

FHR Spectrometer

The Ultimate Performance Spectrometer

The new FHR 640 and FHR 1000 spectrometers offer a unique combination of drive speed, precision and high resolution, completely revolutionizing the large spectrometer market. The latest modifications in FHR technology are based on over ten years of testing by industrial and analytical systems specialists at HORIBA Jobin Yvon.

Designed for researchers who require high accuracy with immediate results, the versatility of the FHR allows for utilization over a wide spectral range, extending from the UV to the IR. The instrument's cast body design accounts for temperature induced stress and expansion, preventing any significant wavelength shifts or signal loss and allowing for optimal performance.



FHR 1000 Spectrometer

The direct grating drive features a grating speed of greater than 300 nm/second, offering users significantly reduced experiment times. Equipped with a fully automated wavelength drive and automated slits, the FHR is available in multiple monochromator and spectrograph configurations, offering a dual field at the exit for array detectors and compatibility with HORIBA Jobin Yvon's full line of accessories. Superior in design, the FHR is the ideal long focal length spectrometer for performing fast acquisitions with high quality results.

| Features | 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 Jobin Yvon accessories | For easy configuration of spectroscopy systems |
| Compatible with HORIBA Jobin Yvon SynerJY [®] Software, LabVIEW VIs available | Simple and complete instrument control with full analysis capabilities |

Specifications

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|--|---------------------|-------------------|--------------------|
| Model | | FHR 640 | FHR 1000 |
| Focal Length | | 640 mm | 1000 mm |
| Entrance Aperture Ratio (single grating) | | f/5.4 | f/9.0 |
| Grating Size | Single grating | 110 mm x 110 mm | |
| | Dual grating | 80 mm x 110 mm | |
| Scanning Range | | 0 – 1500 nm | |
| Scanning Speed | | > 300 nm/second | |
| Spectral Dispersion | | 1.2 nm/mm | 0.8 nm/mm |
| Spectral Resolution w/ 10 µm slits | | 0.016 nm | 0.010 nm |
| Wavelength Position Accuracy | | ± 0.05 nm | |
| Wavelength Repeatability | | ± 0.015 nm | |
| Slits | Automated, Standard | 0 – 2 mm | |
| | Automated, Option | 0 – 7 mm | |
| Dimensions | Length | 29.13 in (740 mm) | 45.67 in (1160 mm) |
| | Width | 13.78 in (350 mm) | 16.93 in (430 mm) |
| | Height | 13.78 in (350 mm) | 13.78 in (350 mm) |
| Weight | | 143.3 lb (65 kg) | 154.3 lb (70 kg) |

*All specifications with 1200 gr/mm grating.

Specifications subject to change without notice.

Ordering information:

- FHR640-1MS: FHR640 with one single grating, one entrance slit and one exit port.
- FHR640-1MS-2X: FHR640 with one single grating, one entrance slit and two exit ports.
- FHR640-2MS: FHR640 with two gratings in turret, one entrance slit and one exit port.
- FHR640-2MS-2X: FHR640 with two gratings in turret, one entrance slit and two exit ports.
- FHR1000-1MS: FHR1000 with one single grating, one entrance slit and one exit port.
- FHR1000-1MS-2X: FHR1000 with one single grating, one entrance slit and two exit ports.
- FHR1000-2MS: FHR1000 with two gratings in turret, one entrance slit and one exit port.
- FHR1000-2MS-2X: FHR1000 with two gratings in turret, one entrance slit and two exit ports.