

GoldSDD^{SE} is a SDD-based precious metal analyzer launched by PURERAY Instrument in 2026. It adopts a USA AMPTEK customized Fast-SDD detector and applies the creative vertical optical path to obtain a smaller real focus. With a 10-core CPU computer, the XRF spectrometer is powered by the Smart FP algorithm. It is specifically designed for the jewelry testing and precious metal recycling industries, enabling fast and accurate analysis of gold, platinum, palladium, and other precious metals.



Specifications

- Input Voltage: AC100~240V, 50Hz
- Package size: 625*560*480mm
- Machine size: 400*522*368mm
- Sample chamber size: 374*344*155mm
- Rated power: 150W
- Gross weight: 57KG
- Net weight: 42KG
- Noise: <65dB
- Operating environment:
 - Temperature: 15°C~31°C
 - Humidity: <70% (Noncondensing)

Features

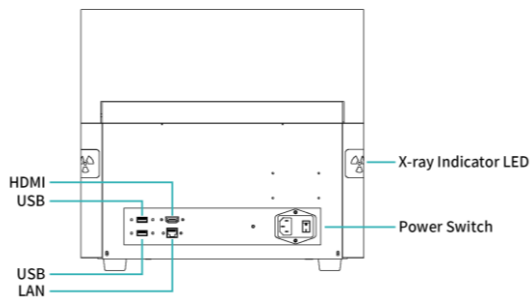
- Analysis elements: K(No.19)~U(No.92)
- Analyzed up to 30 elements at the same time.
- Rhenium and tungsten detection warning
- Coating warning
- Test Sample: metal
- Analysis range: 0.010%~99.999%
- Precision: $\pm 0.01\%$ (9999 gold)
- Support the multi-point continuous test with high efficiency.
- Connect the scale for weight readings and calculate prices of gold samples.
- Automatically calculate the average value and RSD of multiple results.
- Visible samples with lead glass

Core Components

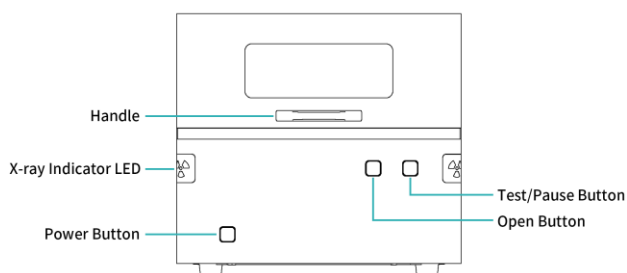
- Detector: USA AMPTEK customized Fast-SDD
 - Detector area: 25mm²
 - Resolution: 125 $\pm$ 5eV
- Embedded computer: Intel i3 10-core
- HV power supply: 50KV/1mA digital HV
- X-ray tube: 50KV/1mA
 - Window material: aluminium
 - Target material: wolfram
 - Focus: $\Phi 0.3$ mm
- Collimator: $\Phi 1.5$ mm

Hardware Interface

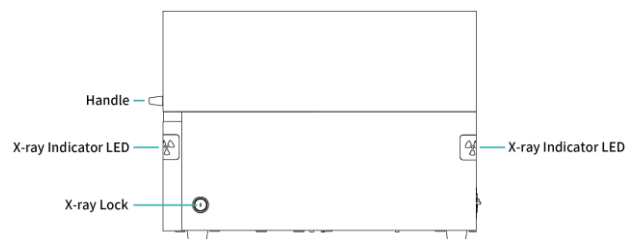
Back



Front

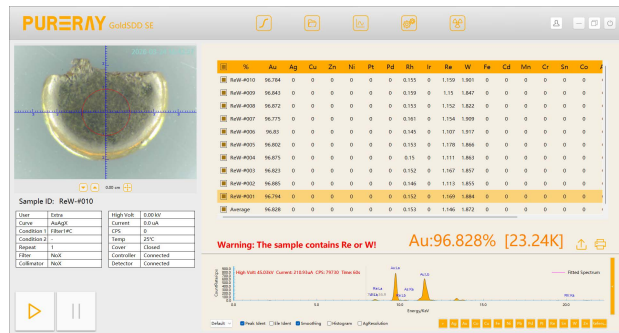
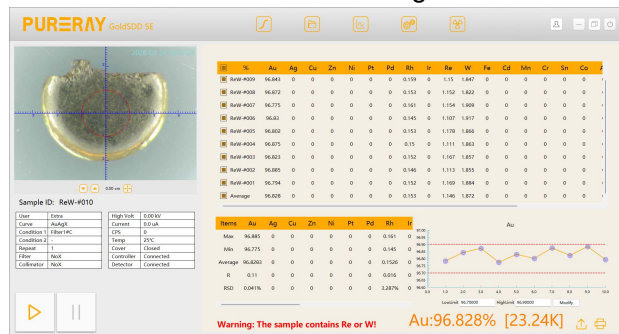


Right

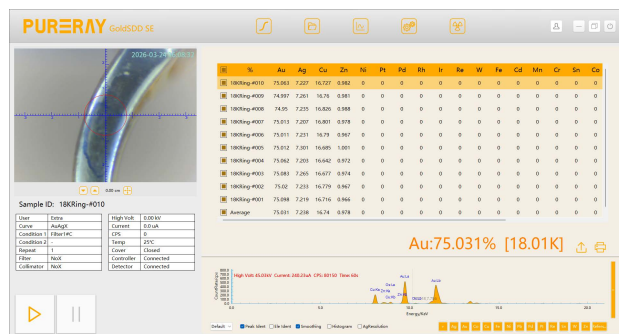
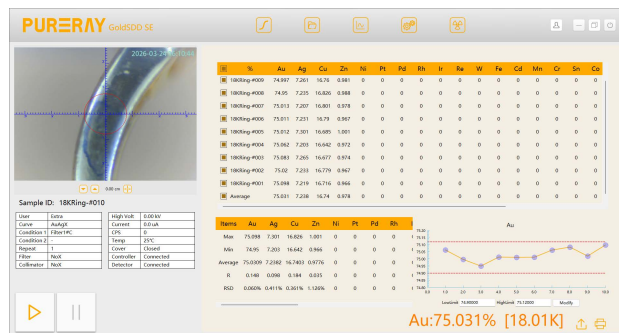


Test Case

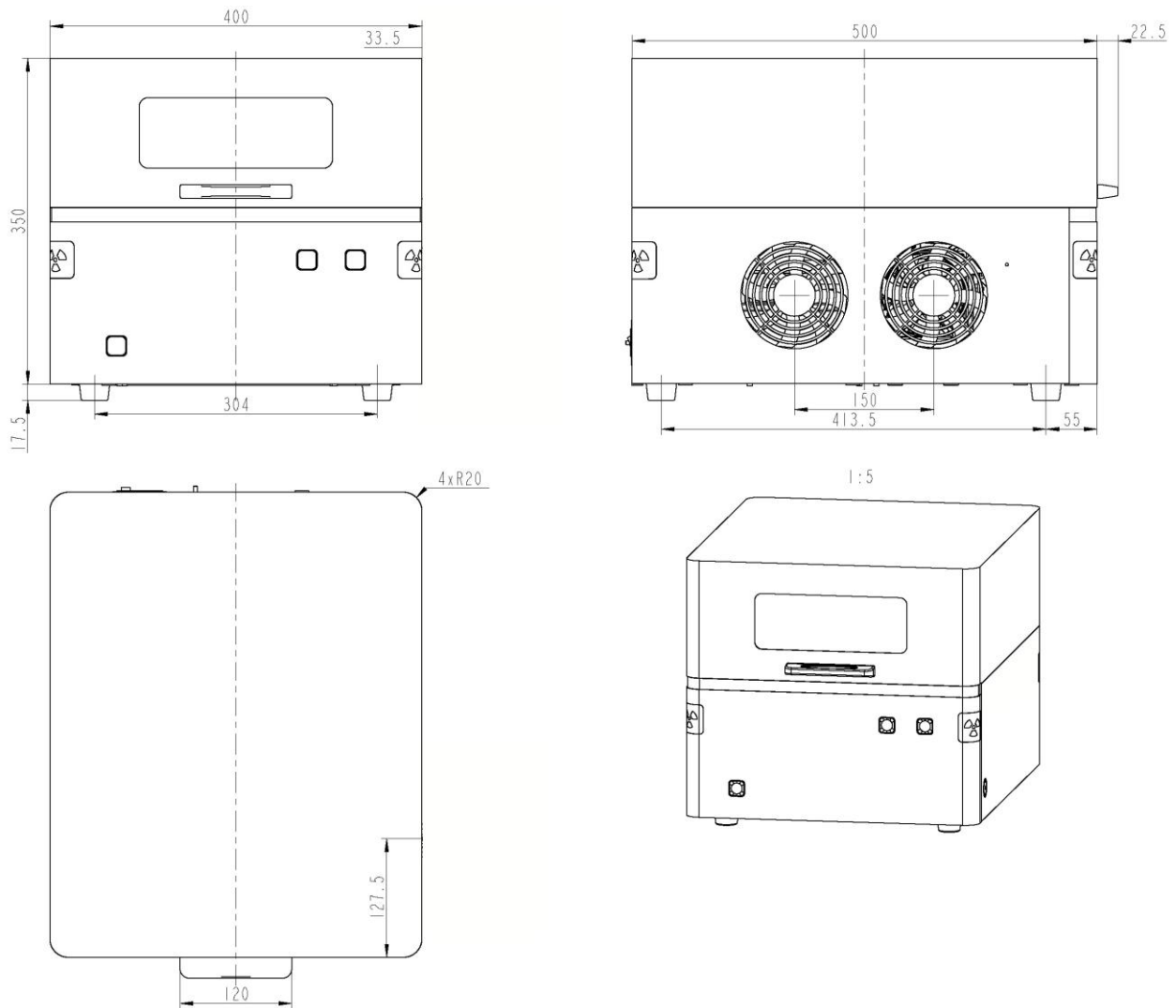
● Gold with Rhenium and Tungsten



● 18K Gold



Product Dimension



Attachment List

Number	Name	Quantity	Specification
1	Grounding cable	1	2m
2	Power cable	1	1.8m
3	Network cable	1	1.5m
4	Mini thermal printer	1	185*135*57mm
5	USB hub	1	4 USB ports
6	USB Wi-Fi adapter	1	300Mbps
7	Testing film	2	20μm thickness
8	Jewelry holder	1	Φ97mm
9	Calibration silver sample	2	Φ30mm H13mm
10	Folder	1	Thickness: 30 mm
11	Plastic box	1	252*188*58mm
12	Dust cover	1	Compatible with the spectrometer
13	Clip	2	Jaw opening max: 22mm
14	Hex Key	1	M2.5mm
15	Hex Key	1	M3.0mm
16	USB Flash Drive	1	64G

Maintenance

- GoldSDD^{SE} should be placed in a dry environment at a normal temperature. If it will not be used for a long time, please unplug the power cable and cover the machine with a dust cover.
- If there is any visible dirt on the metal shell of the spectrometer, clean it with a diluted neutral detergent and a soft cloth, and then wipe off the moisture with a dry cloth. (Do not use alcohol for cleaning.)
- There is an X-ray lock on the back of the machine. Please turn it in the correct position before testing.
- Allow the instrument to preheat for 5 minutes during the initial startup each day. Do not skip the preheating process unless it is an emergency.
- If the instrument has not been used for a long time, it is necessary to turn on the device to test any sample for 30 minutes once a week to keep the X-ray tube dry.

Cautions

- The X-ray remains active during testing and may still be excited briefly after the test is completed. If the sample chamber is opened during testing, the system will immediately stop X-ray generation. If the chamber is opened after testing, the system will cut off power to the X-ray tube to ensure safety.
- It is recommended to use an Uninterruptible Power Supply (UPS) because a power supply failure may cause the embedded computer to lose data or files. Always shut down the instrument before turning off the power.
- The testing film prevents dust from entering the interior of the instrument. Please replace the film if it becomes damaged or worn out.
- The standard test duration is 60 seconds. When the duration is less than 60s, the test result will be slightly inaccurate.