

XC 2000/44 - 4 AXIS CNC PROFILE MACHINING CENTRE



Description:

4 Axis CNC controlled profile machining centre.

Thanks to the protection cover, the machine has both sound and swarf isolation.

C column type profile carriage ensures 0,1mm./1m. Accuracy.

7,5 kW high speed spindle works up to 24.000 rpm and is able to work on 0-180 degrees around the profile.

10,0 kW 24.000 rpm HSK-F63 tool holder spindle is optional.

The alloys that can be processed on the machine: Aluminium up to 20 mm wall thickness – steel up to 2 mm wall thickness – light alloys such as PVC and etc.

The XC 2000 has profile clamps that are manually positioned according to the positions assigned by the CAD-CAM software. AUTOMATIC POSITIONING is optional. All clamps are mounted on the machine with linear bearings and move on linear guides.

Thanks to 6+1 positions tool magazine, it is possible to carry any tool b/w 1 mm – 20 mm tool diameter and 200 mm of disc cutter. The disc cutter is vital for alu machining in doors&sliding series.

Additional 6 positions tool changer magazine is optional.

Waste pieces are isolated by the Machine cover and extracted by the operator via open endings on both sides of the Machine.



Axis information:

X axis net processing length: 4.200 mm. – with the second stopper 8.000 mm.

With disc cutter milling from the beginning of the profile: 4.200 mm.

With disc cutter milling from both ends of the profile: 4.000 mm.

Y axis net processing width: 230 mm..

Z axis net processing depth: 235 mm.

The body:

Vibration free steel chasis, processed with the highest accuracy before mounting the mecanical accessories.

Spindle Heads:

7.5 kw 1.000 -24.000 rpm ISO30 Air Cooling spindle with an inverter adjusted for any rotation speed.

10.0 kW HSK F-63 Liquid Cooling spindle is optional.

Axis technical information:

X axis is working on rack and pinion with brushless servo motors and guided by linear guides with **70 mt./min speed**. 1.6 kW – 4 Nm – 6.000 rpm. – with 1/10 geared 90 mm body of planet reducer.

Y axis is working on rack and pinion with brushless servo motors and guided by linear guides with **60 mt./min speed**. 1.6 kW – 4 Nm – 4.000 rpm. – with 1/10 geared 90 mm body of planet reducer.

Z axis works with a screw mill and brushless brake type servo motor with a speed of **25 mt./min**.

1.6 kW – 4 Nm – 4.000 rpm. – with 20 pitch 20 diameter screw mill and 1/3 ratio belt&coupling.

A – Axis 0.2 kW – 1.0 Nm – 5.000 rpm. – with Cycloid Harmonic Reducer 1/120 geared zero beklasch.

All servo motors are working with **ABSOLUTE ENCODERS** so there is no need for making homing.

Technical Parameters:

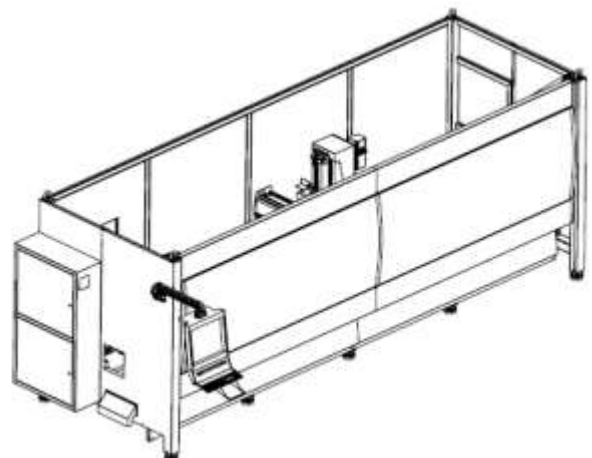
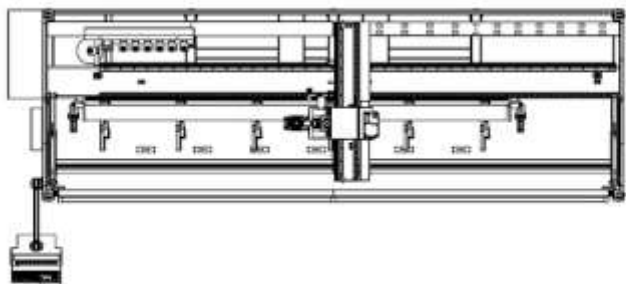
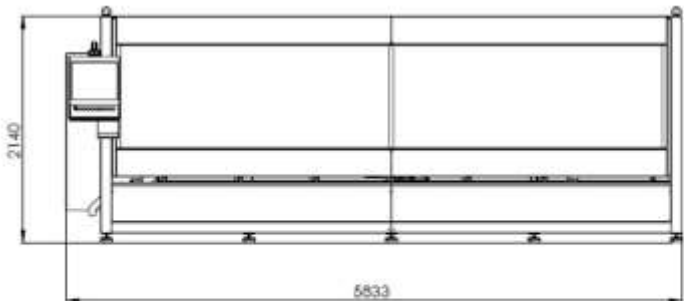
Total installed power: 13 kW / 30A / 400V / 50-60 Hz.

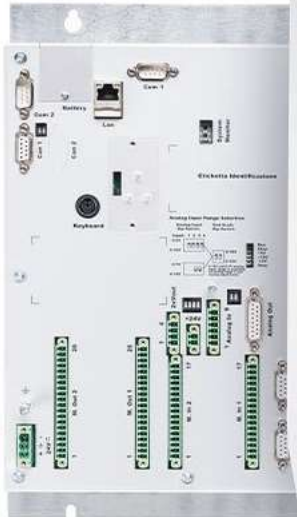
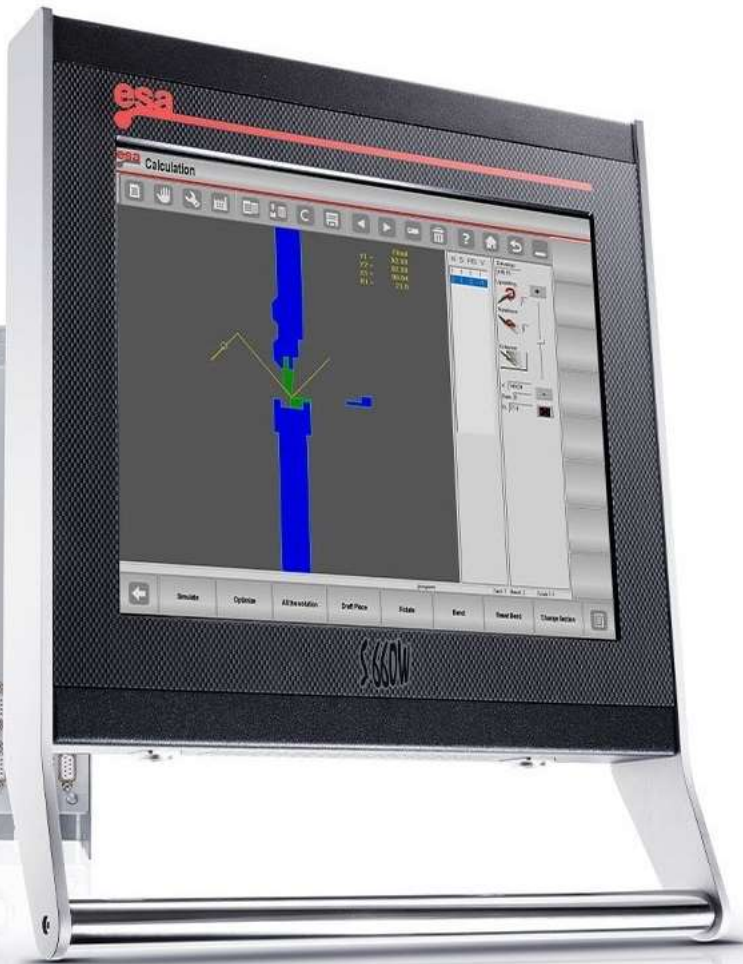
Air pressure and air consumption: 6-8 Bar. - 70 L/min.

Net dimensions as installed: 5.833 X 2.621 X 2.550 mm.

Packing dimensions: 5.900 X 1.820 X 2.228 mm.

Machine weight: 3.050 Kgs.





S 660 W
19" Color TFT LCD
SXGA - 1280x1024
Multitouch (PCAP)
Intel pentium Silver J5005 1,5 - 2,4GHz
2,4GHz
4CBytes DDR3
Integrated Intel® UHD 605 18EUs
64GB Msata
2 x 10/100/1000Mbit Ethernet
2 x Rs232
1 x DVI I 1 x Display Port V1.2
Yes
4 x USB 2.0
Windows® 10 IOT Enterprise 2016
24Vdd +/- 20% - 70W
466,4 x 391,0 x 71,1
+5/+40
CE



INDUSTRIAL CNC CONTROLLER – ESA AOTOMOTION – www.esautomotion.it

12 Axis RTCP (Rotation Tool Center Point) type of 4 Axis simultaneously interpolating real CNC controller. Italian technology with the software and all the hardware.

19" Touchpanel + the CNC controller + the power supply + servo motors + servo drivers with Can-Open.

Each axis has "Absolute Encoder" for avoiding the problems caused by homing and home sensors. The Machine does not need to go to home position each time the operator turns on the Machine.

All power & encoder cables, driver mounted motor communication cables and all motor sockets are designed by ESA to be complete problem free and for perfect communication of the axis.

Movable CNC controller terminal mounted on the Machine body with the PC + keyboard + Mouse + operator buttons embedded on.

Licensed Windows10

Electric system and the cabinet with the cooling system. A/C is optional.

Easy to get support over teamviewer connection.

AC Inverter for adjusting the speed of the spindle 0-24.000 rpm.

Automatic tool measurement probe

Handwheel

Dry run

Changing the home position

Pneumatic Profile Clamps:

230 mm. X 235 mm. clamping section.

6 pieces manually positioned.

Automatic positioning is optional.

Thanks to the special design of the clamps, that are for machining Windows and Doors and Curtain Wall profiles, the loading and offloading is extremely easy.

Optional:

“Wide Profile Clamps” for processing wider profiles up to 350 mm. of width.



Equipment:**Reference points:**

2 pieces pneumatically operated. For using the Machine with 2 processign stations and also for machining profiles longer than the measure.

Both endings of the Machine are opened as a standard accessory.

Profile clamps:

6 pieces are standard. The number of the clamps can be increased up to 8 clamps optionally.

CAD-CAM Software:

Uni_Link INO-OnBoard Software – 1 licance for the Machine + 1 licance for the office is included.

Automatic opening and closing machine enclosure cover:

CNC controlled according to the working cycle.

Spray mist cooling system with oil tank mounted on the Z axis**User manuals.****CE certification.**

Tool Changer Magazine:

The capacity is in total 7 places.

6 standard ISO30 or HSK-F63 tool holders + 1 disc cutter with maximum diameter of 200 mm.

Placed at the beginning of the Machine close to the first reference point and the controller terminal.

The tool changer is mounted on the Machine body as stationary to use long sized and large diameter tools.

Maximum disc cutter diameter 200 mm.

Maximum tool size 150 mm.

Magazine cover pneumatically opening and closing to keep the tools clean from swarf.

Optional:

Additional 2nd magazine is available with additional 6 tool positions.



Air Cooling electrospindle:

High speed spindle with ceramic bearings.

Standard ISO 30

Air cooling system.

Spindle Power: 7.5 kW in S6 and 6.6 kW in S1

Spindle Torque: 5.9 Nm in S6 and 5.3 kW in S1

Spindle rotation: 24.000 rpm (adjustable between 0-24.000)

Tool Holder Set - Optional

Collet Set - Optional

Cutter set - Optional



Liquid Cooling electrospindle:

High speed spindle with ceramic bearings.

Standard HSK F-63

Liquid cooling system thanks to chiller placed beside the Machine.

Spindle Power: 10.0 kW in S6 and 8.5 kW in S1

Spindle Torque: 8.0 Nm in S6 and 6.8 kW in S1

Spindle rotation: 24.000 rpm (adjustable between 0-24.000)

Tool Holder Set - Optional

Collet Set - Optional

Cutter set - Optional



PROFILE PROCESSING DIMENSIONS ACCORDING TO THE CLAMP TYPES AND SPINDLE TYPES:

STANDARD INO CLAMPS

Machine Model	tool height	Profile machining width from the top + the back	Profile machining width from the top + the back + the front	Profile Machining Height
XC 2000/44	45 mm.	230 mm.	155 mm.	235 mm.
XC 2000/44 - LQ	45 mm.	230 mm.	230 mm.	235 mm.

WIDE INO CLAMPS

Machine Model	tool height	Profile machining width from the top + the back	Profile machining width from the top + the back + the front	Profile Machining Height
XC 2000/44	45 mm.	350 mm.	155 mm.	235 mm.
XC 2000/44 - LQ	45 mm.	350 mm.	270 mm.	235 mm.

UNI LINK 3D CAD-CAM:

- Design, R&D and application are carried through the vast experience of ino machinery team and Uni_Link engineers.
- The perfect optimization of economic profile working in 3,4 and 5 Axis.
- Importing of DXF files and converting them to 3D images.
- Generating G-codes over the DXF files.
- Understanding of the operations on the DXf files and auto-tooling
- Also available in Office version with a perfect simulation interface, so that the one working at the Office will also prepare the profile machining programs just like he is beside the machine.
- Incredibly user friendly for the operator and also for the Office responsible who will prepare the machining files in the Office.
- CNC clamp management and collision control.
- Auto positioning of the profiles on the clamps according to the operations on the profiles.
- Macro creation for each operation and placing them on the profile automatically.
- Independent from the size of the profile it is possible to place any operation on the same profile in different length parametricly.
- All the profiles that will be machined, will be listed on the machine HMI and operator will only have to press the start button.
- Ability to work with all Windows and Doors production softwares like Schüco or Orgadata or similar.
- Ability to prepare cut-list optimization for the double mitre saw and import in .csv format. Optionally barcode generation from the cutting machine and reading by the machining center is available.
- This software is the most user friendly software in the market and also the richest one in terms of capabilities.

Werk

Openen... Opslaan als... Profielen Gereedschap Tool Store F3 Edit Parameters Multitouch Piece-mode

X 0
Y 0
Z 0
A 0

#	Serie	Profiel	Color	Length	Id	Left Angle (H)	Right Angle (H)	Left Angle (W)	Left Angle (W)	Todo	Done	Tool Status	Clas.
1	SOHUCO	372220	rienwit structuur/zijdegrijs structuur	2385	1	90	90	90	45	1	0	011/012 OK	1
2	SOHUCO	372220	rienwit structuur/zijdegrijs structuur	2385	2	90	90	45	90	1	0	013/014 OK	2
3	SOHUCO	372220	rienwit structuur/zijdegrijs structuur	1030	3	90	90	45	45	1	0	004/004 OK	1
4	SOHUCO	395530	rienwit structuur/zijdegrijs structuur	2318	4	90	90	45	45	1	0	009/010 OK	1
5	SOHUCO	395530	rienwit structuur/zijdegrijs structuur	2318	5	90	90	45	45	1	0	025/026 OK	2
6	SOHUCO	395530	rienwit structuur/zijdegrijs structuur	932	6	90	90	45	45	1	0	004/004 OK	1
7	SOHUCO	395530	rienwit structuur/zijdegrijs structuur	932	7	90	90	45	45	1	0	004/004 OK	1

Zone 1 Zone 2 Zone 3 Zone 4

C:\Gis_Lnk\Macro\B\Macro.exe

Macro List 0/6 7

Seconaire

Profile	Series	ID	Profile	Length	Color	FRLeft	FRRight	FRTop	FRBottom	FRIncl	FROut	FRIncl	FROut	FRIncl	FROut	FRIncl	FROut
V1	V1	372220	rienwit structuur/zijdegrijs structuur	2385	rienwit structuur/zijdegrijs structuur	90	90	90	45	90	90	90	90	90	90	90	90
V2	V2	372220	rienwit structuur/zijdegrijs structuur	2385	rienwit structuur/zijdegrijs structuur	90	90	45	90	90	90	90	90	90	90	90	90
V3	V3	372220	rienwit structuur/zijdegrijs structuur	1030	rienwit structuur/zijdegrijs structuur	90	90	45	45	90	90	90	90	90	90	90	90
V4	V4	395530	rienwit structuur/zijdegrijs structuur	2318	rienwit structuur/zijdegrijs structuur	90	90	45	45	90	90	90	90	90	90	90	90
V5	V5	395530	rienwit structuur/zijdegrijs structuur	2318	rienwit structuur/zijdegrijs structuur	90	90	45	45	90	90	90	90	90	90	90	90
V6	V6	395530	rienwit structuur/zijdegrijs structuur	932	rienwit structuur/zijdegrijs structuur	90	90	45	45	90	90	90	90	90	90	90	90
V7	V7	395530	rienwit structuur/zijdegrijs structuur	932	rienwit structuur/zijdegrijs structuur	90	90	45	45	90	90	90	90	90	90	90	90

C:\Gis_Lnk\Lnk\Macro.exe

Macro List 0/6 7

Primaire

Profile	Series	ID	Profile	Length	Color	FRLeft	FRRight	FRTop	FRBottom	FRIncl	FROut	FRIncl	FROut	FRIncl	FROut	FRIncl	FROut
V1	V1	372220	rienwit structuur/zijdegrijs structuur	2385	rienwit structuur/zijdegrijs structuur	90	90	90	45	90	90	90	90	90	90	90	90
V2	V2	372220	rienwit structuur/zijdegrijs structuur	2385	rienwit structuur/zijdegrijs structuur	90	90	45	90	90	90	90	90	90	90	90	90
V3	V3	372220	rienwit structuur/zijdegrijs structuur	1030	rienwit structuur/zijdegrijs structuur	90	90	45	45	90	90	90	90	90	90	90	90
V4	V4	395530	rienwit structuur/zijdegrijs structuur	2318	rienwit structuur/zijdegrijs structuur	90	90	45	45	90	90	90	90	90	90	90	90
V5	V5	395530	rienwit structuur/zijdegrijs structuur	2318	rienwit structuur/zijdegrijs structuur	90	90	45	45	90	90	90	90	90	90	90	90
V6	V6	395530	rienwit structuur/zijdegrijs structuur	932	rienwit structuur/zijdegrijs structuur	90	90	45	45	90	90	90	90	90	90	90	90
V7	V7	395530	rienwit structuur/zijdegrijs structuur	932	rienwit structuur/zijdegrijs structuur	90	90	45	45	90	90	90	90	90	90	90	90