JMT

STRONG ON SERVICE

FIBER LASERS

JMT offers quality machine tools
for all your sheet metal fabrication needs.

JMT

STRONG ON SERVICE

JMT sells and services quality metal fabrication machine tools for a wide range of sheet metal and structural steel working applications that include bending, rolling, cutting, drilling, positioning, punching, shearing and welding.

JMT, a division of Jorgenson Industrial Companies, is a family owned business established in 1967. Roger Jorgenson made it his mission to build this company on the foundation of strong customer service. His children now continue this tradition since assuming leadership of the company in 2008 and establishing the *JMT* brand.

JMT is supported by an ever expanding team of industry professionals, which include experienced application engineers, sales consultants and veteran service engineers. *JMT* also has a resourceful parts and tooling department to keep your machines working at optimal performance.

The company has a 30,000 square foot showroom, warehouse and service center at its headquarters in Salt Lake City, Utah. *JMT* also has a 20,000 square foot warehouse and service center in Atlanta, Georgia.

A national network of over 30 select distributors trained to sell and service *JMT* machines are strategically located to provide the fastest response times to our customers.

JMT machines are built to our stringent set of design and quality standards in state-of-the-art manufacturing facilities. *JMT* partners with manufacturers that have extensive experience building machine tools for some of the leading suppliers in the industry.

JMT product designs combine accuracy, speed, flexibility, durability, reliability and advanced technology to deliver machines with the highest performance-to-price ratio in the industry.

SOME OF THE FABRICATION EQUIPMENT OFFERED BY *JMT*

The machinery showroom at *JMT's* corporate headquarters.

JMT press brake demonstation at the FabTech trade show.

For more information please visit **www.JMTUSA.com**
or call toll free **855-773-7727** (855-PRESS-BRAKE).
or email us at **JMT@JMTUSA.com**.

JMT FIBER LASER TECHNOLOGY

JMT solid-state fiber lasers are a cost effective and efficient means for cutting sheet metal. Fiber laser technology uses no laser gas and requires less maintenance and consumes less electricity than other types of lasers. Fiber lasers are an ideal solution for a broad range of material types and material thicknesses below one inch.. Fiber lasers cut faster at lower cost than any CO2 laser at the same power.

Maintenance

Since the diode construction is all solid state, there are no mechanical parts that could wear or need adjustment. Our IPG powered laser has an estimated diode lifetime of more than 100,000 hours. This fiber laser source is truly maintenance free.

Laser Gas

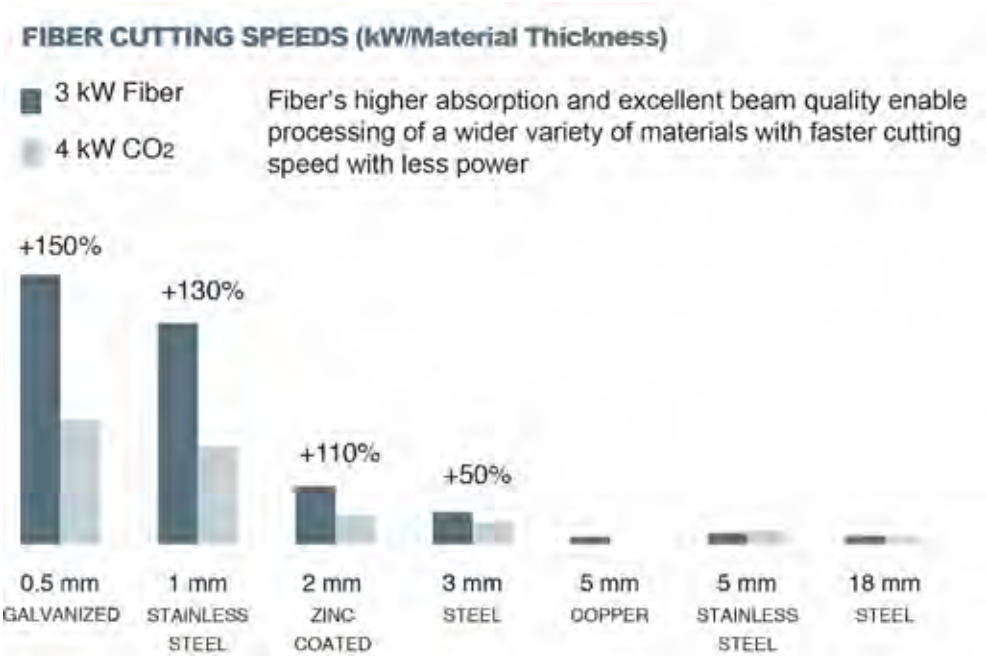
Unlike CO2 lasers that generate their beam by exciting gas molecules with an electrical discharge, fiber lasers are powered by a diode laser that requires **No Gas, No Blower, or No Vacuum** for its operation.

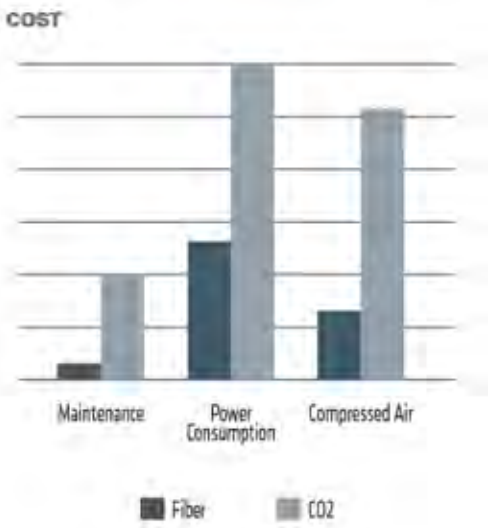
Beam Delivery System

Fiber lasers transmits their energy through a flexible optical fiber from the source to the cutting head. There are **No Mirrors** to adjust or maintain. There is no chance of beam contamination since the light does not travel through air.This makes fiber lasers easier to integrate into a production environment.

Reduced Power Consumption

Fiber has a 30% wall efficiency with four times the beam power denstity, compared to 8% wall efficiency for a CO2 laser. The fiber laser total power consumption is 70 kVa (CNC, Laser, Chillers, Dust Collector, Table).





Fiber Laser Control & Software

Control Unit

A state-of-the-art numerical control and drive system is one reason JMT fiber lasers can deliver faster processing cycle times than other laser systems on the market. Our graphical user interface is designed for easy operation with a complete library of cutting parameters for various materials and thicknesses. This enables the operator to achieve optimal cutting results in a minimum amount of time. Programs can be easilby loaded into the control unit with either a USB stick or via a fast Ethernet connection to the company network.

CAD/CAM Nesting Software

The CAD/CAM software provided with our fiber laser comes complete with all the tools needed to import or draw parts. The operator can easily prepare and automatically optimize the cutting sequence for different part geometries and make nests for efficient cutting.

Standard Features

Linear Motion System

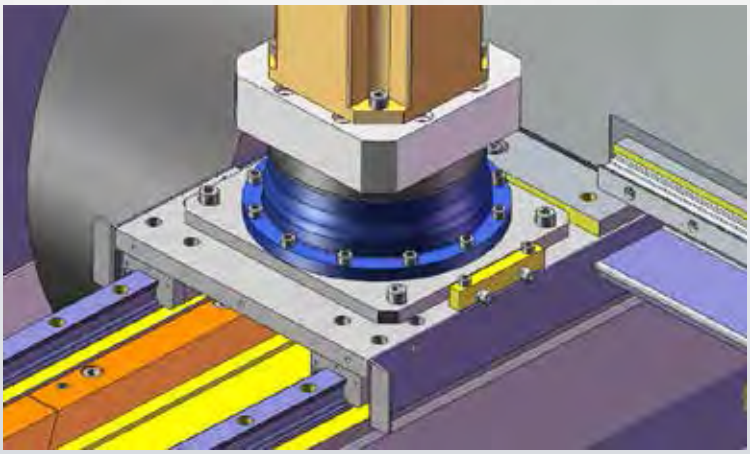
State-of-the-art linear motors further enhance the accuracy of the machine by providing higher dynamics than the rack and pinion system. When the application demands high precision and/or require many positioning movements between complex shaped features, the linear motors will reduce the dead times in the process and increase the productivity.

Ridid Frame & Gantry

The foundation for all JMT laser machines is a rigid stress-relieved welded steel frame construction upon which a stiff gantry axis system moves the cutting head. The design guarantees accurate parts even when cutting with the fastest speeds and under the highest accelerations.

Standard Features

Direct Drive Rack & Pinion



The stable construction concept allows extremely high acceleration values. The axes are driven by dynamic low moment of inertia and high performance AC servo motors, that require no maintenance. There are no intermediate load transmitting elements between the motor and the pinion, which otherwise could cause loss of precision. High precision two-way, hardened helical racks with low running clearance make it possible to achieve very high acceleration and speeds.

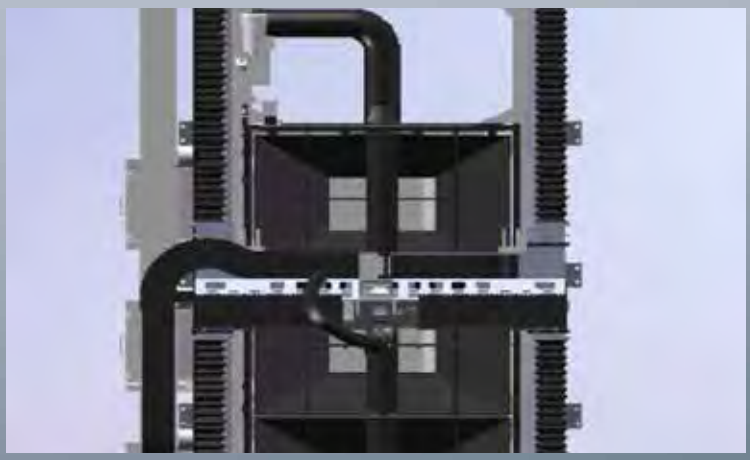
Shuttle Table

Integrated shuttle tables maximize productivity and minimize material handling times. The shuttle table and pallet change system allows convenient loading of new sheets or unloading of finished parts while the laser is cutting another sheet inside the working area. The tables are fully electric and maintenance free. There are no hydraulic oils to handle and the table changes take place fast, smooth and energy efficient.
Not available on Smart Series

Scrap Removal

The standard lateral scrap drawers allow the removal of scrap pieces from the working area without the need to interrupt the cutting process. The sideways operation of the short conveyors allow for easy maintenance and trouble-free operation. Motorized conveyors are available as an option.

Fume Extraction System



Efficient fume extraction by means of shutters which are controlled in accordance with cutting head position results in more efficient use of the filtration system. Therefore a smaller lower cost system can be used. The system consists of six fume extraction zones (as seen below). The improved suction flow design results in:

Standard Features

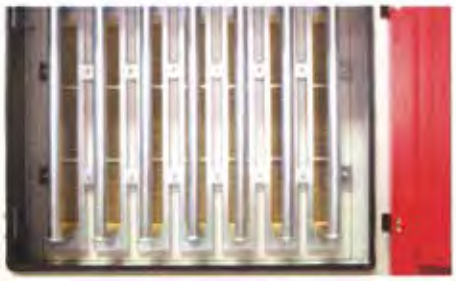
Intelligent Auto Focus Cutting Head

A replaceable, low-cost protection window shield the JMT auto-focus cutting head from contamination. The 1µm wavelength light of fiber lasers is very sensitive to dust or other contamination produced in the cutting or piercing process, therefore having the cutting head with an additional cover ensures that all critical parts remain as clean as possible.

An integrated distance sensor is capable of automatically adjusting the head height to compensate for differences in the sheet even at the extremely high cutting speeds that can be achieved with today's fiber laser technology.

Dust Collection & Filtration

Dust, particles and harmful fumes generated during cutting are removed with a dust collection and filtration system. The filtration system has an intellegent control unit (CPU) from Siemens.



Safety & Protective Measures

The laser cutting system, machine and CNC controller are equipped with safety devices. Safety switches and sensors protect the operator from hazards and counter-act damage to the system. A diagnosis system keeps the operator informed about the current status of the system and allows him to intervene in the dialogue to make corrections that remedy these faults. The steps required for the solution appear as plain text on the controller screen.

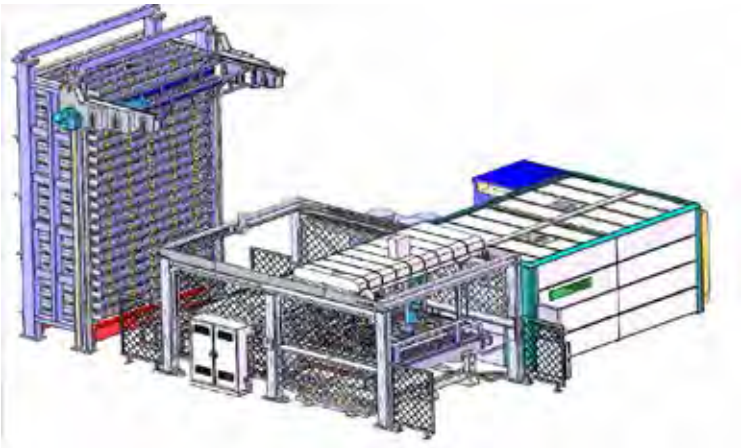
The working area of the machine is protected by light guards. During the laser cutting operation the safety devices are electromagnetically locked in order to prevent an accidental triggering of the machine's EMERGENCY STOP function. The machine's safety equipment corresponds to the CE guidelines currently in force. The laser head is guarded along the Y axis by flexiglass material which allows clear vision of the cutting area.

Optional Features

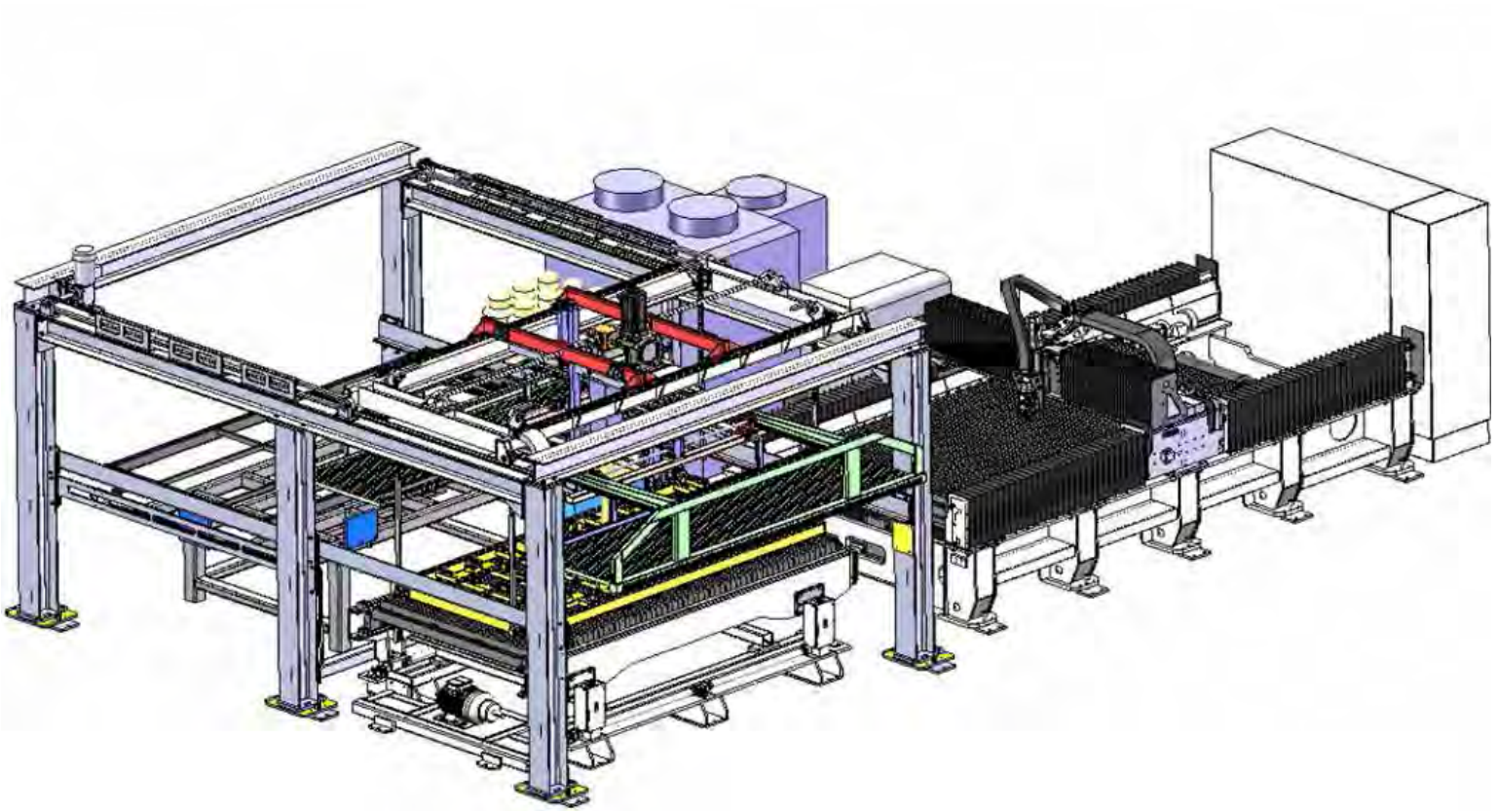
Motorized Lateral Scrap Conveyors

Three optional lateral scrap conveyors offer easy access, easy maintenance and low electrical consumption.

Compact Automation



JMT's automation has been designed with maximum flexibility and allows for upgrading as your production needs grow. Its compact footprint reduces floor space requirements, thereby lowering production costs.



JMT - HDF

JMT - HDF

PERFORMANCE DATA

		Units	1 kW	2 kW	3 kW	4 kW	6 kW
Laser Sources	**Wavelength**	nm	1070 - 1080	1070 - 1080	1070 - 1080	1070 - 1080	1070 - 1080
	Power Output	kW	0.1 - 1	0.2 - 2	0.3 - 3	0.4 - 4	0.6 - 6
	Polarization	-	Random	Random	Random	Random	Random
	Max. Pulse Frequency	kHz	5	5	5	5	5
	Gas Consumption	-	-	-	-	-	-
	Max. Power Consumption	kW	4	8	12	16	24
Application Range (Max. Thickness)	**Mild Steel**	in	0.3149	0.4724	0.6299	0.7874	0.9842
	Stainless Steel	in	0.1574	0.2362	0.3149	0.3937	0.4724
	Aluminum	in	0.1574	0.2362	0.3149	0.4724	0.5905
	Brass	in	0.1574	0.2362	0.3149	0.3937	0.4724
	Copper	in	0.0787	0.1181	0.1968	0.2362	0.3937

MACHINE SPECIFICATIONS

		Units	JMT-HDF 3015	JMT-HDF 4020	JMT-HDF 6020
Available Power Output		kW	1,2,3,4,6	2,3,4,6	2,3,4,6
Machine Dimensions	Height	in	96	98	100
	Width	in	160	189	189
	Length	in	400	496	680
	Weight	lb	26,456	37,975	58,423
Working Range	X-axis	in	120.5	161.4	242.1
	Y-axis	in	61.0	82.7	82.7
	Z-axis	in	7.9	7.9	7.9
	Max Sheet Size	in	120 x 60	160 x 80	240 x 80
	Max Sheet Wt.	lb	2205	2205	5,952
Dynamics	Max. Speed X-axis	ipm	3,937	3,937	3,937
	Max. Speed Y-axis	ipm	3,937	3,937	3,937
	Max Speed Simultaneous	ipm	5,551	5,551	5,551
	Max. Acceleration X-axis	in/s^2	551	551	551
	Max. Acceleration Y-axis	in/s^2	551	551	551
	Max. Acceleration Simultaneous	in/s^2	756	756	756
	Positional Accuracy	in	0.002	0.002	0.002
	Repeatability	in	0.002	0.002	0.002

JMT - HDFL

JMT - HDFL

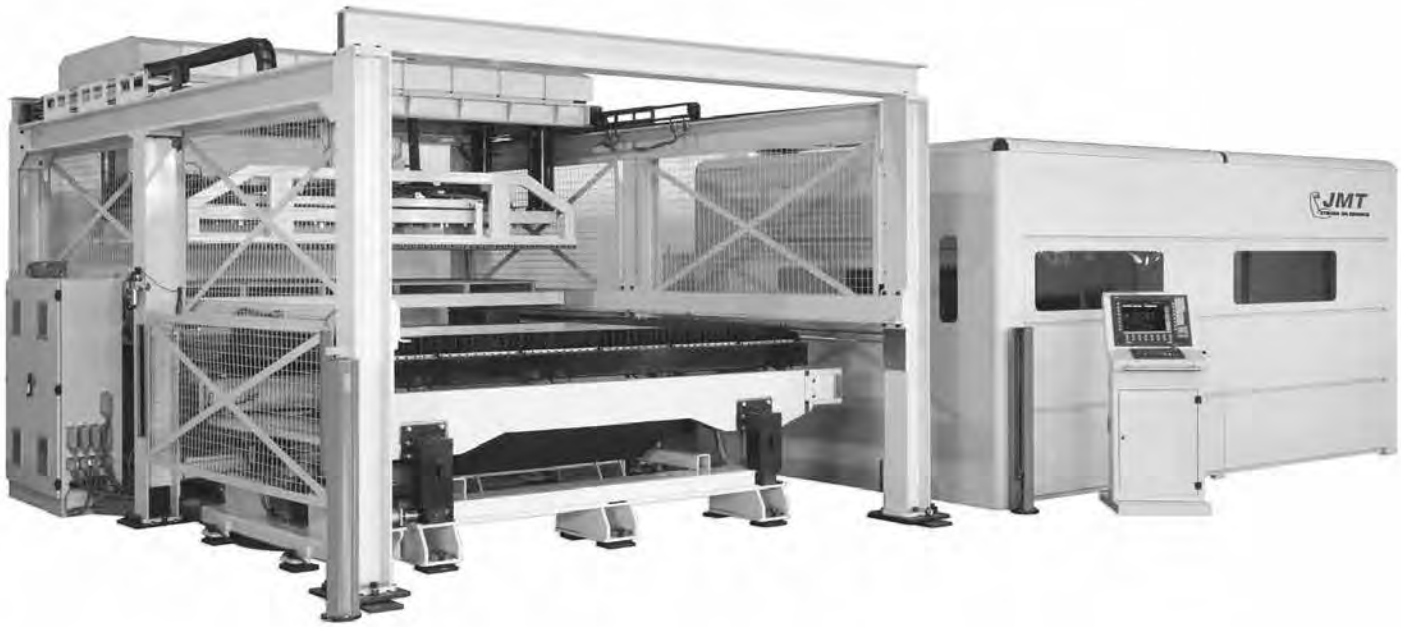
PERFORMANCE DATA

		Units	1 kW	2 kW	3 kW	4 kW	6 kW
Laser Sources	**Wavelength**	nm	1070 - 1080	1070 - 1080	1070 - 1080	1070 - 1080	1070 - 1080
	Power Output	kW	0.1 - 1	0.2 - 2	0.3 - 3	0.4 - 4	0.6 - 6
	Polarization	-	Random	Random	Random	Random	Random
	Max. Pulse Frequency	kHz	5	5	5	5	5
	Gas Consumption	-	-	-	-	-	-
	Max. Power Consumption	kW	4	8	12	16	24
Application Range (Max. Thickness)	**Mild Steel**	in	0.3149	0.4724	0.6299	0.7874	0.9842
	Stainless Steel	in	0.1574	0.2362	0.3149	0.3937	0.4724
	Aluminum	in	0.1574	0.2362	0.3149	0.4724	0.5905
	Brass	in	0.1574	0.2362	0.3149	0.3937	0.4724
	Copper	in	0.0787	0.1181	0.1968	0.2362	0.3937

MACHINE SPECIFICATIONS

		Units	JMT-HDFL 3015	JMT-HDFL 4020	JMT-HDFL 6020
Available Power Output		kW	1,2,3,4,6	2,3,4,6	2,3,4,6
Machine Dimensions	Height	in	96	98	100
	Width	in	160	189	189
	Length	in	400	496	680
	Weight	lb	26,456	37,975	58,423
Working Range	X-axis	in	120.5	161.4	242.1
	Y-axis	in	61.0	82.7	82.7
	Z-axis	in	7.9	7.9	7.9
	Max Sheet Size	in	120 x 60	160 x 80	240 x 80
	Max Sheet Wt.	lb	2205	2205	5,952
Dynamics	Max. Speed X-axis	ipm	7,874	7,874	7,874
	Max. Speed Y-axis	ipm	7,874	7,874	7,874
	Max Speed Simultaneous	ipm	11,102	11,102	11,102
	Max. Acceleration X-axis	in/s^2	787	787	787
	Max. Acceleration Y-axis	in/s^2	787	787	787
	Max. Acceleration Simultaneous	in/s^2	1,112	1,112	1,112
	Positional Accuracy	in	0.0008	0.0008	0.0008
	Repeatability	in	0.0008	0.0008	0.0008

JMT-HD CELL



JMT-HD CELL

JMT offers a complete work flow solution for your laser cutting operations. The JMT-HD CELL combines the cutting efficiency of a JMT-HDF fiber laser with the convenience of an automated material handling system.

The JMT-HD CELL offers a maximum of flexibility on a minimum of required floor space.Two different configurations are available, including one system adapted for integration with automatic storage.

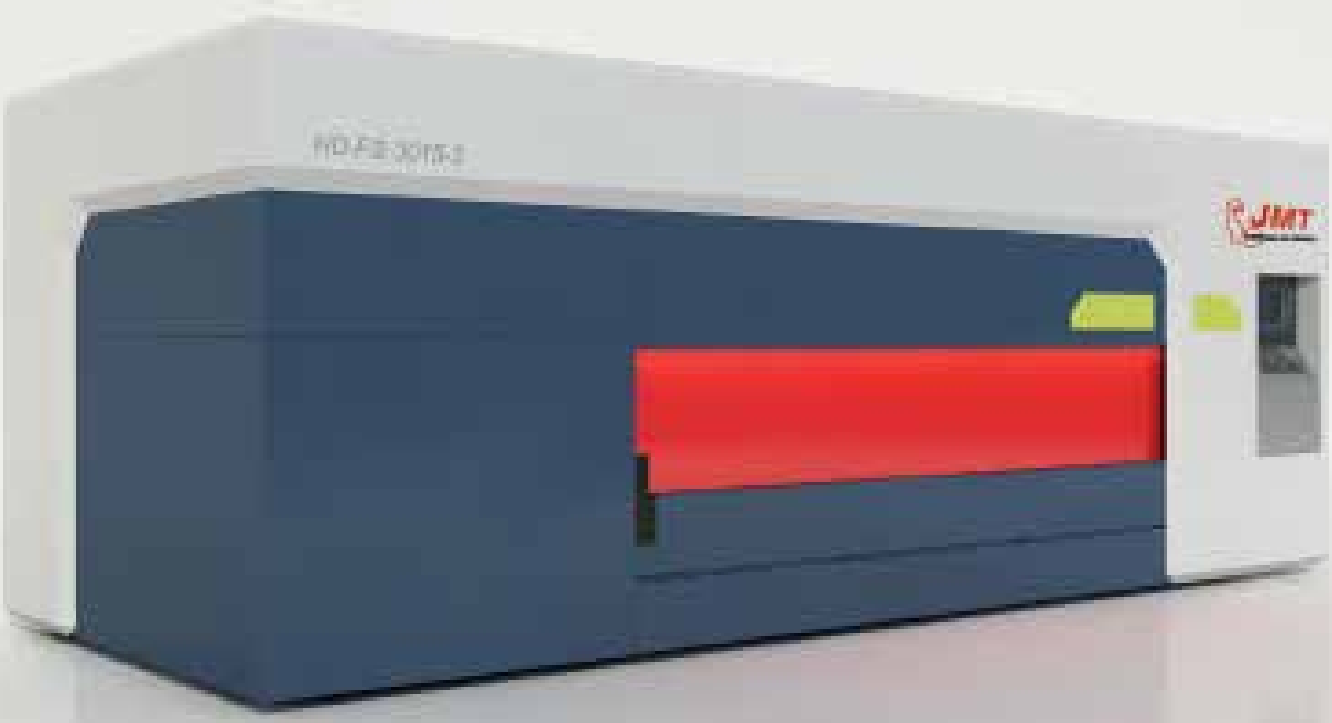
The CELL is a fully functional system integrated with the laser controls: work queues of several sheets are activated by pressing one single button and there is no separate control panel for the loading/ unloading unit.

The JMT-HD CELL is a cost-effecitve solution when you need to optimize your material handling and work flow to increase your laser productiviity.

CELL SPECIFICATIONS

		Units	
Dimensions	Machine Height	in	250
	Machine Width	in	159
	Machine Length	in	138
	Machine Weight	lb	17,637
	Layout Area	in	473 in x 296 in
Working Range	Max. Sheet Dimensions	in	120
	Min. Sheet Dimensions	in	60
	Max. Sheet Thickness	in	1
	Min. Sheet Thickness	in	0.020
	Max. Sheet Weight	lb	2205
	Max. Height on Unload Table (incl. pallet)	in	11.8
	Max. Weight on Unload Table	lb	6,614
	Max. Height on Loading Table (incl. pallet)	in	11.8
	Max. Weight on Loading Table	lb	6,614

JMT-HDFS



JMT-HDFS with Side Access Door:

- Optimized working area
- Strong frame
- Faster table change
- Lighter cutting table
- Easy to reach the cut sheet
- 2 axis, less energy consumption.
- Y-axis is mounted in the middle.
- Motorized front door

JMT-HDFS

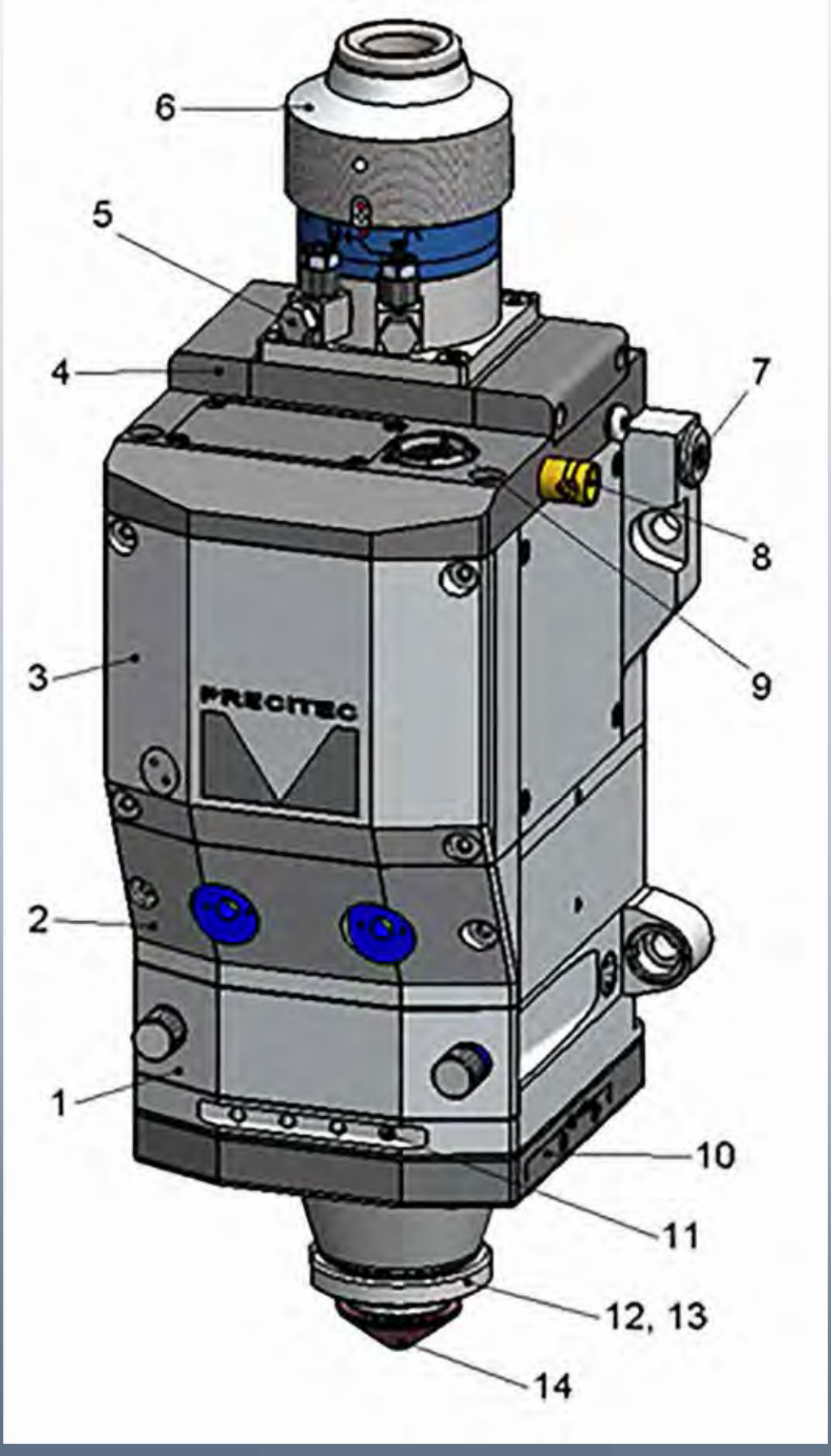
PERFORMANCE DATA

		Units	1 kW	2 kW	3 kW
Laser Sources	**Wavelength**	nm	1070 - 1080	1070 - 1080	1070 - 1080
	Power Output	kW	0.1 - 1	0.2 - 2	0.3 - 3
	Polarization	-	Random	Random	Random
	Max. Pulse Frequency	kHz	5	5	5
	Gas Consumption	-	-	-	-
	Max. Power Consumption	kW	4	8	12
Application Range (Max. Thickness)	**Mild Steel**	in	0.3149	0.4724	0.6299
	Stainless Steel	in	0.1574	0.2362	0.3149
	Aluminum	in	0.1574	0.2362	0.3149
	Brass	in	0.1574	0.2362	0.3149
	Copper	in	0.0787	0.1181	0.1968

MACHINE SPECIFICATIONS

		Units	JMT-HDFS 3015
Available Power Output		kW	3
Machine Dimensions	Height	in	96
	Width	in	160
	Length	in	400
	Weight	lb	26,456
Working Range	X-axis	in	122
	Y-axis	in	61
	Z-axis	in	4.9
	Max Sheet Size	in	120x 60
	Max Sheet Wt.	lb	2,205
Dynamics	Max. Speed X-axis	ipm	3,345
	Max. Speed Y-axis	ipm	3,345
	Max Speed Simultaneous	ipm	4,724
	Max. Acceleration X-axis	in/s^2	397
	Max. Acceleration Y-axis	in/s^2	397
	Max. Acceleration Simultaneous	in/s^2	556
	Positional Accuracy	in	0.002
	Repeatability	in	0.002

Cutting Head



Cutting Head

PROCUTTER HEAD

1 - Protective window (process side)

2 - Focusing unit with horizontal beam adjustment

3 - Collimation unit with vertical focus adjustement

4 - Protective window (fiber side)

5 - Cooling water for fiber connector

6 - Fiber connector

7 - Cutting gas connector

8 - BNC Distance measurement connector

9 - Communication connector

10 - Sensor insert SE

11 - Status display (4 x LED)

12 - Ceramic part

13 - Nut

14 - Nozzle

Notes

Notes

JMT HELPS YOU DO MORE WITH METAL

CUT IT

BEND IT

ROLL IT

FABRICATE IT

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STRONG ON SERVICE

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