Preliminary

Shirt Collar Run-Stitch Machine
(with Auto Pattern Engraving Cutter)
■□ Model U-4212-E

YUHO
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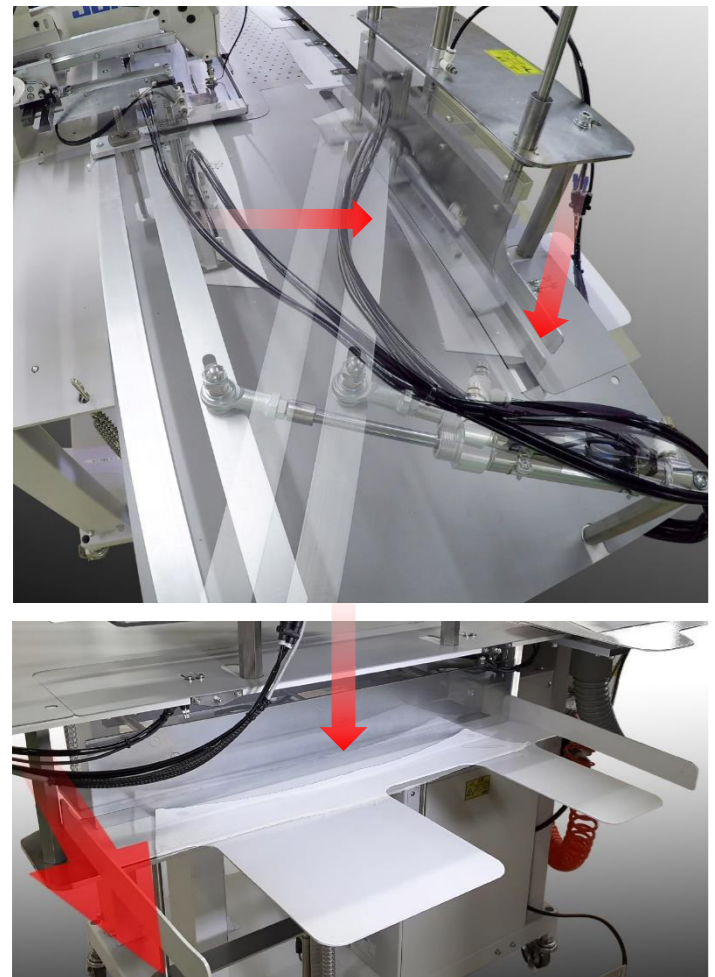http://www.yuhomac.com

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Stacking Section Specially Designed for Collars

After sewing, the materials are neatly aligned and stacked automatically using a drop-in-style stacker.
When the bunch of stacked material reaches a preset number, it is automatically ejected, making it easy to pick it up and transport it to the following production process.

Specifications

★ Sewing Head	JUKI DDL-9000C
	(Direct-drive, 1-needle lockstitch, with Thread Trimmer)
★ Sewing Speed	Max. 4,000 rpm
★ Effective Sewing Area	85 x 550 mm
★ Needle	DP x 17 #11
★ Needle Stroke	35 mm
★ # of Pulse Motor	4-axis
★ # of Pattern Memory	30 Patterns
★ # of points for collar-shape programming	
	Max. 24 points
★ Table Height	930 mm
★ Power Consumption	200 V / AC 700 VA
★ Air Consumption	0.5 MPa 10nl / min
★ Dimensions	W 1,700 x D 850 x H 1,500 mm

Configurations

★ LCD Touchscreen

★ Material Tray and Secondary Material Tray

★ Guide Ruler with Auto Width Adjuster (Based on the width of each collar)

★ Presser Pat with Auto Width Adjuster (Based on the width of each collar)

★ Collar Shape Pattern Creation Functionality
 (X-Y coordinate input method, max. 24 points)

★ Vacuum suction on the table surface

★ 3-Position Workflow Design (Loading, Sewing & Stacking)

★ Built-in End Mill with Shavings Collection Function

★ T.B.D. (Thread Breakage Detector)

★ Stacker for Collars (with Eject function)

★ Air Duster Gun

Daily Output   (In case the collar length is 40cm)

1 cycle	13 sec.
Per 100 pcs.	21 min. 40 sec.

In the interests of product improvement, appearance and/or specifications are subject to change without prior notice.
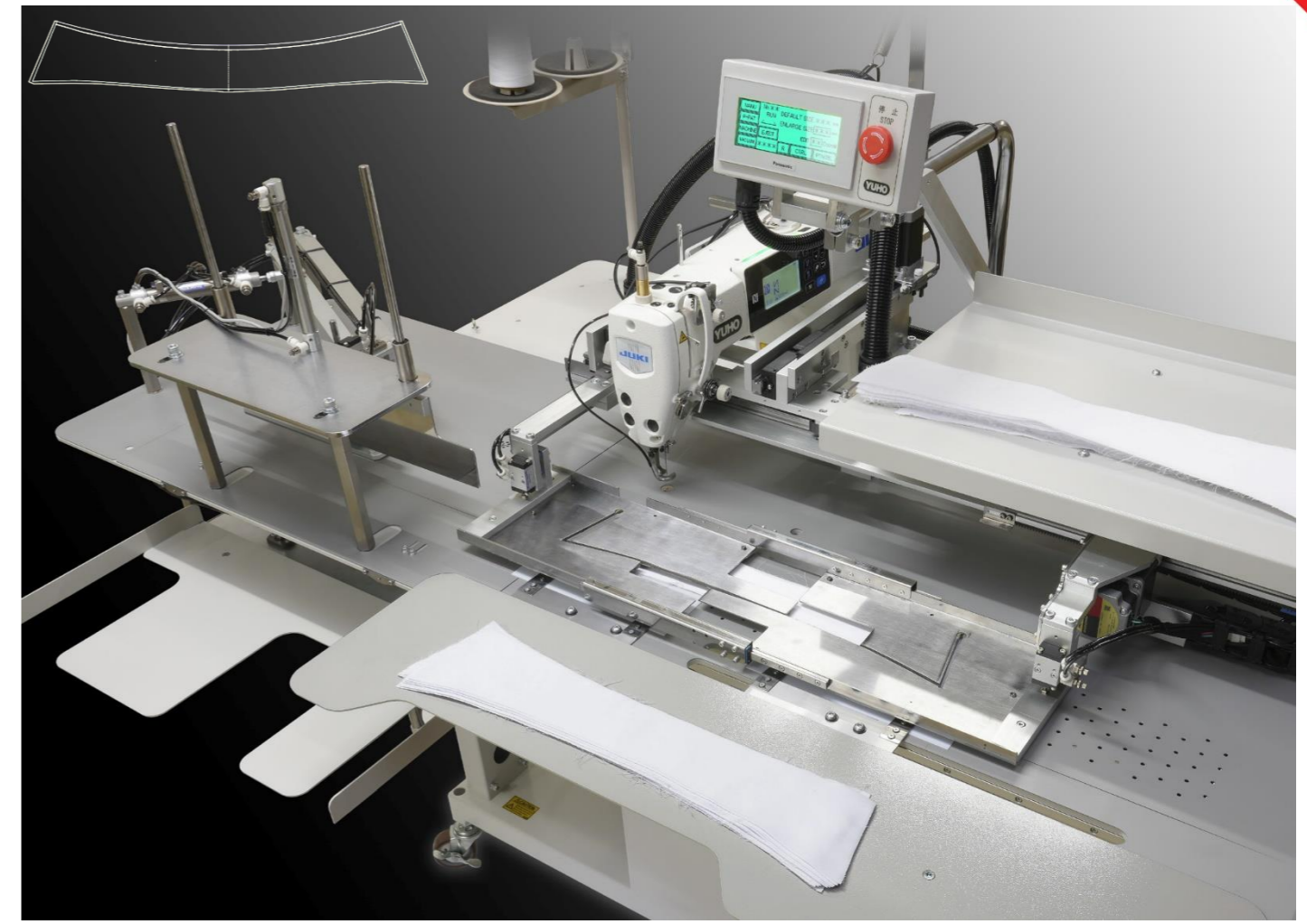
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Zero Lead Time[1], Minimum Idle Time[2].
Create Sewing Pattern Data and Pattern Gauges In-House.

Managing various collar shapes and sizes at low cost and with minimum idle times is required at the collar sewing process of the dress shirt production site. U-4212 allows users to produce sewing pattern data and pattern gauges in-house, and with just one set of sewing pattern data / presser pat / guide ruler, size variations (340 mm ～ 550 mm[3]) can be managed with one touch. Moreover, it features easy operation and a space-saving footprint.

With this automatic machine, YUHO strongly supports the de-skilling, labor-saving, and uniformity of quality in the collar process of shirt sewing factories.

Three Critical Features of the U-4212:

1. The user can produce sewing pattern data, presser pat, and guide ruler in-house.

2. Just input the size; there is no need to replace or adjust the pattern gauges if the collar shape is the same and the size differs.

3. The rapid material loading process realizes the fully overlapping workflow.

*1: When creating sewing pattern data and producing presser pats / guide rulers   *2: When replacing presser pats and guide rulers

YUHO SEWING MACHINE

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YUHO

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Create Sewing Pattern Data In-House by User

Point
1 (START)
Abscissa:0, Ordinate:0

Center

Point
2 **3** **4** **5** **6** **7** **8** **9** **10** **11** **12**
Abscissa: / Ordinate:

The collar run-stitch sewing patterns for various collar designs can be easily created using only this machine. For pattern data using the X-Y coordinate input method, all you have to do is point-input the shape on the left half and then use the mirror duplication function to complete the data input for the entire collar shape. You can input up to 24 points to input even delicate curves faithfully. You can also easily modify parts of the created pattern data later using this machine alone.

In-House Production of Pattern Gauges with Zero Delivery Time

U-4212 can produce pattern gauges (presser pats & guide rulers) within a garment factory with zero delivery time. You can automatically cut left and right elements by installing two 2mm-thick acrylic plates on a guide flame and using the input sewing pattern data. No other automatic machine realizes quick delivery, low cost, and easy pattern gauge production.

The acrylic shavings generated when the end mill (built into the table surface of this machine) cuts the acrylic plates are collected

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into the dust collection box by the vacuum suction function, helping to keep the work environment clean.

Two 2 mm-thick acrylic plates layered together and cut at once
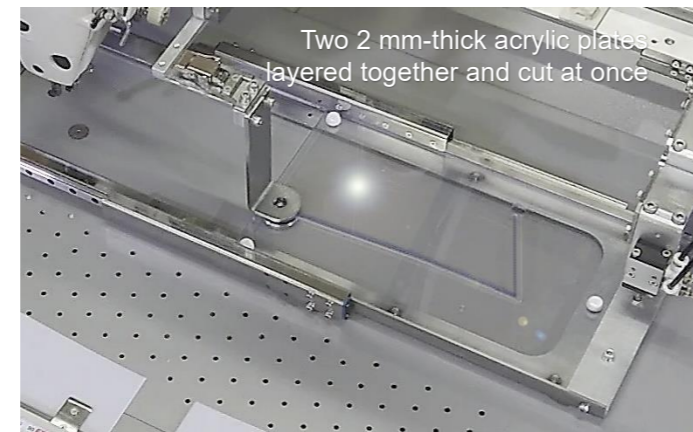
The presser pat is created by automatically engraving the 2mm-thick acrylic plate, pasting the sponge along the grooves, and performing additional processing manually.

Separately, creating a material guide ruler is necessary by simply cutting a 1mm-thick plastic plate using a scroll saw or a cutter knife.

The presser pats made of acrylic plate realize short delivery times and in-house production at garment factories and are ideal for projects of high-mix, low-volume production. Besides, for the collars with the same design that can be produced permanently, YUHO can provide metal presser pats, which are solid and more durable than acrylic plates.
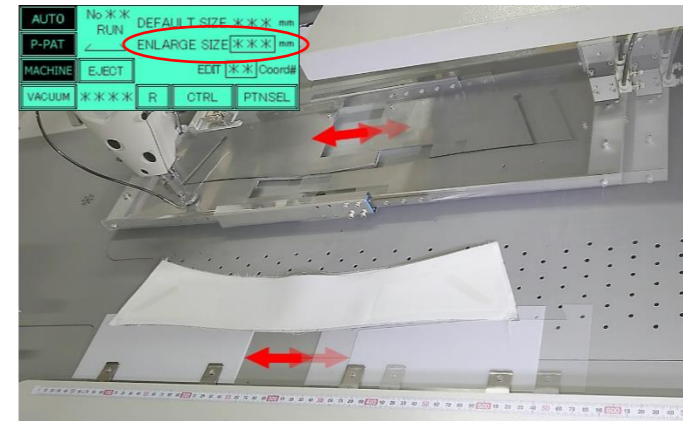

Presser Pat
made of acrylic plate

Guide Ruler
Made of plastic plate

Replace Presser Pat and Guide Ruler in a Flash

Productivity in garment factories cannot be measured solely by the sewing speed of individual sewing machines. Nowadays, in the sites of apparel manufacturing where it is necessary to deal with a wide variety of shapes and sizes, productivity is highly influenced by whether or not to introduce machines that can quickly change settings, including replacing pattern gauges.

With this machine, when changing a production item from one to another collar with a different shape, three steps are required: 1) selecting a sewing pattern, 2) replacing the guide ruler, and 3) replacing the presser pat. U-4212's efficiency-first product design allows users to do all these in one touch to minimize idle time. The presser pat is fixed with three screws, and the guide ruler is fixed with clips, which allow users to detach and attach them quickly and instantly.

Same Shape with Different Size Manageable Just by Inputting the Figure of Width


If the collar shape is the same, but the only difference is the collar size, enter the total length on the LCD touchscreen while keeping the sewing pattern data and presser pat the same. According to the input value, the left and right 2-split presser pats automatically change the interval, and the setting change is completed instantly. Coverage of the collar sizes is from 340mm to 550mm.[*3]

Vacuum Table Makes Material Setting Process Easy and Accurate

The material loading area is equipped with a vacuum suction function. When positioning the material, place the tips of the collar along the shape of the guide rulers, allowing for quick, easy, and accurate positioning. The placed materials are sucked onto the table surface by a vacuum so they do not easily shift, allowing even beginner operators to quickly and accurately set materials without making mistakes.

Covering Various Collar Shapes Including One-Piece Collars

As for the collar shape, you can use U-4212 for one-piece collars (collar + neckband), round collars, and conventional sword-shaped collars.

One-piece collar
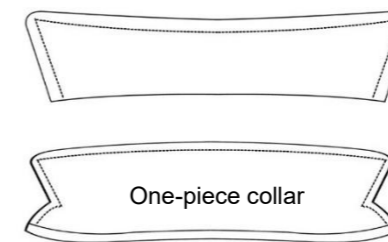
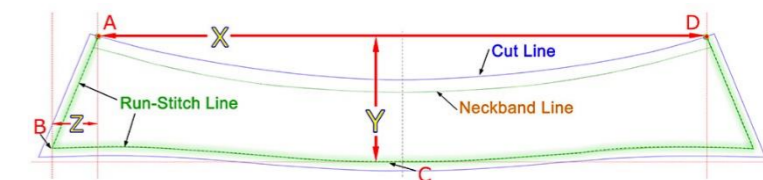## The Secondary Material Tray Is the Key to Overlapping Workflow

The most significant improvement over the previous model U-3412 is the secondary material tray, added at a position one step higher than the surface of the working table. An extra tray has been added to the front side (operator's side) for layering two pieces of material, one on the other. When placing materials in the material loading area with vacuum suction, you can aim at the guide ruler and quickly place the two-layered material, allowing for smoother and error-free work.

Besides, U-4212 has an effective sewing area of 85 mm (depth) x 550 mm (width), sufficient for sewing the collars.
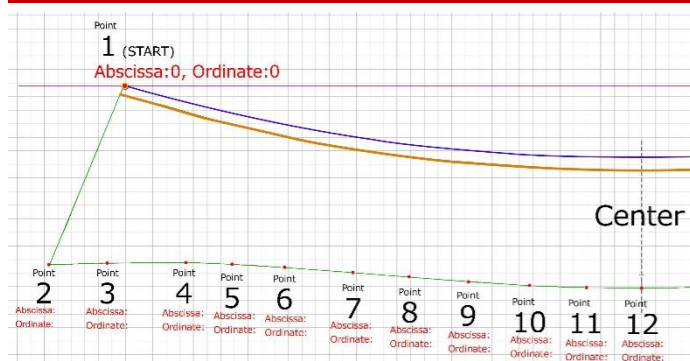

Material Tray

Secondary Material Tray

Securing Accurate Symmetrical Shape, Accurate Neck Measurement

By introducing the U-4212, even beginner operators can perform run-stitching with accurate shape and perfect symmetry, and the neck size of each piece will be uniform without variation. It is advantageous not only to improve and uniformize quality but also to make it easier to automate the collar top-stitching process, which is the post-production process of the collar run-stitching.

*[*3]: The shape and dimensions of the collar that this machine can handle must meet the following requirements.*

*a. The length of the horizontal line **X**, which is a straight line connecting the sewing start point **A** and the sewing endpoint **D**, must be **340 mm minimum and 550 mm maximum**.*

*b. The maximum length of the horizontal line **Z**, which connects point **A**, where the run-stitch line starts sewing, to point **B**, where the run-stitch line is widest outward, is **40 mm or less**.*

*c. The length of the vertical line **Y** connecting the horizontal line **X** to the widest point **C** in the vertical direction is **85 mm at maximum**.*