

# iLaser

FIBER LASER





1950

We produced our first machine.



1971

We produced the first sheet metal working machine "Perforation Press".



1974

We started to produce "Heavy-duty Press Brakes and Guillotine Shears" and we had the reputation (distinction) of being the first Turkish manufacturer for heavy press brakes and shears as MVD brand.



1981

We moved to a new factory and added 4 roll bending machines and Expanded Metal presses to the production in the next year.



1994

We produced the first Tandem Press Brake in Turkey.



2001

We finalized the CE conformity procedures and had marked CE to MVD machines.



2003

We started manufacturing CNC Hydraulic Turret Punch machines.



2010

We started manufacturing Plasma Cutting Machines.



2011

We started manufacturing Fiber Laser Cutting Machines.



2015

We started manufacturing Hybrid Press Brake.



2017

We established the Research and Development Center certified by the Ministry of Industry and Technology.

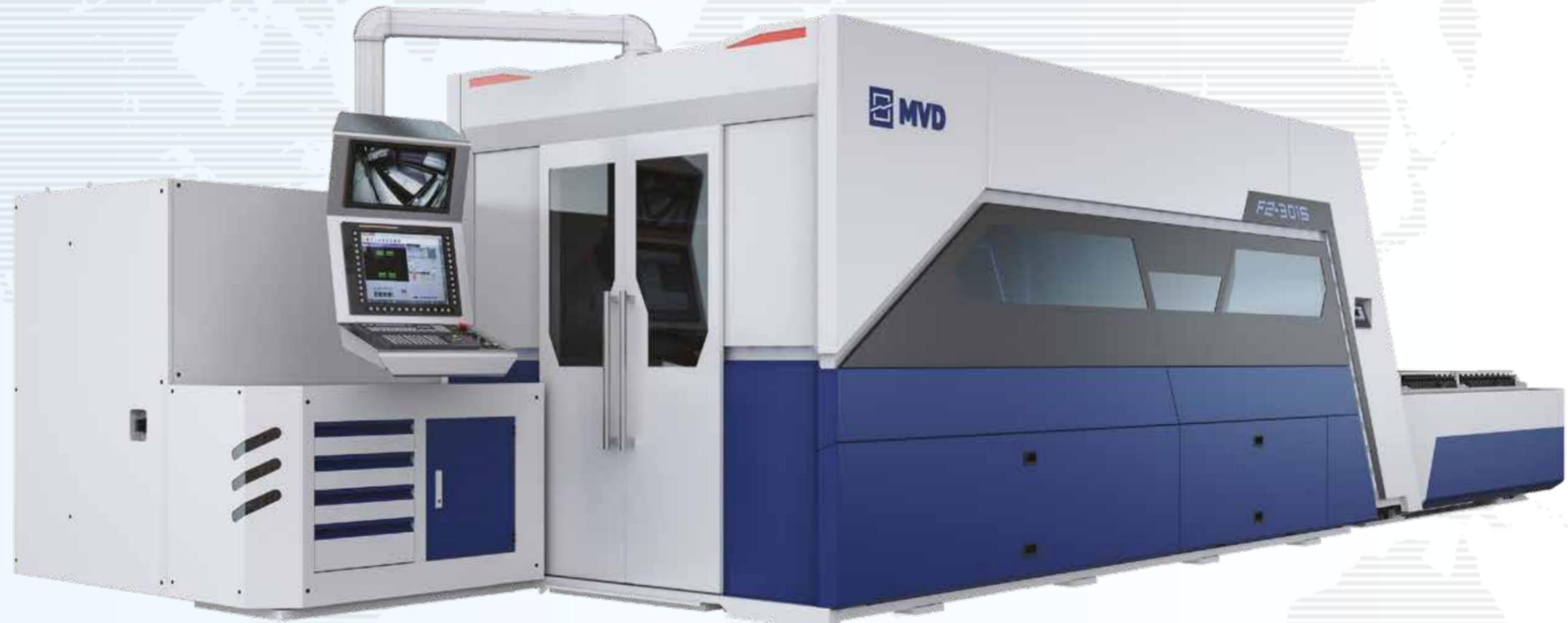


2018

We started manufacturing Servo Press Brake.



# iLaser FIBER LASER Sheet Metal Cutting Machine



## NEW CONCEPT

THANKS TO MVD RESEARCH & DEVELOPMENT CENTER

Ready to Start: Machine, laser source, head & control - all connected during transport

Compact: Fits in a regular truck, less installation time, less foot print

Operator friendly: Easy open side covers and for easy maintenance access.

Making sure of starting the machine same as factory settings and adjustments.

Analyzed, tested Bridge, Frame, and Structural design.

INDUSTRY 4.0



# iLaser FIBER LASER

ENHANCING POWER

## Sales and Service Network

90 Countries



**High** quality technology performance quality precision speed performance speed productivity technology accuracy

## General Specifications

- Designed with high precision criteria, rigid body. Power transmission by Rack & Pinion system
- IPG or nLight laser resonators
- IPG or OMI chiller units
- Precitec Procutter Laser Cutting Head
- Advanced CNC controller, wide Touch Screen
- Faster, powerful loading unloading shuttle table
- Operator friendly interface



## Cutting Head

World's most known and trusted Precitec ProCutter Laser Cutting Head

### ▶ Led Status Indicators

-  Motor system state
-  Head temperature
-  Pressure
-  Glass heat/pollution status

### ⚡ Protective Glass

Protecting the optics against dirt and fume, monitoring of attendance and contamination, tool-free, easy change cartridge

### ⚡ Auto Height Adjusting Sensor

Keeping the cutting height same all over the sheet metal, assuring high-quality cuts by the capacitive sensor in the head.

### ⚡ Auto Motorised Focus System

Motorized focus position adjustment for automatic machine setup and piercing work

### ⚡ Smart status display

Real-time status monitoring over the CNC panel or mobile app.



## CNC Control Unit

ESA and LYNCA CNC Controllers 21" wide touch screen, with easy use panel design all controls are at your fingertips

### ⚡ Camera Monitoring System

By remote access or next to the control panel, you are able to watch the work process real-time



### ⚡ CNC Control Panel

- ▶ Windows operating system
- ▶ Multi-touch graphic screen
- ▶ Multifunctional keyboard, button/joystick/speed potentiometer
- ▶ EtherCAT communications for data transfer or machine control
- ▶ Enhanced Database for cutting parameters, for different type materials and thicknesses
- ▶ Fly Cut functions for same direction high-speed cutting
- ▶ "No Piercing" technology for thin materials, efficiency time and cost improvements
- ▶ Better results at thick cuts, by prioritizing all piercings process before regular cutting
- ▶ Remote connection to PC
- ▶ Multi-language support
- ▶ Enhanced sheet metal recognition software
- ▶ Referencing and sheet alignment functions
- ▶ Setting different user-login levels for operators/maintenance/admin
- ▶ Multi-functional workpiece job order search/recall function





## Power Source

Perfect  
Cutting  
Perfect  
Beam Quality

### Multi Mode Fiber Laser Resonators

- ▶ IPG, nLight and Raycus various resonator options
- ▶ Optimum focus diameter
- ▶ Maintenance free technology,
- ▶ Continuous perfect beam quality with a laser beam is transmitted by the fiber core through the fiber cable.
- ▶ High efficiency, low consumptions of electricity fiber laser technology, 5-6 times the lower running cost
- ▶ Possibility to cut Steel, Stainless Steel, Aluminum, Copper, Brass, Titanium and various materials



## Chiller Unit

- ▶ IPG or OMI options
- ▶ Digital micro processing controlled industrial purpose chiller unit



## Cad/Cam Software

### Automatic Part Nesting

- ▶ Libellula and Lantek options
- ▶ Offers perfect nesting efficiency for automatic or manual part nesting
- ▶ Copy, move, reverse, turn alignment manual, semi-automatic, functions geometrical working
- ▶ Advanced nesting algorithm optimizes the use of a material, minimizing scrap.
- ▶ Can work with standard sheets stocked in the warehouse and/or with scraps obtained from previous processes.

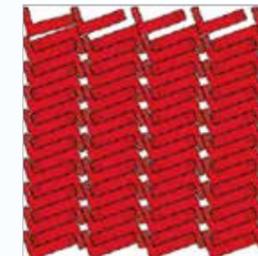
Conventional Nesting

Scrap rate %31.7



Advance Nesting

Scrap rate %22.2



### Automatic Camera Nesting and Referencing

The advanced camera system can recognize and measure the location, size of a randomly placed sheet on the table. Allows you to place and do nesting for parts Helps you start just in a few seconds

## Easy Use

Short preset and programming process

Libellula

lantek



### High Accuracy, Speed and Stability

- ▶ Automatic cutting path determination
- ▶ Time/Cost analyses
- ▶ Simulation before actual cutting
- ▶ Smart Part importer / Exporter from CAD system, DXF, DWG, IGES, Step etc file formats
- ▶ Part Drawing module, call parts, automatic or manual nesting, machining, CNC codes generates, Sheet metal stock searching etc
- ▶ Various input/output methods, film burning, specialized piercing, fast laser, micro-joints, head direction management, edge binding
- ▶ Complicated functions and programmable cad cam system for Common cut, micro joint, lead in lead out parameters.



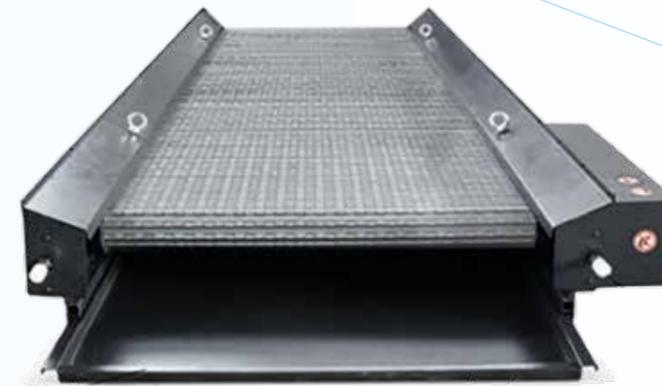
### ⚡ CNC Controlled Shuttle Table

The shuttle table and pallet change system allows convenient loading of new sheets or unloading of finished parts while the machine is cutting another sheet inside the working area. Maximizing the productivity and minimize the material handling times

Rigid, fast loading/unloading table

### ⚡ Dust Collection Filter

Fully automatic dust collection filter absorbs all the harmful dust, fume, particles from the laser cabinet. With high sucking capacity making sure of better cutting environment.



### Conveyor ⚡

Removes scrap pieces from the working area without interrupting the cutting process.

### ⚡ Nozzle Cleaning And Head Calibration

Automatic cleaning of dirt stuck to the nozzle during cutting  
Auto cutting head calibration



### ⚡ Laser Beam Safety Glasses

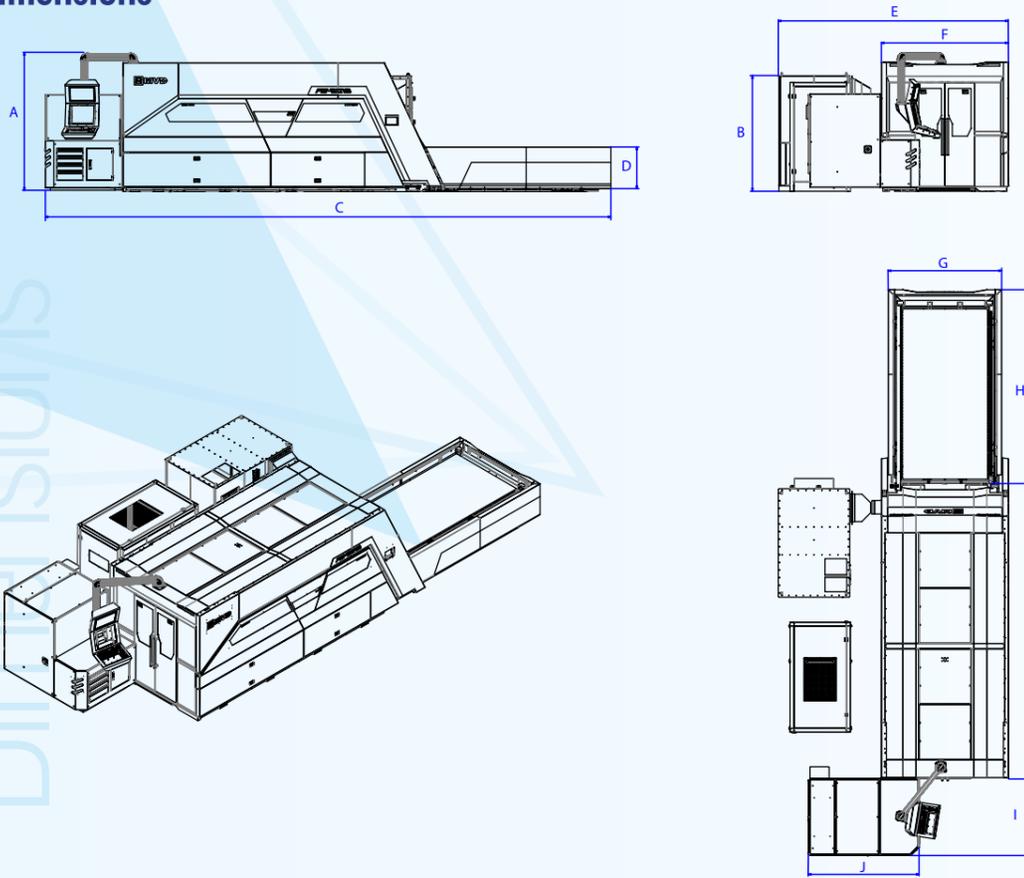
Eye protection glass for operators safety

### ⚡ Camera Monitoring System

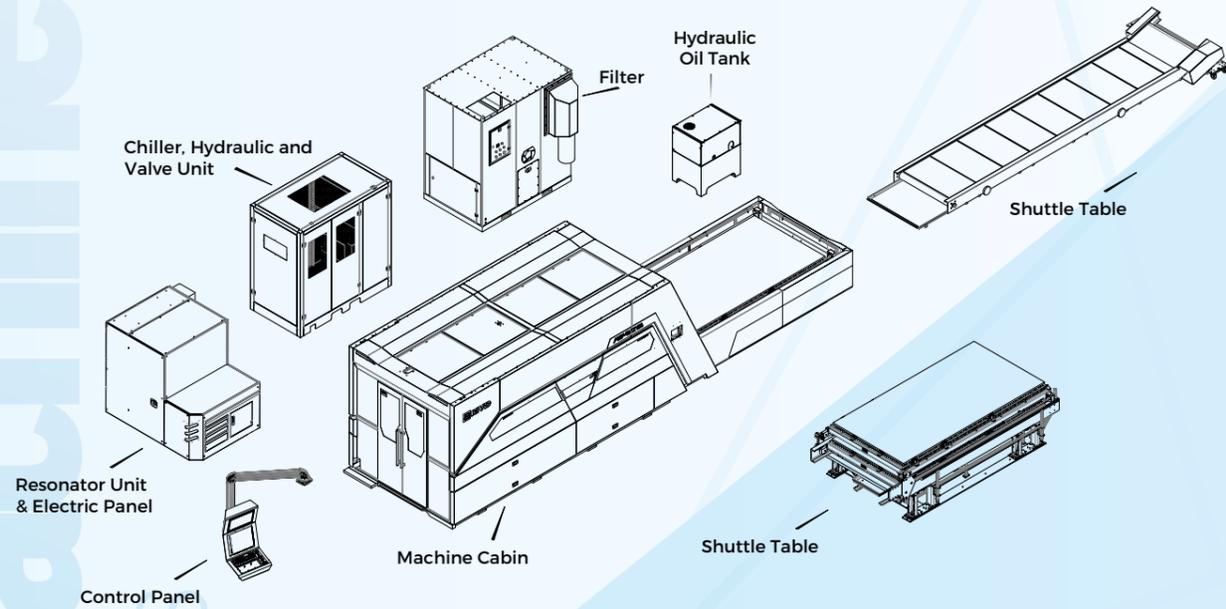
By remote access or next to the control panel, enabling to watch the work process real-time anywhere.



## Machine Dimensions



## Machine Parts



## Technical Specifications

	1530	2040	2060	2080	
X Axis	3040	4030	6030	8030	mm
Y Axis	1535	2030	2030	2030	mm
Z Axis	120	120	120	120	mm
Velocity	2.5	2.5	2.5	2.5	g
Max. Axes Speed	150	150	150	150	meter/minute
Synchronized Speed	210	210	210	210	meter/minute
Positioning Accuracy	+/- 0.05	+/- 0.05	+/- 0.05	+/- 0.05	mm
Repeatability	+/- 0.03	+/- 0.03	+/- 0.03	+/- 0.03	mm
Machine Weight	16500	22200	27750	33250	Kg
Max. Loading Capacity	1500	2500	4000	6000	Kg
Table Change Time	24	30	45	60	sec
A	2600	2600	2600	2600	mm
B	2300	2300	2300	2300	mm
C	10000	12475	16725	16725	mm
D	1150	1150	1150	1150	mm
E	4150	5020	5020	5020	mm
F	2370	2870	2870	2870	mm
G	2030	2530	2530	2530	mm
H	3450	4670	6920	8730	mm
I	1240	1240	1240	1240	mm
J	1200	1200	1200	1200	mm

	1 kW	2 kW	3 kW	4 kW	5 kW	6 kW	8 kW	10 kW	
Resonator	YLS-1000	YLS-2000	YLS-3000	YLS-4000	YLS-5000	YLS-6000	YLS-8000	YLS-10000	
Output Power	100-1000	200-2000	300-3000	400-4000	500-5000	600-6000	800-8000	1000-10000	w
Mild Steel	8	16	18	20	22	25	30	30	mm
Stainless Steel	4	6	10	12	15	18	20	22	mm
Aluminum	4	6	8	10	12	15	18	20	mm
Oxygen Gas Pressure	13	13	13	13	13	13	13	13	bar
Nitrogen Gas Pressure	25	25	25	25	25	25	25	25	bar
Air Gas Pressure	13 or 25	bar							
Avg. Electricity Consumption	15	20	30	35	45	50	60	70	kw/h

\* Technical specifications may change without advance notice



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