



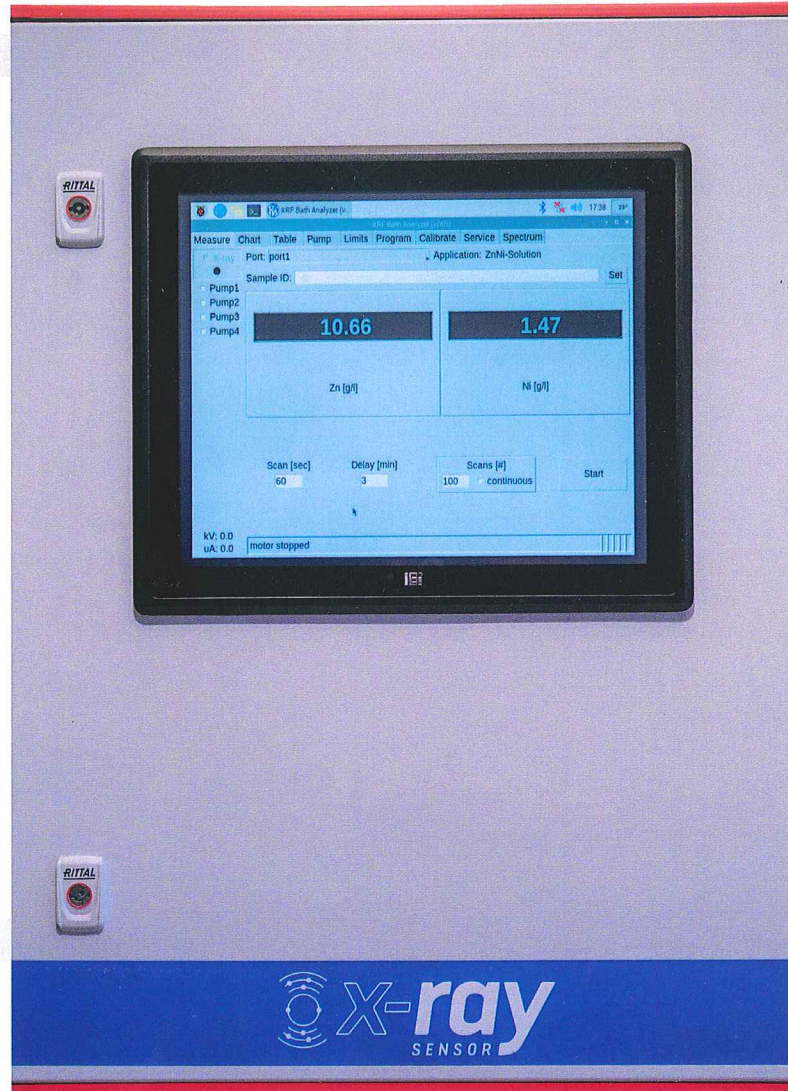
Pratt & Whitney[®]
MEASUREMENT SYSTEMS, INC.

MasterXRF[®] Inline Solution Analyzer

The X-Ray Sensor MasterXRF[®] instrument is an X-ray fluorescence spectrometer for the inline analysis of plating solutions in the electroplating industry. It is the ideal instrument for industrial process control, improving product quality, and saving money.

The instrument allows for the continuous, fully automatic monitoring of metal concentration in plating baths such as alkaline or acidic ZnNi, Cr and Co passivation solutions, as well as elemental Cr, Fe, Ni, Cu, Zn, Pd, Ag, Sn and Au. Up to four separate plating lines can be measured sequentially with the option to set up individual measurement programs for each line.

The solution can be pumped directly from the plating tank that connects to the instrument's measurement tubing. This unique design eliminates the need for a specific solution measuring cell or a manifold assembly requiring flushing or cleaning of the solution lines. The instrument is virtually maintenance free and operates through an easy-to-use, touch screen interface. Quantification is accomplished utilizing a state-of-the-art fundamental parameter (FP) software.



X-ray
SENSOR

Contact Information:



Pratt & Whitney[®]
MEASUREMENT SYSTEMS, INC.

Tel: 800-371-7174 · email: info@prattandwhitney.com
www.prattandwhitney.com

Distribution address:

Technical Specifications



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Element range

Chlorine [Cl, 17] to Uranium [U, 92]
(up to 55 elements simultaneously)

Design

Fully enclosed X-ray system with mechanical positioning mechanism for up to 4 measurement positions

Dimensions

External Dimensions

Instrument only : 400 x 490 x 170 mm (15.7 x 19.3 x 6.7 in)

W x H x T

Instrument + Enclosure : 800 x 1000 x 300 (31.5 x 39.4 x 11.8)

Weight

14 kg (31 lb) + 39 Kg (86 lb) enclosure

X-ray Source and Detection

X-ray tube

Low Power X-ray tube 4W with Rh or W target

High voltage

Three settings: 30 kV; 40 kV; 50 kV

Primary filter

Changeable: Al 250 µm; Al 500 µm Al 750 µm

Collimator

1 or 2 mm Ø

X-ray detector

Silicon-drift-detector (SDD)

Detector area

20 mm²

Detector resolution

FWHM < 130 eV [at Mn-Kα]

Electrical and Environmental data

Power supply

AC 100-240 V 50 -60 Hz

Power consumption

≤ 70 VA

Environmental conditions

Operating temperature

10°C - 50°C (50°F - 104°F)

Storage temperature

0°C - 50°C (32°F - 122°F)

Standards

CE approval

EN 61010 , EN 61326

X-ray standards

DIN EN ISO 3497, ASTM B 568

Approval

Individual acceptance approval per §12 StrlSchG
(German radiation ordinance) Complies to US Standard ANSI/HPS
N43.3 Radiation Safety for X-ray diffraction and fluorescence
analysis equipment