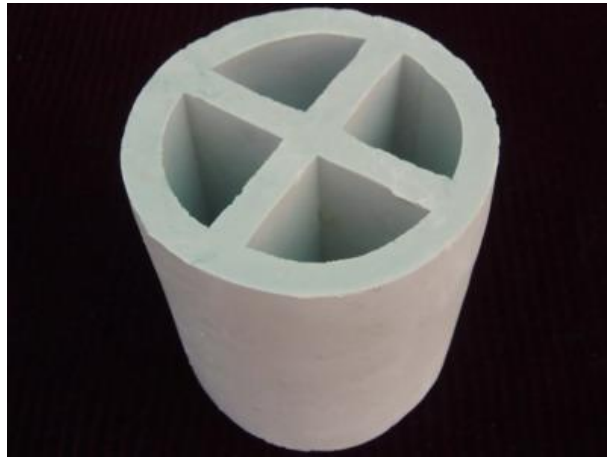
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## JINTAI Ceramic Cross Partition Ring (JT-CCPR)

JINTAI Ceramic Cross-Partition Ring is a packing designed basically from the Raschig Ring with the cross-partitions inside to increase the surface and enhance the transfer efficiency. It is usually used extensively for the supporting packing at the bottom of tower.



**JT-CCPR**

### Technical Parameter

Size	OD*ID*H*T (mm)	Weight kg/m <sup>3</sup>	Number pc. / m <sup>3</sup>	Surface m <sup>2</sup> / m <sup>3</sup>
2"(50mm)	50*40*50*5	600	6400	145
3"(80mm)	80*64*80*8	820	1950	120
4"(100mm)	100*80*100*10	850	1000	110
5"(120mm)	120*96*120*12	860	370	75
6"(150mm)	150*120*150*15	980	295	60

**Geometric Properties for JT-CCPR**

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## JINTAI Ceramic Cascade Ring (JT-CCR)

JINTAI Ceramic Cascade Ring is a packing media designed to give enhanced capacity, increased efficiency and mechanical strength over the older style Pall ring packing. The height/diameter ratio of the packing is 0.5 which is only half that of the known Pall Ring.



JT-CCR

### Technical Parameter

Size	OD*H*T (mm)	Weight kg/m <sup>3</sup>	Number pc. / m <sup>3</sup>	Surface m <sup>2</sup> / m <sup>3</sup>	Free Volume (%)
1"(25mm)	25*20*3	624	74000	250	75
2"(50mm)	50*30*5	600	8980	150	78
3"(76mm)	76*45*8	580	2800	108	86

Geometric Properties for JT-CCR

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