

# Zet@Premium

## Eddy Current Instrument

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### APPLICATION

Compact and easy to use, Zet@Premium can support up to 2 inspection channels at high speed. It works with 8 alarms and performs all analysis of signals. It is suitable to the most common Eddy Current defects detection and material grade sorting applications.

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### MAIN ADVANTAGES

- Standard version with touchscreen
- Compact, robust design for industrial applications
- Real time display of the defects location (with encoder and Production software)
- Very high inspection speed
- In accordance with international standards such as ASTM, API, BS, AF, DIN, EN, SEP... and certified EN ISO 15548-1, EN ISO 15549
- Simple I/O interface to communicate with production lines
- Analog interface and encoders
- Possibility of creating inspection reports (within production software, optional)
- Runs on Windows

### USED FOR

- Defects detection on a wide range of products
- Material Sorting version available, dedicated to material grade sorting and heat treatment verification

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### PRODUCTS RANGE

- Standard version with touchscreen
- Rackable version with USB ports

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### STANDARD SOFTWARE

- Zet@Setting configuration software

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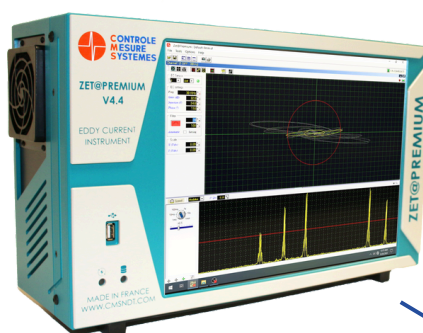
### OTHER CONFIGURATIONS

- Possibility to use either 2 differential channels or one absolute and one differential channel
- Customizable software adapted to inspection needs (long or short product inspection, material sorting...)
- Network connection for remote assistance

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### ASSOCIATED SYSTEMS

- Compatible with ET systems including Magnetizing Units, Sectorial Magnetizing Units, Coils Supports...
- Compatible with single channel ET coils and probes
- Remote assistance

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## Product Range

### Standard Version with Touchscreen

- 256 x 410 x 160 mm (HxWxD)
- IP 52
- 100-240 VAC / 50-60 Hz
- 8 kg
- Permitted ambient temperature : 0-45° C
- 85% max of humidity - no condensation

### Rackable Version with USB and Ethernet Ports which have to be integrated in cabinet

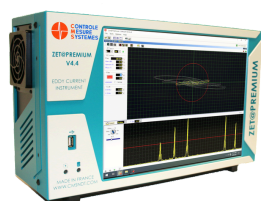
- 131 x 482 x 344 (HxWxD)
- IP 52
- 100-240 VAC / 50-60 Hz
- 5.5 kg
- Permitted ambient temperature : 0-45° C
- 85% max of humidity - no condensation

## Operating Principle

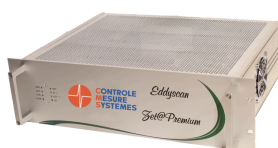
The instrument is driven by the configuration software, defining the Eddy Current parameters for the application, such as measure settings and alarm thresholds for defects detection or sorting thresholds for sorting version.

The signal analysis is performed entirely by the electronics of the instrument, displaying the inspections results live.

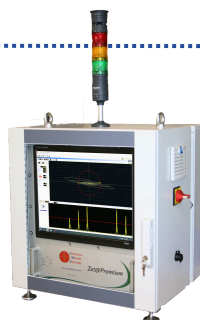
The opto-isolated inputs/outputs of the device allow quick and easy interfacing with the production line.



**Stand Alone**



**Rackable**



**Mini Cabinet**



**Free Standing Cabinet**

## • Technical Information

OPERATION	
<b>Standard Version</b>	<ul style="list-style-type: none"> <li>Windows (W11)</li> </ul>
<b>Connection to External PC</b>	<ul style="list-style-type: none"> <li>USB port and Ethernet connection</li> </ul>

EVALUATION AND LINE	
<b>Signal Evaluation</b>	<ul style="list-style-type: none"> <li>Full circle evaluation and/or X/Y components</li> </ul>
<b>Defect Trigger Threshold</b>	<ul style="list-style-type: none"> <li>Up to 8 circular, rectangular and/or annular alarms by channels (annular optional)</li> </ul>
<b>Tests Procedure</b>	<ul style="list-style-type: none"> <li>Testing with control on/off and continuous testing</li> <li>Up to 2 different control by instrument</li> </ul>
<b>Line Speed / Sampling Frequency</b>	<ul style="list-style-type: none"> <li>Static to 20 m/s (option), and up to 40 m/s with option</li> </ul>
<b>Line Signals</b>	<ul style="list-style-type: none"> <li>Digital: 8 inputs, 12 outputs, 2 encoders</li> <li>8 analog outputs</li> <li>TCPIP exchange protocol</li> </ul>
<b>Marking</b>	<ul style="list-style-type: none"> <li>5 free outputs for marking, buzzer, cutter...</li> </ul>
<b>Sorting</b>	<ul style="list-style-type: none"> <li>7 sorting levels and outputs</li> </ul>
<b>Adjustable Pre-Amplifier</b>	<ul style="list-style-type: none"> <li>0; 20; 40 dB</li> </ul>

SENSOR CONNECTION	
<b>Coil Monitoring</b>	<ul style="list-style-type: none"> <li>Sensor auto-check (sensor current measurement and control)</li> <li>Coil operating condition indicated on screen</li> <li>Voltage and failure indicated in the screen</li> </ul>
<b>Excitation Voltage</b>	<ul style="list-style-type: none"> <li>Incremental tuning resolution by 0.1V</li> <li>0.1 to 48V</li> </ul>
<b>Test Channel</b>	<ul style="list-style-type: none"> <li>Up to 5 instruments linked</li> <li>Up to 2 or 3 channels (1 Abs, 2 diff for same coil)</li> </ul>
<b>Test Frequency</b>	<ul style="list-style-type: none"> <li>Incremental tuning resolution by 1 Hz</li> <li>10 Hz to 12 MHz</li> </ul>
<b>Filters</b>	<ul style="list-style-type: none"> <li>Continuous filters high pass, low pass, band pass with adjustable frequency and auto-filtering</li> <li>1 Hz tuning resolution</li> </ul>
<b>Gain</b>	<ul style="list-style-type: none"> <li>Increments of 0.5 dB / 80 dB dynamic</li> </ul>
<b>Phase</b>	<ul style="list-style-type: none"> <li>0 to 360° by step of 1 Hz</li> </ul>

## • User Interface

OPERATION	
<b>Operation Protection</b>	<ul style="list-style-type: none"> <li>3 user levels, protected by password</li> </ul>
<b>Dialogue Languages</b>	<ul style="list-style-type: none"> <li>Customizable to your needs: French, English, Italian, Russian, Portuguese and more...more</li> </ul>
<b>Status Display</b>	<ul style="list-style-type: none"> <li>Displayed in production software</li> </ul>
<b>Message Windows</b>	<ul style="list-style-type: none"> <li>In real time on the screen</li> </ul>
<b>Tests Setting Display</b>	<ul style="list-style-type: none"> <li>Unlimited</li> </ul>
<b>Setting</b>	<ul style="list-style-type: none"> <li>Unlimited - configuration files saved on SSD/hard disk</li> </ul>

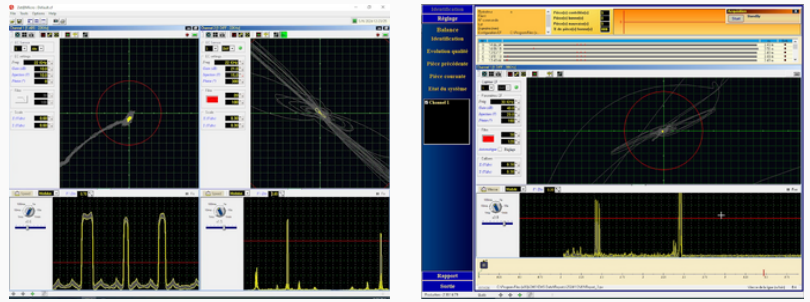
SIGNAL DISPLAY	
<b>Display</b>	<ul style="list-style-type: none"> <li>Lissajous and/or time base</li> <li>Signal is given in less than 0.5 ms</li> </ul>
<b>Position</b>	<ul style="list-style-type: none"> <li>Channels operation are displayed side to side</li> </ul>
<b>Displayed Length</b>	<ul style="list-style-type: none"> <li>Adjustable</li> </ul>

# PRODUCTION SOFTWARE (OPTIONAL)

## OPTION

### Production Software / Remote Interface

- Creation of complete inspection files (report)
- Possibility to store them in hard disk under different format (Excel, PDF...)
- ReportViewer application with possibility to recall, display and print stored inspection files



### Remote Assistance

- Worldwide support, over Internet or dedicated modem
- Visualization of the instrument's screen from CMS company
- Assistance to adjust or verify a setting
- Assistance to upload and update software
- Assistance to backup the system

### Input

- 4 Analog inputs

### Special Function for Material Sorting

- Harmonic Analysis of 3rd, 5th and 7th harmonic
- Multi-frequency inspection
- Anti-mix function

### Filter (Optional)

- Automatic filter adjustment

# RECORD VIEWER SOFTWARE (OPTIONAL)

### Acquisition :

- Record inspection measures for later printing
- Store of the measures on hard disk
- Storage and recall signals

### Recordviewer :

- Signal processing
- Signal Analysis
- Possibility to adjust some Eddy Current settings and see real-time changes in Eddy Current signals

