

MacArtney

MacArtney
UNDERWATER TECHNOLOGY

Research Vessel Equipment
Ole Aarup Mikkelsen, Ph.D.
System Sales Manager
MacArtney A/S

- 12 TSS 500 (TDS)
- 11 TSS 440 (TDS)
- 10 PFD (Depth)
- 9 Laser Z
- 8 Sonar/Ima 7000
- 7 Laser



World-wide sales and service support



- **Group headquarters**
Esbjerg, Denmark
- **Subsidiaries and sales offices**
18 locations in Europe, North America, Asia and Oceania
- **Sales representatives**
26 locations around the world

Founded in 1978 by Martin and Winnie MacArtney

~ 500 employees in group companies

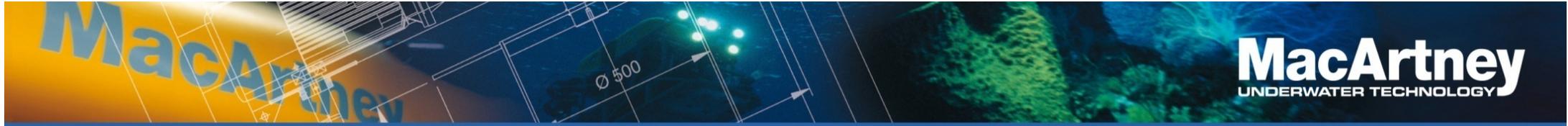
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MacArtney offices





MacArtney is a system solution provider - We design, manufacture, sell and service



Connectivity

Underwater connectivity solutions
- connectors, cables and terminations



Winch and handling solutions

Winch and handling solutions
- winches, A-frames and rotary products



Telemetry

Underwater telemetry systems
- multiplexers and electronics



Remote technology

Remote technology systems
- ROTVs and ROVs



Instruments

Underwater instrumentation systems and products
- sonars, sensors and cameras



Engineering

And we provide system integration of all of the above...

Our industries



Oil and Gas

ROVs, seismic and CSEM survey, cable/pipeline surveys, drill support, construction, IRM, decommissioning



Ocean Science

Universities and research institutes, aquaculture, climate change studies, environmental authorities, coast and port authorities, waterways authorities



Defence

Hydrography, harbour surveillance, coastal and fisheries inspection, sub-marines, MCM



Civil Engineering

Dredging, telecommunications, ship building, tunnel inspection, dams/structures and inspection



Renewable Energy

Tidal and current energy providers, wave energy providers, hydro power, offshore wind



Fishery

Aquaculture, pelagic trawlers, coastal fisheries

What do R/V's need?

- Coastal/shelf sea vs ocean-going vs icebreaking R/V's
- Handle environmental / geotechnical / biological / geological / physical / chemical oceanography overboarding equipment
- R/V's to support scientific operations (mainly?)
- R/V need ~ science need
- R/V operators – academia, commercial enterprises, navies, coast guards
- Reliability, flexibility, adaptability, cost is key
- Ease of use / repair at sea (for crew)
- Safety (for all)
- Environmental concerns (green ship)
- Achieved via lots of equipment, multipurpose equipment or smart equipment
 - Deck equipment (winches, A-frames, cranes)
 - Power regeneration
 - Electronics (use with / upgrade of existing infrastructure)
 - Tow vehicles

Systems – Case example

Pourquoi Pas?



Vædderen

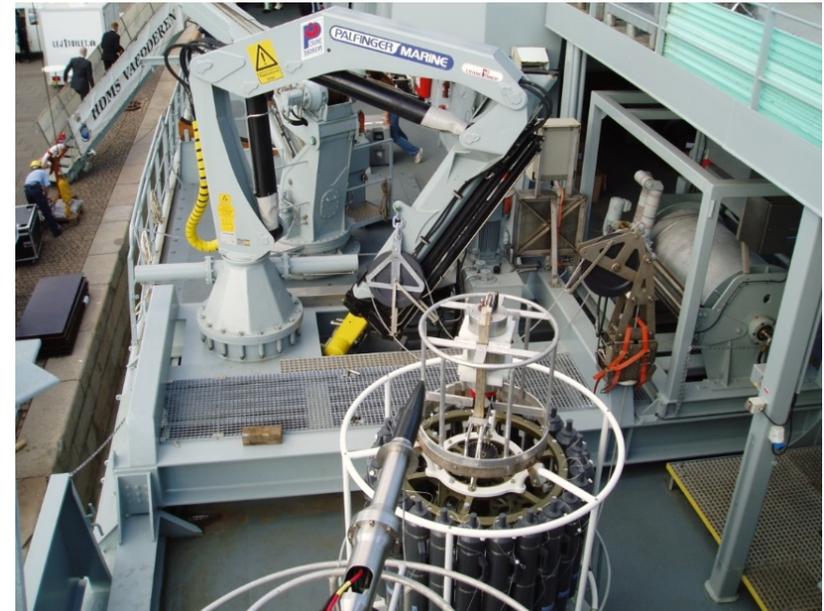


Systems – Case example

Pourquoi Pas?



Vædderen



Complete systems – Case example

JAMSTEC – R/V Kaimei



RA winch with AHC and speed of 3m/s



RA winch with traction



CTD winch



Combined controls, including wireless remotes



Portable multi purpose winch



12.000m traction winch, with AHC and speed of 3m/s



Portable small winch

MERMAC - AHC



MERMAC R series



MERMAC S series



MERMAC A series



MERMAC D series



MERMAC winches – active heave compensation (AHC)

Complete systems – Case example

UCLA – CORMAC M2 winch w/
davit for rigid hull inflatable



Complete and versatile LARS solutions

Complete current meter system comprising:

- CORMAC Q5
- MERMAC A10 (800 kg A-frame) certified to DNV lifting appliances
- Umbilical
- Current meter/CTD
- Slip ring
- Spooling and termination
- Portable

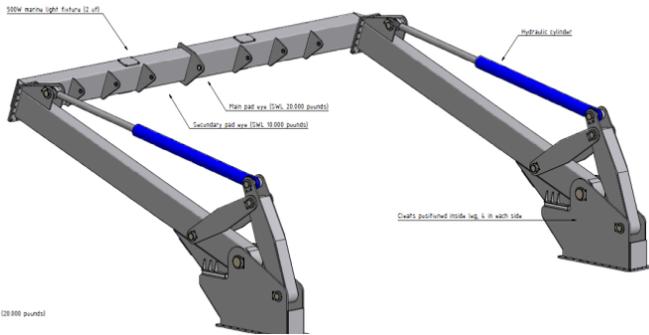


Parked position

Operating position

Launch And Recovery Systems – Case example

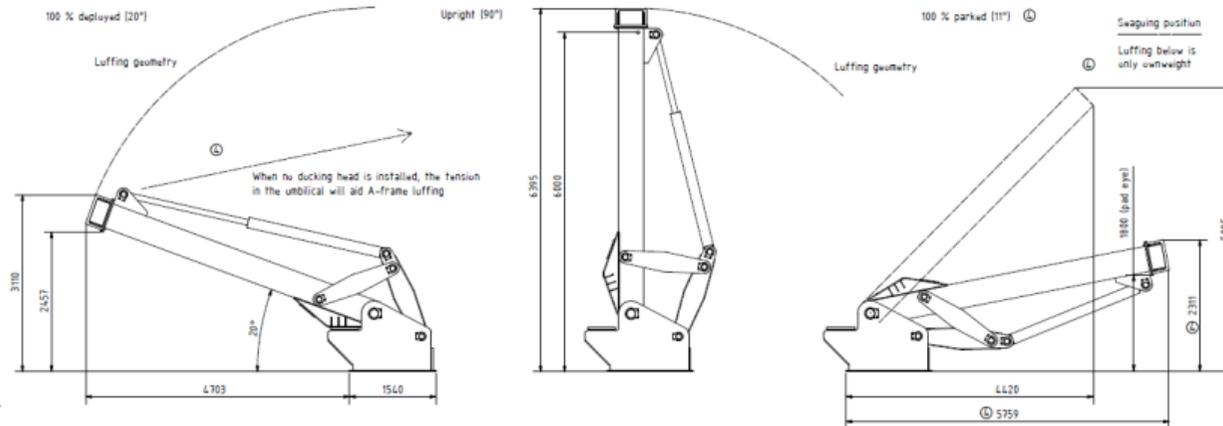
SOI - Full Ocean Class A-Frame R/V Falkor



SWL
100% deployed 81 kN (20,000 pounds)

Weight
7700 kg

Movement stages



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Ocean science



NEXUS multiplexers



NEXUS MK III



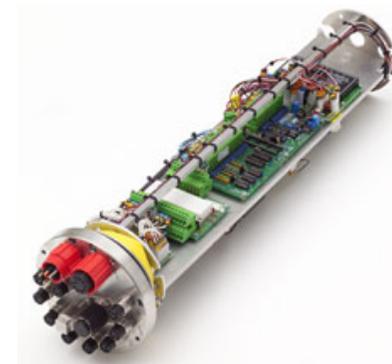
NEXUS MK IV



NEXUS MK VI



NEXUS MK E



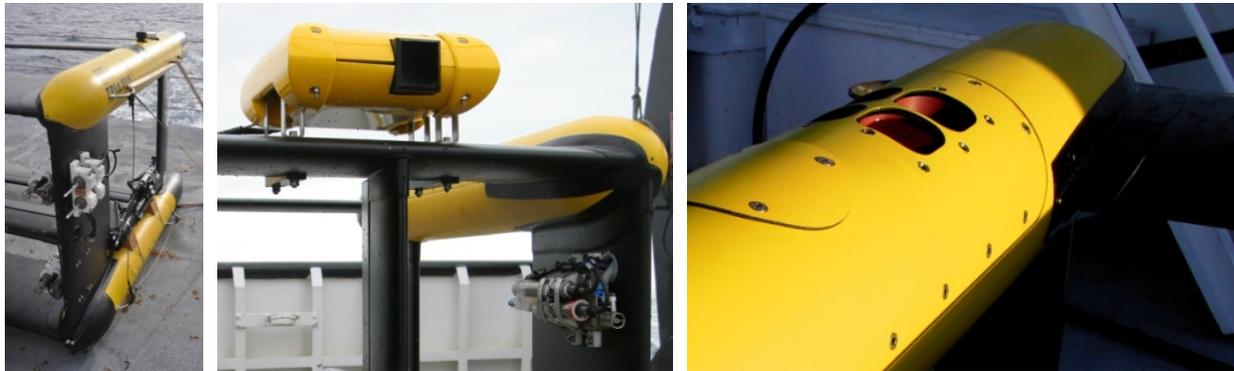
NEXUS MK C



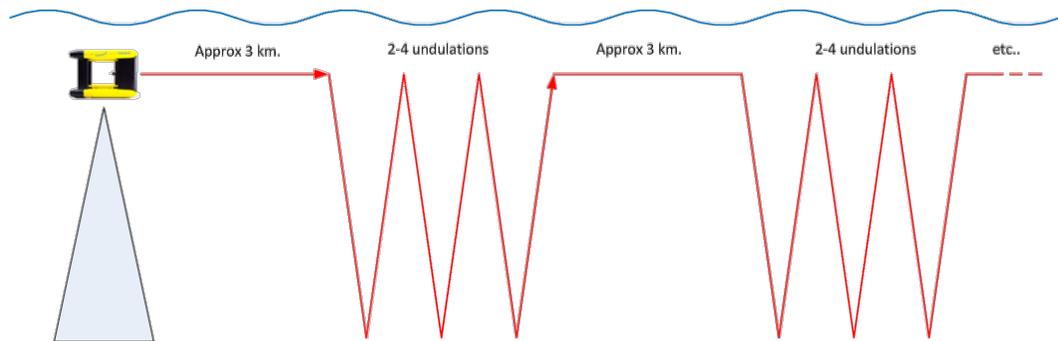
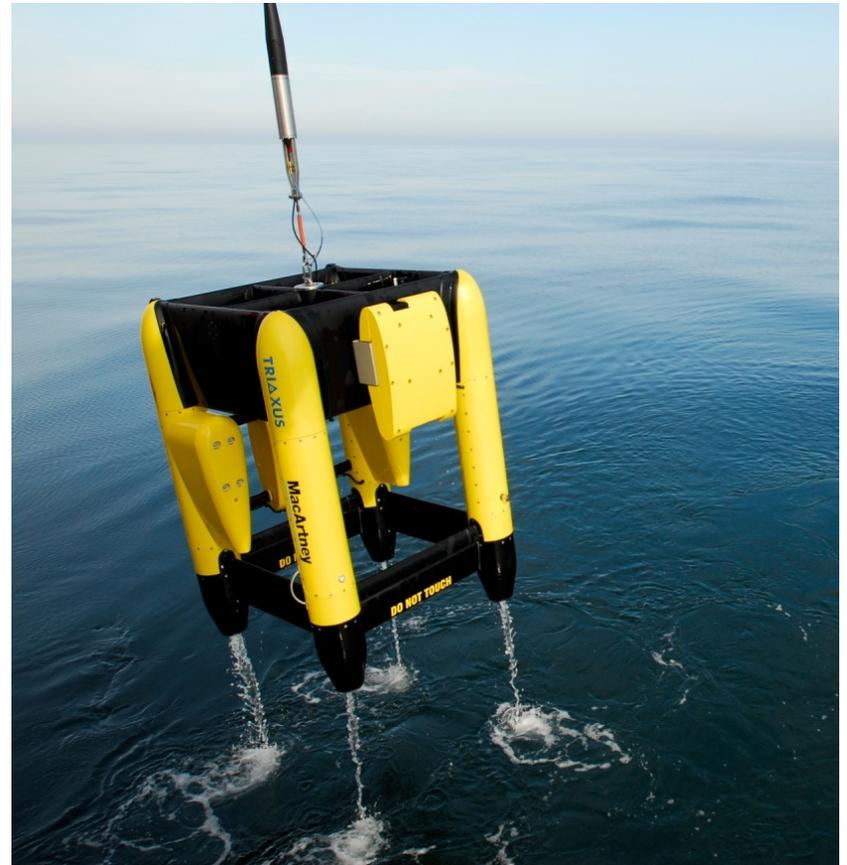
NEXUS MK VII

TRIAXUS

TRIAXUS



A multitude of sensor configurations

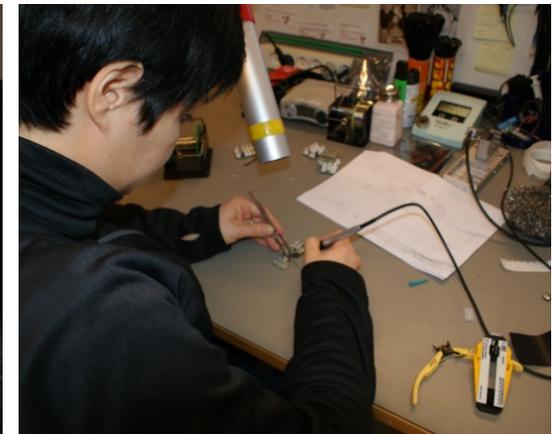
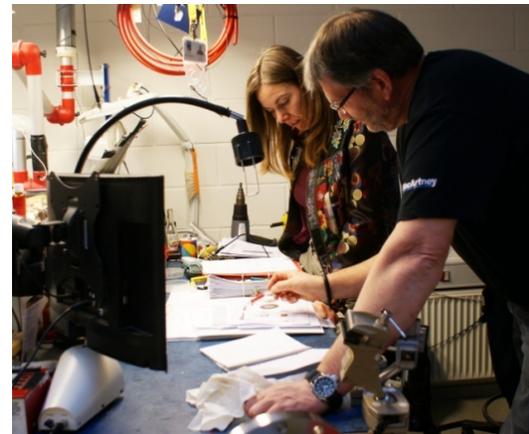


Advanced and flexible sampling strategy

System integration, project management and engineering

Disciplines and services

- Acoustics
- Robotics
- Electronics
- Fibre optics
- Hydrodynamics
- Hydraulics
- Software
- Mechanics



Complete Testing
Slip Ring Installation
Umbilical Termination
Spooling



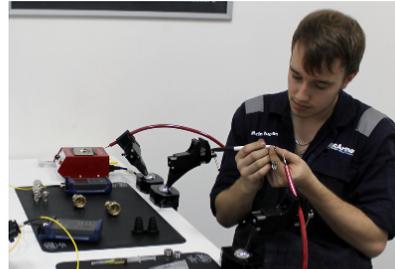
Service and support facilities



Moulding and cable assembly



Slip ring and repair maintenance



Fibre optics



Calibration and maintenance service



Hydrostatic pressure testing



Electronic service and inspection



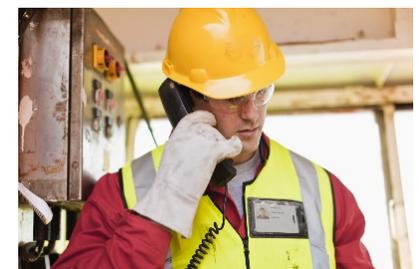
Cable terminations



On site repair



Field installation



24/7 emergency support

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Thank you for your attention

For further information
please contact us at:

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