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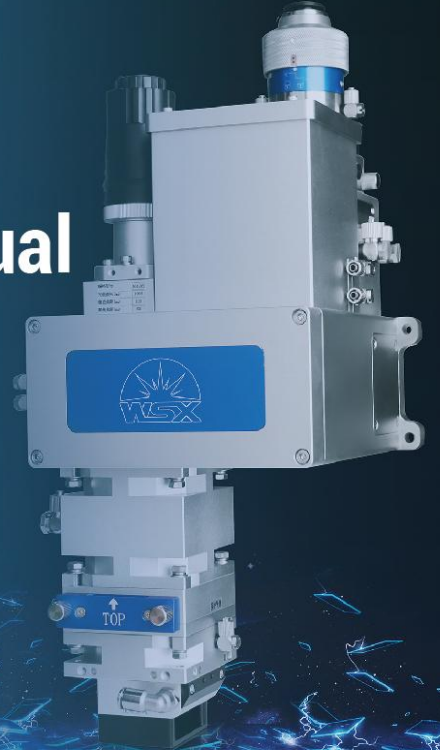
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Cutting head | Welding head | robot

## Welding Head Selection Manual

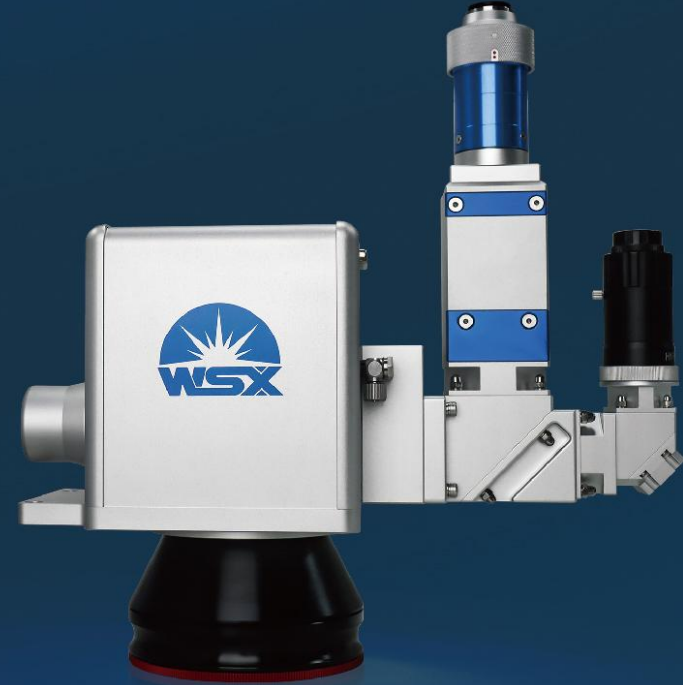
 Solutions for Intelligent Laser Manufacturing Companies



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Shenzhen Worthing Technology Co., Ltd.



Craftsmanship Creates Quality Intelligent Manufacturing Leads The Future

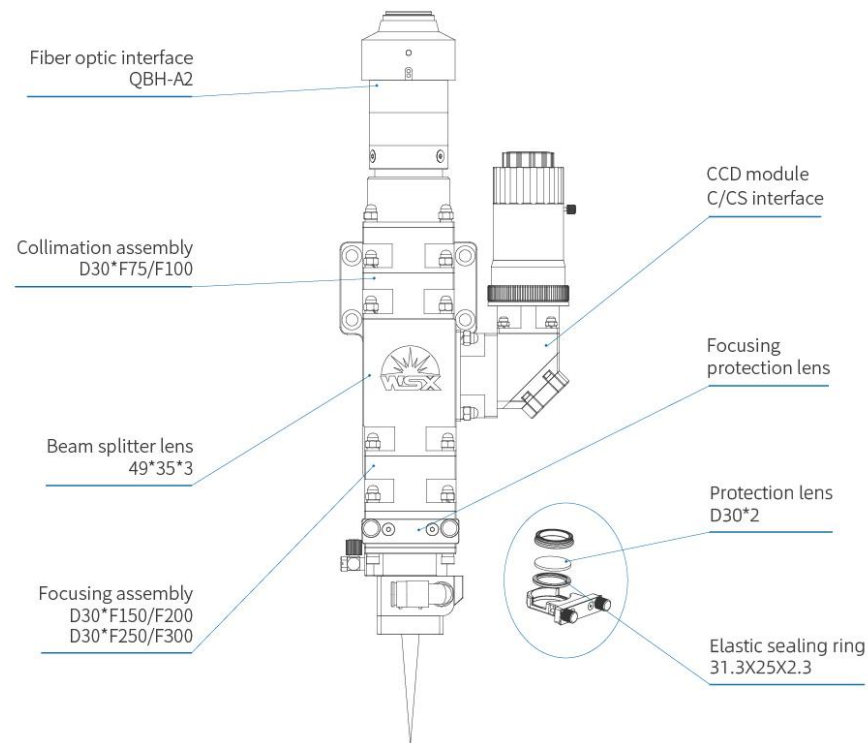


# ND26

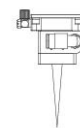
## Medium Power Welding Head

### PRODUCT FEATURES

Max Power	2kW	Collimation Focal Length	F100/F150
Weight	3.2kg	Focus Focal Length	F200/F250 F300
Clear Aperture	Φ27mm		



### Optional end assembly



Air curtain assembly



Coaxial assembly

### PRODUCT CHARACTERISTICS

It has strong advantages in aluminium alloy welding, medium power welding applications, and is a cost-effective welding head.

Full-sealed internal structure protects optical part from pollution by dust.

Air curtain parts prevent welding slag from entering head inside.

Full-sealed internal structure protects optical part from pollution by dust.

Can be equipped with ccd component and coaxial nozzle according to customer's need.

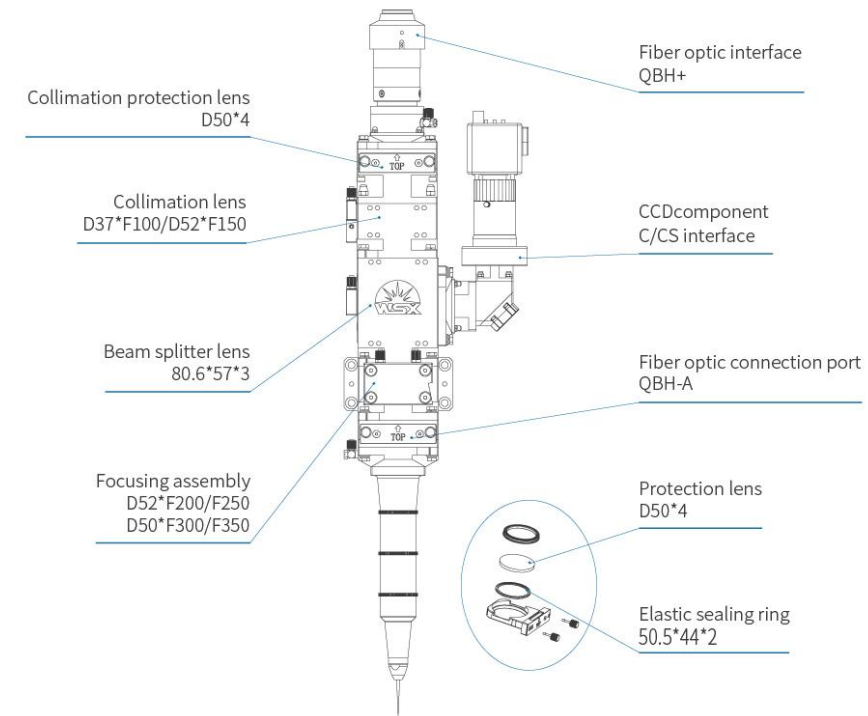


# ND40

## Conventional Welding Head

### PRODUCT FEATURES

Max Power	4kW	Collimation Focal Length	F100/F150
Weight	4.2kg	Focus Focal Length	F200/F250 F300
Clear Aperture	Φ48mm		



### Optional end assembly



Single air curtain



Coaxial nozzle

### PRODUCT CHARACTERISTICS

It has strong advantages in medium thick material welding, high power welding applications.

Full-sealed internal structure protects optical part from pollution by dust.

Air curtain parts prevent welding slags from entering head inside.

The protective lenses have a drawer structure for easy replacement.

Applied to various QBH lasers.

Equipped with water-cooling device to improve product quality.

Available with coaxial nozzle.

# HP41

## Conventional Welding Head

### PRODUCT FEATURES

Max Power

4kW

Collimation Focal Length

F125

Weight

3kg

Focus Focal Length

F250

Clear Aperture

Φ34mm



QBH connector component

Collimation protection  
lens assembly  
D30\*5Protection lensFocusing assembly  
D44\*F125LensBeam splitting assembly  
D48\*5Beam splitter lensFocusing assembly  
D44\*F250/F300/F350Protection lensassembly  
40\*2Protection lens

### PRODUCT CHARACTERISTICS

It has strong advantages in medium thick material welding, high power welding applications, and is a cost-effective welding head.

The internal structure is completely sealed to avoid the dust contamination of the optical parts.

The protective lenses have a drawer structure for easy replacement.

Fitted with coaxial blue light illumination, eliminating the need for an external blue light.

Applied to various QBH lasers.

Equipped with water-cooling device to improve product quality.

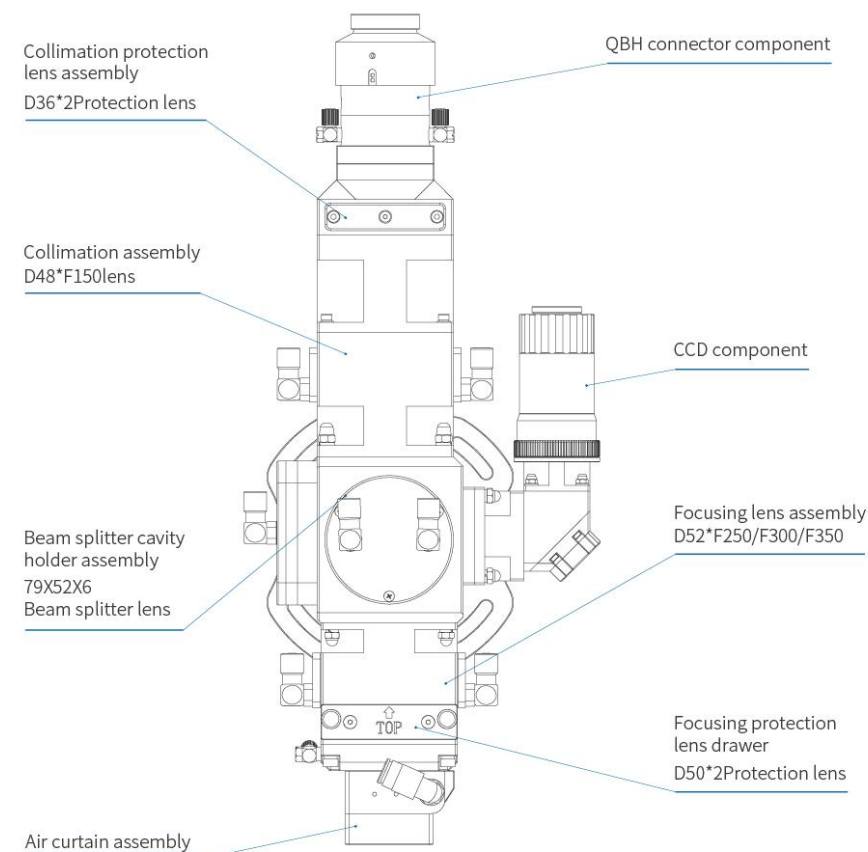
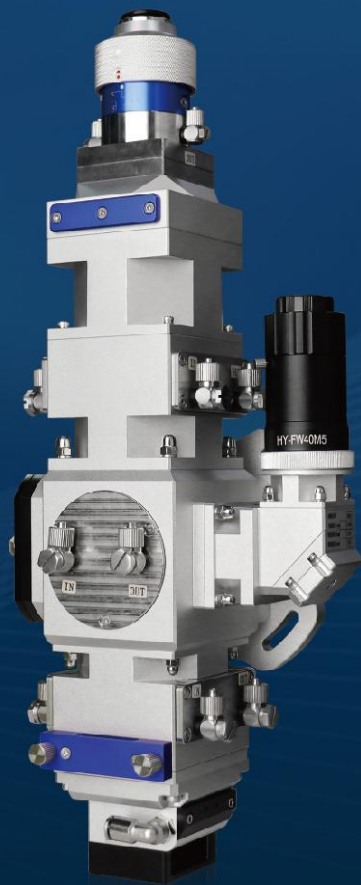
Coaxial nozzle prevents welding slag from entering head inside.

# ND61B

## Ring-shaped Spot

### PRODUCT FEATURES

Max Power	6kW	Collimation Focal Length	F100/F150
Weight	4.6kg	Focus Focal Length	F200/F250 F300
Clear Aperture	Φ46mm		



### PRODUCT CHARACTERISTICS

The compact size of this weld head allows for higher efficiency and quality in thick plate and large part welding applications.

The internal structure is completely sealed to avoid the dust contamination of the optical parts.

Air curtain part prevents welding slag from entering head inside.

The protective lenses have a drawer structure for easy replacement.

Applied to various QBH lasers.

Applicable to coaxial nozzle.

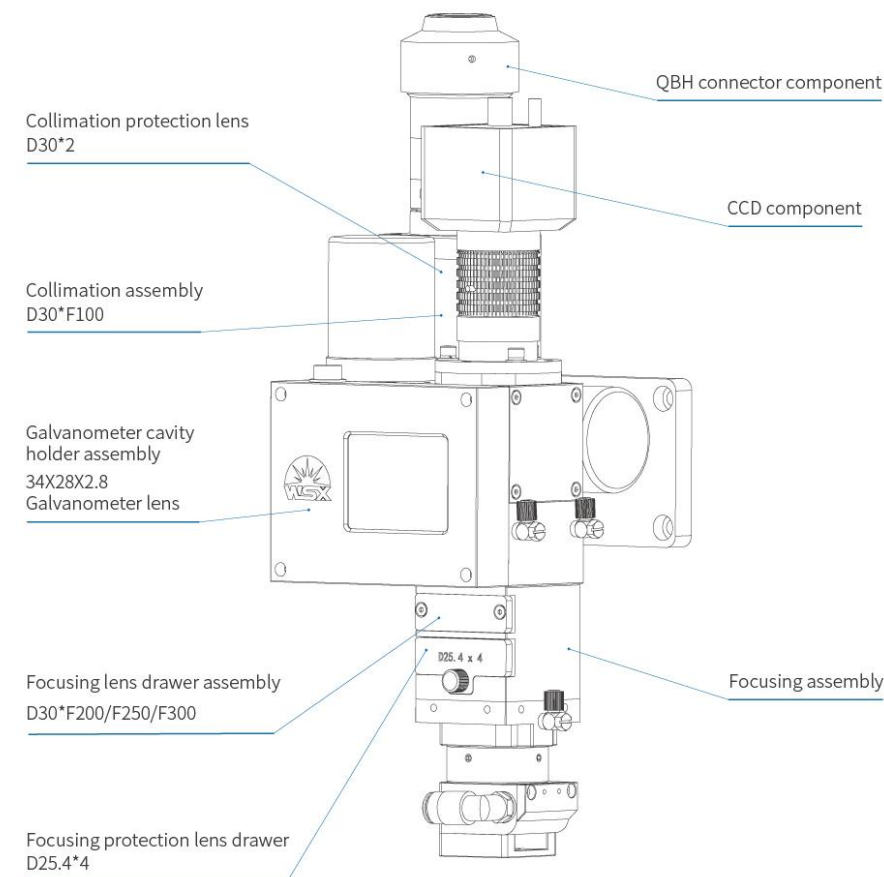


# HB15

## Swing Welding Head

### PRODUCT FEATURES

Max Power	3kW	Collimation Focal Length	F100
Weight	3.6kg	Focus Focal Length	F200
Clear Aperture	Φ24mm	Swing Frequency	5mm/200Hz



### PRODUCT CHARACTERISTICS

**Versatile Welding Head:** Ideal for aluminum alloy and medium-power welding applications, offering economic efficiency.

**Motor-Driven Galvo Mirrors:** X, Y-axis motor-driven galvo mirrors with multiple oscillation modes enhance welding quality, accommodating irregular welding and larger gaps.

**Sealed Internal Structure:** Prevents dust contamination of optical components. Drawer-style protective lens for easy replacement.

**Built-in Blue Light:** No external lighting required, with integrated light source components.

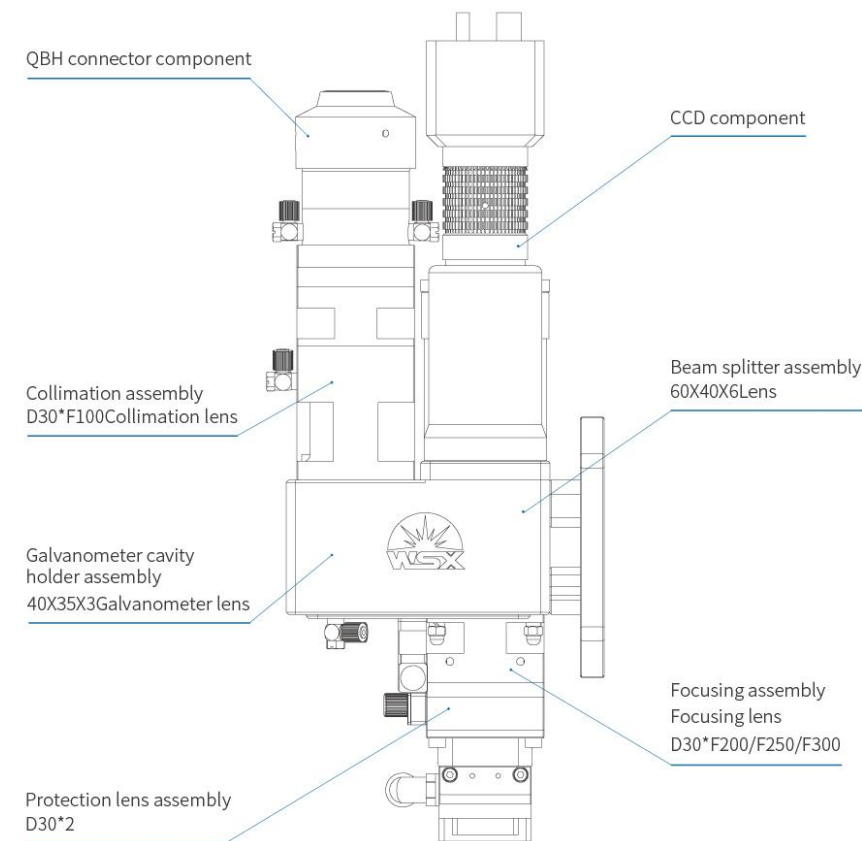
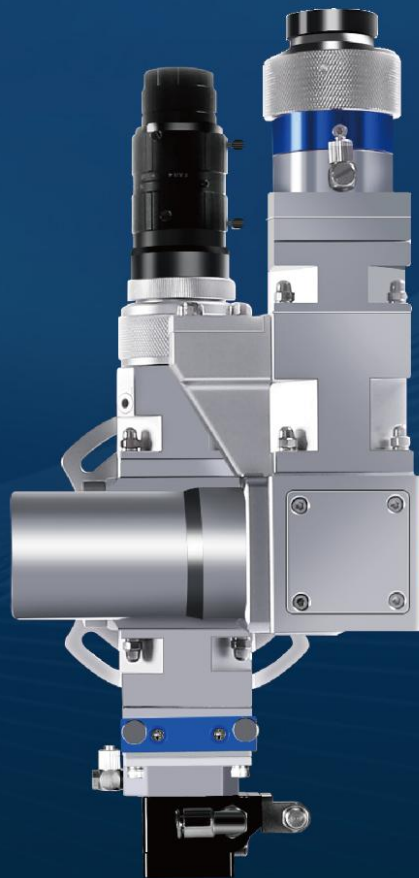
**Compatible with QBH connectors** for various lasers.

# ND15

## Wobble Welding Head

### PRODUCT FEATURES

Max Power	2kW	Collimation Focal Length	F75/F100
Weight	3.6kg	Focus Focal Length	F200/250
Clear Aperture	Φ22mm	Swing Frequency	5mm/250Hz



### PRODUCT CHARACTERISTICS

It has strong advantages in aluminium alloy welding, medium power welding applications, and is a cost-effective welding head.

Adopting the motor to drive the x, y-axis galvanometer lens with a variety of wobbling modes. It allows the work piece with irregular welds, and the larger clearance. Processing parameters can significantly improve the quality.

The internal structure is completely sealed to avoid the dust contamination of the optical parts.

The protective lenses have a drawer structure for easy replacement.

Applied to various QBH lasers.

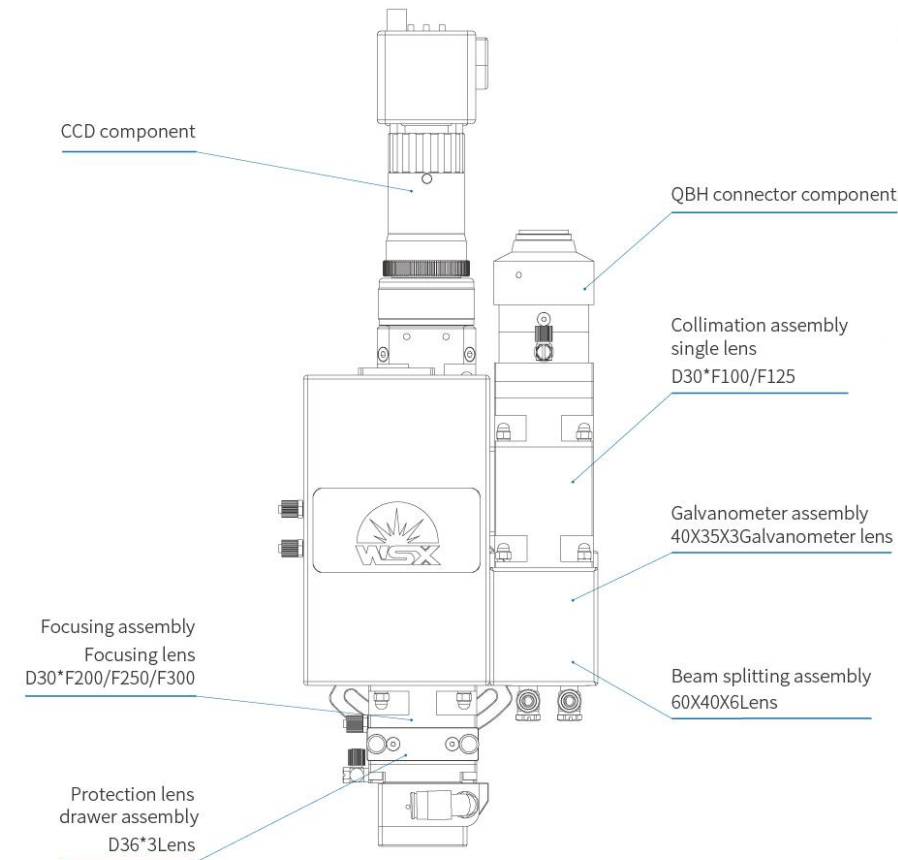


# ND24C

## Wobble Welding Head

### PRODUCT FEATURES

Max Power	4kW	Collimation Focal Length	F100
Weight	4.2kg	Focus Focal Length	F200/250
Clear Aperture	Φ22mm	Swing Frequency	5mm/250Hz



### PRODUCT CHARACTERISTICS

It has strong advantages in aluminium alloy welding, medium power welding applications, and is a cost-effective welding head.

Adopting the motor to drive the x, y-axis galvanometer lens with a variety of wobbling modes. It allows the work piece with irregular welds, and the larger clearance. Processing parameters can significantly improve the quality.

Air curtain part prevents welding slag from entering head inside.

The protective lenses have a drawer structure for easy replacement.

The motor drive is built-in, and the ability to enforce interference is significantly improved.

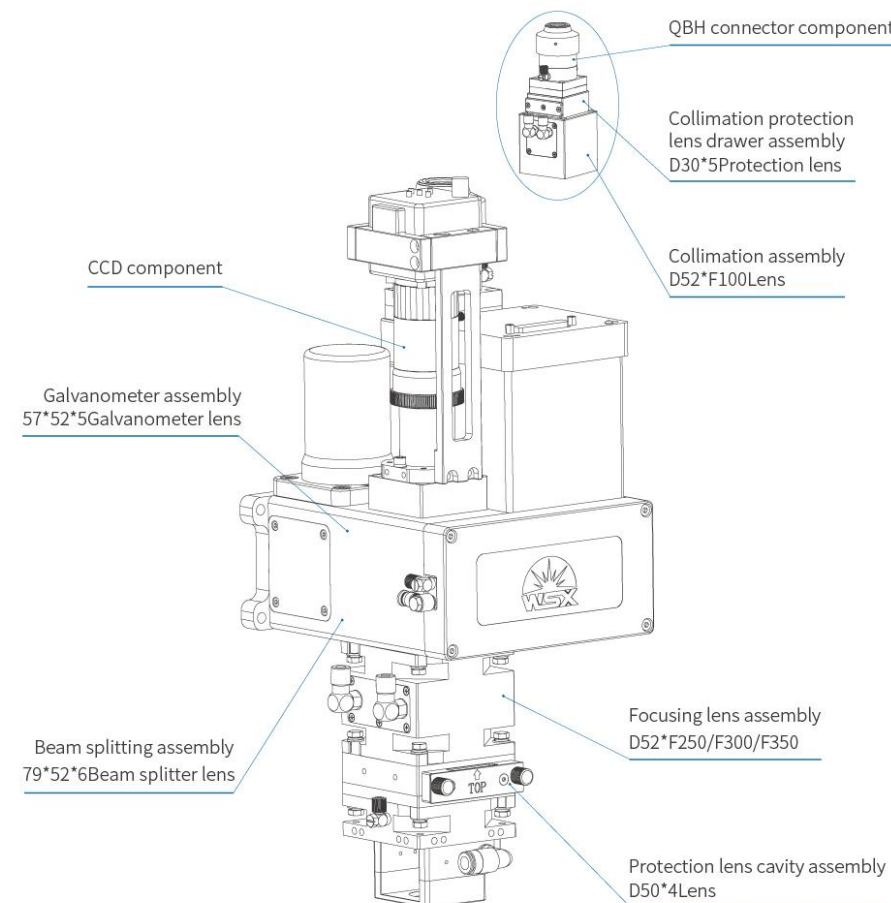
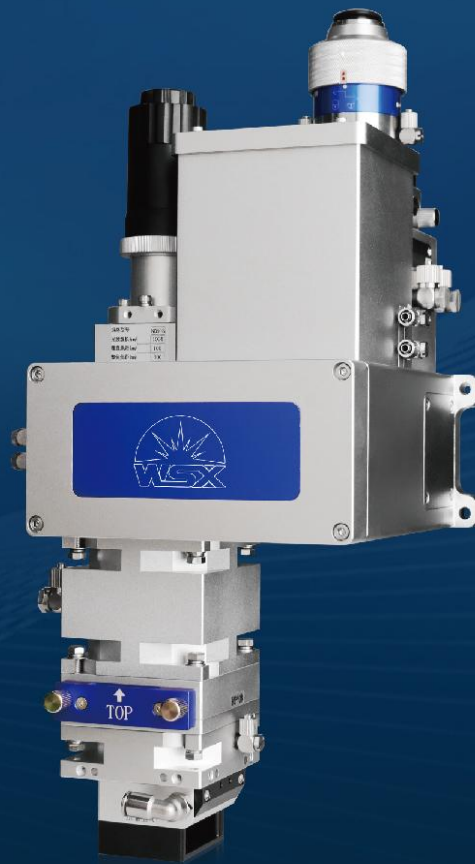
Applied to various QBH lasers.

# ND60B

## Wobble Welding Head

### PRODUCT FEATURES

Max Power	4kW-6kW	Collimation Focal Length	F100/F150
Weight	6.5kg	Focus Focal Length	F200/F250 F300
Clear Aperture	Φ35mm	Swing Frequency	5mm/300Hz



### PRODUCT CHARACTERISTICS

It has strong advantages in high reflective material welding, high power welding applications, and is a cost-effective welding head.

Using of motor-driven x, y-axis wobble lens, with a variety of wobble modes, wobble welding allows the workpiece to have irregular welding, larger gaps and other processing parameters. It can significantly improve the quality of welding.

The internal structure is completely sealed to avoid the dust contamination of the optical parts.

Equipped with air curtain components to minimize contamination of lenses from welding fumes and spatter residue.

The protective lenses have a drawer structure for easy replacement.

Motor drive is built-in and anti-interference capability is significantly improved. It can be equipped with coaxial nozzle.

Applicable to coaxial nozzle.

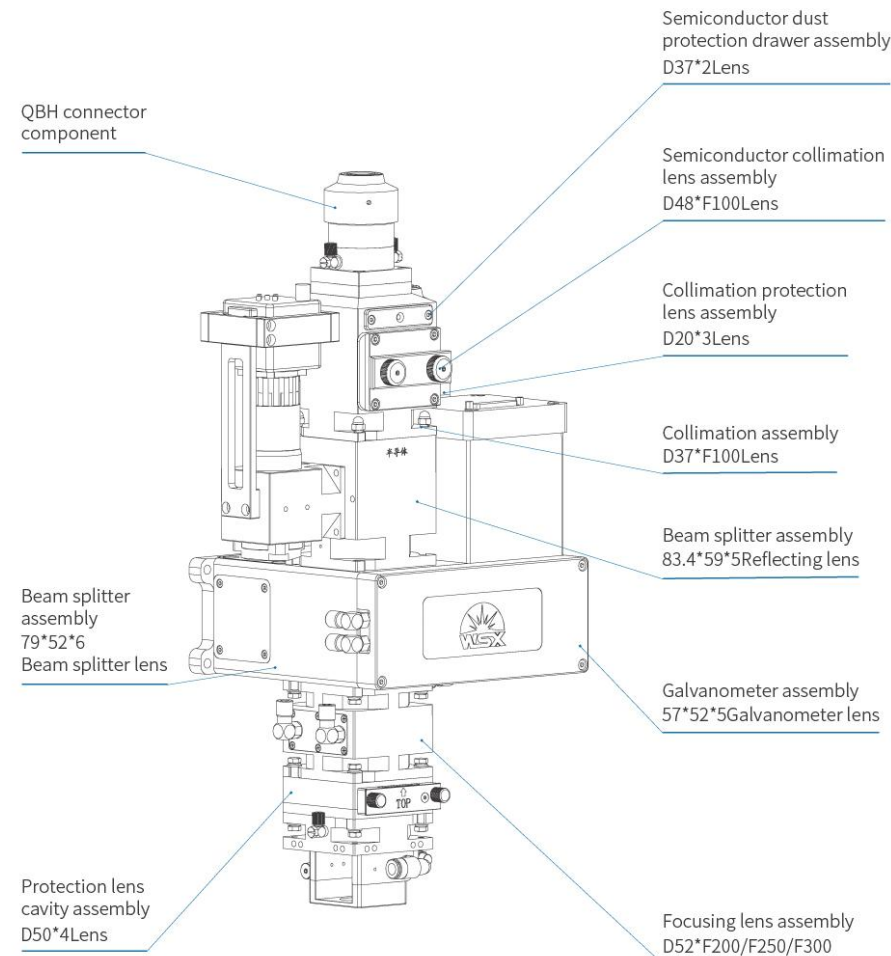


# ND68A

## Hybrid Wobble Welding Head

### PRODUCT FEATURES

Max Power	8kW(6+2)	Collimation Focal Length	F100/F100
Weight	12kg	Focus Focal Length	F250/F300
Clear Aperture	Φ36/Φ45mm	Vertical Focusing Range	±4mm



### PRODUCT CHARACTERISTICS

It has strong advantages in high reflective material welding, high power welding applications, and is a cost-effective welding head.

Using of motor-driven x, y-axis wobble lens, with a variety of wobble modes, wobble welding allows the workpiece to have irregular welding, larger gaps and other processing parameters. It can significantly improve the quality of welding.

The internal structure is completely sealed to avoid the dust contamination of the optical parts.

Equipped with air curtain components to minimize contamination of lenses from welding fumes and spatter residue.

The optical lens adopts a drawer structure, which is easy to replace.

The optics are mounted in separate assemblies and can be replaced in a short time. Possible operational errors during maintenance and use are reduced and the service life of the individual components is significantly extended.

The protective lenses have a drawer structure for easy replacement

Available with coaxial nozzle

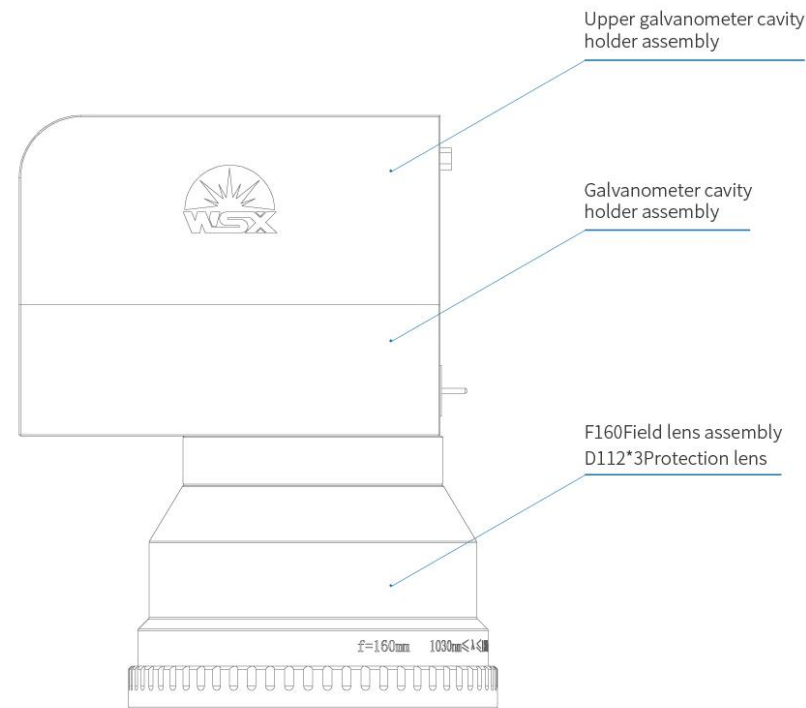


# HZ14A

## Extreme ear cutting head

### PRODUCT FEATURES

Max Power	0.3kW	Incident Spot	14mm(MAX)
Weight	3kg	Optical Scanning Angle	±0.35rad
Wavelength	1064±20nm	Achromatic Field Lens	F125/F160



### PRODUCT CHARACTERISTICS

This galvanometer scanner has advantages such as high welding speed and high precision, and it can achieve high production efficiency in multi - point welding.

The laser head uses motors to drive the galvanometer lens on the X and Y axes, and focuses through the F - THETA focusing lens group. It has multiple swing modes, which can significantly improve the welding quality.

By installing a motor, any scanning range can be achieved.

The internal structure of the galvanometer scanner is completely sealed, which can prevent the optical components from being contaminated by dust.

With the integrated motor drive, it has stronger anti - interference ability.

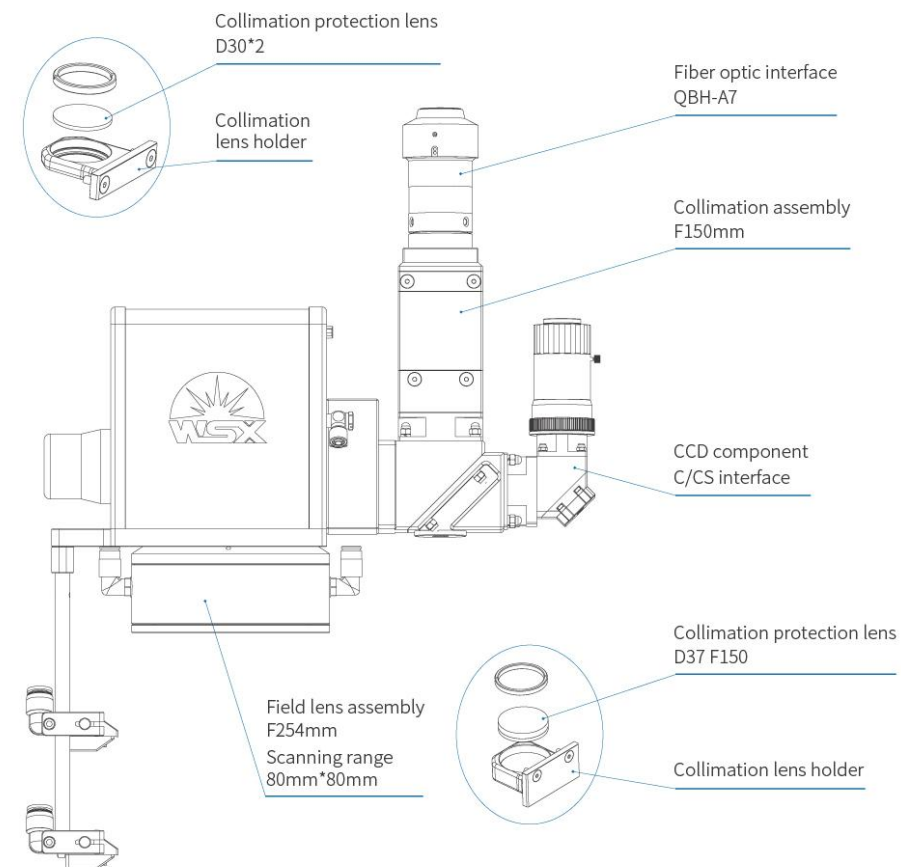
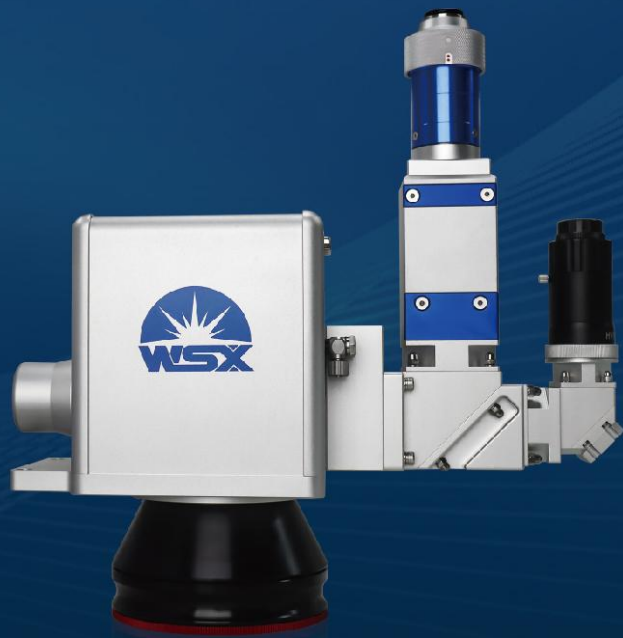
It features lower power consumption of the galvanometer, lower temperature drift of the galvanometer, and higher positioning speed.

# HZ30

## Galvanometer Welding Head

### PRODUCT FEATURES

Max Power	0.3kW	Collimation Focal Length	F150
Weight	9kg	field lens	F254
Wavelength	1064nm	Scanning Range (mm)	80*80
Clear Aperture	Φ30mm		



### PRODUCT CHARACTERISTICS

This welding head has advantages such as high welding speed and high precision, and it can achieve high production efficiency in multi - point welding.

The laser head uses motors to drive the galvanometer mirrors on the X and Y axes, and focuses through the F - THETA focusing lens group. It has multiple swing modes, which can significantly improve the welding quality.

A motor is installed in the collimation part of the welding head, enabling the automatic focusing function.

The internal structure of the welding head is completely sealed, which can prevent the optical components from being contaminated by dust.

It is equipped with an air curtain component to reduce the contamination of the lenses by welding fumes and splash residues.

With the integrated motor drive, it has stronger anti - interference ability.

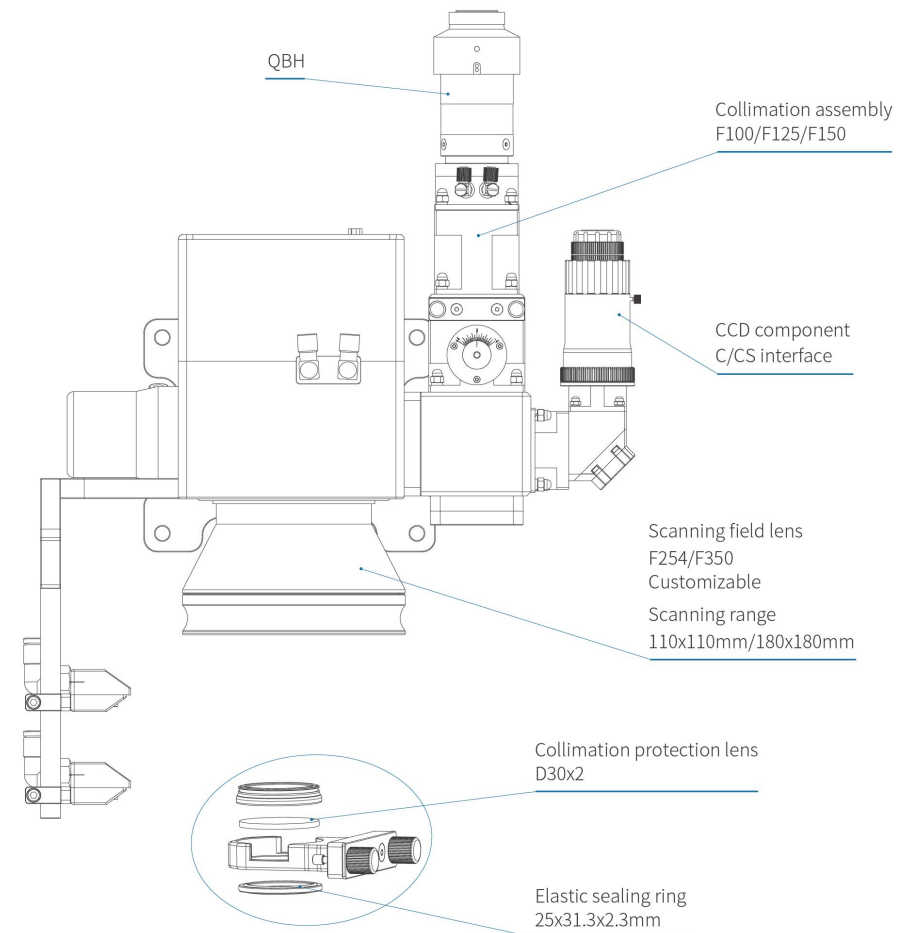
It can be paired with a laser with a QBH connector.

# ND31A

## Galvanometer Welding Head

### PRODUCT FEATURES

Max Power	4kW	Collimation Focal Length	F100/F150
Weight	8kg	Focus Focal Length	F254/F350
Clear Aperture	Φ24mm	Scanning Range (mm)	110*110(F254) 180*180(F350)



### PRODUCT CHARACTERISTICS

This welding head is compact and more efficient in thin plate welding applications.

High productivity in multi-point welding with the advantages of high welding speed and high precision.

Collimation, galvo lens, plane f-theta lens are water-cooled structure, to ensure long-term efficient and stable work.

Adopting the motor to drive the x, y-axis galvanometer lens, f-theta focus lens to focus. Providing a variety of wobble modes significantly improving the welding quality.

Full-sealed internal structure protects optical part from pollution by dust.

Air curtain parts prevent welding slag from entering head inside.



# ND65C

## Galvanometer Welding Head

### PRODUCT FEATURES

Max Power	6kW	Collimation Focal Length	F100/F125 F150
Weight	13.2kg	Focus Focal Length	F330/F350 F420
Clear Aperture	Φ25mm	Scanning Range (mm)	110*110(F254) 160*160(F330)



Collimation protection lens  
D30x2mm

Elastic sealing ring  
25mmx31.3mmx2.3mm

Fiber optic interface  
QBH/QD/LLK-D

Collimation assembly  
F100/F125/F150

CCD component  
C/CS interface

Scanning range  
F330/F350/F420  
Customizable

Scanning range  
160mmx160mm  
180mmx180mm  
200mmx200mm

### PRODUCT CHARACTERISTICS

High productivity in multi-point welding with the advantages of high welding speed and high precision.

Adopting the motor to drive the x, y-axis galvanometer lens, f-theta focus lens to focus. Providing a variety of wobble modes significantly improving the welding quality.

Full-sealed internal structure protects optical part from pollution by dust.

Air curtain parts prevent welding slag from entering head inside.

Built-in driver and improved anti-interference ability.

Equipped with various alarm functions for safety, it effectively prevents burnt lenses damage to the welding head.

Applied to various qbh lasers.



# Company Profile

Since 2006, worthing technology has started creating remarkable laser field devices and providing laser head intelligent solutions for our clients. By focusing on fiber cutting head and fiber welding head research and development, production and sales for more than 10 years, we became one of the best national high-tech enterprises. We have more than 100 professional r & d team members and own over 450 authorized patents. With a professional and efficient after-sales service team, we are keeping to serve our customers with high standards and strict requirements. We will always uphold the concept of "innovation, service, efficiency" to create a better future with customers!

R&D team  
**150+**

Authorized Patent  
**450+**

## Technology as the foundation · Courageous in innovation

Worthing Technology has always adhered to strictly regulating the company's production, R & D, and sales operation processes, forming a model of standardized operation and management. The company's management is fully in line with international advanced standards, and it was the first to pass the ISO9001:2015 Quality Management System Certification. It adheres to the development orientation of "Technology as the foundation, Courageous in innovation", continuously increasing R & D investment every year, and owns multiple technological patents.

## Corporate Culture

### Corporate Mission

Make cutting and welding smarter and more efficient.

### Corporate Vision

Become the leader in intelligent laser manufacturing solutions.

### Corporate Values

Customer - centric, Quality - first, Result - oriented.

### Corporate philosophy

Adhering to the philosophy of "innovation, service, and efficiency", Wanshunxing people are committed to facilitating the transformation and upgrading of the manufacturing industry



#### Professionalism

Shenzhen Worthing Technology Co., Ltd. is a leading professional manufacturer of laser heads in China. It is a high - tech enterprise integrating the R & D, manufacturing, sales, and service of fiber cutting heads and fiber welding heads.



#### Sincerity

Currently, the company's sales and services cover many countries and regions in Asia, Europe, America, and the Middle East. It has a complete sales system and after - sales service team, providing professional and high - quality consulting services and after - sales services to a wide range of customers.



#### Win - win

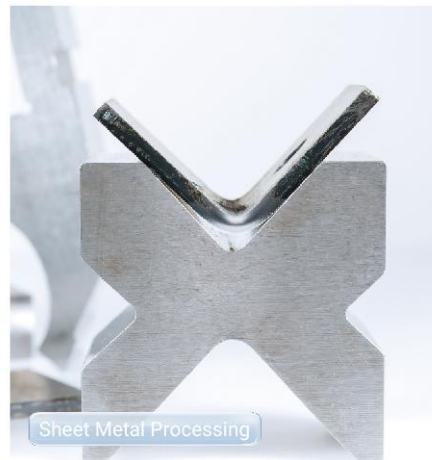
WSX adheres to the philosophy of innovation, service, and efficiency, whole - heartedly providing one - stop services for laser equipment integrators and users. It sincerely cooperates with every customer to seek win - win results! Welcome new and old customers to inquire and discuss cooperation!





# Application Fields

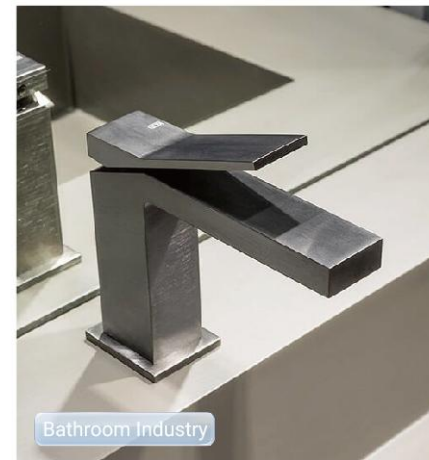
Worthing products are widely used in aerospace, electronics and electrical appliances, automotive, machinery and equipment, tool machining, advertising and decoration and other industry fields of parts processing.



Sheet Metal Processing



Hardware Equipment



Bathroom Industry



Kitchenware Manufacturing Industry



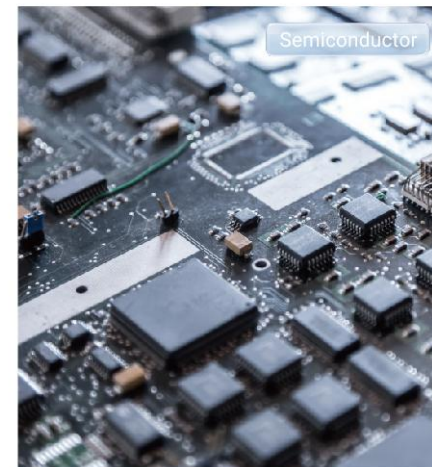
Automotive Manufacturing



Crafts Processing



Construction Machinery



Semiconductor



3c Industry

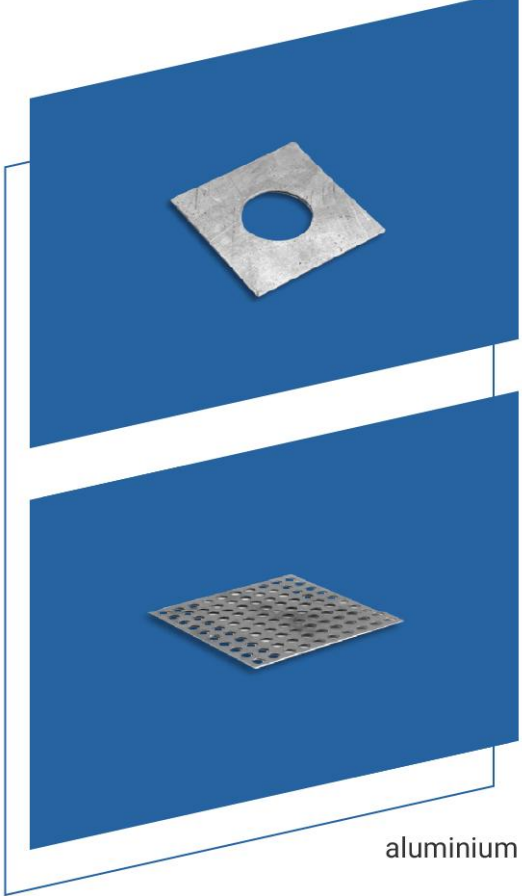


Lithium Battery Manufacturing

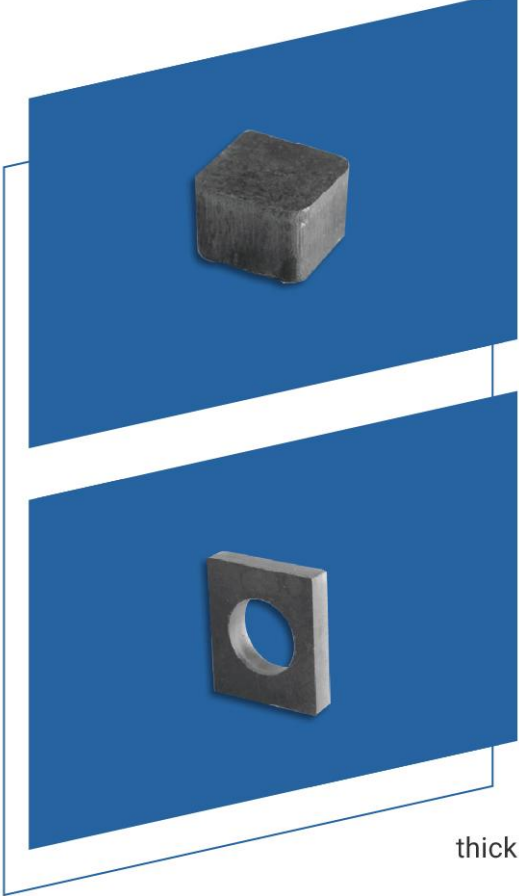




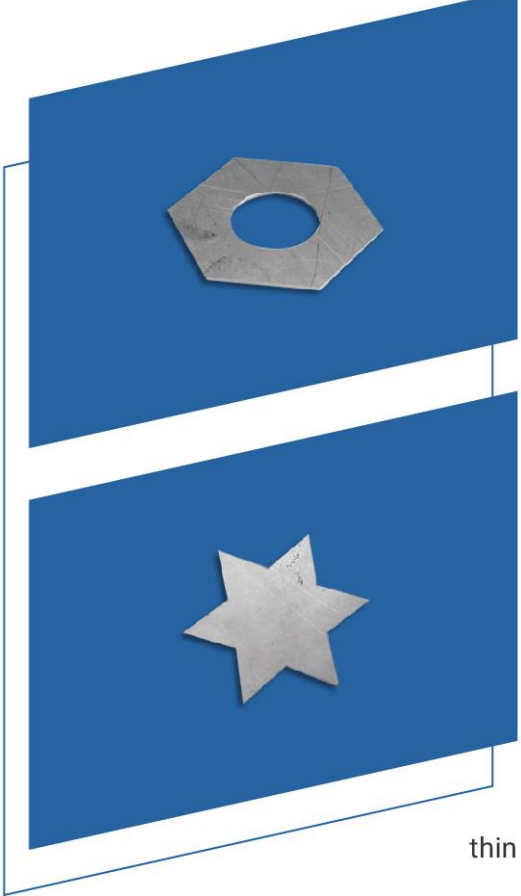
carbon steel



aluminium



thick



thin

Sample Display