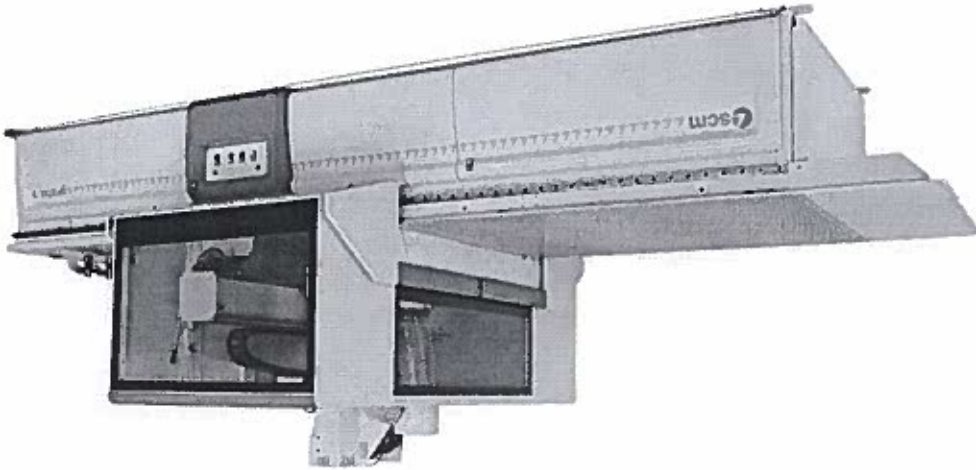




Photo may include optional equipment



**Pratix S15 C +**  
**5' x 12' CNC ROUTER**  
(R040301)

# Pratix S15C + - CNC Machining Center w/ EASE System

(00.20.52) Base Design and Construction

The SCM PratiX S15 owes its rigidity to the design and weight of its reinforced base and innovative one-piece frame. All portions of the base are of heavy gauge steel and are normalized after welding, a process which ensures that all stress in the base is removed before it is machined and drilled for the guides.

Today's machining centers are being asked to perform a wide variety of operations at the highest speeds possible while, at the same time, maintaining a high quality of cut. Micro-vibrations are created around all types of CNC machining centers where there is head positioning, drilling, and high speed routing taking place on the machine base. SCM solves the problem of deadening vibration as well as offering rigidity by employing heavy gauge steel members for the base of the machine. This weight, coupled with the one-piece frame offers the best combination of rigidity and balanced strength on a bridge design. Movement along the X & Y is high precision rack and pinion while the Z-axis is driven by a ball screw.

## High Precision, High Load Prismatic Bearing Guides

SCM uses prismatic guides for support in all axes. Due to their added weight load capability (approximately 4 times that of conventional round guides), prismatic type guides can permit accurate head positioning at high speeds.

## A.C. Servo Motors X, Y & Z Axes

A.C. servomotors, or A.C. brushless motors as they are sometimes called, are the latest in electronic linear motion technology. A.C. servomotors use less power and produce a more even output (drive) throughout the power band. The ability to maintain a constant torque setting when going from an idle setting into a heavy cut produces cleaner cuts and longer tool life. These motors are controlled by digital supply cards that offer the reliability and precision fine tuning associated with solid state electronics.

## Solid State Inverter Controls Router RPM

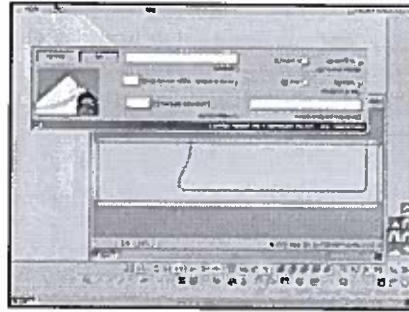
Solid State frequency inverters support the programmable router spindle speeds (S functions). By utilizing digital inverter technology, the programmer can select the correct cutter RPM and match it to the correct linear/rotational feed speed for the specific application and/or material being cut. This will give optimum quality of cut while greatly extending tool life. The inverter also acts as an electronic brake, stopping the router spindle motor in microseconds if an emergency signal is given.

## General features of the Machine Panel and Xilog Plus Programming software

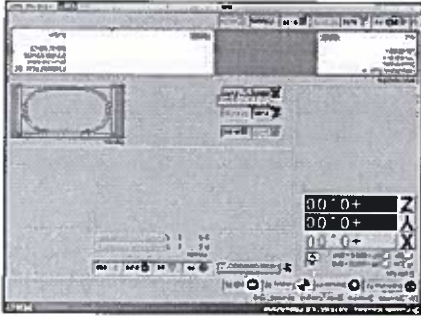
XILOG PLUS is the SCM workstation management software developed as a highly flexible, powerful and user-friendly programming system.

- The beginner will immediately find himself at ease in front of the intuitive XILOG PLUS interface. There are many graphic aids that eliminate the need to learn particular instructions or programming language.
- The more experienced computer user will also find himself at ease in a Windows® based operating environment, including all the features that this implies (i.e., cut and paste, multiple opening of files, etc.).
- Those already familiar with previous SCM programs will be able to choose whether to manage the machine in the new graphic environment or to continue with the traditional input of programming instructions with the alphanumeric keyboard. Moving quickly from one environment to the other is very simple.

Graphic programming interface



Machine operation interface



XILOG PLUS has two applications – to aid in programming and to allow operation of the machine. Graphic programming interface  
This application is a powerful graphic/text editor that aids in programming. It manages program file as well as tooling information. Especially helpful are the built-in macros, shortcuts that are used in performing repetitive tasks (routing arcs, drilling shelf holes, etc.). Users can also customize macros for their own particular needs.

Machine Operation Interface  
This application allows the operator to recall programs and run them on the machine. It tells the operator basic information about the program such as the working field, part size, etc. It also has a very powerful machine diagnostic section with photos and troubleshooting aids.

Additional XILOG PLUS features:

- Controlled acceleration and deceleration
- Linear and circular interpolation
- Self-diagnostics through error messages
- Dynamic tool correction via PLC due to active wear concerning space and time.
- Subroutine programming (canned cycle) with library
- Specular programming: Allows writing of programs two different multiple reference points. For example the Left or Right corner of a panel.
- Parametric scaling of programs through use of template type programs that the operator creates and stores in memory. Part programs can then be proportionally scaled up or down in size without the need to re-write the entire program.
- Programs can be viewed from all 5 faces
- Built in macros for simple, widely used programs
- On board cycle optimization
- Machining Head graphic configuration;
- double override which allows to adjust the operating unit positioning speed;
- Machining Speed selection;
- SCM CNC - JERK function management for dynamic control of acceleration/deceleration.

## Machine Operation

### (63.03.57) Mobile stand panel with Stand-alone PC

It allows the programming directly on the machine without necessity of the programming in the office.

It is equipped with:

- Personal Computer
- Windows 7 operating system available in the following languages: Italian, English, German, French, Spanish.
- 17" LCD colour display
- Qwerty keyboard
- Mobile control panel
- Xilog Plus machine interface software

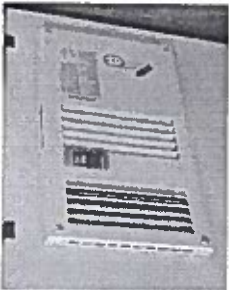


**"TECPAD" Remote Control with 7" Touch-Screen Color Display**  
Machine Operation is accomplished through the use of an extremely flexible Universal Remote Pendant. The 7" COLOR display allows for the effective management of all machine functions from movement of controlled axes in Manual Jog Mode to loading and execution of a program. The unit is also fitted with a USB Port, which allows for a quick load and setup of new programs.



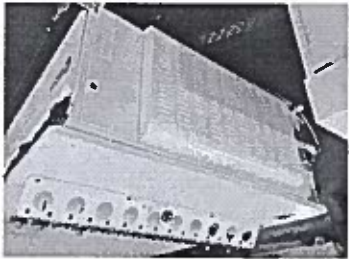
**(63.01.27) Electric cabinet with Air Conditioning device**

It maintains temperature of approx. 65°F inside the electric cabinet.



**(63.03.84) Ventilation system on machine base**

It is particularly suitable for hot climates and for the use of materials sensitive to the heat; this ventilation system and base insulation ensure a low temperature of the working table.



**13HP (S6) Routing Unit**

It includes:

- HSK F 63 quick release tool-holder
- 1500 - 24000 rpm spindle speed
- (S1/S6) 8/9,5 kW (11/13HP) constant motor power from 12000 to 18000 rpm
- Right and left rotation
- Static inverter for continuous speed and rapid shutdown of rotation
- Exhaust hood around whole perimeter

**Presetting for angular-driven heads**

**(63.03.44) Air blowers on the electrosindle**

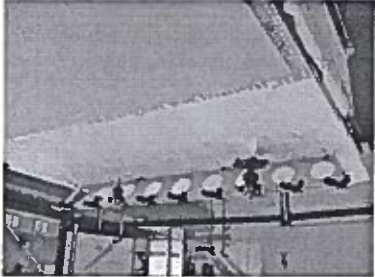
No.4 air blowers capable to convey the chips produced by the cutter during machining.. This facilitates the chip ejection.

**(63.03.54) Touch Probe**

Electronic system positioned on the base side which allows for detecting tool length without running a test program.

**TR 10 Position Tool Changer**

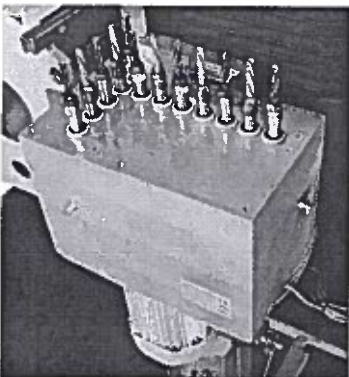
- Maximum number of tools that can be installed: 10
- Tool attachment: HSK 63F



## F12 Boring Unit

It includes:

- No. 12 independent vertical spindles (7 right and 5 left)
- Attachment for bits: M10 / 11 mm diameter
- Center-to-center distance between axes: 32 mm
- Rotation speed: 4.000 rpm
- 2,2 kW motor power
- Vertical ON/OFF stroke of whole unit: 250 mm
- Vertical ON/OFF stroke of each spindle: 60 mm
- Exhaust hood around whole perimeter (150 mm diameter)



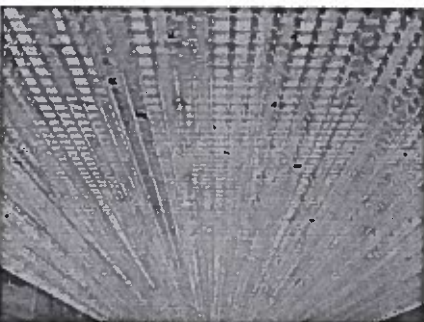
## Inverter for boring head

It allows the rotating speed programming up to 6000 rpm maximum for the drilling bits and 7500rpm for the blade, exploiting the same inverter of the electros spindle.

## Worktable for Component Nesting

High capacity aluminum table, with dual vacuum areas has an answer to most component nesting scenarios. The Vacuum holes set at 120 mm pitch, closure by means of rapid magnetic system "patent pending". Grooves are set at 20mm from each other for fixing of the workpiece using rubbers seals.

In addition to nesting full sheets, the Pralix S15 can also be used for routing smaller components. For work on the face of the component, rubber gasket material can be used to isolate the vacuum for part hold-down. This eliminates the need for special fixturing devices as is necessary on many machines. When machining the edges of parts, the patented MODULESET system raises the component so work can take place without damage to the worktable.



The magnetic system for opening and closing the vacuum passages allows for an extremely quick table set up when the vacuum is only required in a portion of the table. With a dedicated tool (supplied) it is a matter of seconds to perform the set up with no need for a screw driver.

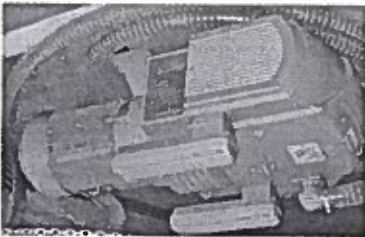
**3 Right stops for "D" field of which no. 1 Side stop and no. 2 Rear Stops.**

**(63.03.53) 3 Left stops for "A" field of which no. 1 Side Stop and no. 2 Rear Stops**

**Dual Vacuum Area** Allows the operator to convey all vacuum to half the working area (left or right) or on the entire working area (left and right)

**(63.03.56 & 63.03.75) Two (2) 300 Cubic Meter/Hour Vacuum Pump (Total 600 m3/hr)**

The vacuum hold-down system features two 300 cubic meter/hour vacuum pumps. It offers the reliability of a substantial increase in vacuum power and allows the use of spoil boards for nesting full sheets.





**(63.03.43) Autotransformer**  
Autotransformer allows the choice of 208 / 230 or 460 volt, 3-phase, 60 cycle

### Safety Bumpers

The SCM Praix S15 is equipped with Bumpers on both sides of the mobile unit. This system allows for safe movement near the machine while saving floor space by eliminating peripheral protection normally required.

### Software

#### AlphaCAM Essential Router (1 license)



- **CAD functionality** including lines, arcs, circles, rectangles, polygon, ellipse, typed-in TrueType® text geometries (including bolt hole circle, involute curve, slot, equal spaced holes), digitizing, importing of DXF/DWG/IGES (as surfaces) CAD files, graphic printing and plotting.
- **CAD utilities** including snap to, auto-snap to and ortho modes, coordinate/distance/radius reporting, dimensioning, access to user layers and APS layers, conversion of points to lines or arcs.
- **Editing functionality** including undo, change start point, 2D move, 2D copy, 2D rotate, 2D mirror, scale, stretch, skew, break, trim, explode, join, extend, fillet, chamfer, offset, and group/ungroup; change function, construction to geometry and reverse.
- **Viewing options** include shading or wireframe mode, 3D view, ghost tools, single steps, rapid positioning, and all zoom functions.
- **Machining functionality** includes user defined tool library, tool direction settings (include inside, outside, left and right), vertical rough and finish machining, contour/linear/spiral pocketing with unlimited islands, 3D engraving, drill/peck/tap/bore holes, automatic lead-in/lead-out, G41/42 tool compensation, automatic calculation of speeds and feeds, cut corner options include straight/roll round/loop, add/remove support tags, adjust feed rate around corners, operation and tool path editing, automatic tool path update upon geometry modification (associative machining), machining styles.
- **Simulation functionality** includes shaded simulation.
- **Nesting functionality** includes automatic rectangular and true shape nesting of geometries and/or tool paths picked from the screen and manual nesting.

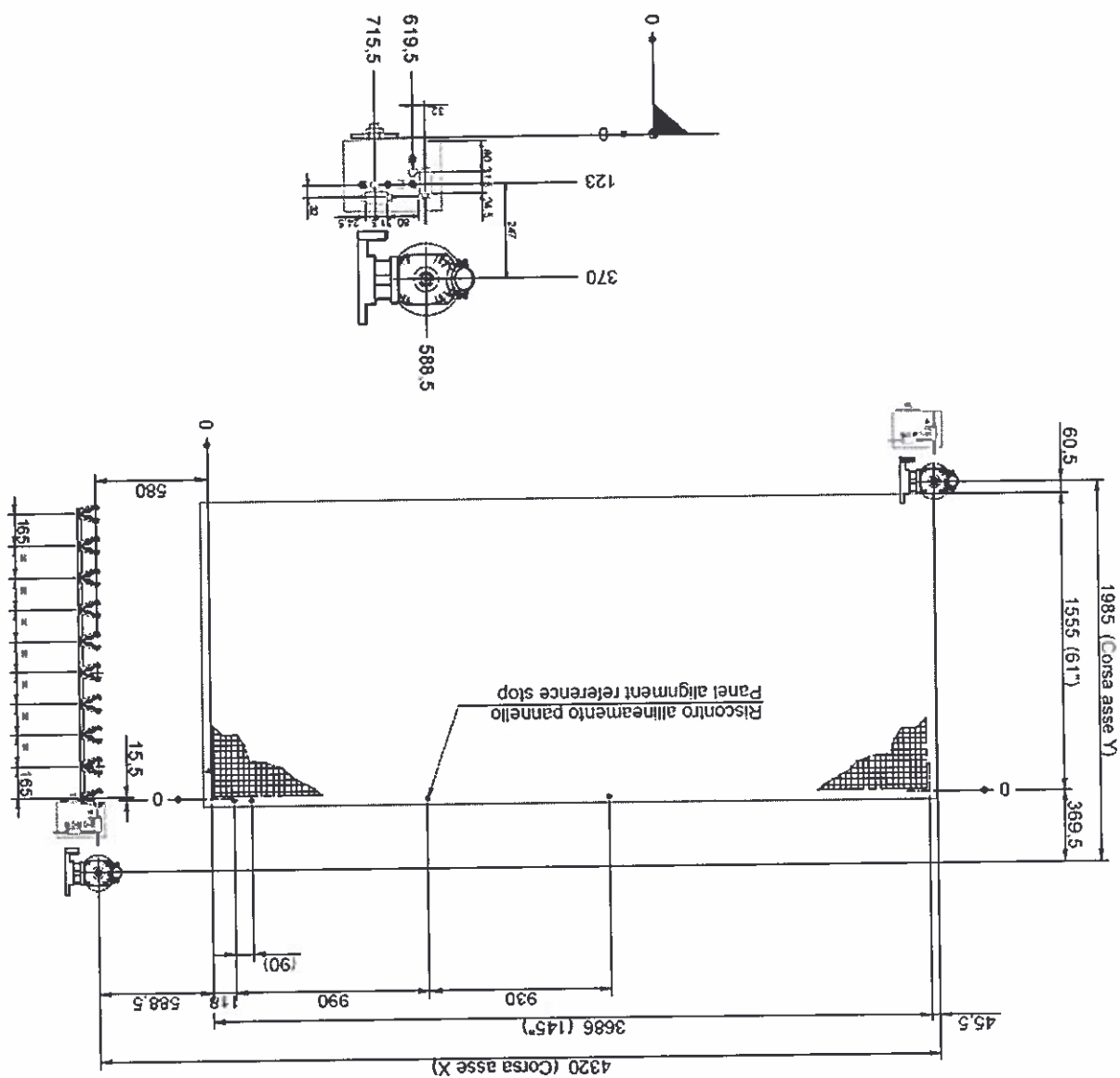
#### Xilog Plus & AlphaCAM Training Course (1 seat)

- This course is intended for designers, programmers or other individuals who are responsible for the programming of parts on a CNC Router or Machining Center utilizing the Xilog Plus User Interface with AlphaCAM software. It is designed specifically to teach the basic information necessary to design and produce programs for a SCM Group CNC Router.
- This course is a classroom-based, interactive workshop that includes theory, practice and hands-on application. Attendees will learn about basic G-Code commands and how to utilize G-Codes within the Xilog Plus User Interface. They will also gain a good conceptual understanding of AlphaCAM Software and the ability to create and modify 2D drawings. Exercises focus on drawing, tool definition and machining methods such as Rough/Finish. Additional subjects include pocketing, engraving, drilling and nesting.

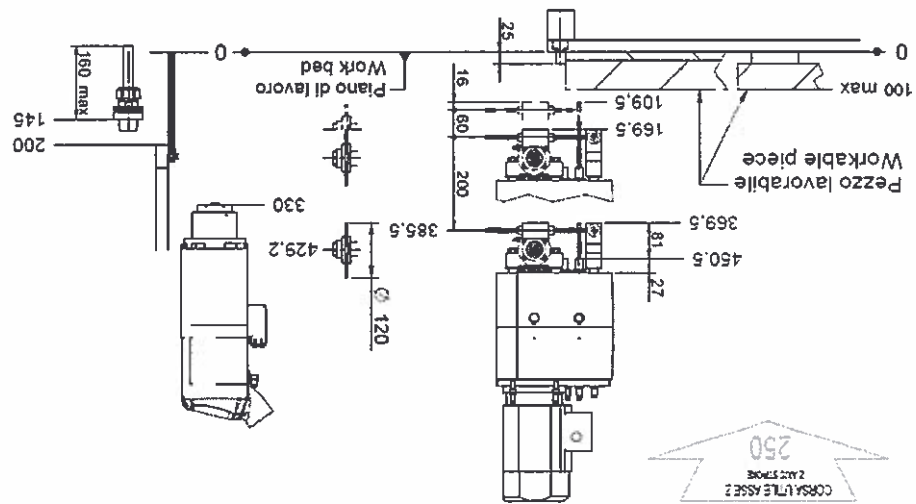
### Technical Specifications:

Worktable dimensions:		Length 3686 mm (145.11")	Width 1555 mm (61.22")
Spindle (main) motor:		Power (12) spindles 3 HP	Spindle rotation speed 6000 RPM
Electrospindle		(11/13HP) air cooled (S1/S6 rating)	
Tool Changer		10 position - Side attached to machine base	
Positions Attachment		HSK 63	
Drilling Unit		7 in X-axis , 5 in Y-axis 2+2 in X, 1+1 in Y Fixed in X direction	
(Optional) No. of horizontal spindles (Optional) Grooving blade		Maximum positioning vectorial speeds: X & Y axis	
Z axis Stroke		250mm (9.84") 150mm (5.90") 100mm (3.93")	
Panel passage Routing Panel passage Drilling		1570 CFM 200 mm (7.87") Router	
Dust extraction required		7 ATM (102 psi)	
Installed power (dependent upon options)		23 – 28.5 KVA	
Electrics		208/230/460 volts, 3-phase balanced, 60 cycles	
Tooling included		(1) 0000410126D ER32 Collets 1/2" (1) 0000410123G ER32 Collets 3/8" (1) 0000410133H ER32 Collets 3/4" (1) 0000410120A ER32 Collets 1/4"	
PC Specifications (minimum):		Operating system Windows 7	
Monitor		17" Flat Panel	

due to adjustments of the various units







All measurements shown in the drawings are THEORETICAL, as they are subject to slight variations due to adjustments of the various units

Some items may be optional.

TOOLS FEATURES

