Technical Specifications

# LYNCSTM

## Weld inspection and corrosion mapping scanner





# WELD INSPECTION & CORROSION MAPPING SCANNER

Modular scanner for phased array corrosion mapping and weld inspection with up to six probes.

LYNCS<sup>™</sup> is an advanced modular ultrasonic inspection scanner that has been designed by experts to provide Phased Array corrosion mapping and weld integrity assessment. It is the first truly versatile system that allows users to interchange between weld inspection and advanced corrosion mapping in less than 1 minute.

**LYNCS WI** weld inspection configuration can accommodate up to 6 PA and/or TOFD probes and has a dual-bar structure for enhanced stability and probe placement accuracy. It is a toolless scanner with an interchangeable design, making it ideally suited to all weld inspection configurations.

**LYNCS CM** corrosion mapping arrangement is ideally suited to vessel and pipework inspection. It has an extremely low profile and lightweight design, making it the most suitable option for rope access deployment and heavily congested pipework.

### Features

- Inspect assets from 100 mm (4 in) diameter.
- Quick and easy PAUT probe setup.
- Easily switch from corrosion mapping to weld inspection.
- Low profile for tightly spaced pipe racks 110 mm (4.3 in).
- Magnetic wheel to adhere to the inspection surface.
- Seamless integration with the M2M Gekko and M2M Mantis.
- Easily apply brakes to stop slippages.
- Onboard scanner controls for pause and index.
- Scalable solution for a variety of applications.
- Lightweight, ideal for rope access and tight spaces.



### LYNCS<sup>™</sup> WI -Weld Inspection Configuration

### **Applications**

- Fabrication and in-service circumferential welds from 100 mm (4 in) to flat plate
- Pressure vessel circumferential welds
- Pipe to elbow/feature welds
- Storage tank/silo welds
- Crack detection, sizing & monitoring
- Corrosion/erosion detection & sizing



#### LYNCS WELD SPECIFICATIONS

| Dimensions                   | Short bar      | 487 × 198 × 109 mm (19.2 × 7.8 × 4.3 in) |  |
|------------------------------|----------------|--|--|
| $(w \times d \times h)$      | Medium bar     | 575 ×198 × 109 mm (22.6 × 7.8 × 4.3 in)  |  |
| Bar width<br>options         | Short          | 412 mm (16.2 in)                         |  |
|                              | Medium         | 500 mm (19.7 in)                         |  |
| Maximum width of tool posts  |                | 40 mm (1.5 in)                           |  |
| Maximum number of tool posts |                | 6  |  |
| Tool posts compatibility     |                | 5 mm male pin wedge.                     |  |
|                              |                | 5 mm female wedge                        |  |
|                              |                | 8 mm female wedge                        |  |
| Weight:<br>scanner with      | 2 x tool posts | 3 kg (6.6 lb)                            |  |
|                              | 4 x tool posts | 3.5 kg (7.7 lb)                          |  |
|                              | 6 x tool posts | 4 kg (8.8 lb)                            |  |
| Circumferential scanning     |                | 100 mm (4 in) to flat plate              |  |

#### COMMON ENVIRONMENTAL SPECIFICATIONS

| Minimum surface temperature | -30°C (-22°F) |
|-----------------------------|---------------|
| Maximum surface temperature | +80°C (176°F) |
| Minimum ambient temperature | -20°C (-4°F)  |
| Maximum ambient temperature | +50°C (122°F) |
| Minimum storage temperature | -10°C (14°F)  |
| Maximum storage temperature | +40°C (104°F) |

### LYNCS CM - Corrosion Mapping Configuration

### **Applications**

- Pipework from 100 mm (4 in) to flat plate
- Vessel shell
- Storage, spherical, and silo tank shell
- Marine vessel hull
- Tank floors and ship decks
- Other critical assets

#### LYNCS CORROSION MAPPING SPECIFICATIONS

| Dimensions (w × d × h)   |                   | 742 × 198 × 109 mm (29.2 × 7.8 × 4.3 in) |
|--------------------------|-------------------|--|
| Standard bar widths      |                   | 412 mm (16.2 in) and 667 mm (26.2 in)    |
| Maximum scan width       |                   | 510 mm (20 in)                           |
| Scanner weight:          | without water box | 2.7 kg (6 lb)                            |
|                          | with water box    | 3.5 kg (7.7 lb)                          |
| Circumferential scanning |                   | 100 mm (4 in) to flat plate              |



### WATER BOX SPECIFICATIONS

| Water box mount external<br>dimensions (w × d × h) | 100 × 80 × H: 47 mm (3.9 × 3.1 × 1.8 in) |  |
|--|--|--|
| Water box mount internal<br>dimensions (w × d × h) | 82 × 42 × 47 mm (3.2 × 1.6 × 1.8 in)     |  |
| Water box external dimensions<br>(w × d × h)       | 81 × 41 × 57 mm (3.2 × 1.6 × 2.2 in)     |  |
| Water box internal dimensions<br>(w × d × h)       | 78 × 24 × 25 (3 × 0.9 × 1 in)            |  |

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# LYNCS CHAIN Configuration

| LYNCS CORROSION MAPPING SPECIFICATIONS   |                           |  |
|--|---------------------------|--|
| Diameter range   | 4 in - 12 in/4 in - 32 in |  |
| Compatible configurations  | LYNCS-WI, LYNCS-CM        |  |
| Minimum width<br>1 x Electronic tractor,<br>1 x Chain assembly block,<br>1 x slimline stabiliser mounted | 140 mm (5.5 in)           |  |
| 12 in  | 1.4 kg (3 lb)             |  |

2.75 kg (6 lb)

# LYNCS<sup>™</sup> Packages

32 in

Chain weight:

| 0 |       |
|---|-------|
|   |       |
|   |       |
|   | 81 60 |
|   | 0 00  |

| LYNCS FULL   | LYNCS WI (WELD INSPECTION)   | LYNCS CM (CORROSION MAPPING)   |
|--|--|--|
| Scanner frame with 412 mm (16 in)rails   | Scanner frame with 412 mm (16 in)rails   | Scanner Frame with 412 mm (16 in) rails                                    |
| 2 x tractor units  | 2 x tractor units  | 2 x tractor units  |
| 4 tool posts   | 4 tool posts   | 667 mm (26.2 in) metric rails with 50 mm drilled holes for increment step  |
| 500 mm (20 in) extended rails  | 500 mm (20 in) extended rails  | 676 mm (26.6 in) imperial rails with 2 in drilled holes for increment step |
| 5 m (16 ft) or 15 m (48 ft) Umbilical  | 5 m (16 ft) or 15 m (48 ft) Umbilical  | 5 m (16 ft) or 15 m (48 ft) Umbilical                                      |
| Accessories<br>Tool case<br>Wedge mounting pins kit<br>Irrigation kit<br>Removable central handle<br>8 x cable / hose guides<br>25 replacement seals | Accessories<br>Tool case<br>Wedge mounting pins kit<br>Irrigation kit<br>Removable central handle<br>8 x cable/hose guides | Accessories<br>8 x cable / hose guides<br>25 replacement seals             |
| 667 mm (26.2 in) metric rails with 50 mm drilled holes for increment step  | Transit case   | Water box mount  |
| 676 mm (26.6 in) imperial rails with 2 in drilled holes for increment step   |  | Water box  |
| Water box mount  |  | Transit case and portable site case  |
| Water box  |  |  |
| Transit case and portable site case  |  |  |



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