

CAVITY-RINGDOWN (CRD) MOUNTS

PROVEN • EASY TO USE • INDUSTRY STANDARD



LGR offers a selection of mirror mounts for use in cavity-ringdown spectroscopy. These mirror mounts are designed to attach to standard vacuum hardware via

a 2.75" Conflat flange. The CRD mirror is held within the mount against a large-diameter o-ring, which permits angular adjustment of the mirror while maintaining a gas seal. A brass backing ring fits onto the back surface of the mirror, and provides a contact point for the ball tips of the three alignment screws (80 TPI). The mounts are available in two versions—one accepts 0.8"- (2-cm-) diameter mirrors, and the other accepts 1.0"- (2.54-cm-) diameter mirrors. Quartz-coated versions are also available for use with our quartz-coated sample cells (see lgrinc.com).

Optional piezo-driven micrometers enable CW CRD operation.

Ordering Information

Price: \$940 per set of two mounts

0.8" Standard Mirror Mounts

Model Number: 902-0008

1" Standard Mirror Mounts

Model Number: 902-0010

Quartz-Coated Mirror Mounts

Price: \$1080 per set of two mounts

0.8" Quartz-Coated Mirror Mounts

Model Number: 902-9008

1" Quartz-Coated Mirror Mounts

Model Number: 902-9010

Options

Piezo-Driven Micrometers

Model Number: 902-0001

Price: Add \$650 per piezo actuator

(up to three per mount)

CRD SOFTWARE

FAST • ACCURATE • INTUITIVE • FLEXIBLE

The LGR CRD software package is designed to provide basic cavity-ringdown acquisition and data processing using a Windows®-based computer and a Gage Applied Technologies (gage-applied.com) high-speed data-acquisition card (Gage card). The exponential-voltage ringdowns are captured with the Gage-card high-speed

digitizer and processed using LGR's proprietary pre-processor and (least-squares) fitting algorithms. This software is provided as a stand-alone executable, and also as a LabVIEW™ VI. For those users who desire "out-of-the-box" functionality or do not need any customization, the executable LGR CRD program provides a simple interface for aligning, evaluating, and data logging a CRD setup. By wrapping these algorithms in a LabVIEW™ shell, LGR has also provided a flexible, modifiable and efficient starting point for users who wish to customize a cavity-ringdown data-acquisition system to their specific needs.

Ordering Information

Price: \$1,000

CRD Software

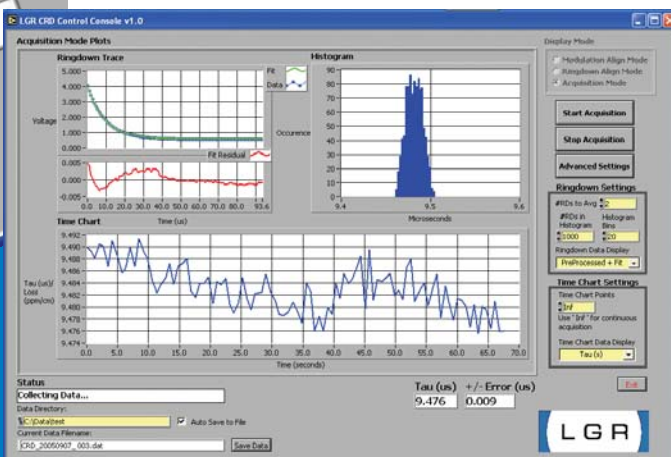
Part Number: 904-0000

Software with Gage Card

Price: \$4,500

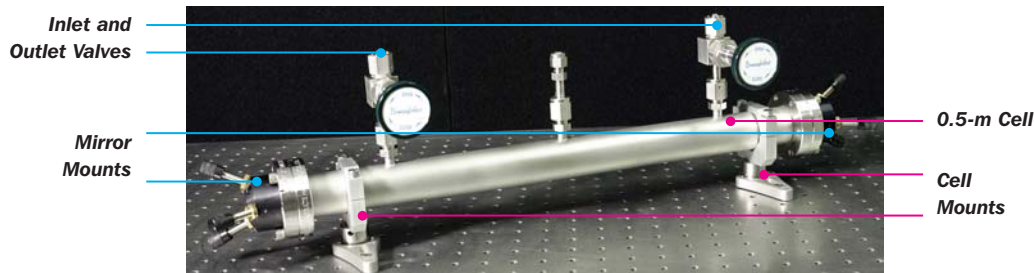
CRD Software with Gage CompuScope Board

Part Number: 904-0001



CRD COMPONENTS

TESTED • RUGGED • RELIABLE



Ringdown Sample Cells

LGR offers complete sample-cell assemblies for customers interested in CRD measurements of flowing and static gases. Our standard sample cell (shown above) is a 0.5-m stainless cell, designed to mate with optional LGR mirror mounts. The sample cell has inlet and outlet ports with regulating shut-off valves and fittings at either end, and a central port with fittings to allow attachment of a pressure gauge. The sample cell also includes cell clamps, pedestals, and holding forks to attach the cell to a laboratory optical table. We also offer a quartz coated version of our standard 0.5-m sample cell for users measuring harsh or corrosive gases. In this version, the wetted stainless surfaces of the cell have been coated with a thin layer of quartz to produce a chemically non-reactive surface. (Quartz-coated mirror mounts are also available for use with our quartz-coated sample cells—see lgrinc.com).

Ordering Information

Price: \$2,150

0.5-m Sample Cell
Model Number: 903-0001

Quartz-Coated Sample Cell

Price: \$2,750

0.5-m Quartz-Coated Sample Cell
Model Number: 903-1001

Custom Sample Cells

LGR can supply custom sample cells in a variety of lengths and configurations, including high-pressure sample cells and quartz-walled cells. Please contact us at sales@lgrinc.com to discuss your requirements.

Cleaning and Inspection Blocks



New Teflon® cleaning and inspection blocks allow safe inspection of sensitive dual-sided coated optics. Each block has a recessed surface large enough to fit a 2-inch diameter mirror and hold it while “drag-wipe” cleaning the surface.

Ordering Information

Price: \$50

Cleaning and Inspection Block
Model Number: 902-0002



Two-inch Adapter Mounts

These adapter mounts allow you to load 0.8"- or 1"-diameter mirrors into a 2"-diameter ring that slips into any standard 2"-optic mount for use in tabletop experiments.

These 2"-optic mounts provide excellent angle adjustment and stability. They are ideal for lab tests and product R&D.

The adapter mounts come in two designs (shown below left). One is a plain mount that holds the mirror HR face slightly recessed to protect the surface. The second design includes a centered adjustable iris diaphragm that aids in alignment as well as protecting the mirror HR face when not in use. Both of these can be ordered to accept either a 0.8"-diameter mirror or a 1"-diameter mirror.

Ordering Information

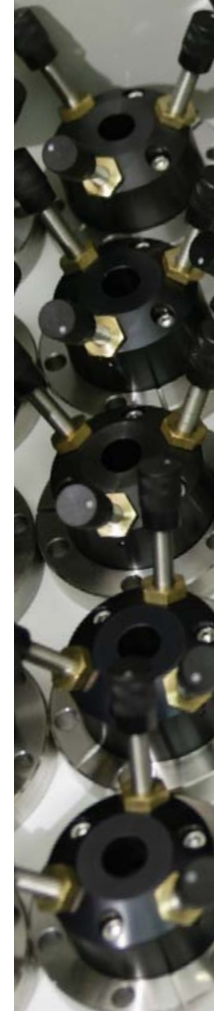
Price: \$150

0.8"-2.0" Standard Adapter Mount
Model Number: 902-0003-0008
1.0"-2.0" Standard Adapter Mount
Model Number: 902-0003-0010

Adapter Mount With Iris

Price: \$250

0.8"-2.0" Adapter Mount with Iris
Model Number: 902-0004-0008
1.0"-2.0" Adapter Mount with Iris
Model Number: 902-0004-0010



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