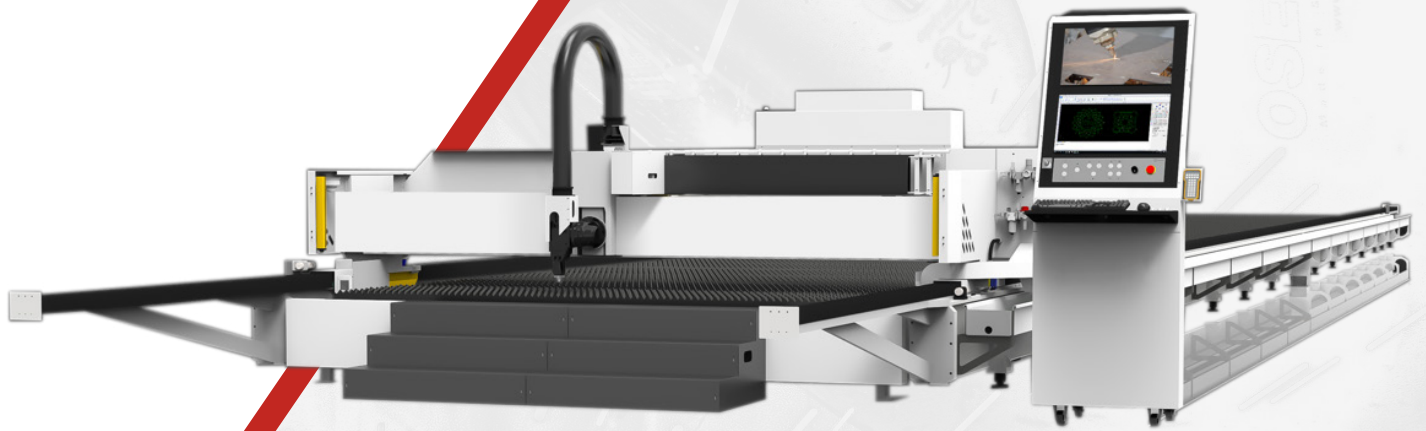


**NXT**  
NEXT WELDING TOOLS



**NXT HIGH CAPACITY  
CUTTING MACHINE  
LASER 30KW BEVEL HEAD**

# Specification and configuration

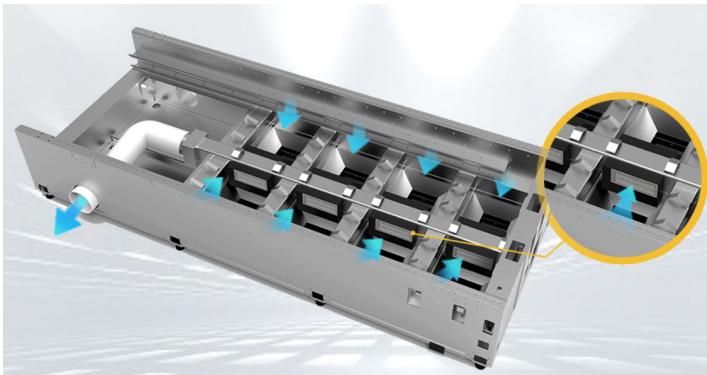
## Technical specifications:

ITEMS	SPECIFICATION
Machine model	NXT-12032
Power supply	3Phase/ 220V 60Hz
Effective cutting width(mm)	3000
Effective cutting length(mm)	12000
Z axis moving distance(mm)	380
A axis	±46°
B axis	±46°
X/Y positioning accuracy	±0.03mm/m
X/Y repeating accuracy	0.03mm
X/Y max moving speed	80m/min
Max acceleration	0.8G
Laser resonator	Maxphotronics 30KW (China)
Cutting head	Cypcut BLT auto focal (China)
CNC control	Cypcut FSCUT8000 (China)
Servo motor	Yaskawa (Japan)
Reducer	Rouist (Germany)
Linear rail	HIWIN (Taiwan China)
Bearing	YYC(China TAIWAN)
Rack and Pinion	YYC(China TAIWAN)
Chiller	HANLI(Chinese)
Electrical parts	Schneider (France)
Gas Proportional Valve	SMC (China)
Down draft cutting table	Made by HUGONG
Auto Lubrication system	Made by HUGONG

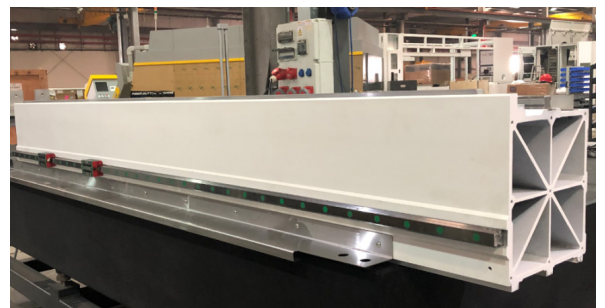
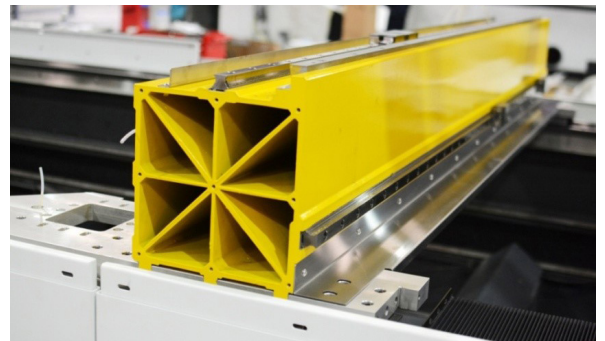
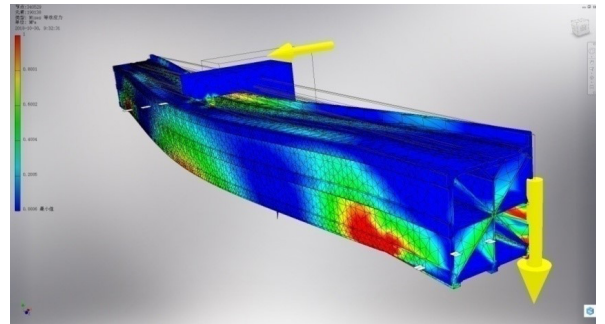
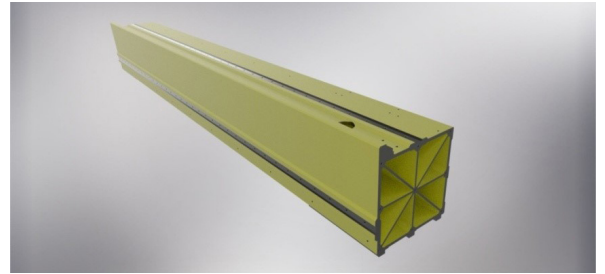
# Machine frame

As the most important part of complete machine, table frame structure is designed and built with reliable mechanical philosophy, reasonable assembly procession and strict quality control procession. ISO9001 and Hugong internal management are involved in whole production. All needed measurement and test instruments are applied for production and QC inspection.

## 4.1 High quality frame with down draft table, pallet changer.



## 4.2 Strong, light and high accuracy extruded aluminum gantry. Newest technology, Stronger, Lighter and Faster!

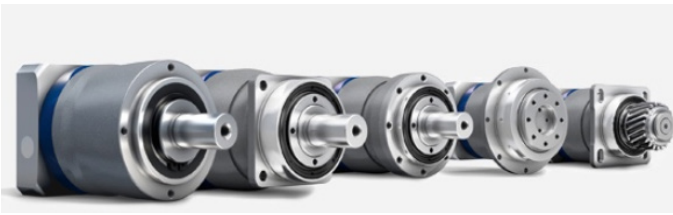


# Part 5 Key Components reference



## Servo motor

1.8KW on Y axis 1.3KW on X axis  
Yaskawa  
Japan

**YASKAWA**

## Reducer

Wittenstein  
Germany

**ROUIST**  
Drive Your Way

## Linear rail

REXROTH  
Germany

**HIWIN®**

## Rack and pinion

Wittenstein  
Germany





**Chiller**

Tongfei  
China



**Proportional valve**

SMC  
Japan



**Electrical parts**

Schneider  
France





# CNC Controller

NXT8000 is EtherCAT bus system designed for ultra high power fiber laser above 6KW, featured by out of box service, easy to install and adjust, full solution functions. It supports customization, automation and informatization solutions, is the leading edge EtherCAT laser cutting control system on the market.



## NXT8000

High Power Laser Cutting  
Ether CAT System

**Technique:** multiple piercing solutions for metal sheet of different thickness; piercing slags removal; vibration suppression; close-loop gas control; separate layer technique for large, medium and small contour cutting, all to expand your machine production capability.

**Vision remnant reuse:** capture remnant sheet by your phone camera or machine camera to reuse the material with high efficiency.

**Find edge:** up to 500mm/s high speed with precision find sheet edge, also provide optional find edge patterns to meet your production needs.

**File formats:** support direct production of DXF and G code; support fast process of LXDS and NRP file generated by CypNest.

**UI:** easy operation with guided and visualized interface.

**Automation:** support coil feeding production, large format production, and sheet-tube combo cutting solutions.

**Convenient maintenance:** support focus correction, optical pollution check photo paper, and oscilloscope monitor functions.

**Digitalization:** provide access with Laser Cloud and MES to collect machine status data and inform maintenance to prolong machine usage.

**Assist functions:** quick cut-off remnant sheet, auto clean nozzle, auto lubrication, pallet changer, dust extractor that add selling points to your machine.

# Raycus Fiber Laser Resonator

NXT enterprise engaged in the research, development and scale production of high-power fiber lasers and core devices and the largest fiber laser R&D and production base with global influence.

NXT has an international first-class fiber laser and key device research and development team including three experts listed in the Thousand Talents Plan and lots of internationally leading patented technologies. It has created many firsts in the industry. It has created many firsts in the industry. The company has successively developed the first 10W pulse fiber laser, the first 25W pulse fiber laser, the first 100W continuous fiber laser, the first 1,000W continuous fiber laser, the first 4000W continuous fiber laser product and the first 6000W continuous fiber laser product. It developed first 10kW industry-level fiber laser. Since its establishment, NXT has realized the industrialization of two series products, 10W-100W pulse fiber lasers and 200W-10000W continuous fiber lasers. It can produce 30,000 pulse fiber lasers and 10,000 continuous fiber lasers of medium and high power. The fiber lasers produced by the company account for 30% of domestic market share and they are exported to Asia, Europe, America, the Middle East and other regions.

# Fiber Lasers

NXT is the enterprise engaged in the research, development and scale production of the laser and core devices and the largest fiber laser R&D and production base with global influence.







# Auto Focal Cutting Head



NXT-25050 is supplied with Cypcut Brand auto focal length and BLT461 for 20KW. BLT high power series designed for metal sheet production industry and adopts EtherCAT bus technology. BLT461 featured by easy-install-and-adjust benefits, and robust performance, is the most intelligent laser on the market.

# Auto Focal Cutting Head

Focusing range:  
 $\pm 46^\circ$

Focusing speed:  
500mm/s

Repositioning accuracy:  
 $\pm 0.01\text{mm}$



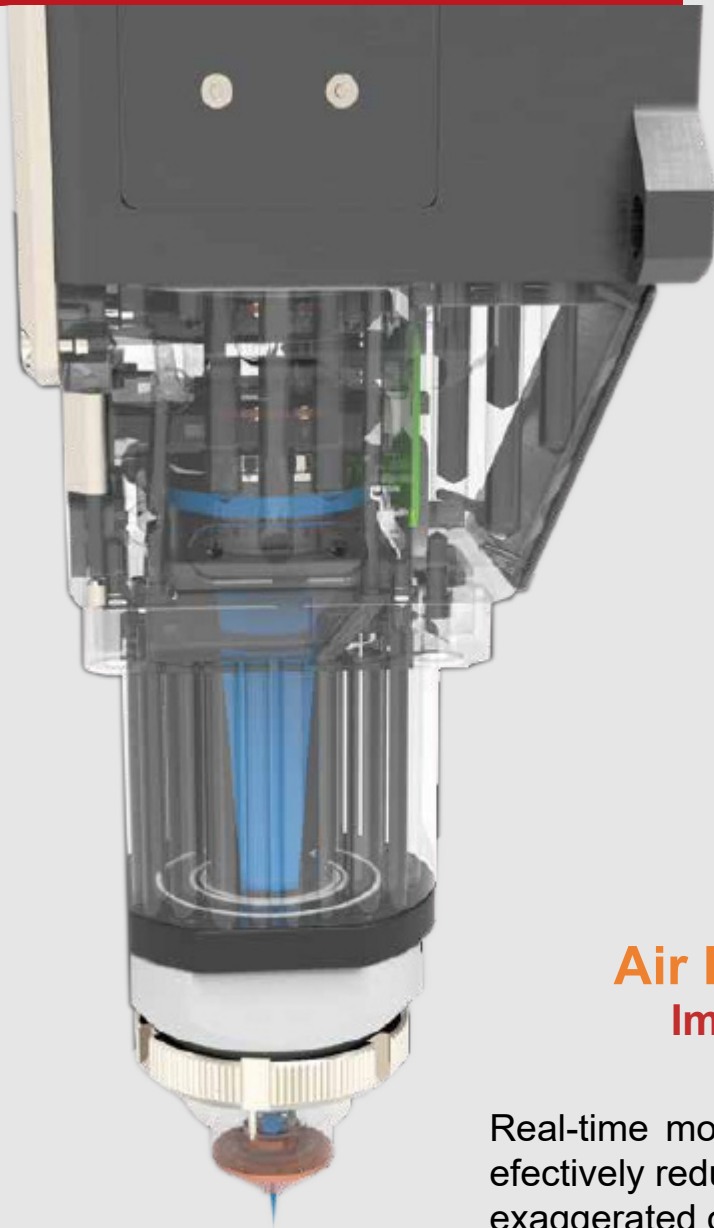
# NXT-BLT4X1 Features



## Anti-Collision Protection More convenient maintenance

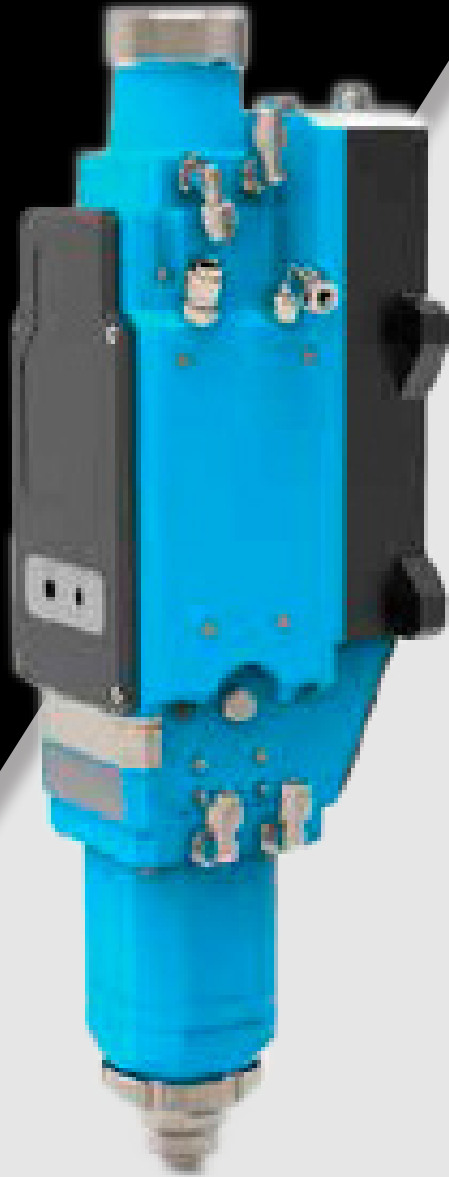
The anti-collision desing of the cutting head effectivly reduces the depot-probability, without technical support, customers can replace the broken parts by themselves, and the maintenande cost is lower.

## NXT-BLT4X1 Features



### **Air Pressure Monitoring** Improve cutting stability

Real-time monitoring of gas flow rate during cutting, effectively reduces the affects of air presure deficiency/ exaggerated on cut surface quality.



## NXT-BLT4X1 Features

### Water Cooling More stable cutting quality

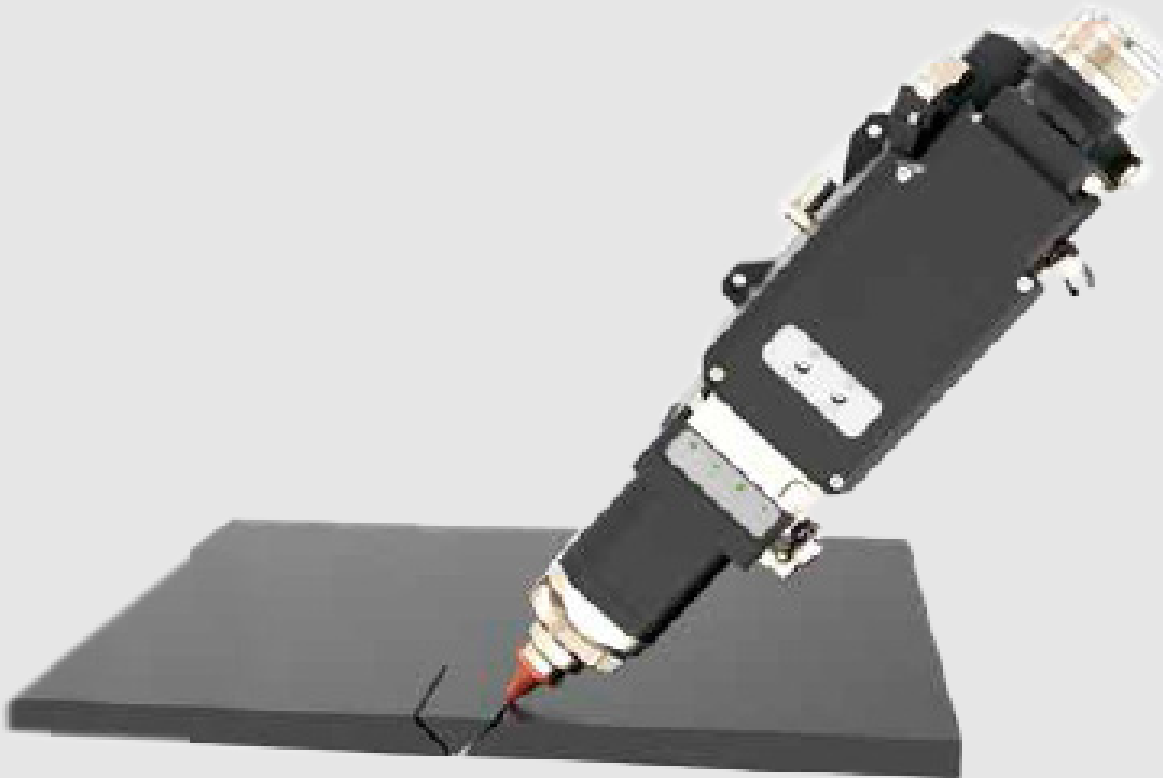
Water-cooled desing covering 90% of the optical path of the cutting head makes cutting more stable.



# NXT-BLT4X1 Features

## Slant Cutting One-time forming

With the AB swivel axis, it can support cutting V, Y, X and other types of grooves, with largest of  $\pm 45^\circ$  groove and one-time forming, reducing the slant opening processes, decreasing cost and increasing efficiency.





**Built-in Amplifier**  
**Improve capacitance**  
**stability**

Strong anti-interference ability, more stable capacitance.

## NXT-BLT4X1 Features

**3D Sensor Head**  
**Multi-type pipe cutting**

I can realize cutting of diferent types of pipes:round pipe, square pipe, channel steel, I-beam etc.

# Off-line Nesting software CypNest



CypNest is a nesting software designed for CypCut/HypCut sheet laser cutting system. It integrates advanced functions of drawing modification, quick nesting, toolpath generation, analysis report and more to meet your production needs.

## Drawing Modification and Import

Intelligent parts recognition, drawing error identification and optimization. Support file formats of DWG and DXF. Support batch create and import parts via Excel table.

## Nesting Strategy

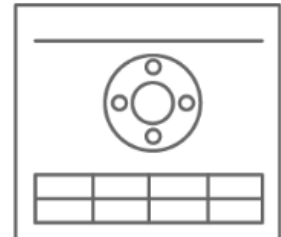
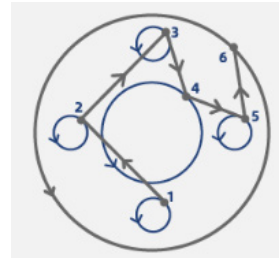
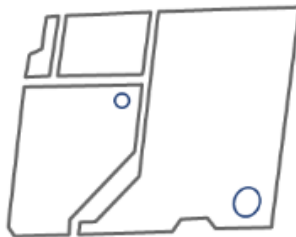
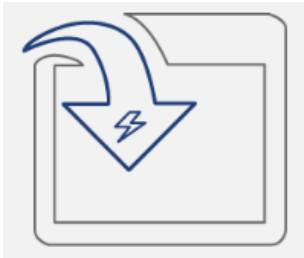
Powerful algorithm engine of high efficiency and production rate; no limit of sheet and parts quantity in nesting; support manual and automatic nesting; support free form sheet nesting.

## Toolpath Optimization

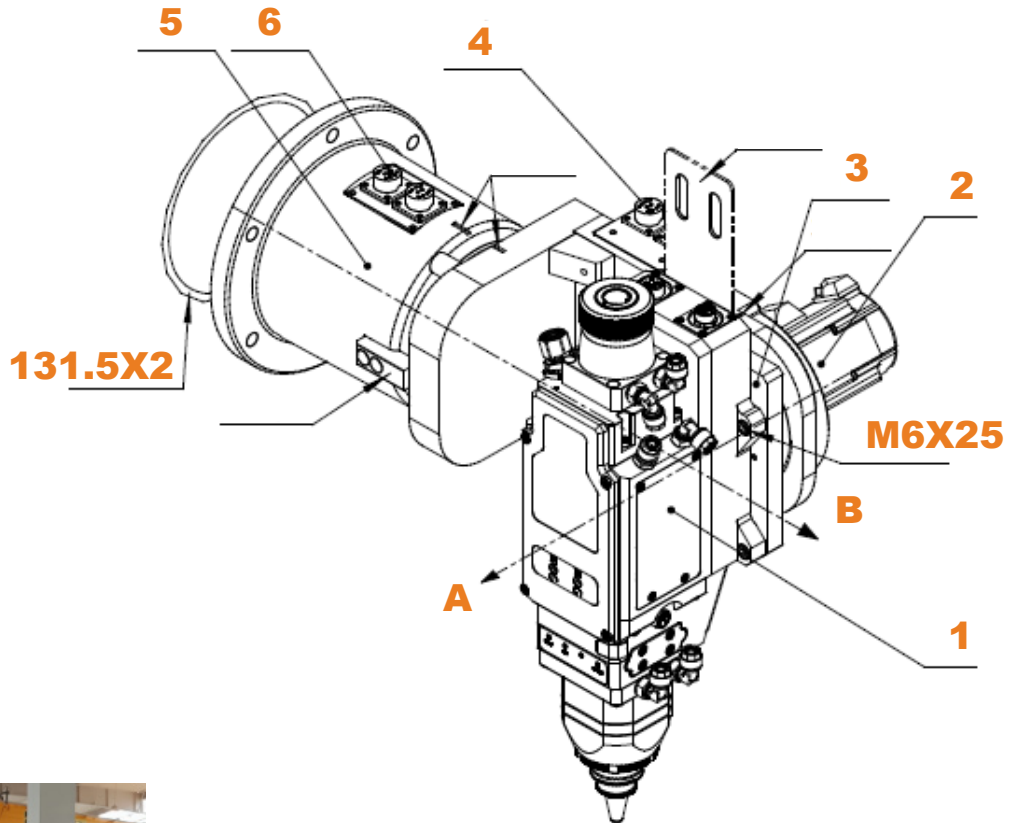
Smart toolpath strategy to minimize travel length; smooth operation style for toolpath adjusting; multiple common line options to meet your production needs

## Production Assist

Generate analysis report of production and pricing. Technique and cutting parameter perfectly match with HypCut/CypCut laser cutting software.



# 10 Bevel device



Swing angle	A axis: $-46^{\circ} \sim 50^{\circ}$ , B axis: $\pm 50^{\circ}$
Maximum speed	37.5r/min (60r/min max1*)
Maximum acceleration	39.2 rad/s <sup>2</sup> (68rad/s <sup>2</sup> max2*)
Positioning accuracy	$\pm 0.02\text{mm}$
Repeatability	$\pm 0.01\text{mm}$
Cable length	20m/30m
Degree of protection	IP653*
Weight	13kg

# Fume extractor system



Number of Filter	6
Air volume	6000m3/h
Air pressure	3600
Filtration efficiency	99.99%
Filtering area	120M2
Entrifugal fan	7.5KW SIEMENS
Collector capacity	50L
Power requirments	380V
Air pressure request	0.6MP, compressed air without oil and water
Unit weight	700kg
Dimension(mm)	1423*1563*2807mm

# Cutting capacity and speed information

30KW cutting parameter

Materia	thickness (mm)	speed (m/min)	Power (W)	Gas	Gas pressure bar	Nozzle type	focus	cutting height (mm)
MS Q235B	8	20-25	3000	N2/AIR	10	4.5	-1	0.5
	10	15-20	3000	N2/AIR	10	4.5	-2	0.5
	12	8.0-10.0	3000	N2/AIR	12	4.5	-3	0.5
	14	9.0-10.5	3000	N2/AIR	14	4.5	-3	0.5
	16	8.0-9.5	3000	N2/AIR	14	5	-4	0.5
	18	6.0-7.0	3000	N2/AIR	20	5	-7	0.5
	20	4.0-5.0	3000	N2/AIR	25	6	-10	0.5
	10	2.2-2.5	6000	O2	0.6	1.2	8	0.6
	12	1.9-2.1	6500	O2	0.6	1.2	9	0.6
	14	1.8-1.9	8000	O2	0.6	1.4	10	0.6
	16	1.6-1.8	8500	O2	0.6	1.4	11	0.6
	18	1.5-1.7	11000	O2	0.5	Single 1.5	+12~13	0.3
	20	1.5-1.6	11000	O2	0.5	Single 1.5	+12~13.5	0.3
	22	1.3-1.5	12000	O2	0.5	Single 1.6	+12~13.5	0.3
	25	1.25-1.4	12000	O2	0.5	Single 1.6	+13~14.5	0.3
	30	1.1-1.3	17000	O2	0.8	Single 1.6	+13~14.5	0.3
	35	1.1-1.2	17000	O2	1	Single 1.7	+13.8~14.5	0.3
	40	0.9-1.1	20000	O2	1.2	Single 1.8	+14~15	0.3
	45	0.7-0.9	28000	O2	1.2	Single 1.8	+15~+16	0.3
	50	0.4-0.5	30000	O2	1.3	Single 1.8	+15~+16	0.3
60	0.2-0.3	30000	O2	1.6	Single 1.8	+16~+17	0.3	
70	0.1-0.2	30000	O2	1.6	Single 1.8	+16~+17	0.3	
80	0.1-0.15	30000	O2	1.6	Single 1.8	+16~+17	0.3	
SS SUS304	6	30-35	30000	N2	8	4.5	-1~-2	0.5
	8	25-28	30000	N2	8	5	-1~-2	0.5
	10	20-22	30000	N2	8	5	-1~-3	0.5
	12	15-17	30000	N2	10	5	-1~-5	0.5
	14	10.0-12.0	30000	N2	14	5	-3~-5	0.5
	16	8.5-10.0	30000	N2	14	5	-4~-5	0.5
	18	6.0-7.0	30000	N2	16	5	-5~-6	0.5
	20	5.0-6.0	30000	N2	20	6	-5~-6	0.5
	25	3.0-4.0	30000	N2	20	6	-6.5~-7.5	0.5
	30	2.0-2.5	30000	N2	25	8	-8.5~-10.5	0.3
	35	1.5-1.8	30000	N2	25	8	-11~-13	0.3
	40	0.9-1.2	30000	N2	25	8	-15~-16.5	0.3
	50	0.2-0.25	30000	N2	25	6	8	0.3
	60	0.15-0.2	30000	N2	25	6	9	0.3
	70	0.1-0.15	30000	N2	25	8	9	0.3
80	0.08-0.12	30000	N2	25	8	9	0.3	
90	0.05-0.1	30000	N2	25	8	9	0.3	
100	0.05-0.08	30000	N2	25	8	9	0.3	
AL	1	60-80	20000	N2	8	3	0	0.5
	2	50-60	20000	N2	8	3	0	0.5
	3	35-45	20000	N2	8	3	-1	0.5
	4	30-40	20000	N2	8	3	-1	0.5
	5	20-25	20000	N2	10	4.5	-2	0.5
	6	15-22	20000	N2	10	4.5	-2	0.5
	8	14-20	20000	N2	10	5	-3	0.5
	10	8.0-10	20000	N2	10	5	-3	0.5
	12	7.0-8.0	20000	N2	10	5	-4	0.5
	14	4.0-6.0	20000	N2	12	5	-5	0.5
	16	3.0-4.5	20000	N2	14	5	-6	0.5
	18	2.3-3.0	20000	N2	14	5	-6	0.5
	20	2.0-2.3	20000	N2	16	5	-7	0.5
	25	1.0-1.5	20000	N2	18	6	-8	0.5
	30	0.6-0.8	20000	N2	20	6	-8	0.5
40	0.3-0.4	20000	N2	25	6	8	0.5	
50	0.3-0.4	20000	N2	28	6	8	0.5	
60	0.2-0.3	20000	N2	28	6	8	0.5	



# Air Compressor



CB-37TV		
Nominal power	HP	37KW
Volume flow	m <sup>3</sup> /min	3.6
Inlet temperature	°C	≤35
Exhaust temperature	°C	≤60 (after cooling)
Installation method:		Indoor installation without foundation
Full load pressure	Mpa	1.55
Power supply requirements	V/Hz/Ph	380/50/3
Cooling mode		wind cooling
Motor level		IP54
Insulation grade		Grade F
Head count	individual	One
outline dimension	Mm	2180*900*2200

# Standard consumables and parts package

## STARTING CONSUMABLES AND PARTS PACKAGE

1. Protection lens	10pcs
2. Nozzle	5pcs
3. Ceramic ring	2pcs
4. Seal ring	2pcs
5. Collimating protection lens	2pcs
6. Focusing protection lens	2pcs
7. Chiller filter	2pcs
8. Laser protection glasses	1pcs



## Packing and shipping

**13.1** NXT-HGLX-25050 machine is packed by vacuum package and steel pallet. Machine is well packed to ensure safety, vacuum package could protect from any air and water to avoid rusting during transportation.



**13.2** Wox40HC container is needed for 1pcs NXT-HGLX-25050 machine shipment





# Service and Warranty

## 14.1 Online Service:

- 7x24 hours on-line technical service is provided
- On-line service is available all machine life.
- On-line service is FREE.

## 14.3 Warranty period

- Warranty period for machine is one year.
- Warranty period for laser resonator is two years.
- Warranty period starts from machine installed on-site.
- Consumables and man-made damage are not covered under warranty.

# Laser machine reference



# NXT High capacity cutting machine. LASER 30KW Bevel Head





Calle Guam 68, Col. Euzkadi, C..P. 02660,  
Del. Azcapotzalco, Ciudad de México.

**TEL. 5521218632**