joinery machines

REV. N. 04 - 02/2024 - MC STUDIO

formula *line*



SCM GROUP SPA
via Casale 450 - 47826 Villa Verucchio, Rimini - Italy
tel. +39 0541 674111 - fax +39 0541 674274
scm@scmgroup.com
www.scmwood.com

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formula *line*

The range of machines that completes and satisfies all the needs of any workshop.



SCM guaranteed quality

All the formula machines are guaranteed by SCM, reflecting their level of quality and reliability.



formula *line*


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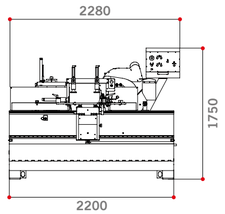

feeders **/ 33**

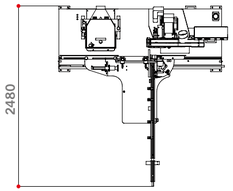

accessories **/ 34**

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.

tenoning machine

formula ten 400







- Not Available
O Option

formula		ten 400	ten 400e
Compressed air	bar	6	6
Voltage (3 ph @ 50 Hz)	V	380/400	380/400
Spindle moulder unit			
Max. tool diameter	mm	360	360
Tool rotating speed	rpm	3600 fixed	up to 3600
Stroke under the worktable	mm	90	90
Exhaust outlet diameter	mm	120	120
Outlet diameter for cooling	mm	-	100
Motor power	kW	7,5	7,5
Tool change system		manual ring	HSK 63B
Spindle diameter	mm	40 or 50	40 or 50
Supplied shafts, 100 mm length		-	4
Fixed spindle length	mm	180	-
Max. tool length above the worktable	mm	140	-
Circular saw unit			
Max. blade diameter	mm	400	400
Max. cutting height	mm	120	120
Blade rotating speed	rpm	2800	2800
Exhaust outlet diameter	mm	120	120
Saw blade horizontal stroke	mm	120	120
Number of stops on revolver		4	4
Selfbraking motor power	kW	3	3
Work-piece support table			
Worktable stroke towards the tool	mm	105	105
Worktable width	mm	400	400
Vertical pressers for pneumatic clamping	n.	2	2
Horizontal presser for pneumatic clamping	n.	1	1
Stops on revolver	n.	5	5
Tilting fence with stops on the table	degrees	± 45	± 45
Extensible stop up to	mm	2800	2800
Rotating chipbreaker for processing at 90°	profiles n.	5	5
Optional devices			
Machine version with 450 mm blade		O	O
N.1 additional tool-holder spindle - 40 mm diameter		-	O
N.1 additional tool-holder spindle - 50 mm diameter		-	O

tenoning machine machining units



High efficiency
Carriage movement on ball bushing linear guides and positioning by means of 5-position revolver.



Simple adjustment
Revolver with 5 mechanical stops for the tenon depth set-up on the circular saw unit.



Perfect tenoning operations
Revolver with 4 mechanical stops for the work-piece positioning during tenoning machining, without needing cutting-off operation.





Smart solutions
The tenoning unit is equipped with two vertical and one horizontal pressure cylinders for the work-pieces locking and the machining even of large elements.



Total safety
Chipbreaker with 5 stops to operate in safety.



Accurate positioning
The worktable is fitted with a tiltable fence up to ± 45°.

Easy set-up
Spindle moulder unit with fixed spindle with height adjustment (up to 90 mm under the worktable).





Maximum performances as standard
The *formula ten 400e* machine version is fitted with spindle moulder unit including an electrospindle with HSK 63B rapid tool change.





sanders

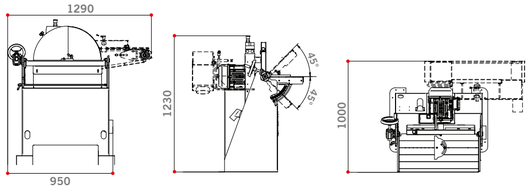
formula dg 60
modular disc sander

formula unilev 150
universal sanding centre with oscillating vertical belt

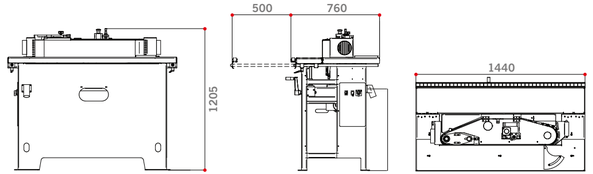




formula dg 60



formula unilev 150



- Not Available
O Option

formula		dg 60	dg 60b	unilev 150
Worktable dimensions (* total width)	mm	700 x 350	700 x 350	1440 x 710*
Table and fence tilting	degrees	0 ÷ 45	0 ÷ 45	0 ÷ 45
Disc diameter	mm	600	600	-
Disc rotating speed	rpm	900	900	-
N.2 belt speeds	m/s	-	-	12/24
Motor power (* belt with S1 2-speed)	kW	2,2	2,2	2,2 / 3*
Voltage (3 ph @ 50 Hz)	V	380/400	380/400	380/400
Belt unit vertical tilting	degrees	-	0 ÷ 90	-
Abrasive belt length	mm	-	1860	2170
Abrasive belt height	mm	-	150	150
Oscillating unit vertical movement	mm	-	-	130
Vertical oscillation	mm	-	-	20
Exhaust outlet diameter	mm	-	-	120
Optional devices				
Retractable table extension with rollers		-	-	O
Supplementary table for processing with rollers equipped with suction connection		-	-	O
Accessories kit		-	-	O
Rubber roller, 8 mm diameter, fitted with pin and ER32 collet chuck		-	-	O
Pneumatic roller, 70 mm diameter, with ER32 collet chuck		-	-	O
Pneumatic roller, 70 mm diameter, with shaft		-	O	-

sanders machining units



Maximum practicality
The worktable can be angled 45° guaranteeing an accurate sanding also of tilted profiles.



Flexibility and sturdiness
The machine is featured with a motor for the belt feeding with two speeds: 12 and 24 m/sec.
Oscillating belt movement through dedicated motor and gear motor.
formula unilev 150

The best support for the work-piece
The mobile front extension makes easy the support of large dimensioned panels on the worktable.
formula unilev 150







No limits to sanding
The *formula dg 60b* machine version is fitted with sanding belt unit and horizontal pneumatic roller with 70 mm diameter.



Ideal for long work-pieces
Possibility of tilting the belt unit for the processing of long work-pieces.
formula dg 60b





Solutions for every requirement
On the rear side of the machine, the worktable has an adjustable stop for the processing of tilted work-pieces. The belt can be adjusted in height for safe work-piece processing.
formula unilev 150

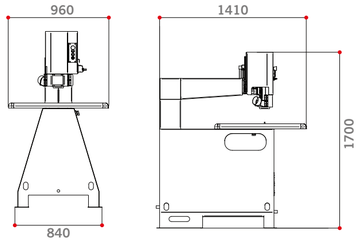
Perfect sanding on shaped work-pieces
A machine even more flexible, with the tiltable worktable and the supplementary table equipped with rubber rollers and integrated dust extraction, ideal for sanding shaped work-pieces (it can be quickly installed and removed).
formula unilev 150



router

formula router 800





formula		router 800
Spindle head and frame distance	mm	800
Variable spindle speed with inverter	rpm	3.000 ÷ 18.000
Motor power	kW	2,2
Voltage (3 ph @ 50 Hz)	V	380/400
Pneumatic shaft vertical stroke	mm	80
Number of revolving turret with adjustable stops		5
Stroke for vertical adjustment of the routing head	mm	65
Max. work-piece height (jig included)	mm	150
Worktable dimensions	mm	960 x 880
Max. table height from floor	mm	1000
Copying pin diameter	mm	8 - 10
Max. tool shank diameter	mm	16
Spindle collet chuck		ER25
Supplied collet for clamping tools with shank from 9 to 10 mm	n.	1
Max. tool diameter	mm	50
Max. tool length	mm	70
Exhaust outlet diameter	mm	80
Air consumption	m^3/h	362

router machining units

Simple and effective

Routing head with electrospindle and vertical adjustment by means of handwheel.





User friendly

The adjustable stop prevents the tool from hitting the worktable.

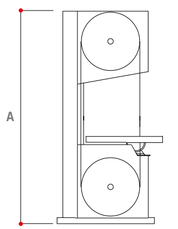


Effortless and dynamic

The routing head is equipped with a 5-stop adjustable revolving turret for a quick setting of the working positions.

band saws

formula s 440p
formula s 540p
formula s 640p
formula s 740p
formula s 840p
formula s 940p





	s 440p	s 540p	s 640p	s 740p	s 840p	s 940p
A (mm)	1940	2100	2340	2395	2625	2860
B (mm)	420	520	600	710	800	800
C (mm)	805	940	1145	1265	1485	1590

formula		s 440p	s 540p	s 640p	s 740p	s 840p	s 940p
Worktable dimensions	mm	420x578	520x720	600x885	710x1000	800x1160	800x1250
Cast iron saw wheels diameter	mm	440	540	640	740	840	940
Saw wheels width	mm	33	38	38	40	45	54
Max. cutting height	mm	440 (18")	500 (20")	600 (24")	450 (18")	540 (21")	560 (22")
Max. cutting width	mm	425	520	620	720	820	910
Worktable tilting (CE)	degrees	0 ÷ 45 (20)	0 ÷ 45 (20)	0 ÷ 45 (20)	0 ÷ 45 (20)	0 ÷ 45 (20)	0 ÷ 45 (20)
Min./max. blade dimensions	mm	6/30	6/35	8/35	10/40	10/45	12/50
Standard S1 three-phase motor power 400 V 50 Hz	kW (Hp)	2,2 (3)	2,2 (3)	3 (4)	4 (5,5)	5,5 (7,5)	7,5 (10)
Standard S1 three-phase motor power 220 V 60 Hz	kW (Hp)	3,6 (4,8)	3,6 (4,8)	3,6 (4,8)	5 (6,6)	6,7 (9)	6,7 (9)
Standard S1 single-phase motor power 220 V 60 Hz	kW (Hp)	3,6 (4,8)	3,6 (4,8)	3,6 (4,8)	-	-	-
Exhaust outlets diameter	mm	2 x 120	2 x 120	2 x 120	2 x 120	2 x 140	2 x 140

band saws machining units



Finish quality

A perfect cut result is assured by the top and bottom high precision blade guides. Practical machines suitable also to perform straight and tilted cuts on wood, plastic and aluminum.



Safety first

Total safety machining with telescopic protections with rackwork to the blade.

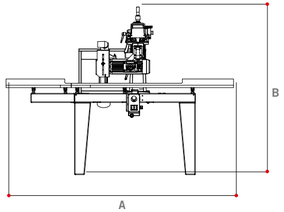


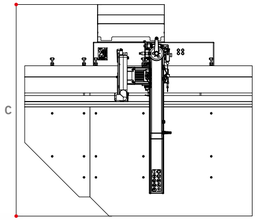
Solidity and sturdiness

The large dimensioned cast iron saw wheels, as well as the worktable, running on sealed for life ball bearings.

radial saws

formula sr 650
formula sr 750
formula sr 900







	sr 650	sr 750	sr 900
A (mm)	1548	1557	1557
B (mm)	1675	1845	2110
C (mm)	1615	1806 (2220 option)	1963

formula		sr 650	sr 750	sr 900
Blade diameter	mm	350 ÷ 400	350 ÷ 400	400
Blade tilting	degrees	-45 ÷ +45	-45 ÷ +45	-45 ÷ +45
Max. cutting depth with 90°/45° blade (* 400 mm blade diameter available as option)	mm	120/83*	120/83*	120/83
Max. cross-cut capacity	rpm	640 x 20	750 x 20	900 x 20
Three-phase motor power	kW (Hp)	3 (4)	3 (4)	4 (5,5)

radial saws machining units



Long-lasting functionality

The mechanisms of which the machine is equipped, as the protection cover on the arm column support, protect the mechanical parts from dust, guaranteeing the best operation over time.



Optimal smoothness

The 8 sliding bearings on the guides grant the best carriage smoothness and an optimal support for a perfect cutting result.



Absolute safety

The blade guard guarantees the absolute operator's safety.



Maximum cutting accuracy

The cast iron structure provides the arm the maximum solidity and rigidity for the maximum cutting accuracy. The interchangeable sliding guides allow the operator a simple and rapid replacing, in case of wear, without direct intervention on the arm.

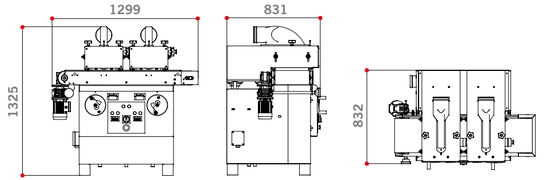
structuring/
brushing machines

formula str 32
formula str 62

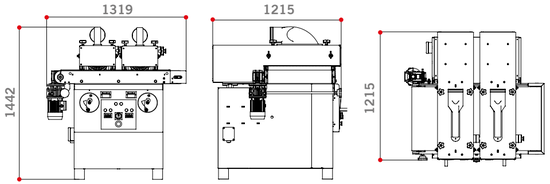




formula str 32



formula str 62



- Not Available
O Option

formula		str 32r	str 32l	str 62r	str 62l
Number of machining units		2	2	2	2
Working width	mm	300	300	600	600
Max. working height	mm	300	300	300	300
Machining unit motor power @ 50 Hz	kW	3	3	4	4
Feed speed motor power @ 50 Hz	kW	0,22	0,22	0,37	0,37
Exhaust outlets diameter	mm	2 x 150	2 x 150	2 x 150	2 x 150
Brushes speed	rpm	1500	100 ÷ 1500	1500	100 ÷ 1500
Feed speed	m/min	3 ÷ 20	3 ÷ 20	3 ÷ 20	3 ÷ 20
Brushes diameter	mm	190 / 190	230 / 230	190 / 190	230 / 230
Net weight	kg	440	440	750	750
Dimensions (width x depth x height)	mm	1300x900x1300	1300x900x1300	1300x1200x1550	1300x1200x1550
Optional devices					
Powered machining units lifting with digital readouts		O	O	O	O
Nylon brush (in place of the sanding brush, 300 mm width)		-	O	-	O
“Jigsaw” cross machining unit creating saw blade effect (first machining unit) The unit includes: - 25 steel strips - 1,5 kW motor controlled by inverter		O	O	O	O
Additional steel brush (0,2 mm wire)		-	O	-	O
Additional steel brush (0,3 mm wire)		O	O	O	O
Additional tynex brush (60 grit)		-	O	-	O
Additional tynex brush (80 grit)		O	O	O	O

structuring/ brushing machines machining units



Easy set-up
Rapid pressure rollers adjustment through dedicated knobs.



Simple working
Machining units lifting by means of handwheels and numerical readout.



Effective solutions
Feed speed variation with mechanical speed variator for a simple and reliable solution.

Best-in-class performance
Superior adherence thanks to the rubber belt with vertical grooves.





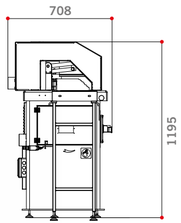
Perfect finishing
The double machining unit allows obtaining the request finishing in a single passage.

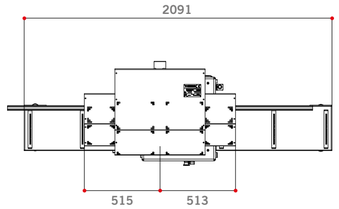


Optimal extraction system
The large diameter of the exhaust outlets grants an optimal dust extraction.

cut-off saw
formula cut 350

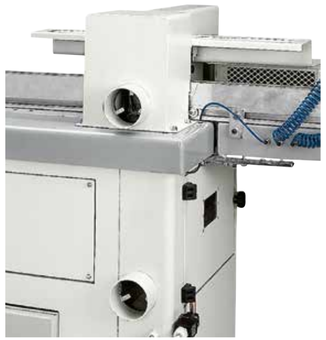






formula		cut 350
Worktable height	mm	800
Blade diameter	mm	350
Max. cross-cut capacity	mm	210 x 30
Max. working pressure	bar	8
Air consumption	Nl/cycle	6
Exhaust outlets diameter	mm	80
Three-phase motor power	kW (Hz)	3 (50) / 3 (60)

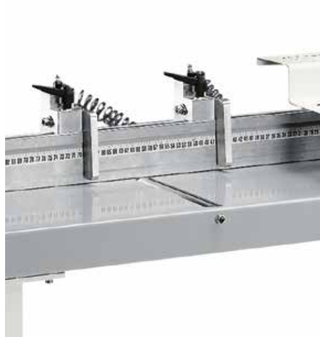
cut-off saw machining units



The best cleaning
The exhaust outlets positioned near the dust evacuation areas ensure a fully cleaning of the working environment.



Total safety
The blade guard and the other operator's protection systems, as the bi-manual hand-safety control, enable operating with total safety.

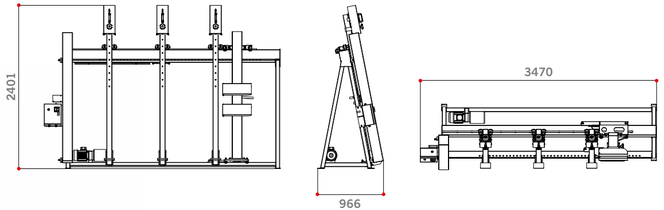


Smart solutions
The machine is equipped with smart solutions as the optional stops and the pneumatic positioning.

clamp

formula clamp 2500





formula		clamp 2500
Working dimensions	mm	2500 x 1800
Vertical hydraulic cylinders stroke	mm	150
Thrust of each vertical hydraulic cylinders	kg	1270
Horizontal hydraulic cylinders stroke	mm	120
Thrust of each horizontal hydraulic cylinder	kg	770

clamp machining units



Ease-of-use

The quick vertical beams positioning system allows a very simple hydraulic cylinders adjustment.



Solidity and sturdiness

Even more machine sturdiness with the lower cast iron supports.



Maximum reliability

The hydraulic cylinders pressure is managed by practical levers and a control panel fitted with a valve with reading monometer and a locking cock for the cylinders pressure maintaining. The process is always under control.

horizontal mortiser
formula as 16



formula		as 16
Worktable dimensions	mm	287 x 550
Longitudinal stroke	mm	200
Vertical stroke	mm	160
Transversal stroke	mm	125
Tool spindle diameter	mm	1 ÷ 16
Spindle rotating speed	rpm	3000
Three-phase motor power	kW (Hz)	1,5 (50) / 1,8 (60)

horizontal mortiser machining units



Solidity and manageability
The cast iron strong structure easily moves on cylindrical sliding bars.



User friendly
Simple movement of the boring head due to the practical control by hand-wheel and levers.

vacuum dust extractors

formula vfp 200
formula vfp 250
formula vfp 300
formula vfp 350
formula vfp 350x



formula		vfp 200	vfp 250	vfp 300	vfp 350	vfp 350x
Nominal air flow @ 20 m/s	m³/h	2262 (1331 CFM)	3534 (2080 CFM)	5089 (2995 CFM)	6927 (4077 CFM)	7127 (4195 CFM)
Static pressure	Pa	2563	2451	2587	2543	3347
Max. air flow @ 20 m/s	m³/h	3000 (1770 CFM)	4900 (2884 CFM)	6000 (3531 CFM)	8500 (5000 CFM)	10000 (5886 CFM)
Exhaust outlet diameter	mm	200	250	300	350	350
Filter type		sleeves	sleeves	sleeves	cartridge	cartridge
Filter surface area	m^2	13,8	22,4	30	73	73
Chip volume capacity	litres	2 x 165	2 x 165	3 x 165	3 x 165	3 x 165
Dimensions (width x depth x height)	mm	2296x830x2050	2351x1058x2361	3000x1058x2361	3129x1058x2361	3129x1058x2361
Three-phase motor power	kW (Hp)	3 (4)	7,5 (10)	7,5 (10)	11 (14,7)	15 (20)

vacuum dust extractors

formula vfk 125
formula vfk 140
formula vfk 160
formula vfk 200



formula		vfk 125	vfk 140	vfk 160	vfk 200
Nominal air flow @ 20 m/s	m³/h	884 (520 CFM)	1108 (652 CFM)	1448 (852 CFM)	2262 (1331 CFM)
Static pressure	Pa	2210	2615	2247	2482
Exhaust outlet diameter	mm	125	140	160	200
Filter type		cartridge	cartridge	cartridge	cartridge
Filter surface area	m^2	5,3	8,5	9,2	22
Chip volume capacity	litres	165	165	2 x 165	2 x 165
Dimensions (width x depth x height)	mm	1045x830x1750	1045x830x1750	1559x830x1800	1662x830x1800
Three-phase motor power 400 V 50 Hz	kW (Hp)	2,2 (3)	2,2 (3)	2,2 (3)	3 (4)

dust extractors with bag

formula eco 300sk
formula eco 300s
formula eco 300d
formula eco 350t
formula eco 350q





formula		eco 300sk	eco 300s	eco 300d	eco 350t	eco 350q
Number of bags		1	1	2	3	4
Max. fan air flow capacity	m^3/h	2550	2550	3900	4560	4560
Fan diameter	mm	300	300	305	356	356
Number of exhaust outlet attachments		2	2	3	4	4
Exhaust outlet diameter	mm	100	100	100	100	100
Bags diameter	mm	900	900	1300	1850	1850
Bags capacity	m^3	0,15	0,15	0,43	0,59	0,79
Motor power	kW (Hz)	1,5 (50)	1,5 (50)	2,2 (50)	3,7 (50)	5 (50)

feeders

formula feed 38
feeder with 3 rollers fitted with stand

formula feed 48
feeder with 4 rollers fitted with stand

formula feed 4i
feeder with 4 rollers with inverter fitted with stand







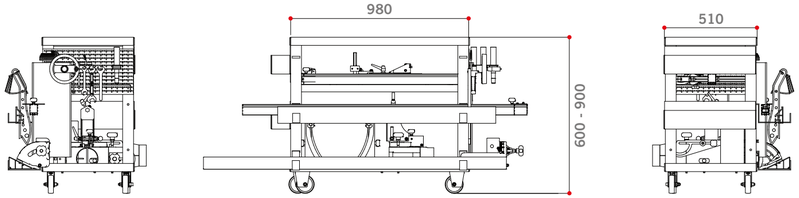
formula		feed 38	feed 48	feed 4i
Number of rollers		3	4	4
Feed speed	m/min	2/4/5,5/7/11/13/16,5/33	2/4/5,5/7/11/13/16,5/33	2 ÷ 22
Rollers diameter	mm	120	120	120
Rollers width	mm	60	60	60
Rollers excursion	mm	18	18	18
Three-phase motor power	kW (Hz)	0,75 (50)	0,75 (50)	0,50 (50)

accessories

“minimax ease” mobile trolley for accessories



Designed to store various accessories such as: surfacing fence, squaring fence, spindle moulder fence, spindle shafts, etc.
It consists of:
- upper table with bakelite surface that can be used also with piece support during processing
- two shelves with rubber surface
- rotating wheels with locking device



accessories

thicknessing table extension to be used in infeed or outfeed



It can be installed on the worktable end side.
Dimensions:
- 520 x 500 mm
- 630 x 500 mm

tablet holder on the sliding carriage



Compatible with tablets from 8” to 11”.



scm | service

WE'LL GO THE EXTRA MILE FOR YOU

CONTACT

SCM SERVICE
via Emilia 77 - 47921 Rimini - Italy
tel. +39 0541 700100
scmservice@scmgroup.com
www.scmwood.com

SCM SPAREPARTS
Via Emilia, 61 - 47921 - Rimini - Italy
tel. +39 0541 674111
spareparts@scmgroup.com
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- 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

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

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.

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.

- scm — WOODWORKING TECHNOLOGIES
- Cms — 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.

- HITECO — SPINDLES AND TECHNOLOGICAL COMPONENTS
- es — ELECTRIC PANELS
- steelmec — METALWORK
- scmfonderie — CAST IRON

scm woodworking technology | *is more*