

SCIE-mail: contact@caple.in Mobile: (91) 99200 71716

# Ergon

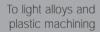
# Beyond machine concept, to offer a wide range of modular solutions which meet specific manufacturing requirements.







To Nesting production







To high productivity







Up to 5 controlled axes production

Mobile: (91) 99200 71716



High technology for any size of machine required.

The correct production from compact to large table versions



Ergon I Ease of use and industrial integration. Optimum working conditions to exploit the machine's highest capabilities.



Ergon TVN

The fixed-gantry rigidity combined with the suction cup and bar worktable flexibility.



# Ergon

CNC routing centres

Ergon

The rigidity of the aluminium multi-function worktable combined with the robust structure of the Ergon guarantee an unbeatable quality finish. Ideal for the production of MDF doors and solid wood components, and for Nesting production.



**e**scm





The flexible solution for tables, office furniture a nd all types of furniture. Fast set-up times of suction cup and bar worktable combined with fast adjustment of working heads with independent Z axis.





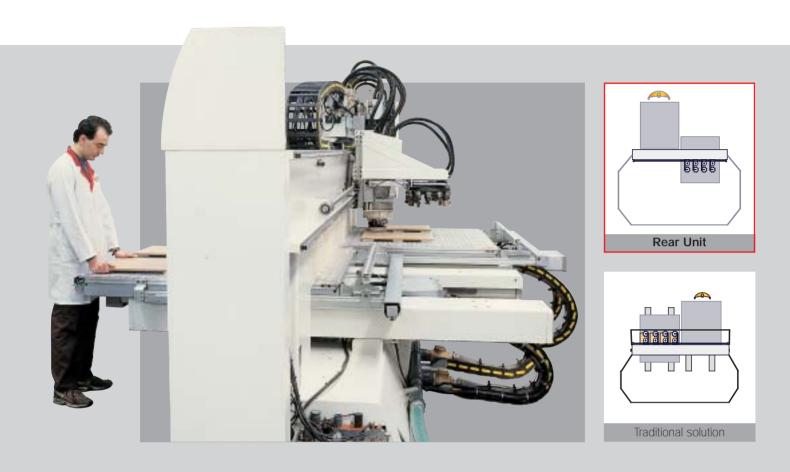
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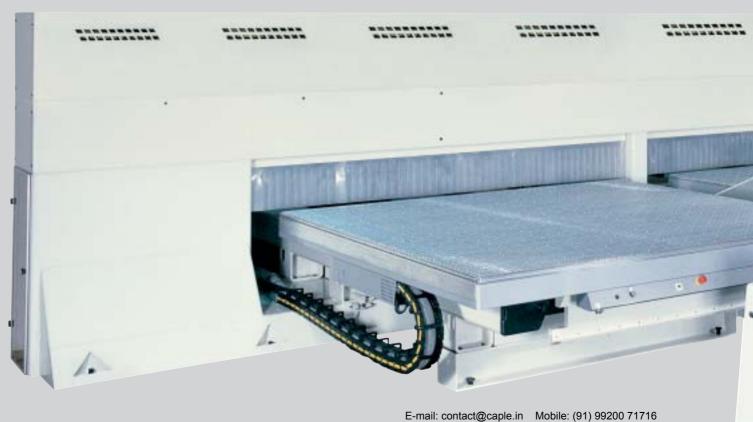
A wide range of innovative solutions designed to offer a TOP technological standard reflecting on machining and on production.



## **Rear Unit:**

the intelligent innovation

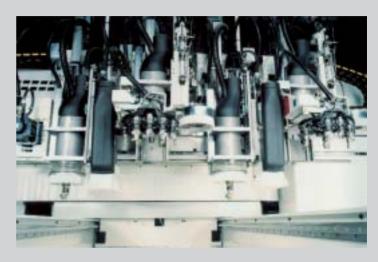


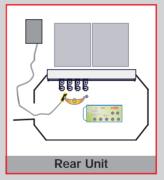


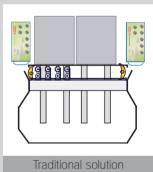


An exclusive and innovative concept with two separate areas: the operator area at the front of the machine and the machining heads area at the rear of the machine for total safety and ease of use.

The machining heads are completely free and totally accessible for maximum ease of retooling.

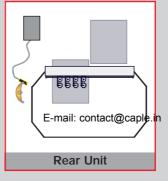














## CNC routing centres

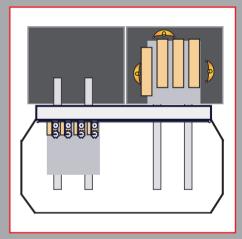
# Ergon L

# The right size for each application



Full access to three sides of the worktable in complete safety while the machine is working. This is the advantage of Ergon L, a practical routing centre ideal for:

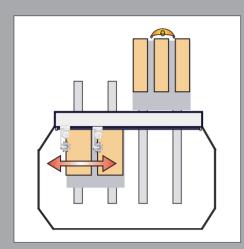
- Machining of large and small components with the greatest of simplicity.
- Referencing long components from a side position adjacent to the worktable .
- Cutting down-time by using two or more operators for loading and unloading operations because of machine's high execution speed.





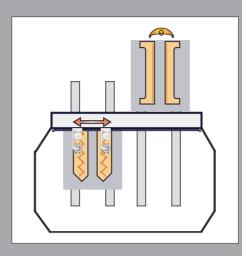
## Independent X axis : complete freedom

An independent X axis means that Ergon can be set up for any type of use adopting the most suitable configuration for each machining requirement.



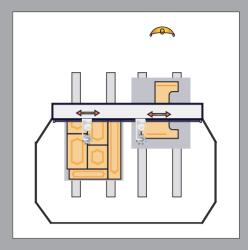
### CNC centre-to-centre adjustment in real time.

Adjusting the centre-to-centre to match machining panels, optimises cycle steps and reduces cycle times.



### Production of mirrored components.

Ideal for single piece batch production composed of several mirrored components such as staircase parts, cupboard side panels, etc.



## Simultaneous production on two worktables of different components.

During long programs, when only one machining head is being used, the second head can be utilised to machine other components on the second worktable.



## Prisma unit: the routing centre revolution



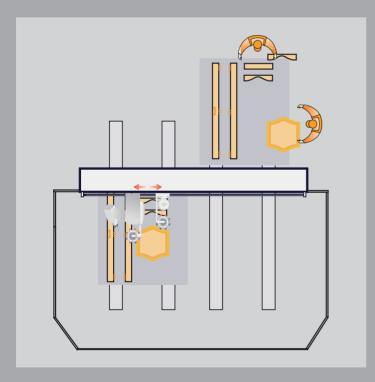


#### Prisma:

### 5 controlled axes machining head

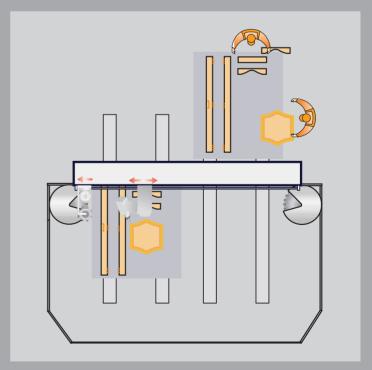
- Routing on tilted axes.
- Mitred cuts with sawblade.
- Machining of any profile with interpolation on 5 axes

The Prisma machining unit is the ideal solution for the modern production process.



### The Basic and Prisma units together.

Power combined with universal use offer a routing centre complete in every function.

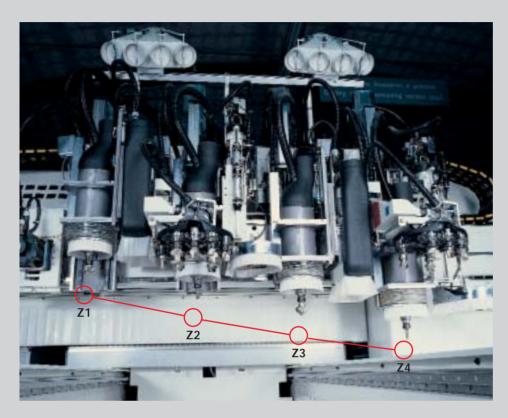


### Prisma and Basic with independent X axis.

Flexibilit <u>Evilian collination and the first through the paying state of the first through the first </u>

## Independent Z axes: top performance as standard





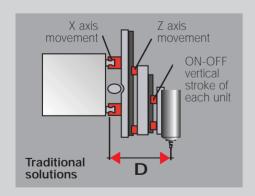
### Top level dynamics and precision.

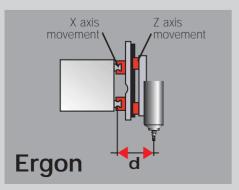
Fast units, driven and balanced separately to ensure a prompt response and maximum positioning precision.

#### Tool length directly set by software

Tools are set directly on the machine without the need for any presetting in cutter tool holders

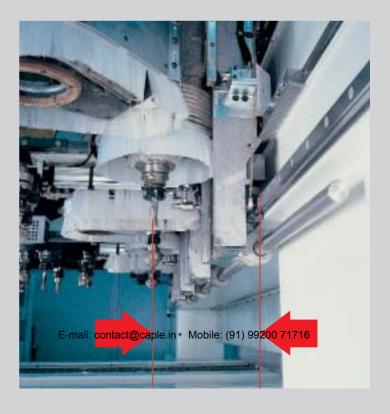
## Units connected directly to the cross beam: maximum one-piece rigidity





The units are anchored directly to the cross beam without any interface structural components between them.

Very short distance between axis, spindle and machine structure.



## Rigidity and Precision: the unbeatable combination for a high quality product





Each machining unit is anchored directly to the cross beam with four high precision recirculating ball bearings. This ensures uniform load distribution, high rigidity and the complete absence of vibration.



A double rack and pinion drive transmission enables fast, accurate vibration-free movement even with heavy components.



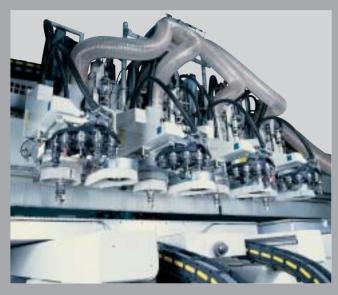
Unparalleled rigidity even on the worktables, thanks to six-point recirculating ball bearing ancorages.



### **Basic unit:**

### maximum rigidity and top quality finish

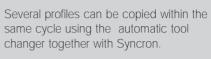




#### Basic unit:

7.5-11-15-16 kW A 12-station tool changer together with ON-OFF units.

**Productivity** and flexibility together.





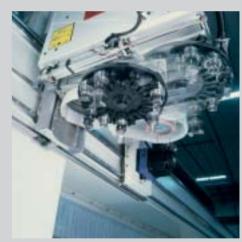
OFF



### Basic unit with Plus tool changer

7.5-11–15–16 kW A 12-station tool changer together with ON-OFF units.

Tool changeover in masked time while drilling or other units are still operating.



Tool change



### Syncron

Electronic floating copying device for continuous, heavy-duty use. Syncron enables surface copying without any heavy pressure on the component. It enables full use of the tool magazine. Unlimited material cutting parameters.



### Modulo unit:

### maximum flexibility and completeness



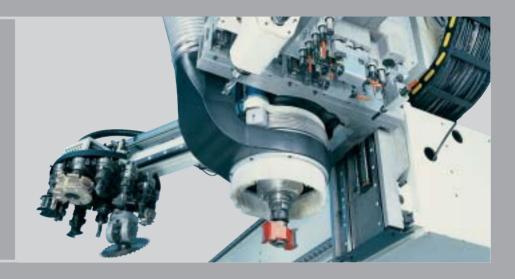
#### Modulo unit:

11 - 15 - 16 kW

A 12-station tool changer together with up to four ON-OFF units.

Maximum flexibility and versatility

Tool changeover in masked time with routing and auxiliary machining.



Universal K2 unit

fixed or 0-360° CNC control. For machining on the horizontal



Drilling unit with 9 (F9) or 18 (F18) independent spindles specifically designed for drilling solid wood and panels.



Saw blade unit 0-90° or 0-360° CNC-controlled sawblade unit. Fast, powerful cutting on any material.



**PB1:** Supplementary electrospindle for complementary machining. The optimized use of this electrospindle in the machining cycle will reduce the number of tool changes.











E-mail: contact@caple.in Mobile: (91) 99200 71716 Mechanical presser. Reinforcing holddown when machining overlapping panels.

### Compact unit:

## the conventional parallel-head design combined with advanced technology





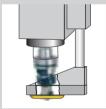


The high productivity of parallel heads combined with the set-up speed of independent Z axes. Together with Syncron C electronic copying device, the Compact unit offers a high productivity solution specifically designed for machining MDF doors.



Syncron C

Syncron C enables the use of higher cutting parameters than those of any other mechanical copying system thanks to the fast response of the working unit with independent Z axis.



## Record set-up times

The Syncron C electronic copying device directly aligns from CNC the tool working dimensions with the ring copying dimensions. This **eliminates all manual presetting times** and means that only one test piece is required to adjust the working height within the CNC.







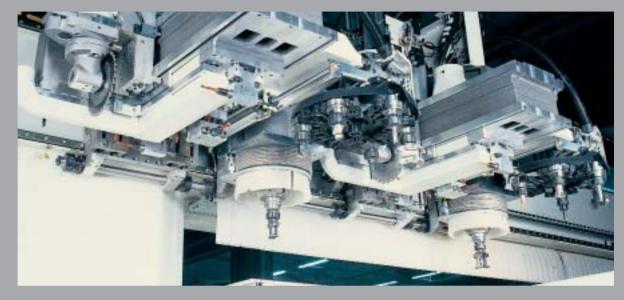
Downstroke Alignment Copying

# Specific solutions: purpose-built units, special angle drive heads and tool magazines



### Drilling unit (FZ 26 – FZ 40) Up to 40

Up to 40 independent drilling spindles.
Drilling unit with independent Z-axis for heavy-duty continuous drilling applications.



### Vector rotary axis:

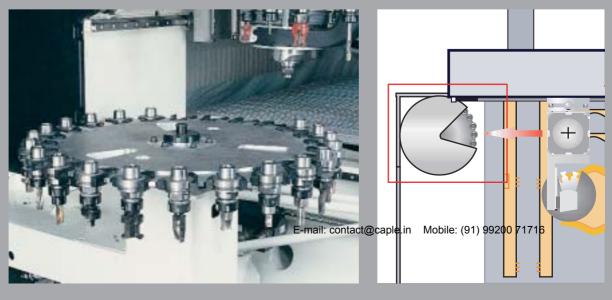
Flexible solution that meets the majority of auxilliary machining requirements using angle drive heads.





### Rapid 24:

Side-mounted tool magazine with 24 tools ready for immediate use in addition to the tools already available from the standard magazine.



### **POWER 2000:**

Power and reliability for a top quality finish.





New-generation

SCM POWER 2000

electro-spindle. Powerful.

Strong. Precise. Reliable.

#### **POWERFUL**

- Large diameter stator
- Oversized static control inverter for heavy stock removal

#### **STRONG**

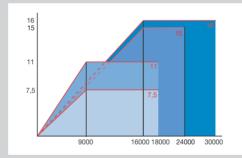
- One-piece, single-block casing
- Twin pre-loaded bearings
- · Large diameter spindle

#### **PRECISE**

- Bearings paired during manufacture to ensure maximum precision
- Automatic alignment of the rear bearing

#### **RELIABLE**

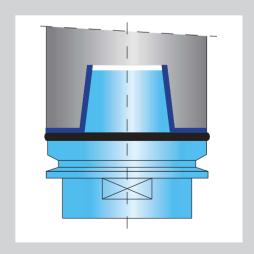
- Pressurised construction to prevent the entry of dust
- Permanent long-life lubrication
- · Liquid cooling



The right power for each application:

7.5 kW from 9000 to 18000 rpm 11 kW from 9000 to 18000 rpm 15 kW from 16000 to 24000 rpm 16 kW from 16000 to 30000 rpm





HSK 63 F tool taper which guarantees
maximum hold-down rigidity and precision
to ensure a high-quality finish for all
applications. Exclusive SCM taper cleaning
system for precise coupling under any
machining conditions.

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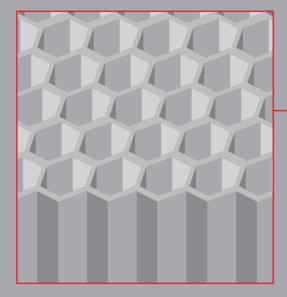
### Multi-function worktable:

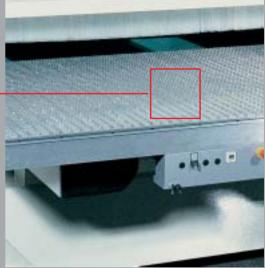
a solid base for all types of component clamping



### Honeycomb construction:

The work table is constructed utilising aerospace aluminium with a honeycomb structure. This ensures perfect rigidity, flatness and long-life precision. The table design also provides optimum dynamic performance even at fast speeds to ensure a high quality finish at all times.

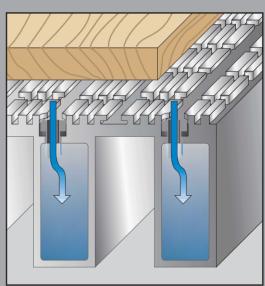




### Direct vacuum supply

The table has a direct vacuum supply. The hold-down vacuum travels to all the vacuum connectors through the extruded channels in the worktable. This ensures uniform vacuum distribution and maximum hold-down vacuum power.





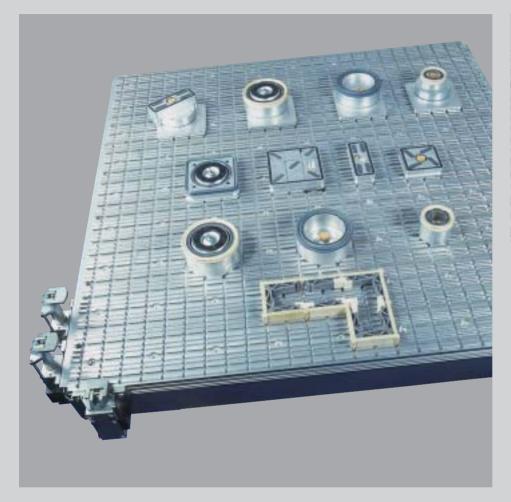
#### Vacuum:

Vacuum hoses, solenoid valves and pumps are dimensioned to ensure a constant, high vacuum capacity throughout all areas of the worktable.



## Multi-function aluminium worktable:

a solid base for all types of workpiece clamping



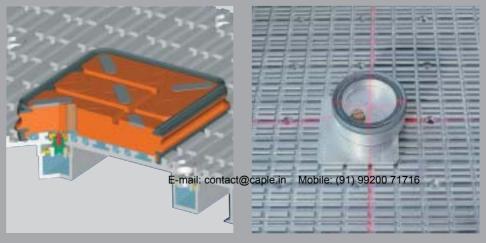


A full range of accessories designed to meet component support, clamping and referencing. Set-up times are drastically reduced.

### MPS: Set-up times reduced to the minimum.

The MPS system reduces worktable set-up times to the bare minimum. When the suction cups are inserted into the grooves of the worktable, an automatic valve immediately starts the vacuum system. Completely free of vacuum supply tubing, the MPS system is extremely easy to use. Using a laser positioning system that guides the operator to all positions, the worktable set-up becomes simple, intuitive and straightforward.

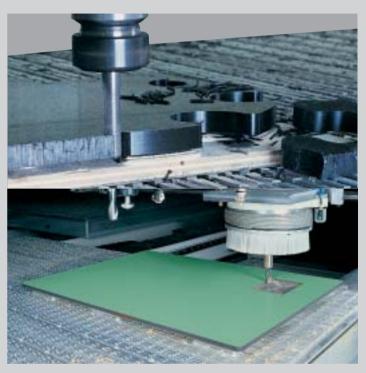








Special inverted T-shaped grooves and threaded holes provide a perfect fixing for all hold-down devices.



Multi-function aluminium worktable rigidity and flatness make it ideal for machining plastics, resins and light alloys.



## TVN bar and suction cup table:

maximum flexibility and ease of use

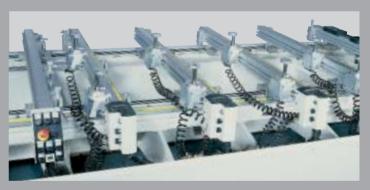


On the TVN worktable, as many suction cups as required can be added to hold down a particular component. Changing over from suction cups to clamps is quick and easy. Just a few simple operations without the need for tools or special fittings.

Originally designed for the production of doors and windows, the bar and suction cup table is also suitable for a wide range of other woodworking applications. The TVN system is practical and easy to use because the table is completely free of vacuum hoses and pipes so that positioning and machining of components of any shape is extremely fast and easy.



Suction cups of any quantity, shape and size can be used, because the table is completely free from vacuum supply hoses.



Pneumatic clamps for solid wood components: solid, secure clamping even when machining at maximum power.



Pneumatic clamps for horizontal clamping.



110 mm high pneumatic clamps: complete freedom when machining from underneath, when using tools with a twin profile and when machining the lower face of a component.







Suction cups specially designed for door uprights, reference stops for veneered components, central references and a complete range of solutions specifically designed to solve all door manufacturer's clamping requirements.





NWT pneumatic clamps: The design of the NWT clamping system is the result of detailed research into the window machining process.



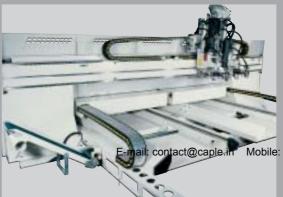






The versatility of the TVN table makes it ideal for the production of designer furniture. The TVN table has a wide range of accessories and suction cups of different shapes and sizes, designed to handle the complex shapes and rounded profiles of designer furniture without any problems.





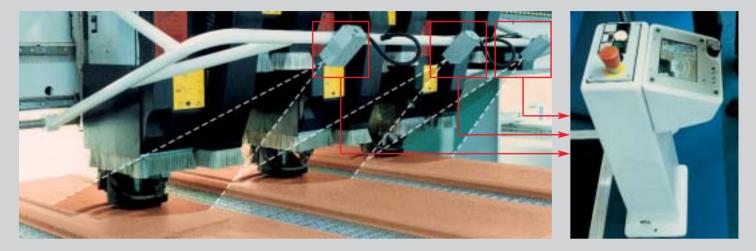
Automatic waste disposal system.

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### Telecontrol - Xilog Plus - Telesolve:

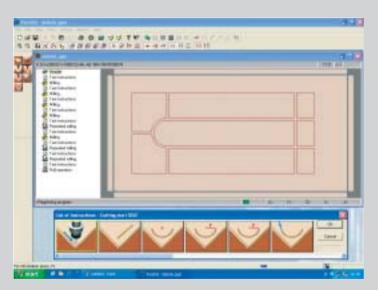
total control





Telecontrol: full monitoring and control at all times.

A video camera system positioned in front of the machining heads videos the operating areas of the machine. In the operator position, camera images are shown on a practical display making it possible to monitor all stages of the machine cycle in complete safety.



Operator interface with graphics to enable machine programming and control even easier.

- Machine functions handled using a practical and fast control panel
- Programs can be generated even without deep technical knowledge using an Editor with graphical icons and examples on films. Completely realized using Windows operating system.



#### **CNC and OFFICE PC**

A high-power CNC on an office PC with a Windows interface. A cost-effective solution combining **high-power processing and ease-of-use**. The perfect combination at last.

This solution means you can use the CNC for all the functions normally handled by a PC:

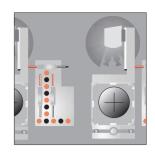
- Internal company network connections
- Adding data from a floppy disk or CD-ROM and remote connections by modem to the Telesolve system offered by SCM.

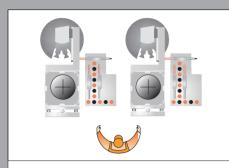
#### **TELESOLVE**

A remote diagnostics system which allows the SCM assistance service E-mail: contact@capte:ion thoute:(9in)=992001717166or:-

- PLC logic diagnostics, machine parameter diagnostics, etc.
- Real time updating of the CNC software.

## The advantage to always find the right configuration





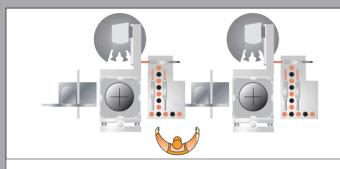
Basic unit with Plus tool changer + F 18 (centre-to-centre 840 mm). General purpose routing and drilling



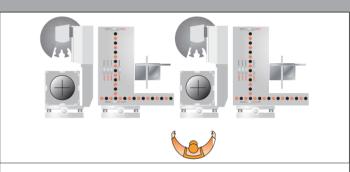
**Basic unit with tool changer + Syncron** (centre-to-centre 720 mm). Flexible production of doors, with copying system



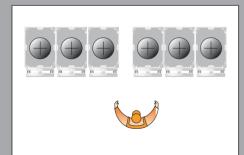
Basic unit with Plus tool changer + Syncron + F 18 (centre-to-centre 1080 mm). General purpose production, with copying system



Basic unit with Plus tool changer + saw blade unit + F 18 (centre-to-centre 1080 mm). For furniture production



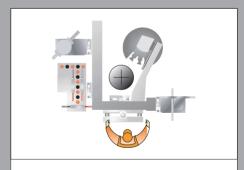
Basic unit with tool changer + FZ40 with independent Z axis and sawing blade (centre-to-centre 1200 mm). For heavy-duty drilling applications



**Compact units** (centre-to-centre 220 mm each). Series production of cupboard doors



Compact units + PB1 (centre-to-centre 360 mm.). Series production of cupboard doors



Modulo units + F18 + sawing blade unit + Universal K2. High flexibility production



Basic unit with Plus tool changer + Prisma unit with tool changer. Power and versatility on 5 axes

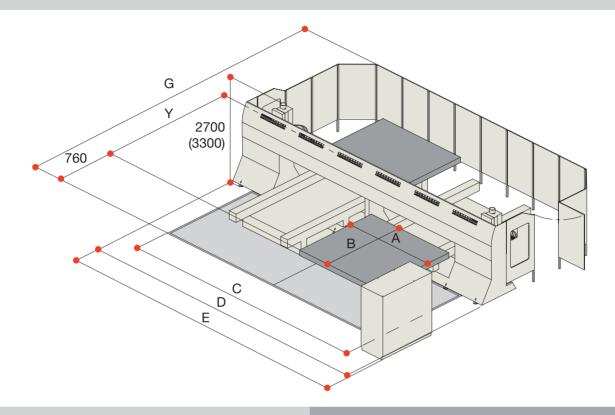


**Basic unit + Prisma with independent X axis + Rapid 24 lateral magazine:** The power and versatility of a 3-axis unit combined with a 5-axis unit. High tool capacity thanks to side mounted 24 station tool magazines.









	Worktable	Worktable	axis stroke	axis stroke	Other dimension		nsions	
Version	Α	В	Χ	Υ	С	D	Е	G
Ergon	1525	1560	4845	2080	4860	6300	6500	6085
	2125	1560	6045		6100	7500	7700	5865
	2845	1560	7685		7660	9150	9350	6190
Ergon L	1525	1560	6045	2080	6110	7500	7700	5865
	2125	1560	7685		7660	9150	9350	6190
	2845	1560	8635		8610	10100	10300	6190
Ergon TOP	1525	1560	4845	2650	4860	6300	6500	5655
	2125	1560	6045		6060	7500	7700	5825
	2845	1560	7685		7700	9150	9350	5655
	1525	2160	4845	3250	4860	6300	6500	6625
	2125	2160	6045		6060	7500	7700	6905
	2845	2160	7685		7700	9150	9350	6730
	1525	3120	4845	4490	4860	6300	6500	9085
	2125	3120	6045		6060	7500	7700	9255
	2845	3120	7685		7700	9150	9350	9085
Ergon L TOP	1525	1560	6045	2650	6110	7500	7700	5655
	2125	1560	7685		7660	9150	9350	5825
	2845	1560	8635		8610	10100	10300	5655
	1525	2160	6045	3250	6110	7500	7700	6625
	2125	2160	7685		7660	9150	9350	6905
	2845	2160	8635		8610	10100	10300	6730
	1525	3120	6045	4490	6110	7500	7700	9085
	2125	3120	7685		7660	9150	9350	9255
	2845	3120	8635		8610	10100	10300	9085
Ergon TVN	1500	1550	4845	3200	5000	6300	6650	7000
	2100	1550	6045		6200	7500	7850	7170
	2800	1550	7685		7850	9150	9500	7000
	1500	1850	4845		5000	6300	6650	7200
	2100	1850	6045		6200	7500	7850	7370
	2850	1850	7685		7850	9150	9500	7200
Ergon L TVN	1500	1550	6045	3200	6200	7500	7850	7000
	2100	1550	7685	-0200	7850	9150	9500	7170
	2800	1550	8635		8800	10100	10450	7000
	1500	1850	6045		6200	7500	7850	7200
	2100	1850	7685		7850	9150	9500	7370
	2850	1850	8635		8800	10100	10450	7200
			0000		0000			

## Technical specifications:

Component passage	260 mm
Axes speed	X = 105  m/min
	Y = 80  m/min
	Y = 130 m/min (TOP versions)
	Z= 25 m/min
Accelerations	$X = 10 \text{ m/sec}^2$
	$Y = from 4 to 6 m/sec^2$
	Y = 10 m/sec <sup>2</sup> (TOP versions)

Some photos show machines fitted with accessories. This is for purposes of illustration only and the configurations shown are in no way binding.

We reserve the right to modify technical data without prior potice. Modifications in no way influence compliance with CE-mark safety requirements.

## Safety first and foremost



### Noise emissions

Ergon	No-load operation without extraction equipment	Machining
Average noise level on measurement surface dB (A)	67,7	81,8
E-mail: contact@caple.in Mo Emitted noise level dBW (A) [mW(A)]	obile: (91) 99200 71 86,7 [0,5]	<b>716</b> 100,8 [12,0]
Noise level at operator position dB (A) [dBmax]	67,7	84,4 [91,0]

# Woodworking machinery: the widest range of products



SCM has been producing woodworking machinery for more than 50 years and represents the nucleus of SCM Group. With a total of 3000 employees, 15 factories and an export of 70%, this Group is one of the world's top producers of woodworking equipment. SCM produces the widest range of machines for secondary wood machining, from machines for small woodworking companies to CNC work centres, to high production integrated lines for the machining of solid wood. SCM is certified according ISO 9001 Standards. Specialized technicians all over the world are able to supply an efficient and rapid after-sale service to SCM customers because full use is made of a system of remote computerised diagnostics. SCM can also utilize an internal structure of SCM Group, the CSR-Study and Research Consortium. CSR-Study and Research Consortium uses advanced experimental systems. This ensures that all machines satisfy the strictest international standards in terms of safety, ergonomics and environmental hygiene.























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