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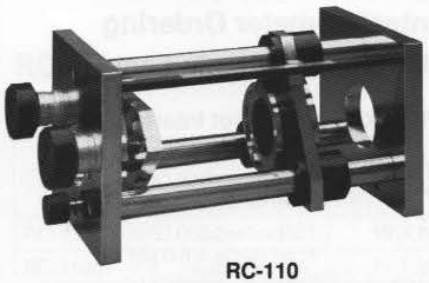
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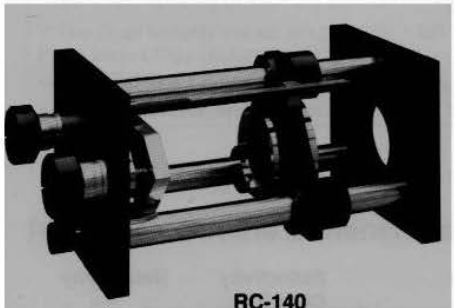
Models and Applications

The **RC-110** features large clear aperture, and continuously variable cavity spacing. The spacing available with the RC-110 is 0.1 - 150 mm and the maximum aperture is 50.8 mm. The RC-110 is the most stable of the 50.8 mm aperture, large body interferometers and is well suited for high resolution, high contrast spectroscopy and mode analysis applications.



RC-110

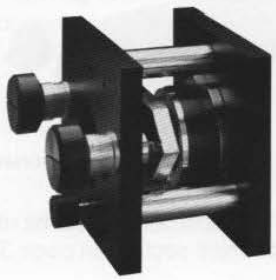
The RC-110 is constructed completely of Super-Invar which is made to Burleigh's own chemical and thermal expansion specifications. This means the end plates, rods, mirror holders, and the alignment micrometers are all Super-Invar. The mass of the instrument and the careful design and construction make it both mechanically and thermally stable.



RC-140

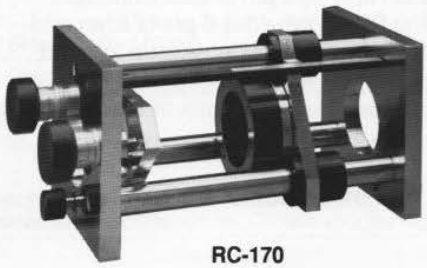
The **RC-140** is a lower cost alternative to the RC-110. The mirror spacing available with the RC-140 is 0.1 - 150 mm and the maximum aperture is 50.8mm. The RC-140 is designed for general spectral analysis.

Every component directly affecting the cavity length of the RC-140 is constructed of Super-Invar. The rods, mirror holders, and alignment micrometers are all Super-Invar. The end plates, however, are constructed of aluminum. These end plates are used only for external support and do not contribute directly to thermal drift or misalignment of the cavity.



RC-150

The **RC-150** is a shorter version of the RC-140 Fabry Perot with 0.1 - 10 mm continuously adjustable mirror spacing. Fixed Super-Invar spacers are available to set the minimum cavity spacing between 10 and 50 mm, while maintaining the 10 mm continuous adjustment. The maximum mirror diameter is 50.8 mm. The RC-150 is appropriate for standard mode analysis of narrow, multimode or broad bandwidth laser sources. It does not accept the RC-22 multipass option.



RC-170

The **RC-170** offers a clear aperture of 70 mm, the largest available with any Burleigh Fabry Perot. The cavity spacing on the RC-170 is continuously variable from 0.1 - 110 mm. The RC-170 is well suited for low light level scattering experiments such as Brillouin Spectroscopy and atmospheric studies, for which the light gathering abilities of a large aperture are of a great advantage.

The RC-170 is constructed in the same manner as the RC-110 with all Super-Invar components in the interferometer cavity and Super-Invar end plates for increased mass and stability. The rods, mirror mounts, and the micrometer screws are all Super-Invar.

Options and Accessories

Fabry Perot mirrors are required but are specified separately from the interferometer because the special demands of clear aperture, wavelength range, reflectivity, and flatness vary for each application. The **RC 600 Series Mirrors** are fused silica substrates and are supplied with apertures of 25.4 mm, 38.1 mm, 50.8 mm, and 70 mm with mirror flatness of $\lambda/50$, $\lambda/100$, and $\lambda/200$. The **RC 800 Series Mirrors** are manufactured of Zinc Selenide and are provided in 25.4 mm, 38.1 mm, and 50.8 mm diameters with mirror flatness of $\lambda/50$, $\lambda/100$, and $\lambda/200$ rated at a wavelength of 10.65 μm. For complete details on individual models and coating ranges, please refer to the ordering information later in this section.

The **RC-22** and **RC-27 Multipass Options** allow the user to fold the input beam for a total of either three or five passes through the cavity with two corner cube reflectors. The corner cube assemblies mount with holes tapped in the end plates of the RC-110, RC-140, and RC-170. The RC-22 Multipass Option is intended for use with the RC-110 or RC-140 with 50.8 mm diameter mirrors. The RC-27 Multipass Option is used with the RC-170 and 70 mm diameter mirrors. A typical three pass system will yield a contrast of 10^8, while a five pass system will yield a contrast of 10^{11}.

The **RC-24** and **RC-25 Mounting Bases** offer the most stable method for holding the RC Series Interferometers. The interferometer feet rest on three points separated by a Super-Invar support. Also, there are θ and ϕ angular adjustments on the base to assist in the alignment of the Fabry Perot to the incident laser beam. The RC-24 can be used with the RC-110, RC-140, and RC-170; the RC-25 is designed for use with the RC-150.

The RC-24 mounts in the RC-34, RC-37, RC-75, and RC-77 thermal enclosures. The RC-25 can be used to mount the RC-150 in the RC-35 Isothermal Box.

The **RC-34/RC-35** and **RC-37 Isothermal Box** is constructed of solid wood with a ½ inch layer of polyurethane lining the inside of the box. The RC-34

OPTICAL PRODUCTS

RC SERIES FABRY-PEROT INTERFEROMETER SYSTEMS

RC System 11	Complete system consisting of RC-110, RC-670, RC-75, RC-24, and RC-44	$ 17,490
RC System 14	Complete system consisting of RC-140, RC-660, RC-24, RC-34, and RC-44	$ 13,975
RC System 15	Complete system consisting of RC-150, RC-640, RC-25 and RC-44	$ 10,790

RC SERIES FABRY-PEROT INTERFEROMETERS

RC-110	0 to 150 mm cavity, 50 mm aperture	$ 8,490
RC-140	0 to 150 mm cavity, 50 mm aperture	$ 6,490
RC-150	0 to 10 mm cavity, 50 mm aperture	$ 5,190
RC-170	0 to 110 mm cavity, 70 mm aperture	$ 10,990
RC-110IR	0 to 150 mm cavity, 50 mm aperture	$ 9,090
RC-140IR	0 to 150 mm cavity, 50 mm aperture	$ 7,090
RC-150IR	0 to 10 mm cavity, 50 mm aperture	$ 5,790
RC-170IR	0 to 110 mm cavity, 70 mm aperture	$ 11,590

RC SERIES FABRY-PEROT MIRROR SETS

RC-620	Fused Silica mirror set, 25 mm dia., lambda/50	$ 2,190
RC-640	Fused Silica mirror set, 38 mm dia., lambda/100	$ 2,790
RC-650	Fused Silica mirror set, 38 mm dia., lambda/200	$ 3,490
RC-660	Fused Silica mirror set, 50 mm dia., lambda/100	$ 3,390
RC-670	Fused Silica mirror set, 50 mm dia., lambda/200	$ 4,090
RC-680	Fused Silica mirror set, 70 mm dia., lambda/100	$ 7,590
RC-690	Fused Silica mirror set, 70 mm dia., lambda/200	$ 8,290
RC-830	ZnSe mirror set, 25 mm dia., lambda/50	$ 4,490
RC-840	ZnSe mirror set, 38 mm dia., lambda/100	$ 6,190
RC-870	ZnSe mirror set, 50 mm dia., lambda/200	$ 7,890

RC SERIES FABRY-PEROT ACCESSORIES

RC-22	Multipass for 50 mm diameter, 3/5 pass (Note 10)	$ 3,390
RC-27	Multipass for 70 mm diameter, 3/5 pass (Note 10)	$ 4,950
RC-24	Kinematic mounting base(RC-110,RC-140,RC-170)	$ 990
RC-25	Kinematic mounting base (RC-150)	$ 690
RC-34	Isothermal box (RC-110, RC-140)(Note 7)	$ 1,150
RC-35	Isothermal box (RC-150)(Note 7)	$ 950
RC-37	Isothermal box (RC-170)(Note 7)	$ 1,350

FABRY-PEROT NOTES:

1. Fabry-Perot Interferometers do not include mirror set.

2. Fabry-Perot Interferometers designated IR feature larger PZT extension (6 microns).

3. Fabry-Perot mirrors include standard coating. Please refer to the coating table for selection.

4. Fused Silica substrates are Spectrosil B (or equivalent).

5. Fused Silica mirrors are specified for flatness at 633 nm over 80% of mirror diameter.

6. ZnSe mirrors are specified for flatness at 10.6 microns. over 80% of mirror diameter.

7. RC-34, RC-35, RC-37, RC-75 and RC-77 thermal boxes are AR coated from 450 to 650 nm. For AR coating from 700 to 1000 nm, denote as AR1. For AR coating from 1000 to 1600 nm, denote as AR2.

8. RC-41 and RC-57 collimators are AR coated from 450 to 650 nm. For AR coating from 700 to 1000 nm, denote as AR1. For AR coating from 1000 to 1600 nm, denote as AR2.

9. The RC-41 and RC-57 collimators include 50, 100, 200 and 500 micron pinholes with an X, Y stage, and mounting bracket.

10. Recommended mirror reflectivities for multipass: 3 pass, R = 93%; 5 pass, R = 88%; both, R = 90%.

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