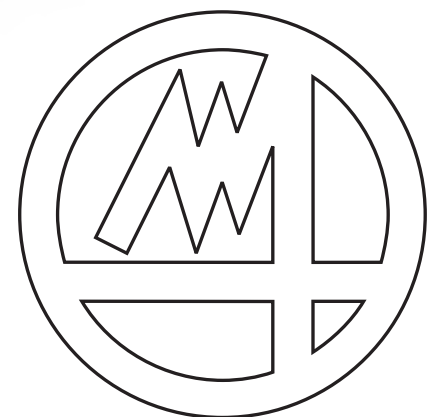
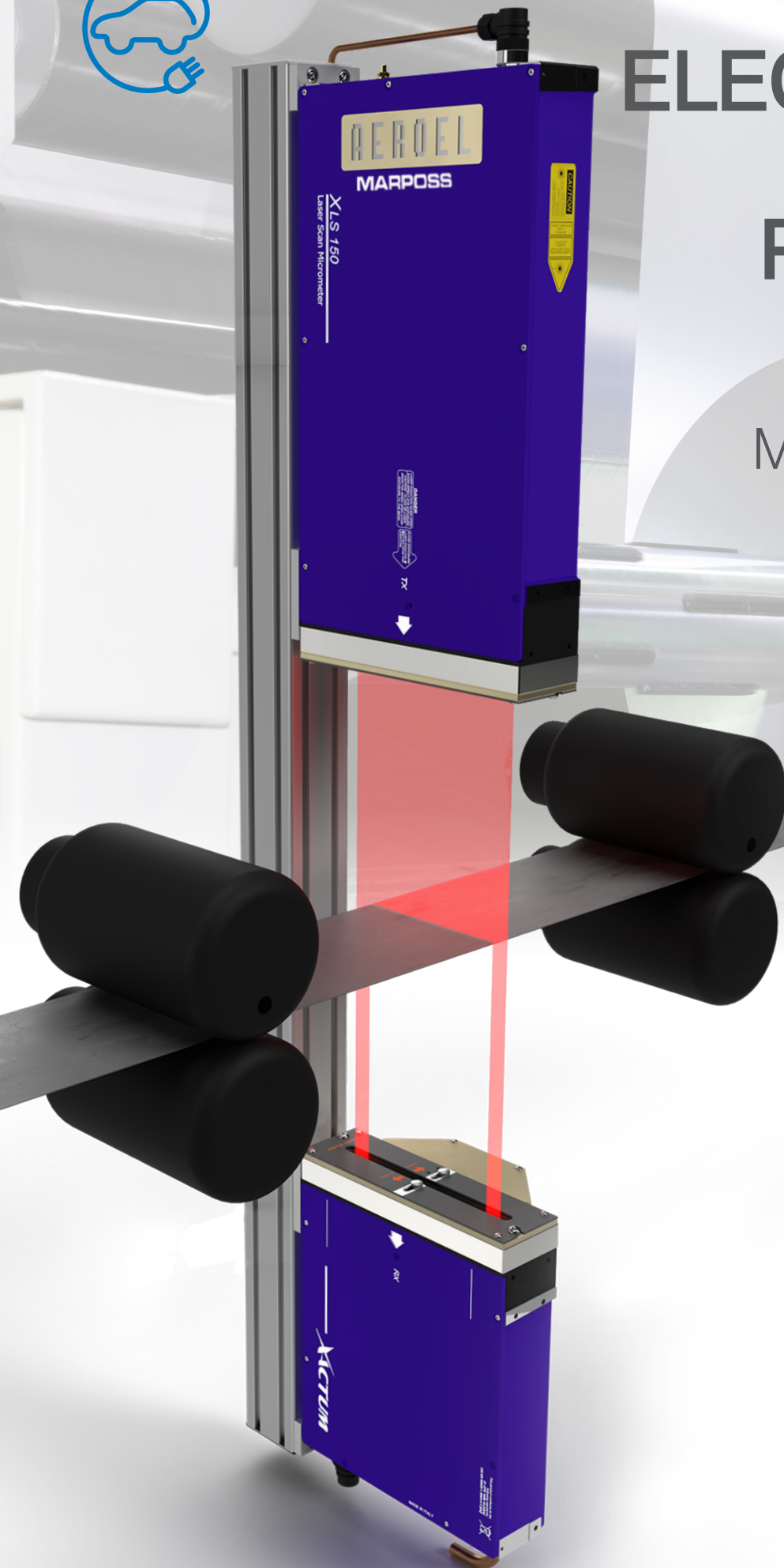




# BATTERY ELECTRODES R2R PROCESS IN LINE WEB WIDTH MEASUREMENT



**MARPOSS**

## Introduction

R2R is a family of manufacturing techniques that involves continuous processing of a flexible substrate that is transferred between two moving rolls of material where additive processes can be used to build film structures in a continuous manner.

In the field of electronic devices, Roll-to-Roll processing (R2R) is a method of producing flexible and large-surface electronic devices on a roll of plastic film or metal foil. R2R is an important class of substrate-based manufacturing processes applied nowadays in the EV market for the Lithium Ion Battery (LIB) such as:

- Metal foil (aluminium and copper) manufacturing
- Plastic film for separator production
- Printed/Flexible thin-film batteries electrodes (cathode and anode)

## Description

The current needs to apply R2R processes in flexible thin-film battery manufacturing are focused on the following process operation:

- Rolling process (electrode foil production)
- R2R Coating and Drying
- R2R Calendering or Compressing
- R2R Slitting or Cutting

In all these operations is important to reduce excessive scrap rates of electrode production by means of in-line quality and control measurement such as non-contact technology sensors for width control.

The width check must be performed strictly within the production line, then carried out with non-contact technologies. In order to perform in-line width measurement on delicate material that cannot be touched and measured with traditional contact solution, MARPOSS/AEROEL proposed its own non-contact technologies: Laser Scanner Micrometers.

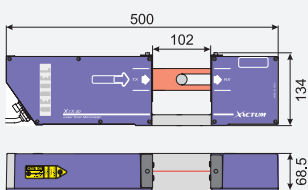
## Benefits

- Scanning Motor with Fluid Dynamic Bearing Technology (without ball bearing) works perfectly, with no wear.
- NO-VAR active thermal compensation allows you to automatically compensate room temperature changes.
- Permanent self calibration and Excellent linearity
- Fully re-programmable with capability to store different application programs
- Direct connection to PC, PLC e NC
- Inputs for reading and synchronizing quadrature encoders

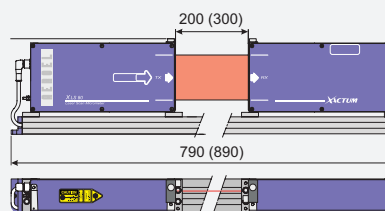
## Versions and Technical Specifications

Version	XLS40	XLS80	XLS150
Measuring Field	40 mm	80 mm	150 mm
Measurable Width	0,06 – 38 mm	0,75 – 78 mm	0,8 – 149 mm
Repeatability (T=1s, $\pm 2\sigma$ )	+/- 0,07 $\mu\text{m}$	+/- 0,2 $\mu\text{m}$	+/- 0,4 $\mu\text{m}$
Scanning Frequency	1.500 Hz		
Laser Source	VLD (Visible Laser Diode); $\lambda = 650 \text{ nm}$		

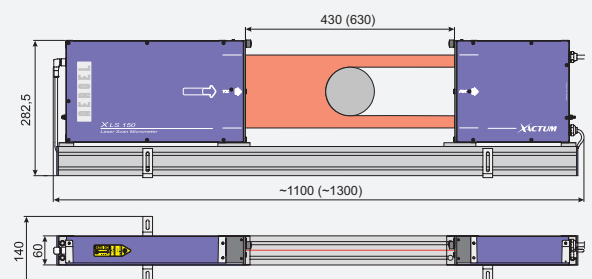
**XLS40**



**XLS80**



**XLS150**



For a full list of address locations, please consult the Marposs official website

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