



Unique Group

Load Testing Solutions

PRODUCT REPORT

Wire Rope Inspection & Monitoring System



Wire Rope Inspection & Monitoring System

Product Details

Magnetic NDT of wire rope is a recognized method in regular use for inspection in deep mines and cableways for a better part of three decades.

Water Weights with over 25 years experience in the crane industry possess extensive knowledge of customer requirements. Building on this experience, we have developed with key partners a line of wire rope monitoring products for permanent installation, or portable inspection on cranes.

Condition Monitoring

Permanently installed on cranes, elevators, & cableways, the system allows constant monitoring and data logging of the wire rope condition, allowing for trending and establishing predictive maintenance schedules. The process eliminates downtime for unexpected activities such as rope replacement, and helps the budget by only replacing the wire rope when necessary or during planned maintenance schedules.

Periodic Testing

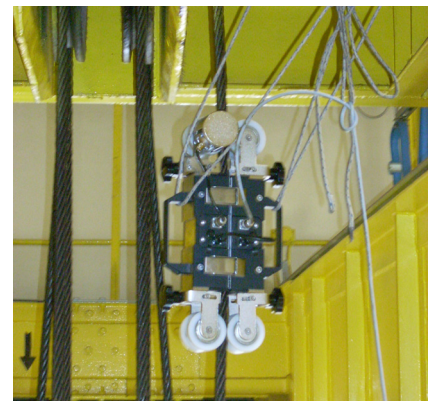
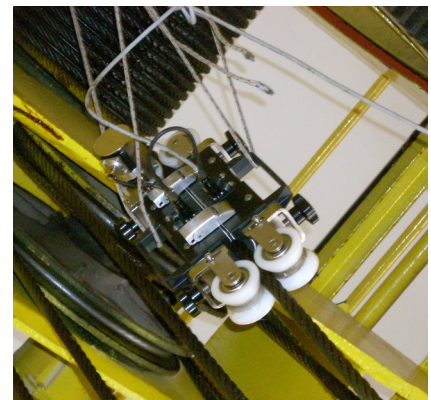
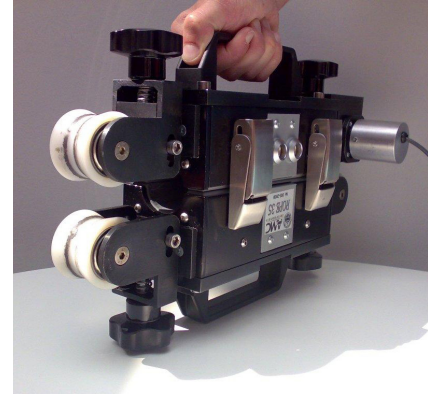
The system is portable and lightweight enabling use during planned inspections and maintenance periods.

The system uses a method based on the magnetization of the wire rope, detecting discontinuity such as broken wires or corrosion pits through special sensors as the rope passes through the device.

It is a dual function device, detecting both local faults (LF) and total change of metallic area (LMA) such missing wires, continued corrosion, and abrasion not readily identified through visual inspection.

With it's global presence expanding, Water Weights provide products and services aimed at optimizing lifespan and performance of critical lifting equipment.

Our systems provide real time measurement of critical components to support the daily operation and long term maintenance of cranes.

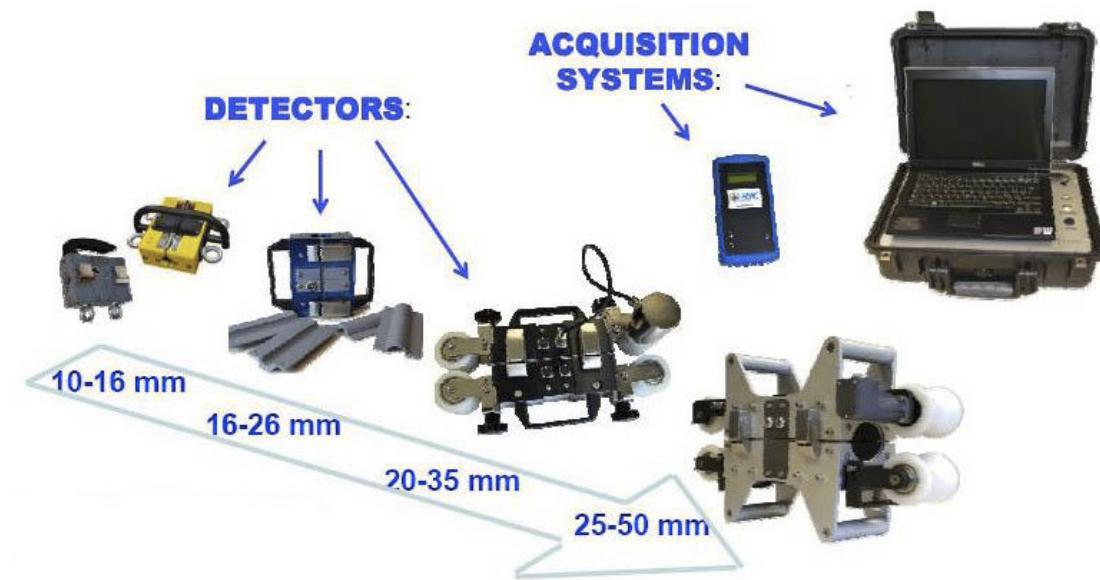


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All devices are certified in accordance with UNI EN 12927/8



In partnership with AMC Instruments, we offer a wide range of magnetic heads for industrial lifting.

The standard range of AMC devices is as follows:

- + AMC Rope22: rope diameter range from 12 up to 22mm
- + AMC Rope40: rope diameter range from 20 up to 42mm
- + AMC Rope65: rope diameter range from 40 up to 65mm

Here are the non-standard systems. A quote can be requested for these special devices

- + AMC OPEN 60-90: for carrying ropes of cableways
- + AMC Rope90: rope diameter range from 60 up to 92mm
- + AMC Rope135: rope diameter range from 90 up to 135mm
- + AMC Rope160: rope diameter range from 130 up to 160mm
- + AMC Lift: rope diameter range from 6 up to 13mm, for elevator
- + AMC Belt: for elevator belts



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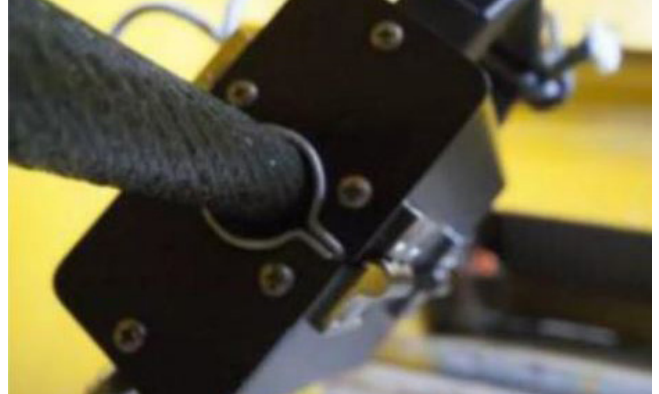
Product Report

AMC ROPE 22

- + Range: from 12mm up to 22mm
- + Magnets: NdFeB
- + Centering system + Encoder: Optional
- + Sensors: LF
- + Weight: 7 kg (excluding centering system)
- + Optional reduction kit (bushings/sensors): From 8mm to 13mm

Additional Features:

- + IP 68 and full compatibility with AMC IASH acquisition system
- + Developed in according to EN12927-8 (optional certificate)

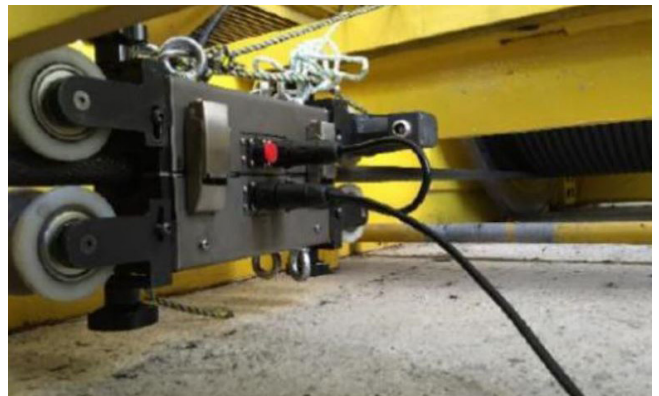


AMC ROPE 40

- + Range: From 20mm up to 40mm
- + Magnets: NdFeB
- + Centering system + Encoder: Included
- + Sensors: LF
- + Weight: 17 kg (including centering system)
- + Optional reduction kit (bushings/sensors): From 14mm to 20mm/
from 8mm to 13mm

Additional Features:

- + IP 68 and full compatibility with AMC IASH acquisition system
- + Developed in according to EN12927-8 (optional certificate)

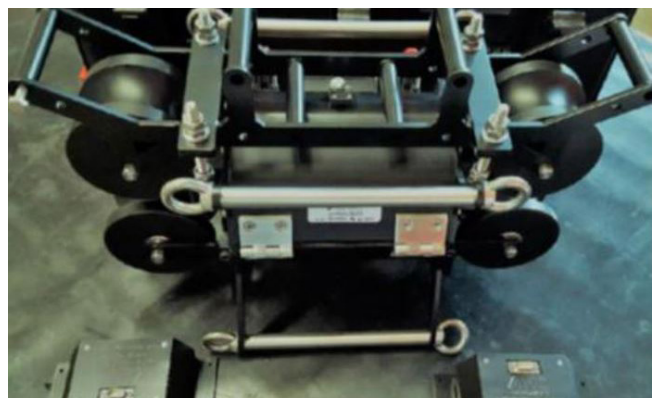


AMC ROPE 65

- + Range: From 40mm up to 65mm
- + Magnets: NdFeB
- + Centering system + Encoder: Optional
- + Sensors: LF
- + Weight: 25 kg (excluding centering system)
- + Optional reduction kit (bushings/sensors): From 30mm to 40mm/
from 20mm to 30mm/from 10mm to 20mm

Additional Features:

- + IP 68 and full compatibility with AMC IASH acquisition system
- + Developed in according to EN12927-8 (optional certificate)



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Acquisition Systems

The AMC IASH is the standard AMC acquisition system, that is compatible with all the measuring head supplied by the company. This device allows to acquire the signal, view the diagrams in real time, store the data and elaborate the results.

The PC, running the software AMC Rope-Lift Monitor®, is included in the kit.

A different kind of system is available: the AMC IASXR. This is a little box that can be connected to the customer PC through USB connection. In this case the PC is not included. A full version of AMC Rope-Lift Monitor® can be downloaded and installed on the customer PC. The license for one machine is included.

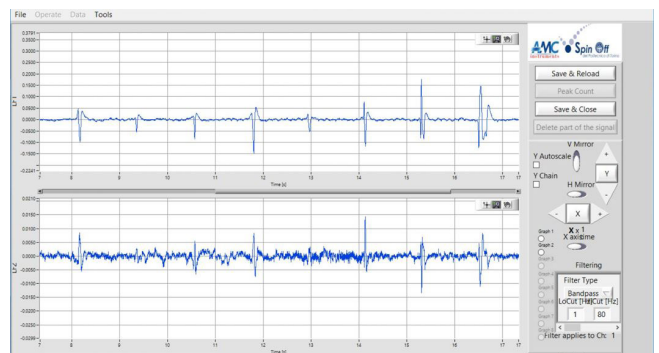
Acquisition-Post processing Software

AMC Rope-Lift Monitor® is a tool that allows to acquire the data from all the measuring heads developed by AMC Instruments.

It has 2 different macro-environments:

- + The acquisition tool: here the customer can acquire the signals, regulate the filters (low/band pass), choose the correct measuring head, set the encoder characteristics and so on. The trace(s) is (are) shown in real time on the PC screen and the inspector can immediately see the defects on the rope. All the acquisitions are performed in time. This means that the clock is not given directly by the encoder, but it is internally generated. The encoder signal is acquired and connected to the time, so that the diagrams can be shown both in time and in meters. After years of development on the field, AMC decided to choose this method in order to avoid problems if the encoder slips during the acquisition (due grease, for example). In this way it is also possible to perform the acquisition without the encoder.

- + The post processing tool: here the inspector can modify the windows sizes, change the filters, cut some portions of diagrams, flip the traces and so on. From this menu it is also possible to print the diagrams on the final report.



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Unique Group's Buoyancy & Ballast products are available for hire or purchase from more than 20 other worldwide locations via our network of independent partners. Please contact us for more details.