VPSE G3 Detector
Imaging of the most Challenging of non Conductors with the third Generation VPSE G3 Detector
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Introduction

Now in its third generation, The ZEISS Microscopy Variable Pressure Secondary Electron (VPSE) detector is designed for all EVO series microscopes. With a detection efficiency approaching the standard set by the Everhart Thornley detector, the VPSE G3 detector provides the most effective imaging solution currently available to the SEM community for true secondary electron imaging of non-conducting specimens. Imaging can now be performed on the most challenging of non conductors, using either air or water vapour. The VPSE G3 excels in two areas:

- Class leading imaging of non conductors
- Excellent imaging using water vapour

The ability to image using water vapour provides new imaging solutions for the most challenging of non conductors, high quality EDS analysis, and for wet specimen analysis.

Benefits

Advanced materials analysis
- Paper, fibres, textiles, forensics
- Pharmaceutical powders and tablets
- Museum work with microfossils

Application in life sciences
- Frozen plant structures using the EVO coolstage
- Insect microstructures
- Dental / bone

Semiconductor inspection
- PCB
- Packaged devices

Operation

The VPSE detector is controlled via the SmartSEM software.

Availability

The VPSE G3 detector is available for the EVO series.
Upgrade path

The VPSE G3 requires:
- Vacuum Board Firmware version 5.0 or higher.
- SmartSEM version 5.02 or higher
- EVO Lite serial numbers EVO XX-05-01 onwards.

The retrofit must be done by an authorised ZEISS Microscopy service engineer. For further information, contact: microscopy@zeiss.com

<table>
<thead>
<tr>
<th>Part</th>
<th>Ordering no.</th>
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<tbody>
<tr>
<td>EVO 10 VPSE G3 detector</td>
<td>354750-9991-000</td>
</tr>
<tr>
<td>EVO 15 VPSE G3 detector for right hand side mounting</td>
<td>354750-9992-000</td>
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<tr>
<td>EVO 15 VPSE G3 detector for left hand side mounting (Required if WDS is also to be fitted)</td>
<td>354750-9993-000</td>
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<tr>
<td>EVO 25 VPSE G3 detector</td>
<td>354750-9994-000</td>
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<td>SIGMA</td>
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<td>VPSE G3 detector mounted on WDS port. (Included with the base system)</td>
<td>352150-9187-000</td>
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<tr>
<td>VPSE G3 detector mounted on LHS front port. (Can be chosen instead of VPSE-WDS if required)</td>
<td>352150-9186-000</td>
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Figure 1

Copy Paper, 3 kV, 70 Pa water, uncoated

Figure 2

Fabric, 3 kV, 20 Pa air, uncoated