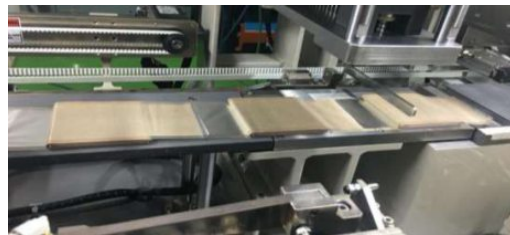
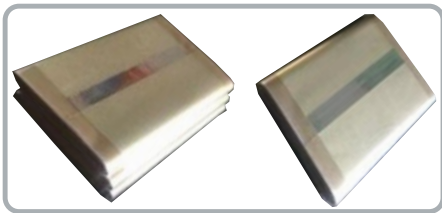
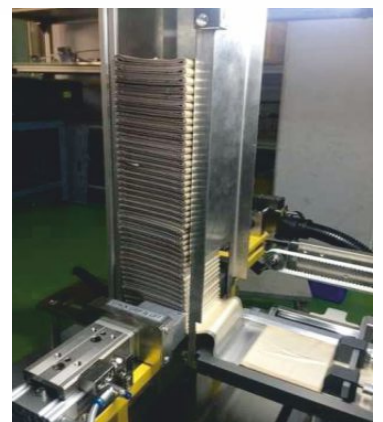


*Smart Winder*<sup>®</sup>

# Automatic Grading Capacitor Winding Machine with Ultrasonic Welding of Foils and Stacking



*Auto Line conveyor with welding*



*Element stacker unit*

**Synthesis**

## Description

Automatic Grading Capacitor Winding Machine (GC 120) is integrated with a complete auto line which constitutes of winding of elements, welding elements and automatic stacking of elements as a single comprehensive solution.

Automatic Grading Capacitor Winding Machine (GC 120) is designed for winding of elements (extended foil type) used in HV Circuit Breakers and Coupling Capacitors.

Wound capacitor elements are automatically extracted, flattened and transferred to a high voltage tester for dry stage testing and sorting.

The tested elements are then automatically transferred to Welding station where the two ends are separated by vacuum suction. One end of the first element is stitched with a pair of TABS while the other end is welded to the subsequent element and the last element is again stitched with a pair of TABS.

Pre-set of Elements after welded is automatically stacked in a Stacker.

The winding machine, welding and assembly station with Stacker as single comprehensive solution.

The machine is controlled by PLC along with a touch panel for ease of operation.

## Features

- Closed loop electronic tension control for film and foil spools give uniform tension, resulting in high quality winding & higher productivity.
- Automatic threading and unloading using collapsible-type mandrel eliminates manual operation and gives good repeatability and enhanced productivity.
- Programmable dielectric length and foil positions.
- Material exhaust sensors reduces wastage.
- Automatic Welding of foils and stacking of elements eliminates manual intervention resulting in faster turn arounds and consistency.
- Robust welded steel structure accurately machined and finished for mounting of various parts ensures perfect alignment of rollers, feeders and sub-assemblies with reference to the winding mandrel.

## Technical Specifications

<b>Particulars</b>	Model : GC 120
Number of Feeders	Film 6; Foil 2
Width of the Foil	40 mm to 110 mm
Width of the Dielectric	50 mm to 120 mm
Thickness of Foil	5 $\mu$ to 8 $\mu$
Thickness of Dielectric	9 $\mu$ to 18 $\mu$
<b>Dry Element Testing and Sorting</b>	
Testing Voltage	0 to 7 kV (Programmable)
Element Thickness	6 mm to 15 mm (Programmable)
Element Length	50 mm to 120 mm
Controller	PLC
<b>Element Welding and Stacking</b>	
Lead TAB Width	25 mm
Lead TAB Thickness	0.1 mm
Lead TAB Length	60 mm to 100 mm (Strip stacked in magazine)
Stack Width	50 mm to 120 mm
Stack Length	50 mm to 120 mm
Stack Height	300 mm to 1000 mm

## Options

- Capacitance measuring unit and data logging
- Automatic Edge Alignment
- Full Machine Guarding with CE and SP Certification

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