

# Welding 4.0 – automated welding production

Cost-efficient even for batches of one





# EWM automation – the perfect solution for every task

Be it for one-offs or large batches, trade or industry, SMEs or corporations, co-bots or turnkey welding robot cells – EWM has the right automation solution for your task and your company.

Industrial robots in system with fully automatic offline programming and tried and tested EWM welding technology.



## With EWM, you can

- speed up production but maintain the same high quality
- permanently reduce costs and plan effectively
- flexibly produce batches from the smallest to the largest
- react quickly to changes on the market
- work reliably and economically
- stand firm against international competition

## EWM product portfolio

We supply the complete automation solution for your task customised to your needs and your company.

- Power sources for MIG/MAG, TIG plasma with the corresponding accessories such as wire feeders and welding torches etc.
- All services
- Robot cells
- Robot systems from our modular system – flexible for every application
- Retrofitting
- Rotary tables as well as circumferential and longitudinal welding machines

# EWM welding technology – everything from a single source

## ewm maXsolution

We offer an all-round advisory service from component analysis, welding tests and process optimisation to customised concepts with commissioning and training. This is ewm maXsolution.

## EWM all-round service

For us, all-round service means: We develop individual solutions, train and support you, commission the equipment, carry out maintenance and are your all-round contact person. We have more than 400 sales and service support outlets near you.

## EWM welding machines, accessories and welding consumables

Get the best results with a complete EWM system: EWM products are renowned for their high quality. Our power sources have an extremely high duty cycle, and thus service life – guaranteed! Our wire feeders, intermediate hose packages and welding torches are high-quality and optimally coordinated.

Other system accessories:

- Robot and automated welding torches
- Transport systems and cooling units
- Interfaces
- Quality management and ewm Xnet 2.0 Welding 4.0 software
- Highly efficient solutions for MIG/MAG, TIG and plasma welding
- High-quality welding consumables for automated welding



## EWM welding processes

To us, allin means that you get all the characteristics, welding procedures and innovative welding processes from EWM included when you buy a machine – without having to pay a surcharge. This will enable you to weld materials such as low- and high-alloy steels and aluminium in a high-quality, economical and sustainable manner.



## ewm Xnet 2.0

Our leading-edge ewm Xnet 2.0 welding management system organises your automated production, planning, quality management, welding coordination and administration, helping you to significantly improve the profitability, quality and documentation of your company.

# Automation solutions – for every need

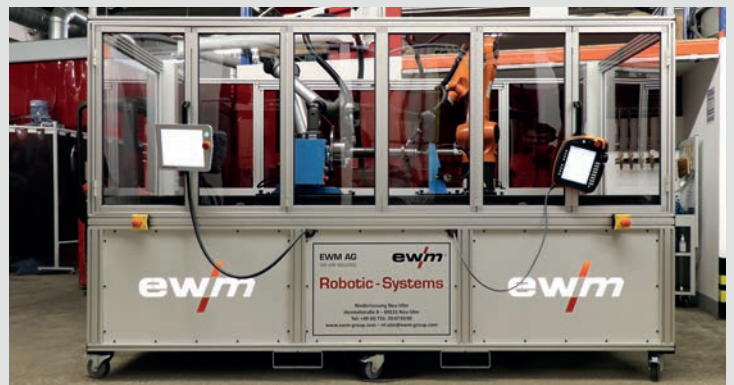
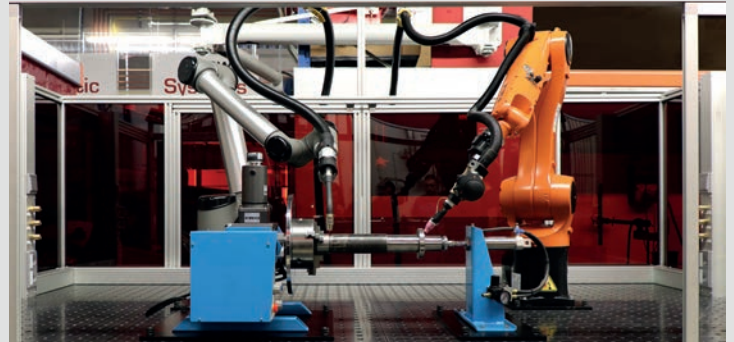
The solution for your task: EWM offers collaborating robots (co-bots), modular complete systems, ready-to-weld, turnkey and compact robot cells and robot systems with automatic offline programming. Together with you, we develop the optimal automation solution for your company.

## Entry-level solution

Collaborating robots (co-bots) for MIG and TIG are small, intuitive automated welding solutions that are ideal for simple welding tasks. They help you to produce even small quantities with consistent quality and at reasonable costs. The robot cells that we have introduced can be fitted to co-bots or industry robots from any manufacturer. Industry robots can also be equipped with an external axis control.

### Advantages:

- Quick installation in a short amount of time
- Easy programming with no prior knowledge necessary
- Fitted with all the necessary safety technology
- Flexible application even in confined areas
- Short amortisation period for trade and industry
- Modular system with one or more robots
- Ready-to-weld, turnkey, modular solution (stationary or mobile), optimised to suit your individual application

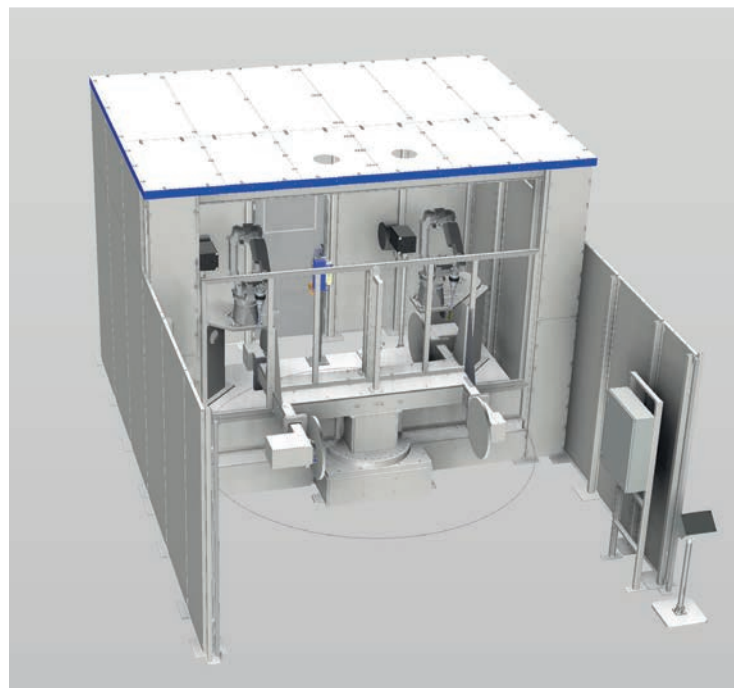


## Robot cells

Our compact, standardised welding cells with customised automation options are the perfect solution for stringent requirements. Turnkey, ready-to-weld and easy to move using a forklift truck – you can install your EWM robot cells right where you need them.

### Advantages:

- The solution for customised tasks
- The system is pre-assembled, tested and ready for quick commissioning at the customer's location
- Modular system
- Turnkey, universally deployable complete solution with base plate and casing, and optional manual and electrical indexing table
- Easy to transport with a forklift truck and lorry thanks to the compact assembly of all components
- For MIG/MAG, TIG and plasma applications





# Flexible and economical – even for batches of one

Modular complete systems that can be programmed offline in a completely automated process are the future of automated welding. In addition to standard variants, we also offer complex, customised solutions that are specially adapted to your task and your sector.

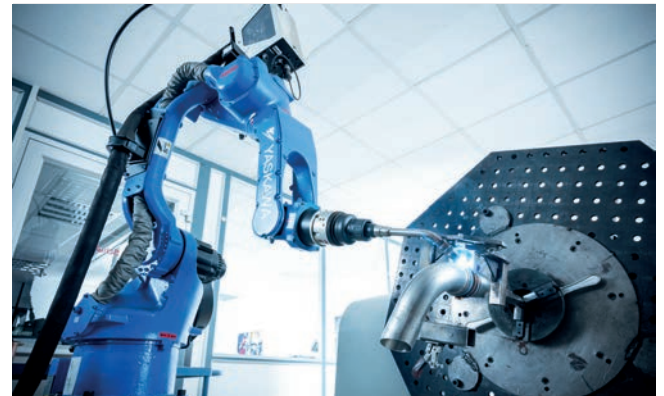
## Modular complete systems

Our modular complete systems are customised to suit your requirements and tasks. Using standard components, we build your individual robot welding system. We carry out all the development, testing, installation, training and maintenance activities for you. Just start producing.



## Advantages:

- High degree of process reliability thanks to the digital control and control of all the process data
- Reproducible welding results with consistent weld seam quality
- Flexible and readily expandable

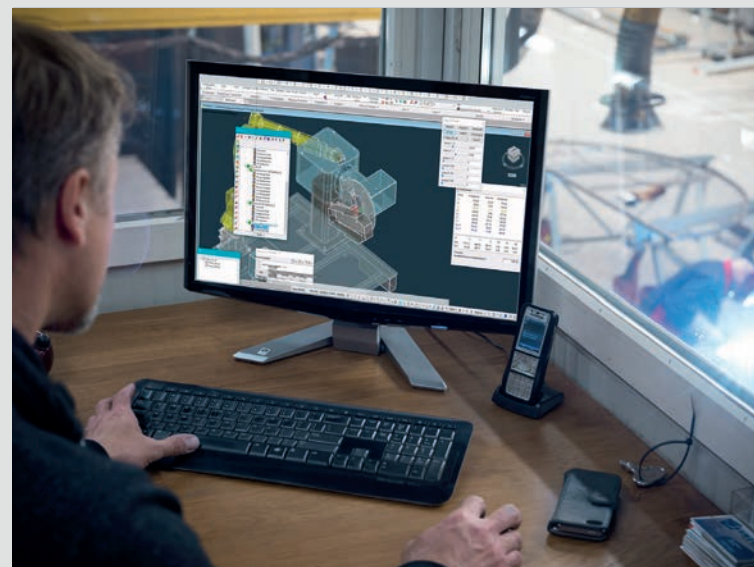


## Systems with fully automated offline programming

The best solution for complex, customised requirements: MOSES software from AUTOCAM provides a uniform, consistent database - from CAD design and partial or fully automated offline programming to production.

## Advantages:

- Reduction in time spent on online programming by up to 95%
- No downtime for the robots
- Highly precise movements even on complex paths
- Automatic program generation from CAD data with no programming knowledge necessary
- Optimum processing quality thanks to the integrated 'technical expertise'
- High level of safety through simulation and collision control
- Improved documentation and storage of your process data



# Offline robot programming using CAD data

With MOSES-ARC from AUTOCAM, you can program industry robots offline to perform path welding tasks on spatial components. The basis are 3D CAD data from the design. As the MOSES software is modular you can set it up as required – for partially automated or even fully automated welding robot offline programming.

You have different application-orientated software packages to choose from:

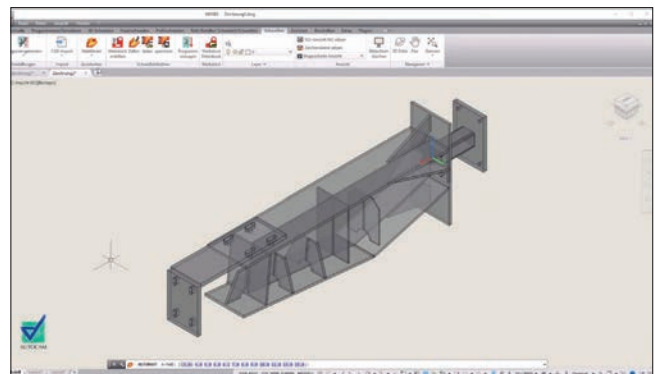
**MOSES-ARC –  
path welding for spatial components**

**MOSES-Profile-ARC –  
welding of add-on components to steel  
construction profiles**

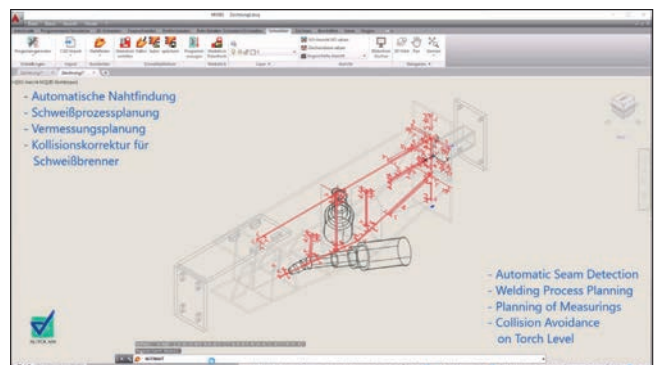
**MOSES-Rohr –  
welding of pipe connections**

## Scope of services:

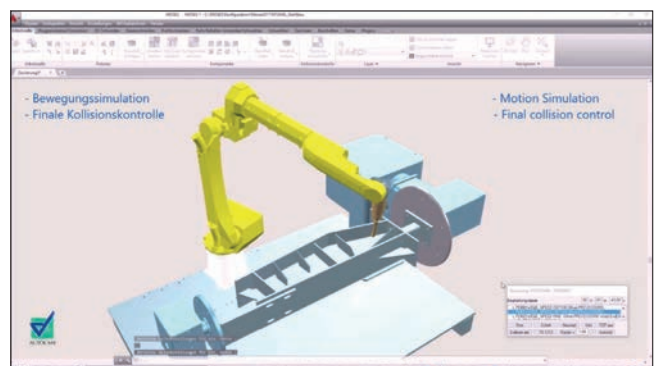
- Automatic generation of control program codes
- Drastic reduction of time and effort for robot programming
- Automatic CAD geometrical analysis + application of welding regulations
- Automatic identification of collision-free welding torch positions + robot paths
- Automatic allocation of welding parameter lists
- Automatic layer planning
- Automatic measurement planning
- Automatic sensor control + tolerance compensation
- Automatic generation of paths and allocation to robot/additional axes
- Automatic simulation with collision avoidance



The component is imported.



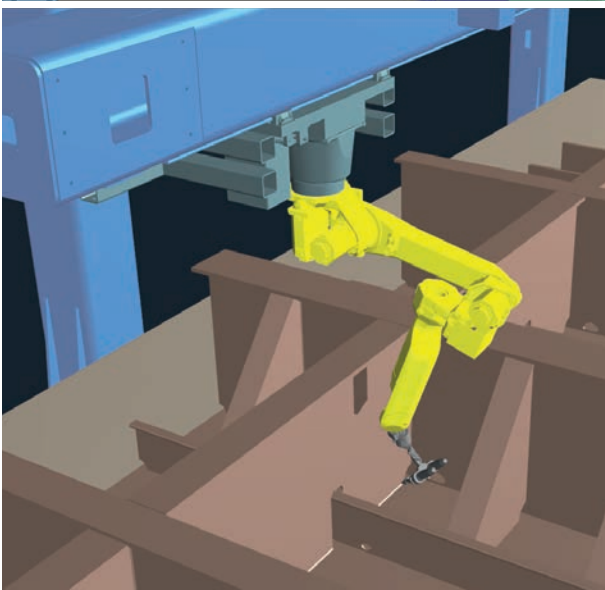
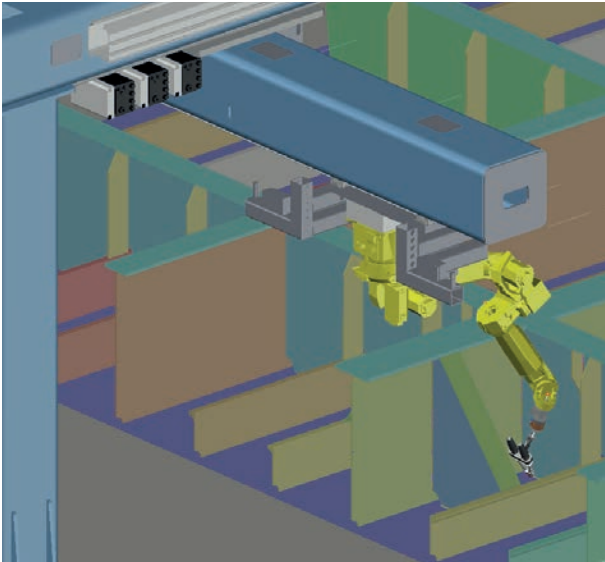
The automatic seam recognition generates the welding seams.



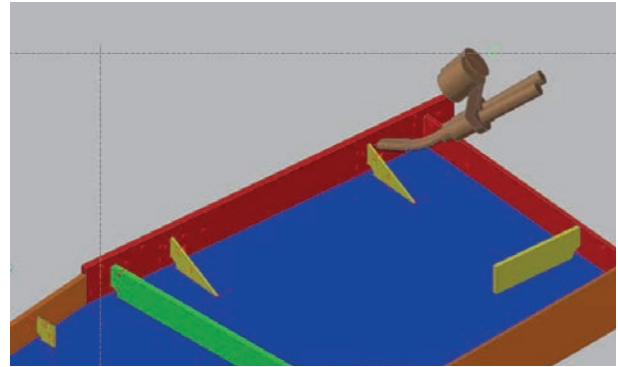
Movement simulation and final collision control

# Industry and application solutions

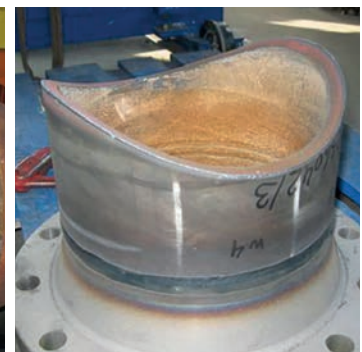
**MOSES-ARC**  
Example shipbuilding



**MOSES-Profile-ARC**  
Example steel construction

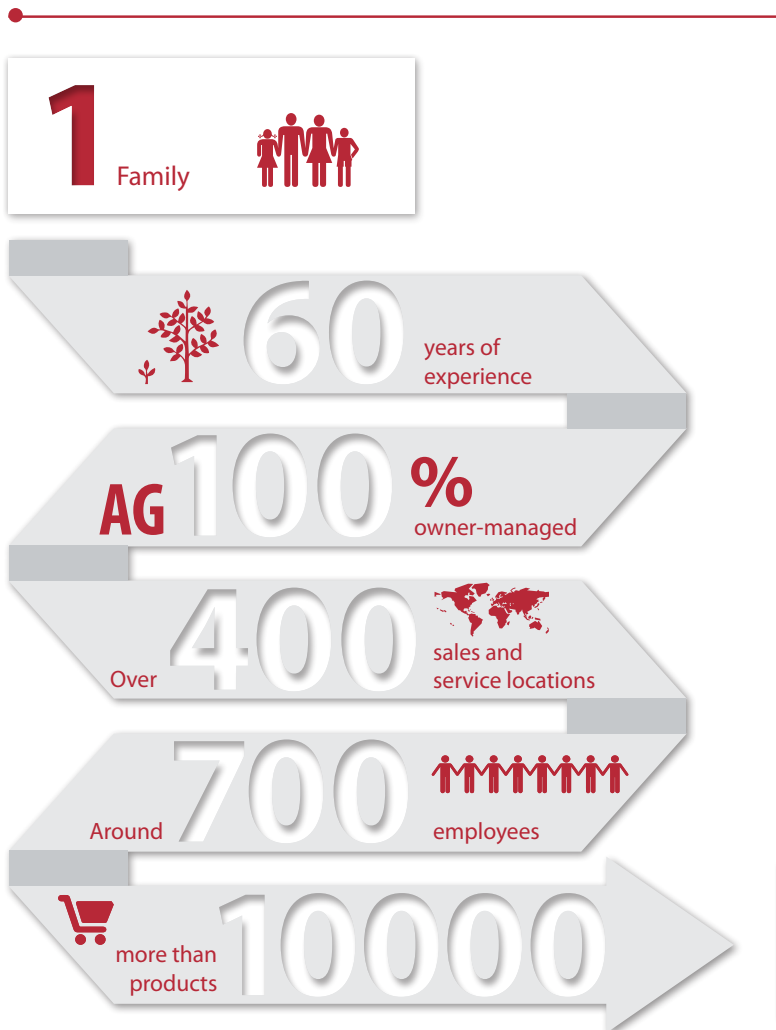


**MOSES-Rohr**  
Example pipe connection





Would you like to find out more? Call us or send us an email! We're always happy to hear from you.  
Tel.: +49 02680 181-0 | [www.ewm-group.com/contact](http://www.ewm-group.com/contact)



## Quality from Germany

EWM AG is Germany's largest and one of the most important world-wide manufacturers of arc welding technology and a major driving force in welding technology.

The family-run company from Mündersbach has been living its motto "WE ARE WELDING" for over 60 years with forward-looking, well thought-out and sustainable complete solutions, designed with a large helping of passion for industrial clients, as well as skilled craft businesses.

1 Partner for all your welding technology needs ✓

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