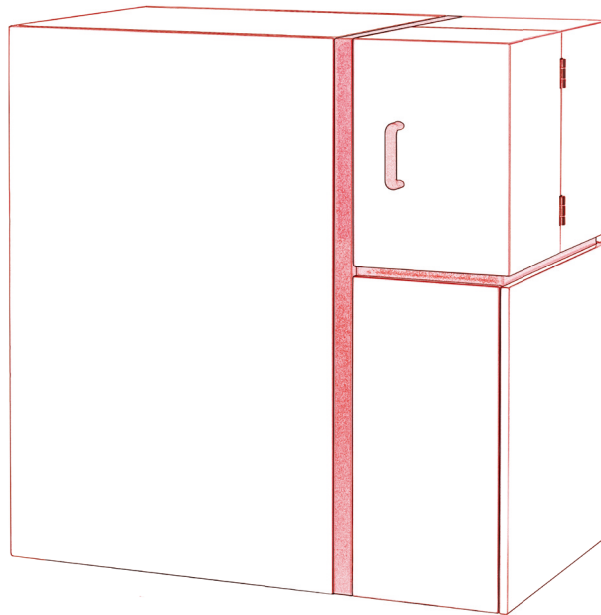


GDA 150 HR



The GDA 150 HR is a robust CCD spectrometer developed for elemental depth profile analysis and bulk analysis in the production sector.

This instrument offers an optimized spectral resolution and sensitivity that is suitable for users who need both precision and flexibility in their applications.

SPECTRUMA developed this high resolution CCD-optics which offers comparable PMT-performance and extends the analytical capabilities of the GDA 150 HR into unparalleled dimension. Due to the unique function of the CCD detector one can add almost an unlimited amount of analytical CCD channels to any given method.

This flexibility permits the fast determination of the composition and thickness of technical coatings.

The GDA 150 HR can analyse coatings in the range of 100 nm to 200 µm, with a relative depth resolution of 5 %. For most matrices the linearity of calibration curves is given. The detection limits at most are 0.1 ppm.

The GDA 150 HR is equipped with a newly developed glow discharge excitation source allowing sputtering diameters of 8 mm to 1 mm. Due to the small sealing ring of only 5 mm in diameter, the analysis of small and geometrically complicated samples is possible.

Optionally the universal sample unit (USU) can be used for the analysis of non-flat or very small samples that would not seal with the normal O-ring.

The GDA 150 HR is suitable for all electrically conductive matrices.

GDA 150 HR

	MODEL	GDA 150 HR
Optics	Polychromator/ Focal length (mm)	400
	PMTs (photomultiplier tubes)	-
	Max. channels	-
	CCD (charge-coupled device)	x
	Wavelength range (nm)	150 - 520
GD Source	Direct current source (DC)	x
	Radio frequency source (RF)	-
	Standard anode diameter : 2.5 mm or 4 mm	x
Vacuum	Vacuum chamber	Rotary vane pump
	Glow discharge lamp	
	Number of vacuum pumps	1
Cooling	Closed sample cooler	-
Options	CCD (400 mm)/ Wavelength range (200 - 800 nm)	-
	CCD- extension	x
	PMT- extension (400 mm) for max. 16 PMTs	-
	Monochromator/ PMT wavelength range (200 - 1200 nm)	-
	External plasma ignition	-
	Universal sample unit (DC)	x
	Universal sample unit (RF)	-
	Universal sample unit for wires	x
	Scroll vacuum pump	x
	Turbomolecular pump	x
	Automatic sampling unit	x
	Transfer chamber	x
	External cooling (type Julabo)	x
	Open sample cooler	x
	Gas switcher for alternative plasma gases 2/ 3 gases	x
	Anode diameter (additional) : 1 mm, 2.5 mm, 4 mm, 8 mm	x
	Molecular spectroscopic database	x
Dimensions	Length/ Width/ Height (mm)	1140/ 650/ 1250
	Weight (kg)	190