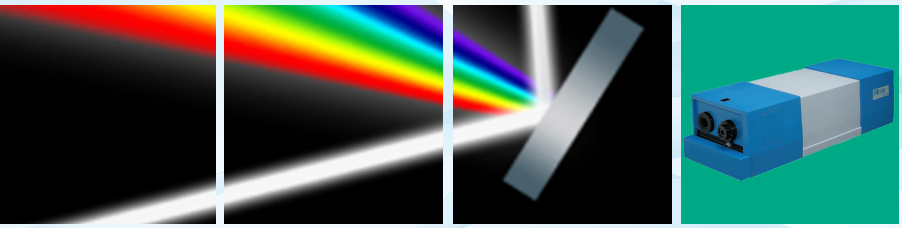
HORIBA Scientific

What makes the FHR Series spectrometers better

ELEMENTAL ANALYSIS
FLUORESCENCE
GRATINGS & OEM SPECTROMETERS
OPTICAL COMPONENTS
CUSTOM SOLUTIONS
PARTICLE CHARACTERIZATION
RAMAN / AFM-RAMAN / TERS
SPECTROSCOPIC ELLIPSOMETRY
SPR IMAGING



High Resolution Monochromators

Features and Benefits

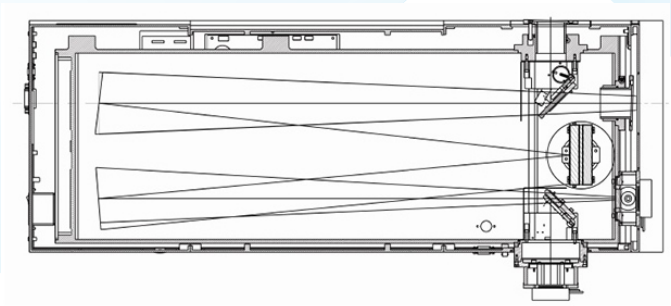
- **High speed** – Reduced experiment times
- **Robust cast body construction** – Provides optimal performance without wavelength shifts and signal loss
- **Specially designed, fully automated direct grating drive** – Exceptional repeatability and accuracy without compromising speed
- **Automated slits** – Full software control of experiments
- **Dual grating turret capability** – Convenience of two gratings
- **Swing away mirror option** – Allows for lateral port selection
- **Integrates with full line of HORIBA Scientific accessories** – For easy configuration of spectroscopy systems
- **Compatible with HORIBA Scientific SynerJY® Software, LabVIEW VIs available** – Simple and complete instrument control with full analysis capabilities

Single Entrance and One or Two Exits

The FHR1000 is an automated Czerny-Turner spectrometer, featuring a 1 m focal length. Especially designed for researchers who require high accuracy with immediate results, the versatility of the FHR series allows for utilization over a wide spectral range, extending from the UV range (140 nm) to the IR (depending on the grating and detector used).

The FHR has been designed to minimize any stray light reaching the focal plane. The optical cavity includes blackened baffles and masks to trap unwanted light.

In addition, the optical design of the FHR is free from re-diffracted light, which is a source of stray light that involves multiple reflections off the optical components themselves and is therefore very difficult to mask.



FHR 1000

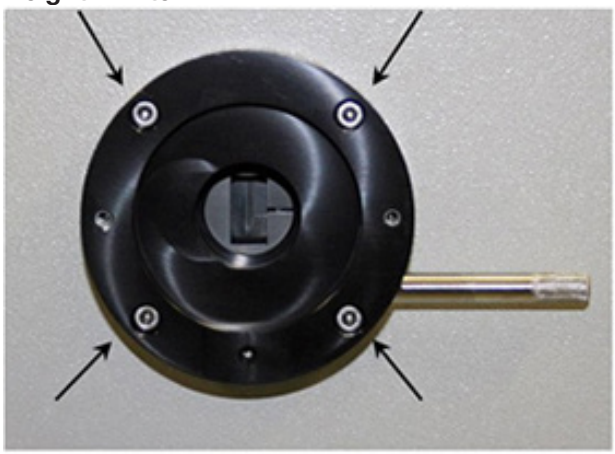
Slits

The FHR Series has automated motorized entrance and exit slits. In the standard version, each slit may be set between 0–2 mm, and there are optional slits which may be set between 0–2 mm. The slits are internal to the monochromator. A manually adjustable height limiter allows the user to quickly shut or open the light path, and also set to a 1 mm height.

You can add accessories to the FHR Series spectrometers to obtain optimum results for a variety of applications. To attach the accessories to the FHR, use the two tapped holes on the body of the height limiter on the outside of the monochromator (shown below). These holes are also useful for connecting the FHR with your experiments and equipment. When connecting with the FHR, it is important

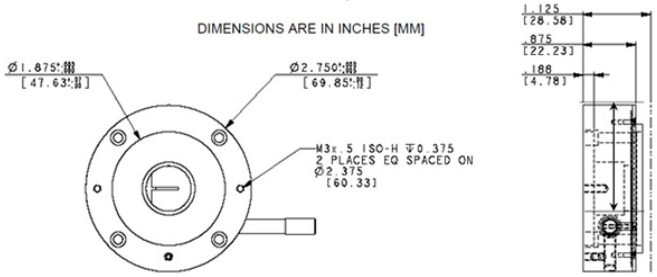
to know the distance from the mounting face of the slit's body to the slits.

Height Limiter



FHR before removal of four mounting screws

FHR after removal of four mounting screws



Note that some custom accessories require removal of the height-limiter assembly in order to be attached to the FHR chassis. To remove the height-limiter assembly, remove the four screws holding the assembly onto the chassis.

Spectroscopy Cameras

HORIBA Scientific offers a complete line of spectroscopic multi-channel detectors for scientific research. For spectral detection from UV to near-IR, two dimensional CCDs and indium gallium arsenide linear arrays offer a faster acquisition option over single point detectors with very high sensitivity. Coupled with HORIBA's range of aberration corrected, flat field imaging spectrographs, custom spectroscopy packages can be assembled for a variety of applications. To learn more, click here.

Broad Band Light Sources

HORIBA Scientific has an excellent selection of broadband light sources. If you would like to couple the spectrograph/ monochromator to one of these light sources, then we have adapters to physically connect them and create a tunable illuminator. To learn more about our broad band light sources, click here. Incidentally, if you are looking for such a tunable illuminator we have a separate page describing our Tunable PowerArc compact tunable illuminator, and our ultimate Tunable KiloArc™ illuminator.

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