

AUTOMATION XR



The new dimension in welding

MULTIMATRIX®

/// Perfection is the principle



MULTIMATRIX®

Save money

Secure jobs

Protect the environment

MULTIMATRIX® is the devised solution for all your current and future welding tasks.

ewm further develops welding processes, material and power source characteristics, networking and individual operation on a continuous basis.

MULTIMATRIX® technology makes it possible to adapt to such new developments or welding tasks quickly using data exchange via a USB flash memory or LAN/WiFi network.



Simply...

... better welding

Continually optimised welding properties in all MIG/MAG processes

... greater sustainability

Less power consumed due to highly efficient welding procedures and inverter technology with standby function

... better quality

The ewm Xnet software is suitable for recording, analysing and optimising all welding data, with optionally either LAN or WiFi interface – ideal prerequisites for Industrie 4.0

... better overview

Convenient, intuitive operation – Expert 2.0 control with plain-text display on large screen

... greater process reliability

Precise wire feeding with the drive 4X wire feeder

... greater security of investment

Permanent further development of MULTIMATRIX technology to achieve best possible efficiency and quality

EWM AG – Simply more!

EWM has a fully coordinated system in which all components are systematically geared towards delivering consistently high welding quality, conserving resources and reducing the workload. The advantages for our customers are obvious – the complete product portfolio means that they only have one contact. EWM provides you with advice and service. We also guarantee the quickest availability and delivery times for all of our products. In doing so, we take technological responsibility for the entire welding process.

This price list contains the complete EWM product range from welding machines.



■ Advice + service

Have you got any questions which are not answered in this price list? Our global EWM branches and sales partners are happy to help and advise you at any time. You will find your local partner online at www.ewm-group.com. Alternatively, please contact the EWM works team at any time on +49 2680 181-0 or info@ewm-group.com.



■ Prices

See title page for validity. All price sheets with earlier dates are hereby void. The prices quoted are in euros before VAT.



■ Financing

Do you only require a machine temporarily or you would like to finance it? We will naturally be happy to provide you with an attractive leasing or rental quotation. Contact us or your dealer.



■ Up to five-year warranty

Our welding machines combine future-oriented, state-of-the-art technology of the highest quality in all their high-tech components. We take full responsibility for this! Each of our products is carefully checked. We have every faith in our products and therefore provide you with a five or three-year warranty on our welding machines, also for 3-shift operation, in accordance with the current version of the warranty conditions.



■ Returns

If you do need to return a product for some reason, please discuss this with the seller in advance. Your return can only be accepted and processed to your satisfaction as quickly as possible in accordance with our return conditions if previously agreed upon and if the goods are in their original packaging. Custom-made products cannot be exchanged.



■ T&Cs + technical data

All products are supplied in accordance with the Terms and Conditions of the applicable EWM sales company. The information in our documents is non-binding. We retain the right to make changes on the grounds of technical developments or errors.

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■ Quality management

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■ Automation

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Welding torches

Robot welding torches, automated welding torches and torch accessories can be found in our 2022 automation price list (item no. 053-000157-0001), and in our [automation catalogue](#).



EWM – future welding

all in

All characteristics and welding processes are included in the machine price

EWM machines are always equipped with all device-specific welding processes for steel, CrNi and aluminium – that is EWM's "All-in" philosophy.



MULTIMATRIX®

■ **forceArc puls**

Fast, spatter-free and cost-effective pulse welding for the entire performance range

■ **forceArc**

Powerful arc for the higher performance range

■ **coldArc/coldArc puls**

Heat-reduced short arc with significantly less distortion; suitable for thin metal sheeting and root welding; coldArc puls for the higher performance range

■ **rootArc/rootArc puls**

Short arc for effortless gap bridging; rootArc puls for the higher performance range

■ **superPuls**

Quick and easy welding of vertical-up welds without using the "Christmas tree technique"

■ **MIG/MAG pulse arc**

■ **MIG/MAG standard arc**

■ **TIG and MMA welding, gouging, MIG brazing and much more**

EN 1090 WPQR Package

Now free download in PDF format!

Save time and money on qualification of welding processes: The ewm EN 1090 WPQR package provides you with WPQR certificates and welding procedure specifications for almost 90% of all standard welding positions and joints, usable with many ewm welding machines¹ and easily extended.

With welding consumables tested for suitability, the same WPQR certificates can even be used for welding machines by any manufacturer using the appropriate corresponding welding consumable.

You will now receive the EN 1090 WPQR package as a free PDF download whenever you purchase a new welding machine from the alpha Q, Phoenix, Taurus Synergic S or Picomig machine series!



This is how it works:

1. You acquire a new ewm welding machine from the alpha Q, Phoenix, Taurus Synergic S or Picomig machine series.
2. Register it with the machine serial number at www.ewm-group.com/en/registration

Registration ensures that you are informed about all updates, add-ons and changes!
3. Once registration is successfully completed, you can then simply download the EN 1090 WPQR package. The download link is sent to you together with your certificate.

Alternatively, you can also purchase the EN 1090 WPQR package:

- **EN 1090 WPQR package folder**
A folder in paper format at cost price.
The package can also be downloaded in PDF format.



Type	Description	Item no.
EN 1090 WPQR package folder	EN 1090 WPQR package in a folder	090-008803-00000
EN 1090 WPQR package download	EN 1090 WPQR-package German as a download	KOS-V00055-00000
EN 1090 WPQR package download	EN 1090 WPQR-package English as a download	KOS-V00067-00000

If no new welding machine is purchased, the EN 1090 WPQR package costs 305,00 € in a folder / 169,00 € as a download! If a new welding machine from the alpha Q, Phoenix, Taurus Synergic S or Picomig series is purchased downloading the package is free and the package folder costs 129.00 €.

Would you like to know what is included in the package?
If so, just ask for the free demo version at
www.ewm-en1090.com

¹This qualification may also be used retrospectively for all previously purchased inverter machines mentioned above (manufactured in 2010 or later).

All information at a glance, quickly accessed

Direct access to expert knowledge. Numerous welding tasks can now be set up and read more easily. This means that all information displays can be individually adapted to the requirements of the user; operating errors are thus drastically reduced. Thanks to the new full-text menu, you also have the entire welding process and all important parameters available at a glance.

Clearly arranged LCD screen

- / Plain text display for welding parameters and functions
- / You have a perfect overview of everything, even through a welding helmet
- / Anti-glare surface, easily readable even with reflected light

Practice-based control

- / Clearly arranged, self-explanatory key buttons and LCD screen
- / Membrane keyboard – resistant against dust, dirt and moisture
- / Matrix operation – quicker to change between levels

Xbutton

- / Scaled access authorisation
- / Individual menu adaptation

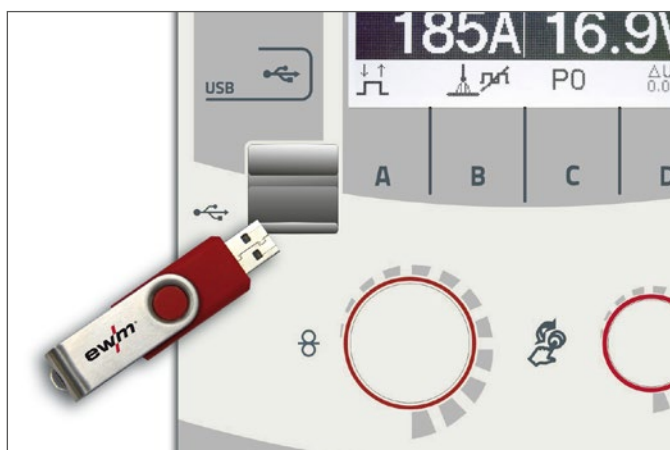
Click wheel

- / Easy and intuitive to operate

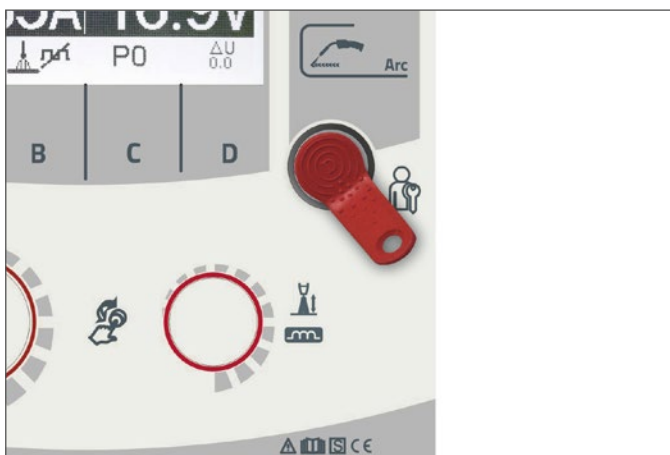
USB connection

- / Offline data transfer

Easy data exchange using USB flash memory



Access authorisation using Xbutton



LAN/Wi-Fi networking of power sources



Your benefits

Invest in the future!

- / ewm is further developing welding processes, material characteristics, networking and individual operation on a continuous basis.
- / MULTIMATRIX technology makes it possible to adapt to these new developments or welding tasks quickly using data exchange via a USB flash memory or LAN/Wi-Fi networks.

Individual user rights

- / Administration of access rights for different control operating levels
- / Identification of the welder
- / Provision of individual welding parameters for each welder
- / The ewm Xnet quality management software provides precise final costing thanks to data recording on an individual basis for each machine and application
- / Extremely robust and considerably more durable than RFID chip cards, for example
- / Incredibly easy to use even when wearing gloves
- / Practical as it can be carried on a key ring, for example

Networking of any number of power sources

- / LAN/Wi-Fi networking via built-in Expert 2.0 control or an external LAN/Wi-Fi gateway


You will find detailed information on networking ewm welding machines on pages 46-53 or in the ewm Xnet quality management software brochure

Easier to operate

Control with Expert 2.0 LC display – functions

Everything at a glance, with quick access

Expert 2.0 features different practical user menus which ensure safe operation of the welding machine



- Display of the effective arc power**
 - / For easy calculation of the energy per unit length
- Robust protective screen for the display**
 - / Scratch-proof protective screen for the display made of acrylic glass with hard coating
 - / Always clearly legible – no signs of wear, unlike touchscreens, for example
 - / 3 mm thick acrylic glass protective screen protects the LC display against damage
- Reliable selection of welding parameters**
 - / Selected using durable hardware keys
 - / No signs of mechanical wear on the LCD display, unlike touchscreens, thanks to hardware keys
- Expert 2.0 remote control**
 - / All Taurus Synergic S, Phoenix and alpha Q machines can be equipped with the full functionality of the Expert 2.0 control panel.



Your benefits

Display and change of welding program sequence

- / You can set all parameters in the program sequence

Start window for the JOB (welding task) selection

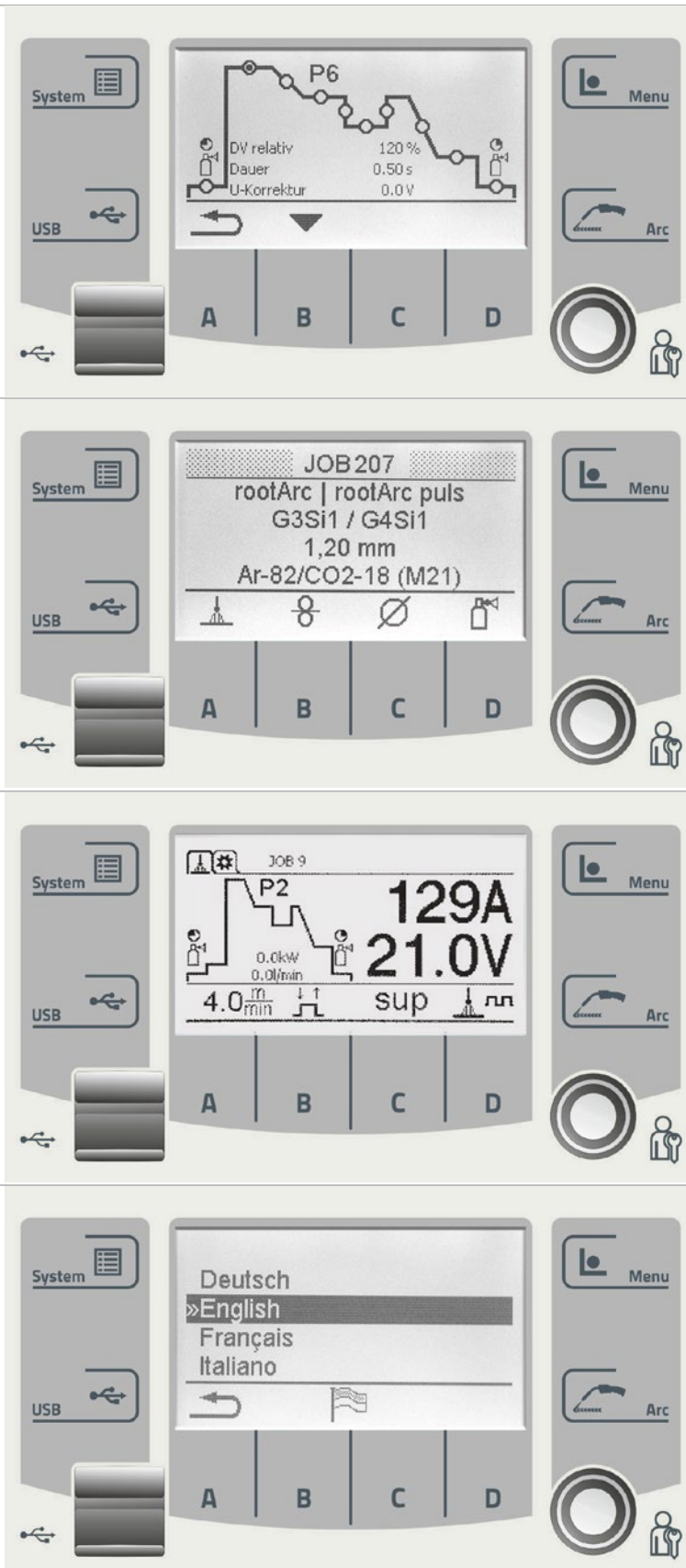
- / Practice-based control
- / JOB (welding task) easy to select using click wheel
 - welding process
 - material type
 - gas type
 - wire diameter

Screen showing welding parameters

- / Displays the effective arc power for a simple calculation of energy per unit length
- / Nominal, actual and hold values
- / Operating modes
- / Status messages

Language selection menu

- / The user interface is available in 13 languages





forceArc puls

Fast, spatter-free, cost-saving pulse welding

Heat-reduced, easily managed pulse arc for the entire power range
For welding non-, low- and high-alloy materials

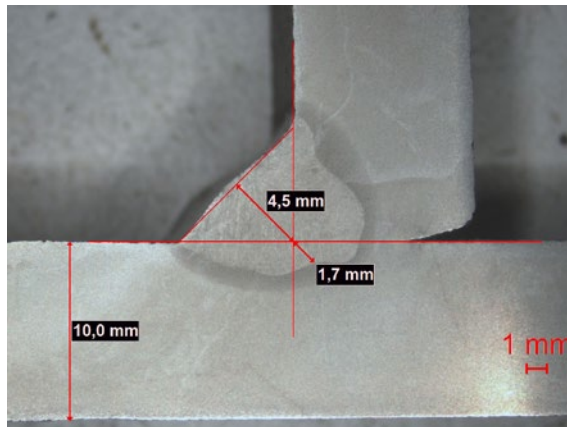


Phoenix puls

alpha Q puls

- Handling easy to learn, no familiarisation periods
- Can be used for forehand and backhand welding
- Excellent gap bridging
- Highly suitable for multi-pass welds
- Suitable for root welding on backing bar with up to 4 mm air gap
- Less distortion thanks to heat-reduced arc
- Excellent side wall wetting
- Rapid welding without undercuts
- Safe welding of scaled or badly rusted sheets
- Quiet arc, low strain on the welder, reduced welding fumes
- Changes to stick-out lengths are very rapidly stabilised
- Manual and automated application

Simple, safe, easy-to-learn handling of forceArc puls

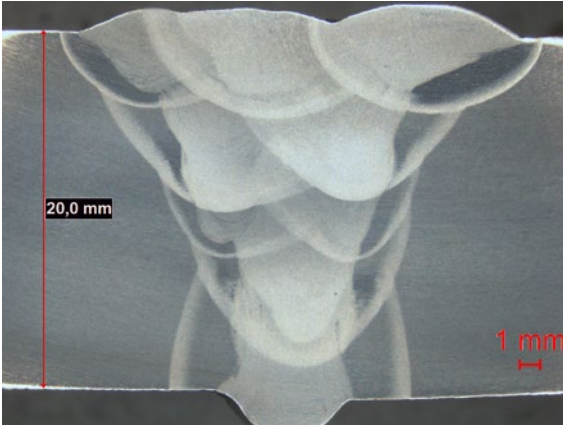


S355, $t = 10$ mm, T-joint, fillet weld without weld preparation
Welding current = 316 A, welding voltage = 28.8 V, WF = 10.5 m/min., $V_s = 50$ cm/min.

- Pulse welding – simple, safe, easy-to-learn handling for manual welding
- Fast, spatter-free welding without rework
- Symmetric fillet weld formation – maximum possible throat thickness can be achieved
- Controlled welding for changeable air gap up to 4 mm
- Good side wall wetting, no undercuts
- Eminently suitable for sheets with scaled or badly rusted surface
- For forehand and backhand torch operation

The EWM EN 1090 WPQR package saves time and money

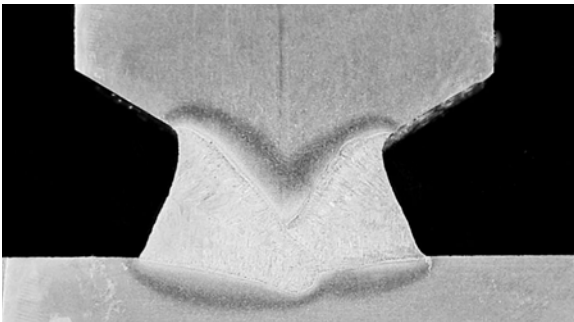
forceArc puls for multi-pass welds



S355, $t = 20$ mm, butt joint, single-V butt weld with 30° included angle, on ceramic backing bar

- Eminently suitable for multi-pass welds
- Heat-reduced compared with standard pulse welding
- Several weld beads can be welded before the maximum intermediate pass temperature is reached
- Less distortion of the component thanks to heat reduction

forceArc puls for full penetration



Soft martensitic steel, high-alloy steel (1.4317), $t = 50$ mm, single-J butt weld, welded without air gap on both sides, without gouging or grinding on the root concavity side



S355, $t = 30$ mm, double bevel seam with 35° included angle, welded without air gap on both sides, without gouging or grinding on the root concavity side

- Root passes with backing bar, filler and final passes with butt joint
- Welded full penetrations on both sides
- Without gouging or grinding on the root concavity side, with or without air gap, on butt and T-joints

Your benefits

- / Fast, spatter-free, cost-saving pulse welding
- / Handling easy to learn, no familiarisation periods
- / Quiet arc, low strain on the welder, reduced welding fumes
- / Less distortion thanks to heat-reduced arc
- / Excellent side wall wetting
- / Can be used for forehand and backhand welding
- / Suitable for root welding on backing bar with up to 4 mm air gap
- / Excellent gap bridging
- / Highly suitable for multi-pass welds

MULTIMATRIX®

/// Perfection is the principle



forceArc

Efficient and cost-effective welding



Taurus Phoenix puls alpha Q puls

Heat-reduced, directionally stable and powerful arc with deep penetration for the upper power range.
Non-alloyed, low-alloy and high-alloy steels and high-tensile fine-grained steels

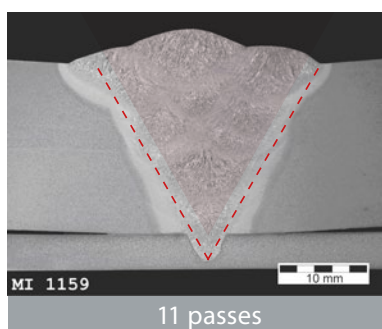
- Smaller included angle due to deep penetration and directionally stable arc
- Fewer passes
- Less distortion thanks to heat-reduced, concentrated arc
- Excellent root and sidewall fusion
- Perfect welding, even with very long stick-outs
- Reduced undercuts
- Virtually spatter-free
- Particularly beneficial for fillet welds, dynamically loaded components such as load-bearing parts for bridges, wagon and steel construction and other applications
- Non-alloyed, low-alloy and high-alloy steels, as well as high-tensile fine-grained steels
- Manual and automated applications

Process comparison of forceArc®/standard spray arc through TWI



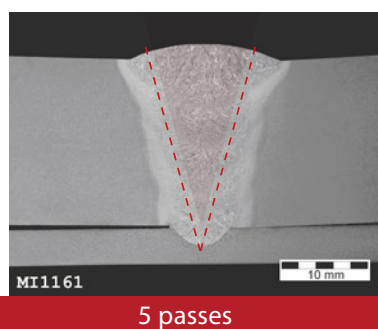
- Butt welds which are welded with the forceArc process and have tight opening angles of 30 ° and 40 ° comply with the requirements of EN ISO 15614-1:2004
- Due to the lower weld volume, the welding times are reduced compared to the standard spray arc process with an opening angle of 60° by up to 50%
- Fillet welds created with forceArc provide a mitred profile without undercut which also satisfies the requirements of EN ISO 15614-1:2004
- Fillet welds created with forceArc have a greater penetration depth

standard spray arc



11 passes

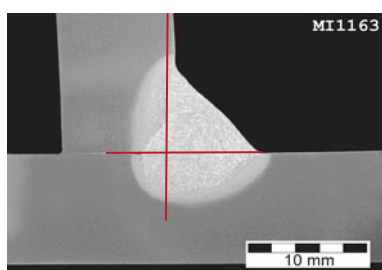
forceArc



5 passes

50% shorter welding time

Unchanged mechanical/technological properties!



- Deeper penetration and therefore possible reduction of the effective throat thickness or seam cross-section
- Changes to stick-out lengths are rapidly stabilised
- Particularly advantageous for very narrow joints and fillet welds, for example

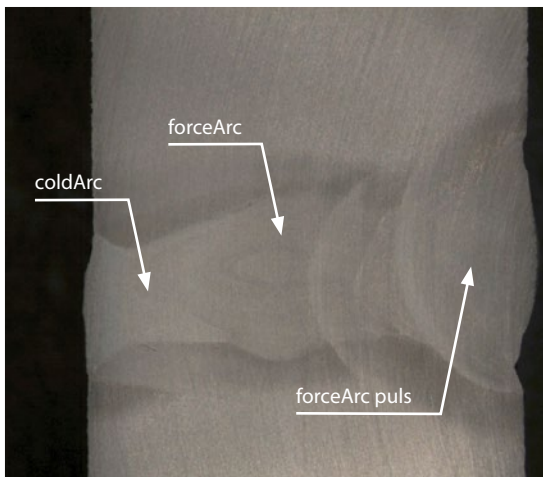


The ewm EN 1090 WPQR Package saves time and money

forceArc

forceArc puls

- Combination of **forceArc puls**, **forceArc** and **coldArc**
- Root pass with **coldArc**, intermediate passes with **forceArc** and final pass with **forceArc puls**
- Saves a welding pass with a smaller included angle
- Perfect ignition and crater fill time with **forceArc puls**, welding with **forceArc**
- Less material distortion due to reduced heat input
- Lower intermediate pass temperature and minimised joint modification
- Particularly advantageous when, for example, welding fine-grained steels
- Angular shrinkage reduced in fillet welds



Sheet metal: S 235; 20 mm
Gas: M21-ArC-18
Wire: 1.2 mm G4Si1
Passes: 4
Position: PC
Included angle: 10°
Welded on one side, without
weld pool backing

Combination of **coldArc**,
forceArc and **forceArc puls**

Efficient and cost-effective welding

- Overall cost savings of up to 60%
- Minimal seam preparation
- Fewer passes
- Less welding consumables and shielding gas consumption
- Faster welding time
- Particularly advantageous with dynamically loaded components



Sheet metal: S 355; 30 mm
Gas: M21-ArC-18
Wire: 1.2 mm G4Si1
Passes: 11
Position: PB/PA
Included angle: 25°
Welded on one side, without
weld pool backing with
forceArc

Your benefits

forceArc

- / Up to 60% overall cost savings when comparing **forceArc** vs. standard spray arc welding.
- / Up to 35% electricity cost savings with the same deposition rate when compared to conventional spray arc welding
- / Up to 50% less harmful emissions through reduced welding fumes
- / Cost savings thanks to fewer passes
- / Less spatter means less finishing work
- / Less distortion thanks to heat-reduced, concentrated arc
- / Highly dynamic current control produces a directionally stable arc with great force and great penetration depth with fewer undercuts

MULTIMATRIX®

/// Perfection is the principle



coldArc coldArc puls

Perfect welding and brazing

coldArc: Heat-reduced, low-spatter short arc for high dimensional stability welding and brazing, plus root welding with excellent gap bridging capabilities.

coldArc puls: The optimum enhancement for the higher performance range, with focused heat input – there where the heat is required.

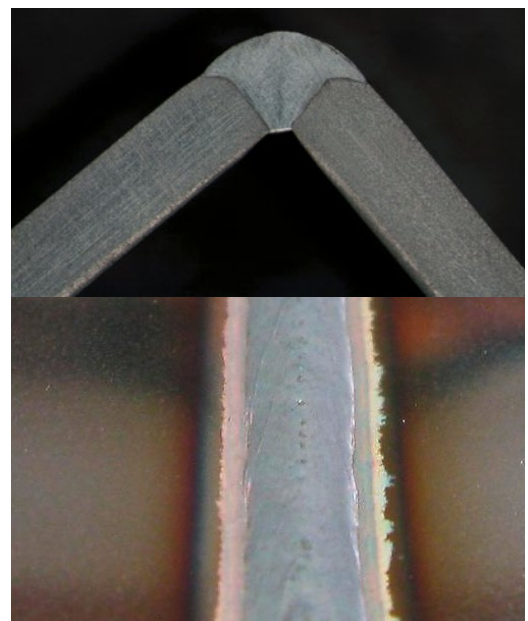


alpha Q puls

- Less distortion and reduced discolouration thanks to minimised heat input
- Considerably reduced spatter thanks to virtually power-free material transfer
- Impressive process stability even with long hose packages without additional sensor leads
- Commercial torch systems, as the material is transferred without drive in the torch, causing no wear and tear
- Easy welding of the root passes in all sheet thicknesses and in all positions
- Perfect gap bridging even with inconsistent gap widths
- Excellent wetting of surfaces when brazing thin metal sheets
- Minimal finishing work, also optimum for visible seams thanks to low-spatter process
- Unalloyed, low-alloy and high-alloy steels and also dissimilar joints of even the thinnest metal sheets
- Brazing of CrNi sheets with CuAl8/AlBz8
- Brazing and welding of coated metal sheets, e.g. with CuSi, AlSi and Zn
- Root welding of non-alloyed and low-alloy steels and high-tensile fine-grained steels
- Visible CrNi seams within the thin metal sheet range

Minimised heat input – 99% less spatter

- Outstanding for butt welds, lap welds and edge welds
- Perfect for visible seams – no post weld work necessary
- Ideally suited for high-alloy steels and coated metal sheets
- Less discolouration and scaling
- Reduced heat-affected zone
- Excellent control for positional welding



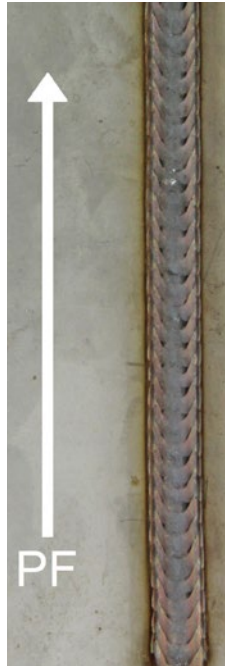
CrNi edge weld of 1 mm sheet metal, with coldArc

The ewm EN 1090 WPQR Package saves time and money

coldArc

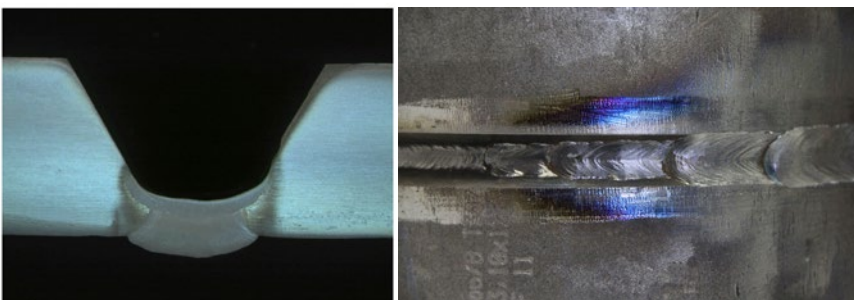
coldArc puls

- Heat, where it is required with **coldArc puls**
- Root welding with **coldArc**: full control of the droplet transfer, minimised risk of bonding faults
- Pass build-up and final passes with **coldArc puls**
- Performance enhancement for thicker metal sheets with **coldArc puls**
- Perfect welding in transitional areas with **coldArc puls**
- Switching between **coldArc** and **coldArc puls** by pressing the torch trigger for secure overlaying of tack points.
- Simple modelling of the molten metal through automatic changing between **coldArc** and **coldArc puls** by switching on superPuls.
- Excellent and easy welding from a standing position through changing between **coldArc** and **coldArc puls** by switching on superPuls, without using the "Christmas tree technique".



Unique gap bridging for root passes

- Perfect gap bridging, even with alternating gap widths, thanks to **coldArc**
- No sagging of the molten metal
- Secure sidewall fusion, even with misaligned edges
- Complete elimination of "wire stab"
- Root passes for all panel thicknesses in all positions
- Pass build-up and final passes with **coldArc puls**



Your benefits

coldArc coldArc puls

- / Root welding with TIG quality and MAG speed – up to 400% quicker than manual TIG and MMA welding
- / Thin metal welding of plain steel and stainless steel, with much less distortion
- / Reduced-energy short arc with unique gap bridging
- / Digitally controlled, nearly power-free material transfer
- / Perfect for sheet metal from 0.5 mm onward
- / Up to 99% less spatter
- / Outstanding for butt welds, lap welds and edge welds
- / Ideal for CO₂ and mixed gas
- / Heat-reduced brazing with innovative, zinc-based solders with low melting point
- / Up to 75% less welding fume emissions when compared with coldArc/coldArc puls vs. standard short arc

MULTIMATRIX®

/// Perfection is the principle



rootArc rootArc puls

The arc with optimum control of the weld pool

rootArc: Short arc with perfect weld modelling capabilities for effortless gap bridging and positional welding

rootArc puls: The perfect enhancement for focused heat input for the higher performance range

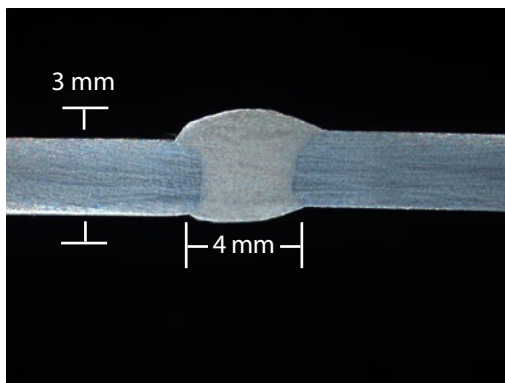


Taurus Phoenix puls alpha Q puls

- Optimum reduction of spatter compared to standard short arc
- Perfect for sheet metal from 1 mm onward
- Optimal for positional and overhead welding
- Reduced-energy short arc
- **rootArc puls** for welding in transitional areas and for initial and final passes
- Excellent, heat-reduced welding in vertical-up positions (PF) through **rootArc superPuls**
- Superb root formation and secure sidewall fusion
- Vertical-up welds without weaving
- Un-alloyed and low-alloy steels
- Manual and automated applications

Effortless gap bridging in the vertical-down weld

- Stable, firm vertical-down weld
- Very good gap bridging
- Heat-reduced, low-spatter arc
- Superb root formation and secure sidewall fusion



Sheet metal: 3 mm
Gap: 4 mm
Gas: M21-ArC-18
Wire: 1.0 mm SG3



Front



Back

The ewm EN 1090 WPQR Package saves time and money

rootArc

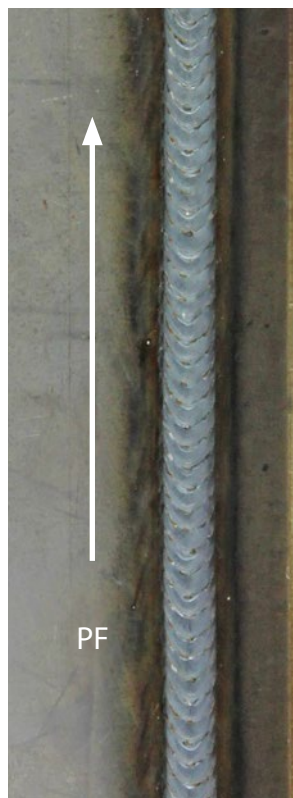
rootArc puls

- Heat input, if necessary, with **rootArc puls**
- Root welding with **rootArc**: Effortless controlling of the weld pool
- Pass build-up and final passes with **rootArc puls**
- Performance enhancement for thick metal sheets with **rootArc puls**
- Switching between **rootArc** and **rootArc puls** by pressing the torch trigger for secure overlaying of tack points
- Effortless mastery of the weld pool by changing between **rootArc** and **rootArc puls** through switching on superPuls
- Quick and easy welding of vertical-up welds by changing between **rootArc** and **rootArc puls** through switching on superPuls

Vertical-up welds in the PF position

- Excellent welding in vertical-up weld positions (PF) with **rootArc-superPuls**
- Secure formation of the root base
- No more weaving required
- Smooth "herring bone" effect results in aesthetically pleasing weld seams

The "Christmas tree technique", normally reserved for true experts, can be avoided, which is advantageous for less experienced welders.



Your benefits

rootArc rootArc puls

- / Reliable short arc welding in all positions
- / Ideally suited for vertical-up welds (PF) without using the laborious "Christmas tree technique"
- / Quick and reliable root welding in TIG quality
- / Effortless welding of vertical-up/down welds and overhead welds
- / Ideal for CO₂ and mixed gas
- / Reduced-energy short arc for effortless mastery of gaps
- / Low-spatter, digitally-controlled material transfer
- / Perfect for sheet metal from 1 mm onward
- / Excellent for butt welds and lap welds

MULTIMATRIX®

/// Perfection is the principle



Pulsed arc Standard arc

The arc with optimum control of the weld pool

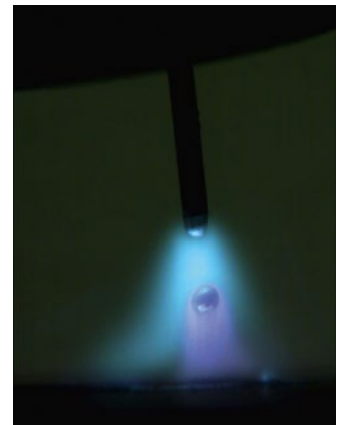
Pulsed arc: Controlled, short circuit-proof pulsed arc for all positions

Standard arc: Controlled short arc far into the transitional area



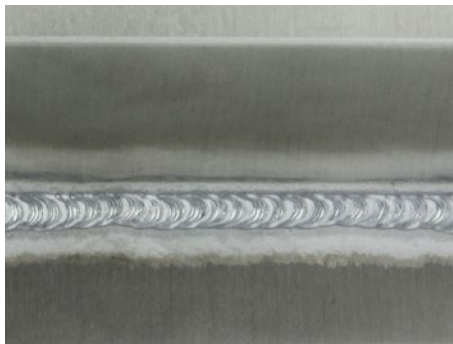
Taurus Phoenix puls alpha Q puls

- Welding of aluminium and aluminium alloys
- Welding of high-alloy steels and nickel alloys
- Even droplet transfer also for materials with high nickel content
- Stable arc in the wide transitional area between short and spray arc
- Copper welding
- Positional welding
- Controlled heat input via 1-droplet-per-pulse-transfer
- Standard short arc range extended far into the transitional area
- Fine-droplet material transfer in the extended short arc range when welding low-alloy steels

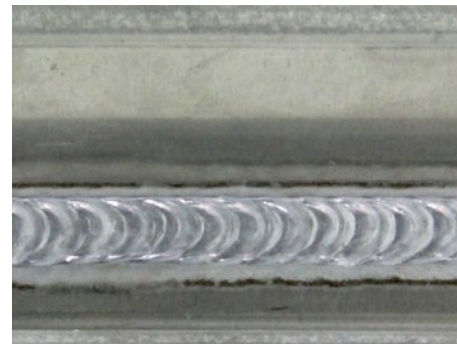


Aluminium welding with pulsed arc

- Perfect pulse welding of aluminium and aluminium alloys, for sheet metal thicknesses from 1 mm onward
- Stable arc in all positions, even when welding the thinnest aluminium sheets
- Almost spatter-free welding
- Spatter-free ignition by reversing the wire feeding
- Simple modelling of the molten metal through superPuls



Fillet weld, 1 mm sheet metal, AlMg, argon
1.2 mm wire electrode



Fillet weld, 8 mm sheet metal, AlMg, argon
1.2 mm wire electrode
Perfect ripples, thanks to superPuls

The ewm EN 1090 WPQR Package saves time and money

Pulsed arc

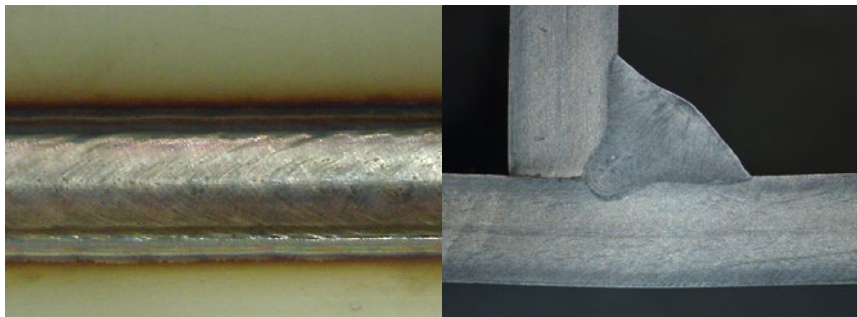
Standard arc

- Extended **standard short arc** range of up to 11 m/min wire, with 1 mm wire diameter G4Si1 under mixed gas
- Less spatter and better arc stability through controlled short arc – to far beyond the transitional area
- High short-circuit frequency, steady weld pool, fine-droplet material transfer
- Higher welding speeds
- Simple modelling of the molten metal through automatic changing between **pulse** and **standard arc** by switching on superPuls
- Excellent welding in the vertical up position through automatic changing between **pulse** and **standard arc** by switching on superPuls



CrNi welding with pulsed arc

- Perfect pulse welding of high-alloy steels and nickel alloys, also for thin sheet metal from 1 mm onward
- Reliable arc welding in all positions
- Very low-spatter process (fewer corrosion attack points)
- Reduced pore susceptibility
- Flat, smooth and notch-free weld seams



Sheet metal: 3 mm
Materials: CrNi 1.4301
Gas: 97.5% Ar/2.5% CO₂
Wire: 1.2 mm 1.4316
Position: PB

Your benefits

Pulsed arc Standard arc

- / Perfect welding of aluminium and aluminium alloys, high-alloy steels and nickel alloys, from 1 mm metal sheet thickness onward
- / Even droplet transfer also for materials with high nickel content
- / Copper welding
- / Extreme low-spatter pulsed arc, also in positional welding
- / Quick and reliable changes to stick-out lengths
- / Spatter-free ignition through reversible wire feeding
- / Extended standard short arc range, to far into the transitional area
- / Fine droplet material transfer in the extended short arc range when welding low-alloy steels

MULTIMATRIX®

/// Perfection is the principle

Your benefits

superPuls

- / Quick and easy welding of vertical-up welds without using the "Christmas tree technique"
- / Effortless mastery of the weld pool
- / Performance increase by pressing on the torch trigger for secure overlaying of tack points
- / Extreme low-spatter pulsed arc, also in positional welding



superPuls

The **superPuls** combination of ewm welding processes offers a multitude of possibilities.

- Reliable fusion of the root base
- Effective filling with pulse
- No more weaving required
- Smooth bead ripples result in aesthetically pleasing weld seams
- Controlled reduced heat input
- Reduced spatter formation
- Easy modelling of the molten metal
- Quick and reliable welding of vertical-up welds without using the "Christmas tree technique"

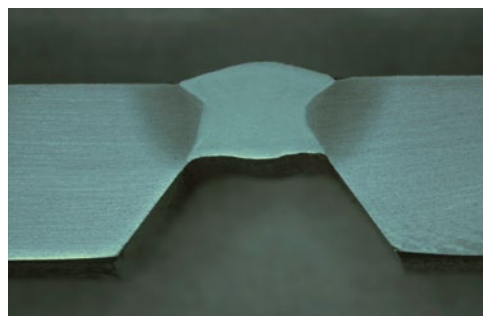
The "Christmas tree technique", an application normally reserved for true experts, can be avoided, which is advantageous for less experienced welders.



Aluminium superPuls
PF position



CrNi superPuls
PF position



Steel superPuls
PF position

Innovative welding processes



forceArc forceArc puls

Heat-reduced, directionally stable and powerful arc with deep penetration for the upper power range.

Non-alloyed, low-alloy and high-alloy steels and high-tensile fine-grained steels



Pulsed arc Standard arc

Pulsed arc: Controlled, short circuit-proof pulsed arc for all positions

Standard arc: Controlled short arc far into the transitional area

	forceArc	forceArc puls	Standard arc	Pulsed arc
Cost savings thanks to reduced weld volume	★★★★★	★★★★★	★★	★★★
Reduced energy costs	★★★★★	★★★★★	★★	★★★★
Penetration depth	★★★★★	★★★★★	★★	★★★★
Reduced heat input	★★★★★	★★★★	★★	★★★
Arc force	★★★★★	★★★★★	★★	★★★★
Directionally stable arc	★★★★★	★★★★★	★★	★★★★
Minimised spatter formation	★★★★★	★★★★★	★★★	★★★★★
Reduced undercuts	★★★★★	★★★★	★★★	★★★★
Highly dynamic current control	★★★★★	★★★★★	★★★	★★★★★
Reduced emissions/ less welding fumes	★★★★★	★★★★★	★★	★★★★
Applications				
Unalloyed and low-alloy steels	Yes	Yes	Yes	Yes
High-alloy steels	Yes	Yes	No	Yes
High-tensile fine-grained steels	Yes	Yes	No	Yes
Aluminium	Yes	Yes	No	Yes
Copper	No	Yes	No	Yes

★ → ★★★★★
Good → Excellent



coldArc coldArc puls

coldArc: Heat-reduced, low-spatter short arc for high dimensional stability welding and brazing, plus root welding with excellent gap bridging capabilities.

coldArc puls: The optimum enhancement for the higher performance range, with focused heat input – there where the heat is required.



rootArc rootArc puls

rootArc: Short arc with perfect weld modelling capabilities for effortless gap bridging and positional welding

rootArc puls: The perfect enhancement for focused heat input for the higher performance range

	coldArc	coldArc puls	rootArc	rootArc puls
Reduced heat input/ less distortion	★★★★★	★★★	★★★★★	★★★
Reduced energy costs	★★★★★	★★★★★	★★★★★	★★★★★
Minimised spatter formation/ less finishing work	★★★★★	★★★★★	★★★	★★★★★
Gap bridging	★★★★★	★★★	★★★★★	★★★
Reduced harmful emissions/ less welding fumes	★★★★★	★★★★★	★★★	★★★★★
Arc force	★★★	★★★★★	★★★★★	★★★★★
Good root formation	★★★★★	★★	★★★★★	★★
Root welding in any position	★★★★★	★	★★★★★	★
Thin panel welding	★★★★★	★★★★★	★★★★★	★★★★★

Applications

Unalloyed and low-alloy steels	Yes	Yes	Yes	Yes
High-alloy steels	Yes	Yes	Yes	Yes
High-tensile fine-grained steels	Yes	Yes	Yes	Yes
Brazing (CuSi, CuAl)	Yes	Yes	No	Yes
Brazing (zinc wire ZnAl)	Yes	No	No	No
Dissimilar joint, aluminium with galvanised steel panel (brazing)	Yes	Yes	No	Yes

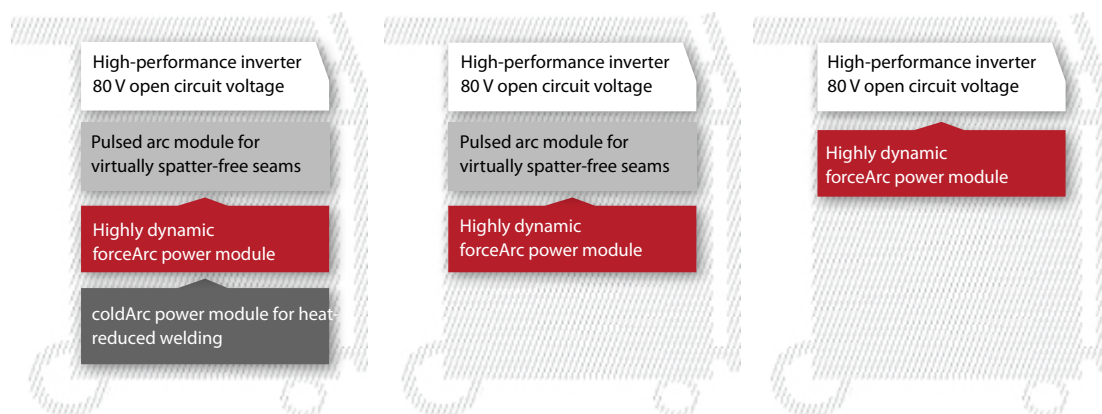
★ → ★★★★★
Good → Excellent

Inverter welding machines and welding procedures

alpha Q and Phoenix welding machines with the latest MULTIMATRIX® technology – for simple operation and reliability in use.

Your benefits

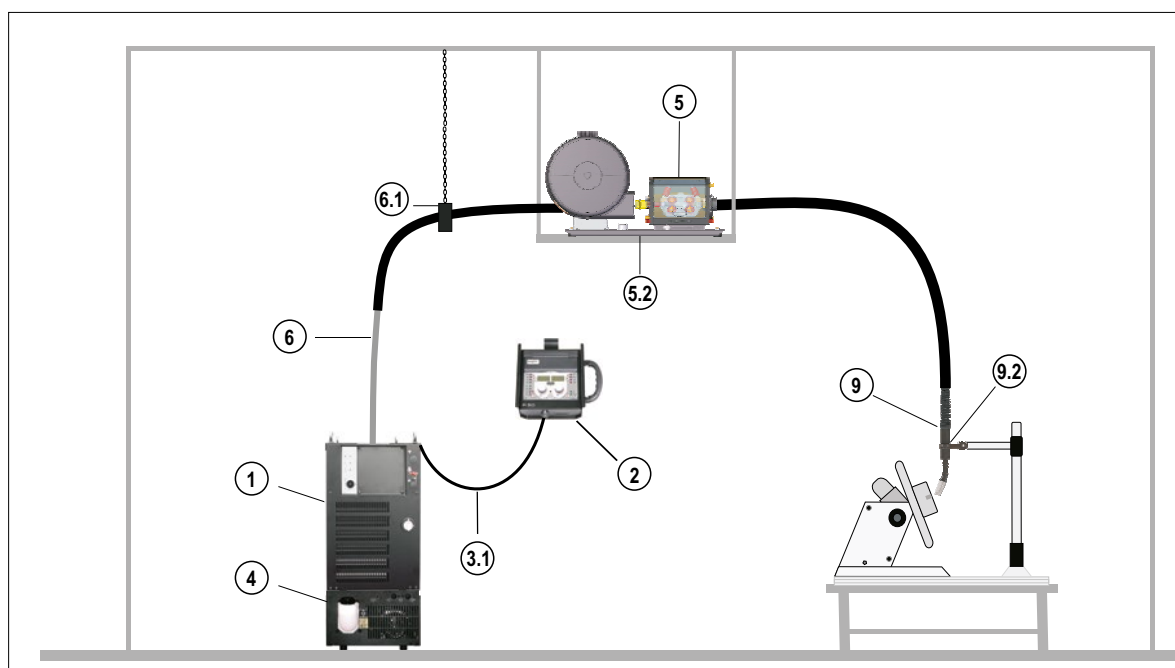
- / Robust, highly dynamic inverter technology
- / Energy savings thanks to efficient welding procedures, optimum efficiency and automatic standby mode
- / High open circuit voltage for excellent ignition characteristics
- / High voltage reserves for long hose packages up to 70 m
- / High duty cycle
- / Wide mains voltage tolerance (-25% to +20%)
- / For all climate zones, from the desert to Antarctica
- / Rugged, dust-protected electronics
- / Certified in accordance with EN 1090



		alpha Q puls	Phoenix puls	Taurus
Multiprocess	MULTIMATRIX technology	✓	✓	✓
	forceArc / forcArc puls	✓ / ✓	✓ / ✓	✓ / -
	coldArc / coldArc puls	✓ / ✓	- / -	- / -
	rootArc / rootArc puls	✓ / ✓	✓ / ✓	✓ / -
	superPuls	✓	✓	-
	Pulsed arc	✓	✓	-
	Standard short arc	✓	✓	✓
	Standard spray arc	✓	✓	✓
	MMA	✓	✓	✓
	TIG (Liftarc)	✓	✓	✓
	Gouging	✓	✓	✓
	Xnet-compatible	✓	✓	✓

R50 ROB 7POL – mobile operating unit

- Remote control R50 ROB 7POL enables all Taurus, Phoenix and alpha Q machines to be equipped with a mobile operation unit.
- R50 ROB 7POL can be connected to any 7-pole system bus interface on welding machines.
- The R50 ROB 7POL control can be connected to power sources without a front control which are also used without an interface, for example. For simple, low-priced mechanisation.



R50 ROB 7POL as a mobile operating unit directly at the workstation

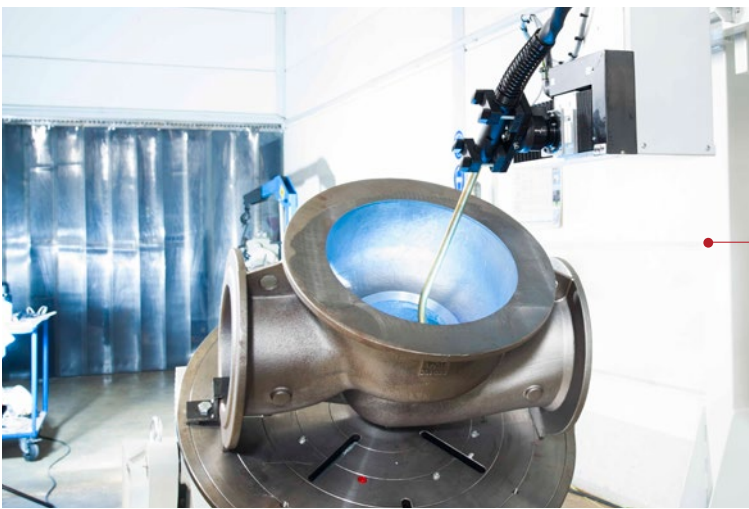
Special torch design according to your specifications

Whether you're looking for MIG/MAG, TIG or plasma - we build the perfect welding torch for your application

In addition to our in-house series production of welding torches, we also manufacture welding torches tailored to your specific application. This way, we guarantee you the very best component for your welding task – for both manual and automated welding.

Highlights

- Wide product range: from gas-cooled or replaceable-neck torches through to fume extraction torches
- EWM's own consumables guarantee a long service life and best integration into the welding system

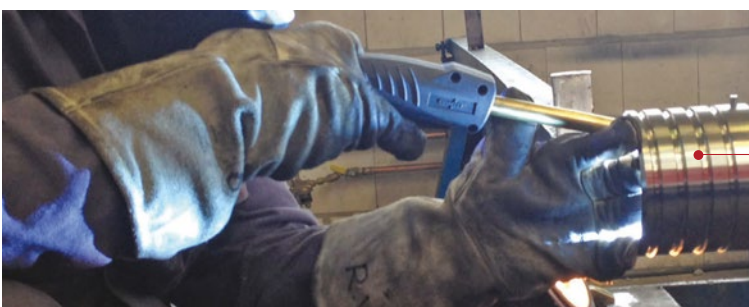


Automated welding inside pipes with an extra-long torch neck

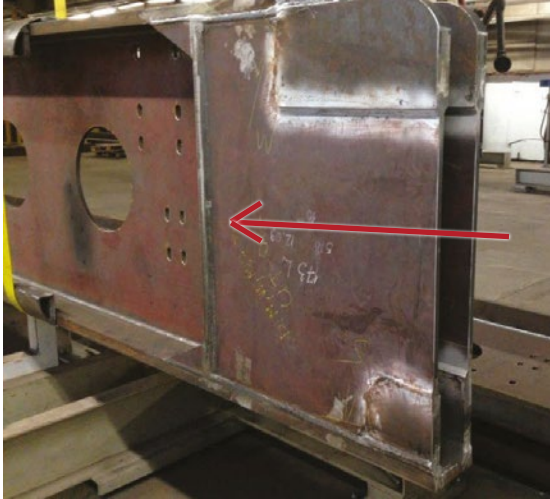


MAG hot wire welding

- Cladding with a deposition rate of up to 13.8 kg



Welding inside pipes with extra long torch neck and small bend radius



Applications

Task scope:

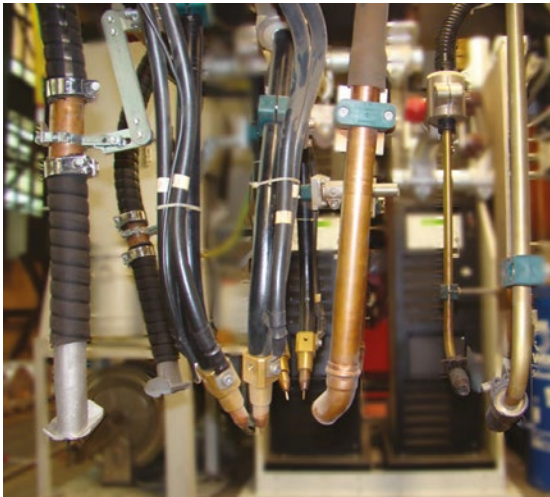
- Welding inside steel structures

EWM solution:

- Torch neck based on the MT551W with a length of 1,500 mm

Customer benefit

- Welding location easily accessible
- Improved visibility of the seam
- Reduced costs due to use of standard MT consumables



Task scope:

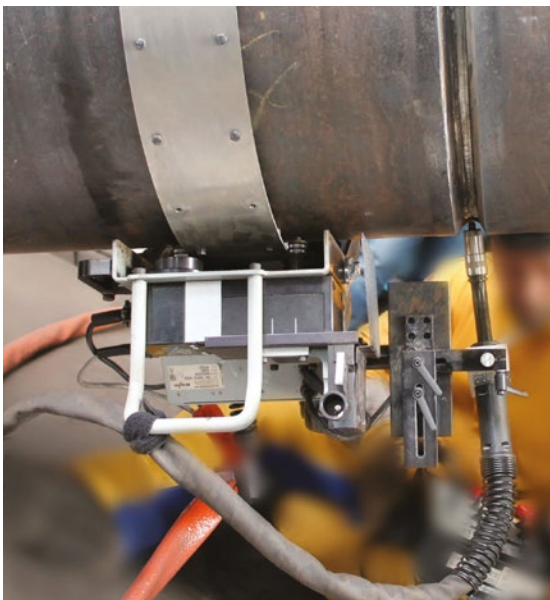
- Reduce downtimes during automated welding of steel structures

EWM solution:

- Welding torch with water-cooled gas nozzle and exchangeable gas nozzle tip

Customer benefit

- The targeted cooling of the gas nozzle enables a duty cycle of 650 A/100%
- High-cost savings thanks to separate exchange of the gas nozzle tip
- Other consumables are standard MT consumables.



Task scope:

- Space-saving welding torch for use on longitudinal carriages and orbital welding installations












EWM solution:

- Automated welding torch based on AMT551W with a total length of just 61 mm

Customer benefit

- More compact design of the longitudinal carriages
- Orbital welding installations require less space to go round the pipe
- Reduced costs due to use of standard MT consumables

Symbols

	1-phase connection		8-pole torch connection
	2-phase connection		12-pole torch connection
	3-phase connection		14-pole remote control connection
	3-phase connection „TNS net“		19-pole torch connection
	5-pole torch connection		28-pole connection
	7-pole remote control connection		

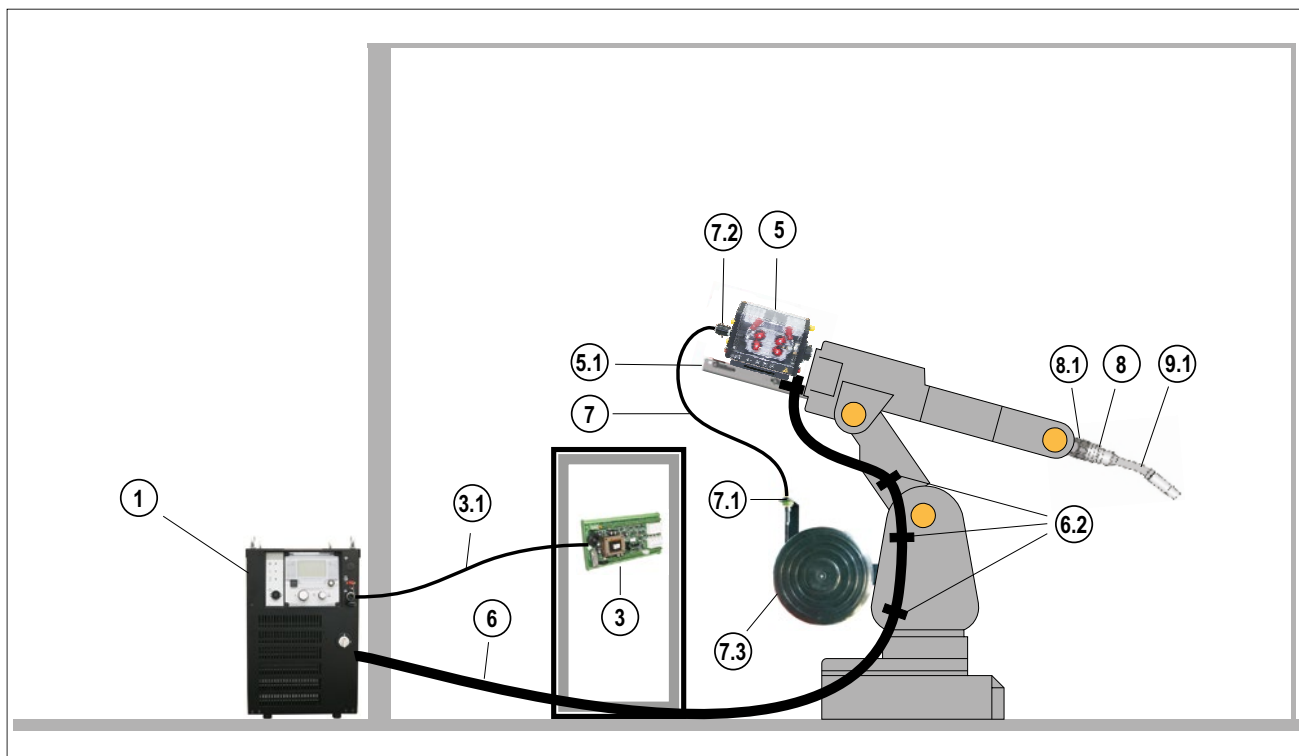
Abbreviations

2DV	Two wire feed units	TDG	Portable, decompact, gas cooled
2T	Double push button	TDM	Portable, decompact, modular
2U/D	2x Up/Down	TGD	Portable, gas cooled, decentral
4R	4 rollers	TGE	Portable, gas cooled, euro torch connection
5P	5-pole connection socket	TKM	Portable, compact, modular
8P	8-pole connection socket	TMD	Portable, modular, decentral
ADAP	Adapter	U/D	Up/Down
ASM	Connection capability	WD	Water cooled, decentral
AW	Connection capability filler wire	WD UD	Water cooled, decentral, Up/Down
cel	Cellulose electrodes	WE	Water cooled, Euro torch connection
CW	Cold wire		
D	Double wire feed unit		
D2	Wire spool D200		
D3	Wire spool D300		
DG	Decompact, gas cooled		
DW	Decompact, water cooled		
EZA	Euro torch connection		
FDG	Mobile, decompact, gas cooled		
FDW	Mobile, decompact, water cooled		
FWD	Mobile, water cooled, decentral		
GD	Gas cooled, decentral		
GD UD	Gas cooled, decentral, Up/Down		
GDV	Rotary gas valve		
HFL	Highly flexible hose package		
HW	Hotwire		
KGE	Compact, gas cooled, Euro torch connection		
MM	Multimatrix		
MV	Multivolt		
PC1	Powercontrol 1		
PC2	Powercontrol 2		
pws	Polarity reversing switch		

Overview

MIG/MAG XR automation		Page
Sample applications	alpha Q, gas-cooled	alpha Q 352 hollow wrist robot system with optional Expert 2.0 LAN gateway 34
		Conventional welding robot system alpha Q 352 RC 36
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	alpha Q, water-cooled	alpha Q 352 hollow wrist robot system with gas-setting option 40
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		Conventional welding robot system Taurus 552 64
		Mechanised welding system Taurus 552 RC 66

alpha Q, gas cooled



alpha Q 352

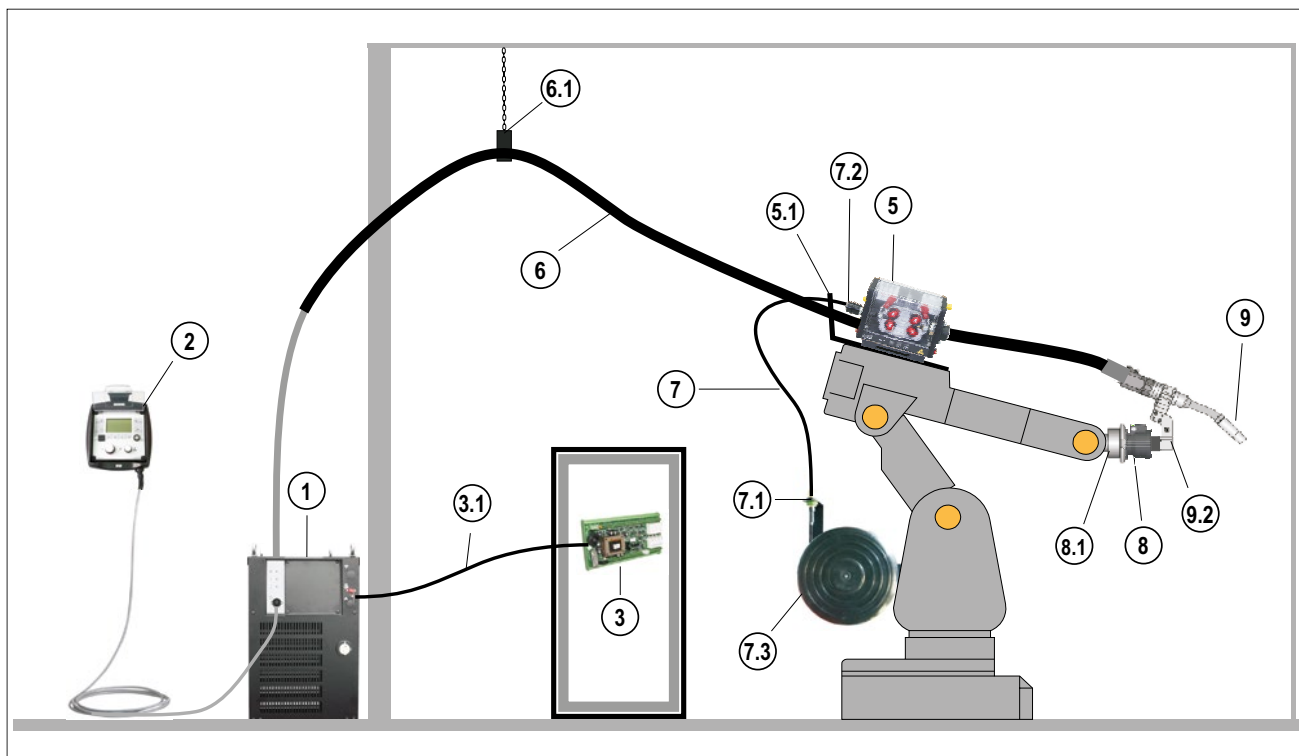
- With Expert 2.0 front control
- With optional Expert 2.0 LAN gateway
- Gas-cooled
- M Drive 4 ROB 5 LI HW XR wire feeder
- As demonstrated on a Yaskawa MA2010

alpha Q 352 hollow wrist robot system with optional Expert 2.0 LAN gateway

Item	Type	Designation	Item no.
1	alpha Q 352 Expert 2.0 puls MM XR	Multiprocess MIG/MAG pulse welding machine with front control	090-005532-00502
1.1	OW CEE 32A	Mains plug, assembled	092-008215-00000
1.2	WK70/CL 5m	Workpiece lead with cable lug	092-002078-00005
1.3	Prereg Ar/CO2 230bar 30l D	Pressure regulator with manometer	394-008488-10030
1.7	OW EXPERT 2.0 LG ROB	Expert 2.0 LAN gateway (ex works only)	092-003078-00001
1.8	RA5 19POL 1x 5M	Connection cable, 19-pole, one-sided wire end ferrules	092-001569-00005
3	RINT X12 STANDARD	Standard robot interface	090-008291-00000
3.1	FRV 7POL 5m	Digital 7-pole cable	092-000201-00003
3.2	KB MOTOMAN-RINT X12	Cable harness for RINT X12 connection to Motoman XRC/NX-100/DX-100/DX-200	094-012212-00003
5	M drive 4 Rob 5 HW XR LI	Wire feeder for automated applications, opens on left, gas-cooled, Euro torch connector	090-005536-00502
5.1	MONTAGE CONSOLE ROB5 XR MOTOMAN MA1440, MA2010, AR1440, AR2010	Robotic assembly console for ROB 5 wire feeder	092-003209-00000
6	70QMM GR 23 POL XR 5M	Robot intermediate hose package, gas-cooled, ribbed hose, 23-pole	092-003114-00205
6.2	MONTAGE SET ZWIPA MOTOMAN MA2010	Fastening set for intermediate hose package on robot	092-002880-00000
7	WIRE CONDUIT 1,8M	Wire guide	094-011515-00004
7.1	CONNECTOR DV-CAB WIRE CONDUIT	Mounting plate set for drum cone including quick connect coupling for drum connector	092-007741-00000
7.2	CONNECTOR DRIVE ROB5 XR WIRE CONDUIT	Connection set for Wire feed WIRE CONDUIT to ROB 5	092-003144-00000
7.3	WSH MOTOMAN MA1440, MA2010, AR1440, AR2010	Wire spool holder, robots	092-003210-00000
7.4	AK300	Wire spool adapter B300	094-001803-00001
8	iCAT A	Collision sensor	094-012718-00000
8.1	ZF ICAT D=56.0MM D=62	Intermediate flange, MOTOMAN	094-021590-00000
9.1	RTN 500G 22DG	Torch neck EWM RT 22°	094-011260-00500
9.4	SP G MOTOMAN MA2010	Hose package, gas cooled	094-022773-00000
10.01	GN MP 500 A 16/28 0mm	Gas nozzle, conical	094-011263-00000
10.02	CT M8 CUCRZR AG 1.2/30mm	CuCrZr contact tip, silver plated	094-011272-00000
10.04	LST EWM RT 360 2 m Ø 0.8-1.2mm	Steel liner, steel, black	094-011667-00500
10.05	RCTH 500 M8 ROB TS W	Contact tip holder	094-011276-00500
-	Set PC300 XQ / ANALYZER	Set comprising PC300 XQ and Analyzer software	090-008779-00000

- Image for conceptual purposes. Not all listed items are shown.
- For more accessories, options and machine variants please refer to the individual chapters
- The application examples shown here are possible with Taurus, Phoenix and alpha Q machines

alpha Q, gas cooled



alpha Q 352 RC

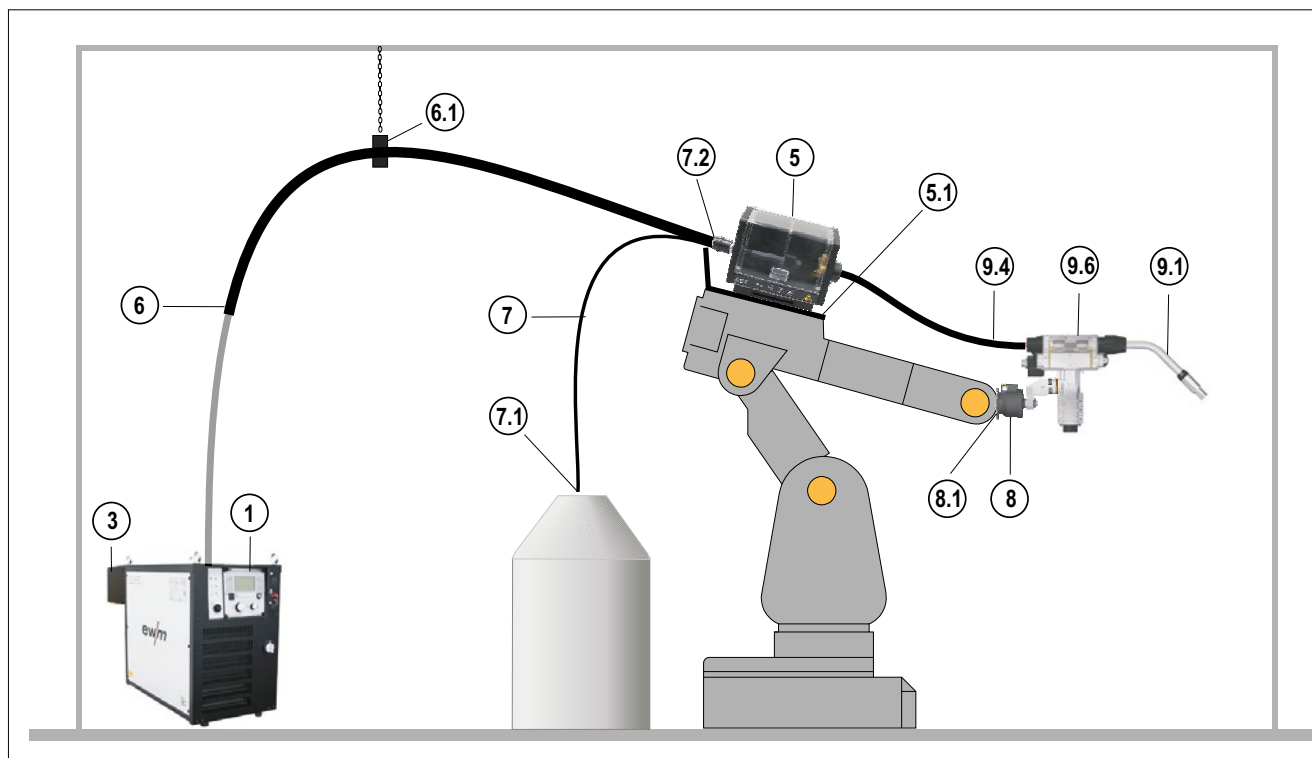
- No front control
- With RCX Expert 2.0 ROB operating panel
- Gas-cooled
- M Drive 4 ROB 5 LI XR wire feeder
- As demonstrated on a Kuka KR 6 R1840-2

Conventional welding robot system alpha Q 352 RC

Item	Type	Designation	Item no.
1	alpha Q 352 puls MM RC XR	Multiprocess MIG/MAG pulse welding machine without front control	090-005530-00502
1.1	OW CEE 32A	Mains plug, assembled	092-008215-00000
1.2	WK70/CL 5m	Workpiece lead with cable lug	092-002078-00005
1.3	Proreg Ar/CO2 230bar 30l D	Pressure regulator with manometer	394-008488-10030
1.8	RA5 19POL 1x 5M	Connection cable, 19-pole, one-sided wire end ferrules	092-001569-00005
2	RCX Expert 2.0 Rob 2m	Control panel	090-008809-00002
3	BUSINT X11 ETHERCAT	Industrial bus interface ETHERCAT, potential-free power supply, 24 V	090-908626-00008
3.1	FRV 7POL 5m	Digital 7-pole cable	092-000201-00003
5	M drive 4 Rob 5 XR LI	Wire feeder for automated applications, opens on left, gas-cooled, Euro torch connector	090-005534-00502
5.1	MONTAGE CONSOLE ROB5 XR UNIVERSAL	Universal mounting console for ROB 5 wire feeder on the 3rd robot axis	092-003147-00000
6	70QMM GRS 23 POL XR 8M	Robot intermediate hose package, gas cooled, ribbed/standard hose, 23-pole	092-003114-00308
6.1	ON ZWIPA CONNECTION XR	Holder for XR robot intermediate hose package as a retrofitting option	092-003219-00000
7	WIRE CONDUIT 1,8M	Wire guide	094-011515-00004
7.1	CONNECTOR DV-CAB WIRE CONDUIT	Mounting plate set for drum cone including quick connect coupling for drum connector	092-007741-00000
7.2	CONNECTOR DRIVE ROB5 XR WIRE CONDUIT	Connection set for Wire feed WIRE CONDUIT to ROB 5	092-003144-00000
7.3	WSH KUKA KR6 R1840-2 ARC HW	Wire spool holder, robots	092-004200-00000
7.4	AK300	Wire spool adapter B300	094-001803-00001
8	RSA MEDIUM PLUS	Collision sensor	094-023605-00000
8.1	ZF CAT D=31,5mm D=20	Intermediate flange, plastic	094-022421-00000
9	MTR360G 22 1.2mm 1.15m	MIG/MAG welding torch, gas-cooled	094-500033-00000
9.2	HS COMP A22	Holder, rigid, compl., EWM RT 22	094-011656-00500
-	Set PC300 XQ / ANALYZER	Set comprising PC300 XQ and Analyzer software	090-008779-00000

- Image for conceptual purposes. Not all listed items are shown.
- For more accessories, options and machine variants please refer to the individual chapters
- The application examples shown here are possible with Taurus, Phoenix and alpha Q machines

alpha Q, gas cooled



alpha Q 352

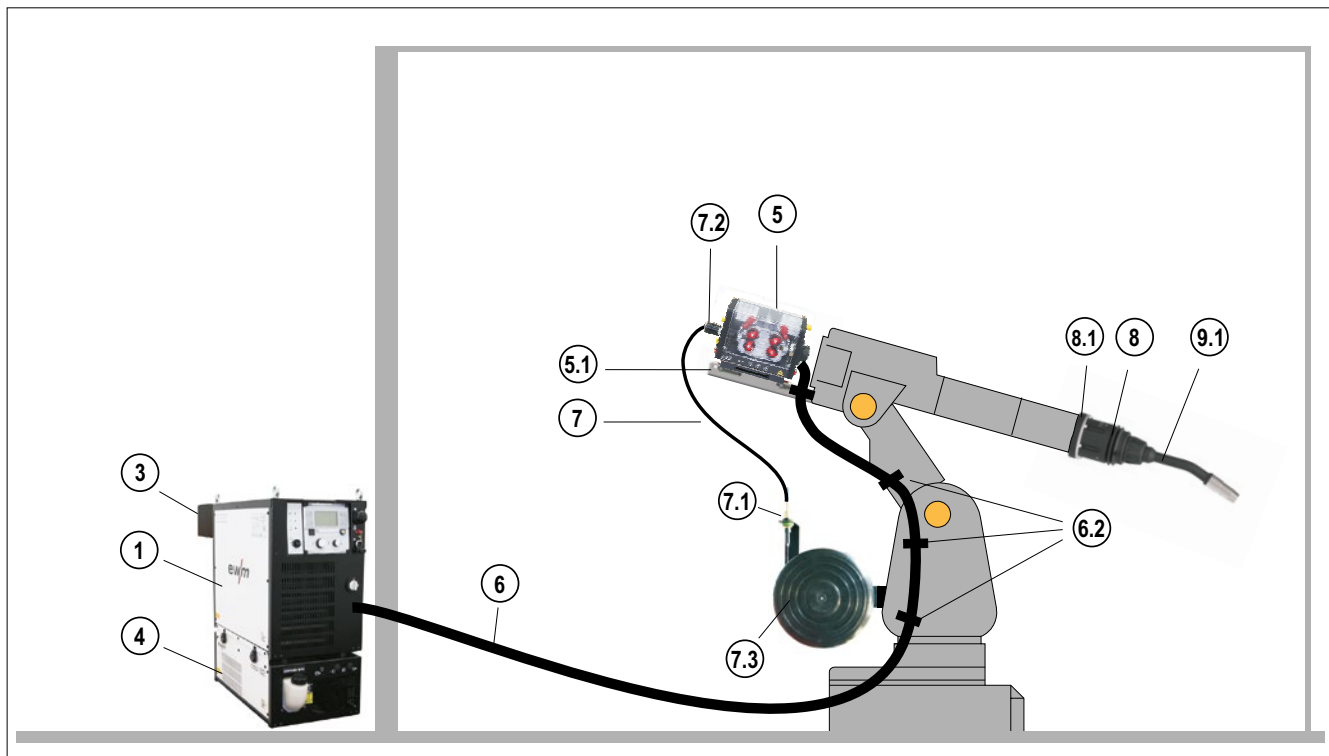
- With Expert 2.0 front control
- F Drive ROB 5 LI XR media separation box
- Gas-cooled
- With optional gas pressure sensor for ROB 5
- As demonstrated on a Kuka KR 16 R1610-2

Conventional welding robot system alpha Q 352 as a frontDrive system

Item	Type	Designation	Item no.
1	alpha Q 352 Expert 2.0 puls MM XR	Multiprocess MIG/MAG pulse welding machine with front control	090-005532-00502
1.1	OW CEE 32A	Mains plug, assembled	092-008215-00000
1.2	WK70/CL 5m	Workpiece lead with cable lug	092-002078-00005
1.3	Prereg Ar/CO2 230bar 30l D	Pressure regulator with manometer	394-008488-10030
3	BUSINTX11 ETHERCAT ATCASE	Industrial bus interface ETHERCAT in the casing, potential-free voltage supply, 24 V	090-908612-00008
5	F drive Rob 5 XR LI	Media separation box for frontDrive robot welding torch, opens on the left	090-005538-00502
5.1	MONTAGE CONSOLE ROB5 XR UNIVERSAL	Universal mounting console for ROB 5 wire feeder on the 3rd robot axis	092-003147-00000
5.2	OW PRESSURE SWITCH ROB 5 XR	Factory-fit option: Gas pressure sensor, Rob 5	092-003141-00001
6	70QMM GRS 23 POL XR 6M	Robot intermediate hose package, gas cooled, ribbed/standard hose, 23-pole	092-003114-00306
6.1	ON ZWIPA CONNECTION XR	Holder for XR robot intermediate hose package as a retrofitting option	092-003219-00000
7	ROLLINER 5M	Wire guide with plastic rolls	092-002575-00000
7.1	ROLLINER CONNECTOR BARREL	Connection for large spool/drum	094-014623-00000
7.2	CONNECTOR DRIVE ROB5 XR ROLLINER	Connection set for wire feed Rolliner to ROB 5	092-003146-00000
8	RSA STRONG	Collision sensor	094-020727-00000
8.1	ZF CAT ISO 9409-1-A50	Intermediate flange, aluminium	094-010150-00000
9.1	RMT301G 45° L=252 mm	Torch neck	094-022074-00000
9.4	SP G FRONTDRIVE RSA L=1,5M	Torch hose package, gas cooled	094-020728-00000
9.6	frontDrive	Drive unit, 4 rolls	090-005393-00502
10.01	GD NW=13MM L=76,5MM TR18X4	Gas nozzle	094-022037-00001
10.02	CT M9 CuCrZr 1.0mm	Contact tip	094-013530-00001
10.04	DFSI 2,0/4,6MM L=2,5M ROT	Steel liner, red	094-022258-00000
10.05	DS M9X48MM TR18X4	Contact tip holder	094-022020-00000
10.07	DFSI 2,0/4,6 L=350MM	Steel liner	094-022268-00000
10.08	UNI 4AR 1.0mm	Drive roll set frontDrive, universal	092-008820-00010
10.1	DEN M10X1 DA11 L21 DI=5MM	Inlet guide	092-003298-00000
-	Set PC300 XQ / ANALYZER	Set comprising PC300 XQ and Analyzer software	090-008779-00000

- Image for conceptual purposes. Not all listed items are shown.
- For more accessories, options and machine variants please refer to the individual chapters
- The application examples shown here are possible with Taurus, Phoenix and alpha Q machines

alpha Q, water cooled



alpha Q 352

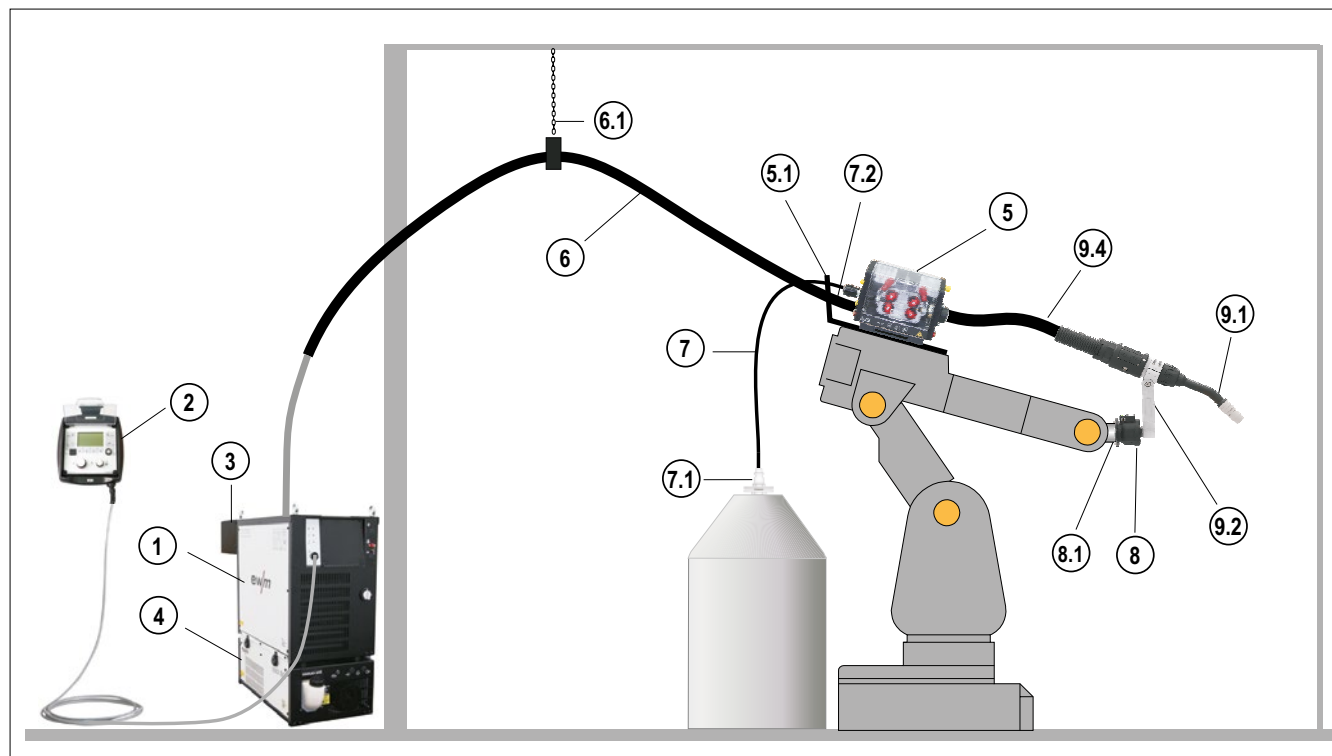
- With Expert 2.0 front control
- With optional gas setting
- Water-cooled
- M Drive 4 ROB 5 LI HW XR wire feeder
- As demonstrated on a Fanuc ArcMate 100iC

alpha Q 352 hollow wrist robot system with gas-setting option

Item	Type	Designation	Item no.
1	alpha Q 352 Expert 2.0 puls MM XR	Multiprocess MIG/MAG pulse welding machine with front control	090-005532-00502
1.1	OW CEE 32A	Mains plug, assembled	092-008215-00000
1.2	WK70/CL 5m	Workpiece lead with cable lug	092-002078-00005
1.3	Maxex AR/MIX 200bar 30m ³ G1/4"	Pressure regulator „Maxex“	096-000000-00000
1.7	OW GAS REGULATION XR	Factory-fit option: Gas setting for MIG/MAG robot power sources in the XR series	092-003139-00001
3	BUSINT X11 ETHERNET IP ATCASE	Industrial bus interface, potential-free voltage supply, 24 V, seam tracking	090-908613-00010
4	cool82 U44	Cooling unit for robot machines with flow monitor	090-008791-00502
4.1	KF 23E-5	Coolant up to -10 °C (14 °F), 5 l	094-000530-00005
4.1			094-000530-00005
5	M drive 4 Rob 5 HW XR LI	Wire feeder for automated applications, opens on left, gas-cooled, Euro torch connector	090-005536-00502
5.1	MONTAGE CONSOLE ROB5 XR FANUC ArcMate 100iC	Robotic assembly console for ROB 5 wire feeder	092-003208-00001
5.2	ON COOL W ROB 5 XR	Retrofit option, water cooling, Rob 5	092-003140-00000
6	70QMM WR 23 POL XR 5M	Robot intermediate hose package, water-cooled, ribbed hose, 23-pole	092-003114-01205
6.2	MONTAGE SET ZWIPA FANUC ArcMate 100iC	Fastening set for intermediate hose package on robot	092-002567-00000
7	WIRE CONDUIT 1,8M	Wire guide	094-011515-00004
7.1	CONNECTOR DV-CAB WIRE CONDUIT	Mounting plate set for drum cone including quick connect coupling for drum connector	092-007741-00000
7.2	CONNECTOR DRIVE ROB5 XR WIRE CONDUIT	Connection set for Wire feed WIRE CONDUIT to ROB 5	092-003144-00000
7.3	WSH FANUC ARC Mate 100iC	Wire spool holder, robots	092-002559-00000
7.4	AK300	Wire spool adapter B300	094-001803-00001
8	RSA HW W SOFT	Collision sensor	090-005655-00000
8.1	ZF RSA HW LK=56MM (8XM4)	Intermediate flange, plastic	094-025491-00000
9.1	RMT551W 22,5° X230,4 Y46,5	RMT 22.5° torch neck	094-025074-00001
9.4	SP RMT W HW 097CM EZA	Hose package, water-cooled, HW	094-527019-01097
-	Set PC300 XQ / ANALYZER	Set comprising PC300 XQ and Analyzer software	090-008779-00000

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- For more accessories, options and machine variants please refer to the individual chapters
- The application examples shown here are possible with Taurus, Phoenix and alpha Q machines

alpha Q, water cooled



No front control

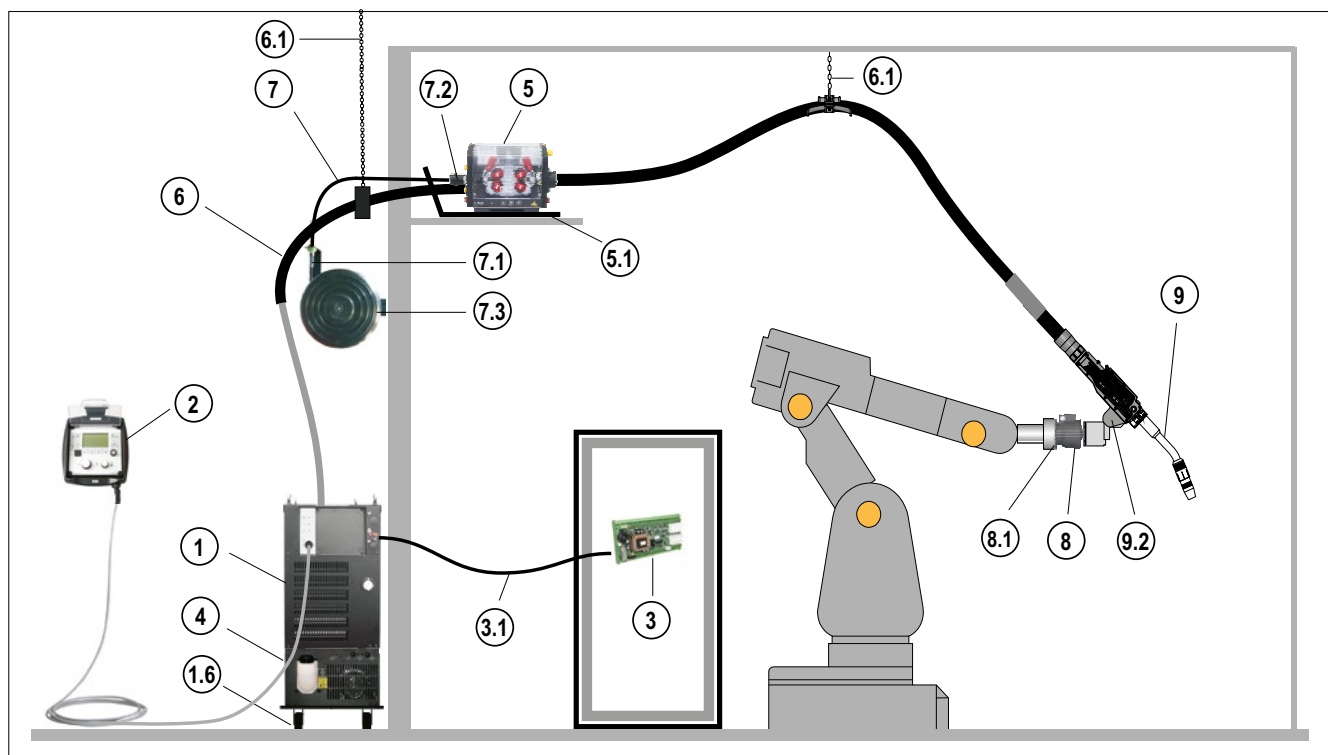
- With RCX Expert 2.0 ROB operating panel
- Water-cooled
- M drive 4 ROB 5 XR LI wire feeder
- As demonstrated on a Kuka KR6 R1820
- alpha Q 552 RC

Conventional welding robot system alpha Q 552 RC

Item	Type	Designation	Item no.
1	alpha Q 552 puls MM RC XR	Multiprocess MIG/MAG pulse welding machine without front control	090-005531-00502
1.1	OW CEE 32A	Mains plug, assembled	092-008215-00000
1.2	WK95/CL 5m	Workpiece lead with cable lug	092-001990-00005
1.3	Proreg Ar/CO2 230bar 30l D	Pressure regulator with manometer	394-008488-10030
1.7	OW ATCASE XR	Factory-fit option: ATCASE interface fitted to power source	092-003213-00001
2	RCX Expert 2.0 Rob 5m	Control panel	090-008809-00005
3	BUSINTX11 ETHERCAT ATCASE	Industrial bus interface ETHERCAT in the casing, potential-free voltage supply, 24 V	090-908612-00008
4	cool82 U44	Cooling unit for robot machines with flow monitor	090-008791-00502
4.1	KF 23E-5	Coolant up to -10 °C (14 °F), 5 l	094-000530-00005
4.1			094-000530-00005
5	M drive 4 Rob 5 XR LI	Wire feeder for automated applications, opens on left, gas-cooled, Euro torch connector	090-005534-00502
5.1	MONTAGE CONSOLE ROB5 XR UNIVERSAL	Universal mounting console for ROB 5 wire feeder on the 3rd robot axis	092-003147-00000
5.2	ON COOL W ROB 5 XR	Retrofit option, water cooling, Rob 5	092-003140-00000
5.2	OW BLOW OUT ROB 5 XR	Factory-fit option: Welding torch, blow out, Rob 5	092-003142-00001
6	95QMM WRS 23 POL XR 6M	Robot intermediate hose package, water cooled, ribbed/standard hose, 23-pole	092-003114-11306
6.1	ON ZWIPA CONNECTION XR	Holder for XR robot intermediate hose package as a retrofitting option	092-003219-00000
7	WIRE LEAD 6,5M	Wire guide	094-018283-00000
7.1	CONNECTOR BARREL WIRE LEAD	Connection for large spool/drum	094-018277-00000
7.2	CONNECTOR DRIVE ROB5 XR WIRE LEAD	Connection set for wire feed WIRE LEAD, WIRE LEAD SOFT to ROB 5	092-003143-00000
8	RSA MEDIUM PLUS	Collision sensor	094-023605-00000
8.1	FL ISO 9409-1-A31,5 AL	Intermediate flange, aluminium	094-016556-00000
9.1	RMT551W 22,5° X230,4 Y46,5	RMT 22.5° torch neck	094-025074-00001
9.2	TH RMT 0°/22,5°	Torch holder	094-025140-00000
9.4	SP RMT W KON 120CM EZA	Hose package, water-cooled, with blow-out function	094-525221-01120
-	Set PC300 XQ / ANALYZER	Set comprising PC300 XQ and Analyzer software	090-008779-00000

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- For more accessories, options and machine variants please refer to the individual chapters
- The application examples shown here are possible with Taurus, Phoenix and alpha Q machines

alpha Q, water cooled



alpha Q 552 RC

- No front control
- With RCX Expert 2.0 ROB operating panel
- Water-cooled
- M Drive 4 ROB 5 LI XR wire feeder
- As demonstrated on a Hyundai HA006B

Conventional welding robot system alpha Q 552 RC in push/pull design

Item	Type	Designation	Item no.
1	alpha Q 552 puls MM RC XR	Multiprocess MIG/MAG pulse welding machine without front control	090-005531-00502
1.1	OW CEE 32A	Mains plug, assembled	092-008215-00000
1.2	WK95/CL 5m	Workpiece lead with cable lug	092-001990-00005
1.3	Proreg Ar/CO2 230bar 30l D	Pressure regulator with manometer	394-008488-10030
1.6	TROLLY ROB XX2	Transport cart for a power source with an add-on module	090-008278-00000
1.8	RA5 19POL 1x 5M	Connection cable, 19-pole, one-sided wire end ferrules	092-001569-00005
2	RCX Expert 2.0 Rob 2m	Control panel	090-008809-00002
3	BUSINT X11 PROFINET CU	Industrial bus interface PROFINET, potential-free voltage supply, 24 V	090-908232-00008
3.1	FRV 7POL 5m	Digital 7-pole cable	092-000201-00003
4	cool82 U44	Cooling unit for robot machines with flow monitor	090-008791-00502
4.1	KF 23E-5	Coolant up to -10 °C (14 °F), 5 l	094-000530-00005
4.1			094-000530-00005
5	M drive 4 Rob 5 XR LI	Wire feeder for automated applications, opens on left, gas-cooled, Euro torch connector	090-005534-00502
5.1	MONTAGE CONSOLE ROB5 XR UNIVERSAL	Universal mounting console for ROB 5 wire feeder on the 3rd robot axis	092-003147-00000
5.2	ON COOL W ROB 5 XR	Retrofit option, water cooling, Rob 5	092-003140-00000
6	95QMM WRS 23 POL XR 6M	Robot intermediate hose package, water cooled, ribbed/standard hose, 23-pole	092-003114-11306
6.1	ON ZWIPA CONNECTION XR	Holder for XR robot intermediate hose package as a retrofitting option	092-003219-00000
6.1	ON ZWIPA-CONNECTION	Retrofit option, third-party intermediate hose package, strain relief	094-007890-00000
7	WIRE CONDUIT 1,8M	Wire guide	094-011515-00004
7.1	CONNECTOR DV-CAB WIRE CONDUIT	Mounting plate set for drum cone including quick connect coupling for drum connector	092-007741-00000
7.2	CONNECTOR DRIVE ROB5 XR WIRE CONDUIT	Connection set for Wire feed WIRE CONDUIT to ROB 5	092-003144-00000
7.3	DV-CAP WALL	Wall holder for wire spools, including pin and accessories	092-001985-00000
7.4	AK300	Wire spool adapter B300	094-001803-00001
8	RSA MEDIUM PLUS	Collision sensor	094-023605-00000
8.1	ZF Hyundai HA006B	Intermediate flange, plastic	394-006124-00000
9	MTR500W PP 22°, 3.20m	MIG/MAG welding torch, push/pull, water-cooled	094-500073-00000
9.2	STANHOL	Standard holder	094-010162-00500
-	Set PC300 XQ / ANALYZER	Set comprising PC300 XQ and Analyzer software	090-008779-00000

- Image for conceptual purposes. Not all listed items are shown.
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- The application examples shown here are possible with Taurus, Phoenix and alpha Q machines

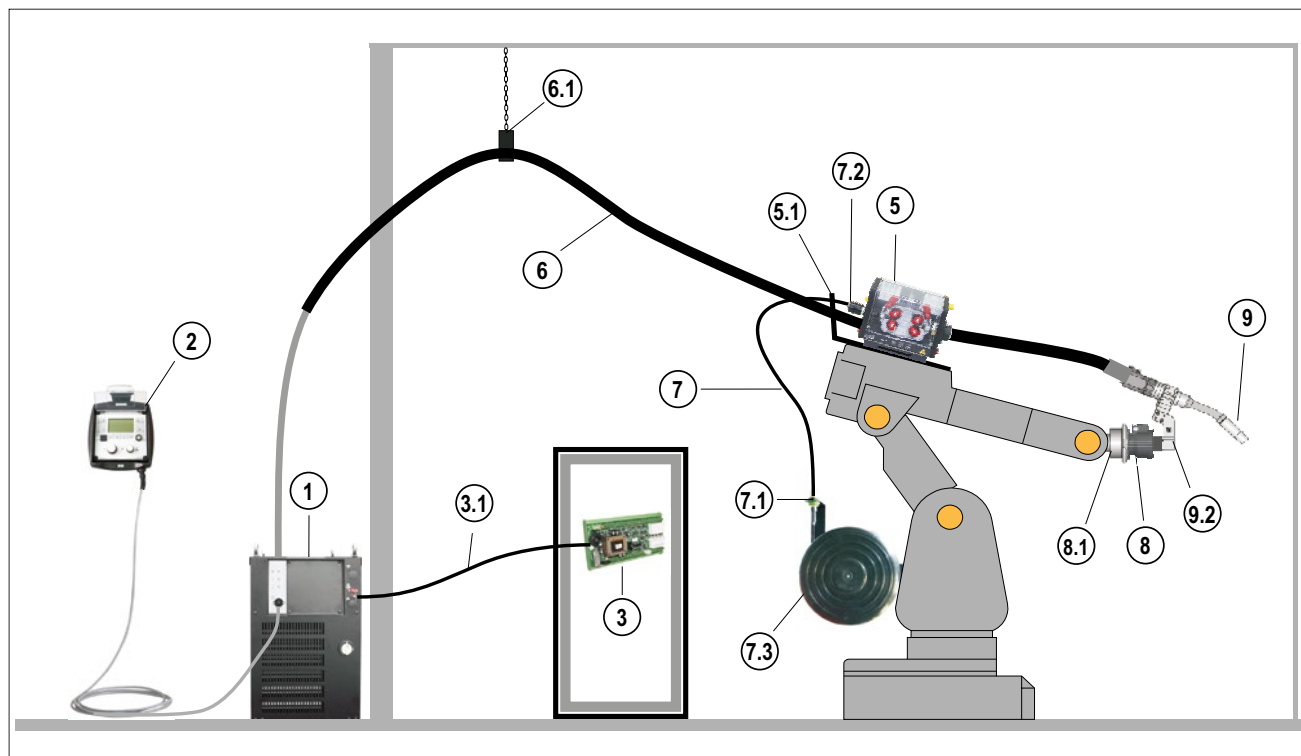


- Phoenix 402 hollow wrist robot system optionally
with increased sensor voltage

Item	Type	Designation	Item no.
1	Phoenix 402 Expert 2.0 puls MM XR	Multiprocess MIG/MAG pulse welding machine with front control	090-005527-00502
1.1	OW CEE 32A	Mains plug, assembled	092-008215-00000
1.2	WK70/CL 5m	Workpiece lead with cable lug	092-002078-00005
1.3	Prereg Ar/CO2 230bar 30l D	Pressure regulator with manometer	394-008488-10030
1.7	OW 60 V SENSOR VOLTAGE XR	Factory-fit option: increased sensor voltage for MIG/MAG XR robot power sources	092-008770-00001
1.8	RA5 19POL 1x 5M	Connection cable, 19-pole, one-sided wire end ferrules	092-001569-00005
3	BUSINT X11 PROFINET CU	Industrial bus interface PROFINET, potential-free voltage supply, 24 V	090-908232-00008
3.1	FRV 7POL 5m	Digital 7-pole cable	092-000201-00003
5	M drive 4 Rob 5 HW XR LI	Wire feeder for automated applications, opens on left, gas-cooled, Euro torch connector	090-005536-00502
5.1	MONTAGE CONSOLE ROB5 XR KUKA KR5 ARC HW	Robotic assembly console for ROB 5 wire feeder	092-003238-00000
6	70QMM GR 23 POL XR 5M	Robot intermediate hose package, gas-cooled, ribbed hose, 23-pole	092-003114-00205
6.2	MONTAGE SET ZWIPA KUKA KR5 ARC HW	Fastening set for intermediate hose package on robot	092-002510-00000
7	WIRE CONDUIT 1,8M	Wire guide	094-011515-00004
7.1	CONNECTOR DV-CAB WIRE CONDUIT	Mounting plate set for drum cone including quick connect coupling for drum connector	092-007741-00000
7.2	CONNECTOR DRIVE ROB5 XR WIRE CONDUIT	Connection set for Wire feed WIRE CONDUIT to ROB 5	092-003144-00000
7.3	WSH universal	Wire spool holder, robots	092-002558-00000
7.4	AK300	Wire spool adapter B300	094-001803-00001
8	iCAT A	Collision sensor	094-012718-00000
8.1	FLANGE KUKA	KUKA KR5/KR6/KR8/KR16 L8 intermediate flange	094-013316-00000
9.1	RTN 500G 22DG	Torch neck EWM RT 22°	094-011260-00500
9.4	SP G KUKA KR5 ARC HW	Hose package, gas cooled	094-022761-00000
10.01	GN MP 500 A 16/28 0mm	Gas nozzle, conical	094-011263-00000
10.02	CT M8 CUCRZR AG 1.2/30mm	CuCrZr contact tip, silver plated	094-011272-00000
10.04	LST EWM RT 360 2 m Ø 0.8-1.2mm	Steel liner, steel, black	094-011667-00500
10.05	RCTH 500 M8 ROB TS W	Contact tip holder	094-011276-00500
-	Set PC300 XQ / ANALYZER	Set comprising PC300 XQ and Analyzer software	090-008779-00000

- Image for conceptual purposes. Not all listed items are shown.
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- The application examples shown here are possible with Taurus, Phoenix and alpha Q machines

Phoenix, gas-cooled



Phoenix 402 RC

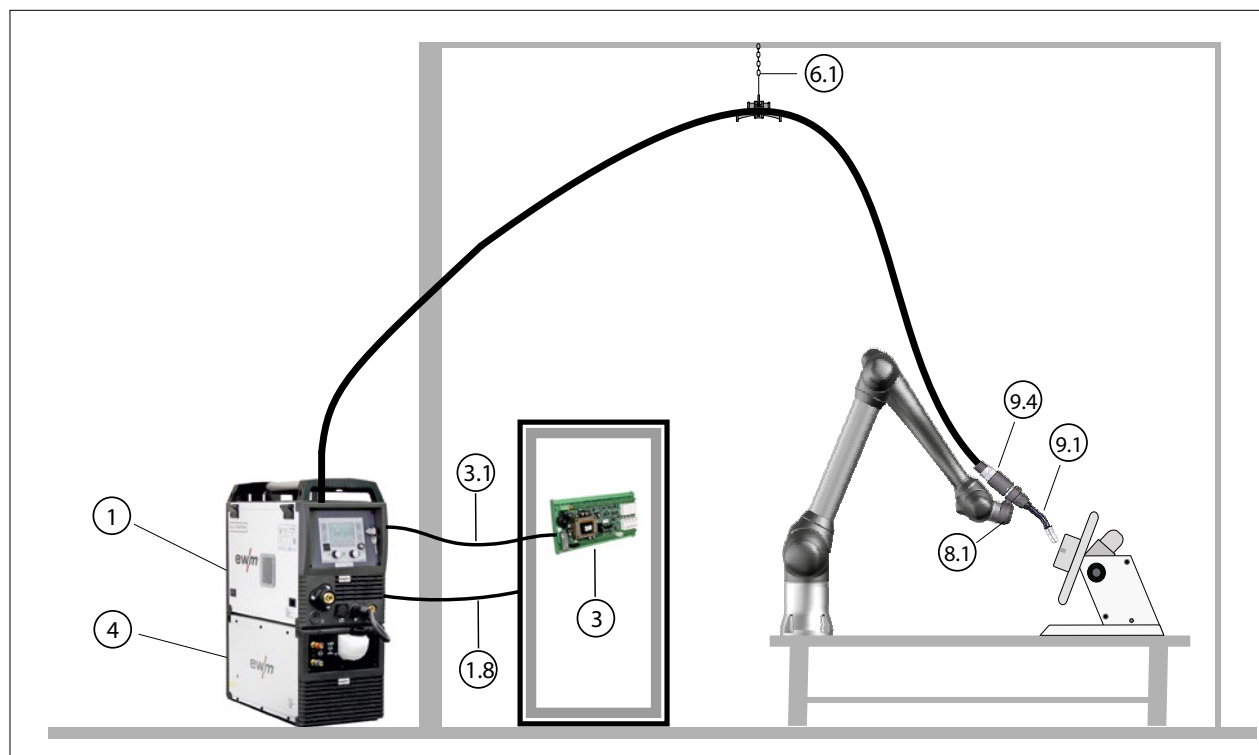
- No front control
- With RCX Expert 2.0 ROB operating panel
- Gas-cooled
- M Drive 4 ROB 5 LI XR wire feeder
- As demonstrated on a Kuka KR 8 R2010-2

Conventional welding robot system Phoenix 402 RC

Item	Type	Designation	Item no.
1	Phoenix 402 puls MM RC XR	Multiprocess MIG/MAG pulse welding machine without front control	090-005523-00502
1.1	OW CEE 32A	Mains plug, assembled	092-008215-00000
1.2	WK70/CL 5m	Workpiece lead with cable lug	092-002078-00005
1.3	Proreg Ar/CO2 230bar 30l D	Pressure regulator with manometer	394-008488-10030
1.8	RA5 19POL 1x 5M	Connection cable, 19-pole, one-sided wire end ferrules	092-001569-00005
2	RCX Expert 2.0 Rob 2m	Control panel	090-008809-00002
3	BUSINT X11 ETHERCAT	Industrial bus interface ETHERCAT, potential-free power supply, 24 V	090-908626-00008
3.1	FRV 7POL 5m	Digital 7-pole cable	092-000201-00003
5	M drive 4 Rob 5 XR LI	Wire feeder for automated applications, opens on left, gas-cooled, Euro torch connector	090-005534-00502
5.1	MONTAGE CONSOLE ROB5 XR UNIVERSAL	Universal mounting console for ROB 5 wire feeder on the 3rd robot axis	092-003147-00000
6	70QMM GRS 23 POL XR 10M	Robot intermediate hose package, gas cooled, ribbed/standard hose, 23-pole	092-003114-00310
6.1	ON ZWIPA CONNECTION XR	Holder for XR robot intermediate hose package as a retrofitting option	092-003219-00000
7	WIRE CONDUIT 1,8M	Wire guide	094-011515-00004
7.1	CONNECTOR DV-CAB WIRE CONDUIT	Mounting plate set for drum cone including quick connect coupling for drum connector	092-007741-00000
7.2	CONNECTOR DRIVE ROB5 XR WIRE CONDUIT	Connection set for Wire feed WIRE CONDUIT to ROB 5	092-003144-00000
7.3	WSH KUKA KR6 R1840-2 ARC HW	Wire spool holder, robots	092-004200-00000
7.4	AK300	Wire spool adapter B300	094-001803-00001
8	RSA MEDIUM PLUS	Collision sensor	094-023605-00000
8.1	ZF ISO 9409-1-A50	Intermediate flange, plastic	094-016554-00000
9	MTR360G 22 1.2mm 1.15m	MIG/MAG welding torch, gas-cooled	094-500033-00000
9.2	HS COMP A22	Holder, rigid, compl., EWM RT 22	094-011656-00500
-	Set PC300 XQ / ANALYZER	Set comprising PC300 XQ and Analyzer software	090-008779-00000

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- For more accessories, options and machine variants please refer to the individual chapters
- The application examples shown here are possible with Taurus, Phoenix and alpha Q machines

Phoenix, water-cooled



With Expert 2.0 front control

- Water-cooled
- With EWM eFeed wire feeder
- With external BUSINTX11 Modbus interface
- With RMT cobot welding torch
- As demonstrated on a cobot welding robot application
- Phoenix 355 Expert 2.0 puls MM TKM Rob

Phoenix 355 co-bot welding robot system

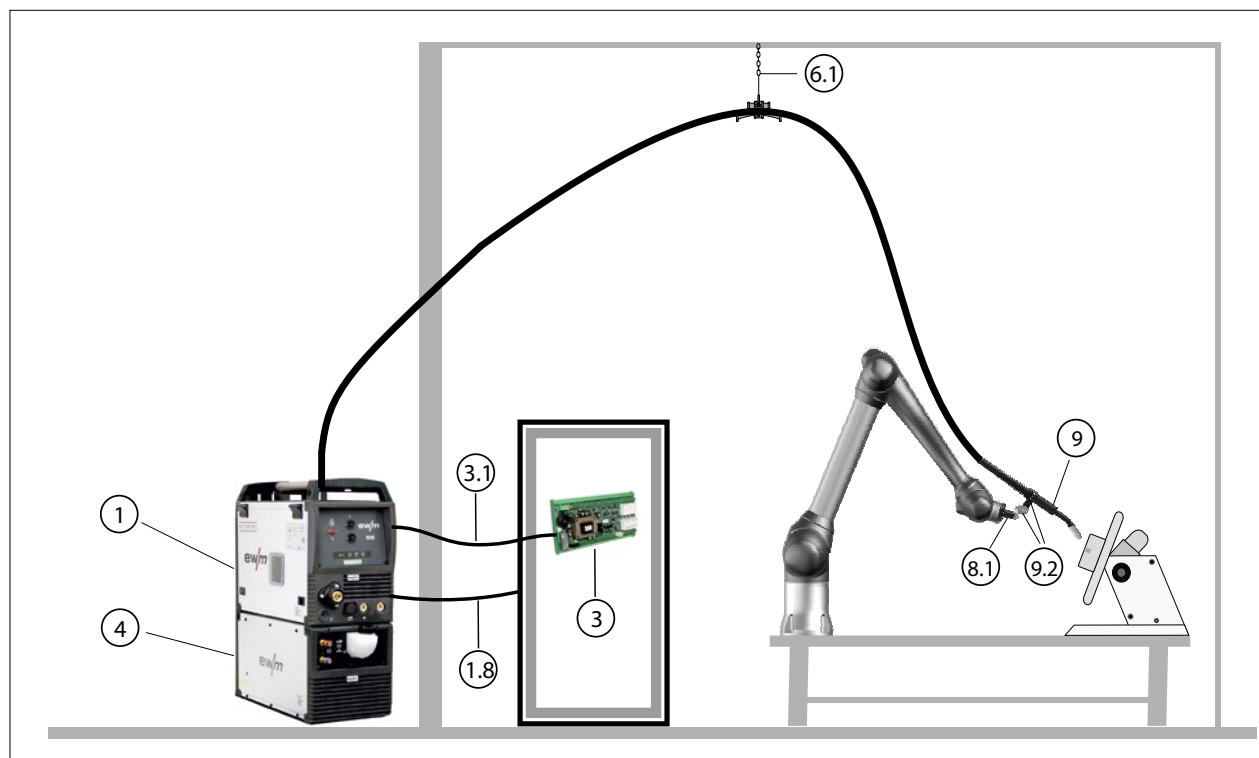
Item	Type	Designation	Item no.
1	Phoenix 355 Expert 2.0 puls MM TKM Rob	Multiprocess MIG/MAG pulse welding machine with MULTIMATRIX technology, compact, portable, modular, Expert 2.0 control	090-505445-04843
1.1	OW CEE 16A/400V	Mains plug, assembled	092-008214-00000
1.2	WK70/CL 5m	Workpiece lead with cable lug	092-002078-00005
1.3	Proreg Ar/CO2 230bar 30l D	Pressure regulator with manometer	394-008488-10030
1.5	GH 2x1/4" 5m	Gas hose	094-000010-00005
1.8	RA5 19POL 1x 5M	Connection cable, 19-pole, one-sided wire end ferrules	092-001569-00005
3	BUSINT X11 MODBUS TCP	MODBUS industrial bus interface	090-008695-00000
3.1	FRV 7POL 5m	Digital 7-pole cable	092-000201-00003
4	cool50 U40	Cooling unit with centrifugal pump	090-008598-00502
4.1	KF 23E-5	Coolant up to -10 °C (14 °F), 5 l	094-000530-00005
4.1			094-000530-00005
6.1	ON ZWIPA-CONNECTION	Retrofit option, third-party intermediate hose package, strain relief	094-007890-00000
7.4	AK300	Wire spool adapter B300	094-001803-00001
8.1	AF 45° RMT COBOT	Adapter flange	094-026863-00000
9.1	RMT551W 22,5° X230,4 Y46,5	RMT 22.5° torch neck	094-025074-00001
9.4	SP RMT W C KON 400CM EZA	Co-bot hose package, water cooled	094-026998-01400
10.01	GN TR 23 66mm D=17mm	Gas nozzle	094-014180-00001
10.02	CT M9 CuCrZr 1.0mm	Contact tip	094-013530-00001
10.04	LSTC 2.0mm x 4.6mm 4.5m	Steel liner, insulated	094-014223-00501
10.05	CTH M9X32MM CUCRZR RMTW	Contact tip holder	094-025209-00000
10.06	GV RMT 20,2X14,5X22,5MM PTFE	Gas diffusers	094-025495-00000
-	Set PC300 XQ / ANALYZER	Set comprising PC300 XQ and Analyzer software	090-008779-00000

► Image for conceptual purposes. Not all listed items are shown.

► For more accessories, options and machine variants please refer to the individual chapters

► You can find information about external interface variants in the Accessories chapter

Phoenix, water-cooled



No front control

- Water-cooled
- With EWM eFeed wire feeder
- With external BUSINTX11 Modbus interface
- With AMT automated welding torch
- As demonstrated on a cobot welding robot application
- Phoenix 355 puls MM RC TKM Rob

Phoenix 355 RC cobot welding robot system

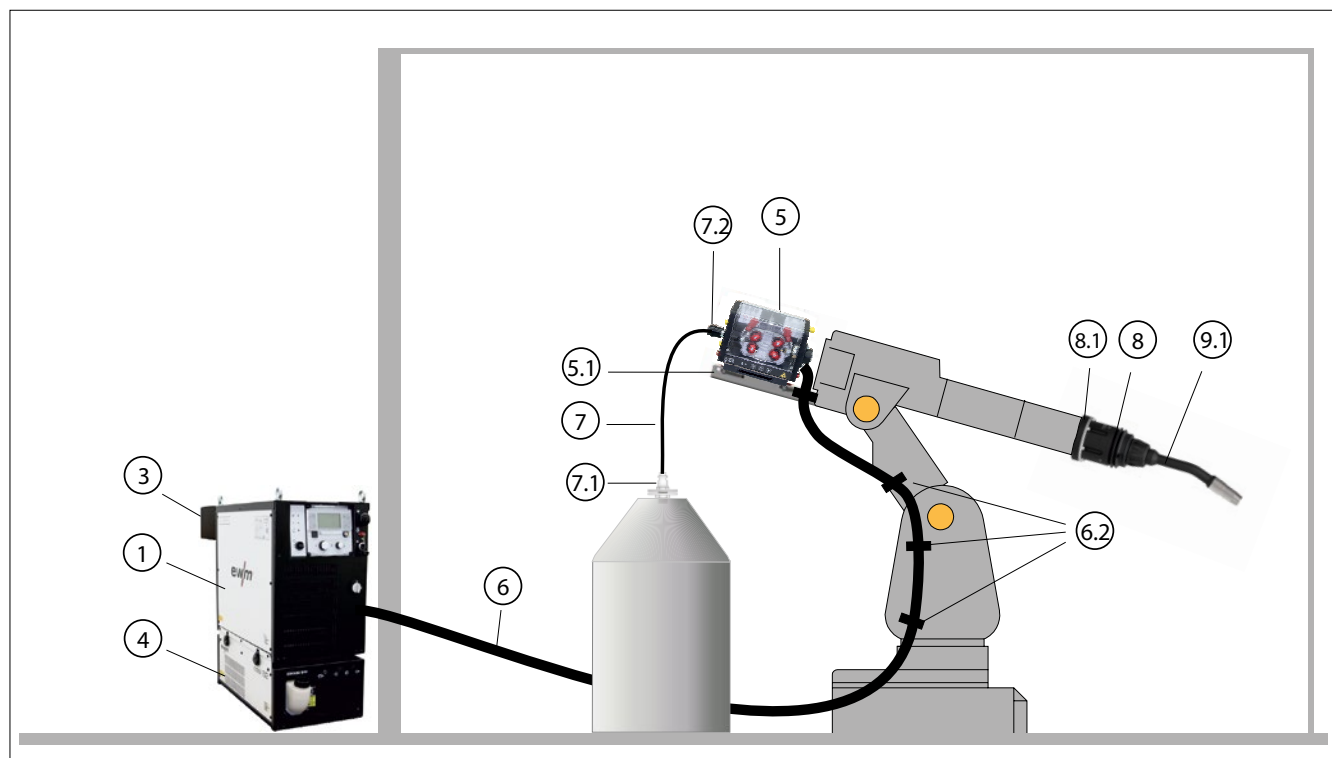
Item	Type	Designation	Item no.
1	Phoenix 355 puls MM RC TKM Rob	Multiprocess MIG/MAG pulse welding machine with MULTIMATRIX technology, compact, portable, modular, without front control	090-S05502-04752
1.1	OW CEE 16A/400V	Mains plug, assembled	092-008214-00000
1.2	WK70/CL 5m	Workpiece lead with cable lug	092-002078-00005
1.3	Proreg Ar/CO2 230bar 30l D	Pressure regulator with manometer	394-008488-10030
1.5	GH 2x1/4" 5m	Gas hose	094-000010-00005
1.8	RA5 19POL 1x 5M	Connection cable, 19-pole, one-sided wire end ferrules	092-001569-00005
3	BUSINT X11 MODBUS TCP	MODBUS industrial bus interface	090-008695-00000
3.1	FRV 7POL 5m	Digital 7-pole cable	092-000201-00003
4	cool50 U40	Cooling unit with centrifugal pump	090-008598-00502
4.1	KF 23E-5	Coolant up to -10 °C (14 °F), 5 l	094-000530-00005
4.1			094-000530-00005
6.1	ON ZWIPA-CONNECTION	Retrofit option, third-party intermediate hose package, strain relief	094-007890-00000
7.4	AK300	Wire spool adapter B300	094-001803-00001
8.1	ZF WIG/AMT	TIG/AMT intermediate flange	094-027802-00000
9	AMT451W 22° 3m M9	Automated MIG/MAG welding torch, water-cooled	094-500066-00000
9.2	TH AMT	Torch holder suitable for AMT torches	092-019400-00000
9.2	STANHOL PIN	Bracket with retention pin, standard	094-012839-00500
-	Set PC300 XQ / ANALYZER	Set comprising PC300 XQ and Analyzer software	090-008779-00000

► Image for conceptual purposes. Not all listed items are shown.

► For more accessories, options and machine variants please refer to the individual chapters

► You can find information about external interface variants in the Accessories chapter

Phoenix, water-cooled



Phoenix 402

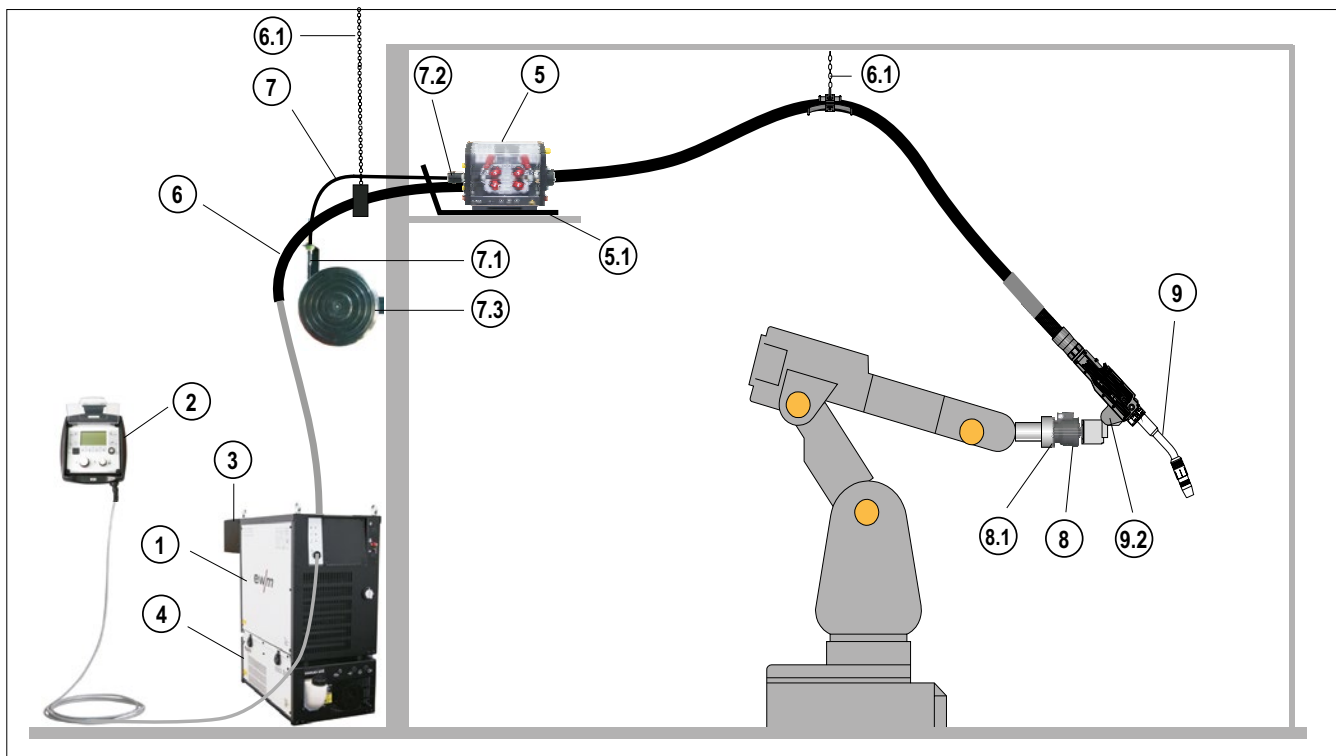
- With Expert 2.0 front control
- Water-cooled
- M Drive 4 ROB 5 LI HW XR wire feeder
- With optional gas pressure sensor
- As demonstrated on a Kuka KR 6 R1840-2 arc HW

Phoenix 402 hollow wrist robot system with optional gas pressure sensor

Item	Type	Designation	Item no.
1	Phoenix 402 Expert 2.0 puls MM XR	Multiprocess MIG/MAG pulse welding machine with front control	090-005527-00502
1.1	OW CEE 32A	Mains plug, assembled	092-008215-00000
1.2	WK70/CL 5m	Workpiece lead with cable lug	092-002078-00005
1.3	Prereg Ar/CO2 230bar 30l D	Pressure regulator with manometer	394-008488-10030
3	BUSINT X11 ETHERCAT ATCASE	Industrial bus interface, potential-free voltage supply, 24 V, seam tracking	090-908612-00010
4	cool82 U44	Cooling unit for robot machines with flow monitor	090-008791-00502
4.1	KF 23E-5	Coolant up to -10 °C (14 °F), 5 l	094-000530-00005
4.1			094-000530-00005
5	M drive 4 Rob 5 HW XR LI	Wire feeder for automated applications, opens on left, gas-cooled, Euro torch connector	090-005536-00502
5.1	MONTAGE CONSOLE ROB5 XR KUKA KR6/KR8 HW	Robotic assembly console for ROB 5 wire feeder	092-003241-00000
5.2	ON COOL W ROB 5 XR	Retrofit option, water cooling, Rob 5	092-003140-00000
5.2	OW PRESSURE SWITCH ROB 5 XR	Factory-fit option: Gas pressure sensor, Rob 5	092-003141-00001
6	70QMM WR 23 POL XR 5M	Robot intermediate hose package, water-cooled, ribbed hose, 23-pole	092-003114-01205
6.2	MONTAGE SET ZWIPA KUKA KR 6 R1840-2 arc HW	Fastening set for intermediate hose package on robot	092-004199-00000
7	WIRE CONDUIT 8M	Wire guide	094-011515-00002
7.1	CONNECTOR BARREL	Quick connect coupling for drum connector	094-011517-00000
7.2	CONNECTOR DRIVE ROB5 XR WIRE CONDUIT	Connection set for Wire feed WIRE CONDUIT to ROB 5	092-003144-00000
8	RSA HW W SOFT	Collision sensor	090-005655-00000
8.1	ZF RSA HW LK=58MM (12XM4)	Intermediate flange, plastic	094-025625-00000
9.1	RMT551W 22,5° X230,4 Y46,5	RMT 22.5° torch neck	094-025074-00001
9.4	SP RMT W HW 113CM EZA	Hose package, water-cooled, HW	094-527019-01113
-	Set PC300 XQ / ANALYZER	Set comprising PC300 XQ and Analyzer software	090-008779-00000

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- For more accessories, options and machine variants please refer to the individual chapters
- The application examples shown here are possible with Taurus, Phoenix and alpha Q machines

Phoenix, water-cooled



Phoenix 552 RC

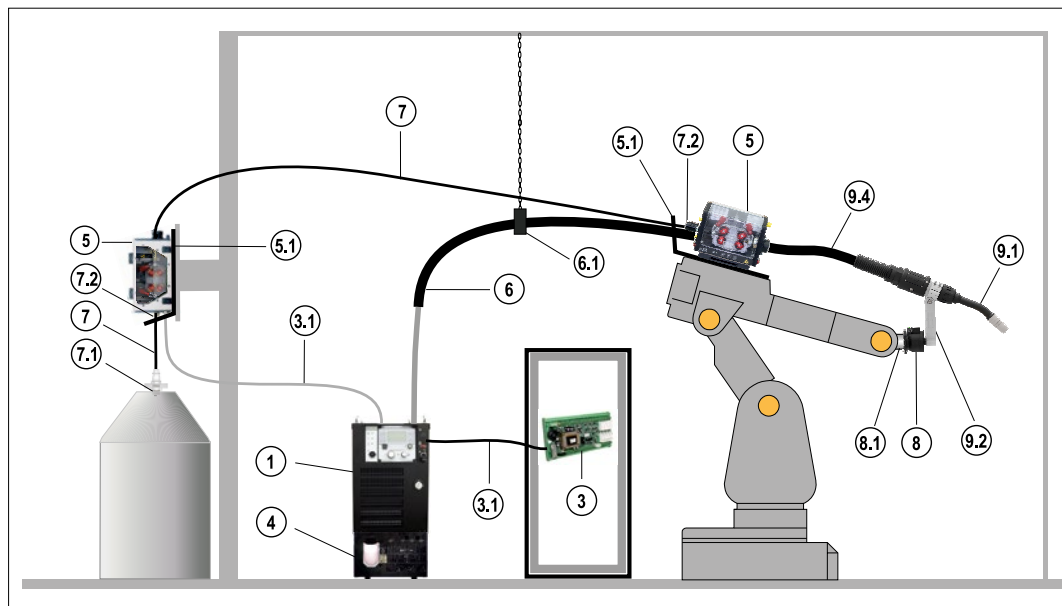
- No front control
- With RCX Expert 2.0 ROB operating panel
- Water-cooled
- M Drive 4 ROB 5 LI XR wire feeder
- As demonstrated on a Kuka KR 10 R1440-2
- With optional ECS torch connector

Conventional welding robot system Phoenix 552 RC, optimised for aluminium welding in push/pull design and with an optional ECS torch connector

This welding system with a push/pull robot welding torch and ECS torch connector is optimised for applications using soft filler wire, e.g. aluminium. Users can increase the process reliability by adding further options, such as digital gas setting. Typical areas of application include e.g. automated applications in mechanical engineering and automotive, vehicle, container and equipment construction.

Item	Type	Designation	Item no.
1	Phoenix 552 puls MM RC XR	Multiprocess MIG/MAG pulse welding machine without front control	090-005525-00502
1.1	OW CEE 32A	Mains plug, assembled	092-008215-00000
1.2	WK95/CL 5m	Workpiece lead with cable lug	092-001990-00005
1.3	Proreg Ar/CO ₂ 230bar 30l D	Pressure regulator with manometer	394-008488-10030
1.7	OW ATCASE XR	Factory-fit option: ATCASE interface fitted to power source	092-003213-00001
2	RCX Expert 2.0 Rob 2m	Control panel	090-008809-00002
3	BUSINTX11 ETHERCAT ATCASE	Industrial bus interface ETHERCAT in the casing, potential-free voltage supply, 24 V	090-908612-00008
4	cool82 U44	Cooling unit for robot machines with flow monitor	090-008791-00502
4.1	KF 23E-5	Coolant up to -10 °C (14 °F), 5 l	094-000530-00005
4.1			094-000530-00005
5	M drive 4 Rob 5 XR LI	Wire feeder for automated applications, opens on left, gas-cooled, Euro torch connector	090-005534-00502
5.1	MONTAGE CONSOLE ROB5 XR UNIVERSAL	Universal mounting console for ROB 5 wire feeder on the 3rd robot axis	092-003147-00000
5.2	AL 4R 1.2 MM/0.045 INCH RED/YELLOW	Drive roll set, 37 mm, 4 rollers, U-groove for aluminium	092-002771-00012
5.2	ON COOL W ROB 5 XR	Retrofit option, water cooling, Rob 5	092-003140-00000
5.2	OW ECS ROB 5 XR	Built-in EWM Euro torch connector for ROB 5	092-003212-00001
6	95QMM WRS 23 POL XR 6M	Robot intermediate hose package, water cooled, ribbed/standard hose, 23-pole	092-003114-11306
6.1	ON ZWIPA CONNECTION XR	Holder for XR robot intermediate hose package as a retrofitting option	092-003219-00000
6.1	ON ZWIPA-CONNECTION	Retrofit option, third-party intermediate hose package, strain relief	094-007890-00000
7	WIRE LEAD SOFT	Wire guide, material sold by the metre	094-020382-00000
7.1	CONNECTOR DV-CAB WIRE LEAD	DV-CAB connection	092-007931-00000
7.2	CONNECTOR DRIVE ROB5 XR WIRE LEAD	Connection set for wire feed WIRE LEAD, WIRE LEAD SOFT to ROB 5	092-003143-00000
7.3	DV-CAP WALL	Wall holder for wire spools, including pin and accessories	092-001985-00000
7.4	AK300	Wire spool adapter B300	094-001803-00001
7.5	CONNECTOR WIRE LEAD SOFT	End piece wire guide for material sold by the metre	094-020381-00000
7.5			094-020381-00000
7.6	UEDFS WLS 2,5x4,5mm 150mm	Transition liner for soft wire lead	094-020380-00000
7.6			094-020380-00000
8	RSA MEDIUM PLUS	Collision sensor	094-023605-00000
8.1	ZF CAT D=31,5mm D=20	Intermediate flange, aluminium	094-022420-00000
9	MTR500W PP 22°, 3.20m	MIG/MAG welding torch, push/pull, water-cooled	094-500073-00000
9	ON ECS 0,8-1,2AL XR	Welding torch conversion kit from Euro torch connector to ECS torch connector, ECS Rob 5	092-003215-00000
9.2	STANHOL	Standard holder	094-010162-00500
10.07	NLB AL 195mm 1.2-1.6mm ROB TS	Brass liner for aluminium, 0°/22°	094-016526-00000
10.08	WFR U-GROOVE 1.2	Drive roll for aluminium (U-groove)	094-010188-00500
-	Set PC300 XQ / ANALYZER	Set comprising PC300 XQ and Analyzer software	090-008779-00000

- Two units are required from position 7.5 and 7.6!
- Image for conceptual purposes. Not all listed items are shown.
- For more accessories, options and machine variants please refer to the individual chapters
- The application examples shown here are possible with Taurus, Phoenix and alpha Q machines



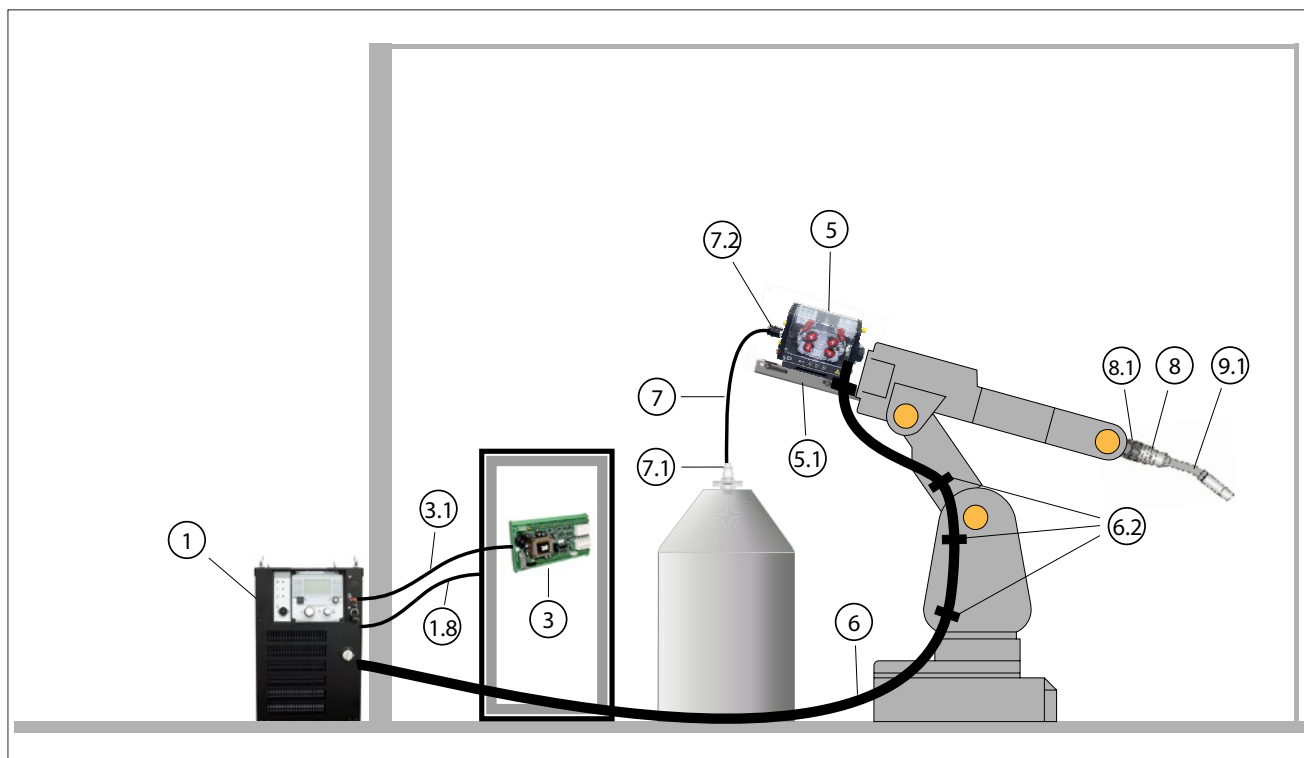
- With Expert 2.0 front control
- With intermediate drive
- Water-cooled
- M Drive 4 ROB 5 LI XR wire feeder
- As demonstrated on a Yaskawa HP20

Conventional welding robot system Phoenix 552 with intermediate drive

Item	Type	Designation	Item no.
1	Phoenix 552 Expert 2.0 puls MM XR	Multiprocess MIG/MAG pulse welding machine with front control	090-005529-00502
1.1	OW CEE 32A	Mains plug, assembled	092-008215-00000
1.2	WK95/CL 5m	Workpiece lead with cable lug	092-001990-00005
1.3	Prereg Ar/CO2 230bar 30l D	Pressure regulator with manometer	394-008488-10030
1.8	RA5 19POL 1x 5M	Connection cable, 19-pole, one-sided wire end ferrules	092-001569-00005
3	RINT X12 STANDARD	Standard robot interface	090-008291-00000
3.1	FRV 7POL 5m	Digital 7-pole cable	092-000201-00003
3.1	FRV 7POL 10m		092-000201-00000
3.2	KB MOTOMAN-RINT X12	Cable harness for RINT X12 connection to Motoman XRC/NX-100/DX-100/DX-200	094-012212-00003
4	cool82 U44	Cooling unit for robot machines with flow monitor	090-008791-00502
4.1	KF 23E-5	Coolant up to -10 °C (14 °F), 5 l	094-000530-00005
4.1			094-000530-00005
5	M drive 4 Rob 2X ZT	Intermediate drive for automated applications	090-005480-00502
5	M drive 4 Rob 5 XR LI	Wire feeder for automated applications, opens on left, gas-cooled, Euro torch connector	090-005534-00502
5.1	MONTAGE CONSOLE ROB 2 UNIVERSAL	Mounting console for wire feed unit	092-001746-00000
5.1	MONTAGE CONSOLE ROB5 XR UNIVERSAL	Universal mounting console for ROB 5 wire feeder on the 3rd robot axis	092-003147-00000
5.2	ON COOL W ROB 5 XR	Retrofit option, water cooling, Rob 5	092-003140-00000
5.2	OW BLOW OUT ROB 5 XR	Factory-fit option: Welding torch, blow out, Rob 5	092-003142-00001
6	95QMM WRS 23 POL XR 6M	Robot intermediate hose package, water cooled, ribbed/standard hose, 23-pole	092-003114-11306
6.1	ON ZWIPIA CONNECTION XR	Holder for XR robot intermediate hose package as a retrofitting option	092-003219-00000
7	WIRE CONDUIT 1,8M	Wire guide	094-011515-00004
7	WIRE CONDUIT 8M		094-011515-00002
7.1	CONNECTOR BARREL	Quick connect coupling for drum connector	094-011517-00000
7.2	CONNECTOR DRIVE ROB2 WIRE CONDUIT	Connection set for wire feed ROB 2 Wire Conduit	092-008205-00000
7.2	CONNECTOR DRIVE ROB5 XR WIRE CONDUIT	Connection set for Wire feed WIRE CONDUIT to ROB 5	092-003144-00000
8	RSA MEDIUM PLUS	Collision sensor	094-023605-00000
8.1	FL ISO 9409-1-A40 AL	Intermediate flange, aluminium	094-010198-00000
9.1	RMT551W 22,5° X230,4 Y46,5	RMT 22.5° torch neck	094-025074-00001
9.2	TH RMT 0°/22,5°	Torch holder	094-025140-00000
9.4	SP RMT W KON 120CM EZA	Hose package, water-cooled, with blow-out function	094-525221-01120
-	Set PC300 XQ / ANALYZER	Set comprising PC300 XQ and Analyzer software	090-008779-00000

- Image for conceptual purposes. Not all listed items are shown.
- For more accessories, options and machine variants please refer to the individual chapters
- The application examples shown here are possible with Taurus, Phoenix and alpha Q machines

Taurus, gas-cooled



Taurus 402

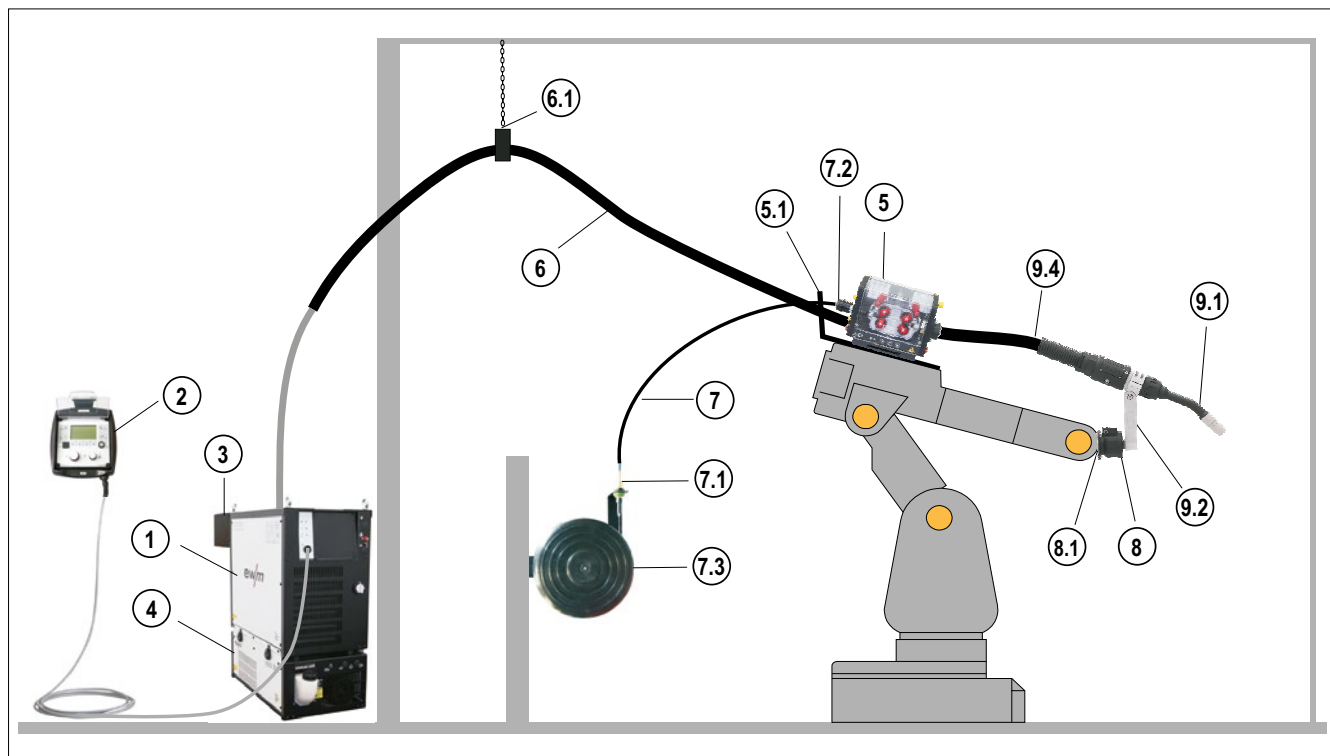
- With Expert 2.0 front control
- Standard welding system
- Gas-cooled
- M Drive 4 ROB 5 LI HW XR wire feeder
- As demonstrated on an ABB IRB 2600ID-8-200

Taurus 402 hollow wrist robot system

Item	Type	Designation	Item no.
1	Taurus 402 MM Expert 2.0 XR	Multiprocess MIG/MAG standard welding machine with front control	090-005519-00502
1.1	OW CEE 32A	Mains plug, assembled	092-008215-00000
1.2	WK70/CL 5m	Workpiece lead with cable lug	092-002078-00005
1.3	Proreg Ar/CO2 230bar 30l D	Pressure regulator with manometer	394-008488-10030
1.8	RA5 19POL 1x 5M	Connection cable, 19-pole, one-sided wire end ferrules	092-001569-00005
3	BUSINT X11 ETHERNET IP ATCASE	ETHERNET IP industrial bus interface in casing	090-008613-00000
3.1	FRV 7POL 5m	Digital 7-pole cable	092-000201-00003
5	M drive 4 Rob 5 HW XR LI	Wire feeder for automated applications, opens on left, gas-cooled, Euro torch connector	090-005536-00502
5.1	MONTAGE CONSOLE ROB5 XR ABB	Robotic assembly console for ROB 5 wire feeder	092-003231-00000
6	70QMM GR 23 POL XR 5M	Robot intermediate hose package, gas-cooled, ribbed hose, 23-pole	092-003114-00205
6.2	MONTAGE SET ZWIPA ABB IRB 2600ID-8-200	Fastening set for intermediate hose package on robot	092-003056-00000
7	WIRE LEAD 6,5M	Wire guide	094-018283-00000
7.1	CONNECTOR BARREL WIRE LEAD	Connection for large spool/drum	094-018277-00000
7.2	CONNECTOR DRIVE ROB5 XR WIRE LEAD	Connection set for wire feed WIRE LEAD, WIRE LEAD SOFT to ROB 5	092-003143-00000
8	iCAT A	Collision sensor	094-012718-00000
8.1	FLANGE ABB IRB 2600	Intermediate flange, ABB IRB 1520/2600	094-019886-00000
9.1	TN MIG ROB A500TS 22°	Torch neck ABIROB A500TS	094-011260-00500
9.4	SP G ABB 2600-8-200	Hose package, gas cooled	094-022746-00000
10.01	GN MP 500 A 16/28 0mm	Gas nozzle, conical	094-011263-00000
10.02	CT M8 CUCRZR AG 1.2/30mm	CuCrZr contact tip, silver plated	094-011272-00000
10.04	LST EWM RT 360 2 m Ø 0.8-1.2mm	Steel liner, steel, black	094-011667-00500
10.05	RCTH 500 M8 ROB TS W	Contact tip holder	094-011276-00500
-	Set PC300 XQ / ANALYZER	Set comprising PC300 XQ and Analyzer software	090-008779-00000

- Image for conceptual purposes. Not all listed items are shown.
- For more accessories, options and machine variants please refer to the individual chapters
- The application examples shown here are possible with Taurus, Phoenix and alpha Q machines

Taurus, water-cooled



Taurus 402 RC without front control

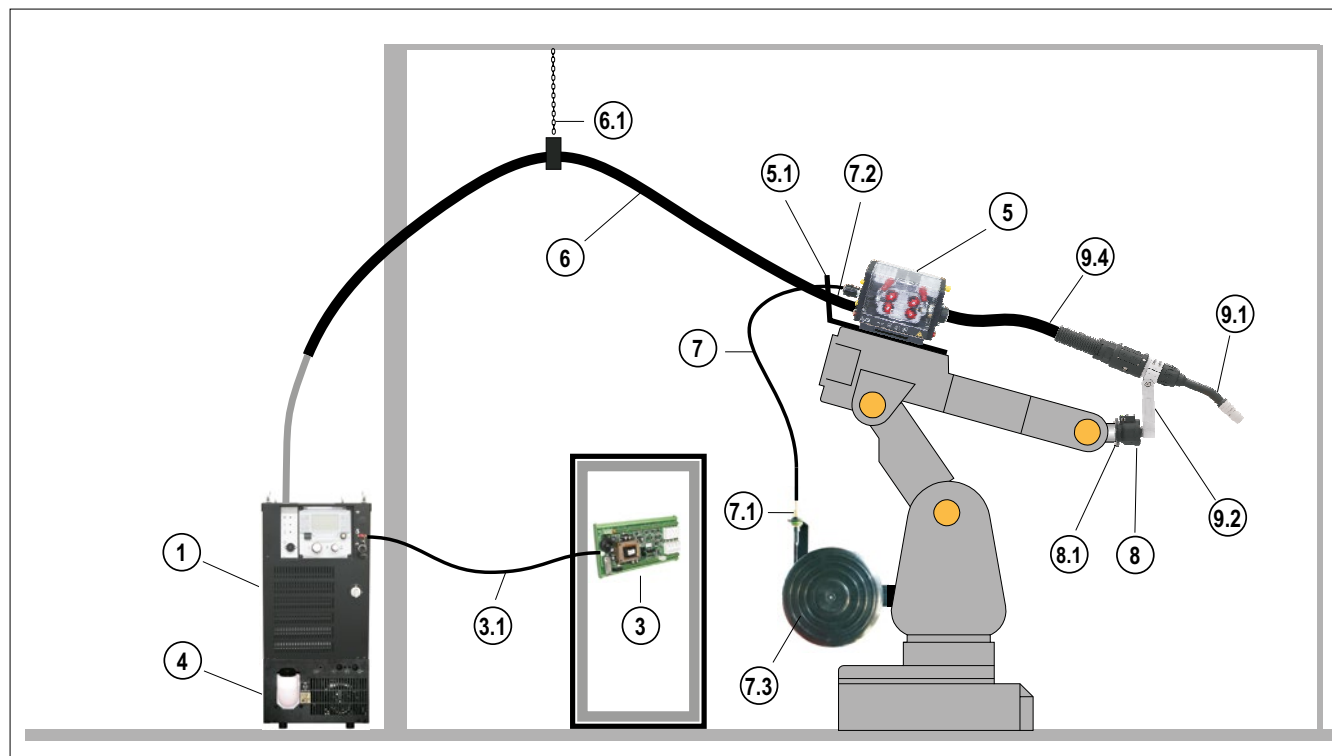
- With RCX Expert 2.0 ROB operating panel
- Water-cooled
- M Drive 4 ROB 5 LI XR wire feeder
- As demonstrated on a Fanuc ArcMate 0iB

Conventional welding robot system Taurus 402 RC

Item	Type	Designation	Item no.
1	Taurus 402 MM RC XR	Multiprocess MIG/MAG standard welding machine without front control	090-005515-00502
1.1	OW CEE 32A	Mains plug, assembled	092-008215-00000
1.2	WK70/CL 5m	Workpiece lead with cable lug	092-002078-00005
1.3	Proreg Ar/CO ₂ 230bar 30l D	Pressure regulator with manometer	394-008488-10030
2	RCX Expert 2.0 Rob 2m	Control panel	090-008809-00002
3	BUSINT X11 ETHERNET IP ATCASE	ETHERNET IP industrial bus interface in casing	090-008613-00000
4	cool82 U44	Cooling unit for robot machines with pressure controller	090-008268-00502
4.1	KF 23E-5	Coolant up to -10 °C (14 °F), 5 l	094-000530-00005
4.1			094-000530-00005
5	M drive 4 Rob 5 XR LI	Wire feeder for automated applications, opens on left, gas-cooled, Euro torch connector	090-005534-00502
5.1	MONTAGE CONSOLE ROB5 XR UNIVERSAL	Universal mounting console for ROB 5 wire feeder on the 3rd robot axis	092-003147-00000
5.2	ON COOL W ROB 5 XR	Retrofit option, water cooling, Rob 5	092-003140-00000
6	70QMM WRS 23 POL XR 5M	Robot intermediate hose package, water cooled, ribbed/standard hose, 23-pole	092-003114-01305
6.1	ON ZWIPA CONNECTION XR	Holder for XR robot intermediate hose package as a retrofitting option	092-003219-00000
7	WIRE LEAD 3M	Wire guide	094-018281-00000
7.1	CONNECTOR DV-CAB WIRE LEAD	DV-CAB connection	092-007931-00000
7.2	CONNECTOR DRIVE ROB5 XR WIRE LEAD	Connection set for wire feed WIRE LEAD, WIRE LEAD SOFT to ROB 5	092-003143-00000
7.3	DV-CAP WALL	Wall holder for wire spools, including pin and accessories	092-001985-00000
7.4	AK300	Wire spool adapter B300	094-001803-00001
8	RSA MEDIUM PLUS	Collision sensor	094-023605-00000
8.1	FL ISO 9409-1-A31,5 AL	Intermediate flange, aluminium	094-016556-00000
9.1	RMT551W 22,5° X230,4 Y46,5	RMT 22.5° torch neck	094-025074-00001
9.2	TH RMT 0°/22,5°	Torch holder	094-025140-00000
9.4	SP RMT W KON 99CM EZA	Hose package, water cooled	094-525221-00099
-	Set PC300 XQ / ANALYZER	Set comprising PC300 XQ and Analyzer software	090-008779-00000

- Image for conceptual purposes. Not all listed items are shown.
- For more accessories, options and machine variants please refer to the individual chapters
- The application examples shown here are possible with Taurus, Phoenix and alpha Q machines

Taurus, water-cooled



Taurus 552

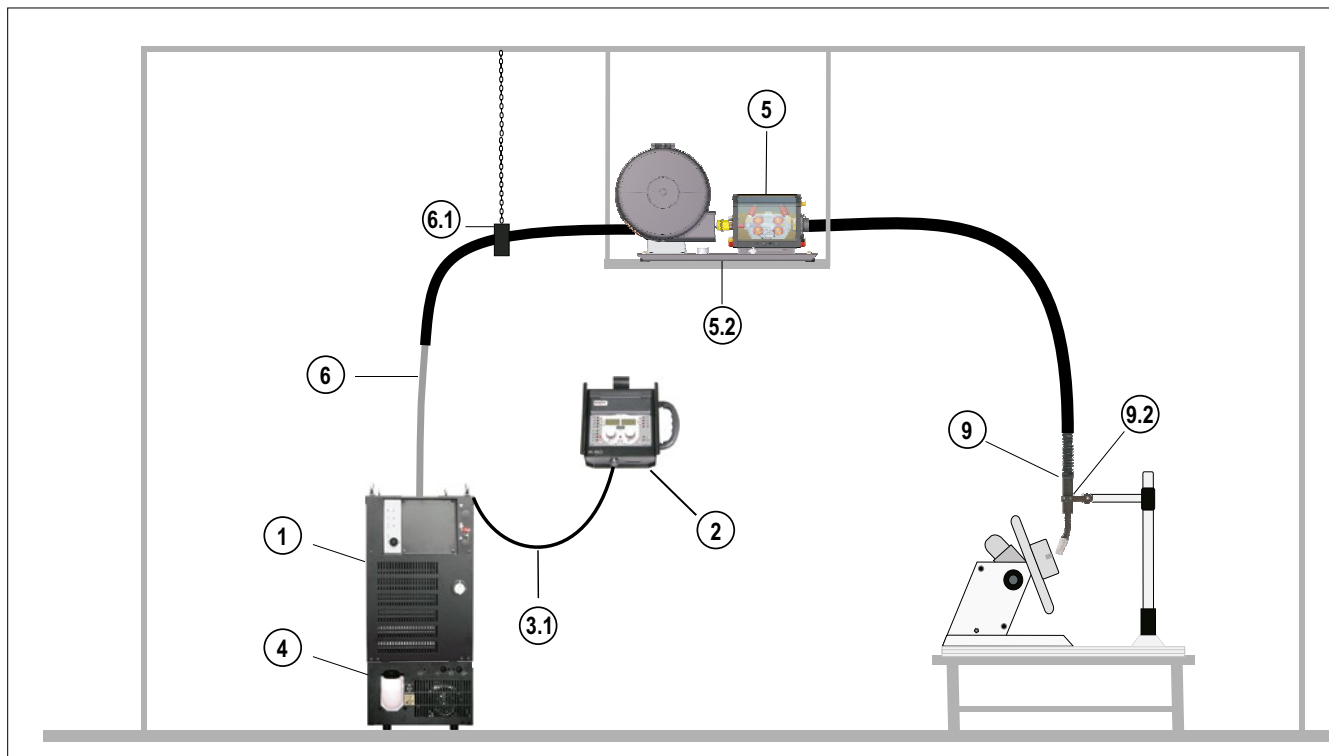
- With Expert 2.0 front control
- Water-cooled
- M Drive 4 ROB 5 LI XR wire feeder
- As demonstrated on an ABB IRB1600

Conventional welding robot system Taurus 552

Item	Type	Designation	Item no.
1	Taurus 552 MM Expert 2.0 XR	Multiprocess MIG/MAG standard welding machine with front control	090-005521-00502
1.1	OW CEE 32A	Mains plug, assembled	092-008215-00000
1.2	WK95/CL 5m	Workpiece lead with cable lug	092-001990-00005
1.3	Proreg Ar/CO2 230bar 30l D	Pressure regulator with manometer	394-008488-10030
1.8	RA5 19POL 1x 5M	Connection cable, 19-pole, one-sided wire end ferrules	092-001569-00005
3	BUSINT X11 DEVICE NET	DEVICE-NET industrial bus interface	090-008230-00000
3.1	FRV 7POL 5m	Digital 7-pole cable	092-000201-00003
4	cool82 U44	Cooling unit for robot machines with pressure controller	090-008268-00502
4.1	KF 23E-5	Coolant up to -10 °C (14 °F), 5 l	094-000530-00005
4.1			094-000530-00005
5	M drive 4 Rob 5 XR LI	Wire feeder for automated applications, opens on left, gas-cooled, Euro torch connector	090-005534-00502
5.1	MONTAGE CONSOLE ABB IRB 1600	Mounting console for wire feed unit	092-002562-00000
5.2	ON COOL W ROB 5 XR	Retrofit option, water cooling, Rob 5	092-003140-00000
6	95QMM WRS 23 POL XR 6M	Robot intermediate hose package, water cooled, ribbed/standard hose, 23-pole	092-003114-11306
6.1	ON ZWIPA CONNECTION XR	Holder for XR robot intermediate hose package as a retrofitting option	092-003219-00000
7	WIRE LEAD 1,5M	Wire guide	094-018280-00000
7.1	CONNECTOR DV-CAB WIRE LEAD	DV-CAB connection	092-007931-00000
7.2	CONNECTOR DRIVE ROB5 XR WIRE LEAD	Connection set for wire feed WIRE LEAD, WIRE LEAD SOFT to ROB 5	092-003143-00000
7.3	WSH universal	Wire spool holder, robots	092-002558-00000
7.4	AK300	Wire spool adapter B300	094-001803-00001
8	RSA MEDIUM PLUS	Collision sensor	094-023605-00000
8.1	FL ISO 9409-1-A40 AL	Intermediate flange, aluminium	094-010198-00000
9.1	RMT551W 22,5° X230,4 Y46,5	RMT 22.5° torch neck	094-025074-00001
9.2	TH RMT 0°/22,5°	Torch holder	094-025140-00000
9.4	SP RMT W KON 125CM EZA	Hose package, water cooled	094-525221-00125
-	Set PC300 XQ / ANALYZER	Set comprising PC300 XQ and Analyzer software	090-008779-00000

- Image for conceptual purposes. Not all listed items are shown.
- For more accessories, options and machine variants please refer to the individual chapters
- The application examples shown here are possible with Taurus, Phoenix and alpha Q machines

Taurus, water-cooled



Taurus 552 RC

- No front control
- With R50 ROB remote control
- Water-cooled
- M Drive 4 ROB 5 LI XR wire feeder
- As demonstrated on a simple mechanical application

Mechanised welding system Taurus 552 RC

Item	Type	Designation	Item no.
1	Taurus 552 MM RC XR	Multiprocess MIG/MAG standard welding machine without front control	090-005517-00502
1.1	OW CEE 32A	Mains plug, assembled	092-008215-00000
1.2	WK95/CL 5m	Workpiece lead with cable lug	092-001990-00005
1.3	Proreg Ar/CO2 230bar 30l D	Pressure regulator with manometer	394-008488-10030
1.8	RA5 19POL 1x 5M	Connection cable, 19-pole, one-sided wire end ferrules	092-001569-00005
2	R50 ROB 7POL	Remote control for mechanised applications	090-008782-00000
3.1	FRV 7POL 5m	Digital 7-pole cable	092-000201-00003
4	cool82 U44	Cooling unit for robot machines with pressure controller	090-008268-00502
4.1	KF 23E-5	Coolant up to -10 °C (14 °F), 5 l	094-000530-00005
4.1			094-000530-00005
5	M drive 4 Rob 5 XR LI	Wire feeder for automated applications, opens on left, gas-cooled, Euro torch connector	090-005534-00502
5.1	ON DV CAP ROB LI	Rob wire spool support, left	092-003217-00000
5.2	ON COOL W ROB 5 XR	Retrofit option, water cooling, Rob 5	092-003140-00000
6	95QMM WRS 23 POL XR 6M	Robot intermediate hose package, water cooled, ribbed/standard hose, 23-pole	092-003114-11306
6.1	ON ZWIPA CONNECTION XR	Holder for XR robot intermediate hose package as a retrofitting option	092-003219-00000
7.4	AK300	Wire spool adapter B300	094-001803-00001
9	AMT551W 22° 1.5m M9	Automated MIG/MAG welding torch, water-cooled	094-500070-00015
9.2	TH AMT	Torch holder suitable for AMT torches	092-019400-00000
-	PC300 XQ Set	PC300 XQ welding parameter software set, including CMSTICK, cable and SECINT X10 USB interface	090-008777-00000

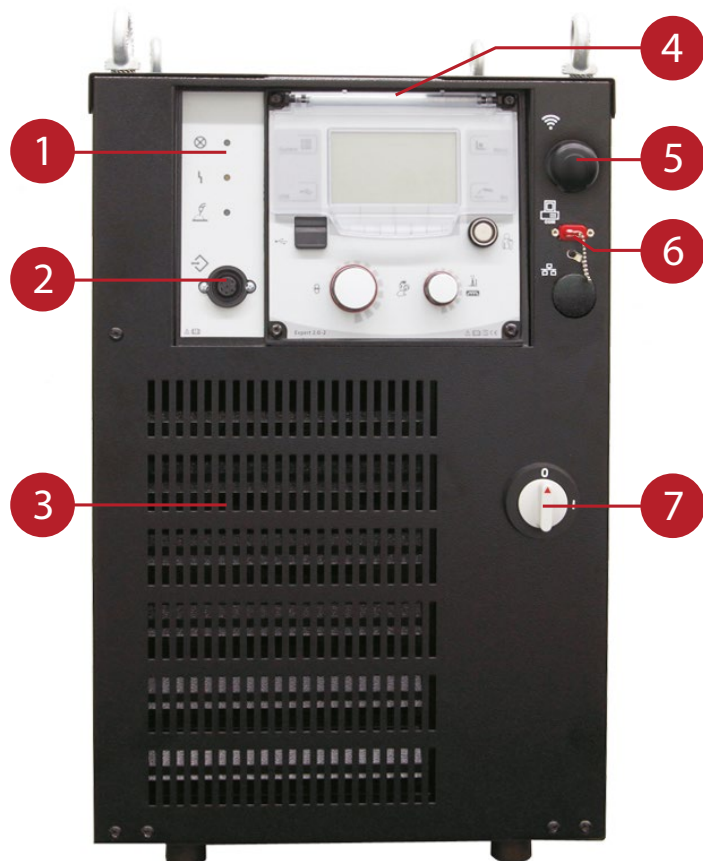
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- For more accessories, options and machine variants please refer to the individual chapters
- The application examples shown here are possible with Taurus, Phoenix and alpha Q machines

Overview

MIG/MAG XR automation		Page
Power source description	alpha Q 352 / 552, Phoenix 402 / 552, Taurus 402 / 552	Front view
		70
		Rear view
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	Phoenix 355	Options for power sources
		72
		Rob Expert 2.0 control
		74
	Phoenix 355	Front view
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		Side view
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	Phoenix 355	Cobot application
		46

Front view

Taurus series power sources are also available with XR robot welding systems in addition to alpha Q and Phoenix power sources. The motor controller cards are already built into these power sources. This makes the wire feeder design more lightweight and more compact. The range is topped off with lots of new options, including the digital gas control. You can find more information on the following pages.



1 Signal lights for

- Ready for operation
- Fault
- Welding operation

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

- R50 ROB remote control
- Panel RCX Expert 2.0 ROB
- External ewm Xnet LAN/WiFi gateway

3 Inverter technology

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

4 Easy operation with Expert 2.0 ROB control, available in LAN or

- LAN/WiFi version

5 Optional ewm Xnet WiFi gateway

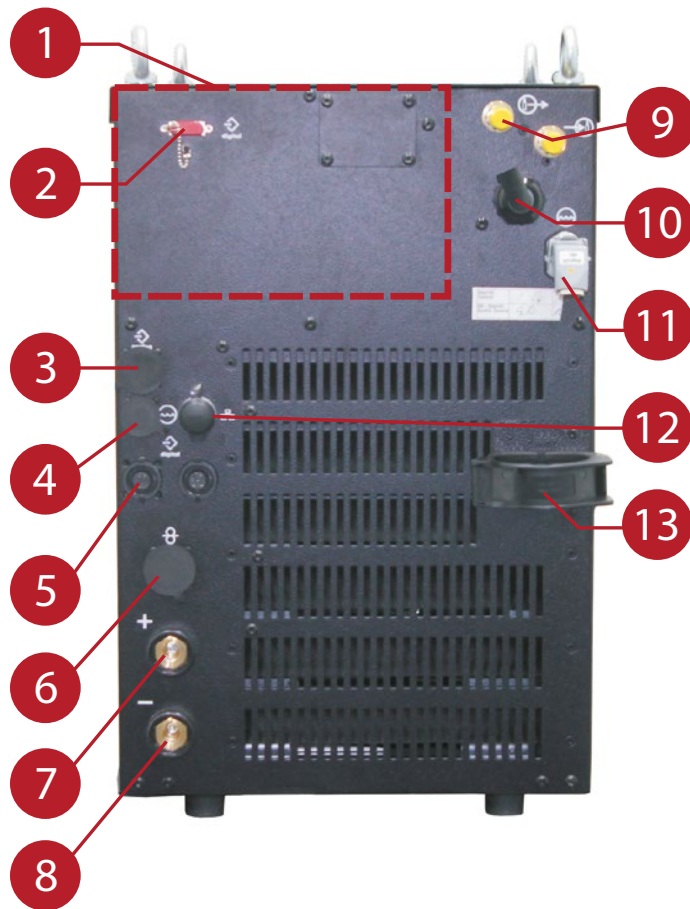
6 PC interface for PC300 software

7 Main switch accessible from the front



Also available as an RC power source without front control. RCX panel also optionally available with built-in Expert 2.0 ROB control system.

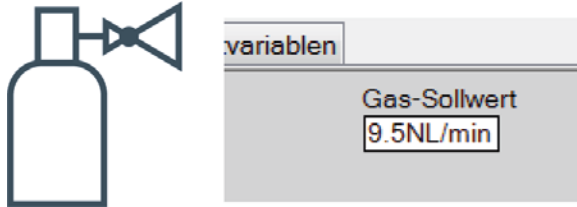
Rear view



- 1** Space for installing an ATCASE interface
- 2** Digital connection when using an ATCASE interface
- 3** 19-pole interface for automated welding
- 5** Connection sockets, 7-pole, e.g. for interface, external ewm Xnet LAN/WiFi gateway.
- 6** Connection socket, 23-pole for wire feeder
- 7** Load connection +
● Intermediate hose package/wire feeder
- 8** Load connection -
● Workpiece lead
- 9** Gas connection, only for the digital gas setting option
- 10** Mains cable
- 11** Connection socket, 5-pole for voltage supply to the cooling unit
- 12** Optional ewm Xnet LAN gateway
- 13** Strain relief for intermediate hose package

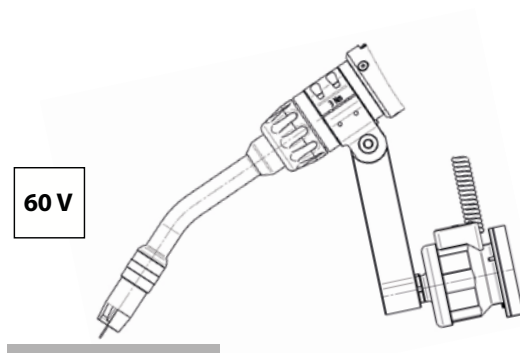
Options for power sources

Overview of the possible options for power sources from the XR series.



Ex works option: Gas setting for MIG/MAG robot power sources from the XR series

- Reduced gas consumption thanks to optimally specified values in the JOB
- Constant gas flow rate thanks to electronic adjustment - > increase in weld seam quality
- Nominal and actual value display of the gas flow rate in l/min on the front control or the RCX panel
- Warnings signal degradation of the gas supply
- The shielding gas is automatically taken into account via the JOB selection



Ex-works option: increased sensor voltage for MIG/MAGrobot power sources

- Improved seam/component finding thanks to 60-V sensor voltage
- Helpful when working with dirty or scaled materials
- Ability to search via wire or gas nozzle (depending on torch equipment)



Ex works option: Expert 2.0 gateway

- LAN or wireless networking with built-in Expert 2.0 control



Ex works option: ATCASE interface fitted to a power source

- RINTX12 or BUSINTX11 ATCASE interface fitted on the back of the power source



Retrofitting Expert 2.0 control for MIG/MAG robot power sources in the RC variant

- Easy retrofitting of the Expert 2.0 control onto RC power sources without front control

Rob Expert 2.0 control



- Optimised for automated applications
- Expert 2.0 control with intuitive user guidance on LCD panel and plain text display of all welding parameters and functions
- USB connection
- Easy switching of welding processes at the press of a button, e.g. from forceArc/forceArc puls to rootArc/rootArc puls or standard/pulse
- Setting of all parameters in program sequence
- Administration of access rights for different control operating levels using the Xbutton
- Wire feed speed specifications
- Arc length correction
- Adjusting the arc dynamics (choke effect) from soft to hard
- Standby function (save energy at the press of a button)
- Kilowatt display for calculating the energy per unit length
- Effective arc power for calculating the energy per unit length
- Electronic gas setting with control and monitoring of gas quantity (option)

Operation mode	Synergic operation
Welding process	MIG/MAG
	MIG/MAG pulse
	TIG lift arc
	MMA
	forceArc®
	forceArc puls®
	rootArc®
	rootArc puls®
	Superpuls
	Gouging
Operating modes	Non-latched
	Special non-latched
	Resistance spot welding
Parameters in display	Welding current
	Welding voltage
	Wire feed speed
	JOB number
	Program number
	Error code
	Effective arc power
	Motor current
	Kilowatt indicator
Freely adjustable programs per JOB	15
Number of JOBS	335, depending on power source
MMA functions	Hotstart
	Arcforce
	Antistick
Functions	Wire burn-back
	Wire creep
	Gas pre-flow time
	Gas post-flow time

Front view

Phoenix 355 ROB power source – compact inverter welding machine with built-in wire feeder mechanism and modular casing design

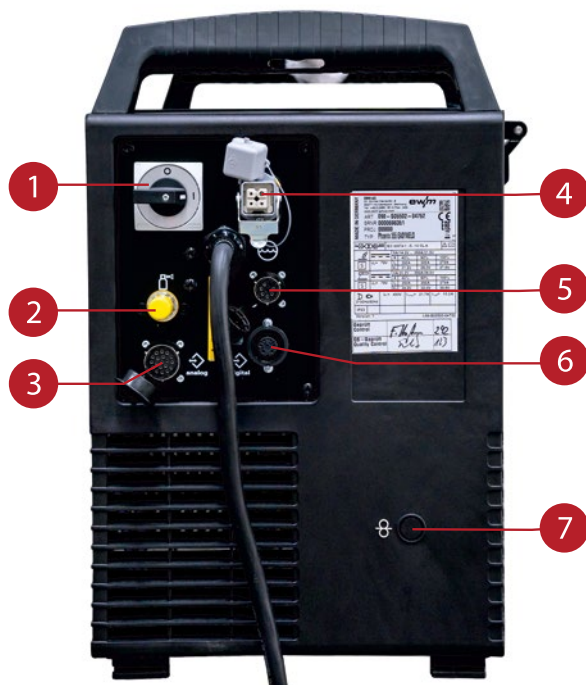


- 1 With or without welding machine control**
- 2 PC interface for PC300 XQ software**
- 3 Push-button for**
 - Wire inching
 - Wire return
 - Gas test
- 4 Euro torch connector**
- 5 Connection socket, 7-pole, for items such as**
 - R50 ROB remote control
 - RCX Expert 2 ROB panel
 - External Xnet LAN/WiFi gateway
- 6 Torch connection socket, 19-pole, for analogue control signals such as a collision sensor or push/pull torch drive**
- 7 Modular casing design**
 - Choice of gas- or water-cooled operation with cooling unit
 - Portable or mobile on a Trolley



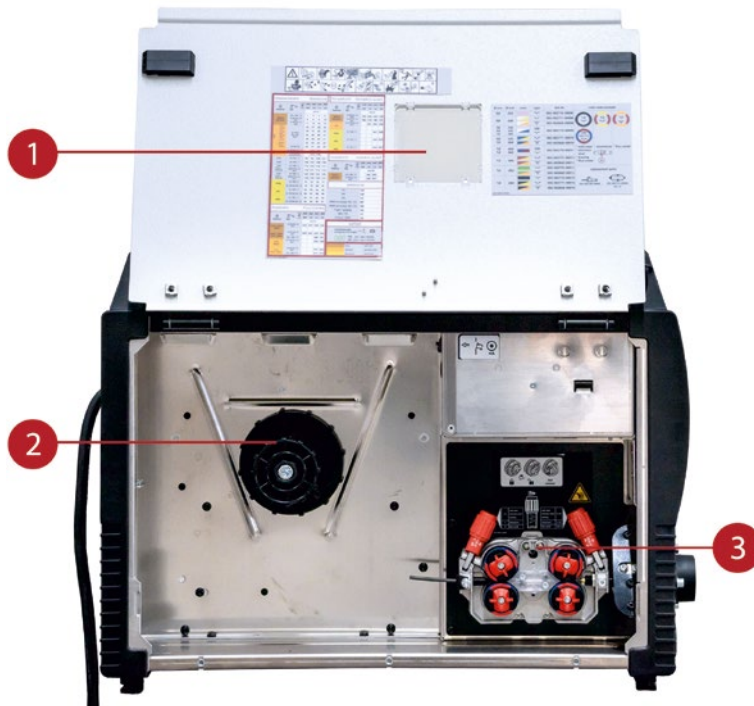
Easier to operate using Expert 2.0 ROB

Rear view



- 1** Main switch
- 2** G1/4 connection for gas hose
- 3** 19-pole interface for automated welding
- 4** 4-pole connection socket for voltage supply to the cooling unit
- 5** 8-pole connection socket, cooling unit monitoring
- 6** 7-pole connection socket, for e.g. RINTX12 or BUSINTX11 interface
- 7** Optional connection capability for drum feeding

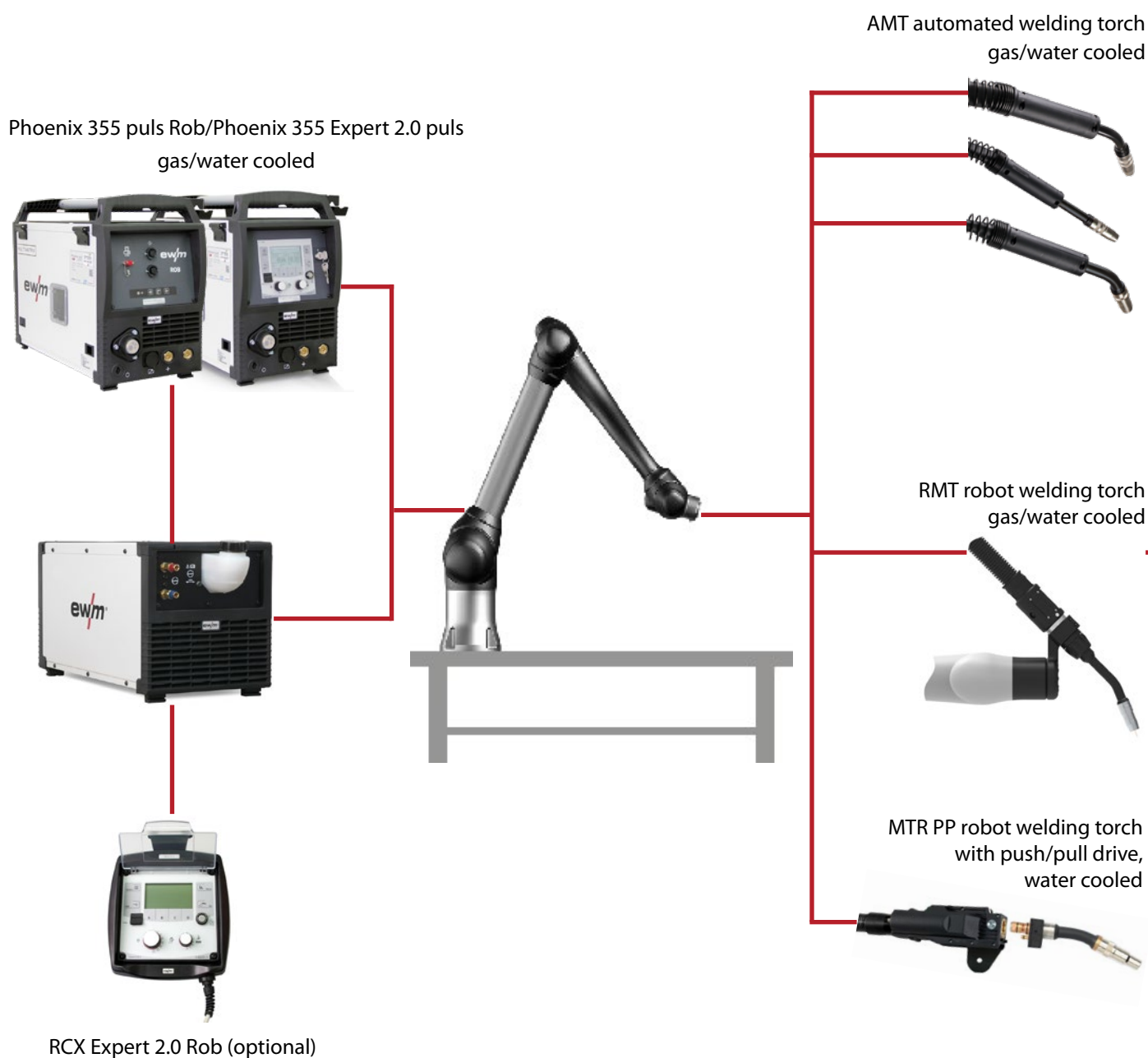
Side view



- 1 Inspection window for checking the drive unit**
- 2 Holder for D200/300 wire spool diameter**
 - Easy to replace wire
 - D200 (5-kg wire spool) and B300 (15-kg wire basket spool) possible using an adapter
- 3 Integrated eFeed wire feeding – precise and practical**
 - Four driven wire feed rolls
 - Automatic wire inching saves time
 - Easy, tool-free roll change
 - Captive roll fasteners

The Phoenix 355 puls Rob is the perfect solution for your co-bot MIG/MAG welding applications.

The compact, multiprocess pulse welding machine with integrated wire feeder is incredibly flexible and comes as a gas-cooled variant or water-cooled with an optional cooling unit. Whether it's the RC version without control with separate RCX operating panel, or with built-in Expert 2.0 control, thanks to our interface variants, deep integration into the co-bot control is easy. In addition to simple solutions with automated and robot welding torches, our robot welding torches can also be used with an additional drive. What's more, you also get our RMT hose packages especially developed for co-bots, which come equipped with three freely assignable function push-buttons. We also offer corresponding components, completely tailored to your automated welding tasks.



The Phoenix 355 puls Rob automated welding system can also be used on industrial welding robots or as part of mechanised systems.



Co-bot hose package with push-buttons for

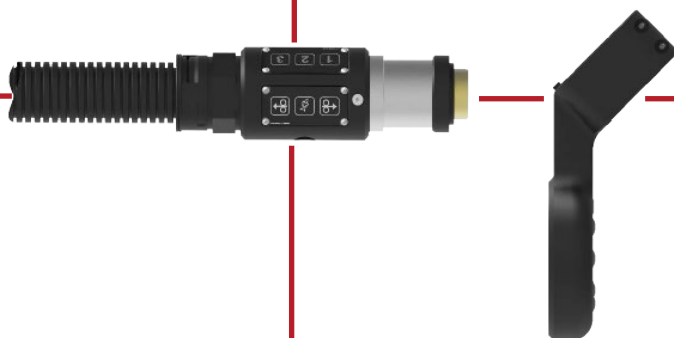
- Wire inching
- Wire return
- Gas test

RMT W C or RMT W CT hose package

RMT CRX torch holder
(depending on co-bot)

- UNIVERSAL ROBOTS
UR 5e, 10e, 16e
- Fanuc CRX 10iA
- Yaskawa HC10
- Doosan M Serie
- Hanwha HCR 5, 10

RMT 551 W welding torch
0°, 22.5°, 35°, 45°



"Teach" co-bot hose package
with push-buttons for

- Wire inching
- Wire return
- Gas test



and three freely assignable function push-buttons
for direct connection to the co-bot, e.g. for

- Robot programming
- Teach mode
- Tack function/welding start



Overview

MIG/MAG XR automation			Page
Multiprocess MIG/MAG welding machines	alpha Q puls	352 - 552 RC	82
		352 - 552 Expert 2.0	84
	Phoenix 355 puls	Rob 355 RC compact	86
		Rob 355 Expert 2.0 compact	89
	Phoenix puls	402 - 552 RC	92
		402 - 552 Expert 2.0	94
	Taurus	402 - 552 RC	96

alpha Q puls 352 - 552 RC

MULTIMATRIX

/rootArc®/rootArc®puls
 /coldArc®/coldArc®puls
 /forceArc®/forceArc®puls
 /Impuls
 /superPuls



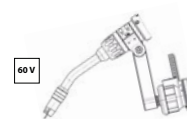
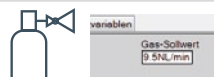
- Multiprocess MIG/MAG pulse welding machine without front control
- Set up on external operating panel or notebook with PC300.NET software
- Equipped at no extra charge EWM Synergic characteristics for coldArc, coldArc puls, pipeSolution, forceArc, forceArc puls, rootArc, rootArc puls and superPuls
- Equipped at no extra charge with Synergic characteristics for GMAW welding of steel/CrNi/aluminium
- Ready to connect an M Drive 4 ROB 5 LI/RE wire feeder
- Ready to connect a media separation box F Drive ROB 5 LI/RE for frontDrive robot welding torches
- Standard interface for automated welding (start/stop, current flows, emergency stop)
- Optional RINT X12 interfaces, BUSINT X11 industrial bus interface, ewm Xnet quality management software
- Parameters adjustable via interfaces: 510 JOBS each with 15 programs in program mode; wire feed speed, arc length correction and arc dynamics in control signal operation
- Optimised for automated applications: Unique second generation digital system for reproducible welding results of the highest possible quality, easy to integrate into automated systems
- Automated and mechanised applications in the production of machinery, cars, vehicles, containers, equipment and ships
- Modular, crenable, stackable
- Gas cooled, with optional cool82 cooling unit also water cooled
- Can be optionally connected to LAN or WiFi, ewm Xnet compatible
- PC interface for PC300 XQ software
- 5 m mains supply lead
- 100 % tested and free-welded

alpha Q	352	552
Setting range for welding current	5 A - 350 A	5 A - 550 A
Duty cycle 40 °C	–	550 A / 60 %
	350 A / 100 %	420 A / 100 %
Open circuit voltage	93 V	
Mains voltage	400 V	
Tolerances	-25 % - +20 %	
Mains frequency	25 A / 50 Hz / 60 Hz	32 A / 50 Hz / 60 Hz
Recommended generator power	18.8 kVA	38.9 kVA
Protection classification	IP23	
Safety marking		
EMC class	A	
Dimensions (L x B x H)	780 mm x 375 mm x 625 mm	
Weight	78.5 kg	
Standards	IEC 60974-1 and -10 CL.A	

Type	Designation	Item no.
alpha Q 352 puls MM RC XR	Multiprocess MIG/MAG pulse welding machine without front control	090-005530-00502
alpha Q 552 puls MM RC XR	Multiprocess MIG/MAG pulse welding machine without front control	090-005531-00502

Options/accessories

Options for retrofitting		Item no.
ON STACK XX2 Connection set for stacking welding machines		092-007856-00000
ON Expert 2.0 ROB Expert 2.0 remote control retrofit		092-003082-00000
Factory-fit options		Item no.
OW ATCASE XR Factory-fit option: ATCASE interface fitted to power source		092-003213-00001
OW GAS REGULATION XR Factory-fit option: Gas setting for MIG/MAG robot power sources in the XR series		092-003139-00001
OW 60 V SENSOR VOLTAGE XR Factory-fit option: increased sensor voltage for MIG/MAG XR robot power sources		092-008770-00001



alpha Q puls 352 - 552 Expert 2.0

MULTIMATRIX

/rootArc®/rootArc®puls
 /coldArc®/coldArc®puls
 /forceArc®/forceArc®puls
 /Impuls
 /superPuls



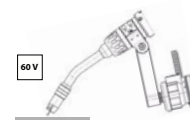
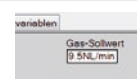
- Multiprocess MIG/MAG pulse welding machine with front control
- Installation via Expert 2.0 control with intuitive user guidance on an LCD display and plain text display of all welding parameters and functions
- Equipped at no extra charge EWM Synergic characteristics for coldArc, coldArc puls, pipeSolution, forceArc, forceArc puls, rootArc, rootArc puls and superPuls
- Equipped at no extra charge with Synergic characteristics for GMAW welding of steel/CrNi/aluminium
- Ready to connect an M Drive 4 ROB 5 LI/RE wire feeder
- Ready to connect a media separation box F Drive ROB 5 LI/RE for frontDrive robot welding torches
- Standard interface for automated welding (start/stop, current flows, emergency stop)
- Optional RINT X12 interfaces, BUSINT X11 industrial bus interface, ewm Xnet quality management software
- Parameters adjustable via interfaces: 510 JOBS each with 15 programs in program mode; wire feed speed, arc length correction and arc dynamics in control signal operation
- Optimised for automated applications: Unique second generation digital system for reproducible welding results of the highest possible quality, easy to integrate into automated systems
- Automated and mechanised applications in the production of machinery, cars, vehicles, containers, equipment and ships
- Modular, crenable, stackable
- Gas cooled, with optional cool82 cooling unit also water cooled
- Can be optionally connected to LAN or WiFi, ewm Xnet compatible
- PC interface for PC300 XQ software
- 5 m mains supply lead
- 100 % tested and free-welded

alpha Q	352	552
Setting range for welding current	5 A - 350 A	5 A - 550 A
Duty cycle 40 °C	–	550 A / 60 %
	350 A / 100 %	420 A / 100 %
Open circuit voltage	93 V	
Mains voltage	400 V	
Tolerances	-25 % - +20 %	
Mains frequency	25 A / 50 Hz / 60 Hz	32 A / 50 Hz / 60 Hz
Recommended generator power	18.8 kVA	38.9 kVA
Protection classification	IP23	
Safety marking		
EMC class	A	
Dimensions (L x B x H)	780 mm x 375 mm x 625 mm	
Weight	78.5 kg	
Standards	IEC 60974-1 and -10 CL.A	

Type	Designation	Item no.
alpha Q 352 Expert 2.0 puls MM XR	Multiprocess MIG/MAG pulse welding machine with front control	090-005532-00502
alpha Q 552 Expert 2.0 puls MM XR	Multiprocess MIG/MAG pulse welding machine with front control	090-005533-00502

Options/accessories

Options for retrofitting		Item no.
ON STACK XX2 Connection set for stacking welding machines		092-007856-00000
Factory-fit options		Item no.
OW ATCASE XR Factory-fit option: ATCASE interface fitted to power source		092-003213-00001
OW GAS REGULATION XR Factory-fit option: Gas setting for MIG/MAG robot power sources in the XR series		092-003139-00001
OW EXPERT 2.0 LG ROB Expert 2.0 LAN gateway (ex works only)		092-003078-00001
OW EXPERT 2.0 WLG ROB Expert 2.0 WiFi gateway (ex works only)		092-003079-00001
OW 60 V SENSOR VOLTAGE XR Factory-fit option: increased sensor voltage for MIG/MAG XR robot power sources		092-008770-00001



Phoenix 355 puls Rob 355 RC compact

MULTIMATRIX

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 /forceArc®/forceArc®puls
 /Impuls
 /superPuls






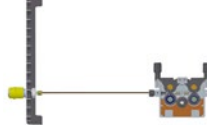



- Multiprocess MIG/MAG pulse welding machine without front control
- Compact inverter welding machine with integrated wire feed mechanism
- Set up on external operating panel or notebook with PC300.NET software
- Push/pull capability when used with EWM MTR242W PP and MTR500W PP welding torches
- Equipped at no extra charge with EWM Synergic characteristics for forceArc, forceArc puls, rootArc, rootArc puls and superPuls
- Equipped at no extra charge with Synergic characteristics for GMAW welding of steel/CrNi/aluminium
- Standard-series 19-pole interface for automated welding, for e.g. (Start/stop, current flows, emergency stop)
- Optional RINT X12 interface, BUSINT X11 industrial bus interface, PCINT X10 documentation interface (+ QDOC 9000 V2.0 software) and ewm Xnet quality management software
- Parameters adjustable via interfaces: 510 JOBs each with 15 programs in program mode; wire feed speed, arc length correction and arc dynamics in control signal operation
- RINT X12 and BUSINT X11 for installation in external electrical enclosure
- Optimised for automated applications: Unique second generation digital system for reproducible welding results of the highest possible quality, easy to integrate into automated systems
- Automated and mechanised applications in the production of machinery, cars, vehicles, containers, equipment and ships
- Gas cooled or optionally water cooled with cool 50 U40 cooling unit
- Shown in combination with Trolley 55-5 and cool50 U40
- High-precision, powerful EWM eFeed 4-roll wire feed mechanism for secure feeding of all solid and flux cored wires
- Equipped with 1.0–1.2 mm UNI rolls for low to high-alloy steel
- Wire spool diameter up to 300 mm/D300, 200 mm/D200 possible with adapter
- Energy-saving thanks to high efficiency and standby function
- Earth fault monitoring (PE protection)
- Can be optionally connected to LAN or WiFi, ewm Xnet compatible
- PC interface for PC300 XQ software
- 5 m mains supply lead
- 100 % tested and free-welded

Setting range for welding current	5 A - 350 A
Duty cycle 40 °C	350 A / 40 %
	300 A / 60 %
	270 A / 100 %
Open circuit voltage	79 V
Mains voltage	400 V
Tolerances	-25 % - +20 %
Mains frequency	50 Hz / 60 Hz
Recommended generator power	18.8 kVA
Protection classification	IP23
Safety marking	
EMC class	A
Dimensions (L x B x H)	636 mm x 298 mm x 482 mm
Weight	36.2 kg
Wire speed m/min	0.5 m/min - 25 m/min
Wire speed ipm	19.68 ipm - 944.88 ipm

Type	Designation	Item no.
Phoenix 355 puls MM RC TKM Rob	Multiprocess MIG/MAG pulse welding machine with MULTIMATRIX technology, compact, portable, modular, without front control	090-S05502-04752

Options/accessories

Cooling units		Item no.
cool50 U40 Cooling unit with centrifugal pump Cooling unit for water-cooled welding torches Water connections in the front, for compact machines (TKM). Modular design, tool-free assembly Excellent torch cooling and therefore cost savings on consumables thanks to the high-performance centrifugal pump External coolant water filling nozzle with filling level indicator We recommend using a cooling unit with a reinforced pump for an overall hose package length of 30 m and above, or for machines with an additional miniDrive of 20 m and above		090-008598-00502
cool50 U42 Cooling unit with boosted pump Cooling unit with a reinforced pump for water-cooled welding torches with hose package lengths of 20 m and longer Cooling unit for water-cooled welding torches Water connections in the front, for compact machines (TKM). Modular design, tool-free assembly Excellent torch cooling and therefore cost savings on consumables thanks to the high-performance centrifugal pump External coolant water filling nozzle with filling level indicator ► Use of cooling unit with reinforced pump: up to 70 m overall hose package length for decompact machines with separate wire feeder plus additional miniDrive, up to 45 m for decompact machines without additional miniDrive and up to 30 m for compact machines with additional miniDrive		090-008797-00502
Trolley		Item no.
Trolley 55-5 Transport cart (four rolls) for transporting a power source, a cooling unit and a gas cylinder Solid, stable design		090-008632-00000
Trolley 55-6 Transport cart (four rolls) for transporting a power source, a cooling unit and a gas cylinder Four rolls For transporting a power source, a cooling unit and one or two shielding gas cylinders Crane-liftable using four fixing points as standard Supplied with roll brakes Solid, stable design		090-008825-00000
Options for welding machines		Item no.
ON Filter TG.0003 Dirt filter for air inlet Comprised of two filter units		092-002662-00000
ON D Barrel TG.0003 Wire guide Rolliner for drum feed		092-007929-00000
Options for retrofitting		Item no.
ON WAK TG.03/TG.04/TG.09/K.02 Wheel assembly kit Wheel set – facilitates work at frequently changing welding sites		092-001356-00000

Options for retrofitting

ON Case

Tool box for mounting to transport cart Trolley 55-5/Trolley 55-6

All tools and replacement parts always to hand.

► **Only available in conjunction with Trolley 55-5 without an additional cooling unit**

► **In conjunction with Trolley 55-6, if using a cooling unit, the option "ON Extender" must also be ordered**



Item no.

092-002899-00000

Phoenix 355 puls Rob 355 Expert 2.0 compact

MULTIMATRIX

/rootArc®/rootArc®puls
/forceArc®/forceArc®puls
/Impuls
/superPuls






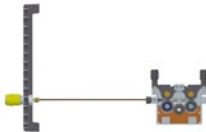



- Multiprocess MIG/MAG pulse welding machine with front control
- Compact inverter welding machine with integrated wire feed mechanism
- Set up on front control or notebook with PC300. NET software
- Expert 2.0 control with intuitive user guidance via LCD panel and plain text display of all welding parameters and functions
- Push/pull capability when used with EWM MTR242W PP and MTR500W PP welding torches
- Equipped at no extra charge with EWM Synergic characteristics for forceArc, forceArc puls, rootArc, rootArc puls and superPuls
- Equipped at no extra charge with Synergic characteristics for GMAW welding of steel/CrNi/aluminium
- Standard-series 19-pole interface for automated welding, for e.g. (Start/stop, current flows, emergency stop)
- Optional RINT X12 interface, BUSINT X11 industrial bus interface, PCINT X10 documentation interface (+ QDOC 9000 V2.0 software) and ewm Xnet quality management software
- Parameters adjustable via interfaces: 510 JOBS each with 15 programs in program mode; wire feed speed, arc length correction and arc dynamics in control signal operation
- RINT X12 and BUSINT X11 for installation in external electrical enclosure
- Optimised for automated applications: Unique second generation digital system for reproducible welding results of the highest possible quality, easy to integrate into automated systems
- Automated and mechanised applications in the production of machinery, cars, vehicles, containers, equipment and ships
- Gas cooled or optionally water cooled with cool 50 U40 cooling unit
- Shown in combination with Trolley 55-5 and cool50 U40
- High-precision, powerful EWM eFeed 4-roll wire feed mechanism for secure feeding of all solid and flux cored wires
- Equipped with 1.0–1.2 mm UNI rolls for low to high-alloy steel
- Wire spool diameter up to 300 mm/D300, 200 mm/D200 possible with adapter
- Energy-saving thanks to high efficiency and standby function
- Earth fault monitoring (PE protection)
- Can be optionally connected to LAN or WiFi, ewm Xnet compatible
- PC interface for PC300 XQ software
- 5 m mains supply lead
- 100 % tested and free-welded

Setting range for welding current	5 A - 350 A
Duty cycle 40 °C	350 A / 40 %
	300 A / 60 %
	270 A / 100 %
Open circuit voltage	79 V
Mains voltage	400 V
Tolerances	-25 % - +20 %
Mains frequency	50 Hz / 60 Hz
Recommended generator power	18.8 kVA
Protection classification	IP23
Safety marking	
EMC class	A
Dimensions (L x B x H)	636 mm x 298 mm x 482 mm
Weight	36.2 kg
Wire speed m/min	0.5 m/min - 25 m/min
Wire speed ipm	19.68 ipm - 944.88 ipm

Type	Designation	Item no.
Phoenix 355 Expert 2.0 puls MM TKM Rob	Multiprocess MIG/MAG pulse welding machine with MULTIMATRIX technology, compact, portable, modular, Expert 2.0 control	090-S05445-04843

Options/accessories

Cooling units		Item no.
cool50 U40 Cooling unit with centrifugal pump Cooling unit for water-cooled welding torches Water connections in the front, for compact machines (TKM). Modular design, tool-free assembly Excellent torch cooling and therefore cost savings on consumables thanks to the high-performance centrifugal pump External coolant water filling nozzle with filling level indicator We recommend using a cooling unit with a reinforced pump for an overall hose package length of 30 m and above, or for machines with an additional miniDrive of 20 m and above		090-008598-00502
cool50 U42 Cooling unit with boosted pump Cooling unit with a reinforced pump for water-cooled welding torches with hose package lengths of 20 m and longer Cooling unit for water-cooled welding torches Water connections in the front, for compact machines (TKM). Modular design, tool-free assembly Excellent torch cooling and therefore cost savings on consumables thanks to the high-performance centrifugal pump External coolant water filling nozzle with filling level indicator ► Use of cooling unit with reinforced pump: up to 70 m overall hose package length for decompact machines with separate wire feeder plus additional miniDrive, up to 45 m for decompact machines without additional miniDrive and up to 30 m for compact machines with additional miniDrive		090-008797-00502
Trolley		Item no.
Trolley 55-5 Transport cart (four rolls) for transporting a power source, a cooling unit and a gas cylinder Solid, stable design		090-008632-00000
Trolley 55-6 Transport cart (four rolls) for transporting a power source, a cooling unit and a gas cylinder Four rolls For transporting a power source, a cooling unit and one or two shielding gas cylinders Crane-liftable using four fixing points as standard Supplied with roll brakes Solid, stable design		090-008825-00000
Options for welding machines		Item no.
ON Filter TG.0003 Dirt filter for air inlet Comprised of two filter units		092-002662-00000
ON D Barrel TG.0003 Wire guide Rolliner for drum feed		092-007929-00000
Options for retrofitting		Item no.
ON WAK TG.03/TG.04/TG.09/K.02 Wheel assembly kit Wheel set – facilitates work at frequently changing welding sites		092-001356-00000

Options for retrofitting

ON Case

Tool box for mounting to transport cart Trolley 55-5/Trolley 55-6

All tools and replacement parts always to hand.

- **Only available in conjunction with Trolley 55-5 without an additional cooling unit**
- **In conjunction with Trolley 55-6, if using a cooling unit, the option "ON Extender" must also be ordered**



Item no.

092-002899-00000

Phoenix puls 402 - 552 RC

MULTIMATRIX

/rootArc®/rootArc®puls
 /forceArc®/forceArc®puls
 /Impuls
 /superPuls



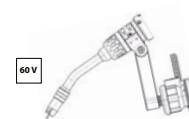
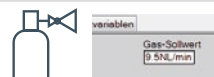
- Multiprocess MIG/MAG pulse welding machine without front control
- Set up on external operating panel or notebook with PC300.NET software
- Equipped at no extra charge with EWM Synergic characteristics for forceArc, forceArc puls, rootArc, rootArc puls and superPuls
- Equipped at no extra charge with Synergic characteristics for GMAW welding of steel/CrNi/aluminium
- Ready to connect an M Drive 4 ROB 5 LI/RE wire feeder
- Ready to connect a media separation box F Drive ROB 5 LI/RE for frontDrive robot welding torches
- Standard interface for automated welding (start/stop, current flows, emergency stop)
- Optional RINT X12 interfaces, BUSINT X11 industrial bus interface, ewm Xnet quality management software
- Parameters adjustable via interfaces: 510 JOBS each with 15 programs in program mode; wire feed speed, arc length correction and arc dynamics in control signal operation
- Optimised for automated applications: Unique second generation digital system for reproducible welding results of the highest possible quality, easy to integrate into automated systems
- Automated and mechanised applications in the production of machinery, cars, vehicles, containers, equipment and ships
- Modular, cranable, stackable
- Gas cooled, with optional cool82 cooling unit also water cooled
- Can be optionally connected to LAN or WiFi, ewm Xnet compatible
- PC interface for PC300 XQ software
- 5 m mains supply lead
- 100 % tested and free-welded

Phoenix	402	552
Setting range for welding current	5 A - 400 A	5 A - 550 A
Duty cycle 40 °C	400 A / 40 %	–
	350 A / 60 %	550 A / 60 %
	300 A / 100 %	420 A / 100 %
Open circuit voltage	79 V	
Mains voltage	400 V	
Tolerances	-25 % - +20 %	
Mains frequency	20 A / 50 Hz / 60 Hz	32 A / 50 Hz / 60 Hz
Recommended generator power	23.2 kVA	38.9 kVA
Protection classification	IP23	
Safety marking		
EMC class	A	
Dimensions (L x B x H)	780 mm x 375 mm x 625 mm	
Weight	78.5 kg	
Standards	IEC 60974-1 and -10 CL.A	

Type	Designation	Item no.
Phoenix 402 puls MM RC XR	Multiprocess MIG/MAG pulse welding machine without front control	090-005523-00502
Phoenix 552 puls MM RC XR	Multiprocess MIG/MAG pulse welding machine without front control	090-005525-00502

Options/accessories

Options for retrofitting		Item no.
ON STACK XX2 Connection set for stacking welding machines		092-007856-00000
ON Expert 2.0 ROB Expert 2.0 remote control retrofit		092-003082-00000
Factory-fit options		Item no.
OW ATCASE XR Factory-fit option: ATCASE interface fitted to power source		092-003213-00001
OW GAS REGULATION XR Factory-fit option: Gas setting for MIG/MAG robot power sources in the XR series		092-003139-00001
OW 60 V SENSOR VOLTAGE XR Factory-fit option: increased sensor voltage for MIG/MAG XR robot power sources		092-008770-00001



Phoenix puls 402 - 552 Expert 2.0

MULTIMATRIX

/rootArc®/rootArc®puls
 /forceArc®/forceArc®puls
 /Impuls
 /superPuls



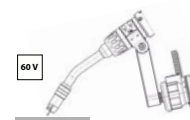
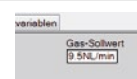
- Multiprocess MIG/MAG pulse welding machine with front control
- Installation via Expert 2.0 control with intuitive user guidance on an LCD display and plain text display of all welding parameters and functions
- Equipped at no extra charge with EWM Synergic characteristics for forceArc, forceArc puls, rootArc, rootArc puls and superPuls
- Equipped at no extra charge with Synergic characteristics for GMAW welding of steel/CrNi/aluminium
- Ready to connect an M Drive 4 ROB 5 LI/RE wire feeder
- Ready to connect a media separation box F Drive ROB 5 LI/RE for frontDrive robot welding torches
- Standard interface for automated welding (start/stop, current flows, emergency stop)
- Optional RINT X12 interfaces, BUSINT X11 industrial bus interface, ewm Xnet quality management software
- Parameters adjustable via interfaces: 510 JOBS each with 15 programs in program mode; wire feed speed, arc length correction and arc dynamics in control signal operation
- Optimised for automated applications: Unique second generation digital system for reproducible welding results of the highest possible quality, easy to integrate into automated systems
- Automated and mechanised applications in the production of machinery, cars, vehicles, containers, equipment and ships
- Modular, crenable, stackable
- Gas cooled, with optional cool82 cooling unit also water cooled
- Can be optionally connected to LAN or WiFi, ewm Xnet compatible
- PC interface for PC300 XQ software
- 5 m mains supply lead
- 100 % tested and free-welded

Phoenix	402	552
Setting range for welding current	5 A - 400 A	5 A - 550 A
Duty cycle 40 °C	400 A / 40 %	–
	350 A / 60 %	550 A / 60 %
	300 A / 100 %	420 A / 100 %
Open circuit voltage	79 V	
Mains voltage	400 V	
Tolerances	-25 % - +20 %	
Mains frequency	20 A / 50 Hz / 60 Hz	32 A / 50 Hz / 60 Hz
Recommended generator power	23.2 kVA	38.9 kVA
Protection classification	IP23	
Safety marking		
EMC class	A	
Dimensions (L x B x H)	780 mm x 375 mm x 625 mm	
Weight	78.5 kg	
Standards	IEC 60974-1 and -10 CL.A	

Type	Designation	Item no.
Phoenix 402 Expert 2.0 puls MM XR	Multiprocess MIG/MAG pulse welding machine with front control	090-005527-00502
Phoenix 552 Expert 2.0 puls MM XR	Multiprocess MIG/MAG pulse welding machine with front control	090-005529-00502

Options/accessories

Options for retrofitting		Item no.
ON STACK XX2 Connection set for stacking welding machines		092-007856-00000
Factory-fit options		Item no.
OW ATCASE XR Factory-fit option: ATCASE interface fitted to power source		092-003213-00001
OW GAS REGULATION XR Factory-fit option: Gas setting for MIG/MAG robot power sources in the XR series		092-003139-00001
OW EXPERT 2.0 LG ROB Expert 2.0 LAN gateway (ex works only)		092-003078-00001
OW EXPERT 2.0 WLG ROB Expert 2.0 WiFi gateway (ex works only)		092-003079-00001
OW 60 V SENSOR VOLTAGE XR Factory-fit option: increased sensor voltage for MIG/MAG XR robot power sources		092-008770-00001



Taurus 402 - 552 RC

MULTIMATRIX

/rootArc®
/forceArc®
/superPuls



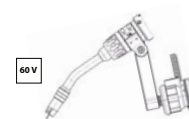
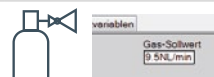
- Multiprocess MIG/MAG standard welding machine without front control
- Set up on external operating panel or notebook with PC300.NET software
- Equipped at no extra charge with EWM certified Synergic characteristics for forceArc, root-Arc and supePuls
- Equipped at no extra charge with Synergic characteristics for GMAW welding of steel/CrNi/aluminium
- Ready to connect an M Drive 4 ROB 5 LI/RE wire feeder
- Ready to connect a media separation box F Drive ROB 5 LI/RE for frontDrive robot welding torches
- Standard interface for automated welding (start/stop, current flows, emergency stop)
- Optional RINT X12 interfaces, BUSINT X11 industrial bus interface, ewm Xnet quality management software
- Parameters adjustable via interfaces: 510 JOBS each with 15 programs in program mode; wire feed speed, arc length correction and arc dynamics in control signal operation
- Optimised for automated applications: Unique second generation digital system for reproducible welding results of the highest possible quality, easy to integrate into automated systems
- Automated and mechanised applications in the production of machinery, cars, vehicles, containers, equipment and ships
- Modular, crenable, stackable
- Gas cooled, with optional cool82 cooling unit also water cooled
- Can be optionally connected to LAN or WiFi, ewm Xnet compatible
- PC interface for PC300 XQ software
- 5 m mains supply lead
- 100 % tested and free-welded

Taurus	402	552
Setting range for welding current	5 A - 400 A	5 A - 550 A
Duty cycle 40 °C	400 A / 40 %	–
	350 A / 60 %	550 A / 60 %
	300 A / 100 %	420 A / 100 %
Open circuit voltage	79 V	
Mains voltage	400 V	
Tolerances	-25 % - +20 %	
Mains frequency	20 A / 50 Hz / 60 Hz	32 A / 50 Hz / 60 Hz
Recommended generator power	23.2 kVA	38.9 kVA
Protection classification	IP23	
Safety marking		
EMC class	A	
Dimensions (L x B x H)	780 mm x 375 mm x 625 mm	
Weight	78.5 kg	
Standards	IEC 60974-1 and -10 CL.A	

Type	Designation	Item no.
Taurus 402 MM RC XR	Multiprocess MIG/MAG standard welding machine without front control	090-005515-00502
Taurus 552 MM RC XR	Multiprocess MIG/MAG standard welding machine without front control	090-005517-00502

Options/accessories

Options for retrofitting		Item no.
ON STACK XX2 Connection set for stacking welding machines		092-007856-00000
ON Expert 2.0 ROB Expert 2.0 remote control retrofit		092-003082-00000
Factory-fit options		Item no.
OW ATCASE XR Factory-fit option: ATCASE interface fitted to power source		092-003213-00001
OW GAS REGULATION XR Factory-fit option: Gas setting for MIG/MAG robot power sources in the XR series		092-003139-00001
OW 60 V SENSOR VOLTAGE XR Factory-fit option: increased sensor voltage for MIG/MAG XR robot power sources		092-008770-00001



Taurus 402 - 552 Expert 2.0

MULTIMATRIX

/rootArc®
/forceArc®
/superPuls








- Multiprocess MIG/MAG standard welding machine with front control
- Installation via Expert 2.0 control with intuitive user guidance on an LCD display and plain text display of all welding parameters and functions
- Equipped at no extra charge with EWM certified Synergic characteristics for forceArc, root-Arc and supePuls
- Equipped at no extra charge with Synergic characteristics for GMAW welding of steel/CrNi/aluminium
- Ready to connect an M Drive 4 ROB 5 LI/RE wire feeder
- Ready to connect a media separation box F Drive ROB 5 LI/RE for frontDrive robot welding torches
- Standard interface for automated welding (start/stop, current flows, emergency stop)
- Optional RINT X12 interfaces, BUSINT X11 industrial bus interface, ewm Xnet quality management software
- Parameters adjustable via interfaces: 510 JOBS each with 15 programs in program mode; wire feed speed, arc length correction and arc dynamics in control signal operation
- Optimised for automated applications: Unique second generation digital system for reproducible welding results of the highest possible quality, easy to integrate into automated systems
- Automated and mechanised applications in the production of machinery, cars, vehicles, containers, equipment and ships
- Modular, crenable, stackable
- Gas cooled, with optional cool82 cooling unit also water cooled
- Can be optionally connected to LAN or WiFi, ewm Xnet compatible
- PC interface for PC300 XQ software
- 5 m mains supply lead
- 100 % tested and free-welded

Taurus	402	552
Setting range for welding current	5 A - 400 A	5 A - 550 A
Duty cycle 40 °C	400 A / 40 %	–
	350 A / 60 %	550 A / 60 %
	300 A / 100 %	420 A / 100 %
Open circuit voltage	79 V	
Mains voltage	400 V	
Tolerances	-25 % - +20 %	
Mains frequency	20 A / 50 Hz / 60 Hz	32 A / 50 Hz / 60 Hz
Recommended generator power	23.2 kVA	38.9 kVA
Protection classification	IP23	
Safety marking		
EMC class	A	
Dimensions (L x B x H)	780 mm x 375 mm x 625 mm	
Weight	78.5 kg	
Standards	IEC 60974-1 and -10 CL.A	

Type	Designation	Item no.
Taurus 402 MM Expert 2.0 XR	Multiprocess MIG/MAG standard welding machine with front control	090-005519-00502
Taurus 552 MM Expert 2.0 XR	Multiprocess MIG/MAG standard welding machine with front control	090-005521-00502

Options/accessories

Options for retrofitting		Item no.
ON STACK XX2 Connection set for stacking welding machines		092-007856-00000
Factory-fit options		Item no.
OW EXPERT 2.0 LG ROB Expert 2.0 LAN gateway (ex works only)		092-003078-00001
		
OW EXPERT 2.0 WLG ROB Expert 2.0 WiFi gateway (ex works only)		092-003079-00001
		
OW ATCASE XR Factory-fit option: ATCASE interface fitted to power source		092-003213-00001
		
OW GAS REGULATION XR Factory-fit option: Gas setting for MIG/MAG robot power sources in the XR series		092-003139-00001
		
OW 60 V SENSOR VOLTAGE XR Factory-fit option: increased sensor voltage for MIG/MAG XR robot power sources		092-008770-00001
		

Options/accessories

Trolley		Item no.
PALETTE ROB XX2 Transport pallet for power source and add-on module Steady and stable design thanks to the welded structure Suitable for use with forklifts		090-008275-00000
		
TROLLY ROB XX2 Transport cart for a power source with an add-on module Steady and stable design thanks to the welded structure		090-008278-00000
		
Accessories		Item no.
System bus distributor box, SCO		
SPLITTER 4x 7POL SPLITTER 2x 7POL		090-508290-01942
		090-508290-05018
Options for welding machines		Item no.
OW 440/460/480 Volt Equipment for 355/405/505 and 351/401/451/501/551 machines for 3x 440/460/480 V mains connection (excluding compact machines from the 355 series or Tetrix AC/DC machines) –factory fitting, no retrofitting Multi-voltage design for operation with mains voltages of 440 V, 460 V and 480 V Not possible with the compact 355 series machines or Tetrix AC/DC welding machines!		092-002647-00001
		
Connection cables		Item no.
Connection cable, 19-pole, one-sided wire end ferrules		
RA5 19POL 1x 5M RA10 19POL 1x 10M RA15 19POL 1x 15M RA20 19POL 1x 20M RA25 19POL 1x 25M		092-001569-00005
		092-001569-00010
		092-001569-00015
		092-001569-00020
		092-001569-00025
Welding leads		Item no.
Workpiece lead with cable lug		
WK70/CL 5m WK70/CL 10m WK95/CL 5m WK95/CL 10m		092-002078-00005
		092-002078-00010
		092-001990-00005
		092-001990-00010
Pressure regulators		Item no.
Pressure regulator with flow meter Two stage, high precision pressure regulator with float type meter for flow measurement Second stage guarantees a constant volume discharge over the whole pressure process		
Optimator AR/MIX 200bar 20l G1/4" Optimator AR/MIX 200 bar, W21,8 G1/4" 30l Optimator AR/H2 200bar 20l G3/8"L		094-011839-00000
		096-000220-00000
		094-011841-00000
Pressure regulator with manometer Manufactured in accordance with ISO 2503 Maximum primary pressure of 230 bar Single-stage Infinite and highly accurate adjustment Safety manometer with pressure meter or flow meter (bar/psi or litres per minute) With cut-off valve		
		394-002910-00015
DM 842 Ar/CO2 230bar 15l D DM 842 Ar/CO2 230bar 30l D		394-002910-00030

Pressure regulators		Item no.
Pressure regulator with manometer Manufactured in accordance with ISO 2503 Maximum primary pressure of 230 bar Single-stage Infinite and highly accurate adjustment Safety manometer with pressure meter or flow meter (bar/psi or litres per minute)		
DM 801 Ar/CO2 230bar 15l UK		394-002911-00015
DM 801 Ar/CO2 230bar 30l UK		394-002911-00030
Pressure regulator with manometer Manufactured in accordance with ISO 2503 Maximum primary pressure of 230 bar Single-stage Infinite and highly accurate adjustment Safety manometer with pressure meter or flow meter (bar/psi or litres per minute) With cut-off valve		
Proreg Ar/CO2 230bar 15l D		394-008488-10015
Proreg Ar/CO2 230bar 30l D		394-008488-10030
General		Item no.
ON AL D13/27 Cap for load sockets		092-003282-00000
Options for retrofitting		Item no.
ON FILTER XX2 Dirt filter for air inlet for robot power sources		092-002714-00000
32A 5POLE/CEE Mains plug ► Suitable for all machines with a welding current of 350 A and above (except compact Phoenix 355, compact Taurus 355 and Picomig 355)		094-000207-00000
Mains plug		Item no.
Mains plug, assembled Mains plug, factory fitting (no retrofitting) ► Suitable for all machines with a welding current of 350 A and above (except compact Phoenix 355, compact Taurus 355 and Picomig 355)		
OW CEE 32A		092-008215-00000
OW CEE 63A		092-008216-00000

Gateways



- Networking via integrated Expert 2.0 control with LAN connection for alpha Q puls MM, Phoenix puls MM and Taurus MM machine series
- Option for machines with integrated Expert 2.0 control only

Type	Designation	Item no.
OW EXPERT 2.0 LG ROB	Expert 2.0 LAN gateway (ex works only)	092-003078-00001

Options/accessories

Xnet hardware	Item no.
SCAN BC 8PoI	090-008823-00000
Scanner	
For component management in conjunction with Xnet software	
Scan QR codes and barcodes	
Scan codes from an LCD screen	
When connecting to welding machines with integrated Xnet gateway, the optional OW 8-pole scanner is required on the machine side	



Gateways



- Networking through built-in Expert 2.0 control system with WiFi connection
- For alpha Q puls MM, Phoenix puls MM and Taurus MM machines
- Option for machines with integrated Expert 2.0 control only

Type	Designation	Item no.
OW EXPERT 2.0 WLG ROB	Expert 2.0 WiFi gateway (ex works only)	092-003079-00001

Options/accessories

Xnet hardware	Item no.
SCAN BC 8Pol	090-008823-00000

Scanner

For component management in conjunction with Xnet software

Scan QR codes and barcodes

Scan codes from an LCD screen

When connecting to welding machines with integrated Xnet gateway, the optional OW 8-pole scanner is required on the machine side



Gateways



- Xnet LAN gateway
- **Range of functions:**
- Connecting welding machines without integrated Xnet components to an Xnet system (for all EWM machines with integrated 7-pole interface)
- Data transfer via network cable
- USB interface for data recording and data transfer
- Connection of a barcode scanner possible
- Registration option via Xbutton
- Digital display with click wheel operation
- **The following information is shown on the display:**
- network status, network configuration, nominal/actual welding parameters, JOB information, Xnet monitoring of the welding parameters in real time, WPQR welding data assistant, component information, errors and warnings in the system
- **For using it, an Xnet-machine licence is required**

Dimensions (L x B x H)

420 mm x 235 mm x 115 mm

Type	Designation	Item no.
Xnet LAN Gateway	LAN gateway in external housing	090-008833-00502

Options/accessories

Xnet hardware	Item no.
SCAN BC 8PoI	090-008823-00000

Scanner

For component management in conjunction with Xnet software

Scan QR codes and barcodes

Scan codes from an LCD screen

When connecting to welding machines with integrated Xnet gateway, the optional OW 8-pole scanner is required on the machine side



Gateways



- Xnet WiFi gateway
- **Range of functions:**
 - Connecting welding machines without integrated Xnet components to an Xnet system (for all EWM machines with integrated 7-pole interface)
 - Data transfer via WiFi or network cable
 - USB interface for data recording and data transfer
 - Connection of a barcode scanner possible
 - Registration option via Xbutton
 - Digital display with click wheel operation
- **The following information is shown on the display:**
 - network status, network configuration, nominal/actual welding parameters, JOB information, Xnet monitoring of the welding parameters in real time, WPQR welding data assistant, component information, errors and warnings in the system
- **For using it, an Xnet-machine licence is required**

Dimensions (L x B x H)

420 mm x 235 mm x 115 mm

Type	Designation	Item no.
Xnet WiFi Gateway	WiFi gateway in external casing	090-008834-00502

Options/accessories

Xnet hardware	Item no.
SCAN BC 8Pol Scanner For component management in conjunction with Xnet software Scan QR codes and barcodes Scan codes from an LCD screen When connecting to welding machines with integrated Xnet gateway, the optional OW 8-pole scanner is required on the machine side	090-008823-00000



Options/accessories

Connection cables

Connection cable, 7-pole

7-pole connection cable, suitable for installation in drag chains

► **Connection and extension cable for external LAN and WiFi gateway, panel, remote control**

FRV-25 7POL 10m

FRV-25 7POL 15m

FRV-25 7POL 20m

FRV-25 7POL 25m

FRV-25 7POL 30m



Item no.

092-003417-00010

092-003417-00015

092-003417-00020

092-003417-00025

092-003417-00030

Connection cable extension

Digital 7-pole cable

Digital 7-pole cable

Extension for 7-pole remote control with permanently installed cable

Connection cable for remote control and gateway without permanently installed cable

FRV 7POL 0.5m

FRV 7POL 1m

FRV 7POL 5m

FRV 7POL 10m

FRV 7POL 15m

FRV 7POL 20m

FRV 7POL 25m



Item no.

092-000201-00004

092-000201-00002

092-000201-00003

092-000201-00000

092-000201-00005

092-000201-00001

092-000201-00007

Overview

MIG/MAG XR automation		Page
Operating panel/remote control	RCX Expert 2.0 Rob	108
	R50 ROB	109

Operating panel/remote control **RCX Expert 2.0 Rob**



- Operating panel for setting welding parameters for RC power sources without front control
- Can also be used as an additional control unit on power sources with front control
- Intuitive user guidance via LCD and plain text display of all welding parameters and functions
- Program mode using 15 programs per JOB
- Economical solution: Operating panel required for programming only, not for operation
- Wire feed speed (m/min.), arc correction (volt) and arc dynamics (soft/hard) directly adjustable using two rotary knobs
- Easy to set and change parameters using the click wheel
- Easy switching of welding procedure at the press of a button, e.g. from forceArc/forceArc puls to rootArc/rootArc puls or coldArc/coldArc puls or standard/pulse
- Setting of all parameters in program sequence
- Easy offline data transfer via USB port
- Xbutton for hierarchised access authorisation

Dimensions (L x B x H)

250 mm x 230 mm x 108 mm

Weight

2 kg

Type	Designation	Item no.
RCX Expert 2.0 Rob 2m	Control panel	090-008809-00002
RCX Expert 2.0 Rob 5m	Control panel	090-008809-00005
RCX Expert 2.0 Rob 10m	Control panel	090-008809-00010
RCX Expert 2.0 Rob 15m	Control panel	090-008809-00015

Operating panel/remote control R50 ROB







- Remote control for mechanised application and use with alpha Q puls MM, Phoenix puls MM and Taurus MM
- Standalone control, all of the welding machine's functions can be set directly at the working site
- Robust metal casing with rubber feet, retaining clip and holding magnet, 7-pole connection socket
- Cable not supplied in delivery, please order connection cable separately

Dimensions (L x B x H)	250 mm x 230 mm x 108 mm
Weight	3.2 kg

Type	Designation	Item no.
R50 ROB 7POL	Remote control for mechanised applications	090-008782-00000

Options/accessories

Connection cables		Item no.
Connection cable, 7-pole		 
7-pole connection cable, suitable for installation in drag chains		
► Connection and extension cable for external LAN and WiFi gateway, panel, remote control		
FRV-25 7POL 10m		
FRV-25 7POL 15m		
FRV-25 7POL 20m		
FRV-25 7POL 25m		
FRV-25 7POL 30m		
FRV-25 7POL 30m		092-003417-00010
		092-003417-00015
		092-003417-00020
		092-003417-00025
		092-003417-00030
Connection cable extension		Item no.
Digital 7-pole cable		 
Digital 7-pole cable		
Extension for 7-pole remote control with permanently installed cable		
Connection cable for remote control and gateway without permanently installed cable		
FRV 7POL 0.5m		
FRV 7POL 1m		
FRV 7POL 5m		
FRV 7POL 10m		
FRV 7POL 15m		092-000201-00004
FRV 7POL 20m		092-000201-00002
FRV 7POL 25m		092-000201-00003
		092-000201-00000
		092-000201-00005
		092-000201-00001
		092-000201-00007

Overview

MIG/MAG XR automation		Page
Wire feeder description	M drive 4 ROB 5 XR – front view	112
	M drive 4 ROB 5 XR – rear view	113
	M drive 4 Rob 2X ZT	114
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	Options for wire feeders	116

M drive 4 ROB 5 XR – front view

The new robot wire feeder is lightweight, weighing in at just 5.5 kg without any extras. It is also available in two versions for clockwise and anti-clockwise operation. Contrary to previous wire feeders, there is no built-in motor control but it is available with media connections on the front or back. The standard version with rear media connections is mainly used for assembly on the third robot axis.

The HW model with media connections on the front is used for hollow wrist robots. The standard version can also be used for hollow wrist robots if necessary, depending on the type of robot. Furthermore, the new M drive 4 ROB 5 XR is characterised by its easy handling and assembly.



- 1** Acrylic glass hood for checking the drive unit
- 2** 4-roll eFeed drive for the highest demands
- 3** Optional connection sets for different wire guides
- 4** Push-button for
 - Wire inching
 - Wire return
 - Gas test
- 5** Stable, insulated mounting rails
- 6** Optional blow-out function for cleaning the torch
- 7** Torch connection socket, 19-pole, for analogue control signals such as a collision sensor or push/pull torch drive
- 8** Euro torch connector (optional Dinse connector and EWM ECS connectors)
- 9** Optional quick connect coupling for coolant feed and return

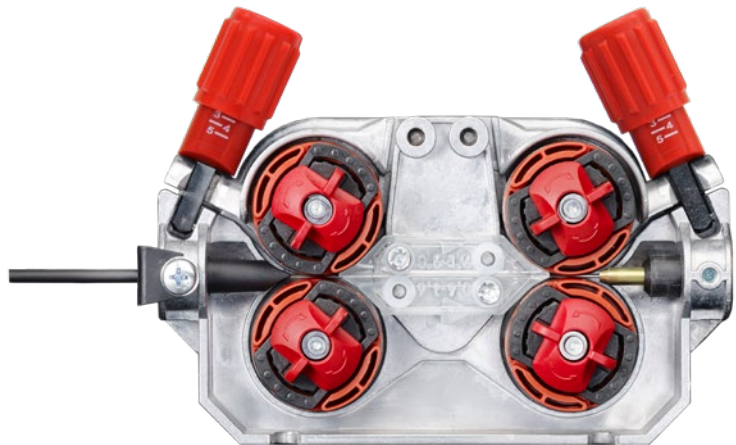
M drive 4 ROB 5 XR – rear view



- 1 Secure fixed connection with a cover for the load cable
- 2 G1/4 connection for gas hose
- 3 G1/4 connection for blow-out (optional)
- 4 Optional connection sets for different wire guides
- 5 Connection socket, 23-pole for intermediate hose package

EWM's own innovative eFeed wire feeder

4-roll drive (quadruple meshing)
 Fully-automated wire inching until the wire comes into contact with the workpiece
 Captive roll fasteners
 Tool-free roll change
 Drive roll sets, each with four wire feed rolls, colour-coded for various wire diameters and groove shapes
 Conversion kits no longer needed
 Exchange rolls in just three steps – instantly, without tools and with captive parts
 Adjustable contact pressure



M drive 4 Rob 2X ZT

Can be universally used as an additional drive unit for robot power sources. For wire feeding when there are large distances between the spool/drum and welding torch



- 1** Inspection window for checking the drive unit
- 2** 4-roll eFeed drive for the highest demands
- 3** Push-button for
 - Wire inching
 - Wire return
 - Gas test
 - Blow out
- 4** Stable, insulated mounting rails



- 1** Connection socket, 7-pole (digital), for connecting the control cable to the power source
- 2** Optional connection sets for different wire guides

F drive Rob 5 XR

MIG/MAG robot media separation box to connect to alpha Q, Phoenix or Taurus XR robot power sources in conjunction with EWM frontDrive robot welding torches. Available in two versions for clockwise and anti-clockwise operation. Also available with front or rear media connections.



- 1 Acrylic glass hood for checking the drive unit
- 2 Optional connection sets for different wire guides
- 3 Push-button for
 - Wire inching
 - Wire return
 - Gas test
- 4 Stable, insulated mounting rails
- 5 Optional blow-out function for cleaning the torch
- 6 Torch connection socket, 19-pole, for analogue control signals such as a collision sensor and frontDrive drive unit
- 7 EWM powerConnector torch connector
- 8 Optional quick connect coupling for coolant feed and return



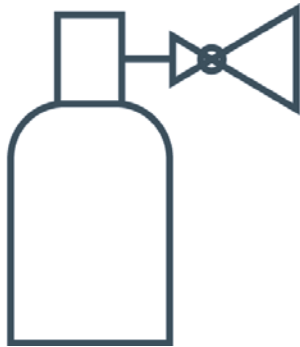
- 1 Secure fixed connection with a cover for the load cable
- 2 G1/4 connection for gas hose
- 3 G1/4 connection for blow-out (optional)
- 4 Optional connection sets for different wire guides
- 5 Connection socket, 23-pole for intermediate hose package



frontDrive RMT301G

Options for wire feeders

Overview of possible options for ROB 5 wire feeders



Ex works option: Gas pressure sensor for ROB 5

- Increased process reliability because the gas pressure is checked before welding
- The wire feeder features a gas valve with upstream pressure monitoring for this purpose



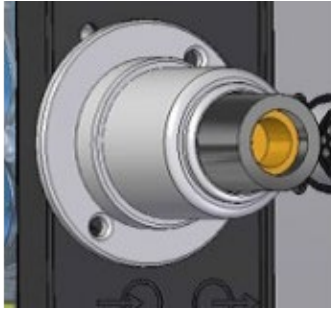
Ex works option: Welding torch blow-out for ROB 5

- Built-in blow-out valve for torch cleaning
- Easy actuation using the interface
- High-end valve with a large air outlet and operating pressure up to 10 bar



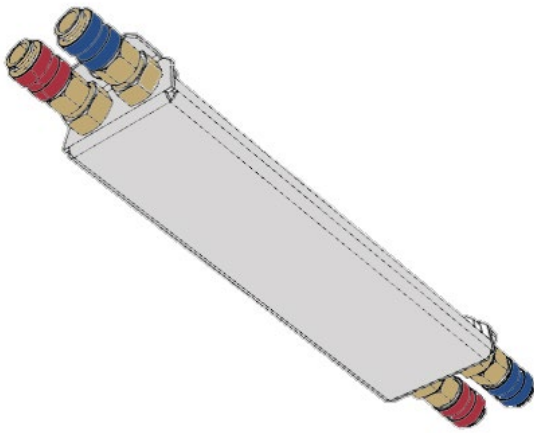
Ex works option: Built-in EWM Euro torch connector for ROB 5

- Optimised wire guiding up to directly in front of the drive rolls
- Perfect for applications with soft wire filler materials, e.g. aluminium
- Retrofitting of ECS connection required on the torch side



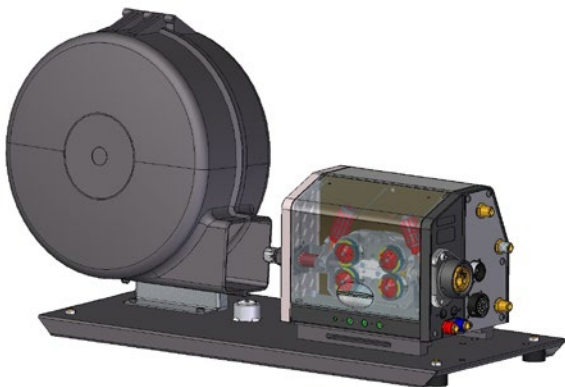
Ex works option: Built-in Dinse connector for ROB 5

- Dinse connector installed ex works



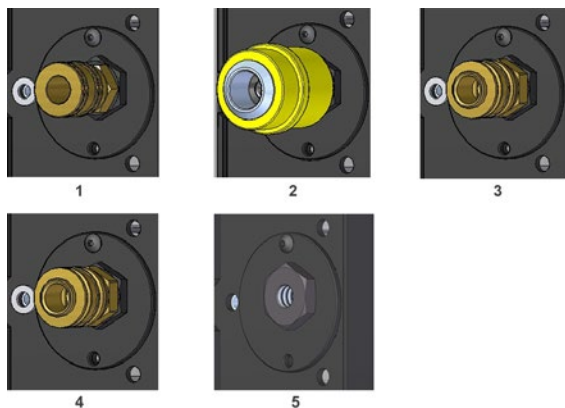
Retrofitting option: Water cooling for ROB 5

- With this retrofitting option, the wire feeder can be equipped with water cooling



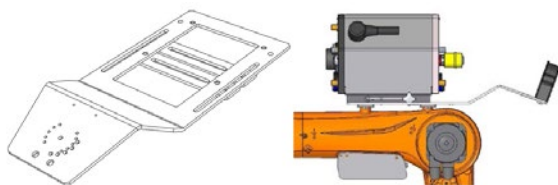
Retrofitting option: Wire spool support for ROB 5

- The wire spool holder makes the wire feeder perfect for mechanised applications
- The wire feeder and wire spool holder are tightly screwed together
- Left and right versions available



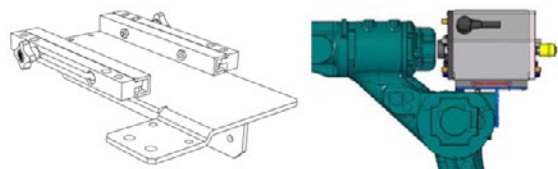
Connection sets for wire feeds to ROB 5

- Wire feed connection:
- 1. Wire Lead
- 2. Wire Conduit
- 3. Masterliner
- 4. Rolliner
- 5. Maxiglide



ROB 5 universal mounting console for conventional robots

- Console that makes installation onto the robot easy, includes strain relief for the intermediate hose package
- The console is suitable for almost all standard robots thanks to its intelligent design
- The length and width mounting can be adapted to the respective robot



ROB 5 mounting console for hollow wrist robots

- Console that makes installation behind the third robot axis easy, includes strain relief for the intermediate hose package
- Insulated sliding rails make positioning the wire feeder even simpler
- The wire feeder can be installed without tools using star grips and secured with limit using a groove
- The wire feeder can be easily pushed back to facilitate exchanging the welding torch or liner

Overview

MIG/MAG XR automation		Page
Wire feed units	M drive 4 Rob 5 XR	120
	M drive 4 Rob 5 HW XR	122
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	F drive Rob 5 XR HW	128
	MEDIA BOX XR	130
	Wire feeder configurations	131

Wire feed units **M drive 4 Rob 5 XR**



- MIG/MAG robot wire feeder, lightweight version
- For use on Taurus, Phoenix and alpha Q robot power sources from the XR series
- Available in two versions for clockwise and anti-clockwise operation.
- Secure power connection for intermediate hose package thanks to screw-in connection
- Media connections on the back for use on most standard robots
- Push/pull capability when used with EWM MTR242W PP and MTR500W PP welding torches
- Standard 19-pole connection socket for signal exchange, e.g. collision protection
- 4-roll drive in metal construction with large 37-mm rolls, ex works for 1.0/1.2-mm steel wires
- Separate push-buttons on the side for wire inching/reverse inching and gas test
- With inspection window for checking the wire feeder
- Especially light, for gas-cooled systems, optional retrofitting for water-cooled systems
- Compact machine for simple mounting on the robot
- High level of process security thanks to the control, regulation and monitoring of all process data via a central, digital bus system
- Operating status signal light
- eFeed: Innovative 4-roll drive (quadruple meshing)
 - Double ball bearings per axle
 - Tool-free roll change, permanently secured roll fasteners
 - Adjustable contact pressure for each roll pair
 - Rolls colour-coded for wire diameter and material
- Mounting console with strain relief for installation on the robot (optional)
- Water connection by means of quick connect coupling (optional)
- Gas pressure sensor (optional)
- Welding torch blow-out function (optional)
- Connection sets for Wire Lead, Wire Lead Soft, Wire Conduit, Masterliner, Rolliner and Maxiglide wire feeds (optional)
- Wire spool support (optional)
- Built-in Dinse connector (optional)
- Built-in ESC Euro torch connector (optional)

Duty cycle 40 °C	550 A / 60 % 430 A / 100 %
Wire feed speed	0.5 m/min - 25 m/min
Wire-feed speed increments	0.1 m/min
Factory-installed roll equipment	1,0-1,2 mm UNI , Steel
Torch connection	Euro torch connector
Protection classification	IP20
Safety marking	CE EAC
EMC class	A
Dimensions (L x B x H)	271 mm x 179 mm x 212 mm
Weight	5.8 kg
Standards	IEC 60974-1, -5 and -10 CL.A

Type	Designation	Item no.
M drive 4 Rob 5 XR LI	Wire feeder for automated applications, opens on left, gas-cooled, Euro torch connector	090-005534-00502
M drive 4 Rob 5 XR RE	Wire feeder for automated applications, opens on right, gas-cooled, Euro torch connector	090-005535-00502

► Please refer to Wire feeder accessories > eFeed drive rolls section for replacement rolls and drive rolls for various welding consumables

Options/accessories

Wire feed units	Item no.
CAPTUB L=77 mm Capillary tube	094-022192-00000
FR74/L=74MM/ID=4,4/AD=5,0MM Guide tube	094-025990-00000
Accessories	Item no.
CONNECTOR DRIVE ROB5 XR MASTERLINER Connection set for Masterliner wire feed to ROB 5	092-003145-00000
CONNECTOR DRIVE ROB5 XR ROLLINER Connection set for wire feed Rolliner to ROB 5	092-003146-00000
CONNECTOR DRIVE ROB5 XR WIRE CONDUIT Connection set for Wire feed WIRE CONDUIT to ROB 5	092-003144-00000
CONNECTOR DRIVE ROB5 XR WIRE LEAD Connection set for wire feed WIRE LEAD, WIRE LEAD SOFT to ROB 5	092-003143-00000
CONNECTOR DRIVE ROB5 XR MAXIGLIDE Connection set for Maxiglides wire feed to ROB 5	092-004213-00000
Options for retrofitting	Item no.
ON COOL W ROB 5 XR Retrofit option, water cooling, Rob 5	092-003140-00000
	
<hr/>	
Rob wire spool support, left Wire spool support for wire feeder Left version suitable for M drive 4 Rob 3X LI, M drive 4 Rob 5 XR LI, M drive 4 Rob 2X, M drive 4 Rob 2X MF, tigSpeed drive 4 Rob Right version suitable for M drive 4 Rob 3X RE, M drive 4 Rob 5 XR RE	
ON DV CAP ROB LI	
ON DV CAP ROB RE Rob wire spool support, right	
Factory-fit options	Item no.
OW DZA ROB 5 XR Factory-fit option: Dinse Euro torch connector	092-003211-00001
OW ECS ROB 5 XR Built-in EWM Euro torch connector for ROB 5	092-003212-00001
OW PRESSURE SWITCH ROB 5 XR Factory-fit option: Gas pressure sensor, Rob 5	092-003141-00001
OW BLOW OUT ROB 5 XR Factory-fit option: Welding torch, blow out, Rob 5	092-003142-00001

Wire feed units **M drive 4 Rob 5 HW XR**



- MIG/MAG robot wire feeder, lightweight version
- For use on Taurus, Phoenix and alpha Q robot power sources from the XR series
- Available in two versions for clockwise and anti-clockwise operation.
- Secure power connection for intermediate hose package thanks to screw-in connection
- Media connections on the front for use on most hollow wrist robots
- Version opening to the left largely for use on hollow wrist robots; please take into account the robot-specific mounting consoles
- Push/pull capability when used with EWM MTR242W PP and MTR500W PP welding torches
- Standard 19-pole connection socket for signal exchange, e.g. collision protection
- 4-roll drive in metal construction with large 37-mm rolls, ex works for 1.0/1.2-mm steel wires
- Separate push-buttons on the side for wire inching/reverse inching and gas test
- With inspection window for checking the wire feeder
- Especially light, for gas-cooled systems, optional retrofitting for water-cooled systems
- Compact machine for simple mounting on the hollow wrist robot
- High level of process security thanks to the control, regulation and monitoring of all process data via a central, digital bus system
- Operating status signal light
- eFeed: Innovative 4-roll drive (quadruple meshing)
 - Double ball bearings per axle
 - Tool-free roll change, permanently secured roll fasteners
 - Adjustable contact pressure for each roll pair
 - Rolls colour-coded for wire diameter and material
- Mounting console with strain relief for installation on the robot (optional)
- Water connection by means of quick connect coupling (optional)
- Gas pressure sensor (optional)
- Welding torch blow-out function (optional)
- Connection sets for Wire Lead, Wire Lead Soft, Wire Conduit, Masterliner, Rolliner and Maxiglide wire feeds (optional)
- Wire spool support (optional)
- Built-in Dinse connector (optional)
- Built-in ESC Euro torch connector (optional)

Duty cycle 40 °C	550 A / 60 % 430 A / 100 %
Wire feed speed	0.5 m/min - 25 m/min
Wire-feed speed increments	0.1 m/min
Factory-installed roll equipment	1,2 mm , Steel
Torch connection	Euro torch connector
Protection classification	IP20
Safety marking	CE EAC
EMC class	A
Dimensions (L x B x H)	271 mm x 179 mm x 212 mm
Weight	5.8 kg
Standards	IEC 60974-1, -5 and -10 CL.A

Type	Designation	Item no.
M drive 4 Rob 5 HW XR LI	Wire feeder for automated applications, opens on left, gas-cooled, Euro torch connector	090-005536-00502
M drive 4 Rob 5 HW XR RE	Wire feeder for automated applications, opens on right, gas-cooled, Euro torch connector	090-005537-00502

► Please refer to Wire feeder accessories > eFeed drive rolls section for replacement rolls and drive rolls for various welding consumables

Options/accessories

Wire feed units	Item no.
CAPTUB L=77 mm Capillary tube	094-022192-00000
FR74/L=74MM/ID=4,4/AD=5,0MM Guide tube	094-025990-00000
Accessories	Item no.
CONNECTOR DRIVE ROB5 XR MASTERLINER Connection set for Masterliner wire feed to ROB 5	092-003145-00000
CONNECTOR DRIVE ROB5 XR ROLLINER Connection set for wire feed Rolliner to ROB 5	092-003146-00000
CONNECTOR DRIVE ROB5 XR WIRE CONDUIT Connection set for Wire feed WIRE CONDUIT to ROB 5	092-003144-00000
CONNECTOR DRIVE ROB5 XR WIRE LEAD Connection set for wire feed WIRE LEAD, WIRE LEAD SOFT to ROB 5	092-003143-00000
CONNECTOR DRIVE ROB5 XR MAXIGLIDE Connection set for Maxiglides wire feed to ROB 5	092-004213-00000
Options for retrofitting	Item no.
ON COOL W ROB 5 XR Retrofit option, water cooling, Rob 5	092-003140-00000
	
Rob wire spool support, left Wire spool support for wire feeder Left version suitable for M drive 4 Rob 3X LI, M drive 4 Rob 5 XR LI, M drive 4 Rob 2X, M drive 4 Rob 2X MF, tigSpeed drive 4 Rob Right version suitable for M drive 4 Rob 3X RE, M drive 4 Rob 5 XR RE	
ON DV CAP ROB LI	
ON DV CAP ROB RE Rob wire spool support, right	
092-003217-00000	
092-003484-00000	
Factory-fit options	Item no.
OW DZA ROB 5 XR Factory-fit option: Dinse Euro torch connector	092-003211-00001
OW ECS ROB 5 XR Built-in EWM Euro torch connector for ROB 5	092-003212-00001
OW PRESSURE SWITCH ROB 5 XR Factory-fit option: Gas pressure sensor, Rob 5	092-003141-00001
OW BLOW OUT ROB 5 XR Factory-fit option: Welding torch, blow out, Rob 5	092-003142-00001

Wire feed units **M drive 4 Rob 2X ZT**



- MIG/MAG robot wire feed unit, intermediate wire feeder
- For use on Taurus, Phoenix and alpha Q robot power sources from the XR series in conjunction with M Drive 4 ROB 5 or F Drive 4 ROB 5
- Only in combination with M Drive 4 Rob 2
- Version opening to the left available
- For wire feeding when there are large distances between spool/drum and welding torch
- Reproducible wire feed speed thanks to fully digital control with incremental transducer, adjustable in increments of 0.1 m/min
- 4-roll drive in metal construction with large 37-mm rolls, ex works for 1.0/1.2-mm steel wires
- Separate buttons on the front for wire return/inching and gas test
- Tool-free roller changing, captive screws
- With inspection window for checking the wire feeder
- Control using a digital incremental transducer
- Compact machine for easy installation
- Compact machine for simple mounting on or near the robot
- High level of process security thanks to the control, regulation and monitoring of all process data via a central, digital bus system
- eFeed: Innovative 4-roll drive (quadruple meshing)
 - Double ball bearings per axle
 - Tool-free roll change, permanently secured roll fasteners
 - Adjustable contact pressure for each roll pair
 - Rolls colour-coded for wire diameter and material
- Mounting console with strain relief for mounting (optional)
- Connection sets for Wire Lead, Wire Lead Soft, Wire Conduit, Masterliner, Rolliner wire feeds (optional)

Wire feed speed	0.5 m/min - 24 m/min
Wire-feed speed increments	0.1 m/min
Factory-installed roll equipment	1,0 + 1,2 mm , Steel
Protection classification	IP23
Safety marking	CE EAC
EMC class	A
Dimensions (L x B x H)	407 mm x 201 mm x 229 mm
Weight	9.8 kg
Standards	IEC 60974-1, -5 and -10 CL.A

Type	Designation	Item no.
M drive 4 Rob 2X ZT	Intermediate drive for automated applications	090-005480-00502

- Please specify the wire guide used when ordering!
- Please refer to Wire feeder accessories > eFeed drive rolls section for replacement rolls and drive rolls for various welding consumables

Options/accessories

Wire feed units	Item no.
CAPTUB L=168 mm; Ø ≤ 1,6 mm Capillary tube	094-011951-00000
FR165/L=159MM/ID=4,4/AD=5,0MM Guide tube	094-006050-00000
Accessories	Item no.
CONNECTOR DRIVE ROB2 WIRE CONDUIT Connection set for wire feed ROB 2 Wire Conduit Connection set for wire feed	092-008205-00000
CONNECTOR DRIVE ROB2 ROLLINER Connection set for Rolliner wire feed to ROB 2 Connection set for wire feed	092-007917-00000
CONNECTOR DRIVE ROB 2 Masterliner Connection set for Masterliner wire feed to ROB 2	092-003639-00000
CONNECTOR DRIVE ROB2 WIRE LEAD Connection set for Wire Lead wire feed to ROB 2 Connection set for wire feed	092-007913-00000
CONNECTOR DRIVE ROB 2 MAXIGLIDE Connection set for Maxiglide wire feed to ROB 2	092-004405-00000
Options for retrofitting	Item no.
Rob wire spool support, left	
Wire spool support for wire feeder	
Left version suitable for M drive 4 Rob 3X LI, M drive 4 Rob 5 XR LI, M drive 4 Rob 2X, M drive 4 Rob 2X MF, tigSpeed drive 4 Rob	
Right version suitable for M drive 4 Rob 3X RE, M drive 4 Rob 5 XR RE	
ON DV CAP ROB LI	092-003217-00000
ON DV CAP ROB RE	092-003484-00000
Rob wire spool support, right	
Assembly consoles	Item no.
MONTAGE CONSOLE ROB 2 UNIVERSAL	
Mounting console for wire feed unit	
Console for simple mounting on robot, with strain relief for intermediate hose package	
Fastening holes (drill pattern) for different robot types already available	
Console for mounting of drive 4 Rob 2, drive 4 Rob 2 MF, M drive 4 Rob 2 HS and tigSpeed drive 4 Rob	
For mounting on the robot axis	
Insulated assembly	
	092-001746-00000

Media devices **F drive Rob 5 XR**

- MIG/MAG robot media separation box, lightweight version
- For use on Taurus, Phoenix and alpha Q robot power sources from the XR series in conjunction with EWM frontDrive welding torch system
- Opening to right or left side
- Secure power connection for intermediate hose package thanks to screw-in connection
- Media connections on the back for use on most standard robots
- Standard 19-pole connection socket for signal exchange, e.g. collision protection
- 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
- With inspection window for checking the wire guide
- Compact machine for simple mounting on the robot
- High level of process security thanks to the control, regulation and monitoring of all process data via a central, digital bus system
- Operating status signal light
- EWM powerConnector hose package connection
- Mounting console with strain relief for installation on the robot (optional)
- Water connection by means of quick connect coupling (optional)
- Gas pressure sensor (optional)
- Welding torch blow-out function (optional)
- Connection sets for Wire Lead, Wire Lead Soft, Wire Conduit, Masterliner, Rolliner and Maxiglide wire feeds (optional)

Duty cycle 40 °C

550 A / 60 %

430 A / 100 %

Torch connection

EWM powerConnector

Protection classification

IP23

Safety marking**EMC class**

A

Dimensions (L x B x H)

271 mm x 179 mm x 212 mm

Weight



4.3 kg

Standards

IEC 60974-1, -5, -10

Type	Designation	Item no.
F drive Rob 5 XR LI	Media separation box for frontDrive robot welding torch, opens on the left	090-005538-00502
F Drive Rob 5 XR RE	Media separation box for frontDrive robot welding torches, opens on the right	090-005539-00502

Options/accessories

Accessories	Item no.
CONNECTOR DRIVE ROB5 XR MASTERLINER Connection set for Masterliner wire feed to ROB 5	092-003145-00000
CONNECTOR DRIVE ROB5 XR ROLLINER Connection set for wire feed Rolliner to ROB 5	092-003146-00000
CONNECTOR DRIVE ROB5 XR WIRE CONDUIT Connection set for Wire feed WIRE CONDUIT to ROB 5	092-003144-00000
CONNECTOR DRIVE ROB5 XR WIRE LEAD Connection set for wire feed WIRE LEAD, WIRE LEAD SOFT to ROB 5	092-003143-00000
CONNECTOR DRIVE ROB5 XR MAXIGLIDE Connection set for Maxiglides wire feed to ROB 5	092-004213-00000
Options for retrofitting	Item no.
ON COOL W ROB 5 XR Retrofit option, water cooling, Rob 5	092-003140-00000
	
Rob wire spool support, left Wire spool support for wire feeder Left version suitable for M drive 4 Rob 3X LI, M drive 4 Rob 5 XR LI, M drive 4 Rob 2X, M drive 4 Rob 2X MF, tigSpeed drive 4 Rob Right version suitable for M drive 4 Rob 3X RE, M drive 4 Rob 5 XR RE	
ON DV CAP ROB LI	092-003217-00000
ON DV CAP ROB RE Rob wire spool support, right	092-003484-00000
Factory-fit options	Item no.
OW PRESSURE SWITCH ROB 5 XR Factory-fit option: Gas pressure sensor, Rob 5	092-003141-00001
OW BLOW OUT ROB 5 XR Factory-fit option: Welding torch, blow out, Rob 5	092-003142-00001



Media devices **F drive Rob 5 XR HW**

- MIG/MAG robot media separation box, lightweight version
- For use on Taurus, Phoenix and alpha Q robot power sources from the XR series in conjunction with EWM frontDrive welding torch system
- Opening to right or left side
- Secure power connection for intermediate hose package thanks to screw-in connection
- Media connections on the front for use on most hollow wrist robots
- Version opening to the left largely for use on hollow wrist robots; please take into account the robot-specific mounting consoles
- Standard 19-pole connection socket for signal exchange, e.g. collision protection
- 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
- With inspection window for checking the wire guide
- Compact machine for simple mounting on the robot
- High level of process security thanks to the control, regulation and monitoring of all process data via a central, digital bus system
- Operating status signal light
- EWM powerConnector hose package connection
- Mounting console with strain relief for installation on the robot (optional)
- Water connection by means of quick connect coupling (optional)
- Gas pressure sensor (optional)
- Welding torch blow-out function (optional)
- Connection sets for Wire Lead, Wire Lead Soft, Wire Conduit, Masterliner, Rolliner and Maxiglide wire feeds (optional)

Duty cycle 40 °C	550 A / 60 % 430 A / 100 %
Torch connection	EWM powerConnector
Protection classification	IP20
Safety marking	CE EAC
EMC class	A
Dimensions (L x B x H)	271 mm x 179 mm x 212 mm
Weight	4.3 kg
Standards	IEC 60974-1

Type	Designation	Item no.
F drive Rob 5 XR HW LI	Media separation box for frontDrive robot welding torch, opens on the left	090-005540-00502
F drive Rob 5 XR HW RE	Media separation box for frontDrive robot welding torches, opens on the right	090-005541-00502

Options/accessories

Accessories	Item no.
CONNECTOR DRIVE ROB5 XR MASTERLINER Connection set for Masterliner wire feed to ROB 5	092-003145-00000
CONNECTOR DRIVE ROB5 XR ROLLINER Connection set for wire feed Rolliner to ROB 5	092-003146-00000
CONNECTOR DRIVE ROB5 XR WIRE CONDUIT Connection set for Wire feed WIRE CONDUIT to ROB 5	092-003144-00000
CONNECTOR DRIVE ROB5 XR WIRE LEAD Connection set for wire feed WIRE LEAD, WIRE LEAD SOFT to ROB 5	092-003143-00000
CONNECTOR DRIVE ROB5 XR MAXIGLIDE Connection set for Maxiglides wire feed to ROB 5	092-004213-00000
Options for retrofitting	Item no.
ON COOL W ROB 5 XR Retrofit option, water cooling, Rob 5	092-003140-00000
<div> <div> Rob wire spool support, left Wire spool support for wire feeder Left version suitable for M drive 4 Rob 3X LI, M drive 4 Rob 5 XR LI, M drive 4 Rob 2X, M drive 4 Rob 2X MF, tigSpeed drive 4 Rob Right version suitable for M drive 4 Rob 3X RE, M drive 4 Rob 5 XR RE </div> <div>   </div> </div>	<div> <div>092-003217-00000</div> <div>092-003484-00000</div> </div>
ON DV CAP ROB LI	
ON DV CAP ROB RE Rob wire spool support, right	
Factory-fit options	Item no.
OW PRESSURE SWITCH ROB 5 XR Factory-fit option: Gas pressure sensor, Rob 5	092-003141-00001
OW BLOW OUT ROB 5 XR Factory-fit option: Welding torch, blow out, Rob 5	092-003142-00001

Media devices **MEDIA BOX XR**



- Media separation box XR
- For use on robot intermediate hose packages from the XR series (092-003114-XXXXX)
- Connects two intermediate hose packages at joints
- Compact machine for easy installation

Duty cycle 40 °C	600 A / 40 % 470 A / 100 %
Protection classification	IP23
Safety marking	CE
Dimensions (L x B x H)	325 mm x 145 mm x 235 mm
Weight	3.03 kg
Standards	IEC 60974-1 and -10 CL.A

Type	Designation	Item no.
MEDIA BOX XR	Media separation box XR	090-S00000-04702

Wire feeder configurations

Options for retrofitting

Selection	Type	Designation	Item no.
<input type="radio"/>	M drive 4 Rob 5 XR LI	Wire feeder for automated applications, opens on left, gas-cooled, Euro torch connector	090-005534-00502
<input type="radio"/>	M drive 4 Rob 5 XR RE	Wire feeder for automated applications, opens on right, gas-cooled, Euro torch connector	090-005535-00502
<input type="radio"/>	M drive 4 Rob 5 HW XR LI	Wire feeder for automated applications, opens on left, gas-cooled, Euro torch connector	090-005536-00502
<input type="radio"/>	M drive 4 Rob 5 HW XR RE	Wire feeder for automated applications, opens on right, gas-cooled, Euro torch connector	090-005537-00502
Accessories			
<input type="radio"/>	CONNECTOR DRIVE ROB5 XR WIRE LEAD	Connection set for wire feed WIRE LEAD, WIRE LEAD SOFT to ROB 5	092-003143-00000
<input type="radio"/>	CONNECTOR DRIVE ROB5 XR WIRE CONDUIT	Connection set for Wire feed WIRE CONDUIT to ROB 5	092-003144-00000
<input type="radio"/>	CONNECTOR DRIVE ROB5 XR MASTERLINER	Connection set for Masterliner wire feed to ROB 5	092-003145-00000
<input type="radio"/>	CONNECTOR DRIVE ROB5 XR ROLLINER	Connection set for wire feed Rolliner to ROB 5	092-003146-00000
<input type="radio"/>	CONNECTOR DRIVE ROB5 XR MAXIGLIDE	Connection set for Maxiglide wire feed to ROB 5	092-004213-00000
Factory-fit options			
<input type="radio"/>	OW PRESSURE SWITCH ROB 5 XR	Factory-fit option: Gas pressure sensor, Rob 5	092-003141-00001
<input type="radio"/>	OW BLOW OUT ROB 5 XR	Factory-fit option: Welding torch, blow out, Rob 5	092-003142-00001
<input type="radio"/>	OW DZA ROB 5 XR	Factory-fit option: Dinse Euro torch connector	092-003211-00001
<input type="radio"/>	OW ECS ROB 5 XR	Built-in EWM Euro torch connector for ROB 5	092-003212-00001
Options for retrofitting			
<input type="radio"/>	ON COOL W ROB 5 XR	Retrofit option, water cooling, Rob 5	092-003140-00000

Options for retrofitting

Selection	Type	Designation	Item no.
<input type="radio"/>	F drive Rob 5 XR LI	Media separation box for frontDrive robot welding torch, opens on the left	090-005538-00502
<input type="radio"/>	F Drive Rob 5 XR RE	Media separation box for frontDrive robot welding torches, opens on the right	090-005539-00502
<input type="radio"/>	F drive Rob 5 XR HW LI	Media separation box for frontDrive robot welding torch, opens on the left	090-005540-00502
<input type="radio"/>	F drive Rob 5 XR HW RE	Media separation box for frontDrive robot welding torches, opens on the right	090-005541-00502
Accessories			
<input type="radio"/>	CONNECTOR DRIVE ROB5 XR WIRE LEAD	Connection set for wire feed WIRE LEAD, WIRE LEAD SOFT to ROB 5	092-003143-00000
<input type="radio"/>	CONNECTOR DRIVE ROB5 XR WIRE CONDUIT	Connection set for Wire feed WIRE CONDUIT to ROB 5	092-003144-00000
<input type="radio"/>	CONNECTOR DRIVE ROB5 XR MASTERLINER	Connection set for Masterliner wire feed to ROB 5	092-003145-00000
<input type="radio"/>	CONNECTOR DRIVE ROB5 XR ROLLINER	Connection set for wire feed Rolliner to ROB 5	092-003146-00000
<input type="radio"/>	CONNECTOR DRIVE ROB5 XR MAXIGLIDE	Connection set for Maxiglide wire feed to ROB 5	092-004213-00000
Factory-fit options			
<input type="radio"/>	OW PRESSURE SWITCH ROB 5 XR	Factory-fit option: Gas pressure sensor, Rob 5	092-003141-00001
<input type="radio"/>	OW BLOW OUT ROB 5 XR	Factory-fit option: Welding torch, blow out, Rob 5	092-003142-00001
Options for retrofitting			
<input type="radio"/>	ON COOL W ROB 5 XR	Retrofit option, water cooling, Rob 5	092-003140-00000

Wire feeder configurations

Options for retrofitting

Selection	Type	Designation	Item no.
<input type="radio"/>	M drive 4 Rob 2X ZT	Intermediate drive for automated applications	090-005480-00502
Accessories			
<input type="radio"/>	CONNECTOR DRIVE ROB 2 Masterliner	Connection set for Masterliner wire feed to ROB 2	092-003639-00000
<input type="radio"/>	OW CONNECTOR DRIVE ROB 2X ZT WIRE LEAD	Wire exit connection for Wire Lead wire feed to ROB 2X ZT	092-004400-00000
<input type="radio"/>	OW CONNECTOR DRIVE ROB 2X ZT WIRE CONDUIT	Wire exit connection for Wire Conduit wire feed to ROB 2X ZT	092-004401-00000
<input type="radio"/>	OW CONNECTOR DRIVE ROB 2X ZT MASTERLINER	Wire exit connection for Masterliner wire feed to ROB 2X ZT	092-004402-00000
<input type="radio"/>	OW CONNECTOR DRIVE ROB 2X ZT ROLLINER	Wire exit connection for Rolliner wire feed to ROB 2X ZT	092-004403-00000
<input type="radio"/>	OW CONNECTOR DRIVE ROB 2 X ZT MAXIGLIDE	Wire exit connection for Maxiglide wire feed to ROB 2X ZT	092-004404-00000
<input type="radio"/>	CONNECTOR DRIVE ROB 2 MAXIGLIDE	Connection set for Maxiglide wire feed to ROB 2	092-004405-00000
<input type="radio"/>	CONNECTOR DRIVE ROB2 WIRE LEAD	Connection set for Wire Lead wire feed to ROB 2	092-007913-00000
<input type="radio"/>	CONNECTOR DRIVE ROB2 ROLLINER	Connection set for Rolliner wire feed to ROB 2	092-007917-00000
<input type="radio"/>	CONNECTOR DRIVE ROB2 WIRE CONDUIT	Connection set for wire feed ROB 2 Wire Conduit	092-008205-00000

Overview

Accessories			Page
Accessories	Wire feed unit accessories	eFeed drive rolls	135
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		Description	XXX
		Item code	149
		XR intermediate hose packages	
		Accessories	151
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		Wire spool holder	157
		Overview of wire spool holders robot-specific	159
		Wire end sensor	163

eFeed drive rolls

Drive roll set



- Drive roll set, V-groove for steel, stainless steel and brazing

Wire Ø	0.8 mm
Colour code	white

Type	Designation	Colour code	PU Units	Groove shape	Item no.
FE 4R 0.8 MM/0.03 INCH WHITE	Drive roll set, 37 mm, 4 rolls, V-groove for steel, stainless steel, nickel and copper alloys	white	1	V-groove	092-002770-00008
AL 4R 0.8 MM/0.03 INCH WHITE/YELLOW	Drive roll set, 37 mm, 4 rollers, U-groove for aluminium	white/yellow		U-groove	092-002771-00008
FUEL 4R 0.8 MM/0.03 INCH WHITE/ORANGE	Drive roll set, 37 mm, 4 rolls, V-groove/knurl for flux cored wire	White/orange		V-groove/knurl	092-002848-00008

► Four roll set

Drive roll set



- Drive roll set, V-groove for steel, stainless steel and brazing

Wire Ø	0.9 mm - 1 mm
Colour code	Blue

Type	Designation	Colour code	PU Units	Groove shape	Item no.
FE 4R 1.0 MM/0.04 INCH BLUE	Drive roll set, 37 mm, 4 rolls, V-groove for steel, stainless steel, nickel and copper alloys	Blue	1	V-groove	092-002770-00010
AL 4R 1.0 MM/0.04 INCH BLUE/YELLOW	Drive roll set, 37 mm, 4 rollers, U-groove for aluminium	blue/yellow		U-groove	092-002771-00010
FUEL 4R 1.0 MM/0.04 INCH BLUE/ORANGE	Drive roll set, 37 mm, 4 rolls, V-groove/knurl for flux cored wire	Blue/orange		V-groove/knurl	092-002848-00010

► Four roll set

Drive roll set, 37 mm, 4 rolls, V-groove for steel, stainless steel and brazing



- Drive roll set, V-groove for steel, stainless steel and brazing

Wire Ø	0.8 mm - 1 mm
Colour code	white/blue
Groove shape	V-groove

Type	Designation	Item no.	PU Units
FE 4R 0.8-1.0MM / 0.03-0.04 INCH BLUE/WHITE	Drive roll set, 37 mm, 4 rolls, V-groove for steel, stainless steel, nickel and copper alloys	092-002770-00009	1

► Four roll set

Drive roll set



- Universal rolls for wire diameter 1.0 mm–1.2 mm

Wire Ø	1 mm - 1.2 mm
Colour code	Blue/Red
Groove shape	V-groove

Type	Designation	Item no.	PU Units
FE 4R 1.0-1.2MM / 0.04-0.045 INCH BLUE/RED	Drive roll set, 37 mm, 4 rolls, V-groove for steel, stainless steel, nickel and copper alloys	092-002770-00011	1

► Four roll set

Drive roll set



- Drive roll set, V-groove for steel, stainless steel and brazing

Wire Ø	1.2 mm
Colour code	Red

Type	Designation	Colour code	PU Units	Groove shape	Item no.
FE 4R 1.2 MM/0.045 INCH RED	Drive roll set, 37 mm, 4 rolls, V-groove for steel, stainless steel, nickel and copper alloys	Red	1	V-groove	092-002770-00012
AL 4R 1.2 MM/0.045 INCH RED/YELLOW	Drive roll set, 37 mm, 4 rollers, U-groove for aluminium	red/yellow		U-groove	092-002771-00012
FUEL 4R 1.2 MM/0.045 INCH RED/ORANGE	Drive roll set, 37 mm, 4 rolls, V-groove/knurl for flux cored wire	Red/orange		V-groove/knurl	092-002848-00012

► Four roll set

Drive roll set



- Drive roll set, V-groove for steel, stainless steel and brazing

Wire Ø	1.4 mm
Colour code	Green

Type	Designation	Colour code	PU Units	Groove shape	Item no.
FE 4R 1.4 MM/0.052 INCH GREEN	Drive roll set, 37 mm, 4 rolls, V-groove for steel, stainless steel, nickel and copper alloys	Green	1	V-groove	092-002770-00014
AL 4R 1.4MM/0.052 INCH GREEN/YELLOW	Drive roll set, 37 mm, 4 rollers, U-groove for aluminium	green/yellow		U-groove	092-002771-00014
FUEL 4R 1.4 MM/0.052 INCH GREEN/ORANGE	Drive roll set, 37 mm, 4 rolls, V-groove/knurl for flux cored wire	Green/orange		V-groove/knurl	092-002848-00014

► Four roll set

Drive roll set



- Drive roll set, V-groove for steel, stainless steel and brazing

Wire Ø	1.6 mm
Colour code	Black

Type	Designation	Colour code	PU Units	Groove shape	Item no.
FE 4R 1.6 MM/0.06 INCH BLACK	Drive roll set, 37 mm, 4 rolls, V-groove for steel, stainless steel, nickel and copper alloys	Black	1	V-groove	092-002770-00016
AL 4R 1.6 MM/0.06 INCH BLACK/YELLOW	Drive roll set, 37 mm, 4 rollers, U-groove for aluminium	black/yellow		U-groove	092-002771-00016
FUEL 4R 1.6 MM/0.06 INCH BLACK/ORANGE	Drive roll set, 37 mm, 4 rolls, V-groove/knurl for flux cored wire	Black/orange		V-groove/knurl	092-002848-00016

► Four roll set

eFeed drive rolls

Drive roll set

- Drive roll set, V-groove for steel, stainless steel and brazing



Colour code

Grey

Type	Designation	Colour code	Wire Ø mm	PU Units	Groove shape	PE	Item no.
FE 4R 2.0 MM/0.08 INCH GREY	Drive roll set, 37 mm, 4 rolls, V-groove for steel, stainless steel, nickel and copper alloys	Grey	2.0	1	V-groove	PU	092-002770-00020
AL 4R 2.0 MM/0.08 INCH GREY/YELLOW	Drive roll set, 37 mm, 4 rollers, U-groove for aluminium	Grey/yellow			U-groove		092-002771-00020
FUEL 4R 2.0 MM/0.08 INCH GREY/ORANGE	Drive roll set, 37 mm, 4 rolls, V-groove/knurl for flux cored wire	Grey/orange			V-groove/knurl	PC	092-002848-00020
SET WF 2,0-3,2mm eFeed	Wire feed set for rolls with diameters greater than 1.6 mm	–	–	–	–		092-019404-00000

► For using rolls with a diameter of more than 1.6 mm, the SET WF 2.0–3.2 mm eFeed (092-019404-00000) option is necessary!

► Four roll set

Drive roll set

- Drive roll set, V-groove for steel, stainless steel and brazing



Colour code

Brown

Type	Designation	Colour code	Wire Ø mm	PU Units	Groove shape	PE	Item no.
FE 4R 2.4 MM/0.095 INCH BROWN	Drive roll set, 37 mm, 4 rolls, V-groove for steel, stainless steel, nickel and copper alloys	Brown	2.4	1	V-groove	PU	092-002770-00024
AL 4R 2.4 MM/0.095 INCH BROWN/YELLOW	Drive roll set, 37 mm, 4 rollers, U-groove for aluminium	Brown/yellow			U-groove		092-002771-00024
FUEL 4R 2.4 MM/0.095 INCH BROWN/ORANGE	Drive roll set, 37 mm, 4 rolls, V-groove/knurl for flux cored wire	Brown/orange			V-groove/knurl	PC	092-002848-00024
SET WF 2,0-3,2mm eFeed	Wire feed set for rolls with diameters greater than 1.6 mm	–	–	–	–		092-019404-00000

► For using rolls with a diameter of more than 1.6 mm, the SET WF 2.0–3.2 mm eFeed (092-019404-00000) option is necessary!

► Four roll set

Drive roll set

- Drive roll set, V-groove for steel, stainless steel and brazing



Colour code

Light green

Type	Designation	Colour code	Wire Ø mm	PU Units	Groove shape	PE	Item no.
FE 4R 2.8 MM/0.11 INCH LIGHT GREEN	Drive roll set, 37 mm, 4 rolls, V-groove for steel, stainless steel, nickel and copper alloys	Light green	2.8	1	V-groove	PU	092-002770-00028
FUEL 4R 2.8 MM/0.11 INCH LIGHT GREEN/ORANGE	Drive roll set, 37 mm, 4 rolls, V-groove/knurl for flux cored wire	light green/orange			V-groove/knurl		092-002848-00028
SET WF 2,0-3,2mm eFeed	Wire feed set for rolls with diameters greater than 1.6 mm	–	–	–	–	PC	092-019404-00000

► For using rolls with a diameter of more than 1.6 mm, the SET WF 2.0–3.2 mm eFeed (092-019404-00000) option is necessary!

► Four roll set

Drive roll set

- Drive roll set, V-groove for steel, stainless steel and brazing



Colour code

Violet

Type	Designation	Colour code	Wire Ø mm	PU Units	Groove shape	PE	Item no.
FE 4R 3.2 MM/0.12 INCH VIOLET	Drive roll set, 37 mm, 4 rolls, V-groove for steel, stainless steel, nickel and copper alloys	Violet	3.2	1	V-groove	PU	092-002770-00032
SET WF 2,0-3,2mm eFeed	Wire feed set for rolls with diameters greater than 1.6 mm	–	–	–	–	PC	092-019404-00000

- For using rolls with a diameter of more than 1.6 mm, the SET WF 2.0–3.2 mm eFeed (092-019404-00000) option is necessary!
- Four roll set

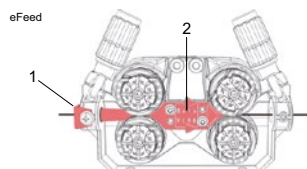
DV X



- You will find further information in the operating instructions.
- Contact our EWM Service Hotline on +49 2680 181-290 or send an email to service@ewm-group.com if you have any questions.
- Wire feed roll support consumables set for eFeed
 - **Problem:**
 - The plastic adapter of the wire feed roll support of the eFeed drive may wear out after long, intensive loads. This wear may cause problems in the wire feeding.
 - **EWM recommends:**
 - An annual check of the wire feed roll support as part of the EN 60974-4 inspection
 - Replacement of the wire feed roll support after 2000 hours of operation
- Includes 4 clamping adapters and all necessary add-ons.

Type	Designation	Item no.
DV X	Wire feed roll mount set	092-002960-E0000

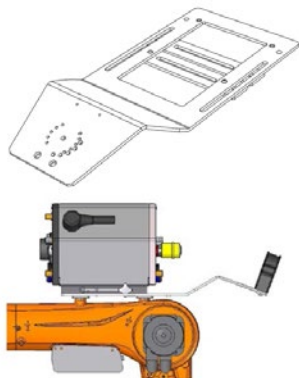
Wire guide set



Type	Designation	Item no.
SET IG 4x4 1.6mm BL	Inlet guide set	092-002780-00000
SET WF 1,6mm eFeed	Wire feed set for rolls up to 1.6 mm in diameter	092-002774-00000
SET WF 2,0-3,2mm eFeed	Wire feed set for rolls with diameters greater than 1.6 mm	092-019404-00000

Assembly consoles

MONTAGE CONSOLE ROB5 XR STANDARD



- Console that makes installation onto the robot easy, includes strain relief for the intermediate hose package
- The console is suitable for almost all standard robots thanks to its intelligent design
- The length and width mounting can be adapted to the respective robot
- Console for mounting M drive 4 ROB 5, F drive ROB 5, left or right versions
- For mounting on the robot axis
- Insulated assembly

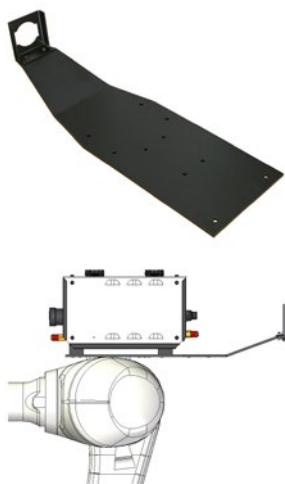
Version

Universal

Type	Designation	Item no.
MONTAGE CONSOLE ROB5 XR UNIVERSAL	Universal mounting console for ROB 5 wire feeder on the 3rd robot axis	092-003147-00000

► Other robot-specific mounting consoles available on request!

MONTAGE CONSOLE UNIVERSAL



- Console for simple mounting on robot, with strain relief for intermediate hose package
- Fastening holes (drill pattern) for different robot types already available
- Console for mounting of drive 4 Rob 2, drive 4 Rob 2 MF, M drive 4 Rob 2 HS and tigSpeed drive 4 Rob
- For mounting on the robot axis
- Insulated assembly

Type	Designation	Item no.
MONTAGE CONSOLE ROB 2 UNIVERSAL	Mounting console for wire feed unit	092-001746-00000

► Other robot-specific mounting consoles available on request!

MONTAGE CONSOLE ROB3/ROB5 2 DV



- Console for simple mounting on robot, with strain relief for intermediate hose package
- Fastening holes (drill pattern) for different robot types already available
- Console for mounting two drive 4 ROB 3 units or ROB 5, one left version and one right version
- For mounting on the robot axis
- Insulated assembly

Type	Designation	Item no.
MONTAGE CONSOLE ROB3/ROB5 2 DV	Assembly console for two wire feed units on robot	092-002406-00000

► Other robot-specific mounting consoles available on request!

ON HPP ROB5 XR

Type	Designation	Item no.
ON HPP ROB5 XR	Hose package stabilisation for Rob 5 universal mounting console	092-003218-00000

Overview of consoles and wire feeders for standard robots

Robot manufacturer	Robot types	Load	Wire feeder	Item number
ABB	IRB 1600-6/1.2	6 kg	M drive 4 Rob 5 XR LI/RE	092-002562-00000
ABB	IRB 1600-10/1.2	10 kg	M drive 4 Rob 5 XR LI/RE	092-002562-00000
ABB	IRB 1600-6/1.45	6 kg	M drive 4 Rob 5 XR LI/RE	092-002562-00000
ABB	IRB 1600-10/1.45	10 kg	M drive 4 Rob 5 XR LI/RE	092-002562-00000
ABB	IRB 2600-10/1.85	10 kg	M drive 4 Rob 5 XR LI/RE	092-003232-00000
ABB	IRB 2600-12/1.65	12 kg	M drive 4 Rob 5 XR LI/RE	092-003232-00000
ABB	IRB 2600-12/1.85	12 kg	M drive 4 Rob 5 XR LI/RE	092-003232-00000
ABB	IRB 2600-20/1.65	20 kg	M drive 4 Rob 5 XR LI/RE	092-003232-00000
ABB	IRB 4600-20/2.5	20 kg	M drive 4 Rob 5 XR LI/RE	092-003228-00000
ABB	IRB 4600-40/2.55	40 kg	M drive 4 Rob 5 XR LI/RE	092-003228-00000
ABB	IRB 4600-45/2.05	45 kg	M drive 4 Rob 5 XR LI/RE	092-003228-00000
ABB	IRB 4600-60/2.05	60 kg	M drive 4 Rob 5 XR LI/RE	092-003228-00000
ABB	IRB 1410	5 kg	M drive 4 Rob 5 XR LI/RE	092-003227-00000
ABB	IRB 2400L	7 kg	M drive 4 Rob 5 XR LI/RE	On request
ABB	IRB 2400/10	10 kg	M drive 4 Rob 5 XR LI/RE	092-003227-00000
ABB	IRB 2400/16	16 kg	M drive 4 Rob 5 XR LI/RE	092-003227-00000
COMAU	NS-12-1.85	12 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
COMAU	NS-16-1.65	16 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
COMAU	NJ-16-3.1	16 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
COMAU	NJ-40-2.5	40 kg	M drive 4 Rob 5 XR LI/RE	On request
COMAU	NJ-60-2.2	60 kg	M drive 4 Rob 5 XR LI/RE	On request
COMAU	RACER 999	7 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
FANUC	ARC Mate 50iD	7 kg	*	*
FANUC	ARC Mate 50iD/7L	7 kg	*	*
FANUC	ARC Mate 0iB	3 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
FANUC	ARC Mate 100iB	6 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
FANUC	M-710iC/20L	20 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
FANUC	R-2000iA		M drive 4 Rob 5 XR LI/RE	092-003147-00000
Hyundai	HA006B	6 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
KAWASAKI	RA005L	5 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
KAWASAKI	RA006L	6 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
KAWASAKI	RA010L	10 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
KAWASAKI	RA010N	10 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
KAWASAKI	RA020N	20 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
KAWASAKI	RS020N	20 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
KUKA	KR 6 R1820	6 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
KUKA	KR 6 R1820 HP	6 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
KUKA	KR 6 R1840-2	6 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
KUKA	KR 8 R1620	8 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
KUKA	KR 8 R1620 HP	8 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
KUKA	KR 8 R2010-2	8 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
KUKA	KR 10 R1420	10 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
KUKA	KR 10 R1420 HP	10 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
KUKA	KR 10 R1440-2	10 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
KUKA	KR 12 R1810-2	12 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
KUKA	KR 16 R1610-2	16 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
KUKA	KR 16 R2010-2	16 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
KUKA	KR 20 R1810-2	20 kg	M drive 4 Rob 5 XR LI/RE	On request
KUKA	KR 20 R3100	20 kg	M drive 4 Rob 5 XR LI/RE	092-S04023-04913
KUKA	KR 22 R1610-2	22 kg	M drive 4 Rob 5 XR LI/RE	On request
KUKA	KR 5	5 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
KUKA	KR 16	16 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
KUKA	KR 16-2	16 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
KUKA	KR 30 L16	16 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000

Robot manufacturer	Robot types	Load	Wire feeder	Item number
KUKA	KR 50 R2500	50 kg	M drive 4 Rob 5 XR LI/RE	092-004384-00000
KUKA	KR 90 R3100 extra	90 kg	M drive 4 Rob 5 XR LI/RE	092-004023-00000
Motoman	AR700	8 kg	M drive 4 Rob 5 XR LI/RE	**
Motoman	AR900	7 kg	M drive 4 Rob 5 XR LI/RE	**
Motoman	MC2000II	50 kg	M drive 4 Rob 5 XR LI/RE	On request
Motoman	K6-C	6 kg	M drive 4 Rob 5 XR LI/RE	On request
Motoman	HP20	20 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
Motoman	HP20D-6	6 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
Motoman	HP20D	20 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
Motoman	HP20RD	20 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
Motoman	HP20F	20 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
Motoman	HP20D-CR7	20 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
Motoman	UP20	20 kg	M drive 4 Rob 5 XR LI/RE	092-003147-00000
Motoman	MH5	5 kg	M drive 4 Rob 5 XR LI/RE	*
Motoman	MH5L	5 kg	M drive 4 Rob 5 XR LI/RE	*
Motoman	MH6	6 kg	M drive 4 Rob 5 XR LI/RE	**
Motoman	MH6-10	10 kg	M drive 4 Rob 5 XR LI/RE	**
Motoman	MH6S	6 kg	M drive 4 Rob 5 XR LI/RE	**
Motoman	MH6S-10	10 kg	M drive 4 Rob 5 XR LI/RE	**
Motoman	MH50	50 kg	M drive 4 Rob 5 XR LI/RE	092-003244-00000
Motoman	MH50-20	20 kg	M drive 4 Rob 5 XR LI/RE	092-003244-00000
Motoman	MH50-35	35 kg	M drive 4 Rob 5 XR LI/RE	092-003244-00000
REIS	RV10-6	6 kg	M drive 4 Rob 5 XR LI/RE	092-003245-00000
REIS	RV20-6	6 kg	M drive 4 Rob 5 XR LI/RE	092-003245-00000
REIS	RV20-16	16 kg	M drive 4 Rob 5 XR LI/RE	092-003245-00000
UNIVERSAL ROBOTS	UR5e	5 kg	*	*
UNIVERSAL ROBOTS	UR10e	10 kg	*	*
UNIVERSAL ROBOTS	UR16e	16 kg	*	*

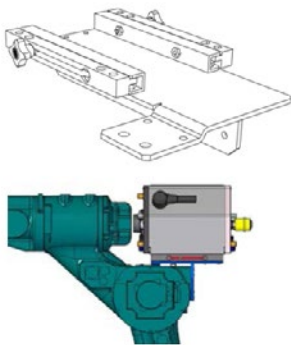
*Robot too small or poor mounting options for connecting a wire feeder! Console and wire feeder should be placed near the robot. Alternatively, use the external ON DV CAP ROB wire spool support.

**Robot potentially too small or poor mounting options for connecting a wire feeder! Testing required depending on the wire feeder, or use an ON DV CAP ROB external wire spool support.

Consoles for standard robots may need to be amended, expanded or used with additional adapter plates on-site.

Assembly consoles

MONTAGE CONSOLE ROB5 XR HOHLWELLE



- Mounting console for hollow wrist robot
- Console that makes installation behind the robot axis easy, includes strain relief for the intermediate hose package
- Easy, optimal wire feeder positioning thanks to insulated sliding rails
- The wire feeder can be installed without tools using star grips
- The wire feeder can be easily pushed back to facilitate exchanging the welding torch or liner
- The wire feeder is also secured with limit using a groove
- Insulated assembly

Type	Designation	Item no.
MONTAGE CONSOLE ROB 5 XR HW	Robotic assembly console for ROB 5 wire feeder	092-003856-00000

- An overview of consoles for hollow wrist robots can be found on the next pages.
- Other robot-specific mounting consoles available on request!

Overview of consoles and wire feeders for hollow wrist robots

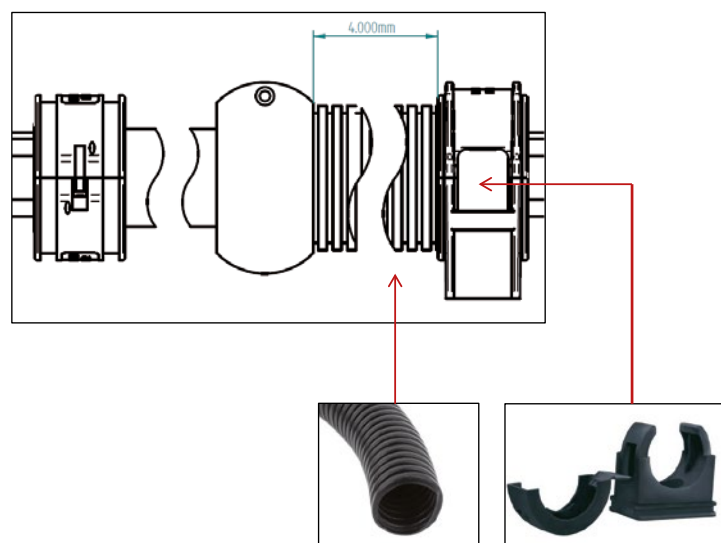
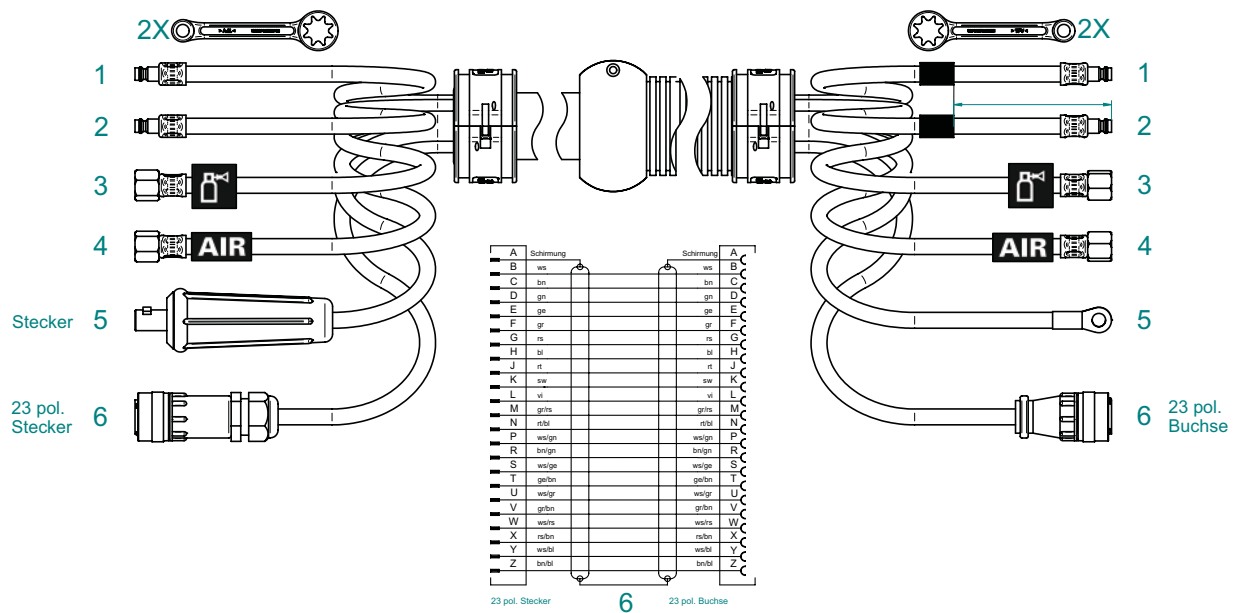
Robot manufacturer	Robot types	Load	Wire feeder	Item number
ABB	IRB 1600ID	4 kg	M drive 4 Rob 5 HW XR LI	092-003230-00000
ABB	IRB 1620ID		M drive 4 Rob 5 HW XR LI	092-003229-00000
ABB	IRB 1660ID-4/1.55	4 kg	M drive 4 Rob 5 HW XR LI	092-003230-00000
ABB	IRB 1660ID-6/1.55	6 kg	M drive 4 Rob 5 HW XR LI	092-003230-00000
ABB	IRB 2600ID-8/2.0	8 kg	M drive 4 Rob 5 HW XR LI	092-003231-00000
ABB	IRB 2600ID-15/1.85	15 kg	M drive 4 Rob 5 HW XR LI	092-003231-00000
ABB	IRB 1520ID-4/1.5	4 kg	M drive 4 Rob 5 HW XR LI	092-003229-00000
COMAU	Arc4-5-1.95	5 kg	On request	On request
COMAU	SMART5	5 kg	M drive 4 Rob 5 HW XR LI	092-003233-00000
FANUC	ARC Mate 100iC/6L	7 kg	M drive 4 Rob 5 HW XR LI	092-003208-00001
FANUC	ARC Mate 100iC/7L	7 kg	M drive 4 Rob 5 HW XR LI	092-003208-00001
FANUC	ARC Mate 100iC/8L	8 kg	M drive 4 Rob 5 HW XR LI	092-003208-00001
FANUC	ARC Mate 100iC/10L	10 kg	On request	On request
FANUC	ARC Mate 100iC/10S	10 kg	M drive 4 Rob 5 HW XR LI	092-003438-00000
FANUC	ARC Mate 100iC/12	12 kg	M drive 4 Rob 5 HW XR LI	092-003208-00001
FANUC	ARC Mate 100iC/12S	12 kg	M drive 4 Rob 5 HW XR LI	092-003235-00000
FANUC	ARC Mate 100iD	12 kg	M drive 4 Rob 5 HW XR LI	092-003745-00000
FANUC	ARC Mate 100iD/8L	8 kg	M drive 4 Rob 5 HW XR LI	092-003745-00000
FANUC	ARC Mate 100iD/10L	10 kg	M drive 4 Rob 5 HW XR LI	092-003745-00000
FANUC	ARC Mate 120iC	20 kg	M drive 4 Rob 5 HW XR LI	092-003208-00001
FANUC	ARC Mate 120iC/10L	12 kg	M drive 4 Rob 5 HW XR LI	092-003745-00000
FANUC	ARC Mate 120iC/12L	12 kg	M drive 4 Rob 5 HW XR LI	092-003208-00001
FANUC	ARC Mate 120iD	25 kg	M drive 4 Rob 5 HW XR LI	092-003745-00000
FANUC	ARC Mate 120iD/12L	12 kg	M drive 4 Rob 5 HW XR LI	092-003745-00000
FANUC	ARC Mate 100iC	10 kg	M drive 4 Rob 5 HW XR LI	092-003208-00001
FANUC	M-10ia/6L	7 kg	M drive 4 Rob 5 HW XR LI	092-003208-00001
FANUC	M-10ia/7L	7 kg	M drive 4 Rob 5 HW XR LI	092-003208-00001
FANUC	M-20ia/12L	12 kg	M drive 4 Rob 5 HW XR LI	092-003208-00001
FANUC	M-710iC/12L	20 kg	M drive 4 Rob 5 HW XR RE	092-003234-00000
Kawasaki	BA006L	6 kg	M drive 4 Rob 5 HW XR LI	092-003208-00001
Kawasaki	BA006N	6 kg	M drive 4 Rob 5 HW XR LI	092-003208-00001
KUKA	KR 6 R1820 arc HW	6 kg	M drive 4 Rob 5 HW XR LI	092-003241-00000
KUKA	KR 6 R1840-2 arc HW	6 kg	M drive 4 Rob 5 HW XR LI	092-003241-00000
KUKA	KR 8 R1420 arc HW	8 kg	M drive 4 Rob 5 HW XR LI	092-003241-00000
KUKA	KR 8 R1440-2 arc HW	8 kg	M drive 4 Rob 5 HW XR LI	092-003241-00000
KUKA	KR 8 R1620 arc HW	8 kg	M drive 4 Rob 5 HW XR LI	092-003856-00000
KUKA	KR 8 R1640-2 arc HW	8 kg	M drive 4 Rob 5 HW XR LI	092-003241-00000
KUKA	KR 8 R2100 arc HW	8 kg	M drive 4 Rob 5 HW XR LI	092-003856-00000
KUKA	KR 5 arc HW	5 kg	M drive 4 Rob 5 HW XR LI	092-003238-00000
KUKA	KR 8 R2100-2 arc HW	8 kg	M drive 4 Rob 5 HW XR LI	092-003856-00000
KUKA	KR 16 arc HW	16 kg	M drive 4 Rob 5 HW XR LI	092-003207-00000
KUKA	KR 16 L8 arc HW	8 kg	M drive 4 Rob 5 HW XR LI	092-003207-00000
Motoman	AR1440	12 kg	M drive 4 Rob 5 HW XR LI	092-003209-00000
Motoman	AR1730	25 kg	M drive 4 Rob 5 HW XR LI	092-003209-00000
Motoman	AR2010	12 kg	M drive 4 Rob 5 HW XR LI	092-003209-00000
Motoman	AR3120	20 kg	M drive 4 Rob 5 HW XR LI	092-004029-00000
Motoman	MA1440	6 kg	M drive 4 Rob 5 HW XR LI	092-003209-00000
Motoman	EA1400	3 kg	M drive 4 Rob 5 HW XR LI	092-003242-00000
Motoman	EA1800N	15 kg	M drive 4 Rob 5 HW XR LI	On request
Motoman	EA1900	3 kg	M drive 4 Rob 5 HW XR LI	092-S03209-04625
Motoman	MA1400	3 kg	M drive 4 Rob 5 HW XR LI	092-003242-00000
Motoman	MA1550	3 kg	M drive 4 Rob 5 HW XR LI	092-003242-00000
Motoman	MA1800	15 kg	M drive 4 Rob 5 HW XR LI	092-003243-00000
Motoman	MA1900	3 kg	M drive 4 Rob 5 HW XR LI	092-003243-00000

Wire feed unit accessories

Robot manufacturer	Robot types	Load	Wire feeder	Item number
Motoman	MA2010	10 kg	M drive 4 Rob 5 HW XR LI	092-003209-00000
Motoman	VA1400	3 kg	M drive 4 Rob 5 HW XR LI	092-003242-00000
Motoman	SSA2000	3 kg	M drive 4 Rob 5 HW XR LI	On request
Motoman	MH24	24 kg	M drive 4 Rob 5 HW XR LI	092-003209-00000
REIS	RV20-6HW	6 kg	On request	On request

Intermediate hose package XR **Description**

Contrary to the previous versions, the new intermediate hose packages have a 23-pole Burndy plug that can be used to connect wire feeders and power sources. Another difference is the two-part outer hose (corrugated hose and standard protective hose). The length of the corrugated hose protection is always 4 m. The intermediate hose package can be installed easily by clipping it to the console, robot and power source. The intermediate hose packages are also available as complete corrugated hose versions or without the respective protective hose.



Item numbers and calculation of prices for robot intermediate hose packages of the XR series

An item code is needed to order robot intermediate hose packages. It forms the final five digits of the item number and corresponds to the configuration of the hose package. The basic price refers to a hose package length of 1 metre. The maximum length of the hose package is 20 metres.

Codes for robot intermediate hose packages

Basic item number: 092-003114-**ABCDD**

Position in item number	Code	Designation	Additional charges	Surcharge per metre 2 m or longer
A	0	70 mm ²	-	-
	1	95 mm ²	€X	€X
B	0	Gas-cooled	-	-
	1	Water-cooled	€X	€X
C	0	No protective hose	-	-
	2	Ribbed protective hose	€X	€X
	3	4 m ribbed protective hose	€X	€X
		Remaining length is standard protective hose		
DD	01–20 m	Indication of length (1 m included in basic price) Intermediate hose package of 2 m or longer		€X

All intermediate hose packages include a 23-pole control cable.

Sample calculations:

95 mm² intermediate hose package, water-cooled, 4 m ribbed protective hose + 6 m standard protective hose, 10 m

Position in item number	Code	Designation	Additional charges	Surcharge per metre 2 m or longer
A	1	95 mm ²	€X	€X
B	1	Water-cooled	€X	€X
C	3	4 m ribbed protective hose	€X	€X
		Remaining length is standard protective hose		
DD	10	10 m length	€X	€X
Total surcharges				€X
Basic price				€X
092-003114- 1 1		Total price		€X
3 10				

70 mm² intermediate hose package, gas-cooled, 5 m ribbed protective hose, 5 m

Position in item number	Code	Designation	Additional charges	Surcharge per metre 2 m or longer
A	0	70 mm ²	-	-
B	0	Gas-cooled	-	-
C	2	5 m ribbed protective hose	€X	€X
DD	05	5 m length	€X	€X
Total surcharges				€X
Basic price				€X
092-003114- 0 0		Total price		€X
2 05				

If a continuous ribbed protective hose package is required, the code for position C is always 2.

XR intermediate hose packages

70QMM GRS 13 POL XR



- The gas hoses are diffusion-proof according to EN 559
- Highly flexible and durable
- Intermediate hose package, 23-pole
- 4-m ribbed protective hose, remaining length is standard protective hose
- Secure load connection on the wire feeder thanks to the screw connection
- Resistant to even high lateral and torsion forces

Type	Designation	Hose package length m	Item no.
70QMM GRS 23 POL XR 6M	Robot intermediate hose package, gas cooled, ribbed/ standard hose, 23-pole	6.0	092-003114-00306
70QMM GRS 23 POL XR 8M		8.0	092-003114-00308
70QMM GRS 23 POL XR 10M		10.0	092-003114-00310

95QMM WRS 13 POL XR



- The gas hoses are diffusion-proof according to EN 559
- Highly flexible and durable
- Intermediate hose package, 23-pole
- 4-m ribbed protective hose, remaining length is standard protective hose
- Secure load connection on the wire feeder thanks to the screw connection
- Resistant to even high lateral and torsion forces

Type	Designation	Hose package length m	Item no.
95QMM WRS 23 POL XR 5M	Robot intermediate hose package, water cooled, rib- bed/standard hose, 23-pole	5.0	092-003114-11305
95QMM WRS 23 POL XR 6M		6.0	092-003114-11306
95QMM WRS 23 POL XR 8M		8.0	092-003114-11308
95QMM WRS 23 POL XR 10M		10.0	092-003114-11310
95QMM WRS 23 POL XR 11M		11.0	092-003114-11311
95QMM WRS 23 POL XR 12M		12.0	092-003114-11312
95QMM WRS 23 POL XR 15M		15.0	092-003114-11315
95QMM WRS 23 POL XR 20M		20.0	092-003114-11320

70QMM GR 23 POL XR



- The gas hoses are diffusion-proof according to EN 559
- Highly flexible and durable
- Intermediate hose package, 23-pole
- Ribbed protective hose
- Secure load connection on the wire feeder thanks to the screw connection
- Resistant to even high lateral and torsion forces

Type	Designation	Hose package length m	Item no.
70QMM GR 23 POL XR 3M	Robot intermediate hose package, gas-cooled, ribbed hose, 23-pole	3.0	092-003114-00203
70QMM GR 23 POL XR 5M		5.0	092-003114-00205
70QMM GR 23 POL XR 7M		7.0	092-003114-00207
70QMM GR 23 POL XR 10M		10.0	092-003114-00210

XR intermediate hose packages

70QMM WR 23 POL XR



- The gas hoses are diffusion-proof according to EN 559
- Highly flexible and durable
- Intermediate hose package, 23-pole
- Ribbed protective hose
- Secure load connection on the wire feeder thanks to the screw connection
- Resistant to even high lateral and torsion forces

Type	Designation	Hose package length m	Item no.
70QMM WR 23 POL XR 2M	Robot intermediate hose package, water-cooled, ribbed hose, 23-pole	2.0	092-003114-01202
70QMM WR 23 POL XR 3M		3.0	092-003114-01203
70QMM WR 23 POL XR 4M		4.0	092-003114-01204
70QMM WR 23 POL XR 5M		5.0	092-003114-01205
70QMM WR 23 POL XR 7M		7.0	092-003114-01207
70QMM WR 23 POL XR 8M		8.0	092-003114-01208
70QMM WR 23 POL XR 10M		10.0	092-003114-01210
70QMM WR 23 POL XR 13M		13.0	092-003114-01213
70QMM WR 23 POL XR 15M		15.0	092-003114-01215
70QMM WR 23 POL XR 20M		20.0	092-003114-01220

95QMM WR 23 POL XR



- The gas hoses are diffusion-proof according to EN 559
- Highly flexible and durable
- Intermediate hose package, 23-pole
- Ribbed protective hose
- Secure load connection on the wire feeder thanks to the screw connection
- Resistant to even high lateral and torsion forces

Type	Designation	Hose package length m	Item no.
95QMM WR 23 POL XR 2M	Robot intermediate hose package, water-cooled, ribbed hose, 23-pole	2.0	092-003114-11202
95QMM WR 23 POL XR 3M		3.0	092-003114-11203
95QMM WR 23 POL XR 4M		4.0	092-003114-11204
95QMM WR 23 POL XR 5M		5.0	092-003114-11205
95QMM WR 23 POL XR 6M		6.0	092-003114-11206
95QMM WR 23 POL XR 7M		7.0	092-003114-11207
95QMM WR 23 POL XR 8M		8.0	092-003114-11208
95QMM WR 23 POL XR 9M		9.0	092-003114-11209
95QMM WR 23 POL XR 10M		10.0	092-003114-11210
95QMM WR 23 POL XR 12M		12.0	092-003114-11212
95QMM WR 23 POL XR 13M		13.0	092-003114-11213
95QMM WR 23 POL XR 15M		15.0	092-003114-11215
95QMM WR 23 POL XR 20M		20.0	092-003114-11220

95QMM WOS 23 POL XR



- The gas hoses are diffusion-proof according to EN 559
- Highly flexible and durable
- Intermediate hose package, 23-pole
- Without protective hose
- Secure load connection on the wire feeder thanks to the screw connection
- Resistant to even high lateral and torsion forces

Type	Designation	Hose package length m	Item no.
95QMM WOS 23 POL XR 6M	Robot intermediate hose package, water-cooled, without protective hose, 23-pole	6.0	092-003114-11006
95QMM WOS 23 POL XR 9M		9.0	092-003114-11009
95QMM WOS 23 POL XR 12M		12.0	092-003114-11012
95QMM WOS 23 POL XR 14M		14.0	092-003114-11014

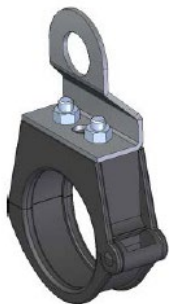
XR intermediate hose packages Accessories

ON ZWIPA-CONNECTION



Type	Designation	Item no.
ON ZWIPA-CONNECTION	Retrofit option, third-party intermediate hose package, strain relief	094-007890-00000

ON ZWIPA CONNECTION XR



Type	Designation	Item no.
ON ZWIPA CONNECTION XR	Holder for XR robot intermediate hose package as a retrofitting option	092-003219-00000

GH 2x1/4 XR

Connection

G1/4"



Type	Designation	Item no.
GH 2x1/4 XR 3m		092-003220-00000
GH 2x1/4 XR 5m	G1/4 IG/AG gas hose, extension for XR robot intermediate hose package	092-003220-00001
GH 2x1/4 XR 10m		092-003220-00002

LS KV D=60MM

Type	Designation	Item no.
LSH, 60 mm	Leather protective hose	094-020777-00000

► Minimum order quantity: 5 m

25X0,25DP/ÖLFLEX-ROBOT/11,1MM

Type	Designation	Item no.
25X0,25DP/ ÖLFLEX-ROBOT/11,1MM	Cables	094-008970-00000

23POLE/M/PLUG

Type	Designation	Item no.
23POLE/M/PLUG	Cable connector	094-007440-00000

UTG18ST

Type	Designation	Item no.
UTG18ST	Strain relief	094-012884-10000

SM20M1TK6 0.35-0.50QMM

Type	Designation	Item no.
SM20M1TK6 0.35-0.50QMM	Pin contact	024-000433-00000

UTG618 23SN

Type	Designation	Item no.
UTG618 23SN	Cable plug, socket contact, 23-pole, crown nut	094-007448-00000

23POLE/STRAIN RELIEF

Designation	Item no.
Protective cap with strain relief	094-007442-00000

SC20M1TK6 0.35-0.5QMM

Type	Designation	Item no.
SC20M1TK6 0.35-0.5QMM	Socket contact	024-000434-00000

G DI6X3

Type	Designation	Item no.
G DI6X3 R	Fabric hose, red	094-025909-00000

G DI6X3 B

Type	Designation	Item no.
G DI6X3 B	Fabric hose, blue	094-025910-00000

13,0MM ID=13,0MM/LÄNGE=17MM/D=

Type	Designation	Item no.
13,0MM ID=13,0MM/ LÄNGE=17MM/D=	Hose sleeve	094-011497-00000

SK104,5x25x15

Type	Designation	Item no.
SK104,5x25x15	Protective cap	094-012079-00000

6MM/L=32MM/D=9MM

Type	Designation	Item no.
6MM/L=32MM/D=9MM	Hose nipple	094-002068-00000

XR intermediate hose packages Accessories

APH N/AR/CO2 4,0X3,5MM

Type	Designation	Item no.
APH N/AR/CO2 4,0X3,5MM	Argon hose	094-011496-00000

Crown nuts

Version

Suitable for bush 094-000999-00000



Type	Designation	Item no.
G1/4"R SW 17 Ø9,5mm	Crown nuts	094-000044-00000

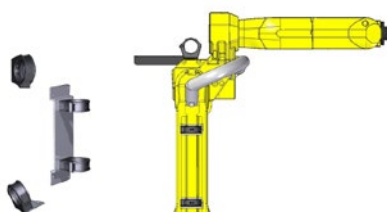
G1/4"X3,5-DIN8542/MS58/LW3,5MM

Type	Designation	Item no.
G1/4"X3,5-DIN8542/MS58/LW3,5MM	Connecting nipple	094-000045-00000

SH DI=11,5X17

Type	Designation	Item no.
SH DI=11,5X17	Hose sleeve	094-018488-00000

Overview of mounting kits for intermediate hose packages



- **INTERMEDIATE HOSE PACKAGE MOUNTING KIT**
- Kits to mount intermediate hose packages onto robots
- Versions for other robot types available upon request.

Overview of mounting kits for intermediate hose packages

Robot manufacturer	Robot types	Version	Load	Item number
ABB	IRB 1600-6/1.2	Standard	6 kg	On request
ABB	IRB 1600-10/1.2	Standard	10 kg	On request
ABB	IRB 1600-6/1.45	Standard	6 kg	On request
ABB	IRB 1600-10/1.45	Standard	10 kg	On request
ABB	IRB 2600-10/1.85	Standard	10 kg	On request
ABB	IRB 2600-12/1.65	Standard	12 kg	On request
ABB	IRB 2600-12/1.85	Standard	12 kg	On request
ABB	IRB 2600-20/1.65	Standard	20 kg	On request
ABB	IRB 4600-20/2.5	Standard	20 kg	On request
ABB	IRB 4600-40/2.55	Standard	40 kg	On request
ABB	IRB 4600-45/2.05	Standard	45 kg	On request
ABB	IRB 4600-60/2.05	Standard	60 kg	On request
ABB	IRB 1410	Standard	5 kg	On request
ABB	IRB 2400L	Standard	7 kg	On request
ABB	IRB 2400/10	Standard	10 kg	On request
ABB	IRB 2400/16	Standard	16 kg	On request
ABB	IRB 1600ID	Hollow shaft	4 kg	092-002569-00000
ABB	IRB 1620ID	Hollow shaft		On request
ABB	IRB 1660ID-4/1.55	Hollow shaft	4 kg	092-004115-00000
ABB	IRB 1660ID-6/1.55	Hollow shaft	6 kg	092-004115-00000
ABB	IRB 2600ID-8/2.0	Hollow shaft	8 kg	092-003056-00000
ABB	IRB 2600ID-15/1.85	Hollow shaft	15 kg	092-003056-00000
ABB	IRB 1520ID-4/1.5	Hollow shaft	4 kg	092-007910-00000
COMAU	NS-12-1.85	Standard	12 kg	On request
COMAU	NS-16-1.65	Standard	16 kg	On request
COMAU	NJ-16-3.1	Standard	16 kg	On request
COMAU	NJ-40-2.5	Standard	40 kg	On request
COMAU	NJ-60-2.2	Standard	60 kg	On request
COMAU	RACER 999	Standard	7 kg	On request
COMAU	Arc4-5-1.95	Hollow shaft	5 kg	On request
COMAU	SMART5 ARC4	Hollow shaft	5 kg	092-003072-00000
FANUC	ARC Mate 50iD	Standard	7 kg	On request
FANUC	ARC Mate 50iD/7L	Standard	7 kg	On request
FANUC	ARC Mate 0iB	Standard	3 kg	On request
FANUC	ARC Mate 100iB	Standard	6 kg	On request
FANUC	M-710iC/20L	Standard	20 kg	092-003246-00000
FANUC	R-2000iA	Standard		On request
FANUC	ARC Mate 100iC/6L	Hollow shaft	7 kg	092-002567-00000
FANUC	ARC Mate 100iC/7L	Hollow shaft	7 kg	On request
FANUC	ARC Mate 100iC/8L	Hollow shaft	8 kg	092-008775-00000
FANUC	ARC Mate 100iC/10L	Hollow shaft	10 kg	On request
FANUC	ARC Mate 100iC/10S	Hollow shaft	10 kg	092-003439-00000
FANUC	ARC Mate 100iC/12	Hollow shaft	12 kg	092-002567-00000
FANUC	ARC Mate 100iC/12S	Hollow shaft	12 kg	092-003247-00000
FANUC	ARC Mate 100iD	Hollow shaft	12 kg	092-003841-00000
FANUC	ARC Mate 100iD/8L	Hollow shaft	8 kg	092-003841-00000
FANUC	ARC Mate 100iD/10L	Hollow shaft	10 kg	092-003841-00000
FANUC	ARC Mate 120iC	Hollow shaft	20 kg	092-002581-00000
FANUC	ARC Mate 120iC/10L	Hollow shaft	12 kg	On request
FANUC	ARC Mate 120iC/12L	Hollow shaft	12 kg	092-002581-00000
FANUC	ARC Mate 120iD	Hollow shaft	25 kg	092-003841-00000
FANUC	ARC Mate 120iD/12L	Hollow shaft	12 kg	092-003841-00000
FANUC	ARC Mate 100iC	Hollow shaft	10 kg	092-002567-00000
FANUC	M-10iA/6L	Hollow shaft	7 kg	092-002567-00000
FANUC	M-10iA/7L	Hollow shaft	7 kg	092-002567-00000
FANUC	M-20iA/12L	Hollow shaft	12 kg	092-002581-00000
FANUC	M-710iC/12L	Hollow shaft	20 kg	092-503246-04771

Robot manufacturer	Robot types	Version	Load	Item number
Hyundai	HA006B	Standard	6 kg	On request
Hyundai	HH010L	Standard	10 kg	092-S00000-04866
Kawasaki	RA005L	Standard	5 kg	On request
Kawasaki	RA006L	Standard	6 kg	On request
Kawasaki	RA010L	Standard	10 kg	On request
Kawasaki	RA010N	Standard	10 kg	On request
Kawasaki	RA020N	Standard	20 kg	On request
Kawasaki	RS020N	Standard	20 kg	On request
Kawasaki	BA006L	Hollow shaft	6 kg	092-008787-00000
Kawasaki	BA006N	Hollow shaft	6 kg	092-008787-00000

KUKA	KR 6 R1820	Standard	6 kg	On request
KUKA	KR 6 R1820 HP	Standard	6 kg	On request
KUKA	KR 6 R1840-2	Standard	6 kg	092-004199-00000
KUKA	KR 8 R1620	Standard	8 kg	On request
KUKA	KR 8 R1620 HP	Standard	8 kg	On request
KUKA	KR 8 R2010-2	Standard	8 kg	092-003910-00000
KUKA	KR 10 R1420	Standard	10 kg	On request
KUKA	KR 10 R1420 HP	Standard	10 kg	On request
KUKA	KR 10 R1440-2	Standard	10 kg	092-004199-00000
KUKA	KR 12 R1810-2	Standard	12 kg	On request
KUKA	KR 16 R1610-2	Standard	16 kg	On request
KUKA	KR 16 R2010-2	Standard	16 kg	092-003910-00000
KUKA	KR 20 R1810-2	Standard	20 kg	On request
KUKA	KR 20 R3100	Standard	20 kg	092-004022-00000
KUKA	KR 22 R1610-2	Standard	22 kg	On request
KUKA	KR 5	Standard	5 kg	On request
KUKA	KR 16	Standard	16 kg	On request
KUKA	KR 16-2	Standard	16 kg	On request
KUKA	KR 30 L16	Standard	16 kg	On request
KUKA	KR 50 R2500	Standard	50 kg	On request
KUKA	KR 90 R3100 extra	Standard	90 kg	092-004022-00000
KUKA	KR 120 R3100-2	Standard	120 kg	On request
KUKA	KR 6 R1820 arc HW	Hollow shaft	6 kg	092-003248-00000
KUKA	KR 6 R1840-2 arc HW	Hollow shaft	6 kg	092-004199-00000
KUKA	KR 8 R1420 arc HW	Hollow shaft	8 kg	092-003248-00000
KUKA	KR 8 R1440-2 arc HW	Hollow shaft	8 kg	092-004199-00000
KUKA	KR 8 R1620 arc HW	Hollow shaft	8 kg	092-003263-00000
KUKA	KR 8 R1640-2 arc HW	Hollow shaft	8 kg	092-004199-00000
KUKA	KR 8 R2100 arc HW	Hollow shaft	8 kg	092-003910-00000
KUKA	KR 5 arc HW	Hollow shaft	5 kg	092-002510-00000
KUKA	KR 8 R2100-2 arc HW	Hollow shaft	8 kg	On request
KUKA	KR 16 arc HW	Hollow shaft	16 kg	092-004296-00000
KUKA	KR 16 L8 arc HW	Hollow shaft	8 kg	092-004296-00000

Motoman	AR700	Standard	8 kg	On request
Motoman	AR900	Standard	7 kg	On request
Motoman	MC2000II	Standard	50 kg	On request
Motoman	K6-C	Standard	6 kg	On request
Motoman	HP20	Standard	20 kg	On request
Motoman	HP20D-6	Standard	6 kg	On request
Motoman	HP20D	Standard	20 kg	On request
Motoman	HP20RD	Standard	20 kg	On request
Motoman	HP20F	Standard	20 kg	On request
Motoman	HP20D-CR7	Standard	20 kg	On request
Motoman	UP20	Standard	20 kg	092-003452-00000
Motoman	MH5	Standard	5 kg	On request
Motoman	MH5L	Standard	5 kg	On request
Motoman	MH6	Standard	6 kg	On request

Overview of mounting kits for intermediate hose packages

Robot manufacturer	Robot types	Version	Load	Item number
Motoman	MH6-10	Standard	10 kg	On request
Motoman	MH6S	Standard	6 kg	On request
Motoman	MH6S-10	Standard	10 kg	On request
Motoman	MH50	Standard	50 kg	092-003378-00000
Motoman	MH50-20	Standard	20 kg	092-003378-00000
Motoman	MH50-35	Standard	35 kg	092-003378-00000
Motoman	AR1440	Hollow shaft	12 kg	092-003858-00000
Motoman	AR1730	Hollow shaft	25 kg	On request
Motoman	AR2010	Hollow shaft	12 kg	092-004135-00000
Motoman	AR3120	Hollow shaft	20 kg	092-004028-00000
Motoman	MA1440	Hollow shaft	6 kg	092-002879-00000
Motoman	EA1400	Hollow shaft	3 kg	092-002566-00000
Motoman	EA1800N	Hollow shaft	15 kg	092-002564-00000
Motoman	EA1900	Hollow shaft	3 kg	092-002564-00000
Motoman	MA1400	Hollow shaft	3 kg	092-002566-00000
Motoman	MA1550	Hollow shaft	3 kg	092-002566-00000
Motoman	MA1800	Hollow shaft	15 kg	092-002564-00000
Motoman	MA1900	Hollow shaft	3 kg	092-002564-00000
Motoman	MA2010	Hollow shaft	10 kg	092-002880-00000
Motoman	VA1400	Hollow shaft	3 kg	092-003250-00000
Motoman	SSA2000	Hollow shaft	3 kg	092-002566-00000
Motoman	MH24	Hollow shaft	24 kg	092-003249-00000
REIS	RV10-6	Standard	6 kg	On request
REIS	RV20-6	Standard	6 kg	On request
REIS	RV20-16	Standard	16 kg	On request
REIS	RV20-6HW	Hollow shaft	6 kg	092-S00000-03851
UNIVERSAL ROBOTS	URe	Standard	5 kg	*
UNIVERSAL ROBOTS	UR10e	Standard	10 kg	*
UNIVERSAL ROBOTS	UR16e	Standard	16 kg	*

*Robot too small or poor fastening capability for the mounting kit!

Wire spool holder

DV-CAP WALL

- Wall holder for D300 wire spools
- Consists of casing, pin, wire guide connection and mounting accessories



Type	Designation	Item no.
DV-CAP WALL	Wall holder for wire spools, including pin and accessories	092-001985-00000

► The wire feed connection sets are not included in the supply package and must be ordered separately.

ON DV CAP ROB5 XR

- Wire spool support for wire feeder
- Left version suitable for M drive 4 Rob 3X LI, M drive 4 Rob 5 XR LI, M drive 4 Rob 2X, M drive 4 Rob 2X MF, tigSpeed drive 4 Rob
- Right version suitable for M drive 4 Rob 3X RE, M drive 4 Rob 5 XR RE



Type	Designation	Item no.
ON DV CAP ROB LI	Rob wire spool support, left	092-003217-00000
ON DV CAP ROB RE	Rob wire spool support, right	092-003484-00000

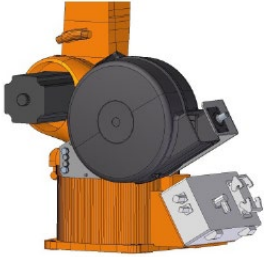
AK300

- Wire spool adapter for use with a wire basket spool (B 300)



Type	Designation	Item no.
AK300	Wire spool adapter B300	094-001803-00001

Overview of wire spool holders | robot-specific



- Wire spool holder for fixing to robot
- For D300 wire spools
- Consists of bracket, cover, pin and assembly material
- Versions for other robot types available on request
- The wire feed connection sets are not included in the supply package and must be ordered separately

Overview of wire spool holders | robot-specific

Robot manufacturer	Robot types	Item number	
ABB	IRB 1600-6/1.2	092-002558-00000	K
ABB	IRB 1600-10/1.2	092-002558-00000	K
ABB	IRB 1600-6/1.45	092-002558-00000	K
ABB	IRB 1600-10/1.45	092-002558-00000	K
ABB	IRB 2600-10/1.85	092-003253-00000	K
ABB	IRB 2600-12/1.65	092-003253-00000	K
ABB	IRB 2600-12/1.85	092-003253-00000	K
ABB	IRB 2600-20/1.65	092-003253-00000	K
ABB	IRB 4600-20/2.5	092-003254-00000	K
ABB	IRB 4600-40/2.55	092-003254-00000	K
ABB	IRB 4600-45/2.05	092-003254-00000	K
ABB	IRB 4600-60/2.05	092-003254-00000	K
ABB	IRB 1410	092-003251-00000	K
ABB	IRB 2400L	On request	K
ABB	IRB 2400/10	092-003252-00000	K
ABB	IRB 2400/16	092-003252-00000	K
ABB	IRB 1600ID	092-002558-00000	HW
ABB	IRB 1620ID	092-003255-00000	HW
ABB	IRB 1660ID-4/1.55	092-002558-00000	HW
ABB	IRB 1660ID-6/1.55	092-002558-00000	HW
ABB	IRB 2600ID-8/2.0	*	HW
ABB	IRB 2600ID-15/1.85	*	HW
ABB	IRB 1520ID-4/1.5	092-003255-00000	HW
COMAU	NS-12-1.85	On request	K
COMAU	NS-16-1.65	On request	K
COMAU	NJ-16-3.1	On request	K
COMAU	NJ-40-2.5	On request	K
COMAU	NJ-60-2.2	On request	K
COMAU	RACER 999	092-003256-00000	K
COMAU	Arc4-5-1.95	On request	HW
COMAU	SMART5 ARC4	092-003257-00000	HW
FANUC	ARC Mate 50iD	*	K
FANUC	ARC Mate 50iD/7L	*	K
FANUC	ARC Mate 0iB	*	K
FANUC	ARC Mate 100iB	On request	K
FANUC	M-710iC/20L	092-003259-00000	K
FANUC	R-2000iA	092-003258-00000	K
FANUC	ARC Mate 100iC/6L	On request	HW
FANUC	ARC Mate 100iC/7L	On request	HW
FANUC	ARC Mate 100iC/8L	092-002559-00000	HW
FANUC	ARC Mate 100iC/10L	On request	HW
FANUC	ARC Mate 100iC/10S	092-002559-00000	HW
FANUC	ARC Mate 100iC/12	092-002559-00000	HW
FANUC	ARC Mate 100iC/12S	On request	HW
FANUC	ARC Mate 100iD	*	HW
FANUC	ARC Mate 100iD/8L	On request	HW
FANUC	ARC Mate 100iD/10L	On request	HW
FANUC	ARC Mate 120iC	092-002580-00000	HW
FANUC	ARC Mate 120iC/10L	092-002580-00000	HW
FANUC	ARC Mate 120iC/12L	092-002580-00000	HW
FANUC	ARC Mate 120iD	On request	HW
FANUC	ARC Mate 120iD/12L	On request	HW
FANUC	ARC Mate 100iC	092-002559-00000	HW
FANUC	M-10iA/6L	092-002559-00000	HW
FANUC	M-10iA/7L	092-002559-00000	HW
FANUC	M-20iA/12L	On request	HW
FANUC	M-710iC/12L	092-003259-00000	HW

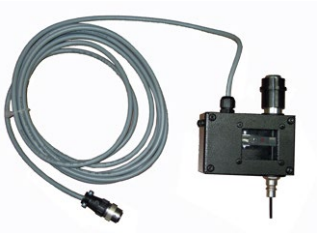
Wire feed unit accessories

Robot manufacturer	Robot types	Item number	
Hyundai	HA006B	On request	K
Kawasaki	RA005L	On request	K
Kawasaki	RA006L	On request	K
Kawasaki	RA010L	092-003261-00000	K
Kawasaki	RA010N	On request	K
Kawasaki	RA020N	On request	K
Kawasaki	RS020N	On request	K
Kawasaki	BA006L	092-003992-00000	HW
Kawasaki	BA006N	092-003992-00000	HW
KUKA	KR 6 R1820	On request	K
KUKA	KR 6 R1840-2	092-004200-00000	K
KUKA	KR 6 R1820 HP	092-003263-00000	K
KUKA	KR 8 R1620	On request	K
KUKA	KR 8 R1620 HP	092-003263-00000	K
KUKA	KR 8 R2010-2	092-004200-00000	K
KUKA	KR 10 R1420	On request	K
KUKA	KR 10 R1420 HP	092-003263-00000	K
KUKA	KR 10 R1440-2	092-004200-00000	K
KUKA	KR 12 R1810-2	On request	K
KUKA	KR 16 R1610-2	On request	K
KUKA	KR 16 R2010-2	092-004200-00000	K
KUKA	KR 20 R1810-2	On request	K
KUKA	KR 20 R3100	On request	K
KUKA	KR 22 R1610-2	On request	K
KUKA	KR 5	On request	K
KUKA	KR 16	On request	K
KUKA	KR 16-2	On request	K
KUKA	KR 30 L16	092-003262-00000	K
KUKA	KR 50 R2500	092-004047-00000	K
KUKA	KR 90 R3100 extra	On request	K
KUKA	KR 120 R3100-2	092-004047-00000	K
KUKA	KR 240 R2700 prime	092-500000-04869	K
KUKA	KR 6 R1820 arc HW	092-003263-00000	HW
KUKA	KR 6 R1840-2 arc HW	092-004200-00000	HW
KUKA	KR 8 R1420 arc HW	092-003263-00000	HW
KUKA	KR 8 R1440-2 arc HW	092-004200-00000	HW
KUKA	KR 8 R1620 arc HW	092-003263-00000	HW
KUKA	KR 8 R1640-2 arc HW	092-004200-00000	HW
KUKA	KR 8 R2100 arc HW	092-003263-00000	HW
KUKA	KR 5 arc HW	092-002558-00000	HW
KUKA	KR 8 R2100-2 arc HW	On request	HW
KUKA	KR 16 arc HW	092-003207-00000	HW
KUKA	KR 16 L8 arc HW	092-003207-00000	HW
Motoman	AR700	*	K
Motoman	AR900	On request	K
Motoman	MC2000II	On request	K
Motoman	K6-C	On request	K
Motoman	HP20	092-001250-00000	K
Motoman	HP20D-6	092-001250-00000	K
Motoman	HP20D	092-001250-00000	K
Motoman	HP20RD	092-001250-00000	K
Motoman	HP20F	092-001250-00000	K
Motoman	HP20D-CR7	092-001250-00000	K
Motoman	UP20	On request	K
Motoman	MH5	*	K
Motoman	MH5L	*	K
Motoman	MH6	*	K

Robot manufacturer	Robot types	Item number	
Motoman	MH6-10	*	K
Motoman	MH6S	*	K
Motoman	MH6S-10	*	K
Motoman	MH50	092-001250-00000	K
Motoman	MH50-20	092-001250-00000	K
Motoman	MH50-35	092-001250-00000	K
Motoman	AR1440	092-003210-00000	HW
Motoman	AR1730	092-003210-00000	HW
Motoman	AR2010	092-003210-00000	HW
Motoman	AR3120	092-004027-00000	HW
Motoman	MA1440	092-003210-00000	HW
Motoman	EA1400	092-002558-00000	HW
Motoman	EA1800N	On request	HW
Motoman	EA1900	092-001250-00000	HW
Motoman	MA1400	092-002558-00000	HW
Motoman	MA1550	092-002558-00000	HW
Motoman	MA1800	092-001250-00000	HW
Motoman	MA1900	092-001250-00000	HW
Motoman	MA2010	092-003210-00000	HW
Motoman	VA1400	On request	HW
Motoman	SSA2000	092-002558-00000	HW
Motoman	MH24	092-003265-00000	HW
REIS	RV10-6	092-003266-00000	K
REIS	RV20-6	092-003266-00000	K
REIS	RV20-16	On request	K
REIS	RV20-6HW	092-003266-00000	HW
UNIVERSAL ROBOTS	URe	*	K
UNIVERSAL ROBOTS	UR10e	*	K
UNIVERSAL ROBOTS	UR16e	*	K
*Robot too small or poor fastening capability for the wire spool holder. If necessary, use an external DV CAP Wall holder or ON DV CAP ROB wire spool support!			
See page xxx.			

Wire end sensor

ON SENSOR WIRE END XR



- Wire end sensor
- For mounting between the wire drum and wire feed
- The sensitivity setting can be easily adjusted using the potentiometer
- LED display
- Includes 5-m cable for connection to BUSINTX11 ATCASE with optional connection capability for wire end sensor

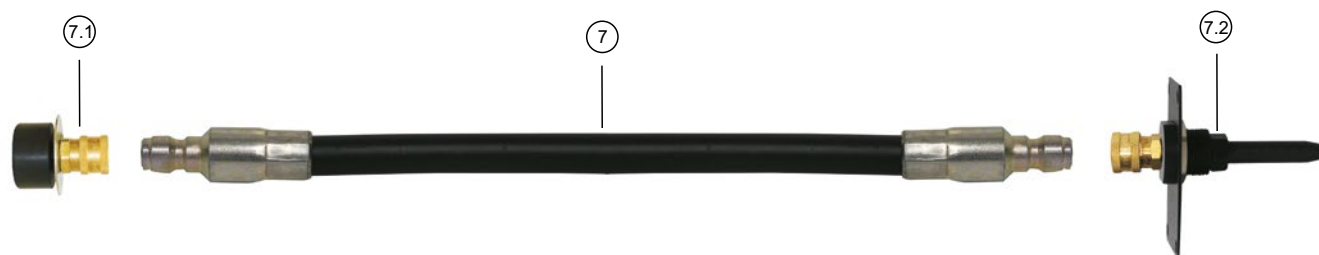
Type	Designation	Item no.
ON SENSOR WIRE END XR	Wire end sensor to connect to BUSINTX11 with OW WS option	092-003216-00000
ON SENSOR WIRE END WLS		092-S01190-03413
ON SENSOR WIRE END		092-S01190-03414
ON SENSOR WIRE END WCON	Wire end sensor	092-S01190-04365
ON SENSOR WIRE END		092-S01190-04862
ON SENSOR WIRE LEAD PRO		092-S01190-05002
OW WS BUSINTX11 ATCASE XR	Wire end sensor connection capability for BUSINTX11 ATCASE	092-003214-00001

► Please specify the wire feed used (e.g. Wire Lead, Wire Conduit) when ordering
Can only be used in conjunction with option 092-003214-00001 and ATCASE interface

Overview

Accessories		Page
Wire guide	Wire feed	WIRE LEAD 164
		WIRE LEAD SOFT 165
		WIRE CONDUIT 166
		MASTERLINER 167
		ROLLINER 168
		Maxiglide 169

Wire feed

**Wire lead**

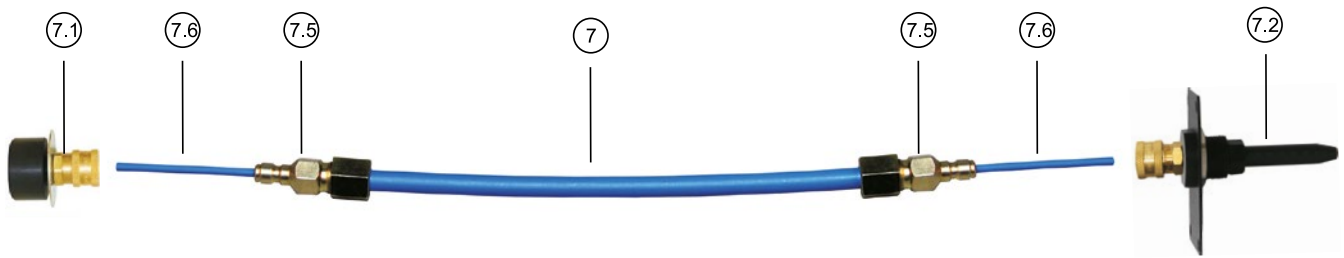
- For steel wire, round wires
- Outside dia.: 13 mm
- Wire dia. up to 1.6 mm

WIRE LEAD

Item	Type	Designation	Item no.
7	WIRE LEAD 1,5M	Wire guide	094-018280-00000
7	WIRE LEAD 3M		094-018281-00000
7	WIRE LEAD 5M		094-018282-00000
7	WIRE LEAD 6,5M		094-018283-00000
7	WIRE LEAD 8M		094-018284-00000
7	WIRE LEAD 10M		094-018285-00000
7	WIRE LEAD PRO	Wire guide, material sold by the metre	094-018279-00001
7.1	CONNECTOR BARREL WIRE LEAD	Connection for large spool/drum	094-018277-00000
7.1	CONNECTOR DV-CAB WIRE LEAD	DV-CAB connection	092-007931-00000
7.2	CONNECTOR DRIVE ROB2 WIRE LEAD	Connection set for Wire Lead wire feed to ROB 2	092-007913-00000
7.2	CONNECTOR DRIVE ROB5 XR WIRE LEAD	Connection set for wire feed WIRE LEAD, WIRE LEAD SOFT to ROB 5	092-003143-00000
-	CONNECTOR WIRE LEAD PRO	End piece wire guide for material sold by the metre	094-018278-00000

► Two Connector Wire Lead Pro units are needed!

Wire feed



Soft wire lead

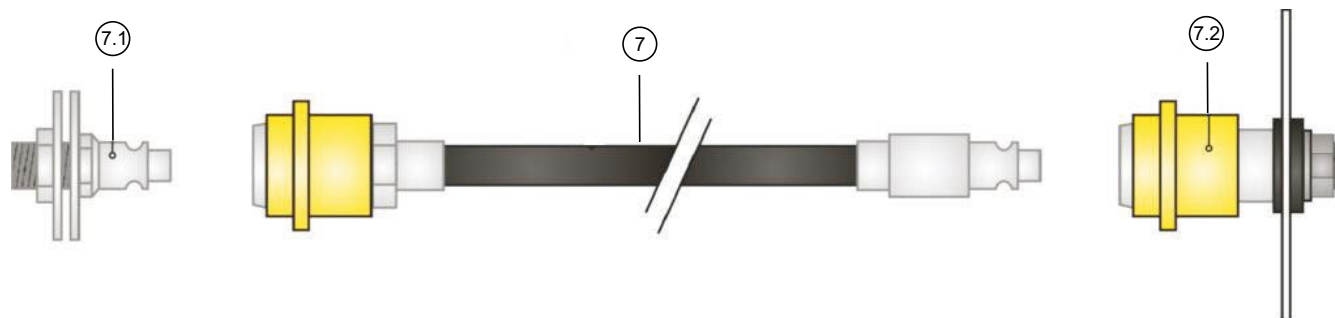
- For aluminium and stainless steel wire, round wires
- Outside dia.: 12 mm
- Wire dia. up to 1.6 mm

WIRE LEAD SOFT

Item	Type	Designation	Item no.
7	WIRE LEAD SOFT 1,5M	Wire guide	094-020383-00000
7	WIRE LEAD SOFT 3M		094-020383-00001
7	WIRE LEAD SOFT 5M		094-020383-00002
7	WIRE LEAD SOFT 6,5M		094-020383-00003
7	WIRE LEAD SOFT 8M		094-020383-00004
7	WIRE LEAD SOFT 10M		094-020383-00005
7	WIRE LEAD SOFT 12M		094-020383-00006
7	WIRE LEAD SOFT	Wire guide, material sold by the metre	094-020382-00000
7.1	CONNECTOR BARREL WIRE LEAD	Connection for large spool/drum	094-018277-00000
7.1	CONNECTOR DV-CAB WIRE LEAD	DV-CAB connection	092-007931-00000
7.2	CONNECTOR DRIVE ROB2 WIRE LEAD	Connection set for Wire Lead wire feed to ROB 2	092-007913-00000
7.2	CONNECTOR DRIVE ROB5 XR WIRE LEAD	Connection set for wire feed WIRE LEAD, WIRE LEAD SOFT to ROB 5	092-003143-00000
7.5	CONNECTOR WIRE LEAD SOFT	End piece wire guide for material sold by the metre	094-020381-00000
7.6	UEDFS WLS 2,5x4,5mm 150mm	Transition liner for soft wire lead	094-020380-00000

► Two units are required from position 7.5 and 7.6!

Wire feed

**Wire conduit**

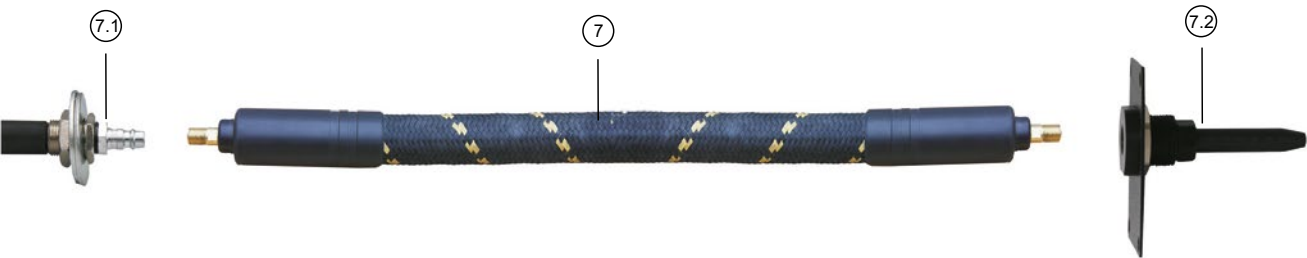
- Rugged design
- For steel wire, round wires
- Outside dia.: 16 mm
- Wire dia. up to 1.6 mm

WIRE CONDUIT

- Wire feed tube with quick connect coupling
- For small to medium-sized lengths and for use in manual operation, mechanisation and automation

Item	Type	Designation	Item no.
7	WIRE CONDUIT 1,8M	Wire guide	094-011515-00004
7	WIRE CONDUIT 2M		094-011515-00006
7	WIRE CONDUIT 3M		094-011515-00000
7	WIRE CONDUIT 3,5M		094-011515-00005
7	WIRE CONDUIT 4,5M		094-011515-00001
7	WIRE CONDUIT 8M		094-011515-00002
7	WIRE CONDUIT 10M		094-011515-00007
7	WIRE CONDUIT 12M		094-011515-00003
7.1	CONNECTOR BARREL	Quick connect coupling for drum connector	094-011517-00000
7.1	CONNECTOR DV-CAB WIRE CONDUIT	Mounting plate set for drum cone including quick connect coupling for drum connector	092-007741-00000
7.2	CONNECTOR DRIVE ROB2 WIRE CONDUIT	Connection set for wire feed ROB 2 Wire Conduit	092-008205-00000
7.2	CONNECTOR DRIVE ROB5 XR WIRE CONDUIT	Connection set for Wire feed WIRE CONDUIT to ROB 5	092-003144-00000

Wire feed



Masterliner HW

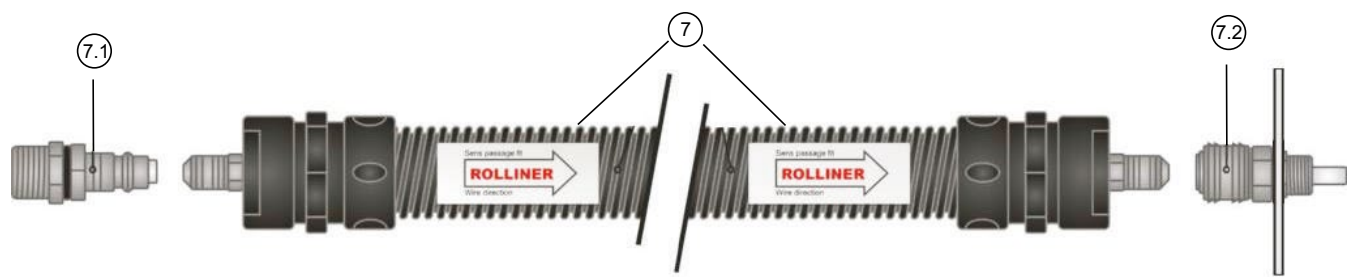
- For all material types, round wires
- Outside dia.: 30 mm
- Wire dia. up to 1.2 mm
- Weight: Approx. 400 g/m

MASTERLINER

Item	Type	Designation	Item no.
7	Masterliner HD 5m	Wire guide	094-025510-00005
7	Masterliner HD 6m		094-025510-00006
7	Masterliner HD 8m		094-025510-00008
7	Masterliner HD 10m		094-025510-00010
7	Masterliner HD 15m		094-025510-00015
7.1	Masterliner Connector Barrel	Connection for large spool/drum	092-003643-00000
7.1	Masterliner Connector DV-CAP	DV-CAB connection	092-003638-00000
7.2	CONNECTOR DRIVE ROB 2 Masterliner	Connection set for Masterliner wire feed to ROB 2	092-003639-00000
7.2	CONNECTOR DRIVE ROB5 XR MASTERLINER	Connection set for Masterliner wire feed to ROB 5	092-003145-00000

► Other lengths available on request

Wire feed



Rolliner

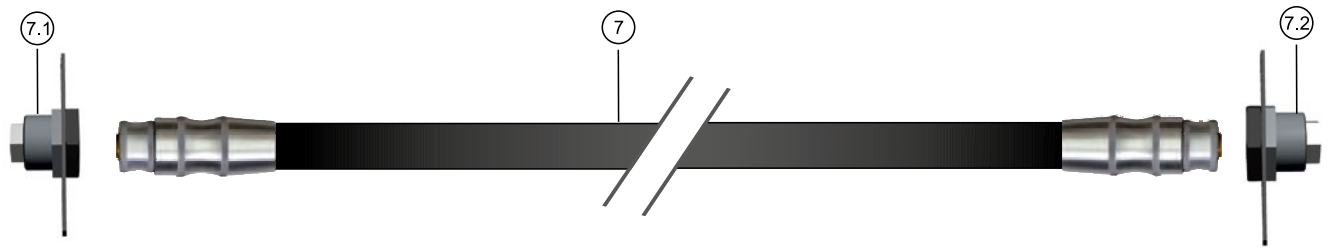
- For all material types, round wires
- Outside Ø: 43 mm
- Wire Ø up to 4.0 mm
- Weight: approx. 500 g/m

ROLLINER

Item	Type	Designation	Item no.
7	ROLLINER 3,5M	Wire guide with plastic rolls	092-002575-00005
7	ROLLINER 5M		092-002575-00000
7	ROLLINER 8M		092-002575-00006
7	ROLLINER 10M		092-002575-00001
7	ROLLINER 15M		092-002575-00002
7	ROLLINER 20M		092-002575-00003
7	ROLLINER 25M		092-002575-00004
7.1	ROLLINER CONNECTOR BARREL	Connection for large spool/drum	094-014623-00000
7.1	ROLLINER CONNECTOR DV-CAB	DV-CAB connection	092-007930-00000
7.2	CONNECTOR DRIVE ROB2 ROLLINER	Connection set for Rolliner wire feed to ROB 2	092-007917-00000
7.2	CONNECTOR DRIVE ROB5 XR ROLLINER	Connection set for wire feed Rolliner to ROB 5	092-003146-00000

► Other lengths available on request

Wire feed



Maxiglide

- For all material types, round wires
- Outside Ø: 35 mm
- Wire Ø: up to 4 mm
- Weight: approx. 600 g/m

Maxiglide

Item	Type	Designation	Item no.
7	MAXIGLIDE PA	Wire guide, material sold by the metre	398-008549-00000
7.1	CONNECTOR DV-CAB MAXIGLIDE	DV-CAB connection	092-004214-00000
7.2	CONNECTOR DRIVE ROB5 XR MAXIGLIDE	Connection set for Maxiglide wire feed to ROB 5	092-004213-00000
-	MAXIGLIDE S-E	Maxiglide quick connect coupling	398-008550-00000
-	MAXIGLIDE ADAPTER I M10x1	Internal thread adapter	398-008551-00000
-	MAXIGLIDE ADAPTER A M10x1	External thread adapter	398-008552-00000

Overview

Accessories			Page
Interfaces	RINT X12	STANDARD	175
		STANDARD ATCASE	176
	BUSINT X11	MIG/MAG	178
		MIG/MAG Atcase	179

Function overview

As standard

RINT X12 option

BUSINT X11 option



Outputs:

- Emergency stop for collision switch
- Current flow signal
- Power relay contact
- Uactual
- Welding voltage measurement
- Power supply +15 V
- Power supply -15 V
- Iactual

Input:

- Welding machine emergency stop
- Start/stop

Available for selection:

- Inching via constant or ramp function
- Positive/negative input logic
- Non-latched/Special non-latched
- Standard/pulse welding

Signals:

- Welding process active/finished
- Standard/pulse welding activated
- Error reset
- Shielding gas valve
- Compressed air valve
- Pilot gas valve (plasma)
- Inching active/finished
- Reverse inching active/finished
- JOB selection active/finished
- Program selection
- I>0 arc detection
- Ready to weld/not ready
- Wire stick/no wire stick
- Error
- Workpiece detection

Signal monitoring:

- Welding voltage OK/not OK
- Welding current OK/not OK
- Wire feed speed OK/not OK
- Motor current OK/not OK

Control voltage:

- 0 V–10 V wire feed speed
- 0 V–10 V arc correction
- 0 V–10 V dynamic correction

Available for selection:

- JOB mode for automatic selection of welding type and operating mode
- Process control via 15 programs or control signals for wire feeder, voltage correction and arc dynamics
- Simulation with similar parameters of all process signals for determining cycle times
- Fast actual process values for seam tracking available as an option
- Workpiece search function (optional integration of fast actual process values required)

Signals:

- Manual signals for shielding gas, blow out, wire inching and reverse inching, welding type, operating mode
- Safety-related emergency shut-down of processes via software or optional hardware
- Safety switch-off in case of interruption in fieldbus connection
- Transfer of actual process values for welding voltage, welding and motor current, wire feed speed

Signal monitoring:

- Process signals for displaying the arc, process and system state
- Error indication
- Intelligent arc interruption, wire stick and ignition error detection
- Welding voltage
- Welding and motor current
- Wire feed speed
- Single channel message
- Collective relay output

Outputs:

- Up to four user-defined outputs

Inputs:

- Fast, external input for torch collision detection
- Three user-defined inputs

Matching EWM interfaces to robot controls from a variety of manufacturers

Manufacturer	ABB						COMAU		FANUC						IGM				KAWASAKI		
Control	S3	S4	S4C	S4C+	IRC5	C3G+	C4G	R-J2	R-J3	R-J3iB	R-J3iC	R-J30iB	R-30iB Plus	RT K3, K4	RTi K5	RTi K6	RCE K6	C 40	D 40	E01	
Interface for automated welding	*	*	*					*	*	*	*							*	*		
RINT X12	+	+	+	o	x	x	x	+	+	+	+	o		+	o			+	+		
BUSINT X11 PROFIBUS				o				x	x	x	x							x	x		
BUSINT X11 INTERBUS						x												x	x		
BUSINT X11 DEVICE NET				+	+					x	x				+			x	x		
BUSINT X11 CAN-OPEN																		x	x		
BUSINT X11 RUGGED LINE																					
BUSINT X11 ETHERNET IP					+						o	+	+							+	
BUSINT X11 PROFINET																					
BUSINT X11 ETHERCAT																+	+				
Key	+	Recommended version																			
	o	Possible version																			
	x	Possible, please contact EWM																			
	*	Additional option																			

Please note that this table is only to be used for guidance on possible configurations. You must consult your system integrator or robot manufacturer to determine whether the suggested interface version can be used in your application.

Matching EWM interfaces to robot controls from a variety of manufacturers

Manufac- turer	KUKA						MOTOMAN							OTC	PANASONIC	REIS	
Control	KF 30/51	KRC1	VKRC1	KRC2	VKRC2	KRC4	ERC	MRC	XRC	NX 100	DX 100	DX 200	YRC1000	EN 5624	G1/G2	RS4	RS5
Interface for automated welding	*	*	*	*	*		*	*	*	*				*	*	*	*
RINT X12	+	*	*	*	*		+	+	+	+	+	+		+	+	+	x
BUSINT X11 PROFIBUS		x	x	x	x												
BUSINT X11 INTERBUS		x	x	x	x												
BUSINT X11 DEVICE NET		+	x	+	x				+	o							
BUSINT X11 CAN-OPEN		x	x	x	x												+
BUSINT X11 RUGGED LINE		x	+	x	+												
BUSINT X11 ETHERNET IP											x						
BUSINT X11 PROFINET						o					x		+				+
BUSINT X11 ETHERCAT						+											
Key	+	Recommended version															
	o	Possible version															
	x	Possible, please contact EWM															
	*	Additional option															

Please note that this table is only to be used for guidance on possible configurations. You must consult your system integrator or robot manufacturer to determine whether the suggested interface version can be used in your application.

RINT X12 STANDARD



- Robot interface
- For installation in external switching cabinet
- Interface for controlling automated Titan, alpha Q, Phoenix, Taurus and Tetrix machine series in one machine (conversion via jumpers)
- Control signals, analogue: MIG/MAG control voltage for wire feed speed (welding power), arc voltage correction and dynamics – TIG/plasma control voltage: welding current, secondary current, pulse time, pause time
- Control signals, digital: Operating modes, e.g. non-latched, special non-latched, start/stop, gas test 1, 2, inching 1, 2, direction of rotation, inching speed (constant/ramp), welding type (standard MIG/pulse arc MIG welding)
- Status signals, analogue: Current, voltage
- Status signals, digital: Current flowing $I > 0$; ready for welding, stick, error
- JOB selection, up to 510 JOBS available, switching of internal/external JOB selection
- Program selection, 15 programs available
- JOB operation with welding and operating mode per program
- Expanded control signal to parameterise the pulse modes
- Simplified control (signal default setting via jumpers)
- Workpiece search function
- Software-based emergency shut-down signal
- Diagnostic interface for set up, problem analysis and operation of the Analyzer software
- Fast and easy integration into robot systems

Dimensions (L x B x H)	235 mm x 130 mm x 100 mm
Weight	ca.1 kg
Version	Standard

Type	Designation	Item no.
RINT X12 STANDARD	Standard robot interface	090-008291-00000
RINT X12 DV SWITCH	Robot interface including optional wire feeder switching	090-008291-00001
RINT X12 TANDEM	Robot interface including tandem option	090-008291-00002

Options/accessories

Options for retrofitting	Item no.
ON PLUG SET RINT X12 Retrofit option EWM plug set for RINT X12/DVINT X11	092-001822-00000
Cable sets	Item no.
KB MOTOMAN-RINT X12 Cable harness for RINT X12 connection to Motoman XRC/NX-100/DX-100/DX-200	094-012212-00003
KB RINT X12 FANUC 34POL Cable assembly	094-009441-00001
KB RINT X12 FANUC 50POL Cable assembly	094-009440-00001
KB RINT X12 ARC-MATE 100 IBE Cable harness for RINT X12 connection to Fanuc robot	094-010388-00000

RINT X12 STANDARD ATCASE



- Interface for controlling automated alpha Q, Phoenix, Taurus and Tetrix machine series in one machine (conversion via jumpers)
- Robot interface in separate casing for fitting to all xx2 casings
- Control signals, analogue: MIG/MAG control voltage for wire feed speed (welding power), arc voltage correction and dynamics – TIG/plasma control voltage: welding current, secondary current, pulse time, pause time
- Control signals, digital: Operating modes, e.g. non-latched, special non-latched, start/stop, gas test 1, 2, inching 1, 2, direction of rotation, inching speed (constant/ramp), welding type (standard MIG/pulse arc MIG welding)
- Status signals, analogue: Current, voltage
- Status signals, digital: Current flowing $I > 0$; ready for welding, stick, error
- JOB selection, up to 510 JOBS available, switching of internal/external JOB selection
- Program selection, 15 programs available
- JOB operation with welding and operating mode per program
- Expanded control signal to parameterise the pulse modes
- Simplified control (signal default setting via jumpers)
- Workpiece search function
- Software-based emergency shut-down signal
- Diagnostic interface for set up, problem analysis and operation of the Analyzer software
- Fast and easy integration into robot systems

Dimensions (L x B x H)









271 mm x 134 mm x 187 mm

Weight

ca.3.7 kg

Type	Designation	Item no.
RINT X12 STANDARD ATCASE	Standard robot interface in casing	090-008293-00000
RINT X12 DV SWITCH ATCASE	Robot interface in casing including optional wire feeder switching	090-008293-00001
RINT X12 TANDEM ATCASE	Robot interface in casing incl. tandem option	090-008293-00002

Options/accessories

ATCASE connection cable		Item no.
RA5 23POL 5M Connection cable, 23-pole, one-sided wire end ferrules		092-007727-00005
RA5 23POL 10M Connection cable, 23-pole, one-sided wire end ferrules		092-007727-00010
RA5 28POL 5M Connection cable, 28-pole, one-sided wire end ferrules		092-007728-00005
RA5 28POL 10M Connection cable, 28-pole, one-sided wire end ferrules		092-007728-00010
RA5 23/28POL 5M FANUC Connection cable, 23-pole, for Fanuc RJ-3iB/RJ-3iC		092-007729-00005
RA5 23/28POL 10M FANUC Connection cable, 23-pole, for Fanuc RJ-3iB/RJ-3iC		092-007729-00010
RA5 23POL 5M MOTOMAN Connection cable, 23-pole, for Motoman XRC/NX-100/DX-100/DX-200		092-007731-00005
RA5 23POL 10M MOTOMAN Connection cable, 23-pole, for Motoman XRC/NX-100/DX-100/DX-200		092-007731-00010

Options and item numbers, BUSINT X11

Option code number		00001	00002	00004	00008
Interface	Basic item number, without options	Wire feeder switching	Seam tracking	Tandem	External power supply
PHOENIX BUSINT ATCASE					
BUSINT X11 PHOENIX CANOPEN ATCASE	090-008234-00000	o	o	o	o
BUSINT X11 PHOENIX DEVICE NET ATCASE	090-008233-00000	o	o	o	o
BUSINT X11 PHOENIX INTERBUS ATCASE	090-008225-00000	o	o	o	o
BUSINT X11 PHOENIX PROFIBUS ATCASE	090-008261-00000	o	o	o	o
BUSINT X11 PHOENIX RUGGED LINE ATCASE	090-008226-00000	o	o	o	+
BUSINT X11 PHOENIX PROFINET ATCASE	090-008610-00000	o	o	o	o
BUSINT X11 PHOENIX PROFINET LWL ATCASE	090-008611-00000	o	o	o	+
BUSINT X11 PHOENIX ETHERCAT ATCASE	090-008612-00000	o	o	o	o
BUSINT X11 PHOENIX ETHERNET/IP ATCASE	090-008613-00000	o	o	o	o
BUSINT X11 PHOENIX MODBUS TCP ATCASE	090-008694-00000	-	-	-	o
PHOENIX BUSINT					
BUSINT X11 PHOENIX CANOPEN	090-008231-00000	o	-	o	o
BUSINT X11 PHOENIX DEVICE NET	090-008230-00000	o	-	o	o
BUSINT X11 PHOENIX INTERBUS	090-008228-00000	o	-	o	o
BUSINT X11 PHOENIX PROFIBUS	090-008229-00000	o	-	o	o
BUSINT X11 PHOENIX PROFINET	090-008232-00000	o	-	o	o
BUSINT X11 PHOENIX ETHERCAT	090-008626-00000	o	-	o	o
BUSINT X11 PHOENIX ETHERNET/IP	090-008614-00000	o	-	o	o
BUSINT X11 PHOENIX MODBUS TCP	090-008695-00000	-	-	-	o
Key	+	Included			
	o	Possible			
	-	Not possible			
The item number for orders consisting of a BUSINT X11 interface with options is made up as follows: In position A in the basic item number, insert the code number 9 (interface with option), and the code numbers corresponding to the option go in position B. If there are several options, their code numbers can also be added.					
Example					
Basic item number, without options		090-A08234-BBBBB			
Item number with wire feeder switching option (00001)		090-908234-00001			
Item number with wire feeder switching option (00001) plus seam tracking (00002)		090-908234-00003			

BUSINT X11 MIG/MAG



- Industrial bus interface
- For installation in external switching cabinet
- Integration in manufacturing processes/robot applications, e.g. with DEVICE-NET, CAN-OPEN, ETHERCAT, ETHERNET IP, INTERBUS, PROFIBUS, PROFINET CU and MODBUS TCP systems
- Start/Stop; gas test 1, 2; inching 1, 2; rotation direction; welding type, JOB mode
- Digital inputs for JOB selection
- Up to 510 JOBS and 15 programs available
- Welding data monitoring: Current, voltage, wire feed speed, armature current
- Control voltage for wire feed speed (welding performance), arc voltage correction, dynamics/choke effect
- Diagnostic interface for set up, problem analysis and operation of the Analyzer software
- Optional switching between several wire drive units
- Optional for tandem process (master-slave mode)

Dimensions (L x B x H)	235 mm x 130 mm x 100 mm
Weight	ca.1 kg
Version	DEVICE-NET

Type	Designation	Item no.
BUSINT X11 DEVICE NET	DEVICE-NET industrial bus interface	090-008230-00000
BUSINT X11 CAN-OPEN	CAN-OPEN industrial bus interface	090-008231-00000
BUSINT X11 ETHERCAT	ETHERCAT industrial bus interface	090-008626-00000
BUSINT X11 ETHERNET IP	ETHERNET IP industrial bus interface	090-008614-00000
BUSINT X11 INTERBUS	INTERBUS industrial bus interface	090-008228-00000
BUSINT X11 PROFIBUS	PROFIBUS industrial bus interface	090-008229-00000
BUSINT X11 PROFINET CU	PROFINET industrial bus interface, copper	090-008232-00000
BUSINT X11 MODBUS TCP	MODBUS industrial bus interface	090-008695-00000

Options/accessories

Options for retrofitting	Item no.
ON VOLTAGE SUPPLY IBUS3 Retrofit option: external potential-free voltage supply, 24 V	092-008197-00000
Factory-fit options	Item no.
OW DV SWITCH P Operation of two wire feeders in automated systems	00001
OW TANDEM Factory-fit option for the tandem process	00004
OW VOLTAGE SUPPLY IBUS3 Factory-fit option: external potential-free voltage supply, 24 V	00008

BUSINT X11 MIG/MAG Atcase



- Industrial bus interface in separate casing for fitting to all xx2 casings
- Integration in manufacturing processes/robot applications, e.g. with DEVICE-NET, CAN-OPEN, ETHERCAT, ETHERNET IP, INTERBUS, PROFIBUS, PROFINET CU, PROFINET LWL, RUGGED LINE and MODBUS TCP systems
- Start/Stop; gas test 1, 2; inching 1, 2; rotation direction; welding type, JOB mode
- Digital inputs for JOB selection
- Up to 510 JOBS and 15 programs available
- Welding data monitoring: Current, voltage, wire feed speed, armature current
- Control voltage for wire feed speed (welding performance), arc voltage correction, dynamics/choke effect
- Diagnostic interface for set up, problem analysis and operation of the Analyzer software
- Optionally available with signal conditioning for seam tracking using fast actual process values (V, I)
- Optional switching between several wire drive units
- Optional for tandem process (master-slave mode)






Dimensions (L x B x H)	271 mm x 134 mm x 187 mm
Weight	ca.3.7 kg
Version	DEVICE-NET

Type	Designation	Item no.
BUSINT X11 DEVICE NET ATCASE	DEVICE NET industrial bus interface in casing	090-008233-00000
BUSINT X11 CAN-OPEN ATCASE	CAN-OPEN industrial bus interface in casing	090-008234-00000
BUSINT X11 ETHERCAT ATCASE	ETHERCAT industrial bus interface in casing	090-008612-00000
BUSINT X11 ETHERNET IP ATCASE	ETHERNET IP industrial bus interface in casing	090-008613-00000
BUSINT X11 INTERBUS ATCASE	INTERBUS industrial bus interface in casing	090-008225-00000
BUSINT X11 PROFIBUS ATCASE	PROFIBUS industrial bus interface in casing	090-008261-00000
BUSINT X11 PROFINET CU ATCASE	PROFINET industrial bus interface in casing, copper	090-008610-00000
BUSINT X11 PROFINET LWL ATCASE	PROFINET LWL industrial bus interface in casing	090-008611-00000
BUSINT X11 RUGGED LINE ATCASE	RUGGED LINE industrial bus interface in casing	090-008226-00000
BUSINT X11 MODBUS TCP ATCASE	MODBUS industrial bus interface in casing	090-008694-00000

Options/accessories

Options for retrofitting	Item no.
ON VOLTAGE SUPPLY SV+/-15 Retrofit option: external potential-free voltage supply, 24 V	092-008198-00000
Factory-fit options	Item no.
OW WS BUSINTX11 ATCASE XR Wire end sensor connection capability for BUSINTX11 ATCASE	092-003214-00001
OW DV SWITCH P Operation of two wire feeders in automated systems	00001
OW SEAM TRACKING Factory-fit option, support for seam tracking	00002
OW TANDEM Factory-fit option for the tandem process	00004
OW VOLTAGE SUPPLY SV+/-15 Retrofit option: external potential-free voltage supply, 24 V	00008

Options/accessories

Network cable		Item no.
Plug for network cable		094-020407-00000
KM GL Cable knife		094-020409-00000
LAN Cable Network cable, sold by the metre For industrial use		094-020408-00500
		
Connection cables		Item no.
Connection cable, 7-pole		
7-pole connection cable, suitable for installation in drag chains		
► Connection and extension cable for external LAN and WiFi gateway, panel, remote control		
FRV-25 7POL 10m		092-003417-00010
FRV-25 7POL 15m		092-003417-00015
FRV-25 7POL 20m		092-003417-00020
FRV-25 7POL 25m		092-003417-00025
FRV-25 7POL 30m		092-003417-00030
		
		
Connection cable extension		Item no.
Digital 7-pole cable		
Digital 7-pole cable		
Extension for 7-pole remote control with permanently installed cable		
Connection cable for remote control and gateway without permanently installed cable		
FRV 7POL 0.5m		092-000201-00004
FRV 7POL 1m		092-000201-00002
FRV 7POL 5m		092-000201-00003
FRV 7POL 10m		092-000201-00000
FRV 7POL 15m		092-000201-00005
FRV 7POL 20m		092-000201-00001
FRV 7POL 25m		092-000201-00007
		
		

Overview

Machine accessories		Page
Machine accessories	Cooling units	Cool series
		RK series
	Transport systems	Pallet, trolley
		Spare parts set
	Service accessories	A3-SH test machine
		Calibration device
		PC300 XQ, Analyzer, QDOC, Xnet, WPQ Manager
	Software and hardware	

Cool series

cool82 U44



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

Cooling capacity at 1 l/min.	1600 W (1l/min)
Tank capacity	7 l
Flow rate	5 l/min
Coolant outlet pressure	3.5 bar
Protection classification	IP23
Safety marking	CE EAC
Dimensions (L x B x H)	650 mm x 370 mm x 250 mm
Weight	ca.24 kg
Standards	IEC 60974-1, -2 and -10 CL.A

Type	Designation	Item no.
cool82 U44	Cooling unit for robot machines with pressure controller	090-008268-00502

cool82 U44



- Powerful cooling unit with centrifugal pump
- Especially sturdy metal casing
- Coolant connections at rear
- High-performance pump, flow monitor, temperature-controlled pump and fan
- Recommended up to 10 m intermediate hose package

Cooling capacity at 1 l/min.	1600 W (1l/min)
Tank capacity	7 l
Flow rate	5 l/min
Coolant outlet pressure	3.5 bar
Protection classification	IP23
Safety marking	CE
Dimensions (L x B x H)	650 mm x 370 mm x 250 mm
Weight	ca.24 kg
Standards	IEC 60974-1, -2 and -10 CL.A

Type	Designation	Item no.
cool82 U44	Cooling unit for robot machines with flow monitor	090-008791-00502

COOL82 U45



- Powerful cooling unit with centrifugal pump
- Reinforced model
- Especially sturdy metal casing
- Coolant connections at rear
- High-performance pump, pressure switch, temperature-controlled pump and fan
- Reinforced centrifugal pump and excellent cooling capacity
- Recommended e.g. for long intermediate hose packages over 15 m

Cooling capacity at 1 l/min.	1800 W (2l/min) 1600 W (1l/min)
Tank capacity	7 l
Flow rate	20 l/min
Coolant outlet pressure	4.5 bar
Protection classification	IP23
Safety marking	
Dimensions (L x B x H)	650 mm x 370 mm x 250 mm
Weight	27.5 kg
Standards	IEC 60974-1, -2 and -10 CL.A

Type	Designation	Item no.
cool82 U45	Cooling unit for robot machines with pressure controller, reinforced version	090-008280-00502

cool82 U45 / U45 2DV



- Powerful cooling unit with centrifugal pump
- Reinforced model
- Especially sturdy metal casing
- Coolant connections at rear
- High-performance pump, flow monitor, temperature-controlled pump and fan
- Reinforced centrifugal pump and excellent cooling capacity
- Recommended e.g. for long intermediate hose packages over 15 m

Cooling capacity at 1 l/min.	1800 W (2l/min) 1600 W (1l/min)
Tank capacity	7 l
Flow rate	20 l/min
Coolant outlet pressure	4.5 bar
Protection classification	IP23
Safety marking	
Dimensions (L x B x H)	650 mm x 370 mm x 250 mm
Weight	27.5 kg
Standards	IEC 60974-1, -2 and -10 CL.A

Type	Designation	Item no.
cool82 U45	Cooling unit for robot machines with flow meter, reinforced version	090-008792-00502
cool82 U45 2DV	Cooling unit for robot machines with flow monitor, reinforced version, two connections for 2 wire feeders, for example	090-008280-13502

ON FILTER COOL

Type	Designation	Item no.
ON FILTER COOL	Dirt filter for air inlet for cool 82	092-008771-00000

Cool series

KF 23E 10°C, 5 l



- Coolant for water-cooled welding machines and cooling units

Freezing point

-10 °C

Contents

5 l

Type	Designation	Item no.
KF 23E-5	Coolant up to -10 °C (14 °F), 5 l	094-000530-00005

KF 23E-200, -10°



- Coolant for water-cooled welding machines and cooling units

Freezing point

-10 °C

Contents

200 l

Type	Designation	Item no.
KF 23E-200	Coolant up to -10 °C (14 °F), 200 l	094-000530-00001

RK series

RK 1



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

Cooling capacity at a flow temperature of 20 °C	900 W (at 25°C)
	500 W (at 32°C)
Tank capacity	6 l
Max. ambient temperature	32 °C
Mains voltage	1 x 230 V
Version	Standard
Dimensions (L x B x H)	565 mm x 440 mm x 345 mm
Weight	42 kg

Type	Designation	Item no.
RK 1	Recooling unit	094-002283-00000

RK 2/3



- 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
- Powerful pump, temperature-controlled fan

Tank capacity	15 l
Max. ambient temperature	32 °C
Version	Standard
Dimensions (L x B x H)	750 mm x 450 mm x 500 mm
Weight	85 kg

Type	Designation	Cooling capacity at a flow temperature of 20 °C W (at 25°C)	Cooling capacity at a flow temperature of 20 °C W (at 32°C)	Mains voltage V	Item no.
RK 2	Recooling unit	2300	1400	1 x 230	094-002284-00000
RK 3		3300	2400	3 x 400	094-002285-00000

RK 2.1/3.1



- 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
- Heavy-duty 8 bar pump, temperature-controlled fan

Tank capacity	15 l
Max. ambient temperature	32 °C
Version	Heavy-duty pump
Dimensions (L x B x H)	750 mm x 450 mm x 500 mm
Weight	85 kg

Type	Designation	Cooling capacity at a flow temperature of 20 °C W (at 25°C)	Cooling capacity at a flow temperature of 20 °C W (at 32°C)	Mains voltage V	Item no.
RK 2.1	Recooling unit with boosted pump 8 bar	2000	1300	1 x 230	094-002284-02000
RK 3.1		3300	2300	3 x 400	094-002285-02000

RK series

RK10



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

Cooling capacity at a flow temperature of 20 °C

1300 W (at 25°C)

1000 W (at 40°C)

Tank capacity

7 l

Max. ambient temperature

50 °C

Mains voltage

1 x 230 V

Version

Heavy Duty

Dimensions (L x B x H)

370 mm x 518 mm x 700 mm

Weight

65 kg

Type	Designation	Item no.
RK10	Recooling unit	094-027244-00000

RK20



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

Cooling capacity at a flow temperature of 20 °C

2500 W (at 25°C)

2000 W (at 40°C)

Tank capacity

15 l

Max. ambient temperature

50 °C

Mains voltage

1 x 230 V

Version

Heavy Duty

Dimensions (L x B x H)

542 mm x 467 mm x 850 mm

Weight

70 kg

Type	Designation	Item no.
RK20	Recooling unit	094-027245-00000

RK30



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

Cooling capacity at a flow temperature of 20 °C

3800 W (at 25°C)

3000 W (at 40°C)

Tank capacity

45 l

Max. ambient temperature

50 °C

Mains voltage

3 x 400 V

Version

Heavy Duty

Dimensions (L x B x H)

781 mm x 659 mm x 1152 mm

Weight

125 kg

Type	Designation	Item no.
RK30	Recooling unit	094-027247-00000

KF 23E 10°C, 5 l

- Coolant for water-cooled welding machines and cooling units



Freezing point	-10 °C
Contents	5 l

Type	Designation	Item no.
KF 23E-5	Coolant up to -10 °C (14 °F), 5 l	094-000530-00005

KF 23E-200, -10°

- Coolant for water-cooled welding machines and cooling units



Freezing point	-10 °C
Contents	200 l

Type	Designation	Item no.
KF 23E-200	Coolant up to -10 °C (14 °F), 200 l	094-000530-00001

ON DFW RK

- Connection for flow monitor FL200 at RK 1-3



Type	Designation	Item no.
ON DFW RK	Flow monitor connection, retrofit option	092-008266-00000
ON DFW RK FT		092-S08266-04168

HOSE BRIDGE

- Hose bridge
- For operating gas-cooled torches on water-cooled welding machines



Type	Designation	Item no.
HOSE BRIDGE	Hose bridge	092-007857-00000

RK series

WS 2x0,5M



Type	Designation	Item no.
WS 2x0,5M	Water hoses, two units	092-001953-00001

UKV4SET 4M



Type	Designation	Item no.
UKV4SET 4M	Hose connection set to connect a cooling unit	092-000587-00000

SET 2 Y-PART

Type	Designation	Item no.
SET 2 Y-PART	Water connection set, 2x Y-Part	092-S09218-04188

Pallet, trolley

PALETTE ROB



- Steady and stable design thanks to the welded structure
- Suitable for use with forklifts

Trolley dimensions L x W x H in mm

785 mm x 495 mm x 200 mm

Trolley weight

28.5 kg

Type	Designation	Item no.
PALETTE ROB XX2	Transport pallet for power source and add-on module	090-008275-00000

TROLLY ROB



- Steady and stable design thanks to the welded structure

Trolley dimensions L x W x H in mm

785 mm x 495 mm x 200 mm

Trolley weight

28.5 kg

Type	Designation	Item no.
TROLLY ROB XX2	Transport cart for a power source with an add-on module	090-008278-00000

► For power sources without pre-installed pallet

Spare parts set

SERVICE SYSTEM SS01



- Spare parts starter kit for service technicians for maintenance and repairs to EWM machines and EWM torches
- Covers machine, torch and automation
- **Machine spare parts:** Casing screws, spacers, gas valves, ring screws, rotary knobs, tank caps, filter sieves, connecting pieces, couplings, safety fuses, push-buttons, switches, connection sockets, contact pins, protective dust caps, caps for openings in casings, jumpers, plug connectors, protective caps, strain reliefs
- **Torch spare parts:** Microswitches, push-button springs, cable lugs, single-ear clamps, control cable plugs and contacts, connecting nipples, screws, cylindrical pins
- Approx. 2000 items total
- The assortment boxes can be ordered separately and the contents may be ordered in packing units (see spare parts catalogue)

Type	Designation	Item no.
SERVICE SYSTEM SS02	Spare parts starter set, two boxes	092-002469-00001

BOX 1-2



- Spare parts starter kit, separate boxes
- Box 1 contains assortment boxes 1–4
- Box 2 contains assortment boxes 5–8

Type	Designation	Item no.
BOX 1	Spare parts starter kit, box 1	092-007781-00001
SBOX 2	Spare parts starter kit, box 2	092-007786-00001

Service Case 1-8



- Separate assortment boxes
- The contents can be ordered separately or in packing units (see replacement parts catalogue)

Type	Designation	Version	Item no.
SERVICE CASE SC01	Assortment box 1: Screws, hexagon spacers	Assortment box 1: Screws, hexagon spacers	092-007782-00001
SERVICE CASE SC02	Assortment box 2: Rotary dials and covers, gas valves, spacers, lifting eyes	Assortment box 2: Rotary dials and covers, gas valves, spacers, lifting eyes	092-007783-00001
SERVICE CASE SC03	Assortment box 3: Hose clamps, couplings, filters, pressure controllers, quick connect coupling, tank covers	Assortment box 3: Hose clamps, couplings, filters, pressure controllers, quick connect coupling, tank covers	092-007784-00001
SERVICE CASE SC04	Assortment box 4: Safety fuses	Assortment box 4: Safety fuses	092-007785-00001
SERVICE CASE SC05	Assortment box 5: Burndy pin/socket contact, connection sockets	Assortment box 5: Burndy pin/socket contact, connection sockets	092-007787-00001
SERVICE CASE SC06	Assortment box 6: Minifit/old Burndy pin/socket contacts	Assortment box 6: Minifit/old Burndy pin/socket contacts	092-007788-00001
SERVICE CASE SC07	Assortment box 7: Blind caps/caps	Assortment box 7: Blind caps/caps	092-007789-00001
SERVICE CASE SC08	Assortment box 8: Switches, triggers, jumpers, drive pinions, strain relief, automatic cutouts	Assortment box 8: Switches, triggers, jumpers, drive pinions, strain relief, automatic cutouts	092-007790-00001

A3-SH test machine

A3-SH SET



- Test machine for repetition tests of arc welding machines as per IEC EN 60974-4 (VDE 0544-4), as well as electrical operating material as per VDE 0701-0702.
- For single-phase machines with 230 V connection voltage and three-phase machines from 230 V to 400 V/32 A.
- Pre-installed automatic testing routines for EWM machines
- Universal test routines also for testing other manufacturers' machines
- Extensive database functions
- Free software updates for changes or modifications to testing procedures
- Test logs with your company logo
- **Delivery includes:**
 - Test Machine A3-SH
 - Measuring leads
 - 230 V connecting cable/AC
 - USB cable
 - EWM-specific test log/A3-S Remote database software
 - Factory calibration certificate

Type	Designation	Item no.
A3-SH SET	Test machine for repetition test	090-008210-00000

Calibration device

Calibration device



- Calibration device for validation of arc welding systems as per IEC EN 60974-14 (replacement for BS EN 50504/VDE 0544-50), portable
- Analogue display of measurement data from mains input current and mains input voltage
- Digital display of measurement data from welding current, welding voltage, open circuit voltage (as per BS EN IEC 60974-1) and ambient temperature
- Delivery includes: Calibration device, 2 x measuring leads for external voltage measurement (2 m), 4 x load cables (4 m/95 mm²)
- A power source load is additionally required for standard-compliant validation, see LS 600A 090-008059-00101.
- You will receive authorisation to use the EWM validation protocols after completing the optional EWM service training, "Validation as per IEC EN 60974-14"! **Participation is highly recommended.**

Mains voltage (tolerances)	3 x 400 V
Mains fuses (slow-blow)	3
Connection load	600 A / 60 %
	500 A / 100 %
Weight	25 kg

Type	Designation	Item no.
KLE 2	Calibration device	090-008297-00502

Calibration costs

- Perform verification
- Professional documentation and identification
- Preparation of a report

Type	Designation	Item no.
KOS60	Calibration costs per welding machine	KOS-S00018-00000
KOSV38	Calibration certificate	KOS-V00038-00000

Miete KLE

Type	Designation	Item no.
KLE+LS600A WEEKLY RENTAL	Weekly rental LS600A, incl. calibration unit and TESTO 470	KOS-S00019-00000
KLE+LS600A MONTHLY RENTAL	Monthly rental LS600A, incl. calibration unit and TESTO 470	KOS-S00020-00000

LS 600A



- Power source load for arc simulation
- For standard-compliant loading of arc welding systems during validation as per DIN EN IEC 60974-14 (replacement for DIN EN 50504/VDE 0544-50) or for loading power sources for service purposes
- Allows static loading of arc welding systems without igniting an arc.
- **Very straightforward handling:**
- no tedious setting of the operating point.
- Simple toggling of the standard characteristics (MMA, TIG, MIG/MAG)
- **Delivery includes:**
- load simulation device, load cable bridge

Mains voltage (tolerances)	3 x 400 V
Mains fuses (slow-blow)	3
Connection load	600 A / 60 %
	500 A / 100 %
Maximum connection voltage	DC , 120 V
	AC , 50 V
Weight	139.5 kg

Type	Designation	Item no.
LS 600A	Load simulation device	090-008059-00101

TESTO 470

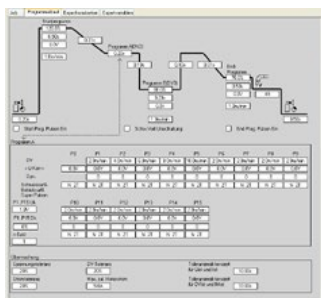


- Measuring device for measuring rotation speeds, speeds and lengths
- For validation of wire feeders compliant with EN 50504 (VDE 0544-50)
- Saving of average, max. and min. values and the last measurement value
- Measurement spacing up to 600 mm (optical measurement)
- Easy one-hand operation

Type	Designation	Item no.
TESTO 470	Measuring instrument for rotational speeds, velocities and lengths	098-005120-00000

PC300 XQ, Analyzer, QDOC, Xnet, WPQ Manager

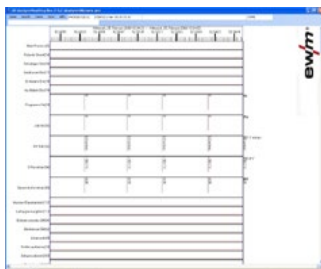
PC300 XQ Set



- Welding parameter software
- Windows interface makes operation straightforward
- Structured operating menus and levels for changing, setting and programming all welding parameters
- Management of up to 510 JOBS in a database with easy-to-use search options
- Exchange of JOBS to and from the welding machine
- Online data exchange, i.e. data is visualised in PC300 and mapped directly to the welding process (ideal for training and test welding purposes)
- Integrated password protection to protect against unauthorised changes
- Display of the actual values for the welding voltage and current, wire feed speed, wire feeder motor armature current and welding power using digital screen displays with bar graph and hold function
- Connection to a standard serial COM interface on the welding machine
- Default settings for welding data monitoring
- Always up to date due to standard update function for new welding parameters
- Ideal for data backup via easy exchange between power source and PC
- EWM Backup Tool – simple backup function of JOB and system configuration.
- EWM PC300 Light Version – simple operation, compressed to the most important functions.
- EWM Config Tool – configuration of system components.
- System requirements: Windows 7 (32-/64-bit), Windows Vista, Windows XP SP3, .NET Framework 2.0 installed (will be installed at the same time where applicable), Intel Pentium (or comparable) CPU with at least 1.7 GHz, 512 MB RAM, min. 300 MB free hard disk space, USB 1.1 or USB 2.0 for installation the software, USB 1.1 or USB 2.0 port for connection to welding machine

Type	Designation	Item no.
PC300 XQ Set	PC300 XQ welding parameter software set, including CMSTICK, cable and SECINT X10 USB interface	090-008777-00000

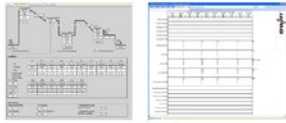
ANALYZER



- Analysis software for control data
- Can be used with BUSINT X11 fieldbus interfaces for the alpha Q, Phoenix and Tetrix welding systems
- Can be used with RINT X12 analogue/digital interfaces for the alpha Q, Phoenix and Tetrix welding systems
- Non-time based display and representation of the currently used data profile (BUSINT X11 only)
- Display and representation of all activation and status signals in a compressed form and as a time-based logic diagram
- Storage and re-display of recorded signal sequences
- Signal editor
- Display of additional information about the state of the fieldbus and the welding machine (BUSINT X11 only)
- Display of machine type, performance class and software version of the process control
- EWM Config Tool - configuration of system components
- System requirements: Windows 7 (32-/64-bit), Windows Vista, Windows XP SP3, .NET Framework 2.0 installed (will be installed at the same time where applicable), Intel Pentium (or comparable) CPU with at least 2.4 GHz, min. 2 GB RAM, min. 4 GB free hard disk space, USB 1.1 or USB 2.0 for installation of software, USB 1.1 or USB 2.0 port for connection to welding machine; SECINT X10-USB PC connection cable, ADAPT X10 adaptor cable for use with BUSINT X11 and RINT X12 interfaces for installation in electrical enclosure

Type	Designation	Item no.
ANALYZER	Software for control and status signal analysis	090-008778-00000

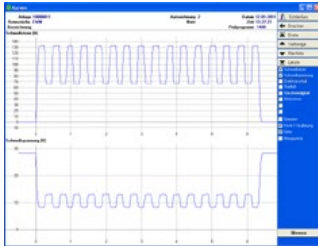
Set PC300 XQ / ANALYZER



- Welding parameter software PC300 + Analyzer software to analyse control data
- Only one USB dongle required to operate both programs

Type	Designation	Item no.
Set PC300 XQ / ANALYZER	Set comprising PC300 XQ and Analyzer software	090-008779-00000

Set QDOC9000-2



- Welding data documentation software
- Windows interface makes operation straightforward
- Quality control for welding production
- Suitable for creating welding instructions
- Also ideal for welding tasks requiring documentation
- Important tool in welding training
- Recording, monitoring and documentation of:
 - Welding voltage
 - Welding current
 - Wire feed motor armature current
 - Wire feed speed
 - Adaptable, printable forms
 - Easy export of data
 - High-performance database-driven data functions
- System requirements: Windows 7 (32/64-bit), Windows Vista, Windows XP SP3, .NET Framework 2.0 installed (will be installed at the same time where applicable), Intel Pentium (or comparable) CPU with at least 2.4 GHz, 2 GB RAM, min. 4 GB free hard disk space, CD-ROM drive for installing software, USB 1.1 or USB 2.0 port for connection to welding machine

Type	Designation	Item no.
QDOC9000 V2.0	Set consisting of interface, documentation software, connection lead	090-008713-00000

xNet 1.0



- Software product for quality assurance in welding production
- Xnet Basis Set consisting of USB dongle with serial number, installation file and software usage licence

Type	Designation	Item no.
Xnet Basis Set	Xnet Basis Set consisting of USB dongle with serial number, installation file and software usage licence	091-008836-00000

WPQ Manager single-station solution

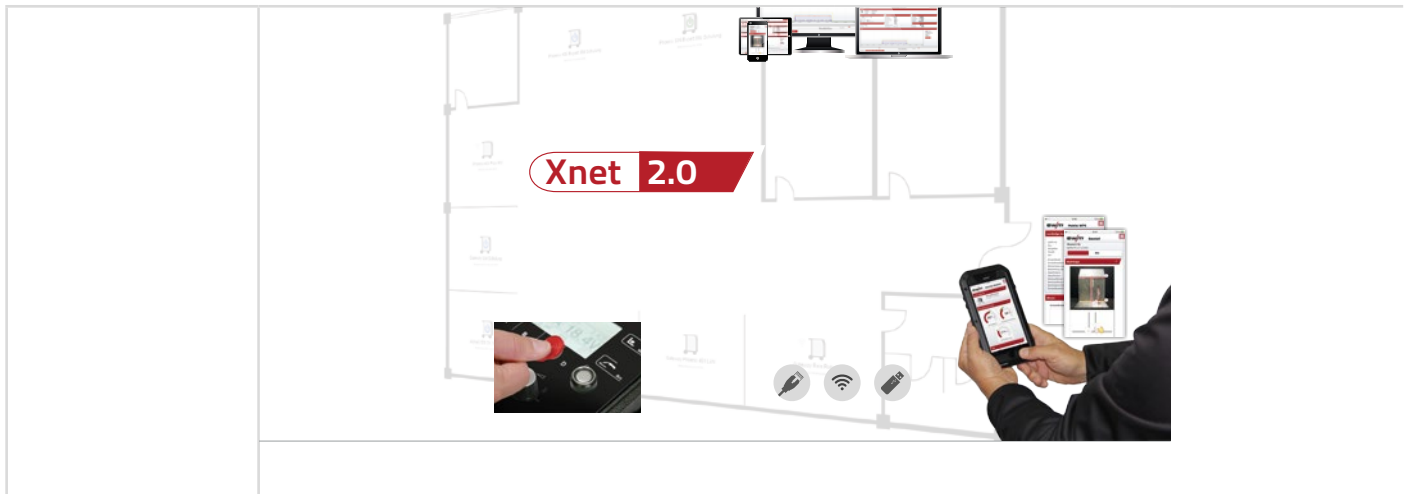
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- Easy, quick creation and management of a database by WPQR and pWPS/WPS **on a local PC**
- Direct creation of a pWPS/WPS
- Creation and management of a database for welder and welder qualification **on a local PC**
- Reminder in case of due confirmation/extension of welder qualification
- **The WPQ Manager cannot be readily used in combination with Xnetproducts**

Type	Designation	Item no.
WPQ-Manager Server	WPQ Manager: Software for creating and managing welding documentation and welder qualifications as a server solution in the network	091-008837-00000
WPQ-X Manager (Upgrade 1)	Xnet software module for WPS creation and management	090-008814-00000



Structure of an Xnet system

Step 1 Configuring the software according to customer requirements



More information can be found in the Xnet price list and in the online shop:
www.ewm-sales.com/Xnet

Step 2 Configuring the hardware according to customer requirements

From page 198	EWM machines	Machines from other manufacturers
	<p>Xnet retrofitting for all EWM welding machines with 7-pole, digital interface</p> 	

Step 3 Defining the number of machine usage licences

	Not required
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Step 4 Commissioning and training by EWM

From page 199	
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■ For detailed questions about Xnet: xnet@ewm-group.com

Xnet

Xnet Extended-Set LAN



- Xnet retrofitting set for LAN consisting of:
 - One Xnet LAN gateway in a robust industry-compatible casing
 - One machine usage licence
 - One network cable (10 m)
 - One 7-pole connection cable (5 m)
- **Range of functions:**
 - Connecting welding machines without integrated Xnet components to an Xnet system (for all EWM machines with integrated 7-pole interface)
 - Data transfer via network cable
 - USB interface for data recording and data transfer
 - Connection of a barcode scanner possible
 - Registration option via Xbutton
 - Digital display with click wheel operation
 - Showing the following information on the display: network status, network configuration, nominal/actual welding parameters, JOB information, Xnet monitoring of the welding parameters in real time, WPQR welding data assistant, component information, errors and warnings in the system
- *We offer bulk prices, use the price advantage*

Designation	Item no.
Xnet retrofitting set LAN: One machine licence, one LAN gateway, one network cable (10 m), one 7-pole connection cable (5 m), including connection for barcode scanner	091-008833-00001

Xnet Extended-Set WiFi



- Xnet retrofitting set for WiFi consisting of:
 - One Xnet WiFi gateway in a robust industry-compatible casing
 - One machine usage licence
 - One 7-pole connection cable (5 m)
- **Range of functions:**
 - Connecting welding machines without integrated Xnet components to an Xnet system (for all EWM machines with integrated 7-pole interface)
 - Data transfer via WiFi or network cable
 - USB interface for data recording and data transfer
 - Connection of a barcode scanner possible
 - Registration option via Xbutton
 - Digital display with click wheel operation
 - Showing the following information on the display: network status, network configuration, nominal/actual welding parameters, JOB information, Xnet monitoring of the welding parameters in real time, WPQR welding data assistant, component information, errors and warnings in the system
- *We offer bulk prices, use the price advantage*

Designation	Item no.
Set: One machine licence, one Wi-Fi gateway, one 7-pole connection cable (5 m)	091-008834-00001

Universal logger Base



- Complete set for connecting Xnet to all manufacturers' welding machines
- Parameter recording of: Welding current and voltage, wire feed speed and welding time
- **Set contents:** External measuring unit, voltage measurement adapter, ammeter cable
- With the Xnet Universal logger, welding machines from all manufacturers can be connected to an Xnet gateway and the Xnet software.
- Almost all Xnet functions can be used, such as e.g.:
 - Real-time display, recording and documentation of the welding parameters
 - Consumption calculation
 - Welding machine maintenance
 - Bar code scanning
 - WPQ Manager
 - Welder management
- Two different options are available for recording the wire feed speed of the connected welding machine:
 - 1) Mathematical calculation of the wire feed speed based on the measured welding current without an additional EMU WF 1 sensor wire sensor
 - 2) Metrological recording of the wire feed speed using the wire sensor EMU WF 1 sensor

Designation	Item no.
Complete set for connecting Xnet to all manufacturers' welding machines	091-008842-00000

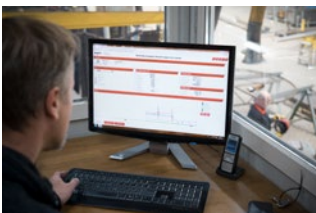
Universal logger DGC



- Complete set including gas measurement for connecting Xnet to all manufacturers' welding machines
- Parameter recording of: Welding current and voltage, wire feed speed, welding time and shielding gas quantity
- Set contents: External measuring unit including gas quantity measurement, voltage measurement adapter, ammeter cable, gas hose
- With the Xnet Universal logger, welding machines from all manufacturers can be connected to an Xnet gateway and the Xnet software.
- Almost all Xnet functions can be used, such as e.g.:
 - Real-time display, recording and documentation of the welding parameters
 - Consumption calculation
 - Welding machine maintenance
 - Bar code scanning
 - WPQ Manager
 - Welder management
- Two different options are available for recording the wire feed speed of the connected welding machine:
 - 1) Mathematical calculation of the wire feed speed based on the measured welding current without an additional EMU WF 1 sensor wire sensor
 - 2) Metrological recording of the wire feed speed using the wire sensor EMU WF 1 sensor

Designation	Item no.
Complete set including gas measurement for connecting Xnet to all manufacturers' welding machines	091-008843-00000

Xnet Workshop



- The main goal of the workshop is to be able to use the full extent of Xnet and for participants to be able to determine the potential for their own companies. Participants must recognise the advantages of using the system in their daily work. At the same time, customer suggestions for future updates are noted and identified. The workshop forms the basis of implementation of the Xnet system in the ongoing welding production process. To sum up, the workshop, along with the EWM experts, helps to recognise daily benefits, reduce costs and increase the day-to-day efficiency. The result of the decision will prove the correctness of your decision and open up new possibilities for cooperation with EWM.

Designation	PE	Item no.
Xnet workshop „Working efficiently with Xnet“	PC	KOS-V00076-00000
Hourly rate for installation and commissioning of the Xnet system	h	KOS-V00028-00000

► More Xnet components such as scanners and Xbutton sets can be found in the Xnet price list and in the online shop!

Overview

Degaussing		Page
Degauss	Set Degauss 600	204

Degaussing prior to welding



Degauss 600

Magnetism is not desired where steel is welded. Undesired residual magnetism in steel parts results in an unstable and deflected arc. The effect may be so great that welding is impossible.

When using the Degauss 600, you can degauss your materials and workpieces. Following the easy installation of the components at the workpiece, the continuous degaussing process will automatically be completed within the shortest possible time.

The effect of the degaussing will show immediately in the subsequent welding process. Your welding results speak for themselves: The arc is stable and no longer deflected, there are no unnecessary arc striking spots, sidewalls are fused without lack of fusion, perfect results without rework or scrap are achieved.

Your benefits

- / Degaussing of magnetic materials and workpieces
- / Single button operation – automatic degaussing
- / Stable welding process without magnetic deflection – perfect welding result without finishing work

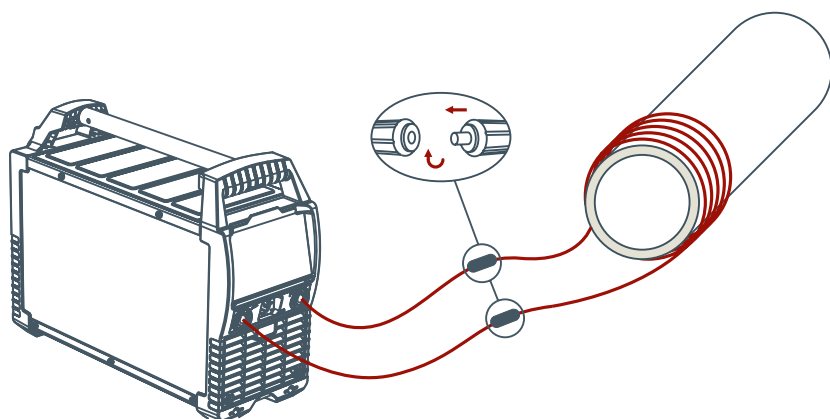




Your benefits

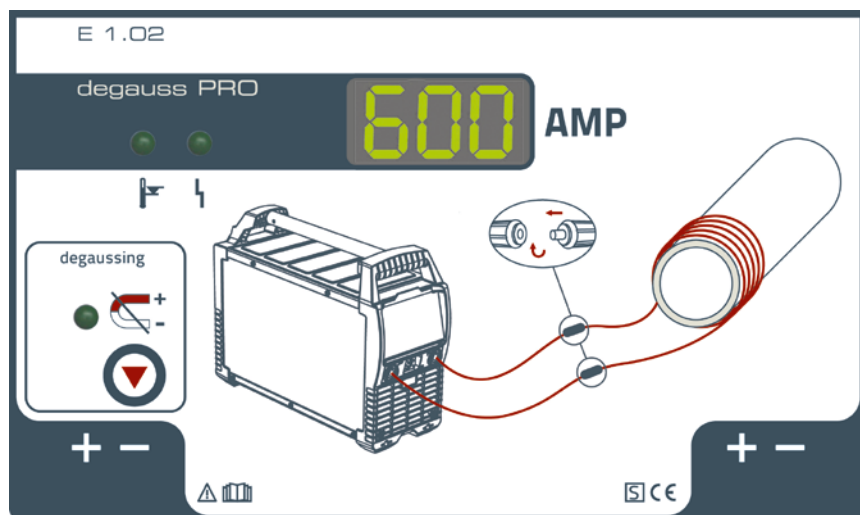
User's advantages

- / No deflection of the arc by residual magnetism in the workpiece
- / Avoidance of lack of fusion due to insufficient side-wall fusion
- / Minimisation of finishing work
- / Cost-efficient and high-quality results
- / Degaussing of pipes and metal sheets



Very straightforward handling

- / The set includes all components required for degaussing
- / Quick connection at the pipe by means of three load cables
- / Single button operation
- / Automatic degaussing process
- / Use at -25 °C to +40 °C with mains voltage tolerances of +/-20%
- / Portable and robust



Degauss 600

- / Compact degaussing power source suitable for use at the construction site
- / Single button operation
- / Automatic degaussing process

Degauss Set Degauss 600



- Set: Degauss 600 degaussing machine, two 5 m load cables (35 mm²) and one 20 m load cable (35 mm²), RT DGS1 remote control including 5 m connection cable
- **Degauss – automatic degaussing process before welding:**
- dependable degaussing for better welding results through stable welding process without magnetic deflection, minimisation of finishing work
- **activgauss (10–250 A) – degaussing during welding:**
- avoids moving up of magnetic field during the welding process in case of very long and strongly magnetised components
- Quick connection to the component thanks to the practical load cable set
- Unlimited generator operation and connection to long mains leads thanks to high mains voltage tolerances
- Robust design suitable for construction site use
- Impact-resistant casing
- Inspected protection against splash water (IP-34s)
- Portable, shoulder strap
- **RT DGS1 remote control – controls degaussing during welding (activgauss):**
- activates the activgauss function
- Infinitely adjustable current for generation of the required opposing magnetic field
- Pole reversing switch, start/stop function
- Operation directly at the welding site
- **Recommended accessories:** FIM1-4 magnetic field meter for measuring magnetic direct and alternating fields
- **Advantages of degaussing:**
- No deflection of the arc by residual magnetism in the workpiece
- Prevention of lack of fusion due to insufficient sidewall fusion
- Minimisation of finishing work
- Cost-efficient and high-quality results

Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)
Mains fuses (slow-blow)	3
Degaussing current	10 A - 600 A
cos φ	0.99
Efficiency	90 %
Weight, machine	25 kg
	55.1 lbs
EMC class	A
Insulation class	H
Protection class	IP34s
Approvals	

Type	Designation	Item no.
Set Degauss 600	Set: Degauss 600 degaussing machine, two 5 m load cables (35 mm ²) and one 20 m load cable (35 mm ²), RT DGS1 remote control including 5 m connection cable	091-002065-00502

Options/accessories

Remote controls

RT DGS1

Degauss remote control

Remote control with a polarity reversing switch and start/stop function for Degauss 600
Remote control activates additional function – generation of an opposing magnetic field during the welding process

Infinitely adjustable current (0% to 100%) to produce the required opposing magnetic field directly at the welding site

Cable not supplied in delivery, please order connection cable separately



Item no.

090-008806-00000

Accessories

Set LC 35 mm²

Set: Two 5-metre load cables (35 mm²) and one 20-metre load cable (35 mm²) for degaussing



Item no.

092-002921-00000

FIM1-4 Set

Set: magnetic field meter, including Hall effect sensor

Magnetic field meter for measuring magnetic direct and alternating fields

Three possible measuring ranges: 20 mT, 200 mT and 2000 mT

Hand-held unit for operation with mains, battery or power-pack

LCD digital display

Measuring accuracy: $\pm 2\%$ of measured value ± 1 digit using internal calibration voltage, better than $\pm 1\%$ of measured value ± 1 digit using calibrated comparison magnet

Resolution: 0.01 mT

Output: ± 199.9 mV analogue output corresponding to 1,999 digits, connection for analogue display, X-Y plotter and A-D converter

Operating time: about 100 hours with dry-cell battery, about 50 hours with power-pack charge (power pack not included)



092-002937-00000

General information

The global economy is changing continuously. Markets evolve, requirements change, opportunities arise and fade away. Companies that are committed to supporting their customers in this kind of environment must be one thing above all, flexible.

For this reason, the EWM Group is continually expanding its worldwide presence. Our advanced manufacturing, service and training sites in key industrial and growth regions reinforce our dedication to be as close to our customers as absolutely possible. Continuous expansion of our network with EWM sales offices as well as committed sales and service partners ensures global availability and optimum customer service for the customers who use our products.

We believe that acting in our customers' interests means accepting their challenges as our own. That is why we continuously optimise our product and service offerings. Innovative power electronics, the latest information technology and comprehensive expertise in application issues flow into each of our four service areas and combine to create complete solutions for arc welding that offer real added value.

This price list gives you an overview of the wide range of services from EWM so that you can get the best possible results from our products.

■ Conditions

- All prices in this price list are net prices excluding any applicable sales or value-added tax and are not subject to any additional discounts.
- The prices remain valid until a new price list is released.
- Subject to technical modification.
- We deliver products and services on the basis of our "General Terms and Conditions of Sale" which can be found at www.ewm-group.com.

■ Sales and service partners

Please visit our website at www.ewm-group.com to find the sales and service partner closest to you.

Customised machine configuration

■ Included in delivery

Order one or more weld-ready systems and configure them precisely to your requirements by adding relevant accessories and options. Of course, we are also happy to advise you beforehand about the optimum configuration for your welding task. We will assemble the system at our factory according to your specifications and test the system before delivery. The following services are included (varies according to machine type and composition):

- Mounting and assembly of trolley, cooling unit, multi-voltage module, pivot support and other accessories.
- Connection of the intermediate hose package to power source and wire feeder.
- Changing of the wire feed rollers and optimisation of the wire feed roller for your preferred wire.
- Configuration of welding torch: Gas and contact tip plus liner on MIG/MAG torches, tungsten electrode, gas nozzle and collet body on TIG torches.
- Filling of coolant container, connection of mains plug (European standard), gas supply, workpiece lead, etc.
- A trained employee will use pre-programmed JOBS (welding tasks) to perform a test weld using the wire/gas combination that you specify.

■ Costs

Type	Designation	Item no.
KOS25	Customised configuration with assembly for portable and compact systems	KOS-V00123-00000
KOS26	Customised configuration with assembly for decompact systems	KOS-V00122-00000

Commissioning

■ Included in delivery

- On-site assembly of individual components
- Connection of the hose packages and welding cables
- Connection of the supply lines (e.g. gas, mains, compressed air connection, etc.)
- Insert and inch in the welding filler (MIG/MAG)
- Adjust the wire feed system and the gas quantity
- Explanation of basic functions and test welding
- Tips on servicing and maintaining the machine
- If requested (and following written or verbal agreement), we will be happy to provide additional training after commissioning (see Chapter Instruction/Basic Training).

■ Costs

► The hourly rates given exclude any travel and accommodation costs incurred, as well as expenses!

Type	Designation	Item no.
KOS3	Manual welding: hourly rate for welding experts, electrical engineers	KOS-A00000-00002
KOS4-I	Automated welding: Hourly rate for welding experts, electrical engineers, test welding	KOS-A00000-I0003
KOS49-01	Automated welding: Hourly rate for welding experts, electrical engineers, process supervision	KOS-V00013-00001
KOS24	Mileage allowance	KOS-S00010-00000
KOS57	Hourly rate for travel expenses for technicians and engineers	KOS-V00057-00000

Instruction/basic training

Duration: 1 hour

■ Included in delivery

In combination with the “customised machine configuration”, we offer you on-site commissioning. On the agreed date we commission your system at the place of installation, adjust the parameters to your current application and instruct you on the functions of the system.

■ Costs

► The hourly rates given exclude any travel and accommodation costs incurred, as well as expenses!

Type	Designation	Item no.
KOS27	Commissioning: 1 hour	KOS-V00027-00000
KOS24	Mileage allowance	KOS-S00010-00000
KOS57	Hourly rate for travel expenses for technicians and engineers	KOS-V00057-00000

Duration: 2 hours

■ Included in delivery

This detailed two-hour instruction/basic training is designed to give you a more in-depth overview of the functionality and performance of our machines. Building upon the one-hour instruction, all functions on the welding machine are explained in detail. We closely examine your configuration and applications in order to jointly optimise the welding process with you.

■ Costs

► The hourly rates given exclude any travel and accommodation costs incurred, as well as expenses!

Type	Designation	Item no.
KOS29	Instruction/basic training: 2 hours	KOS-V00029-00000
KOS24	Mileage allowance	KOS-S00010-00000
KOS57	Hourly rate for travel expenses for technicians and engineers	KOS-V00057-00000

Machine updates

■ Included in delivery

- Delivery of the machine to EWM Service in Mündersbach or on-site update
- Check of the existing software/machine version
- Machine updated to the latest software version

■ Costs

You will be charged for replacement circuit boards and time spent. Freight costs for delivery and return will be charged according to the volume of the goods being sent.

► The hourly rates given exclude any travel and accommodation costs incurred, as well as expenses!

■ Notes

Replacement circuit boards and any other necessary parts and software are invoiced according to the currently valid price list or, if available, the valid price quotation.

Type	Designation	Item no.
KOS29	Machine update, hourly rate for welding experts, electrical engineers	KOS-S00015-00000
KOS29-I	Machine update, hourly rate for development staff, technicians/engineers	KOS-S00015-I0000
KOS24	Mileage allowance	KOS-S00010-00000
KOS57	Hourly rate for travel expenses for technicians and engineers	KOS-V00057-00000

Calibration

Our calibration service is designed for those with the highest quality expectations.

One of our service technicians uses a calibration device to adjust your welding machine. We are also happy to provide this service on-site.

■ Included in delivery

- Determining welding parameters under load
- Correction of deviations
- Documentation of measurement values
- Quality assurance for reproducible welding results

■ Costs

Freight costs for delivery and return will be charged according to the volume of the goods being sent.

► The hourly rates given exclude any travel and accommodation costs incurred, as well as expenses!

Type	Designation	Item no.
KOS60	Calibration costs per welding machine	KOS-S00018-00000
KOS24	Mileage allowance	KOS-S00010-00000
KOS57	Hourly rate for travel expenses for technicians and engineers	KOS-V00057-00000

Parameter determination/characteristics/process optimisation

Parameter determination

■ General remarks

- The welding machine required for the following services plus common gases and welding consumables are provided by EWM.
- If special gases, parent metals and consumables are needed for parameter determination/finding of characteristics, these must be provided in adequate quantities.
- You are required to deliver to your site at no charge your supplied samples, as well as the gases, parent metals and welding consumables. The freight costs for the return delivery are calculated based on the volume of goods dispatched.
- Any parts and software required will also be charged as per the quotation or the current price list.

■ Included in delivery

- Parameters adjusted to your requirements

■ Costs

Type	Designation	Item no.
KOS3	Manual welding: hourly rate for welding experts, electrical engineers	KOS-A00000-00002
KOS4-I	Automated welding: Hourly rate for welding experts, electrical engineers, test welding	KOS-A00000-I0003
KOS3-I	Hourly rate for development staff, technicians/engineers	KOS-A00000-I0002

Preparing a characteristic

■ Costs

Type	Designation	Item no.	ZBHA
KOS51	Fixed price per characteristic	KOS-A00007-00001	Services

Creating a new characteristic at our site

■ Included in delivery

- We create for you a new, customised characteristic in accordance with your requirements (welding task, parent metal, welding consumable, gas, etc.)

■ Costs

Type	Designation	Item no.
KOS3	Manual welding: hourly rate for welding experts, electrical engineers	KOS-A00000-00002
KOS4-I	Automated welding: Hourly rate for welding experts, electrical engineers, test welding	KOS-A00000-I0003

Process optimisation

■ Included in delivery

- Process optimisation or new determination according to your requirements.
- Because any process optimisation requires a customised solution, we are unable to give a more precise description here.

■ Costs

► The hourly rates given exclude any travel and accommodation costs incurred, as well as expenses!

Type	Designation	Item no.
KOS49	Manual welding: hourly rate for welding experts, electrical engineers	KOS-V00013-00000
KOS49-01	Automated welding: Hourly rate for welding experts, electrical engineers, process supervision	KOS-V00013-00001
KOS4-I	Automated welding: Hourly rate for welding experts, electrical engineers, test welding	KOS-A00000-I0003
KOS49-I	Hourly rate for development staff, technicians/engineers	KOS-V00013-I0000
KOS24	Mileage allowance	KOS-S00010-00000
KOS57	Hourly rate for travel expenses for technicians and engineers	KOS-V00057-00000

Demonstrations/training

Demonstrations/demonstration machines

■ Included in delivery

- We demonstrate for you the main features and functions as well as the performance capabilities of the machines.
- Welding on sample panels to demonstrate the various functions is included, highlighting the advantages to the user.
- Please bear in mind that a demonstration does not represent any form of training and cannot replace a training course.
- We can provide you with a machine for a long-term test. To do this, we conclude a contract with you for limited-time use of the machine in return for a fee.

■ Costs

► The hourly rates given exclude any travel and accommodation costs incurred, as well as expenses!

Type	Designation	Item no.
KOS3	Manual welding: hourly rate for welding experts, electrical engineers	KOS-A00000-00002
KOS4-I	Automated welding: Hourly rate for welding experts, electrical engineers, test welding	KOS-A00000-I0003
KOS3-I	Hourly rate for development staff, technicians/engineers	KOS-A00000-I0002
KOS24	Mileage allowance	KOS-S00010-00000
KOS57	Hourly rate for travel expenses for technicians and engineers	KOS-V00057-00000

Training courses/advanced training courses/presentations

■ Included in delivery

We offer our customers and sales partners training courses on our products, we present all new developments in our training news, we conduct welding training with different materials and help you develop excellence when it comes to service.

An updated training calendar with detailed information about individual training events is available at www.ewm-group.com in the Download area under the Service heading.

■ Costs

Free of charge in Mündersbach for sales partners

On-site: Free of charge for sales partners, plus any travel costs, accommodation and expenses incurred, purchase of workpieces, welding consumables, gases, etc.

On-site: Plus any costs for travel and accommodation as well as expenses incurred, purchase of workpieces, welding consumables, gases, etc.

► Please note that for cancellations received less than 7 days before the start of the training course, the full course fee is payable, and for complimentary courses, €50.00 is payable for each participant.

Type	Designation	Item no.
TRAINING 1	Standard training courses (according to training calendar)	KOS-V00017-00000
TRAINING 2	Special training courses (topics at customer's request not already covered in training calendar)	KOS-V00017-00001
TRAINING 3	Expert training courses (highly specialised, by development staff)	KOS-V00017-00002
KOS24	Mileage allowance	KOS-S00010-00000
KOS57	Hourly rate for travel expenses for technicians and engineers	KOS-V00057-00000

Service: Servicing and repair (incl. repetition test)

■ Included in delivery

- Repair or servicing, including repetition test, on-site or at EWM.

■ Costs

Freight costs for delivery and return will be charged according to the volume of the goods being sent.

The cost for this service is calculated from the work expense plus any applicable material costs. Spare parts required for repairs will be calculated upon the basis of the currently valid price list or a valid price quotation, to the extent not covered by our warranty terms (see Chapter Warranty Declaration).

► The hourly rates given exclude any travel and accommodation costs incurred, as well as expenses!

■ Notes

- If requested, we will be happy to provide a cost estimate for the service. Cost estimates are invoiced at a flat rate of €50.00 (KOS-S00011-00000).
- These costs are not applied if the repair work is carried out.

Type	Designation	Item no.
KOS15	Hourly rate for electrical engineers	KOS-S00001-00000
KOS2	Hourly rate for test	KOS-S00002-00000
KOS24	Mileage allowance	KOS-S00010-00000
KOS57	Hourly rate for travel expenses for technicians and engineers	KOS-V00057-00000

Metallurgic testing

At the EWM site

■ Included in delivery

- Non-destructive and destructive test of your welding samples
- Metallurgic testing of your welded sample
- Extensive report with results of the test

■ Costs

Freight costs for delivery and return will be charged according to the volume of the goods being sent.

► The hourly rates given exclude any travel and accommodation costs incurred, as well as expenses!

Type	Designation	Item no.
KOS54	Hourly rate for metallurgic testing	KOS-A00009-00000
KOS3	Manual welding: hourly rate for welding experts, electrical engineers	KOS-A00000-00002
KOS4-I	Automated welding: Hourly rate for welding experts, electrical engineers, test welding	KOS-A00000-I0003
KOS3-I	Hourly rate for development staff, technicians/engineers	KOS-A00000-I0002

Welding tests/sample welds

At EWM's site

■ Included in delivery

- Welding of samples with our machines
- Welding report with results
- The welding machine required and the standard gases and welding consumables are provided by EWM.
- If we will need special gases, parent metals and consumables for your sample welds, these must be provided in adequate quantities.

■ Costs

Freight costs for delivery and return will be charged according to the volume of the goods being sent.

Type	Designation	Item no.
KOS3	Manual welding: hourly rate for welding experts, electrical engineers	KOS-A00000-00002
KOS4-I	Automated welding: Hourly rate for welding experts, electrical engineers, test welding	KOS-A00000-I0003

On-site

■ Included in delivery

- Welding of samples with our machines
- Welding report with results

■ Costs

Freight costs for delivery and return will be charged according to the volume of the goods being sent.

► The hourly rates given exclude any travel and accommodation costs incurred, as well as expenses!

Type	Designation	Item no.
KOS3	Manual welding: hourly rate for welding experts, electrical engineers	KOS-A00000-00002
KOS4-I	Automated welding: Hourly rate for welding experts, electrical engineers, test welding	KOS-A00000-I0003
KOS24	Mileage allowance	KOS-S00010-00000
KOS57	Hourly rate for travel expenses for technicians and engineers	KOS-V00057-00000

Rent/leasing/financing

Welding machines are capital investments. For this reason, the decision to purchase such a product is influenced not only by good welding characteristics, but also to a large extent by a good return on investment. However, at first glance returns often appear insufficient.

For example, short-term, seasonal peaks in orders, special orders or other special occasions (training, welder tests, etc.) may cause capacity bottlenecks in your production, but the temporary nature of these events does not justify the procurement costs of a new machine, causing the investment to appear not worthwhile.

In other cases, you may have an urgent need to expand long-term capacity, but find it impossible to finance the purchase at the current time. Or perhaps you simply want to experience the quality of our machines over a longer period of time before making a purchase decision.

In order to react flexibly to all of these scenarios, we offer you the option of renting or leasing one or several welding machines as an alternative to a direct purchase.

▪ Renting EWM welding machines

- Cover short-term production bottlenecks with the latest EWM technology.
- Durations and rent are agreed individually.
- At the end of the contract duration, return the machine without surcharges or choose to purchase the machine with full accounting of previous rental payments.
- Tax advantages: Rental payments may be deducted as operational expenses.

▪ Leasing EWM welding machines

- Transparent, uniform rates facilitate reliable planning
- Individualised determination of leasing rates, durations and closing charges
- Pay-as-you-earn: The leasing rates are incurred parallel to the use of the machine and can therefore be financed from the profits.
- This allows you to make a large investment without committing a large amount of capital.
- Tax advantages: Leasing charges may be deducted as operational expenses.

Are you interested in a welding machine and would like to receive a price quotation? We are available to help at any time and will be happy to work with you to create a rental or leasing contract adapted to your requirements.

General assembly and service conditions

The setup, commissioning or repair of systems supplied, and the instruction of operating staff on those systems, are undertaken on acceptance of the following conditions. The Assembly and Service Terms and Conditions are based on our General Terms and Conditions of business. These terms supplement and specify the general terms for the areas of assembly and service.

1. The ordering party shall ensure that all preparations required for on-site completion of assembly work are carried out to ensure that the work can be started immediately on arrival. The connections for operating power and water must be provided up to the supply point, among other things. If the setup and commissioning of systems is delayed or prevented due to circumstances not under our control, the ordering party shall bear the costs for sending the personnel (travel costs, hourly rates, daily allowance, etc.) Not included in our services are electrical cabling at the installation site from the switching cabinet to the individual power consumers including installation material, prop supports, building, plastering and painting work, pneumatic and water installations, roofing and other building and additional work required. Any crane and scaffolding work required shall be carried out by the customer.
2. The assembly and service rates, unless otherwise agreed, are calculated on the basis of time (incl. travel and waiting time) and costs. The following are also subject to charges: Allowances, accommodation, travel expenses and preparation costs required for assembly. For assembly work abroad, the additional costs, e.g. for obtaining visas, for any medical examination costs and immunisations, will be billed at cost. If additional safety tests are required for the work, e.g. radiation passport, these formalities must be completed in advance by the ordering party. The use of materials will be charged at cost + sales tax at the relevant prices valid at the time. The calculation will be carried out based on the work documentation from our engineers. The engineers are required to present their work documentation on completion of work (for extended assignments on a weekly basis) to our customers for signature. This shall also apply for flat-rate assembly work. For extended assemblies, monthly partial invoices will be generated. Time and materials required for assembly and service are acknowledged by signature, making them binding for both sides. If the ordering party refuses to sign, it shall submit a written declaration immediately to that respect. If our staff are not able to obtain the signature for any other reason, the details given on the customer service invoice shall be assumed to be agreed upon. Our engineers are not authorised to submit legally binding declarations on our behalf. All agreements not covered by the assembly and service conditions shall require written confirmation.
3. Cost proposals are produced to the best of our knowledge, but are not binding. Should the price given in advance increase significantly during the maintenance work, consultation will be sought. Generation of a cost estimate is subject to a flat charge (€50.00 per estimate) but will be reimbursed when the associated contract is signed. The prices given in the cost estimates are valid for one month. Maintenance jobs with a low value are also carried out without providing a cost estimate in advance.
4. Wage costs: Per working hour (worktime, waiting time, travel time and preparation time for staff on-site and office staff), based on 40 hours per week of 5 working days. Overtime and surcharges are not charged by EWM!
5. Expenses are charged in accordance with the relevant regional regulations on travel costs.
6. Travel and freight costs: We calculate the actual outlay incurred for transporting staff, their tools and their luggage, if incurred via public transport. When using motor vehicles (cars and service vehicles) we calculate €0.60/km. When using the train, we calculate 2nd class for travel in both directions. Flight costs will be charged at Business Class. Freight costs, for travel in both directions, for machines sent in for maintenance will be billed to the customer.
7. Overnight stays will be charged at cost. Daily allowances and overnight stays are also charged for Sundays and holidays when the engineer is not working and does not travel home for cost reasons.
8. The payment conditions in our general terms and conditions of business and delivery shall apply over and above any other agreements made where applicable. Unless written authorisation is provided, our engineers are not authorised to receive payments on our behalf. The payment due date for all services shall be 14 days net.
9. Our services are provided in the German or English language. Should other languages be required, an interpreter should be procured by the customer!
10. These general assembly and service terms and conditions shall apply from January 1, 2012. All previous assembly and service conditions are hereby invalidated.

Disposal of old equipment

Germany's Used Electrical Equipment Law (Elektro-Altgeräte-Gesetz) stipulates that this machine does not belong in domestic waste.

The machine contains valuable raw materials, which should be recycled, and electronic components, which must be disposed of. Do not dispose of the machine in household waste! Observe local regulations on disposal!



EWM participates in an approved waste disposal and recycling scheme and is registered in the National Register for Waste Electric Equipment (EAR) with reference number WEEE DE 57686922.

Please contact EWM regarding the options for returning your used electrical equipment: info@ewm-group.com

Machines can also be returned to EWM sales partners across Europe.

■ Packaging return

- German packaging legislation states that EWM is obliged to take back product packaging and guarantee its recycling or disposal. We work with an approved disposal system to meet these requirements.
- Packaging can be returned to any EWM sales partner after purchase. Please contact EWM directly in the case of machines purchased online.
- We, EWM AG in Mündersbach, Germany, hereby confirm that all products which we supply to you that are subject to the RoHS Directive comply with RoHS requirements (Directive 2011/65/EU).

■ Compliance with RoHS requirements

- German packaging legislation states that EWM is obliged to take back product packaging and guarantee its recycling or disposal. We work with an approved disposal system to meet these requirements.
- Packaging can be returned to any EWM sales partner after purchase. Please contact EWM directly in the case of machines purchased online.
- We, EWM AG in Mündersbach, Germany, hereby confirm that all products which we supply to you that are subject to the RoHS Directive comply with RoHS requirements (Directive 2011/65/EU).

■ Manufacturer's declaration to end user

- According to European provisions (Directive 2012/19/EU of the European Parliament and the Council of 13 August 2012), used electric and electronic equipment may no longer be placed in unsorted municipal waste. It must be collected separately. The symbol depicting a waste container on wheels indicates that the equipment must be collected separately. Please help to protect the environment and ensure that this machine is placed in the appropriate collection category when you no longer wish to use it.
- German law (reform of the law governing the distribution, taking back and environmentally correct disposal of electric and electronic equipment [ElektroG] dated 20 October 2015) states that you are required to place used machines in a collection system separate from unsorted municipal waste. It is possible that legally authorised disposal authorities will also collect used equipment from private households.
- Please refer to your local waste collection calendar or ask your state or municipal government about options available in your area for returning or collecting used equipment.



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The content of this document has been researched, prepared and reviewed with all reasonable care. The information provided is subject to change; errors excepted.