

GARNET 5X

CNC Profile Machining Center (5 Axis)

Automation by
FANUC



YouTube



WEB

PRODUCT WEB LINK

The GARNET 5X, a 5-axis CNC machining center, empowers a wide range of users by efficiently processing aluminum [PVC, light alloy and even steel] profiles of various sizes. Its spindle allows for multi-angle machining between 0° and 360° on the C-axis and 0° to 180° on the A-axis. Designed for versatility, it tackles non-standard operations on diverse profiles, including cutting, drainage channel opening, drilling, marking, and notching – all in a single setup. This multi-functionality is complemented by a generous working area of 515 mm x 370 mm, boosting user productivity.



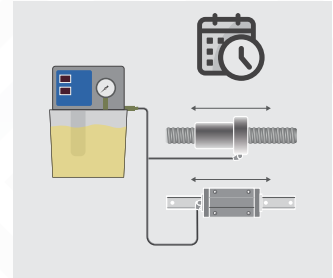
By focusing on providing convenient solutions for customers, and combining power and precision, GARNET 5X lets the processing capacity be only limited by the users imagination, thanks to the 11 kW spindle motor with automatic tool replacement feature.



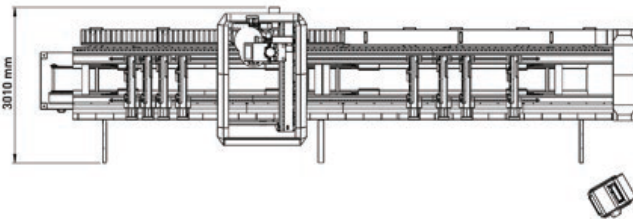
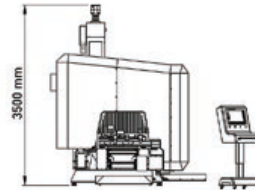
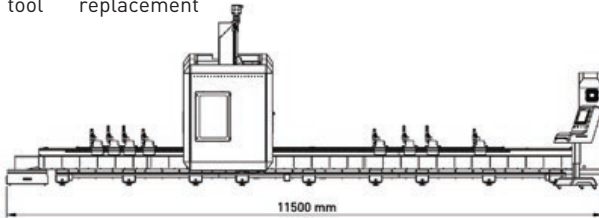
High speed rates on axes and internal automatic tool replacement magazine which moves with gantry for 20+1 tools allow for time savings when running different processes which require tool replacement.



With full automatic clamp positioning, GARNET 5X automates many tasks assuming the work load of the user.



Maintenance of transmission elements is accomplished by the automatic lubrication system which is offered as an optional feature increasing the service life for accuracy in processes. Capacity may be varied for processing of non-standard profiles with on demand optimization of size and number of clamps.



GARNET 5X

CNC Profile Machining Center (5 Axis)

MACHINING LENGTHS

	8 M	12 M	16 M	20 M +
X Axis (Longitudinal)	8000 mm ●	12000 mm ○	16000 mm ○	20000 mm + ○
Y Axis (Lateral)	515 mm (Tool length 50 mm from the collet)			
Z Axis (Vertical)	370 mm (Tool length 50 mm from the collet)			
A Axis (Head processing angles)	-90° / +90°			
C Axis (Head rotation movement)	0° / 360°			

POSITIONING SPEED

X Axis (Longitudinal)	84 m/min
Y Axis (Lateral)	75 m/min
Z Axis (Vertical)	40 m/min
A Axis (Rotational Movement)	100° /sec
C Axis (Rotation movement)	100° /sec

Positioning speeds are the maximum speed values that the machine can use continuously.

AIR

Pressure	6-8 Bar
----------	---------

ELECTRICAL

Max. Power	50 kW
Voltage	400V 3N PE AC
Frequency	50-60 Hz

SPINDLE

Max. Power	11 kW ● / 16 kW ○
Maximum rotation speed	24.000 rpm
Tool holder	HSK F63
Cooling type	Liquid

TOOL STORAGE

Automatic umbrella typed set magazine system	●
Attributable maximum set number - Umbrella type	20+1
Standard Saw Diameter	400 mm
Optional Saw Diameter	550 mm
Automatic Tools Measuring	●

SCREW-CUTTING CAPACITY

Tapping with adapter	M8
----------------------	----

PROFİL POZİSYONLAMA

Right and left one with pneumatic movement, two alignment bar in the middle	4
---	---

CONTROL UNIT

Industrial PC - Touchscreen	15"
Data transfer via remote network connection, Ethernet and USB	●
Barcode reader	●
Camquix CAM program	●
CadXtract CAD-CAM Production program	○

OPERATIONAL AREA

Steel profile machining thickness	5 mm			
Clamps, standard pcs	8	12	16	20 +
Clamps, maximum pcs	10	14	18	22 +
Servo-controlled automatic clamp positioning system	●			
Automatic lubrication in processing area	●			
Cabinet providing protection in processing zone	●			
Safety barrier (sensor)	●			
Automatic lubrication system for X, Y and Z axes	○	●	●	●
Automatic sawdust discharge unit	●			
FESTO pneumatic system	○	●	●	●

● Opsiyonal ○ Opsiyonal

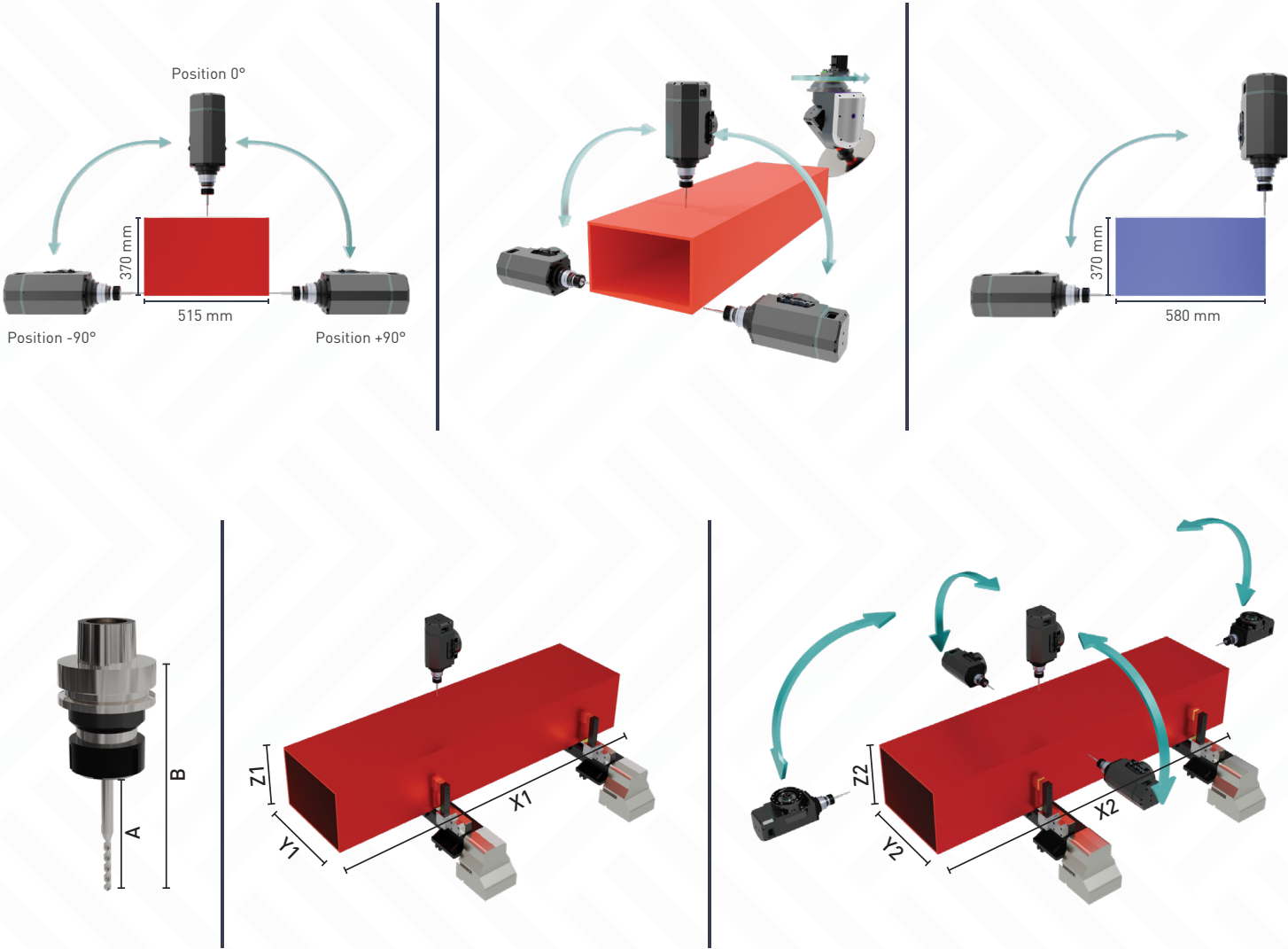
Özçelik Makina continuously improves its products and offers new and modern solutions for PVC and Aluminum Profile Processing. Accordingly, Özçelik reserves the right to change the information in this document without notice. All dimensions and weights are reference values. Valid from January 2023

GARNET 5X

CNC Profile Machining Center (5 Axis)

MOTOR ANGLES

With a spindle capable of processing at any angle between 0° and 180° on the A axis and 0° and 360° on the C axis, the machine can process aluminum and PVC profiles of various sizes, offering users a wide range of solutions.



	A	B	X1	Y1	Z1	X2	Y2	Z2
GARNET 5X	50	120	8000	580	370	8000	515	370
GARNET8000	50	95	8000	580	450	8000	515	450
GARNET XS 4(3m)	50	110	3000	320	255	3000	320	255
GARNET XS 4(4m)	50	110	4000	320	255	4000	320	255
GARNET XS	50	95	3000	320	255	3000	320	255
GARNET MINI	80	118	350	150	120			