



## High Power Welding Head

### Application

- > Tailor Welded Blanks(TWB)
- > Hybrid welding
- > others

### System components & Laser

- > With robot
- > With gantry
- > Possible laser : Disk, Fiber

### Description

- > Designed compact modular type
- > Can be applied various system by changing module simply
- > Multi protective glass for collimation & focus Lens



Extension Tube

Protection Module

Cross-jet Module

Focus Lens Module

Collimation Lens Module

# SIS CORPORATION

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## Laser-Hybrid SYSTEM

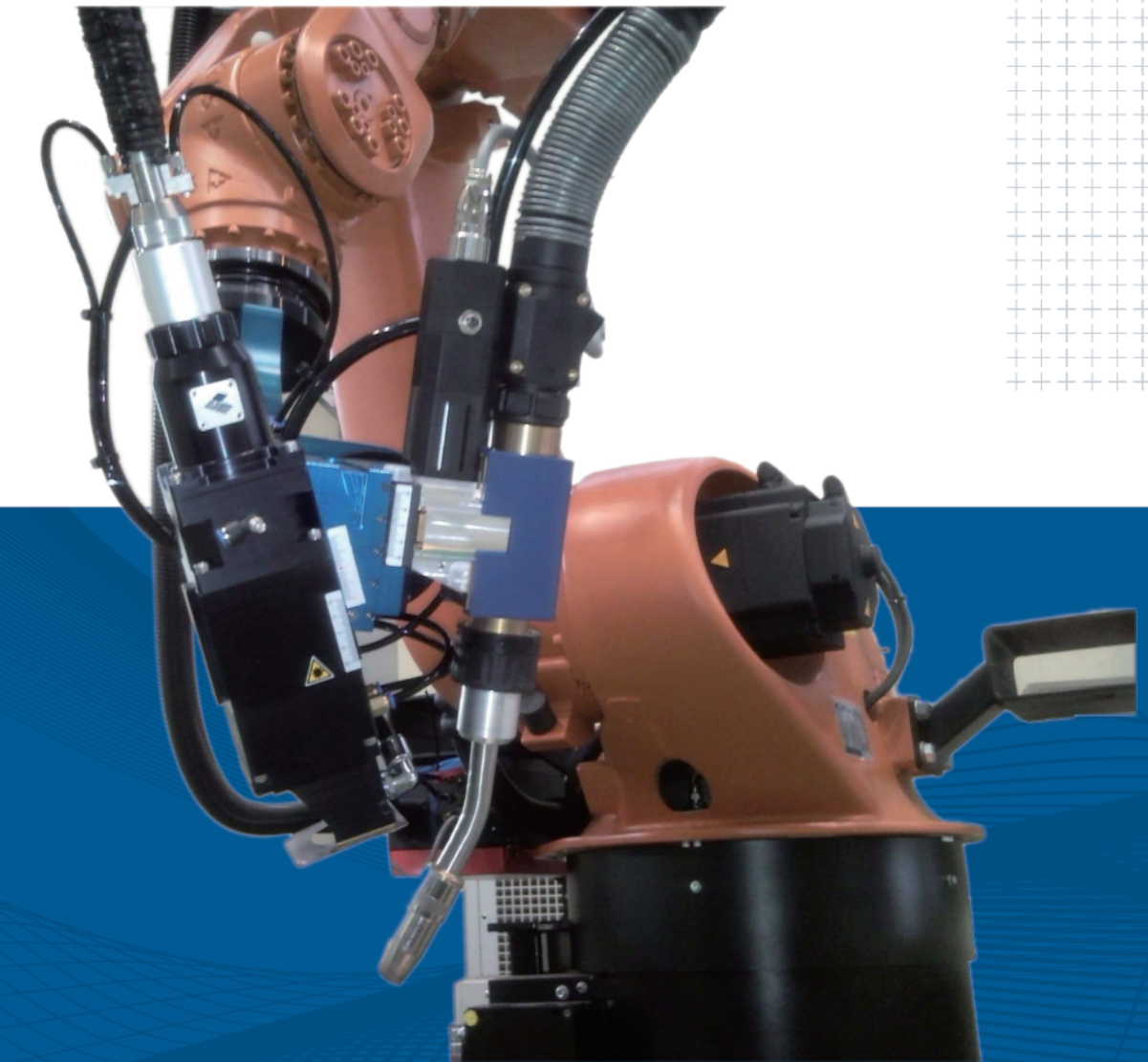


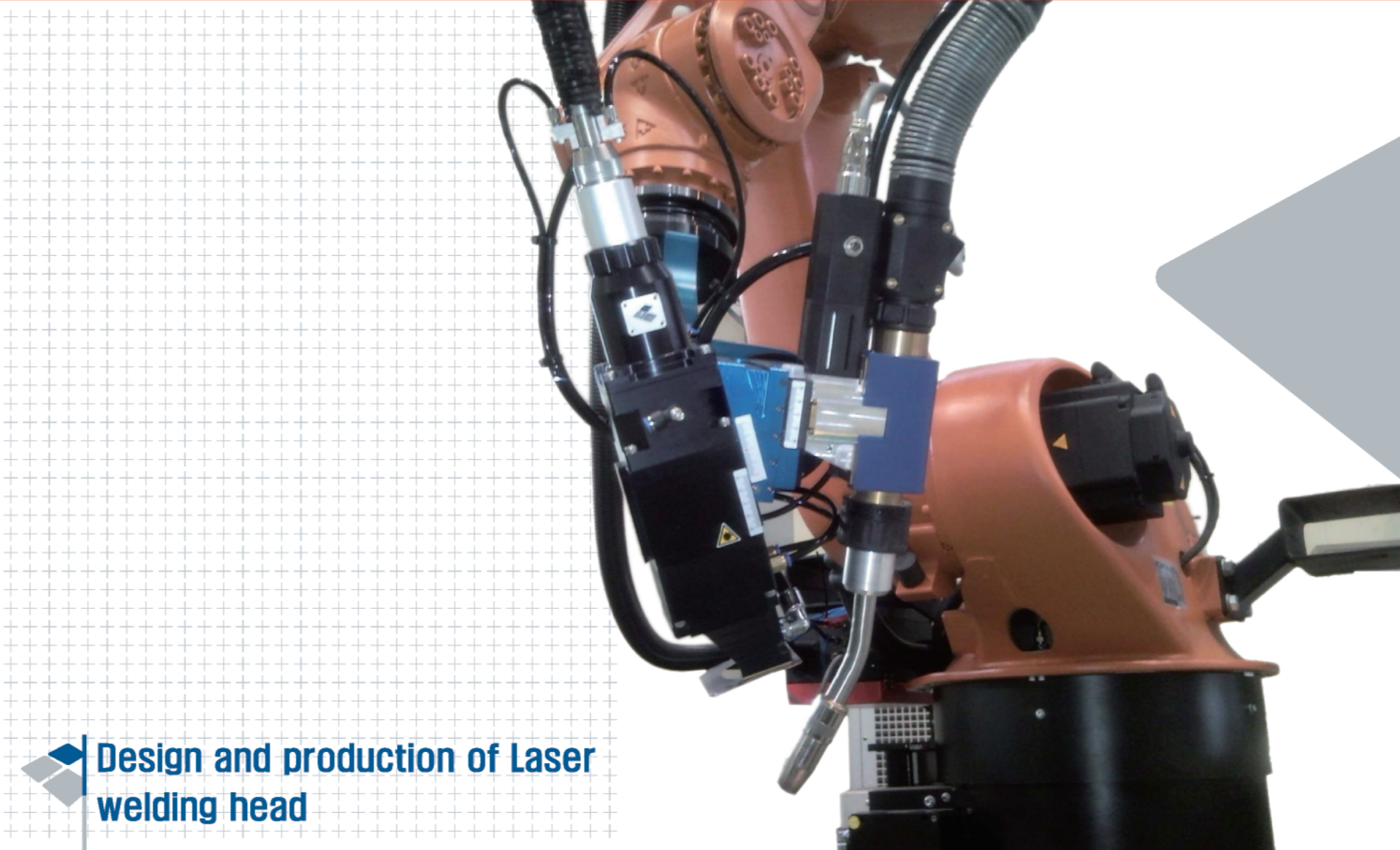
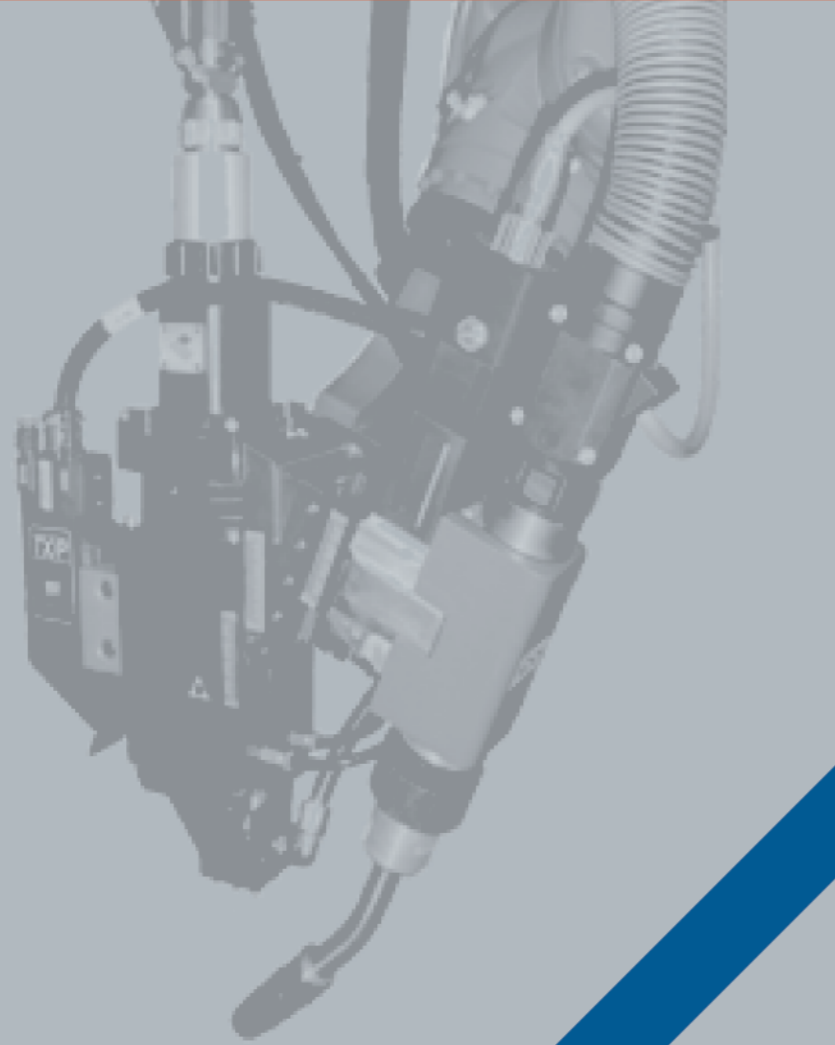
## Specifications of Laser-hybrid system

Description	Specification
Focusing system(magnificatioin@ focal length)	1.6@200mm, 2.4@300mm, 3.0@375mm
Collimation system(magnificatioin@ focal length)	1.0@125mm
Max. laser power	Average 4kW ~6kW
Max. beam parameter acceptance	0.12 ~0.18 [NA]
Wavelength	1025 ~1080 nm
Transmission	> 94%
Core diameter laser light cable	100~600 μm
Laser Light cable receiver	QBH, QBH-Auto, LLK-D, LLK-Auto, QD
Dimensions	70 x 70 x 550mm
Weight	2.5 Kg
Pneumatics	Cross jet :1.0 MPa, approx.350 l/min@0.6 MPa
Cooling	Flow rate 1.5 l/min, temperature 15~35°C
Options	CCD Viewing

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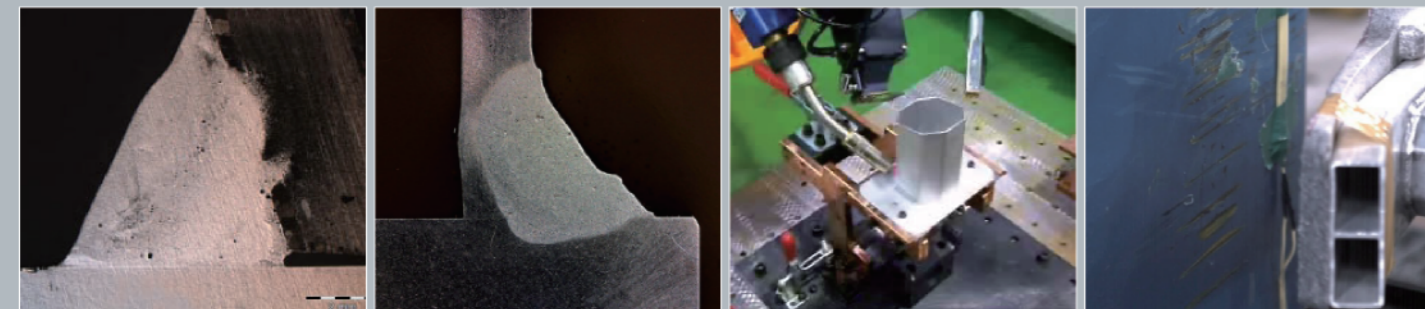


# Hybrid Welding Head Laser-Hybrid SYSTEM

## Description

The combination of laser beam and an electrical arc into an amalgamated welding process results in an increase in both weld penetration depth and welding speed. As a result, it has both of benefit such as large productivity and cost reduction.

Welding tool provides improved quality apply with seam tracking to compensate position accuracy of welding object and deformation factor during welding process.



Cross-section of MIG Welding

Cross-section of MIG(Arc) with Laser hybrid welding

RCAR test for Al Bumper

## Design and production of Laser welding head

### Laser-Hybrid SYSTEM

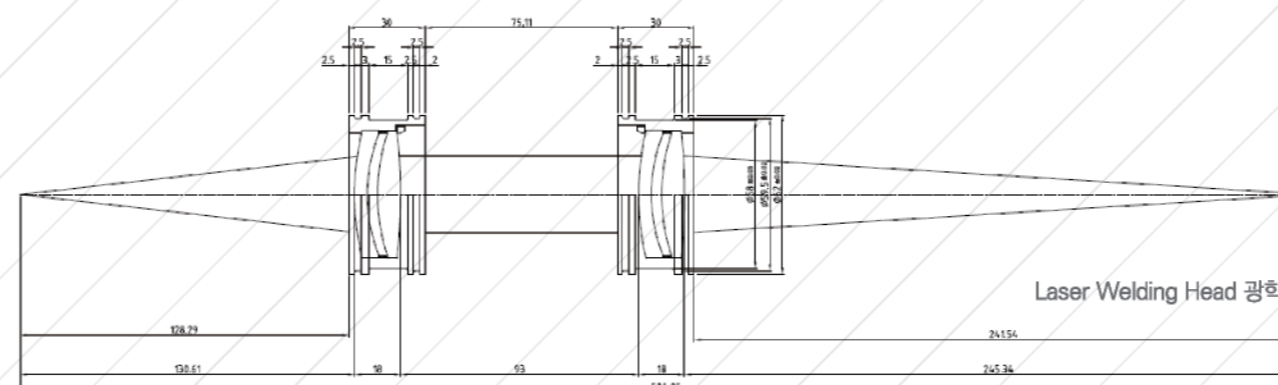
#### ✓ It is possible to weld a crash box at a time

- Combination of Laser welding head and Arc torch
- If the interruption of welding occurs, the probability of product defects is increased



#### ✓ Design and production of Laser welding head

- Focal Length: 250 mm - Spot Diameter: 300 μm - Laser Power : Max. 6 kW
- Spatter cut-off air knife, Water Cooling System



#### ✓ Case of applications

