

Measuring Head MH-120



Destination:

Measuring Head **MH-120** is designed for Non-destructive Inspection (**MRT- Magnetic Rope Testing**) of Wire Ropes. **MH-120** is part of the **LRM[®]XXI** Diagnostic System.

Measuring Range:

- Standard solution: nominal diameters from **70mm** up to **102mm**.
- Dedicated solution: the measuring range of the MH-120 model can be shifted about **+10%** at the customer's request.

NOTE:

Dedicated Measuring Head solution for MRT inspection of the locked coil construction of wire rope and umbilical armour is required.

Operation with LRM-XXI diagnostic system:

- Guiding system: slides (preferred for strands wire ropes) or wheels. One adjustable set of guiding system for the entire test range.
- Recorder types: **LRM[®]XXI** or **LRM[®]XXI-B**.
- Encoder types: detachable solution types **LRM[®]RI-1** or **LRM[®]RI-2** (ability to operate in time mode, without encoder).
- Connection cables: All types of **LRM[®]CA** connection cables with lengths from 0.5m to 60m.

Operating temperature range:

- From **-25°C** up to **55°C**.

Built-In Sensors:

- **LF (Local Fault)** based on **MFL Method (Magnetic Flux Leakage)**:
 - Magnetic flux to analog signal converter based on copper coils.
 - Dedicated to detecting short/long wire discontinuities, corrosion pitting, strands loosening, fatigue changes in wire material.
 - Dedicated **LF Sensor Inserts (LF-I)** - 2 types sets.
 - Speed compensation of LF signals is implemented - Amplitude of LF sensor indication is not dependent on inspection speed in range from 0,05m/s up to 10m/s.
 - Accuracy of LF indications according to EN12927:2019 and ASTM E1571-11 standards.
- **LMA (Loose of Metallic Area)**:
 - Magnetic field to analog signal converter based on hall effect elements.
 - Dedicated to detecting changes in metallic cross-sections area caused by mechanical abrasion or corrosion. It also detects shape deformation and fatigue-related material changes, wire breaks with longer distance between broken ends.
 - Accuracy of LF indications according to ASTM E1571-11 standard.
 - The amplitude of the LMA indication is independent of the inspection speed.

NOTE:

The application of LF and LMA sensors allows to meet the discard criteria according to ISO 4309:2017 (Annex C) as well as EN 12927:2019 where the LMA sensor is not required.

Construction:

- IP Ratings for all components is minimum IP67 (The MH underwater operational solution available upon request).
- Strong magnetic field due to NdFeB permanent magnets.
- Durable against mechanical damage, external and chemical factors due to composite housing construction of stainless steel and nylon.
- Simple design, no protruding parts, very easy to clean from grease with available chemicals.
- Dedicated attachment points for rigging.
- Transported in heavy-duty, waterproof plastic cases with wheels.

Dimensions & Weights:

- Dimensions (with guiding system):
 - Length: 680mm.
 - Height: 260mm.
 - Width: 270mm.
- Weight:
 - Net weight: 57kg.
 - Gross weight: 60kg.

NOTE:

At the customer's request, the dimensions of the MH can be customized to meet the requirements of conducting MRT inspections in areas with limited space or access.