

# FL-03

## Fully Auto Finger Jointing Line

# FL-05

## Auto Finger Jointing Line

- Three initial infeed tables.
- Automatic feed to pre-press assemble stand.



# Fully Auto Finger Jointing Line

**CKM**<sup>®</sup>  
Quality & Service

*Turn your wood waste into valuable material and create added profits with CKM FL-03 Fully Auto Finger Jointing Line.*

## The most cost effective automatic finger jointing line.

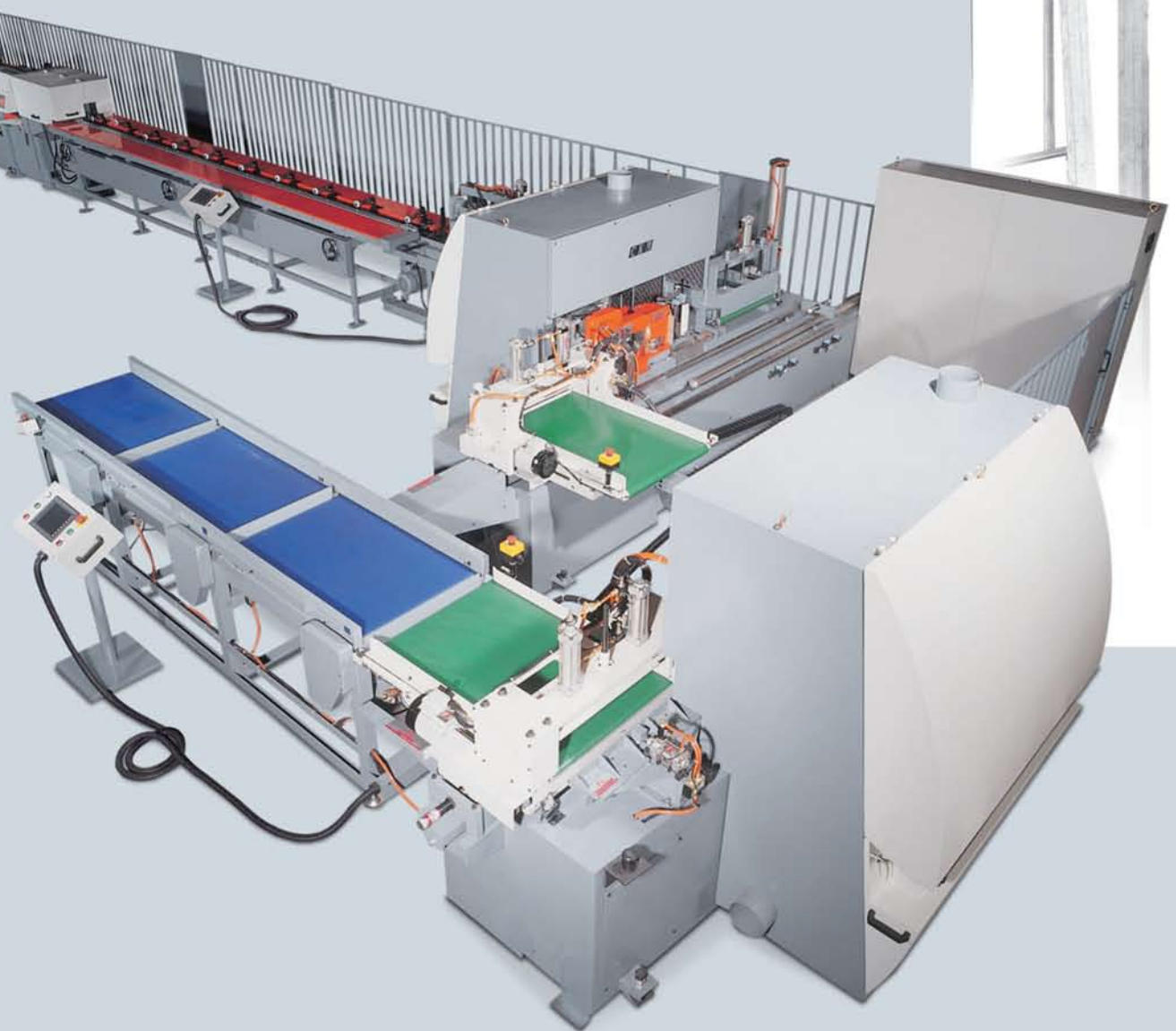
CKM, a world-class woodworking machinery manufacturer since 1960, has been producing finger jointing systems. CKM finger jointing systems have been operated worldwide.

The popularity of CKM finger jointing system is because the systems are designed with the purpose of finger jointing in mind. The CKM finger jointing systems are most user friendly and cost effective. This is achieved by CKM's extensive experience and continued innovation.

FL-03

[www.ckmtw.com.tw](http://www.ckmtw.com.tw)

CE Model Available



# PRODUCTION FLOW CHART

**CKM**  
Quality & Service

## PRODUCTION FLOW CHART :

**1** Automatic initial infeeding of workpieces.

**3** F-C05 right finger shaper performs scoring, trimming, and shaping on right end of workpiece.

**5** F-C06 left finger shaper performs scoring, trimming, shaping and gluing on left end of workpiece.

**7** Workpiece feed one by one automatically.

**9** Workpieces travel forward for cutting-to-length.

**11** Final product out-feed on staging platform.

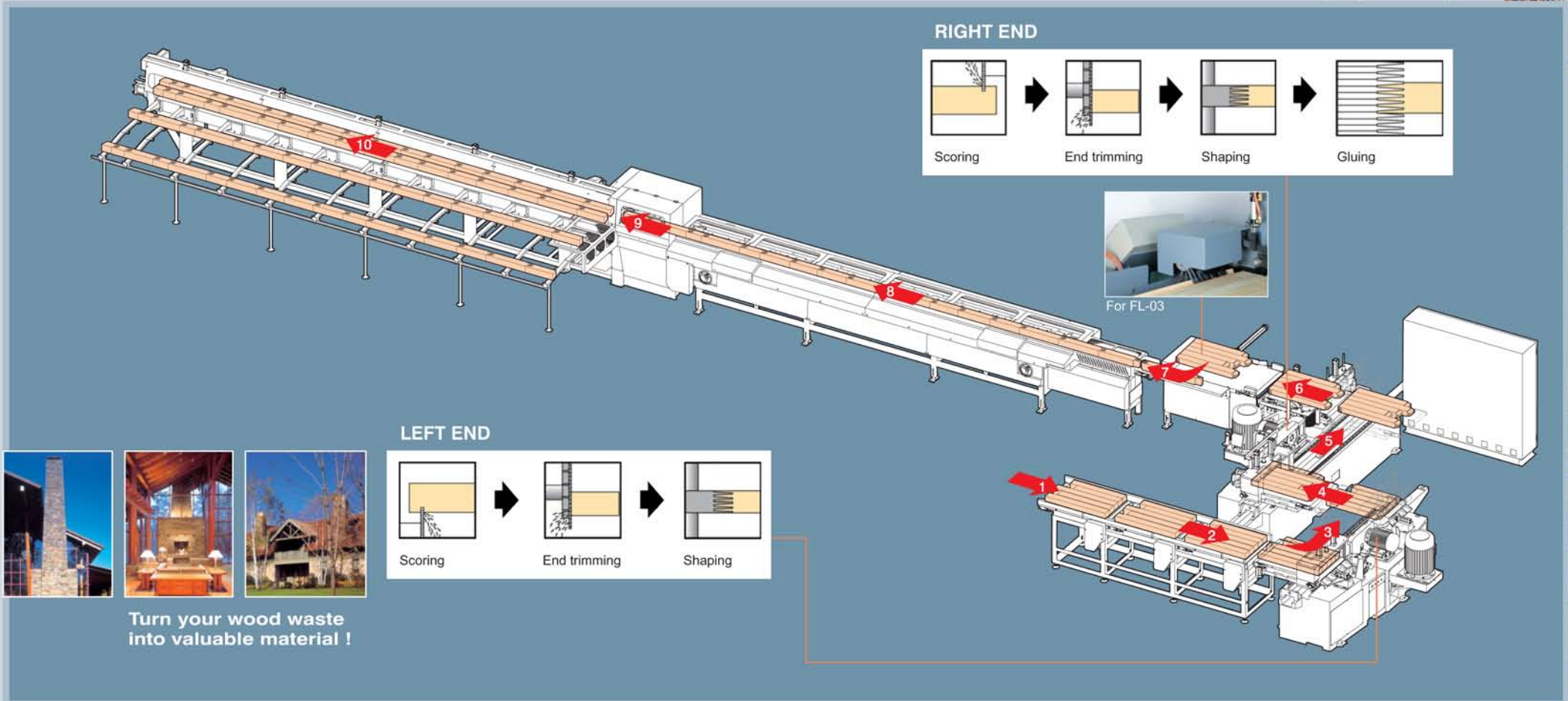
**2** Automatic feed table.

**4** Workpieces automatically travel into left finger shaper.

**6** Workpieces travel onto the standby conveyor, then feed forward onto automatic feeding table.

**8** Work pieces automatically feed to pre-press assemble stand.

**10** Finger assembly is performed by a powerful hydraulic system.

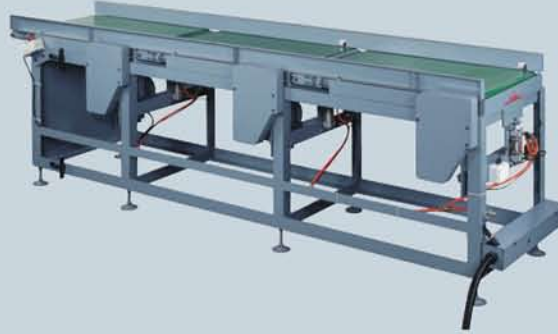


Turn your wood waste into valuable material !

## F-I01

### MULTI-STAGE INITIAL CONVEYOR TABLE

- The three initial infeed tables allows for continuous infeed of workpiece.



## F-C05

### FINGER SHAPER (Right End)

- It combines three functions - scoring, trimming, shaping in a unit on right end of the workpiece.



#### RIGHT SHAPING MECHANISM

The mechanism performs scoring, trimming, shaping operations on 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" thick.



#### 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.

## F-C06

### 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 operation on left end of the workpiece. Scoring blades cut top and bottom edges to prevent tear-out.



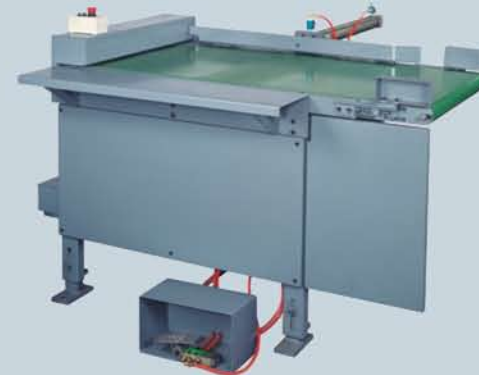
#### CUTTER PRESETTER

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

## F-D11

### (ON MODEL FL-05) MANUAL WORKPIECE TURN-OVER

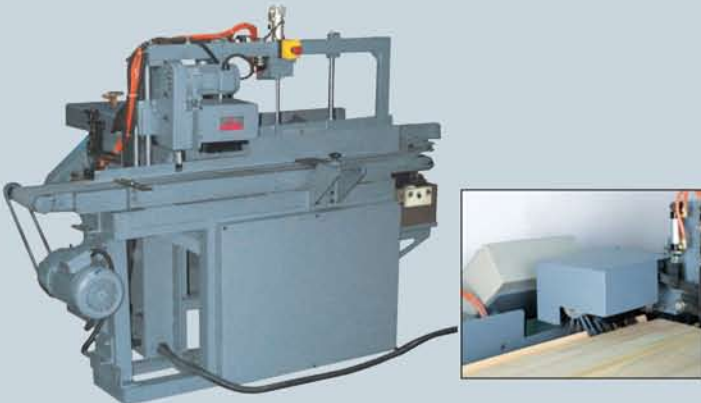
- The workpieces are turned-over before feeding to automatic feeding table.
- At this station, the operator may inspect cutting quality produced by finger shapers.



## F-D01

### AUTOMATIC FEEDING TABLE (ON MODEL FL-03)

- Located in front of pre-press assemble stand this automatic feeding table allows workpieces to feed, one by one, eliminating operator's efforts.
- Workpieces turn-over are made by a steel brush roller.



## F-A03

### ASSEMBLE PRESS

- The assemble press employs two hydraulic cylinder at front and rear, providing more powerful and faster jointing performance. This special design also assure extremely consistent jointing effect on the entire wood.
- The assemble press joints short stoch to produce long board length up to 6200mm.
- 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 outfeed motions.
- Times of cut are controlled by limit switches, which permits for

maximum 4 times of cut setting.



## F-T03 / F-T05

### F-T03 CHAIN TYPE PRE-PRESS ASSEMBLE STAND (LESS INFEEED CONVEYOR TABLE)

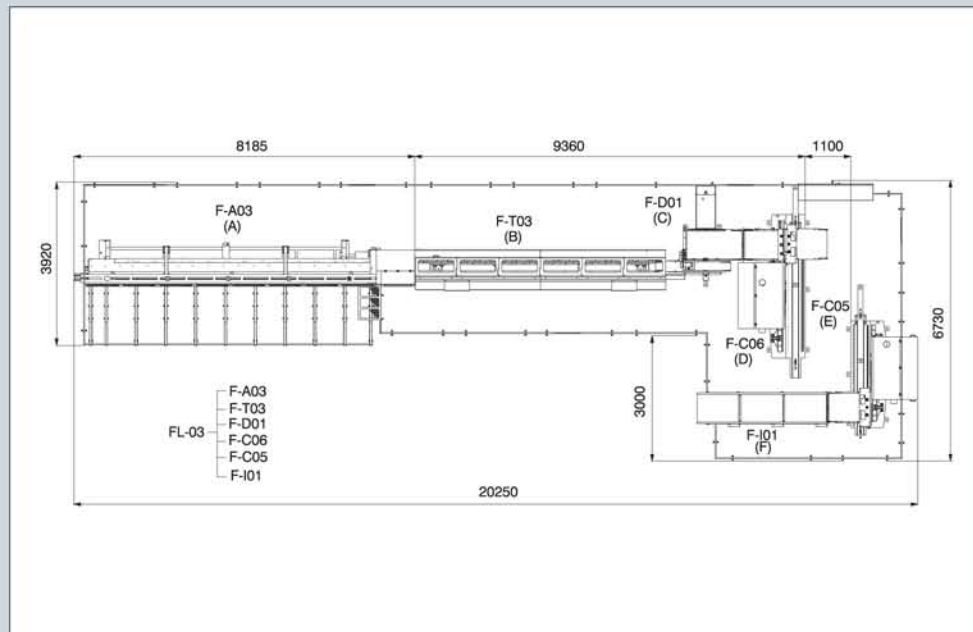
### F-T05 CHAIN TYPE PRE-PRESS ASSEMBLE STAND

- The pre-press assemble stand employs chain feed, and provides 3 and 6 meters of length to choose from.
- This assemble stand provides pre-pressed board ready to be cut to length, and ensures accurate vertical and horizontal alignment of finger joint. The pre-press is fully synchronized with cut-to-length process.



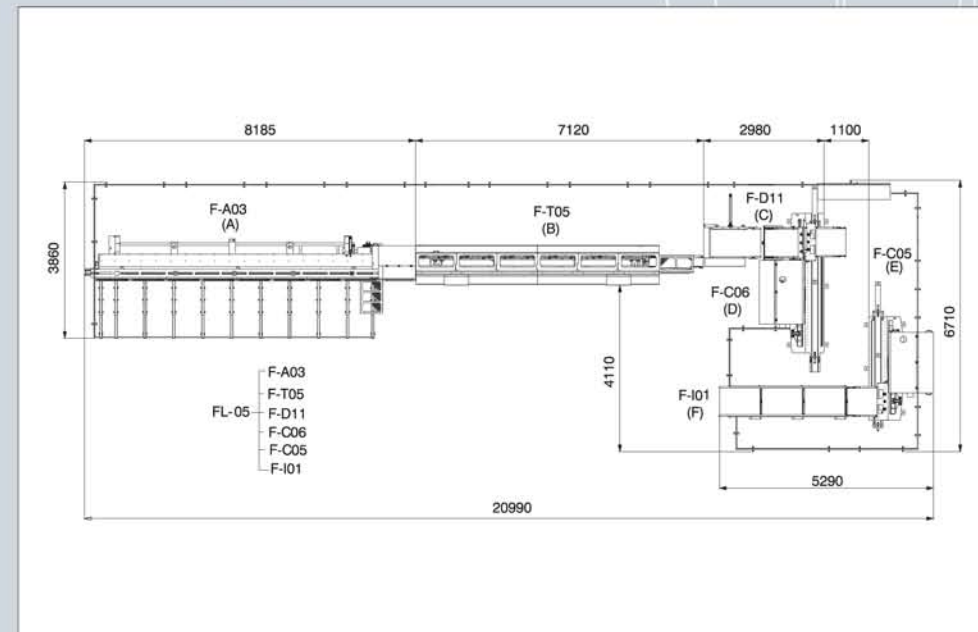
# DIMENSIONAL DRAWING

## FL-03



|                |              |   |
|----------------|--------------|---|
| <b>FL-03 —</b> | <b>F-I01</b> | <b>THREE INITIAL INFEED TABLES</b>                  |
|                | <b>F-C05</b> | <b>FINGER SHAPER (Right End)</b>                    |
|                | <b>F-C06</b> | <b>FINGER SHAPER (Left End)</b>                     |
|                | <b>F-D01</b> | <b>AUTOMATIC FEEDING TABLE<br/>(on model FL-03)</b> |
|                | <b>F-T03</b> | <b>PRE-PRESS ASSEMBLE STAND</b>                     |
|                | <b>F-A03</b> | <b>ASSEMBLE PRESS</b>                               |

## FL-05



|                |              |   |
|----------------|--------------|---|
| <b>FL-05 —</b> | <b>F-I01</b> | <b>THREE INITIAL INFEED TABLES</b>                          |
|                | <b>F-C05</b> | <b>FINGER SHAPER (Right End)</b>                            |
|                | <b>F-C06</b> | <b>FINGER SHAPER (Left End)</b>                             |
|                | <b>F-D11</b> | <b>MANUAL WORKPIECE TURN-<br/>OVER<br/>(on model FL-05)</b> |
|                | <b>F-T05</b> | <b>CHAIN DRIVE PRE-PRESS ASSEMBLY STAND</b>                 |

# SPECIFICATIONS

| MULTI-STAGE INITIAL CONUEYOR TABLE        | F-I01            |
|---|------------------|
| Conveyor table width                      | 650mm            |
| Table height                              | 860mm            |
| Feed drive motor                          | 1HPx3            |
| Overall length                            | 3250mm           |
| Overall width                             | 860mm            |
| Overall height                            | 960mm            |
| Packing dimensions ( L x H x W )          | 3350x1175x960mm  |
| Combined packing dimensions ( L x H x W ) | 4190x1175x1780mm |

| FINGER SHAPER (RIGHT END)                              | F-C05                              |
|--|------------------------------------|
| Max. working width                                     | 650mm                              |
| Range of material length                               | 150-1000mm                         |
| Range of material height                               | 30-160mm                           |
| Table feed speed (Air/hydraulic combiluation cylinder) | 0~20m/mim                          |
| Trim saw speed   | 2800 rpm (50hz),<br>3400rpm (60hz) |
| Finger cutter speed                                    | 5000rpm                            |
| Scoring saw speed                                      | 2800 rpm (50hz),<br>3400rpm (60hz) |
| <b>MOTOR HORS</b>                                      |                                    |
| For table drive  | 1/2HP                              |
| For scoring saw  | 1HP                                |
| For trimming saw                                       | 10HP                               |
| For finger cutter spindle                              | 20HP                               |
| Finger cutter spindle dia.                             | ø50mm                              |
| Finger cutter specif. (I.D./Max.O.D.)                  | ø70/ø160mm                         |
| Dust outlet diameter                                   | 6"x2                               |
| Machine dimensions ( L x H x W )                       | 3670x1905x2155mm                   |
| Noise level  | 88.2 Db                            |
| Packing dimensions ( L x H x W )                       | 3810x2120x2270mm                   |

★ NOTE: ø50mm Clamping collars with various thickness for finger cutter ane optional accessories to be ordered.

| FINGER SHAPER (LEFT END)              | F-C06                              |
|---------------------------------------|------------------------------------|
| Max, working width                    | 650mm                              |
| Range of material length              | 150-1000mm                         |
| Range of material height              | 30-160mm                           |
| Table feed speed (Air/hydraulic)      | 0~20m/mim                          |
| Trim saw speed                        | 2800 rpm (50hz),<br>3400rpm (60hz) |
| Finger cutter speed                   | 5000rpm                            |
| Upper scoring saw speed               | 2800 rpm (50hz),<br>3400rpm (60hz) |
| Lower scoring saw speed               | 2800 rpm (50hz),<br>3400rpm (60hz) |
| <b>MOTOR HORSEPOWER</b>               |                                    |
| For table drive                       | 1/2HPx2                            |
| For upper scoring saw                 | 1HP                                |
| For lower scoring saw                 | 1HP                                |
| For trim saw                          | 10HP                               |
| For finger cutter spindle             | 20HP                               |
| Finger cutter specif. (I.D./Max.O.D.) | Ø70/Ø160mm                         |
| Dust outlet diameter                  | 6"x2                               |
| Machine dimensions ( L x H x W )      | 4160x1905x2155mm                   |
| Noise level                           | 88.2 Db                            |
| Packing dimensions ( L x H x W )      | 4855x2120x2270mm                   |

★ NOTE: ø50mm Clamping collars with various thickness for finger cutter ane optional accessories to be ordered.

| PNEUMATIC FEEDING TABLE | F-D11  |
|-------------------------|--------|
| Conveyor table width    | 650mm  |
| Table height            | 860mm  |
| Feed drive motor        | 1HP    |
| Overall length          | 1420mm |
| Overall width           | 1790mm |
| Overall height          | 975mm  |

| AUTOMATIC FEEDING TABLE  | F-D01      |
|--------------------------|------------|
| Conveyor table width     | 650mm      |
| Table height             | 860mm      |
| Range of material length | 100-1000mm |
| Range of material height | 30-160mm   |
| <b>MOTOR HORSEPOWER</b>  |            |
| Feed drive motor         | 1HP        |
| Outfeed drive motor      | 2HP        |
| Brush roller drive motor | 1/8HP      |
| Overall length           | 1540mm     |
| Overall width            | 1545mm     |
| Overall height           | 2450mm     |

| CHAIN DRIVE PRE-RESS ASSEMBLY STAND | F-T03            |
|-------------------------------------|------------------|
| Max. pre-press length               | 6000mm           |
| Range of workpiece width            | 15-200mm         |
| Range of workpiece height           | 15-100mm         |
| Feed speed                          | 80m/mim          |
| <b>MOTOR HORSEPOWER</b>             |                  |
| For left transmission               | 2HP              |
| For right transmission              | 2HP              |
| Machine dimensions ( L x H x W )    | 6035x1060x1000mm |
| Noise level                         | 70 Db            |
| Packing dimensions ( L x H x W )    | 6070x1275x1120mm |

# SPECIFICATIONS

| ASSEMBLE PRESS (DOUBLE SIDES PRESSING) |                           | F-A03                     |
|--|---------------------------|---------------------------|
| <b>MODEL</b>                           | <b>6M</b>                 | <b>6.8M</b>               |
| Max. product length                    | 6200mm                    | 6800mm                    |
| Range of material width                | 15-160mm                  | 15-160mm                  |
| Range of material height               | 15-60mm                   | 15-60mm                   |
| Feed speed                             | 80m/mim                   | 80m/mim                   |
| Range of pressing pressure             | 0~150Kgs/ cm <sup>2</sup> | 0~150Kgs/ cm <sup>2</sup> |
| Production rate                        | 5pcs/mim                  | 5pcs/mim                  |
| <b>MOTOR HORSEPOWER</b>                |                           |                           |
| For feeding                            | 2HP                       | 2HP                       |
| For hydraulic pump                     | 7-1/2HP                   | 7-1/2HP                   |
| For sizing                             | 5HP                       | 5HP                       |
| Saw arbor diameter                     | ø1" (ø25.4mm)             | ø1" (ø25.4mm)             |
| Dust outlet diameter                   | 4" (101.6mm)              | 4" (101.6mm)              |
| Machine dimensions ( L x H x W )       | 7670 x 1370 x 1510mm      | 8270 x 1370 x 1510mm      |
| Noise level                            | 84Db                      | 84Db                      |
| Packing dimensions ( L x H x W )       | 7745 x 1585 x 1150mm      | 8345 x 1585 x 1150mm      |

| CHAIN DRIVE PRE-PRESS ASSEMBLY STAND |                  | F-T05            |
|--------------------------------------|------------------|------------------|
| <b>MODEL</b>                         | <b>3M</b>        | <b>6M</b>        |
| Max. pre-press length                | 3000mm           | 6000mm           |
| Range of workpiece width             | 15-200mm         | 15-200mm         |
| Range of workpiece height            | 15-100mm         | 15-100mm         |
| Feed speed                           | 80m/mim          | 80m/mim          |
| <b>MOTOR HORSEPOWER</b>              |                  |                  |
| For table drive                      | 2HP              | 2HP              |
| For left transmission                | 2HP              | 2HP              |
| For right transmission               | 2HP              | 2HP              |
| Machine dimensions ( L x H x W )     | 4130x1060x1000mm | 7130x1060x1000mm |
| Noise level                          | 70 Db            | 70 Db            |
| Packing dimensions ( L x H x W )     | 4230x1160x1100mm | 7162x1275x1120mm |



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