

Pinnacle of Laser Cutting Technology

HK Laser & Systems
Product Catalog

English

www.hk-global.com



HK Headquarters





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[Vision]

The company that provides fun and joy

[Mission]

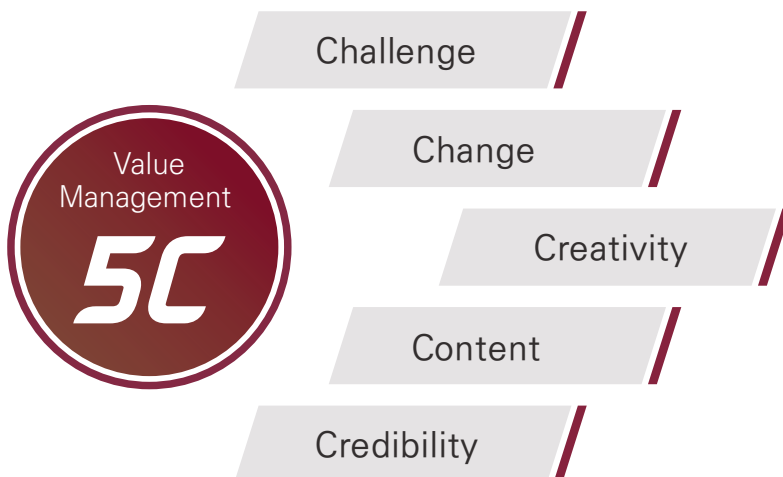
Creating the value of success through customer satisfaction

[Core Value]

Challenge · Change · Creativity · Content · Credibility

HK Laser & Systems is one of the world's leading manufacturers in the field of high power laser cutting machine.

HK Laser & Systems is the company that creates value of the success and shares the value with all our customers. Based on the continuous investment in R&D, we have developed the laser cutting technologies and products.



HK Headquarters

Introduction



Pinnacle of Laser Cutting Technology

○ 1990 – 1999



Great Challenge

-
- 1990 · Incorporated HK Co., Ltd.
-
- 1991 · Excellence award in the field of laser technology
-
- 1993 · Established research center
-
- 1994 · Awarded for excellence in the program of parts & materials localization
-
- 1995 · Awarded the venture enterprise prize
-
- 1998 · Selected as a promising mid-sized export company
 - Incorporated HK USA Chicago subsidiary
-
- 1999 · Acquired ISO 9001 certification

'HK' is the new name for 'Han Kwang'.
It was announced in 2015 to express our strong volition to set ourselves apart as a global company in time for the completion of 'Take-Off Hall'.

○ 2000 – 2009



Globalization

-
- 2000
- Selected as one of 2000 leading ventures
 - listed in KOSDAQ

-
- 2001
- Relocated headquarters to Hwaseong-si, Gyeonggi-do, South Korea

-
- 2003
- Incorporated HK China Shanghai subsidiary

-
- 2007
- Director awarded the proud enterpriser prize
 - 20 million dollar export prize

-
- 2009
- Selected as a learning organization company
 - Declared 5C value management

○ 2010 – Present



Smart Future

-
- 2010
- Certified as an excellent human resource management company
 - Awarded the prestigious peter drucker innovation enterprise

-
- 2012
- Recognized in technology innovation for a mid-sized company

-
- 2014
- Won the mid-sized company culture award
 - Opened 10th domestic Daegu CVS center

-
- 2015
- Constructed 2nd factory
 - Changed the company name to HK Laser & Systems

-
- 2016
- Incorporated HK Taiwan Taipei subsidiary
 - Incorporated HK Europe Frankfurt subsidiary



Global Network

[Branches]

HK Headquarters

South Korea

HK USA

Chicago
Charlotte

HK Europe

Frankfurt

HK China

Shanghai
Qingdao

HK Taiwan

Taipei



Worldwide **HK**

[Dealers]

America	Asia-Pacific	Europe	MENA
Mexico	Thailand	England	Israel
Canada	Malaysia	Poland	Egypt
Brazil	Singapore	Russia	Saudi Arabia
Argentina	Vietnam	Ukraine	
Chile	Indonesia	Finland	
	India	Belarus	
	Uzbekistan	Netherlands	
	Australia		

System Line up

Fiber Laser

FL3015 Fiber



PS Series Fiber



CO₂ Laser

FL3015 CO₂



PL3015 CO₂



PS Series CO₂



Based on machinery design technology optimized through strict structural analysis, HK has been manufacturing ultralight and high-precision industrial high energy laser cutting machines. In addition, we provide total solution for sheet metal working that customers want such as bending, welding, deburring, and loading automation.

Tube Laser

TL6015



TL7525



Other

Deburring Machine



Automation

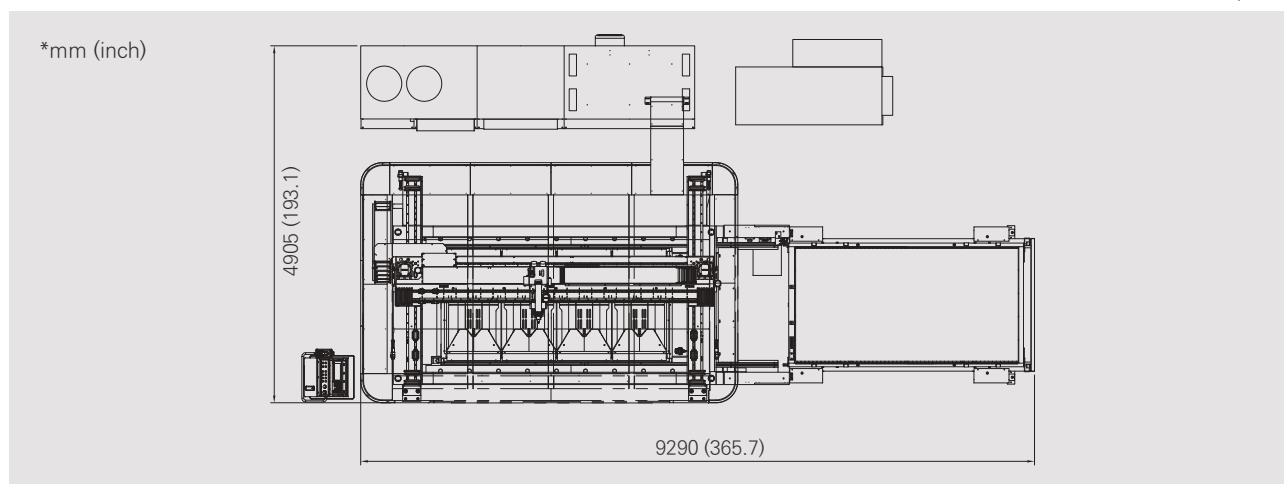




Features

- Wide open door
- High-stiff main frame that minimizes vibration
- Dynamic motion control
- Quick piercing that shortens piercing time and improves quality
- High precision and high quality cutting of ultra-thin (0.1mm~0.5mm) material
- No alignment / No overhaul / No mirror
- Tube cutting (Optional)
- Ultralight and high-stiff cutting bridge
- Optimal thick plate cutting by Smart Cut
- No need for separate oscillator room (a Thermo-hygrostat mounted in modular box)
- Cutting of high-reflective and high-level processing material

*Additional service area is required.

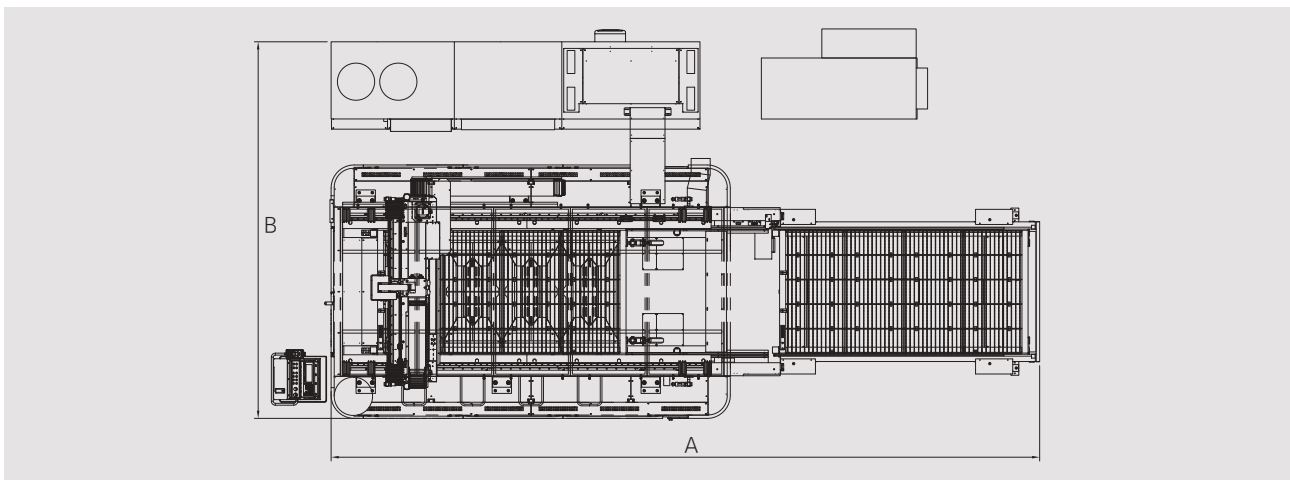




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- No need for separate oscillator room (a Thermo-hygrostat mounted in oscillator)
- Cutting of high-reflective and high-level processing material
- Maximum work area of 8m x 2.5m

*Additional service area is required.



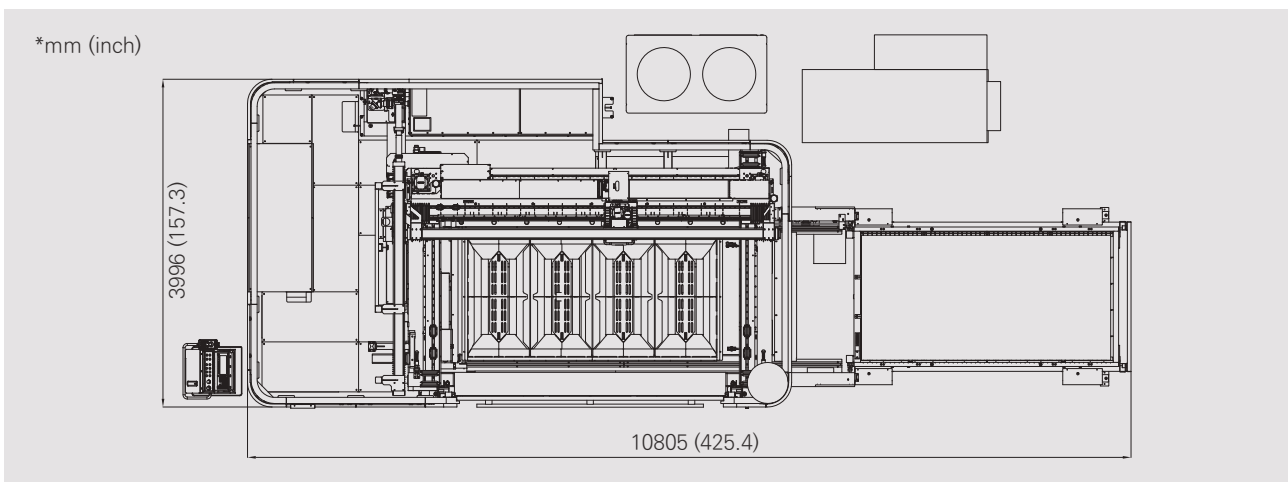
	PS3015	PS4020	PS6025	PS8025
A mm (inch)	9,230 (363.4)	11,400 (448.8)	15,280 (601.5)	20,100 (791.3)
B mm (inch)	4,905 (193.1)	5,405 (212.8)	5,936 (233.7)	6,100 (240.1)



Features

- Wide open door
- Synchronized dual servo motor
- Lens cartridge switching
- Plasma monitoring system saving piercing time and preventing cutting failure
- Tube cutting (Optional)
- Auto focus controller
- 15" Wide touch screen

*Additional service area is required.

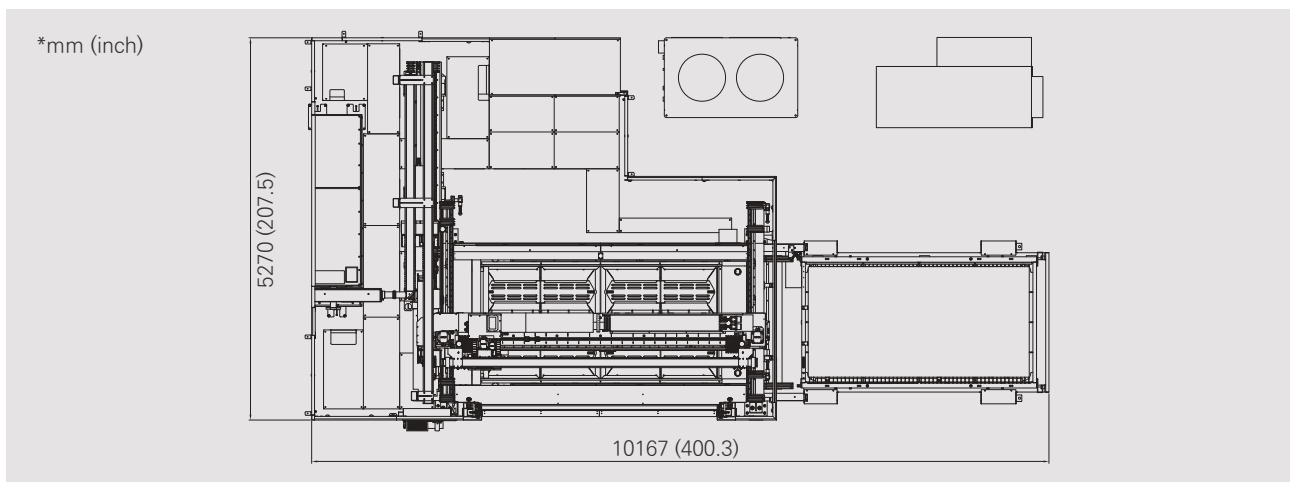




Features

- Wide open door
- Synchronized dual servo motor
- Lens cartridge switching
- Plasma monitoring system saving piercing time and preventing cutting failure
- Optimal cutting quality by beam radius control function (BRC)
- Tube cutting (Optional)
- Auto focus controller
- 15" Wide touch screen
- Uniformed quality throughout whole work area by constant beam delivery system (CBDS)

*Additional service area is required.

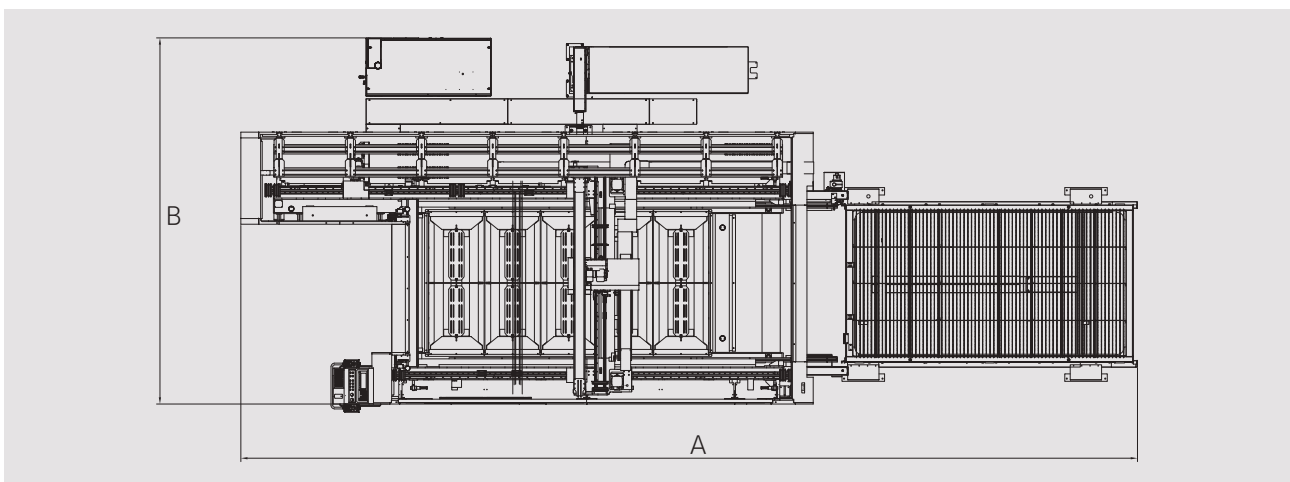




Features

- Maximum work area of 8m x 2.5m
- Lens cartridge switching
- No need to move table for full pallet changing thus producing high productivity and quality
- Uniformed quality throughout whole work area by constant beam delivery system (CBDS)
- Auto focus controller
- 15" Wide touch screen
- Optimal cutting quality by beam radius control function (BRC)
- Plasma monitoring system saving piercing time and preventing cutting failure

*Additional service area is required.



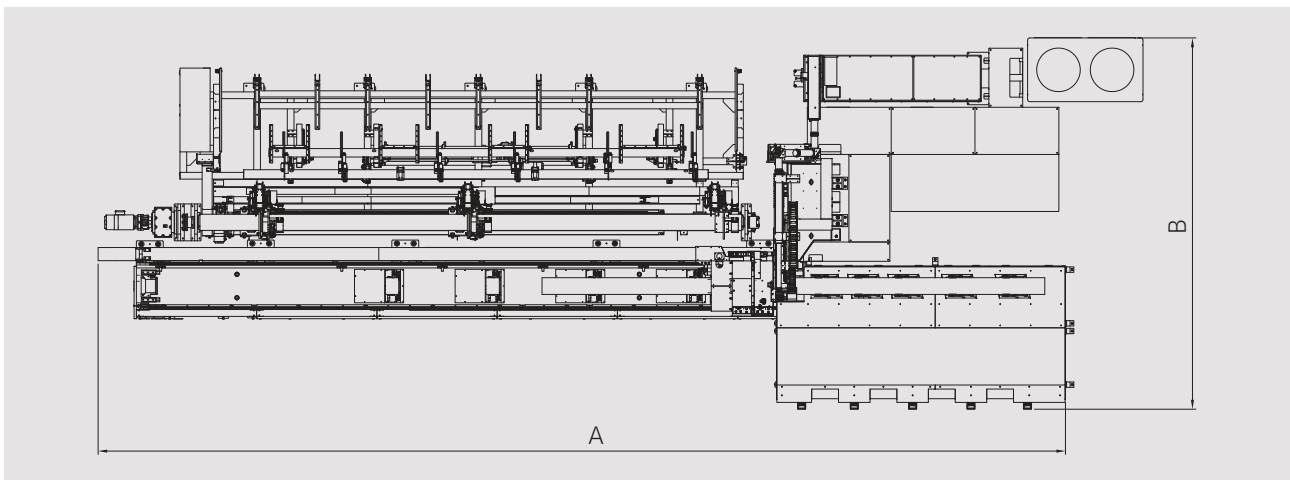
	PS4020	PS4025	PS6020	PS6025	PS8025
A mm (inch)	13,286 (523.1)	13,564 (534)	17,890 (704.3)	17,969 (707.4)	22,662 (892.2)
B mm (inch)	5,424 (213.5)	6,058 (238.5)	5,347 (210.5)	6,076 (239.2)	6,045 (238)



Features

- ATBL (Automatic Tube Bundle Loader)
- ATUS (Automatic Tube Unloading System)
- Maximum 7,500mm Auto Loading System
- CO₂ / Fiber laser mountable (Copper and brass tube cutting when fiber laser is mounted)
- ATLS (Automatic Tube Loading System)
- ALMS (Automatic Length Measurement System)
- Easy operating / High productivity
- Sim tracking unit (Optional)

*Additional service area is required.

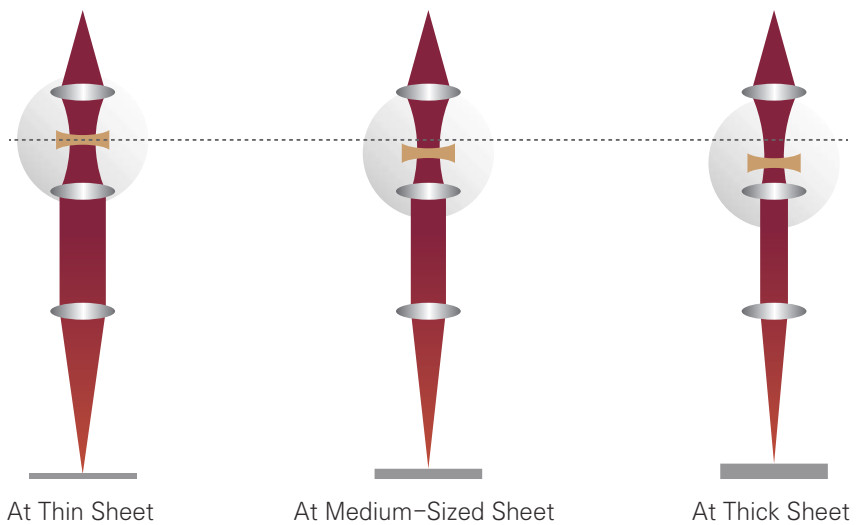


	TL6015 CO ₂	TL6015 Fiber	TL7525 CO ₂	TL7525 Fiber
A mm (inch)	13,555 (533.7)	13,555 (533.7)	14,424 (568)	15,093 (594.2)
B mm (inch)	6,079 (240)	3,602 (142)	5,535 (218)	4,359 (171.6)

Functions / Fiber

SMART CUT

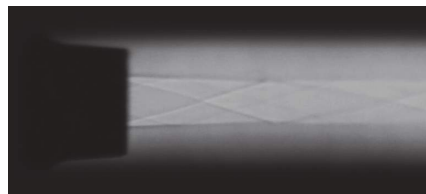
Zoom Head
+
Supersonic Nozzle



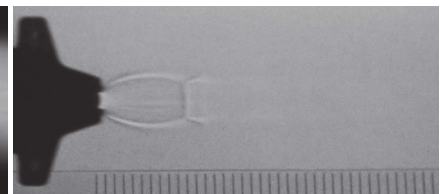
〈Fig. Zoom Type Head〉

- Depend on thickness, it is available to control the beam size and make a exact angle of incidence.
- Widen cutting width, blow out the material melting easily.

Supersonic Nozzle
Shadow Graph



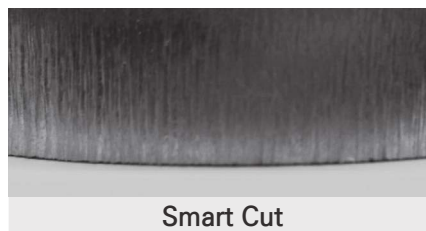
Supersonic Nozzle



Convergent Nozzle

- Improving gas flow > Minimized trisection cutting.

Smart Cut
Cutting Result



Smart Cut



Normal Cut

**- Special Benefits
of Smart Cut**

- Significant improvement of cutting stability in case of using supersonic nozzle.
- Approaching optimal efficiency based on laser cutting theory.
- Maximized cutting speed.
- Improved cutting quality due to preventing top melt.
- Maximized fiber laser efficiency in case of 8mm melt cutting or over.

- Fiber Cutting Head

- Measuring distance automatically.
- Auto edge detecting function.
- Automatic focal position adjustment.
- Applying protect window to long life time.
- Automatic focal diameter adjustment(Optional).

- Fiber Resonator

- High energy efficiency & long life span.
- Simple structure and composition.
- Low maintenance cost (No external optics & laser gas).
- Strong in high reflecting materials.

Functions / CO₂

- **AFC**
Auto Focus Control

Changing the location of focus depending on material and thickness in order to create constant cutting quality.



- **BRC**
Beam Radius Control

Controlling the radius of laser beam to get optimal cutting quality for various material and thickness.



- **CBDS**
Constant Beam Delivery System

Maintaining constant beam delivery to get constant cutting quality over the entire area.



- **LCS**
Lens Crack Sensor

Detecting the damage of lens to minimize losses and internal contamination.



- **U-Axis**
Pipe Cutting Device

Optionally mounted on L type model for tube cutting.
(Max. Ø 280mm in diameter)



- CO₂ Cutting Head
 - Measuring distance automatically.
 - Auto edge detecting function.
 - Outstanding cutting speed and quality by FM sensing mode.
 - Convenient lens cartridge exchange.

- CO₂ Resonator
 - High quality & stability.
 - Low electricity consumption(Echo mode).
 - Oil-less bearings of turbo blower.
 - Modular design for convenient repair and exchange.

- CAD / CAM
 - Professional software for laser cutting machine.
 - Abundant options(3D, duct etc.).
 - Automatic and manual nesting.
 - Wide post processing with integrated control system.

	Power kW	AFC	BRC	CBDS	PMU	LCS	U-Axis
FL3015	2.5	●	-	-	▲	▲	▲
	4.0	●	-	-	●	▲	▲
	6.0	●	-	-	●	●	▲
PL3015	2.5	●	●	●	●	●	▲
	4.0	●	●	●	●	●	▲
	6.0	●	●	●	●	●	▲
PS4020	2.5	●	●	●	●	●	-
	4.0	●	●	●	●	●	-
	6.0	●	●	●	●	●	-
PS4025	2.5	●	●	●	●	●	-
	4.0	●	●	●	●	●	-
	6.0	●	●	●	●	●	-
PS6020	2.5	●	●	●	●	●	-
	4.0	●	●	●	●	●	-
	6.0	●	●	●	●	●	-
PS6025	2.5	●	●	●	●	●	-
	4.0	●	●	●	●	●	-
	6.0	●	●	●	●	●	-
PS8025	2.5	●	●	●	●	●	-
	4.0	●	●	●	●	●	-
	6.0	●	●	●	●	●	-

● : Apply - : Not apply ▲ : Option

Specifications

FIBER

	Max. Work Size mm (inch)	Power kW	Electric Consumption kW			U-Axis
			Resonator	Chiller	CNC	
FL3015	3,048 x 1,524 (120 X 60)	3.0	8.5	3.6	5	▲
		4.0	11.8	5.2		
		6.0	18.4	7.7		
PS3015	3,048 x 1,524 (120 X 60)	3.0	8.5	3.6	5	-
		4.0	11.8	5.2		
		6.0	18.4	7.7		
PS4020	4,064 x 2,050 (160 x 80)	3.0	8.5	3.6	8	-
		4.0	11.8	5.2		
		6.0	18.4	7.7		
PS6025	6,096 x 2,540 (240 x 100)	3.0	8.5	3.6	8	-
		4.0	11.8	5.2		
		6.0	18.4	7.7		
PS8025	8,250 x 2,540 (325 x 100)	3.0	8.5	3.6	8	-
		4.0	11.8	5.2		
		6.0	18.4	7.7		

- : Not apply ▲ : Option

TUBE

	Max. Work Size mm (inch)	Max. Cross Section mm (inch)			Power kW	Cutting Capacity mm (inch)				
		Round	Square	Rectangle		MS	SUS	AL	Brass	Cu
TL6015 CO ₂	6,000 (236.22)	∅165 (∅6.50)	120 x 120 (4.72 x 4.72)	Diagonal 165 (6.50)	2.5	6.4 (0.25)	5 (0.20)	4 (0.16)		
TL6015 Fiber	6,000 (236.22)	∅165 (∅6.50)	120 x 120 (4.72 x 4.72)	Diagonal 165 (6.50)	2.0	6.4 (0.25)	5 (0.20)	4 (0.16)	5 (0.20)	3 (0.12)
					3.0	10 (0.39)	6.4 (0.25)	6.4 (0.25)	5 (0.20)	5 (0.20)
TL7525 Fiber	7,500 (295.28)	∅250 (∅9.84)	175 x 175 (6.89 x 6.89)	Diagonal 245 (9.65)	2.0	6.4 (0.25)	5 (0.20)	4 (0.16)	5 (0.20)	3 (0.12)
					3.0	10 (0.39)	6.4 (0.25)	6.4 (0.25)	5 (0.20)	5 (0.20)

*The specification is subject to change without prior notice.



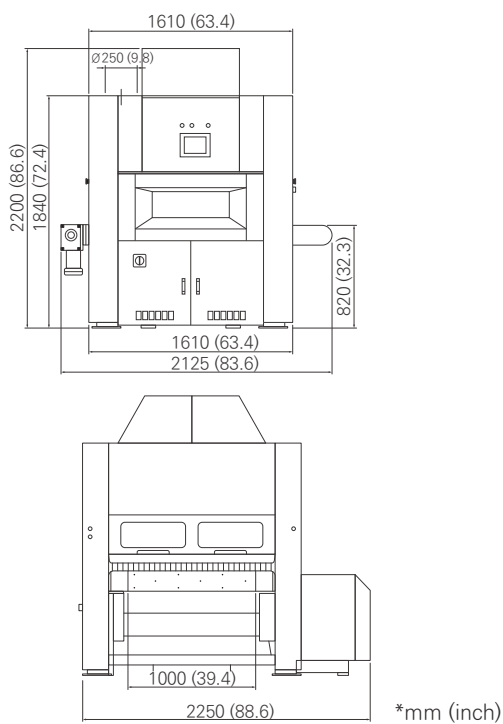
	Max. Work Size mm (inch)	Power kW	Electric Consumption kW		
			Resonator	Chiller	CNC
FL3015	3,048 x 1,524 (120 x 60)	2.5	21.7	12	5
		4.0	35.9	13	
		6.0	52.5	16.4	
PL3015	3,048 x 1,524 (120 x 60)	2.5	21.7	12	5
		4.0	35.9	13	
		6.0	52.5	16.4	
PS4020	4,064 x 2,032 (160 x 80)	2.5	21.7	12	8
		4.0	35.9	13	
		6.0	52.5	16.4	
PS4025	4,064 x 2,540 (160 x 100)	2.5	21.7	12	8
		4.0	35.9	13	
		6.0	52.5	16.4	
PS6020	6,096 x 2,032 (240 x 100)	2.5	52	12	8
		4.0	65	13	
		6.0	86	16.4	
PS6025	6,096 x 2,540 (240 x 100)	2.5	21.7	12	8
		4.0	35.9	13	
		6.0	52.5	16.4	
PS8025	8,250 x 2,540 (325 x 100)	2.5	21.7	12	8
		4.0	35.9	13	
		6.0	52.5	16.4	

Cutting Capacity

Fiber		2.0kW	3.0kW	4.0kW	6.0kW
Material mm (inch)	MS	12 (0.47)	16 (0.63)	20 (0.79)	*25 (0.98)
	SUS	8 (0.31)	10 (0.39)	15 (0.59)	20 (0.79)
	AL	8 (0.31)	10 (0.39)	12 (0.47)	15 (0.59)
	Brass	6 (0.24)	10 (0.39)	10 (0.39)	12 (0.47)
	Cu	4 (0.16)	6 (0.24)	6 (0.24)	8 (0.31)
CO ₂		2.5kW	4.0kW	6.0kW	
Material mm (inch)	MS	20 (0.79)	20 (0.79)	25 (0.98)	
	SUS	8 (0.31)	12 (0.47)	15 (0.59)	
	AL	8 (0.31)	10 (0.39)	15 (0.59)	

*Material test result / Caution : Test result can be varied based on installation environment, material, quality and conditions. *With Smart Cut

Deburring Machine



Features

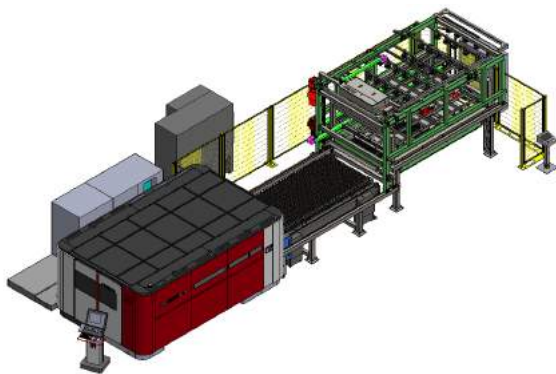
- Eccentric rotary head
- Built-in type vacuum belt
- Standard dust collector
- Program & store 45 parts

Max. width of work piece	1,000mm
External dimension (W x D x H)	2,125 x 2,280 x 2,200 mm
Weight	1,850kg
Max. height of work piece	70mm
Electric power	17.9kW
Conveyor speed	4m/min

Automation

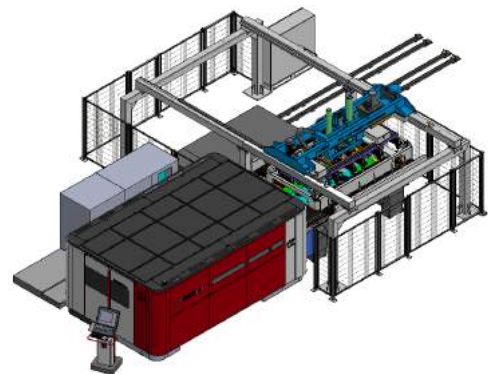
SMART-CELL

Automatic loading / Unloading system



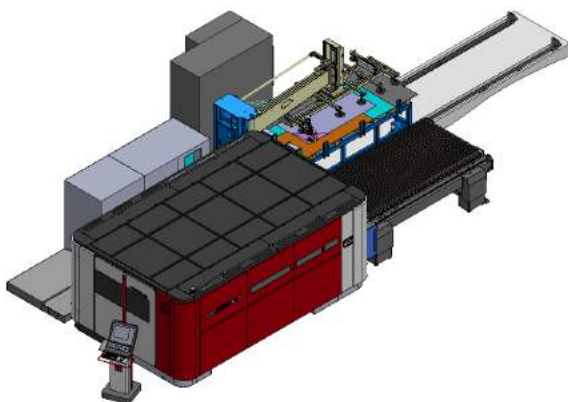
SMART-LIFTER

Automatic loading / Unloading system



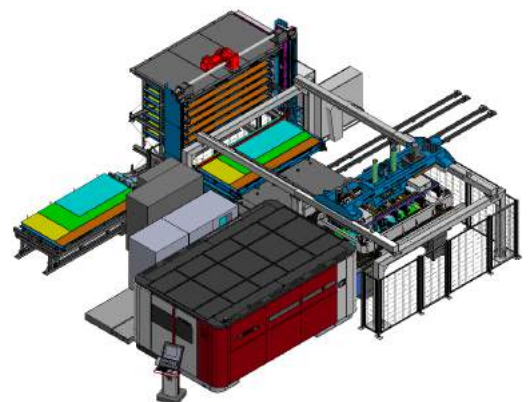
SMART-LOADER

Automatic loading system



SMART-TOWER

Material screening and loading system

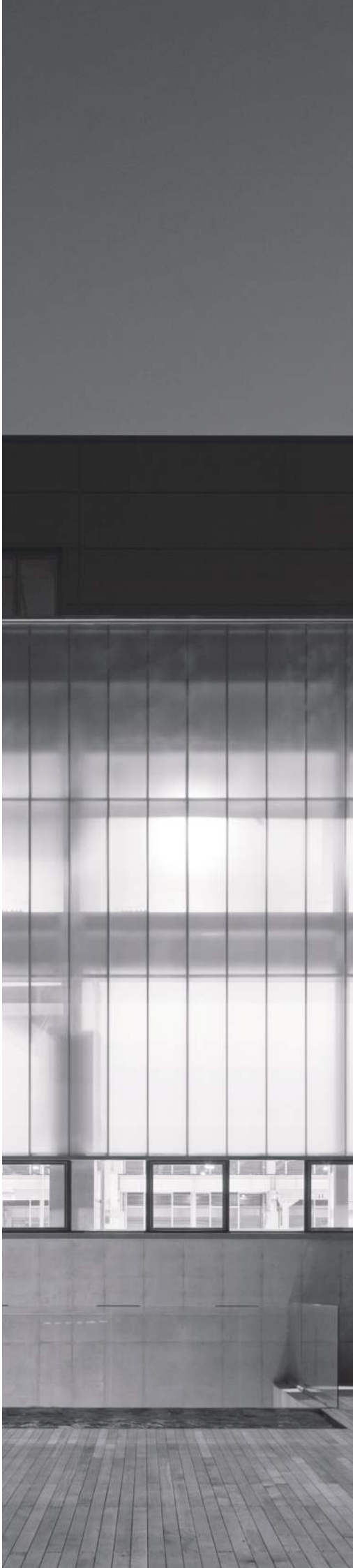


*Smart Tower must be used with Smart Lifter.

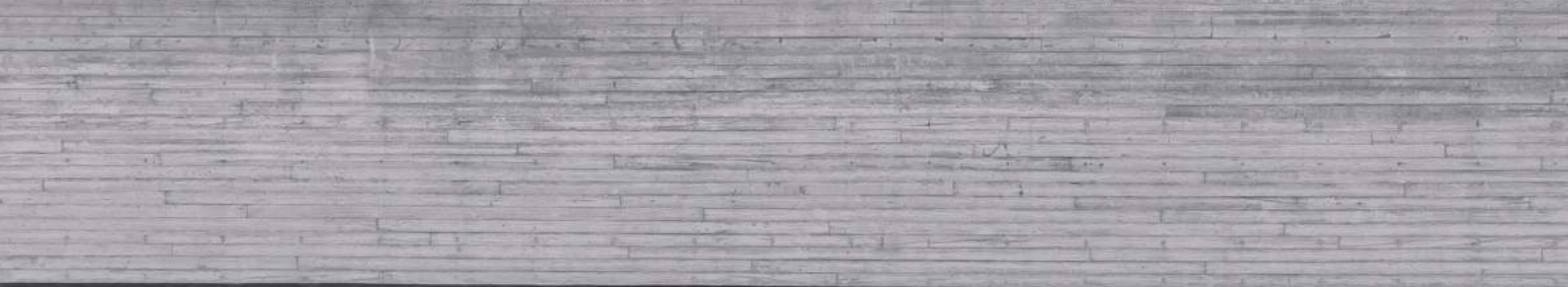
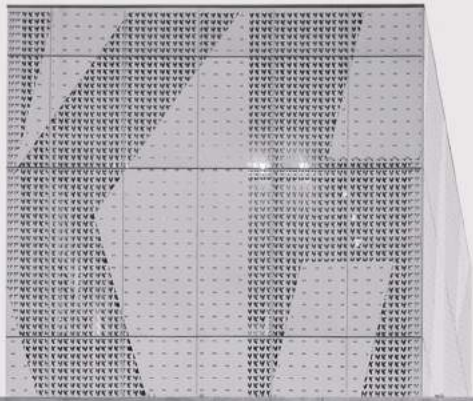
	3015	4020	4025	6020	6025
Smart Cell	•				
Smart Lifter	•	•	•	•	•
Smart Loader	•	•			
Smart Tower	•	•			

Creating the Value of Success

HK Headquarters











HK Laser & Systems CA.2.0 ENG 201611 – We reserve the right to change any specifications without notice.

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