

# Handheld Laser Welding Systems

FY-WCC01 combines handheld welding, cleaning and manual cutting in one configurable fiber laser platform. Select it around the primary job, material and access to the working area. The process modes use matched setups rather than operating simultaneously; programmed sheet profiles or automated motion require a separate equipment and integration review.



FY-WCC01 cabinet, handheld head and wire feeder. Source photo with the shipping base removed.

## THREE DECISIONS BEFORE YOU SHORTLIST

### 01 **Begin with the joint or surface**

Identify the primary job. For welding, define alloy, thickness, joint and fit-up; for cleaning, describe the coating and substrate. Establish the acceptable result before selecting a process configuration.

### 02 **Confirm the mode equipment**

Review the head, lenses, nozzles, wire feeder and accessories for each required process. Published power options do not by themselves establish material thickness, working reach or the supplied package.

### 03 **Plan handheld work safely**

Check head access, cables, workholding and the controlled working area. Confirm utilities, cooling, extraction and the required laser-protection arrangement; do not assume the handheld platform includes robotic motion.

## Review the FY-WCC01 configuration

| OPTION / PLATFORM                 | WHEN TO SHORTLIST                                                                     | CONFIRM BEFORE ORDERING                                                                                  |
|-----------------------------------|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| <b>Welding as the primary job</b> | Accessible joints on suitable metal fabrication, cabinets, enclosures and assemblies. | Alloy, fit-up, joint geometry, thickness, required finish, strength/acceptance method and sample result. |
| <b>Cleaning requirement</b>       | Suitable surface preparation or residue removal using the matched setup.              | Coating, substrate sensitivity, required finish, head/lens choice and representative cleaning trial.     |
| <b>Manual cutting requirement</b> | Appropriate handheld cutting tasks within the selected configuration.                 | Material, access, head setup and accepted result; CNC profiles require a separate machine review.        |
| <b>Laser-source configuration</b> | Select the quoted source around the process and tested result.                        | Current source options, electrical supply, cooling and material-specific application limits.             |
| <b>Wire feed and accessories</b>  | Specify supporting equipment around joint and process requirements.                   | Wire feeder, consumables, nozzles, lenses and mode-change components included in the quotation.          |
| <b>Site and workholding</b>       | Plan a controlled handheld work location with consistent part presentation.           | Fixtures, reach and cables, protection, extraction, utilities and operator access.                       |

### Three processes; one mode at a time

Select the setup for welding, cleaning or manual cutting. Confirm whether weld-seam cleaning is included in the cleaning mode and which head, lens or nozzle changes are required. Follow the supplied mode-change instructions.

### Handheld cutting is not a CNC table

If the work requires repeated profiles, nesting or programmed sheet production, compare a CNC cutting machine. A handheld manual-cutting function does not establish those capabilities.

# Prepare a useful application brief

### Primary process and material

Identify welding, cleaning or manual cutting as the main job. List the alloy, material thickness, surface condition and intended secondary process requirements.

### Joint or surface details

For welding, send joint drawings, fit-up and access. For cleaning, describe coating and substrate; for manual cutting, show the contour and required edge.

### Acceptance and samples

Define weld appearance and required tests, acceptable cleaning effect or cutting result. Supply representative parts so the proposed setup can be evaluated against those criteria.

### Handling and workflow

Describe part position, fixtures, operator access, batch pattern and cycle target. Specify working reach separately; any repetitive automation needs an explicit integration review.

### Site and protection

Provide the destination electrical supply, cooling arrangement and available space. Review extraction, controlled access, cable routes and laser-protection requirements for the planned work location.

### Included equipment

Confirm source, head, wire feeder, lenses, nozzles, consumables and process-change accessories. Agree instructions, installation responsibilities and the configuration-specific acceptance record in the quotation.

## A PRACTICAL ROUTE TO A CONFIRMED CONFIGURATION

### 01 Define

Send the material, joint or surface details, primary process and a clear acceptance target for review.

### 02 Configure

Match the source, handheld head, accessories and utilities to the proposed process and site conditions.

### 03 Test

Evaluate representative parts using the intended mode; record settings, preparation and the accepted process result.

### 04 Agree

Confirm the supply list, mode-change equipment, work-area protection and application limits before approving the order.

Documented configurations do not guarantee a universal welding thickness, cleaning result or cutting capacity. Confirm source, reach, utilities, accessories and process limits for the ordered unit. Handheld work requires a site-specific protection arrangement; this guide is neither an operating procedure nor evidence of certification.

## OFFICIAL REFERENCES

1. Laser welding family
2. FY-WCC01 product configuration
3. CNC cutting alternatives
4. Current download library