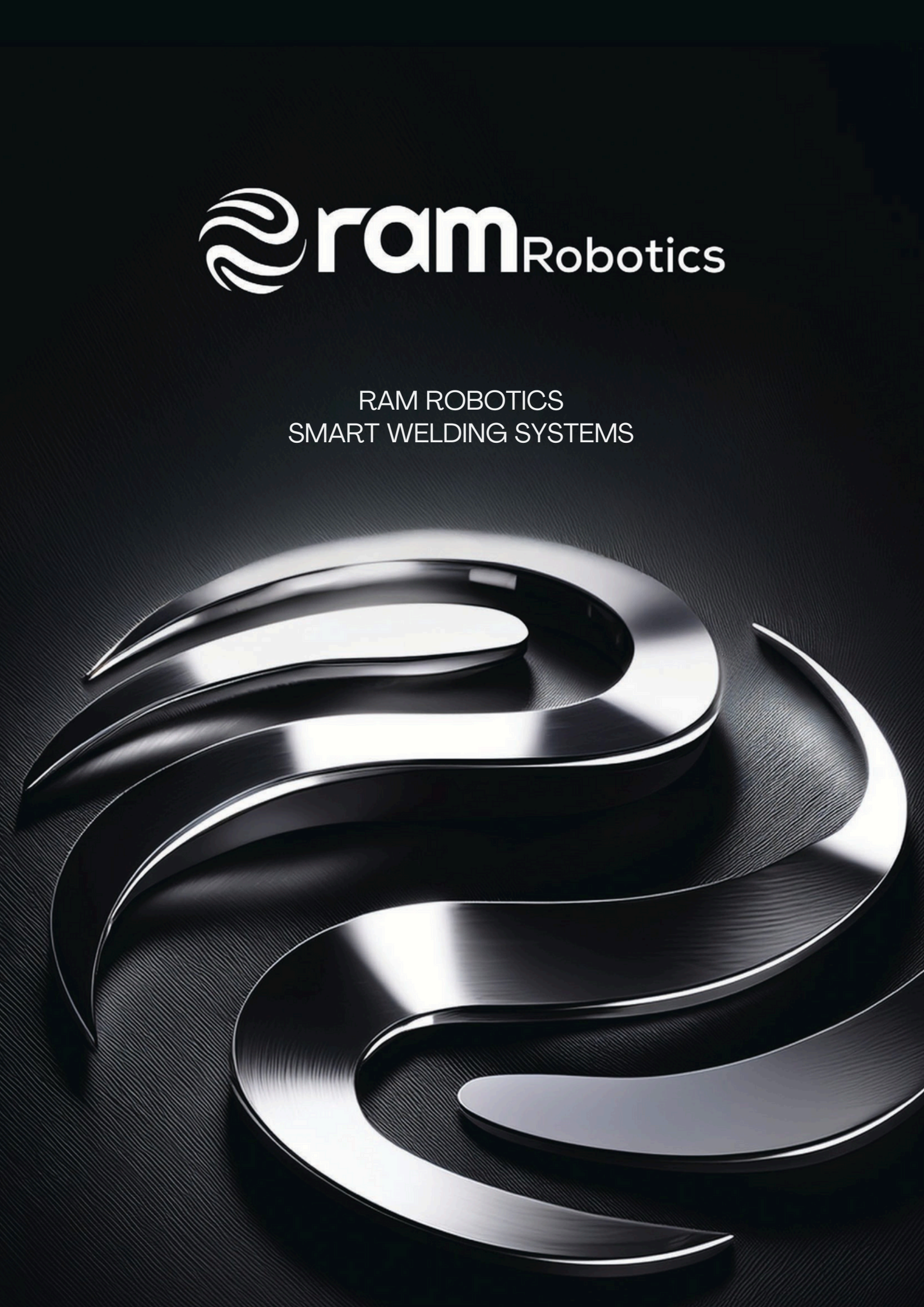
ram Robotics

RAM ROBOTICS
SMART WELDING SYSTEMS





Since 2017

Endless Satisfaction

Complete Pre- and Post-Sales Support

Unique Production as Distinct as a Fingerprint for Every Industry

About Us
Every Robot We Build Is an Engineering Marvel!

RAM Robotic was founded in 2017 by experienced leaders who made a name for themselves through numerous domestic and international projects in welding, handling, feeding, and packaging processes. With its skilled engineering team, experienced manufacturing staff, and commitment to solving customer challenges, the company continues to serve its target audience. Guided by the motto “Every job we do is an engineering marvel,” the solutions delivered help customers stand out in their fields. Its product range—including gantry-type robot positioners, 6-axis articulated robots, robot positioners, robotic fixtures, and welding systems—adds significant value across industries. The technologies we offer at Ram Robotics illuminate the future, deliver strong results, and empower our customers to stay ahead of the competition.

Your Solution Partner in Robotic Systems

With an experienced engineering team, our company designs and produces robotic products and systems, leading innovations across the industry. With a wide product range—such as 6-axis articulated robots, gantry-type robot positioners, L-type positioners, K-type positioners, H-type positioners, single-axis positioners, and drop-center positioners—we help customers improve efficiency with industry-specific solutions.

ram Robotics

AI SUPPORT
ROBOTIC WELDING SYSTEM

Precision Production for Welding

Our welding robots are designed with lightweight, high-rigidity structures to deliver faster motion and superior path accuracy. Each joint in these arc-welding-focused systems is optimized for smooth and stable performance in demanding welding environments.

Smart Control, Easy Use

Powered by advanced motion control algorithms and a quad-core CPU, RAM Robotics Intelligent Welding Systems (IWS) deliver precise and smart path planning with exceptional response times. User-friendly programming interfaces and optional offline programming tools reduce learning time and boost efficiency.

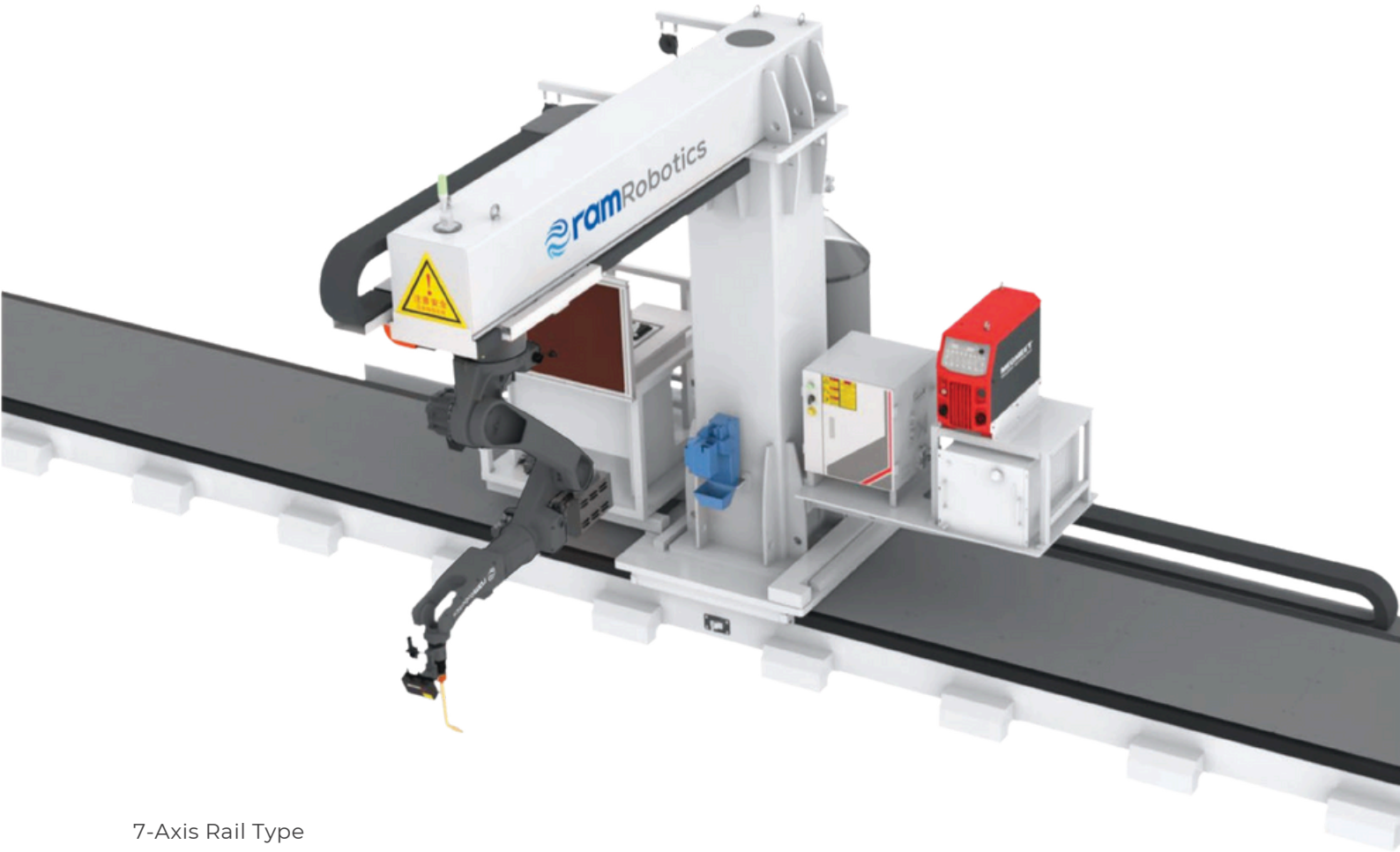
Compatible with Many Industries

From steel constructions to automotive parts and from the energy sector to heavy equipment, RAM Robotics Intelligent Welding Systems (IWS) easily adapt to a wide range of applications. Whether it's a single-station automation setup or fully integrated welding lines, they provide scalable solutions tailored to your production needs.

Preferred Industries

- Automotive
- Centrifugal Technologies Industry
- Heavy Industries
- Heavy Equipment Industry
- Railway Systems Industry
- Steel Construction Industry
- Energy Indusrty

ROBOTIC WELDING SYSTEM



7-Axis Rail Type

7The 7-axis rail-type welding robot is designed for large-scale and long beam structures. Its extended linear rail and six-axis robot arm provide a wide working range and high positioning accuracy. Ideal for beam assembly lines and structural component welding, this configuration offers superior flexibility and weld consistency over long distances.

7-Axis Gantry Type

The 7-axis gantry-type robot combines horizontal reach with adjustable vertical movement, making it suitable for overhead or side welding applications. Its compact form allows easy integration into narrow work areas while maintaining full motion capability for complex weld paths. Suitable for medium and large-scale steel assemblies, it increases efficiency with reduced repositioning.

8-Axis Gantry Type

With an added axis on the console arm, the 8-axis model delivers greater movement range and coverage. This allows precise processing of angled joints, multilayer welding, and handling of different workpiece shapes. It is optimized for sectors that demand high precision and compliance, such as pressure vessel or machine frame production.

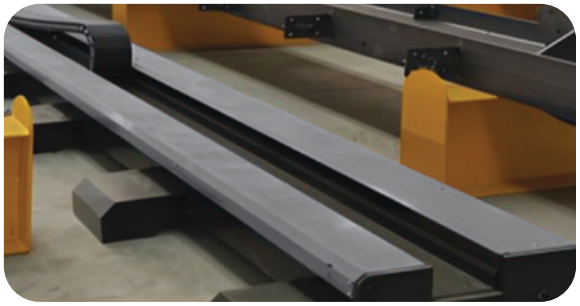
9-Axis Console Type

The 9-axis console robot represents the highest flexibility in the series. Its extra rotary axis enables full control of complex welding positions and complete 3D coverage of intricate parts. This setup is ideal for applications requiring high customization or situations where precision, stability, and versatility are critical during dense assemblies.

- With its ergonomic robot design, the robotic hose package passes through the robot wrist without causing problems during welding operations.
- It eliminates the manual teaching/programming method.
- It adapts to multiple product structures within the robot's working range.
- Incorporating positioning procedures reduces the precision requirements of the workpiece assembly group.
- It offers simple usage, quick learning, and reduced labor requirements.
- No fixture is required; it is sufficient to secure the workpiece beforehand.
- Welding support types: flat corner weld, vertical corner weld, fillet weld, multi-layer and multi-pass weld.
- H-shaped steel beams, columns, bridge plates, ship plates, and transformer walls reduce the online welding time of steel construction structures.



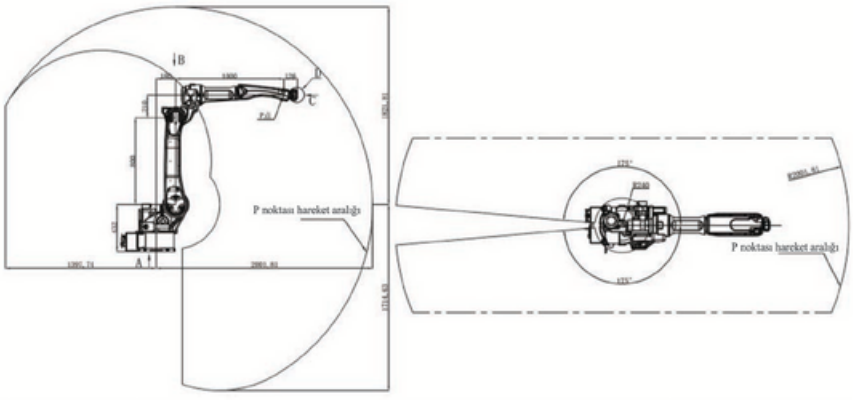




WELDING ROBOT ARM

NAME	Kaynak Robotu	Hareket Aralığı	Temel Eksen	J1	±173°	Maksimum Hız	Temel Eksen	J1	172.1°/s
TYPE	Dikey Eklem 6			J2	+85°/ -150°			J2	135.1°/s
MAIN OBJECTIVE	Eksen Kaynak			J3	±80°			J3	259.3°/s
FEATURES	RM20iA-20		Kol Ekseni	J4	±150°		Kol Ekseni	J4	294.1°/s
MAXIMUM LOAD CAPACITY	6KG			J5	+140°/ -105°			J5	294.1°/s
Position	±0.08mm			J6	±220°			J6	426 .7 °/s
Tekrarlanabilirliği Hareket Aralığı	Ekli Çizim	Maksimum Erişim	2116mm			Montaj	Zemin, tavan, duvar montajı		
Batarya Kapasitesi	3KVA	Çalışma Koşulları	0–45°C, 20–80%RH bağıl nem (yoğuşmasız)						
Gövde Ağırlığı	230KG	Koruma Sınıfı	IP65						

SCOPE OF WORK AND ACCESS





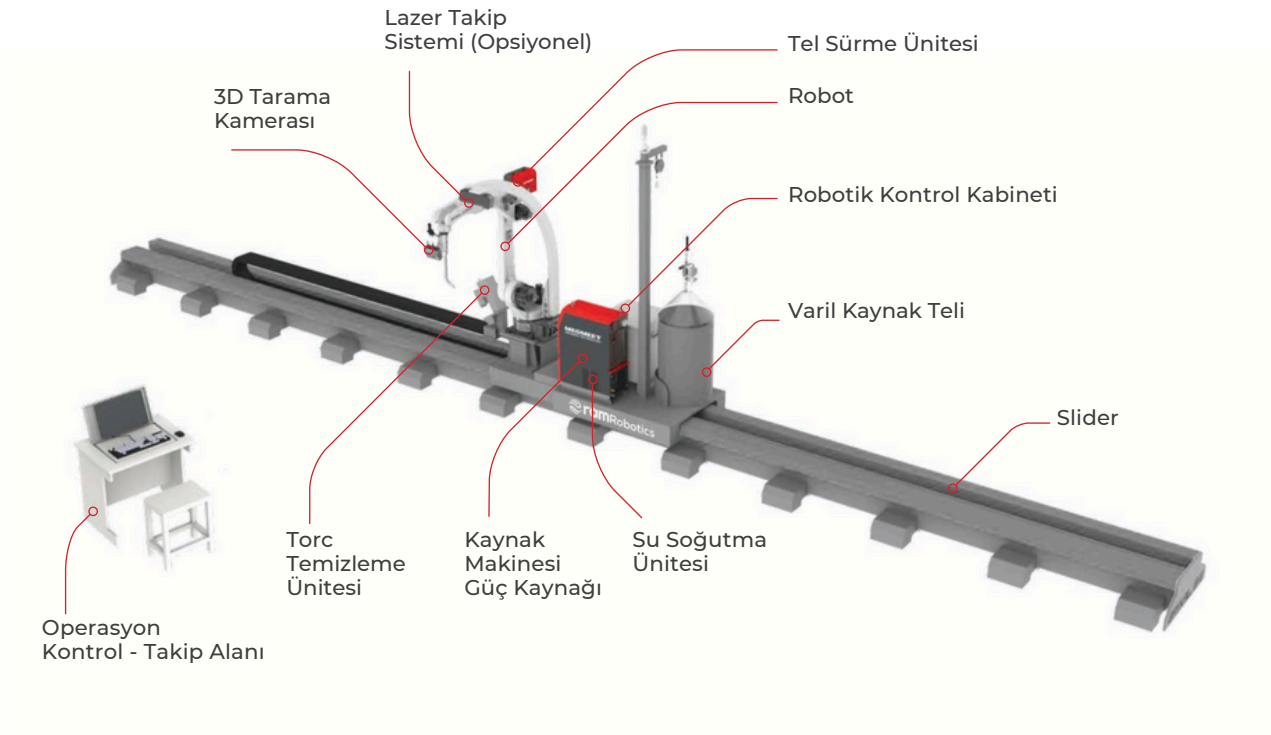
ROBOT ARM PARAMETERS



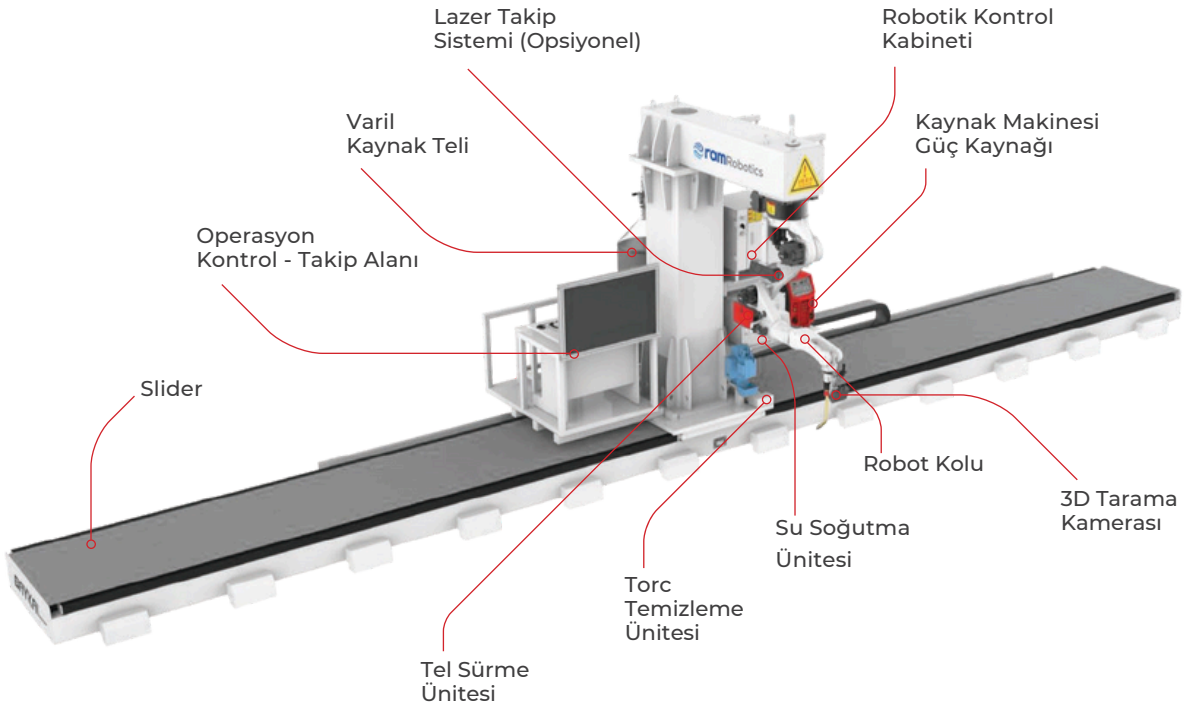
Main Technical Parameters	
Positioning Accuracy:	±0.05 mm
Maximum Walking Speed:	33m/min
Operating Temperature:	-10-450C
Work Environment Humidity Level:	20-80%
Cabin Protection Level:	IP54
Communication Function:	TCP/IP · Modbus-TCP · Ethernet/IP · EtherCAT, etc.
Power Supply Unit:	Megmeet (Dex2 M)
3D Drawing:	Tekla, Solidworks
Source Range:	12000mmm (L) ×1300mm (W) (L) iş parçasının boyutuna göre özelleştirilebilir)

RAM IWS SYSTEM COMPONENTS

7 eksenli RAM IWS (Intelligent Welding System)

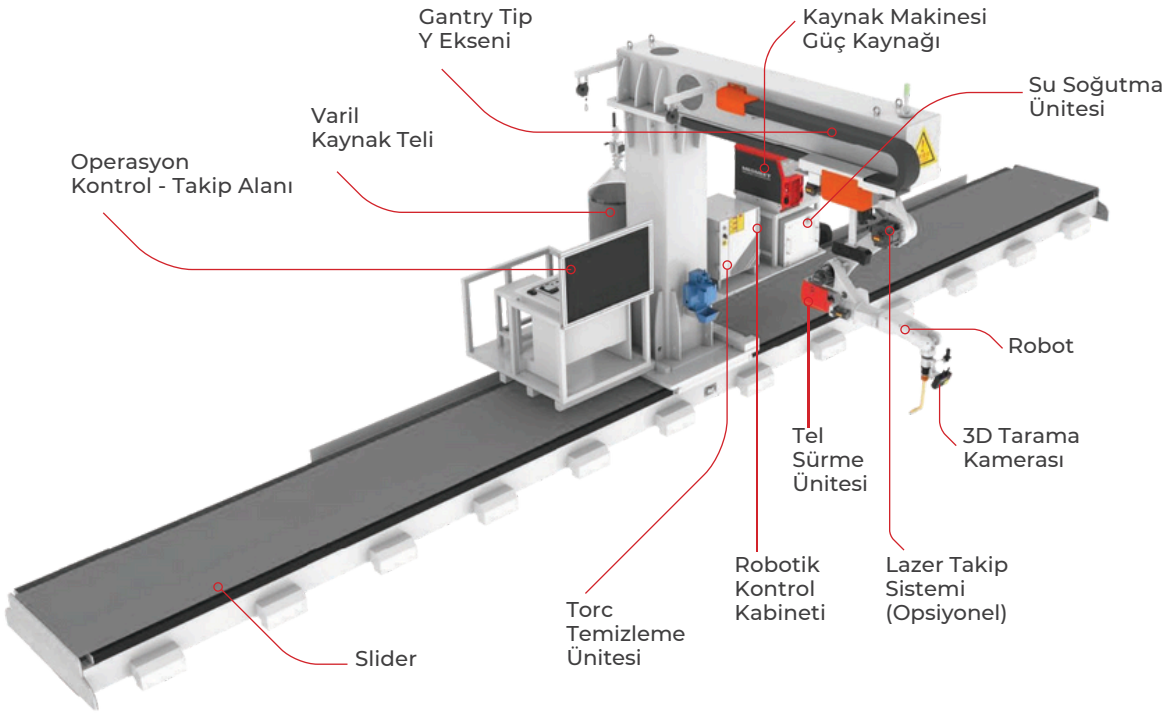


7-axis RAM IWS (Intelligent Welding System)

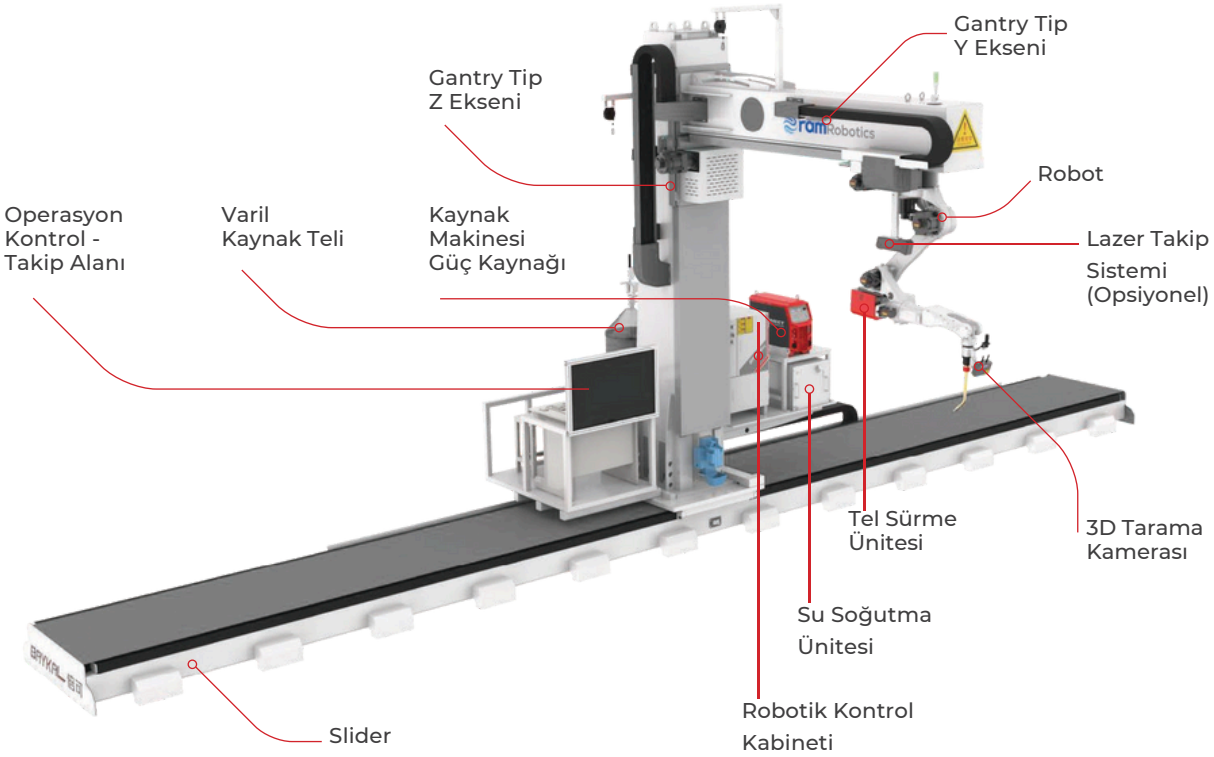


RAM IWS SYSTEM COMPONENTS

8-axis RAM IWS (Intelligent Welding System)



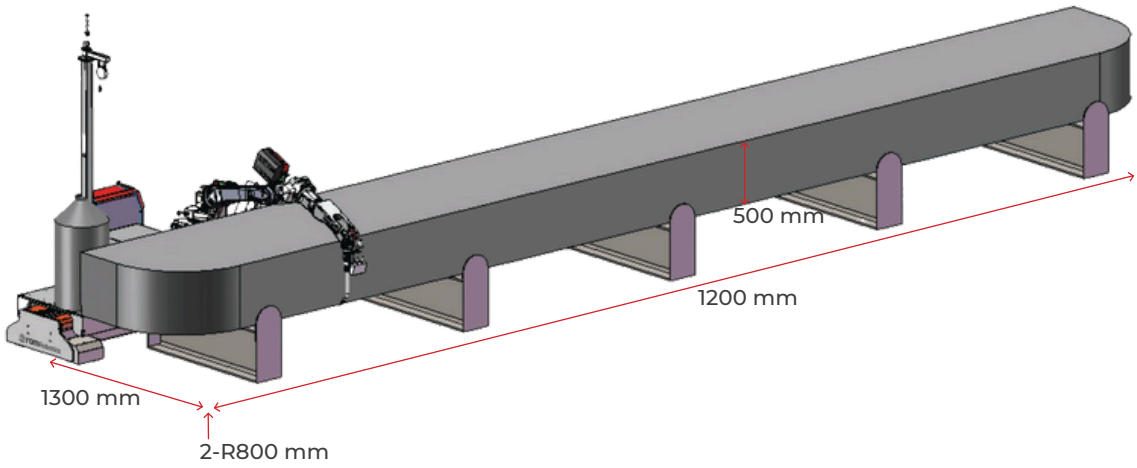
8-axis RAM IWS (Intelligent Welding System)



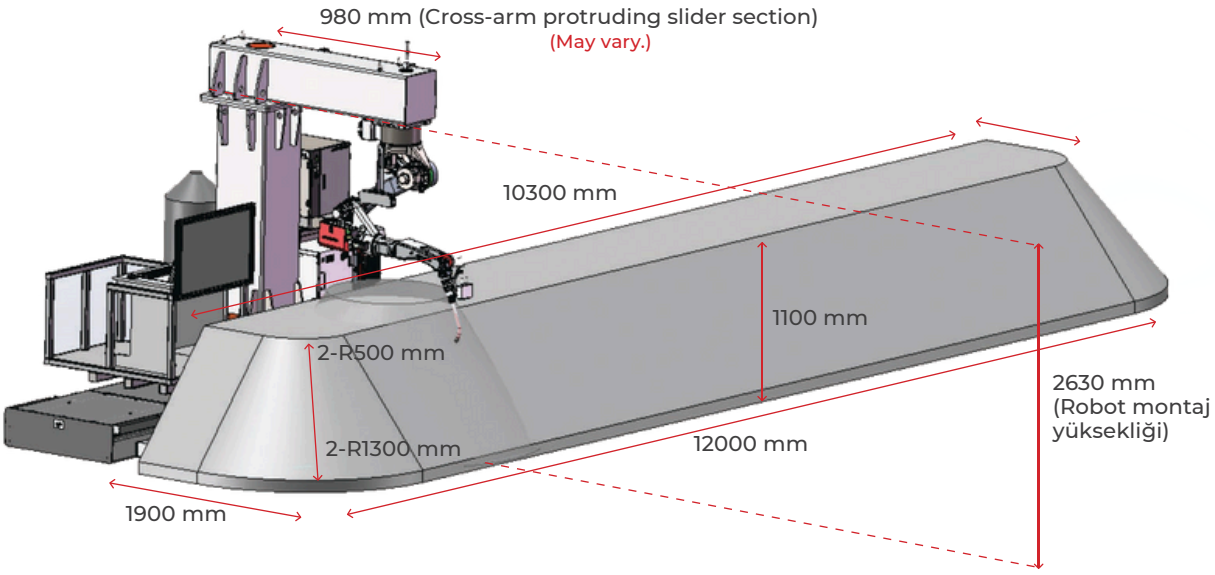
RAM IWS SYSTEM COMPONENTS

Slider: 12 meters, adjustable in 3-meter increments.

7-axis RAM IWS (Intelligent Welding System)



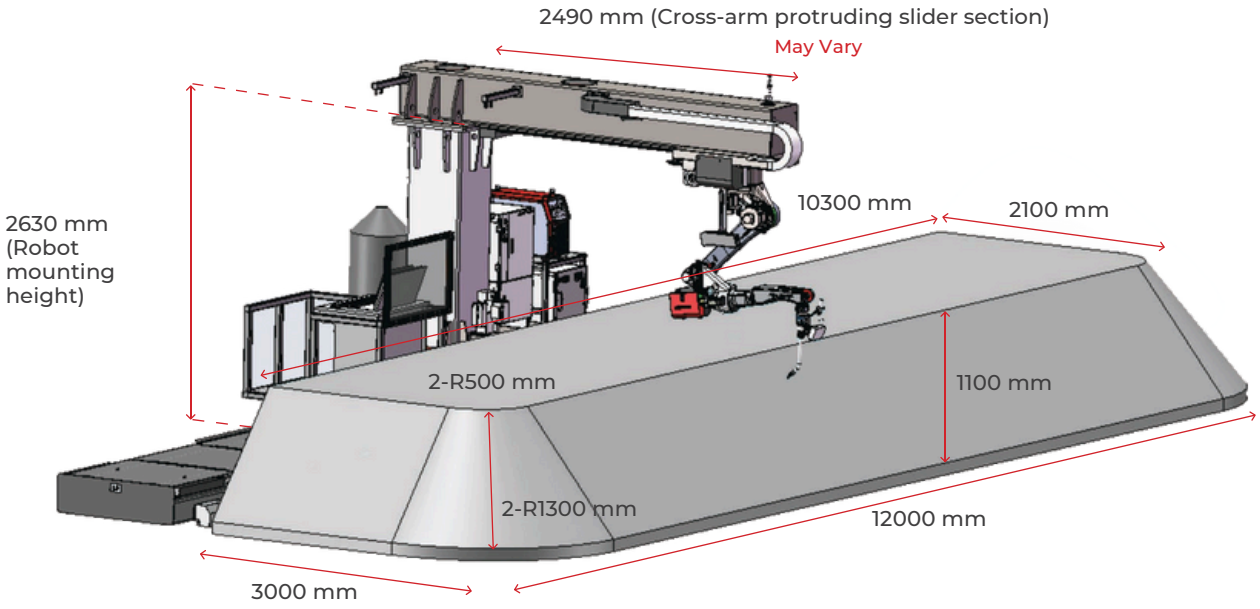
7-axis RAM IWS (Intelligent Welding System)



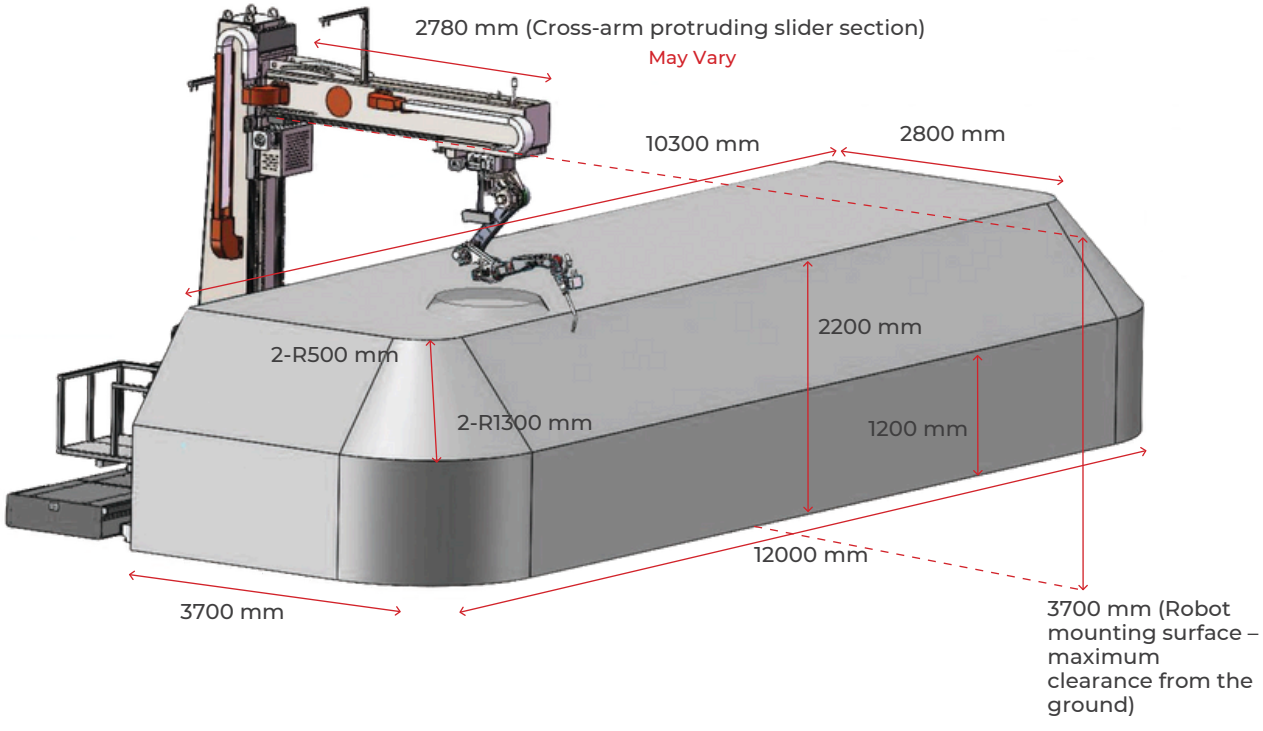
SOURCE DISTANCE – 12M SLIDER

Slider: 12 meters, adjustable in 3-meter increments.

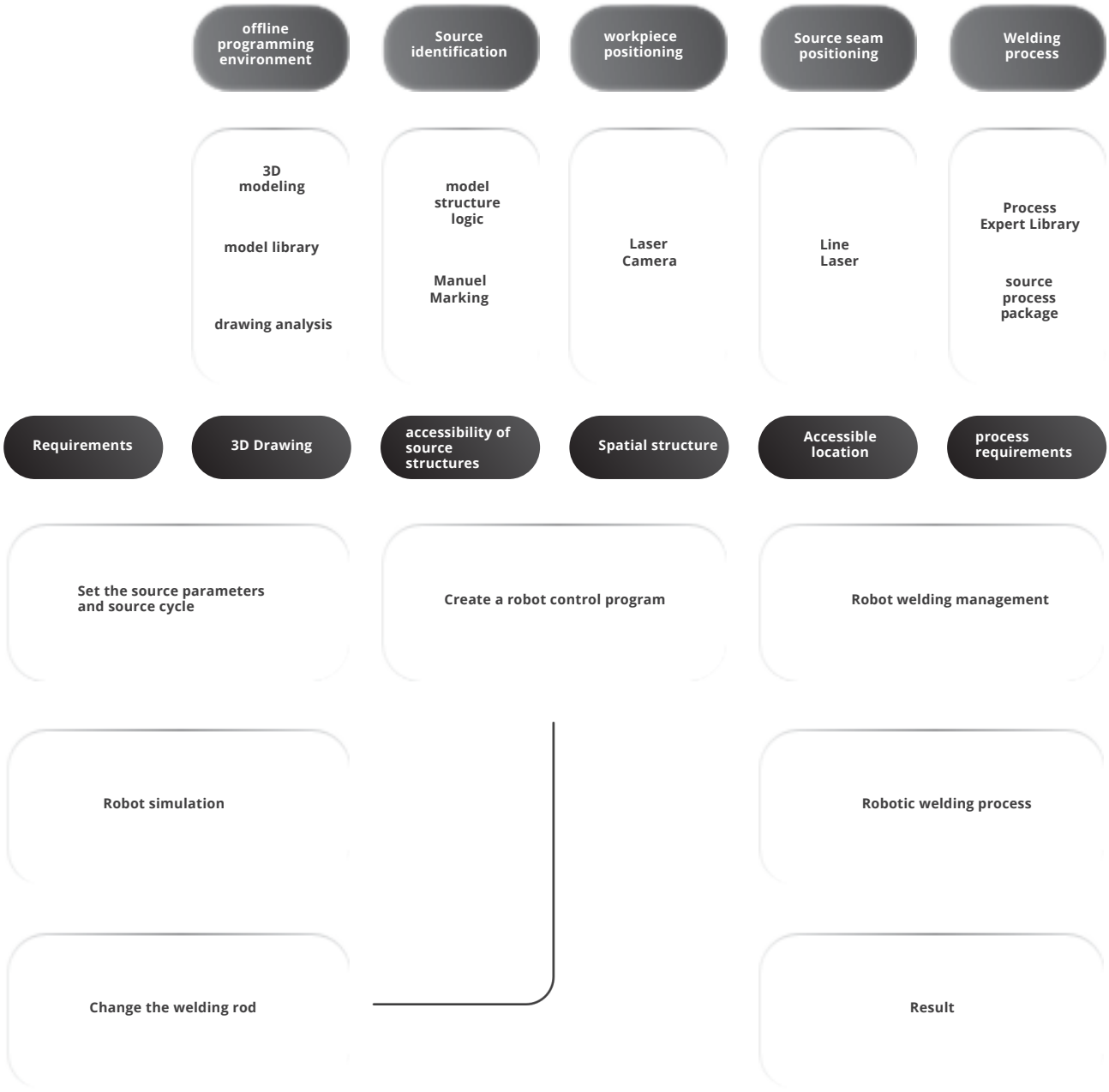
8-axis RAM IWS (Intelligent Welding System)

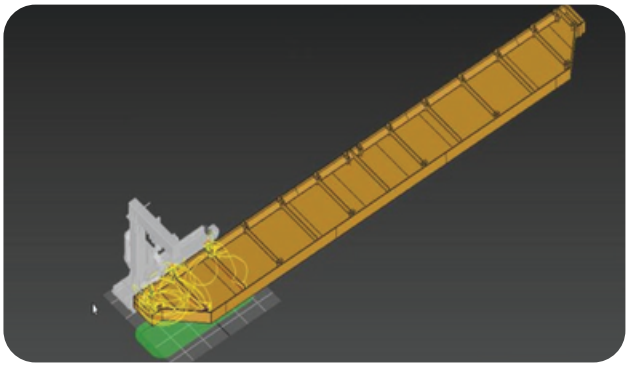


9-axis RAM IWS (Intelligent Welding System)

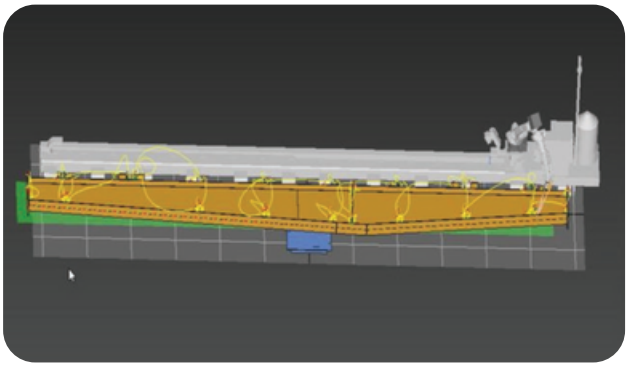


RAM IWS (INTELLIGENT WELDING SYSTEM)



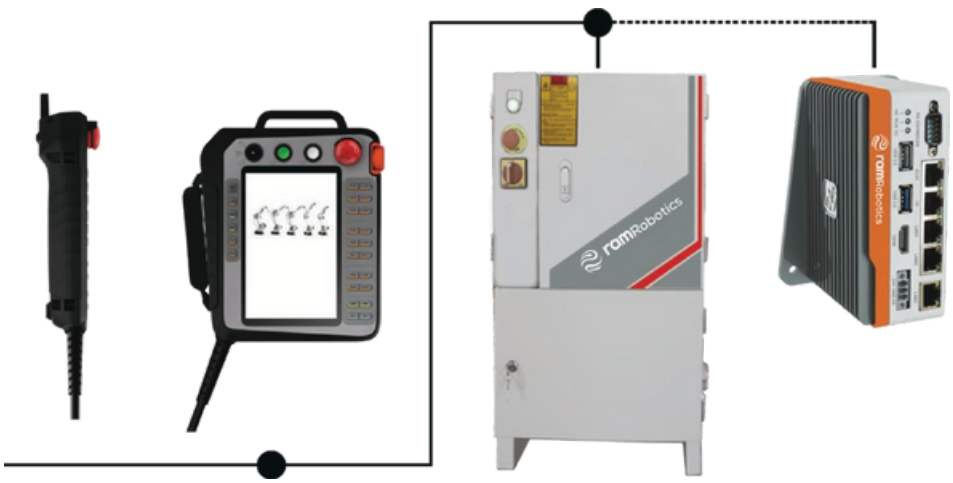


Simülasyonu Test - 1



Simülasyonu Test - 2

ROBOTIC CONTROL SYSTEM



Category	Item	Technical Specifications
Electrical Control Cabinet	Size	500 × 504.5 × 650 mm
	Weight	48 kg
	Protection Class	IP55
	Cooling Method	Fan
Teach Pendant	Dimension	225 × 285 mm
	Weight	0.7 kg
	Cable Length	7 m / 15 m
	Teach Pendant Screeni	800 × 1280 resolution, Resistive touchscreen
	Touch Pen	Provided
	Internal Communication Mode	Modbus-TCP
	Core Processor	4 çekirdekli CPU, 1.9 GHz
	Ram	4 GB
	Hard Disk	128 GB SSD
	Operating System	Linux Real-Time Operating System
Control Unit	Servo Communication Method	EtherCAT bus
	Planning Control Cycle	1 ms
	External Communication Interface	RS232, RS484, CAN, EtherCAT TCP/IP, USB
	Input / Output Signal	DI 16 / DO 16 / AI 4 / AO 4 (opsiyonel)
	Number of Control Axes	8 internal axes + 8 external axes
	Power Failure Protection Mode	Support

RAM IWS KEY FEATURES

1- Multi-axis external connection system

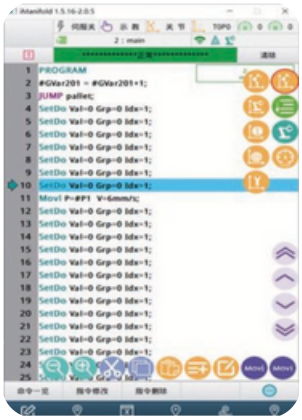
It can support various external axis modes such as linear portals, ground rails, positioners, etc., and can support 11 axis connections simultaneously.

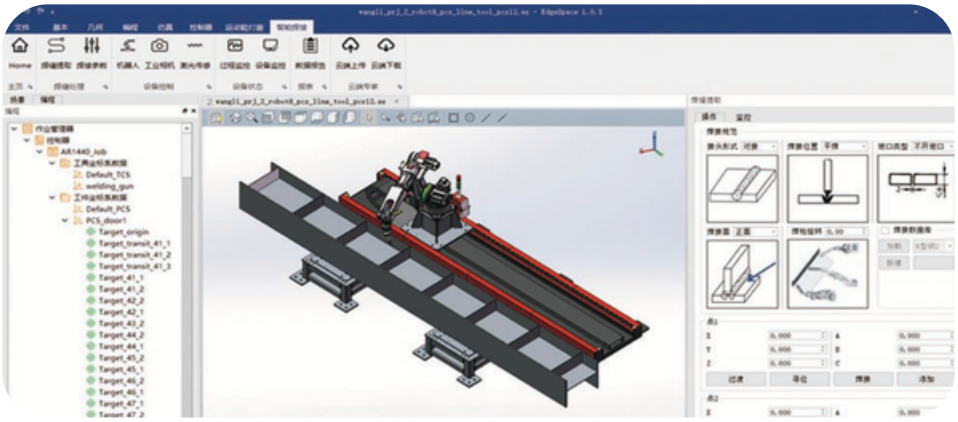
2- The industry's most comprehensive resource process package

Flexible welding machine selection and configuration; Different welding modes to increase welding efficiency; Arc tracking based on workpiece deformation during welding; Determining part position with laser scanning and laser positioning; Oscillating welding supports multiple oscillation modes, dwell oscillation, dwell time adjustment support; Professional welding torch TCP calibration tool; intermittent welding to increase programming efficiency; Dynamic modification of welding parameters; point laser positioning, welding wire
positioning;
Integrated 3D visual welding recognition.

3- Continuously connected host offline programming system

Supports importing the 3D model of the workpiece and automatically generates the source teaching program.





4- User-friendly interactive interface

Visual-based presentation.

5- Superior motion performance

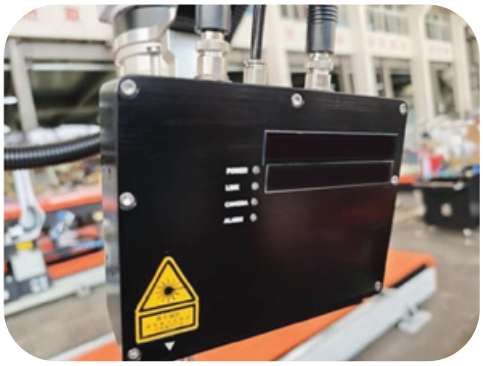
Various transition planning methods: speed planning, path planning, sample planning, smooth and efficient transitions; Supports multiple speed planning modes with high operational efficiency.

6- Multi-sensor fusion

Point laser support
Line laser support
3D imaging support

LAZER TAKİP SİSTEMİ

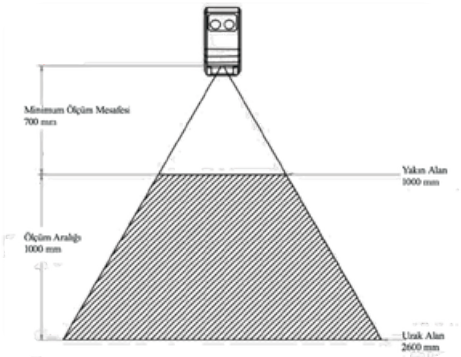
Laser Camera Class	Sınıf III B
Minimum Viewing Distance / mm	500
Maximum Viewing Distance / mm	2500
Optimal Viewing Distance / mm	760
Depth of Field / mm	2000
Nearest Focusing Range Width / mm	140
Optimal Field of View Width / mm	220
Maximum Viewing Field Width / mm	740
Average Resolution in Y Direction / mm	0.06
Average Resolution in Z Direction / mm	0.34
Frame Rate (Original)	20 fps
Square Speed (Long Distance)	37 fps
Square Speed (Short Distance)	50 fps



LINE LASER STEREO CAMERA (REVERSE MODELING) - OPTIONAL

The BCW181P line laser stereo camera is a large line scan camera used in welding systems. It acquires contour information of the welded part by performing initial positioning point cloud imaging with its built-in line laser scanning and uses this information to guide subsequent welding processes. The BCW181P line laser stereo camera is equipped with a wide dynamic range, image processing algorithms, and high-precision measurement algorithms. This enables it to produce high-precision measurement results in real time, even in complex scenarios.

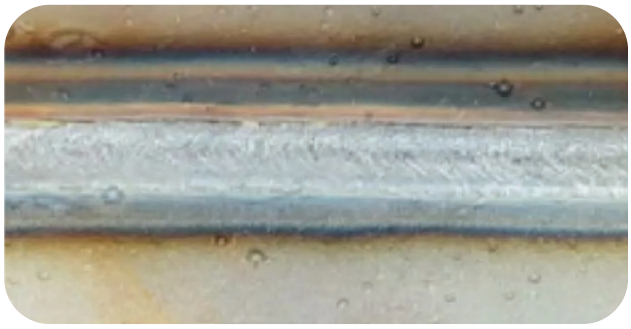
No.	Öğe	Teknik Özellik
1	Detection Speed	3 m/s
2	Accuracy of Detection	±5 mm
3	Close-range Vision Area	1000 mm
4	Long-range visibility	2600 mm
5	Measurement Range (MR)	1000 mm
6	Scan Frame Rate	400 fps
7	Laser Safety Class	Sınıf 3B
8	Weight	1.6 kg
9	Operating Temperature	0 ~ 45°C
10	Working Humidity	%20 ~ %85 RH (yoğunlaşmasız)
11	Scan Speed	200 mm/s



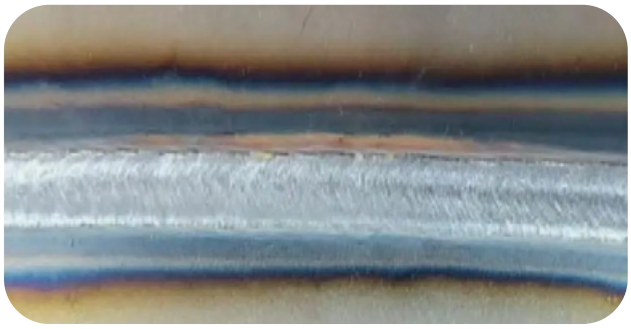


WELDING MACHINE POWER SOURCE – MEGMEET DEX2 M SERIES

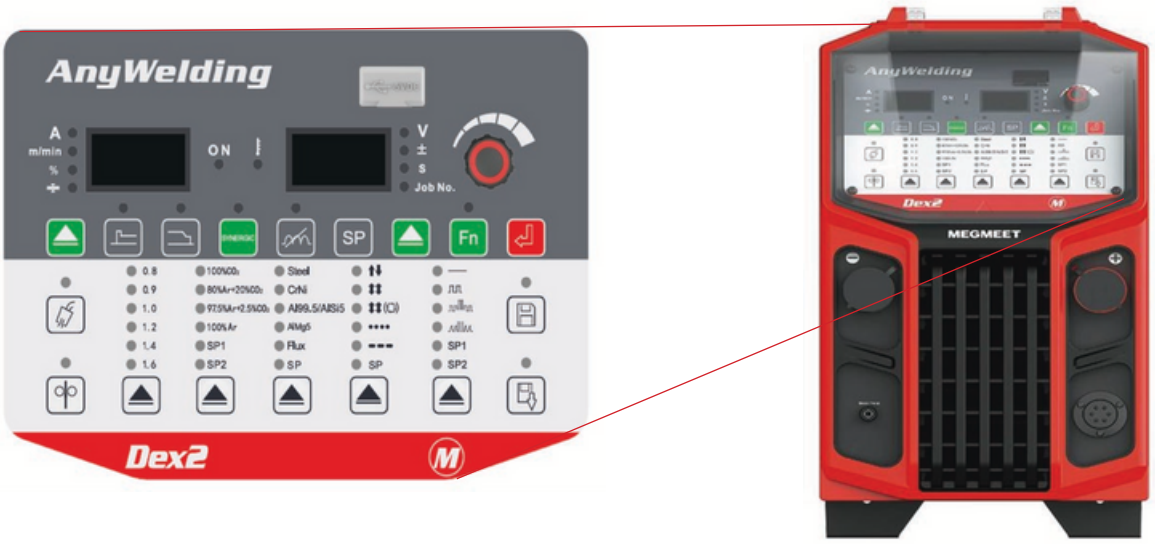
- LSA (low spatter arc welding – enabled by software algorithm), optimized welding programs for fast pulse, high-speed welding, and others. Welding can be performed on multiple materials: carbon steel, stainless steel, aluminum alloy, and others.
  The “Chopper” control technology is implemented in the software to precisely control droplets andreduce splashing by more than 50%.
- The special rapid pulse process integrates the advantages of pulse and DC short-circuit welding, and the welding speed is increased by more than 20% compared to traditional pulse welding.
- Wider voltage range, high current and low voltage, lower heat input, higher melting
- efficiency. Thin plate welding is more suitable compared to TAP-TYPE machines.
  Adaptive arc start retraction technology increases the arc start success rate to nearly 100%.
- The inverter frequency can reach up to 110kHz, providing higher control accuracy and a more stable arc.
- Comprehensive communication interfaces enable communication with different brands of robots.
- The built-in contact detection function in the 80-400 volt range helps to easily clean rust on the workpiece surface.
- It meets national standards for first-level energy efficiency.
- The IoT interface is dedicated for connection to the Megmeet SMARC smart welding cloud management system.
- The U-disk upgrade function allows customers to easily obtain Megmeet's latest resource technologies.
- Application areas: engineering machinery, steel structures, special vehicles, automotive parts, two/three-wheeled vehicles, containers, petroleum and petrochemical industries, etc.



Normal DC (excessive bounce)



NormLSA (low bounce and low heat input) DC (excessive bounce)



TECHNICAL PARAMETERS

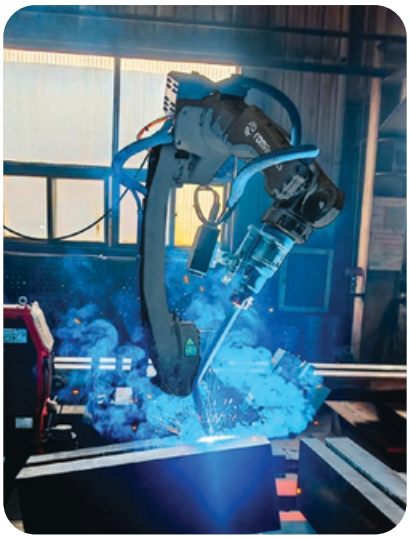
Control Method	Dijital IGBT Kontrol
Input Voltage	3-faz AC 380 V (±%25)
Input Frequency	40 ~ 70 Hz
Inverter Switching Frequency	110 kHz
Nominal Input Capacity	23.3 KVA / 21.4 KW
Zero Voltage	77 V
Nominal Output Current	500 A
Nominal Output Voltage	39 V
Work Cycle	%100 @ 500 A
Power Factor	0.92
Productivity	%91 @ 500 A
Output Characteristics	CV
Wire Feed Speed	0.5 ~ 28 m/dk
Parameter JOB	50
Operating Temperature	-10°C to 40°C (power supply can be started at -39°C)
Dimension (UGY, mm)	647 × 291 × 572
Weight	37 kg
Preservation Protection Class	IP23 S
Insulation Class	H
Cooling Method	Forced air

Projects



















MÜŞTERİLERDEN GELENLER







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Turkey
Discover
the potential

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