

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

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		± 0.03 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.