



# domino

**NC integrated machining centre** for solid wood windows and doors.

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**NC integrated machining centre** for solid wood windows and doors.

The ideal solution for all machining operations for any construction concept, joint and cross-section type. It enables batch or unit machining, reducing downtime to a minimum even for less skilled operators. It eliminates the need for the continuous presence of an operator and reduces space requirements to a minimum. It enables daily multi-shift operation without compromising quality and reliability.

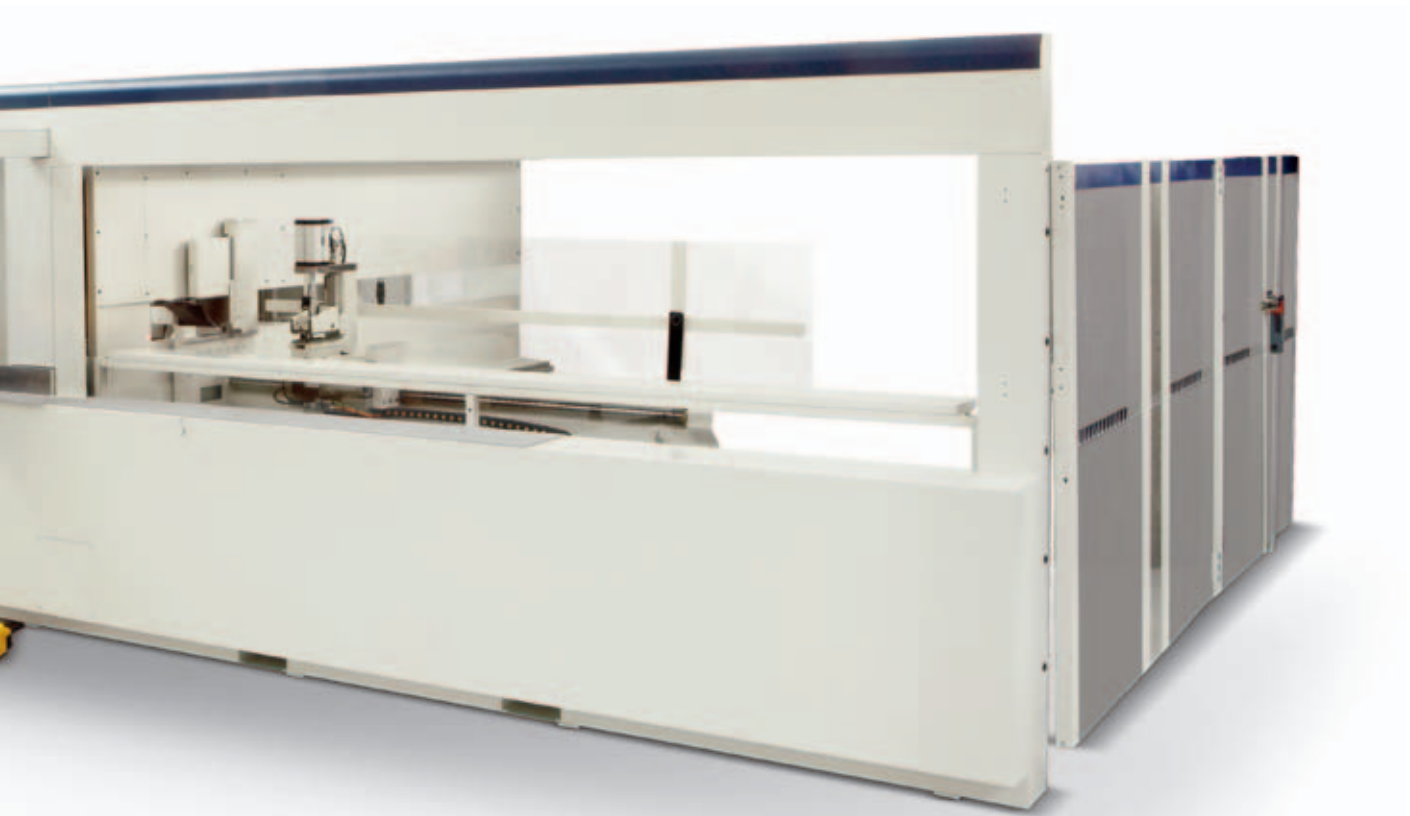
It automatically prevents splintering during tenoning operations for any type of tenon, piece shape or number of tools **thanks to the “Colibri” electronic system**

Great flexibility with respect to number and diameter of tools thanks to **spindles with HSK 85S attachment and automatic tool changer**

Finished piece at end of cycle; possibility of performing any boring-routing operation without chucks thanks to the **4 axis technology and “BRC” unit**

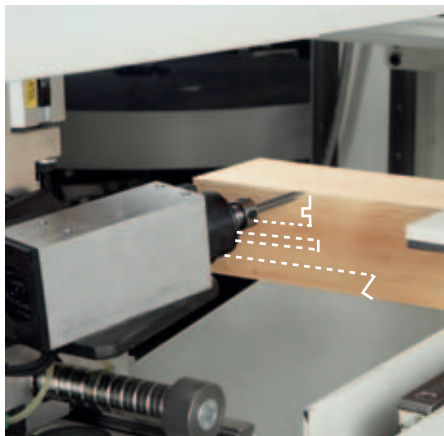
- cutting.
- planing.
- tenoning.**
- boring-routing.**
- profiling.**
- storm proofing.**
- sanding.
- painting.
- assembly.
- packing.





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technological advantages



## **“COLIBRI” ELECTRONIC ANTI-SPLINTER DEVICE**

The device enables the achievement of a uniform finish for any type of material, number of machined pieces and tools. It also prevents splintering on already profiled or shaped pieces, with limited maintenance needed.



## **TOOL HOLDER SHAFTS WITH “HSK 85S” ATTACHMENT AND AUTOMATIC TOOL CHANGER**

The HSK 85S attachment ensures high performance with respect to finish quality, removal, ease of operation and greatly reduced downtime notwithstanding the number of tools.



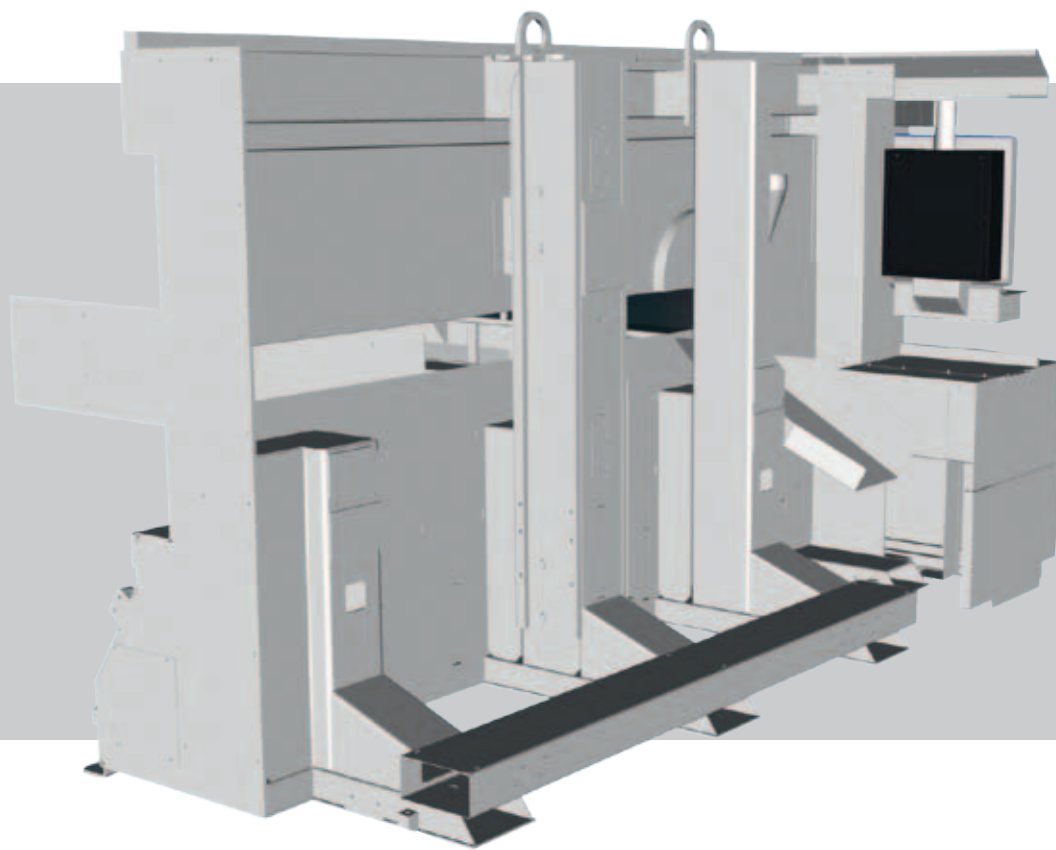
## **4-AXIS ELECTROSPINDLES WITH HSK 63E ATTACHMENT**

The 4-axis technology makes it possible to perform any type of machining operation on the piece, such as tenoning, vertical and horizontal boring-routing, without having to resort to commercial chucks.



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tenoning machine



## MACHINE BASE

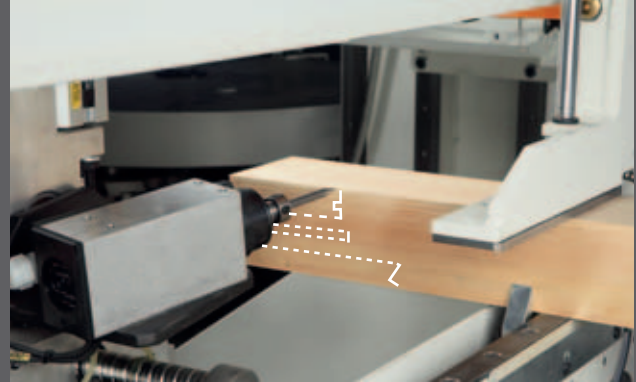
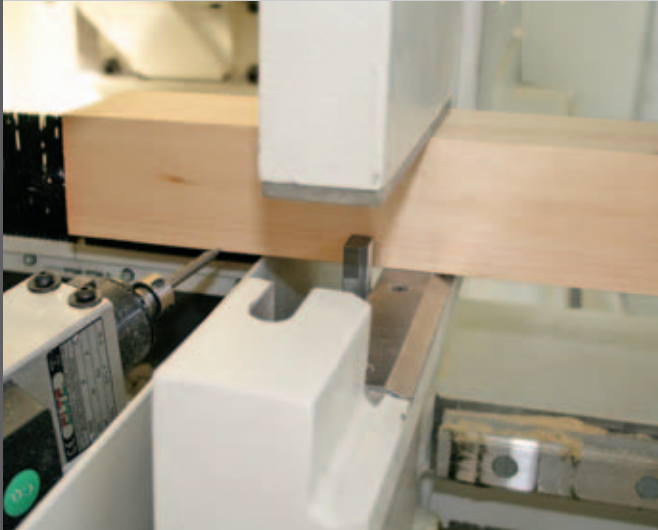
In order to guarantee maximum precision, finish quality and reliability, the machine's structure must not produce any vibrations. Domino's one-piece structure is adequately sized thanks to CAD systems that can verify its structural behaviour with respect to stress during operation.

## TENONING CARRIAGE

The piece is secured by a central clamp managed NC, depending on the piece's dimensions, and by an additional hook/presser on the machining unit.

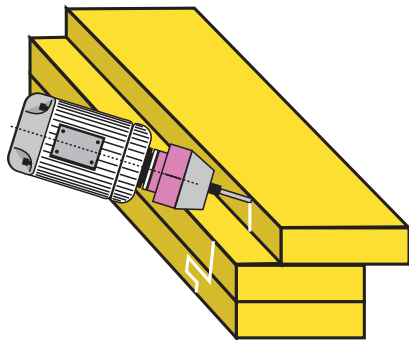


## **machining head: BRC multi-function unit**



### **“COLIBRI”**

The Colibrì electronic device has been patented in order to ensure uniform finish quality and reduce maintenance costs during tenoning operations.



Colibrì prevents splintering also for shaped or already profiled pieces. Data imports in DXF format allow for quick and easy programming. Always ready for any tool change.



### **SPINDLES WITH HSK 85S ATTACHMENT**

The HSK 85S technology was used in order to speed up tool changing and make it more user friendly. It reduces downtime and operator risk notwithstanding the number of tools used

- available power up to 15 Kw
- tool diameter up to 370 mm

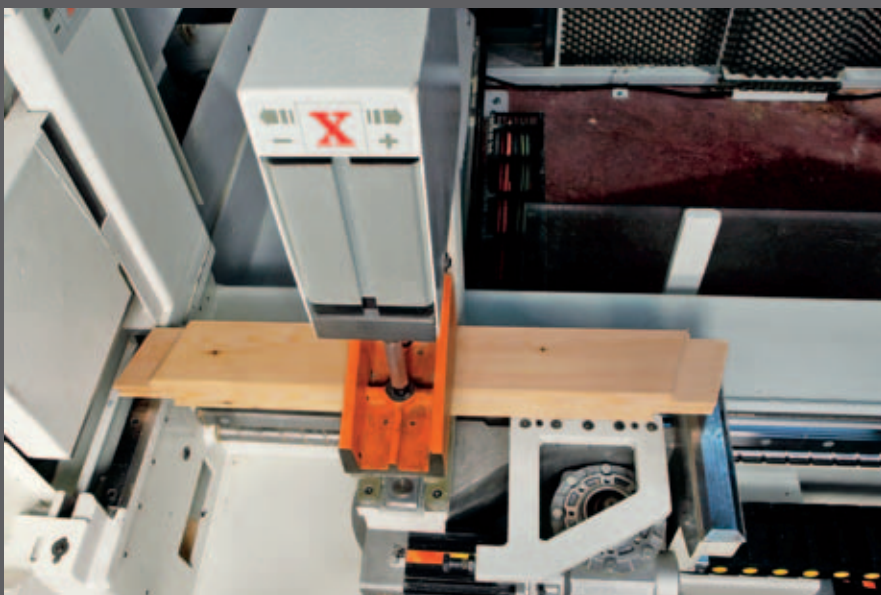
# domino

tenoning machine



## TOOL CHANGER FOR SPINDLES WITH HSK 85S ATTACHMENT

Tool changing directly from the spindle or the tool magazine is made easy thanks to a semi-automatic device



## ROTATEN

For inclined tenons, the cycle is managed automatically thanks to the Rotaten device, which allows users to achieve inclines of up to +/- 60°





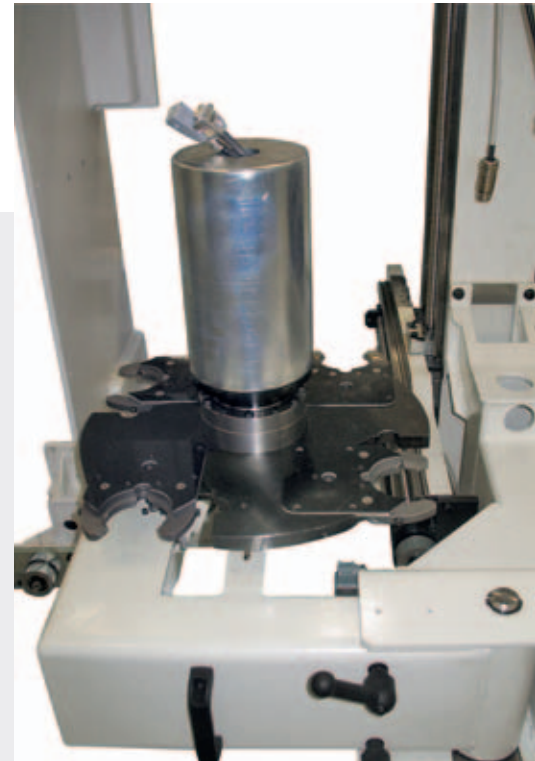
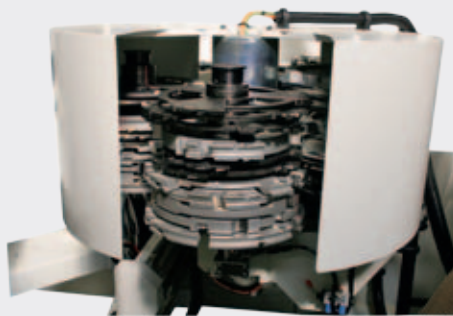
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## tenoning machine optionals

### “R4S” TOOL CHANGER

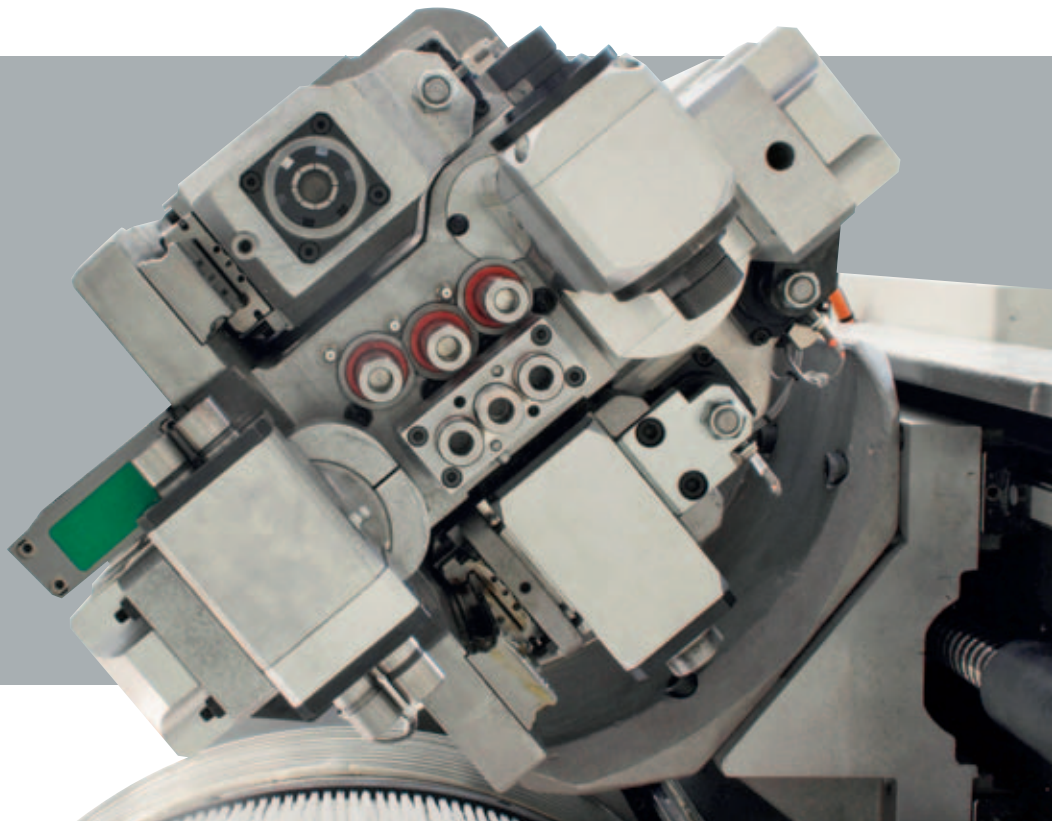
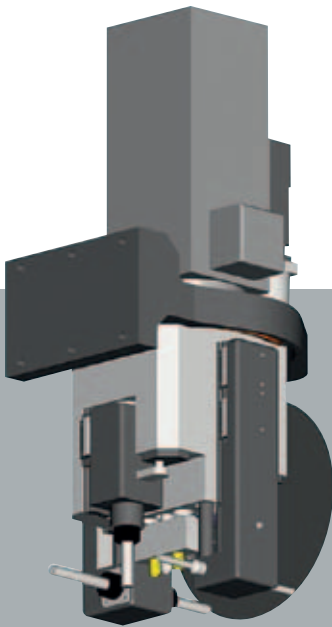
The RS4 4-position automatic tool changing device can be employed in order to avoid wasting time and ensure that all tools on the machine are always available

- Max L tool holder shaft 320 mm
- Max tool diameter 370 mm



### “BRC”

In order to perform additional machining operations and avoid time-wasting due to tool changing, the piece comes out as finished and the BRC boring-routing-cutting unit enables greater flexibility and productivity, thus avoiding the need to resort to commercial chucks.



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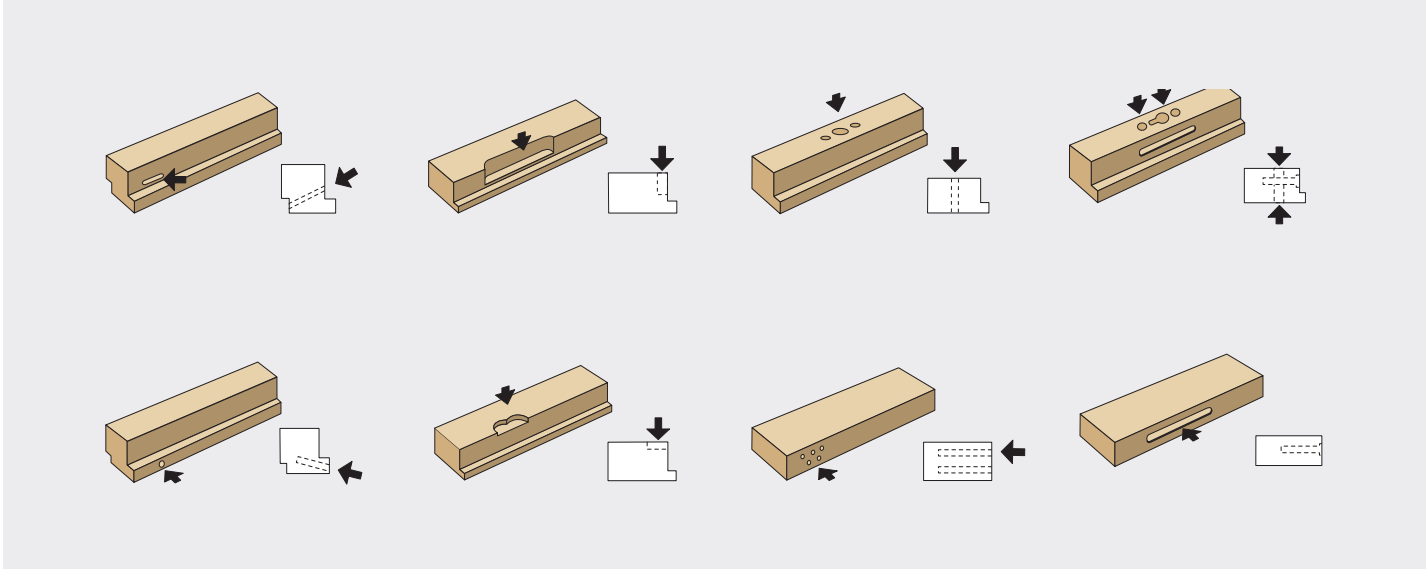
## tenoning machine optionals



### “MODULO T”

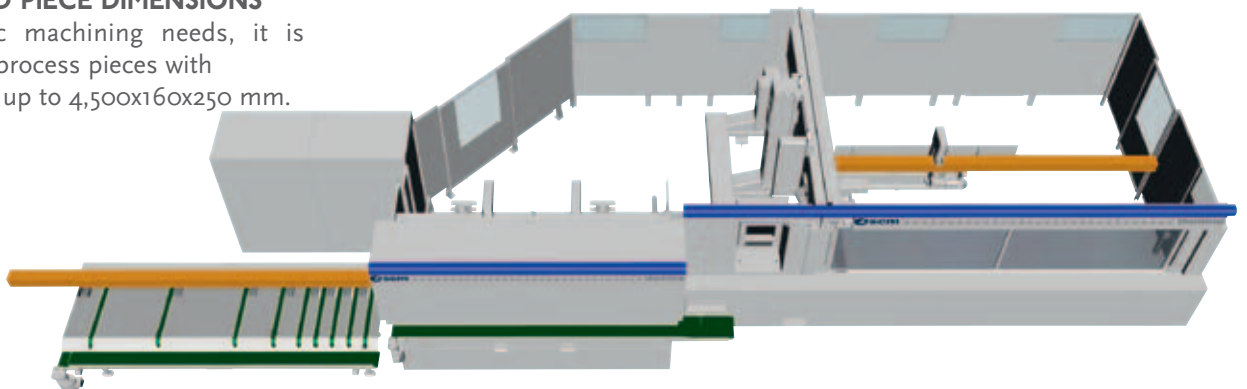
A 4-axis electrospindle with HSK 63E attachment in order to satisfy increasingly stringent client requirements. Routing, boring and cutting at any point on the piece has never been easier. Possibility of machining tenons using several tools (splitting concept)

- max power 12 KW at 6,000 RPM
- 12-position tool changer



### OVERSIZED PIECE DIMENSIONS

For specific machining needs, it is possible to process pieces with dimensions up to 4,500x160x250 mm.



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profiling machine

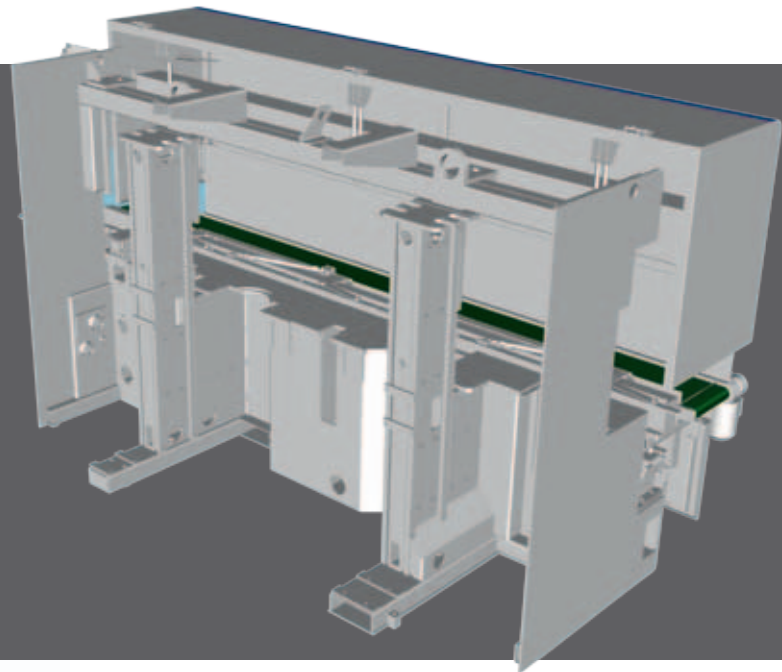


# domino

profiling machine

## MACHINE BASE

In order to guarantee maximum precision, finish quality and reliability, the machine's structure must not produce any vibrations. Domino's one-piece structure is adequately sized thanks to CAD systems that can verify its structural behaviour with respect to stress during operation.

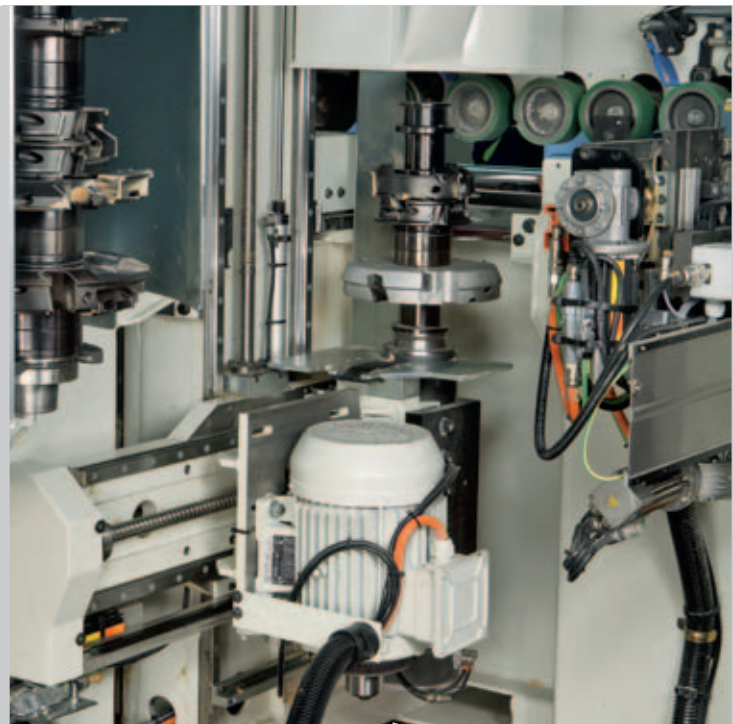


## FEED SYSTEM

In order to guarantee the feeding of any type of profile and a high finish quality for any shape, length and material, the profiling machine has been equipped with a piece feed system with universal joints and gears.

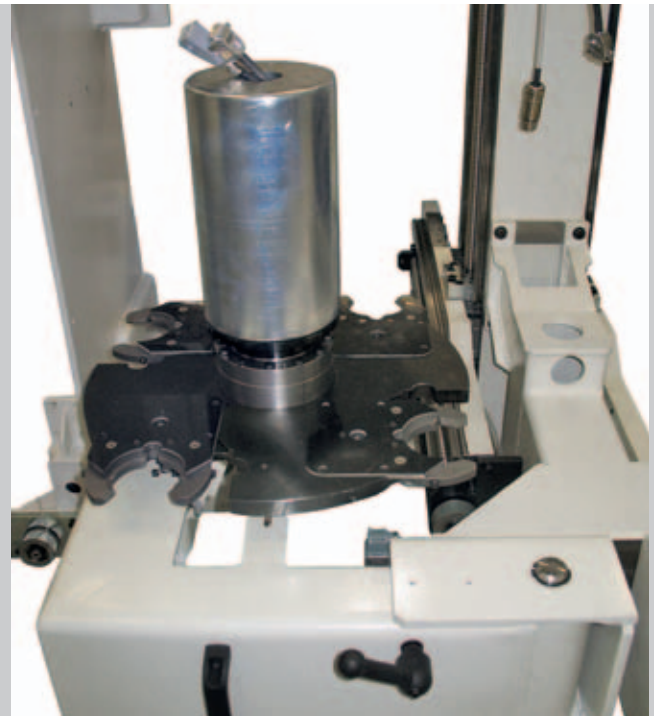
## HD SPINDLES

In order to ensure optimal finish during the profiling stage also with movement speeds of over 12 m/min for any type of material or profile to be machined, spindles with power up to 15 kw, tool dimension up to 250 mm and rotation speed up to 7,500 RPM were chosen.



# domino

## profiling machine optionals



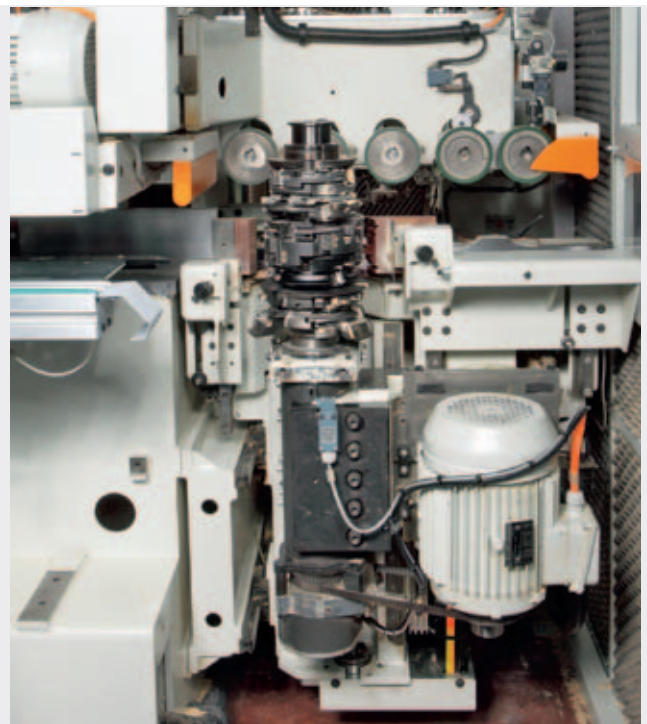
### **"R4S" TOOL CHANGER**

The RS4 4-position automatic tool changing device can be employed in order to avoid wasting time and ensure that all tools on the machine are always available

- Max L tool holder shaft 320 mm
- Max tool diameter 250 mm

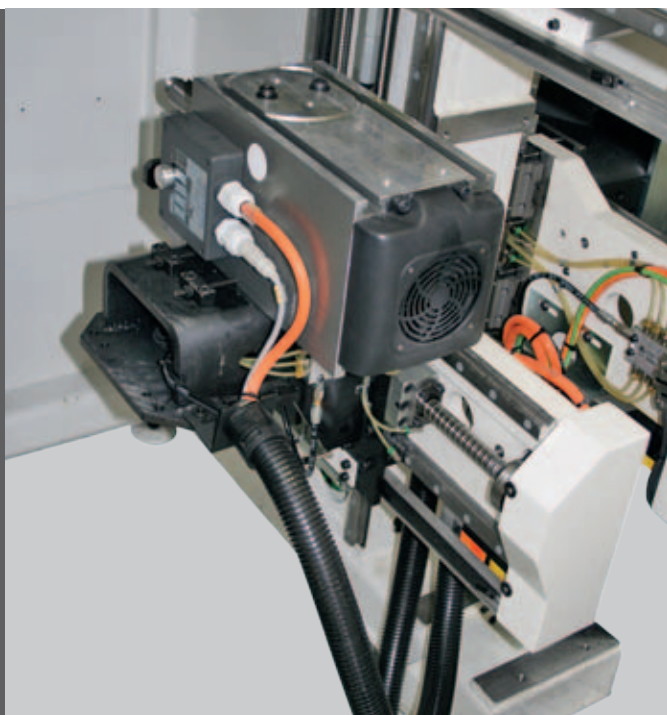
### **LEFT VERTICAL SHAFT HD**

The left vertical shaft with electronic vertical and horizontal positioning can be used to profile the left-hand side at the same time as the right-hand side, thus avoiding having to feed the piece twice into the machine.



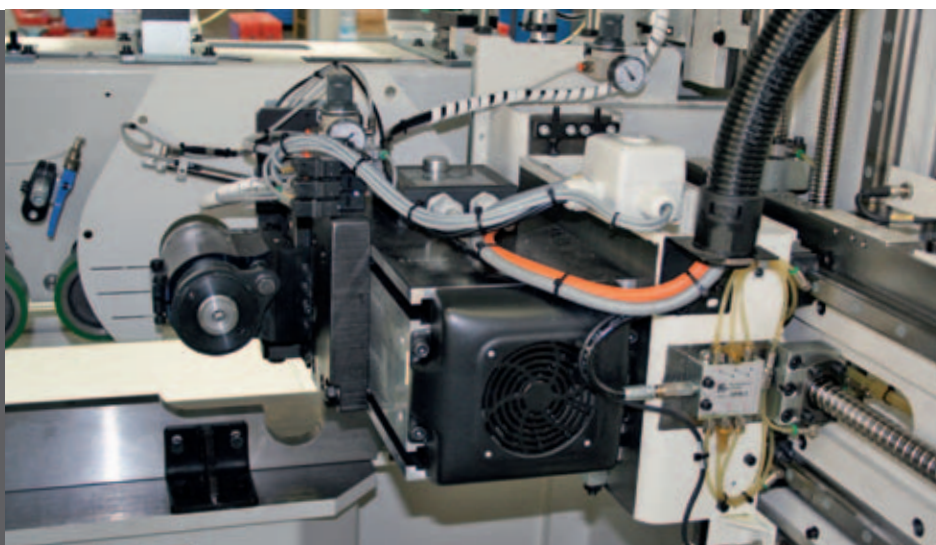
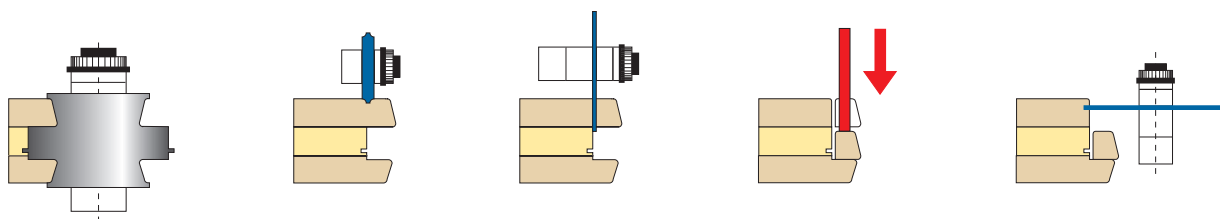
# domino

## profiling machine optionals



### HORIZONTAL SPINDLES

The upper and/or lower horizontal shaft can be used in order to machine the upper/lower part of the piece, such as when creating seal channels or single-piece joints on the frame at the same time as profiling.



### "TWIX"

When machining of 45° edge-trimmed glazing bead during profiling, the Twix work unit makes it possible to radius and subsequently profile the glazing bead during the same operation. Should it be necessary to create an airway, an independent vertical machining unit can be retrofitted.

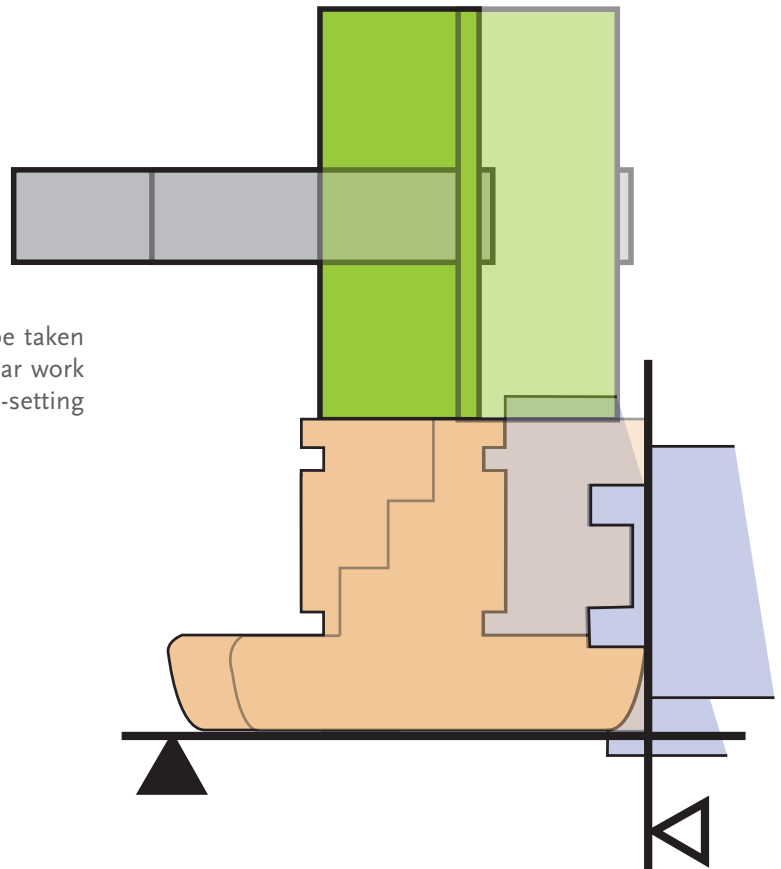
# domino

## profiling machine optionals



### FEED WHEELS

In order to enable pieces with any profile type to be taken off and avoid operator intervention, feed wheels near work units on the right hand side are fitted with on/off 3-setting axial positioning.

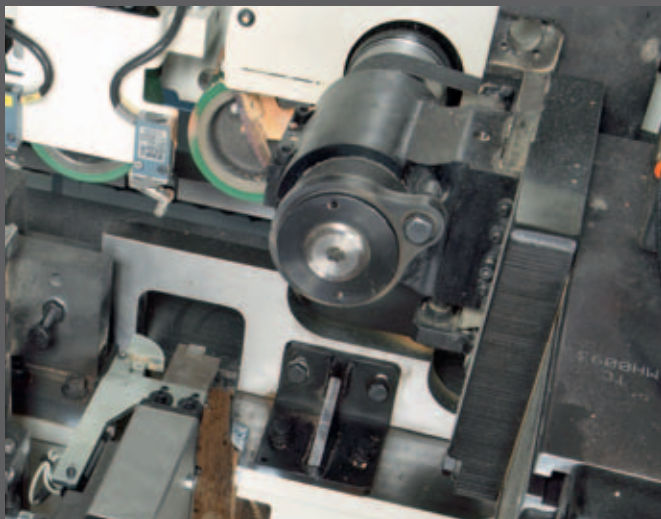


When pieces with a marked left profile or of considerable thickness need to be machined, the left guide can be equipped with horizontal and vertical electronic positioning in order to ensure machining precision and optimal finish.



# domino

## profiling machine optionals



### GLAZING BEAD NAILING

When machining the glazing bead, it is possible to envisage a strip/piece nailing function in order to link the piece to the relevant strip during factory production.

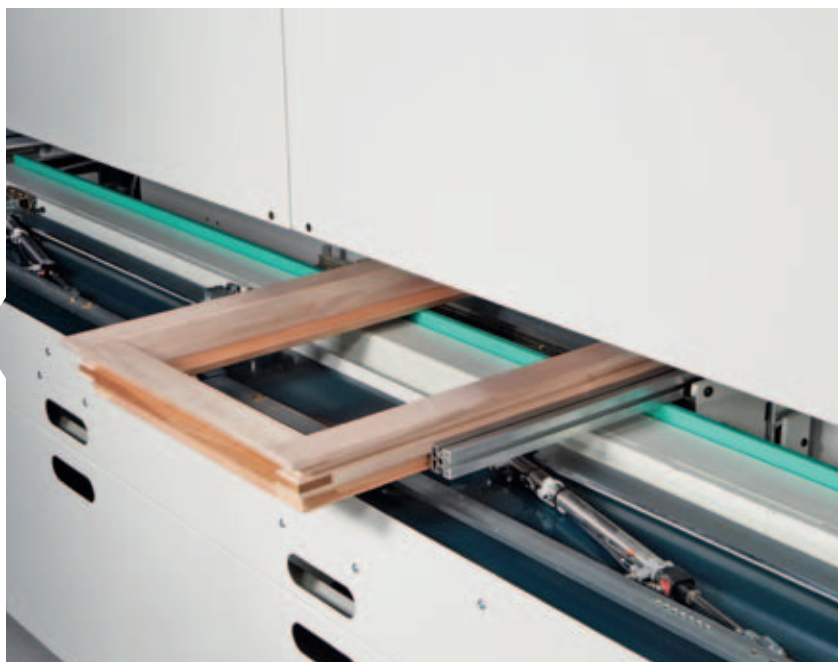
### MARKING THE PIECE

In order to identify the piece at any time (client, piece type, etc.) a inkjet printer with NC-managed positioning and control can be fitted.

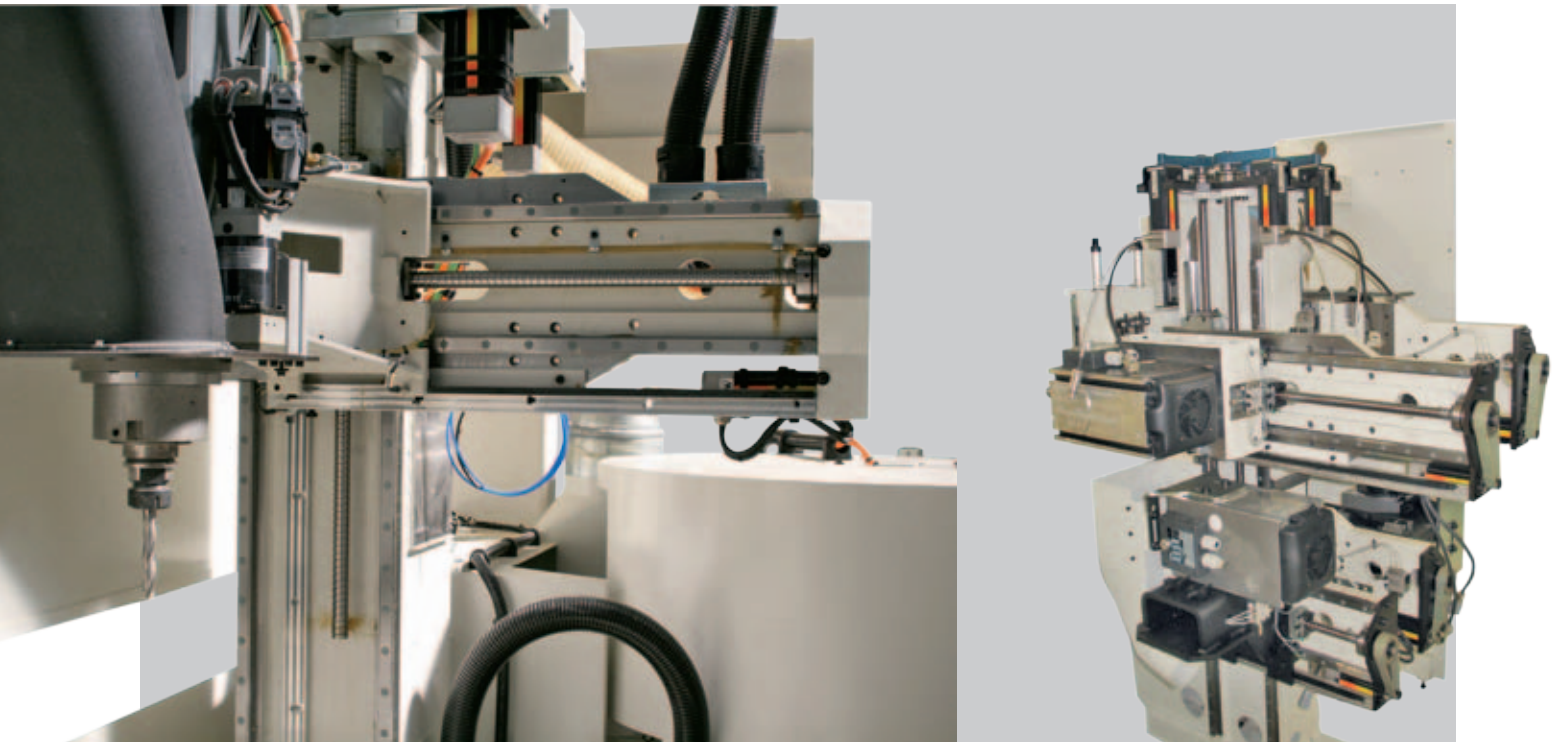


### STORM PROOFING

When assembled sashes need to be storm proofed, an additional carriage can be fitted to ensure optimal finish and facilitate operations for the operator.

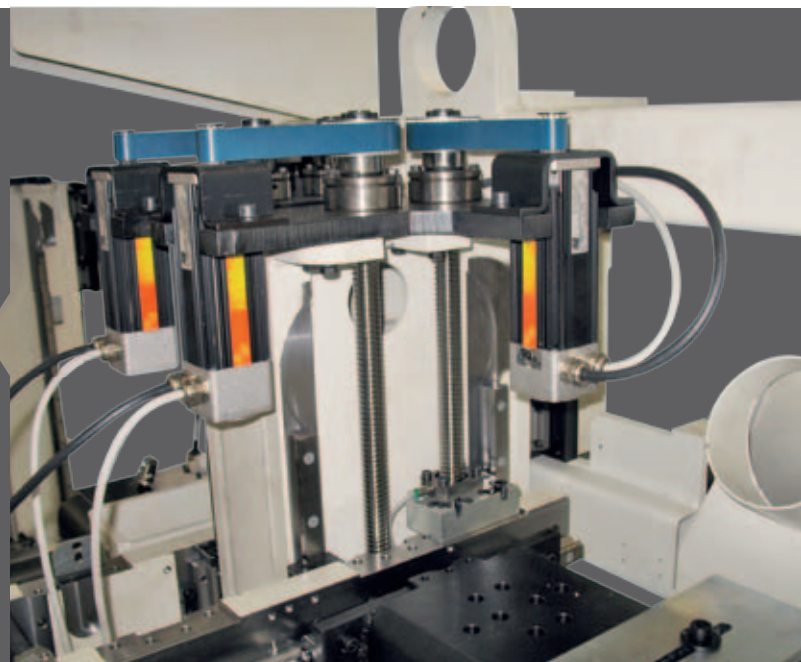






Work units slide by means of prismatic guideways and RDS screws in order to guarantee optimal finish and accurate machining also in difficult or daily multi-shift operation conditions.

Work units need to be continuously configured with different settings to ensure flexible operation. To guarantee swift, precise and quick movements, each action is governed by means of an NC-managed Brushless Motion Control continuous engine.



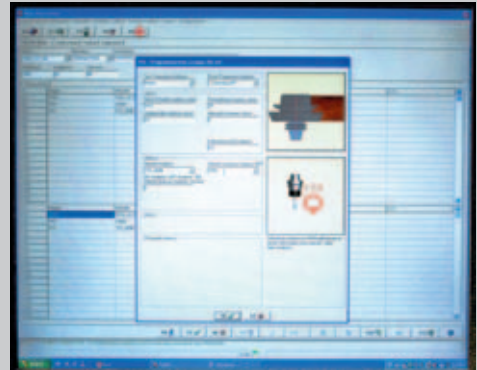
# domino

electronic control



**CONTROL 100 PC** is the control unit, subdivided into two parts. The first is the Programmable Logical Controller that manages the machine. The second is a personal computer that, through the “Next” software developed by SCM, acts as the man/machine interface. Programming is quick and easy and the following operations are described in a step-by-step way:

- Piece programming
- Automatic execution of work programmes
- Execution of several interlinked programmes (Mix)
- Management of machine parameters
- Management of tool tables
- Management of diagnostic messages
- Creation of Production Reports
- Importing DXF (to manage Colibri)
- Restart
- Management of scrap



## TELESOLVE

The machine is equipped as standard with telesolve function that connects it to the SCM Group Service.

MANAGEMENT OF ERROR SIGNALS

MANAGEMENT OF FAULT LOCALISATION

MANAGEMENT OF MACHINE  
PARAMETERS

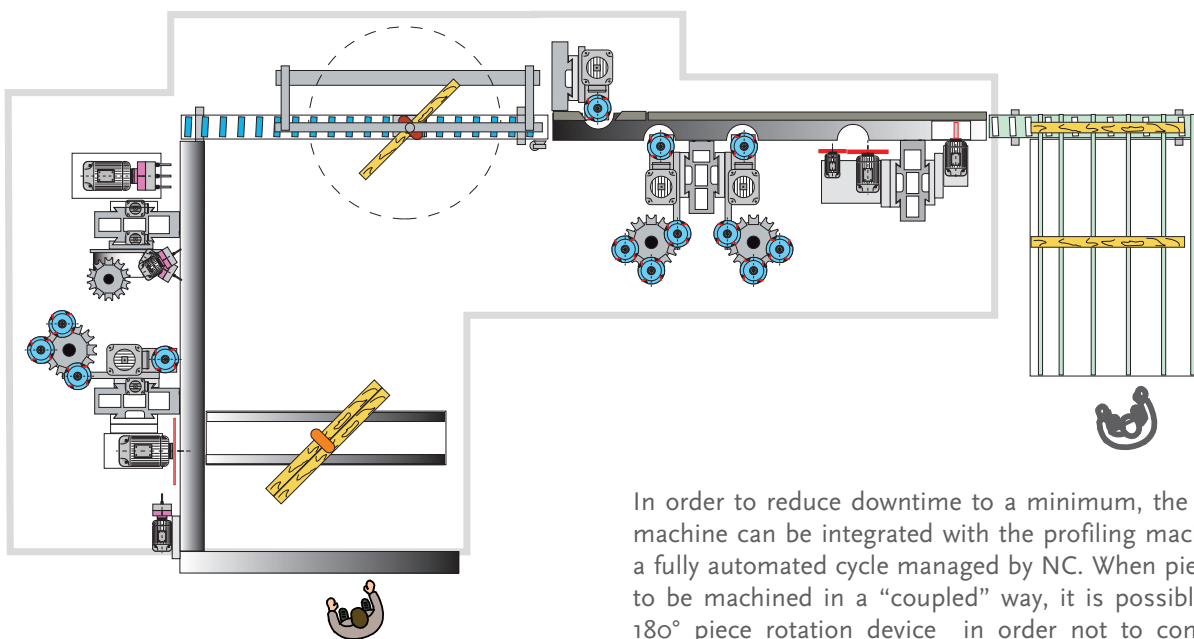
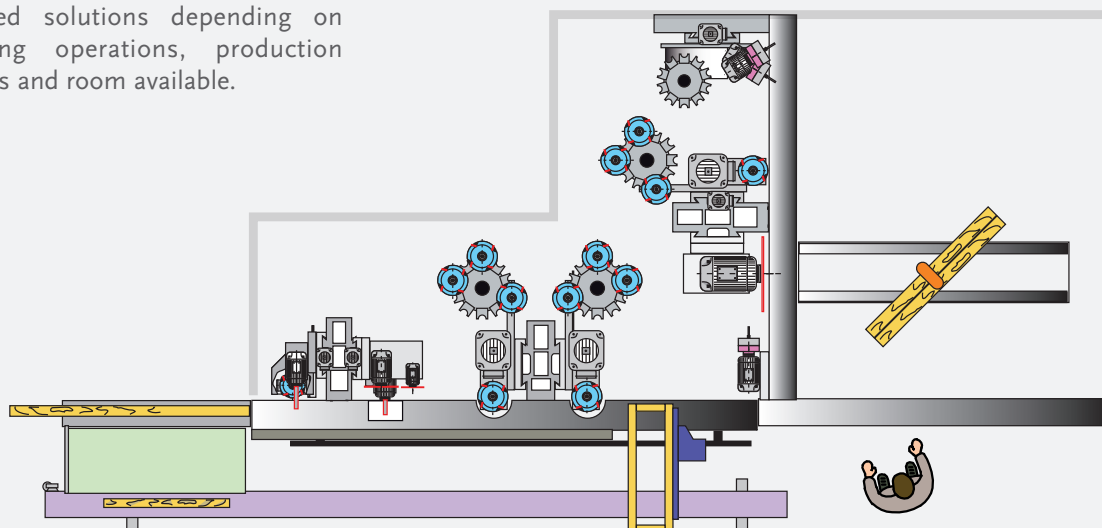
CALIBRATION MANAGEMENT

scm  group service

# domino

## layout

Integrated solutions depending on machining operations, production deadlines and room available.



In order to reduce downtime to a minimum, the tenoning machine can be integrated with the profiling machine with a fully automated cycle managed by NC. When pieces need to be machined in a “coupled” way, it is possible to fit a 180° piece rotation device in order not to compromise production deadlines.

# domino

sound insulation



In order to reduce noise and dust emissions, the rear area of the machine near machining units can be insulated.



The machine can be fully sound-insulated (upon request) in order to reduce the noise level more effectively.

CNC MACHINING CENTRE		DOMINO
Min/max machining length	mm	200 / 3200
Min/max piece length	mm	30/200
Min/max piece thickness	mm	30/140
Max incline		± 60°
Tenoning carriage movement speed	m/min	0÷100
Profiling movement speed	m/min	6/12 (4÷24)
Working table con worktable	mm	1130
Working table con worktable	mm	950

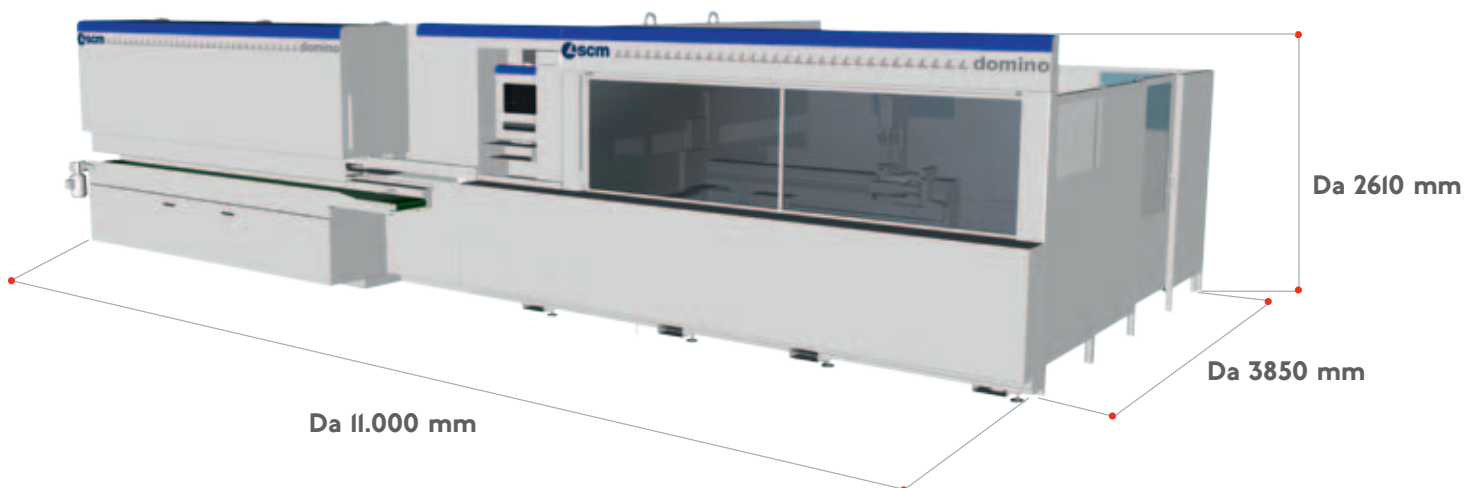
## NOISE LEVEL

Operating conditions: CUTTING - TENONING - PROFILING

	Reference Standard	K constant [db] [pr EN 848-1]	VSA	LAV
Sound pressure level on measurement surface - db (A)	EN ISO 3746-79	2	82,7	82,7
Sound pressure level on measurement surface db (A) [mW (A)]			105,2 [33,1]	105,9 [38,9]
Operator station sound pressure level - db - (A) [db MAX] input			85,6	87,0 [107,7]
Operator station sound pressure level - db - (A) [db MAX] output			85,7	86,1 [105,1]

The above-mentioned levels refer to "free field" conditions in compliance with test conditions set out in the Reference Standard

Profiling feed speed LAV: during machining



 **scm**  
 **minimax**  
 **scm tecmatic**

 **scm**

 **routech**

 **celaschi**

 **dmc**

 **superfici**

 **sergiani**

 **gabbiani**

 **morbidelli**


 **mahros**

 **stefani**

 **cpc**

 **sag**

 **scmgroup**  
engineering

 **delmac**  
engineering

 **scmfonderie**

 **steelmec**

 **hiteco**

 **es**

 **csr**

 **CMS Cms**  
wood technology

 **CMS Cms**  
advanced materials technology

 **CMS Brembana**  
stone technology

 **CMS Brembana**  
glass technology

 **CMS CmsPlast**  
plastic technology

 **CMS Tecnocut**  
waterjet technology

 **CMS Balestrini**

| **1**  
large industrial  
group  
/

| **18**  
production  
sites  
/

| **29**  
specialist  
brands  
/

| **21**  
foreign branches  
/

| more than **50**  
years  
in business  
/

| **70%**  
exports  
/

| **350**  
agents  
and dealers  
/

| **365**  
registered patents  
/

| **500**  
support  
technicians  
/

| **3.000**  
square metre  
showroom  
/

| **10.000**  
classic and  
professional  
machines made per  
year  
/

| **240.000**  
square metres  
of production  
space  
/



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