



ilaser

FIBER LASER



1950

MVD produced its first machine .

1971

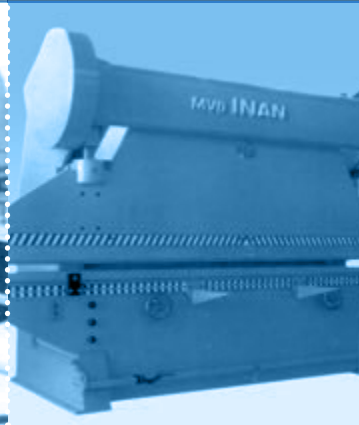
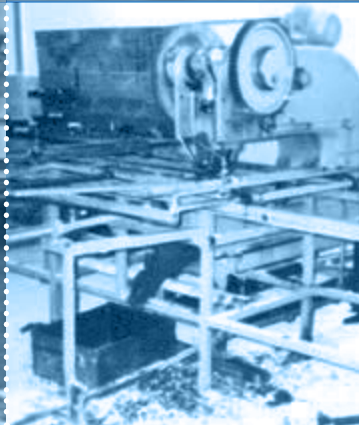
The first sheet metal working machine “perforation press” was presented to the market.

1974

The production of “Heavy-duty Press Brakes and Guillotine Shears” started and MVD had the distinction of being the first Turkish manufacturer for heavy press brakes and shears.

1981

Moved to second factory and added the production of 4 roll bending machines and Expanded Metal presses in the next years. Thus, a great variety of machines were presented in sheet metal working industry.





1994

MVD produced the first tandem press brake in Turkey.

2001

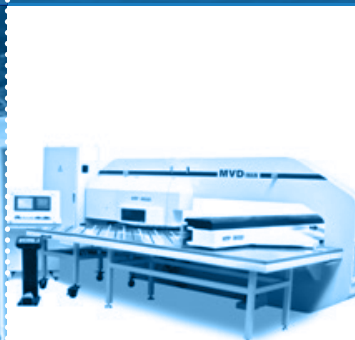
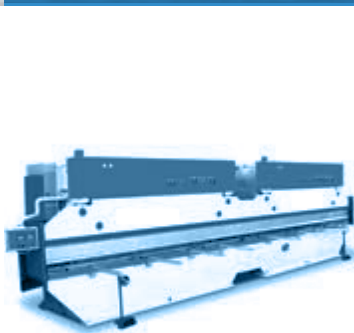
Finalised the CE conformity procedures and had its machines CE marked.

2003

CNC Hydraulic Turret Punch machine was presented to the market.

2011

Plasma cutting machine and Fiber Laser Cutting machines were presented to the market.







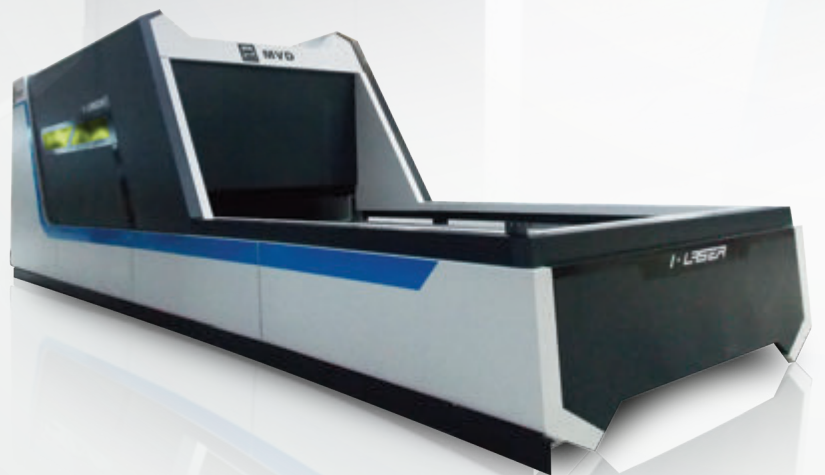
Quality High Technology

Quality and service support is accepted as principle. Designing and manufacturing are based on reliability, durability and precision.

Machines are easy to use and are built to be ready for user errors. Machines are designed and analyzed with 3-D supported computer aided programs, precisely machined in moving column CNC machining centres, equipped with world-known equipments and presented to the customers' use after quality control.



**NEW CONCEPT OF
PERFORMANCE
AND ECONOMY
FOR SHEET
METAL CUTTING**



iLaser

SHIFT TO POWER

Fastest economic and maintenance free technology

- ▶ The fiber laser cutting method best, most experienced in the industry in the production of sheet metal processing machinery manufacturers are rebuilding with MVD Machine.



Specifications

- ▶ Designed with high precision criteria, rigid, powerfully body
- ▶ The mechanical structure constructed for heavy duty conditions
- ▶ Produced by the world's best components, reliable, robust fiber laser technology
- ▶ IPG LASER Source resonators
- ▶ IPG Laser Chiller Unit
- ▶ Faster, powerfull loading unloading shuttle table
- ▶ Precitec Laser Cutting Head
- ▶ Touch Screen Industrial CNC controller
- ▶ User friendly interface

High efficiency, highest performance

▶ IPG Multi Mode Fiber Laser YLS

- ▶ Perfectly Beam Quality for best cutting
- ▶ Optimum focal diameter for high accuracy laser cutting
- ▶ Maintenance free technology, 100.000 hours diode life time
- ▶ Optical consumable cost free, affected by working conditions, continuously perfect beam quality with laser beam is transmitted by fiber core
- ▶ Lowest running cost
- ▶ Cutting possibilities Cooper, titanium, brass
- ▶ High Efficiency, low consumptions of electricity fiber laser technology, 5-6 times lower running cost.
- ▶ Energy efficiency with Low capacity chiller necessary



- ▶ High speed fiber laser cutting, 4 times speedier compare other laser cutting applications
- ▶ Free Laser Resonator cost
- ▶ Perfectly cutting contour with high density laser beam
- ▶ High Accurate geometric performance
- ▶ Not needed calibrations or adjusting optical component, advantage of time and cost

▶ Precitec Cutting Head

- ▶ Most reliable Germany produced Precitec HP-SSL laser cutting head
- ▶ Protect glass of lens for long life cutting lens, low consumable cost
- ▶ Cartridge lens system for easy change, less setup time
- ▶ Advantage of setup time for different cutting thickness with cartridge equipment
- ▶ High performance, high accurate height control system for constant cutting quality
- ▶ Collision control functions and safe working for cutting head equipment
- ▶ Original Precitec nozzle, ceramic parts for continuously cutting quality and safe working



▶ HPSSL Plus Optional

- ▶ Motorised focus adjustment
- ▶ Piercing Sensor Control
- ▶ Processing Sensor



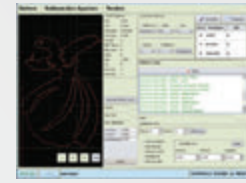
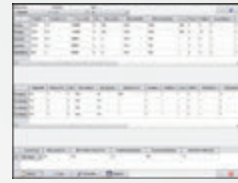
▶ IPG Laser Chiller Unit Standard

- ▶ Reliable efficiency for IPG laser source cutting head and lenses
- ▶ Digital micro processing controlled industrial chiller



Filtre Ünitesi

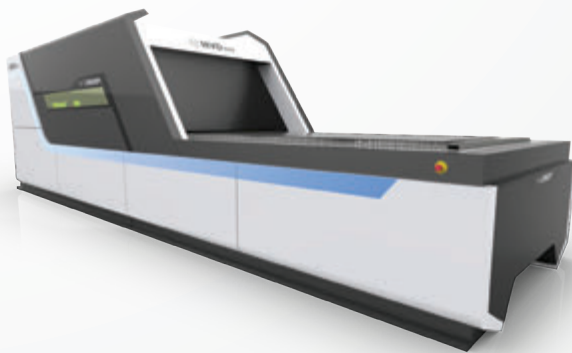
▶ iLaser CNC Controller



- ▶ 15 " resistive touch screen 1024x768 pixel
- ▶ Intel Pentium ®1.6GHz CPU
- ▶ 160 GB HDD, (SSD veya CF opsiyonel)
- ▶ 1 GB RAM
- ▶ 1x Front USB port
- ▶ 2 x RJ45 Ethernet 10/100/1000Mhz
- ▶ 4 x Back USB port
- ▶ External keyboard connections
- ▶ Industrial based PC controller
- ▶ TCP /IP or USB connection for sending part programs
- ▶ EtherCAT communications for data transfer or machine control
- ▶ Reliable, Real Time Linux system.
- ▶ Database for cutting parameters, From thin to thick materials
- ▶ "No Piercing" technology for thin materials, efficiency time and cost improvements
- ▶ Fly Cut functions for same direction high speed cutting
- ▶ "G codes standart" support
- ▶ Kerf calculations on controller or software
- ▶ Special Restart functions, for any interruption
- ▶ Referencing options, and Automatic sheet recognition
- ▶ Unlimited part program size
- ▶ Different user-level possibilities by password Supervisor, maintenance or operator mode
- ▶ Direct counter or part choosing functions, maximum flexibility on the process according job, part priority
- ▶ Ethercat bus protocol.
- ▶ Create manual programs according job, part priority
- ▶ Motion task cycle time 0.5 ms.
- ▶ Soft plc with 1 ms cycle time.
- ▶ 2D Process monitor
- ▶ Preview of the part to be processed.
- ▶ Get the cutting technology from G code or override selected parameters.

▶ Automatic Loading Unloading Shuttle Table Standard

- ▶ Rigid, powerfully, speed loading table



▶ Laser Protective Glasses Standard

- ▶ Laser cabin according fiber laser vawe length for eye protections



CAD CAM

Standard

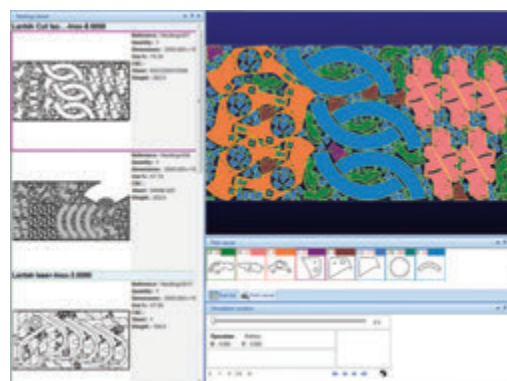
- ▶ Automatic Machining for cutting head optimum calculations
- ▶ Automatic Nesting and optimizations
- ▶ Time and cost analysis, simulations before cutting
- ▶ Part importer / Exporter from CAD system, DXF, DWG, IGES, Step etc file format acceptable
- ▶ Part Drawing module, call parts, automatic or manual nesting, machining, CNC codes generates, Sheet metal stock searching etc.
- ▶ Parts management, open database. All parts can be searching with different criteria dates thickness, material, customer .
- ▶ Scrap databases.
- ▶ Complicated functions and programmable cad cam system for Common cut, micro joint, lead in lead out parameters.

Specifications

Machine Model	F2 - 1530	F3 - 1530	F4 - 1530	F2 - 2040
Laser Power	2 Kw	3 Kw	4 Kw	2 Kw
Type	Fly Optic	Fly Optic	Fly Optic	Fly Optic
Maximum Sheet Size	1530 mm. x 3030 mm.	1530 mm. x 3030 mm.	1530 mm. x 3030 mm.	2030 mm. x 4030 mm.
Maximum Cutting Thickness	Steel 15 mm	Steel 18 mm	Steel 20 mm	Steel 15 mm
	Stainless steel Ç. 6 mm	Stainless steel 9 mm	Stainless steel 12 mm	Stainless steel 6 mm
	Aluminium 5 mm	Aluminium 8 mm	Aluminium 10 mm	Aluminium 5 mm
Maximum Loading Capacity	1000 Kg.	1000 Kg.	1000 Kg.	1750 Kg.
Axes				
X Axes	3030 mm.	3030 mm.	3030 mm.	4030 mm.
Y Axes	1530 mm.	1530 mm.	1530 mm.	2030 mm.
Z Axes	100 mm.	100 mm.	100 mm.	100 mm.
Average Electricity Consumption kw/h	20kw/h	30kw/h	35kw/h	20kw/h
Acceleration	X, Y, Z: 1.5 G	X, Y, Z: 1.5 G	X, Y, Z: 1.5 G	X, Y, Z: 1.2 G
Axes Speed	X, Y: 120 meter / minute	X, Y: 120 meter / minute	X, Y: 120 meter / minute	X, Y: 120 meter / minute
Axes	X and U Parallel, Y and Z 4 axes	X and U Parallel, Y and Z 4 axes	X and U Parallel, Y and Z 4 axes	X and U Parallel, Y and Z 4 axes
Positioning Accuracy	X, U, Y and Z +/- 0.02 mm.	X, U, Y and Z +/- 0.02 mm.	X, U, Y and Z +/- 0.02 mm.	X, U, Y and Z +/- 0.02 mm.
Repability	./- 0.01 mm. For 4 axes	./- 0.01 mm. For 4 axes	./- 0.01 mm. For 4 axes	./- 0.01 mm. For 4 axes
Cutting Head	5" ve 7.5" Focus length	5" ve 7.5" Focus length	5" ve 7.5" Focus length	5" ve 7.5" Focus length
Z Axes Height Control	Precitec Lasermatic	Precitec Lasermatic	Precitec Lasermatic	Precitec Lasermatic
Lighting	4 pieces Light	4 pieces Light	4 pieces Light	4 pieces Light
Cutting Gas Type	Compressor Air, Oxygen and Nitrogen Cutting Gas	Compressor Air, Oxygen and Nitrogen Cutting Gas	Compressor Air, Oxygen and Nitrogen Cutting Gas	Compressor Air, Oxygen and Nitrogen Cutting Gas
Cutting Gas Pressure	Oxygen 0,2 bar - 2.5 bar, Nitrogen 5 - 25 bar	Oxygen 0,2 bar - 2.5 bar, Nitrogen 5 - 25 bar	Oxygen 0,2 bar - 2.5 bar, Nitrogen 5 - 25 bar	Oxygen 0,2 bar - 2.5 bar, Nitrogen 5 - 25 bar
Machine Weight	16.500 Kg (Chillier, Cutting table Filter dust collector included)	16.500 Kg (Chillier, Cutting table Filter dust collector included)	16.500 Kg (Chillier, Cutting table Filter dust collector included)	22.200 Kg (Chillier, Cutting table Filter dust collector included)

Automatic Nesting

- ▶ Maximum flexibility maximum performance manual or automatic nesting
- ▶ Copy, move, reverse, turn alignment manual, semi automatic, automatically functions geometrical working
- ▶ Autonesting parameters
- ▶ Scrap parameters and nesting on scrap materials



F3 - 2040	F4 - 2040	F2 - 2060	F3 - 2060	F4 - 2060
3 Kw	4 Kw	2 Kw	3 Kw	4 Kw
Fly Optic	Fly Optic	Fly Optic	Fly Optic	Fly Optic
2030 mm. x 4030 mm.	2030 mm. x 4030 mm.	2030 mm. x 6030 mm.	2030 mm. x 6030 mm.	2030 mm. x 6030 mm.
Steel 18 mm	Steel 20 mm	Steel 15 mm	Steel 18 mm	Steel 20 mm
Stainless steel 9 mm	Stainless steel 12 mm	Stainless steel 6 mm	Stainless steel 9 mm	Stainless steel 12 mm
Aluminium 8 mm	Aluminium 10 mm	Aluminium 5 mm	Aluminium 8 mm	Aluminium 10 mm
1750 Kg.	1750kg	2750 Kg.	2750 Kg.	2750kg
4030 mm.	4030 mm.	6030 mm.	4030 mm.	4030 mm.
2030 mm.	2030 mm.	2030 mm.	2030 mm.	2030 mm.
100 mm.	100 mm.	100 mm.	100 mm.	100 mm.
30kw/h	35kw/h	20kw/h	30kw/h	35kw/h
X, Y, Z : 1.2 G	X, Y, Z : 1.2 G	X, Y, Z : 1.2 G	X, Y, Z : 1.2 G	X, Y, Z : 1.2 G
X, Y : 120 meter / minute	X, Y : 120 meter / minute	X, Y : 120 meter / minute	X, Y : 120 meter / minute	X, Y : 120 meter / minute
is X and U Parallel, Y and Z 4 axes	X and U Parallel, Y and Z 4 axes	X and U Parallel, Y and Z 4 axes	X and U Parallel, Y and Z 4 axes	X and U Parallel, Y and Z 4 axes
X, U, Y and Z +/- 0.02 mm.	X, U, Y and Z +/- 0.02 mm.	X, U, Y and Z +/- 0.02 mm.	X, U, Y and Z +/- 0.02 mm.	X, U, Y and Z +/- 0.02 mm.
./- 0.01 mm. For 4 axes	./- 0.01 mm. For 4 axes	./- 0.01 mm. For 4 axes	./- 0.01 mm. For 4 axes	./- 0.01 mm. For 4 axes
5" ve 7.5" Focus length	5" ve 7.5" Focus length	5" ve 7.5" Focus length	5" ve 7.5" Focus length	5" ve 7.5" Focus length
Precitec Lasermatic	Precitec Lasermatic	Precitec Lasermatic	Precitec Lasermatic	Precitec Lasermatic
4 pieces Light	4 pieces Light	4 pieces Light	4 pieces Light	4 pieces Light
Compressor Air, Oxygen and Nitrogen Cutting Gas	Compressor Air, Oxygen and Nitrogen Cutting Gas	Compressor Air, Oxygen and Nitrogen Cutting Gas	Compressor Air, Oxygen and Nitrogen Cutting Gas	Compressor Air, Oxygen and Nitrogen Cutting Gas
Oxygen 0,2 bar - 2.5 bar, Nitrogen 5 - 25 bar	Oxygen 0,2 bar - 2.5 bar, Nitrogen 5 - 25 bar	Oxygen 0,2 bar - 2.5 bar, Nitrogen 5 - 25 bar	Oxygen 0,2 bar - 2.5 bar, Nitrogen 5 - 25 bar	Oxygen 0,2 bar - 2.5 bar, Nitrogen 5 - 25 bar
22.200 Kg (Chillier, Cutting table Filter dust collector included)	22.200 Kg (Chillier, Cutting table Filter dust collector included)	27.750 Kg (Chillier, Cutting table Filter dust collector included)	27.750 Kg (Chillier, Cutting table Filter dust collector included)	27.750 Kg (Chillier, Cutting table Filter dust collector included)

www.mvd.com.tr



Technical specifications are subject to change without notice.



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