

## Brief Introduction Of Oil Slotting Pipe Laser Cutting Machine

Farley Laserlab oil slotting pipe laser cutting machine adopts advanced technology, which can cut different type of oil slotting pipe. By means of focusing, high density and high-power laser beam working on sieve pipe, on the premise of exceeding a threshold value of laser power density, heat energy from working gas and laser beam's chemical reaction is absorbed by material, thus causing a dramatic increase in the temperature of laser sport on the surface of the casing, partial melting or gasification of workpiece material to form a hole, then relative motion of the casing and laser beam can achieve casing cutting.

### Mechanical Motion System

1. Cantilever Structure Technology (patent number: ZL 200520099443.7) provides open operation platform with one-time processing area of 12m x 1.5m;
2. Machine tool structure is composed of a bed, cantilever beam, special clamp for sieve pipe cutting, high precision ball screw lubrication device.
3. Customized cutting rotation axis, double chuck structure and variable pitch worm can fix sieve pipe more stable and much easier to cut oil pipes. Plane working table can also be equipped to cut plates.

### Features

1. The slotted liner is a robust and cost-effective solution for long completions or low productivity wells;
2. We offer straight and keystone slot in a wide range of slotting patterns to satisfy the required open area;
3. High rigidity, resisting scrape and abrasion, high intensity, anti-corrosion and even distribution.

### Rotation Axis

1. Support position adjusted according to the pipe diameter;
2. Max. pipe Length: 12m Max. pipe diameter: 240mm;
3. Rotating clamp adopt double chuck structure to avoid the pipe not being vertical and thermal deformation in processing;
4. Varying pitch worm gear is adopted to effectively achieve mechanical wear compensation.

### Cutting Head and Nozzle

1. Customized Bifocal Laser Head (5" and 7.5") , convenient to change to cut material of different depth;
2. Laser head can detect pipe on-contact before cutting and automatically position when cutting to match position change;
3. Anti-collision all-around auto reset cutting head.

### Parameters

Machine Model	Profile
Processing Area	12000×1500(mm)
Laser Power	4000W
Customized Laser Cutting Head	5 inch&7.5 inch

PRECITEC Sensor		High voltage 25Kg/ cm <sup>2</sup>
CNC System/Serve		Beckhoff/611D,1FT6 motor
Operation System		Windows XP
Display		24 inch LCD with mouse interface
Interface		USB,RJ45
Cutting Aperture		≤0.1~0.3mm(depending on the material)
Cutting Roughness		Ra≤25μm
Cutting Depth for Carbon Steel		1-20mm
Cutting Depth for Stainless Steel		1-10mm
X ,Y,Z Axis		Ball screw
X axis	Moving Speed	50m/min
	Max. Processing Speed	30m/min
	Stroke	12000mm
	Position Accuracy	+/-0.025mm
	Repeatability	0.02mm
	Resolution	0.001mm
Y axis	Moving Speed	50m/min
	Max. Processing Speed	30m/min
	Stroke	1500mm
	Position Accuracy	+/-0.025mm
	Repeatability	0.02mm
	Resolution	0.001mm
Z axis	Stroke	100mm
	Resolution	0.001mm
A axis	Area	Length: 12m. Diameter: 240mm, rotary: absoluteness.
	Position Accuracy	+/-0.05°
	Repeatability	+/-0.01°
	Min. Resolution	0.001°
	Rotary Speed	7200°/min