

MIG/MAG  
TIG  
PLASMA

**ewm**<sup>®</sup>  
WE ARE WELDING

## **AUTOMATION**

FLEXIBLE COMPLETE SYSTEMS  
FOR ROBOTIC WELDING.



# EWM AUTOMATION.

Whether it's single units or large batches, trade or industry, SMEs or large corporations – EWM offers flexible complete systems for automation to suit every need.

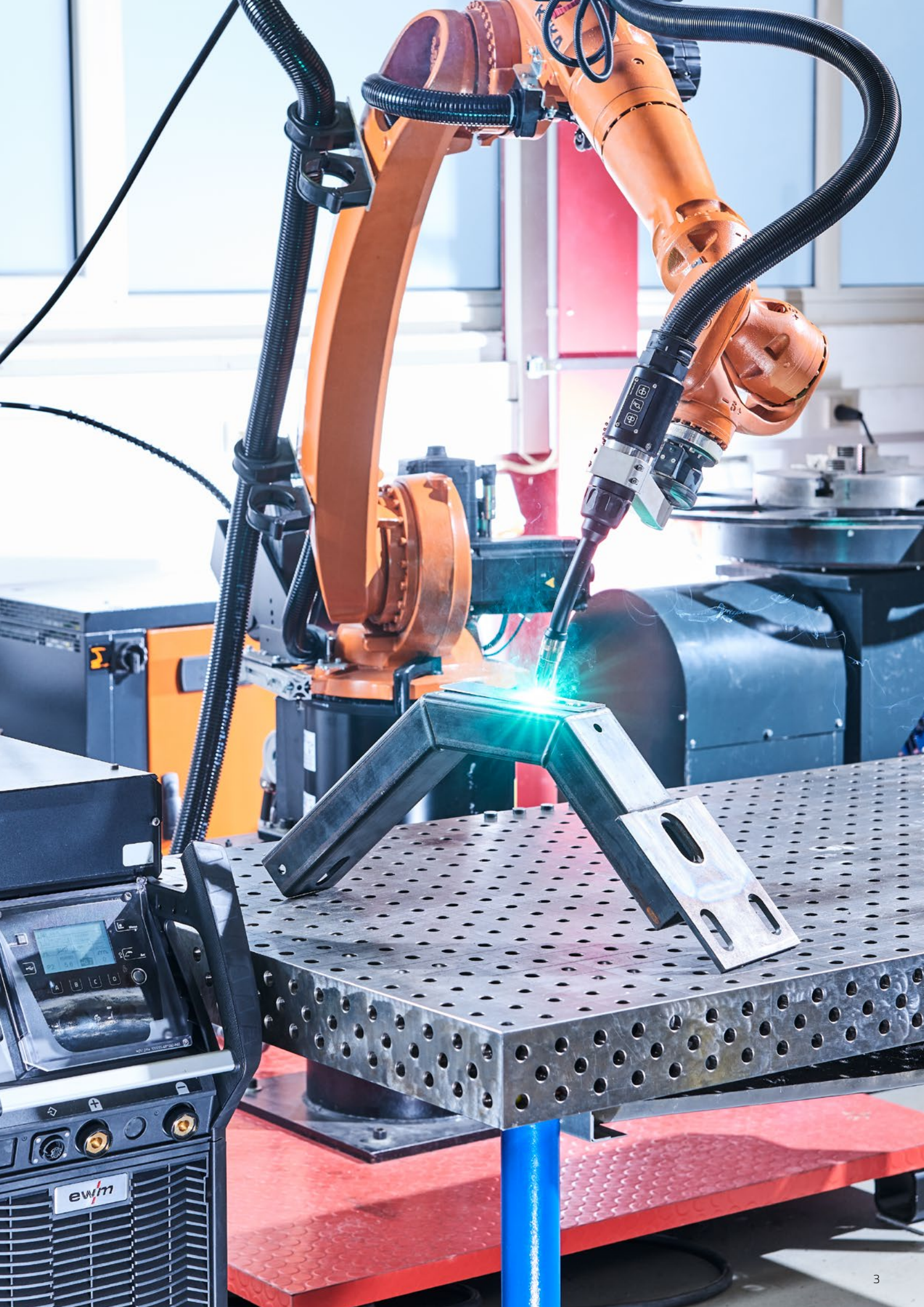
Automated welding does not only facilitate reliable processes and excellent weld seam quality, it also makes for a significantly more efficient production line. And it can be used for various processes, such as MIG/MAG, TIG or plasma welding. We don't just offer individual components; we offer extensive complete solutions that are always tailored to fit your needs. Whatever your welding challenge, EWM has the complete solution. Get all the benefits of automation: produce faster without compromising on quality, permanently lower your costs, plan with even more peace of mind, react more quickly to changes in the market and secure an even better footing among your international competitors.

## AREAS OF USE:

- Mechanical engineering
- Car manufacturing
- Vehicle construction
- Container construction
- Equipment construction
- Shipbuilding
- Chemicals/food/plants
- Power
- Defence
- Steel construction
- Transport (vehicle construction, shipbuilding)

## THE BENEFITS FOR YOU +

- Reliability
- Duty cycle
- Multiple communication interfaces
- Extensive range of accessories
- Expert support



# DESCRIPTION OF THE MACHINE.

## XQ R WELDING MACHINES.

The Titan XQ R puls and Phoenix XQ R puls are further developments of the Phoenix puls and alpha Q puls for automated welding. They feature the new RCC inverter technology (Titan) as well as significantly improved XQ welding processes and are available as gas- or water-cooled options. The machines are also suitable for welding torch changing systems. They cover long distances with up to three drives in series depending on the version. Perfect weld seams are thereby pre-programmed for all materials and material thicknesses.

**PC interface  
for PC300 software**

**Available controls:**

- No front control
- With Expert XQ R 2.0 Rob
- With Expert XQ R 2.0 Rob with LAN or WiFi function

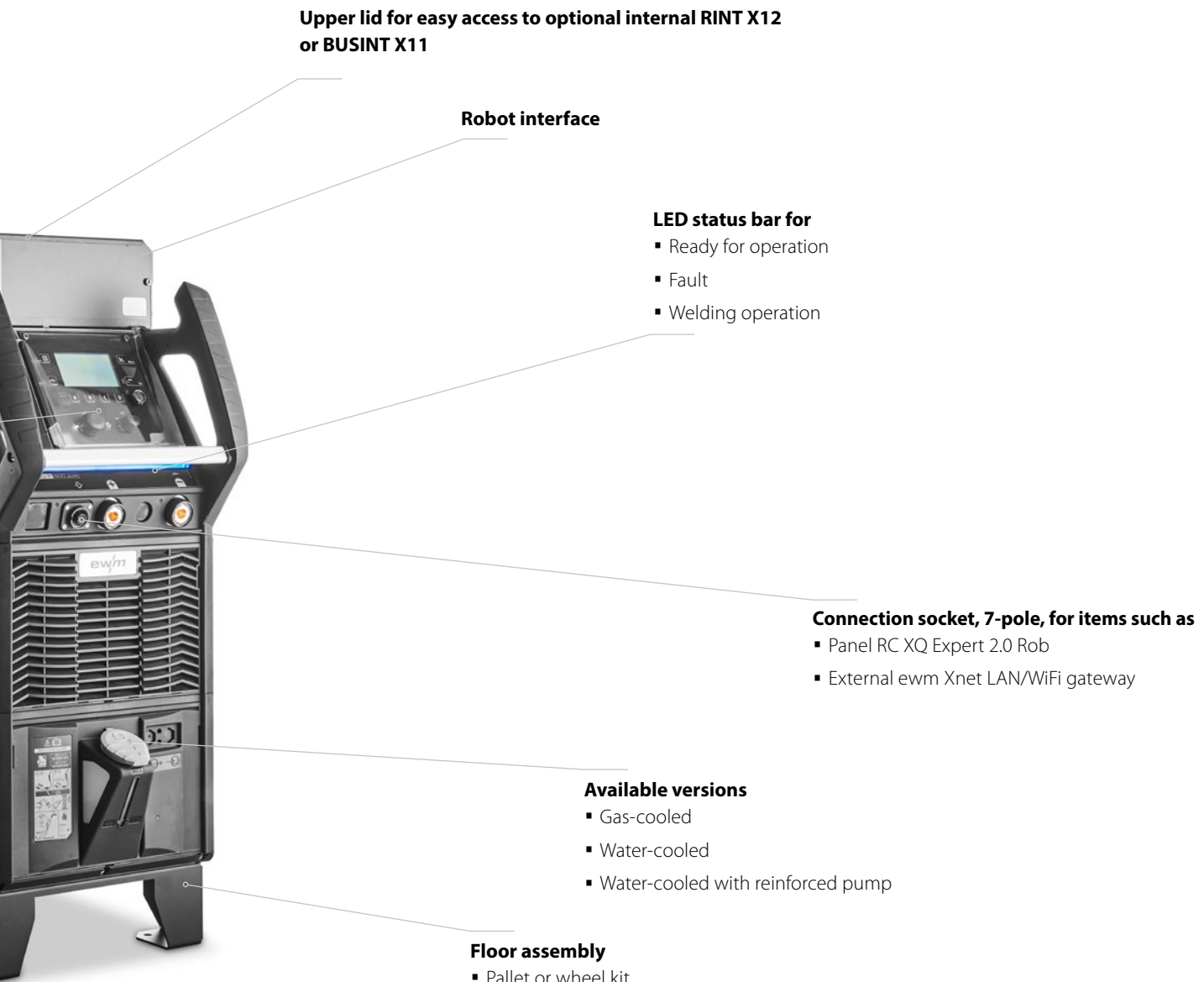
**Inverter technology**

- High efficiency
- High duty cycle
- Standby function
- Dust-protected electronics



## TECHNICAL DATA

Titan XQ R Phoenix XQ R	350 puls	400 puls	500 puls	600 puls	Titan XQ R 400 AC/DC
Setting range	5 – 350 A	5 – 400 A	5 – 500 A	5 – 600 A	5 – 400 A
Duty cycle 40 °C	350 A/100%	400 A/80% 370 A/100%	500 A/80% 470 A/100%	600 A/40% 550 A/60% 470 A/100%	400 A/80% 370 A/100%
Open circuit voltage	79 V				82 V



**Upper lid for easy access to optional internal RINT X12 or BUSINT X11**

**Robot interface**

**LED status bar for**

- Ready for operation
- Fault
- Welding operation

**Connection socket, 7-pole, for items such as**

- Panel RC XQ Expert 2.0 Rob
- External ewm Xnet LAN/WiFi gateway

**Available versions**

- Gas-cooled
- Water-cooled
- Water-cooled with reinforced pump

**Floor assembly**

- Pallet or wheel kit

## OPTIONAL: DGC – DIGITAL GAS CONTROL



- No gas blast with turbulence when igniting the arc, as the electrical valve opens and closes gently
- Efficiency through gas savings thanks to accurate settings
- Prevents welding errors caused by too much or too little gas
- Precise, digitally adjustable gas quantity
- Suitable gas quantity for the respective welding task (JOB) optimally set at the factory
- Exact gas quantity automatically provided depending on the shielding gas, without conversion for argon, argon-mixed gas, CO<sub>2</sub> or helium
- Stops welding when dropping below the critical quantity of gas (shielding gas cylinder empty or gas supply interrupted)
- Simplified calculation by recording the exact gas consumption via the ewm Xnet software (optional)

# THE XQ WELDING PROCESSES.

## PROCEDURES AND PROCESSES FOR OPTIMUM WELDING RESULTS.

Maximum operating convenience, a long service life and innovative welding processes are optimised and included in the machine at no extra charge. Here, perfect weld seams are already pre-programmed for low- to high-alloy steels and aluminium in all material thicknesses and all positions.

Titan XQ R	Titan XQ R AC
<b>Standard (MIG/MAG)</b>	<b>Standard (MIG/MAG)</b>
<b>Pulse</b>	<b>Pulse</b>
rootArc® puls XQ	rootArc® puls XQ
rootArc® XQ	rootArc® XQ
coldArc® puls XQ	coldArc® puls XQ
coldArc® XQ	coldArc® XQ
forceArc® puls XQ	forceArc® puls XQ
forceArc® XQ	forceArc® XQ
wiredArc puls XQ	wiredArc puls XQ
wiredArc XQ	wiredArc XQ
<b>Positionweld</b>	<b>Positionweld</b>
superPuls	superPuls
<b>TIG</b>	<b>TIG</b>
<b>MMA</b>	<b>MMA</b>
<b>Gouging</b>	<b>Gouging</b>
	acArc puls XQ



### Standard

Perfect short and spray arcs



### forceArc®/ forceArc® puls

Powerful, high-performance arc with deep penetration



### Pulse

Low spatter pulsed arc



### wiredArc

Heat-reduced, directionally stable high-performance arc with penetration stabiliser for changing stick-out



## Phoenix XQ R

### Standard (MIG/MAG)

Pulse

rootArc<sup>®</sup> puls XQ

rootArc<sup>®</sup> XQ

forceArc<sup>®</sup> puls XQ

forceArc<sup>®</sup> XQ

Positionweld

superPuls

TIG

MMA

Gouging

## Phoenix 355 ROB

### Pulse

rootArc<sup>®</sup>

rootArc<sup>®</sup> puls

forceArc<sup>®</sup>

forceArc<sup>®</sup> puls

superPuls



### rootArc<sup>®</sup>/ rootArc<sup>®</sup> puls

Perfect root welding/easy-to-execute filler and final passes



### superPuls

Heat-reduced interval welding between two operating points: high-current and low-current phases freely adjustable – control dependent



### coldArc<sup>®</sup>

Heat-reduced for thin-sheet welding



### Positionweld

Simple positional welding without 'Christmas tree' technique

# TITAN XQ R 400 AC PULS.

## ACARC PULS XQ FOR ALUMINIUM WELDING.

In the Titan XQ R 400 AC puls, the AC welding process acArc® puls XQ and all DC welding processes are included in the machine at no extra charge.

In this way, EWM are revolutionising MIG-AC aluminium welding. The Titan XQ R 400 AC puls is fitted with Expert 2.0 XQ Rob control and water cooling. Thanks to the many options and extensive accessories, every user can adapt the machine to themselves and their area of application. But what does not change is the optimum quality, a high duty cycle and thus long service life, excellent welding characteristics and intuitive operation.



**All AC and established DC MIG/MAG processes are included in the machine at no extra charge!**

**With RCC inverter technology, the welding characteristics of the Titan XQ R puls have been significantly improved for all welding processes.**

**acArc® puls XQ**

Ideal for welding thin aluminium sheets

**forceArc® XQ/forceArc® puls XQ**

Powerful, high-performance arc with deep penetration

**rootArc® XQ/rootArc® puls XQ**

Perfect root welding/easy-to-execute filler and final passes

**Positionweld**

Simple positional welding without 'Christmas tree' technique

**coldArc® XQ / coldArc® XQ puls**

Heat-minimised arc for thin metal sheet welding

**Pulse XQ and standard XQ**

TIG and MMA welding, gouging

**wiredArc XQ/wiredArc puls XQ**

Powerful high-performance arc with penetration independent of stick-out thanks to dynamic wire control (penetration stabilisation)

## THE BENEFITS FOR YOU +

- Perfect aluminium welding, even with thin sheets
- Very good ignition characteristics
- Excellent air gap bridging, even with automated applications
- Minimised heat input
- Faster welding speed
- Simple and safe control of the arc for manual and automated welding
- Well-suited to additive welding with aluminium (3D welding)
- Clean weld seams due to heavily reduced magnesium oxides
- Lower welding fume emissions
- Fast digital current regulation with EWM RCC inverter technology (Rapid Current Control)

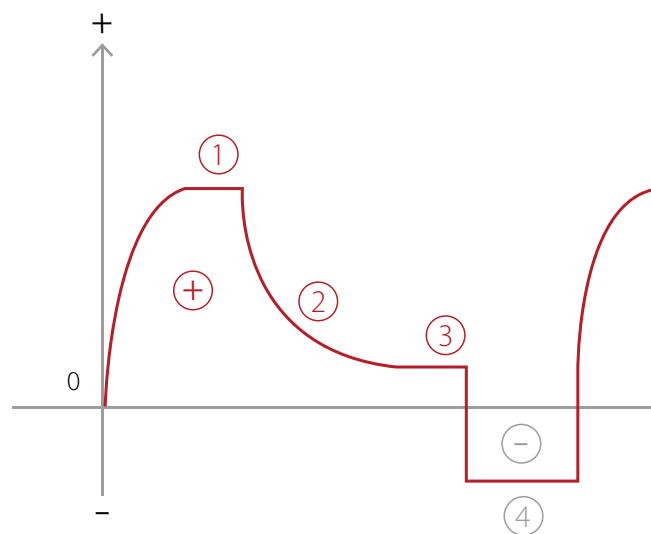




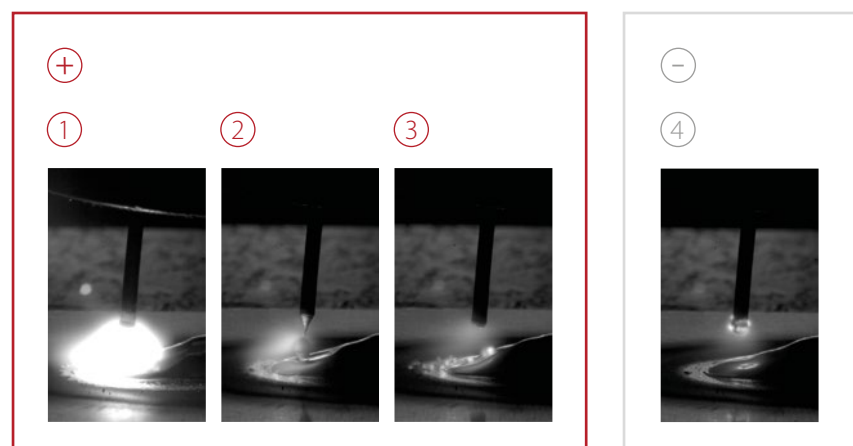
With the AC alternating current welding process of the Titan XQ R 400 AC puls, MIG aluminium welding is even easier in both manual and automated sectors. Create clean weld seams on even the thinnest metal sheets without burn marks with MIG-AC, even when using AlMg alloys.

With the acArc<sup>®</sup> puls XQ, the polarity switches between positive (pulse) and negative during the process, with the heat shifting from the material to the welding consumable. This bridges air gaps effectively and reduces welding fume emissions.

## AC PULSED ARC



## (+) POSITIVE PHASE/(-) NEGATIVE PHASE



- 1) Droplet formation in the pulse phase
- 2) Droplet detachment after the pulse phase
- 3) Fundamental current phase
- 4) Cleaning and preheating of the wire in the negative phase

# PHOENIX XQ R MODULAR.

## THE PHOENIX XQ R AS A MODULAR SYSTEM.



The new Phoenix XQ R with modular casing system offers a cost-effective alternative. It has all the parameters, processes and functions of the existing Phoenix XQ R with demodular system.

The Phoenix XQ R is also available in all common amperages and all power sources and interfaces can be configured individually.

Modular means flexible. That means you can retrofit a cooling unit or trolley at any time.

Phoenix XQ R	355 puls	405 puls	505 puls
Setting range	5 – 350 A	5 – 400 A	5 – 500 A
Duty cycle 40 °C	350 A / 100 %	350 A / 100 % 400 A / 60%	370 A / 100 % 500 A / 60%
Open circuit voltage		82 – 98 V	



### COOL50 XQ R U40

- Flow rate and temperature monitoring ex works
- Cooling unit for water-cooled welding torches
- Modular design, tool-free installation
- Excellent torch cooling and therefore cost savings on consumables thanks to the high-performance centrifugal pump
- 3.5 bar pump pressure and even 4.5 bar pump pressure in reinforced version U42



# ROBOTIC WIRE FEEDER.

## M DRIVE 4 ROB 5 XR.

M Drive 4 Rob 5 XR, the wire feeder for automated welding, is available for conventional robot systems or hollow wrist robots. The eFeed allows easy wire inching and reverse inching. Rollers and flap can be optionally aligned to the left or the right. That way, you can install two wire feeders next to each other. The M Drive 4 Rob 5 XR is available for gas or water-cooled welding torches and can be fitted with a variety of options depending on your needs.

### Robust acrylic glass hood

For checking the drive unit

### eFeed 4-roll drive

For the highest demands

### Push-buttons

- Wire inching
- Wire return
- Gas test/purge

Stable, insulated mounting rails

### Optional: Airblast function for cleaning the welding torch

For cleaning stations, optional connection needed for blow-outs

### Connection socket, 19-pole

For analogue control signals such as collision sensors, push/pull torch drives

### Euro torch connector

Individual welding torch connections (optional)

### Quick connect coupling

For coolant feed and return

### Water cooling (optional)

For retrofitting or conversion from gas cooling to water cooling

### Secure, screwed fixed connection

For load cable with cover

### G1/4 shielding gas connection

For shielding gas hose

### G1/4 compressed air connection (optional)

Compressed air for blow-outs when using a cleaning station

### Wire feed connection

Available for various wire guides with different connections

### Connection socket, 23-pole

For intermediate hose package



## ALL WIRE FEEDERS FOR XQ R.

### M DRIVE 4 ROB 5 XR



- MIG/MAG robot wire feeder available in two models for left/right-side orientation
- Also available as a variant for hollow wrist robots
- Compatible with a wide range of robots using various mounting consoles
- Push/pull capability when used with EWM MTR242W PP and MTR500W PP welding torches
- Standard-series 19-pole connection socket for signal exchange, e.g. collision sensor
- Separate push-button on the side for wire inching/reverse inching and gas test, with inspection window for monitoring wire feeder
- Extra-light for gas-cooled systems, optional retrofitting for water-cooled systems
- Optimum process reliability thanks to the control, regulation and monitoring of all process data via a central digital bus system
- eFeed: Innovative 4-roll drive with rolls that can be changed without tools, permanently secured rolls with adjustable contact pressure per roll pair and colour-coded rolls for wire diameter and material

### F DRIVE ROB 5 XR



- MIG/MAG robot media separation box in two versions for right and left-side opening
- Also available as a variant for hollow wrist robots
- Secure power connection of intermediate hose package and standard 19-pole connection socket for signal exchange, e.g. collision sensor
- Separate push-buttons on the side for wire inching/reverse inching and gas test
- Especially light, for gas-cooled systems, optional retrofitting for water-cooled systems
- Compact machine for simple mounting on the robot
- Optimum process reliability thanks to the control, regulation and monitoring of all process data via a central digital bus system
- EWM powerConnector hose package connection

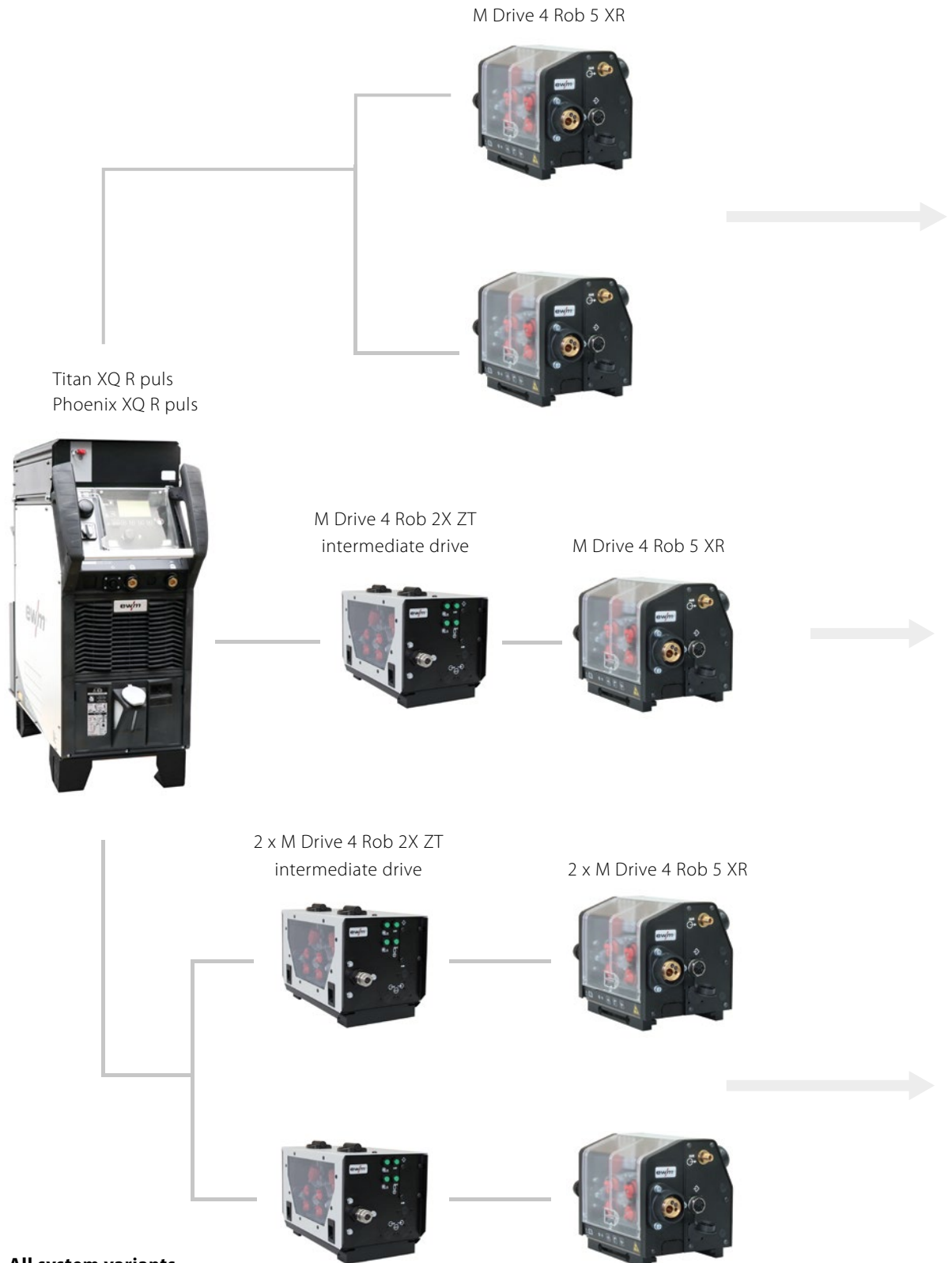
### M DRIVE 4 ROB 2X ZT



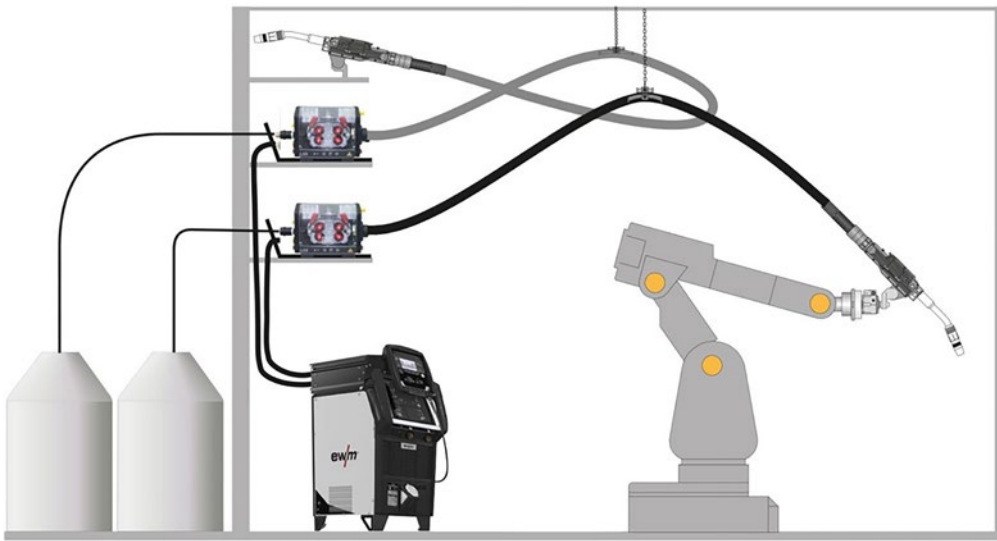
- MIG/MAG robot wire feeder for use as intermediate drive
- Also available as a variant for hollow wrist robots
- For wire feeding where there are large distances between the spool/drum and welding torch
- Reproducible wire feed speed thanks to fully digital control with rotary transducer, adjustable in increments of 0.1 m/min
- Separate push-buttons on the front for wire inching/reverse inching and gas test
- Optimum process reliability thanks to the control, regulation and monitoring of all process data via a central digital bus system
- eFeed: Innovative 4-roll drive with rolls that can be changed without tools, permanently secured rolls, adjustable contact pressure per roll pair and colour-coded rolls for wire diameter and material

# THE RIGHT SOLUTION FOR YOUR APPLICATION.

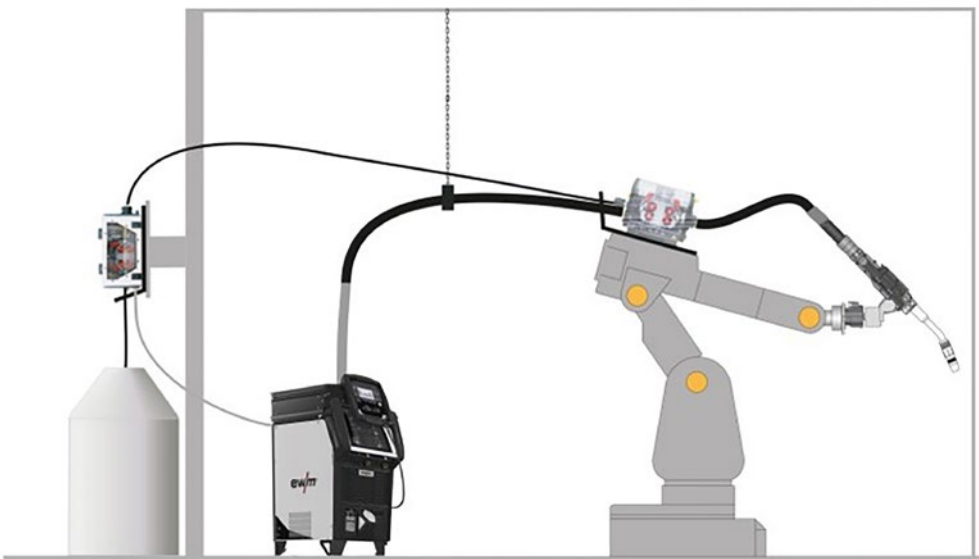
In addition to the standard variants with just one drive, you can also use a drum feed or an intermediate drive. Up to three drives in series can be used in combination with a push/pull welding torch. Plus, you can also alternate between two welding torches with the welding machine when you use a welding torch changing system. Here at EWM, we have the right components for any application, allowing you to achieve perfection in your automated welding task.



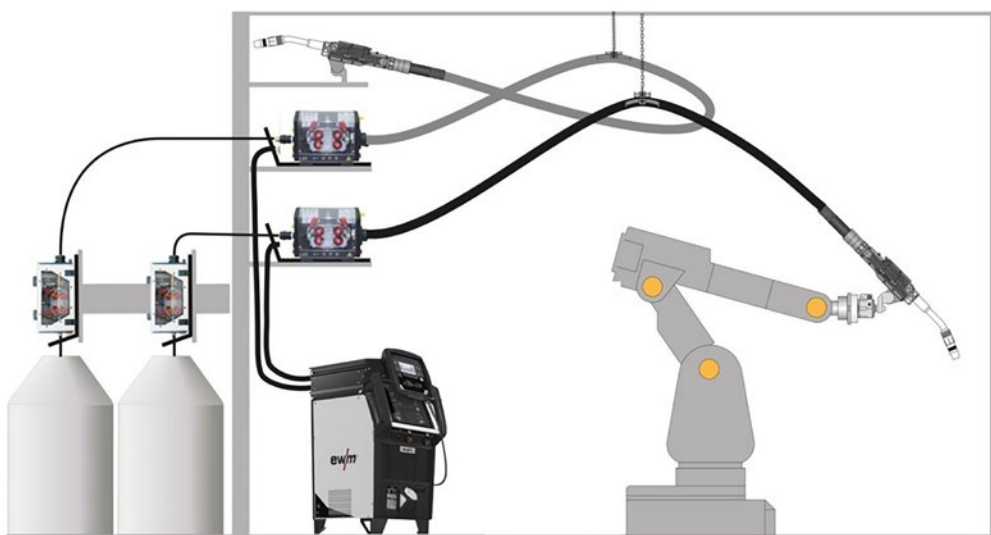
**All system variants  
also available with XX5.**



Wire feeder  
changing system



Wire feeder system  
with intermediate drive,  
e.g. drum feed



Wire feeder changing system  
with intermediate drive,  
e.g. drum feed

# PANEL/REMOTE CONTROLS.



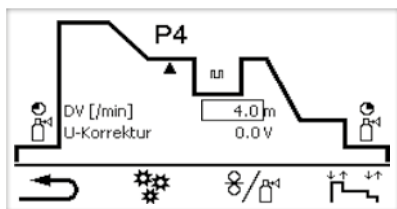
## RC XQ EXPERT 2.0 ROB

- Operating panel with pre-assembled connection cable for setting welding parameters for RC XQ power sources without front control
- Can also be used as an additional actuation module on power sources with front control
- Setting of: Welding current (amp), arc correction (volt) and arc dynamics (soft/hard) directly adjustable using two rotary knobs
- Expert 2.0 control with intuitive user guidance on LCD display and plain text display of all welding parameters and functions
- Simple JOB preselection (welding procedure, material, gas, wire Ø) using click wheel and 16 individually configurable programs for each welding task (JOB)
- Easy switching of welding process at the push of a button, setting of all parameters in program sequence and special non-latched and special latched with adjustable start and end crater program
- Administration of access rights for different control operating levels using the Xbutton

**Dimensions (L x W x H):** 250 x 230 x 108 mm

**Weight:** 2 kg

# CONTROL.



## EXPERT XQ R 2.0

- **Welding program sequence**  
Simple adjustment of all welding parameters in the program sequence.
- **JOB window**  
Simple JOB selection for characteristics via click wheel
- **Quick switching between MIG/MAG processes**  
The optimum for every welding task.
- **WPQR welding data assistant**  
Exact calculation of heat input and energy per unit length.
- **Language selection**  
Pre-configured languages for the user menu



# CUSTOMER'S CHOICE OF ROBOT WELDING TORCH.

With the Titan XQ R puls, you can also enjoy an entire range of welding torch possibilities: choose between the standard or hollow-wrist variants, gas or water cooling as well as push/pull or push/push welding torches. You can even choose a drum feed. Welding torches with various neck bend angles or a swan neck, a collision sensor, wire feeders and other welding accessories complete the system.

## **EWM RMT hollow-wrist robot welding torches**

Gas- or water-cooled



## **M Drive 4 Rob 5 HW XR robotic wire feeder**



## **Titan XQ R puls or Phoenix XQ R puls**



## **EWM RMT robot welding torches**

Gas- or water-cooled



## **M Drive 4 Rob 5 XR robotic wire feeder**



## **EWM AMT Automated welding torches**

Gas- or water-cooled



**Made in Germany; custom lengths and bend angles on request.**

# MIG/MAG ROBOT WELDING MACHINES.

## PHOENIX 355 EXPERT 2.0 ROB TECHNICAL DATA.

With the Titan XQ R puls, you can also enjoy an entire range of welding torch possibilities: choose between the standard or hollow-wrist variants, gas or water cooling as well as push/pull or push/push welding torches. You can even choose a drum feed. Welding torches with various neck bend angles or a swan neck, a collision sensor, wire feeders and other welding accessories complete the system.



- Compact multi-process MIG/MAG pulse welding machine with integrated eFeed wire feeder
- Optimised for automated applications
- Expert 2.0 control with intuitive user guidance on LCD display and plain text display of all welding parameters and functions
- Can be optionally connected to LAN or WiFi, ewm Xnet compatible
- Push/pull capability when used with EWM MTR242W PP and MTR500W PP welding torches
- EWM Synergic characteristics for forceArc®, forceArc® puls, rootArc®, rootArc® puls and superPuls
- Synergic characteristics for GMAW welding of steel/CrNi/aluminium
- Standard-series 19-pole interface for automated welding and optional RINT X12 interface, BUSINT X11 industrial bus interface, PCINT X10 documentation interface (+ QDOC 9000 V2.0 software) and ewm Xnet quality management software
- Automated and mechanised applications in the manufacture of machinery, cars, vehicles, containers, equipment and ships
- Gas-cooled or optionally water-cooled with cool 50 U40 cooling unit
- Powerful, high-precision EWM eFeed 4-roll wire feeder to reliably feed all solid and flux-cored wires
- Equipped with 1.0–1.2 mm UNI rolls for low- to high-alloy steel ex works
- Wire spool diameter up to 300 mm/D300, 200 mm/D200 possible with adapter

<b>Phoenix 355 ROB</b>	<b>350</b>
Setting range	5 – 350 A
Duty cycle 40 °C	350 A / 40 % 300 A / 60 % 270 A / 10 %
Open circuit voltage	79 V



# TIG AUTOMATION WITH TETRIX.



- TIG inverter welding machine in DC or AC/DC variants
- Optimised for automated applications: unique second-generation digital system for reproducible welding results of the highest possible quality – easy to integrate into automated systems
- Comes with 19-pole interface for automated welding as standard with the option of equipping a RINT X12 interface or BUSINT X11 industrial bus interface
- activArc® – precise, focussed arc with reduced heat input and deep fusion penetration for optimum root fusion
- Numerous variants to suit your application:
  - In various amperages
  - With various controls
  - Gas-cooled or water-cooled with optional cooling unit
  - Available with cold wire or hot wire

TETRIX	352	452	552	1002
Setting range	5 – 350 A	4 – 450 A	5 – 550 A	10 – 1.000 A
Duty cycle 40 °C	350 A/100%	450 A/80% 420 A/100%	550 A/80% 420 A/100%	1.000 A/60% 750 A/100%
Open circuit voltage	79 V			



- TIG inverter welding machine with Comfort 2.0 control in DC or AC/DC variants
- activArc<sup>®</sup> – precise, focussed arc with reduced heat input and deep fusion penetration for optimum root fusion
- Comes with 19-pole interface for automated welding as standard with the option of equipping a RINT X12 interface or BUSINT X11 industrial bus interface
- Numerous variants to suit your application:
  - gas-cooled or optionally water-cooled with cool 41 U31 cooling unit
  - available with cold wire or hot wire depending on variant

#### TETRIX COMFORT 2.0 PULS

Version	ROB	CW ROB	AC/DC ROB	AC/DC CW ROB
Setting range			5 – 300 A	
Duty cycle 40 °C			300 A/35 % 260 A/60 % 210 A/100 %	
Open circuit voltage			63 V	

# TIG WIRE FEEDERS AND SEPARATION BOXES.

## WIRE FEEDERS FOR TIG AUTOMATION.

Always the right wire feeder for automated and mechanised TIG welding whatever the area of application.



### T drive 4 Rob 2

- Wire feeder for automated TIG welding applications
- Optimised for high cold or hot wire deposition rates up to 10 m/min
- Reproducible wire feed speed thanks to fully digital control with rotary transducer, adjustable in increments of 0.1 m/min
- 4-roll drive in metal construction with large 37 mm rolls, equipped ex works for 1.0/1.2-mm steel wires
- Separate push-buttons on the front for wire return, gas test and wire inching
- Optimum process reliability thanks to the control, regulation and monitoring of all process data via a central digital bus system



### T drive 4 Rob 3

- Light, compact wire feeder for high-precision cold wire feed for automated TIG welding applications
- Available in various variants as combination of cold wire, hot wire, hollow wrist and in left or right-side orientation
- Reproducible wire feed speed thanks to fully digital control with rotary transducer, adjustable in increments of 0.1 m/min
- 4-roll drive in metal design with large 37 mm rolls. equipped ex works for 1.0/1.2 mm steel wires with rolls that can be changed without tools thanks to permanently secured screws
- Separate push-buttons on the front for wire return, gas test and wire inching
- Optimum process reliability thanks to the control, regulation and monitoring of all process data via a central digital bus system



### tigSpeed drive 4 Rob

- Wire feeder for automated TIG welding applications
- Optimised for high cold or hot wire deposition rates up to 10 m/min
- Dynamic wire feed system through superimposed forward/backward wire motion
- Reproducible wire feed speed thanks to fully digital control with rotary transducer, adjustable in increments of 0.1 m/min
- 4-roll drive in metal construction with large 37 mm rolls, equipped ex works for 1.0/1.2-mm steel wires
- Separate push-buttons on the front for wire return, gas test and wire inching
- Optimum process reliability thanks to the control, regulation and monitoring of all process data via a central digital bus system

## MEDIA SEPARATION BOX.



### Tig Torch Box media separation box

- Lightweight, compact TIG media separation box
- For connection to TIG MT 400Q and TIG MT 500 W
- Can be combined with T Drive 4 Rob 3 L/R (left/right)
- Integrated gas valve
- Separate push-button for gas test
- Gas pressure monitoring
- Assembly PCB panel with strain relief for mounting on the robot (optional)
- Compact machine for simple mounting on the robot



### forceTig Torch Box media separation box

- forceTig media separation box, lightweight version up to 550 A
- For using forceTig<sup>®</sup> welding torches with automated Tetrax XX2 power sources
- Can be combined with T Drive 4 Rob 3 L/R (left/right)
- Integrated gas valve
- Separate push-button for gas test
- Gas pressure sensor
- Compact machine for easy installation
- Maximum overall length of welding torch and connecting hose package: 18 m

## INTERMEDIATE HOSE PACKAGES

You are sure to find the right intermediate hose package for all areas of application. Fully equipped, exactly how you need it for your application!

### POSSIBLE EQUIPMENT COMBINATIONS

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70 QMM  
95 QMM  
2x95 QMM, screwable power connection  
VSLP TORCHBOX  
VSLP TORCHBOX + WF / TIGSPEED  
SLP 7/12 pol  
SLP 7/12 pol hotwire  
VSLP PIPETRUCK  
VSLP TORCHBOX + WF + HW / TIGSPEED only possible with or without ribbed protective hose, no standard protective hose

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Gas-cooled (not for SLP)  
Water-cooled (always for VSLP)  
Without gas or water (for SLP)

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No protective hose  
Standard protective hose (not for 2x95 QMM)  
Ribbed protective hose

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Indication of length  
(1 m included in base price)  
Intermediate hose package  
Control cable assembly

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# ALWAYS KEEP A COOL WELDING TORCH HEAD.

## TIG ROB 400W

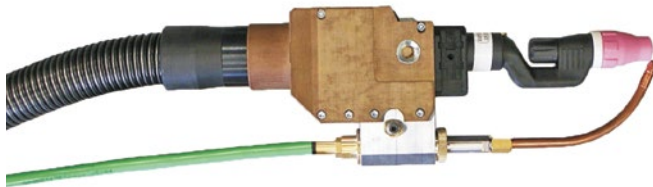


- Fast, safe, trouble-free
- Pre-set tungsten electrode
- Reproducible welding torch position

**Basic features:**

- 4 m hose package
- Straight torch neck
- Gas nozzle  $\varnothing = 10$  mm L = 37 mm
- Gas diffuser  $\varnothing$  electrode = 2.4 mm

## TIG ROB 400W CW/HW

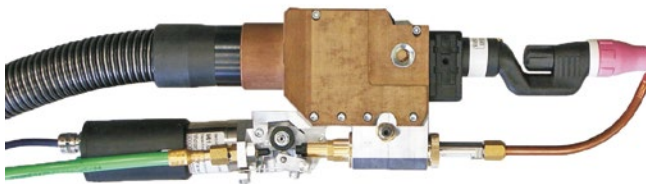


- Fast, safe, trouble-free
- With cold wire feed
- Pre-set tungsten electrode
- Reproducible welding torch position

**Basic features:**

- 4 m hose package
- Straight torch neck
- Cold wire nozzle  $\varnothing = 1$  mm
- Gas nozzle  $\varnothing = 10$  mm L = 37 mm
- Gas diffuser  $\varnothing$  electrode = 2.4 mm

## TIG ROB 400W CW PP



- Fast, safe, trouble-free
- With cold wire feed
- Pre-set tungsten electrode
- Reproducible welding torch position

**Basic features:**

- 4 m hose package
- Straight torch neck
- Gas nozzle  $\varnothing = 10$  mm L = 37 mm
- Gas diffuser  $\varnothing$  electrode = 2.4 mm
- Cold wire nozzle  $\varnothing = 1.0$  mm
- Universal drive roll  $\varnothing = 1.0$  mm

	TIG ROB 400 W	TIG ROB 400 W CW/HW	TIG ROB 400 W CW PP
Cooling		W	
DC		400 A / 100 %	
AC		280 A / 100 %	



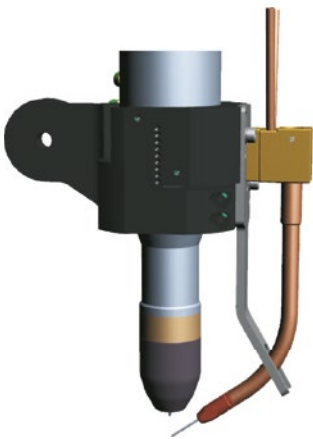


## FT500

- Stable design for increased crash safety
- Closed cooling circuit
- Screw-in electrode, defined calibrated geometry when changing electrodes, i.e. no need to adjust with setting gauges at replacement time
- Available with or without filler wire feed

### Basic features:

- Gas diffuser, round cathode, 13 mm copper gas nozzle
- Hose package outlet upwards



## FT1000

- Stable design for increased crash safety
- Closed cooling circuit
- Screw-in electrode, defined calibrated geometry when changing electrodes, i.e. no need to adjust with setting gauges at replacement time
- Available with or without filler wire feed

### Basic features:

- Gas diffuser, round cathode, 13 mm copper gas nozzle
- Hose package outlet on side



## FT1002

- Mechanised high-current welding
- Designed for continuous operation at highest loads
- Laminar shielding gas for optimal protection of weld seam
- Different electrode diameters make adapting to different welding tasks a breeze
- Hose package outlet on side, available in different lengths

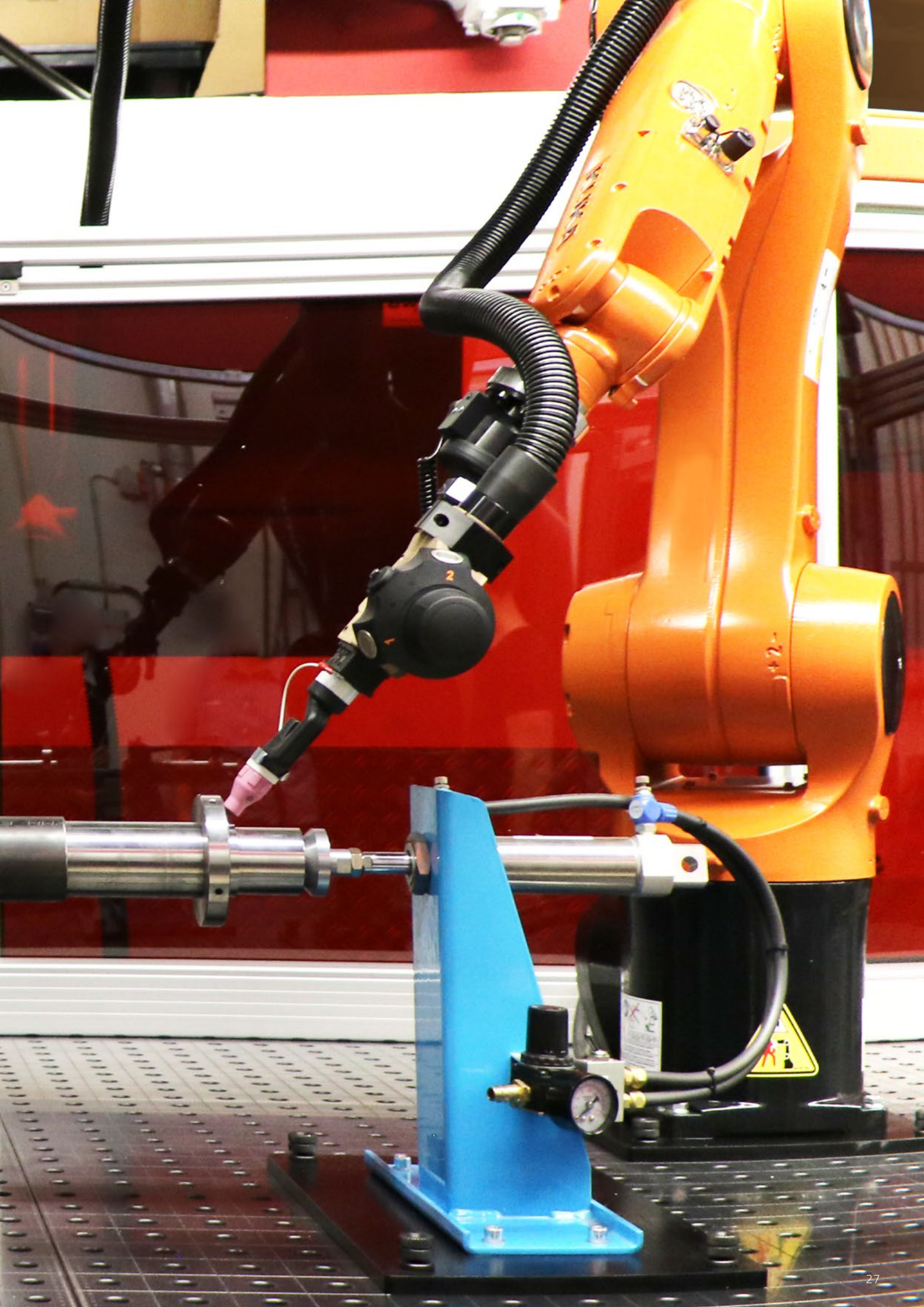
	FT500	FT1000	FT1002
Cooling		W	
DC	500 A / 100%	800 A / 100%	1000 A / 100%

# ALWAYS KEEP A COOL WELDING TORCH HEAD.



- Long service life thanks to optimal heat dissipation combined with the smallest possible size
- Hose package outlet on side without risk of kinking
- Tungsten electrode can be adjusted from the rear
- Outstanding accessibility with optimum output

	<b>TIG MT 200G</b>	<b>TIG MT 300W</b>	<b>TIG MT 400W</b>	<b>TIG MT 500W</b>
Cooling	Gas	W	W	W
DC	200 A/60%	300 A/100%	400 A/100%	500 A/100%
AC	140 A/60%	210 A/100%	280 A/100%	350 A/100%



# TETRIX PLASMA AUTOMATION.



- DC plasma welding machine or DC microplasma welding machine
- Available with cold wire or hot wire depending on variant
- Also available in variants with or without gas control
- activArc® – precise, focussed arc with reduced heat input and deep fusion penetration for optimum root fusion
- Standard-series 19-pole connection socket for signal exchange, e.g. collision sensor and optional RINT X12 interface, BUSINT X11 industrial bus interface or PCINT X10 documentation interface
- Optimised for automated applications: unique second-generation digital system for reproducible welding results of the highest possible quality – easy to integrate into automated systems
- No need to purchase additional characteristics – all characteristics for this machine type are included in the scope of delivery ex works
- Freely adjustable pilot arc current from 5 to 80 A
- Plasma spotArc® possible
- Phase failure monitoring (in combination with BUSINTX11 ATCASE), medium monitoring for shielding gas/pilot gas pressure and water flow monitoring
- Emergency stop circuit in hardware for safety shut-down

## TECHNICAL DATA

TETRIX PLASMA	152	352	552	MICROPLASMA 102
Setting range	5 – 150 A	4 – 350 A	5 – 550 A	0,5 – 100 A
Duty cycle 40 °C	150 A / 100%	350 A / 100%	550 A / 60% 420 A / 100%	100 A / 100%
Open circuit voltage	79 V			

# MICROPLASMA AUTOMATION.



- DC microplasma welding machine with Comfort 2.0 P control and precision gas metering unit
- Plasma and TIG welding
- Standard-series 19-pole interface for automated welding, for e.g. (start/stop, current flows, emergency stop) and optional RINT X12 interfaces, BUSINT X11 industrial bus interface



**Specially developed  
Comfort 2.0 P control**

## TECHNICAL DATA

MICROPLASMA	25-2	55-2	105-2
Setting range	0,3 – 20 A	0,3 – 50 A	0,3 – 100 A
Duty cycle 40 °C	20 A/100%	50 A/100%	1000 A/60 % 70 A/100%
Open circuit voltage	95 V		



# PLASMA WELDING TORCHES.

Always find the right welding torch whatever the plasma application.

	PWM 25	PWM 100	PWM 150	PWM 250
Cooling	W			
Pilot arc current	4 – 10 A	2 – 12 A		5 – 12 A
ED DC -	25 A/100%	100 A/100%	150 A/100%	250 A/100%
ED AC		80 A/100%	120 A/100%	
ED DC +		35 A/100%	50 A/100%	

	PWM 150 ROB	PWM 250 ROB	PWM 350-S90	PWM 350-S180
Cooling	W			
Duty cycle		250 A/100%	350 A/100%	350 A/100%
Pilot arc current	2 – 12 A	5 – 12 A	10 – 20 A	10 – 20 A
ED DC -	150 A/100%			
ED AC	120 A/100%			
ED DC +	50 A/100%			



**PWM 25**



**PWM 100**



**PWM 150**



**RINT X12 for  
XQ R welding machines**



**PWM 150 Rob  
PWM 250 Rob**



**PWM 350 - S180  
PWM 350 - S90**

# GAS METERING UNIT.

Gas metering unit for operation on Tetrax plasma welding machines without digital gas control.

## CONTROLS OVERVIEW

GDE 4



GDE 4.1



GDE 5



**Fields of application:**

- Plasma welding, + pole: aluminium-based alloys
- Plasma welding, - pole: high-alloy steels, nickel, copper, titanium and special alloys

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## TECHNICAL DATA

	GDE 4	GDE 4.1	GDE 5
Shielding gas	3,5 – 20 l/min	3,5 – 20 l/min	3,5 – 20 l/min
Pilot arc gas	0,3 – 5,5 l/min	0,1 – 1,1 l/min	0,3 – 5,5 l/min
Pilot arc gas 2			0,1 – 1,1 l/min

# ALWAYS KEEP A COOL WELDING TORCH HEAD.

## RK1



- High-performance recooling unit with fully thermal motor compressor
- Rear connections
- Coolant drain valve and coolant level indicator
- Temperature control and LED display
- High-performance pump, pressure controller, temperature-controlled pump and fan

## RK2 / RK3 / RK2.1 / RK3.1



- High-performance recooling unit with fully thermal motor compressor
- Connection on the front side
- Coolant drain valve and coolant level indicator
- Temperature control and LED display

	<b>RK1</b>	<b>RK2 +3</b>	<b>RK2.1 + 3.1</b>
			reinforced
Mains voltage		1 x 230 V	3 x 400 V
Cooling capacity	900W	2.000W (RK2) / 2.700W (RK3)	
Max. output pressure	3,5 bar	4,5 bar	8 bar

up to max. 32°C ambient temperature

## COOL82 U44



- Powerful cooling unit with centrifugal pump
- Extra-sturdy metal housing
- Coolant connections at rear
- High-performance pump, pressure controller, temperature-controlled pump and fan
- Recommended up to 10 m intermediate hose package



## COOL82 U45 / COOL82 U45 2DV



- Powerful cooling unit with centrifugal pump
- Reinforced model
- Extra-sturdy metal housing
- Coolant connections at rear
- High-performance pump, pressure controller, temperature-controlled pump and fan
- Reinforced centrifugal pump and excellent cooling capacity
- Recommended for long intermediate hose packages over 15 m, for example

	COOL 82 U44	COOL 82 U45	COOL 81 U45 2DV
			Reinforced model
Flow volume	5 l/min		20 l/min
Cooling capacity	1.600W		1.800W
Max. output pressure	3,5 bar		4,5 bar

## RK10



## RK20



## RK30



- Powerful recooling unit
- Rear connections
- Coolant drain valve and coolant level indicator
- Temperature control and LED display
- Powerful pump, temperature-controlled fan

	RK10	RK20	R30
Mains voltage		1 x 230 V	3 x 400 V
Cooling capacity	1300W	2.500W	3.800W
	up to max. 40°C ambient temperature		

# INTERFACES FOR TIG, MIG/MAG AND PLASMA.

## XQ R MIG/MAG

BUSINT X11 FOR  
CONTROL CABINETS



**Available  
fieldbus types**



DEVICE NET  
PROFIBUS  
PROFINET CU  
ETHERCAT  
ETHERNET IP  
MODBUS TCP  
CAN OPEN

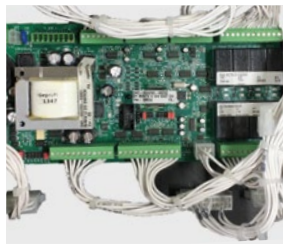
BUSINT X11 FOR XQ R  
WELDING MACHINES



**Available  
fieldbus types**



DEVICE NET  
PROFIBUS  
PROFINET  
ETHERCAT  
ETHERNET IP  
MODBUS TCP  
CAN OPEN



**RINT X12 for  
XQ R welding machines**



**RINT X12 for control cabinets**

## TIG AND PLASMA

BUSINT X11 FOR  
CONTROL CABINETS



**Available  
fieldbus types**



DEVICE NET  
PROFIBUS  
PROFINET  
ETHERCAT  
ETHERnet IP  
MODBUS TCP  
CAN OPEN

BUSINT X11  
ATCASE FOR  
WELDING  
MACHINES



**TIG**



**Available  
fieldbus types**



DEVICE NET  
PROFIBUS  
PROFINET CU  
ETHERCAT  
ETHERNET IP  
MODBUS  
CAN OPEN



**Plasma**



**Available  
fieldbus types**



DEVICE NET  
PROFIBUS  
PROFINET CU  
ETHERCAT  
ETHERNET IP  
MODBUS  
CAN OPEN

# EWM AUTOMATION – THE PERFECT SOLUTION FOR EVERY TASK.

Whether it's single units or large batches, trade or industry, SMEs or large corporations, cobots or turnkey welding robot cells – EWM has the right automation solution for your task and your business.

## WITH EWM YOU WILL

- Speed up production while maintaining the same high quality
- Permanently reduce costs and plan effectively
- Produce flexibly from the smallest to the largest batches
- 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 and plasma with related accessories such as wire feeders, 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 systems



# EFFECTIVE AND ECONOMICAL – EVEN FOR ONE-OFF BATCHES.

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 specifically 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, letting you start production right away.

### THE BENEFITS FOR YOU +

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

## STANDARD WELDING CELLS

Our compact, standardised welding cells with customised automation options are the perfect solution for stringent requirements. Designed, delivered and commissioned ready-to-weld according to customer specifications. Fitted with FANUC or Kuka robots or cobots from Universal Robots and Doosan Robotics on request.

### THE BENEFITS FOR YOU +

- Standardised robot cell
- Different robot manufacturers (acc. to customer specifications)
- Positioner acc. to customer or component requirements
- Operated with various multiprocess power sources
- MIG/TIG/plasma/forceTig® and stud welding
- Complete protective casing with sliding doors and inspection window
- Can be combined with any extraction system
- Optional linear axis or rotary table
- Customised configuration



# WELDING 4.0 – EWM XNET WELDING MANAGEMENT SYSTEM

Intelligent and productivity-boosting networking of man and machine for the automatic flow of data within the production chain: Industry 4.0 is now becoming established in welding production thanks to the new and innovative ewm Xnet Welding 4.0 welding management system. In this way, future concepts such as the smart factory and digital transformation effortlessly become reality. The advantages are obvious: improved networking of products and people improves efficiency and quality, reduces costs and saves resources at the same time. Intelligent monitoring and transparent processes, from planning to production to final costing of weld seams, keep you informed at all times. ewm Xnet provides the advantages of Industry 4.0 for welding operations of any size and specialisation. Bring the future to your business today – contact us!

## THE BENEFITS FOR YOU

- Record welding data
- Save, review and analyse at a central point
- Online monitoring – control and monitor the welding process for any number of welding machines from any number of computer workstations
- Online analysis, evaluation, reporting and documentation of logged welding parameters for each networked welding machine using different documentation and analysis tools
- Optionally transfer to all welding machines in the network
- Convenient, easy-to-create graphic display layout showing equipment in the network based on work facility floor plan. Can be enlarged by zooming, navigation window and much more

## MODULES AND COMPONENTS

- Basis set – record and manage welding data and transmit consumption values in real time
- Upgrade 1 – WPQ-X Manager – create, manage and assign welding procedure specifications to welders
- Upgrade 2 – component management – manage components, create welding sequence plans, assign WPS
- Upgrade 3 – project planning for complex welding tasks
- Xbutton – access rights and WPS allocation for the welder using the robust hardware key



### Quick data transfer for Industry 4.0

- Networking of any number of power sources – by LAN/WiFi
- Simple offline data transfer via USB connection







**WE ARE WELDING**

We're happy to help: [sales@ewm-group.com](mailto:sales@ewm-group.com)

EWM is your partner for the best welding technology. With EWM, you'll weld more efficiently, more reliably and produce higher-quality results. EWM's innovative systems, high-performance welding procedures, digital technologies and services, as well as expert consultation, all support you in achieving perfect results from your welding tasks.



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