

# STINGER II

Portable CMM technology can be yours for a low price! But make no mistake - this arm features powerful patented technology from the innovators in portable CMMs.

With STINGER II, you don't need expensive, cumbersome or immobile equipment ... you bring the STINGER II to the part or fixture and begin inspection quickly and easily.

## STINGER II™ Configuration

Includes STINGER II™ portable CMM; ZERO-G™ Counterbalance; 15 mm ball, 6 mm ruby tip, and point tip probes; WinRDS™ and HighRES™ software; NIST-traceable certified length standard; one-year warranty, and carrying case.



The **NEW STINGER II™** portable CMM offers a cost-effective solution for inspection, measuring and reverse engineering challenges. The STINGER II™ includes these powerful features:

**Intelligent quick-change probes** can be changed on-the-fly without tools or the need to re-calibrate. The system automatically recognizes and compensates for the type of probe installed. This saves a significant amount of time during the inspection process.

**Removable ZERO-G™ counterbalance** offsets the weight of the arm and allows for one-handed operation.

**Carbon graphite composite arms** that are stronger than steel and dimensionally stable regardless of temperature. ROMER CimCore offers a lifetime warranty on the carbon graphite arm tube.

**A patent-pending Ball-Track™ soft stop design enables** 540 degrees rotation from the principal axis and prevents arm damage common with conventional hard stops.

**Ultra-portable design**, weighing 3.6 to 4.5 kg (8 to 10 lbs.) allows the arm to be moved easily throughout a job site.

**Field calibration** - unlike competitor products, ROMER arms provide field re-certification with our NIST-traceable calibrated length standard.

**HighRES™ reverse engineering software** is provided free with each arm, allowing realtime, seamless input from the arm to one of five CAD programs (current versions): SolidWorks, AutoCAD, Mechanical Desktop/Inventor, Mastercam or CADKEY.

## Options

- **Computer:** laptop or desktop.
- **PowerINSPECT™:** our premier inspection and reverse-engineering software, features CAD-to-part comparison, GD&T and more than 10 optional CAD translators.
- **PowerINSPECT Lite™:** ideal for those needing basic measurement functions without the advanced CAD inspection features of PowerINSPECT.
- **Hardware options:** magnetic base, numerous additional probes, and portable stands are available.



**ROMER**  
**cimcore**  
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# STINGER II™ Specifications

Measuring Envelope	1.8 m (6 ft.)	2.4 m (8 ft.)	3.0 m (10 ft.)	3.6 m (12 ft.)	4.6 m (15 ft.)
Measuring Volume	3 m <sup>3</sup> 113 ft. <sup>3</sup>	7 m <sup>3</sup> 268 ft. <sup>3</sup>	14 m <sup>3</sup> 523 ft. <sup>3</sup>	24 m <sup>3</sup> 904 ft. <sup>3</sup>	51 m <sup>3</sup> 1767 ft. <sup>3</sup>
Single Point Sphere Test <sup>(A)</sup>	± .015 mm (.0006 in.)	± .030 mm (.0011 in.)	± .075 mm (.0029 in.)	± .100 mm (.0039 in.)	± .185 mm (.0073 in.)
Point Repeatability Test <sup>(B)</sup>	± .040 mm (.0015 in.)	± .050 mm (.0019 in.)	± .080 mm (.0031 in.)	± .110 mm (.0043 in.)	± .200 mm (.0079 in.)
Volumetric Length Accuracy <sup>(C)</sup>	± .055 mm (.0021 in.)	± .070 mm (.0027 in.)	± .110 mm (.0043 in.)	± .155 mm (.0061 in.)	± .285 mm (.0112 in.)
Arm Weight	3.6 kg (8 lbs.)	4.1 kg (9 lbs.)	4.3 kg (9.5 lbs.)	4.5 kg (10 lbs.)	5.4 kg (12 lbs.)

## Test Methods, all results 2 Sigma confidence level

### A. Single Point Sphere Test

The arm's probe scans hundreds of data points averaging them to resolve the center of a sphere from multiple approach directions. Machine data is analyzed as a range of deviations of the resultant sphere center point locations. This test is not recommended for determining machine repeatability. Averaging and collection techniques do not reflect true repeatability. We do not recommend this data for evaluating the performance of a portable CMM.

### B. Point Repeatability Test (also known as the Single Point Articulation Test, S.P.A.T.)

The probe is placed within a trihedral seat or conical socket, and individual points are measured from multiple approach angles with maximum articulation of all of the principal joints. Each individual point measurement is analyzed as a range of deviations about the average value for the point locations. The Point Repeatability Test is intended to assess the arm's ability to provide similar values of a point coordinate, when the arm is articulated through the maximum possible range of motion for that single point.

### C. Volumetric Length Accuracy Test (Volumetric Performance Test)

Volumetric length accuracy is determined by using certified length standards (included with all our arms) that are measured at various locations and orientations throughout the measuring volume of the arm. This test most accurately represents the reasonable expectations for machine performance in practical measuring applications. The Volumetric Length Accuracy Test is the most appropriate test for determining machine accuracy and repeatability since it involves measuring a certified length standard many times in several locations and orientations and compares the resultant measurements to the actual length.

**Note:** The ASME Standards committee has established a working group (B89.4.22) to develop a standard for Methods of Performance and Evaluation of Articulated Arm Coordinate Measuring Machines. The standard has not been finalized, approved or released to date. We endorse the Single Point Articulation Test and the Volumetric Performance Test since they are integral to the proposed B89 standard.

## Other Specifications

**Axes Configuration:** 6 axes, 2-2-2

**Operating Range:** 0°C to 46°C

**Humidity:** 95% Non-Condensing

**Protection:** Provides protection to IP 64 standards

**Permissible angular acceleration:** Greater than 105 rad/s<sup>2</sup>. 93/68/EEC

**Vibration:** (55 to 2000Hz) <100m/s<sup>2</sup> (IEC 68-2-6)

**Shock and impact:** (6ms) <1000m/s<sup>2</sup> (IEC 68-2-27)

**Power Supply:** Universal worldwide voltage 100-240 VAC, 50/60 Hz 0.8A

**Certification:** CE Compliant

**EMC, Electromagnetic Compatibility Directive** 89/336/EEC, 92/31/EEC, 93/68/EEC

EN 61326-1 (1997) + A1(1998)

EN 55011 (1994), Group 1, Class "A"

EC 1000-4-2,3,4,5,6 (1995), IEC 1000-4-11 (1995)

EN61000-3-2, EN61000-3-3

**Low Voltage Directive** 73/23/EEC, 93/68/EEC

EN 61010-1:1993 (includes A1) + A2:1995



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