



Carbon Raschig Ring

Introduction

Carbon Raschig Rings are highly durable, thermally stable, and chemically resistant random packing elements widely used in mass transfer applications such as distillation, absorption, scrubbing, and stripping. Manufactured from high-purity carbon, these rings provide excellent resistance to acidic and basic environments, making them ideal for use in the chemical, petrochemical, and gas treatment industries.

Key Advantages

- Superior chemical resistance to acids and alkalis
- Thermal stability up to 1500°C in inert atmospheres
- High mechanical strength ($>500 \text{ kg/cm}^2$)
- Low ash content (1–5%)
- Stable structure with minimal water absorption ($\leq 3\%$)
- High specific surface area with low pressure drop



Technical Specification

Nominal Size ¹ (mm)	Approx. Pieces per m ³	Bulk Density (kg/m ³)	Specific Surface Area ² (m ² /m ³)*	Void (%)
13 × 13 × 2.5	≈400,000	≈640	≈409	≈57
19 × 19 × 3	≈130,000	≈550	≈287	≈62
22 × 22 × 3	≈72,000	≈425	≈215	≈72
25 × 25 × 3	≈58,000	≈495	≈228	≈67
25 × 25 × 4.5	≈50,500	≈549	≈193	≈63
32 × 32 × 5	≈25,000	≈510	≈157	≈66
38 × 38 × 6	≈15,570	≈530	≈135	≈64
50 × 50 × 7	≈6,750	≈480	≈104	≈68

¹ Nominal Size format: Outer Diameter × Height × Wall Thickness (mm).

² Specific Surface Area is calculated theoretically, including outer, inner, and end surfaces. Experimental values may be slightly lower due to packing inefficiencies.





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Application

- Acid gas scrubbers
- Chlorine drying towers
- Solvent recovery systems
- Fume treatment units
- Alkali absorption columns
- High-temperature distillation and absorption columns

Physical & Chemical Properties

- **Real Density:** 1500 – 1600 Kg/m³
- **Water Absorption:** ≤ 3%
- **Carbon Content:** > 95%
- **Ash Content:** 1 – 5%
- **Max Temperature Resistance:** 1500°C in inert atmospheres (oxidation occurs at lower temperatures in oxygen-rich environments)
- **Crushing Strength:** > 500 kg/cm²
- **Chemical Resistance:**
 - <1 wt.% weight loss in H₂SO₄, HF, H₃PO₄, HCl
 - No change in hardness in 10% NaOH @ 80°C after 72 hrs.
 - Suitable for use in up to 40% NaOH/KOH and H₂S vapor environments

