

# TSC U41

Detection and sizing of subsea surface-breaking cracks





# TSC U41 MODERNIZING SUBSEA SURFACE CRACK INSPECTION

As today's industry is looking to scale the use of auditable NDT methods to all their assets, faster, more flexible, easier to deploy inspections and better reporting capabilities are required. Who else but Eddyfi Technologies to redefine and modernize subsea surface crack inspection with its new TSC U41.

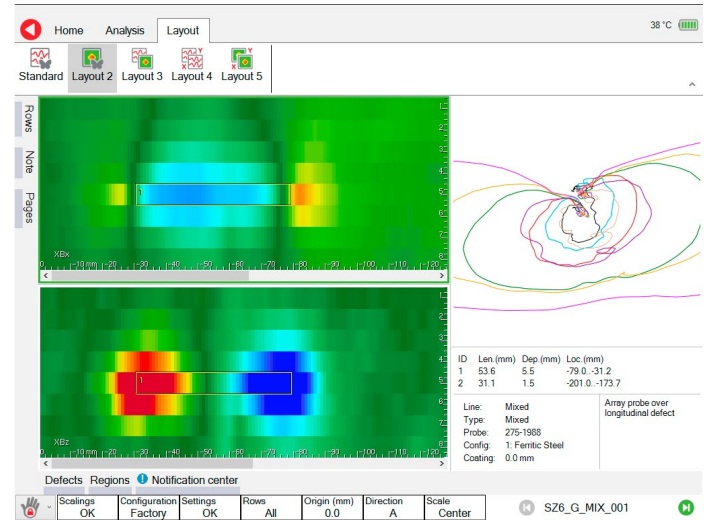
## Modernizing Subsea ACFM

For the last 30 years, ACFM® technology has been used globally as the method of choice for the detection and sizing of subsea surface-breaking cracks. Recognized and approved by many certification bodies, including DNV, ABS and Lloyds, the technique has been used successfully against traditional uncomputerized and more user dependent methods, such as MPI.

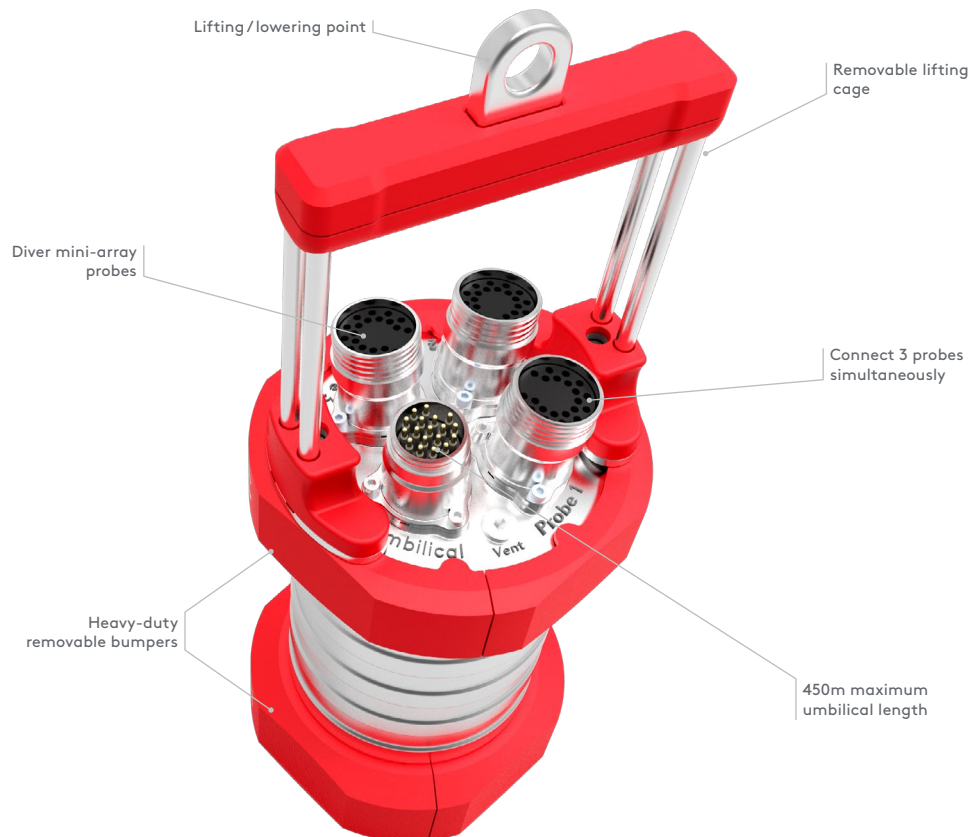
## Applications

- Structural node welds on jackets
- Caisson inspection
- Pipeline damage
- Spudcans
- Welded plate structures
- Mooring systems including chains

## Assist3 Reporting Software



14 × increase in data resolution



# DIVE LESS, INSPECT MORE

Bringing high-quality True ACFM inspection data to the surface.

## Faster inspections

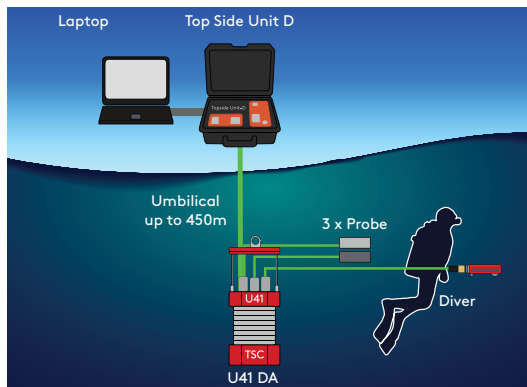
- Connect 3 probes simultaneously to avoid frequent returns to the surface, thus saving time.
- 10 × faster acquisition electronics, improving scanning capabilities and inspection integrity.
- Diver mini-array probe and ROV full-array probes reduces the number of scans and allows for faster recognition and characterization of defects.
- Reduced cleaning requirements, no need to clean to bare metal.
- Probe calibration files are saved on the probe instead of a remote PC. This removes the potential for incorrect probe calibration being used.
- Capable of inspecting corroded surfaces or through non-conducting coatings several millimeters thick.

## Easier to use

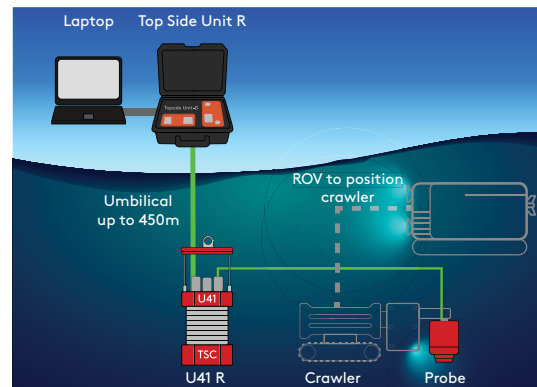
- New Assist3 reporting software version, with a simpler and more modern interface, and with continuous evolution.
- Umbilical reel dramatically reduced in size: 1/3 less weight and 1/3 less storage. Up to 3 umbilicals can be connected for a total length of 450 m.
- Easy to configure communications with support for multiple protocols to ROVs (Ethernet, Extended Ethernet, RS232, RS485).
- Global network of service centers.

## Improved data quality

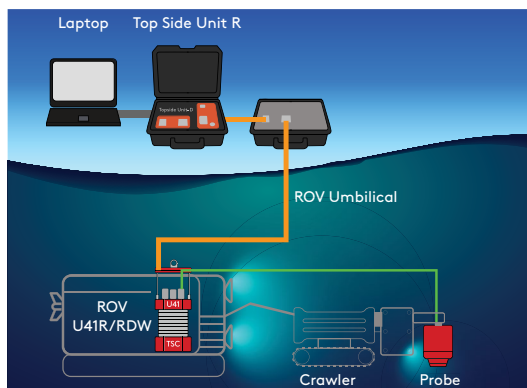
- Increased ACFM signal quality with 14 × increase in data resolution, improving the accuracy of data acquisition with the better ability to zoom on acquired signals.
- Lower noise increases the signal-to-noise ratio, inspect through coatings twice as thick compared to previous model.



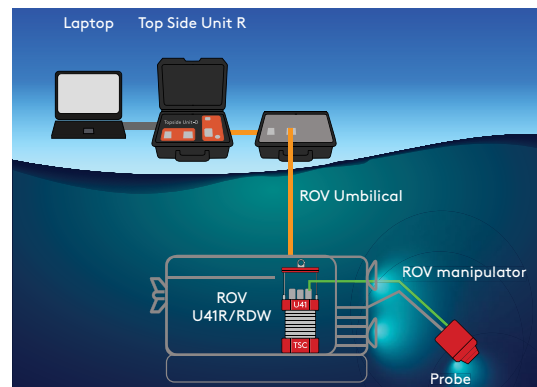
Diver from fixed platform, vessel or from saturation bell (TSC U41D/TSC U41DA)



Crawler deployed from basket (TSC U41R)



Scanner used with ROV (TSC U41R/TSC U41RDW)



Pick-and-place array deployed directly from ROV manipulator (TSC U41R/TSC U41RDW)

# SPECIFICATIONS

MODELS	TSC U41D	TSC U41DA	TSC U41R	TSC U41RDW
Connectors	3 × SENSU2 UW	3 × SENSU2 UW	3 × SENSU2 UW	3 × SENSU2 UW
Max umbilical length	450 m	450 m	450 m	450 m
Array	No	4 × rows mini	Up to 32 × rows	Up to 32 × rows
Communications	Extended Ethernet only	Extended Ethernet only	Ethernet/Extended Ethernet/ RS485/RS232	Ethernet/Extended Ethernet/ RS485/RS232
Depth rating	300 m	300 m	300 m	2000 m
Topside units type	Topside unit D	Topside unit D	Topside unit R	Topside unit R
Bottle dimension	with lifting cage	156 × 156 × 430 mm	156 × 156 × 430 mm	Contact Us
	without lifting cage	156 × 156 × 292 mm	156 × 156 × 292 mm	Contact Us
Bottle weight (in air)	9.2 kg	9.2 kg	9.2 kg	Contact Us
Frequency	Single	Dual	Multiple	Multiple

GENERAL	
Operating temperature range	0–45°C (32–113°F)
Environmental protection (topside unit)	IP64
Probe cable length	5 m (16 ft)
Umbilical cable length	20 m (65 ft) topside integration cable 150 m (492 ft) umbilical extension (Up to 3 can be used in series) (Max total length topside unit to bottle = 470 m (1542 ft))
Serial communications cable length	5m Ethernet cable to PC (supplied) Longer, off-the-shelf, Ethernet cables also can be used
Power requirements	Topside: 110 V AC / 400 mA TSC U41: 48 Vdc / 1A