RFA ROBOTICS

ROBOTICS
IS NOT A LUXURY
BUT A NECESSITY


YASKAWA MOTOMAN


Beratung

RFA Robotics is a robotics department of Triada-Welding enterprise and official integrator of industrial robotic welding systems.

RFA Robotics officially represents YASKAWA MOTOMAN (Japan) in Ukraine, one of the world's leading manufacturers of robots. It specializes in design and development of technologies using industrial robots for automation of welding processes, including spot welding, surfacing, moving of goods.

RFA Robotics has unique experience in development and production of equipment for any tasks, including design of tooling and jig plates. Customer is offered a free service and support package, as well as programming courses.

We use equipment of leading world manufacturers such as FRONIUS (Austria), ABICOR BINZEL (Germany), welding materials of ASKAYNAK (Turkey), in robotic systems (RTC) production processes.

After delivery of RTC we provide full range of warranty services at our own service center.

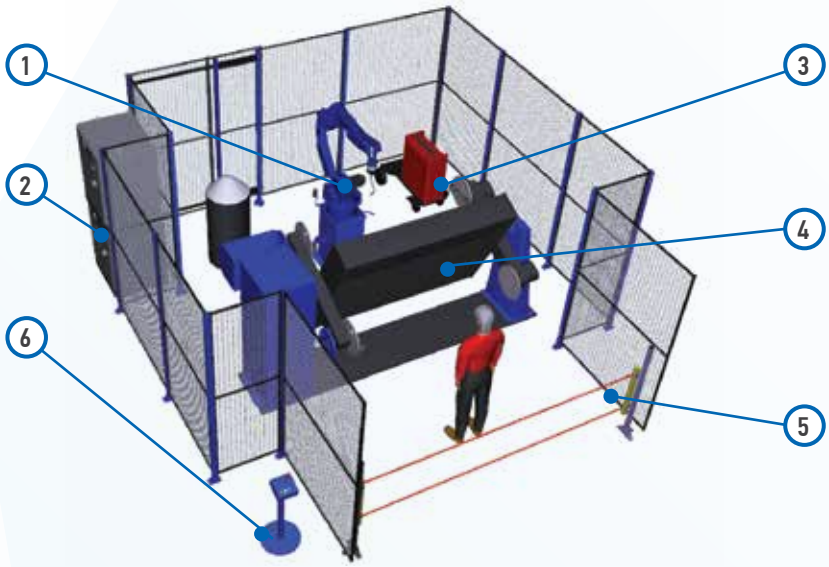
Our highly skilled personnel guarantee the best solutions in price, quality, productivity and implementation of new technologies in welding process.

ROBOTIC WELDING SYSTEMS

Robotic welding systems consist of one or two robots, a positioner, and necessary safety equipment. Additionally, it is possible to add more equipment from a wide range of predetermined options and accessories.

Robotic welding systems are designed to perform cost-effective, reliable and highly productive welding operations. They are based on modular system of standard elements that's why they take up minimal floor space.

① Industrial welding robot
② Robot controller
③ Welding machine
④ Positioner
⑤ Safety barriers
⑥ Operator panel



ROBOTIC WELDING SYSTEM **MA1400+MT1**:

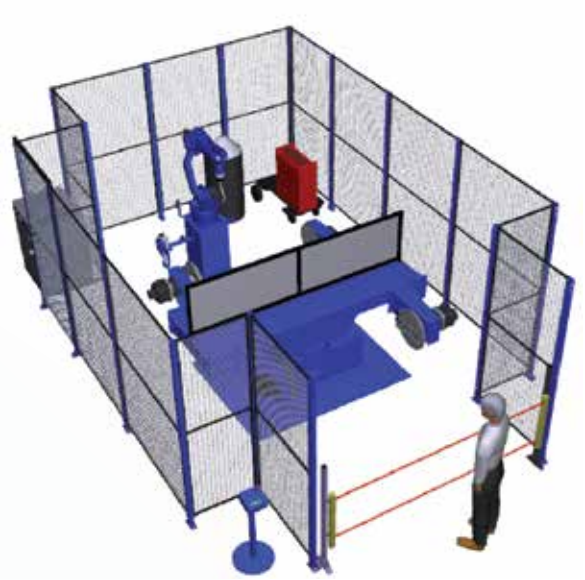
Parts of the complex	Type of equipment
Welding robot	MA1400
Controller	DX100
Positioner	MT1-250
Welding robot	TransPulsSynergic 3200
Torch cleaning station	BRS-CC
Protection elements	Safety barriers
The size of the complex	3 x 3,5 m

ROBOTIC WELDING SYSTEM **MA1400+HSD** 2 PCS.

Parts of the complex	Type of equipment
Welding robot	MA1400
Controller	DX100
Positioner	HSD 250 1600 mm 2 pcs..
Welding robot	TransPulsSynergic 3200
Torch cleaning station	BRS-CC
Protection elements	Safety barriers
The size of the complex	4 x 4 m

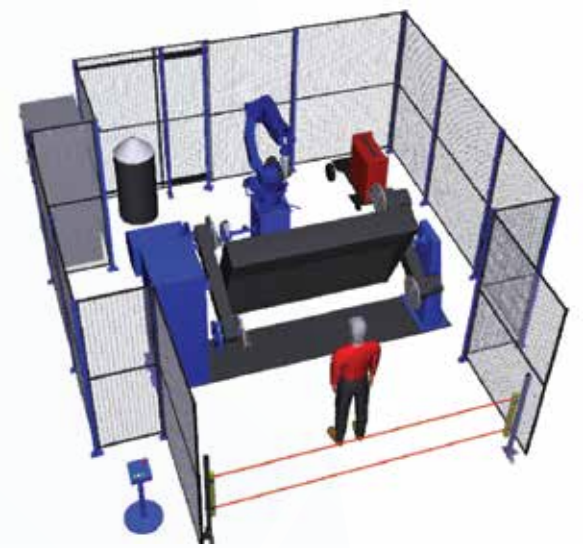
ROBOTIC WELDING SYSTEM **MA1400+VMH:**

Parts of the complex	Type of equipment
Welding robot	MA1400
Controller	DX100
Positioner	VMH250 1600 mm
Welding robot	TransPulsSynergic 3200
Torch cleaning station	BRS-CC
Protection elements	Safety barriers
The size of the complex	4 x 6 m



ROBOTIC WELDING SYSTEM **MA1900+RM-2:**

Parts of the complex	Type of equipment
Welding robot	MA1900
Controller	DX100
Positioner	RM2-500 2000 mm
Welding robot	TransPulsSynergic 5000
Torch cleaning station	BRS-CC
Protection elements	Safety barriers
The size of the complex	5,5 x 5 m



ROBOTIC WELDING SYSTEM **MA1900** 2 PCS. + **HSD** 2 PCS.

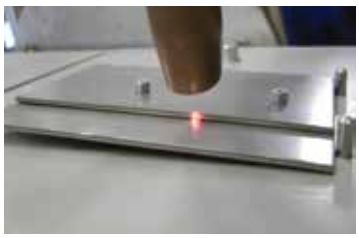
Parts of the complex	Type of equipment
Welding robot	MA1900 2 pcs.
Controller	DX100 2 pcs.
Positioner	HSD 500 3000мм 2 pcs.
Welding robot	TransPulsSynergic 3200 2 pcs.
Torch cleaning station	BRS-CC 2 pcs
Protection elements	Safety barriers
The size of the complex	5 x 5 m

SEARCH ENGINE TO START WELDING **“SEAM FINDING”:**

Seam finding is realized by touching a component with a wire end. It is used for all types of joints, except of the butt-joints without gap.

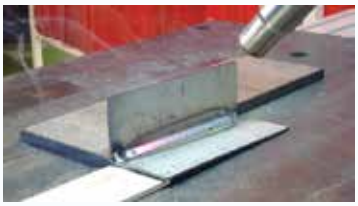
LASER SYSTEM FOR THE SEARCH WELDING START **“WELD FINDER”:**

The process of finding the beginning of welding is realized by a laser beam. (Positioning accuracy of laser beam is ± 0.2 mm). This system is used for a sheet which thickness is over 1 mm.



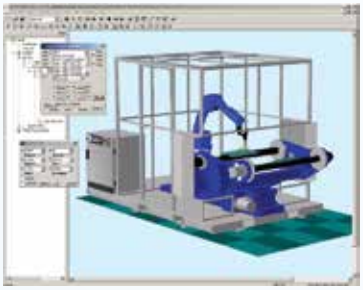
LASER SEAM TRACKING SYSTEM:

Welding seam tracking during welding. This system is used for all types of joints, including butt-joints without gap.



OFFLINE ROBOT PROGRAMMING SOFTWARE.

The software includes design, modeling, optimization and offline programming of robotic cells in a single 3D environment of digital shop space. It allows you to optimize the cycle time, positions and movements of robot, avoiding real collision between robots, parts, tools, equipment and surroundings. This software allows you to create robot programs for



THE SOFTWARE FOR ROBOT CONTROL AND MONITORING **MOTO ADMIN**

MotoAdmin is a cost efficient software which enables you to remotely control a robot using a PC, as well as detect faults. Thus, using this software you can maintain robot remotely from a distant location. The connection between robot and a

LASER TECHNOLOGY WITH THE USE OF ROBOTS

LASER WELDING ADVANTAGES:

- high productivity (welding speed up to 10 m / min);
- ability to weld a wide range of steels and alloys;
- depth of penetration without clearance and cutting up to 12 mm;
- welding in different positions;
- high quality of welding goods;
- minimal heating and deformation of the parts;
- flexibility of the process, fast automatic reconfiguration;
- energy savings and filler materials;
- comfortable working conditions and good environment.

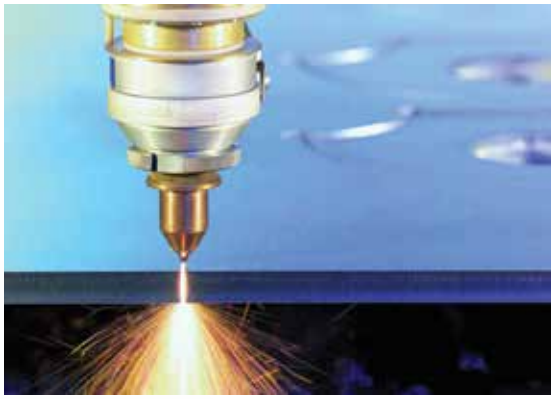
LASER WELDING USING TONGS

Distinctive features:

- laser power up to 4 kW;
- laser welding with the tight compression of welded parts;
- seam controling in real time and recording the parameters of each joint;
- welding of multilayer products.

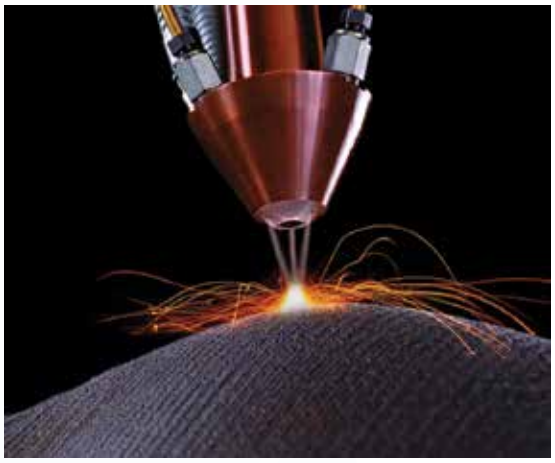
AREAS OF APPLICATION:

- welding of bodies;
- reliable welding of high strength steels;
- welding deformable material;
- welding of thin and ultra-thin materials;
- increased strength, seam welding instead of spot welding;
- no pull material;
- It is 2 times faster than a conventional resistance welding.



LASER CUTTING ADVANTAGES:

- high productivity (cutting speed 1-20 m / min);
- width of the laser cutting 0.5-1.5 mm;
- the accuracy of the finished part ± 0,1 mm;
- no mechanical effect on material;
- minimal thermal effects.



LASER CLADDING ADVANTAGES:

- ensuring a strong and firm grip of base and filler materials;
- reduction of residual stresses and strains;
- ensuring minimum base penetration;
- high index of filler material usage;
- height of a deposited layer in 1 pass is up to 1 mm;
- width of a deposited bead is 1 pass is up to 7 mm;
- cladding speed is 3-5 m/min;
- alloying material index is up to 0,9.

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