



# FO 12025/12030 series



## New Generation of Large-format Gantry Laser

HK Laser & Systems would like to introduce the brand-new FO series LARGE-FORMAT Gantry Laser cutting system. This new laser system is a masterpiece in its class, in terms of the high-speed dynamic design that is based on HK's innovative engineering concept. The conventional gantry laser was a slow laser cutting system due to its heavy gantry structure, and its accuracy was not as good as the standard 5x10 flying-optics laser system.



### FO 12025 in production

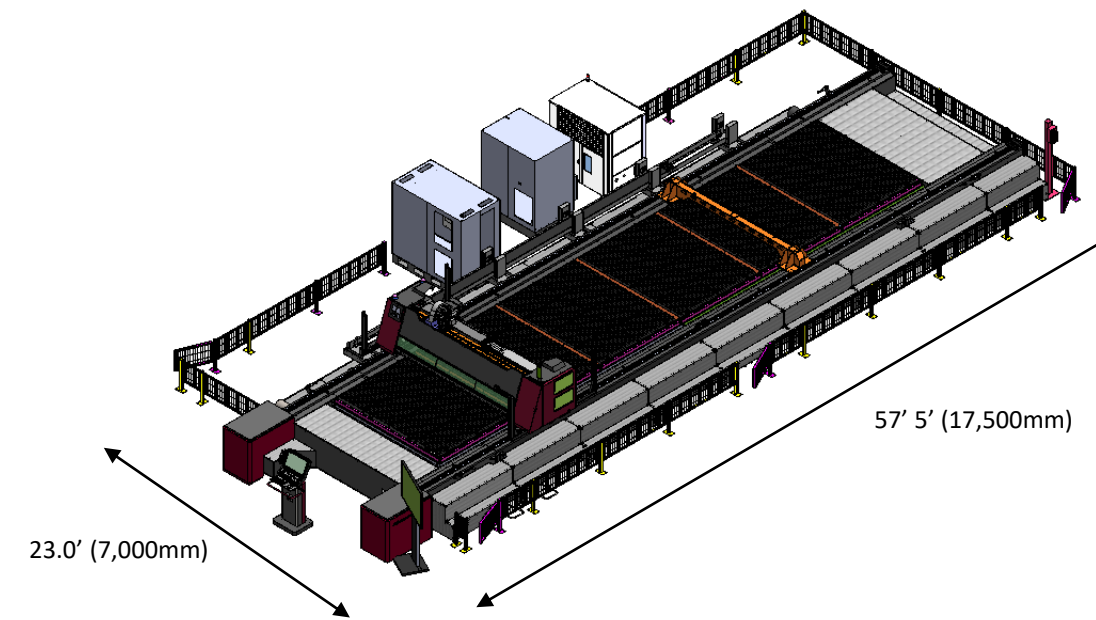
This unit was installed in early 2021 and has been running in production to cut the steel plates up to 1 inch with its 6kw Corona fiber laser. Thanks to its large-format capacity being combined with ultra high-speed traverse/ fiber-cutting feature, the customer is already looking to add the 2<sup>nd</sup> one to replace their current plasma table.

## Specification

Items	Specifications	Remarks
Model	FO12030	12,000mm x 3,100mm
Laser power	6kW – 12kW Fiber / n-Light VBPP	VBPP 6K, 8K,10K, 12K
Gantry system	Ultra light-weight & stiff structure	
Acceleration	0.8G	
Positioning speed	2,362 ipm (80m/min)	
Cutting span	98”(2.5m) / 122”(3.1m)	
Table length	40’(12m) / 66’(20m)	
Positioning accuracy	±0.0039 inch	Per 120” travel
Repeatability accuracy	±0.001 inch	
Controller	Siemens SINUMERIK 840D SL	
Monitor	21” Touch Flat Touch Screen	
Safety	Front & Side Collision safety Sensor Automatic sliding door View camera & monitor	

Model	FO12025	FO16025	FO20025	Model	FO12030	FO16030	FO20030
98” span	40’ (12.4m)	52’ (16.0m)	65’ (20m)	122” span	40’ (12.4m)	52’ (16.0m)	65’ (20m)

### Floor Plan (FO 12025)



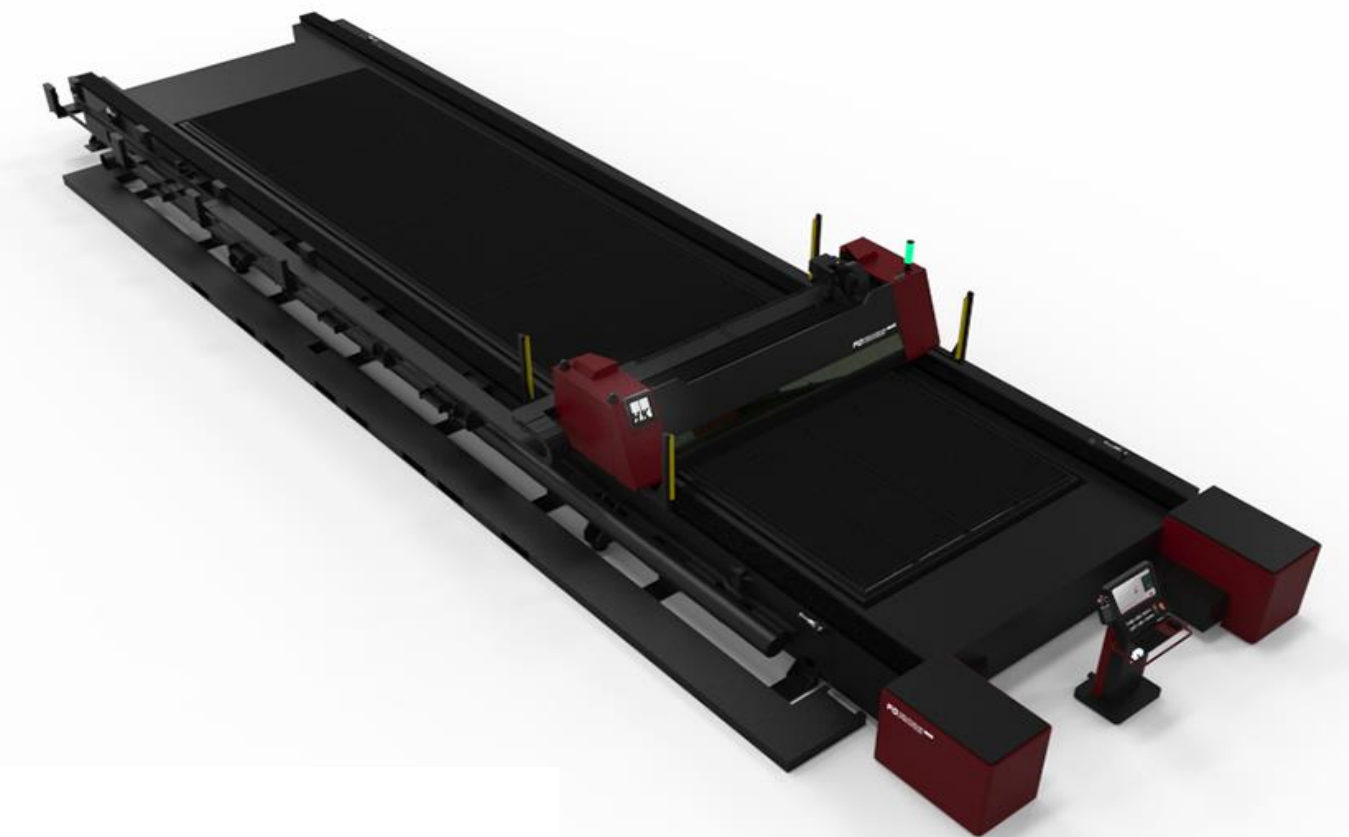
**HK USA**  
1296 Humbracht Circle  
Bartlett, IL 60103 U.S.A  
TEL +1 630 916 0200  
FAX + 1 630 916 0300  
[www.HK-US.com](http://www.HK-US.com)

**HK Headquarters**  
117, Sareupjae-gil, Yanggam-myon,  
Hwasung-si, South Korea  
TEL +82 31 350 2800  
FAX +82 31 350 2994

Distributor



# FO series Large-Format Gantry Laser



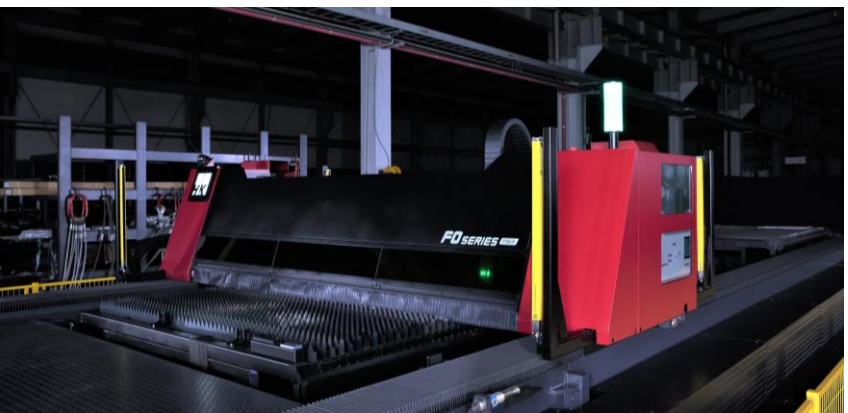


Thanks to the specially designed lightweight gantry structure, its rapid traverse speed is up to 3150 ipm with 0.86G of acceleration rate, which is 2-3x faster than the conventional gantry laser. Its span is 125 inches, so 5x10' plate can be laid downside by side to maximize its cutting productivity. The synchronized twin motors drive system along with the use of brushless Siemens motors and high precision rank-pinion gears, enables the machine to reach high speed, high accuracy and excellent cutting quality during the entire cutting process. Another key feature is that the cutting table and the main system body are separated for easy maintenance and service. HK's latest innovation includes many features, such as a SIEMENS Sinumerik controller, a light barrier at gantry for safety, a touch screen at the side of the gantry and so much more.

- >10' wide table
- Table length up to 40'(12.0m) or 66'(20.0m)
- High-speed travel/ High-speed cutting gantry system
- Advanced features for productivity
- Safety features for Fiber laser & Collision protection
- Easier operation & accessibility
- Reliable & excellent cutting performance for thick metal plates
- Service support



## Game-Changing Innovation on Large - Format Gantry Laser Industry



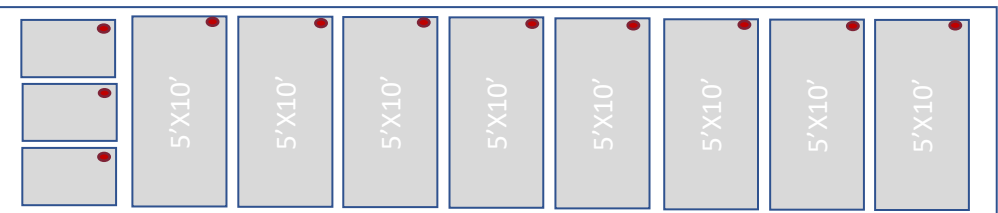
- High-speed Gantry system**
- Driven by powerful SIEMENS dual servo motors
  - Rapid traverse speed up to 3150 ipm with 0.86G accel.
  - Ultra high-precision rack and pinion system
  - Honeycomb design Light-weight Gantry structure

- Safety features at the Gantry**
- Completely enclosed sliding door structure
  - Automatic shut-down of laser beam with door open
  - Four(4) light barriers activated for crash prevention
  - Front and rearview camera systems for safety monitoring

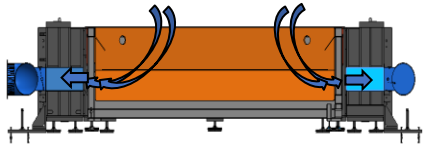
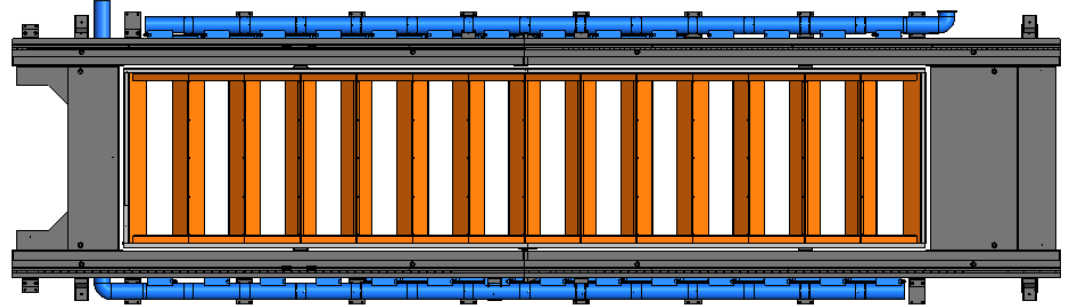
- Side-wall Monitor & Control Screen**
- 21" Quad monitor screens to view the cutting area
  - HMI Flat Touch Screen which is fully operation like the main controller
  - Provide the ability to the operator to control the machine on side



- Multi-origin Operation**
- 5x10 plates can be laid downside by side up to 12 sheets (ex. FO 20030)
  - Each 5x10 or any size of plate can be set as a new home position to process.
  - Thanks to this Multi-origin feature and gigantic table structure, the uptime for the processing time is dramatically increased.



- Fume & Dust Collecting System**
- Zone control duct system
  - 14 compartments (ex. FO12025 model)
  - Only one compartment is open for maximum suction capability
  - Suction ducts from both sides for uniform dust removal



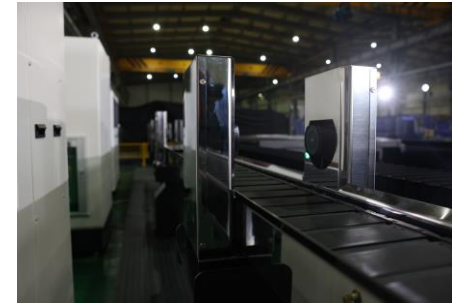
- Back of the gantry**
- Automated Lubrication System
  - Dual Servo Motor for X-axis
  - Two Gas regulators for Oxygen for mild steel and HP Nitrogen to clean cut Stainless & Aluminum
  - Solid & flexible cable ducts design



- Cable duct Protection Bar**
- Multiple Stainless-steel Bars on the track to guide and protect the long flexible cable ducts from potential crash and damage



- SIEMENS based control system**
- HK HMI & App based on the powerful Siemens platform
  - 21" flat touch screen
  - Safety E-stop at the controller and the control pendant
  - Data input by USB or Ethernet LAN



**Rearview of FO 12030**  
Showing the dust collecting system at the side of the frame

