

# AUTO FINGER JOINTING LINE

## YL-FL-08

A highly efficient production line that offers excellent performance cost ratio.

Dedicated To Pursue High Levels Of Woodworking Technology

[www.routmac.com](http://www.routmac.com)



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Precision / Quality Proven / Ruggedly Constructed



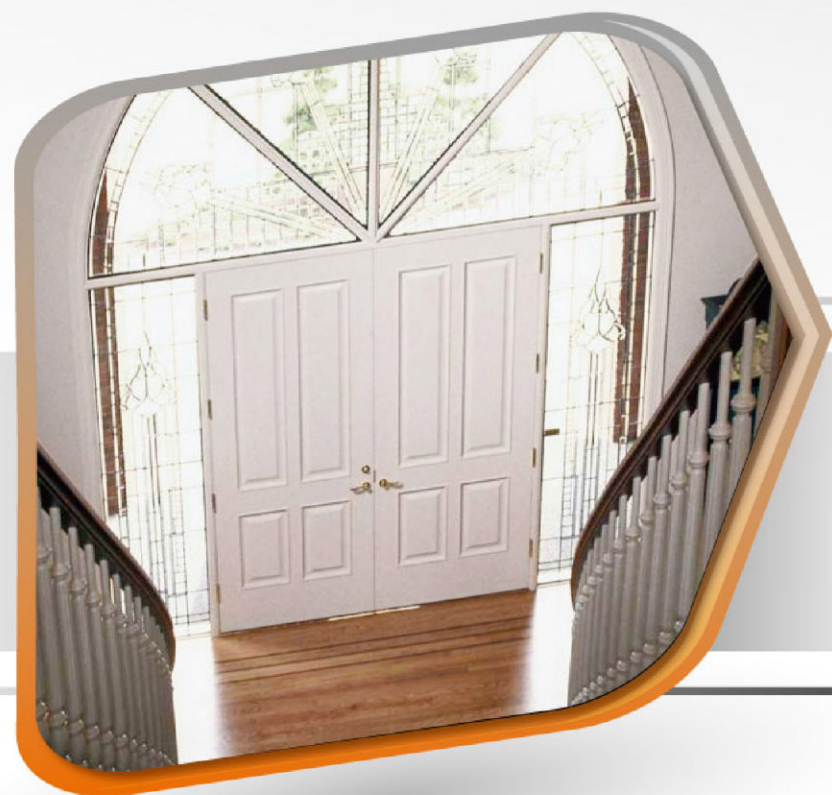
ISO 9001 No: FM 518615



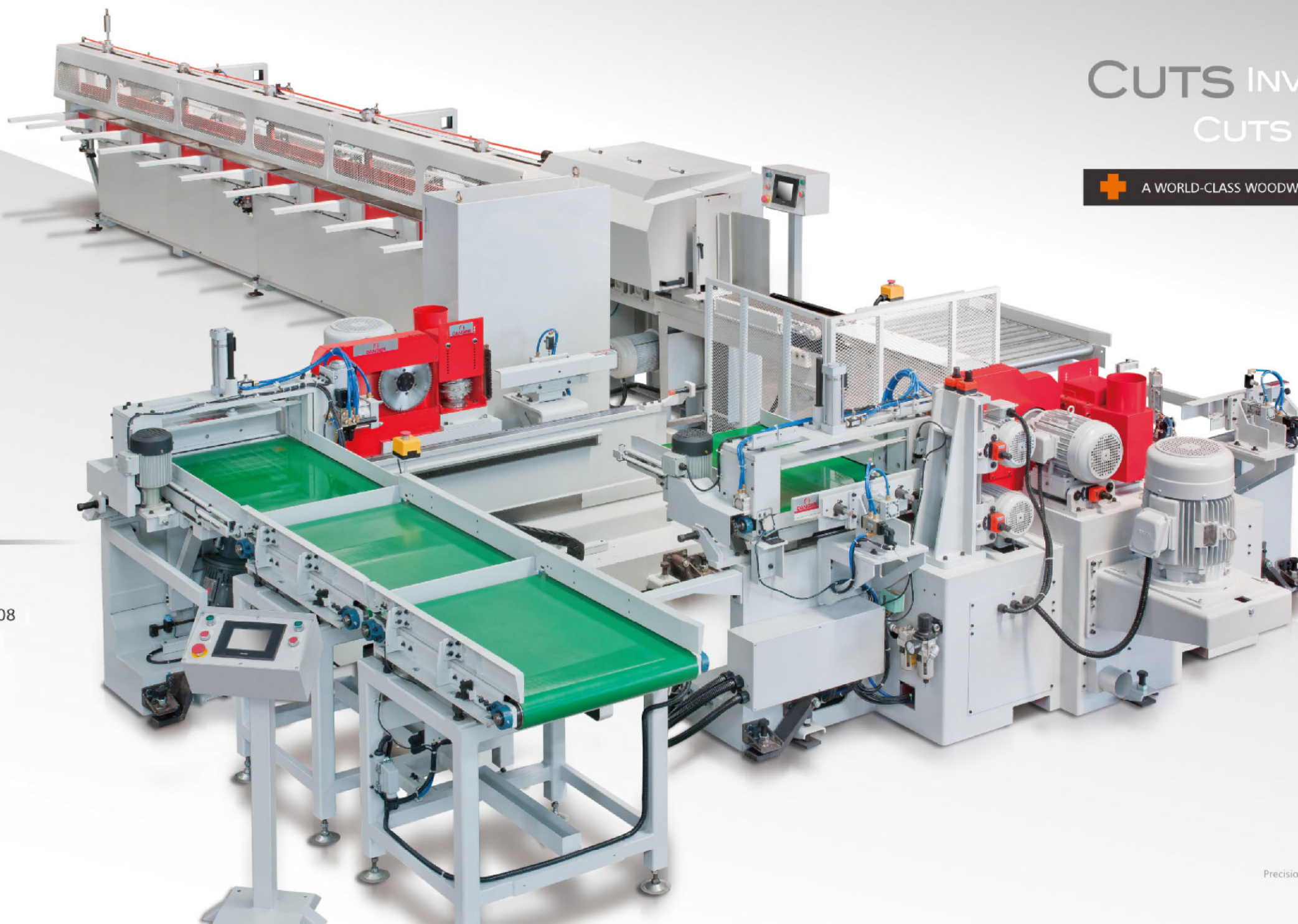
# YL-FL-08

## AUTO FINGER JOINTING LINE

An extra value in performance and price



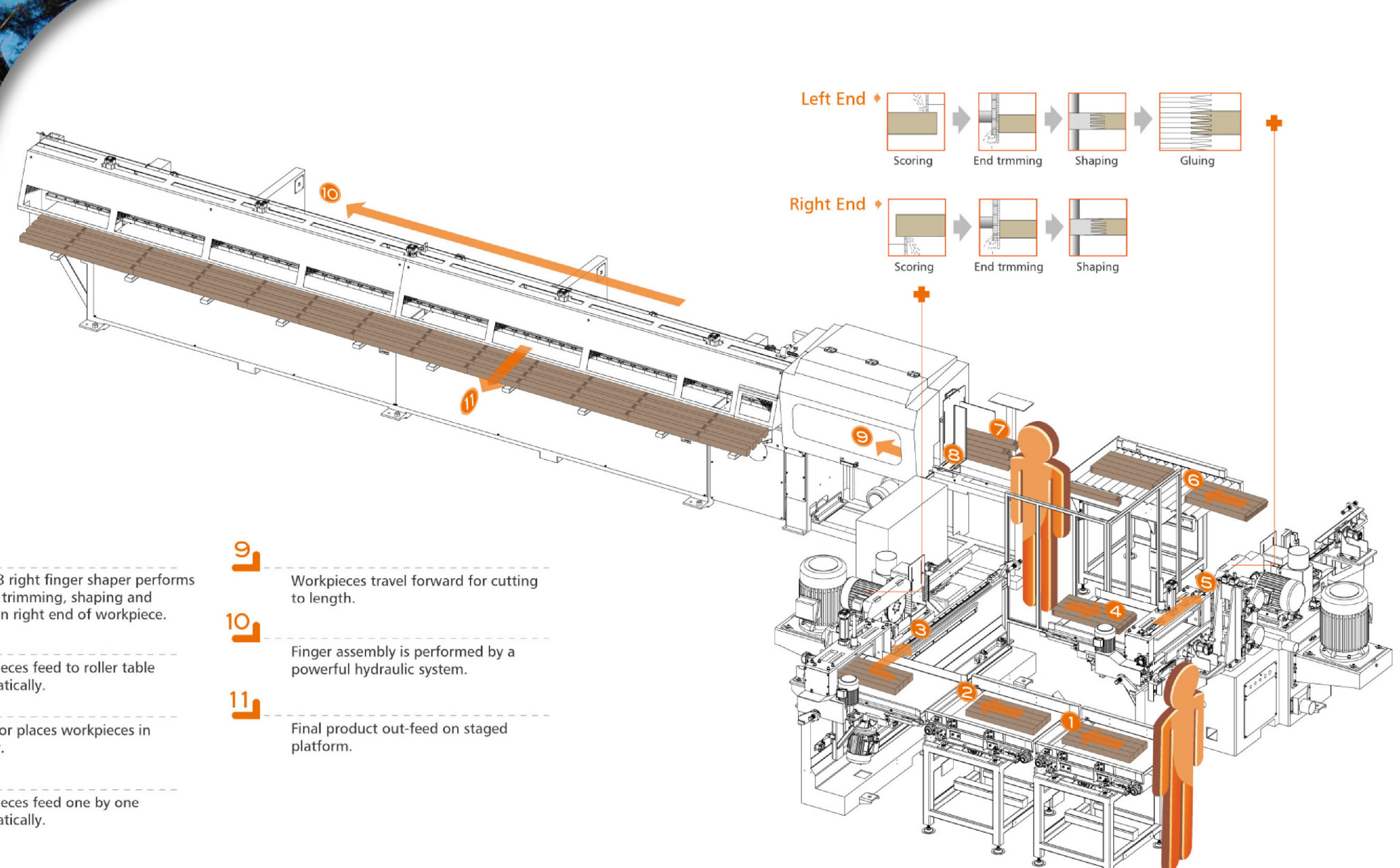
If you need to increase productivity and quality in finger jointing operations, you can consider the YL-FL-08 Auto Finger Jointing Line. The entire machining procedures from workpiece in-feed, left and right shaping to jointing is fast, smooth and accurate. The whole production line is carefully designed and built for maximum dependability year after year.



CUTS INVESTMENT COSTS  
CUTS MACHINING TIME

✚ A WORLD-CLASS WOODWORKING MACHINERY MANUFACTURER





## PRODUCTION FLOW CHART

- 1 Automatic initial in-feeding of workpiece.
- 2 Automatic feed table.
- 3 YL-F-C07 left finger shaper performs scoring, trimming and shaping on left end of workpiece.
- 4 Workpieces automatically travel into right finger shaper.
- 5 YL-F-C08 right finger shaper performs scoring, trimming, shaping and gluing on right end of workpiece.
- 6 Workpieces feed to roller table automatically.
- 7 Operator places workpieces in hopper.
- 8 Workpieces feed one by one automatically.
- 9 Workpieces travel forward for cutting to length.
- 10 Finger assembly is performed by a powerful hydraulic system.
- 11 Final product out-feed on staged platform.

TURN YOUR  
WOOD WASTE INTO  
**VALUABLE  
MATERIAL**





# YL-F-I29

## Independent Initial Conveyor Table

The specially designed initial conveyor tables are a combination of independent tables. This design permits customers to increase or reduce the quantity of conveyor tables as desired.



# YL-F-C07

## Finger Shaper (Right End)



### Right Shaping Mechanism

The mechanism performs scoring, trimming and shaping operations on the right end of the workpiece. Scoring blade in front of trimming blade cuts bottom edge to give splinter-free finish. Finger cutters produce smooth finger shape. Cutting capacity: 6 1/4" thickness.



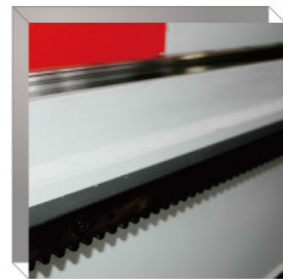
### Accurate Sawblade Adjustment

The trimming and scoring sawblade position are adjusted on the precision rod guides, which are hard chrome-plated for maximum wear resistance. Micrometers are also provided for accurate indication for adjustment, ensuring superior jointing quality.

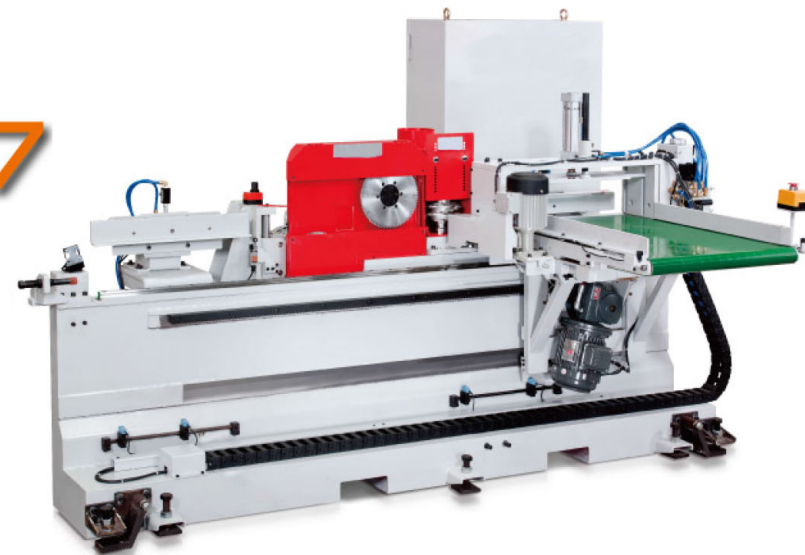


### Frequency Inverted Motor Drive

The feed systems on the right and left finger shapers are driven by an individual frequency inverted motor, providing variable feed speed.



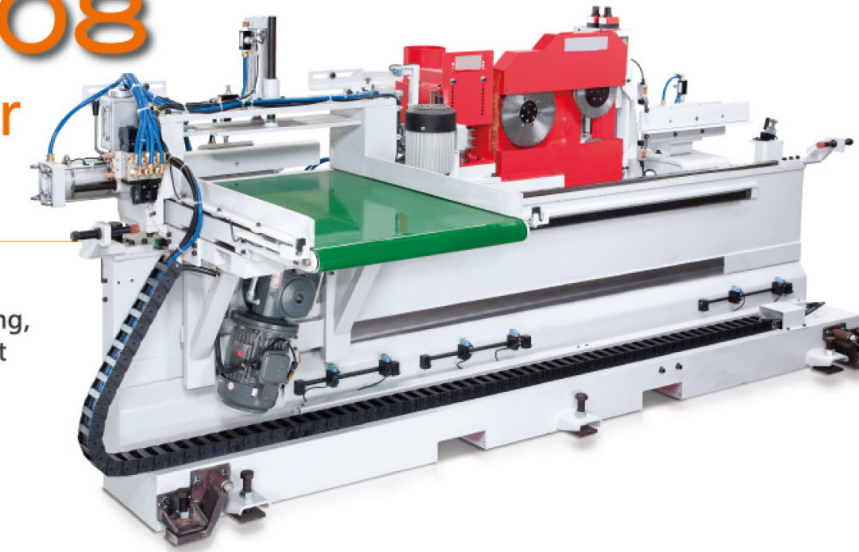
The tables on the right and left finger shapers move on precision linear guide ways in combination with rack/pinion transmission for extra smooth movement.



# YL-F-C08

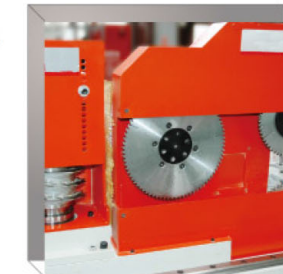
## Finger Shaper (Left End)

It combines four functions-trimming, scoring, shaping and gluing on left end of the workpiece.



### Left Shaping Mechanism

The mechanism performs scoring, trimming, shaping and gluing operations on the left end of the workpieces. Scoring blades cut top and bottom edges.



### Cutter Presetter

A cutter presetter is built on the right shaper for convenient cutter assembly.



## Roller-Type Glue Coating Device (standard)



# 1

## Glue Spraying Device (optional)

With this device, glue can be uniformly sprayed on the surface of finger joints during feeding. It also features easy cleaning and maintenance.



# 2



# YL-F-D16

## Hand Feeding Table (Single Side Open Fence)

- A manually operated roller conveyor table, located between the right finger shaper and the assembly press.
- At this station, the operator may inspect cutting quality produced by finger shapers.



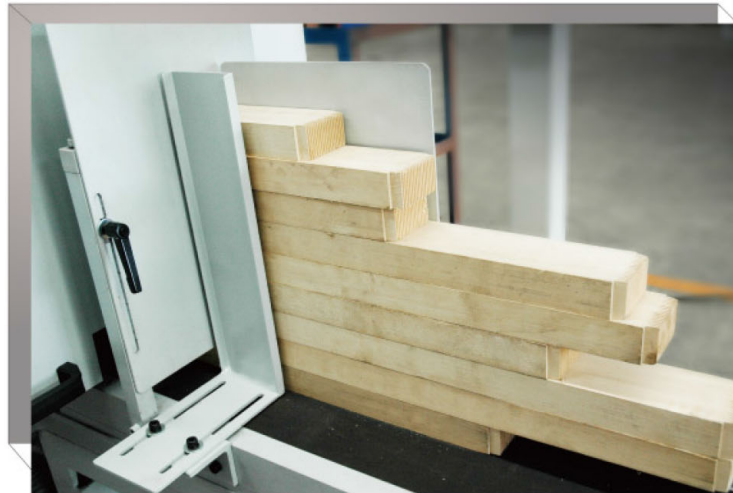
## Accurate Length Setting Via Touch Screen Panel

- Length of cut is calculated by an encoder and set on a touch screen for increased accuracy.



## Hopper Loader

- The hopper loader is mounted before the assembly press. After shaping, the operator may stack the workpieces in the hopper loader for automatic feed into the assembly press.



# YL-F-A05-6

## Assembly Press

- For jointing lengths over 6.2 meters; the assembly press is designed with two hydraulic cylinders, providing more powerful and faster jointing performance.
- For jointing lengths under 6.2 meters; only a single hydraulic cylinder is equipped.
- Standard jointing length is 4.5 meters.
- Other jointing lengths can be specified.
- A synchronized 2-step process allows the back of the press to continue jointing and cutting to length while the front of the press is performing pressing and out-feeding motions.
- Length of cut is calculated by an encoder.

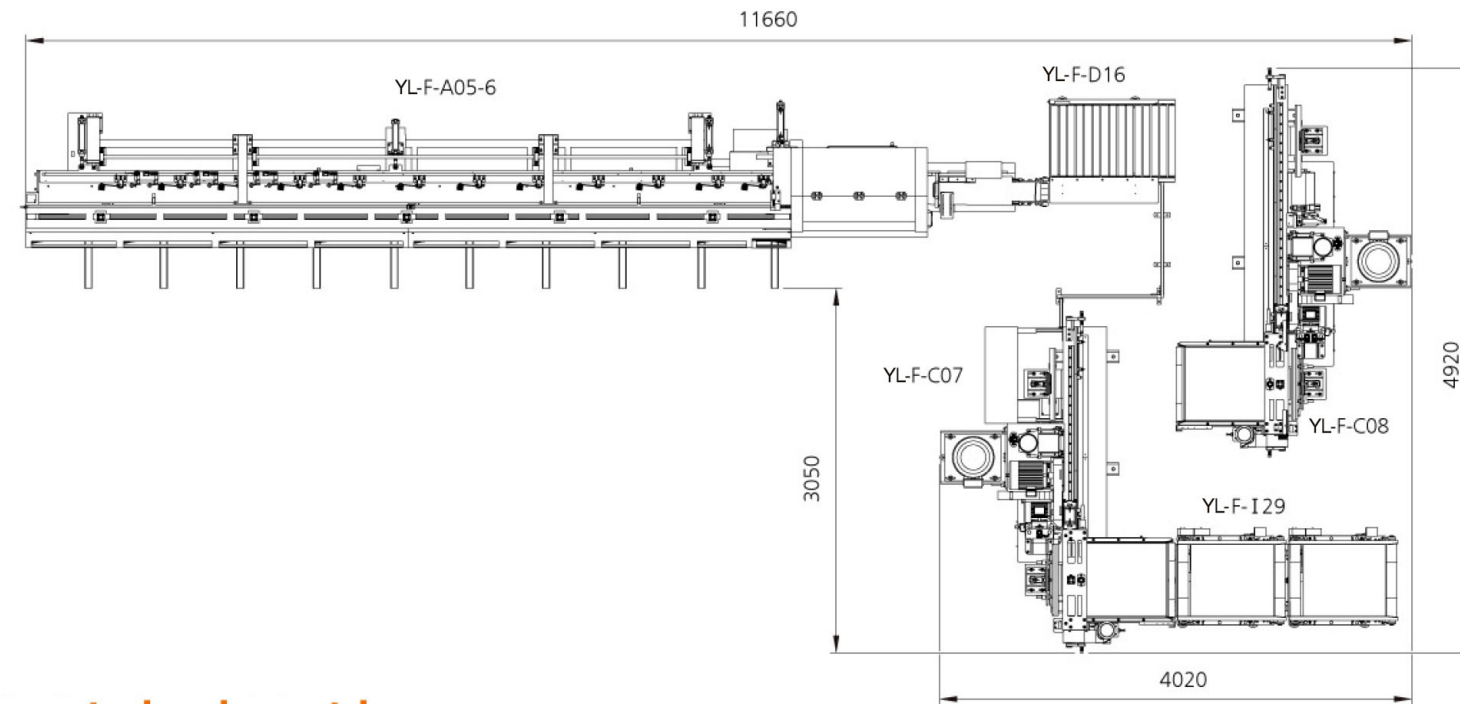
### Pneumatically Loaded Feed Rollers

The feed rollers on the assembly press are loaded by air cylinders to achieve smooth and stable feeding at all times.

# YL-FL-08

## Dimensions

- YL-F-A05-6**  
Auto Assemble Press
- YL-F-D16**  
Hand Feeding Table
- YL-F-C08**  
Auto Finger Shaper (Left End)
- YL-F-C07**  
Auto Finger Shaper (Right End)
- YL-F-I29x2**  
Multi-stage Initial Conveyor Table



## YL-FL-08 Finger Jointing Line

### YL-F-I29 Multi-stage Initial Conveyor Table

SPECIFICATIONS	
Conveyor table width	600mm
Table height	875mm
Feed drive motor	1/2HP
Overall length	990mm
Overall width	840mm

\*Additional units to expand the system are available upon request.

### YL-F-D16 Hand Feeding Table

SPECIFICATIONS	
Table width	570mm
Roller sizes	Ø57x570mm
Machine height	960mm
Machine length	1065mm
Machine width	890mm

\* 1: The standard gluing device is roller type, the tenon depth is 12 mm.  
2: Inject type gluing system can be installed upon request.

### YL-F-C07 Auto Finger Shaper (Right End)

SPECIFICATIONS	
Max. available width working table	600 mm
Range of workpiece length	150 ~ 900 mm
Range of workpiece height	30 ~ 160 mm
Table moving speed	3 ~ 4 carts/min.
Trimming saw speed	2800 rpm (50hz), 3400rpm (60hz)
Finger cutter speed	5000 rpm
Scoring saw speed	2800 rpm (50hz), 3400rpm (60hz)

POWER REQUIRED	
Table-drive motor	1HP
For conveyor motor	1/2HP
Scoring saw motor	2HP
Trim saw motor	5HP
Shaper cutter motor	20HP
Dia of Cutter (in/out)	Ø70/Ø160 mm
Dust hood outlet diameter	6"×1, 4"×1
Machine dimensions ( L x H x W )	2860×1390×1980 mm
Noise Value	88.2 Db

### YL-F-C08 Auto Finger Shaper (Left End)

SPECIFICATIONS	
Max. available width working table	600 mm
Range of workpiece length	150 ~ 900 mm
Range of workpiece height	30 ~ 160 mm
Table moving speed	3 ~ 4 carts/min.
Trimming saw speed	2800 rpm (50hz), 3400rpm (60hz)
Finger cutter speed	5000 rpm
Scoring saw speed	2800 rpm (50hz), 3400rpm (60hz)

POWER REQUIRED	
Table-drive servo motor	1HP
For conveyor motor	1/2HP
Scoring saw motor	2HPx2
Trim saw motor	5HP
Shaper cutter motor	20HP
Dia of Cutter (in/out)	Ø70/Ø160 mm
Dust hood outlet diameter	6"×1, 4"×1
Machine dimensions ( L x H x W )	3270×1680×1980 mm
Noise Value	88.2 Db

\* 1: The standard gluing device is roller type, the tenon depth is 12 mm.  
2: Inject type gluing system can be installed upon request.

### YL-F-A05-6 Auto Assembly Press

SPECIFICATIONS	
Available length of product	6200 mm
Available thickness of product	15 ~60 mm
Available width of product	20~160mm
Feeding speed	80m/min
Capacity length product	4 ~ 6 pcs

\*All specifications, dimensions and design characteristics are subject to change without prior notice.

POWER REQUIRED	
Feed motor	3HP
Max. assembly pressure	0~150Kg/cm <sup>2</sup>
Hydraulic power unit	5HP
Cut-off saw	5HP
Dust hood outlet diameter	4"(101.6mm)
Machine dimensions ( L x H x W )	8610×1465×1545 mm
Noise Value	84 Db