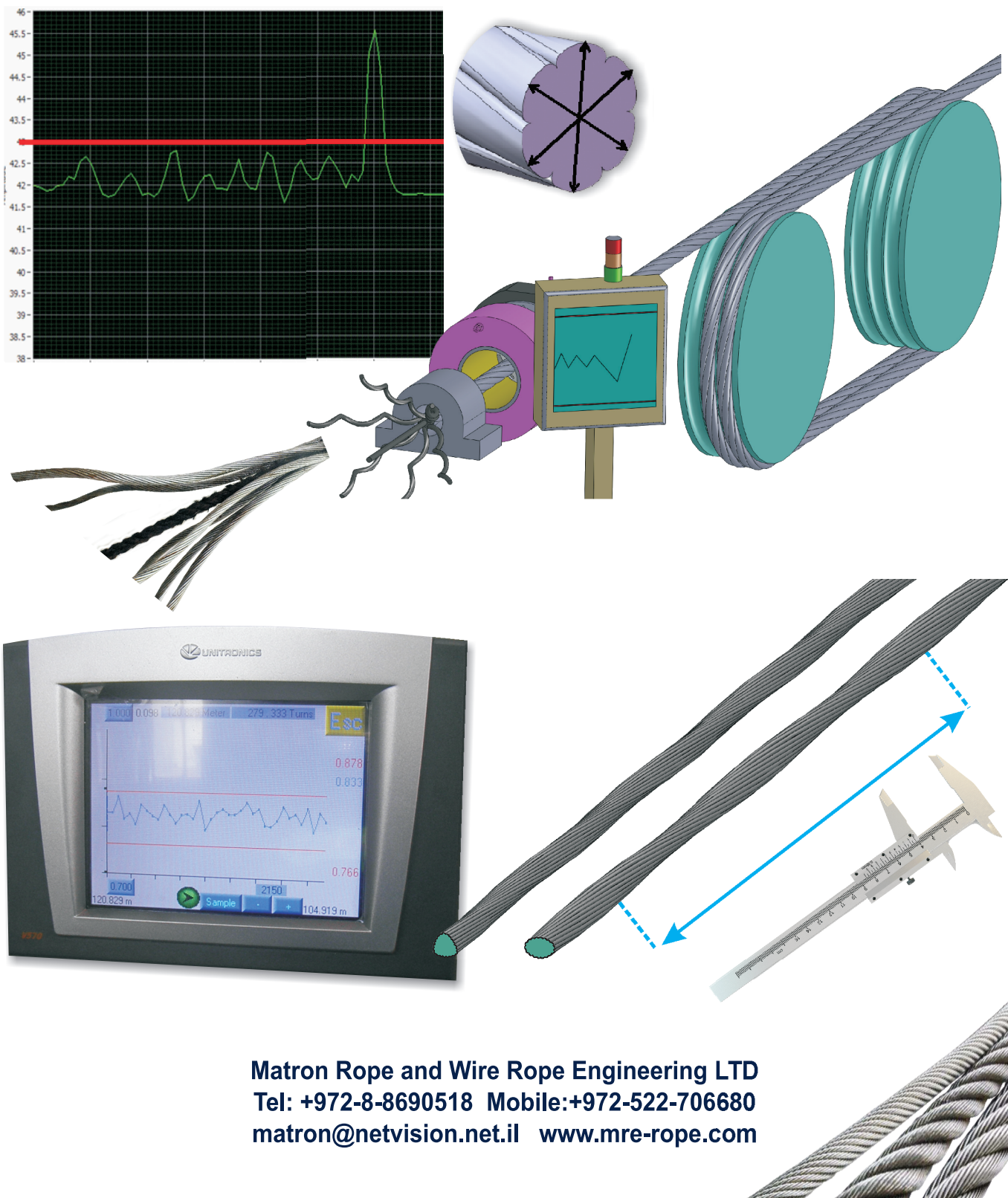


In Line Monitoring for Stranding & Rope Closing



M.R.E. develops and implements state-of-the-art in-line monitoring technology for rope manufacturers.

- Improved rope quality
- Optimized rope production
- Optimal machine parameter settings
- Cost-savings in production
- Improved production reliability



Products and Services

M.R.E.'s proprietary in-line monitoring technology detects underlying faults in the stranding and closing processes of shaped strand ropes.

- In-line monitoring of geometrical features of un-circular shaped strands during the stranding process (twist level, surface anomalies, profile dimensions, etc.)
- In-line monitoring of geometrical features of ropes constructed of shaped strands during closing (diameter, ovality, and surface anomalies)
- In-line monitoring of wires and strand tension during stranding and closing processes

We design the instruments according to production and plant conditions- commissioning the process and providing full service.

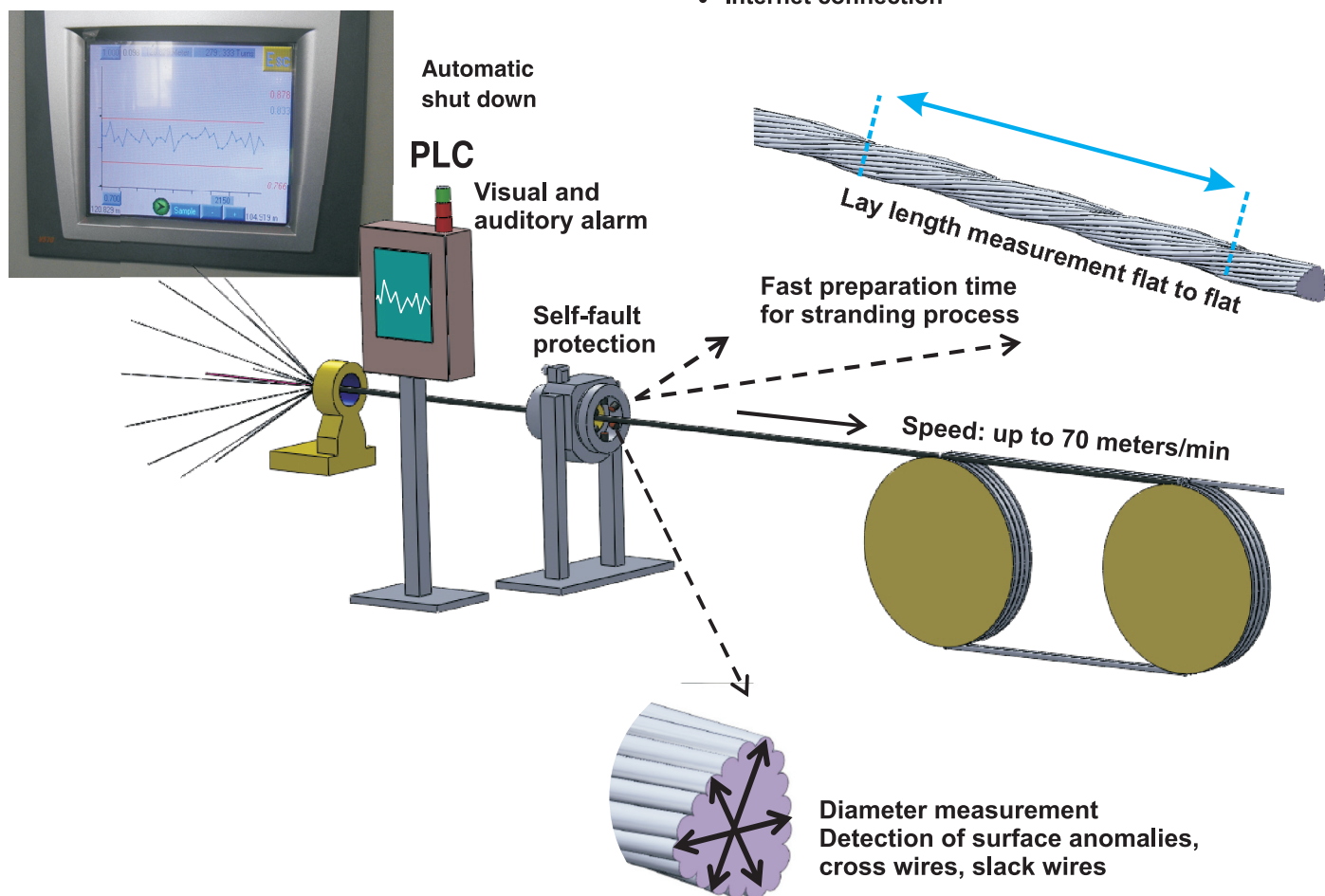
M.R.E. technology features international patents and is currently being used by leading rope manufacturers worldwide.

In-line Monitoring during Stranding of Shaped Strands

Matron has developed physical, direct in-line measuring and monitoring technology to detect imperfections along geometrical features of triangular and un-circular strands during the stranding process. This technology ensures that any defects such as faulty flat lay length, cross wire, faults in the strand core, and imperfections at the edge or flat of strands will be detected.

With stringent monitoring parameters, **no faulty strand will reach the closing process.**

- In-line display of critical measurement parameters
- Data recording
- Operator interface: production parameter and limit configurations
- Internet connection



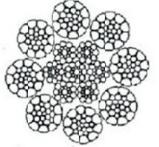
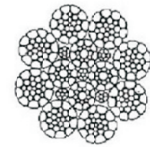
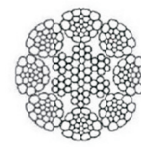
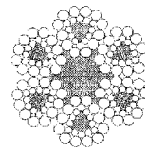
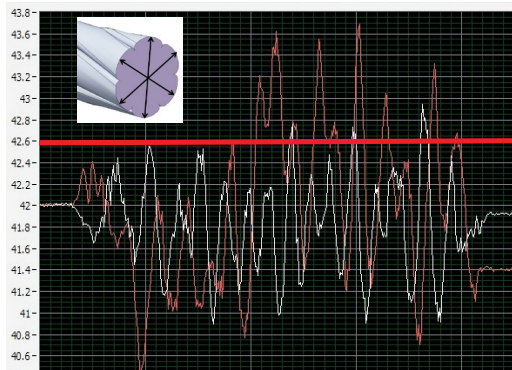
In-Line Strand Monitoring Models:

- **STRTP:** Monitors the stranding of TRIANGULAR strands, programmed for planitar stranding machines, up to 20 meters/min stranding speed.
- **STRTT:** Monitors the stranding of TRIANGULAR strands, programmed for tubular stranding machines, up to 70 meters/min stranding speed.
- **STRFP:** Monitors stranding of FLAT/OVAL strands, programmed for tubular stranding machines, up to 70 meters/min stranding speed.

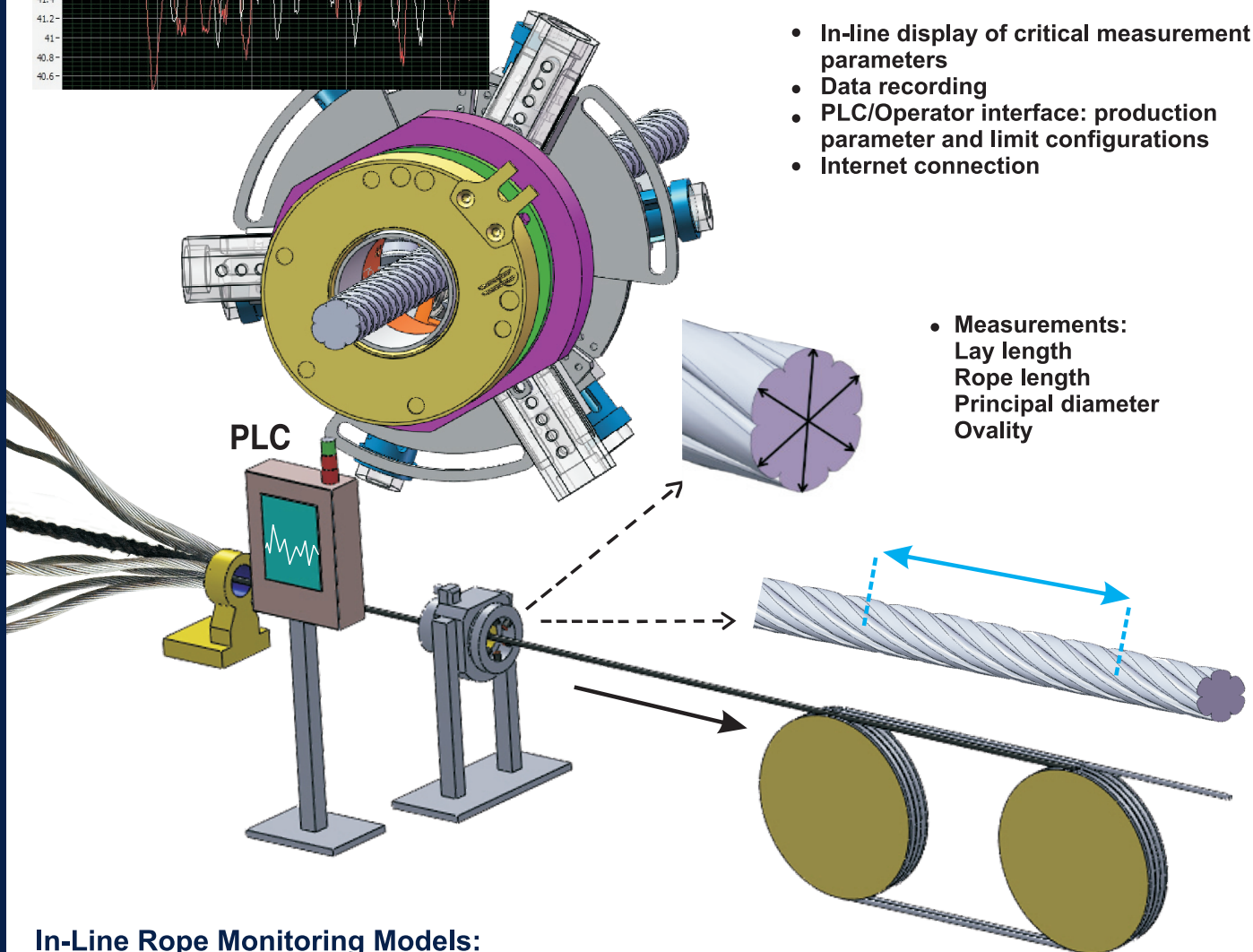
In Line Monitoring for complex Rope Closing Process

Rope closing is a critical process whereby key rope features must be measured and recorded. These include: rope diameter, ovality, local flat turns in triangular ropes, local flat turns in ropes constructed of shaped strands, waviness, etc.

M.R.E.'s advanced in-line monitoring machines monitor the closing process of triangular and flat strand construction to the most stringent standards.



- In-line display of critical measurement parameters
- Data recording
- PLC/Operator interface: production parameter and limit configurations
- Internet connection



- Measurements:
Lay length
Rope length
Principal diameter
Ovality

In-Line Rope Monitoring Models:

- **RCTR:** Monitors flat, compacted and triangular ropes; 22-70 mm diameter.
- **RCMS:** Monitors multi-strand constructions- up to 18 outer strands; 22-180 mm diameter.
- **RCMF:** Monitors flat strand constructions- up to 12 outer strands; 22-70 mm diameter.