

J-RING APPARATUS FOR SELF-COMPACTING CONCRETE

Passing Ability / Flow Test — 300 mm Ring, 16 × 16 mm Bars



A laboratory testing accessory used to evaluate the passing ability and flow characteristics of fresh self-compacting concrete (SCC) under simulated reinforcement obstruction. The apparatus consists of a rigid circular steel ring fitted with 16 evenly spaced vertical steel bars representing reinforcement obstacles. Used together with a standard slump cone, it allows the operator to compare SCC flow under unrestricted and obstructed conditions and assess potential blocking during flow. Suitable for laboratory testing, mix development, research and quality-control applications.

• TECHNICAL SPECIFICATIONS

Product Name	J-Ring Apparatus for SCC Test	Application	Passing Ability / Flow Test of SCC
Test Type	J-Ring / Slump-Flow Test	Material	Mild Steel (MS)
Optional Material	Stainless Steel (SS)	Ring Type	Circular Rigid Ring
Ring Internal Diameter	300 mm	Ring Height (Approx.)	100 mm
Vertical Bars	Steel	Bar Diameter	16 mm
Number of Bars	16 Nos.	Bar Arrangement	Evenly Spaced Around Ring
Joints	Welded	Surface Finish	Powder Coated / Anti-Rust Painted
Base Plate	Optional	Operation	Manual
Use	Laboratory / Quality Control	Test Material	Self-Compacting Concrete
Compatibility	Suitable for Use with Slump-Flow Test Equipment		

• MAIN COMPONENTS

- **Circular J-Ring:** 300 mm internal opening, approx. 100 mm high, rigid steel construction; provides structural support for the vertical bars.
- **Vertical Reinforcement-Simulation Bars:** 16 bars, 16 mm diameter, uniformly distributed around the ring and rigidly welded to it; represent reinforcement obstacles.
- **Base Plate (Optional):** May be supplied where additional stability is required — helps maintain ring position, reduce movement during testing and improve repeatability.

• TEST PRINCIPLE

SCC → Slump Cone → J-Ring → Cone Lifted → Concrete Flows Through Bars → Measure Flow

- The J-ring is placed concentrically around the slump cone. After filling, the cone is lifted vertically without disturbing the ring, and concrete flows radially outward through the spaces between the 16 vertical bars.
- Recorded parameters typically include slump flow, J-ring flow, and the flow difference between unrestricted and obstructed spread — together with visual observation of blocking, uneven spread or segregation.

• MATERIAL OPTIONS

- **Mild Steel (MS):** Standard — robust, economical, easy to fabricate, good mechanical strength, powder-coating compatible.
- **Stainless Steel (SS):** Optional — enhanced corrosion resistance and reduced maintenance; grade (e.g. SS 304 / SS 316) to be stated on the purchase specification.

• SCOPE OF SUPPLY

- **Standard J-Ring:** J-ring assembly with 16×16 mm vertical bars, powder-coated MS construction.
- **Complete J-Ring Testing Set:** J-ring assembly, slump cone, base plate and supporting/handling accessories — exact scope to be specified in the purchase order.

Note: Suitable for J-ring and slump-flow testing of self-compacting concrete in accordance with the applicable standard specification. Ring dimensions, number/diameter of bars and spacing should be verified against the latest edition of the specified standard before claiming full compliance.
