LARGE GANTRY ADDITION AND SUBTRACTION PROCESSING CENTER

Additive and subtractive manufacturing integrated machine

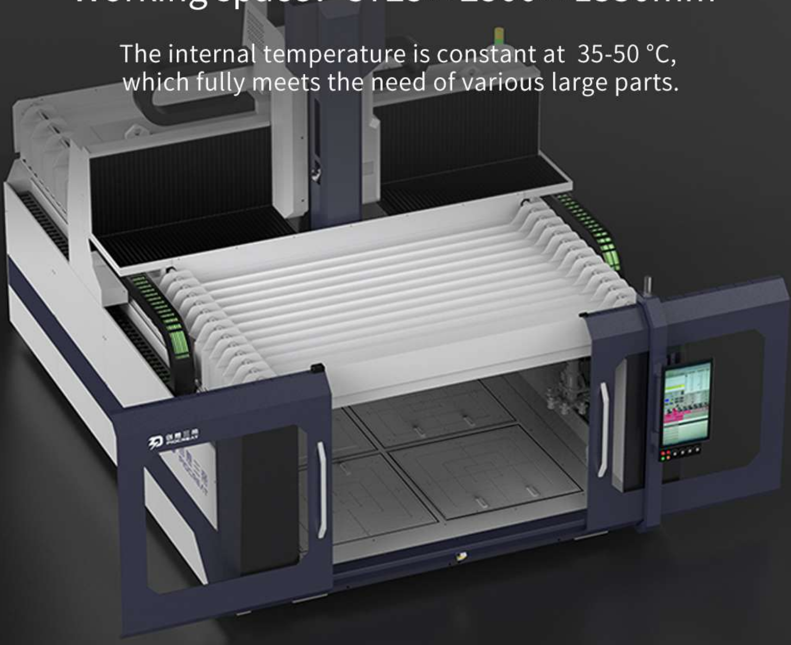
Screw 3D printing and CNC five-axis manufacturing integrated

By 3D printing to print the work piece closed to the final size and contour, then the final size is achieved by milling, the processing speed is faster, the cost is lower, and the material is more efficient to use.The integrated manufacturing of adding and subtracting materials is an ideal solution for forming large sized work pieces.

Large working space

Working space：3725×2500×1330mm

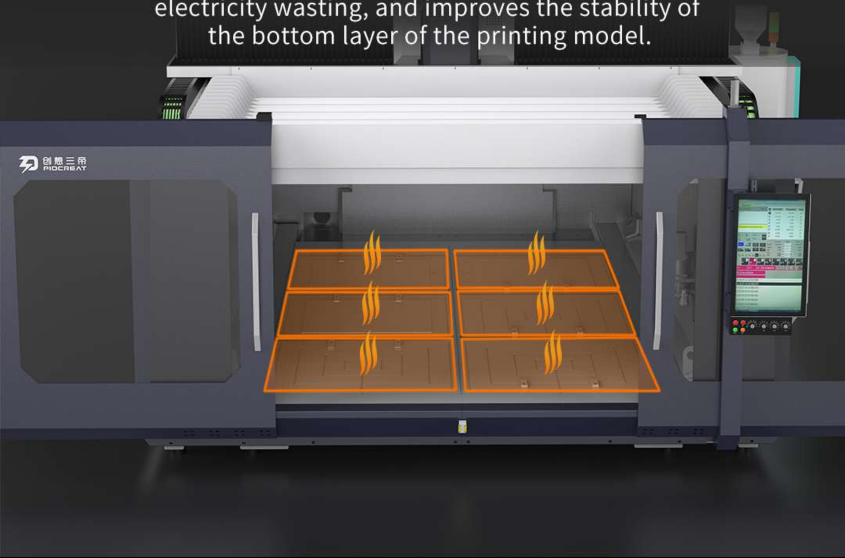
The internal temperature is constant at 35-50 °C, which fully meets the need of various large parts.



Workbench design

Can be divided into 6 independently controlled heating table

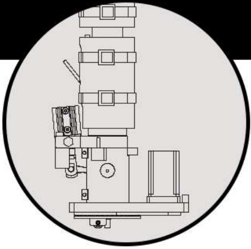
According to the printed model, zone heating control can be selective, avoid effectively electricity wasting, and improves the stability of the bottom layer of the printing model.



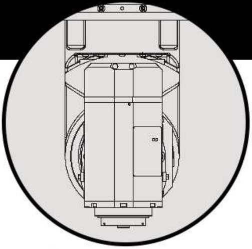
High flow screw extrusion design

Equipped with 3-8mm large flow screw extrusion nozzle

The maximum printing speed can reach 100kg/h. To ensuring the stability and accuracy of the gantry (±0.02mm/1000mm), the printing speed is 10m/min and the processing speed is 15m/min.



Screw 3D printing



CNC five-axis machining

High-speed and high-precision five-axis head

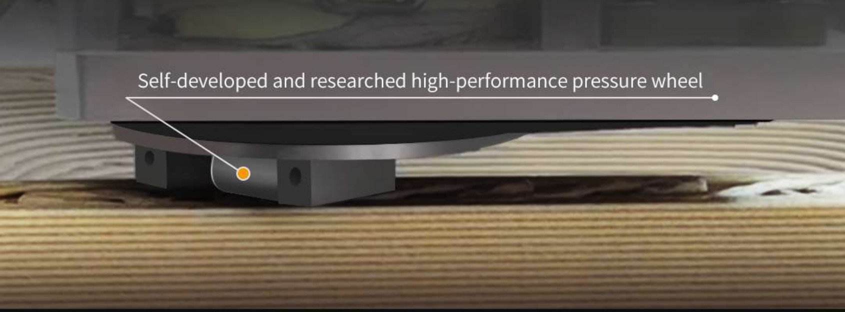
Equipped with 8.5KW/24000 high-speed hvct

Using precision five-axis head, A axis ± 120 ° C, C axis ± 320 ° C, machinable with plastic, carbon fiber and non-ferrous metals.

High performance pressure wheel

Effectively improve the printing materials density

Self-developed and researched high-performance pressure wheel, according to the control printing path, can effectively improve the density of the printing material and make stronger the bonding between the printing layers.



Wide range of printing materials

Can meet the application needs of different fields

It is suitable for printing all kinds of thermoplastic particles, special mixtures materials, and ceramics and metal materials. Supports a variety of fiber composite thermoplastic polymer materials.

Full-automatic provide dry material

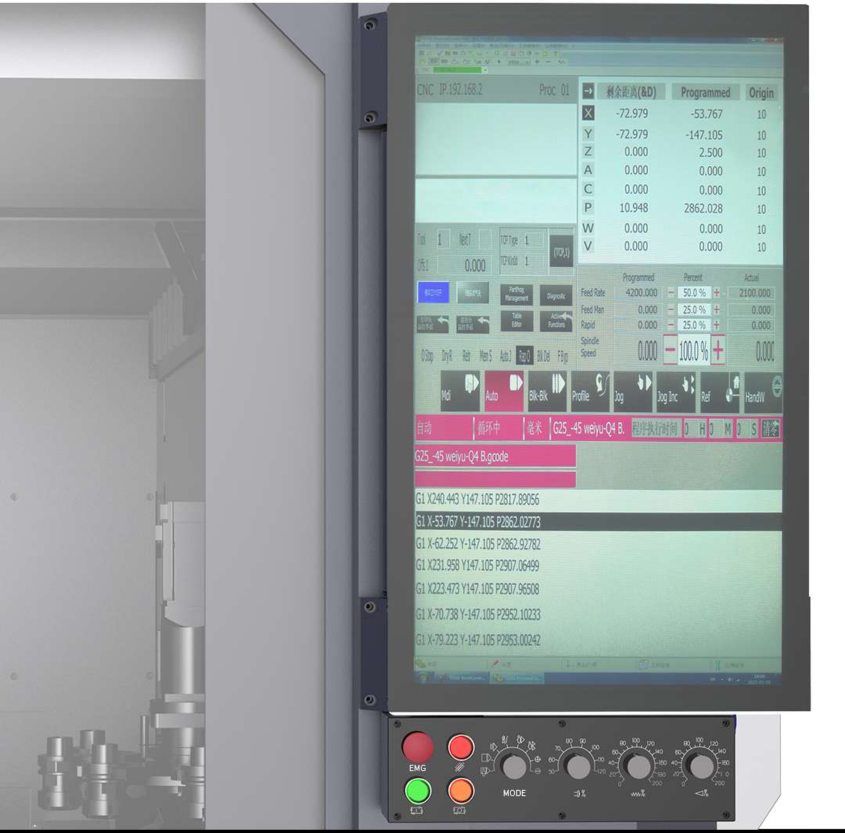
Automatic feeding + drying + dehumidification three in one

The full-automatic three in one feeding system provides constantly dry materials, which can meet the continuous printing needs of 7×24 hours

OSAI Control System

32-inch full touch all-in-one machine

Adopt OSAI control system and motion servo system,
32-inch full touch all-in-one machine,
to ensure equipment stability and machine response speed.



CNC IP.192.168.2 Proc 01

→	剩余距离(&D)	Programmed	Origin
X	-72.979	-53.767	10
Y	-72.979	-147.105	10
Z	0.000	2.500	10
A	0.000	0.000	10
C	0.000	0.000	10
P	10.948	2862.028	10
W	0.000	0.000	10
V	0.000	0.000	10

	Programmed	Percent	Actual
Feed Rate	4200.000	50.0 %	2100.000
Feed Man	0.000	25.0 %	0.000
Rapid	0.000	25.0 %	0.000
Spindle Speed	0.000	100.0 %	0.00

自动 | 循环中 | 毫米 | G25_-45 weiyu-Q4 B. | 程序执行时间 0 H 0 M 0 S

G25_-45 weiyu-Q4 B.gcode

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G1 X240.443 Y147.105 P2817.89056
G1 X-53.767 Y-147.105 P2862.02773
G1 X-62.252 Y-147.105 P2862.92782
G1 X231.958 Y147.105 P2907.06499
G1 X223.473 Y147.105 P2907.96508
G1 X-70.738 Y-147.105 P2952.10233
G1 X-79.223 Y-147.105 P2953.00242
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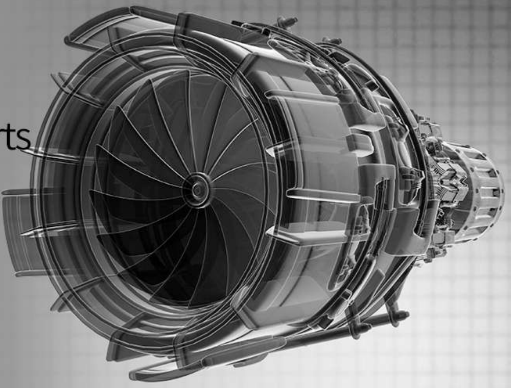
Application field

Applied in various fields

Suitable for producing large to very large thermoplastic materials parts,molds, models and industrial tools, etc.
Widely used in aerospace, automobile manufacturing, wind power, yacht and ship, home life, urban landscape and other composite materials field.

Aerospace

Ultra-large parts



Rail transit

models

wind power
oversized parts

yacht structure
oversized parts

Urban landscape
Super large model

Product specification

G40 particle 3D printing and CNC 5-axis machining

3D printing parameters

Printing Size：	3725×2500×1330mm
Particles Diameter：	2-5mm
Hybrid additive manufacturing and milling system：	Yes
Machine Size：	5962×4220×4800mm
Maximum extrusion volume：	100kg/h
precision and repeatability：	0.018/1000mm
Molding Tech：	FGF
Bed Temp：	⩽200℃
Filament：	PLA, PETG, ABS, PC, PA and other composite materials
Discharge structure：	Screw extrusion
Nozzle Number：	1
Nozzle Diameter：	3-8mm
Nozzle Temp：	⩽450℃
Power Voltage：	AC 380V
Slicer Software：	Creality Print
Rated Power：	65KW
Weight:	≈15000KG

CNC machining parameters

Processing Size：	3400×2500×1330mm
Processing Speed：	20m/min
Spindle Power：	8.5KW
Processing Mode：	Five axis