TECHNICAL DESCRIPTION | 2000 x 3000 mm

CF2030 Laser Sandblasting, Back-paint Removal & Drilling Machine

Open-grid table · Loading arm · Pneumatic lift cylinders · Travelling dust extraction



Item	Value	Item	Value
Model	CF2030-140W	Working size	2000 x 3000 mm, glass up to 50 mm
Laser	140 W MOPA fibre laser (MOKE custom)	Laser lifetime	Approx. 80,000 h (theoretical)
Sandblasting width	Up to 160 mm	Hole diameter	2 to 160 mm
Engraving speed	Up to 12,000 mm/s	Total power	4.5 kW, AC 190 to 240 V

01 Application Scope

The CF2030 is a high-speed, high-precision laser sandblasting machine developed for the smart-mirror and decorative-glass industry. Besides sandblasting, it removes mirror back paint and coatings and drills holes and cut-outs. It can also mark stainless steel, aluminium oxide, copper and other alloys.

- **Sandblasting** on glass and mirrors: logos, patterns, text and frosted areas
- **Back-paint and coating removal** on mirrors to reveal clear glass, for LED and smart mirrors
- **Drilling holes and cut-outs** in glass from 2 to 16 mm thick, holes from 2 to 160 mm

02 Performance Characteristics

01	Latest-generation laser control software (730SA-PLUS): simple to operate and powerful.
02	High-speed, high-precision galvanometer scan head with a telecentric field lens.
03	Dual-temperature, dual-control chiller keeps the laser stable during long working hours.
04	Welded steel machine body, stress-relieved by annealing and finished on a 5-axis CNC milling centre for overall accuracy.
05	Moving parts made of industrial aluminium profiles machined on a 5-axis centre: rigid, light and precise.
06	High-precision servo motors and transmission: large torque, small error and good dynamic response.
07	High-peak MOPA fibre laser (MOKE custom model): good beam quality, stable power, low consumption and long life.
08	Z-axis worktable rises and lowers automatically for plates of different thickness and material.
09	Travelling dust extraction with an open (hollow) grid table: dust is removed right at the laser head and drilling waste drops through.
10	Maximum sandblasting width 160 mm; maximum drilling area 150 x 150 mm per setup.
11	Pneumatic loading arm tilts the glass onto the table; cylinder lift pins raise the sheet so one operator can move and position it.

03 Machine Basic Parameters

Item	Value
Machine model	CF2030-140W
Working mode	Fibre laser
Working size	2000 x 3000 x 50 mm
Floor space	Approx. 4890 x 2701 x 1676 mm (with loading arm)

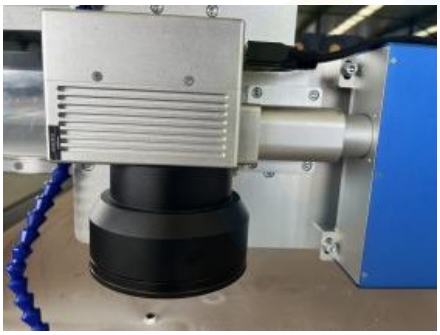
04 Machine Technical Parameters

Item	Value
Total power	4.5 kW
Laser	MOPA high-peak fibre laser, 140 W (MOKE custom)
Laser lifetime (theoretical)	Approx. 80,000 hours
Laser wavelength	1055 to 1070 nm
Mechanical repeatability	0.25 mm
Laser repetition accuracy	0.002 mm
Engraving line speed	12,000 mm/s
Max. sandblasting width	160 mm
Max. drilling area per setup	150 x 150 mm
Control system	730SA-PLUS laser control system
Smoke exhaust	High-pressure fan with direct flue exhaust
Power supply	AC 190 to 240 V, 50 to 60 Hz
Working environment	+5 to 35 °C; relative humidity 30 to 60 %

05 Main Parts of Equipment

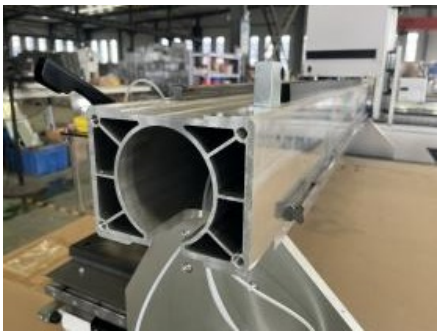
Part	Brand / type	Advantage
Laser	140 W MOPA fibre (MOKE custom)	Theoretical service life about 80,000 hours
Galvanometer scan head	Jinhaichuang	About twice the durability of ordinary domestic heads
Field lens & beam expander	Telecentric field lens	Even spot and accuracy over the whole field
Guide rails & slides	Taiwan AirTAC	High hardness, high precision, dust-proof
Rack	1.5 module rack, made in China	High hardness and high precision
Servo motors	Taiwan servo, dual drive	Four motors (three 750 W, one 400 W)
Laser control system	730SA-PLUS	Adaptive to round and rectangular shapes
Crossbeam	Seamless steel, customised	Rigid and stable
Machine body	One-piece welded	Aged by heat treatment; no permanent deformation
Lubrication	Manual oil injection	Avoids freezing in winter and prolongs service life
Electrical parts	Switches, filters and special flexible cables	Reliable long-term operation
Chiller	Dual-temperature, dual-control	Stable laser temperature

Inside the machine


Laser scan head


Linear guide rails


Dual-temperature chiller


Aluminium-profile beam


Protective bellows


Lift cylinders

06 Equipment Advantages

3D galvanometer lens
More durable than 2D lenses; industrial-grade and suited to demanding workshop conditions.

Dual-control chiller
Two independent temperature circuits with their own water temperature, flow and pressure.

Aluminium beam, not cast iron
Cast iron can deform from casting and heat-treatment stress; aluminium profile is stiff and stays straight.

140 W high-power laser
Less power decay and longer lifespan than standard lasers.

Loading arm + lift cylinders
The glass is tilted onto the table, then lifted by cylinders so a single operator can move and position it safely.

Side-mounted Y-axis guide rails
Double-sided rails run more smoothly and improve stability and engraving accuracy.

Servo motors with reducers
Higher rotation accuracy than ordinary gear motors.

Flat, rigid worktable
A carefully produced rigid table stays flatter than ordinary aluminium-plastic tables.

5-axis machining
Parts finished on 5-axis centres are flatter and more precise than with 3-axis machining.

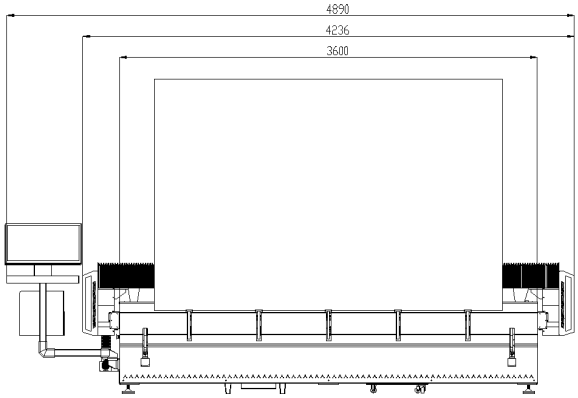
07 Drilling Data

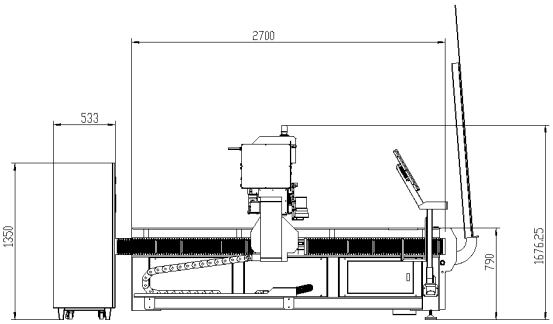
Glass type	Thickness	Min. hole	Max. hole / cut-out
Ultra-clear glass	1 to 8 mm	2 mm	160 x 160 mm
Ultra-clear glass	10 to 15 mm	3 mm	140 x 140 mm
Normal glass	1 to 8 mm	5 mm	120 x 120 mm
Normal glass	10 to 15 mm	5 mm	100 x 100 mm
Green glass	1 to 8 mm	5 mm	100 x 100 mm
Green glass	10 to 12 mm	5 mm	40 x 40 mm

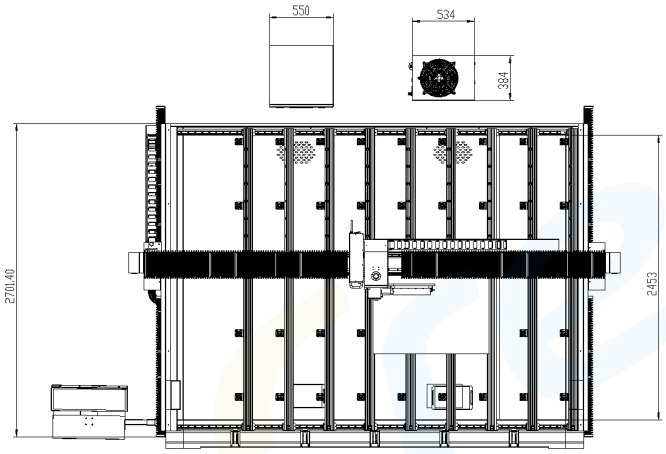
Reference data with F254 lens. Results depend on glass quality and settings; critical jobs are confirmed with a test sample.

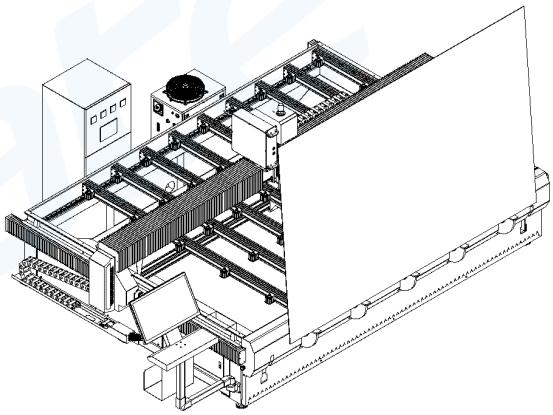
08 Layout Drawing

CF2030 with loading arm. Front, side and top views, plus 3D view. All dimensions in mm. The electrical cabinet (approx. 550 x 533 x 1350 mm) and chiller (approx. 534 x 384 mm) stand next to the machine.









09 Installation, Training & After-sales

Installation & commissioning

Our engineer installs and commissions the machine at your factory.

Engineer travel costs

Air tickets, accommodation and meals for our engineer are paid by the buyer.

Warranty

1 year.

Operator training

Your operators are trained on site until they can run the machine on their own.

Remote support

After installation, we give remote support whenever you need it.

Sample testing

Send us your drawing and glass, and we will make test samples before you decide.

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