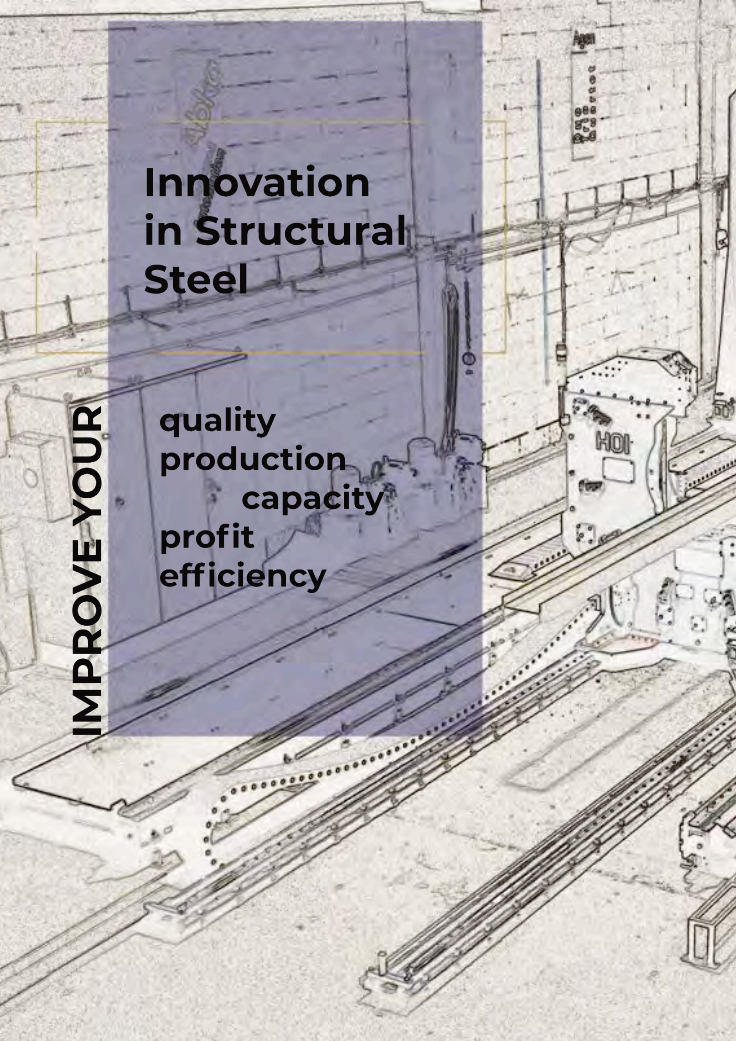


**Robotic  
Structural  
Steel  
Assembler**

**AGEN**  
— D U O —

[www.steelmar.at](http://www.steelmar.at)

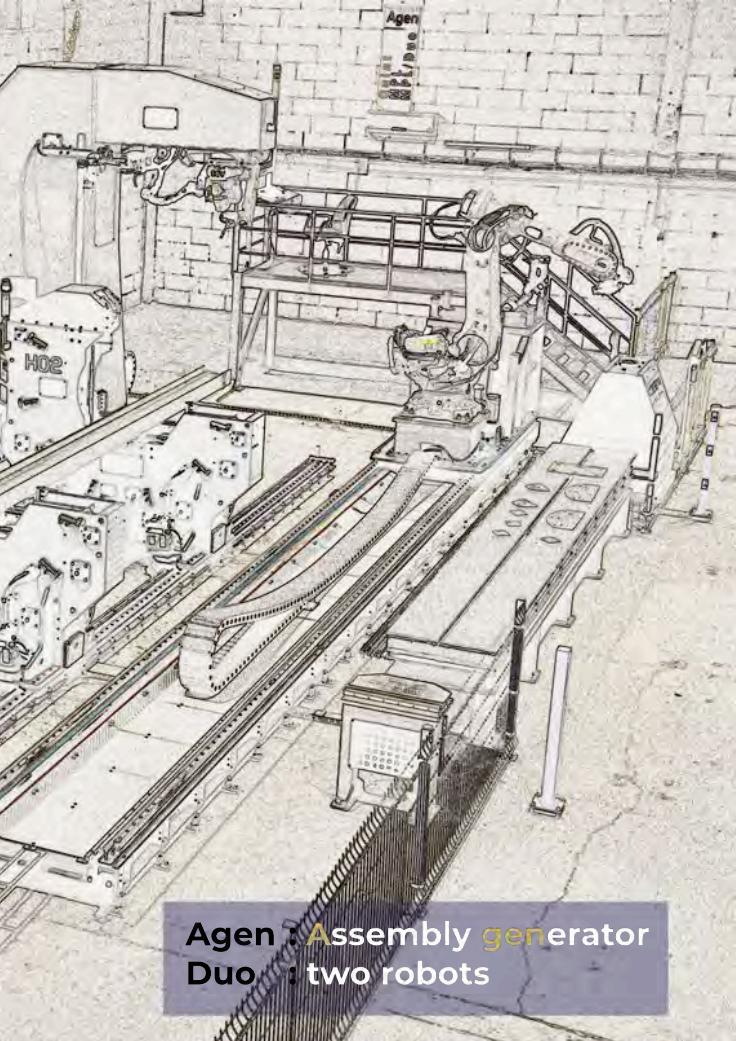
[www.abkaotomasyon.com](http://www.abkaotomasyon.com)



# Innovation in Structural Steel

**IMPROVE YOUR**

quality  
production  
capacity  
profit  
efficiency



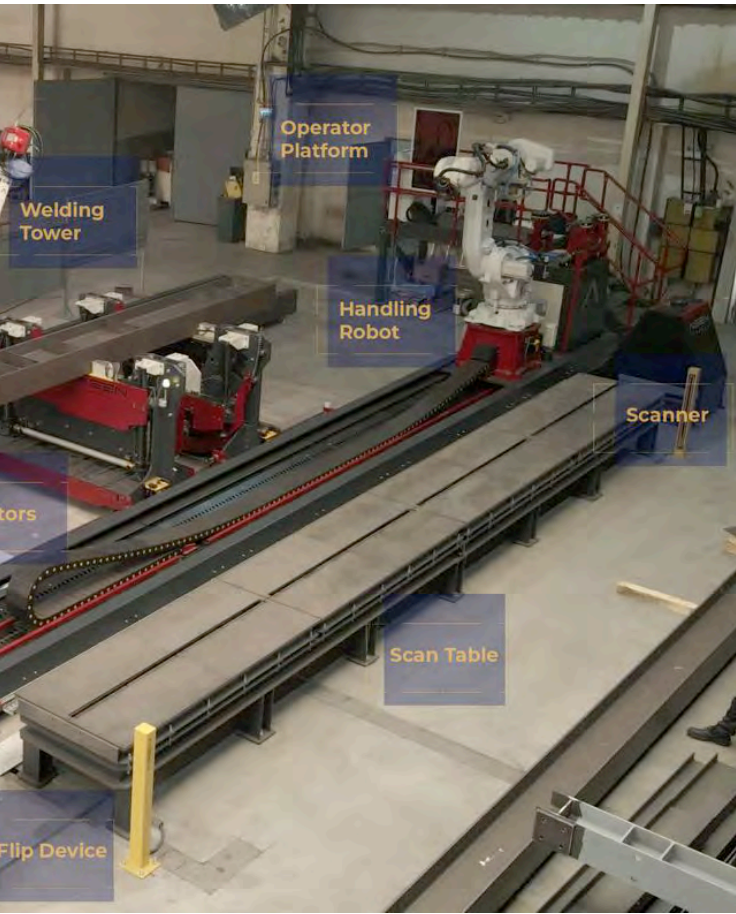
**Agen** : Assembly generator  
**Duo** : two robots

# AGEN DUO

Main  
Cabinet

Rota





Operator  
Platform

Welding  
Tower

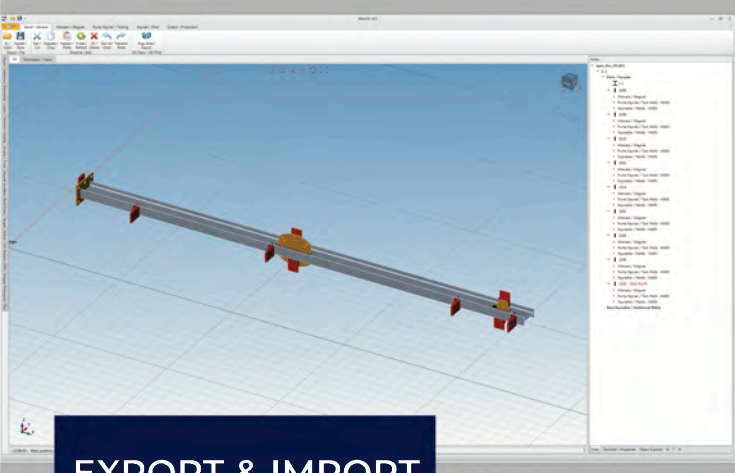
Handling  
Robot

Scanner

tors

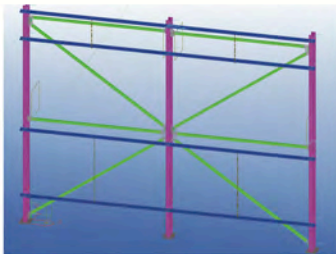
Scan Table

Flip Device



## EXPORT & IMPORT

Our software makes it simpler...



Export your BIM/CAD model from TEKLA, SDS/2, Advance Steel etc. with our export module.

Abka01, our design software, automatically finds the magnet, tack and weld positions. Optionally stud weld positions, too. Also it has advanced collusion check algorithms. For most of the assemblies, total process is only takes couple of minutes. You can not only add, delete, stretch, change thickness of welds but also change weld parameters as well. It's that easy.



## SCAN

Place plates, angles, and profiles on the table. Robot picks the scanner and scans the whole table. At the same time, beam scan process starts and it validates the main profile by checking it's width and length. After scanning process, our software starts auto-matching process. Our software creates work orders, and robot flips the plates automatically, if necessary.





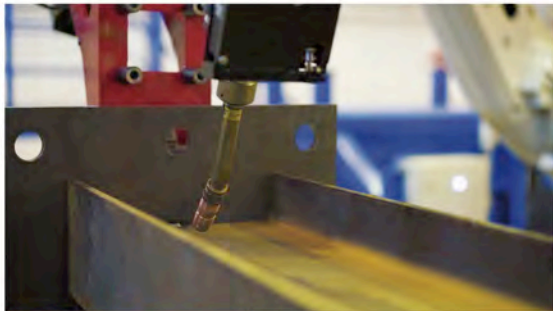
## FIT & TACK

Fit and tack process is totally an unattended process. High precision sensors detect the right spot to tack weld.

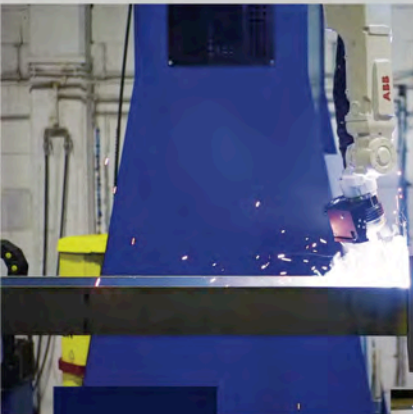
Up to 150kg (200kg is optional) plates can be mounted on main parts.

Before fitting, deformation on the beam is calculated and measured, so it fits to the right place. Total fitting tolerance is  $\pm 1\text{mm}$ .

The new era for fitting.



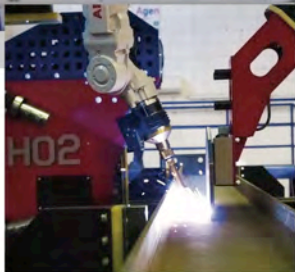




# WELD

## High quality welds.

Esab power source is industry leader in it's field. Weld Cloud let's traceability in an easier way. From a3 to a6 single layer, a6 to a15 multi layer weld thicknesses can be achieved. Also tandem torches are supported. It's much faster than conventional methods. Torch cleaning unit, cuts wire, cleans the nozzle, sprays anti-spatter spray and calibrates the torch automatically. Welds are second to none.



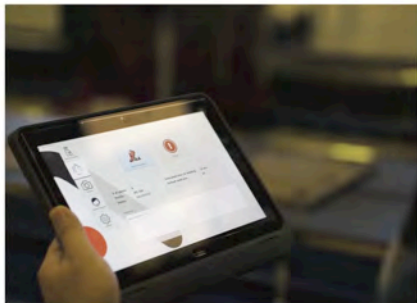


## BENEFITS

Agen Duo, with two industrial robot, can boost your production. It's much faster compared with conventional fit&weld process.

It's flexible, so it can easily be converted to Agen Trio. All the softwares running, is developed by our company Abka. So new options can be added easily.

Increase your competitiveness and quality...



**AUTOMATED**  
**FAST**  
**EFFICIENT**  
**FLEXIBLE**  
**ACCURATE**  
**CONVENIENT**

Let's build  
the future  
together.



**AGEN**  
— D U O —

Solution Partners:

**ABB**



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E-mail: [info@steelmar.at](mailto:info@steelmar.at)

[www.steelmar.at](http://www.steelmar.at)

# TECHNICAL SPECIFICATIONS

## Industrial Robots

- ABB Handling Robot - 200kg payload
- ABB Welding Robot
- 18 meter linear track - 2 piece

## Robotic Welding Power Source:

Fronius / ESAB 500 Amper Water Cooled Power Source - Synergic

- Wire diameter - 1.2mm - 1.6mm
- Torch bend angle - 22/33 degree
- Big pack wire capacity - 250kg
- Weld Shield Gas - Ar + CO<sub>2</sub> 95 / Ar + CO<sub>2</sub> 98

## Torch Cleaning Unit:

- Wire cutting, rimming, anti-spatter - included
- Torch measurement and calibration - included

## Plate Table

- Table dimensions 1000mm x 8000mm
- Plate flipping - Included

## Plate Laser Scan Unit

- Tolerance + 0.50mm

## Laser Touch Sense

- Linearity 0.4mm
- Max. distance 750mm

## Rotator / Positioner:

- 2 piece
- Maximum capacity 6000kg

## Total System Tolerance:

±1.50mm

## Magnet Tool:

- Mag No.0 20kg - Optional
- Mag No.1 70kg - Included
- Mag No.2 200kg - Included

## Operator Panel:

24" multi touch screen

Profile Type	Min. Dimension (mm)	Max. Dimension (mm)
H profiles	120 (4")	1100 (43")
W Profiles	W4x13	W30x39"
I profiles	120 (4")	1100 (43")
Box sections	100	600

## OPTIONS

Second Weld Tower - Agen Trio Prep.

1,500mm profile height

15,000mm profile length

18,000mm profile length

Magnet for small parts - Mag No.0

Corner frame application

Angle profile processing as ADD part

Additional workplace license or add. CAD support

Lights-out manufacturing - Full Remote Control

Pre-heating unit

Infeed conveyor

Outfeed conveyor

Optional

Optional

Optional

Optional

Optional

Optional

Optional

Optional

Optional

Optional

Optional

Optional