

L'invincibile

State Of The Art

REV 05 - 02-2024 - MIC STUDIO

L'invincibile



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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.



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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APP Thundercut

Technology at your fingertips

SCM Thundercut is the Optimizer/Sequencer App for mobile devices that allows to optimize the panel surface and guides the operator through the cutting sequence.

High cut speed execution, less material waste and mistake odds minimized, even for not skilled workers!

Download it now from the AppStore and Google Play:

SCM Thundercut



SCM CLASSICAL MACHINES, QUALITY EVEN MORE GUARANTEED

You can manage your circular saws fleet, the material warehouse and many project you are working on.



The 3D sequencer, thanks to its simple and clear design, suggest the ideal settings of the machine for every single cut to be executed.



The App is available for circular saws, circular saws with movable blade unit, saw-shaper combination machines and universal combination machines (you will find the QR code to activate the App in each new machine).



Since 1952, SCM has been leader in the design and production of woodworking machines.

We went beyond 70 years of company history by offering to our customers knowledge and advanced technologies that distinguish **L'invincibile**, **class** and **nova** classical machines.

Different ranges united by the strength points: performance, ease-of-use and certified quality. We believe so much in the reliability of our machines to offer to our customers the possibility to have a **warranty extended up to 2 years***. An extra peace of mind for small artisans workshops and joineries who see SCM as the ideal partner to grow their business.

To activate the 2-year warranty extension, it is compulsory to register on-line the machine on the website:

scmwood.com/warranty-extension

*Check the models of machines that can take advantage of the initiative on the website:

scmwood.com/joinery-machines



CIRCULAR SAWS

PROGRAMMED RIP FENCE: QUICK AND ACCURATE POSITIONING.

Movement on a recirculating ball screw mechanism and sliding on linear guide.

The fence can be easily excluded from the working area when it is not used.

SQUARING FRAME WITH "COMPEX" DEVICE: BEST-IN-CLASS PERFORMANCE

With automatic self-adjustment of stops position in respect of the blade and rule tilting angle.

Furthermore, thanks to the dedicated frame structure, it is possible to carry out tilted cuts keeping the squaring rule comfortably within the operator's reach, both in acute cuts and in obtuse ones, without renouncing to a valid support of the work-piece.

SOLUTIONS FOR EVERY REQUIREMENT.

Wide range of accessories to meet all customer's demands.

- ⊕ satisfaction to operate
- ⊖ machine accidents

L'invincibile



CIRCULAR SAWS



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.

The "arc" profile of the slideways ensures:

- 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



CONTROL PUSH-BUTTONS INTEGRATED IN THE SLIDING CARRIAGE: MAXIMUM PRACTICALITY.

The possibility to start or stop the blades motors from the push-buttons located at the ends of the carriage considerably helps when machining large dimensioned panels.



TABLET HOLDER ON THE SLIDING CARRIAGE: ERGONOMIC.

Compatible with tablets from 8" to 11".



TELESCOPIC SWINGING ARM: 'INVINCIBLE' FLUIDITY OF MOVEMENT.

The support of the squaring frame is the only one to be made of a large dimensioned extrusion with sliding on prismatic linear guides on recirculating ball bearings. It guarantees:

- best smooth movement of the work-piece
- no play and no noise
- dust protection
- no need for maintenance

SQUARING FRAME WITH "QUICK LOCK" FENCE: HIGH EFFICIENCY.

Minimum set-up time with the SCM system that enables rapid fence positioning.

The extending roller and the stronger frame support maximise performance.

"FULL SUPPORT" MOBILE FRAME FOR ANGULAR CUTTINGS: PRECISION MECHANICS.

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

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



"WIRELESS" SYSTEM: 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.

- ⊕ practicality
- ⊖ waste of time

RELIABILITY AND TECHNOLOGY WITHOUT COMPARISON.

10 years of SCM guarantee for the carriage sliding system.

- ⊕ reliability
- ⊖ maintenance

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CIRCULAR SAWS



"EYE-S" CONSOLE: THE PLEASURE OF CONTROLLING ALL MACHINE FUNCTIONS FROM THE CONTROL PANEL.

The mobile control panel is fitted with "eye-S" console that, thanks to an articulated support arm, can be oriented horizontally for the best operator's comfort during the programming.

The electronic control allows easy and intuitive machine programming, combining the 15" colour touch-screen display and the **Maestro** active user interface.

Main functions:

- connectivity among machines belonging to the same company network and **4.0 Industry** preset
- sharing of work programs and tools database
- activity monitoring and reporting on the use of the machine
- connectivity with **SCM Thundercut** (optimizer/sequencer App)
- self-diagnosis, tele-service and link to troubleshooting

TOTALLY AUTOMATIC.

The electronic control can manage the inverter for the adjustment of the saw blade rotation speed and the scoring unit alignment.



ADJUSTABLE TABLET HOLDER POSITIONED ON THE MOBILE CONTROL PANEL: SIMPLE WORKING.

Compatible with tablets from 7" to 13".

It is equipped with USB port for power supply positioned on the mobile control panel.



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

The electronic control suggests to the operator information for the correct use of any cutting configuration. It is possible to create the required work-piece with maximum accuracy and without any calculations or cutting tests even with the most complicated of cases.

LIGHTING LAMP: USER FRIENDLY.

The high efficiency LED lamp, positioned under the control panel display, improves the operator's view of the work area.



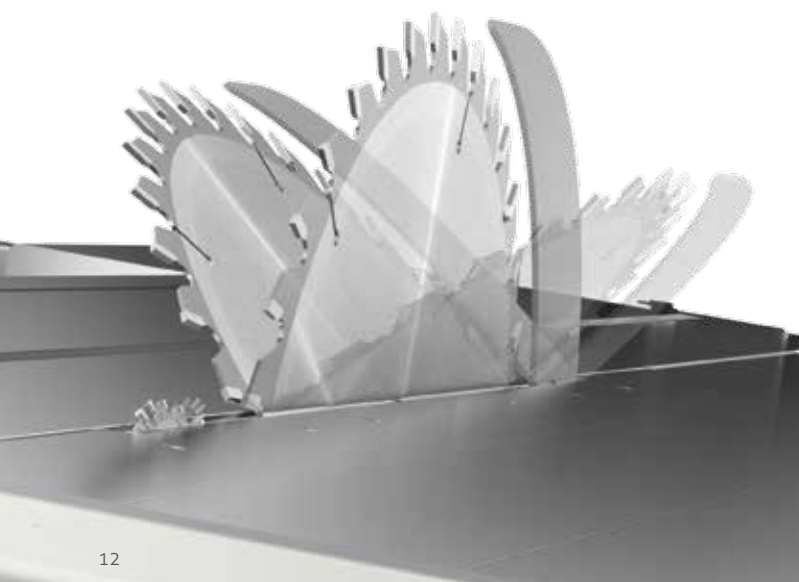
+ accuracy
- calculations

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+ ergonomics
- downtimes

CIRCULAR SAWS



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DOUBLE BLADE TILTING: MAXIMUM HEIGHT CUTTING WITHOUT COMPROMISE.

The SCM solution enables to use a 550 mm saw blade without scoring blade or to use simultaneously a 450 mm saw blade and 160 mm scoring blade, for both 90° and $\pm 46^\circ$ inclined cuts, providing the best performance on veneered panels and solid wood components.

L'invincibile si x

SAW UNIT: PERFECT CUT.

Maximum torsional rigidity and total absence of vibration through the closed loop structure of the saw unit, which ensures perfect alignment of the blades during tilted and difficult cuts.

"LED INDICATING SCORING BLADE UNIT IN OPERATION" DEVICE: SAFETY AS THE FIRST FACTOR.

When the scoring blade is working, the high efficiency LEDs clearly indicate the danger area, making the machine safer than ever.



AUTOMATIC POSITIONING SYSTEM OF THE OVERHEAD PROTECTION: THE INNOVATION AT THE OPERATOR'S SERVICE.

The overhead protection automatically positions itself as a function of the blade using the **exclusive AP system** (solution patented by SCM). This makes the transition from cuts with different angles even faster and safe, without the operator having to change the settings of the machine.

L'invincibile si x



EASE-OF-USE WITH THE BLADES-HOLDER DRAWER INTEGRATED IN THE MACHINE'S FRAME.

It is made of 4 shelves, customizable with labels, for the easy replacement of the blades.



"PRO-LOCK" SYSTEM: IMMEDIATELY ON THE CORRECT POSITION.

System for the main blade rapid locking with fast and tool-less riving knife adjustment.



LASER DEVICE: "ZERO" ERRORS.

Laser light for the work-piece alignment with the cutting line.



⊕ technology
⊖ errors

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⊕ safety
⊖ inconveniences

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CIRCULAR SAWS

	/SI X	/SI 5	/SI 3	
Equipment				
Electronic control with "eye-S" console 15" touch-screen	S	S	S	
Mobile control panel	S	S	S	
"SCM Thundercut" Optimizer/Sequencer App for tablet	S	S	S	
Programmed rip fence	S	S	S	
Telescopic swinging arm support of the squaring frame	S	S	S	
"Pro-Lock" system for the main blade rapid locking	S	O	O	
Electronic adjustment of the scoring blade unit	O*	S	S	
Expandable scoring blade	-	O	O	
"LED indicating scoring blade unit in operation" device	O	O	O	
Squaring frame with "CompeX" device	S	S	S	
"Full Support" mobile frame for angular cuttings complete with "Wireless" system	O	O	O	
Squaring frame with "Quick Lock" fence	O	O	O	
Control push-buttons integrated in the sliding carriage	S	S	S	
Eccentric clamp	S	S	S	
Cast-iron work table extensions	O	O	O	
Reinforced work table extensions	O	O	O	
Squaring fence with 3 digital readouts for stops position	O	O	O	
Fence for angular cuttings on the sliding carriage	O	O	O	
Fence for angular cuttings with self-adjustment	O	O	O	
Fence for angular cuttings with self-adjustment and digital readouts	O	O	O	
Fence for complementary cuttings	O	O	O	
Fence for parallel cuttings on the sliding carriage	O	O	O	
Fence for parallel cuttings on the sliding carriage with digital readouts	O	O	O	
Panels support extension with roller conveyor on rip fence side	O	O	O	
Arrangement for "DADO" machining	-	O	O	
Inverter for electronic speed change of the main blade	S	O	O	
"SavEnergy" intelligent system for the management of the machine's energy consumption	O	O	O	
Adjustable tablet holder positioned on the mobile control panel	O	O	O	
Tablet holder on the sliding carriage	O	O	O	
Laser device	O	O	O	
Blades-holder drawer integrated in the machine's frame	O	O	-	
Lighting lamp	O	O	O	
Barcode reader	O	O	O	
Technical data				
Squaring capacity with 3200 mm carriage	mm	3200x3200	3200x3200	3200x3200
Squaring capacity with 3800 mm carriage	mm	3800x3200	3800x3200	3800x3200
Cutting width on the rip fence	mm	1500	1500	1500
Maximum cutting height at 90°	mm	200	200	140
Maximum cutting height at 45°	mm	130	130	97
Maximum cutting height at -45°	mm	105	-	-
Main blade motor power	kW	9	7	7
Scoring blade motor power	kW	1,3	1,3	1,3

* Scoring unit available as option

S Standard
O Option

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SPINDLE MOULDERS

TOP QUALITY FINISH OF THE PROCESSED WORK-PIECE.

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.

"FLEX" SPINDLE MOULDER FENCE WITH AUTOMATIC MOVEMENT: MAXIMUM PERFORMANCES AS STANDARD.

The 250 mm exclusive fence stroke on linear guides with recirculating ball bearings enables the best flexibility for all machining types (machining with $\pm 45,50^\circ$ tilting and "head" machining).

A single, simple movement to retract and re-position instantly and accurately the position of the fence on the work table with such safety that no other control is necessary.

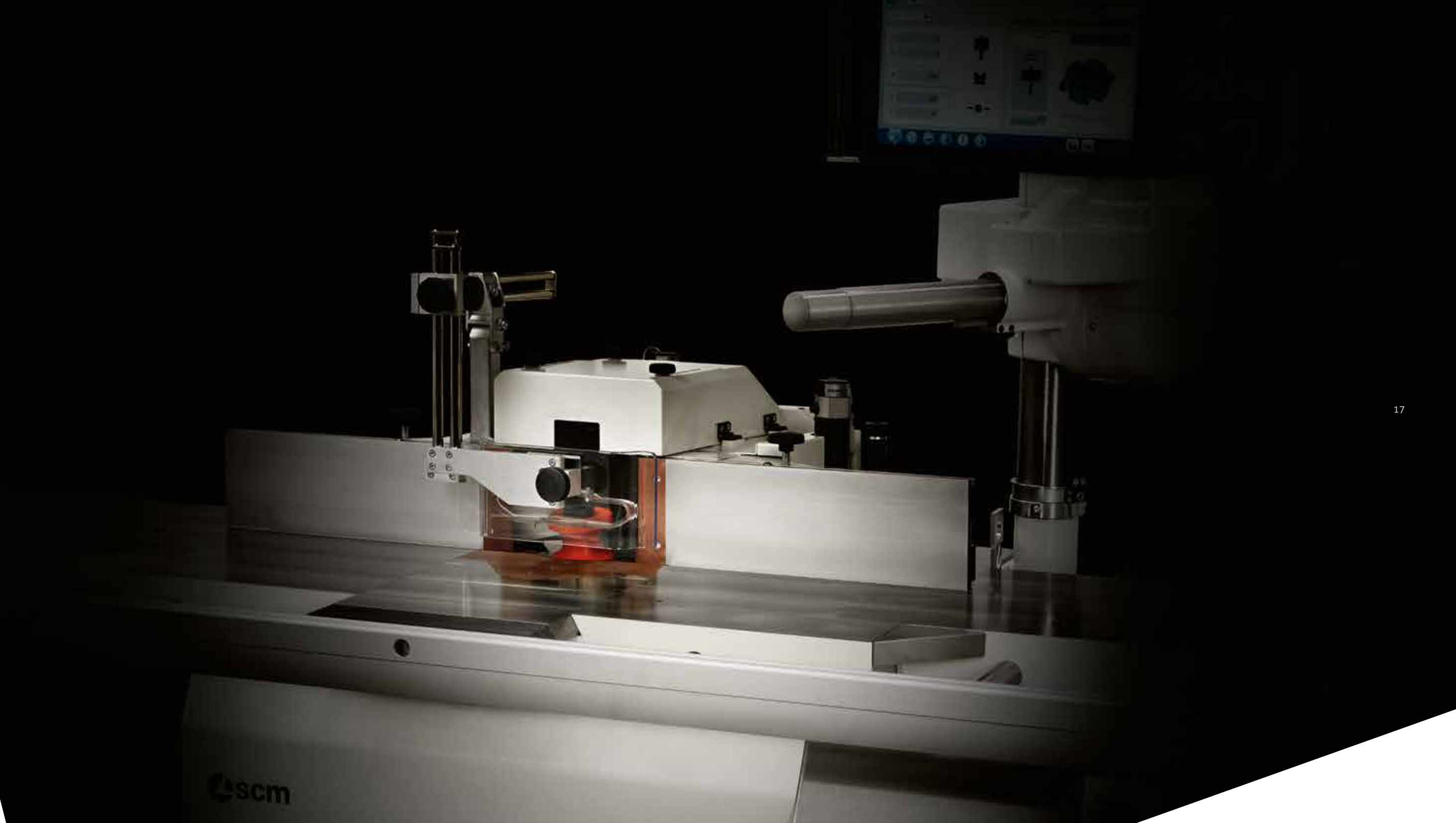
SOLUTIONS FOR EVERY REQUIREMENT.

Wide range of accessories to meet all customer's demands.

⊕ satisfaction
⊖ waste of time

L'invincibile

scm



SPINDLE MOULDERS

ELECTROSPINDLE: ACCURACY 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 enables 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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"EYE-S" CONSOLE: THE PLEASURE OF CONTROLLING ALL MACHINE FUNCTIONS FROM THE CONTROL PANEL.

The mobile control panel is fitted with "eye-S" console that allows easy and intuitive machine programming, combining the 15" colour touch-screen display and the **Maestro** active user interface.

Main functions:

- connectivity among machines belonging to the same company network and **4.0 Industry** preset
- sharing of work programs and tools database
- activity monitoring and reporting on the use of the machine
- self-diagnosis, tele-service and link to troubleshooting

TOOL DETECTION SYSTEM: SETTING UP SPEEDILY AND SAFELY.

This system eliminates any manual operation for setting up the required work enabling 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.

OPERATOR'S ASSISTANCE: WORKING BECOMES EASIER AND MORE ACCURATE.

The electronic control can manage the inverter for the adjustment of spindle rotation speed. For the most recurring machining jobs, it is possible to set the dimensions of the required profile and select the tool to be used.



+ safety
- errors

SPINDLE MOULDERS

	/TI 7	/TI 5	/TF 5
Equipment			
Electronic control with "eye-S" console 15" touch-screen	S	S	S
Mobile control panel	S	S	S
"Flex" spindle moulder fence with automatic movement	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	O
7,5kW electrospindle	S	S	O
11kW electrospindle	O	O	O
HSK 63B rapid tool changeover	S	O	O
HSK 63E rapid tool changeover	O	O	O
Automatic tool detecting system	S	O	O
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
Barcode reader	O	O	O
Technical data			
Work table dimensions	mm 1200x750	1200x780	1200x730
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)	250 (from -125 to +125)

S Standard
O Option

Linvincibile



SURFACE PLANER

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 enables the setting of previous positions by the use of mechanical stops.

⊕ reliability
⊖ maintenance



L'invincibile



THICKNESSING PLANER

FEEDING ROLLERS ON CONNECTING RODS: 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 allow their vertical displacement by rotation and the best linear feeding.

INTERCHANGEABLE ROLLERS: WIDE VERSATILITY.

The quick and easy changeover of the rollers enables the operator to configure the machine drive function in case of special demands such as a minimum removal of fine wood and/or batches where multiple pieces of different thicknesses are processed.



⊕ **quality**
⊖ **waste of time**



SURFACE PLANER

THICKNESSING PLANER

		/F 7
Equipment		
Mobile control panel		S
Electrical movement of infeed table		S
Electronic digital readout of thicknessing 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		O
Additional overturning fence		S
"Tersa" monoblock cutterblock with throwaways knives		O
"Xylent" spiralknife cutterblock		O
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

		/S 7
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		O
First front roller with two different types of rubber		O
First sectional feed roller in steel		O
No. 2 outfeed rubber-coated rollers		S
Pneumatic pressure with independent adjusting on the front/outfeed rollers		S
Thicknessing table with 2 idle rollers		O
"Tersa" monoblock cutterblock with throwaways knives		O
"Xylent" spiralknife cutterblock		O
Thicknessing table extension to be used in infeed or outfeed		O
Technical data		
Work table dimensions	mm	640x1000
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

S Standard
O Option



Invincible

SURFACING-THICKNESSING PLANER

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

Changing the process from surfacing to thicknessing 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.

"READY" ELECTRONIC CONTROL: EASY TO USE.

The programming of the work becomes simple and effective with the electronic control with LCD display.

Working mode: manual, semi-automatic and automatic with a memory capacity of up to 99 programs.

⊕ practicality
⊖ inconveniences

L'invincibile



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 sectioned steel roller	O	
Outfeed rubber-coated roller	S	
Thicknessing table with 2 idle rollers	O	
Additional overturning fence	O	
"Tersa" monoblock cutterblock with throwaways knives	O	
"Xylent" spiralknife cutterblock	O	
Thicknessing table extension to be used in infeed or outfeed	O	
Technical data		
Work table dimensions	mm	520x900
Maximum working height	mm	250
Minimum working height	mm	3
Cutterblock diameter	mm	120
Feeding rollers diameter	mm	67
Feed speed	m/min	5-8-12-18
Main motor power	kW	9

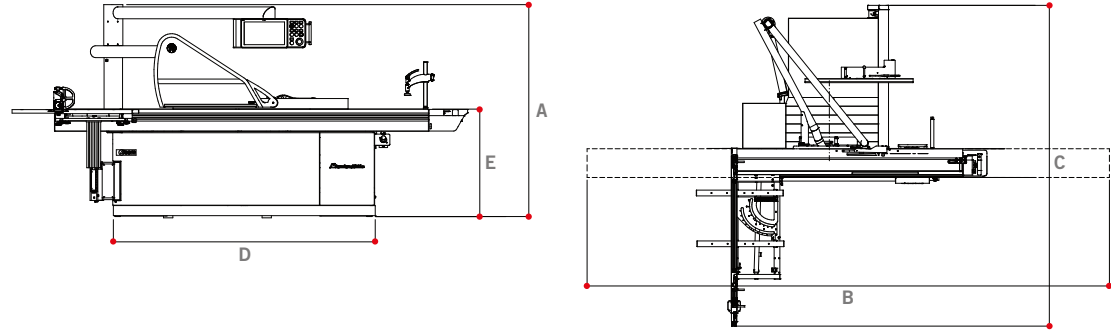
S Standard
O Option

L'invincibile

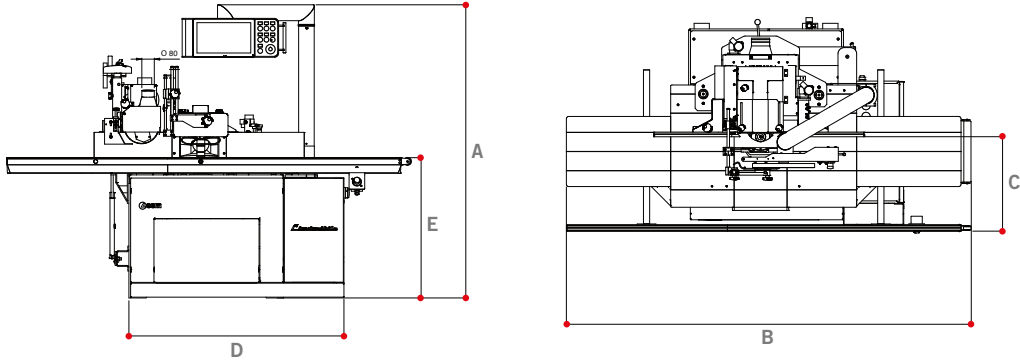


LAYOUT

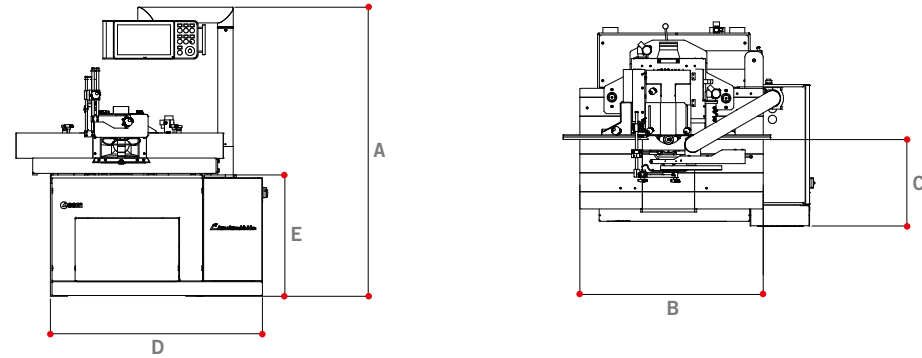
Circular saws	L'invincibile	SI X	SI 5	SI 3
A	mm	1815	1815	1744
B	mm	7250 (3200)	7250 (3200)	7250 (3200)
C	mm	7850 (3800)	7850 (3800)	7850 (3800)
D	mm	4450	4503	4270
E	mm	2244	2244	2069
F	mm	920	920	920



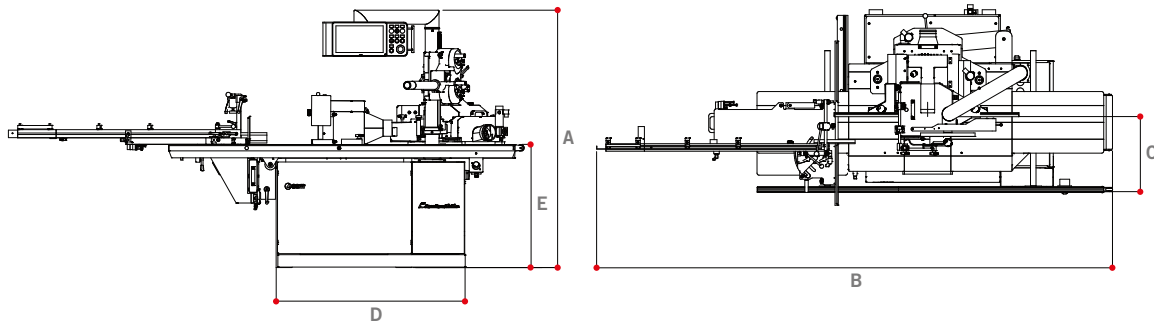
Spindle moulders - "LL" version	L'invincibile	TI 7	TI 5	TF 5
A	mm	1881	1881	1881
B	mm	2600	2600	2600
C	mm	450	450	430
D	mm	1381	1381	1381
E	mm	900	900	900



Spindle moulders - basic version	L'invincibile	TI 7	TI 5	TF 5
A	mm	1881	1881	1881
B	mm	1194	1194	1194
C	mm	513	450	430
D	mm	1381	1381	1381
E	mm	900	900	900



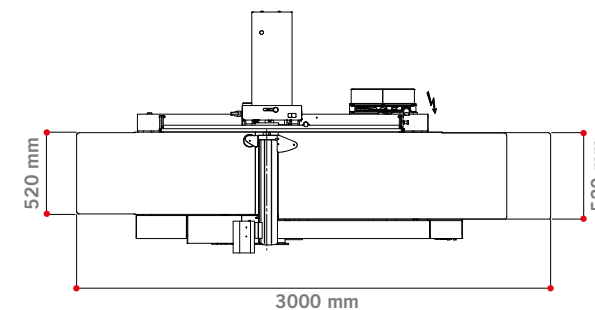
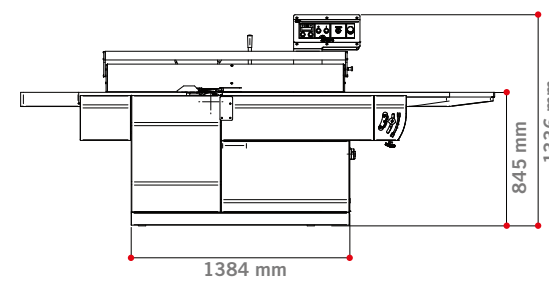
Spindle moulders - "TL PRO-10" version	L'invincibile	TI 7	TI 5	TF 5
A	mm	1881	1881	1881
B	mm	3770	3770	1194
C	mm	450	450	430
D	mm	1381	1381	1381
E	mm	900	900	900



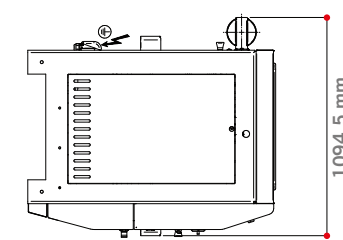
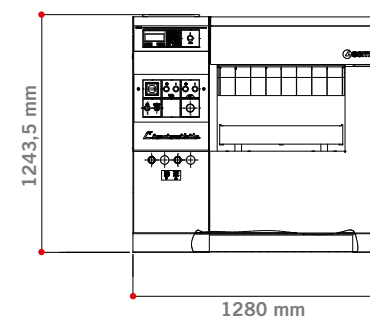
L'invincibile

LAYOUT

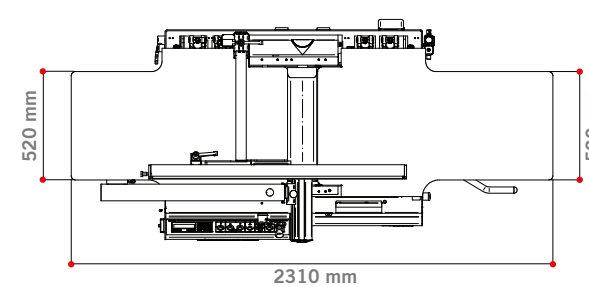
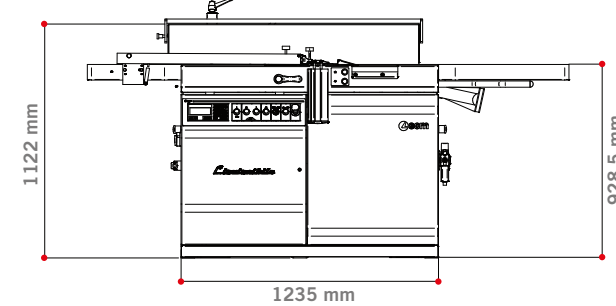
L'invincibile F 7



L'invincibile S 7



L'invincibile FS 7



L'invincibile





The motors powers in this catalogue are expressed in S6, except where otherwise specified. In this catalogue, machines are shown in CE configuration and with options. We reserve the right to modify technical specifications without prior notice, provided that such modifications do not affect safety as per CE norms.



scm | service

WE'LL GO THE EXTRA MILE FOR YOU

SCM OFFERS A FULL RANGE OF **HIGHLY SPECIALISED SERVICES** WITH A QUALITY AND RELIABILITY THAT STEM FROM 70 YEARS OF EXPERIENCE IN THE INDUSTRY.

From installation and production start-up to services and maintenance. From training to the supply of specific original spare parts: **we provide solutions designed around you!**

CONTACT

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My Scm



SERVICE AND MAINTENANCE

- Remote support
- Scheduled maintenance contracts
- Warranty extension



TRAINING SERVICE

- Courses for machine operators
- Software and programming courses
- Training in production start-up



SPARE PARTS

- Recommended spare parts list
- E-shop
- Interactive spare-parts catalogues
- Repairs on electronic parts, glue tanks and electro-spindles



DIGITAL SERVICES

- Maestro Connect - IoT platform to be constantly connected with your machines
- Smartech - assistance with augmented reality
- My Scm portal - opening of service ticket and single point of access to the apps and Services tools

THE STRONGEST WOOD TECHNOLOGIES ARE IN OUR DNA

SCM. A HERITAGE OF SKILLS IN A UNIQUE BRAND

70 years of success gives SCM the centre stage in woodworking technology. This heritage results from bringing together the best know-how in machining and systems for wood-based manufacturing. SCM is present all over the world, brought to you by the widest distribution network in the industry.

70 years history

3 main production sites in Italy

300.000 square metres of production space

20.000 machines manufactured per year

90% export

20 foreign branches

400 agents and dealers

500 support technicians

500 registered patents

In SCM's DNA also strength and solidity of a great Group. The SCM Group is a world leader, manufacturing industrial equipment and components for machining the widest range of materials.

SCM GROUP, A HIGHLY SKILLED TEAM EXPERT IN INDUSTRIAL MACHINES AND COMPONENTS

INDUSTRIAL MACHINERY

Stand-alone machines, integrated systems and services dedicated to processing a wide range of materials.



WOODWORKING TECHNOLOGIES



TECHNOLOGIES FOR PROCESSING
COMPOSITE MATERIALS, ALUMINIUM,
PLASTIC, GLASS, STONE, METAL

INDUSTRIAL COMPONENTS

Technological components for the Group's machines and systems, for those of third-parties and the machinery industry.



SPINDLES AND
TECHNOLOGICAL
COMPONENTS



ELECTRIC PANELS



METALWORK



CAST IRON

scm | is more
woodworking technology