

Beautiful Winding, Maintenance of Low Yield Strength, and High-speed Rewinding

For Interconnector
Rewinding Machine

RSBF-01H



Reduction of changes in material properties of Interconnector caused by rewinding / Solid traverse control prevents the winding from collapsing.

Fluctuation in tension during acceleration/deceleration is reduced to an absolute minimum by application of the minimum tension required and highly accurate dancer control. As a result this device enables high-speed rewinding without increasing the yield strength of the material.

Constant Pitch Bobbin-traverse Control is adopted to keep the material wound at constant intervals. In addition, the Bobbin Edge Detection Function incorporated into the machine automatically corrects dimension errors and attachment errors of the bobbin. It reduces the occurrences of overlaps and gaps at the edge and also reduces material failure by collapse of winding during transportation of the material.



● Interconnector for solar cell in high demand

For Interconnector Rewinding Machine **RSBF-01H**

■ Suppressing the increase in yield strength by stable tension

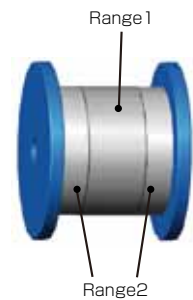
When unstable tension is applied during rewinding, excessive stress is applied to the material that increases the yield strength of the material. In order to solve this problem, we adopted a highly accurate and constant dancer position control, which is one of our strengths. We can apply stable tension with the dancer. The position of the dancer is always stabilized even during high-speed transfer or steep acceleration/deceleration; this reduces the stress applied to the material. In addition, the structure itself is designed to be low-inertia so, even if the dancer is swayed, the fluctuation in tension becomes very small.

Application of tension can be electrically adjusted. A wide range of tension settings is available from 20 cN up to 300 cN, so the appropriate tension can be applied for various models. The tension is set by a touch panel. The reproducibility of the applied tension is very high, and many patterns, including other conditions, can be saved, which makes it possible to reduce problems with production management.

■ Traverse control compatible with various material widths

A traverse width of up to 7 mm can be set. The optimal pitch setting according to various material widths can be realized with the very fine setting unit, which is as fine as 0.01 mm. Winding at a constant pitch without being affected by changes in the speed or winding radius stabilizes the gaps of the wound material and reduces the collapse of winding caused by slips during transportation.

Normally, the winding position of the material is delayed for the traverse operation when it turns at the edge of the bobbin, which causes overlapping of the material. When overlaps are created repeatedly, this causes the winding of the material to collapse. Therefore, the Edge Traverse Pitch Adjustment Function(*) was incorporated. It reduces overlaps by expanding the winding pitch to wider than normal at the edge to reduce the delay in the winding position. The area to adjust the pitch and rate of adjustment can be set arbitrarily using the touch panel.



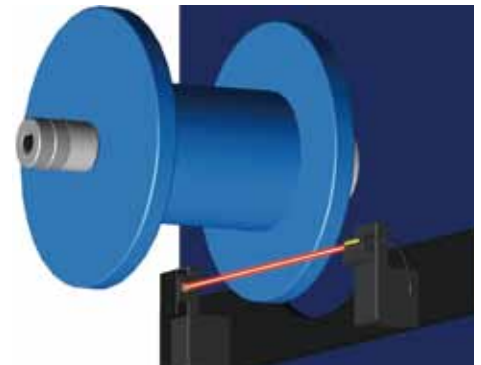
* Traverse Pitch Adjustment Function
The edge pitch(Range2) can be set to 50%~200% of the set pitch(Range1).

■ Automatic Bobbin Edge Detection Function

It is very difficult to always set the winding turn position at the same position as resin bobbins because of the large errors in dimension accuracy and the deformation of the attachment parts caused by their reuse. Therefore, we incorporated the "Automatic Bobbin Edge Detection Function," which automatically detects the edges of the bobbin and corrects even the fine errors that vary among bobbins. With this function, the difficult adjustment work conducted by visual observation can be omitted to save time and labor.

This function measures the inside width of the bobbin by automatically scanning four points around both ends of the bobbin every 90°. The turn point is calculated based on one of the following measurement values—the maximum, minimum, or average width (the last of which can be selected arbitrarily)—and it is reflected in the operation.

In addition, the allowable deviation of the position can be set to make it possible to automatically detect bobbin failures such as errors in attachment and greatly deformed bobbins.



● Automatic Bobbin Edge Detection Function

■ Specifications

Type	RSBF-01H	Traverse width	~160mm
Wire size	Rectangular Wires Range: up to 5.0mm / Thickness: 0.1-2.0mm	Speed	~300m/min(MAX930rpm)
Spool size	Unwinding : Max. flange diameter:φ355mm/Max. overall width:200mm	the Bobbin Edge Detection Function	One-point detection/Four-point detection (selectable from maximum width/minimum width/average width)
	Winding : Max. flange diameter:φ250mm/Max. overall width:200mm		
Tension	20~300cN	Dimensions *Safety Cover included	Unwinding : L1300xW500xH1800mm(the arm length:600mm)
Traverse pitch	~7mm/rev		Winding : L1300xW600xH1700mm

Inquiry

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We offer testing by using various demonstration machines.