

THE MOBILE WELDING CELL FOR THE CRAFT BUSINESS: SIMPLE, LOW-BUDGET, SAFE



EASYAR

Member of DAIHEN Group



Advantages



The mobile installation concept for automated welding

- Mobile compact design: space-saving, flexible and reasonably-priced
- Easy operation with OTC Easy Teach control: minimal time required to create the welding program, even without elaborate training
- Stable and precise welding robot: physical relief for employees and ensures optimized, consistent welding quality
- Safety technology in accordance with CE standards: Electrically monitored, lightweight protective housing safeguards from unauthorized access and glare effects



Features and characteristics



EASYAR Simple, low-budget, safe



• Safety housing with aluminum sheet reinforcement, large opening and foldable side elements - seen here in setup mode



• Creating a program on the component using the Easy Teach mode

2

1



• Welding table prepared for holding clamping elements - here, the operator is shown during the mounting phase

3

4



• Automatic welding process with the machine closed - operator observes the process through the safety windows



Configuration

(EASYARG 01 – MIG/MAG package

Compact turnkey welding robot station with welding technology

Basic equipment

- 3D welding table with intelligent system grids for clamping and positioning the workpieces
- Fully assembled and CE-compliant documentation
- Welbee P400 welding machine (gas-cooled inverter pulse power source)

- OTC safety technology with monitoring unit (RMU) and housing
- Six-axis robot, FD-B6, with integrated cable routing for optimal accessibility
- OTC robot welding torch with forced shutdown

Option 01

 Welbee P500L welding machine (water-cooled inverter pulse power source)

Option 02

 Horizontal rotary positioner, A2-1PB250, including synchromotion software and integration in the Easy Teach control system

Layout and dimensions

(EASYARG 01 – MIG/MAG package

Basic equipment for MIG / MAG welding with Welbee P400 welding machine



Option 01 for MIG / MAG welding with Welbee P500L welding machine





<complex-block>



Configuration

(EASYARG 02 - TIG package

Compact turnkey welding robot station with welding technology

Basic equipment

- 3D welding table with intelligent system grids for clamping and positioning the workpieces
- Fully assembled and CE-compliant documentation
- Welbee A350P welding machine (water-cooled inverter pulse power source)
- OTC safety technology with monitoring unit (RMU) and housing
- Six-axis robot, FD-V8 for maximum flexibility
- OTC robot welding torch with 3D forced shutdown

Option 01

 Push-pull system for feeding welding wire into the weld pool

Option 02

 Horizontal rotary positioner, A2-1PB250, including synchromotion software and integration in the Easy Teach control system

Layout and dimensions

(EASYARG 02 – TIG package

Basic equipment for TIG welding with Welbee A350P welding machine







Option 01 for TIG welding with cold wire (push-pull system)





Option 02 for TIG welding* with horizontal rotary positioner





Technical specifications

| Robot | | | |
|------------------------------|------------------------------|------------------------------|--|
| | 2 | | |
| Model | FD-B6 | FD-V8 | |
| Kinematics | Vertically articulated robot | Vertically articulated robot | |
| Kinematics Number of area | Vertically articulated robot | Vertically articulated robot | |

| Number of axes | 6 | 6 | |
|---|-----------------------|------------------------|--|
| Workspace (P-point) | R 1,445 mm | R 1,437 mm | |
| Maximum load | 6 kg | 8 kg | |
| Repeat accuracy (see note 1) | ± 0.08 mm | ± 0.08 mm | |
| Drive system | AC servo motor | AC servo motor | |
| Ambient temperature/humidity | 0 ~ 45°C, 20 ~ 80% | 80% 0 ~ 45°C, 20 ~ 80% | |
| Weight | 145 kg | 145 kg 140 kg | |
| Maximum load on upper arm | 10 kg 10 kg | | |
| Position information | See note 2 See note 2 | | |
| Installation position of the vertically articulated robot | F, W, C | F, W, C | |

Note 1: The indicated value is the result of numerous repetitions of automated operations under stable conditions, during operations of the robot with maximum load. The repeat accuracy (repeatability) refers to the covered path. Repeatability with respect to the point is ± 0.2 mm.

Note 2: The position information is protected by the battery-powered memories inside the manipulator. F = floor / W = wall / C = ceiling

Welding machines







| Model <i>Webee</i> | | P400 (MIG/MAG) | P500L (MIG/MAG) | A350P (TIG) |
|--------------------------------|-------|-----------------------|-----------------------|-------------------------------|
| Execution | | Gas-cooled | Water-cooled | Water-cooled |
| Supply voltage (± 15%) | | 3 x 400 V / 50 Hz | 3 x 400 V / 50 Hz | 3 x 400 V / 50 Hz |
| Max. rated power | | 18.2 kVA | 25 kVA | 12.7 kVA (AC) / 12.2 kVA (DC) |
| Welding current | | 30–400 A | 30–500 A | 5–350 A (AC) / 2–350 A (DC) |
| Welding voltage | | 12–34 V | 12-39 V | 24 V |
| Welding current/ duty cycle | 30 % | 400 A | 500 A | 350 A (AC) / 350 A (DC) |
| | 60 % | 400 A | 500 A | 350 A (AC) / 320 A (DC) |
| | 100 % | 370 A | 410 A | 270 A (AC) / 300 A (DC) |
| Type of protection/cooling | | IP 23 / F | IP 23 / F | IP 23 / F |
| Switching steps | | Continuously variable | Continuously variable | Continuously variable |
| Dimensions L x W x H | | 710 x 395 x 592 mm | 710 x 395 x 762 mm | 710 x 395 x 592 mm |
| Weight | | 62 kg | 62 kg | 68 kg |

Welding table

OTC Welding Table

- Made of high-quality steel S355J2+N, plasma-nitrided and coated
- Dimensions of the whole table: (D*W) 2.000*1.200mm
- Dimensions of the perforated plate: (D*W) 1.200*800mm
- Table height depends on selected variant
- Table legs with steering rollers and foot-operated parking brakes
- Load capacity approx. 1.000 kg
- Weight approx. 600 kg
- Different hole diameters available: Drilling hole Ø 28mm in a 100*100mm grid Drilling hole Ø 22mm in a 100*100mm grid Drilling hole Ø 16mm in a 50*50mm grid

Horizontal turning positioner



- Enables fully synchronized operation with FD-series robots
- The central hole in the flange plate is designed for conducting media
- Maximum load 250 kg
- Rotational speed 26° per sec.
- Torque 205 Nm
- Repeat accuracy ± 0.1 mm
- Weight 110 kg

Welding torches



(EASY)

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