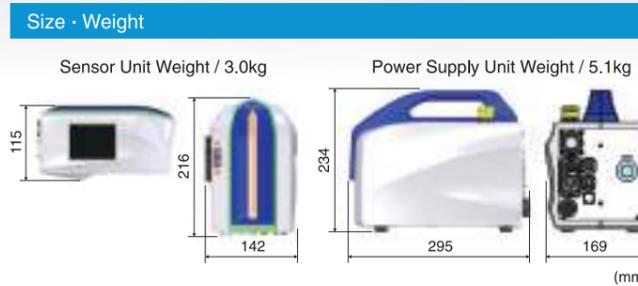


# Portable X-ray residual stress analyzer

## *micro* $\mu$ -X360J



| Specification             |                                                                             |
|---------------------------|-----------------------------------------------------------------------------|
| Measurement items         | Residual stress, FWHM(included with software), Retained austenite(Optional) |
| Measurement method        | cosa method(Single-incident angle method)                                   |
| Collimator size           | Standard: $\phi$ 1.0mm(Irradiation size Approx. $\phi$ 2mm)                 |
| X-ray tube cooling method | Air cooling                                                                 |
| Power                     | AC100- 240V, 50/60Hz, 130W                                                  |

### Countries Using Pulstec's $\mu$ -X360 Series



※The specification in this document may change without prior notice.

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ISO9001 (Domestic Office)  
ISO14001 (Domestic Office)

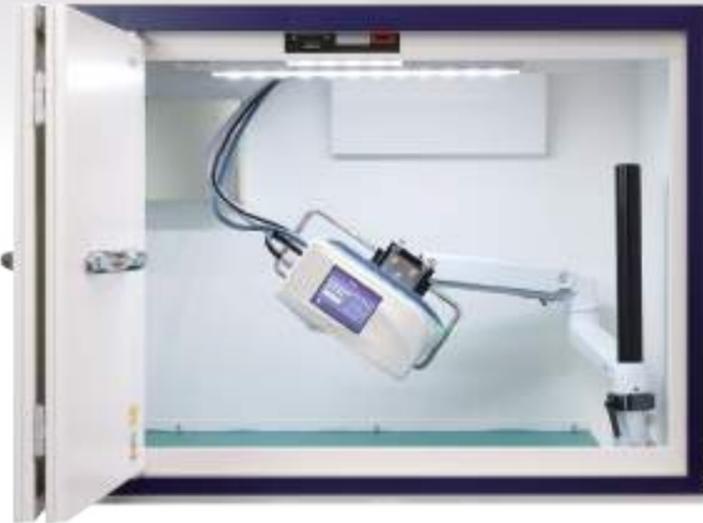
MEMO

Easy measurements for anyone, anywhere!

**PULSTEC**  
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# Features

**Safety cabinet with interlock**  
Size: W800xD600xH600mm



Anyone

The safety cabinet prevents X-ray leakage



Spring



Crankshaft



Gear



Fillet weld

Anywhere

Non-contact, non-destructive measurement for large structures

**Tripod • Flexible arm**  
Used for on-site measurements  
Flexible positioning



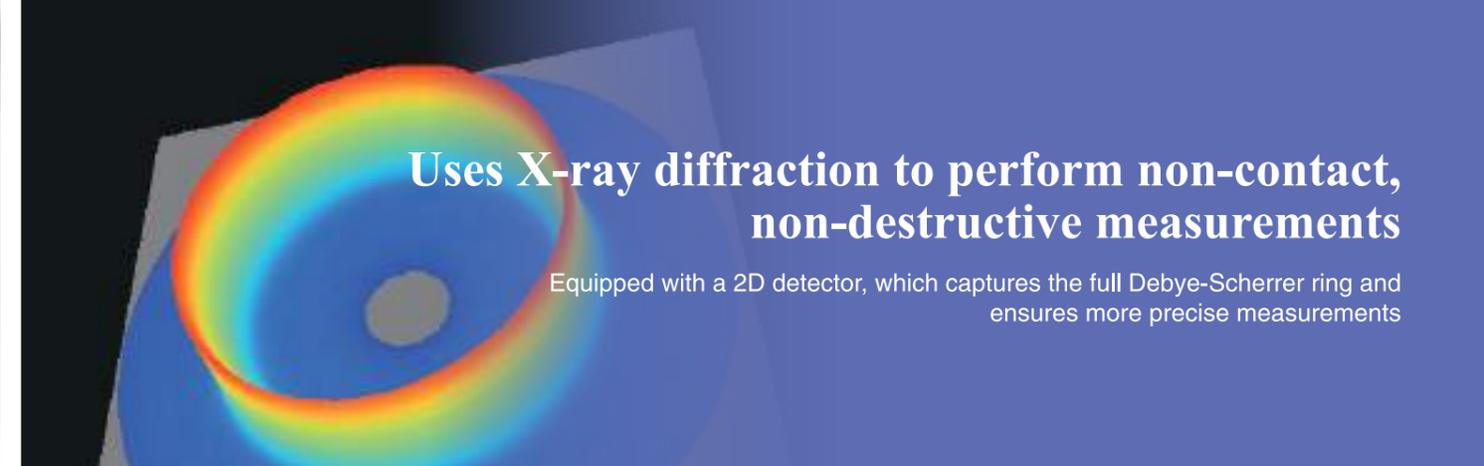
Check the annealing effects of welds in oil tanks



Check the residual stress in a rolled component after heat treatment



Bridge maintenance



Uses X-ray diffraction to perform non-contact, non-destructive measurements

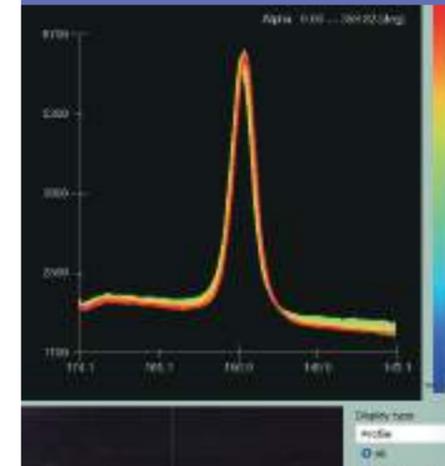
Equipped with a 2D detector, which captures the full Debye-Scherrer ring and ensures more precise measurements

Easy to set up

The  $\mu$ -X360J features an LCD monitor, allowing you to easily see and adjust your sample



Primary benefits of  $\mu$ -X360J



■ R. Stress

$\sigma_x$  -436 MPa  
Dev. 5 MPa

**Short measurement time**

Measures samples quickly compared to other equipment  
Measures ferritic steel samples in ~40 seconds

■ FWHM

Ave. 3.20 deg  
Min. 3.15 deg

Lower X-ray power output to ensure operator safety



## On-site measurements are possible

Compact, lightweight and highly portable!



## Easy-to-use software minimal training needed

Anyone can operate after short training!



### STEP.1 Set the sample

Use the integrated angle gauge to adjust the X-ray incident angle  
Use the CCD camera display to adjust the sample's position and distance

### STEP.2 Start the measurement

X-ray is ON  
After a few moments, the results are displayed

### STEP.3 Read the results

The software will display residual stress results, the Debye-Scherrer ring, a camera image, and FWHM

## Additional benefits & features of $\mu$ -X360J

### We offer various, optional accessories for different measurement applications

Can select according to your specific application!

#### X-ray unit for exchange

Pulstec offers various X-ray tubes based on sample material  
Available tube options include Cr, V, Mn, Cu, and Co

#### Collimator

Used to change the X-ray spot size without any special tools

#### Height adjustment stand for the sensor

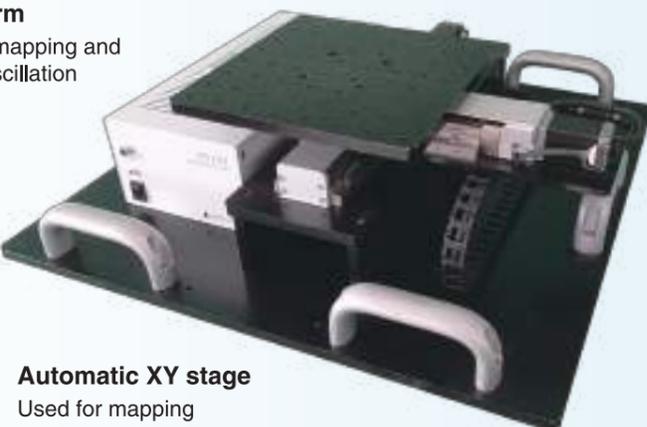
Helps when measuring flat samples continuously

#### Reference specimens for residual stress & retained austenite

Used for checking measurement accuracy

#### Robot arm

Used for mapping and tri-axial oscillation



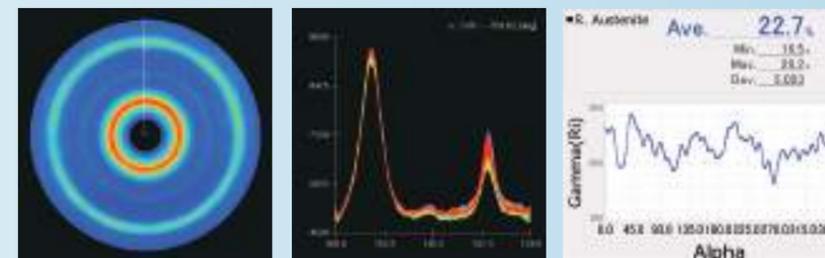
#### Automatic XY stage

Used for mapping



#### Electrochemical polisher

Used for layer removal on depth profile measurements



#### Retained austenite measurement

Optional software function that measures the percentage of retained austenite in the sample



#### Hand-carry case

This impact-resistant carry-case protects the unit and flexible arm during transport