

SMART 30



MAIN FEATURES

Numerically controlled machining centre mod. SMART 30 with fixed working table and mobile head carriage with three continuous displayed axes, suitable for the machining of wood, also composite and plastic materials. The machine structure allows to exploit the space available at best. The pieces are always fixed to the table, as movements along the three axes X, Y and Z are carried out by the head carriage and the operating head.

Base frame and head carriage are made of electric welded steel, which is normalized and suitably ribbed in order to obtain maximum stiffness and long-lasting life.

The X axis movement is carried out on a high precision rack system, while the Y and Z axis movement is carried out by means of threaded worm screws coupled to high precision and high reliability preloaded ball lead nuts with slack recovery.

All sliding run on linear guides with prismatic geometry fitted with ball circulation tracks coupled to high precision preloaded slides.

The screws are driven by brushless motors to achieve the best finish and long-term reliability.

Open structure system type "cantilever" with the following characteristics and equipments:

Strokes: X axis: 3550 mm
 Y axis: 1790 mm
 Z axis: 430 mm

Working area X axis: 3050 mm
 Y axis: 1250 mm (max. panel width 1450 mm)
 Z axis: 120 mm

No.6 aluminum bars with 2 vacuum cups (3rd vacuum cup as an option) and No.1 pneumatic reference stop each

No.2 fixed bars at the ends with No.2 pneumatic reference stop each

No.2 bars to lift heavy pieces (further 2 as an option)

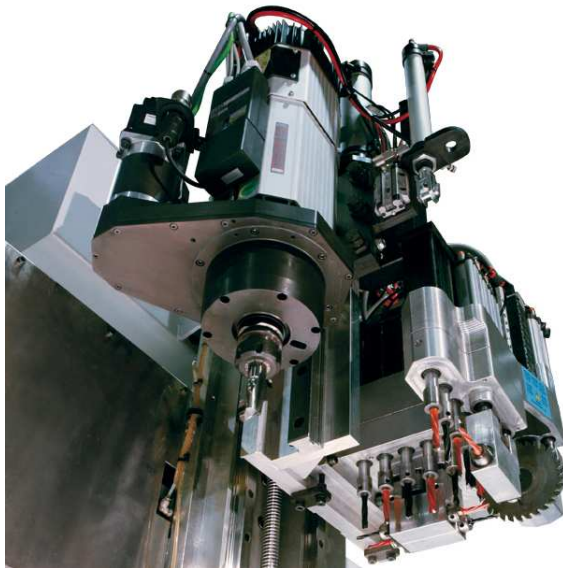
Weight 3.320 Kg.



OPERATING UNITS

No.1 routing head 9 kW HSK F63 with 8-position automatic tool changer, as an option rotative 4° axis 360° for the use of angular gear box

No.1 drilling unit with 10 vertical and 6 horizontal spindles, and one motor for circular saw with max. diameter of 120 mm.



CNC CONTROLLER

CNC control ESA with graphic ASPAN NC interface for an easy and quick programming operations, teleservice by the means of internet for remote diagnosis and upgrades (as an option). Computer, screen and keyboard are fitted on a wheeled remote console for an easy positioning for the operator use



Main characteristics:

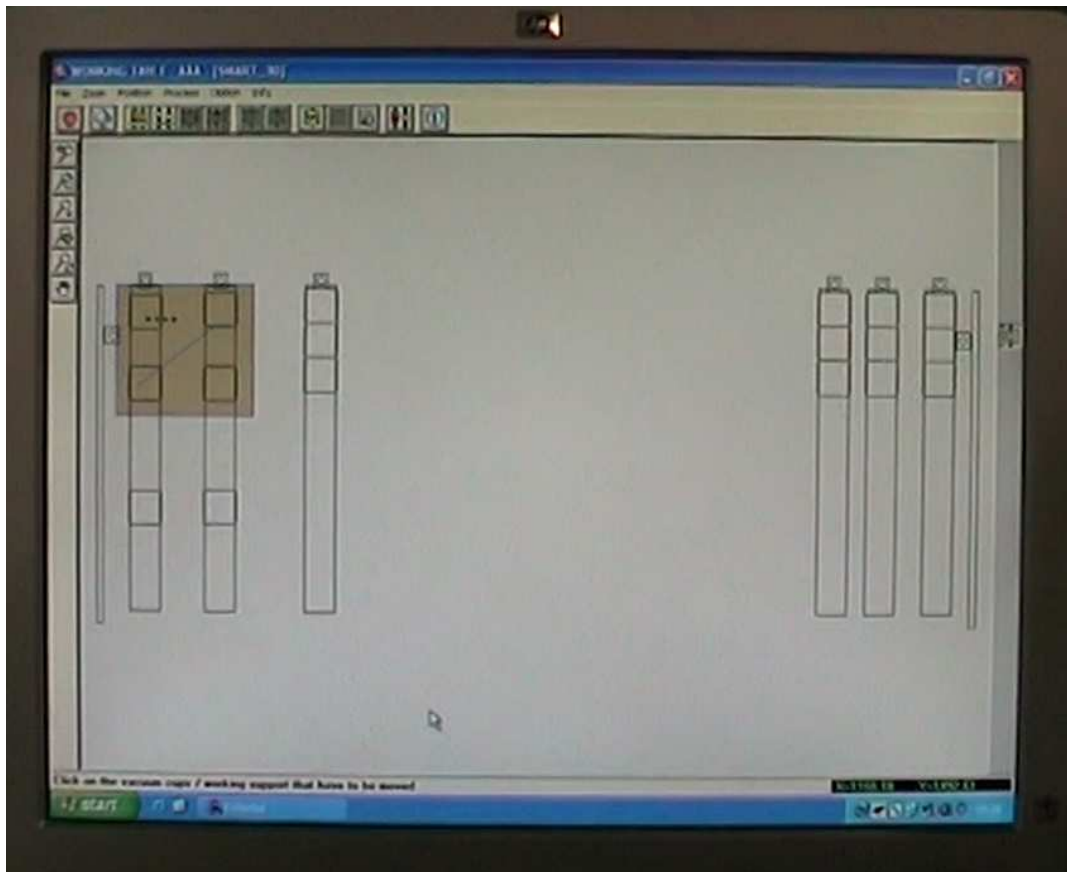
Simultaneous programming and machining
High speed for program execution
Machining cycles: drilling, pockets, etc.
Vector compensation of cutter radius
3D helical interpolation
Automatic deceleration on edges
High level geometric programming
Parametric programming
Interactive programming.
Rotation of interpolation plane
Scale factor
Graphics for program display

CONTROLLER TECHNICAL DATA

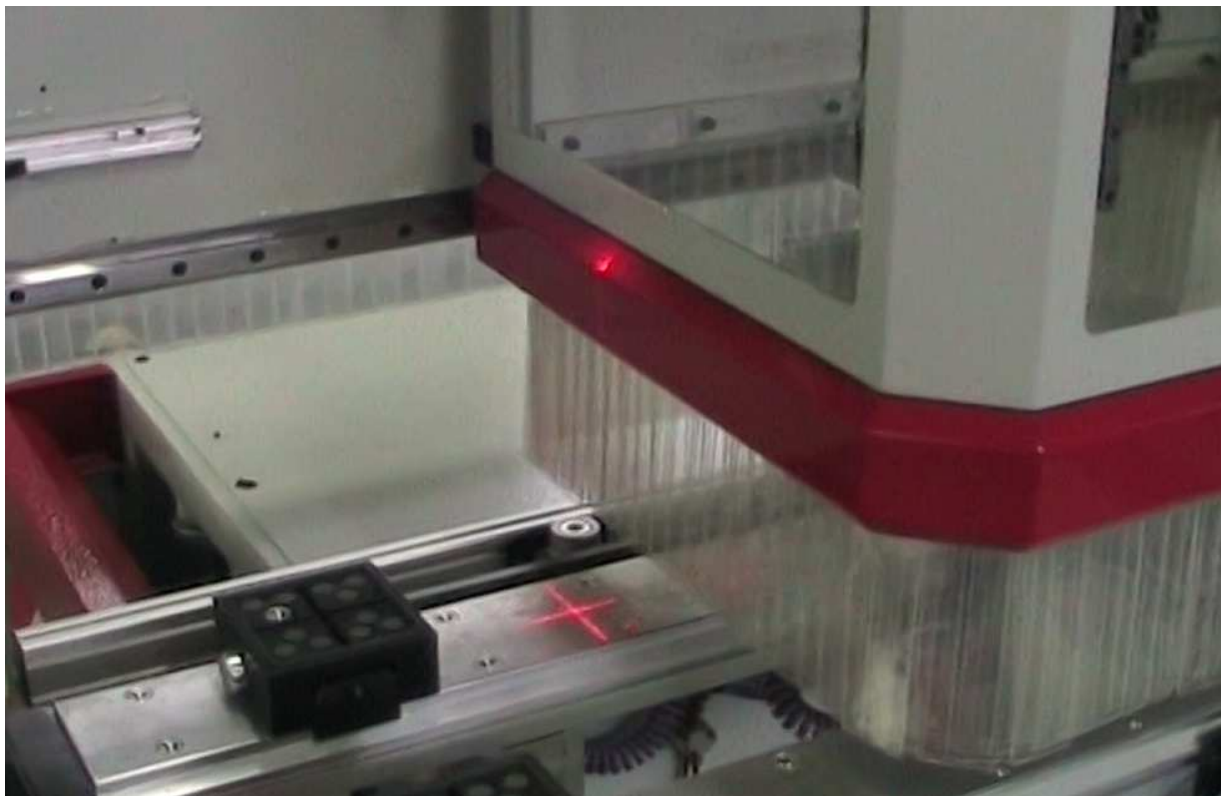
Emergency relay: 1
Encoder wire break detection: standard
Communication ETHERNET: standard
Serial port COM 1e COM 2: RS 232
USB port: 1 2.0 release
Number of controlled process: 1 standard
Max. number of axes: 4 analogical
I/O interface: on board
Input for digital interface

PC characteristics:

Color 17" TFT screen
Processor Intel Celeron 430
Ram dynamic storage 1 GB
Hard Disk 80 GB
DVD reader
2 + 6 USB ports
1 serial port RS-232
1 parallel standard port
1 Ethernet RJ45 port
Internal modem 56K
Windows XP Pro operating system
Standard QWERTY keyboard
Mouse



Automatic system to identify vacuum cups position managed by Aspan NC software for a manual but very easy and precise positioning of the pod according to the size of the working piece (as an optional).



Remote wired control for axis speed adjustment with emergency stop



No.2 control turrets with push button and No. 2 foot pedals for vacuum activation/deactivation and setting of working cycle in the two separate working areas

AUTOMATIC LUBRICATION SYSTEM

The machining centre is equipped with a centralized automatic lubrication system with distribution pump, complete with tank. The system is programmable through the CNC with regard to lubrication intervals and the numerical control displays a message as soon as the minimum lubricant level is achieved.



AIR CONDITIONING (as an optional)

Air conditioning system on the electric cabinet to assure constant temperature of the whole electric equipment

VACUUM PUMP

The standard 90 m³/h pump of the vacuum unit is operated by means of a 2.2 kW three-phased induction motor. The pump generates vacuum by means of the rotation of a rotor that is misaligned with the stator. The rotor is equipped with sliding blades, coming out due to the centrifugal force and adhering to the stator during rotation: acting this way defined volumes are generated that trap the air and form the desired vacuum.

SAFETY PROTECTION

The machine, which is standard equipped with CE NORMS, is provided with safety mats on the front side and a perimetral net with access door, controlled by an electromechanical system.

The safety mats are divided into No.3 working areas:

- right area, which permits the operator to safely load/unload pieces, while the working cycle is running on the opposite side of the working table.
- left area, which specularly behaves as the right area.
- central area, which guarantees safety to the operator, while the machine operates on one of the two working areas

No. 2 push-button turrets with emergency stop button are positioned on the front side of the machine.

