

## The Ultimate in Portability

The One-Box combines the best of X-ray and the best of LIBS via a compact, affordable package of analyzers with shared accessories like batteries, charger and cables. Enjoy optimal performance for virtually every alloy and element for less money than a comparable spark OES system.

Alloy/Element	Best Technology	Comments
Carbon in stainless, steels or other alloys	Z	The Z is the only handheld that measures carbon in these alloys. X-ray cannot measure carbon.
Common stainless, Cr/Mo steels, nickel or other high temp alloys not requiring carbon	X-550 or X-250	Use the lower cost X-50 if you don't need to measure Si, P, S, Mg or Al, or low residual metals.
Specialty elements Li, Be, B	Z	X-ray cannot measure Li, Be, B.
Phosphorus and sulfur	X-550 or X-250	LIBS can't yet measure P or S.



### Application Notes

For technical details, see our ApNotes for Carbon, Carbon Equivalents and Aluminum Alloys at [www.sciaps.com](http://www.sciaps.com).

# One-Box



### XRF Handheld X-ray

Best choice for basic stainless, high-temp alloys, Cr/Mo steels, brasses and bronzes and Al alloys not requiring Li, Be or B analysis. Also, phosphorus and sulfur.

### LIBS Laser Analysis

The only choice for carbon and CE in steels, L and H grade stainless and nickel alloys, cast irons and cast steels.



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Videos <https://bit.ly/2K5v13z>

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# SciAps

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# NDT-PMI

Carbon, Carbon Equivalents, Alloys  
...even L and H grade stainless



Simply the best handheld XRF analyzer ever made  
The lightest, fastest and best shape for NDT & PMI

# The world's ONLY handheld for carbon in steels and stainless

## Meet the Z.

The world's ONLY handheld analyzer that measures carbon in steels, stainless and other alloying materials. The Z features our patented LIBS technology plus miniaturized argon purge. It's lightweight, compact, and delivers highly precise carbon measurements. Take it anywhere - up a tower, into the ditch, onto a rack. Measure carbon, silicon and alloying metals in seconds.

## More than just Carbon!

**Lithium, boron, beryllium in aluminum alloys.** LIBS technology excels at measuring critical alloy elements such as Mg, Si, Li, Be, B, Cr, Mn, Cu and other transition, heavy metals.



**Sulfidic corrosion.** The Z measures Si down to 0.02% in 3 seconds for sulfidic corrosion. In use at major refineries.

**Cr for flow-accelerated corrosion (FAC).** The Z measures Cr content < 0.03% in just a few seconds, without the need for X-ray radiation sources.

Measures carbon equivalents, L and H grade stainless, residuals.



**Field tested, user approved.**  
 With nearly 1,000 carbon units shipped globally and included in API RP 578 3rd Edition, the Z is accepted for pipeline testing by every major pipeline owner/operator. Multiple independent studies validate its performance compared to spark OES

## Oil and Gas Applications



**Upstream**  
 Alloy material verification for on-shore, off-shore rigs.



**Midstream**  
 Fast, in-ditch measurements of carbon and carbon equivalents with the Pipeline Safety app. Material verification per API 5L, PHMSA "Mega Rule."



**Downstream**  
 PMI for carbon steels, L, and H grade stainless and nickel alloys. Residuals (Cr, Cu, Ni) including carbon. Carbon, carbon equivalents in welds and materials.

## Widespread Industry Applications



**Power**  
 The Z does it all: flow-accelerated corrosion, carbon, CE in steels and stainless, and alloy PMI. All without the regulatory burden of X-ray.



**Aerospace & Fabrication**  
 Need to PMI carbon for fabricated metal product and welds? Use the smallest, fastest carbon analyzer ever made. In use daily at hundreds of fab shops globally.



**Pharmaceutical, Chemical**  
 Instantly verify that your alloy materials are 316L. The Z measures carbon down to 0.007%.

# For everything else, use our next generation of handheld XRF

Simply the lightest, fastest, most articulate X-ray analyzer ever made.



ALL NEW X-550

## Meet the NEW X-550.

The SciAps X-550 sets a new performance standard for PMI. It's the lightest weight X-ray gun ever made, at 2.8 lbs. including batteries. It's also the fastest, showing the initial test result in less than 1 second. What about more complicated verifications such as sulfidic corrosion, residuals or API 5L that require longer test times or multi-beam tests? Pre-configured on-board apps assure quality testing by every operator. Like the Z, the X runs on Android OS, with the ease of use of a smartphone.

## What's better about the X-550?

The X-550 was designed from the ground up for NDT, wherever you test - on the ground, in racks or on ropes.

**Perfectly balanced, light weight, and articulate,** you can test all day long without fatigue. The narrow footprint permits total access to virtually any test location and weld.

**Fast and precise,** it has a powerful but miniaturized X-ray tube designed to excel measuring low atomic number elements Si, P, S, Mg and Al. This tube combined with highly optimal internal geometry yields blazing speed on previously challenging applications like measuring silicon for sulfidic corrosion.

## Great on aluminum alloys, too!

If you work with aluminum or magnesium alloys, you'll want to try the SciAps X-550. It measures magnesium at the 0.3% level in 2 seconds, 5-10x times faster than competing X-ray guns. Our patent-pending Aluminum App is optimized for both low atomic number elements and transition metals for ultra-fast, highly specific verification of the many similar aluminum grades. **Grades 3003/3004/3005, Cast 356 and 357, and 2014/2024 are just a few examples that are easy for the X, but often confound other X-ray guns.**

## X Series Performance and Value

Is value more important to you than form factor? Then consider the X-200 or X-50.

### X-200

The X-200 offers the same analytical performance and blistering speed on most elements, at a lower price. What's the trade-off? It requires a few extra seconds of test time on elements Mg, Al, Si, P and S, doesn't have the sleek form factor and it's about 0.5 lb heavier.

### X-50

Even more value: If you're performing PMI on fairly routine alloys, cost-effective PiN diode technology works great for stainless (not L, H separations), high temp alloys, Cr/Mo steels, brass/bronzes and many specialty alloys.



Remote App

X-200

X-50

## Improve Your Data and Reporting

Stacks of spreadsheets. PMI data lost before it's been downloaded. Painstakingly matching hand-written notes with downloaded analyzer data. Yes, it's a nightmare, and we're developing better approaches with our users all the time. Partners welcome!

### Real-time Syncing

Every test result is stored on the analyzer and sent via WiFi to one or more online PCs located anywhere in the world.

### Custom Auto Reports

Create a report template one time, with your company logo, layout, etc. Then download data directly, print (even via WiFi), and done.

### Cloud-based Data

Test results are automatically uploaded to a secure cloud site, and can be viewed, edited and downloaded from browser software.

### Data Merging

You use X-ray for some materials, LIBS for others. How about automatically merging the data from both analyzers into a single report? Even a competitor's XRF!