

L'Invincibile

1952

A HISTORY OF SUCCESS

Entry into the woodworking machinery sector with the design and manufacture of the new combined woodworking machine with increased machining capability.

Immediately industrially manufactured with the L'invincibile brand name becoming very well-known for its quality of construction and competitiveness, features that will bring an immediate and wide acknowledgement, firstly in Europe and then all over the World.

2006

PROUD OF OUR ROOTS L'INVINCIBILE RETURNS!

The historical SCM brand name returns to the market with a new range of classical machines including the most advanced technology with an exclusive and customised product.



2014 State Of The Art

L'invincibile sets **new standards for quality** and incorporates all the experience and expertise of the manufacturer of the widest range of woodworking machines in the World.

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Thicknessing Planer	16
Combined Surfacing-Thicknessing Planer	20

CIRCULAR SAW

OPERATOR'S SUPPORT: ONE CUT ONLY, THE CORRECT ONE.

The large display suggests to the operator information for the correct use of any cutting configuration. It is possible to create the required work piece with maximum precision and without any calculations or cutting tests even with the most complicated of cases (angular cuts on the table, tilted blade, unknown measurements, etc.).

WIRELESS: WHEN TECHNOLOGY REALLY HELPS.

The electronic control updates in real-time the data for the positions of the three stops, always showing the actual size of the required work piece in any cutting configuration.

FULL SUPPORT: USER FRIENDLY AND PRECISE MECHANICAL COMPONENTS.

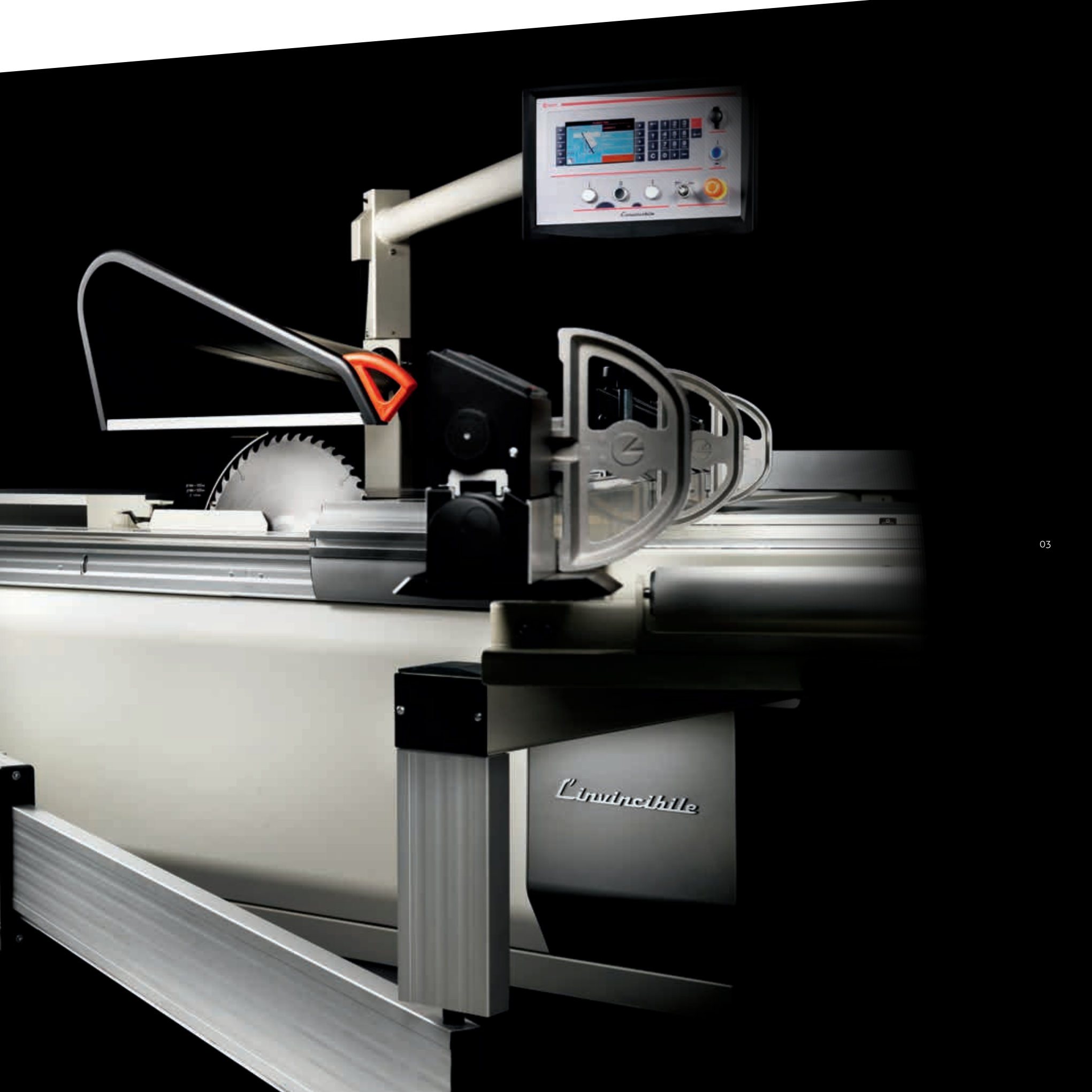
It provides maximum support for the panel for any angle due to the exclusive SCM patented solutions consisting of a single centre of rotation for maximum reliability over time. It can support heavy and large dimensioned panels for all angles (from +50° to -50°).

The practical "Quick Lock" fence and the extended roller complete the extensive equipment to satisfy all customer's requirement.

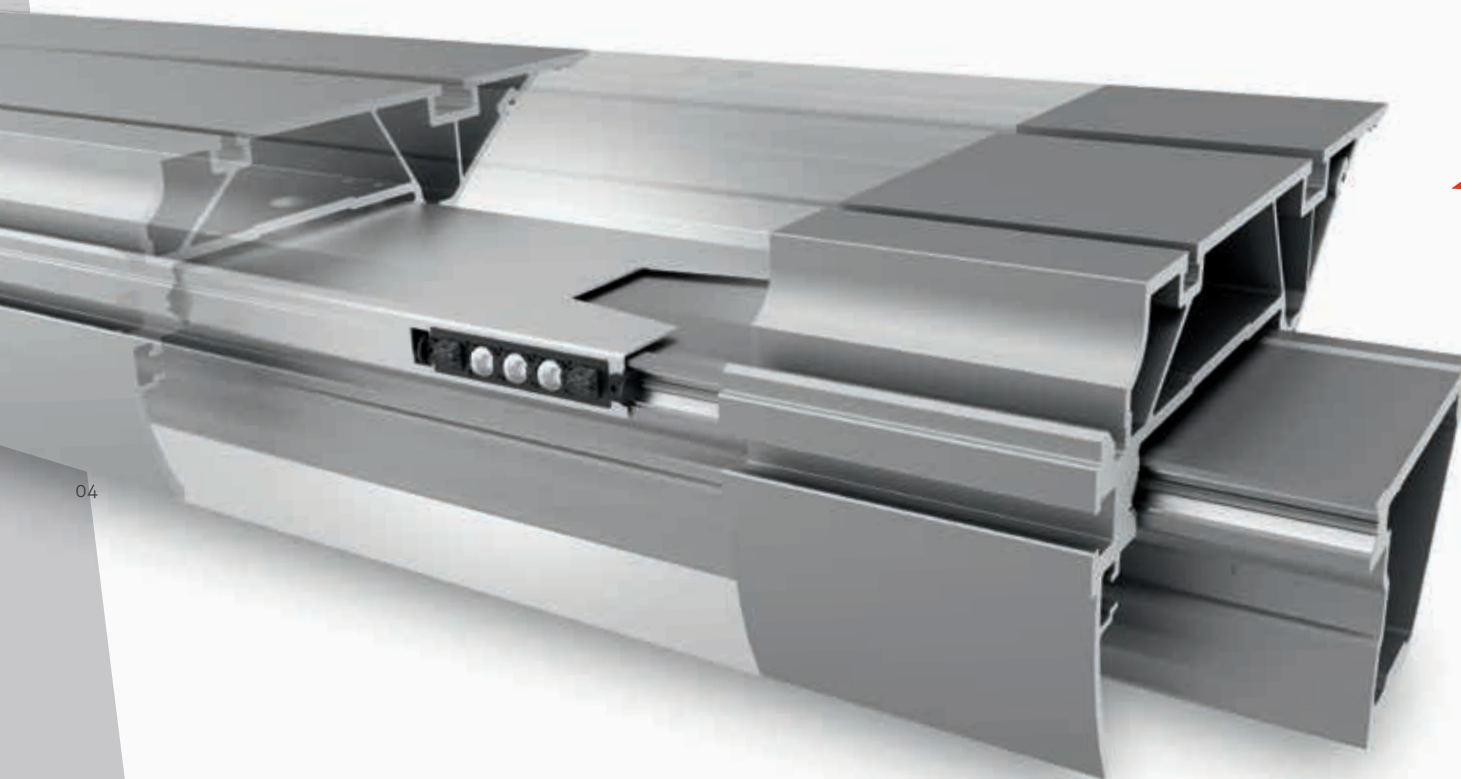
- ⊕ satisfaction to operate**
- ⊖ machine accidents**

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CIRCULAR SAW



04

- + reliability**
- maintenance**

SLIDING CARRIAGE: MAXIMUM CUT QUALITY GUARANTEED OVER TIME.

The carriage will never require adjustment and thanks to its structure with arch-ground steel slideways (SCM exclusive and patented solution) it can bear loads four times higher.

"ARC" PROFILE: FOR EXCELLENCE IN MACHINING.

- no play and no need for adjustments over time
- higher loading capacity
- $\pm 0,05$ mm tolerance on the entire carriage length for straight and high quality cutting.

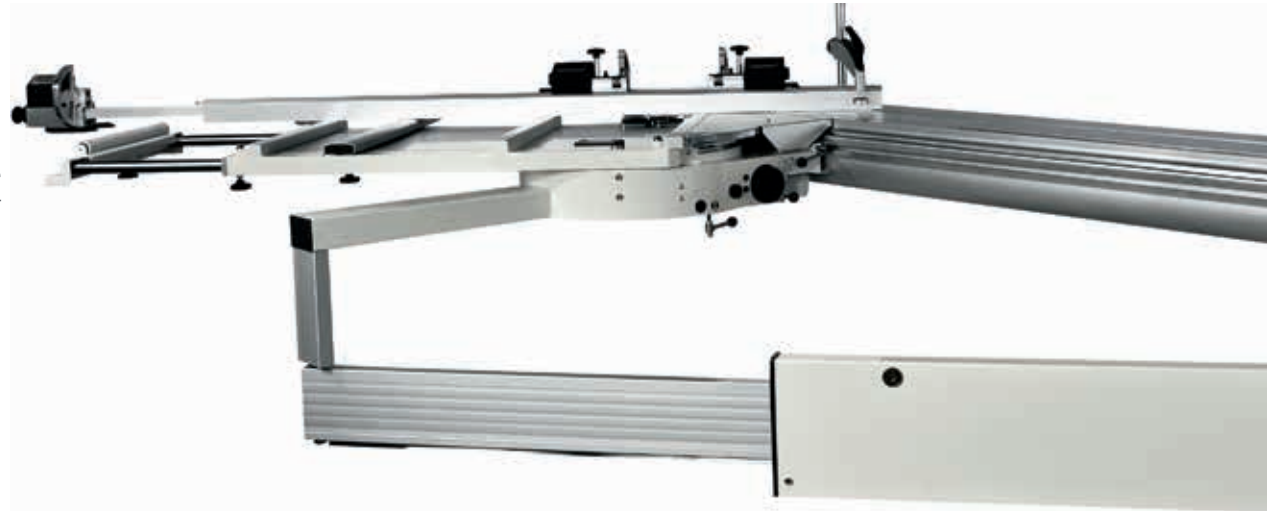
The horizontal positioning of the guides ensures protection from dust therefore improving the sliding of the carriage.

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TELESCOPIC SWINGING ARM: FLUIDITY OF MOVEMENT.

The work piece support frame is the only one to be made of a large dimensioned extrusion and linear guide on recirculating ball bearings. It ensures:

- maximum work piece with fluid movement
- no play and no noise
- dust protection
- no need for maintenance



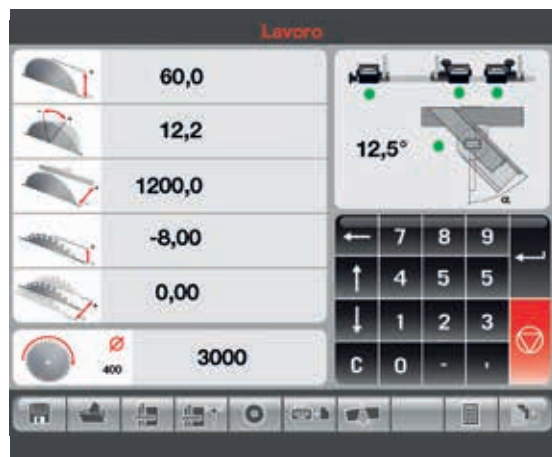
EASY TOUCH: THE ADVANTAGE FROM DAY ONE THAT GUIDES YOU EVERYWHERE.

The satisfaction of fast and easy-to-use control of all machine functions with the 12" large flat touch-screen colour display. The system guides the operator every step of the way offering suggestions that avoid the operator making any mistakes. Additional calculation functions assists the operator when designing the necessary cuts for assembled components and complex geometrical shapes.

EASY: THE OPERATING ADVANTAGE FOR EASY ASSISTANCE.

Intuitive graphic, Duraswitch® pushbuttons for the best reliability of the electronic control up to 5 axes with the 7" LCD display, 16:9 format. Ease-of-use with the function pushbuttons. Integrated and fast management of dedicated functions that improves productivity and easily exploits the power of the machine.

05

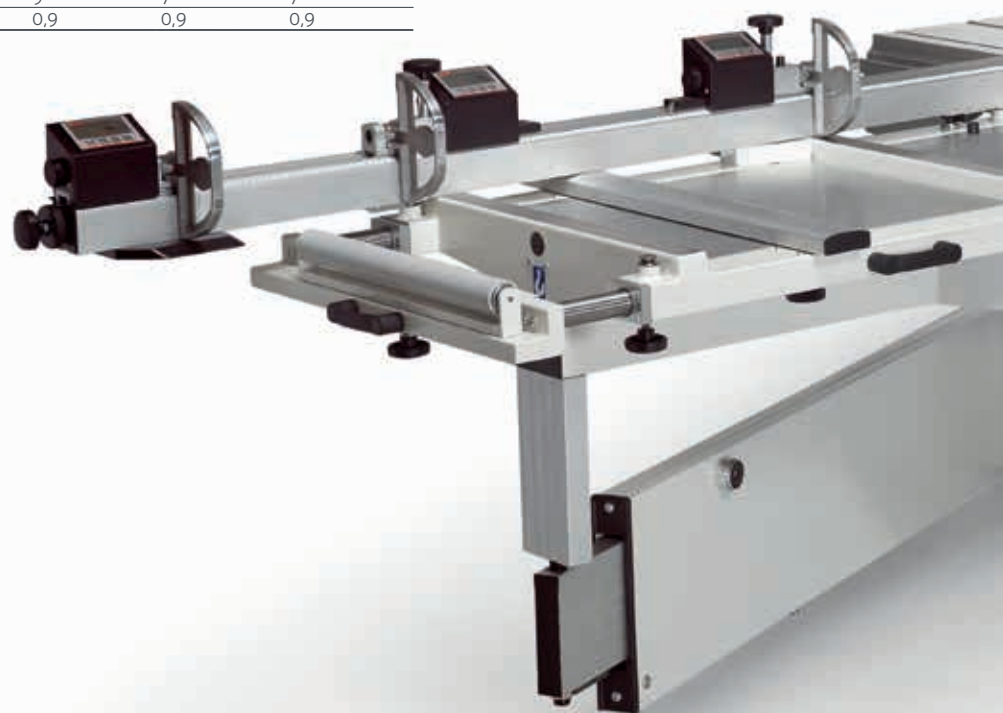


+ precision
- calculations

CIRCULAR SAW

		/SI 7	/SI 5	/SI 3
Equipment				
"Easy Touch" electronic control		S	-	-
5-axes "Easy" electronic control		-	S	S
Mobile control panel		S	S	S
Electronic adjustment for scoring unit		S	S	S
Automatic rip fence with movement on screw and ball bushing linear guide		S	S	S
Start/stop pushbuttons integrated in the carriage		S	S	S
"Quick Lock" squaring fence		S	S	S
Squaring fence with LCD readouts for the stops		0	0	0
"Full Support"		0	0	0
"Wireless"		0	0	0
"Dado" machining		0	0	-
Inverter for electronic speed change of the main blade		0	0	0
"SAVENERGY" Intelligent system for the management of the machine's energy consumption		0	0	0
Technical data				
Squaring capacity with 3200 carriage	mm	3200x3200	3200x3200	3200x3200
Cutting width on rip fence	mm	1500	1500	1500
Max. cutting height at 90°	mm	200	200	140
Max. cutting height at 45,50°	mm	130	130	97
Main blade motor power	kW	9	7	7
Scoring blade motor power	kW	0,9	0,9	0,9

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SPINDLE MOULDER

TOP QUALITY FINISH OF THE PROCESSED WORKPIECE.

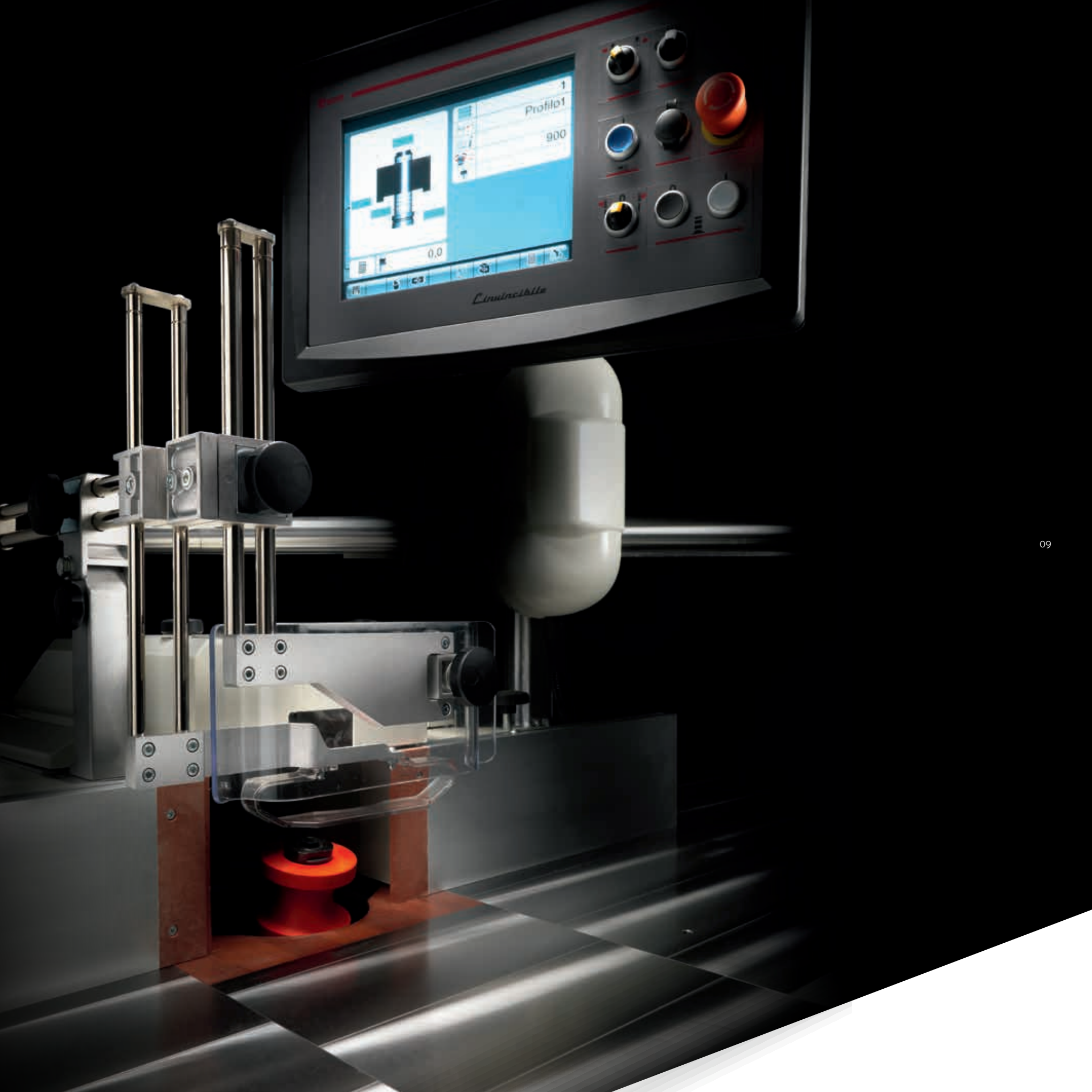
Total absence of vibration and absolute machine rigidity when machining due to a perfectly balanced electrospindle structure and the use of the highest quality materials and components.

Electrospindle controlled by an inverter for speed changes electronically from 900 to 12.000 rpm with maximum available motor power from 3.400 rpm.

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- ⊕ satisfaction
- ⊖ waste of time

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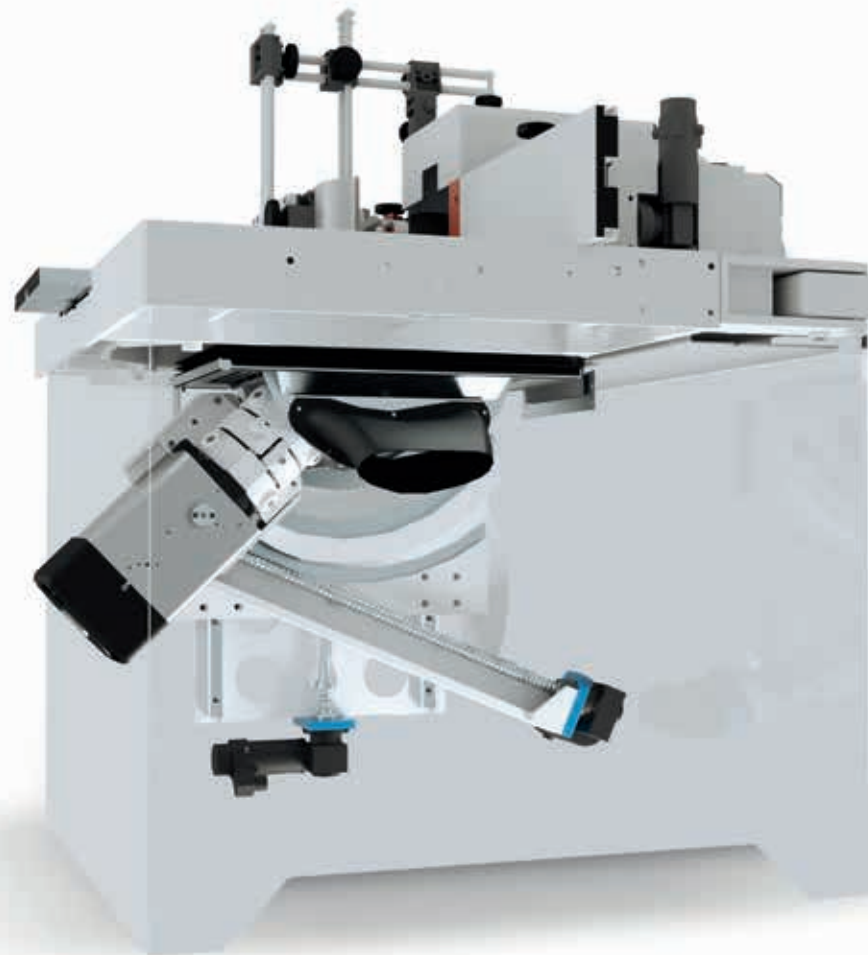
SPINDLE MOULDER

ELECTROSPINDLE: PRECISION AND RELIABILITY IN AN UNBEATABLE TIMESCALE.

The exclusive drive unit consists of an electrospindle specifically designed for all possible spindle moulder applications. The electrospindle's direct drive eliminates maintenance procedures common with conventional belt driven systems. Optimal machine cleaning and a healthy environment due to an efficient exhaust system with side outlets.

LESS MOVEMENT FOR FASTER SETTING-UP.

Speed of setting-up due to the unique movement mechanism of the spindle (SCM patent), which allows the operator to position independently the height of the tool with the tilted spindle and the moulder fence. Maximum performance using the latest technology of the screws with recirculating ball-bearings and the linear guides which guarantee a total absence of vibration and wear, therefore much reduced maintenance (centralised lubrication).



⊕ technology
⊖ maintenance

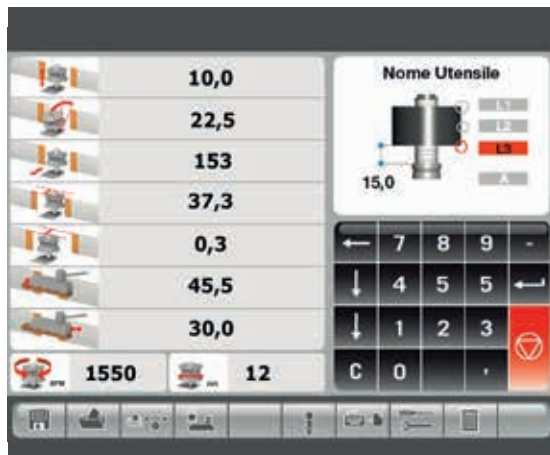
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EASY TOUCH: THE ADVANTAGE FROM DAY ONE THAT GUIDES YOU EVERYWHERE.

The satisfaction of fast and easy-to-use control of all machine functions with the 12" large flat touch-screen colour display. The system guides the operator every step of the way offering suggestions that avoids the operator making any mistakes. Information windows instruct the operator as to what to do on the next operation ensuring the operator works in complete safety.

TOOL DETECTION SYSTEM: SETTING UP SPEEDILY AND SAFELY.

This system eliminates any manual operation for setting up the required work allowing the operator to automatically input all the work data. Higher operator's safety: the possibility to select only the programs associated with the tool installed eliminates possible dangerous situations. Less input data, fewer errors, immediately ready to work.



EASY: THE OPERATING ADVANTAGE FOR EASY ASSISTANCE.

Intuitive graphic, Duraswitch® pushbuttons for the best reliability of the electronic control up to 5 axes with the 7" LCD display, 16:9 format.

Ease-of-use with the function pushbuttons. Integrated and fast management of dedicated functions that improves productivity and easily exploits the power of the machine.

OPERATOR ASSISTANCE: WORKING BECOMES EASIER AND MORE PRECISE.

For every tool, the machine can be positioned without the necessity of calculation or to create programs due to the possibility of defining the origin point on three different positions of the tool profile. For the most recurring machining jobs it is possible to set the dimensions of the required profile and select the tool to be used. The controls will create the dedicated program to carry out the required machining operations.



+ safety
- errors

SPINDLE MOULDER

	/TI 7	/TI 5	/TF 5
Equipment			
"Easy Touch" electronic control	S	-	-
"Easy" electronic control	-	S	S
Mobile control panel	S	S	S
"Flex" spindle moulder fence with automatic programming	S	S	S
Spindle moulder fence with aluminium tables	S	S	S
"Fast" sectional table with manual movement	-	S	S
"Fast" sectional table with automatic movement	S	O	O
Inverter for speed change from 900 to 12.000 rpm	S	S	S
Electrospindle, 7,5kW motor power	S	S	O
Electrospindle, 11kW motor power	O	O	O
HSK B 63 rapid tool changeover	S	O	O
Automatic tool detecting system	S	-	-
MK5 interchangeable spindle	-	S	S
"T-SET" rapid tool locking	-	O	O
Automatic feeder support	O	O	O
Manual feeder support	O	O	O
"LL" version with 2 profiling extensions	O	O	O
"TL PRO-10" version for tenoning and profiling	O	O	O
Glazing bead unit	O	O	O
"SAVENERGY" Intelligent system for the management of the machine's energy consumption	O	O	O
Technical data			
Work table dimensions	mm	1200 x 750	1200 x 780
Spindle tilting	degrees	±45,50°	±45,50°
Spindle speed	rpm	900÷12.000	900÷12.000
			3000÷4500÷6000÷ 7000÷10000
Spindle moulder fence stroke	mm	250 (from -125 to +125)	250 (from -125 to +125)



PIALLA FILO

FEEDING ON CONNECTING RODS: CONSTANT PRECISION OVER TIME.

All machining with maximum safety with the movement of the infeed table by means of a parallelogram kinetic mechanism which always gives the same distance between the cutterblock and the table. The system operating directly on the connecting rods avoids any exertion to the table assuring constant planarity over time.

CONCAVE/CONVEX FUNCTION: PERFECT JOINTS EVERY TIME.

The available settings allow perfect bonding of the components giving excellent coupling and eliminating any joint line. The device allows the setting of previous positions by the use of mechanical stops.

⊕ reliability
⊖ maintenance



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THICKNESSING PLANER

FEEDING ROLLERS ON CONNECTING ROADS: PERFECT FINISH.

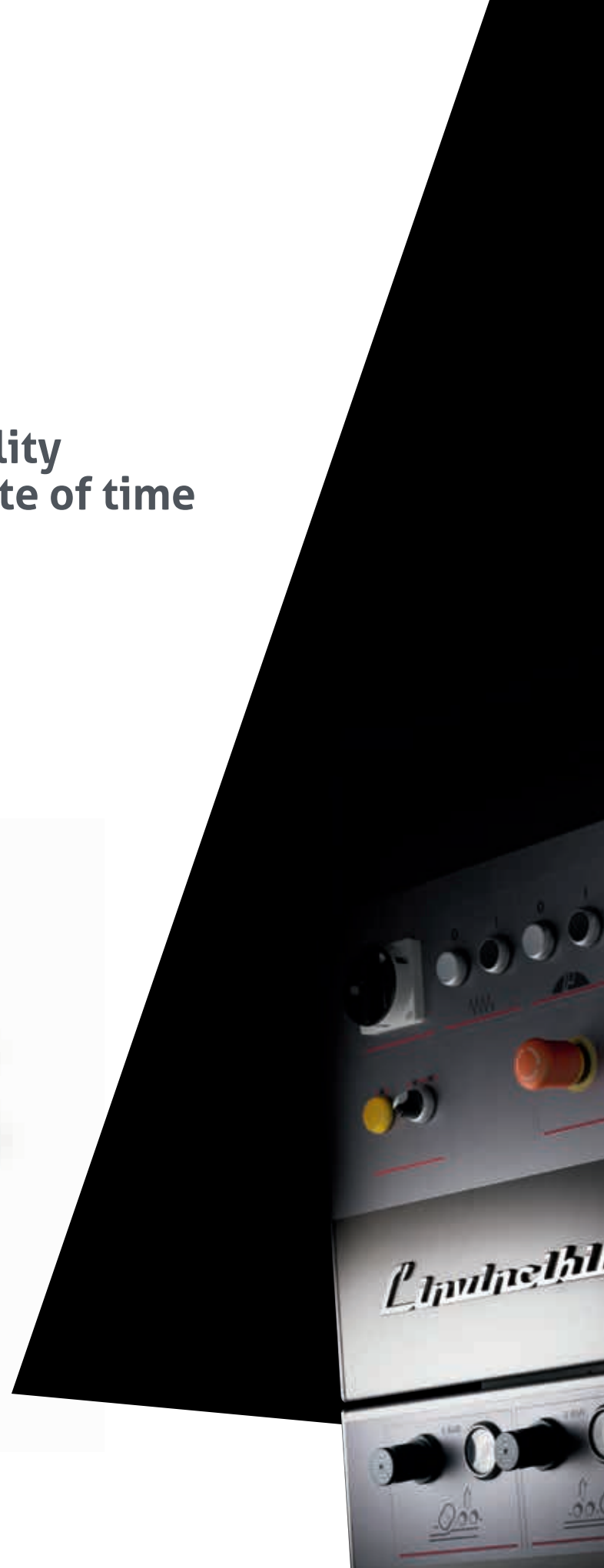
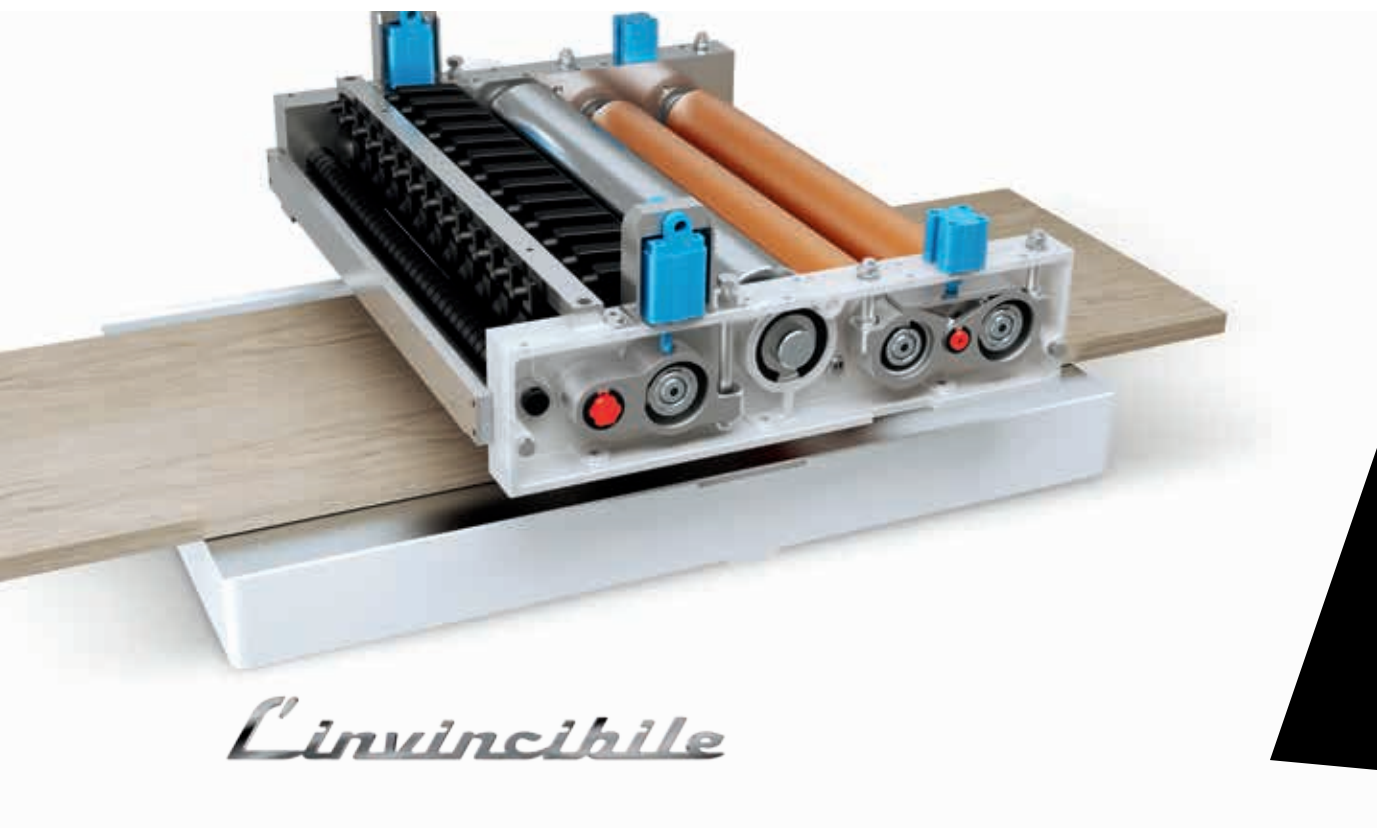
The stopping of the work piece and the presence of notches on its surface are eliminated due to the movement system on all three rollers that allows their vertical displacement by rotation and the best linear feeding.

INTERCHANGEABLE ROLLERS: ONE MACHINE FOR EVERY REQUIREMENT.

Perfect finish obtained by quick and easy changeover of the rollers that allows the operator to configure the machine drive function in case of special requirements such as a minimum removal of fine wood and/or batches where multiple pieces of different thicknesses are processed.

⊕ quality
⊖ waste of time

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 scm

le

SURFACE PLANER THICKNESSING PLANER

		/F7
Equipment		
Mobile control panel		S
Electrical movement of infeed table		S
Electronic digital readout of thickening cutting depth		S
Concave/convex function		S
Planer protection integrated in the machine base		S
"Smart Lifter" for planer protection integrated in the machine base		0
Additional overturning fence		S
Mortiser		0
"Tersa" monoblock cutterblock with throwaways knives		0
Technical data		
Working width	mm	520
Total work table length	mm	3008
Cutterblock diameter	mm	120
No. 4 knives	mm	35x3x520
Surface fence dimensions	mm	1500x175
Main motor power	kW	7

		/S7
Equipment		
"Ready" electronic control		S
Automatic positioning of working height		S
Feed speed with electronic adjustment from 4 to 20 m/min		S
First front roller in helicoidal grooved steel		S
First front roller with rubber coating		0
First front roller with two different types of rubber		0
First sectional feed roller in steel		0
No. 2 outfeed rubber-coated rollers		S
Pneumatic pressure with independent adjusting on the front/outfeed rollers		S
Work table with no. 2 idle rollers		0
"Tersa" monoblock cutterblock with throwaways knives		0
Work table extension		0
Technical data		
Work table dimensions	mm	640 x1000
Maximum working height	mm	300
Minimum working height	mm	3,5
Cutterblock diameter	mm	120
No. 4 knives	mm	35x3x640
Feeding rollers diameter	mm	85
Main motor power	kW	9
Feed motor power	kW	1,3





COMBINED SURFACING THICKENING PLANER

SERVO SYSTEM FOR THE OPENING OF THE TABLES: SPEED, ERGONOMICS AND SAFETY.

Changing the process from surfacing to thickening is now easy, safe and effortless due to the two buttons on the front of the machine that, as well as automatically raising the work tables, position the related extraction hood and the safety system.

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- ⊕ practicality
- ⊖ inconvenience

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COMBINED SURFACING THICKNESSING PLANER

	/ FS 7	
Equipment		
"Ready" electronic control		S
Automatic positioning of working height		S
Speedy set-up for changeover from surfacing to thicknessing		S
First front roller in helicoidal grooved steel		S
First front roller with rubber coating		0
Outfeed rubber-coated roller		S
No.2 outfeed rubber-coated rollers		0
Additional overturning fence		0
Mortiser		0
"Tersa" monoblock cutterblock with throwaways knives		0
Technical data		
Work table dimensions	mm	520 x900
Maximum working height	mm	250
Minimum working height	mm	3
Cutterblock diameter	mm	120
Feeding roller diameter	mm	67
Feed speed	m/min	5-8-12-18
Main motor power	kW	9

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เครื่องจักรช่างไม้
จินวินซีแป

Scm Group S.p.A
via Emilia, 77
47921 Rimini - Italy

via Casale, 450
47826 Villa Verucchio
Rimini - Italy

scm@scmgroup.com
www.scmgroup.com





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State Of The Art