

Robotic Structural Steel Assembler

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A black and white photograph of a large industrial facility, likely a steel fabrication shop. In the foreground, a long conveyor belt carries several large, flat steel plates with pre-drilled holes. In the background, two large industrial robotic arms are positioned over the conveyor. The facility has a high ceiling with visible steel beams and large windows on the left side. The text "WRI" is visible on a structure in the background.

IMPROVE YOUR,
QUALITY
EFFICIENCY
PRODUCTIVITY

In Structural Steel Fabrication

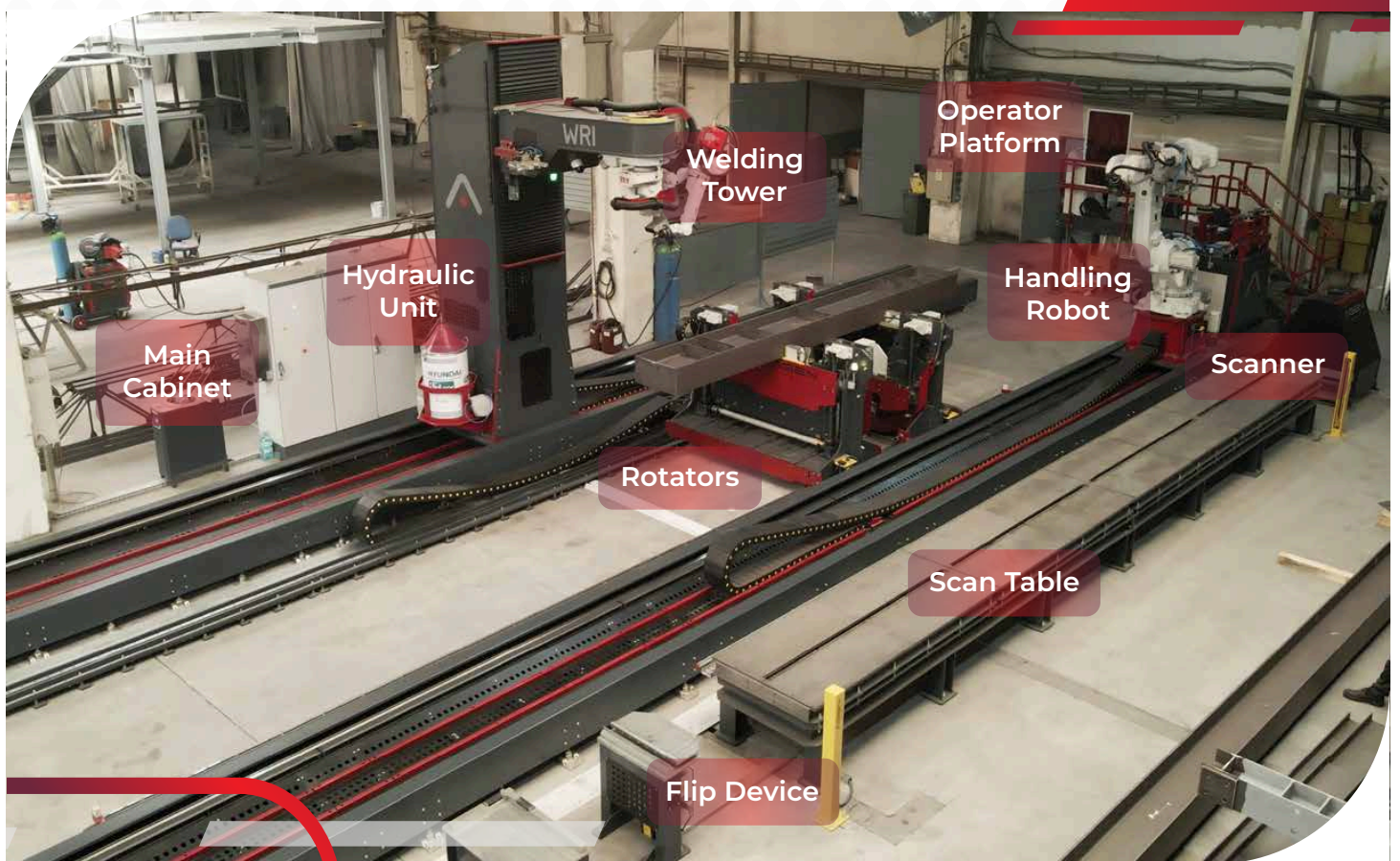
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Assembly
GENerator

Two Robots

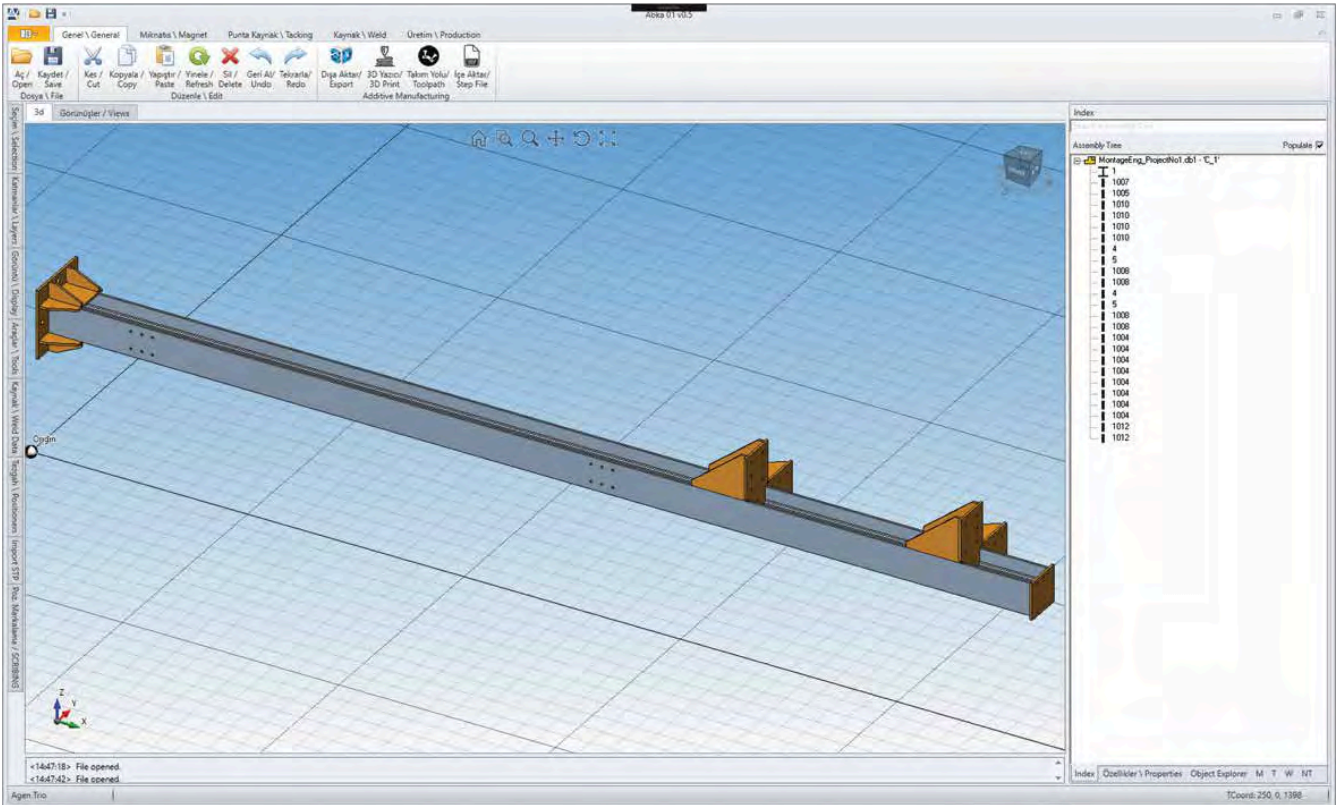
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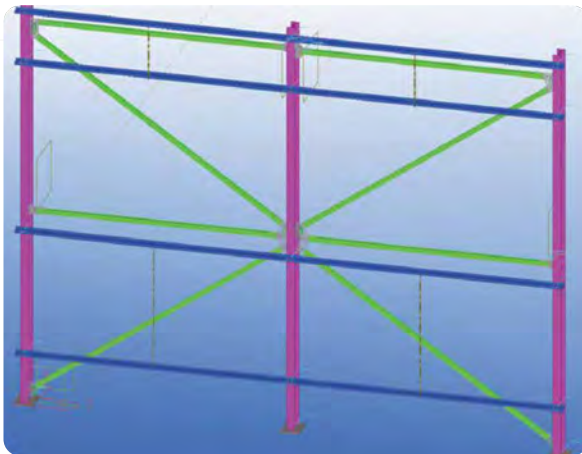
Assembly
GENerator
Three Robots

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EXPORT & IMPORT

Our software makes it simpler...



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

AgemQ, our design software, automatically detects the magnet, tack, and weld positions, as well as optional stud weld positions. It also features advanced collision-check algorithms. For most assemblies, the entire process takes only a couple of minutes. You can not only add, delete, stretch, or change the thickness of welds, but also modify weld parameters. It's that easy!



SCAN

Place plates, angles, and profiles on the table. The robot picks up the scanner and scans the entire table.

Simultaneously, the beam scan process begins, validating the main profile by checking its width and length.

After the scanning process, our software initiates the auto-matching process. It creates work orders, and the robot flips the plates automatically, if necessary.

FIT & TACK

The new era of fitting.

The fit and weld process is completely unattended.
High-precision sensors detect the correct spot for
tack welding.

Plates weighing up to 235kg, including tool weight,
can be mounted on the main parts.

Before fitting, deformation in the beam is calculated
and measured to ensure a precise fit. The total fitting
tolerance is $\pm 1\text{mm}$.





WELD

High quality welds.

The Fronius power source is an industry leader in its field. Weld Cloud makes traceability easier.

Weld thicknesses ranging from a3 to a8 for single-layer and a8 to a15 for multi-layer can be achieved. Tandem torches are also supported, making the process much faster than conventional methods.

The torch cleaning unit cuts the wire, cleans the nozzle, sprays anti-spatter solution, and calibrates the torch automatically. The resulting welds are second to none.





BENEFITS



**AUTOMATED,
FAST,
EFFICIENT,
FLEXIBLE,
ACCURATE,
CONVENIENT.**

Agen Duo, with two industrial robots, can significantly boost your production. It is much faster compared to the conventional fit and weld process.

Its flexibility allows it to be easily upgraded to Agen Trio. All software running on the system is developed by our company, Abka, enabling new options to be added seamlessly.

Increase your competitiveness and quality.

Our Service Is Your Success.

We understand how essential quality service is for the effective operation of your equipment. Our local service team is always ready to assist you and responds quickly to your requests. We're just a phone call away, ensuring you receive the best service experience.

Service is our top priority, and we take pride in providing fast and reliable solutions for all your needs. Your success is our goal!



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 ₂ %5 / Ar + CO ₂ %18

Torch Cleaning Unit:

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

Plate Table:

Table dimensions	1.000mm x 8.000mm
Plate flipping	Included

Plate Laser Scan Unit:

Tolerance	± 0.50mm
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Laser Touch Sense:

Linearity	0.4mm
Max. distance	500mm

Rotator / Positioner:

2 piece	
Maximum capacity	6.000kg

Total System Tolerance:	± 1.50mm
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Magnet Tool:

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

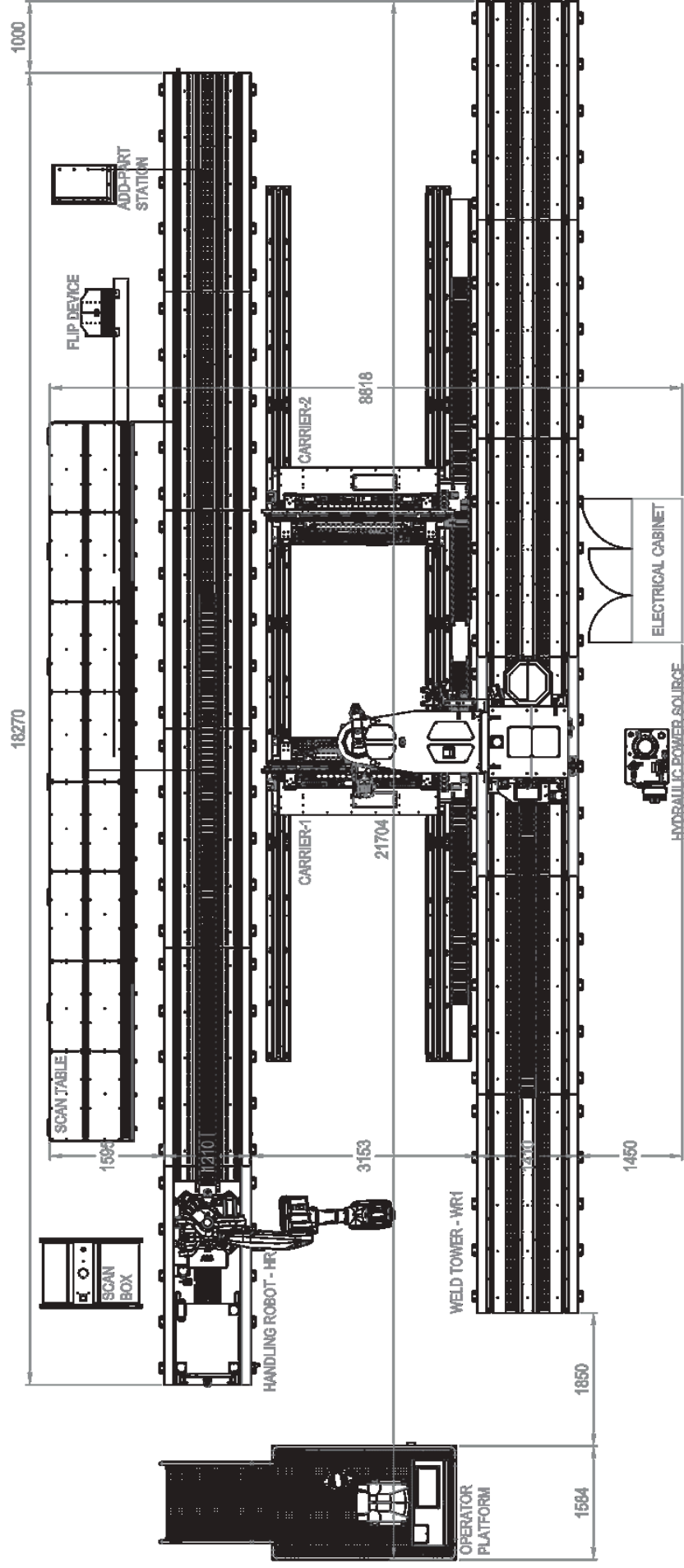
Operator Panel:

24" multi touch screen

Profil Type	Min. Dimension (mm)	Max. Dimension (mm)
H profiles	120 (4")	1100 (43")
W Profiles	W6x13	W30x391
I profiles	140 (5.5")	1100 (43")
Box sections	100	600

OPTIONS

Second Weld Tower - Agen Trio Prep.	Optional
15.000mm profile length	Optional
18.000mm profile length	Optional
Magnet for small parts – Mag No.0	Optional
Haunched frame application	Optional
Angle profile processing as ADD part	Optional
Additional workplace license or add. CAD support	Optional
Lights-out manufacturing - Full Remote Control	Optional
Pre-heating unit	Optional
Infeed conveyor	Optional
Outfeed conveyor	Optional



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