

■ **Technical Data**

Alpha Series™

analyzers give fast, accurate alloy grade & chemistry.

For Positive Material Identification (PMI), verification and quality assurance – without radioactivity – Innov-X offers the smallest, fastest and most versatile handheld XRF analyzer available anywhere.

The Innov-X tube-based Alpha Series™ is isotope-free and delivers instant, accurate readings. It features a miniature X-ray tube and high-resolution detector. It is engineered around the HP iPAQ pocket PC.

XRF is a standard lab technique for metals analysis. Now it is available in the field.



22	2
Ti	8
	10
	2
Titanium	
47.867	

24	2
Cr	8
	13
	1
Chromium	
51.9415	

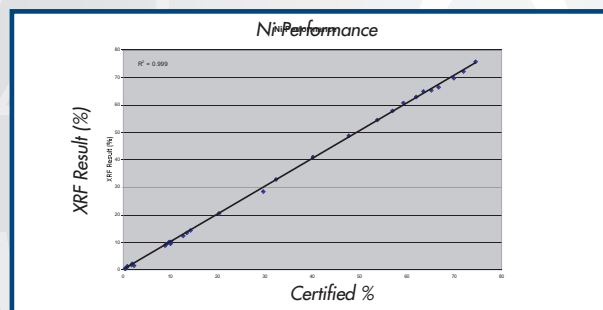
28	2
Ni	8
	16
	2
Nickel	
58.6934	

42	2
M	8
	16
	2
Mo	
35.	



27	2
Co	8
	13
	1
Cobalt	
51.94	

Nickel in Alloys.



Comparison of Alpha Series™ results with certified values for nickel in alloys, 10 sec. measurement.

The lightweight, easy-to-use Alpha Series™ provides rapid grade identification.

Innov-X Alpha Series™ advantages include:

- Measure Cr in carbon steel to 0.03% -- for evaluating flow accelerated corrosion (FAC).
- Designed for tests to 800° F.
- Analyze low alloy, stainless, nickel, titanium, cobalt, copper-based alloys and more.
- Confidently separate challenging alloys such as 304 & 321, P91 & 9 Cr, Ti Grade 7 & CP Ti.
- Exceptional performance on 6061/6063 aluminum alloy separations.



Innov-X Alpha Series™

The alloy analyzer for fast and confident on-the-spot identification.

Now with SmartBeam™ technology, Innov-X combines X-ray tube expertise, multiple beam filtering capability and the HP iPAQ pocket PC. This combination, together with superior ergonomics, results in superb reliability, speed, precision and a lifetime of upgrade potential.

Designed and engineered for alloy analysis anywhere.

With its lightweight pistol grip and extended probe head, Alpha Series™ lets you reach into piping, welds, flanges and other hard-to-access areas.



Sophisticated grade IDs.

Alpha Series™ holds thousands of alloy grades. User may search on common names, UNS numbers, ASME, Mil Specs and more. The entire UNS library is available for search on the PDA. Alternative grade libraries may be imported anytime.

Cutting edge PDA technology.

Alpha Series™ is driven by the HP iPAQ pocket PC. Data entry is instant. Reports are generated on the spot. Upgrades are possible over the lifetime of the analyzer. Bluetooth™ enabled for wireless printing.

Typical Alloy Precision.

	316	HAST C-276	HS-25	4340
	Nom +/-	Nom +/-	Nom +/-	Nom +/-
Cr	16 0.3	15 0.2	20 0.5	0.9 0.03
Co	- -	0.9 0.2	50 0.5	- -
Ni	10 0.3	56 0.5	10 0.3	1.8 0.13
Mo	2 0.04	16 0.25	1.2 0.03	0.25 0.03
W	- -	3.5 0.35	15 0.7	- -

Precision for several common alloys, for 20 second test times. Note test times are 2-3 seconds for rapid sorting applications.



Custom holster lets you take Alpha Series anywhere.



Removable handle with belt-mount battery pack for testing in tight places.

Basic Specifications.

Weight: 2.625 lbs. (base wt.) 3.375 lbs (1.6 kg) with batteries.

Excitation Source: X-ray tube, Ag or W anode, 10-40 kV, 10-50 µA, up to 5 filter positions.

Smart Beam: Delivers industry-leading detection limits on critical elements Cr, V, Ti.

Detector: Si PiN diode detector, < 230 eV FWHM at 5.95 keV Mn K-alpha line. Temperature Range: -10°C to +50°C.

Operation: Trigger or Start/Stop Icon. One-touch trigger or "deadman" trigger option. Optional control from external PC.

Power: Li-ion batteries, rechargeable (charger included). Powers analyzer and iPAQ simultaneously. AC Adapter optional.

Battery life: 8 hours (typical duty cycle) using built-in; optional multiple battery pack.

Number of Elements: Standard package includes 21 elements. Customer may specify 4 additional, or use multiple suites of 25 elements each.

Display Screen: Color, high resolution touchscreen. Variable brightness provides easy viewing in all ambient lighting conditions.

Data Display: Concentrations in %. Spectral display with peak zoom and identification.

Memory, Data storage: 128 Mb standard memory. 20,000 test results with spectra, upgrade to >100,000 with optional 1 Gb flash card.

Processor: Intel 400 MHz StrongArm processor or higher.

Operating System: Microsoft Windows CE (portable system) or Windows (PC-based). Software Modes: Alloy Analytical, Fast ID, Pass/Fail. Optional lead paint, soil, others.

Specifications subject to change without notice.



23 V Vanadium 50.9415	24 Cr Chromium 51.9415	25 Mn Manganese 54.938049	26 Fe Iron 55.8457	27 Co Cobalt 58.933200	28 Ni Nickel 58.6934	29 Cu Copper 63.546	30 Zn Zinc 65.39	31 Ga Gallium 69.723	32 Ge Germanium 72.61
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