Atmospheric Pressure Rotating Cage System

Laboratory Evaluation & Qualification of Corrosion Inhibitors Under Simulated Flow Conditions

As an authorized Metal Samples distributor, Imotron supplies the Atmospheric Pressure Rotating Cage System for studying the performance of corrosion inhibitors in the laboratory. Designed for oil and gas production pipelines, transmission lines, refineries, and chemical/petrochemical plants, the system simulates aggressive field flow conditions that cause localized pitting corrosion—enabling reliable inhibitor qualification and alloy selection using flat replicate coupons.

> **Applicable ASTM Standards:** Conforms to **ASTM G170** (Standard Guide for Evaluating and Qualifying Oilfield and Refinery Corrosion Inhibitors in the Laboratory), **ASTM G184** (Standard Practice for Evaluating and Qualifying Oilfield and Refinery Corrosion Inhibitors Using Rotating Cage), and **ASTM G202** (Standard Test Method for Using Atmospheric Pressure Rotating Cage).

1. Technical Specifications & System Data

The Atmospheric Pressure Rotating Cage System accommodates eight flat corrosion coupons simultaneously in a chemically resistant test chamber with precise rotational speed control.

Parameter	Specification & System Details
Measurement Technique	Mass Loss (gravimetric general corrosion rate and localized pitting evaluation).
Max. Operating Temperature	Up to 70 °C (158 °F).
Rotational Speed	Up to 1,000 rpm.
Corrosion Coupons	Eight (8) flat coupons per run: 75 mm (L) × 19 mm (W) × 3 mm (T); exposed surface area of 34.14 cm² with 150-grit surface finish.
Solution Volume Ratio	Minimum solution volume (cm³) to metal surface area (cm²) ratio: ≥ 14 cm.
Electrical Power	1Ø, 100–120 VAC input, 1/8 HP motor, 0.8 Amps.
Dimensions (L × W × H)	**Instrument:** 11" × 8.5" × 26-1/8" (66.4 × 21.6 × 28 cm) **Control Unit:** 9" × 7" × 5" (22.8 × 17.8 × 12.7 cm)
Wetted Materials	PTFE, Polycarbonate, 316L Stainless Steel, Rubber (Seal).
Non-Wetted Materials	Aluminum.

2. Ordering Information

The system is supplied as a complete laboratory package ready for immediate testing, with replacement coupon sets available in standard and custom alloys.

Part Number	Description & Scope of Supply
TF4500	**Atmospheric Pressure Rotating Cage Assembly:** Complete system including test chamber, speed controller, and one (1) set of eight (8) corrosion coupons.
CO97C3777104300	**Replacement Corrosion Coupon Set:** Set of eight (8) flat rotating cage coupons (75 × 19 × 3 mm, 150-grit finish).

Equip Your Laboratory for ASTM G170 / G184 / G202 Inhibitor Testing

Contact Imotron Instruments for technical specifications, custom alloy coupon sets, and laboratory corrosion testing solutions.