


# F Series™

Professional Flatbed
Finishing Systems

Basic unit

Media Handling Options

Modules & Tools

**SYSTEM**

Software

Peripherals


System

Transport & Installation

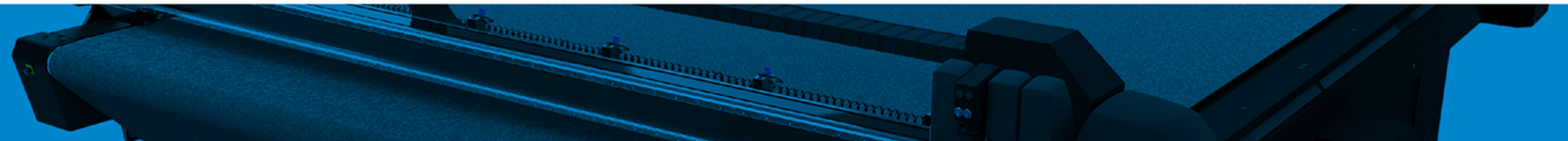
System Integration

**SOLUTION**

Training

After Sales Support





# Basic Unit

## F1612

- Working area (for all standard tools):
  **160 cm wide x 120 cm long**
- Maximum media width: 165 cm
- Machine dimensions:
  +/- 196 x 235 x 110cm (+/- 500 kg)
- Shipping dimensions
  +/- 223 x 253 x 142 (+/-850 kg)
  - Basic table is shipped assembled
- Free space (clearance) under the bridge is 5 cm
  - (≠ working depth!! – see further)
- Central Unit (see further) fixed to the carriage
- Vacuum Table (see further)
- Requirements (see further)
- Specifications (see further)

# Basic Unit

## F1330

- Working area (for all standard tools):
  **129 cm wide x 305 cm long**
- Maximum media width: 134 cm
- Machine dimensions:
  +/- 214 x 410 x 122 (+/- 1500 kg)
- Shipping dimensions
  (see further)
  - Basic table is shipped disassembled
- Free space (clearance) under the bridge is 5 cm
  - (≠ working depth!! – see further)
- Central Unit (see further) fixed to the carriage
- Vacuum Table (see further)
- Requirements (see further)
- Specifications (see further)

# Basic Unit

## F1832

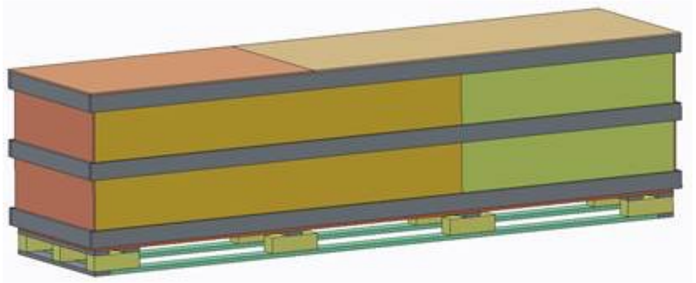
- Working area (for all standard tools):
  **185 cm wide x 320 cm long**
- Maximum media width: 190 cm
- Machine dimensions:
  +/- 270 x 425 x 122 (+/- 1500 kg)
- Shipping dimensions
  (see further)
  - Basic table is shipped disassembled
- Free space (clearance) under the bridge is 5 cm
  - (≠ working depth!! – see further)
- Central Unit (see further) fixed to the carriage
- Vacuum Table (see further)
- Requirements (see further)
- Specifications (see further)

# Basic Unit

## F2630

- Working area (for all standard tools):
  **265 cm wide x 305 cm long**
- Maximum media width: 270 cm
- Machine dimensions:
  +/- 392 x 349 x 122cm (+/- 1600 kg)
- Shipping dimensions
  See Further
  - Basic Table is shipped disassembled
- Free space (clearance) under the bridge is 5 cm
  - (≠ working depth!! – see further)
- Central Unit (see further) fixed to the carriage
- Vacuum Table (see further)
- Requirements (see further)
- Specifications (see further)

# Shipping



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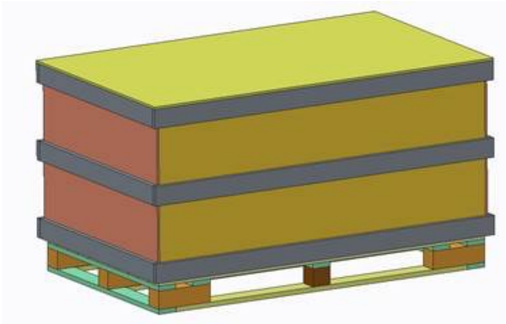
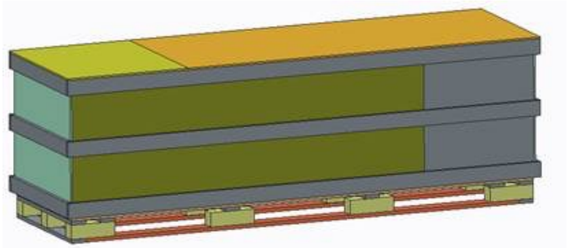


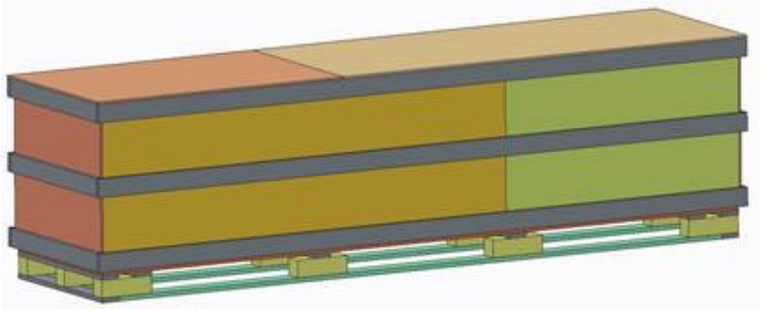
## F1330

- The basic unit is shipped in 4 creates and needs onsite assemblage.
- On site assemblage (excluding training) requires a minimum of 2 trained technicians, during minimum 3 days.

| | L [mm] | B [mm] | H [mm] | Weight [kg] | *tare weight [kg]* |
|---|---|---|---|---|---|
| Crate 1 | 3930 | 980 | 1090 | 670 | *300* |
| Crate 2 | 1980 | 1180 | 900 | 400 | *200* |
| Crate 3 | 1980 | 1180 | 900 | 380 | *200* |
| Crate 4 | 1980 | 1180 | 900 | 315 | *200* |

# Shipping





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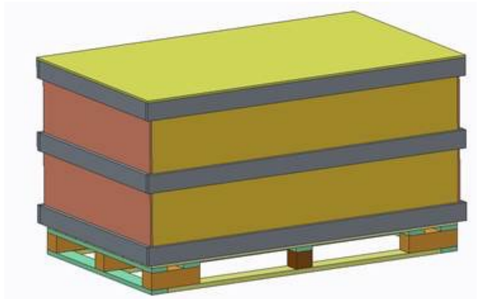
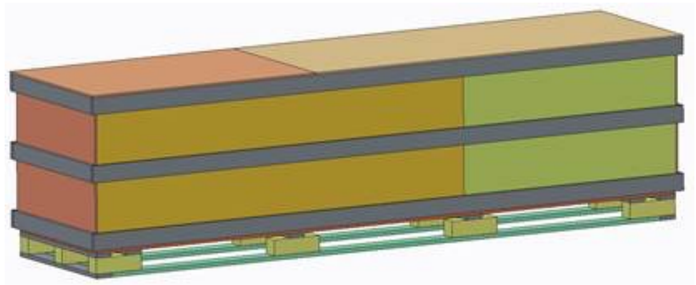


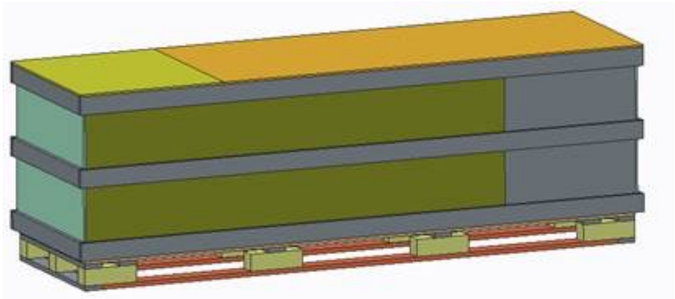
## F1832

- The basic unit is shipped in 4 creates and needs onsite assemblage.
- On site assemblage (excluding training) requires a minimum of 2 trained technicians, during minimum 3 days.

| | L [mm] | B [mm] | H [mm] | Weight [kg]* | tare weight [kg]* |
|---|---|---|---|---|---|
| Crate 1 | 2450 | 980 | 1090 | 550 | 1200 |
| Crate 2 | 4030 | 980 | 1090 | 770 | 1700 |
| Crate 3 | 1980 | 1180 | 1090 | 320 | 700 |
| Crate 4 | 1980 | 1180 | 1090 | 360 | 800 |
| Crate 5 | 1980 | 1180 | 1090 | 400 | 880 |

*Estimation, exact value is not available at the moment of publication





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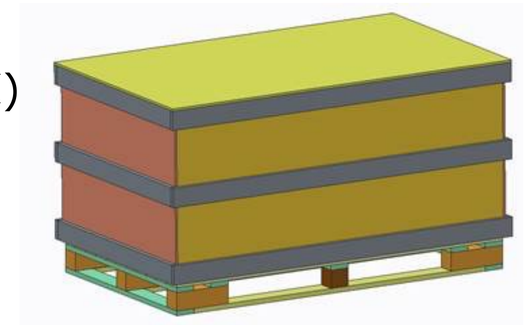


# Shipping

## F2630

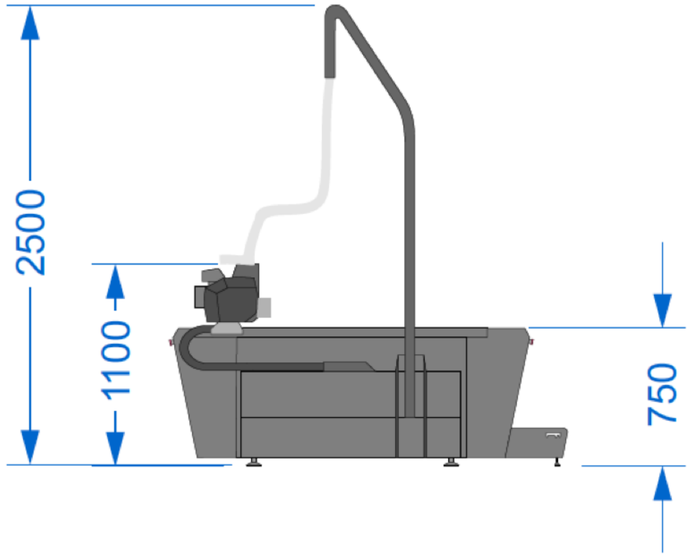
- The basic unit is shipped in 5 creates and needs onsite assemblage.
- On site assemblage (excluding training) requires a minimum of 2 trained technicians, during minimum 3 days.

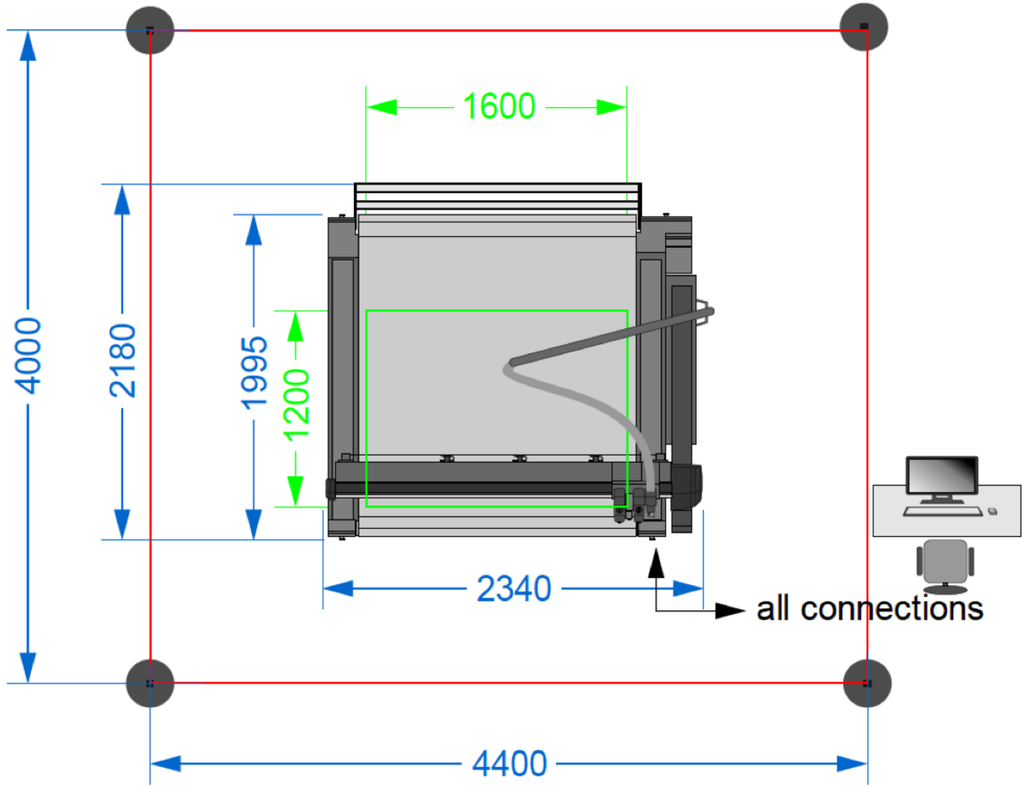
| | L [mm] | B [mm] | H [mm] | Weight [kg] | *tare weight [kg]* |
|---|---|---|---|---|---|
| Crate 1 | 3925 | 974 | 1082 | 800 | *300* |
| Crate 2 | 3274 | 974 | 1082 | 700 | *250* |
| Crate 3 | 1974 | 1174 | 1082 | 700 | *200* |
| Crate 4 | 1974 | 1174 | 1082 | 400 | *200* |
| Crate 5 | 1974 | 1174 | 1082 | 400 | *200* |

# Basic Unit: Dimensions

## F1612

- Working Area: 1600 mm x 1200 mm [1]
  - [1] - 8 cm for V-Cut tools
- All values are in mm

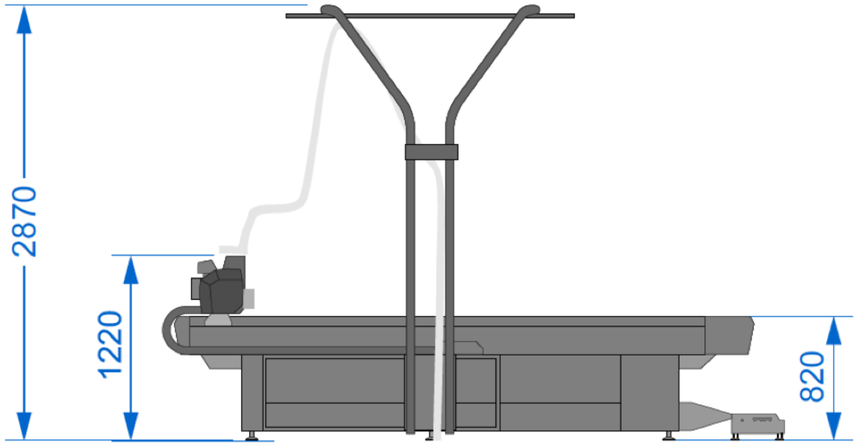


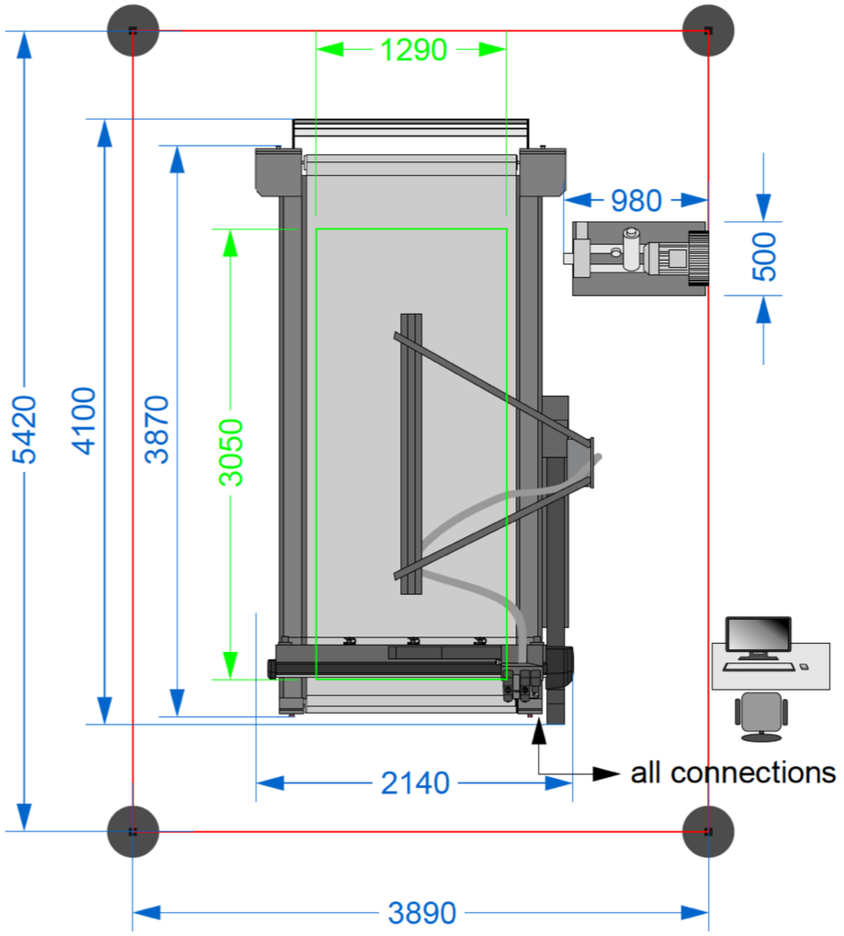



# Basic Unit: Dimensions

## F1330

- Working Area: 1290 mm x 3050 mm[(1)]
  - [(1)] - 8 cm for V-Cut tools
- All values are in mm

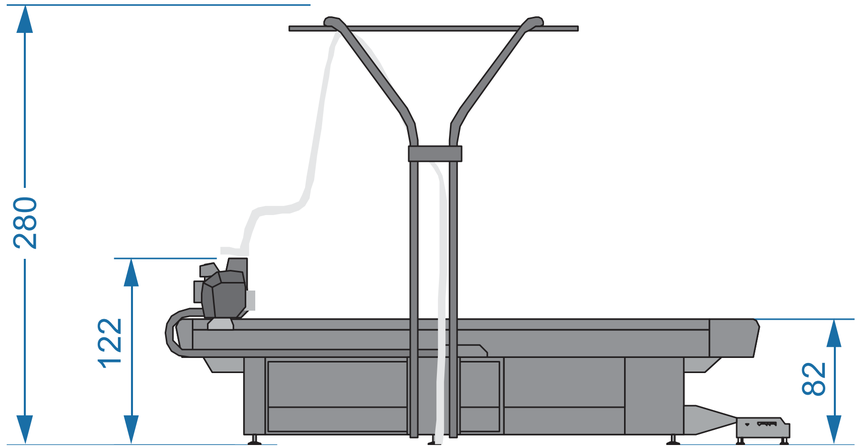


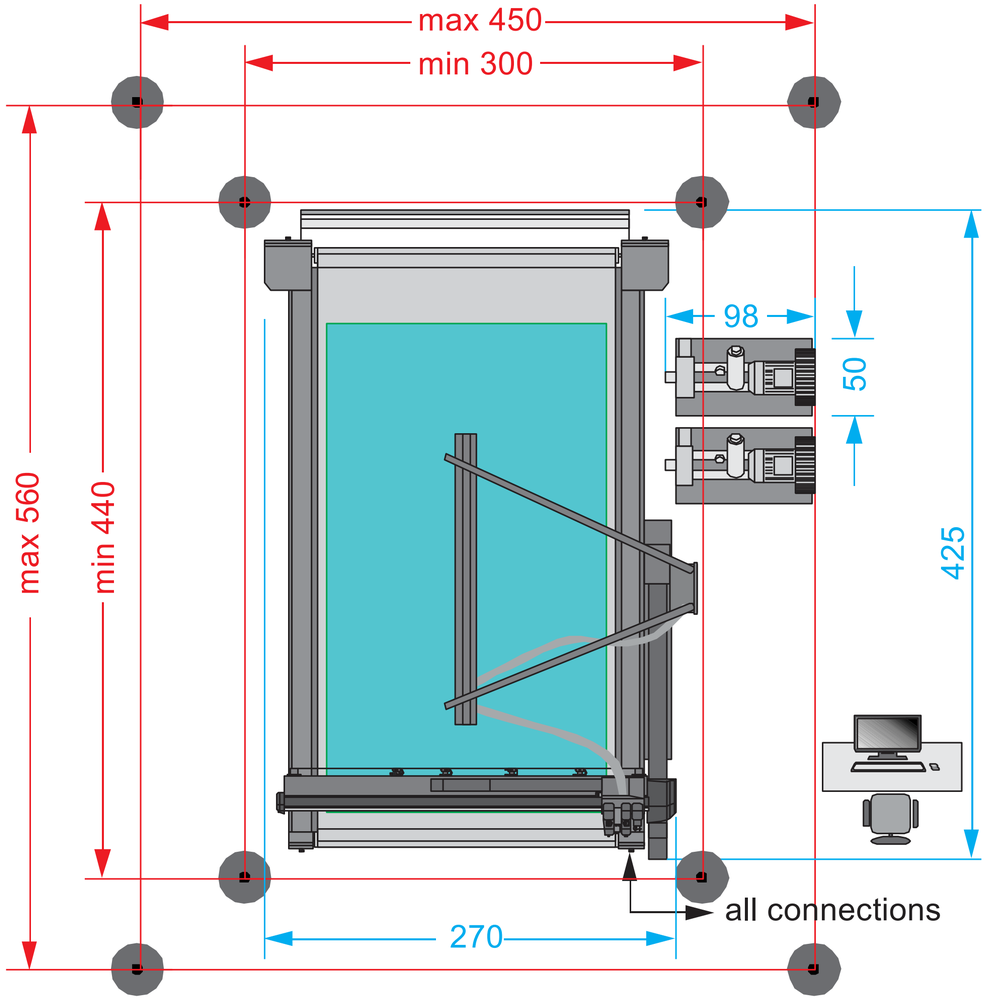



# Basic Unit: Dimensions

## F1832

- Working Area: 1860 x 3200 mm(1)
  - (1) - 8 cm for V-Cut tools
- All values are in mm

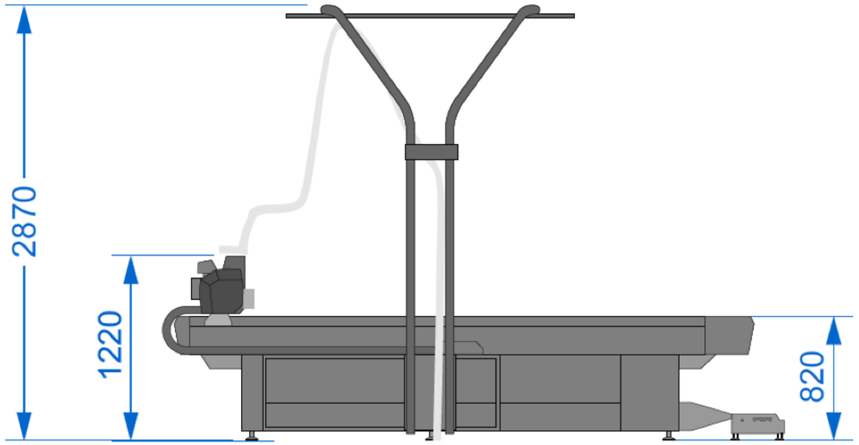


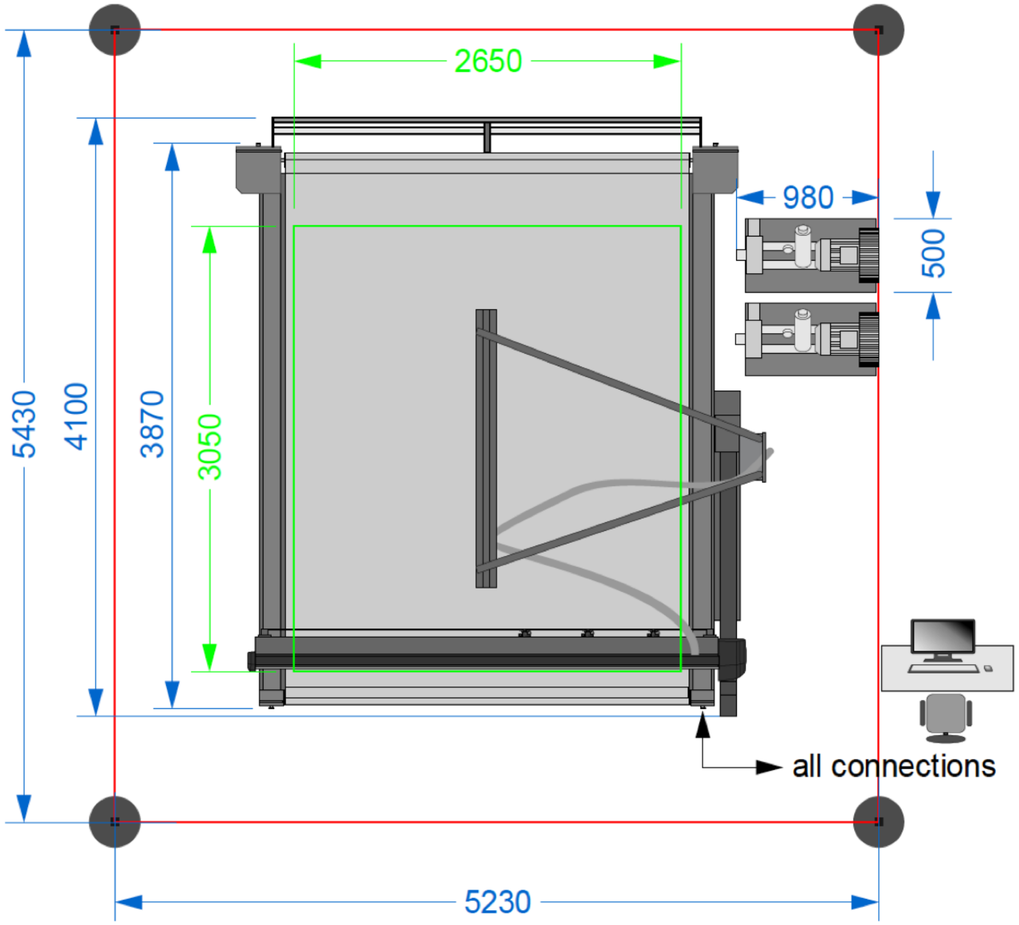



# Basic Unit: Dimensions

## F2630

- Working Area: 2650 x 3050 mm[(1)]
  - [(1)] - 8 cm for V-Cut tools
- All values are in mm



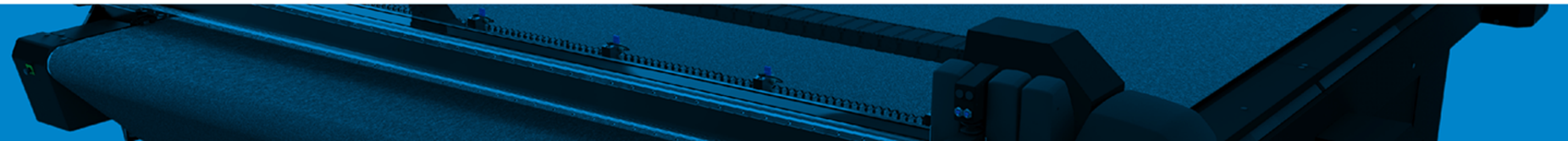
# Comparison

| Model | F1612 | F1330 | F1832 | F2630 |
|---|---|---|---|---|
| **Dimensions** | 236 x 214 x 110 cm | 214 x 410 x 122 cm | 270 x 425 x 122 cm | 349 x 410 x 122 cm |
| **Media Width** | Up to 165 cm | Up to 134 cm | Up to 190 cm | Up to 270 cm |
| **Working Area** | 160 x 120 cm | 129 x 305 cm | 184 x 320 cm | 265 x 305 cm |
| **Vacuum** | 1.3 kW* (50Hz) / 1.75 kW (60Hz) | 2.2 kW (50 Hz) / 2.55 kW (60 Hz) | 2 x 2.2 kW (50 Hz) /<br>2 x 2.55 kW (60 Hz) | 2 x 2.2 kW (50 Hz) /<br>2 x 2.55 kW (60 Hz) |
| **Vacuum Zones** | Variable over width of machine | 6 zones (2 rows x 3 columns) | 8 zones (2 rows x 4 columns) | 12 zones (2 rows x 6 columns) |
| **Speed** | Up to 1000 mm/sec | Up to 1000 mm/sec | Up to 1000 mm/sec | Up to 1000 mm/sec |
| **Acceleration** | Up to 1 G | Up to 1 G | Up to 1 G | Up to 1 G |
| **Requirements** | **Standard:**<br>3 x 400V + N, 50Hz, max 20A<br>**Or:** 3 x 208V + N, 60Hz, max 30A<br>**Or:** 3 x 230V, 50Hz, max 20A | **Standard:**<br>3 x 400V + N, 50Hz, max 30A<br>**Or:** 3 x 208V + N, 60Hz, max 30A<br>**Or:** 3 x 230V, 50Hz, max 30A | **Standard:**<br>3 x 400V + N, 50Hz, max 30A<br>**Or:** 3 x 208V + N, 60Hz, max 30A<br>**Or:** 3 x 230V, 50Hz, max 30A | **Standard:**<br>3 x 400V + N, 50Hz, max 30A<br>**Or:** 3 x 208V + N, 60Hz, max 30A<br>**Or:** 3 x 230 V, 50Hz, max 30A |

**Standard Solution includes**

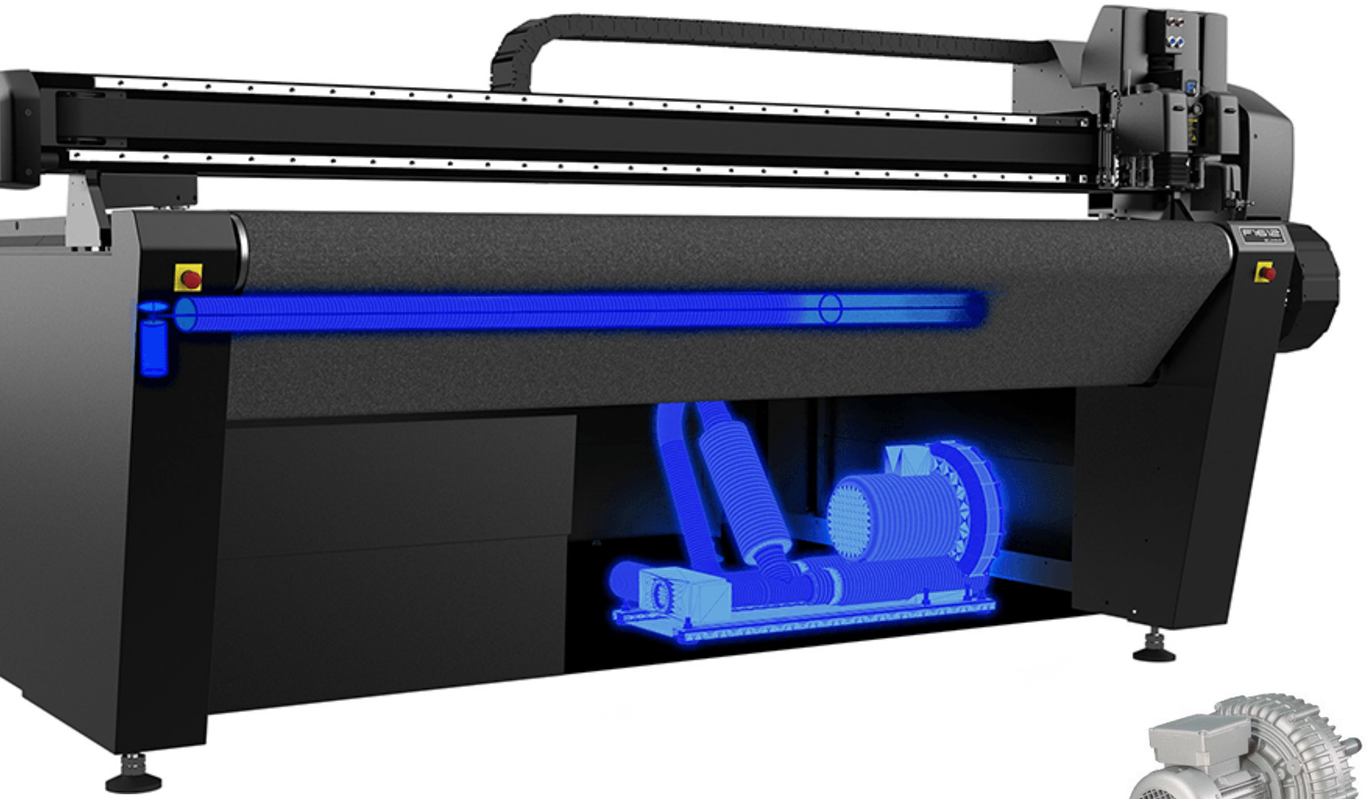
- F Series Flatbed System
- Conveyor System with Pneumatic Media Clamps
- Safety Pack
- Camera System
- Axis Control™ Software
- Remote Controller with charger and USB Bluetooth
- Drag Module
- ADC Right
- SummaFlex Pro ™ Software

For complete specifications, please visit www.summa.eu



# Comparison

# Basic Unit: Vacuum Table



## F1612

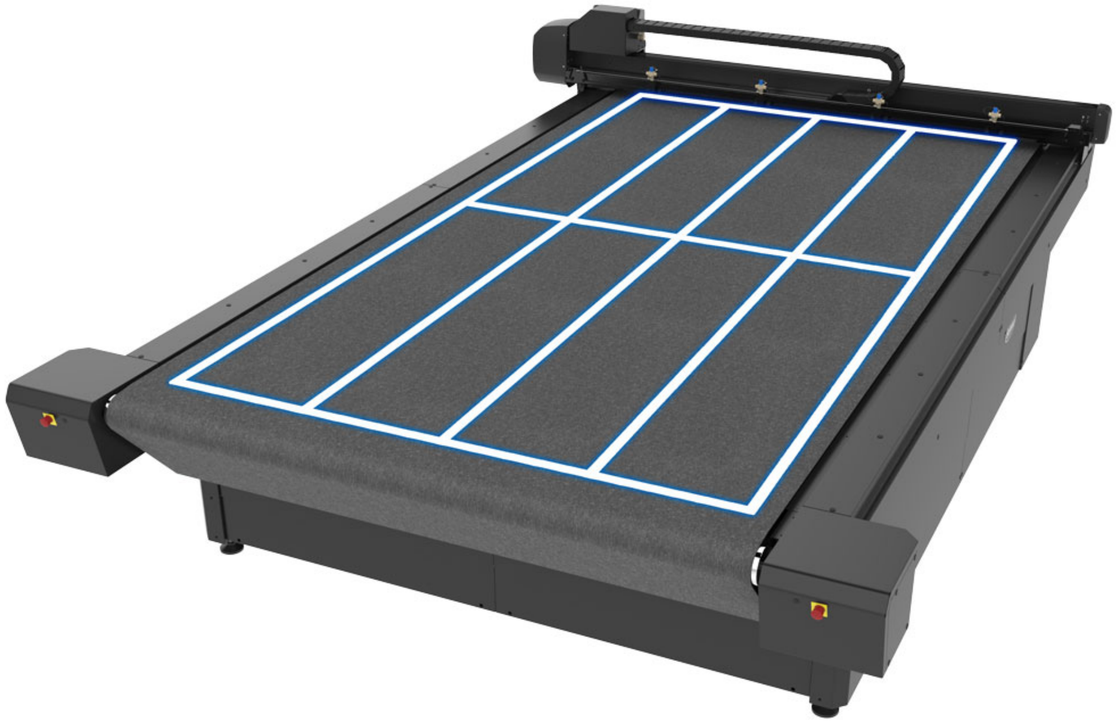
- Perforated stainless steel top plate.
  - Suitable for kiss-cutting.
  - Extra optional protection mat is required for cutting through.
- The table needs minimal mechanical adjustment.
  The flatness is measured once and compensated while working. This makes installation and periodical recalibration fast and easy.
- The powerful vacuum pump (1,3 kW) with sound absorber holds the material steady in place during the job. Moreover, by blowing under the material, which floats over the table, the electronic switching valve makes loading and unloading a child's play.
- The vacuum selector adjusts the vacuum width automatically to the working area.
- The vacuum is electronically switched on and off.

# Basic Unit: Vacuum Table

## F1330

- Vacuum Pump
  - 2.2 kW (50 Hz) / 2.55 kW (60 Hz)
  - The pump is placed outside the table to reduce the heating of the table.
- 6 Vacuum Zones
  - Automated (de)activation of all individual zones.
  - The (de)activation is pneumatic. Therefore all F1330 are shipped with a pneumatic board and all F1330 installations need compressed air.
  - The conveyor system with 3 pneumatic media clamps is included.
  - Note: In contradiction to the F1612 with a vacuum selector over the width of the table, on the F1330 you have the choice to work more central or to the left of the table.

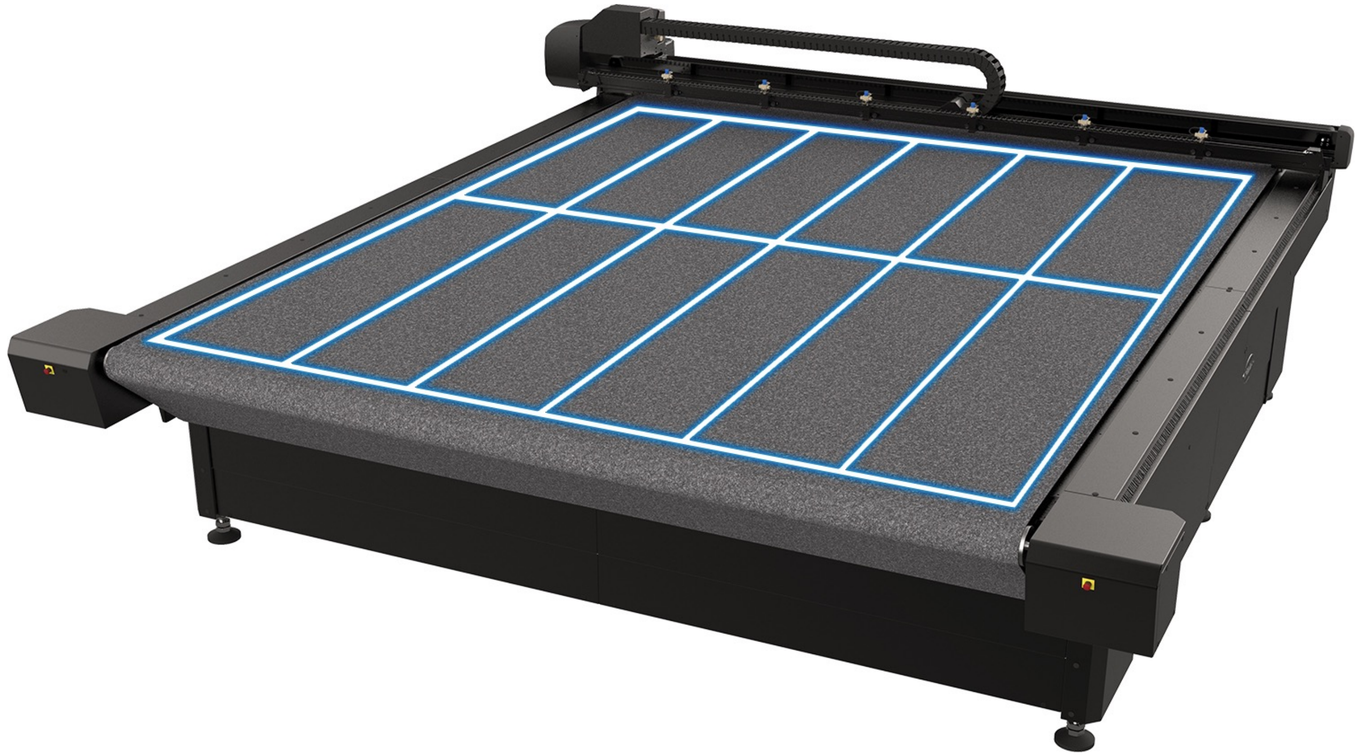
# Basic Unit: Vacuum Table



## F1832

- Vacuum Pump (2x)
  - 2.2 kW (50 Hz) / 2.55 kW (60 Hz)
  - The pump is placed outside the table to reduce the heating of the table.
- 8 Vacuum Zones
  - Automated (de)activation of all individual zones.
  - The (de)activation is pneumatic. Therefore all F1832 are shipped with a pneumatic board and all F1832 installations need compressed air.
  - The conveyor system with 4 pneumatic media clamps is included.
  - Note: In contradiction to the F1612 with a vacuum selector over the width of the table, on the F1832 you have the choice to work more central or to the left of the table.

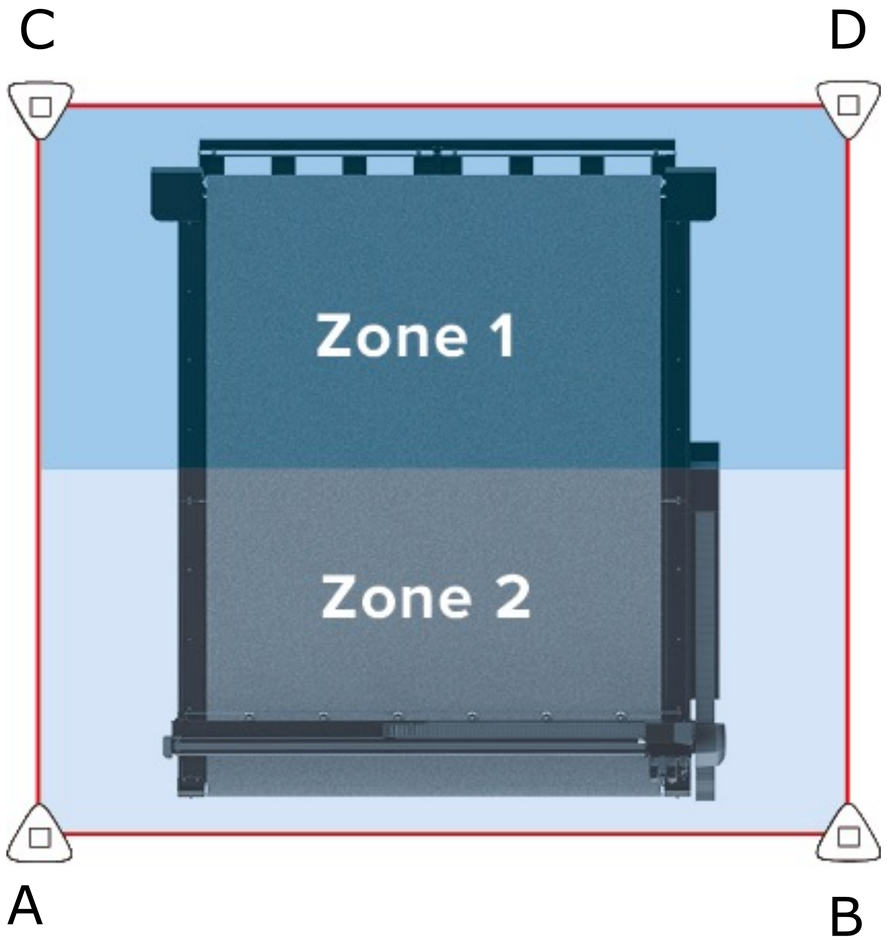
# Basic Unit: Vacuum Table



## F2630

- Vacuum Pumps (2x)
  - 2.2 kW (50 Hz) / 2.55 kW (60 Hz)
  - The pumps are placed outside the table to reduce the heating of the table.
- 12 Vacuum Zones
  - Automated (de)activation of all individual zones.
  - The (de)activation is pneumatic. Therefore all F2630 are shipped with a pneumatic board and all F2630 installations need compressed air.
  - The conveyor system with 6 pneumatic media clamps is included.
  - Note: In contradiction to the F1612 with a vacuum selector over the width of the table, on the F2630 you have the choice to work more central or to the left of the table.

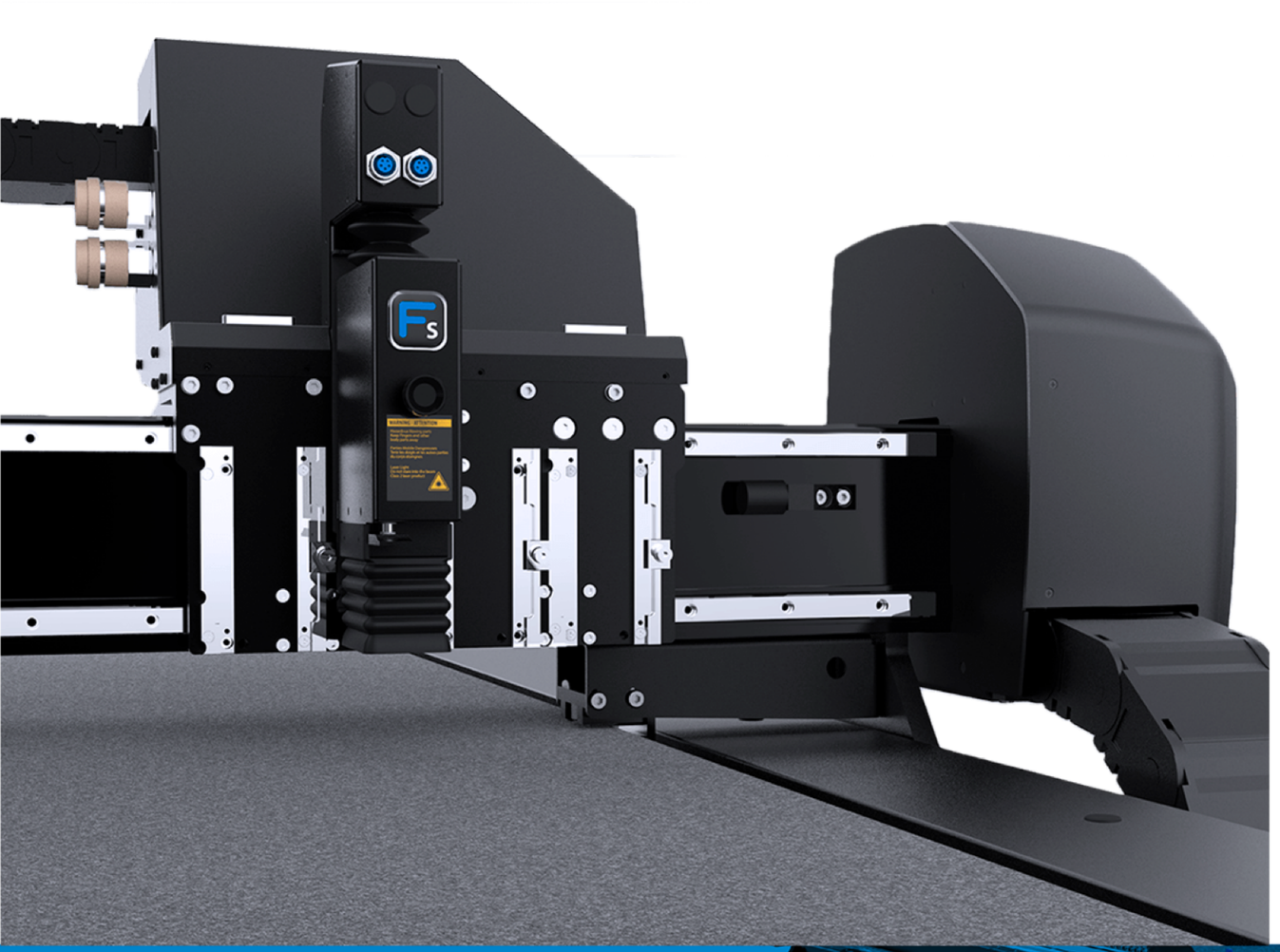
# Basic Unit: Tandem Mode




## F1330 / F1832 / F2630

- The machine is split up in two zones.
- While the machine is working in zone 1 the machine is accessible for loading and unloading between the safety poles C-D.
- While the machine is working in zone 2 the machine is accessible for loading and unloading between the safety poles A-C.
- The tandem mode makes it possible to minimize the downtime of the machine, thus maximizing the profitability!

# Basic Unit



## Central Unit

- Standard on the basic unit.
- Camera with flexible cap to avoid light interference.
  - Origin positioning over control software.
  - Marker recognition for contour cutting.
- LED pointer.
  - SET Origin without camera.
- Connectors.
  - Power supply for (future) tools.
  - Compressed air for (future) tools.
- Quick manual height adjustment mechanism for camera focus.


# Basic Unit

## Three Modules Space

- Three modules (see further) can be mounted at the same time.
- A drag module is standard included with the basic unit.
- The three modules can be of the same or a different type.
- For most modules the position is free to choose.
  - For future modules restrictions may apply.
  - (e.g. Miller needs extra space)
- The unit will automatically recognize which modules are installed.
- Extra modules can be purchased afterwards.

# Basic Unit

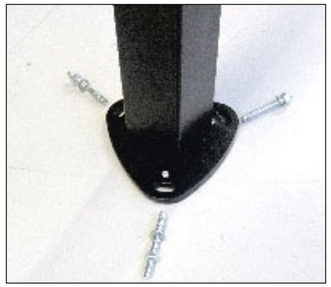

## Interface

- The unit has no keyboard or screen.
- A remote controller (with charger and USB-Bluetooth adaptor) is included.
- Full Control over the computer (not included).
  - Windows Vista, 7, 8, 8.1 & 10 (32 & 64 bit)
- Axis Control (included)
  - Optimized for touch screen systems.
  - Support of Bluetooth remote controller.

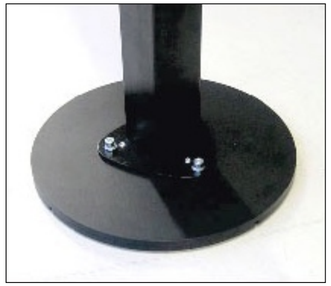
# Basic Unit

## Safety Pack

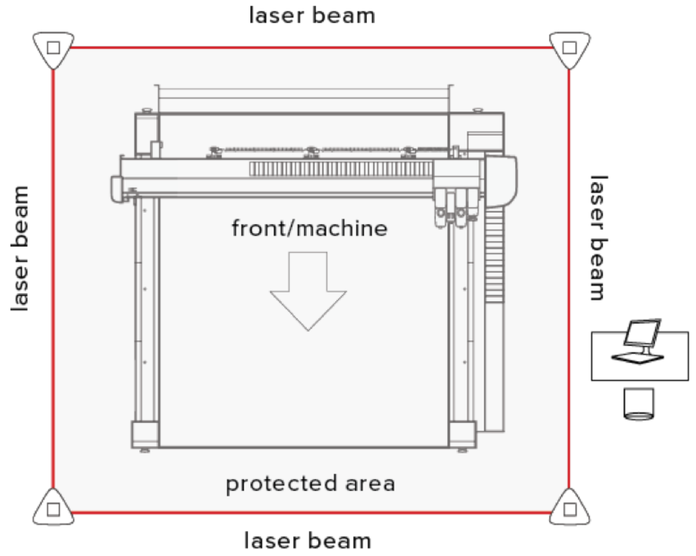
- The table has four emergency stops.
- The included Safety Pack assures maximum security.
  - A laser beam system surrounds the table and controls the area.
  - The unit is continuously guarded in production mode, while the unit remains easily accessible for setup.

Standard



Optional
Safety Pole Base
(set of 4) [500-9220]



# Basic Unit

## Info

**F1612**

- POWER
  - OR: 3 X 208V + N , 60HZ, MAX 30A
  - OR: 3 X 400V + N , 50HZ, MAX 20A
  - OR: 3 X 230V, 50HZ, MAX 20A

**F1330**

- POWER
  - Or: 3 x 208V + N , 60Hz, max 30A
  - Or: 3 x 400V + N , 50Hz, max 30A
  - Or: 3 x 230V, 50Hz, max 30A

**F1832**

- POWER
  - Or: 3 x 208V + N , 60Hz, max 30A
  - Or: 3 x 400V + N , 50Hz, max 30A
  - Or: 3 x 230V, 50Hz, max 30A

**F2630**

- POWER
  - Or: 3 x 208V + N , 60Hz, max 30A
  - Or: 3 x 400V + N , 50Hz, max 30A
  - Or: 3 x 230V, 50Hz, max 30A

- CE-Certification for electrical light industrial environment.
- FCC Class A
- Complies with ANSI/UL Standard 60950-1 and CAN/CSA Standard C22.2 No 60950-1
- All units require compressed air.
- Power cable not included!

# Basic Unit: Media Handling

## Media Transport

- Sheet material:
  - Kiss-cutting directly on stainless steel top plate.
  - Cutting through on optional protective mat.
  - Extension table

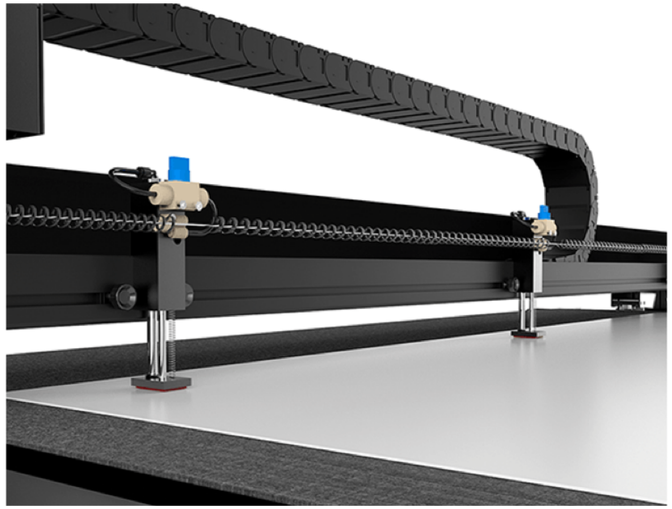
- Roll material:
  - Pneumatic Pack
    - Basic pneumatic components and media advance clamps.
  - Roll-support system (see further)
    - Kiss-cutting directly on stainless steel top plate.
    - Cutting through on optional protection mat (material dependent)
  - Conveyor system (see further)
    - Cutting through

# Basic Unit: Media Handling

## Pneumatic Pack

- The pneumatic pack is a basic pack for advancing media on the table. Pneumatically-driven media advance clamps hold the material down while pulling it forward to work continuously in panels or multiple jobs.

- It includes:
  - A control unit for compressed air
    - An air filter and pressure control
    - Multiple electronically controlled valves
      - For media advance clamps
      - For future tools on the central unit
- It requires:
  - An air compressor
    (not delivered by Summa)



# Basic Unit: Media Handling

## Roll-support

- Purpose:
  - Kiss-cutting of roll material directly on stainless steel top plate.
  - Cutting through of roll material on optional protection mat (material dependent).
- Includes:
  - Media support system, similar to the drum-cutters.

**F1612**

- All units are shipped with the conveyor and roll support system.

**F1330**

- All units are shipped with the conveyor and roll support system.
- Media basket is not be available.

**F1832**

- All units are shipped with the conveyor and roll support system.
- Media basket is not be available.

**F2630**

- All units are shipped with the conveyor and roll support system.
  - The system is split in two, which makes it possible to load two rolls next to each other.
  - Media basket is not be available.

# Basic Unit: Media Handling


## Conveyor System

- Purpose:
  - Cutting through of roll material.
    - The Conveyor System allow you to cut, crease and annotate large lenghts of (flexible) material to large production runs.
- Includes:
  - Conveyor belt
  - Conveyor rolls
  - Conveyor clamps to drag the conveyor forward

# Media Handling Options


## Basket (Specific F1612)

- Purpose:
  - Catching of waste media after it has been cut.
  - The textile basket can easily be separated from the frame for easy disposal of waste.
- Installation:
  - The frame attaches itself to the machine with magnets.
- Notes:
  - It can be installed at a later time.
  - It is equipped with solid wheels, so it can be moved around.

- Part number: [500-9120]

# Media Handling Options

## Extension Table (Specific F1612)


- Purpose:
  - Support of long boards during cutting.
- Installation:
  - Positioned in front and behind the F Series
- Notes:
  - Can be installed at a later time.
  - Height is adjustable.
  - Tables are foldable.

- Part number: [500-9121]

# Modules and Tools

**TOOL**

Knife + Tool Holder

**MODULE**

Tool is mounted in a module

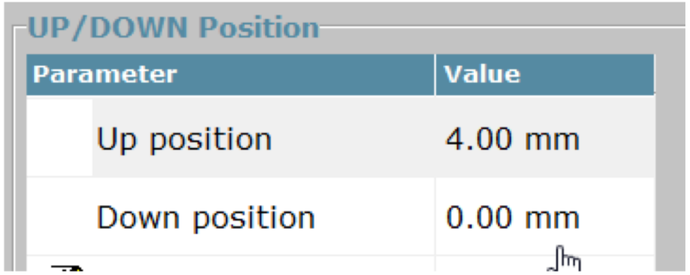
**HEAD**

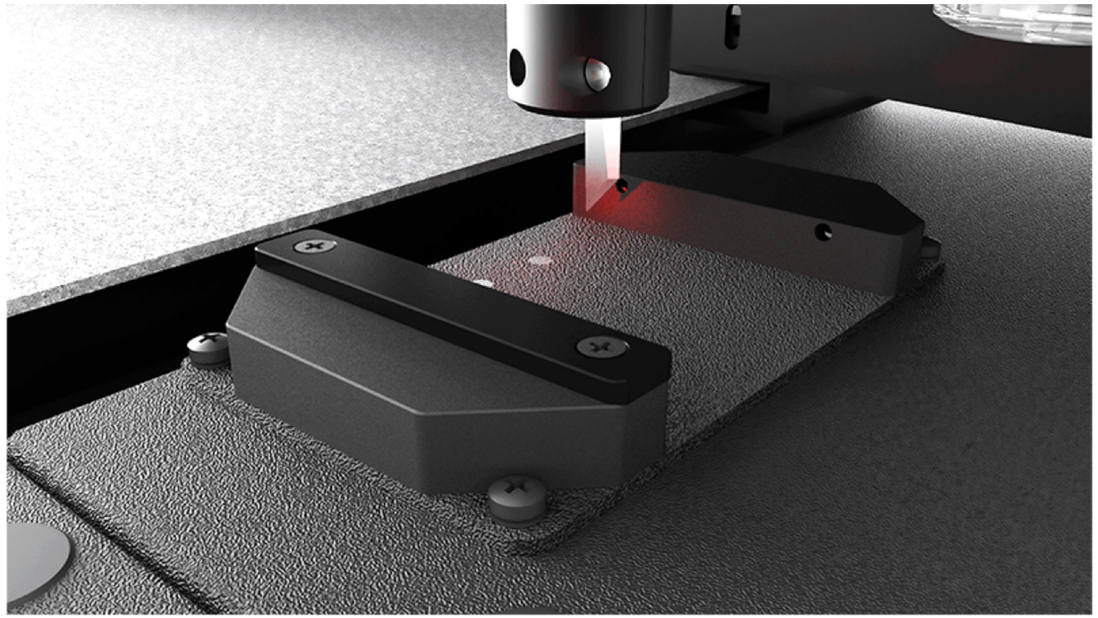
Module is mounted on one of the three module spaces of the head

# Automated Depth Control / ADC

- The Automated Depth Control (ADC) simplifies tool, knife or bit changes significantly. The ADC measures the tip of the knife or bit accurately and sets the down position of the tool to the level of the table.
- When starting up the unit or after a tool change, all installed tools are measured to detect changes and avoid operator errors.
- The measurement only takes a few seconds and provides for a swift tool change. On all tangential controlled tools, the ADC can also calibrate the knife. This ensures the best settings can always be used to get the most optimal cut quality.

- ADC right for slots 2 and 3 is standard included.
- ADC left for slot 1 is optional.

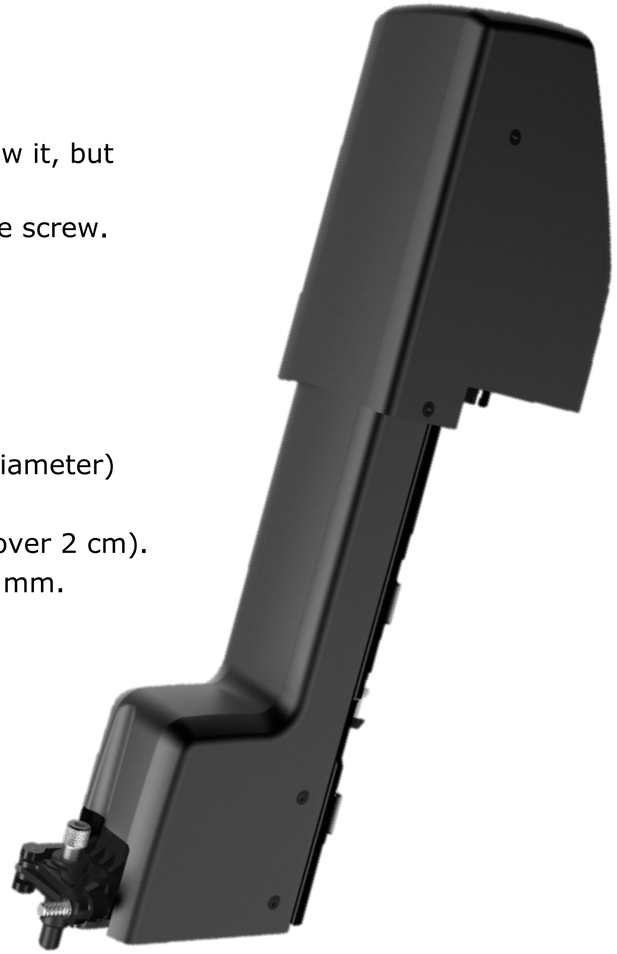



# Modules and Tools

## Drag Module

- This is basically the Summa Drag Head as we know it, but with a maximum pressure of 600 gr.
- The module can be quickly (un-)mounted with one screw.
- The knife pressure is electronically controlled.
- This module can handle following tools:
  - Fibre tip pen
  - Roller ball points
  - Universal Pen Holder
  - Standard black drag knife holder (1,5 mm diameter)
  - Copper drag knife holder (2 mm diameter)
- The module can manually be adjusted in height (over 2 cm).
- The head lifts electronically with a maximum of 4 mm.



- This head is suitable for:
  - Standard vinyl (contour) cutting.
  - Kiss-cutting of media that gives tracking problems on standard roll-plotters.
  - Making notations with a pen on the media (cardboard, paper, …).
- Part number: [500-9300]
- Main Application
  - Kiss cutting adhesive vinyl’s
  - Window Film
  - Pen Plotting
  - Drawing
  - Examples: Vehicle Graphics, stickers,…

# Modules and Tools

## Tangential Module

- The tangential module is suitable for tools which require control over the tool orientation.
- The module can be quickly installed with one screw.
- The tool moves electro-mechanically up/down over a maximum of 5 cm.
- The head is controlled by height.
- Force:
  - Maximum vertical force = 10 kg
  - Maximum horizontal force = 20 kg
- The tool holders for this module contain a barcode which can be read by this module. This way the flatbed knows which tools are installed.

- Part number: [500-9310]

Tools for Tangential module (Barcode system)

# Modules and Tools

Tools for Tangential Module (1)

## Kiss-Cutting Tool

- Known Summa tangential blades fit into this holder.
- Pressure is mechanically controlled by a spring. Pressure adjustments should be done manually.
- 3 springs are included (up to  120, 650 and 2000 gr)
- Maximum thickness: 1,2 mm
- Includes nose-piece for precise depth control.
- Suitable for dye-cutting materials that need extra pressure (eg. Prismatic material).

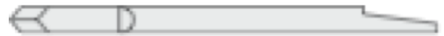
- Part number: [500-9311]

- Main Application
  - Kiss cutting adhesive vinyl’s
  - Kiss cutting PVC banner vinyl’s
  - Kiss cutting sandblast foil
  - Kiss cutting reflective foil
  - Cutting thing cardboards (<200 gr)
  - Cutting window film
  - Examples: Cardboard folder, stickers, vehicle graphics, sample from PE, coating plate, hanging sign

Tangential knife 36°
Up to 0.25mm

Tangential knife 45°
Up to 1mm

Double Sided Tangential knife 36°
Up to 0.5mm



Tangential knife 60°
Up to 1.2mm

# Modules and Tools

Tools for Tangential Module (2)

## Cutout Tools

- Suitable for cutting through a whole range of materials.
- Three holders are available, depending on the knife type:
  - Single Edge Cutout (with gliding disk)
    - Part number: [500-9312]
  - Double Edge Cutout (with gliding disk)
    - Part number: [500-9313]
  - Heavy Duty Cutout (without gliding disk)
    - Part number: [500-9314]

- Main Applications
  - Cutting paper <200gr
  - Cutting Cardboard 300-500gr
  - Cutting Varnish Blankets
  - Cutting Banner Vinyl's
  - Cutting Adhesive / Magnetic / Reflective material
  - Cutting Hard foamboard <2mm
  - Cutting Polypropelene sheet <= 1,2 mm
  - Cutting Polycarbonate <=0,6 mm
  - Examples: Banners (for buildings), wobbler, roll-up material, coating blanket, folding boxes, ski coating,…


Single Edge cutout knife 65°
Up to 6mm

Double Edge cutout knife 50°
Up to 3mm

Double Edge cutout knife 60°
Up to 5mm

Heavy Duty cutout knife 45°-90°
Up to 15mm

# Modules and Tools

Tools for Tangential Module (3)

## Electronic Oscillating Tool (EOT)

- The EOT is suitable to cut foam boards, corrugated cardboard, corrugated polypropylene boards as well as honeycomb boards. It cuts thinner materials as well, where static knives are less successful (or fail) e.g.: solid cardboard (chipboard), textiles, thin acrylic …
- Depending on the knife shape, material consistency and material thickness, the maximum cutting speed varies, as well as the minimum radius for curves.
  - Powered by Electronic DC Motor
  - Max. 12000 rpm / 200hz
    - Software selectable oscillation speed (12000 or 10000 rpm)
  - Stroke : 1mm
  - Requires: regular service and maintenance
  - Recommended: set of two
- Part number: [500-9320]


- Main Applications
  - Cutting Foamboards <10mm
  - Cutting Corrugated Cardboards
  - Cutting Rubber Gasket Material
  - Cutting Corrugated Plastics
  - Examples: POS Stand, counter display, 3D display, cardboard boxes, corrugated packaging

# Modules and Tools

## Knives for EOT

- It is recommended to use a blade length adapted to the material thickness. The shorter the blade the better the results are.
- Shorter knife types have different shapes. The thinner the knife shape, the smaller the curves that can be cut. Knives with more ‘body’ can handle more cutting force in order to cut more rigid material. The width of the knife tip influences the maximum cutting speed (the wider, the faster).
- The knife with a small piece of horizontal edge [500-9813] is most suitable for fibrous materials (banner, canvas, textiles).
- The maximum thickness of 24 mm is only usable for soft foams.

EOT Knife 65° L25
Up to 5 mm
[500-9800]

EOT Knife 65°-80° L25
Up to 11 mm (5mm)
[500-9810]

EOT Knife 65°-85° L25
Up to 11 mm (5mm)
[500-9811]

EOT Knife 0-65° L25
Up to 9 mm (5mm)
[500-9813]

EOT Knife 65°-85° L28
Up to 14 mm (8mm)
[500-9812]

EOT Knife 45°-85° L33
Up to 19 mm (13mm)
[500-9815]

EOT Knife 45°-86° L38
Up to 24 mm (18mm)
[500-9814]

# Modules and Tools

Tools for Tangential Module (4)

## Pneumatic Oscillating Tool (POT)

- The POT is suitable to cut foam boards, corrugated cardboard, corrugated polypropylene boards as well as honeycomb boards and foams with a thickness up to 25 mm.
- Depending of the knife shape, material consistency and material thickness, the minimum radius for curves will vary.
  - Powered Air supply
  - Max. 150hz
  - Stroke : 8mm
  - Air consumption : 6 Bar & 78 l/min
    - Advised is a compressor with 4-5 times airflow capacity (+/- 360 l/min)
  - Ear protection is advised as the sound level is +/- 84 dB

- Part number: [500-9350]

- **Note F1330/ F1832/ F2630 :**
  **The Pneumatic Oscillating Tool has another connector.**

- Main Applications
  - Cutting Honeycomb Boards >10mm
  - Cutting Foamboard with paper >10mm
  - Cutting Polystyreen Foam
  - Cutting Foamboard with plastic
  - Cutting Corrugated Cardboard >7mm
  - POS Stand Processing
  - Examples: POS Stand, counter display, 3D display, cardboard boxes, corrugated packaging

# Modules and Tools

## Knives for EOT

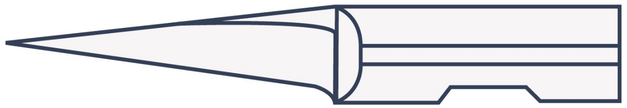
POT Knife L20 T0.63
Max. cutting thickness 18 mm
[500-9830]

POT Knife L20 T1.50
Max. cutting thickness 18 mm
[500-9832]

POT Knife L27 T0.63
Max. cutting thickness 25 mm
[500-9831]

POT Knife L27 T0.63
Max. cutting thickness 25 mm
[500-9833]

POT Knife L20 T1.0*
Max. cutting thickness 16 mm
[500-9834]
***Extra protective mat recommended**

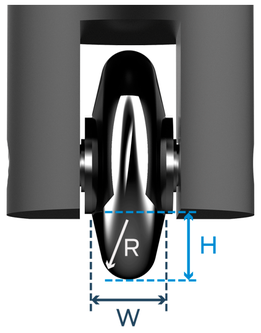


# Modules and Tools

Tools for Tangential Module (5)

## Creasing tools

- Suitable for making ‘folds’ in paper, cardboard, scoring paper, cartons, polypropylene and PVC material
  - Five tools are available:
    - [500-9325] Creasing Tool D25 R3 W8
    - [500-9326] Creasing Tool D25 R1.5 W8
    - [500-9327] Creasing Tool D25 R0.75 W1.5
    - [500-9328] Creasing Tool D15 R0.35 W0.7
    - [500-9329] Creasing Tool D15 R0.175 W0.35



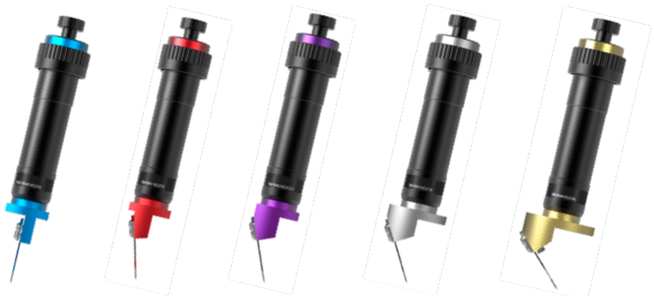

- Main Applications
  - Creasing Cardboard
  - Creasing Corrugated Cardboard
  - Creasing Plastics
  - Box making
  - Examples: Packaging, cardboard boxes, folding boxes, cardboard folders, boxes (samples) from PE

# Modules and Tools

Tools for Tangential Module (6)

## V-Cut Tools

- Suitable for making V-grooves in thick media for folding.
- Five tools are available with different knife angles.
  - [500-9340] V-Cut Tool 0°
  - [500-9341] V-Cut Tool 15°
  - [500-9342] V-Cut Tool 22.5°
  - [500-9343] V-Cut Tool 30°
  - [500-9344] V-Cut Tool 45°



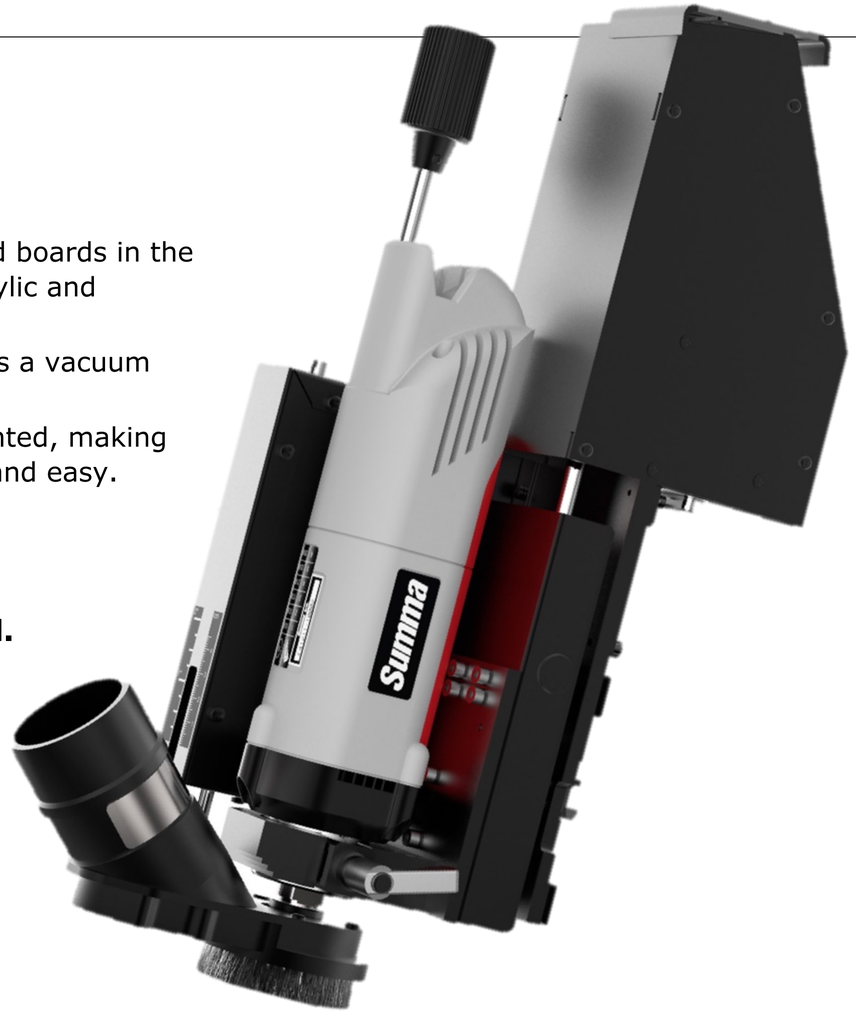
V-Cut Tool 0° | V-Cut Tool 15° | V-Cut Tool 22.5° | V-Cut Tool 30° | V-Cut Tool 45°

- Main Applications
  - V-Cutting foamboard
  - V-Cutting honeycomb board
  - V-Cutting corrugated plastics
  - V-Cutting picture frame
  - Examples: POS stand, Counter display, 3D display

# Modules and Tools

## Router Module

- The router module is capable of milling most used solid boards in the graphic and sign industry, such as hard foam PVC, acrylic and aluminum covered foam boards.
- The module has a 1 kW motor. The router also includes a vacuum cleaning kit to take away the chips and dust.
- The router module can be easily mounted and dismounted, making changeovers between knife-cutting and routing quick and easy.
- Rotational speed **25,000 Rpm.**
- **Note : Order number and price varies by model.**

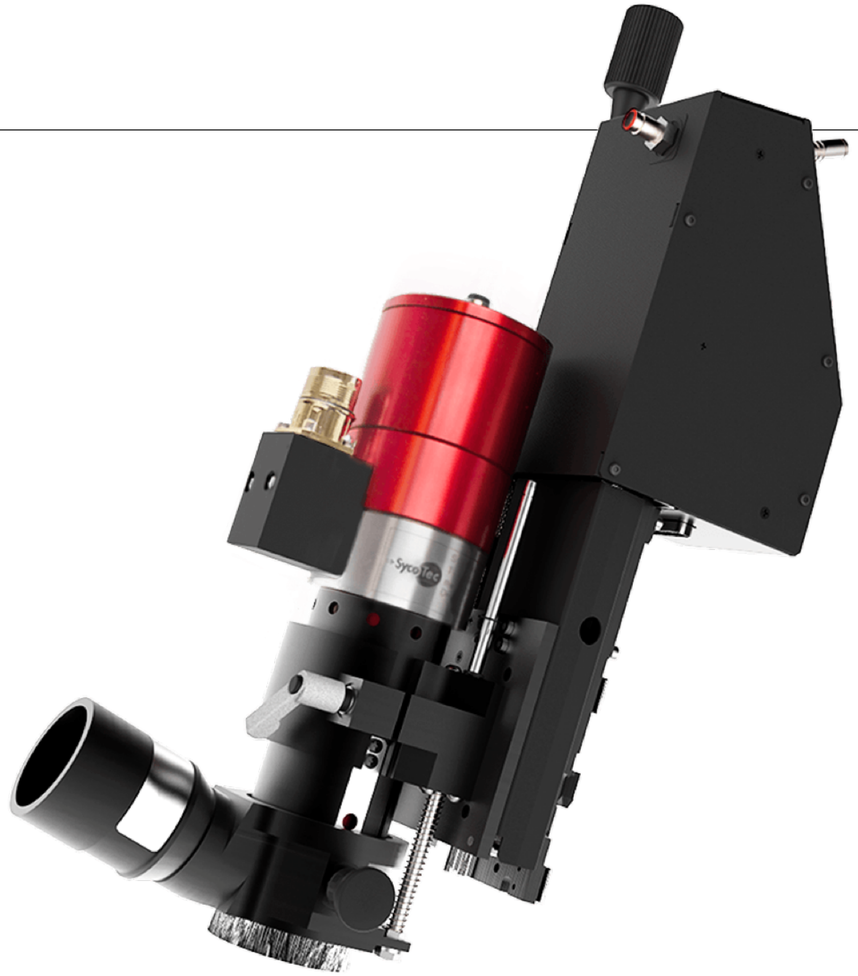



- Main Application
  - Routing corrugated plastics
  - Routing hard foamboards
  - Routing aluminium
  - Composite sheeting (Dibond/Alucobond)
  - Routing wood materials
  - Routing acrylic materials
  - Routing PVC materials
  - Routing polycarbonate material
  - Examples: 3D Display, Dibond Display, Outdoor Signage, Storage (MDF)

# Modules and Tools

## HF Router Module

- The spindle of the Milling motor is *utmost balanced*. This means that the spindle rotates with minimum play. When using small bits (<=4mm) or balanced bits, the vibrations are minimal. This results in a **smoother finishing,** which is most obvious when processing acrylics.
- With up to 1 kW output power the HF milling motor has significant more power, which allows faster **processing speeds.**
- The collet is clamping the bit pneumatically. No wrenches are needed to replace the bit. While in change tool/bit mode, a compressed air switch activates and deactivates the clamping of the bit. This can be done while the milling motor remains in the module, which results in fast and easy bit changes.
- Rotational speed **48,000 Rpm** generate **faster processing speeds**.
- **Note** : Order number and price varies by model.



- Main Application
  - Routing corrugated plastics
  - Routing hard foamboards
  - Routing aluminium
  - Composite sheeting (Dibond/Alucobond)
  - Routing wood materials
  - Routing acrylic materials
  - Routing PVC materials
  - Routing polycarbonate material
  - Examples: 3D Display, Dibond Display, Outdoor Signage, Storage (MDF)

# Routing Modules

## Vacuum Modules

Option 1 (light use)

Option 2 (heavy use)

**Option 1 (light use)**

Smaller vacuum cleaner with a switch to turn on the vibrating filter cleaning process. This vacuum cleaner holds a small waste container, and is often seen at an end user that does not route all the time.
(Recommended for F1612)

**Option 2 (heavy use)**

3000W Vacuum cleaner for the router system.
This vacuum cleaner has a waste container of 100L.

Note: 50 hz versions only

# Modules and Tools

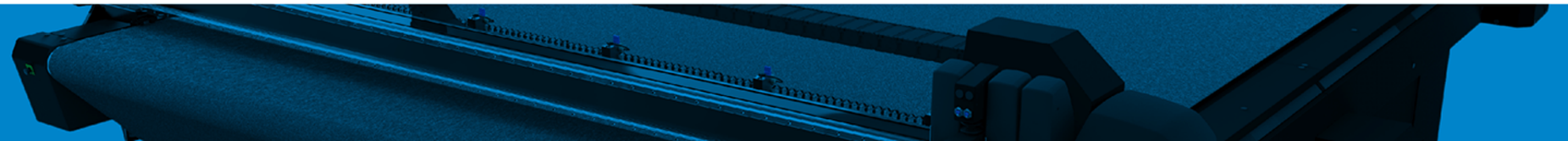
## Rotary Module

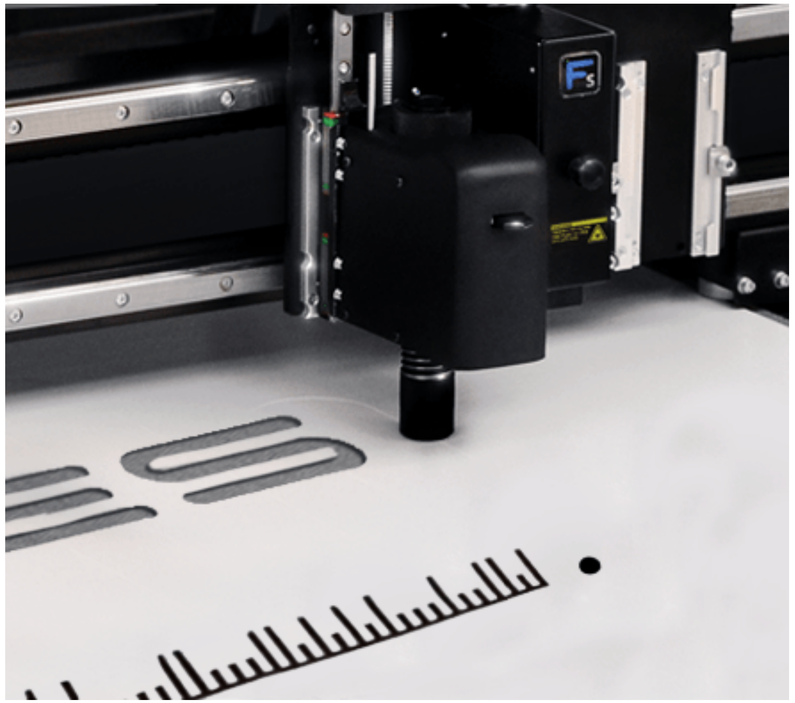
- The rotary module has a decagonal (10 corners / almost round) **tangential controlled knife, which is driven by an electronic motor**.
- All kinds of thin materials can be cut with the rotary knife. However, the main focus is on **textiles** because several fibres are hard to cut with other knife types.
- In general the vacuum table has less grip on textiles. The rotary knife produces minimal horizontal forces, ensuring the material stays in place.
- After each job, **dust is removed** from the knife by compressed air.

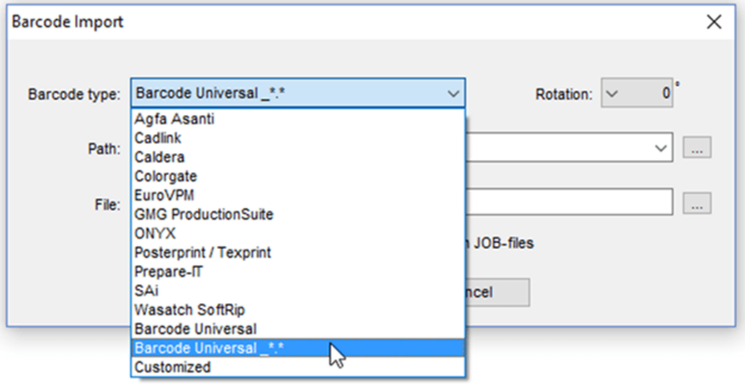
- Main applications
  - Textiles
  - Fabric
  - Awning
  - Canvas
  - Fleece
  - Flag Material
  - Examples: outdoor equipment, truck tarpaulin, functional textiles, parachutes, packaging foam, protective textiles

# Software

- Control Software:
  - **Axis Control** (see before)
- Production software:
  - High-end production software : **SummaFlex Pro**
    - Front-end application with job preparation, post processor and import plug-ins for CAD and illustration software (e. g. AutoCAD, Illustrator, CorelDRAW)
    - Software to drive the unit
    - SummaFlex Pro with camera support
    - Easy integration with many popular RIPs
    - See separate SummaFlex presentation
- Other software:
  - The system will be open (using HPGL code) for other software with routing or engraving modules.
    - Cadlink, SAi
  - SDK is available.





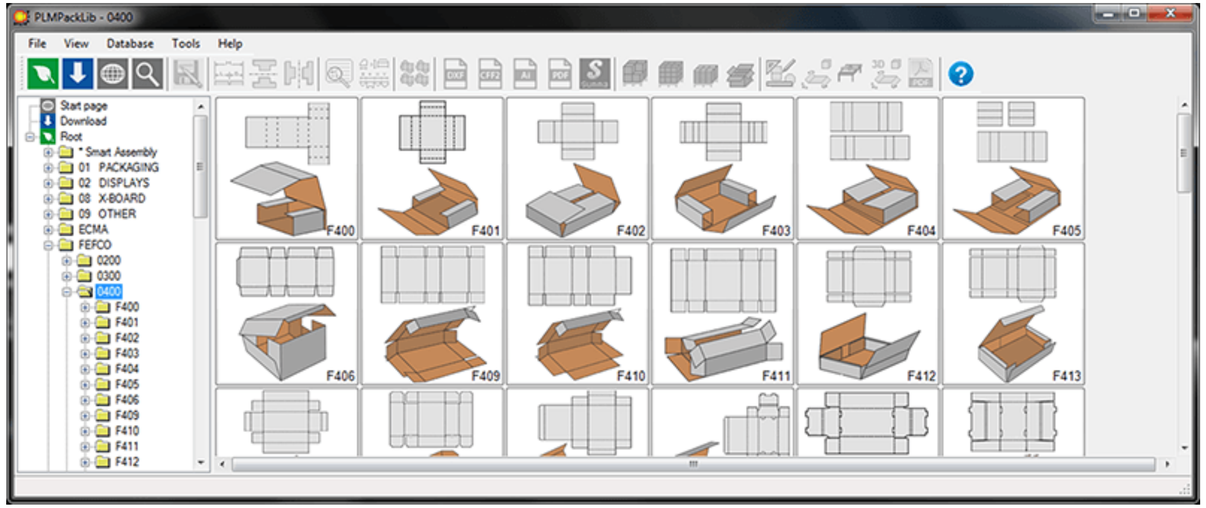



# Software

## Barcode

- Certain RIPS offer the possibility **to print a barcode with OPOS marks**. This barcode can be used to identify the job and to automatically obtain the necessary cut data from the computer.
- By scanning the barcode, the operator doesn't need to localise the job himself anymore. Scanning the job happens **automatically** by the built-in camera of the Summa F Series system or by a handscanner, depending on the selected workflow. Consequently the job will be opened in SummaFlex to be processed **immediately**.
- The biggest advantage of Summa's revolutionary camera system is that as soon as a job is finished, the camera will search for the next job **without operator intervention**. When using this workflow, the process will be repeated **automatically**.
- Note: an extra licence for the camera is required.

# Software




## PLM Packlib

- The PLM Packlib* for Summa is a library of **resizable standard packaging models**. The most popular packaging standards FEFCO (corrugated cardboard) and ECMA (folding carton) are included. Also a few POS display designs and solid cardboards (furniture) designs are available.
- Box/designs dimensions and material thickness are parametric. So, within a few clicks the correct cutting and folding lines are generated. These lines can be exported to a layered Illustrator file, ready to put graphics on it. This 'Summa version' also has the option to generate an OXF file, immediately ready to be used by **SummaFlex Pro**.
- *Note: The PLM Packlib is a program from TreeDim, mainly known by the CAD/packaging software 'Picador'.

# Software

## Workflow Compatibility

With the Workflow Compatibility function, SummaFlex Pro can seamlessly fit into **existing workflows**. SummaFlex Pro offers a **very flexible data import** and is supported by the following **RIP manufacturers**.

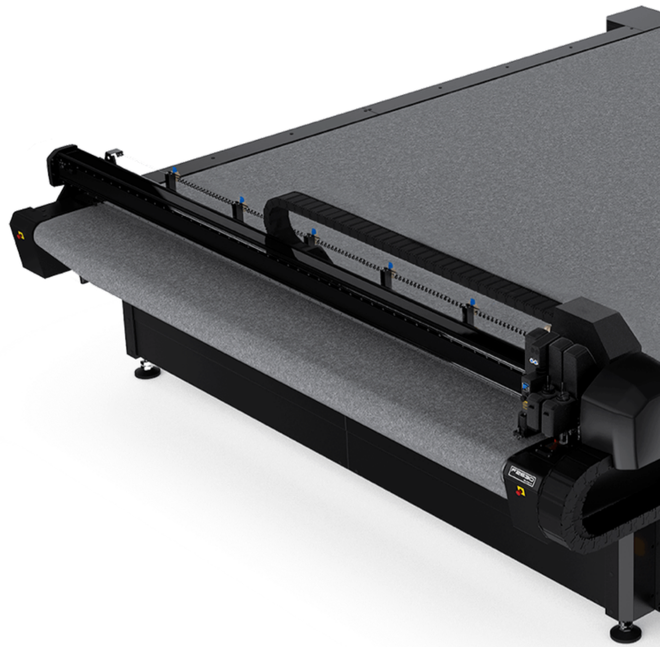
### RIP Manufacturers:

Agfa Asanti
Cadlink RIP
Caldera RIP
ColorGATE RIP
EFI RIP
ErgoSoft PosterPrint
ErgoSoft TexPrint
GMG Production Suite
IGEPA Master RIP
ONYX RIP
Pjannto RIP
PosterJet
Prepare-it
SAi
Wasatch RIP

### Packaging Software Compatibility:

Arden
ERPA
Engview
Picador

SummaFlex Pro has a wide variety of file import filters. This means nearly all data can be imported and processed.



### Vector/ CAD:

.PDF
.AI
.EPS
.WMF
.EMF
.DXF
.IK
.GTP
.JTP
.JOB
.HPGL
.CMX
.PS
.JPG

### Special Filters:

.Cut / I-Cut Vision (up to Version 6)
.ZCC / Zünd Cut Center
.OXF / Optiscout

# Peripherals

- Summa Vacuum pack (standard included)

| F1612 | F1330 | F1832 | F2630 |
|---|---|---|---|
| 1 x 1,3 kW -50hz / 1,75kW – 60hz pump | 2.2kW – 50hz / 2.55kW - 60hz pumps | 2 x 2.2kW – 50hz / 2 x 2.55kW - 60hz pumps | 2 x 2.2kW – 50hz / 2 x 2.55kW - 60hz pumps |
| Sound Absorber | Sound Absorber | Sound Absorber | Sound Absorber |
| Switching valve | Switching valve | Switching valve | Switching valve |

- Remote controller for easy operating (standard included).
- Safety Pack (standard included)
  - 4 adjustable poles with safety beam
  - Optional Safety Pole Base (set of 4) [500-9220]
- Windows based computer (minimum: xxx): not offered by Summa.
- Air compressor: not offered by Summa.
  (8 mm one touch pneumatic fitting required for F1612 (not included)!)
  (10 mm one touch pneumatic fitting required for F1330 (not included)!)
  (10 mm one touch pneumatic fitting required for F1832 (not included)!)
  (10 mm one touch pneumatic fitting required for F2630 (not included)!)
- Power cable not included!

Summa®

# F Series™

Professional Flatbed Finishing Systems