

S1 TITAN

Handheld XRF Spectrometer

The S1 TITAN is among the lightest (1.5 kg, including battery) **tube-based handheld XRF analyzers** on the market today. Fast analysis speed and exceptional accuracy are two key attributes that help define the S1 TITAN.

Other innovative features include an integrated touch-screen color display, 50 kV X-ray tube, SMART Grade™ timing, Sharp Beam™ optimized X-ray geometry, Silicon Drift Detector (SDD), and an extremely tough housing that is sealed against humid and dusty environments. **Contact our sales team today** to learn more about the innovative S1 TITAN!

The S1 TITAN series is **available in three (3) configurations: models 800, 600, and 500**. All models use Bruker's SharpBeam® technology. The S1 TITAN 800 and 600 use a FAST SDD® detector to give you incredibly fast analysis times. The S1 TITAN 500 is configured with a fast, accurate, and affordable standard SDD detector. In addition, the S1 TITAN can be configured with calibrations that are optimized for a variety of sample materials- including a wide range of alloys, various mining & environmental samples, as well as restricted materials.

SharpBeam™ technology

The S1 TITAN's patent pending SharpBeam™ technology optimizes the detector and tube geometry. The optimized geometry has many desirable effects, including:

- Reduces power requirements
- Reduces weight
- Improves measurement precision
- Improved detection limits
- Increases battery life

NEW options: Integrated camera, small spot collimator

The S1 TITAN can now be configured with optional integrated camera and/or small spot collimator.

Thanks to the S1 TITAN's SharpBeam™ optimized geometry, the precision and accuracy of the measurement are the same as for the normal spot- there is no need to extend the measurement time to achieve the desired precision. The camera options is available for S1 TITAN 800 and 600. The 5mm spot size is standard for all models, however the S1 TITAN 800 can be configured with either an optional 8mm or 3mm spot.

TITAN Detector Shield



- Do you analyze metal turning or fine wires with your XRF gun?
- Have you ever punctured your XRF gun's detector?

Then you know that the cost to repair a detector can range from \$4,000 to \$7,000...plus potential down-time.

The TITAN Detector Shield can minimize these risks! [Learn more about the TITAN Detector Shield.](#)

The S1 TITAN benefits at a glance

- Available calibrations include: alloy, gold and precious metals, bulk material (E-scrap and catalytic converters), soil, mining, restricted materials, and customer specific
- Superior FAST SDD™ detector technology
- Superior count rates and resolution (compared to previous generation SiPIN instruments)
- Faster than previous generations
- Lower detection limits
- Easy analysis of light elements, such as magnesium, aluminum and silicon, without the need for vacuum or helium atmosphere (S1 TITAN 800 and 600 only)

S1 TITAN Technical Details

Calibration range (depending on specific calibration):

- S1 TITAN 800 & 600: 37 elements, including light elements Mg, Al & Si
- S1 TITAN 500: 31 elements

Weight: 1.5 kg (3.3 lbs) with battery

Size: 25 cm x 28 cm x 9 cm (10 in x 11 in x 3.7 in)

Sample temperature:

- S1 TITAN 800 & 600: Default to 150°C with Ultralene® window. Up to 500°C with Kapton® window and hot surface adapter.
- S1 TITAN 500: up to 500°C

TITAN Detector Shield™:

- Included on all S1 TITAN models (except model 800 with 3mm collimator)

Integrated camera:

- S1 TITAN 800: Included
- S1 TITAN 600: Optional
- S1 TITAN 500: Not available

Detector:

- S1 TITAN 800 & 600: FAST SDD®
- S1 TITAN 500: Standard SDD

Collimator options:

- S1 TITAN 800: 5mm standard. Optional 8mm or 3mm
- S1 TITAN 600 and 500: 5mm

X-ray tube: Rh target; max voltage 50 kV

Filter changer:

- S1 TITAN 800 and 600: Five position motorized filter changer

- S1 TITAN 500: Fixed filter

Languages Supported: Chinese, Chinese simplified, Dutch, English, French, French Canadian, German, Indonesian, Italian, Japanese, Korean, Polish, PortugueseBR, Russian, SpanishMEX, SpanishSPN, Thai, Turkish

Applications

- QA/QC and positive material identification (PMI) in fabrication
- PMI for plant / refinery safety
- Scrap metal sorting
- Aerospace alloys
- Gold testing
- Precious metals testing
- Mine face
- Ore grade control
- Core analysis
- Mineral exploration
- Geochemical mapping
- Soil analysis
- Metal recovery
- Lead in Children's Products
- ASTM-F963
- Toxics in Packaging Clearing House (TPCH)
- Screening Children's Apparel for Lead
- Proposition 65 Compliance
- RoHS
- More