A faster, less operator-dependant, screening than PT/MT

› Very high PoD: leave no crack behind
› Repeatable and reliable results
› Minimal surface preparation required; no need to remove coating
› Data archiving
› Compatible with a wide variety of flexible-PCB probes, coils diameters, and topologies
**Coverage**

200 mm (8 in)

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**Number of Channels Required**

128

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**Outer Diameter Range**

150 mm (6 in) OD to flat surfaces

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**Smallest Detectable Defects**

As small as 2mm (0.080")L × 1mm (0.040")D

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**Max. Measurable Crack Depth**

No depth sizing

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**Scan Speed**

Up to 600 mm/s (24 in/s)

*With full data recording

---

**Lift-Off Tolerance**

Up to 3 mm (0.120 in)

*Lift-off compensation to be available

**Non-conductive coatings and paints, with monitoring and autocorrection

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**Materials**

All pipeline alloys

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**Other Features**

**Grid-As-U-Go™**

Embedded spring-loaded encoder

Pre-calibration/calibration check tool

Combined with Magnifi: assisted detection and on-the-spot reporting

Control buttons for single operator use

Max. operating temperature: 150 °C (300 °F)
Simultaneous detection and depth sizing of longitudinal SCC in parent material on pipelines and ERW welds.

› Very high POD
› Repeatability at ±0.1 mm
› Assisted detection tool: allows the quick identification and positioning of deepest cracks among SCC colonies
› Controls human factor
› Fast
› Data traceability
<table>
<thead>
<tr>
<th><strong>COVERAGE</strong></th>
<th>71 mm (2.8 in)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NUMBER OF CHANNELS REQUIRED</strong></td>
<td>64</td>
</tr>
<tr>
<td><strong>COMPATIBLE PIPE DIAMETERS (NPS)</strong></td>
<td>254–1220 mm (10–48 in)</td>
</tr>
</tbody>
</table>
| **MIN. DETECTABLE LONGITUDINAL CRACK** | Length: 1.5 mm (0.060 in)  
  Depth: 0.25 mm (0.010 in) |
| Results may vary according to crack location, lift-off, surface conditions, etc. |
| **MAX. MEASURABLE CRACK DEPTH** | 3 mm (0.12 in) |
| *Can detect deeper cracks  
  **Cracks shorter than 4.5 mm can slightly be undersized* |
| **DEPTH SIZING ACCURACY** | ±10–15%        |
| *Presence of corrosion and high density may impact accuracy, results may vary according to crack location, lift-off, surface conditions, etc.* |
| **LONGITUDINAL RESOLUTION ON SCC** | Can resolve cracks distanced by 1.0 mm |
| **CIRCUMFERENTIAL RESOLUTION ON SCC** | Can resolve cracks distanced by 1.0 mm |
| **SCAN SPEED** | Up to 600 mm/s (24 in/s) |
| *With full data recording* |
| **LIFT-OFF TOLERANCE** | Up to 1 mm (0.040 in) |
| *Detection still possible with up to 2 mm of lift-off but accuracy on depth sizing may be affected*  
  **Non-conductive coatings and paints, with monitoring and autocorrection** |
| **MATERIALS** | Permeability compensation for X42, X46, X52, X56, X60 |
Sharck HR Butt Weld

Featuring all advantages of the Sharck HR but managing what it can’t mechanically do.

Detection and depth sizing of:

› Longitudinal SCC on pipe diameters ≤ 254 mm (10 in)
› SCC along seam welds
› Cracks in A.O. Smith Flash welds
› SCC in dents
› Circumferential SCC
› Circumferential SCC in girth welds
| **COVERAGE** | 37 mm (1.46 in) |
| **NUMBER OF CHANNELS REQUIRED** | 64 |
| **COMPATIBLE PIPE DIAMETERS (NPS)** | 152–1220 mm (6–48 in) |
| **MIN. DETECTABLE LONGITUDINAL CRACK** | Length: 1.5 mm (0.060 in)  
 Depth: 0.25 mm (0.010 in)  
Results may vary according to crack location, lift-off, surface conditions, etc. |
| **MAX. MEASURABLE CRACK DEPTH** | 3 mm (0.12 in)  
*Can detect deeper cracks  
**Cracks shorter than 4.5 mm can slightly be undersized |
| **DEPTH SIZING ACCURACY** | ±10–15%  
*Presence of corrosion and high density may impact accuracy, results may vary according to crack location, lift-off, surface conditions, etc. |
| **LONGITUDINAL RESOLUTION ON SCC** | Can resolve cracks distanced by 1.0 mm |
| **CIRCUMFERENTIAL RESOLUTION ON SCC** | Can resolve cracks distanced by 1.0 mm |
| **SCAN SPEED** | Up to 600 mm/s (24 in/s)  
*With full data recording |
| **LIFT-OFF TOLERANCE** | Up to 1 mm (0.040 in)  
*Detection still possible with up to 2 mm of lift-off but accuracy on depth sizing may be affected  
**Non-conductive coatings and paints, with monitoring and autocorrection |
| **MATERIALS** | Permeability compensation for X42, X46, X52, X56, X60 |
Sharck Pencil HR

Detection and depth sizing of:

› SCC in deep dents
› SCC close to girth or spiral welds
› Long cracks at seam welds toes
<table>
<thead>
<tr>
<th>COMPATIBLE PIPE DIAMETERS (NPS)</th>
<th>All pipe diameters</th>
</tr>
</thead>
</table>
| **MIN. DETECTABLE LONGITUDINAL CRACK** | Length: 1.5 mm (0.060 in)  
Depth: 0.25 mm (0.010 in)  
Results may vary according to crack location, lift-off, surface conditions, etc. |
| **MAX. MEASURABLE CRACK DEPTH** | 3 mm (0.12 in)  
*Can detect deeper cracks  
**Cracks shorter than 4.5 mm can slightly be undersized |
| **DEPTH SIZING ACCURACY** | ±10–15%  
*Presence of corrosion and high density may impact accuracy, results may vary according to crack location, lift-off, surface conditions, etc. |
| **SCAN SPEED** | Up to 600 mm/s (24 in/s)  
*With full data recording |
| **LIFT-OFF TOLERANCE** | Up to 1 mm (0.040 in)  
*Detection still possible with up to 2 mm of lift-off but accuracy on depth sizing may be affected  
**Non-conductive coatings and paints, with monitoring and autocorrection |
| **MATERIALS** | Permeability compensation for X42, X46, X52, X56, X60 |
Detection and depth sizing of individual cracks anywhere on pipes, especially in seam and girth welds (crown, toes and heat affected zones).

› Cracks detection in all orientation within a single pass
› Depth sizing on cracks down to 7 mm in pipe walls
› High lift-off tolerance
<table>
<thead>
<tr>
<th><strong>COVERAGE</strong></th>
<th>53 mm (2.1 in)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NUMBER OF CHANNELS REQUIRED</strong></td>
<td>64</td>
</tr>
<tr>
<td><strong>COMPATIBLE PIPE DIAMETERS (NPS)</strong></td>
<td>254–1220 mm (10–48 in)</td>
</tr>
</tbody>
</table>
| **MIN. DETECTABLE LONGITUDINAL CRACK** | Length: 3 mm (0.120 in)  
Depth: 0.5 mm (0.020 in)  
Results may vary according to crack location, lift-off, surface conditions, etc. |
| **MAX. MEASURABLE CRACK DEPTH** | 7 mm (0.275 in)  
*Can detect deeper cracks  
**Dynamic compensation for cracks down to 6 mm in length |
| **DEPTH SIZING ACCURACY** | ±10–20%  
*Weld roughness may have an impact on depth sizing |
| **LENGTH SIZING ACCURACY** | ±2 mm (0.08 in)  
Typical when using 0.5 mm (0.02 in) scan resolution |
| **SCAN SPEED** | Up to 200 mm/s (8 in/s)  
*With full data recording |
| **LIFT-OFF TOLERANCE** | Up to 3 mm (0.120 in)  
*Detection still possible with up to 3 mm of lift-off but accuracy on depth sizing may be affected  
**Non-conductive coatings and paints, with monitoring and autocorrection |
| **MATERIALS** | Permeability compensation for X42, X46, X52, X56, X60 |
Detection and depth sizing of individual cracks anywhere on pipes, especially in seam and girth welds toes, single crack or low-density SCC in dents.
<table>
<thead>
<tr>
<th><strong>COMPATIBLE PIPE DIAMETERS (NPS)</strong></th>
<th>All pipe diameters</th>
</tr>
</thead>
</table>
| **MIN. DETECTABLE LONGITUDINAL CRACK** | Length: 3 mm (0.120 in)  
Depth: 0.5 mm (0.020 in)  
*Results may vary according to crack location, lift-off, surface conditions, etc.* |
| **MAX. MEASURABLE CRACK DEPTH** | 7 mm (0.275 in)  
*Can detect deeper cracks* |
| **DEPTH SIZING ACCURACY** | ±10–20%  
*Weld roughness may have an impact on depth sizing* |
| **SCAN SPEED** | Up to 200 mm/s (8 in/s)  
*With full data recording* |
| **LIFT-OFF TOLERANCE** | Up to 3 mm (0.120 in)  
*Detection still possible with up to 3 mm of lift-off but accuracy on depth sizing may be affected*  
**Non-conductive coatings and paints, with monitoring and autocorrection** |
<p>| <strong>MATERIALS</strong> | Permeability compensation for X42, X46, X52, X56, X60 |</p>
<table>
<thead>
<tr>
<th>PROBE</th>
<th>APPLICATION</th>
<th>DETECTION</th>
<th>SIZING</th>
<th>SIZEABLE DEPTH RANGE</th>
<th>MINIMUM CRACK LENGTH</th>
<th>COVERAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td>Cracks detection in all orientations</td>
<td><img src="image2.png" alt="Image" /></td>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
<td><img src="image5.png" alt="Image" /></td>
<td><img src="image6.png" alt="Image" /></td>
</tr>
<tr>
<td><img src="image7.png" alt="Image" /></td>
<td>Axial SCC in parent material and ERW welds</td>
<td><img src="image8.png" alt="Image" /></td>
<td><img src="image9.png" alt="Image" /></td>
<td><img src="image10.png" alt="Image" /></td>
<td><img src="image11.png" alt="Image" /></td>
<td><img src="image12.png" alt="Image" /></td>
</tr>
<tr>
<td><img src="image13.png" alt="Image" /></td>
<td>Axial SCC on pipe diameters from 152 mm (6 in)</td>
<td><img src="image14.png" alt="Image" /></td>
<td><img src="image15.png" alt="Image" /></td>
<td><img src="image16.png" alt="Image" /></td>
<td><img src="image17.png" alt="Image" /></td>
<td><img src="image18.png" alt="Image" /></td>
</tr>
<tr>
<td><img src="image19.png" alt="Image" /></td>
<td>SCC along seam welds</td>
<td><img src="image20.png" alt="Image" /></td>
<td><img src="image21.png" alt="Image" /></td>
<td><img src="image22.png" alt="Image" /></td>
<td><img src="image23.png" alt="Image" /></td>
<td><img src="image24.png" alt="Image" /></td>
</tr>
<tr>
<td><img src="image25.png" alt="Image" /></td>
<td>A.O. Smith Flash welds</td>
<td><img src="image26.png" alt="Image" /></td>
<td><img src="image27.png" alt="Image" /></td>
<td><img src="image28.png" alt="Image" /></td>
<td><img src="image29.png" alt="Image" /></td>
<td><img src="image30.png" alt="Image" /></td>
</tr>
<tr>
<td><img src="image31.png" alt="Image" /></td>
<td>SCC in dents</td>
<td><img src="image32.png" alt="Image" /></td>
<td><img src="image33.png" alt="Image" /></td>
<td><img src="image34.png" alt="Image" /></td>
<td><img src="image35.png" alt="Image" /></td>
<td><img src="image36.png" alt="Image" /></td>
</tr>
<tr>
<td><img src="image37.png" alt="Image" /></td>
<td>Circ. SCC</td>
<td><img src="image38.png" alt="Image" /></td>
<td><img src="image39.png" alt="Image" /></td>
<td><img src="image40.png" alt="Image" /></td>
<td><img src="image41.png" alt="Image" /></td>
<td><img src="image42.png" alt="Image" /></td>
</tr>
<tr>
<td><img src="image43.png" alt="Image" /></td>
<td>SCC in deep dents</td>
<td><img src="image44.png" alt="Image" /></td>
<td><img src="image45.png" alt="Image" /></td>
<td><img src="image46.png" alt="Image" /></td>
<td><img src="image47.png" alt="Image" /></td>
<td><img src="image48.png" alt="Image" /></td>
</tr>
<tr>
<td><img src="image49.png" alt="Image" /></td>
<td>SCC next to welds</td>
<td><img src="image50.png" alt="Image" /></td>
<td><img src="image51.png" alt="Image" /></td>
<td><img src="image52.png" alt="Image" /></td>
<td><img src="image53.png" alt="Image" /></td>
<td><img src="image54.png" alt="Image" /></td>
</tr>
<tr>
<td><img src="image55.png" alt="Image" /></td>
<td>Long cracks along seam welds toes</td>
<td><img src="image56.png" alt="Image" /></td>
<td><img src="image57.png" alt="Image" /></td>
<td><img src="image58.png" alt="Image" /></td>
<td><img src="image59.png" alt="Image" /></td>
<td><img src="image60.png" alt="Image" /></td>
</tr>
<tr>
<td><img src="image61.png" alt="Image" /></td>
<td>Detection and depth sizing of individual cracks in welds (cap, toes and HAZ)</td>
<td><img src="image62.png" alt="Image" /></td>
<td><img src="image63.png" alt="Image" /></td>
<td><img src="image64.png" alt="Image" /></td>
<td><img src="image65.png" alt="Image" /></td>
<td><img src="image66.png" alt="Image" /></td>
</tr>
<tr>
<td><img src="image67.png" alt="Image" /></td>
<td>Cracks detection in all orientations</td>
<td><img src="image68.png" alt="Image" /></td>
<td><img src="image69.png" alt="Image" /></td>
<td><img src="image70.png" alt="Image" /></td>
<td><img src="image71.png" alt="Image" /></td>
<td><img src="image72.png" alt="Image" /></td>
</tr>
<tr>
<td><img src="image73.png" alt="Image" /></td>
<td>Detection and depth sizing of individual cracks in welds (cap, toes and HAZ)</td>
<td><img src="image74.png" alt="Image" /></td>
<td><img src="image75.png" alt="Image" /></td>
<td><img src="image76.png" alt="Image" /></td>
<td><img src="image77.png" alt="Image" /></td>
<td><img src="image78.png" alt="Image" /></td>
</tr>
<tr>
<td><img src="image79.png" alt="Image" /></td>
<td>Long cracks along seam welds toes</td>
<td><img src="image80.png" alt="Image" /></td>
<td><img src="image81.png" alt="Image" /></td>
<td><img src="image82.png" alt="Image" /></td>
<td><img src="image83.png" alt="Image" /></td>
<td><img src="image84.png" alt="Image" /></td>
</tr>
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