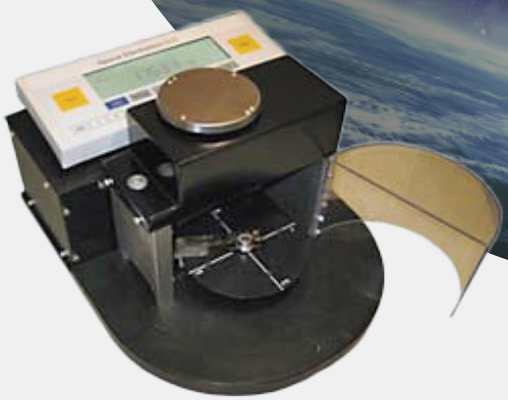
RAPTOR SCIENTIFIC

SE199 Measurement

Global Provider of Test & Measurement Solutions



Micro-Moment Center of Gravity Instrument

This instrument is designed to measure weight and prcisely locate the CG of test objects weighing up to 100 gm along a single axis. It is particularly well suited for locating the CG of gyro rotors, small turbine buckets, and other small objects for balancing purposes.

With alternate fixturing, the axial position of the CG of small caliber bullets and other small projectives can also be accurately determined. This instrument uses a microbalance moment transducer concept developed by Space Electronics to achieve a sensitivity of .06 gm-mm. A dual axis version of this instrument, utilizing a rotary table, is also available.

Design Features

The SE199 instrument has a single operation to determine both weight and center of gravity. There is minimal setup and measurement time, and a compter loaded with our software to automate calculation and reporting. We offer optional fixtures for locating various shaped parts at an additional cost.

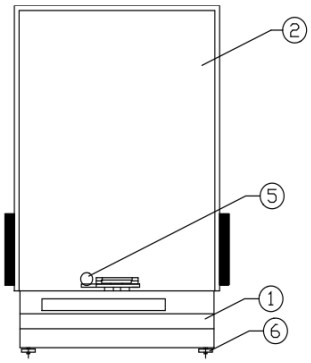
Unsurpassed Accuracy

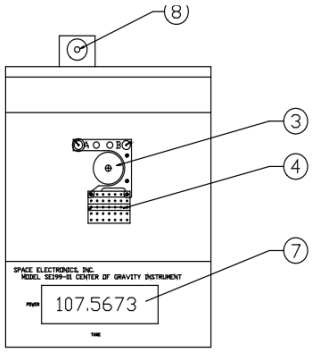
SE199-01 Grid plate interface version - design to measure rectangular objects. Part locating pins can be inserted in the grid at a variety of known reference locations.

SE199-02 Vee block interface version - designed to measure axial CG location of cylindrical objects such as small bullets or gyro rotors. The 120 degree vee is 0.95” wide x 2” long. There is an adjustable end stop. A second vee at right angles allows measurement of radial CG.

General Specifications

Minimum Payload Weight	0.002 lb
Maximum Payload Weight	0.22 lb (including fixture)
CG Location Accuracy	0.1% + 0.06 g-mm
Full Scale Moment	0.04 lb-in
Moment Sensitivity	1.7×10^{-5} lb-in
Weight Sensitivity	1.1×10^{-5} lb





1. SE199V Base
2. All glass dust/draft shielf
3. Pan for weight measurement
4. Vee block fixture
5. Adjustable counterweight
6. Adjustable leveling feet
7. Weight/moment display
8. Bubble level

RAPTOR SCIENTIFIC | Raptor Scientific - Physical Properties
81 Fuller Way, Berlin, CT 06037

Manufactured in the USA
CAGE Code: 52892

Phone: (860) 829-0001
E-mail: sales@raptor-scientific.com