



# 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*



tenoning machine / 6



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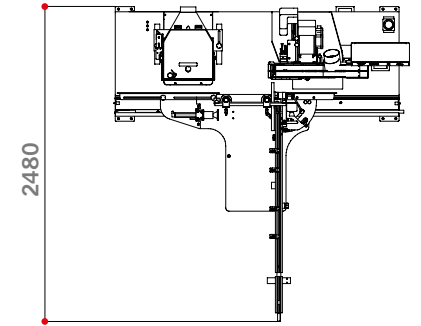
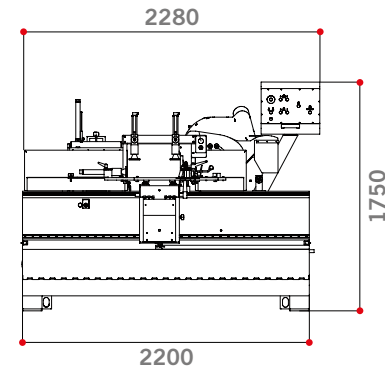


accessories / **36**

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
<b>Spindle moulder unit</b>			
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	-
<b>Circular saw unit</b>			
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
<b>Work-piece support table</b>			
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
<b>Optional devices</b>			
Machine version with 450 mm blade		0	0
N.1 additional tool-holder spindle - 40 mm diameter		-	0
N.1 additional tool-holder spindle - 50 mm diameter		-	0

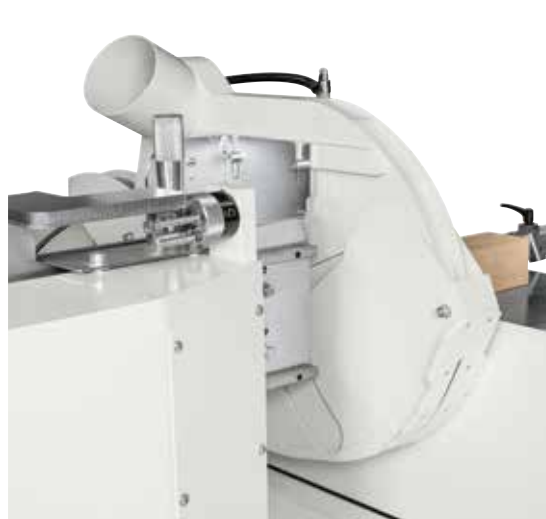


# tenoning machine main features



## 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.



## Accurate positioning

The worktable is fitted with a tiltable fence up to  $\pm 45^\circ$ .



## Easy set-up

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





## 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.



## 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**

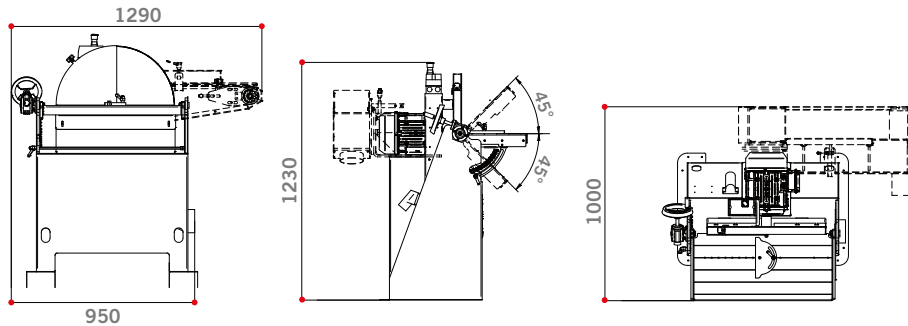
modular disc sander

**formula unilev 150**

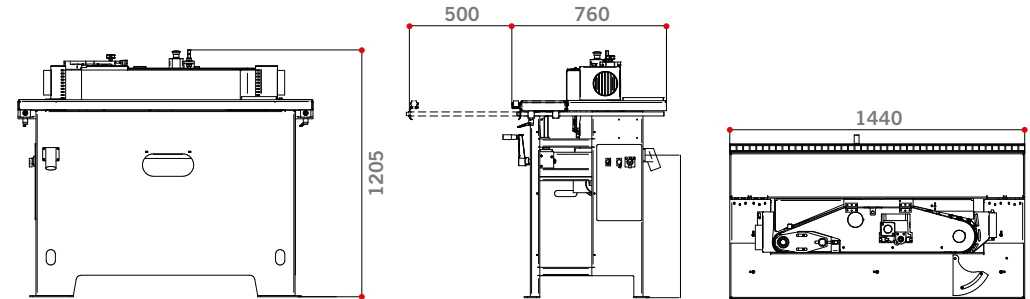
universal sanding centre with  
oscillating vertical belt



## 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
<b>Optional devices</b>				
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 main features



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



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*







## 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*



## 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

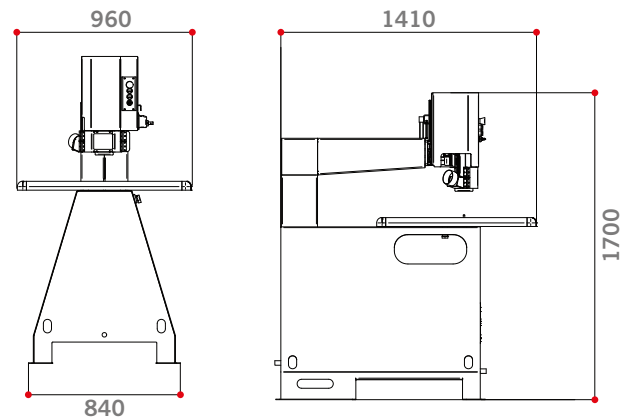
A machine even more flexible, with the tiltable worktable and the supplementary table equipped with rubber rollers and integrated dust extraction, ideal for sanding shaped work-pieces (it can be quickly installed and removed).

*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 <sup>3</sup> /h	362

# router main features

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**

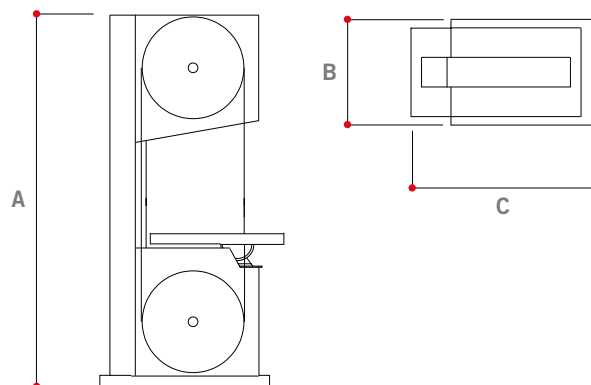
**formula s 540p**

**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 main features



**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.



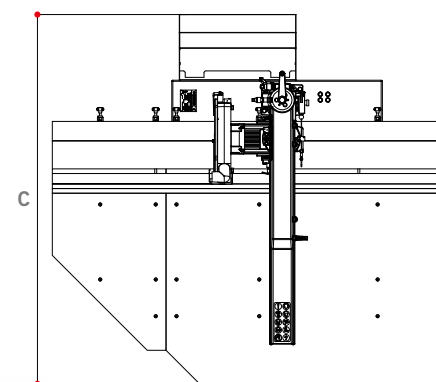
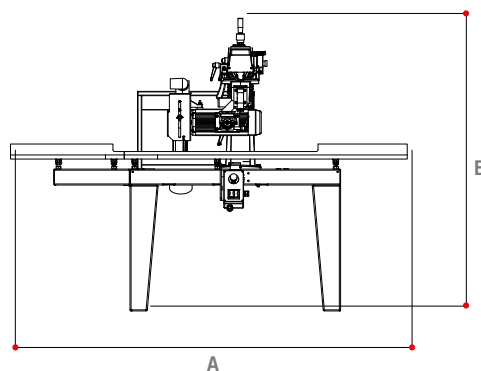
**Solidity and sturdiness**  
The large dimensioned cast iron saw wheels, as well as the worktable, running on sealed for life ball bearings.

# 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 main features



## 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

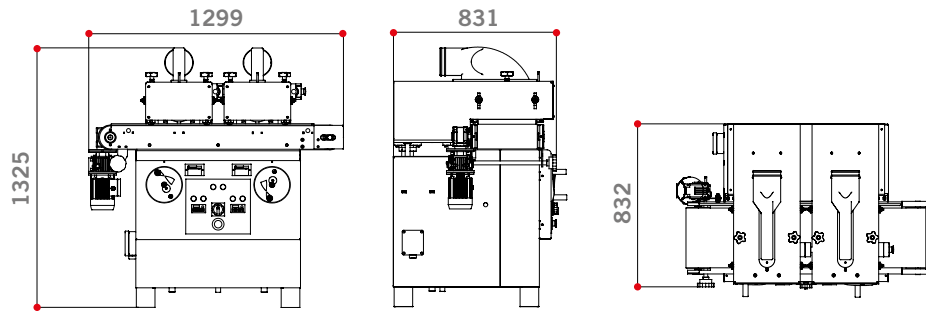
**formula str 32**

**formula str 62**

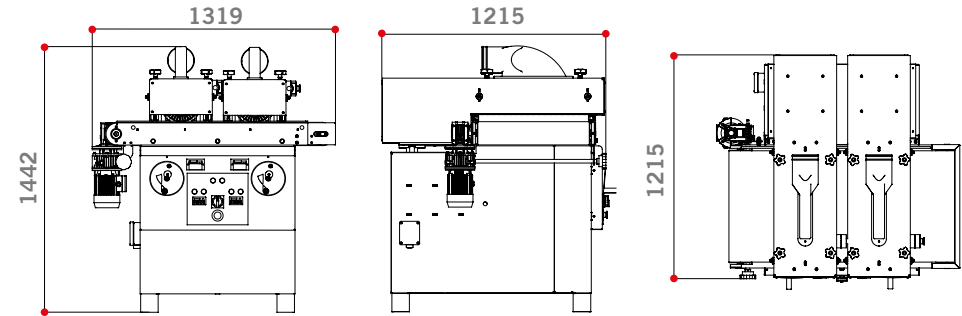




## formula str 32



## formula str 62



■ Not Available  
○ 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
<b>Optional devices</b>					
Powered machining units lifting with digital readouts		○	○	○	○
Nylon brush (in place of the sanding brush, 300 mm width)		-	○	-	○
“Jigsaw” cross machining unit creating saw blade effect (first machining unit) The unit includes: - 25 steel strips - 1,5 kW motor controlled by inverter		○	○	○	○
Additional steel brush (0,2 mm wire)		-	○	-	○
Additional steel brush (0,3 mm wire)		○	○	○	○
Additional tynex brush (60 grit)		-	○	-	○
Additional tynex brush (80 grit)		○	○	○	○

# structuring/ brushing machines main features



## 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.



## Perfect finishing

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

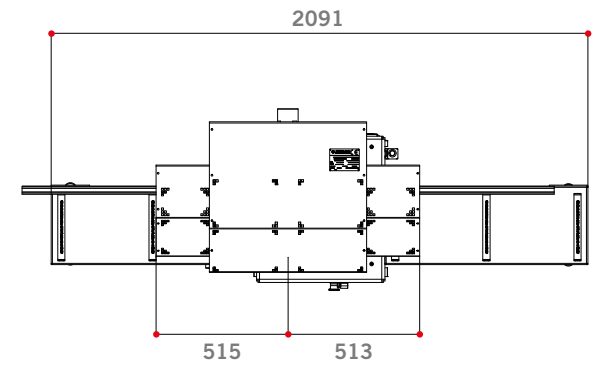
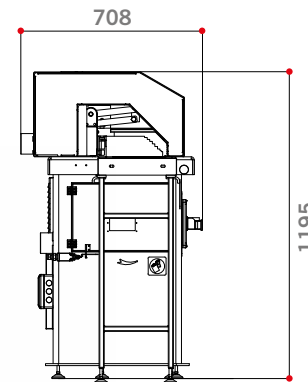
Best-in-class performance  
Superior adherence thanks to the  
rubber belt with vertical grooves.



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

# cut-off saw

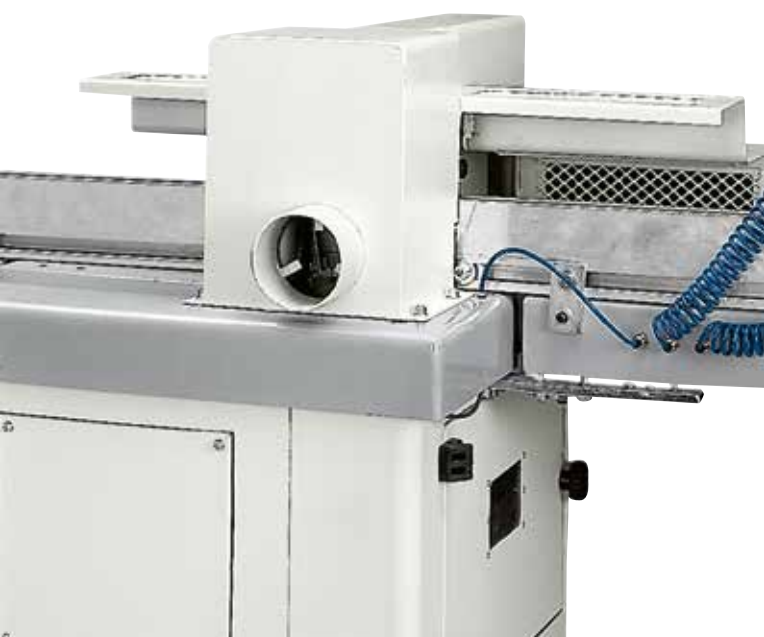
## formula cut 350



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	NI/cycle	6
Exhaust outlets diameter	mm	80
Three-phase motor power	kW (Hz)	3 (50) / 3 (60)



# cut-off saw main features



## The best cleaning

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



## Total safety

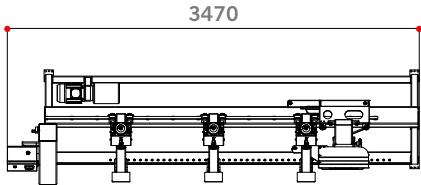
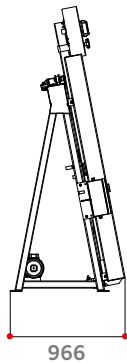
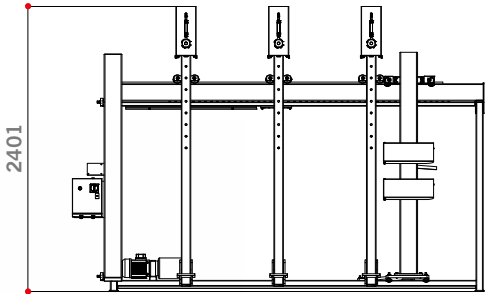
The blade guard and the other operator's protection systems, as the bi-manual hand-safety control, enable operating with total safety.



## 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 main features



## 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 main features



## 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	m²	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 main features

A clean and healthy  
working environment

- 1) Large air surge tank with fast diaphragm valves for optimum jet filter cleaning and lowest use of compressed air.
- 2) Filter bag made of antistatic polyester needle felt material (BGIA-tested for dust, M class) as standard with snap ring lock.



## Great performances

- 3) Energy-efficient motors according to IE3 as standard.
- 4) Sound-insulated air recirculation for optimum noise emission values.
- 5) Low-maintenance automatic fire extinguishing system with manual and automatic operation (standard with *formula vfp 250, 300, 350 and 350x*).
- 6) PLC control, manual and automated operation possible, can be extended with many options (e.g. machine recognition, slide valve control, frequency controlled operation, etc.).



## High efficiency

- 7) Viewing window for fill level check.
- 8) Ergonomically shaped clamping lever for simple container locking.

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	m <sup>3</sup> /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 <sup>2</sup>	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	m³/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	m³	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

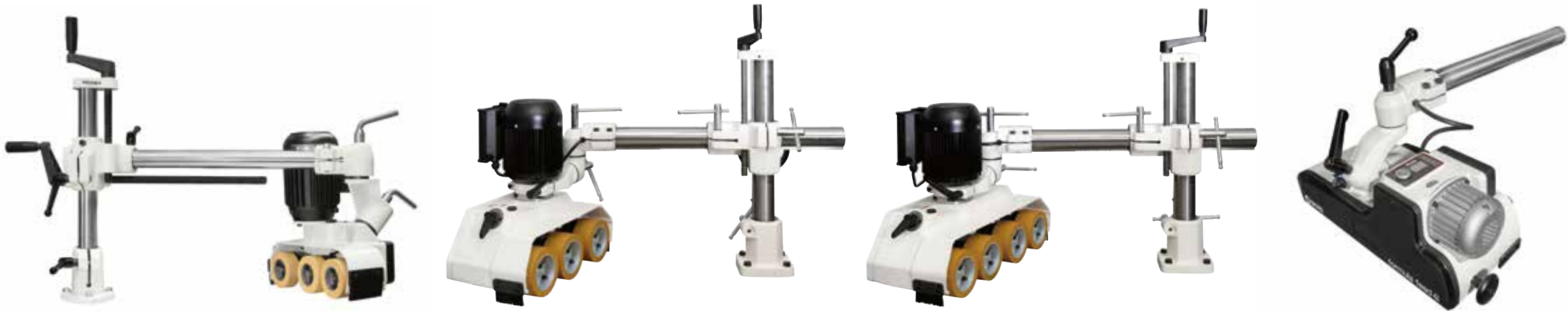
**formula feed 32**

**formula feed 38**

**formula feed 48**

**formula feed 4i**

The feeders are an accessory especially used for spindle moulders. The main function of this device is to bring the work-piece to be processed closer towards the machine tool, in automated mode, with constant speed and thrust. This guarantees accuracy and quality in the final result of the processing performed by the woodworking machine, as well as ensuring maximum safety for the operator.



formula		feed 32	feed 38	feed 48	feed 4i
Number of rollers		3	3	4	4
Feed speed	m/min	5/6,5/8/11	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	80	120	120	120
Rollers width	mm	30	60	60	60
Rollers excursion	mm	18	18	18	18
Three-phase motor power	kW (Hz)	0,18 (50)	0,75 (50)	0,75 (50)	0,50 (50)

# feeders main features

## Ease-of-use

The **formula** range feeders is designed to meet all machining requirements. It includes 3-roller models, *formula feed 32* and *formula feed 38*, and 4-roller models, *formula feed 48* and *formula feed 4i*. The *formula feed 4i* feeder is equipped with inverter-driven motor with variable speed drive from 2 to 22 meters per minute.

## Smart solutions

The flip-over support with electric pre-setting can be used with all the feeders of the **formula** range. It allows a total exclusion of the device and prevents interference with other parts of the machine.



## High efficiency

The *formula feed 32* feeder can be installed on the combined machine together with the support table specifically designed by SCM, available as an option.



accessories

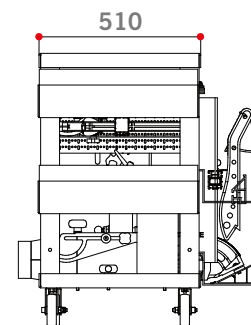
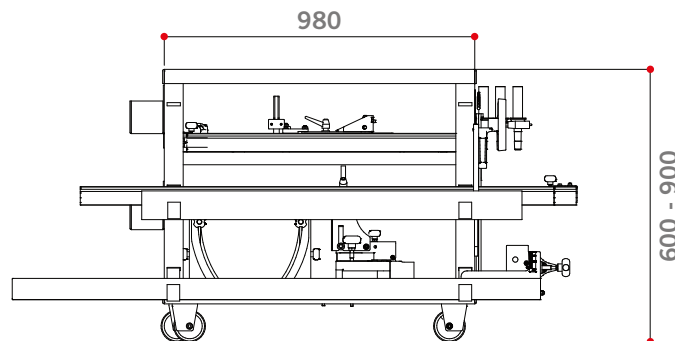
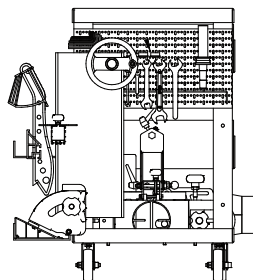
# **“minimax ease” mobile trolley for accessories**



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  
**thickening 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".



SERVICE AND MAINTENANCE



TRAINING SERVICE



SPARE PARTS



DIGITAL SERVICES

**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

##### SCM SERVICE

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##### SCM SPAREPARTS

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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



is more



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