

Catalogue 2017

Automation

A new dimension of welding

MULTIMATRIX®

/// Perfection is the principle



The EN 1090 WPQR Package is now free of charge!



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 catalogue contains the complete EWM product range from welding machines.



■ Advice + service

Have you got any questions which are not answered in this catalogue? 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.



■ Validity

See title page. All catalogues with earlier dates are hereby void.



■ 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.

Contact EWM

■ Internet	www.ewm-group.com	■ E-Mail	info@ewm-group.com
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EWM – future welding

all in

All characteristics and welding procedures are included in the machine price

EWM machines are always equipped with all device-specific welding procedures 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
- **pipeSolution**
Safe welding in every position, with or without a gap
- **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.
- **EN 1090 WPQR CD ROM**
We will also gladly send you a CD at an extra cost.



Type	Description	Item no.	PG	Price
EN 1090 WPQR package folder	EN 1090 WPQR package in a folder	090-008803-00000	D1	125.00 €*
EN 1090 WPQR package CD ROM	EN 1090 WPQR package on CD ROM	090-008804-00000	D1	16.00 €*
EN 1090 WPQR package download	EN 1090 WPQR-package as a download	KOS-V00055-00000	N1	0.00 €*

* If no new welding machine is purchased, the EN 1090 WPQR package costs 295,00 € in a folder / 210,00 € as a CD ROM / 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!

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

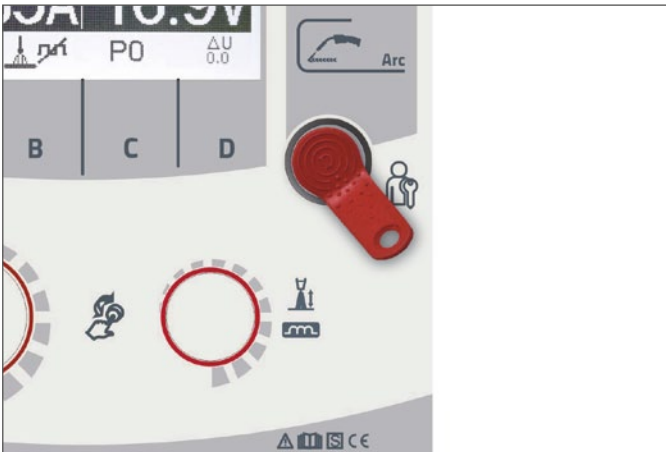
USB connection

- / 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 30 and 31 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

The image shows the Expert 2.0 LC display interface. The display is divided into several sections: a top status bar with 'L 1.01', a central graph area showing a power curve with 'P2' and '129A 21.0V' displayed, and a bottom section with buttons labeled 'A', 'B', 'C', and 'D'. The graph area also shows '4.0 in/min', 'sup', and 'Arc' icons. The interface is surrounded by physical buttons for 'System', 'USB', 'Menu', and 'Arc', and two large rotary hardware keys at the bottom.

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

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

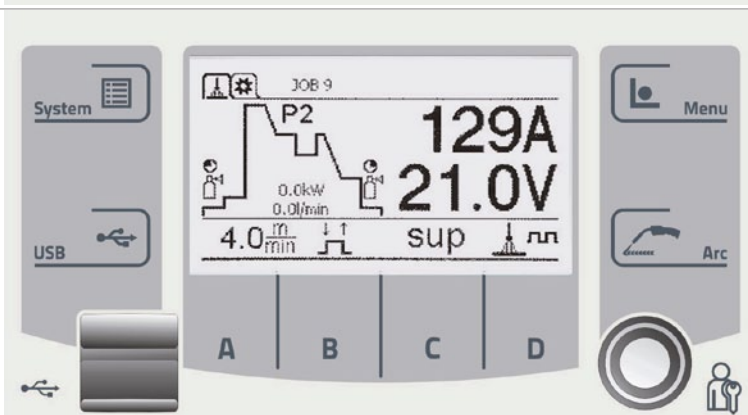
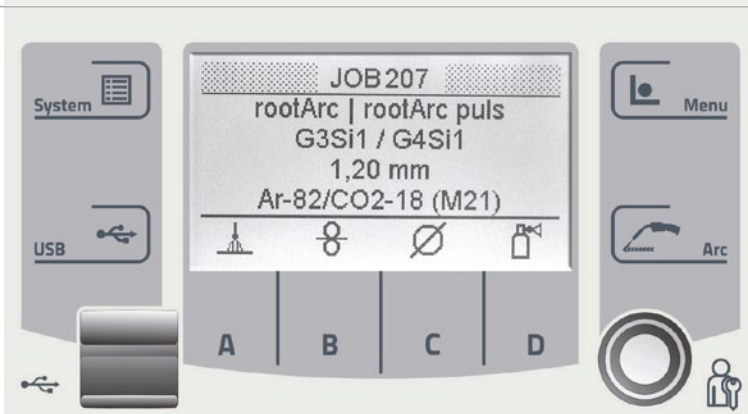
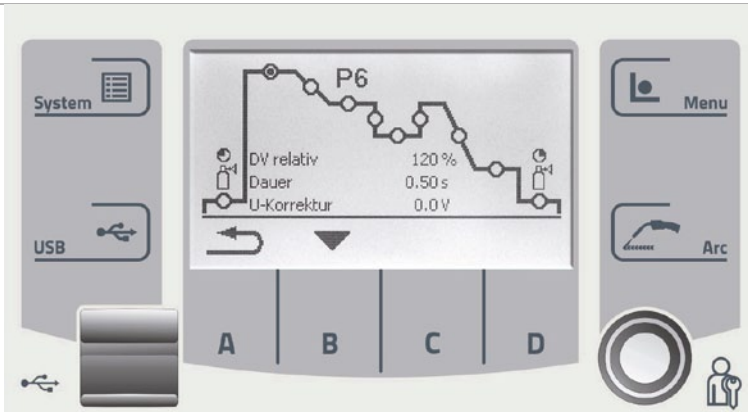
- / Practice-based control
- / JOB (welding task) easy to select using click wheel
 - welding process
 - material type
 - gas type
 - wire diameter

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



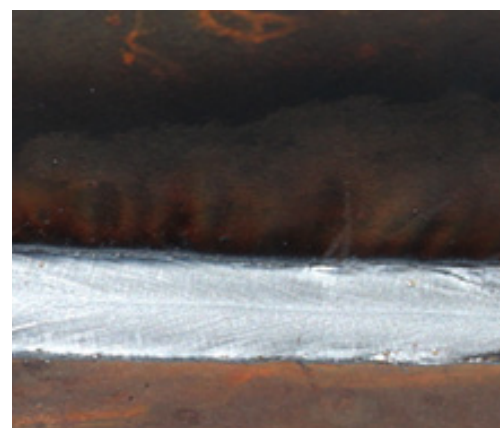
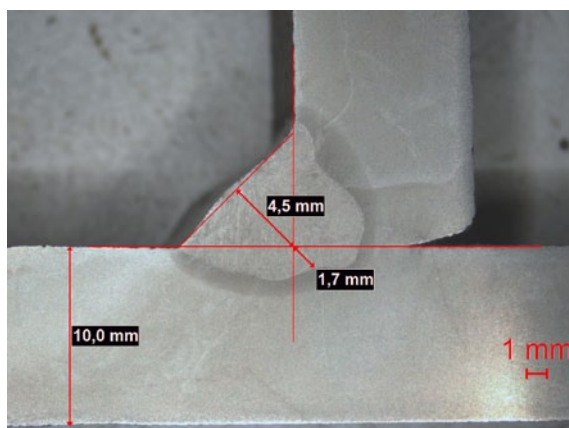
Phoenix puls

alpha Q puls

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

- 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



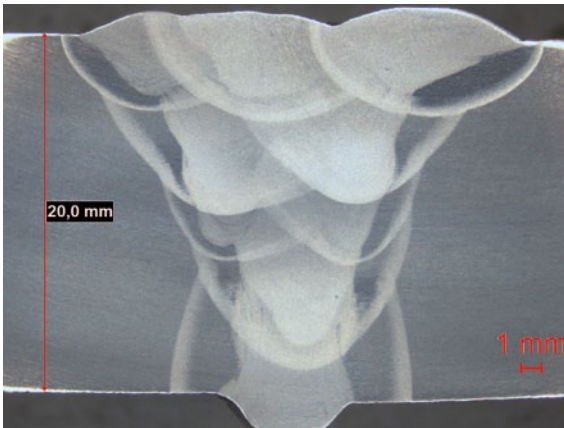
S355, $t = 10 \text{ mm}$, T-joint, fillet weld without weld preparation
Welding current = 316 A, welding voltage = 28.8 V, WF = 10.5 m/min., $V_s = 50 \text{ cm/min.}$

- 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

Your benefits

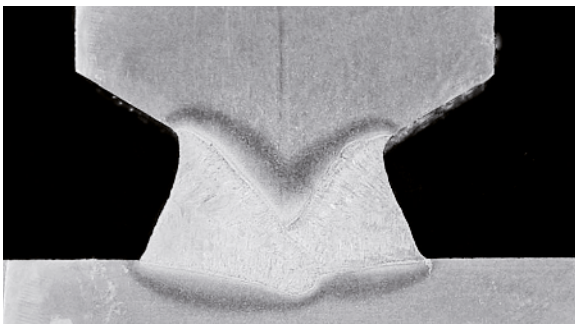
forceArc puls for multi-pass welds



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

- / 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



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

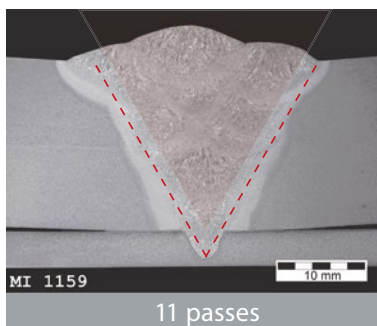
- Smaller included angle due to deep penetration and directionally stable arc
- Fewer passes
- Less distortion thanks to heat-reduced, concentrated arc
- Excellent root and sidewall fusion
- Perfect welding, even with very long stick-outs
- Reduced undercuts
- Virtually spatter-free
- Particularly beneficial 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

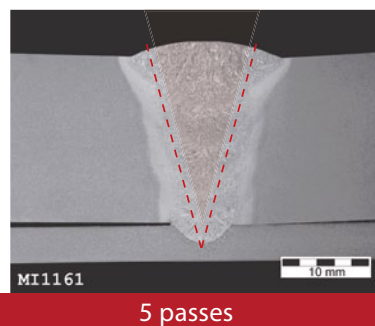
- Butt welds which are welded with the forceArc process and have tight opening angles of 30° and 40° comply with the requirements of EN ISO 15614-1:2004
- Due to the lower weld volume, the welding times are reduced compared to the standard spray arc process with an opening angle of 60° by up to 50%
- 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

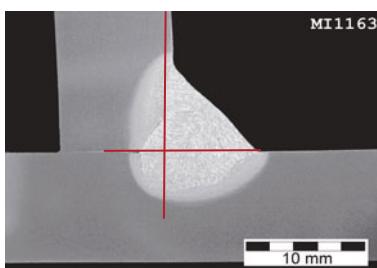
forceArc



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

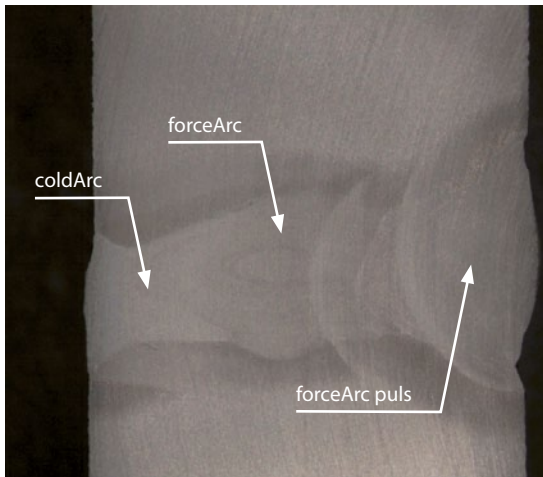


The ewm EN 1090 WPQR Package saves time and money

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**

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

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

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coldArc
coldArc puls

Perfect welding and brazing



alpha Q puls

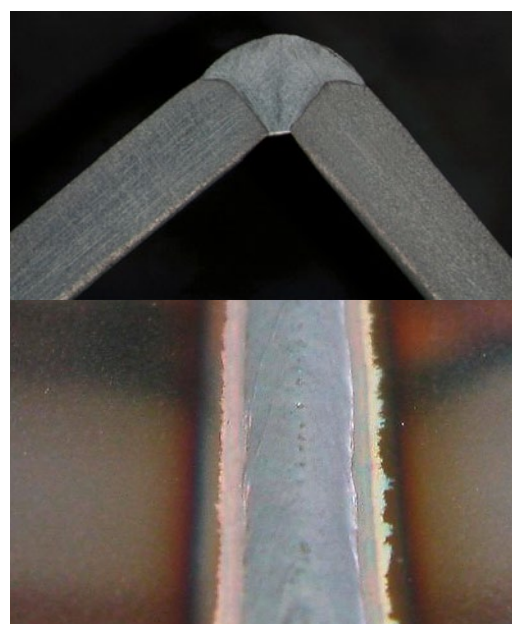
coldArc: Heat-reduced, low-spatter short arc for high dimensional stability welding and brazing, plus root welding with excellent gap bridging capabilities.

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

- 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



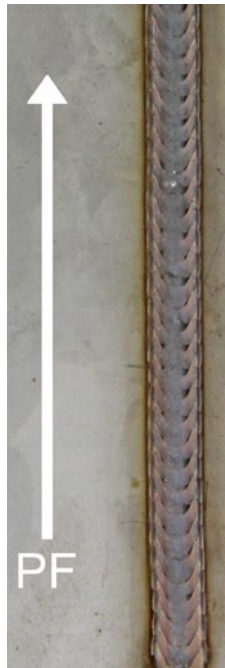
CrNi edge weld of 1 mm sheet metal, with coldArc

The ewm EN 1090 WPQR Package saves time and money

coldArc

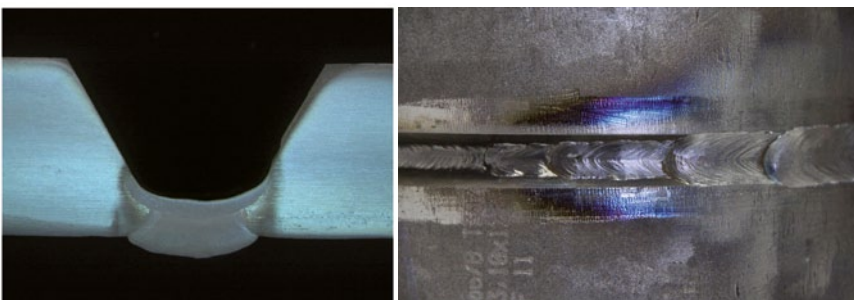
coldArc puls

- 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

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Phoenix puls

alpha Q puls



rootArc rootArc puls

The arc with optimum control of the weld pool

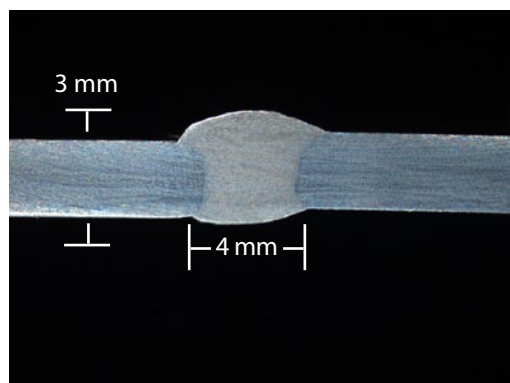
rootArc: Short arc with perfect weld modelling capabilities for effortless gap bridging and positional welding

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

- 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

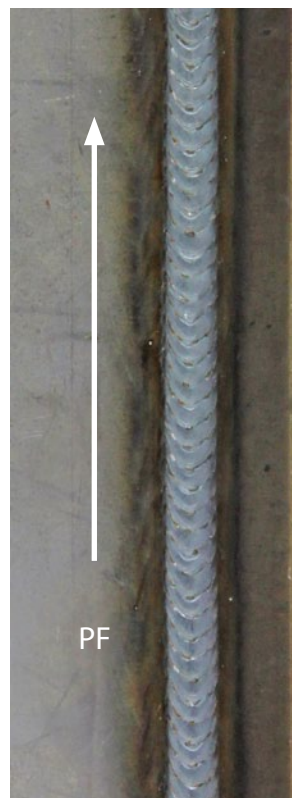
rootArc puls

- 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

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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



Phoenix puls

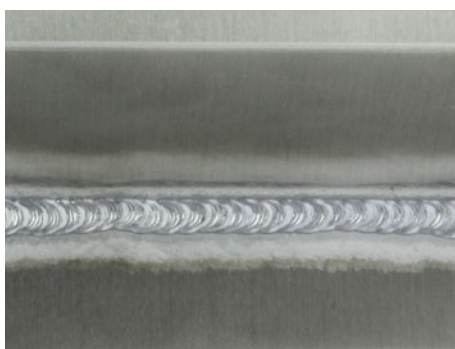
alpha Q puls

- 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

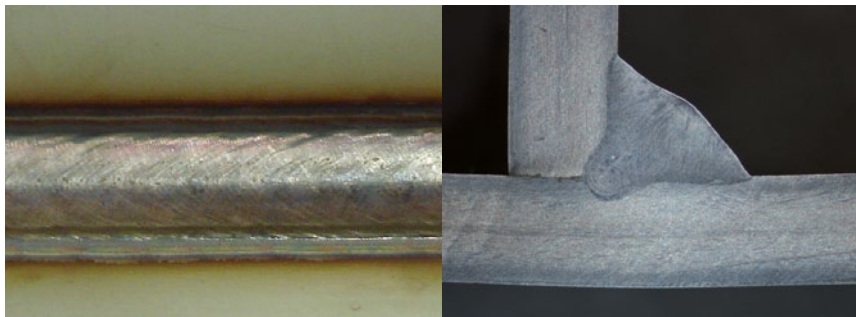
Standard arc

- 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®

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Innovative welding processes

Your benefits

pipeSolution pipeTruck – MAG orbital system

- / pipeSolution/pipeTruck – up to 400% quicker than manual TIG and MMA welding
- / Low and high-alloy solid wires (e.g. for the parent metal alloy 625)
- / Rutile and basic flux-cored wires (e.g. for the parent metal high heat-resistant steel P91)
- / Performance is significantly enhanced for root welding: Automated pipeSolution® achieves 150 to 500 mm per minute
- / root welding in one operation without backing run
- / MAG welding with pipeSolution® process on pipes with 3,400 mm diameter – wall thicknesses up to 30 mm
- / Flawless welding result – high quality: certified by TÜV Hesse in welding procedure test according to AD 2000 regulations
- / Root welding in one operation: Especially efficient, without a backing run, without weld pool backing
- / The entire pipeTruck MAG orbital system from a single source:

Welding tractor with control unit
alpha Q puls power source
Welding consumables
Welding torch
Wear parts
Welding accessories
Training and consultancy



pipeSolution pipeTruck – MAG orbital system

Welding at MAG speed with TIG reliability.

Powerful short arc for rapid, safe welding, with and without gaps, in all positions.

- Root welding for metal sheets and pipes in all positions
- Hot pass/intermediate pass with pulsed arc
- Intermediate/final pass with flux cored wire
- Safe overhead welding thanks to optimum viscosity of the weld pool
- Reduction or elimination of preparation work, e.g. weld pool backing
- Virtually power-free material transfer
- Impressive process stability, even with long hose packages without additional sensor leads
- Unalloyed, low-alloy and high-alloy steels and high-tensile fine-grained steels



pipeTruck MAG orbital system

- Considerable reduction in set-up time – the 19-kg tractor is placed effortlessly on the track system and can be clamped in quickly
- High precision of the orbiting speed, linear pendular motion with adjustable frequency and holding times
- Seam can be accessed at any time thanks to the arrangement of the welding system on the tractor side
- Pipe welding in any position
- Pipe diameters of DN300 and up
- Pipes can be welded automatically and in high quality in all wall thicknesses



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"

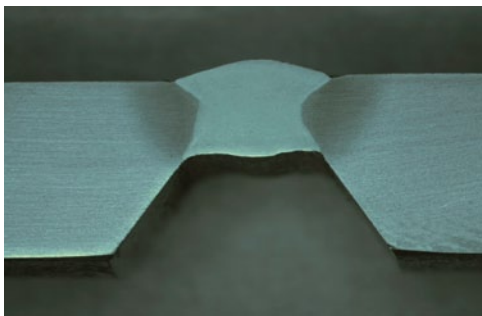
The "Christmas tree technique", an application normally reserved for true experts, can be avoided, which is advantageous for less experienced welders.



Aluminium superPuls
PF position



CrNi superPuls
PF position



Steel superPuls
PF position

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

MULTIMATRIX®

/// Perfection is the principle

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



pipeSolution

Powerful arc for rapid, secure welding with and without gap in all positions.

	coldArc	coldArc puls	rootArc	rootArc puls	pipeSolution
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	★★★★★	★★★★★	★★★★★	★★★★★	★★★

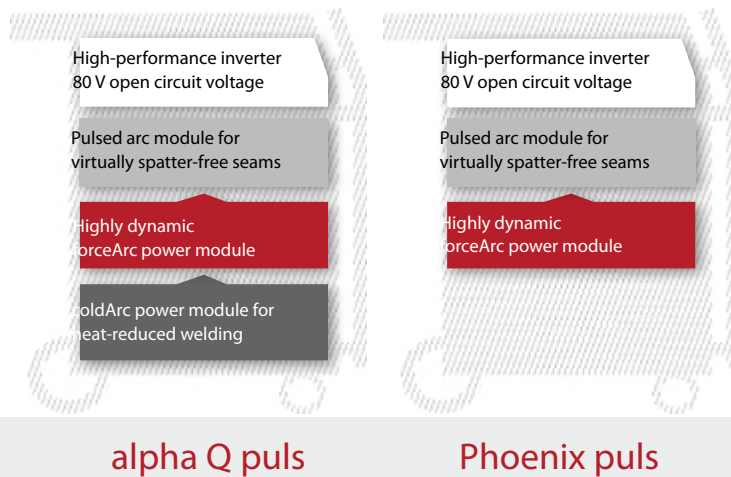
Applications

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

★ → ★★★★★
Good → Excellent

Inverter welding machines and welding procedures

Compact or decompact with the latest MULTIMATRIX® technology, ewm welding machines are well-conceived in every way. For simple operation and reliability in use.



Your benefits

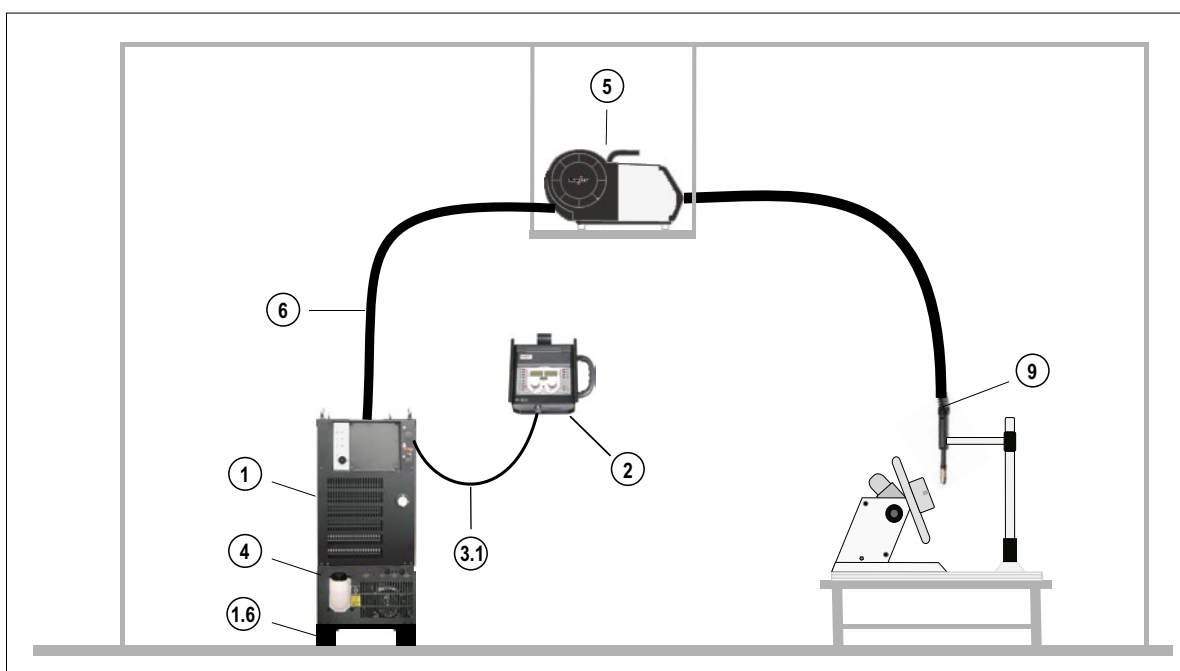
- / Robust, highly dynamic inverter technology
- / Energy savings thanks to efficient welding procedures, optimum efficiency and automatic standby mode
- / High open circuit voltage for excellent ignition characteristics
- / High voltage reserves for long hose packages up to 70 m
- / High duty cycle
- / 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

MULTIMATRIX technology	alpha Q puls			Phoenix puls			
	✓	✓	✓	✓	✓	✓	
MIG/MAG	forceArc / forcArc puls	✓	/	✓	✓	/	✓
	coldArc / coldArc puls	✓	/	✓	-	/	-
	rootArc / rootArc puls	✓	/	✓	✓	/	✓
	pipeSolution	✓			-		
	superPuls	✓			✓		
	Pulsed arc	✓			✓		
	Standard short arc	✓			✓		
	Standard spray arc	✓			✓		
MMA	✓			✓			
TIG (lift arc)	✓			✓			
Gouging	✓			✓			
Xnet-compatible	✓			✓			














■ **R50 ROB 7POL – mobile operating unit**

- Remote control **R50 ROB 7POL** enables all 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.



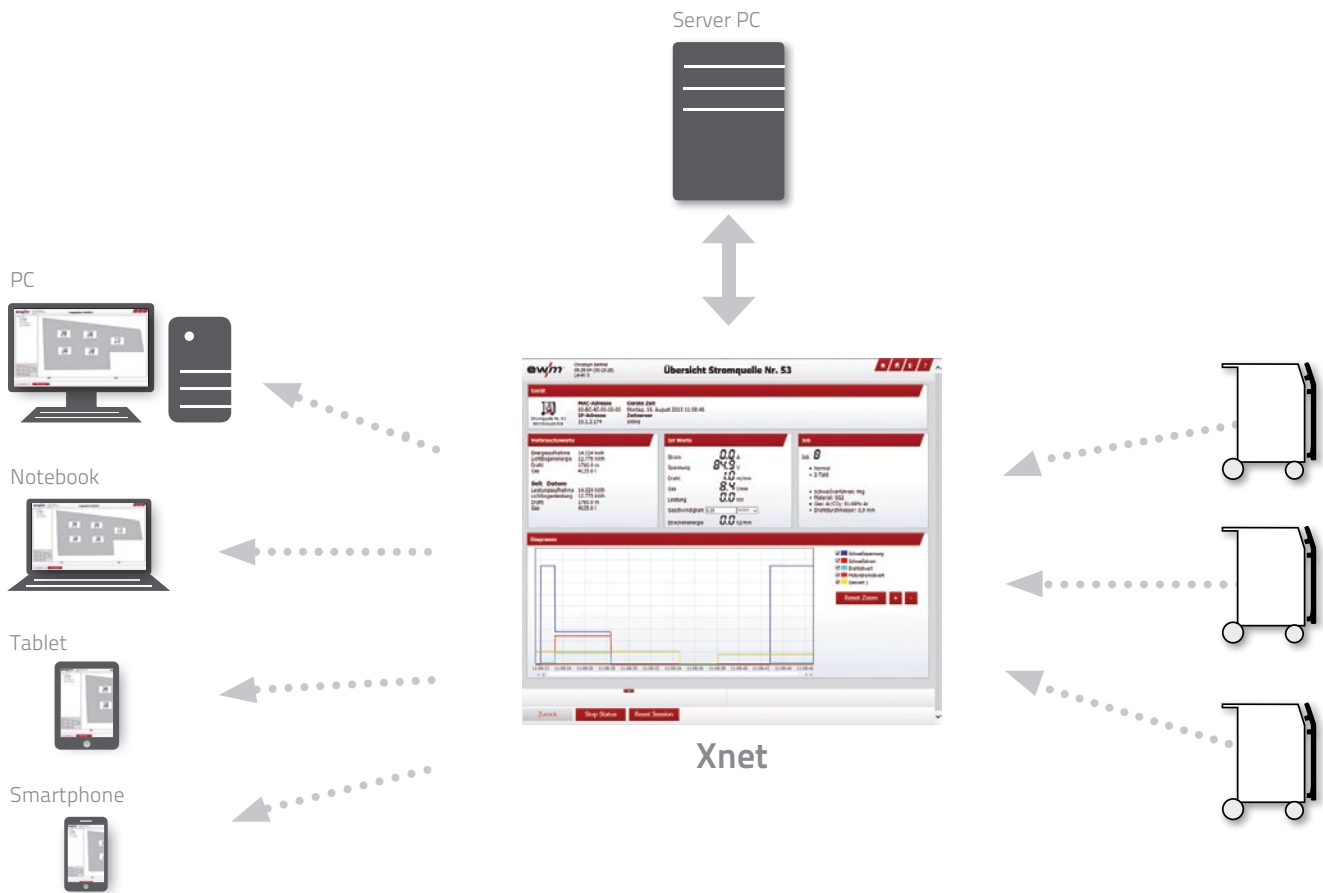
R50 ROB 7POL as a mobile operating unit directly at the workstation

■ 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		



- QM software for analysing of welding processes
- Record, view and analyse welding data
- Fast identification of disruptive factors thanks to realtime monitoring
- Suitable for manual, automated and robot -controlled applications
- Network can be expanded to any number of welding machines and computers
- Customisable user and machine management
- Ethernet networking, Wi-Fi also possible

For more information on Xnet see the Xnet brochure and on our website at www.ewm-group.com/xnet

Recording, analysing, optimising, benefiting



Can be used with:

- alpha Q puls
- Phoenix puls
- Taurus Synergic S
- Tetrix

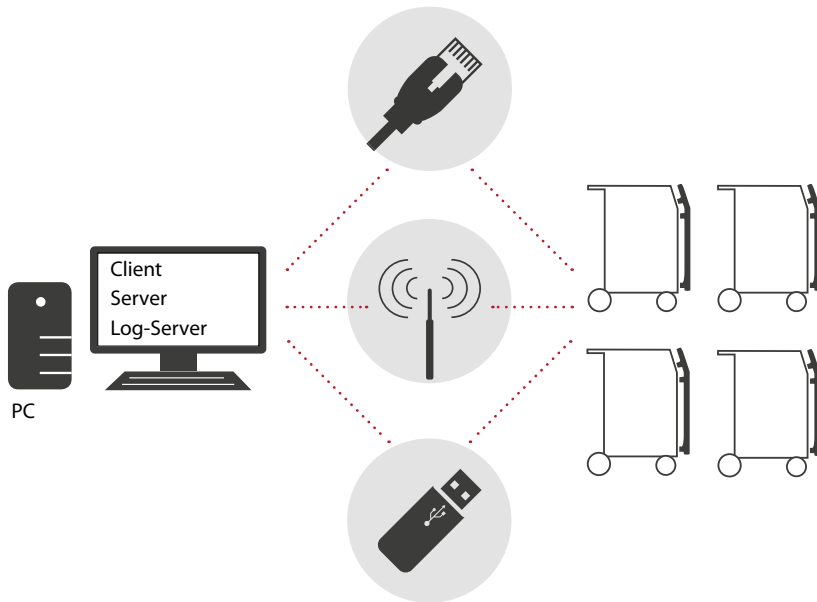
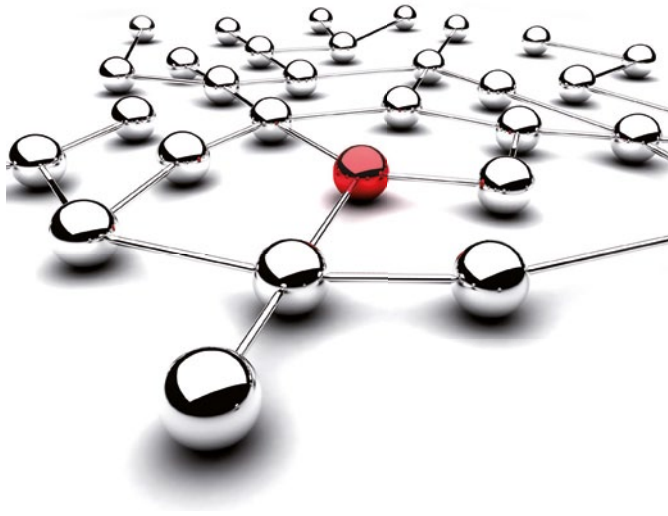
Document every weld seam, identify savings potentials and manufacture efficiently – these three requirements could not be any more different. The modular quality management software ewm Xnet helps to combine

these three tasks in a single solution which both small welding firms and major, globally active companies can use.



LAN/Wi-Fi networking of power sources – alpha Q puls, Phoenix puls, Taurus Synergic S

- 1 LAN/Wi-Fi networking using built-in interface (Expert 2.0)
- 2 Networking via LAN/Wi-Fi gateway (Progress, Synergic S) fitted ex works
- 3 Networking via external LAN/Wi-Fi gateway (compact machines, Progress, Expert 2.0, automated power sources)



Network solutions

The compact solution

- / Occasional recording, reviewing and analysing of welding data as well as monitoring of networked machines
- / The computer used does not need to be switched on permanently
- / Ideal for smaller single-shift operations and smaller to medium-sized companies with up to about 15 networked machines

The standard solution

- / Continuous recording, reviewing and analysing of welding data as well as monitoring of networked machines
- / The computer used should be permanently switched on to reduce network loads
- / The standard solution for medium-sized and large companies with up to about 60 networked machines

The high-performance solution

- / Continuous recording, reviewing and analysing of welding data of a large number of machines as well as monitoring of networked machines
- / The server PCs must be permanently switched on
- / A high-performance solution for larger companies with more than 60 networked machines

Xnet Your benefits:

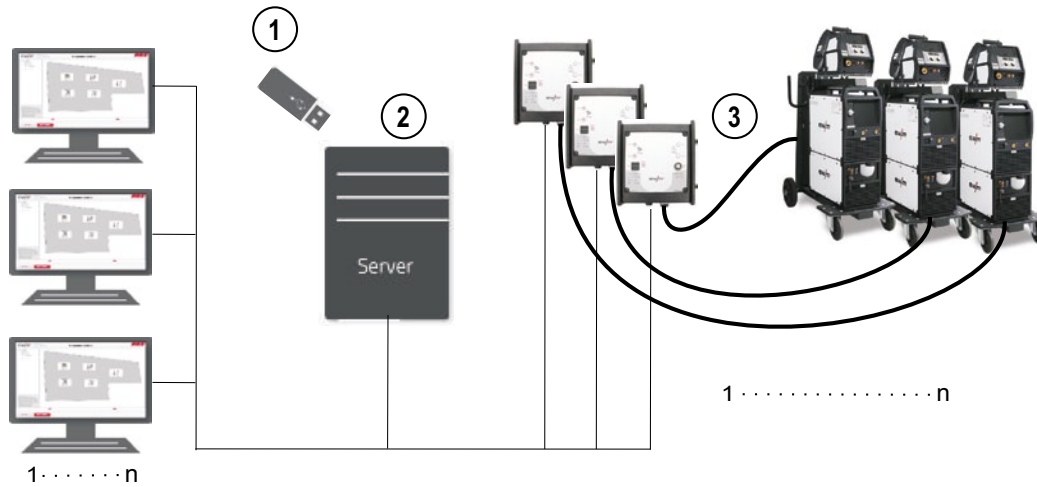
- Recording of welding data
- Save, review and analyse at a central point
- Online monitoring – control and monitor the welding process for any number of welding machines from any number of PC workstations
- JOB (welding tasks) management – creation, administration and archiving of welding JOBS, both online and offline
- Option of transferring to all welding machines in the network
- Online analysis, evaluation, reporting and documentation of logged welding parameters for each networked welding machine using different documentation and analysis tools
- Convenient, easy-to-create graphic display layout showing equipment in the network, based on work facility floor plan; can be enlarged by zooming, navigation window and much more

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LAN external gateway • retrofit set



Networking via external LAN gateway for machines with 7-pole digital interface

- Can be retrofitted
- Network can be expanded to include any number of welding machines and PCs

Item	Type	Designation	Item no.
1	ewm Xnet Starter-Set	Set: QM software, a dongle (contains the installation files and software licence)	091-008788-00001
3	ewm Xnet Extended-Set 1 LAN	Set: One machine licence, a LAN gateway, a network cable (10 m), one 7-pole connection cable (5 m)	091-008789-00001
3	ewm Xnet Extended-Set 3 LAN	Set: Three machine licences, three LAN gateways, three network cables (10 m), three 7-pole connection cables (5 m)	091-008789-00003
3	ewm Xnet Extended-Set 5 LAN	Set: Five machine licences, five LAN gateways, five network cables (10 m), five 7-pole connection cables (5 m)	091-008789-00005

Optional

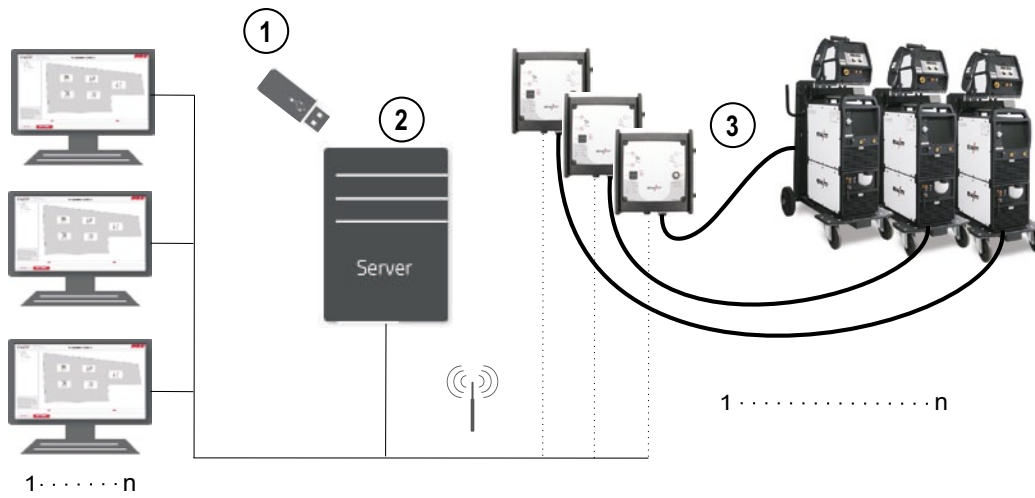
Item	Type	Designation	Item no.
2	ewm Tower Server	Tower server incl. Xnet QM software and 1 dongle	092-002813-xxxxx
3	ewm Xnet Extended-Set 1 LAN	Set: One machine licence, a LAN gateway, a network cable (10 m), one 7-pole connection cable (5 m)	091-008789-00001
3	ewm Xnet Extended-Set 3 LAN	Set: Three machine licences, three LAN gateways, three network cables (10 m), three 7-pole connection cables (5 m)	091-008789-00003
3	ewm Xnet Extended-Set 5 LAN	Set: Five machine licences, five LAN gateways, five network cables (10 m), five 7-pole connection cables (5 m)	091-008789-00005

► Specification on request

► System requirements of customer server: Pentium-compatible PC or higher (min. DualCore) with min. 2 GHz, Microsoft Windows 7, 8, Server 2008, installed .Net Framework 4.0 (will be installed at the same time if required), 2 GB RAM (4 GB recommended), 1 TB hard disk space, LAN 100/1000, CD-ROM drive, USB 1.1 connection or higher, minimum resolution 800x600, 256 colours



WiFi external gateway • retrofit set



Item	Type	Designation	Item no.
1	ewm Xnet Starter-Set	Set: QM software, a dongle (contains the installation files and software licence)	091-008788-00001
3	ewm Xnet Extended-Set 1 WiFi	Set: One machine licence, one Wi-Fi gateway, one 7-pole connection cable (5 m)	091-008790-00001
3	ewm Xnet Extended-Set 3 WiFi	Set: Three machine licences, three Wi-Fi gateways, three 7-pole connection cables (5 m)	091-008790-00003
3	ewm Xnet Extended-Set 5 WiFi	Set: Five machine licences, five Wi-Fi gateways, five 7-pole connection cables (5 m)	091-008790-00005

Optional

Item	Type	Designation	Item no.
2	ewm Tower Server	Tower server incl. Xnet QM software and 1 dongle	092-002813-xxxxx
3	ewm Xnet Extended-Set 1 WiFi	Set: One machine licence, one Wi-Fi gateway, one 7-pole connection cable (5 m)	091-008790-00001
3	ewm Xnet Extended-Set 3 WiFi	Set: Three machine licences, three Wi-Fi gateways, three 7-pole connection cables (5 m)	091-008790-00003
3	ewm Xnet Extended-Set 5 WiFi	Set: Five machine licences, five Wi-Fi gateways, five 7-pole connection cables (5 m)	091-008790-00005

► Specification on request

► System requirements of customer server: Pentium-compatible PC or higher (min. DualCore) with min. 2 GHz, Microsoft Windows 7, 8, Server 2008, installed .Net Framework 4.0 (will be installed at the same time if required), 2 GB RAM (4 GB recommended), 1 TB hard disk space, LAN 100/1000, CD-ROM drive, USB 1.1 connection or higher, minimum resolution 800x600, 256 colours



Built-in LAN gateway • factory-fit option



Networking with built-in LAN or WiFi gateway

- For alpha Q puls and Phoenix puls machine series
- Factory-fit option; retrofitting not possible
- Network can be expanded to include any number of welding machines and PCs

Item	Type	Designation	Item no.
1	ewm Xnet Starter-Set	Set: QM software, a dongle (contains the installation files and software licence)	091-008788-00001
3	LAN CABLE 10m	Network cable	094-020672-00000
4	OW LG 1.0 ROB	Built-in LAN gateway (ex works only)	092-003080-00001
5	ewm Xnet LC1	Xnet machine licence	090-008787-LIZ01

► Each machine requires a licence (5, not pictured), a gateway (4) and a corresponding cable (3)!

Optional

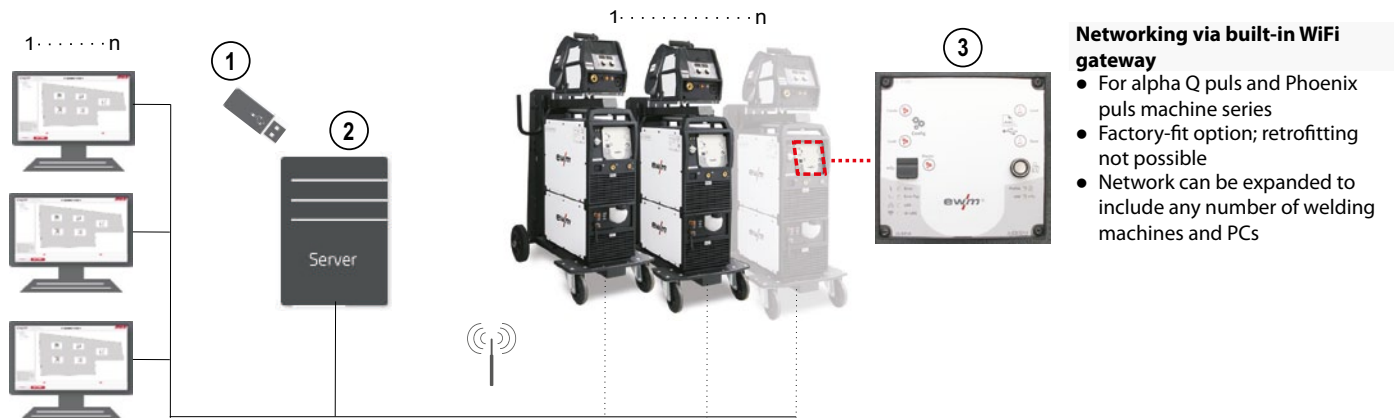
Item	Type	Designation	Item no.
2	ewm Tower Server	Tower server incl. Xnet QM software and 1 dongle	092-002813-xxxxx
3	LAN CABLE 10m	Network cable	094-020672-00000
4	OW LG 1.0 ROB	Built-in LAN gateway (ex works only)	092-003080-00001
5	ewm Xnet LC1	Xnet machine licence	090-008787-LIZ01

► Specification on request

► System requirements of customer server: Pentium-compatible PC or higher (min. DualCore) with min. 2 GHz, Microsoft Windows 7, 8, Server 2008, installed .Net Framework 4.0 (will be installed at the same time if required), 2 GB RAM (4 GB recommended), 1 TB hard disk space, LAN 100/1000, CD-ROM drive, USB 1.1 connection or higher, minimum resolution 800x600, 256 colours



Built-in WiFi gateway • factory-fit option



Networking via built-in WiFi gateway

- For alpha Q puls and Phoenix puls machine series
- Factory-fit option; retrofitting not possible
- Network can be expanded to include any number of welding machines and PCs

Item	Type	Designation	Item no.
1	ewm Xnet Starter-Set	Set: QM software, a dongle (contains the installation files and software licence)	091-008788-00001
3	OW WLG 1.0 ROB	Built-in WiFi gateway (ex works only)	092-003081-00001
5	ewm Xnet LC1	Xnet machine licence	090-008787-LIZ01

► Each machine requires a licence (5, not pictured) and a gateway (3)!

Optional

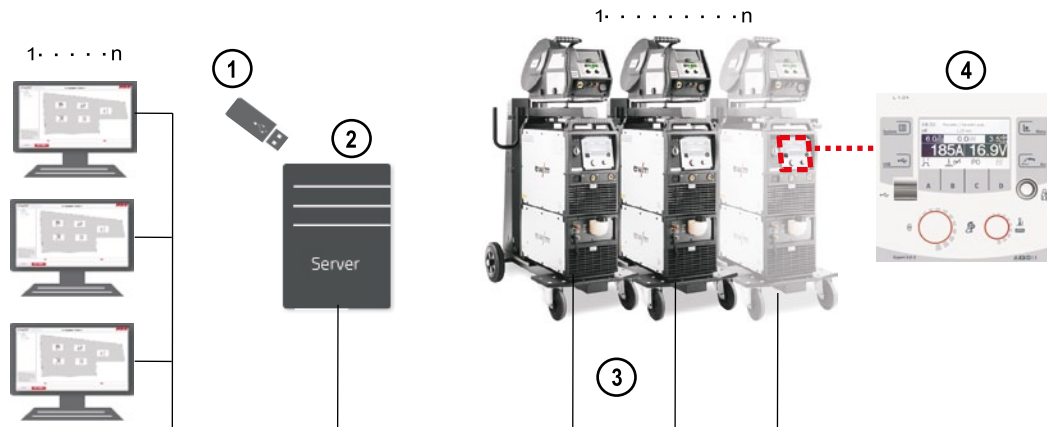
Item	Type	Designation	Item no.
2	ewm Tower Server	Tower server incl. Xnet QM software and 1 dongle	092-002813-xxxxx
3	OW WLG 1.0 ROB	Built-in WiFi gateway (ex works only)	092-003081-00001
5	ewm Xnet LC1	Xnet machine licence	090-008787-LIZ01

► Specification on request

► System requirements of customer server: Pentium-compatible PC or higher (min. DualCore) with min. 2 GHz, Microsoft Windows 7, 8, Server 2008, installed .Net Framework 4.0 (will be installed at the same time if required), 2 GB RAM (4 GB recommended), 1 TB hard disk space, LAN 100/1000, CD-ROM drive, USB 1.1 connection or higher, minimum resolution 800x600, 256 colours



LAN gateway • built-in Expert 2.0 control system • factory-fit option



Item	Type	Designation	Item no.
1	ewm Xnet Starter-Set	Set: QM software, a dongle (contains the installation files and software licence)	091-008788-00001
3	LAN CABLE 10m	Network cable	094-020672-00000
4	OW EXPERT 2.0 LG ROB	Expert 2.0 LAN gateway (ex works only)	092-003078-00001
5	ewm Xnet LC1	Xnet machine licence	090-008787-LIZ01

► Each machine requires a licence (5, not pictured), a gateway (4) and a corresponding cable (3)!

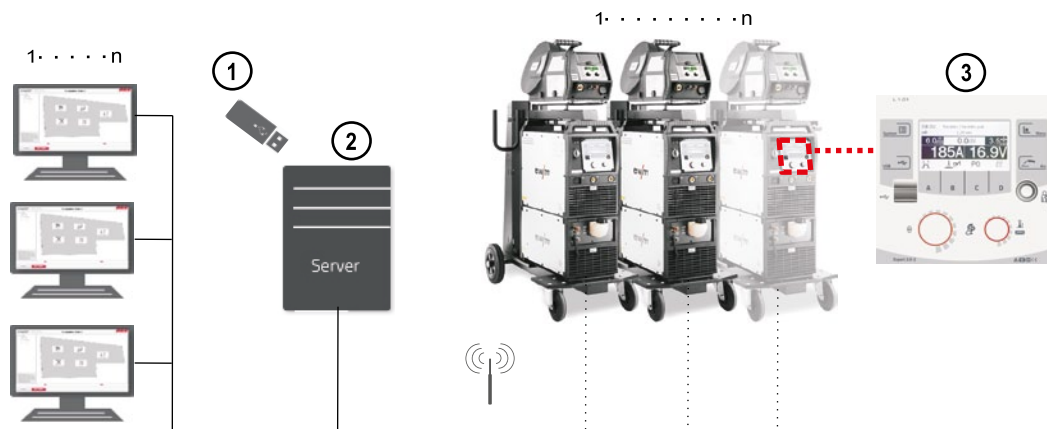
Optional

Item	Type	Designation	Item no.
2	ewm Tower Server	Tower server incl. Xnet QM software and 1 dongle	092-002813-xxxxx
3	LAN CABLE 10m	Network cable	094-020672-00000
4	OW EXPERT 2.0 LG ROB	Expert 2.0 LAN gateway (ex works only)	092-003078-00001
5	ewm Xnet LC1	Xnet machine licence	090-008787-LIZ01

► Specification on request

► System requirements of customer server: Pentium-compatible PC or higher (min. DualCore) with min. 2 GHz, Microsoft Windows 7, 8, Server 2008, installed .Net Framework 4.0 (will be installed at the same time if required), 2 GB RAM (4 GB recommended), 1 TB hard disk space, LAN 100/1000, CD-ROM drive, USB 1.1 connection or higher, minimum resolution 800x600, 256 colours

WiFi gateway • built-in Expert 2.0 control system • factory-fit option



Item	Type	Designation	Item no.
1	ewm Xnet Starter-Set	Set: QM software, a dongle (contains the installation files and software licence)	091-008788-00001
3	OW EXPERT 2.0 WLG ROB	Expert 2.0 WiFi gateway (ex works only)	092-003079-00001
5	ewm Xnet LC1	Xnet machine licence	090-008787-LIZ01

► Each machine requires a licence (5, not pictured) and a gateway (3)!

Optional

Item	Type	Designation	Item no.
2	ewm Tower Server	Tower server incl. Xnet QM software and 1 dongle	092-002813-xxxxx
3	OW EXPERT 2.0 WLG ROB	Expert 2.0 WiFi gateway (ex works only)	092-003079-00001
5	ewm Xnet LC1	Xnet machine licence	090-008787-LIZ01

► Specification on request

► System requirements of customer server: Pentium-compatible PC or higher (min. DualCore) with min. 2 GHz, Microsoft Windows 7, 8, Server 2008, installed .Net Framework 4.0 (will be installed at the same time if required), 2 GB RAM (4 GB recommended), 1 TB hard disk space, LAN 100/1000, CD-ROM drive, USB 1.1 connection or higher, minimum resolution 800x600, 256 colours

Optional

Type	Designation	Item no.	per unit
KOSV51	One-day training (with certificate of sale for Xnet)	KOS-V00051-00000	
KOSV52	Hourly rate for IT specialist	KOS-V00052-00000	
KOSV53	Software maintenance contract, includes debugging, updating and customer support regarding software utilisation (costs per month)	KOS-V00053-00000	
KOS28	Hourly rate for installation of Xnet QM software on customer server	KOS-V00028-00000	



Software ■ Xbutton

Xbutton



- Authentication key
- Controls access to welding machines with Expert 2.0 control
- Individual assignment of rights
- Simple Xbutton programming
- List of all users as well as all active/inactive Xbutton
- Clear allocation of Xbuttons
- Administration of any number of users

Type	Designation	PU Units	PE	Item no.
Xbutton Starter-Set	Authentication set: Programming box incl. cable, software key, dongle, 10 Xbuttons	1	per unit	092-002911-00000
1x Xbutton black	Authentication key			092-002912-00000
5x Xbutton black	Authentication key 5+1 (6 for the price of 5)	6		092-002912-00005
10x Xbutton black	Authentication key 10+3 (13 for the price of 10)	13	per PU	092-002912-00010
1x Xbutton red	Authentication key	1	per unit	092-002913-00000
5x Xbutton red	Authentication key 5+1 (6 for the price of 5)	6		092-002913-00005
10x Xbutton red	Authentication key 10+3 (13 for the price of 10)	13	per PU	092-002913-00010
1x Xbutton green	Authentication key	1	per unit	092-002914-00000
5x Xbutton green	Authentication key 5+1 (6 for the price of 5)	6		092-002914-00005
10x Xbutton green	Authentication key 10+3 (13 for the price of 10)	13	per PU	092-002914-00010
1x Xbutton yellow	Authentication key	1	per unit	092-002915-00000
5x Xbutton yellow	Authentication key 5+1 (6 for the price of 5)	6		092-002915-00005
10x Xbutton yellow	Authentication key 10+3 (13 for the price of 10)	13	per PU	092-002915-00010
1x Xbutton blue	Authentication key	1	per unit	092-002916-00000
5x Xbutton blue	Authentication key 5+1 (6 for the price of 5)	6		092-002916-00005
10x Xbutton blue	Authentication key 10+3 (13 for the price of 10)	13	per PU	092-002916-00010



Overview

Degaussing

Degauss

Page

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■ Degaussing

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

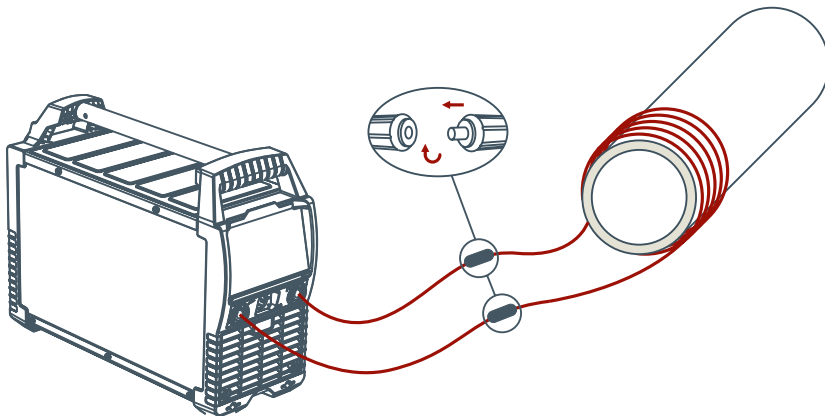
User's advantages

- / 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



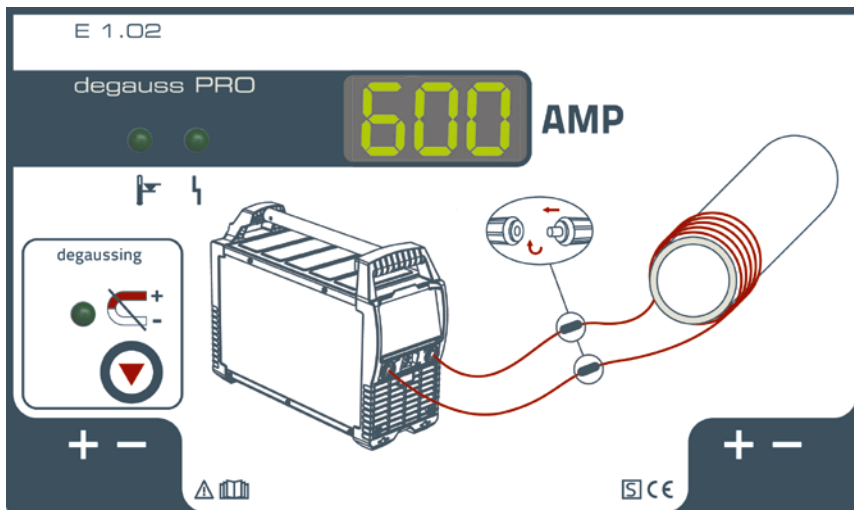
Very straightforward handling

- / 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



- Degaussing of pipes and metal sheets
- Automatic degaussing
- Dependable degaussing for better welding results through stable welding process without magnetic deflection, minimisation of finishing work
- Portable and robust
- Quick connection at the pipe by means of three load cables
- Use at -25 °C to +40 °C with mains voltage tolerances of +/- 20%



Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)
Mains fuses (slow-blow)	3 x 16 A
Open circuit voltage	41 V
Setting range for welding current	600 A
cos φ	0.99
Efficiency	90 %
Dimensions LxWxH in mm	600 x 205 x 415
Weight	23.5 kg

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

RT DGS1



- 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

Type	Designation	Item no.	per unit
RT DGS1	Degauss remote control	090-008806-00000	



FIM1-4 Set



- 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)

Type	Designation	Item no.		per unit
FIM1-4 Set	Set: magnetic field meter, including Hall effect sensor	092-002937-00000		

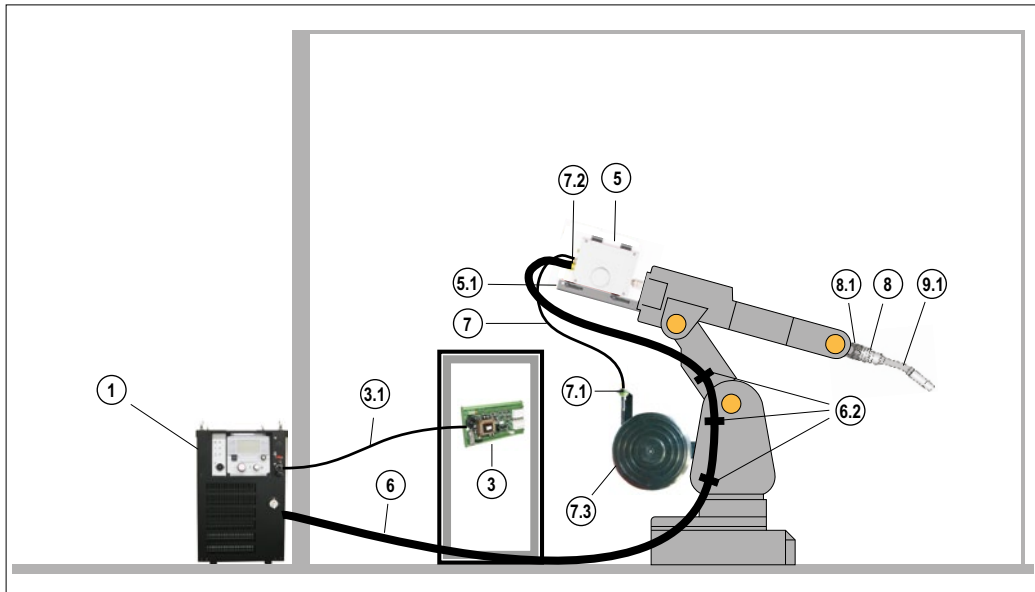


Overview

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■ alpha Q, gas cooled ■ Pulse ● forceArc ● coldArc ● pipeSolution
■ Hollow wrist robot system alpha Q 352



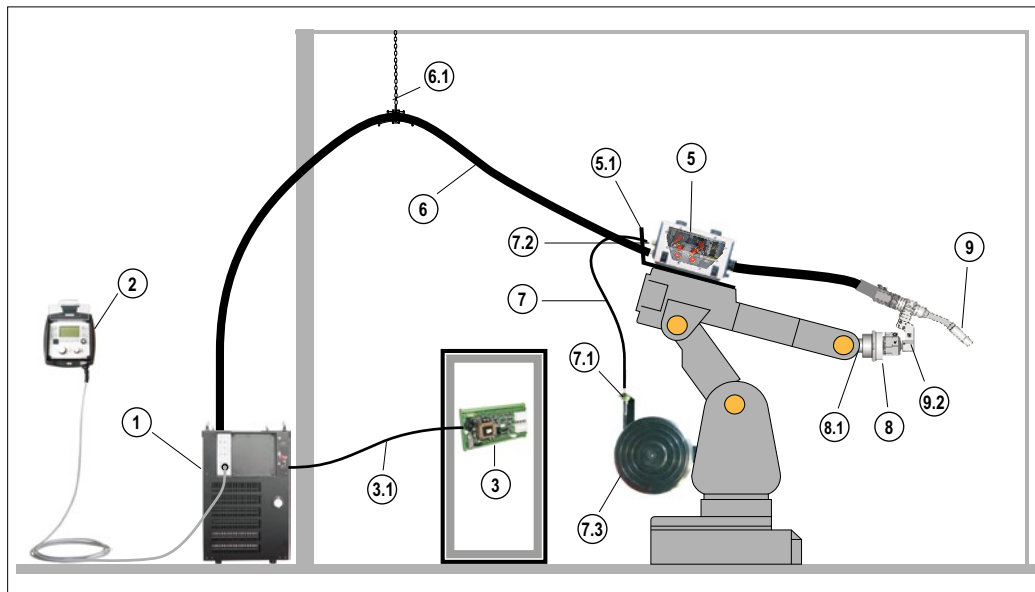
- alpha Q 352**
- with front control Expert 2.0
 - gas-cooled
 - M Drive 4 Rob 3X LI
 - example shown: Motoman MA2010

Item	Type	Designation	Item no.
1	alpha Q 352 Expert 2.0 puls MM	Multiprocess MIG/MAG pulse welding machine with front control	090-005488-00502
1.1	OW CEE 32A	Factory-fit option, mains plug including fitting	092-008215-00000
1.2	WK70/CL 5m	Workpiece lead with cable lug	092-002078-00005
1.3	DM 842 Ar/CO2 230bar 30l D	Pressure regulator with manometer	394-002910-00030
1.8	RA5 19POL 1x 5M	Connection cable, 19-pole 5 m, wire end ferrules on one end	092-001569-00005
3	RINT X12 STANDARD	Standard robot interface	090-008291-00000
3.1	FRV 7POL 5m	Connection cable extension	092-000201-00003
3.2	KB MOTOMAN-RINT X12	Cable harness for RINT X12 connection to Motoman XRC/NX-100/DX-100	094-012212-00003
5	M drive 4 Rob 3X LI	Wire feeder for automated applications, opens on left, gas-cooled, Euro torch connector	090-005483-00502
5.1	MONTAGE CONSOLE ROB3 MOTOMAN MA1440/2010/MH24	Mounting console for wire feed unit	092-002877-00000
6	70QMM GR 7/12 POL 5M	Robot intermediate hose package, gas cooled, ribbed hose, 7/12-pole	092-007855-00205
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	DV-CAB connection	092-007741-00000
7.2	CONNECTOR DRIVE ROB3 WIRE CONDUIT	Connection set for Rob 3 wire conduit	092-007916-00000
7.3	WSH universal	Wire spool holder	092-002558-00000
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	094-021590-00000
9.1	TN MIG ROB A500TS 22°	Torch neck ABIROB A500TS	094-011260-00500
9.4	SP MOTOMAN ICAT A MA2010	Hose package, gas cooled	094-021723-00000
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
10.05	RCTH 500 M8 ROB TS W	RT contact tip holder	094-011276-00500
-	ANALYZER	Software for control and status signal analysis	090-008778-00000
-	PC300.Net Set	PC300.Net welding parameter software set incl. CMSTICK, cable and interface SECINT X10 USB	090-008777-00000

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



■ alpha Q, gas cooled ■ Pulse ● forceArc ● coldArc ● pipeSolution
■ Handling/welding robot system alpha Q 352 RC


alpha Q 352RC

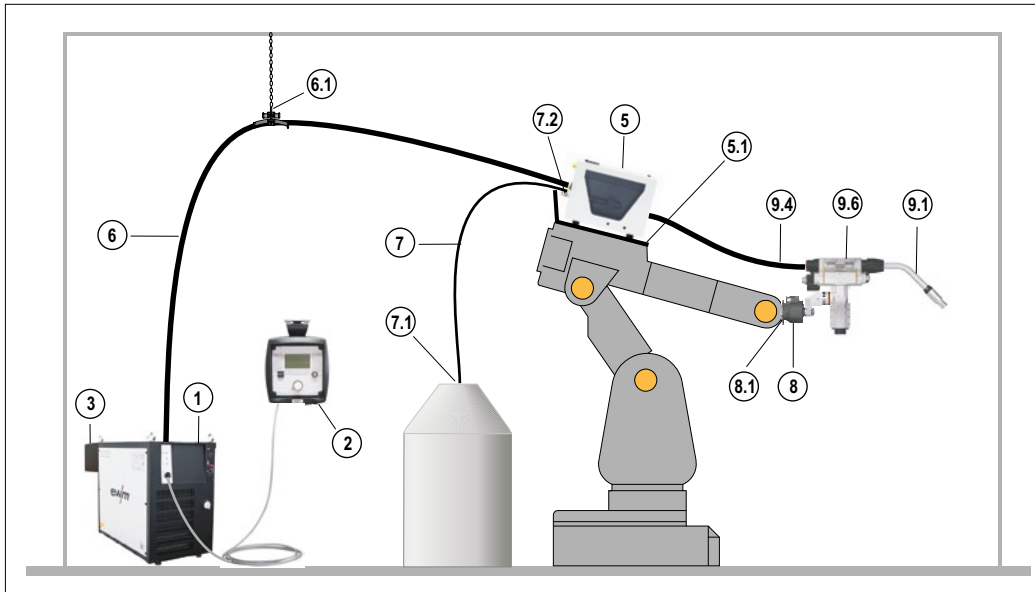
- no front control
- gas-cooled
- welding parameters can be set via external operating panel
- M Drive 4 Rob 2X
- example shown: Kuka KR16

Item	Type	Designation	Item no.
1	alpha Q 352 puls MM RC	Multiprocess MIG/MAG pulse welding machine without front control	090-005464-00502
1.1	OW CEE 32A	Factory-fit option, mains plug including fitting	092-008215-00000
1.2	WK70/CL 5m	Workpiece lead with cable lug	092-002078-00005
1.3	DM 842 Ar/CO2 230bar 30l D	Pressure regulator with manometer	394-002910-00030
1.8	RA5 19POL 1x 5M	Connection cable, 19-pole 5 m, wire end ferrules on one end	092-001569-00005
2	RCX Expert 2.0 Rob 2m	Control panel	090-008809-00002
3	BUSINT X11 DEVICE NET	DEVICE-NET industrial bus interface	090-008230-00000
3.1	FRV 7POL 5m	Connection cable extension	092-000201-00003
5	M drive 4 Rob 2X	Wire feeder for automated applications, water-cooled, Euro torch connector	090-005477-00502
5.1	MONTAGE CONSOLE ROB 2 UNIVERSAL	Mounting console for wire feed unit	092-001746-00000
6	70QMM GS 7/12 POL 5M	Robot intermediate hose package, gas cooled, standard protective hose, 7/12-pole	092-007855-00105
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	DV-CAB connection	092-007741-00000
7.2	CONNECTOR DRIVE ROB2 WIRE CONDUIT	Connection set for Rob 2 wire conduit	092-008205-00000
7.3	WSH universal	Wire spool holder	092-002558-00000
7.4	AK300	Wire spool adapter B300	094-001803-00001
8	CAT2-XL	Collision sensor	094-008501-00500
8.1	FL ISO 9409-1-A40	Intermediate flange, plastic	094-013347-00500
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
-	ANALYZER	Software for control and status signal analysis	090-008778-00000
-	PC300.Net Set	PC300.Net welding parameter software set incl. CMSTICK, cable and interface SECINT X10 USB	090-008777-00000

- ▶ Image for conceptual purposes. Not all listed items are shown.
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- ▶ For more accessories, options and machine variants please refer to the individual chapters



■ alpha Q, gas cooled ■ Pulse ● forceArc ● coldArc ● pipeSolution
■ Handling/welding robot system alpha Q 352 RC as frontDrive system



alpha Q 352 RC

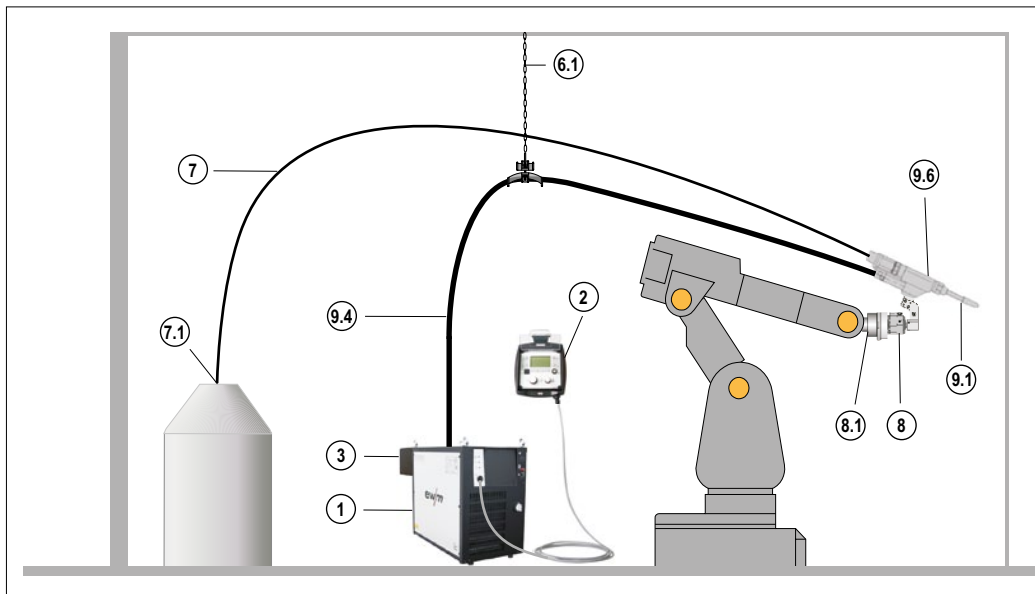
- No front control
- EWM frontDrive
- Media separation box
- Gas-cooled
- As demonstrated on a Kuka KR 125-3

Item	Type	Designation	Item no.
1	alpha Q 352 puls MM RC	Multiprocess MIG/MAG pulse welding machine without front control	090-005464-00502
1.1	OW CEE 32A	Factory-fit option, mains plug including fitting	092-008215-00000
1.2	WK70/CL 5m	Workpiece lead with cable lug	092-002078-00005
1.3	DM 842 Ar/CO2 230bar 30l D	Pressure regulator with manometer	394-002910-00030
2	RCX Expert 2.0 Rob 2m	Control panel	090-008809-00002
3	BUSINT X11 INTERBUS LWL ATCASE	Industrial bus interface, potential-free power supply, 24 V	090-908225-00008
5	F drive Rob 3 LI	Media separation box for frontDrive robot welding torch, opens on left	090-005391-00502
5.1	MONTAGE CONSOLE ROB 3 UNIVERSAL	Mounting console for wire feed unit	092-002440-00000
6	70QMM GS 7/12 POL 5M	Robot intermediate hose package, gas cooled, standard protective hose, 7/12-pole	092-007855-00105
6.1	ON ZWIPA-CONNECTION	Retrofit option, third-party intermediate hose package strain relief	094-007890-00000
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	ROLLINER CONNECTOR DRIVE ROB3	Connection set for Rob 3 wire conduit	092-007918-00000
8	RSA STRONG	Collision sensor	094-020727-00000
8.1	ZF CAT ISO 9409-1-A160	Intermediate flange	094-020733-00000
9.1	RMT301G 45° L=252MM	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	094-013530-00000
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	Liner	094-022268-00000
10.08	UNI 4AR 1.0mm	Drive roll set frontDrive	092-008820-00010
10.10	DEN M10X1 DA11 L19,3 DI=5MM	Inlet guide	094-020263-00001
-	PC300.Net Set	PC300.Net welding parameter software set incl. CMSTICK, cable and interface SECINT X10 USB	090-008777-00000

- ▶ Image for conceptual purposes. Not all listed items are shown.
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- ▶ For more accessories, options and machine variants please refer to the individual chapters



■ alpha Q, gas cooled ■ Pulse ● forceArc ● coldArc ● pipeSolution
■ alpha Q 352 RC handling/welding robot system as MasterPull system



alpha Q 352 RC

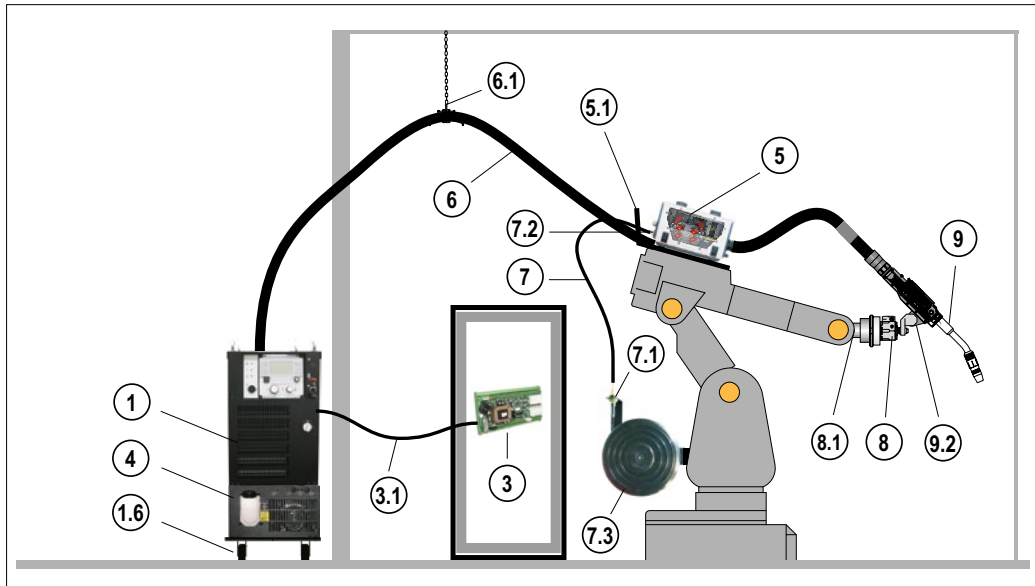
- Without front control
- MasterPull version
- Gas cooled
- Example shown: Fanuc Arc Mate 120i R-30iB

Item	Type	Designation	Item no.
1	alpha Q 352 puls MM RC MasterPull	MIG/MAG multiprocess pulse welding machine, including connection capability for MasterPull welding torch	090-005466-00502
1.1	OW CEE 32A	Factory-fit option, mains plug including fitting	092-008215-00000
1.2	WK70/CL 5m	Workpiece lead with cable lug	092-002078-00005
1.3	DM 842 Ar/CO2 230bar 30l D	Pressure regulator with manometer	394-002910-00030
2	RCX Expert 2.0 Rob 2m	Control panel	090-008809-00002
3	BUSINT X11 ETHERNET IP ON SV	ETHERNET IP industrial bus interface, including option for external voltage supply	090-908613-00008
6.1	ON ZWIPIA-CONNECTION	Retrofit option, third-party intermediate hose package strain relief	094-007890-00000
7	Masterliner HD 8m	Wire guide	094-019127-00000
7.1	SET MASTERLINER	Masterliner HD connection set, including all Masterliner connections	094-019128-00000
8	CAT2-XL/HL	Collision sensor	094-012838-00000
8.1	FL ISO 9409-1-A40	Intermediate flange, plastic	094-013347-00500
9.1	RTN MasterPull 500A 22°	Torch neck, MasterPull 22°	094-018247-00000
9.4	TBROB MasterPull 8m	Hose package, MasterPull 8 m	094-018250-00000
9.6	masterPull	Master drive with 0-20m/min wire feed speed	094-017455-00000
10.01	GN MP 500 A 16/28 0mm	Gas nozzle, conical	094-011263-00000
10.02	CT M8x30 CuCrZr Ø=1mm	Contact tip	094-005225-00000
10.03	BSL-Liner 2.0mm x 4.5mm, 3m	BSL liner for steel	094-010578-00000
10.05	RCTH 500 M8 ROB TS W	RT contact tip holder	094-011276-00500
10.08	WFROLL 1.2mm	Wire feed roll, smooth	094-018246-00000
10.08	WFROLL FE 1.2	Drive roll for steel (V-groove)	094-010207-00000
10.09	TUBE 23mm	Inlet tube	094-011293-00000
10.10	2.0mm x 4.5mm, 3m	Inlet nipple, PVC, for BSL liner	094-013024-00000
10.11	SLEEVE M9x0.75	Sleeve	094-011295-00000
-	ANALYZER	Software for control and status signal analysis	090-008778-00000
-	PC300.Net Set	PC300.Net welding parameter software set incl. CMSTICK, cable and interface SECINT X10 USB	090-008777-00000

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



■ alpha Q, water cooled ■ Pulse ● forceArc ● coldArc ● pipeSolution
■ Handling/welding robot system alpha Q 352



alpha Q 352

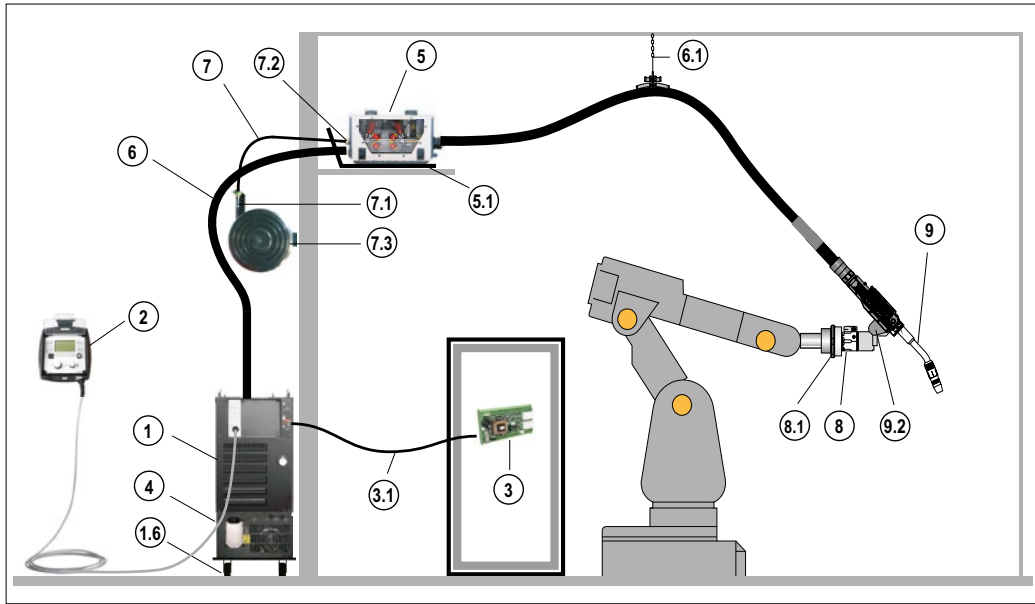
- With Expert 2.0 front control
- Water cooled
- M Drive 4 Rob 2X
- As demonstrated on a KUKA KR5 arc

Item	Type	Designation	Item no.
1	alpha Q 352 Expert 2.0 puls MM	Multiprocess MIG/MAG pulse welding machine with front control	090-005488-00502
1.1	OW CEE 32A	Factory-fit option, mains plug including fitting	092-008215-00000
1.2	WK70/CL 5m	Workpiece lead with cable lug	092-002078-00005
1.3	DM 842 Ar/CO2 230bar 30l D	Pressure regulator with manometer	394-002910-00030
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 5 m, wire end ferrules on one end	092-001569-00005
3	RINT X12 STANDARD	Standard robot interface	090-008291-00000
3.1	FRV 7POL 5m	Connection cable extension	092-000201-00003
3.2	ON PLUG SET RINT X12	Retrofit option EWM plug set for RINT X12/DVINT X11	092-001822-00000
4	cool82 U44	Cooling unit for robot machines	090-008268-00502
4.1	KF 23E-10, -10	Coolant (-10 °C), 9.3 l	094-000530-00000
5	M drive 4 Rob 2X	Wire feeder for automated applications, water-cooled, Euro torch connector	090-005477-00502
5.1	MONTAGE CONSOLE ROB 2 UNIVERSAL	Mounting console for wire feed unit	092-001746-00000
6	70QMM WS 7/12POL 5M	Robot intermediate hose package, water cooled, standard protective hose, 7/12-pole	092-007855-01105
6.1	ON ZWIPIA-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	DV-CAB connection	092-007741-00000
7.2	CONNECTOR DRIVE ROB2 WIRE CONDUIT	Connection set for Rob 2 wire conduit	092-008205-00000
7.3	WSH universal	Wire spool holder	092-002558-00000
7.4	AK300	Wire spool adapter B300	094-001803-00001
8	CAT2-XL	Collision sensor	094-008501-00500
8.1	FL ISO 9409-1-A40	Intermediate flange, plastic	094-013347-00500
9	MTR242W 22 1.2mm 1.25m	MIG/MAG welding torch, water-cooled	094-500034-00000
9.2	STANHOL	Standard holder	094-010162-00500
-	ANALYZER	Software for control and status signal analysis	090-008778-00000
-	PC300.Net Set	PC300.Net welding parameter software set incl. CMSTICK, cable and interface SECINT X10 USB	090-008777-00000

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■ alpha Q, water cooled ■ Pulse ● forceArc ● coldArc ● pipeSolution
■ Handling/welding robot system alpha Q 552 RC as push/pull version



alpha Q 552RC

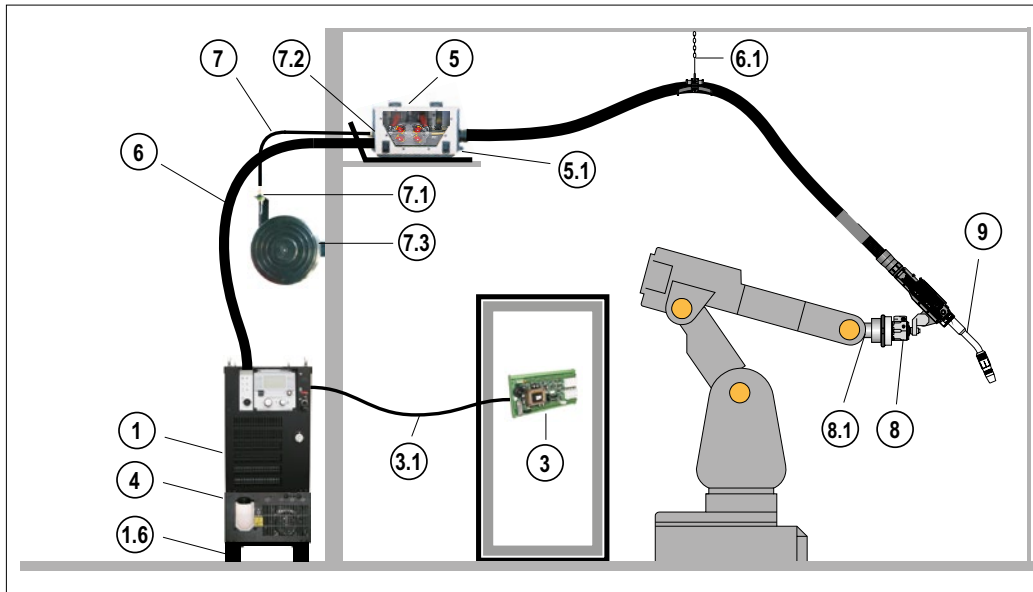
- no front control
- push/pull design
- water-cooled
- welding parameters can be set via external operating panel
- M Drive 4 Rob 2X
- example shown: ABB IRB1600

Item	Type	Designation	Item no.
1	alpha Q 552 puls MM RC	Multiprocess MIG/MAG pulse welding machine without front control	090-005465-00502
1.1	OW CEE 32A	Factory-fit option, mains plug including fitting	092-008215-00000
1.2	WK95/CL 5m	Workpiece lead with cable lug	092-001990-00005
1.3	DM 842 Ar/CO2 230bar 30l D	Pressure regulator with manometer	394-002910-00030
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 5 m, wire end ferrules on one end	092-001569-00005
2	RCX Expert 2.0 Rob 2m	Control panel	090-008809-00002
3	BUSINT X11 DEVICE NET	DEVICE-NET industrial bus interface	090-008230-00000
3.1	FRV 7POL 5m	Connection cable extension	092-000201-00003
4	cool82 U44	Cooling unit for robot machines	090-008268-00502
4.1	KF 23E-10, -10	Coolant (-10 °C), 9.3 l	094-000530-00000
5	M drive 4 Rob 2X	Wire feeder for automated applications, water-cooled, Euro torch connector	090-005477-00502
5.1	MONTAGE CONSOLE ROB 2 UNIVERSAL	Mounting console for wire feed unit	092-001746-00000
6	95QMM WS 7/12 POL 5M	Robot intermediate hose package, water cooled, standard protective hose, 7/12-pole	092-007855-11105
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	DV-CAB connection	092-007741-00000
7.2	CONNECTOR DRIVE ROB2 WIRE CONDUIT	Connection set for Rob 2 wire conduit	092-008205-00000
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	CAT2-XL	Collision sensor	094-008501-00500
8.1	FL ISO 9409-1-A40	Intermediate flange, plastic	094-013347-00500
9	MTR500W PP 22°, 3.2m	MIG/MAG welding torch, push/pull, water-cooled	094-500073-00000
9.2	STANHOL	Standard holder	094-010162-00500
-	ANALYZER	Software for control and status signal analysis	090-008778-00000
-	PC300.Net Set	PC300.Net welding parameter software set incl. CMSTICK, cable and interface SECINT X10 USB	090-008777-00000

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



■ alpha Q, water cooled ■ Pulse ● forceArc ● coldArc ● pipeSolution
■ Handling/welding robot system alpha Q 352 as MasterFeeder system



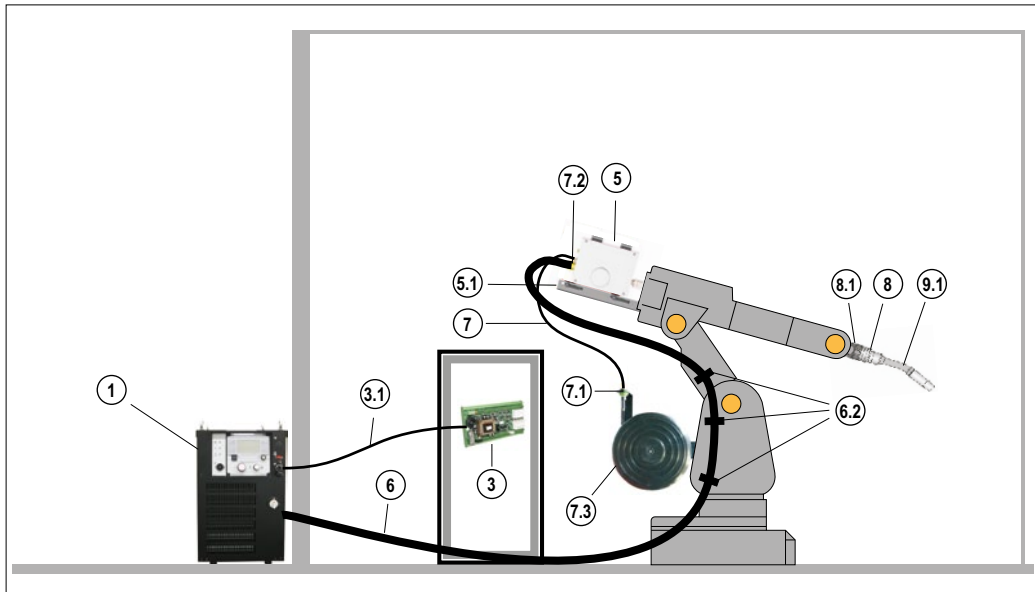
- alpha Q 352**
- With Expert 2.0 front control
 - Master feeder design
 - Water cooled
 - M drive 4 Rob 2X MF
 - As demonstrated on a Reis RV20-6

Item	Type	Designation	Item no.
1	alpha Q 352 Expert 2.0 puls MM	Multiprocess MIG/MAG pulse welding machine with front control	090-005488-00502
1.1	OW CEE 32A	Factory-fit option, mains plug including fitting	092-008215-00000
1.2	WK70/CL 5m	Workpiece lead with cable lug	092-002078-00005
1.3	DM 842 Ar/CO2 230bar 30l D	Pressure regulator with manometer	394-002910-00030
1.6	PALETTE ROB XX2	Transport pallet for power source and add-on module	090-008275-00000
1.8	RA5 19POL 1x 5M	Connection cable, 19-pole 5 m, wire end ferrules on one end	092-001569-00005
3	BUSINT X11 CAN-OPEN	CAN-OPEN industrial bus interface	090-008231-00000
3.1	FRV 7POL 5m	Connection cable extension	092-000201-00003
4	cool82 U44	Cooling unit for robot machines	090-008268-00502
4.1	KF 23E-10, -10	Coolant (-10 °C), 9,3 l	094-000530-00000
5	M drive 4 Rob 2X MF	Wire feeder for automated applications, water-cooled, master feeder	090-005481-00502
5.1	MONTAGE CONSOLE ROB 2 UNIVERSAL	Mounting console for wire feed unit	092-001746-00000
6	95QMM WS 7/12 POL 5M	Robot intermediate hose package, water cooled, standard protective hose, 7/12-pole	092-007855-11105
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	DV-CAB connection	092-007741-00000
7.2	CONNECTOR DRIVE ROB2 WIRE CONDUIT	Connection set for Rob 2 wire conduit	092-008205-00000
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	CAT2-XL	Collision sensor	094-008501-00500
8.1	FL ISO 9409-1-A50	Intermediate flange, plastic	094-016554-00500
9	MIG ROB ABK 500 MF	MIG/MAG welding torch 22°, master feeder, 1.2 mm steel, 6 m	094-010203-00000
-	ANALYZER	Software for control and status signal analysis	090-008778-00000
-	PC300.Net Set	PC300.Net welding parameter software set incl. CMSTICK, cable and interface SECINT X10 USB	090-008777-00000

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



■ Phoenix, gas-cooled ■ Pulse ● forceArc ● rootArc
■ Hollow wrist robot system Phoenix 352



Phoenix 352

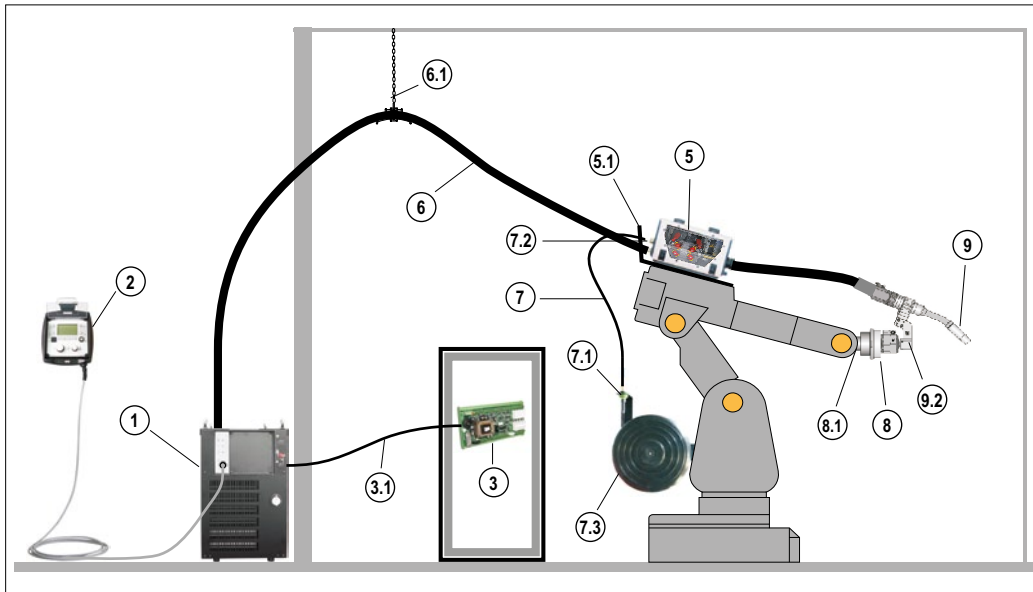
- with front control Expert 2.0
- gas-cooled
- M Drive 4 Rob 3X LI
- example shown: Kuka KR5 arc HW

Item	Type	Designation	Item no.
1	Phoenix 352 Expert 2.0 puls MM	Multiprocess MIG/MAG pulse welding machine with front control	090-005492-00502
1.1	OW CEE 32A	Factory-fit option, mains plug including fitting	092-008215-00000
1.2	WK70/CL 5m	Workpiece lead with cable lug	092-002078-00005
1.3	DM 842 Ar/CO2 230bar 30l D	Pressure regulator with manometer	394-002910-00030
1.8	RA5 19POL 1x 5M	Connection cable, 19-pole 5 m, wire end ferrules on one end	092-001569-00005
3	BUSINT X11 DEVICE NET	DEVICE-NET industrial bus interface	090-008230-00000
3.1	FRV 7POL 5m	Connection cable extension	092-000201-00003
5	M drive 4 Rob 3X LI	Wire feeder for automated applications, opens on left, gas-cooled, Euro torch connector	090-005483-00502
5.1	MONTAGE CONSOLE ROB3 KUKA KR5 HW	Mounting console for wire feed unit	092-002441-00000
6	70QMM GR 7/12 POL 5M	Robot intermediate hose package, gas cooled, ribbed hose, 7/12-pole	092-007855-00205
6.2	MONTAGE SET ZWIPA KUKA KR5	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	DV-CAB connection	092-007741-00000
7.2	CONNECTOR DRIVE ROB3 WIRE CONDUIT	Connection set for Rob 3 wire conduit	092-007916-00000
7.3	WSH universal	Wire spool holder	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 KR5	KUKA KR5 intermediate flange	094-013316-00000
9.1	TN MIG ROB A500TS 22°	Torch neck ABIROB A500TS	094-011260-00500
9.4	SP KR5 G HWEWM	Hose package, gas cooled	094-013323-00000
10.01	RGN 500G S6 K16/0 75mm	Gas nozzle, conical	094-016487-00500
10.02	CT M8 CUCRZR AG 1.2/30mm	CuCrZr contact tip, silver plated	094-011272-00000
10.05	RCTH 500 M8 ROB TS W	RT contact tip holder	094-011276-00500
-	ANALYZER	Software for control and status signal analysis	090-008778-00000
-	PC300.Net Set	PC300.Net welding parameter software set incl. CMSTICK, cable and interface SECINT X10 USB	090-008777-00000

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■ Phoenix, gas-cooled ■ Pulse ● forceArc ● rootArc
■ Handling/welding robot system Phoenix 352 RC



Phoenix Q 352 RC

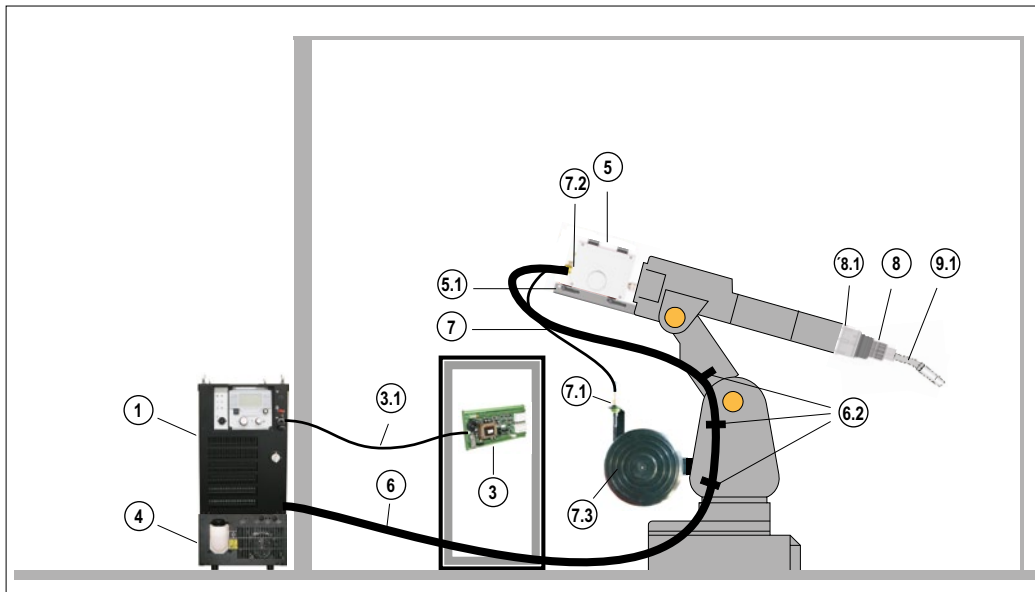
- no front control
- gas-cooled
- welding parameters can be set via external operating panel
- M Drive 4 Rob 2X
- example shown: Kawasaki FS10

Item	Type	Designation	Item no.
1	Phoenix 352 puls MM RC	Multiprocess MIG/MAG pulse welding machine without front control	090-005468-00502
1.1	OW CEE 32A	Factory-fit option, mains plug including fitting	092-008215-00000
1.2	WK70/CL 5m	Workpiece lead with cable lug	092-002078-00005
1.3	DM 842 Ar/CO ₂ 230bar 30l D	Pressure regulator with manometer	394-002910-00030
1.8	RA5 19POL 1x 5M	Connection cable, 19-pole 5 m, wire end ferrules on one end	092-001569-00005
2	RCX Expert 2.0 Rob 2m	Control panel	090-008809-00002
3	BUSINT X11 PROFIBUS	PROFIBUS industrial bus interface	090-008229-00000
3.1	FRV 7POL 5m	Connection cable extension	092-000201-00003
5	M drive 4 Rob 2X	Wire feeder for automated applications, water-cooled, Euro torch connector	090-005477-00502
5.1	MONTAGE CONSOLE ROB 2 UNIVERSAL	Mounting console for wire feed unit	092-001746-00000
6	70QMM GS 7/12 POL 5M	Robot intermediate hose package, gas cooled, standard protective hose, 7/12-pole	092-007855-00105
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	DV-CAB connection	092-007741-00000
7.2	CONNECTOR DRIVE ROB2 WIRE CONDUIT	Connection set for Rob 2 wire conduit	092-008205-00000
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	CAT2-XL	Collision sensor	094-008501-00500
8.1	FL ISO 9409-1-A40	Intermediate flange, plastic	094-013347-00500
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
-	ANALYZER	Software for control and status signal analysis	090-008778-00000
-	PC300.Net Set	PC300.Net welding parameter software set incl. CMSTICK, cable and interface SECINT X10 USB	090-008777-00000

- ▶ Image for conceptual purposes. Not all listed items are shown.
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■ Phoenix, water-cooled ■ Pulse ● forceArc ● rootArc
■ Hollow wrist robot system Phoenix 552



Phoenix 552

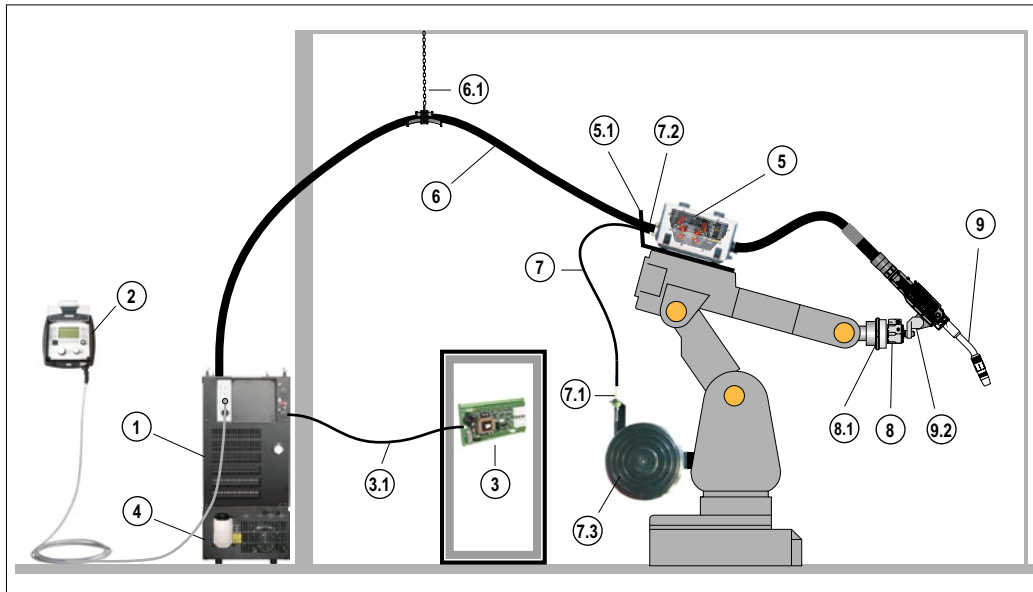
- With Expert 2.0 front control
- Water cooled
- M drive 4 Rob 3X LI
- As demonstrated on a Fanuc ArcMate 100iC

Item	Type	Designation	Item no.
1	Phoenix 552 Expert 2.0 puls MM	Multiprocess MIG/MAG pulse welding machine with front control	090-005494-00502
1.1	OW CEE 32A	Factory-fit option, mains plug including fitting	092-008215-00000
1.2	WK95/CL 5m	Workpiece lead with cable lug	092-001990-00005
1.3	DM 842 Ar/CO2 230bar 30l D	Pressure regulator with manometer	394-002910-00030
1.8	RA5 19POL 1x 5M	Connection cable, 19-pole 5 m, wire end ferrules on one end	092-001569-00005
3	RINT X12 STANDARD	Standard robot interface	090-008291-00000
3.1	FRV 7POL 5m	Connection cable extension	092-000201-00003
3.2	KB RINT X12 FANUC 34POL	Cable assembly	094-009441-00001
3.2	KB RINT X12 FANUC 50POL		094-009440-00001
4	cool82 U44	Cooling unit for robot machines	090-008268-00502
4.1	KF 23E-10, -10	Coolant (-10 °C), 9.3 l	094-000530-00000
5	M drive 4 Rob 3X LI	Wire feeder for automated applications, opens on left, gas-cooled, Euro torch connector	090-005483-00502
5.1	MONTAGE CONSOLE ROB3 FANUC ARC Mate 100iC/120iC	Mounting console for wire feed unit	092-002497-00000
5.2	ON COOL W ROB3	Retrofit option water cooling ROB 3	092-002384-00000
6	95QMM WR 7/12 POL 5M	Robot intermediate hose package, water cooled, ribbed hose, 7/12-pole	092-007855-11205
6.2	MONTAGE SET ZWIPA FANUC 100	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	DV-CAB connection	092-007741-00000
7.2	CONNECTOR DRIVE ROB3 WIRE CONDUIT	Connection set for Rob 3 wire conduit	092-007916-00000
7.3	WSH FANUC ARC Mate 100iC	Wire spool holder	092-002559-00000
7.4	AK300	Wire spool adapter B300	094-001803-00001
8	iSTM ABIROB W	Torch interface complete	094-012933-00000
8.1	FLANGE FANUC iSTM C100/120	Intermediate flange, FANUC C100/120	094-012934-00000
8.1	SWIVEL FANUC iSTM C100/120	Rotating joint, FANUC C100/120	094-012935-00000
9.1	BH ROB 500W 22° x242 y50	Torch neck with gas nozzle sensor, 22°	094-012936-00000
9.4	SP C100iC W EZA 0.85m	Hose package, water cooled	094-013714-00000
10.01	GASNOZZ CON NW15.5 L75.5	Gas nozzle, conical	094-010219-00000
10.02	CT M8 CuCrZr 30mm, 1.2mm	Contact tip	094-013113-00000
10.05	RCTH 500 W	RT contact tip holder	094-010891-00000
10.06	SPLS 500W HD	Spatter protection, high-temperature-resistant	094-013862-00000
-	ANALYZER	Software for control and status signal analysis	090-008778-00000
-	PC300.Net Set	PC300.Net welding parameter software set incl. CMSTICK, cable and interface SECINT X10 USB	090-008777-00000

- ▶ Image for conceptual purposes. Not all listed items are shown.
- ▶ The application examples shown here are possible with both Phoenix and alpha Q machines
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■ Phoenix, water-cooled ■ Pulse ● forceArc ● rootArc
■ Handling/welding robot system Phoenix 552 RC



Phoenix 552 RC

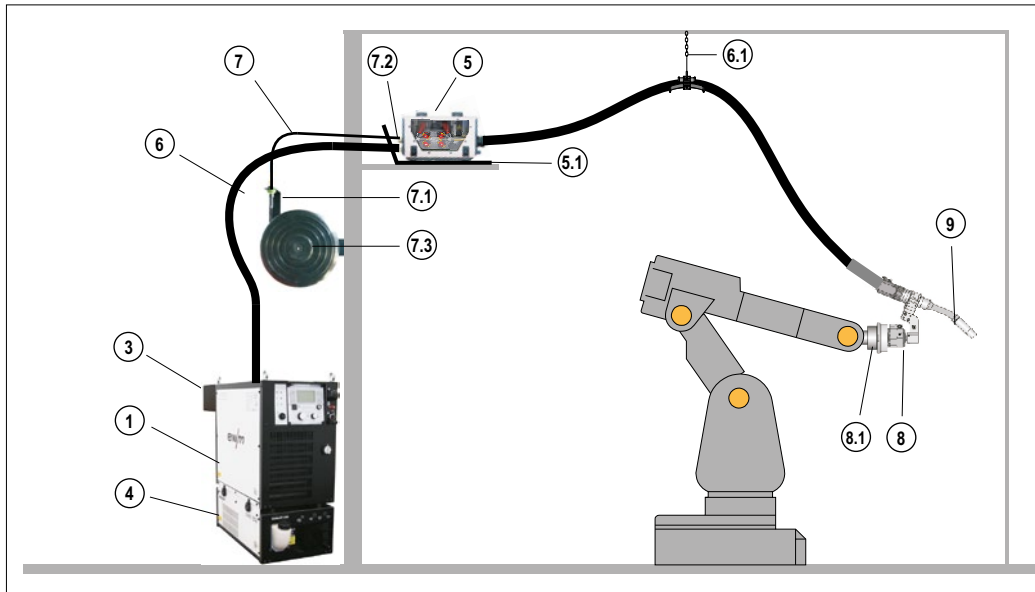
- No front control
- Water cooled
- Welding parameters can be set via external operating panel
- M drive 4 Rob 2X
- Example shown: Kuka KR16/KRC2

Item	Type	Designation	Item no.
1	Phoenix 552 puls MM RC	Multiprocess MIG/MAG pulse welding machine without front control	090-005470-00502
1.1	OW CEE 32A	Factory-fit option, mains plug including fitting	092-008215-00000
1.2	WK95/CL 5m	Workpiece lead with cable lug	092-001990-00005
1.3	DM 842 Ar/CO2 230bar 30l D	Pressure regulator with manometer	394-002910-00030
1.8	RA5 19POL 1x 5M	Connection cable, 19-pole 5 m, wire end ferrules on one end	092-001569-00005
2	RCX Expert 2.0 Rob 2m	Control panel	090-008809-00002
3	BUSINT X11 DEVICE NET	DEVICE-NET industrial bus interface	090-008230-00000
3.1	FRV 7POL 5m	Connection cable extension	092-000201-00003
4	cool82 U44	Cooling unit for robot machines	090-008268-00502
4.1	KF 23E-10, -10	Coolant (-10 °C), 9.3 l	094-000530-00000
5	M drive 4 Rob 2X	Wire feeder for automated applications, water-cooled, Euro torch connector	090-005477-00502
5.1	MONTAGE CONSOLE ROB 2 UNIVERSAL	Mounting console for wire feed unit	092-001746-00000
6	95QMM WS 7/12 POL 5M	Robot intermediate hose package, water cooled, standard protective hose, 7/12-pole	092-007855-11105
6.1	ON ZWIPA-CONNECTION	Retrofit option, third-party intermediate hose package strain relief	094-007890-00000
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 ROB2 WIRE LEAD	Connection set for Rob 2 wire conduit	092-007913-00000
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	CAT2-XL	Collision sensor	094-008501-00500
8.1	FL ISO 9409-1-A40	Intermediate flange, plastic	094-013347-00500
9	MTR500W 22 1.2mm 1.25m	MIG/MAG welding torch, water-cooled	094-500035-00000
9.2	STANHOL	Standard holder	094-010162-00500
-	ANALYZER	Software for control and status signal analysis	090-008778-00000
-	PC300.Net Set	PC300.Net welding parameter software set incl. CMSTICK, cable and interface SECINT X10 USB	090-008777-00000

- ▶ Image for conceptual purposes. Not all listed items are shown.
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- ▶ For more accessories, options and machine variants please refer to the individual chapters



■ Phoenix, water-cooled ■ Pulse ● forceArc ● rootArc
■ Handling/welding robot system Phoenix 552 with MasterFeeder system



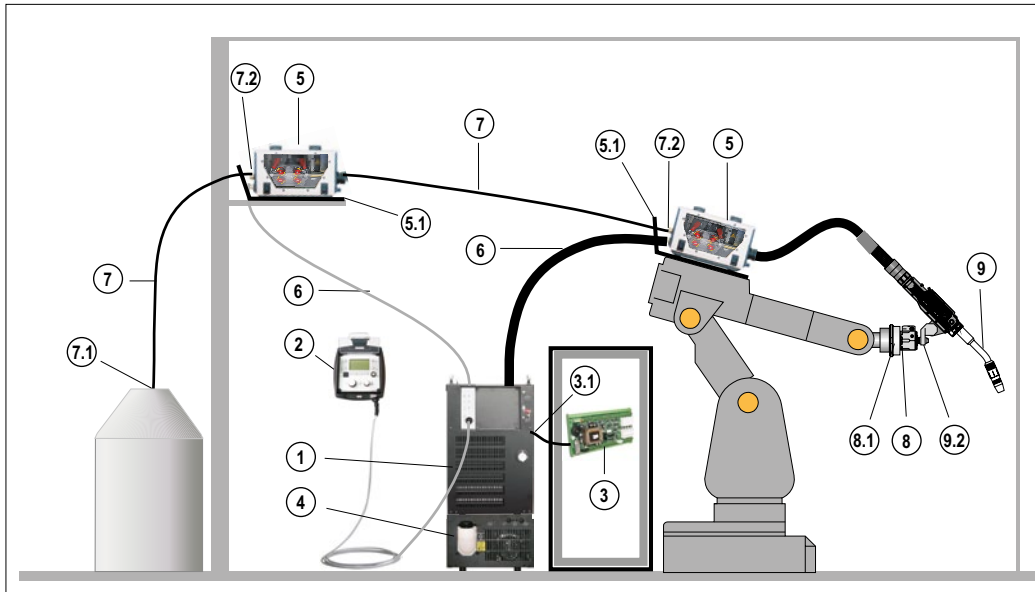
- Phoenix 552**
- With Expert 2.0 front control
 - Water cooled
 - M drive 4 Rob 2X MF
 - As demonstrated on a Reis RV20-6

Item	Type	Designation	Item no.
1	Phoenix 552 Expert 2.0 puls MM	Multiprocess MIG/MAG pulse welding machine with front control	090-005494-00502
1.1	OW CEE 32A	Factory-fit option, mains plug including fitting	092-008215-00000
1.2	WK95/CL 5m	Workpiece lead with cable lug	092-001990-00005
1.3	DM 842 Ar/CO2 230bar 30l D	Pressure regulator with manometer	394-002910-00030
3	BUSINT X11 CAN-OPEN ATCASE	CAN-OPEN industrial bus interface in casing	090-008234-00000
4	cool82 U44	Cooling unit for robot machines	090-008268-00502
4.1	KF 23E-10, -10	Coolant (-10 °C), 9.3 l	094-000530-00000
5	M drive 4 Rob 2X MF	Wire feeder for automated applications, water-cooled, master feeder	090-005481-00502
5.1	MONTAGE CONSOLE ROB 2 UNIVERSAL	Mounting console for wire feed unit	092-001746-00000
6	95QMM WS 7/12 POL 5M	Robot intermediate hose package, water cooled, standard protective hose, 7/12-pole	092-007855-11105
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	DV-CAB connection	092-007741-00000
7.2	CONNECTOR DRIVE ROB2 WIRE CONDUIT	Connection set for Rob 2 wire conduit	092-008205-00000
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	CAT2-XL	Collision sensor	094-008501-00500
8.1	FL ISO 9409-1-A50	Intermediate flange, plastic	094-016554-00500
9	MIG ROB ABK 500 MF	MIG/MAG welding torch 22°, master feeder, 1.2 mm steel, 6 m	094-010203-00000
-	ANALYZER	Software for control and status signal analysis	090-008778-00000
-	PC300.Net Set	PC300.Net welding parameter software set incl. CMSTICK, cable and interface SECINT X10 USB	090-008777-00000

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



■ Phoenix, water-cooled ■ Pulse ● forceArc ● rootArc
■ Handling/welding robot system Phoenix 552 RC with intermediate wire feeder



Phoenix 552 RC

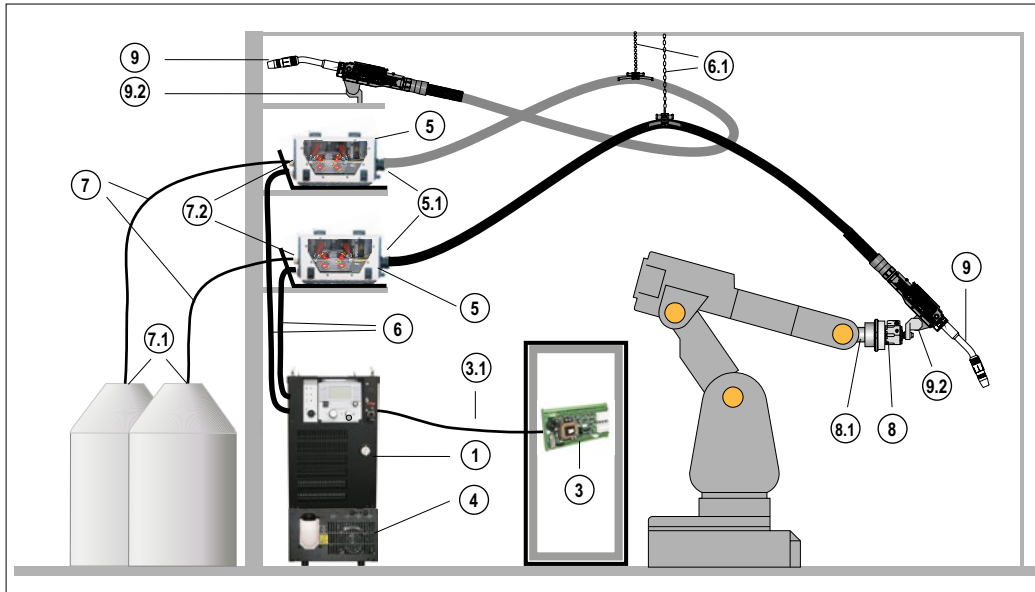
- No front control
- Water-cooled
- Welding parameters can be set via external operating panel
- M Drive 4 Rob 2X
- With intermediate wire feeder
- Example shown: Kuka KR16

Item	Type	Designation	Item no.
1	Phoenix 552 puls MM RC	Multiprocess MIG/MAG pulse welding machine without front control	090-005470-00502
1.1	OW CEE 32A	Factory-fit option, mains plug including fitting	092-008215-00000
1.2	WK95/CL 5m	Workpiece lead with cable lug	092-001990-00005
1.3	DM 842 Ar/CO2 230bar 30l D	Pressure regulator with manometer	394-002910-00030
1.8	RA5 19POL 1x 5M	Connection cable, 19-pole 5 m, wire end ferrules on one end	092-001569-00005
2	RCX Expert 2.0 Rob 2m	Control panel	090-008809-00002
3	BUSINT X11 DEVICE NET	DEVICE-NET industrial bus interface	090-008230-00000
3.1	FRV 7POL 5m	Connection cable extension	092-000201-00003
4	cool82 U44	Cooling unit for robot machines	090-008268-00502
4.1	KF 23E-10, -10	Coolant (-10 °C), 9.3 l	094-000530-00000
5	M drive 4 Rob 2X	Wire feeder for automated applications, water-cooled, Euro torch connector	090-005477-00502
5	M drive 4 Rob 2X ZT	Intermediate drive for automated applications	090-005480-00502
5.1	MONTAGE CONSOLE ROB 2	Mounting console for wire feed unit	092-001746-00000
5.1	UNIVERSAL		092-001746-00000
6	95QMM WS 7/12 POL 5M	Robot intermediate hose package, water cooled, standard protective hose, 7/12-pole	092-007855-11105
6	SLP 5 7/12 POL 5M	Control cable, standard protective hose	092-007855-52105
7	WIRE CONDUIT 3M	Wire guide	094-011515-00000
7	WIRE CONDUIT 8M		094-011515-00002
7.1	CONNECTOR BARREL	Connection for large spool/drum	094-011517-00000
7.2	CONNECTOR DRIVE ROB2 WIRE	Connection set for Rob 2 wire conduit	092-008205-00000
7.2	CONDUIT		092-008205-00000
8	CAT2-XL	Collision sensor	094-008501-00500
8.1	FL ISO 9409-1-A50	Intermediate flange, plastic	094-016554-00500
9	MTR500W 22 1.2mm 1.25m	MIG/MAG welding torch, water-cooled	094-500035-00000
9.2	STANHOL	Standard holder	094-010162-00500
-	ANALYZER	Software for control and status signal analysis	090-008778-00000
-	PC300.Net Set	PC300.Net welding parameter software set incl. CMSTICK, cable and interface SECINT X10 USB	090-008777-00000

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



■ Phoenix, water-cooled ■ Pulse ● forceArc ● rootArc
■ Handling/welding robot system Phoenix 552 with two wire feed units



Phoenix 552

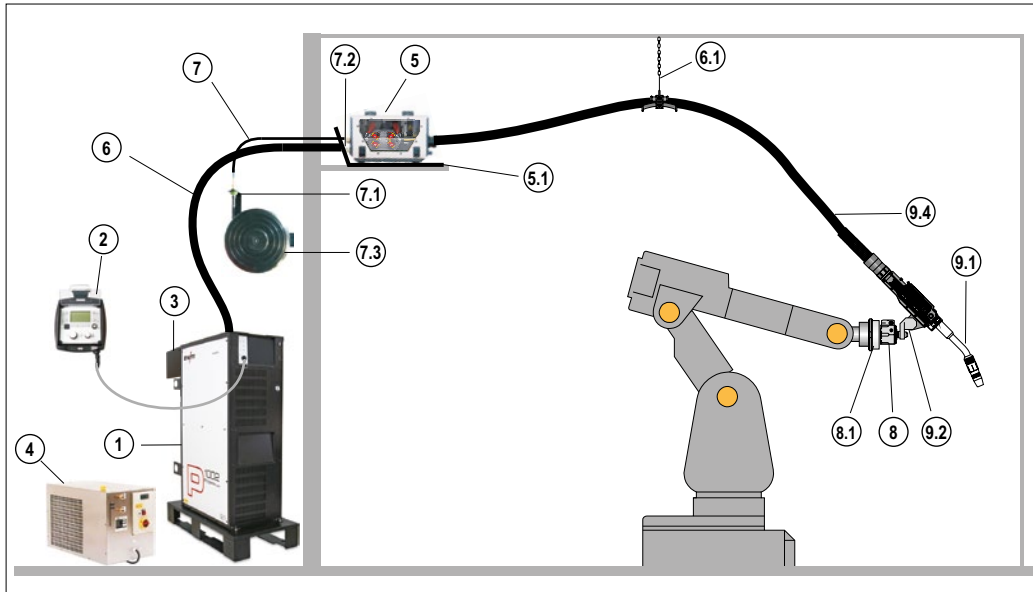
- With Expert 2.0 front control
- Water cooled
- Two wire feeders
- Two push/pull welding torches
- As demonstrated on a KUKA KR16

Item	Type	Designation	Item no.
1	Phoenix 552 Expert 2.0 puls MM	Multiprocess MIG/MAG pulse welding machine with front control	090-005494-00502
1.1	OW CEE 32A	Factory-fit option, mains plug including fitting	092-008215-00000
1.2	WK95/CL 5m	Workpiece lead with cable lug	092-001990-00005
1.3	DM 842 Ar/CO2 230bar 30l D	Pressure regulator with manometer	394-002910-00030
1.7	OW ASM 2 ROB DV	Factory-fit option, connection capability 2nd WF to Phoenix / alpha Q	092-002570-00001
1.8	RA5 19POL 1x 5M	Connection cable, 19-pole 5 m, wire end ferrules on one end	092-001569-00005
3	BUSINT X11 DEVICE NET ON DV SWITCH	Industrial bus interface DEVICE-NET, incl. WF Switch option	090-908230-00001
3.1	FRV 7POL 5m	Connection cable extension	092-000201-00003
4	cool82 U45 2DV	Cooling unit for robot machines with flow monitor, reinforced version, two connections for 2 wire feeders, for example	090-008280-13502
4.1	KF 23E-10, -10	Coolant (-10 °C), 9,3 l	094-000530-00000
5	M drive 4 Rob 2X	Wire feeder for automated applications, water-cooled, Euro torch connector	090-005477-00502
5.1	MONTAGE CONSOLE ROB 2 UNIVERSAL	Mounting console for wire feed unit	092-001746-00000
6	95QMM WS 7/12 POL 3M	Robot intermediate hose package, water cooled, standard protective hose, 7/12-pole	092-007855-11103
6.1	ON ZWIPIA-CONNECTION	Retrofit option, third-party intermediate hose package strain relief	094-007890-00000
6.1			094-007890-00000
7	WIRE CONDUIT 3M	Wire guide	094-011515-00000
7			094-011515-00000
7.1	CONNECTOR BARREL	Connection for large spool/drum	094-011517-00000
7.1			094-011517-00000
7.2	CONNECTOR DRIVE ROB2 WIRE CONDUIT	Connection set for Rob 2 wire conduit	092-008205-00000
7.2			092-008205-00000
8	CAT2-XL	Collision sensor	094-008501-00500
8			094-008501-00500
8.1	FL ISO 9409-1-A50	Intermediate flange, plastic	094-016554-00500
9	MTR500W PP 22°, 3.2m	MIG/MAG welding torch, push/pull, water-cooled	094-500073-00000
9			094-500073-00000
9.2	STANHOL	Standard holder	094-010162-00500
9.2			094-010162-00500
-	ANALYZER	Software for control and status signal analysis	090-008778-00000
-	PC300.Net Set	PC300.Net welding parameter software set incl. CMSTICK, cable and interface SECINT X10 USB	090-008777-00000

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



■ Phoenix, water-cooled ■ Pulse ● forceArc ● rootArc
■ Handling/welding robot system Phoenix 1002 RC for high-speed welding



Phoenix 1002 RC

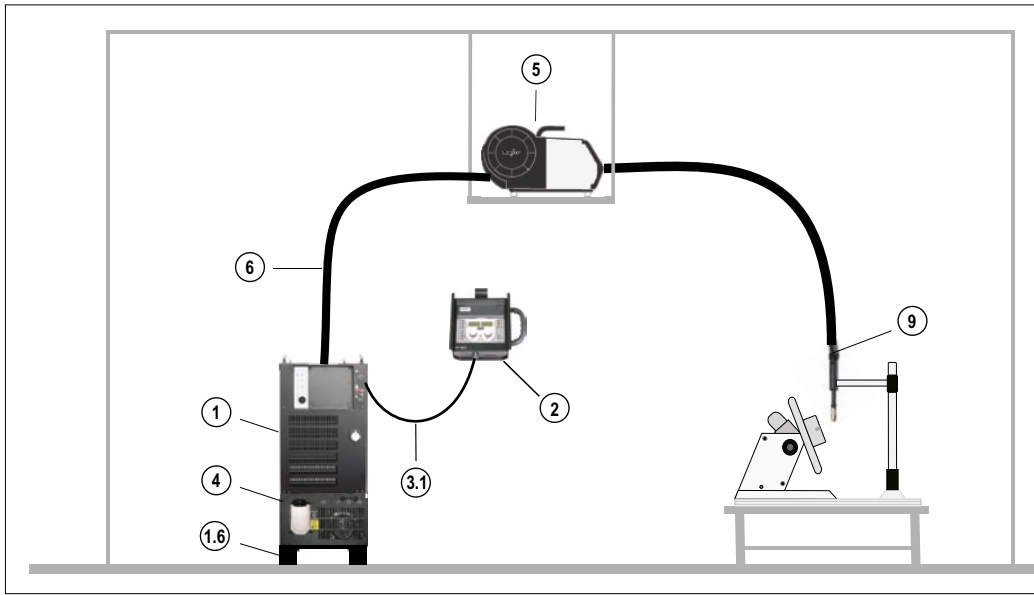
- No front control
- Water cooled
- Welding parameters can be set via external operating panel
- M drive 4 Rob HS 2X with RPC
- For high-performance welding
- Example shown: Reis RV20-6

Item	Type	Designation	Item no.
1	Phoenix 1002 puls MM RC	Multiprocess MIG/MAG pulse welding machine without front control	090-005476-00502
1.1	OW CEE 63A	Factory-fit option, mains plug including fitting	092-008216-00000
1.2	WK95/CL 5m	Workpiece lead with cable lug	092-001990-00005
1.2	WK95/CL 5m	Workpiece lead with cable lug	092-001990-00005
1.3	DM 842 Ar/CO2 230bar 30l D	Pressure regulator with manometer	394-002910-00030
2	RCX Expert 2.0 Rob 2m	Control panel	090-008809-00002
3	BUSINT X11 CAN-OPEN ATCASE	CAN-OPEN industrial bus interface in casing	090-008234-00000
4	RK 2	Recooling unit	094-002284-00000
4.1	KF 23E-10, -10	Coolant (-10 °C), 9.3 l	094-000530-00000
4.2	HOSE BRIDGE	Hose bridge	092-007857-00000
4.3	ON DFW RK	Flow monitor connection, retrofit option	092-008266-00000
5	M drive 4 Rob 2X HS	Wire feeder for automated applications, high performance welding, water-cooled	090-005482-00502
5.1	MONTAGE CONSOLE ROB 2 UNIVERSAL	Mounting console for wire feed unit	092-001746-00000
6	2x95QMM WR 7/12POL 5M	Robot intermediate hose package, 2 x 95 sq mm, water cooled, ribbed hose, 7/12-pole	092-007855-21205
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	DV-CAB connection	092-007741-00000
7.2	CONNECTOR DRIVE ROB2 WIRE CONDUIT	Connection set for Rob 2 wire conduit	092-008205-00000
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	CAT2-XL	Collision sensor	094-008501-00500
8.1	FL ISO 9409-1-A50	Intermediate flange, plastic	094-016554-00500
9.1	BH WH 600W 22DG	Torch neck	094-021803-00000
9.2	STANHOL	Standard holder	094-010162-00500
9.4	SP MIG WH W L=1,50M RPC	Hose package, water cooled	094-021802-00000
10.01	GD NW=21,5MM L=92MM	Gas nozzle, conical	094-021813-00000
10.02	CT M12 CUCRZR 1,2mm	Contact tip	094-021810-00000
10.05	CTH 600W M12	Contact tip holder	094-021808-00000
10.06	GASDIFF 600W	Gas diffuser	094-021809-00000
-	ANALYZER	Software for control and status signal analysis	090-008778-00000
-	PC300.Net Set	PC300.Net welding parameter software set incl. CMSTICK, cable and interface SECINT X10 USB	090-008777-00000

- ▶ Image for conceptual purposes. Not all listed items are shown.
- ▶ For more accessories, options and machine variants please refer to the individual chapters



■ Phoenix, water-cooled ■ Pulse ● forceArc ● rootArc
■ Mechanisation welding system Phoenix 552 RC with Drive 4L ROB and R50 ROB



Phoenix 552 RC

- No front control
- Water cooled
- Welding parameters can be selected and set via remote control
- M drive 4L Rob X LI with wire spool holder
- R50 ROB
- Example shows a simple mechanical application

Item	Type	Designation	Item no.
1	Phoenix 552 puls MM RC	Multiprocess MIG/MAG pulse welding machine without front control	090-005470-00502
1.1	OW CEE 32A	Factory-fit option, mains plug including fitting	092-008215-00000
1.2	WK95/CL 5m	Workpiece lead with cable lug	092-001990-00005
1.3	DM 842 Ar/CO2 230bar 30l D	Pressure regulator with manometer	394-002910-00030
1.6	PALETTE ROB XX2	Transport pallet for power source and add-on module	090-008275-00000
1.8	RA5 19POL 1x 5M	Connection cable, 19-pole 5 m, wire end ferrules on one end	092-001569-00005
2	R50 ROB 7POL	Remote control for mechanised applications	090-008782-00000
3.1	FRV 7POL 10m	Connection cable extension	092-000201-00000
4	cool82 U44	Cooling unit for robot machines	090-008268-00502
4.1	KF 23E-10, -10	Coolant (-10 °C), 9.3 l	094-000530-00000
5	M drive 4L Rob X LI	Wire feeder for automated applications, opens on left, gas-cooled, Euro torch connector	090-005486-00502
6	95QMM WS 7/12 POL 5M	Robot intermediate hose package, water cooled, standard protective hose, 7/12-pole	092-007855-11105
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
-	TH AMT	Torch holder suitable for AMT torches	092-019400-00000
-	PC300.Net Set	PC300.Net welding parameter software set incl. CMSTICK, cable and interface SECINT X10 USB	090-008777-00000

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



Overview

MIG/MAG automation		Page
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Multiprocess MIG/MAG pulse welding machines	352 - 452 - 552 RC	54
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alpha Q 352, 552 and Phoenix 352, 452, 552

Signal lights for

- Ready for operation
- Interference
- Welding operation

Connection socket, 7-pole, for items such as

- R50 Rob remote control
- RCX Expert 2 Rob panel
- Xnet LAN/Wi-Fi gateway, external

Inverter technology

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

Easier to operate using Expert 2.0 control

Optionally with Xnet WiFi gateway

PC interface for PC300 software

Optionally with Xnet LAN gateway

Main switch accessible from front



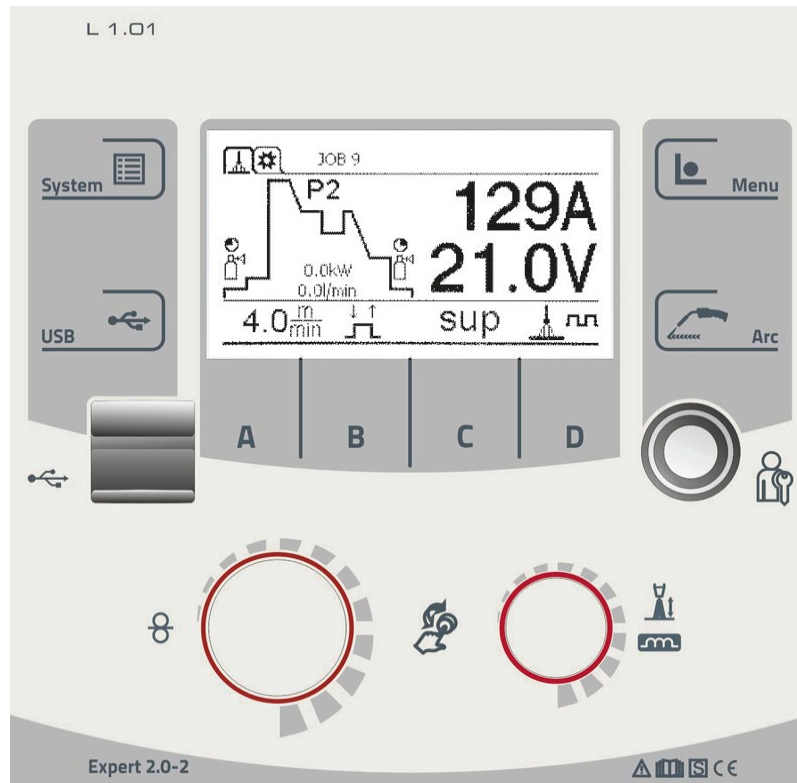
Also available as RC power source without front control

Optionally with built-in LAN or LAN/WiFi gateway





Control Expert 2.0



Operation

- / Welding current (amp), arc correction (volt) and arc dynamics (soft/hard) directly adjustable using two rotary knobs
- / Easy switching of welding process at the press of a button, e.g. from forceArc/forceArc puls to rootArc/rootArc puls or coldArc/coldArc puls or standard/pulse
- / Simple JOB selection (welding procedure, material, gas, wire Ø) using click wheel
- / Equipped with EN 1090-certified Synergic characteristics for EWM coldArc, coldArc puls, pipeSolution, forceArc, forceArc puls, rootArc, rootArc puls and superPuls at no extra charge
- / Equipped with EN 1090-certified Synergic characteristics for GMAW welding of steel/CrNi/aluminium at no extra charge
- / Suitable for MMA welding, TIG welding and gouging at no extra charge

Adjustable welding parameters and functions

- / Plain text display for all welding parameters and functions
- / Administration of access rights for different control operating levels using the Xbutton
- / Setting of all parameters in program sequence
- / Operating modes: non-latched
- / Special non-latched with adjustable start and end crater program
- / 15 welding programs per JOB
- / Standby function

LCD display with different user menus

- / Display and change of welding program sequence
- / Information on selected welding task such as JOB number and procedure
- / Welding current, welding voltage
- / Wire feed speed
- / Default plate thickness
- / Effective arc power for calculating the energy per unit length
- / Nominal, actual and hold values
- / Operating modes
- / Status messages
- / Program number
- / Motor current (wire feed mechanism), indicates any wire feeding errors
- / Pre-configured languages for the user menu: German, English, French, Italian, Dutch, Polish, Danish, Latvian, Russian, Spanish, Czech, Swedish, Brazilian Portuguese, Turkish, Hungarian, Romanian

Synergic welding characteristics certified to EN 1090

Option to network via LAN or WiFi thanks to Multimatrix technology

Easy offline data transfer via USB port



alpha Q puls ■ 352 ● 552 RC

MULTIMATRIX

- /forceArc® /forceArc®puls
- /rootArc® /rootArc®puls
- /coldArc® /coldArc®puls
- /pipeSolution®
- /Pulse
- /superPuls



- Multiprocess MIG/MAG pulse welding machine without front control
- Set up on external operating panel or notebook with PC300.NET software
- Standard interface for automated welding (start/stop, control voltage, current flow)
- Very high power reserves enable use of long intermediate hose packages:
70 mm² up to 30 m 95 mm² up to 40 m
- 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 or wire feed speed, arc length correction and arc dynamics via control voltage
- 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 water-cooling unit
- 5 m mains supply lead
- 100 % tested and free-welded



alpha Q	352	552
Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)	
Mains fuses (slow-blow)	3 x 25 A	3 x 32 A
Open circuit voltage	93 V	
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 %
cos φ	0.99	
Efficiency	88 %	
Dimensions LxWxH in mm	780 x 375 x 625	
Weight	78.5 kg	

Type	Designation	Item no.	per unit
alpha Q 352 puls MM RC	Multiprocess MIG/MAG pulse welding machine without front control	090-005464-00502	
alpha Q 552 puls MM RC	Multiprocess MIG/MAG pulse welding machine without front control	090-005465-00502	

► For more information on the operating panel and wire feeds please refer to the following pages
 For more information on interfaces and intermediate hose packages please refer to the „Accessories“ chapter

Options/accessories

Factory-fit options	Item no.	PG
OW 60 V SENSOR VOLTAGE Factory-fit option: increased sensor voltage for MIG/MAG power sources	092-008770-00001	
OW ASM 2 ROB DV Factory-fit option, connection capability 2nd WF to Phoenix / alpha Q	092-002570-00001	
Options for retrofitting	Item no.	PG
BGA364X51X47 Panel for stacking machines	094-012294-00001	
ON Expert 2.0 ROB Expert 2.0 remote control retrofit	092-003082-00000	



■ alpha Q puls ■ 352 • 552 RC MasterPull

MULTIMATRIX

- /forceArc® /forceArc®puls
- /rootArc® /rootArc®puls
- /coldArc® /coldArc®puls
- /pipeSolution®
- /Pulse
- /superPuls



- Multiprocess MIG/MAG pulse welding machine without front control
- Connection capability to MasterPull welding torch
- Set up on external operating panel or notebook with PC300.NET software
- Standard interface for automated welding (start/stop, control voltage, current flow)
- Very high power reserves enable use of long intermediate hose packages:
 - 70 mm² up to 30 m
 - 95 mm² up to 40 m
- 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 or wire feed speed, arc length correction and arc dynamics via control voltage
- 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 water-cooling unit
- 5 m mains supply lead
- 100 % tested and free-welded



alpha Q	352	552
Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)	
Mains fuses (slow-blow)	3 x 25 A	3 x 32 A
Open circuit voltage	93 V	
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 %
cos φ	0.99	
Efficiency	88 %	
Dimensions LxWxH in mm	780 x 375 x 625	
Weight	78.5 kg	

Type	Designation	Item no.	per unit
alpha Q 352 puls MM RC MasterPull	MIG/MAG multiprocess pulse welding machine, including connection capability for MasterPull welding torch	090-005466-00502	
alpha Q 552 puls MM RC MasterPull	MIG/MAG multiprocess pulse welding machine, including connection capability for MasterPull welding torch	090-005467-00502	

► For more information on the operating panel and wire feeds please refer to the following pages
For more information on interfaces and intermediate hose packages please refer to the „Accessories“ chapter

■ Options/accessories

Factory-fit options	Item no.	PG
OW 60 V SENSOR VOLTAGE Factory-fit option: increased sensor voltage for MIG/MAG power sources	092-008770-00001	
Options for retrofitting	Item no.	PG
BGA364X51X47 Panel for stacking machines	094-012294-00001	
ON Expert 2.0 ROB Expert 2.0 remote control retrofit	092-003082-00000	



alpha Q puls ■ 352 ● 552 Expert 2.0

MULTIMATRIX

- /forceArc® /forceArc®puls
- /rootArc® /rootArc®puls
- /coldArc® /coldArc®puls
- /pipeSolution®
- /Pulse
- /superPuls



- Multiprocess MIG/MAG pulse welding machine with front control
- Expert 2.0 control with intuitive user guidance via LCD panel and plain text display of all welding parameters and functions
- Set up on front control or notebook with PC300. NET software
- Standard interface for automated welding (start/stop, control voltage, current flow)
- Very high power reserves enable use of long intermediate hose packages:
 - 70 mm² up to 30 m
 - 95 mm² up to 40 m
- 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 or wire feed speed, arc length correction and arc dynamics via control voltage
- 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 water-cooling unit
- 5 m mains supply lead
- 100 % tested and free-welded



alpha Q	352	552
Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)	
Mains fuses (slow-blow)	3 x 25 A	3 x 32 A
Open circuit voltage	93 V	
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 %
cos φ	0.99	
Efficiency	88 %	
Dimensions LxWxH in mm	780 x 375 x 625	
Weight	78.5 kg	

Type	Designation	Item no.	per unit
alpha Q 352 Expert 2.0 puls MM	Multiprocess MIG/MAG pulse welding machine with front control	090-005488-00502	
alpha Q 552 Expert 2.0 puls MM	Multiprocess MIG/MAG pulse welding machine with front control	090-005489-00502	

► For more information on the operating panel and wire feeds please refer to the following pages
 For more information on interfaces and intermediate hose packages please refer to the „Accessories“ chapter

Options/accessories

Factory-fit options	Item no.	PG
OW 60 V SENSOR VOLTAGE Factory-fit option: increased sensor voltage for MIG/MAG power sources	092-008770-00001	
OW ASM 2 ROB DV Factory-fit option, connection capability 2nd WF to Phoenix / alpha Q	092-002570-00001	
Options for retrofitting	Item no.	PG
BGA364X51X47 Panel for stacking machines	094-012294-00001	



■ alpha Q puls ■ 352 • 552 Expert 2.0 MasterPull

MULTIMATRIX

- /forceArc® /forceArc®puls
- /rootArc® /rootArc®puls
- /coldArc® /coldArc®puls
- /pipeSolution®
- /Pulse
- /superPuls



- Multiprocess MIG/MAG pulse welding machine with front control
- Expert 2.0 control with intuitive user guidance via LCD panel and plain text display of all welding parameters and functions
- Connection capability to MasterPull welding torch
- Set up on front control or notebook with PC300. NET software
- Standard interface for automated welding (start/stop, control voltage, current flow)
- Very high power reserves enable use of long intermediate hose packages:
 - 70 mm² up to 30 m 95 mm² up to 40 m
- 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 or wire feed speed, arc length correction and arc dynamics via control voltage
- 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 water-cooling unit
- 5 m mains supply lead
- 100 % tested and free-welded



alpha Q	352	552
Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)	
Mains fuses (slow-blow)	3 x 25 A	3 x 32 A
Open circuit voltage	93 V	
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 %
cos φ	0.99	
Efficiency	88 %	
Dimensions LxWxH in mm	780 x 375 x 625	
Weight	78.5 kg	

Type	Designation	Item no.	per unit
alpha Q 352 Expert 2.0 puls MM MasterPull	MIG/MAG multiprocess pulse welding machine with front control, including connection capability for MasterPull welding torch	090-005490-00502	
alpha Q 552 Expert 2.0 puls MM MasterPull	MIG/MAG multiprocess pulse welding machine with front control, including connection capability for MasterPull welding torch	090-005491-00502	

► For more information on the operating panel and wire feeds please refer to the following pages
For more information on interfaces and intermediate hose packages please refer to the „Accessories“ chapter

■ Options/accessories

Factory-fit options	Item no.	PG
OW 60 V SENSOR VOLTAGE Factory-fit option: increased sensor voltage for MIG/MAG power sources	092-008770-00001	
Options for retrofitting	Item no.	PG
BGA364X51X47 Panel for stacking machines	094-012294-00001	



Phoenix puls ■ 352 ● 452 ● 552 RC

MULTIMATRIX

- /forceArc® /forceArc®puls
- /rootArc® /rootArc®puls
- /Pulse
- /superPuls



- Multiprocess MIG/MAG pulse welding machine without front control
- Set up on external operating panel or notebook with PC300.NET software
- Standard interface for automated welding (start/stop, control voltage, current flow)
- Very high power reserves enable use of long intermediate hose packages:
 70 mm² up to 30 m 95 mm² up to 40 m
- 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 or wire feed speed, arc length correction and arc dynamics via control voltage
- 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 water-cooling unit
- 5 m mains supply lead
- 100 % tested and free-welded



Phoenix	352	452	552
Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)		
Mains fuses (slow-blow)	3 x 25 A	3 x 32 A	
Open circuit voltage	80 V		
Setting range for welding current	5 A - 350 A	5 A - 450 A	5 A - 550 A
Duty cycle 40 °C	–	450 A / 80 %	550 A / 60 %
	350 A / 100 %	420 A / 100 %	
cos φ	0.99		
Efficiency	90 %		
Dimensions LxWxH in mm	780 x 375 x 625		
Weight	78.5 kg		

Type	Designation	Item no.	per unit
Phoenix 352 puls MM RC	Multiprocess MIG/MAG pulse welding machine without front control	090-005468-00502	
Phoenix 452 puls MM RC	Multiprocess MIG/MAG pulse welding machine without front control	090-005469-00502	
Phoenix 552 puls MM RC	Multiprocess MIG/MAG pulse welding machine without front control	090-005470-00502	

► For more information on the operating panel and wire feeds please refer to the following pages
 For more information on interfaces and intermediate hose packages please refer to the „Accessories“ chapter

Options/accessories

Factory-fit options	Item no.	PG
OW 60 V SENSOR VOLTAGE Factory-fit option: increased sensor voltage for MIG/MAG power sources	092-008770-00001	
OW ASM 2 ROB DV Factory-fit option, connection capability 2nd WF to Phoenix / alpha Q	092-002570-00001	
Options for retrofitting	Item no.	PG
BGA364X51X47 Panel for stacking machines	094-012294-00001	
ON Expert 2.0 ROB Expert 2.0 remote control retrofit	092-003082-00000	



■ Phoenix puls ■ 352 ● 452 ● 552 RC MasterPull

MULTIMATRIX

- /forceArc® /forceArc®puls
- /rootArc® /rootArc®puls
- /Pulse
- /superPuls



- Multiprocess MIG/MAG pulse welding machine without front control
- Connection capability to MasterPull welding torch
- Set up on external operating panel or notebook with PC300.NET software
- Standard interface for automated welding (start/stop, control voltage, current flow)
- Very high power reserves enable use of long intermediate hose packages:
 - 70 mm² up to 30 m
 - 95 mm² up to 40 m
- 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 or wire feed speed, arc length correction and arc dynamics via control voltage
- 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 water-cooling unit
- 5 m mains supply lead
- 100 % tested and free-welded



Phoenix	352	452	552
Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)		
Mains fuses (slow-blow)	3 x 25 A	3 x 32 A	
Open circuit voltage	80 V		
Setting range for welding current	5 A - 350 A	5 A - 450 A	5 A - 550 A
Duty cycle 40 °C	–	450 A / 80 %	550 A / 60 %
	350 A / 100 %	420 A / 100 %	
cos φ	0.99		
Efficiency	90 %		
Dimensions LxWxH in mm	780 x 375 x 625		
Weight	78.5 kg		

Type	Designation	Item no.	per unit
Phoenix 352 puls MM RC MasterPull	MIG/MAG multiprocess pulse welding machine, including connection capability for MasterPull welding torch	090-005471-00502	
Phoenix 452 puls MM RC MasterPull	MIG/MAG multiprocess pulse welding machine, including connection capability for MasterPull welding torch	090-005472-00502	
Phoenix 552 puls MM RC MasterPull	MIG/MAG multiprocess pulse welding machine, including connection capability for MasterPull welding torch	090-005473-00502	

► For more information on the operating panel and wire feeds please refer to the following pages
For more information on interfaces and intermediate hose packages please refer to the „Accessories“ chapter

■ Options/accessories

Factory-fit options	Item no.	PG
OW 60 V SENSOR VOLTAGE Factory-fit option: increased sensor voltage for MIG/MAG power sources	092-008770-00001	
Options for retrofitting	Item no.	PG
BGA364X51X47 Panel for stacking machines	094-012294-00001	
ON Expert 2.0 ROB Expert 2.0 remote control retrofit	092-003082-00000	



Phoenix puls ■ 352 ● 452 ● 552 Expert 2.0

MULTIMATRIX

- /forceArc® /forceArc®puls
- /rootArc® /rootArc®puls
- /Pulse
- /superPuls



- Multiprocess MIG/MAG pulse welding machine with front control
- Expert 2.0 control with intuitive user guidance via LCD panel and plain text display of all welding parameters and functions
- Set up on front control or notebook with PC300. NET software
- Standard interface for automated welding (start/stop, control voltage, current flow)
- Very high power reserves enable use of long intermediate hose packages:
 - 70 mm² up to 30 m
 - 95 mm² up to 40 m
- 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 or wire feed speed, arc length correction and arc dynamics via control voltage
- 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 water-cooling unit
- 5 m mains supply lead
- 100 % tested and free-welded



Phoenix	352	452	552
Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)		
Mains fuses (slow-blow)	3 x 25 A	3 x 32 A	
Open circuit voltage	80 V		
Setting range for welding current	5 A - 350 A	5 A - 450 A	5 A - 550 A
Duty cycle 40 °C	-	450 A / 80 %	550 A / 60 %
	350 A / 100 %	420 A / 100 %	
cos φ	0.99		
Efficiency	90 %		
Dimensions LxWxH in mm	780 x 375 x 625		
Weight	78.5 kg		

Type	Designation	Item no.	per unit
Phoenix 352 Expert 2.0 puls MM	Multiprocess MIG/MAG pulse welding machine with front control	090-005492-00502	
Phoenix 452 Expert 2.0 puls MM	Multiprocess MIG/MAG pulse welding machine with front control	090-005493-00502	
Phoenix 552 Expert 2.0 puls MM	Multiprocess MIG/MAG pulse welding machine with front control	090-005494-00502	

► For more information on the operating panel and wire feeds please refer to the following pages
 For more information on interfaces and intermediate hose packages please refer to the „Accessories“ chapter

Options/accessories

Factory-fit options	Item no.	PG
OW 60 V SENSOR VOLTAGE Factory-fit option: increased sensor voltage for MIG/MAG power sources	092-008770-00001	
OW ASM 2 ROB DV Factory-fit option, connection capability 2nd WF to Phoenix / alpha Q	092-002570-00001	
Options for retrofitting	Item no.	PG
BGA364X51X47 Panel for stacking machines	094-012294-00001	



■ Phoenix puls ■ 352 ● 452 ● 552 Expert 2.0 MasterPull

MULTIMATRIX

- /forceArc® /forceArc®puls
- /rootArc® /rootArc®puls
- /Pulse
- /superPuls



- Multiprocess MIG/MAG pulse welding machine with front control
- Expert 2.0 control with intuitive user guidance via LCD panel and plain text display of all welding parameters and functions
- Connection capability to MasterPull welding torch
- Set up on front control or notebook with PC300. NET software
- Standard interface for automated welding (start/stop, control voltage, current flow)
- Very high power reserves enable use of long intermediate hose packages:
 - 70 mm² up to 30 m
 - 95 mm² up to 40 m
- 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 or wire feed speed, arc length correction and arc dynamics via control voltage
- 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 water-cooling unit
- 5 m mains supply lead
- 100 % tested and free-welded



Phoenix	352	452	552
Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)		
Mains fuses (slow-blow)	3 x 25 A	3 x 32 A	
Open circuit voltage	80 V		
Setting range for welding current	5 A - 350 A	5 A - 450 A	5 A - 550 A
Duty cycle 40 °C	-	450 A / 80 %	550 A / 60 %
	350 A / 100 %	420 A / 100 %	
cos φ	0.99		
Efficiency	90 %		
Dimensions LxWxH in mm	780 x 375 x 625		
Weight	78.5 kg		

Type	Designation	Item no.	per unit
Phoenix 352 Expert 2.0 puls MM MasterPull	MIG/MAG multiprocess pulse welding machine with front control, including connection capability for MasterPull welding torch	090-005495-00502	
Phoenix 452 Expert 2.0 puls MM MasterPull	MIG/MAG multiprocess pulse welding machine, including connection capability for MasterPull welding torch	090-005496-00502	
Phoenix 552 Expert 2.0 puls MM MasterPull	MIG/MAG multiprocess pulse welding machine with front control, including connection capability for MasterPull welding torch	090-005497-00502	

► For more information on the operating panel and wire feeds please refer to the following pages
For more information on interfaces and intermediate hose packages please refer to the „Accessories“ chapter

■ Options/accessories

Factory-fit options	Item no.	PG
OW 60 V SENSOR VOLTAGE Factory-fit option: increased sensor voltage for MIG/MAG power sources	092-008770-00001	
Options for retrofitting	Item no.	PG
BGA364X51X47 Panel for stacking machines	094-012294-00001	



Phoenix puls ■ 1002 RC

MULTIMATRIX

- /forceArc® /forceArc®puls
- /rootArc® /rootArc®puls
- /Pulse
- /superPuls



- Multiprocess MIG/MAG pulse welding machine for high-speed welding, without front control
- Set up on external operating panel or notebook with PC300.NET software
- Screw-in power connection
- Standard interface for automated welding (start/stop, control voltage, current flow)
- Very high power reserves enable use of long intermediate hose packages:
 - 70 mm² up to 30 m
 - 95 mm² up to 40 m
- 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 or wire feed speed, arc length correction and arc dynamics via control voltage
- 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, with recooling unit or cooling unit, water-cooled as option
- 5 m mains supply lead
- 100 % tested and free-welded

Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)
Mains fuses (slow-blow)	3 x 63 A
Open circuit voltage	80 V
Setting range for welding current	10 A - 1000 A
Duty cycle 40 °C	1000 A / 80 % 750 A / 100 %
cos φ	0.99
Efficiency	90 %
Dimensions LxWxH in mm	780 x 375 x 1250
Weight	177 kg

Type	Designation	Item no.	per unit
Phoenix 1002 puls MM RC	Multiprocess MIG/MAG pulse welding machine without front control	090-005476-00502	

► For more information on the operating panel and wire feeds please refer to the following pages
 For more information on interfaces and intermediate hose packages please refer to the „Accessories“ chapter

Options/accessories

Factory-fit options	Item no.	PG
OW 60 V SENSOR VOLTAGE Factory-fit option: increased sensor voltage for MIG/MAG power sources	092-008770-00001	
OW ASM 2 ROB DV Factory-fit option, connection capability 2nd WF to Phoenix / alpha Q	092-002570-00001	
Options for retrofitting	Item no.	PG
ON Expert 2.0 ROB Expert 2.0 remote control retrofit	092-003082-00000	



■ Phoenix puls ■ 1002 Expert 2.0

MULTIMATRIX

- /forceArc® /forceArc® puls
- /rootArc® /rootArc® puls
- /Pulse
- /superPuls



- Multiprocess MIG/MAG pulse welding machine with front control
- Expert 2.0 control with intuitive user guidance via LCD panel and plain text display of all welding parameters and functions
- Set up on front control or notebook with PC300. NET software
- Screw-in power connection
- Standard interface for automated welding (start/stop, control voltage, current flow)
- Very high power reserves enable use of long intermediate hose packages:
 - 70 mm² up to 30 m
 - 95 mm² up to 40 m
- 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 or wire feed speed, arc length correction and arc dynamics via control voltage
- 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, with recooling unit or cooling unit, water-cooled as option
- 5 m mains supply lead
- 100 % tested and free-welded



Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)
Mains fuses (slow-blow)	3 x 63 A
Open circuit voltage	80 V
Setting range for welding current	10 A - 1000 A
Duty cycle 40 °C	1000 A / 80 %
	750 A / 100 %
cos φ	0.99
Efficiency	90 %
Dimensions LxWxH in mm	780 x 375 x 1250
Weight	177 kg

Type	Designation	Item no.	per unit
Phoenix 1002 Expert 2.0 puls MM	Multiprocess MIG/MAG pulse welding machine with front control	090-005500-00502	







► For more information on the operating panel and wire feeds please refer to the following pages
For more information on interfaces and intermediate hose packages please refer to the „Accessories“ chapter

■ Options/accessories

Factory-fit options	Item no.	PG
OW 60 V SENSOR VOLTAGE Factory-fit option: increased sensor voltage for MIG/MAG power sources	092-008770-00001	
OW ASM 2 ROB DV Factory-fit option, connection capability 2nd WF to Phoenix / alpha Q	092-002570-00001	



Options/accessories

	Item no.	PG
<p>Transport cart TROLLY ROB XX2 Transport cart for a power source with an add-on module Steady and stable design thanks to the welded structure</p>		090-008278-00000
<p>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</p>		090-008275-00000
<p>Options for welding machines OW 440/460/480 Volt Equipment of the 355/405/505 and 351/401/451/501/551 machines for 3x 440/460/480 V mains connection (ex works only) Multi-voltage design for operation with mains voltages of 440 V, 460 V and 480 V ► Not possible with the compact 355 series machines! Factory-fit option, mains plug including fitting Factory fitting (no retrofitting) ► Suitable for all machines with a welding current of 350 A and above</p>	<p>440 V 460 V 480 V</p> 	092-002647-00001
<p>OW CEE 32A OW CEE 63A</p>		092-008215-00000 092-008216-00000
<p>Mains plug Mains plug 32A 5POLE/CEE 63A 5POLE/CEE</p>		094-000207-00000 094-003410-00000
<p>Connection cables RA5 19POL 1x 5M Connection cable, 19-pole 5 m, wire end ferrules on one end</p>		092-001569-00005
<p>RA10 19POL 1x 10M Connection cable, 19-pole 10 m, wire end ferrules on one end</p>		092-001569-00010
<p>Welding leads Workpiece lead with cable lug WK70/CL 5m WK70/CL 10m WK95/CL 5m WK95/CL 10m</p>		092-002078-00005 092-002078-00010 092-001990-00005 092-001990-00010
<p>Pressure regulators 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 200bar 2x34l G1/4" Optimator AR/H2 200bar 20l G3/8"L DM 842 Ar/CO2 230bar 30l D 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 DM 801 Ar/CO2 230bar 30l UK</p>	 	094-011839-00000 096-000220-00000 094-011841-00000 394-002910-00030 394-002911-00030
<p>Options for retrofitting ON FILTER XX2 Dirt filter for air inlet for robot power sources</p>		092-002714-00000



OW EXPERT 2.0 LG ROB



- Networking via built-in Expert 2.0 control with LAN connection for alpha Q puls MM and Phoenix puls MM machine series
- Option for machines with built-in 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

OW EXPERT 2.0 WLG ROB



- Networking via built-in Expert 2.0 control with WiFi connection for alpha Q puls MM and Phoenix puls MM machine series
- Option for machines with built-in 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

OW LG 1.0 ROB

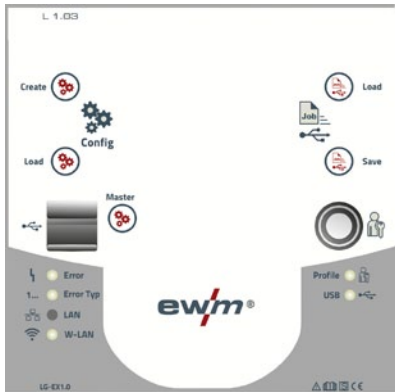


- Networking with built-in LAN gateway for the alpha Q puls MM and Phoenix Progress puls MM machine series
- Option for machines without Expert 2.0 control only

Type	Designation	Item no.
OW LG 1.0 ROB	Built-in LAN gateway (ex works only)	092-003080-00001



OW WLG 1.0 ROB



- Networking with built-in LAN/WiFi gateway for the alpha Q puls MM and Phoenix Progress puls MM machine series
- Option for machines without Expert 2.0 control only

Type	Designation	Item no.		
OW WLG 1.0 ROB	Built-in WiFi gateway (ex works only)	092-003081-00001		

ON LG-EX



- Networking via external LAN gateway for machines with 7-pole digital interface
- For machines without a built-in LAN gateway

Type	Designation	Item no.		per unit
ON LG-EX	LAN gateway in external housing	090-008789-00502		

ON WLG-EX



- Networking via external WiFi gateway for machines with 7-pole digital interface
- For machines without a built-in WiFi gateway

Type	Designation	Item no.		per unit
ON WLG-EX	WiFi gateway in external casing	090-008790-00502		



■ RCX Expert 2.0 Rob



- Operating panel for setting welding parameters for RC power sources without 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 transducer
- 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 LxWxH in mm

310 x 230 x 110

Weight

2 kg

Type	Designation	Item no.		per unit
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		



R50 ROB



- Remote control for mechanised application and use with alpha Q and Phoenix
- 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

Dimensions LxWxH in mm	115 x 235 x 300
Weight	3.2 kg

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

Options/accessories

Connection cable extension	Item no.	PG
Connection cable extension		
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

MIG/MAG automation		Page	
Wire feed units	MIG/MAG	M drive 4 Rob 2X	82
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		MIG ROB ABK 500 MF	85
		M drive 4 Rob 2X Highspeed	86
		M drive 4 Rob 3X light version	87
		M Drive 4 Rob 3X intermediate wire feeder	88
		M drive 4L Rob X	88
		Media separation box	89
		F drive Rob 3 LI	89



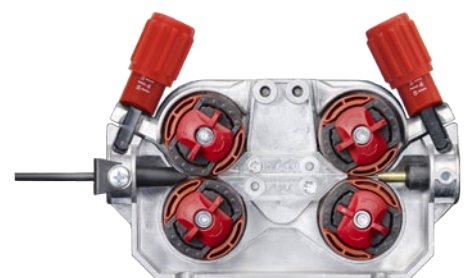
M drive 4 Rob 2X

All MIG/MAG robot wire feeders now feature eFeed wire feed mechanism. Dual ball-bearing drive axles and four individually driven wire feed rolls make the wire feeder highly precise, durable and robust.



ewm's own innovative wire feed mechanism eFeed

- 4-roll drive (quadruple meshing)
- Fully-automated wire inching until wire comes into contact with the workpiece
- Captive roll fastener
- Tool-free roll changes
- 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 spool/drum and welding torch.





M drive 4 Rob 3X

Also available as a design with cover cap opening on the left or right.

M drive 4 Rob 3X LI



M drive 4 Rob 3X RE





F drive 4 Rob 3

MIG/MAG robot media box to connect to Phoenix and alpha Q robot power sources in conjunction with EWM front-Drive robot welding torches.





MIG/MAG ■ M drive 4 Rob 2X



- Standard MIG/MAG robot wire feed unit
- Processes all mediums: electricity, water, gas and compressed air (for blowing out)
- 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
- Reproducible wire feed speed thanks to fully digital control with incremental transducer, adjustable in increments of 0.1 m/min
- Separate buttons on the front for wire return and inching, blow-out and gas test
- Tool-free roller changing, captive screws
- With inspection window for checking the wire feeder
- Control using a digital incremental transducer
- High level of process security thanks to the control, regulation and monitoring of all process data via a central, digital bus system
- Gas pressure monitoring (optional)
- eFeed: Innovative 4-roll drive (4x toothed)
- Equipped for 1.2 mm steel wire
- Mounting plate with strain relief for fixing to the robot (optional)
- Compact unit for simple mounting on the robot

Wire speed m/min	0.5 m/min - 24 m/min
Wire-feed speed increments	0.1 m/min
Roll diameter	37 mm
Wire feeder, LxWxH in mm	407 x 201 x 229
Weight, wire feeder	9.8 kg

Type	Designation	Item no.	
M drive 4 Rob 2X	Wire feeder for automated applications, water-cooled, Euro torch connector	090-005477-00502	
M drive 4 Rob 2X D	Wire feeder for automated applications, water-cooled, Dinse connector	090-005479-00502	
M drive 4 Rob 2X GDS	Wire feeder for automated applications, including gas pressure switch, water-cooled, Euro torch connector	090-005478-00502	

- ▶ Please refer to Wire feeder accessories > eFeed drive rolls section for replacement rolls and drive rolls for various welding consumables
- ▶ Also available with ECS connection for applications using soft welding consumables.

Options/accessories

Factory-fit options	Item no.	PG
OW PRESSURE SWITCH Factory-fit option: Pressure controller/gas monitoring	092-000224-00001	



■ MIG/MAG ■ M drive 4 Rob 2X intermediate wire feeder



- MIG/MAG robot wire feed unit, intermediate wire feeder
- Only in combination with M Drive 4 Rob 2
- 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
- Separate buttons on the front for wire return and inching, blow-out and gas test
- Tool-free roller changing, captive screws
- With inspection window for checking the wire feeder
- Control using a digital incremental transducer
- 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 (4x toothed)
- Equipped for 1.2 mm steel wire
- Mounting plate with strain relief for fixing to the robot (optional)
- Compact unit for simple mounting on the robot

Wire speed m/min	0.5 m/min - 24 m/min
Wire-feed speed increments	0.1 m/min
Roll diameter	37 mm
Wire feeder, LxWxH in mm	407 x 201 x 229
Weight, wire feeder	9.8 kg

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

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



MIG/MAG ■ M drive 4 Rob 2X MF for Master feeder torch MIG ROB ABK 500 MF



- MIG/MAG robot wire feed unit, master feeder
- Master/slave wire feed system for demanding requirements of constant and reproducible wire speed and the associated welding seam quality
- System consists of the following coordinated components: MIG/MAG robot wire feed unit and master feeder torch
- Standard 19-pole connection socket for signal exchange, e.g. collision protection
- Reproducible wire feed speed thanks to fully digital control with incremental transducer, adjustable in increments of 0.1 m/min
- Separate buttons on the front for wire return and inching, blow-out and gas test
- Tool-free roller changing, captive screws
- With inspection window for checking the wire feeder
- Control using a digital incremental transducer
- 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 (4x toothed)
- Equipped for 1.2 mm steel wire
- Mounting plate with strain relief for fixing to the robot (optional)
- Compact unit for simple mounting on the robot

Wire speed m/min	0.5 m/min - 24 m/min
Wire-feed speed increments	0.1 m/min
Roll diameter	37 mm
Wire feeder, LxWxH in mm	407 x 281 x 229
Weight, wire feeder	12 kg

Type	Designation	Item no.
M drive 4 Rob 2X MF	Wire feeder for automated applications, water-cooled, master feeder	090-005481-00502

- ▶ Please refer to Wire feeder accessories > eFeed drive rolls section for replacement rolls and drive rolls for various welding consumables
- ▶ Can only be used with MIG ROB ABK 500 MF master feeder torch



MIG/MAG ■ M drive 4 Rob 2X Highspeed



- High-speed MIG/MAG wire feed system for wire feed speeds up to 40 m/min
- For use with Phoenix 1002 power source
- For torch hose package with RPC connection
- Power connection for intermediate hose package, screw-in type
- Processes all mediums: electricity, water, gas and compressed air (for blowing out)
- Standard 19-pole connection socket for signal exchange, e.g. collision protection
- Reproducible wire feed speed thanks to fully digital control with incremental transducer, adjustable in increments of 0.1 m/min
- Separate buttons on the front for wire return and inching, blow-out and gas test
- Tool-free roller changing, captive screws
- With inspection window for checking the wire feeder
- Control using a digital incremental transducer
- 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 (4x toothed)
- Equipped for 1.2 mm steel wire
- Mounting plate with strain relief for fixing to the robot (optional)
- Compact unit for simple mounting on the robot

Wire speed m/min	0.5 m/min - 40 m/min
Wire-feed speed increments	0.1 m/min
Roll diameter	37 mm
Wire feeder, LxWxH in mm	407 x 283 x 229
Weight, wire feeder	17 kg

Type	Designation	Item no.
M drive 4 Rob 2X HS	Wire feeder for automated applications, high performance welding, water-cooled	090-005482-00502

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



MIG/MAG ■ M drive 4 Rob 3X light version



- MIG/MAG robot wire feeder, lightweight version
- Opening to right or left side
- Version opening to the left is suitable for use on most hollow wrist robots; please note robot-specific mounting consoles
- Standard 19-pole connection socket for signal exchange, e.g. collision protection
- Reproducible wire feed speed thanks to fully digital control with digital rotary transducer, adjustable in increments of 0.1 m/min.
- Separate buttons on the front for wire return/inching and gas test
- Tool-free roll exchange, captive screws
- Especially light, for gas cooled systems, optional retrofitting for water cooled systems
- With inspection window for checking the wire feed mechanism
- Optimum process reliability thanks to the control, regulation and monitoring of all process data via a central digital bus system
- LED process status display
- Water connection by means of quick connect coupling (optional)
- Mounting plate with strain relief for mounting on the robot (optional)
- With inspection window for checking the wire feeder
- 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 (4x toothed)
- Equipped for 1.2 mm steel wire
- Compact unit for simple mounting on the robot

Wire speed m/min	0.5 m/min - 24 m/min
Wire-feed speed increments	0.1 m/min
Roll diameter	37 mm
Wire feeder, LxWxH in mm	345 x 230 x 250
Weight, wire feeder	6.5 kg

Type	Designation	Item no.		
M drive 4 Rob 3X LI	Wire feeder for automated applications, opens on left, gas-cooled, Euro torch connector	090-005483-00502		
M drive 4 Rob 3X RE	Wire feeder for automated applications, opens on right, gas-cooled, Euro torch connector	090-005484-00502		

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

Options/accessories

Factory-fit options	Item no.	PG
OW PRESSURE SWITCH ROB3 Factory-fit option: Pressure controller/gas monitoring	092-002784-00001	
Options for retrofitting	Item no.	PG
ON COOL W ROB3 Retrofit option water cooling ROB 3	092-002384-00000	



■ MIG/MAG ■ M Drive 4 Rob 3X intermediate wire feeder



- MIG/MAG robot wire feed unit, intermediate wire feeder
- 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
- Separate buttons on the front for wire return and inching, blow-out and gas test
- Tool-free roller changing, captive screws
- With inspection window for checking the wire feeder
- Control using a digital incremental transducer
- 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 (4x toothed)
- Equipped for 1.2 mm steel wire
- Mounting plate with strain relief for fixing to the robot (optional)
- Compact unit for simple mounting on the robot

Wire speed m/min	0.5 m/min - 24 m/min
Wire-feed speed increments	0.1 m/min
Roll diameter	37 mm
Wire feeder, LxWxH in mm	345 x 230 x 250
Weight, wire feeder	6.5 kg

Type	Designation	Item no.		
M drive 4 Rob 3X ZT	Intermediate drive for automated applications	090-005485-00502		

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

■ Options/accessories

Options for retrofitting	Item no.	PG	
ON COOL W ROB3 Retrofit option water cooling ROB 3	092-002384-00000		



MIG/MAG ■ M drive 4L Rob X



- Wire spool support for diameters up to 300 mm
- MIG/MAG wire feeder for mechanisation on rotating and longitudinal welding machines
- Processes all mediums: electricity, water, gas and compressed air (for blowing out)
- 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
- Reproducible wire feed speed thanks to fully digital control with incremental transducer, adjustable in increments of 0.1 m/min
- Separate buttons on the front for wire return and inching, blow-out and gas test
- Tool-free roller changing, captive screws
- Control using a digital incremental transducer
- High level of process security thanks to the control, regulation and monitoring of all process data via a central, digital bus system
- Gas pressure monitoring (optional)
- eFeed: Innovative 4-roll drive (4x toothed)
- Equipped for 1.2 mm steel wire

Wire speed m/min	0.5 m/min - 24 m/min
Wire-feed speed increments	0.1 m/min
Roll diameter	37 mm
Wire feeder, LxWxH in mm	690 x 300 x 410
Weight, wire feeder	15.1 kg

Type	Designation	Item no.	
M drive 4L Rob X LI	Wire feeder for automated applications, opens on left, gas-cooled, Euro torch connector	090-005486-00502	

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

Options/accessories

Factory-fit options	Item no.	PG
OW PRESSURE SWITCH Factory-fit option: Pressure controller/gas monitoring	092-000224-00001	



Media separation box ■ F drive Rob 3 LI



- MIG/MAG robot media separation box, lightweight version
- For use on Phoenix and alpha Q robot power sources in conjunction with EWM frontDrive welding torch system
- Opens on left
- Standard 19-pole connection socket for signal exchange, e.g. collision protection
- Especially light, for gas cooled systems, optional retrofitting for water cooled systems
- With inspection window for checking the wire guide
- Compact unit for simple mounting on the robot
- Optimum process reliability thanks to the control, regulation and monitoring of all process data via a digital bus system
- Operating status signal light
- EWM powerConnector hose package connection
- Mounting console with strain relief for mounting (optional)
- Water connection by means of quick connect coupling (optional)
- Gas pressure sensor (optional)
- Connection sets for Wire Lead, Wire Lead Soft, Wire Conduit, Masterliner, Rolliner wire guides (optional)

Duty cycle 40 °C	550 A / 60 %
	420 A / 100%
Dimensions LxWxH in mm	360 x 190 x 225
Weight	5.5 kg

Type	Designation	Item no.		
F drive Rob 3 LI	Media separation box for frontDrive robot welding torch, opens on left	090-005391-00502		

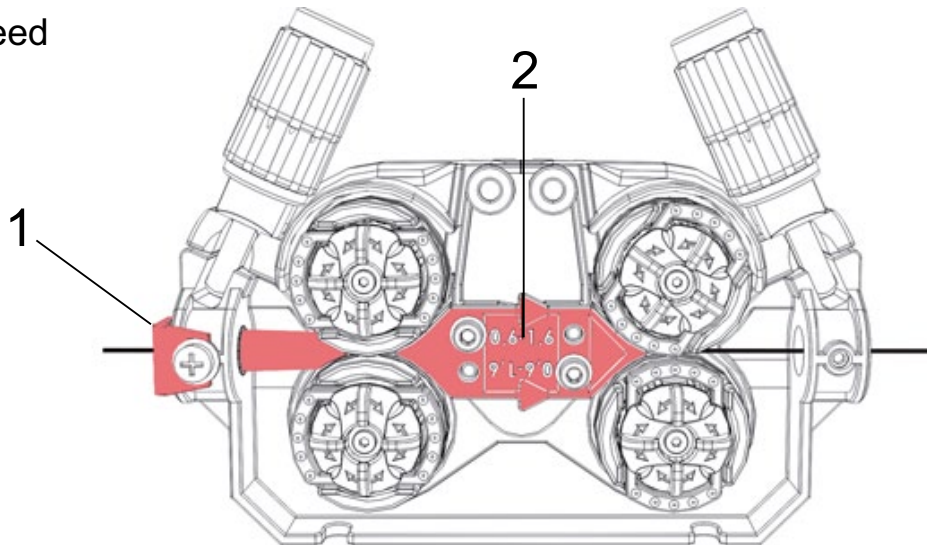
Options/accessories

Factory-fit options	Item no.	PG
OW PRESSURE SWITCH ROB3 Factory-fit option: Pressure controller/gas monitoring	092-002784-00001	
OW BLOW OUT ROB 3 Factory-fit option: Welding torch blow out Rob 3 frontDrive	092-003204-00001	
Options for retrofitting	Item no.	PG
ON COOL W ROB3 Retrofit option water cooling ROB 3	092-002384-00000	



■ Wire feed units ■

eFeed



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



Wire feed rolls ■ eFeed drive rolls

0.8 mm

Ø wire

0.8 mm

Colour code

White

Type	Designation	Colour code	PU Units	groove shape	Item no.	per PU
FE 4R 0.8 MM/0.03 INCH WHITE	Drive roll set, 37 mm, 4 rolls, V-groove for steel, stainless steel and brazing	White	4	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/ knurled for flux cored wire	White/orange		V-groove/knurl	092-002848-00008	

► Four roll set

1.0 mm

Ø wire

0.9 mm - 1 mm

Colour code

Blue

Type	Designation	Colour code	PU Units	groove shape	Item no.	per PU
FE 4R 1.0 MM/0.04 INCH BLUE	Drive roll set, 37 mm, 4 rolls, V-groove for steel, stainless steel and brazing	Blue	4	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/ knurled for flux cored wire	Blue/orange		V-groove/knurl	092-002848-00010	

► Four roll set

1.2 mm

Ø wire

1.2 mm

Colour code

Red

Type	Designation	Colour code	PU Units	groove shape	Item no.	per PU
FE 4R 1.2 MM/0.045 INCH RED	Drive roll set, 37 mm, 4 rolls, V-groove for steel, stainless steel and brazing	Red	4	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/ knurled for flux cored wire	Red/orange		V-groove/knurl	092-002848-00012	

► Four roll set



■ Wire feed rolls ■ eFeed drive rolls

1.4 mm



Ø wire	1.4 mm
Colour code	Green

Type	Designation	Colour code	PU Units	groove shape	Item no.	per PU
FE 4R 1.4 MM/0.052 INCH GREEN	Drive roll set, 37 mm, 4 rolls, V-groove for steel, stainless steel and brazing	Green	4	V-groove	092-002770-00014	
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

1.6 mm



Ø wire	1.6 mm
Colour code	Black

Type	Designation	Colour code	PU Units	groove shape	Item no.	per PU
FE 4R 1.6 MM/0.06 INCH BLACK	Drive roll set, 37 mm, 4 rolls, V-groove for steel, stainless steel and brazing	Black	4	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

2.0 mm



Colour code	Grey
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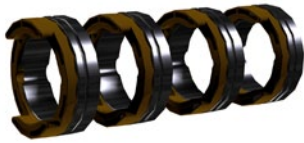
Type	Designation	Colour code	Ø wire mm	PU Units	groove shape	PE	Item no.	per PU
FE 4R 2.0 MM/0.08 INCH GREY	Drive roll set, 37 mm, 4 rolls, V-groove for steel, stainless steel and brazing	Grey	0.8	4	V-groove		092-002770-00020	
FUEL 4R 2.0 MM/0.08 INCH GREY/ORANGE	Drive roll set, 37 mm, 4 rolls, V-groove/knurl for flux cored wire	Grey/orange	2.0		V-groove/knurl		092-002848-00020	
SET WF 2,0-3,2mm eFeed	Wire feed set for rolls with diameters greater than 1.6 mm	-	-	1	-	per unit	092-019404-00000	

► You need the SET WF 2,0-3,2 mm eFeed option to use these rolls.

► Four roll set


2.4 mm
Colour code

Brown



Type	Designation	Colour code	Ø wire 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 and brazing	Brown	2.4	4	V-groove		092-002770-00024		
FUEL 4R 2.4 MM/0.095 INCH BROWN/ORANGE	Drive roll set, 37 mm, 4 rolls, V-groove/ knurled for flux cored wire	Brown/ orange			V-groove/ knurl	per PU	092-002848-00024		
SET WF 2,0-3,2mm eFeed	Wire feed set for rolls with diameters greater than 1.6 mm	-	-	1	-	per unit	092-019404-00000		

- ▶ You need the SET WF 2,0-3,2 mm eFeed option to use these rolls.
- ▶ Four roll set

2.8 mm
Colour code

Light green



Type	Designation	Colour code	Ø wire 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 and brazing	Light green	2.8	4	V-groove	per PU	092-002770-00028		
SET WF 2,0-3,2mm eFeed	Wire feed set for rolls with diameters greater than 1.6 mm	-	-	1	-	per unit	092-019404-00000		

- ▶ You need the SET WF 2,0-3,2 mm eFeed option to use these rolls.
- ▶ Four roll set



■ Wire feed rolls ■ eFeed drive rolls

3.2 mm

Colour code

Violet



Type	Designation	Colour code	Ø wire 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 and brazing	Violet	3.2	4	V-groove	per PU	092-002770-00032		
SET WF 2,0-3,2mm eFeed	Wire feed set for rolls with diameters greater than 1.6 mm	-	-	1	-	per unit	092-019404-00000		

- ▶ You need the SET WF 2,0-3,2 mm eFeed option to use these rolls.
- ▶ Four roll set



Overview

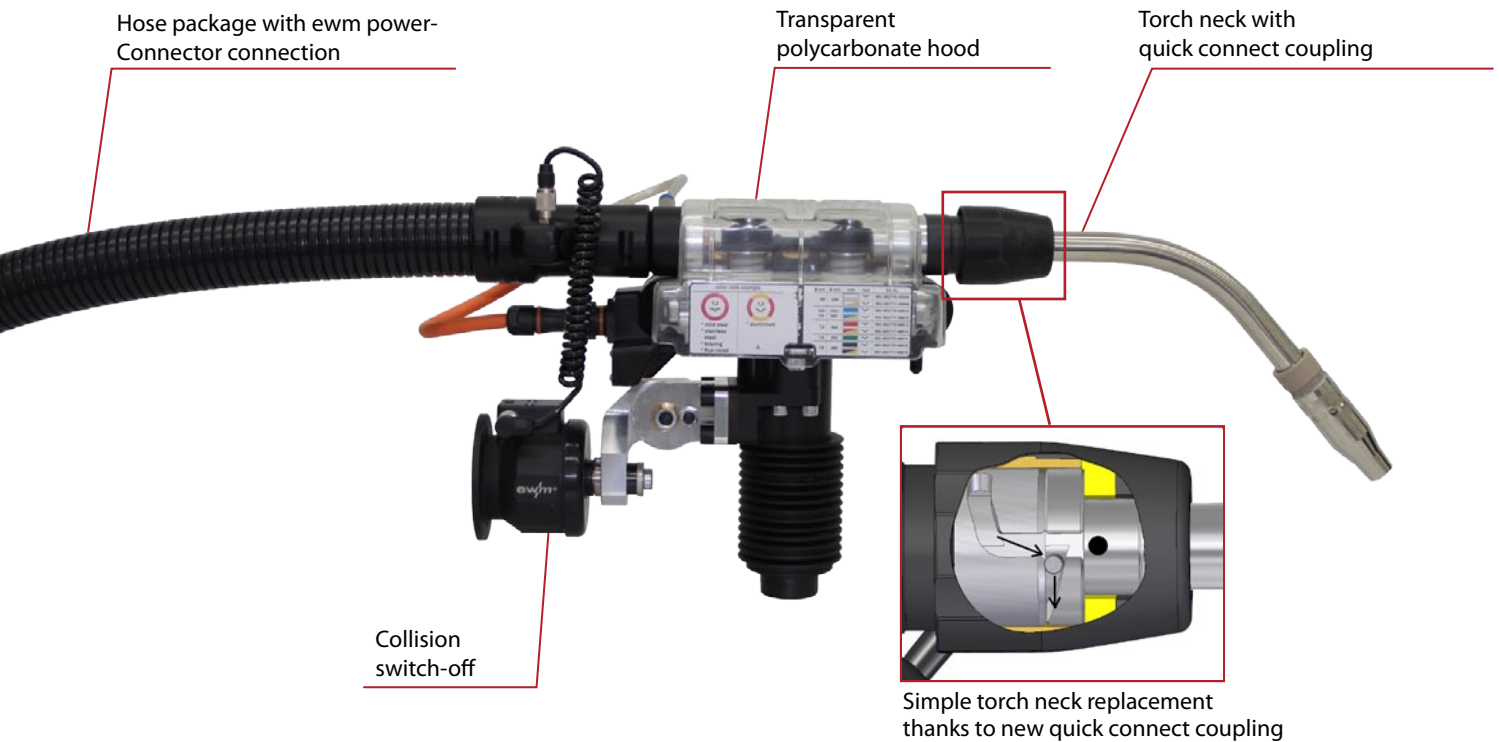
MIG/MAG automation		Page
	MTR360G	100
	MTR500G	102
	MTR300W	104
	MTR505W	106
	MTR242W	108
	MTR242W PP	110
	MTR500W	112
Welding torches	Robot welding torches	
	MTR500W PP	114
	MTR600W	116
	MIG ROB ABK 500 MF for use on Rob 2 MF wire feeder	118
	Systems for hollow wrist robots, gas-cooled	120
	Systems for hollow wrist robots, water-cooled	123
	RMT301G frontDrive, gas cooled	126
	MIG ROB ABK A 360 MasterPull	128
	MIG ROB ABK A 500 MasterPull	131
	Automated welding torches	
AMT301G	134	
AMT451W	139	
AMT551W	144	



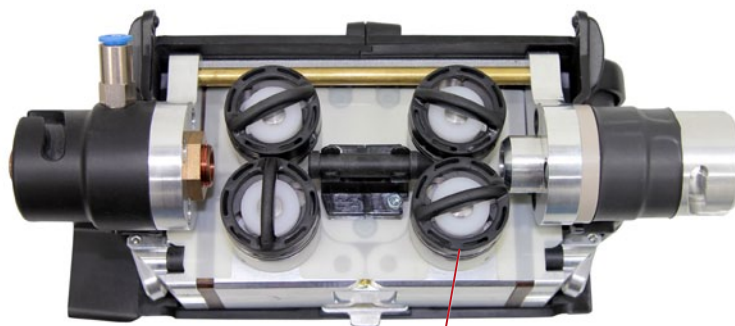
RMT 301G frontDrive

The new gas-cooled robot welding torch for your automated application.

The ewm frontDrive system can be used with conventional robots and is thus easily integrated into your production process. This system also offers greater availability in comparison to push/pull solutions since the wire is conveyed to the process by just one single drive. The frontDrive drive unit is connected to the power source via the F Drive Rob 3 media box and corresponding hose packages.



Drive unit



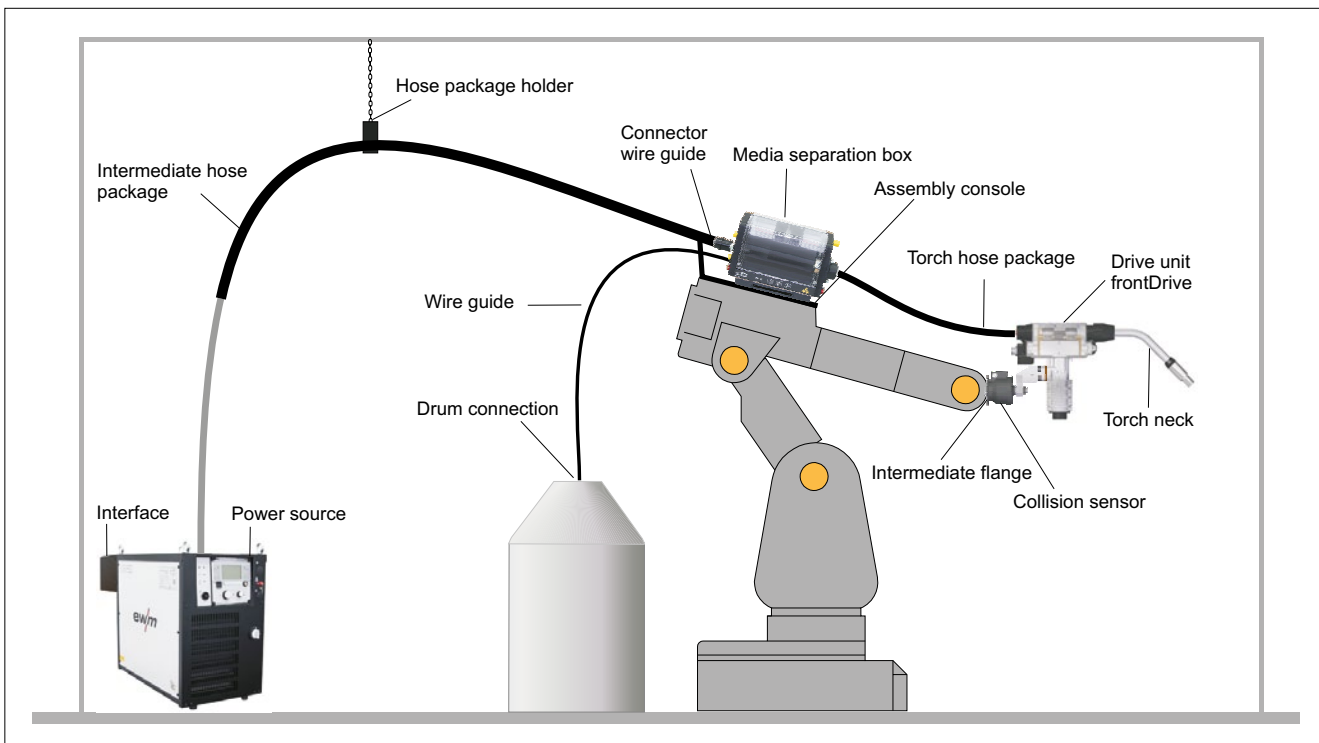
- Reliable wire feeding thanks to four driven rolls
- Colour-coded wire feed rolls; replaceable without tools



Roll pressure in 5 locking stages for reproducible contact pressure

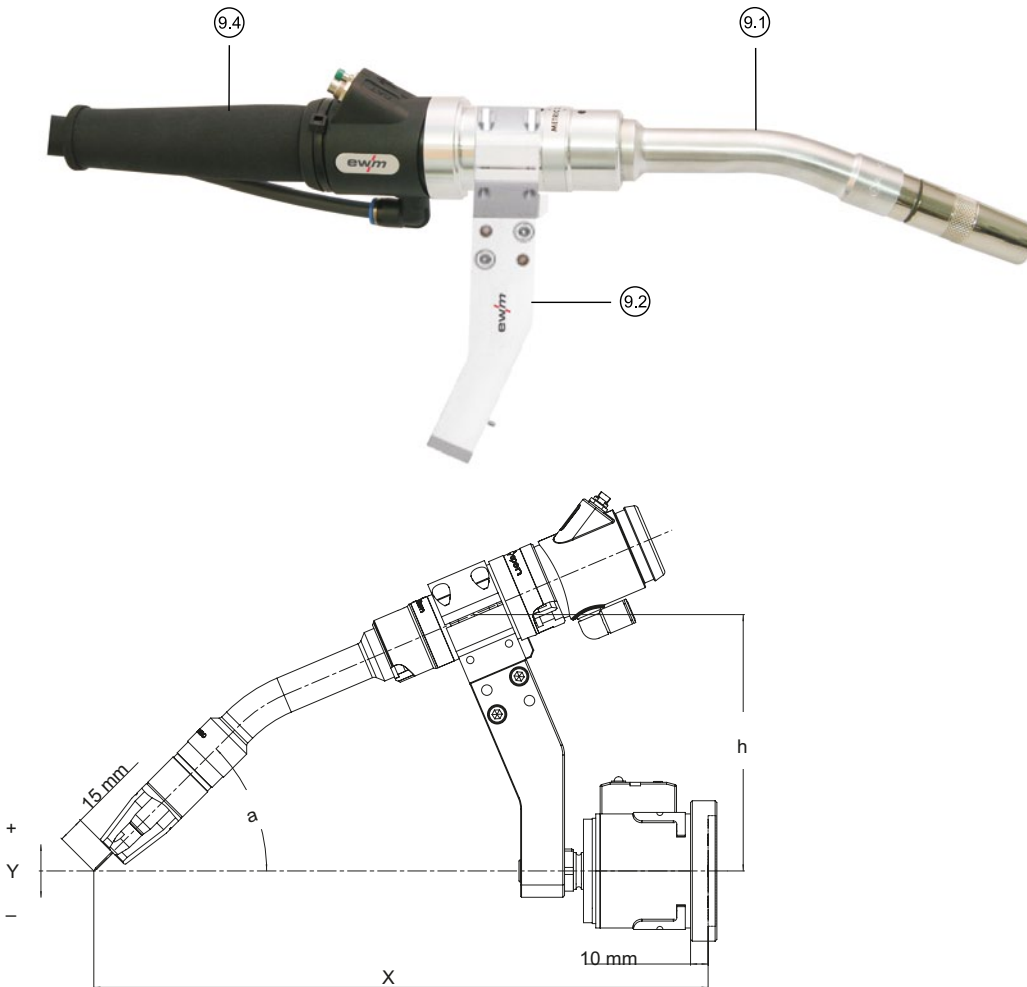
Push-button for wire inching, wire return, gas test

System overview





Robot welding torches ■ MTR360G



MIG/MAG robot welding torch, gas cooled

- Maximum TCP security
- Modular construction
- Quick-change torch neck
- Standard equipment: 14 mm gas nozzle, 1.2 mm steel contact tip, 22° torch neck, 1.15 m hose package

Duty cycle CO2

360 A / 100 %

Duty cycle M21

290 A / 100 %

Ø wire

0.8 mm - 1.4 mm

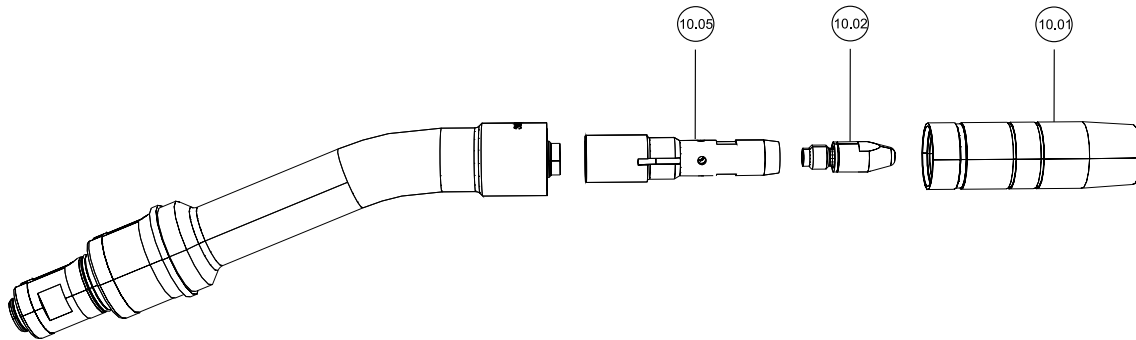
angle	X	Y	h	a
22°	350	0	146	45°
45°	350	0	107	45°

Item	Type	Designation	Length m	Item no.
9	MTR360G 22 1.2mm 1.15m	MIG/MAG welding torch, gas-cooled		094-500033-00000
9.1	RTN 360G 22DG	Torch neck EWM RT 22°		094-010139-00500
9.1	RTN 360G 45DG	Torch neck EWM RT 45°		094-010148-00500
9.2	HS COMP A22	Holder, rigid, compl., EWM RT 22	-	094-011656-00500
9.2	HS COMP A45	Holder, rigid, compl., EWM RT 45		094-016499-00500
9.2	RTM interlock/SH compl. for VTS/ EWM RT	RTM interlock/SH compl. for VTS/EWM RT		094-016500-00500
9.4	TBROB ECO 1.15m	RT A ECO hose package	1.2	094-016492-00500
9.4	TBROB ECO 1.45m		1.4	094-016492-00503

► More hose package lengths, torch neck angles and replacement parts on request!



■ Consumables/Accessories



Item	Designation	Stickout/Recess mm	Nozzle Ø mm	Ø wire mm	Threads	Length mm	PU Units	Item no.	per unit
10.01	Gas nozzle, conical	0	14	-	-	68	1	094-010142-00500	
10.01	Gas nozzle, conical	0	16	-	-	68	1	094-010566-00500	
10.02	CuCrZr contact tip, silver plated	-	-	0.8	M6	28	10	094-010468-00000	
10.02	CuCrZr contact tip, silver plated	-	-	0.9	M6	28	10	094-010469-00000	
10.02	CuCrZr contact tip, silver plated	-	-	1	M6	28	10	094-010470-00000	
10.02	CuCrZr contact tip, silver plated	-	-	1.2	M6	28	10	094-016488-00000	
10.02	CuCrZr contact tip, silver plated	-	-	1.4	M6	28	10	094-010471-00000	
10.05	RT contact tip holder	-	-	-	M6	-	1	094-010143-00500	

■ Liners

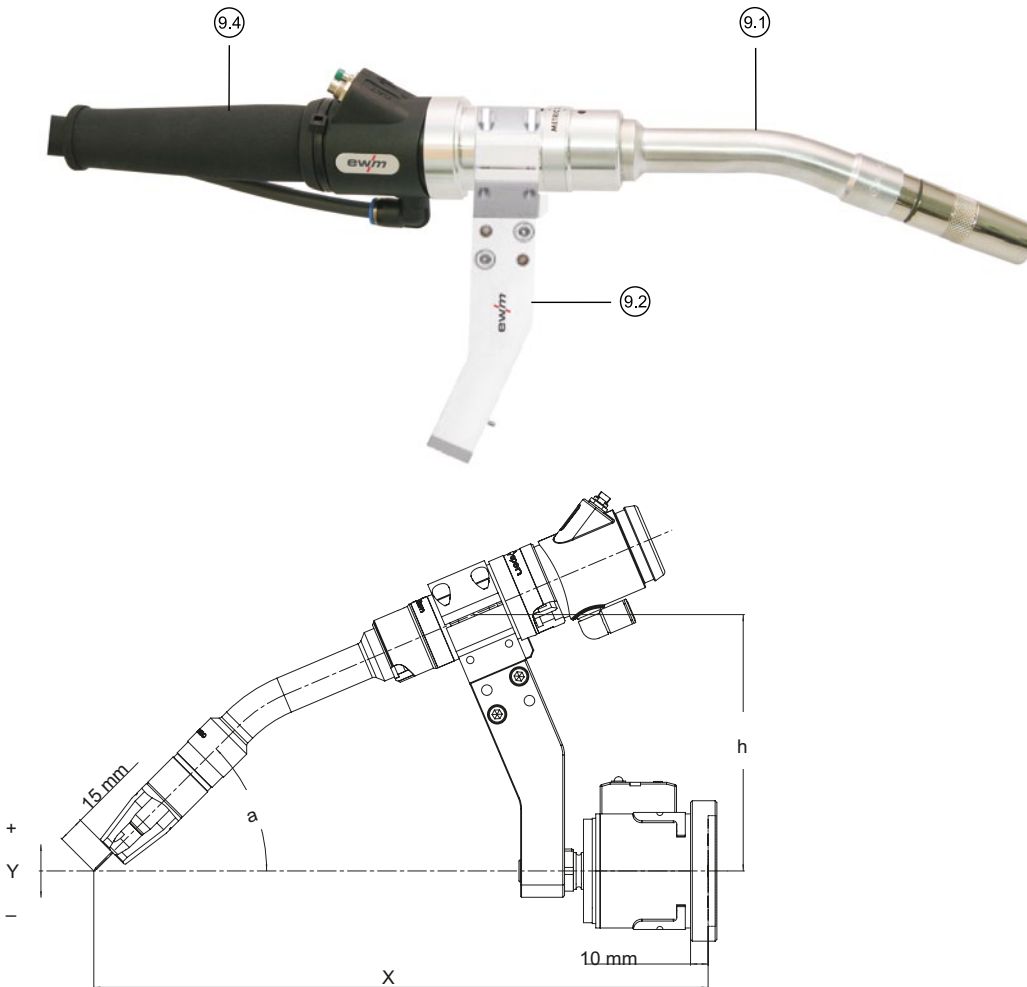
Designation	Ø wire mm	Length m	PU Units	Item no.	per unit
Steel liner, steel, black	0.8 - 1.2	2	1	094-011667-00500	
Steel liner, steel, black	0.8 - 1.2	3.15	1	094-016493-00500	
Steel liner, steel, black	0.8 - 1.2	10	1	094-016495-00500	

■ Options/accessories

Torch accessories	Item no.	PG
RTN FIX 360G/500G 0/22/45DG Adjusting device for 0°, 22°, 45°	094-010152-00000	



Robot welding torches ■ MTR500G



MIG/MAG robot welding torch, gas cooled

- Maximum TCP security
- Modular construction
- Quick-change torch neck

Duty cycle CO2

500 A / 100 %

Duty cycle M21

400 A / 100 %

Ø wire

0.8 mm - 1.6 mm

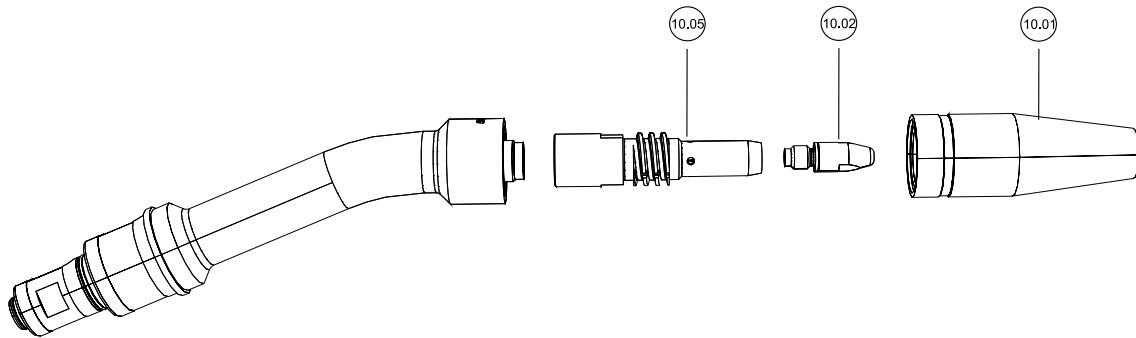
angle	X	Y	h	a
22°	350	0	146	45°
45°	350	0	107	45°

Item	Type	Designation	Length m	Item no.
9.1	RTN 500G 22DG	Torch neck EWM RT 22°		094-011260-00500
9.1	RTN 500G 45DG	Torch neck EWM RT 45°		094-011262-00500
9.2	HS COMP A22	Holder, rigid, compl., EWM RT 22		094-011656-00500
9.2	HS COMP A45	Holder, rigid, compl., EWM RT 45		094-016499-00500
9.2	RTM interlock/SH compl. for VTS/ EWM RT	RTM interlock/SH compl. for VTS/EWM RT		094-016500-00500
9.4	TBROB ECO 1.15m	RT A ECO hose package	1.2	094-016492-00500

- ▶ Order welding torch fully equipped. Replacement parts and equipment parts are not part of the scope of supply and must be ordered based on the specific application!
- ▶ More hose package lengths, torch neck angles and replacement parts on request!



■ Consumables/Accessories



Item	Designation	Stickout/Recess mm	Nozzle Ø mm	Ø wire mm	Threads	Length mm	PU Units	Item no.	per unit
10.01	Gas nozzle, conical	0	16	-	-	75	1	094-016487-00500	
10.02	CuCrZr contact tip, silver plated	-	-	0.8	M8	30	10	094-011269-00000	
10.02	CuCrZr contact tip, silver plated	-	-	0.9	M8	30	10	094-011270-00000	
10.02	CuCrZr contact tip, silver plated	-	-	1	M8	30	10	094-011271-00000	
10.02	CuCrZr contact tip, silver plated	-	-	1.2	M8	30	10	094-011272-00000	
10.02	CuCrZr contact tip, silver plated	-	-	1.4	M8	30	10	094-011273-00000	
10.02	CuCrZr contact tip, silver plated	-	-	1.6	M8	30	10	094-011274-00000	
10.05	RT contact tip holder	-	-	-	M8	70	1	094-011276-00500	

■ Liners

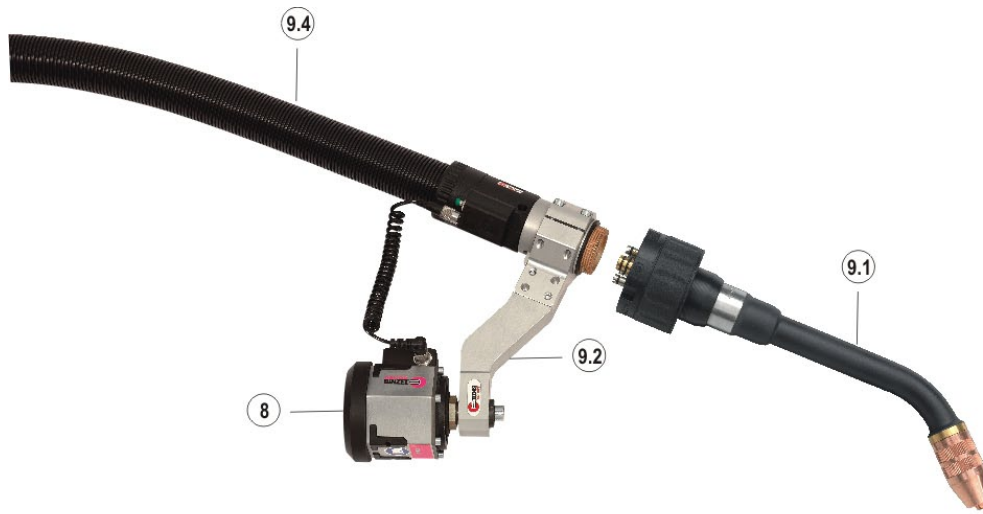
Designation	Ø wire mm	Length m	PU Units	Item no.	per unit
Steel liner, steel, black	0.8 - 1.2	2	1	094-011667-00500	
Steel liner, steel, black	0.8 - 1.2	3.15	1	094-016493-00500	
Steel liner, steel, black	0.8 - 1.2	10	1	094-016495-00500	

■ Options/accessories

Torch accessories	Item no.	PG
RTN FIX 360G/500G 0/22/45DG Adjusting device for 0°, 22°, 45°	094-010152-00000	



Robot welding torches ■ MTR300W



MIG/MAG robot welding torch, water cooled

- Maximum TCP security
- Modular construction
- Quick-change torch neck
- Non-return valves for coolant
- One-piece liner

Duty cycle CO2

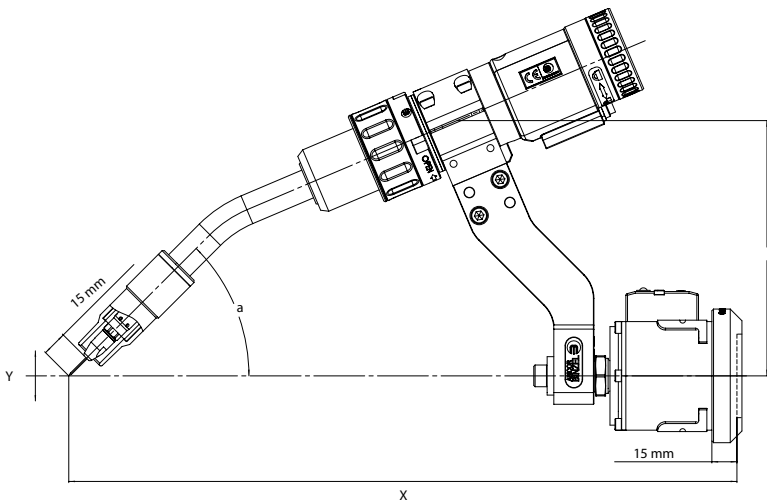
330 A / 100 %

Duty cycle M21

300 A / 100 %

Ø wire

0.8 mm - 1.2 mm



Winkel	X	Y	h	a
22°	400	0	149	45°
45°	400	0	90	50°

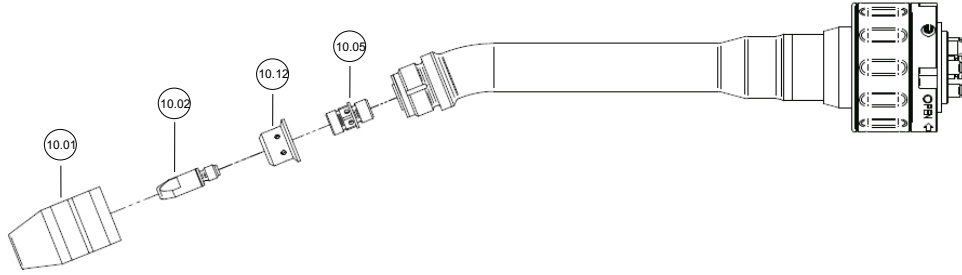
Item	Type	Designation	Length m	Item no.
8	CAT2-XL/HL	Collision sensor		094-012838-00000
9.1	BH ROB 300W 22° x279 y30	Torch neck, 22°		094-022441-00000
9.1	BH ROB 300W 45° x260 y65	Torch neck with gas nozzle sensor, 22°		094-022442-00000
9.1	BH ROB 300W 45° x260 y65	Torch neck with gas nozzle sensor, 45°		094-022443-00000
9.1	BH ROB 300W 45° x260 y65	Torch neck, 45°		094-022443-00000
9.2	H ROB 300W 22° CAT2-HL	Rigid holder for torch neck, 22°		094-022448-00000
9.2	H ROB 300W 45° CAT2-HL	Rigid holder for torch neck, 45°		094-022449-00000
9.4	SP ROB W 1,10m	Hose package, water-cooled up to 400 A	1.1	094-022454-00000

► Order welding torch fully equipped. Replacement parts and equipment parts are not part of the scope of supply and must be ordered based on the specific application!

► More hose package lengths, torch neck angles and replacement parts on request!



■ Consumables/Accessories



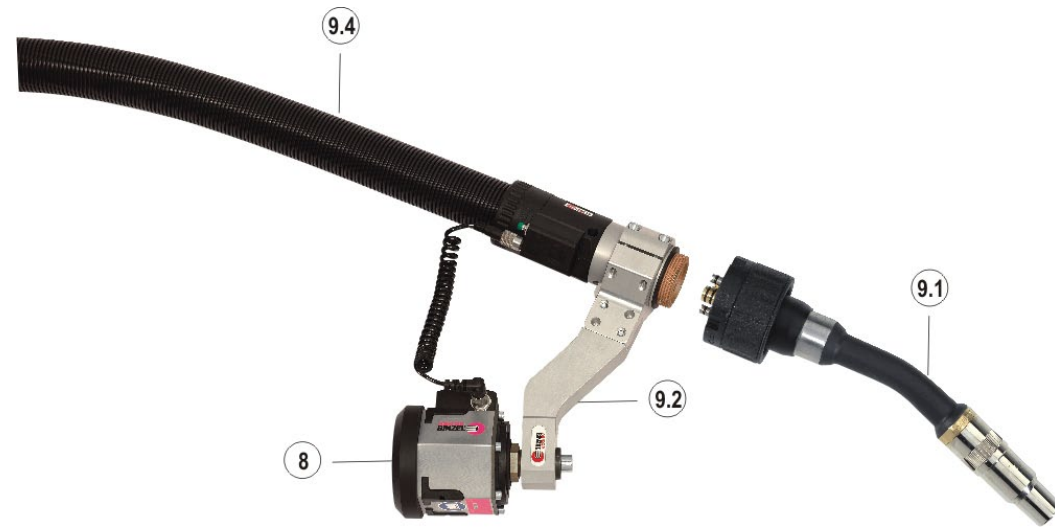
Item	Designation	Nozzle Ø mm	Ø wire mm	Threads	Length mm	Material	PU Units	Item no.	PE
10.01	Gas nozzle, conical	13	-	-	44.5	-	1	094-020913-00000	per unit
10.01	Gas nozzle, conical	13	-	-	48.5	-	1	094-022432-00000	per unit
10.01	Gas nozzle, conical	15.5	-	-	44.5	-	1	394-001924-00000	per unit
10.02	Contact tip	-	0.8	M6	28	CuCrZr	10	094-005407-00000	per unit
10.02	Contact tip	-	0.9	M6	28	CuCrZr	10	094-005408-00000	per unit
10.02	Contact tip	-	1	M6	28	CuCrZr	10	094-003339-00000	per unit
10.02	Contact tip	-	1.2	M6	28	CuCrZr	10	094-005224-00000	per unit
10.05	Contact tip holder M6	-	-	M6	19	Copper	10	094-020914-00000	-
10.12	Gas diffuser standard	-	-	-	13	-	1	094-020915-00000	per unit
10.12	Gas diffuser ceramic	-	-	-	13	-	1	094-022453-00000	per unit

■ Liners

Designation	Ø wire mm	Length m	PU Units	Item no.	per unit
Steel liner, steel, black	0.8 - 1.2	2	1	094-011667-00500	
Combined steel liner, aluminium	0.8 - 1.2	2.4	1	094-013325-00000	



Robot welding torches ■ MTR505W



MIG/MAG robot welding torch, water cooled

- Maximum TCP security
- Modular construction
- Quick-change torch neck
- Non-return valves for coolant
- One-piece liner

Duty cycle CO2

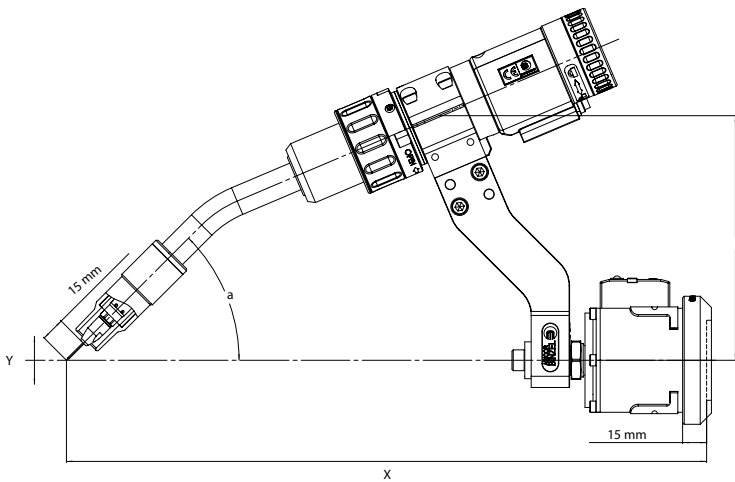
550 A / 100 %

Duty cycle M21

500 A / 100 %

Ø wire

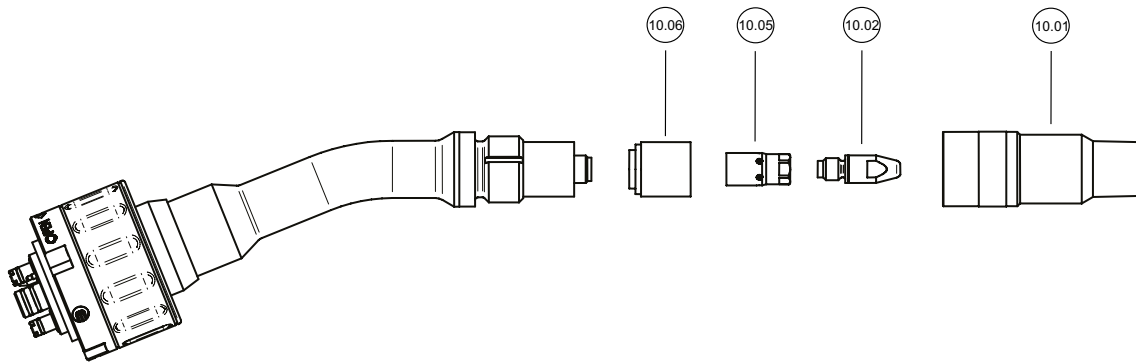
0.8 mm - 1.6 mm



Winkel	X	Y	h	a
22°	400	0	153	45°
35°	400	0	125	45°
45°	400	0	126	50°

Item	Type	Designation	Length m	Item no.
8	CAT2-XL/HL	Collision sensor		094-012838-00000
9.1	BH ROB 500W 22° x242 y50	Torch neck with gas nozzle sensor, 22°		094-019839-00000
9.1	BH ROB 500W 35° x227 y81	Torch neck with gas nozzle sensor, 35°		094-012937-00000
9.1	BH ROB 500W 45° x211 y105	Torch neck with gas nozzle sensor, 45°		394-000502-00000
9.2	H ROB 500W 22° CAT2-HL	Rigid holder for torch neck, 22°		094-012716-00000
9.2	H ROB 500W 35° CAT2-HL	Rigid holder for torch neck, 35°		094-022444-00000
9.2	H ROB 500W 45° CAT2-HL	Rigid holder for torch neck, 45°		094-022450-00000
9.4	SP ROB W 1,10m	Hose package, water-cooled over 400 A	1.1	094-022451-00000
9.4		Hose package, water-cooled up to 400 A		094-022452-00000
				094-022440-00000
				094-022454-00000

- ▶ Order welding torch fully equipped. Replacement parts and equipment parts are not part of the scope of supply and must be ordered based on the specific application!
- ▶ More hose package lengths, torch neck angles and replacement parts on request!


Consumables/Accessories


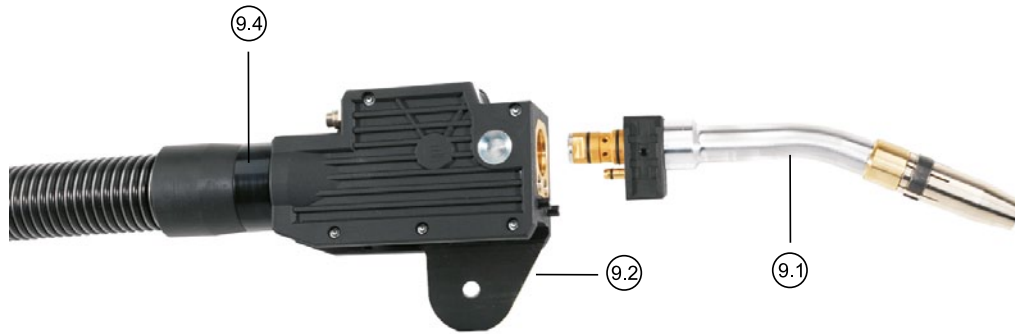
Item	Designation	Stickout/Recess mm	Nozzle Ø mm	Ø wire mm	Threads	Length mm	Material	PU Units	Item no.	per unit
10.01	Gas nozzle, bottle shape	- 1.1	13	-	-	75.5	-	1	094-010221-00000	
10.01	Gas nozzle, bottle shape	- 2.6	13	-	-	77	-	1	094-022446-00000	
10.01	Gas nozzle, bottle shape	+ 2.4	15.5	-	-	72	-	1	094-010222-00000	
10.01	Gas nozzle, conical	+ 1.9	15.5	-	-	72.5	-	1	094-010220-00500	
10.01	Gas nozzle, bottle shape	- 1.1	15.5	-	-	75.5	-	1	094-018003-00000	
10.01	Gas nozzle, bottle shape	- 2.6	15.5	-	-	77	-	1	094-009895-00000	
10.01	Gas nozzle, conical	- 1.1	15.5	-	-	75.5	-	1	094-010219-00000	
10.02	Contact tip	-	-	0.8	M6	28	CuCrZr	10	094-005407-00000	
10.02	Contact tip	-	-	0.9	M6	28	CuCrZr	10	094-005408-00000	
10.02	Contact tip	-	-	1	M6	28	CuCrZr	10	094-003339-00000	
10.02	Contact tip	-	-	1.2	M6	28	CuCrZr	10	094-005224-00000	
10.02	Contact tip	-	-	0.8	M8	30	CuCrZr	10	094-005409-00000	
10.02	Contact tip	-	-	0.9	M8	30	CuCrZr	10	094-005410-00000	
10.02	Contact tip	-	-	1	M8	30	CuCrZr	10	094-005225-00000	
10.02	Contact tip	-	-	1.2	M8	30	CuCrZr	10	094-004207-00000	
10.02	Contact tip	-	-	1.4	M8	30	CuCrZr	10	094-005411-00000	
10.02	Contact tip	-	-	1.6	M8	30	CuCrZr	10	094-005412-00000	
10.05	RT contact tip holder	-	-	-	M8	23.2	Copper	1	094-010891-00000	
10.05	Contact tip holder	-	-	-	M6	23.2	Brass	1	094-022445-00000	
10.05	Contact tip holder	-	-	-	M6	23.2	Copper	1	094-010892-00000	
10.05	Contact tip holder	-	-	-	M8	23.2	Brass	1	094-009896-00000	
10.06	Spatter protection, standard	-	-	-	-	17	-	1	094-009897-00000	
10.06	Spatter protection, high-temperature-resistant	-	-	-	-	21	-	1	094-013862-00000	
10.06	Splash protection, standard, short	-	-	-	-	11.4	-	1	094-020106-00000	
10.12	Gas diffuser standard	-	-	-	-	17	-	1	094-019840-00000	

Liners

Designation	Ø wire mm	Length m	PU Units	Item no.	per unit
Steel liner, steel, black	0.8 - 1.2	2	1	094-011667-00500	
Liner, steel, white	1.4 - 1.6	2.15	1	094-011668-00000	
Combined steel liner, aluminium	0.8 - 1.2	2.4	1	094-013325-00000	
Combined steel liner, aluminium	1.4 - 1.6	2.4	1	094-022447-00000	



Robot welding torches ■ MTR242W



MIG/MAG robot welding torch, water cooled

- Maximum TCP security
- Modular construction
- Quick-change torch neck
- Standard equipment: 1.2 mm steel contact tip, NW15.5/-1.0 mm conical gas nozzle, 22° torch neck, 1.25 m hose package

Duty cycle CO2

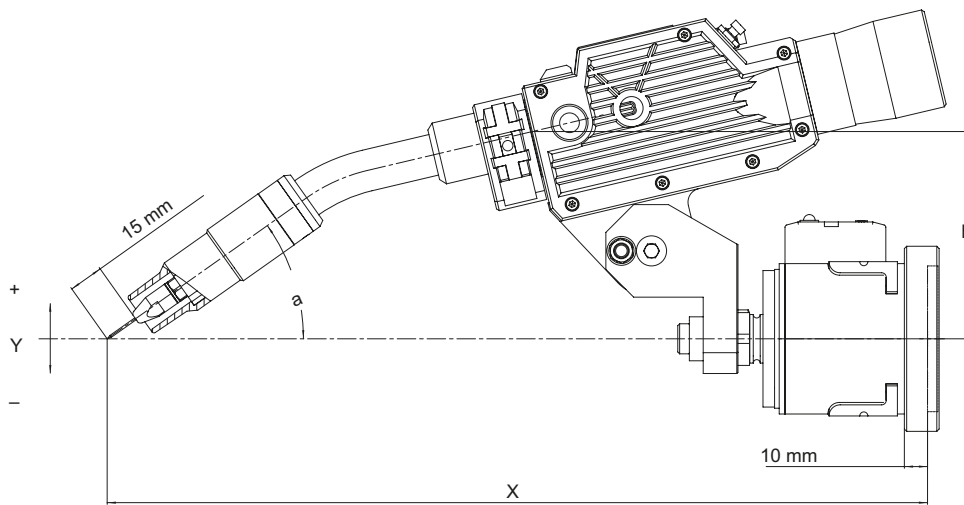
320 A / 100 %

Duty cycle M21

280 A / 100 %

Ø wire

0.8 mm - 1.2 mm



Standard holder

angle	X	Y	h	a
22°	354	0	89	35°
45°	349	0	99	46°

Segment holder

angle	X	Y	h	a
22°	356	55	100	22°
45°	350	3	100	45°

RTM-holder

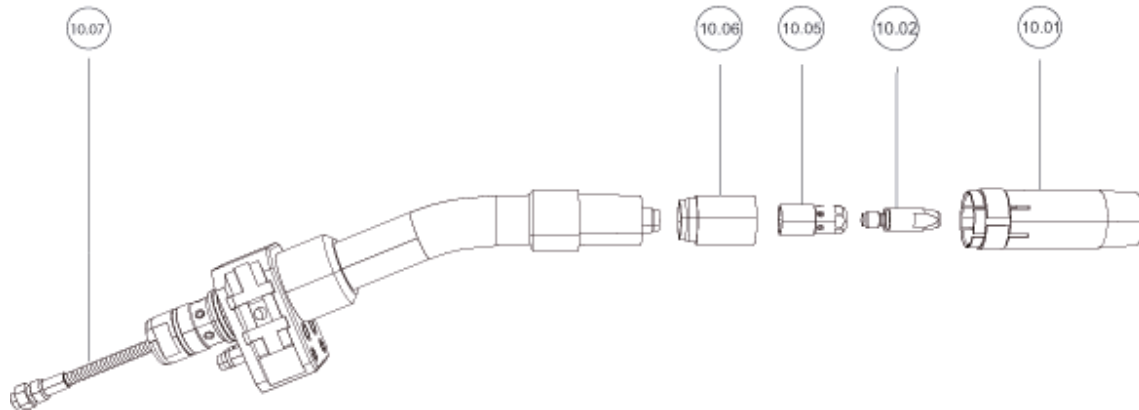
angle	X	Y	h	a
22°	327	0	127	48°
45°	288	-44	127	71°

Item	Type	Designation	Length m	Item no.
9	MTR242W 22 1.2mm 1.25m	MIG/MAG welding torch, water-cooled		094-500034-00000
9.1	RTN 242 DW 22DG	Torch neck EWM RT 22°		094-015036-00500
9.1	RTN 242 DW 45DG	Torch neck EWM RT 45°		094-013470-00500
9.2	RTMHOL	RTM holder WH		094-016549-00500
9.2	SEGHOL	Segment holder WH		094-016548-00500
9.2	STANHOL	Standard holder		094-010162-00500
9.4	TBROB RT W 1.25	EWM RT W hose package	1.2	094-012720-00502

► More hose package lengths, torch neck angles and replacement parts on request!



■ Consumables/Accessories



Item	Designation	Stickout/Recess mm	Nozzle Ø mm	Ø wire mm	Threads	Length mm	Material	PU Units	Item no.	per unit
10.01	Gas nozzle, conical	- 1	15.5	-	-	62	-	1	094-016508-00500	
10.02	Contact tip	-	-	0.8	M6	28	CuCrZr	10	094-005407-00000	
10.02	Contact tip	-	-	0.9	M6	28	CuCrZr	10	094-005408-00000	
10.02	Contact tip	-	-	1	M6	28	CuCrZr	10	094-003339-00000	
10.02	Contact tip	-	-	1.2	M6	28	CuCrZr	10	094-005224-00000	
10.05	Contact tip holder	-	-	-	M6	23.5	-	1	094-015037-00500	
10.06	Spatter protection, standard	-	-	-	-	27	-	1	094-013472-00500	

■ Liners

Item	Designation	Ø wire mm	Length	PU Units	Item no.	per unit
-	Liner, steel, red	0.8 - 1.2	3.2 m	1	094-011627-00500	
-	Liner, steel, red	0.8 - 1.2	5 m	1	094-012655-00500	
10.07	Brass liner for steel, 0°/22°	1 - 1.2	197 mm	1	094-015038-00500	
10.07	Brass liner for steel, 45°	1 - 1.2	197 mm	1	094-011812-00500	



Robot welding torches ■ MTR242W PP



MIG/MAG robot welding torch, water cooled

- Push/pull version
- Maximum TCP security
- Modular construction
- Quick-change torch neck
- Standard equipment: 1.2 mm steel contact tip, 15.5 mm-1 mm gas nozzle, 22° torch neck, 3.2 m hose package

Duty cycle CO2

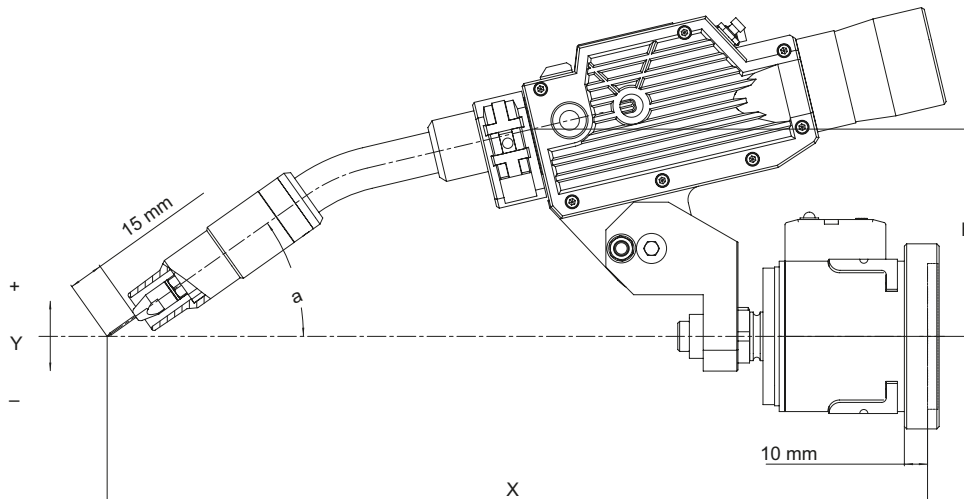
320 A / 100 %

Duty cycle M21

280 A / 100 %

Ø wire

0.8 mm - 1.2 mm



Standard holder

angle	X	Y	h	a
22°	354	0	89	35°
45°	349	0	99	46°

Segment holder

angle	X	Y	h	a
22°	356	55	100	22°
45°	350	3	100	45°

RTM-holder

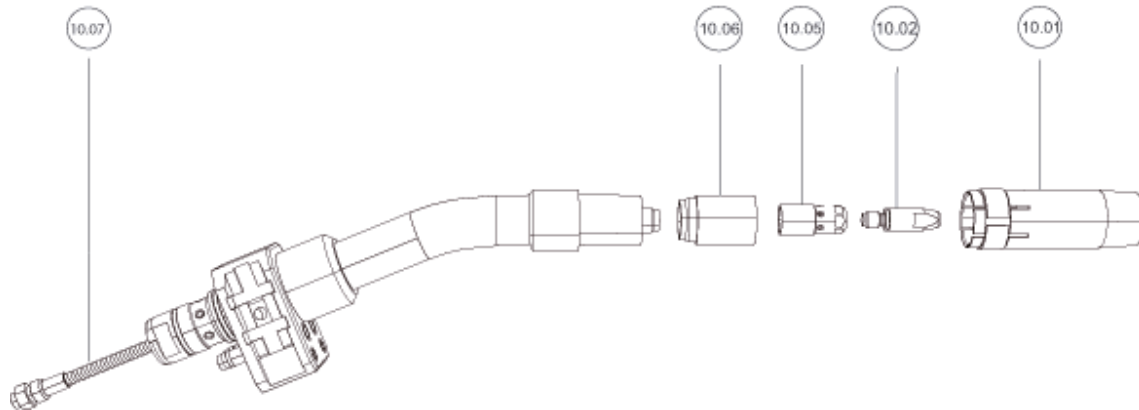
angle	X	Y	h	a
22°	327	0	127	48°
45°	288	-44	127	71°

Item	Type	Designation	Length m	Item no.
9	MTR242W PP 22 1.2mm 3.20m	MIG/MAG welding torch, push/pull, water-cooled		094-500074-00000
9.1	RTN 242 DW 22DG	Torch neck EWM RT 22°		094-015036-00500
9.1	RTN 242 DW 45DG	Torch neck EWM RT 45°		094-013470-00500
9.2	RTMHOL	RTM holder WH		094-016549-00500
9.2	SEGHOL	Segment holder WH		094-016548-00500
9.2	STANHOL	Standard holder		094-010162-00500
9.4	TBROB RT-PP W I=17.1:1 1.50	EWM RT-PP W hose package	1.5	094-016535-00501
9.4	TBROB RT-PP W I=17.1:1 2.20		2.2	094-016535-00503
9.4	TBROB RT-PP W I=17.1:1 3.20		3.2	094-016535-00505
9.4	TBROB RT-PP W I=17.1:1 4.20		4.2	094-016535-00506

► More hose package lengths, torch neck angles and replacement parts on request!



Consumables/Accessories



Item	Designation	Stickout/Recess mm	Nozzle Ø mm	Ø wire mm	Threads	Length mm	Material	PU Units	Item no.	per unit
10.01	Gas nozzle, conical	- 1	15.5	-	-	62	-	1	094-016508-00500	
10.02	Contact tip	-	-	0.8	M6	28	CuCrZr	10	094-005407-00000	
10.02	Contact tip	-	-	0.9	M6	28	CuCrZr	10	094-005408-00000	
10.02	Contact tip	-	-	1	M6	28	CuCrZr	10	094-003339-00000	
10.02	Contact tip	-	-	1.2	M6	28	CuCrZr	10	094-005224-00000	
10.05	Contact tip holder	-	-	-	M6	23.5	-	1	094-015037-00500	
10.06	Spatter protection, standard	-	-	-	-	27	-	1	094-013472-00500	

Liners

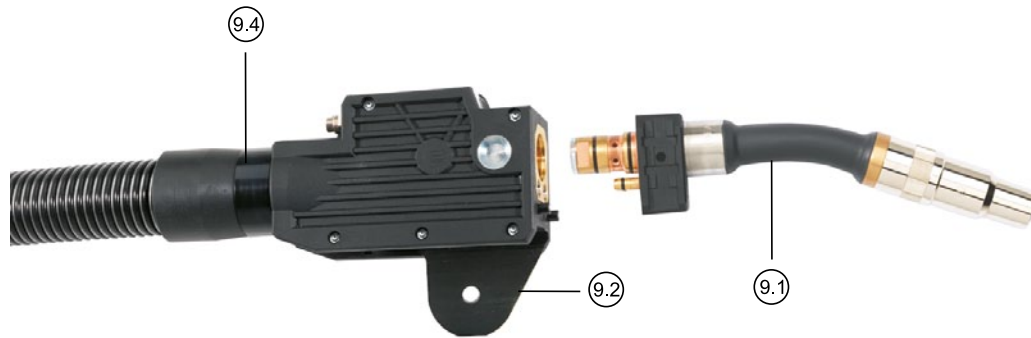
Item	Designation	Ø wire mm	Length	PU Units	Item no.	per unit
10.07	Brass liner for steel, 0°/22°	1 - 1.2	197 mm	1	094-015038-00500	
10.07	Brass liner for steel, 45°	1 - 1.2	197 mm	1	094-011812-00500	
10.07	Brass liner for aluminium, 0°/22°	0.8 - 1	197 mm	1	094-016517-00000	
10.07	Brass liner for aluminium, 0°/22°	1.2 - 1.6	197 mm	1	094-016518-00000	
10.07	Brass liner for aluminium, 45°	0.8 - 1	219 mm	1	094-016519-00000	
10.07	Brass liner for aluminium, 45°	1.2 - 1.6	197 mm	1	094-016520-00000	
-	Liner, steel, red	0.8 - 1.2	3.2 m	1	094-011627-00500	
-	Liner, steel, red	0.8 - 1.2	5 m	1	094-012655-00500	

Options/accessories

Drive rolls	Item no.	PG
WFR U-GROOVE 0.8 Drive roll for aluminium (U-groove)	094-010186-00500	
WFR U-GROOVE 0.9 Drive roll for aluminium (U-groove)	094-016542-00500	
WFR U-GROOVE 1.0 Drive roll for aluminium (U-groove)	094-010187-00500	
WFR U-GROOVE 1.2 Drive roll for aluminium (U-groove)	094-010188-00500	
WFR U-GROOVE 1.6 Drive roll for aluminium (U-groove)	094-016545-00500	
WFR V-GROOVE 0.8 Drive roll, universal (V-groove)	094-016546-00500	
WFR V-GROOVE 0.9 Drive roll, universal (V-groove)	094-016547-00500	
WFR UNI V 1.0 Drive roll, universal (V-groove)	094-010194-00500	
WFR UNI V 1.2 Drive roll, universal (V-groove)	094-010195-00500	
WFR UNI V 1.4 Drive roll, universal (V-groove)	094-010196-00500	
WFR UNI V 1.6 Drive roll, universal (V-groove)	094-010197-00500	



Robot welding torches ■ MTR500W



MIG/MAG robot welding torch, water cooled

- Extremely durable and compact
- Maximum TCP security
- Modular construction
- Quick-change torch neck
- Standard equipment: 1.2 mm steel contact tip, NW15.5/-1.1 mm conical gas nozzle, 22° torch neck, 1.25 m hose package

Duty cycle CO2

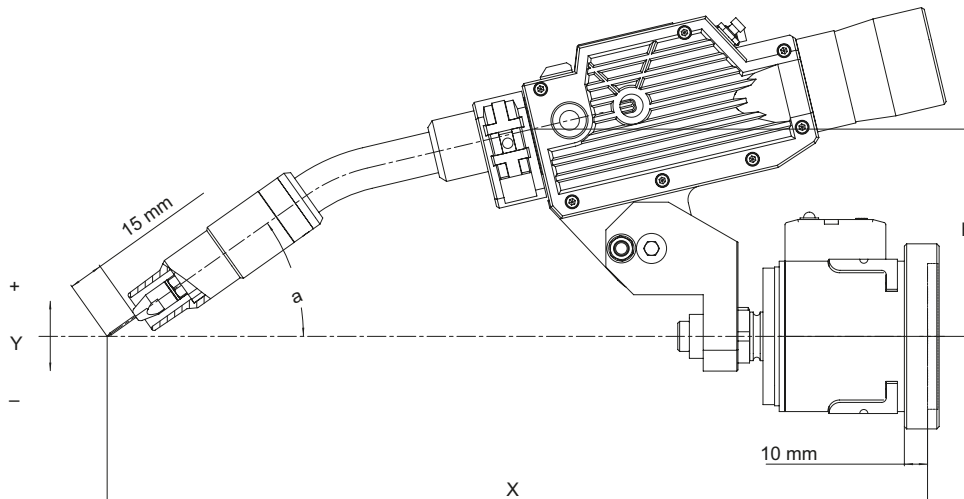
550 A / 100 %

Duty cycle M21

500 A / 100 %

Ø wire

0.8 mm - 1.6 mm



Standard holder

angle	X	Y	h	a
22°	354	0	89	35°
45°	349	0	99	46°

Segment holder

angle	X	Y	h	a
22°	356	55	100	22°
45°	350	3	100	45°

RTM holder

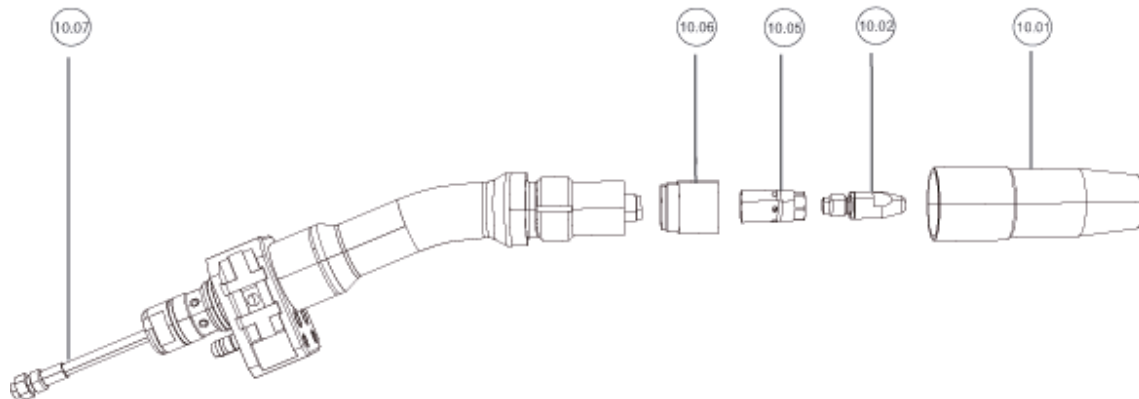
angle	X	Y	h	a
22°	327	0	127	48°
45°	288	-44	127	71°

Item	Type	Designation	Length m	Item no.
9	MTR500W 22 1.2mm 1.25m	MIG/MAG welding torch, water-cooled		094-500035-00000
9.1	BH ROB 500W 22° x242 y50	Torch neck EWM RT 22°		094-016505-00500
9.1	BH ROB 500W 45° x211 y105	Torch neck EWM RT 45°		094-016507-00500
9.2	RTMHOL	RTM holder WH	-	094-016549-00500
9.2	SEGHOL	Segment holder WH		094-016548-00500
9.2	STANHOL	Standard holder		094-010162-00500
9.4	TBROB RT W 1.25	EWM RT W hose package	1.2	094-012720-00502

► More hose package lengths, torch neck angles and replacement parts on request!



■ Consumables/Accessories



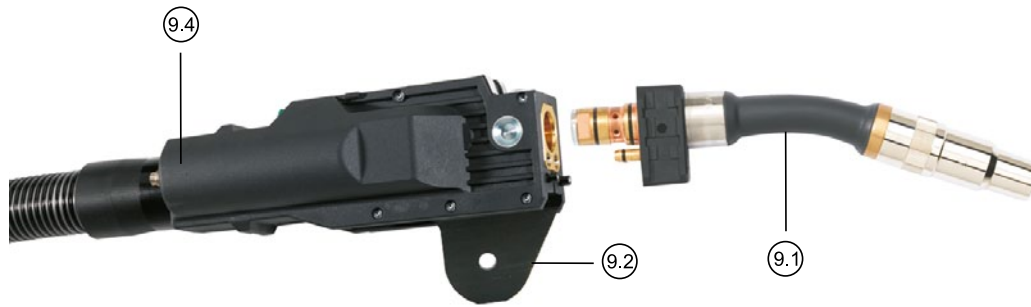
Item	Designation	Stickout/Recess mm	Nozzle Ø mm	Ø wire mm	Threads	Length mm	Material	PU Units	Item no.	per unit
10.01	Gas nozzle, conical	- 1.1	15.5	-	-	75.5	-	1	094-016512-00500	
10.01	Gas nozzle, conical	+ 1.9	15.5	-	-	72.5	-	1	094-010220-00500	
10.02	Contact tip	-	-	0.8	M8	30	CuCrZr	10	094-005409-00000	
10.02	Contact tip	-	-	0.9	M8	30	CuCrZr	10	094-005410-00000	
10.02	Contact tip	-	-	1	M8	30	CuCrZr	10	094-005225-00000	
10.02	Contact tip	-	-	1.2	M8	30	CuCrZr	10	094-004207-00000	
10.02	Contact tip	-	-	1.4	M8	30	CuCrZr	10	094-005411-00000	
10.02	Contact tip	-	-	1.6	M8	30	CuCrZr	10	094-005412-00000	
10.05	Contact tip holder	-	-	-	M8	23.2	-	1	094-009896-00500	
10.06	Spatter protection, high-temperature- resistant	-	-	-	-	21	-	1	094-013862-00000	

■ Liners

Item	Designation	Ø wire mm	Length m	PU Units	Item no.	per unit
10.07	BSLred brass liner for steel, 0°/22°	0.8 - 1.2	-	1	094-016521-00500	
10.07	BSLred brass liner for steel, 35°/45°	0.8 - 1.2	-	1	094-016523-00500	
10.07	BSLblue brass liner for steel, 0°/22°	1.4 - 1.6	-	1	094-016522-00500	
10.07	BSLblue brass liner for steel, 35°/45°	1.4 - 1.6	-	1	094-016524-00500	
-	Liner, steel, red	0.8 - 1.2	3.2	1	094-011627-00500	
-	Liner, steel, red	0.8 - 1.2	5	1	094-012655-00500	
-	Steel liner, steel, blue	1.4 - 1.6	3.2	1	094-010579-00500	
-	Steel liner, steel, blue	1.4 - 1.6	5	1	094-022407-00000	



Robot welding torches ■ MTR500W PP



MIG/MAG robot welding torch, water cooled

- Extremely durable and compact
- Push/pull version
- Maximum TCP security
- Modular construction
- Quick-change torch neck
- Standard equipment: 1.2 mm steel contact tip, NW15.5/-1.1 mm conical gas nozzle, 22° torch neck, 4.2 m hose package

Duty cycle CO2

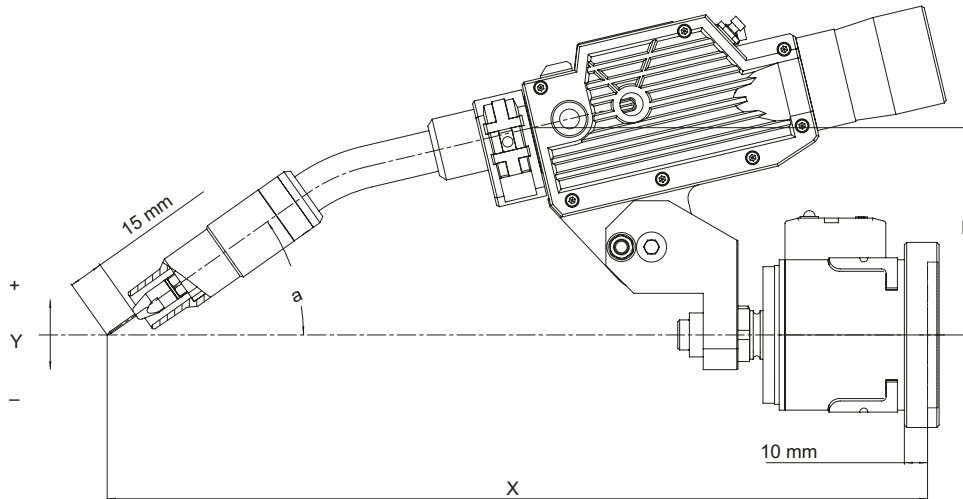
550 A / 100 %

Duty cycle M21

500 A / 100 %

Ø wire

0.8 mm - 1.6 mm



Standard holder

angle	X	Y	h	a
22°	354	0	89	35°
45°	349	0	99	46°

Segment holder

angle	X	Y	h	a
22°	356	55	100	22°
45°	350	3	100	45°

RTM holder

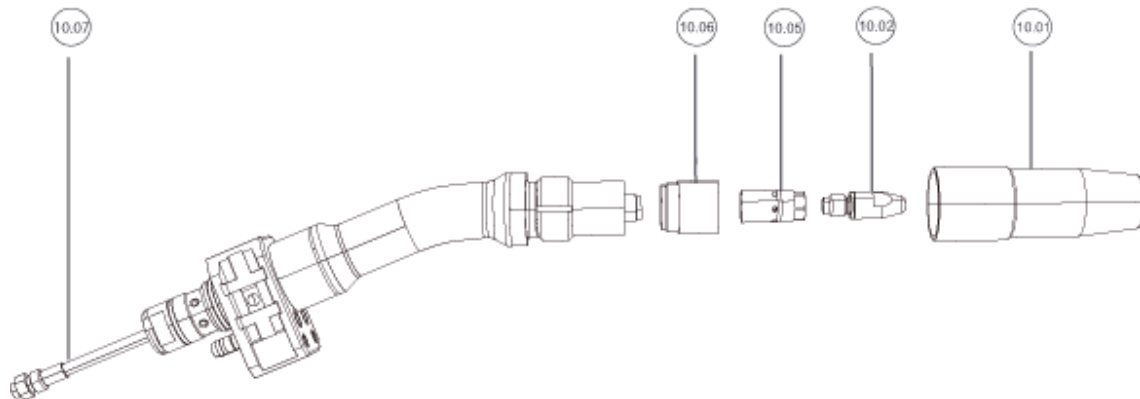
angle	X	Y	h	a
22°	327	0	127	48°
45°	288	-44	127	71°

Item	Type	Designation	Length m	Item no.
9	MTR500W PP 22°, 3.2m	MIG/MAG welding torch, push/pull, water-cooled	-	094-500073-00000
9	MTR500W PP 22°, 4.20m			094-500073-00001
9.1	BH ROB 500W 22° x242 y50	Torch neck EWM RT 22°	-	094-016505-00500
9.1	BH ROB 500W 45° x211 y105	Torch neck EWM RT 45°		094-016507-00500
9.2	RTMHOL	RTM holder WH		094-016549-00500
9.2	SEGHOL	Segment holder WH		094-016548-00500
9.2	STANHOL	Standard holder		094-010162-00500
9.4	TBROB RT-PP W I=17.1:1 1.50	EWM RT-PP W hose package	1.5	094-016535-00501
9.4	TBROB RT-PP W I=17.1:1 2.20		2.2	094-016535-00503
9.4	TBROB RT-PP W I=17.1:1 3.20		3.2	094-016535-00505
9.4	TBROB RT-PP W I=17.1:1 4.20		4.2	094-016535-00506

- ▶ Also available with ECS connection for applications using soft welding consumables.
- ▶ More hose package lengths, torch neck angles and replacement parts on request!



Consumables/Accessories



Item	Designation	Stickout/Recess mm	Nozzle Ø mm	Ø wire mm	Threads	Length mm	Material	PU Units	Item no.	per unit
10.01	Gas nozzle, conical	- 1.1	15.5	-	-	75.5	-	1	094-016512-00500	
10.01	Gas nozzle, conical	+ 1.9	15.5	-	-	72.5	-	1	094-010220-00500	
10.02	Contact tip	-	-	0.8	M8	30	CuCrZr	10	094-005409-00000	
10.02	Contact tip	-	-	0.9	M8	30	CuCrZr	10	094-005410-00000	
10.02	Contact tip	-	-	1	M8	30	CuCrZr	10	094-005225-00000	
10.02	Contact tip	-	-	1.2	M8	30	CuCrZr	10	094-004207-00000	
10.02	Contact tip	-	-	1.4	M8	30	CuCrZr	10	094-005411-00000	
10.02	Contact tip	-	-	1.6	M8	30	CuCrZr	10	094-005412-00000	
10.05	Contact tip holder	-	-	-	M8	23.2	-	1	094-009896-00500	
10.06	Spatter protection, high-temperature- resistant	-	-	-	-	21	-	1	094-013862-00000	

Liners

Item	Designation	Ø wire mm	Length m	PU Units	Item no.	per unit
10.07	BSLred brass liner for steel, 0°/22°	0.8 - 1.2	-	1	094-016521-00500	
10.07	BSLred brass liner for steel, 35°/45°	0.8 - 1.2	-	1	094-016523-00500	
10.07	BSLblue brass liner for steel, 0°/22°	1.4 - 1.6	-	1	094-016522-00500	
10.07	BSLblue brass liner for steel, 35°/45°	1.4 - 1.6	-	1	094-016524-00500	
10.07	Brass liner for aluminium, 0°/22°	1 - 1.2	-	1	094-016525-00000	
10.07	Brass liner for aluminium, 0°/22°	1.2 - 1.6	-	1	094-016526-00000	
10.07	Brass liner for aluminium, 35°/45°	1 - 1.2	-	1	094-016527-00000	
10.07	Brass liner for aluminium, 35°/45°	1.2 - 1.6	-	1	094-016528-00000	
-	Liner, steel, red	0.8 - 1.2	3.2	1	094-011627-00500	
-	Liner, steel, red	0.8 - 1.2	5	1	094-012655-00500	
-	Steel liner, steel, blue	1.4 - 1.6	3.2	1	094-010579-00500	
-	Steel liner, steel, blue	1.4 - 1.6	5	1	094-022407-00000	

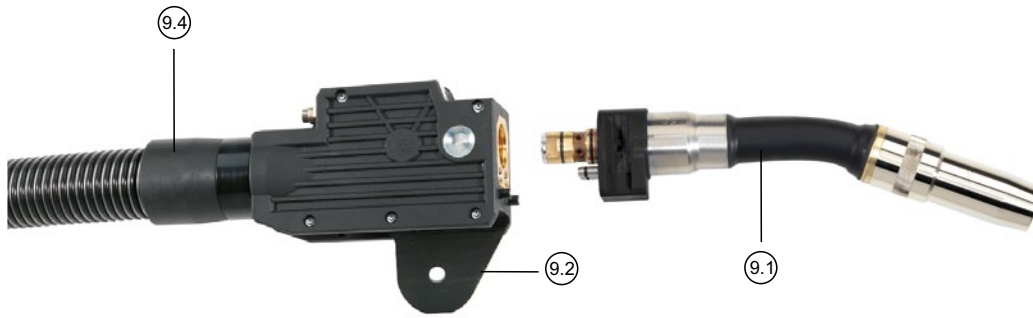
Options/accessories

Drive rolls

	Item no.	PG
WFR U-GROOVE 0.8 Drive roll for aluminium (U-groove)	094-010186-00500	
WFR U-GROOVE 0.9 Drive roll for aluminium (U-groove)	094-016542-00500	
WFR U-GROOVE 1.0 Drive roll for aluminium (U-groove)	094-010187-00500	
WFR U-GROOVE 1.2 Drive roll for aluminium (U-groove)	094-010188-00500	
WFR U-GROOVE 1.6 Drive roll for aluminium (U-groove)	094-016545-00500	
WFR V-GROOVE 0.8 Drive roll, universal (V-groove)	094-016546-00500	
WFR V-GROOVE 0.9 Drive roll, universal (V-groove)	094-016547-00500	
WFR UNI V 1.0 Drive roll, universal (V-groove)	094-010194-00500	
WFR UNI V 1.2 Drive roll, universal (V-groove)	094-010195-00500	
WFR UNI V 1.4 Drive roll, universal (V-groove)	094-010196-00500	
WFR UNI V 1.6 Drive roll, universal (V-groove)	094-010197-00500	



Robot welding torches ■ MTR600W



MIG/MAG robot welding torch, water cooled

- Extremely durable and compact
- Maximum TCP security
- Modular construction
- Quick-change torch neck
- RPC connection: only in combination with M Drive 4 Rob 2X HS

Duty cycle CO2

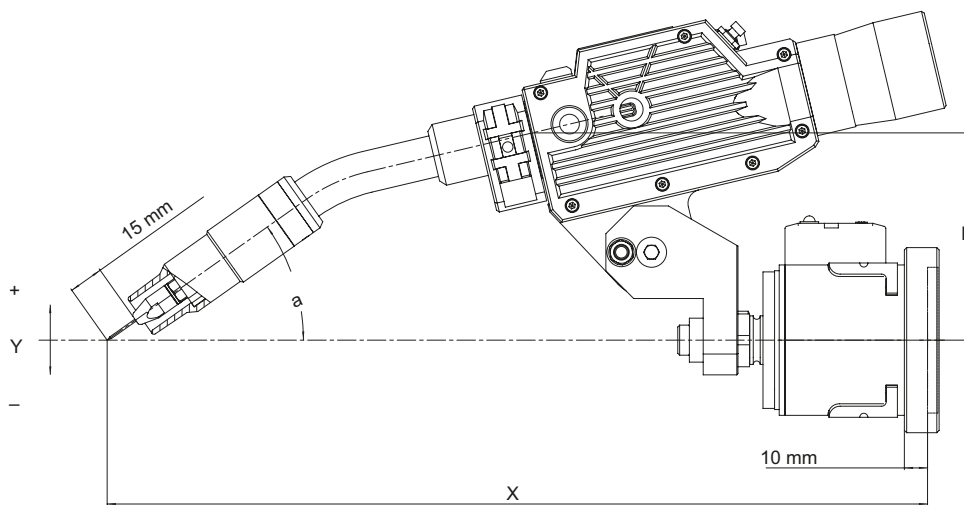
600 A / 100 %

Duty cycle M21

550 A / 100 %

Ø wire

1.2 mm - 1.6 mm



Standard holder

angle	X	Y	h	a
22°	354	0	89	35°
45°	349	0	99	46°

Segment holder

angle	X	Y	h	a
22°	356	55	100	22°
45°	350	3	100	45°

RTM holder

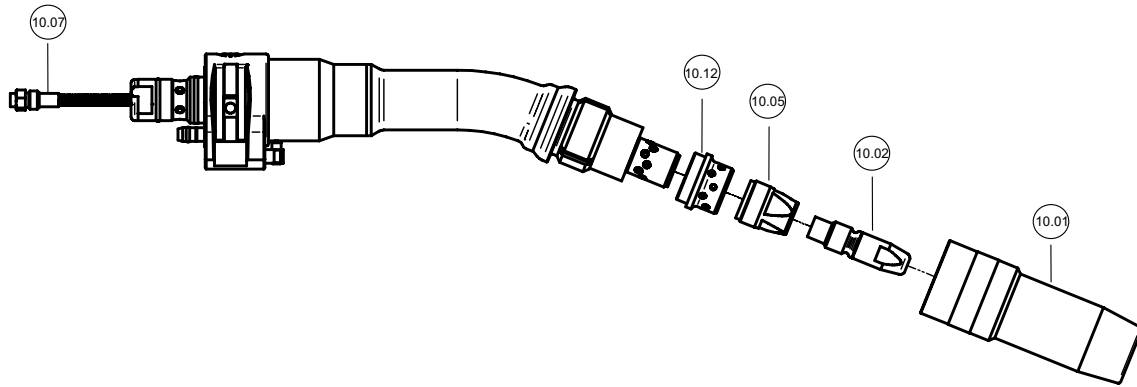
angle	X	Y	h	a
22°	327	0	127	48°
45°	288	-44	127	71°

Item	Type	Designation	Length m	Item no.
9.1	BH WH 600W 22DG	Torch neck	-	094-021803-00000
9.1	BH WH 600W 45DG			094-021804-00000
9.2	RTMHOL	RTM holder WH	-	094-016549-00500
9.2	SEGHOL	Segment holder WH		094-016548-00500
9.2	STANHOL	Standard holder		094-010162-00500
9.4	SP MIG WH W L=1,50M RPC	Hose package, water cooled	1.5	094-021802-00000

► More hose package lengths, torch neck angles and replacement parts on request!



Consumables/Accessories



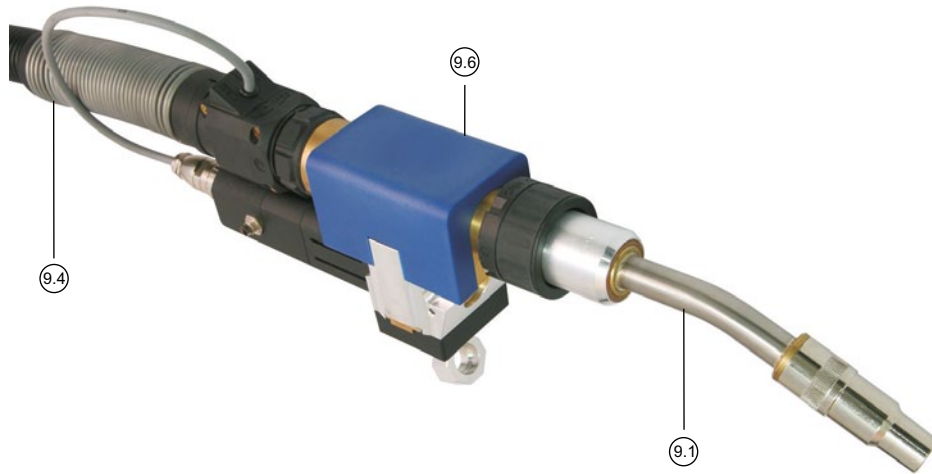
Item	Designation	Stickout/Recess mm	Nozzle Ø mm	Ø wire mm	Threads	Length mm	PU Units	Item no.	per unit
10.01	Gas nozzle, conical	0	21.5	-	-	92	1	094-021813-00000	
10.01	Gas nozzle, conical	+ 6	21.5	-	-	86	1	094-021814-00000	
10.01	Gas nozzle, conical	- 3	21.5	-	-	95	1	094-021815-00000	
10.01	Gas nozzle, conical	0	18	-	-	92	1	094-021816-00000	
10.02	Contact tip	-	-	1.2	M12	45	10	094-021810-00000	
10.02	Contact tip	-	-	1.4	M12	45	10	094-021811-00000	
10.02	Contact tip	-	-	1.6	M12	45	10	094-021812-00000	
10.05	Contact tip holder	-	-	-	M12	23	1	094-021808-00000	
10.12	Gas diffuser	-	-	-	-	18.5	1	094-021809-00000	

Liners

Item	Designation	Ø wire mm	Length	PU Units	Item no.	per unit
10.07	Brass liner for steel	1 - 1.2	239 mm	1	094-021805-00000	
10.07	Brass liner for steel	1.4 - 1.6	239 mm	1	094-021806-00000	
-	Liner, steel, red	0.8 - 1.2	3.2 m	1	094-011627-00500	
-	Liner, steel, red	0.8 - 1.2	5 m	1	094-012655-00500	
-	Steel liner, steel, blue	1.4 - 1.6	3.2 m	1	094-010579-00500	
-	Steel liner, steel, blue	1.4 - 1.6	5 m	1	094-022407-00000	



■ Robot welding torches ■ MIG ROB ABK 500 MF for use on Rob 2 MF wire feeder



MIG/MAG robot welding torch, water cooled

- 4-roller drive unit
- Maximum TCP security
- Modular construction
- Quick-change torch neck
- Equipment as supplied: 1.2 mm contact tip, 22° torch neck, 6 m hose package, NW15.5 mm/70 mm gas nozzle
- Includes standard holder

Duty cycle CO2

550 A / 100 %

Duty cycle M21

500 A / 100 %

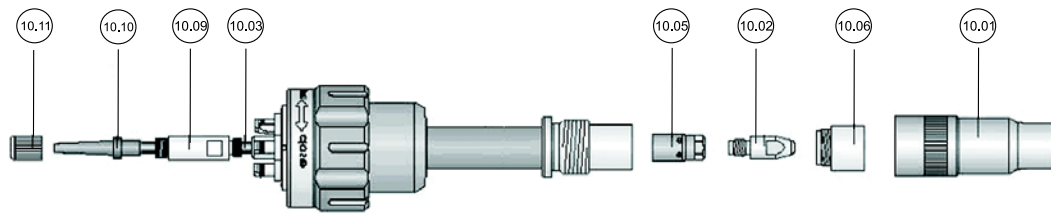
Ø wire

0.8 mm - 1.6 mm

Item	Type	Designation	Length m	Item no.
9	MIG ROB ABK 500 MF	MIG/MAG welding torch 22°, master feeder, 1.2 mm steel, 6 m		094-010203-00000
9.1	TN MIG ROB ABK 500 0°	Torch neck, straight	-	094-021951-00000
9.1	TN MIG ROB ABK 500 22°	Torch neck, 22°	-	094-021983-00000
9.1	TN MIG ROB ABK 500 35°	Torch neck, 35°	-	094-021984-00000
9.1	TN MIG ROB ABK 500 45°	Torch neck, 45°	-	094-021985-00000
9.4	SPA MIG MF 4M	ABK hose package	4.0	094-017905-00000
9.4	SPA MIG MF 6M	ABK hose package	6.0	094-017905-00006
9.6	MF1 ABK	ABK master drive	-	094-017904-00000



Consumables/Accessories



Item	Designation	Stickout/Recess mm	Nozzle Ø mm	Ø wire mm	Threads	Length mm	Material	PU Units	Item no.	per unit
10.01	Gas nozzle, bottle shape	- 1.1	13	-	-	75.5	-	1	094-010221-00000	
10.01	Gas nozzle, bottle shape	+ 2.4	15.5	-	-	72	-	1	094-010222-00000	
10.01	Gas nozzle, conical	+ 1.9	15.5	-	-	72.5	-	1	094-010220-00500	
10.01	Gas nozzle, cylindrical	-	20	-	-	69.5	-	1	094-010223-00000	
10.02	Contact tip	-	-	0.8	M8	30	CuCrZr	10	094-005409-00000	
10.02	Contact tip	-	-	1	M8	30	CuCrZr	10	094-005225-00000	
10.02	Contact tip	-	-	1.2	M8	30	CuCrZr	10	094-004207-00000	
10.02	Contact tip	-	-	1.6	M8	30	CuCrZr	10	094-005412-00000	
10.05	Contact tip holder	-	-	-	M8	23.2	-	1	094-009896-00500	
10.06	Spatter protection, standard	-	-	-	-	17	-	1	094-009897-00000	
10.06	Spatter protection, high-temperature-resistant	-	-	-	-	21	-	1	094-013862-00000	

Liners

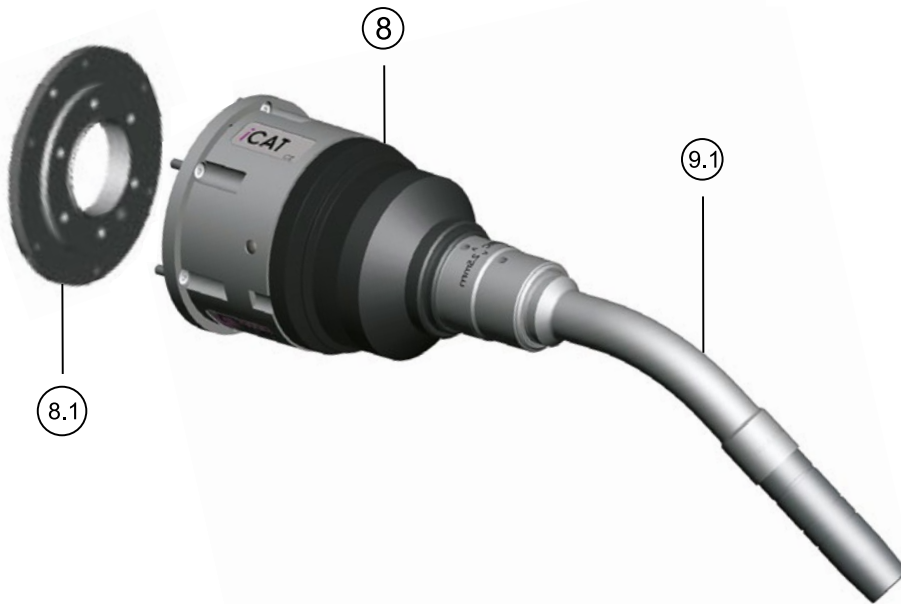
Item	Designation	Ø wire mm	Inside Ø mm	Outside Ø mm	Length	PU Units	Item no.	per unit
10.03	PA liner for aluminium	1.4 - 1.6	2.3	4.7	3 m	1	094-001285-00000	
10.03	PA liner for aluminium	0.8 - 1.2	2	4	3 m	1	094-001282-00000	
10.09	Inlet tube	-	-	-	23 mm	1	094-011293-00000	
10.10	Wire inlet guide, PA	-	4	-	-	1	094-011292-00000	
10.10	Inlet nipple, PVC	-	4.5	-	-	1	094-010827-00000	
10.10	BSL liner for steel	0.8 - 1.2	2	4.5	3 m	1	094-010578-00000	
10.10	Inlet nipple, PVC, for BSL liner	-	-	-	-	1	094-013024-00000	
10.10	BSL liner for steel	1.4 - 1.6	2.4	4.5	3 m	1	094-010579-00000	
10.11	Sleeve	-	-	-	-	1	094-011295-00000	
-	Wire feed nozzle	0.8	-	-	-	1	094-011281-00000	
-	Wire feed nozzle	1	-	-	-	1	094-011282-00000	
-	Wire feed nozzle	1.2	-	-	-	1	094-011283-00000	
-	Wire feed nozzle	1.6	-	-	-	1	094-011289-00000	
-	Liner sleeve	-	-	-	-	1	094-011284-00000	

Options/accessories

Drive rolls	Item no.
WFROLL AL 0.8 Drive roll for aluminium (U-groove)	094-010214-00000
WFROLL AL 0.9 Drive roll for aluminium (U-groove)	094-010215-00000
WFROLL AL 1.0 Drive roll for aluminium (U-groove)	094-010216-00000
WFROLL AL 1.2 Drive roll for aluminium (U-groove)	094-010217-00000
WFROLL AL 1.6 Drive roll for aluminium (U-groove)	094-010218-00000
WFROLL FE 0.8 Drive roll for steel (V-groove)	094-010211-00000
WFROLL FE 0,9 Drive roll for steel (V-groove)	094-010883-00000
WFROLL FE 1.2 Drive roll for steel (V-groove)	094-010207-00000
WFROLL 1.2mm Wire feed roll, smooth	094-018246-00000
WFROLL FE 1.0 Drive roll for steel (V-groove)	094-010212-00000
WFROLL FE 1.6 Drive roll for steel (V-groove)	094-010213-00000



Robot welding torches ■ Systems for hollow wrist robots, gas-cooled



MIG/MAG welding torch for hollow shaft robots, gas-cooled

- Extremely durable and compact
- Maximum TCP security
- Modular construction
- Quick-change torch neck
- Excellent accessibility with optimum performance

Duty cycle CO2

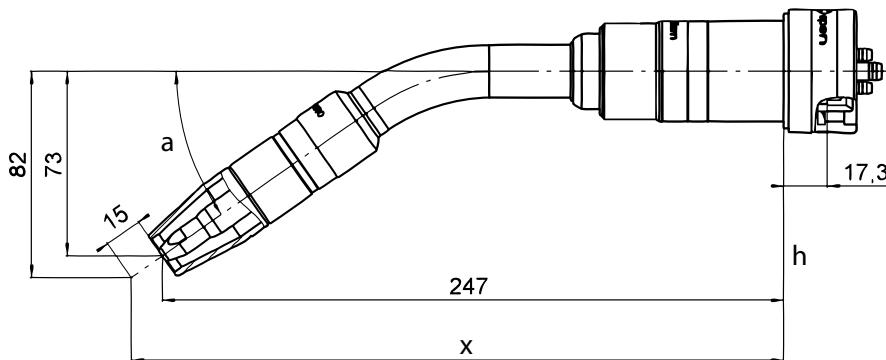
500 A / 100 %

Duty cycle M21

400 A / 100 %

Ø wire

0.8 mm - 1.6 mm



Standard holder

Angle	X	Y	h	a
0°	393	0	97	21°
22°	376	0	101	34°

Segment holder

Angle	X	Y	h	a
0°	399	45	114	15°
22°	377	0	114	37°

RTM holder

Angle	X	Y	h	a
0°	378	42	146	23°
45°	324	0	146	45°

Fanuc Arc Mate 100iC/120iC

Item	Type	Designation	Length m	Item no.
8	iSTM ABIROB A	Torch interface complete		094-012932-00000
8.1	FLANGE FANUC iSTM C100/120	Intermediate flange, FANUC C100/120		094-012934-00000
8.1	SWIVEL FANUC iSTM C100/120	Rotating joint, FANUC C100/120		094-012935-00000
9.1	TN MIG ROB A500TS 0°	Torch neck ABIROB A500TS	-	094-011259-00000
9.1	TN MIG ROB A500TS 22°		094-011260-00500	
9.1	TN MIG ROB A500TS 35°		094-011261-00000	
9.1	TN MIG ROB A500TS 45°		094-011262-00500	
9.4	SP C100iC G EZA	Hose package, gas cooled	0,85	094-013712-00000
9.4	SP C120iC G EZA		1,05	094-013713-00000
9.4	SP G 100iC 10L		1,25	094-013717-00000
9.4	SP G 100iC 6L		1,07	094-013716-00000

ABB IRB 1520 ID / ABB IRB 1600 ID

Item	Type	Designation	Length m	Item no.
8	iCAT A	Collision sensor		094-012718-00000
8.1	FLANGE ABB IRB 1600	Intermediate flange, ABB IRB 1520/1600		094-019884-00000
9.1	TN MIG ROB A500TS 0°	Torch neck ABIROB A500TS	-	094-011259-00000
9.1	TN MIG ROB A500TS 22°		094-011260-00500	
9.1	TN MIG ROB A500TS 35°		094-011261-00000	
9.1	TN MIG ROB A500TS 45°		094-011262-00500	
9.4	SP ABB 1520 G 1,03M	Hose package, gas cooled	1,03	094-019866-00000
9.4	SP ABB 1600 G 1,03M			094-019867-00000


ABB IRB 2600 ID

Item	Type	Designation	Length m	Item no.
8	iCAT A	Collision sensor		094-012718-00000
8.1	FLANGE ABB IRB 2600	Intermediate flange, ABB IRB 2600		094-019886-00000
9.1	TN MIG ROB A500TS 0°			094-011259-00000
9.1	TN MIG ROB A500TS 22°	Torch neck ABIROB A500TS		094-011260-00500
9.1	TN MIG ROB A500TS 35°		094-011261-00000	
9.1	TN MIG ROB A500TS 45°		094-011262-00500	
9.4	SP ABB 2600ID-8/2.00 W		1,16	094-019869-00000
9.4	SP MIG ABB IRB 2600ID-15/1,85 W	Hose package, gas cooled	1,38	094-019868-00000

Kuka KR5 arc HW

Item	Type	Designation	Length m	Item no.
8	iCAT A	Collision sensor		094-012718-00000
8.1	FLANGE KUKA KR5	KUKA KR5 intermediate flange		094-013316-00000
9.1	TN MIG ROB A500TS 0°			094-011259-00000
9.1	TN MIG ROB A500TS 22°	Torch neck ABIROB A500TS		094-011260-00500
9.1	TN MIG ROB A500TS 35°		094-011261-00000	
9.1	TN MIG ROB A500TS 45°		094-011262-00500	
9.4	SP KR5 G HWEWM	Hose package, gas cooled	0,91	094-013323-00000

Kuka KR16 arc HW / KR16 L8 arc HW

Item	Type	Designation	Length m	Item no.
8	iCAT A	Collision sensor		094-012718-00000
8.1	FLANGE KUKA KR16 arc HW	Intermediate flange, KUKA KR16		094-019885-00000
9.1	TN MIG ROB A500TS 0°			094-011259-00000
9.1	TN MIG ROB A500TS 22°	Torch neck ABIROB A500TS		094-011260-00500
9.1	TN MIG ROB A500TS 35°		094-011261-00000	
9.1	TN MIG ROB A500TS 45°		094-011262-00500	
9.4	SPA MIG KUKA KR 16 EWM		1,04	094-019874-00000
9.4	SPA MIG KUKA KR 16 L8 W EWM	Hose package, gas cooled	1,43	094-019875-00000

MOTOMAN MA 1400/1550/1800/1900 / VA1400

Item	Type	Designation	Length m	Item no.
8	iCAT A	Collision sensor		094-012718-00000
8.1	FLANGE MOTOMAN 56mm	Intermediate flange, MOTOMAN		094-012715-00000
9.1	TN MIG ROB A500TS 0°			094-011259-00000
9.1	TN MIG ROB A500TS 22°	Torch neck ABIROB A500TS		094-011260-00500
9.1	TN MIG ROB A500TS 35°		094-011261-00000	
9.1	TN MIG ROB A500TS 45°		094-011262-00500	
9.4	SP EA 1400G/SSA2000		0,97	094-012857-00000
9.4	SP EA 1900G EZA		1,26	094-012900-00000
9.4	SP MOTOMAN MA1800 G	Hose package, gas cooled	1,13	094-019880-00000
9.4	SPA MIG MOTOMAN MA1550 G		1,11	094-019879-00000
9.4	SPA MIG MOTOMAN VA1400 G		0,97	094-019878-00000

MOTOMAN MA 2010 / MA1440 / MH24

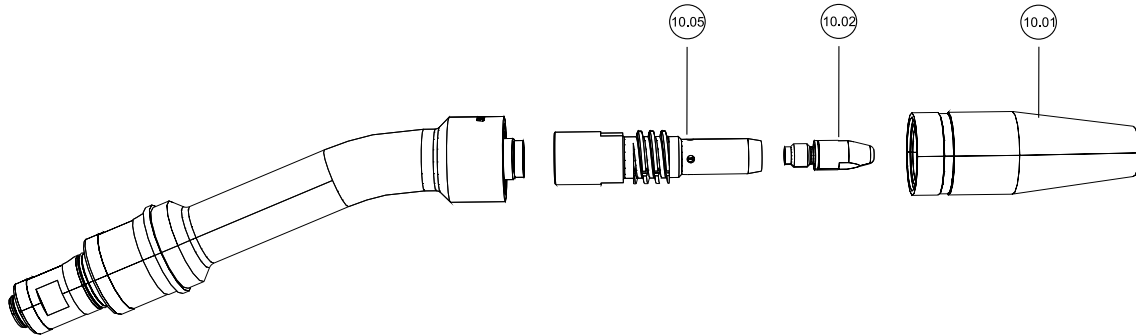
Item	Type	Designation	Length m	Item no.
8	iCAT A	Collision sensor		094-012718-00000
8.1	ZF ICAT D=56.0MM D=62	Intermediate flange		094-021590-00000
9.1	TN MIG ROB A500TS 0°			094-011259-00000
9.1	TN MIG ROB A500TS 22°	Torch neck ABIROB A500TS		094-011260-00500
9.1	TN MIG ROB A500TS 35°		094-011261-00000	
9.1	TN MIG ROB A500TS 45°		094-011262-00500	
9.4	SP MOTOMAN ICAT A MA1440		0,9	094-020965-00000
9.4	SP MOTOMAN ICAT A MA2010	Hose package, gas cooled	1,4	094-021723-00000
9.4	SP MOTOMAN ICAT A MH24		1,0	094-021696-00000

► Order welding torch fully equipped. Replacement parts and equipment parts are not part of the scope of supply and must be ordered based on the specific application!

► Please note: Torch neck, collision sensor, intermediate flange and hose package are not included in the scope of supply and must be ordered separately!



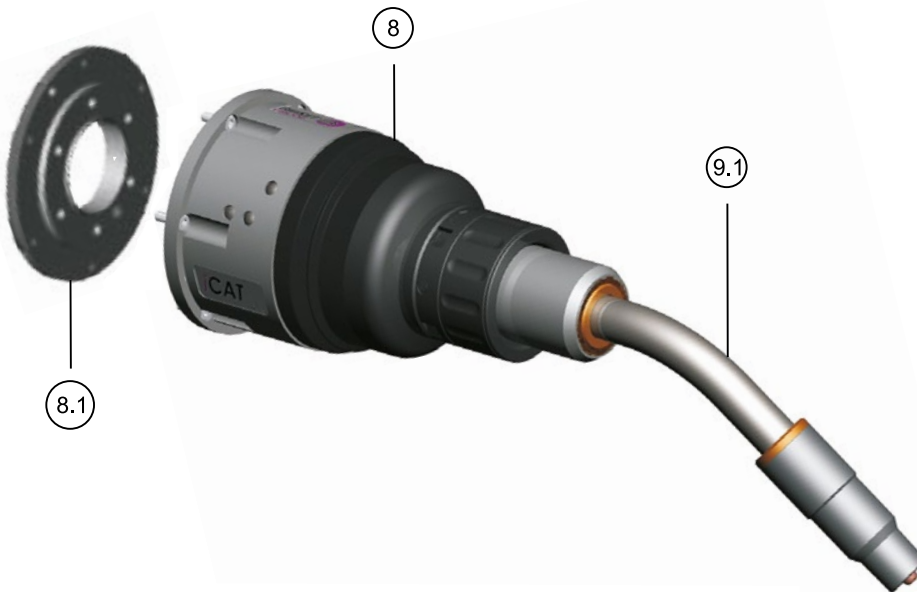
Consumables/Accessories



Item	Designation	Stickout/Recess	Nozzle Ø	Ø wire	Threads	Length	PU	Item no.	per unit
		mm	mm	mm		mm	Units		
10.01	Gas nozzle, conical	+ 3	16	-	-	72	1	094-011265-00000	
10.01	Gas nozzle, conical	0	16	-	-	75	1	094-011263-00000	
10.01	Gas nozzle, conical	- 2	16	-	-	77	1	094-011264-00000	
10.02	CuCrZr contact tip, silver plated	-	-	0.8	M8	30	10	094-011269-00000	
10.02	CuCrZr contact tip, silver plated	-	-	0.9	M8	30	10	094-011270-00000	
10.02	CuCrZr contact tip, silver plated	-	-	1	M8	30	10	094-011271-00000	
10.02	CuCrZr contact tip, silver plated	-	-	1.2	M8	30	10	094-011272-00000	
10.02	CuCrZr contact tip, silver plated	-	-	1.4	M8	30	10	094-011273-00000	
10.02	CuCrZr contact tip, silver plated	-	-	1.6	M8	30	10	094-011274-00000	
10.05	RT contact tip holder	-	-	-	M8	70	1	094-011276-00500	



Robot welding torches ■ Systems for hollow wrist robots, water-cooled



MIG/MAG welding torch for hollow wrist robots, water cooled

- Extremely durable and compact
- Maximum TCP security
- Modular construction
- Quick-change torch neck
- Excellent accessibility with optimum performance

Duty cycle CO2

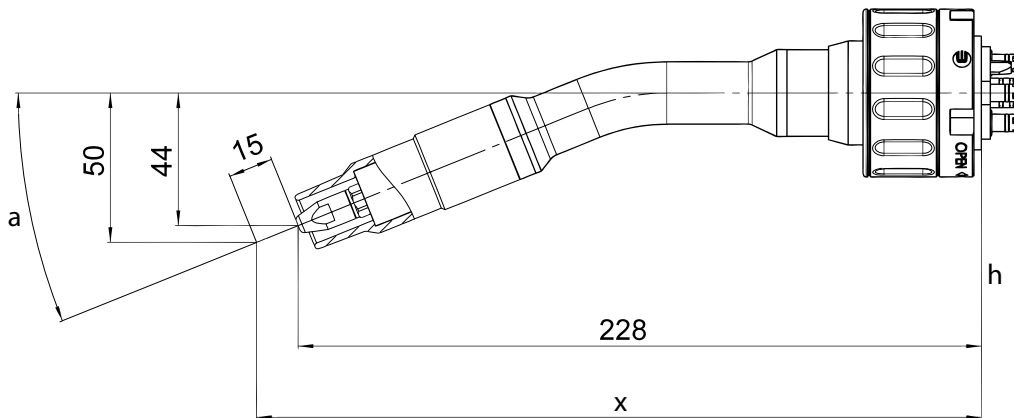
500 A / 100 %

Duty cycle M21

500 A / 100 %

Ø wire

0.8 mm - 1.6 mm



Standard holder					Standard holder					Holder, rigid				
Angle	X	Y	h	a	Angle	X	Y	h	a	Angle	X	Y	h	a
22°	399	0	103	33°	22°	400	0	115	36°	22°	400	0	153	45°
45°	370	0	105	45°	45°	368	0	118	48°	45°	288	-44	126	50°

■ Fanuc Arc Mate 100iC/120iC

Item	Type	Designation	Length m	Item no.
8	iSTM ABIROB W	Torch interface complete		094-012933-00000
8.1	FLANGE FANUC iSTM C100/120	Intermediate flange, FANUC C100/120		094-012934-00000
8.1	SWIVEL FANUC iSTM C100/120	Rotating joint, FANUC C100/120		094-012935-00000
9.1	BH ROB 500W 22° x242 y50	Torch neck with gas nozzle sensor, 22°	-	094-012936-00000
9.1	BH ROB 500W 35° x227 y81	Torch neck with gas nozzle sensor, 35°		094-012937-00000
9.1	BH ROB 500W 45° x211 y105	Torch neck with gas nozzle sensor, 45°		094-012716-00000
9.4	SP C100iC W EZA 0.85m		0,85	094-013714-00000
9.4	SP C100iC W EZA 6L 1.07m		1,07	094-013718-00000
9.4	SP C120iC W EZA 1.05m	Hose package, water cooled	1,05	094-013715-00000
9.4	SP C120iC W EZA 10L 1.25m		1,25	094-018359-00000

■ Fanuc ArcMate 100iC 6L / 710iC 12L

Item	Type	Designation	Length m	Item no.
8	iCAT W	Collision sensor		094-012714-00000
8.1	FLANGE FANUC C100/120	Intermediate flange, FANUC C100/120		094-013711-00000
9.1	BH ROB 500W 22° x242 y50	Torch neck with gas nozzle sensor, 22°	-	094-012936-00000
9.1	BH ROB 500W 35° x227 y81	Torch neck with gas nozzle sensor, 35°		094-012937-00000
9.1	BH ROB 500W 45° x211 y105	Torch neck with gas nozzle sensor, 45°		094-012716-00000
9.4	MIG Fanuc 100iC/6L iCAT W		1,09	094-020192-00000
9.4	MIG Fanuc M-710iC/12L iCAT W	Hose package, water cooled	2,16	094-021865-00000



ABB IRB 1520 ID / ABB IRB 1600 ID

Item	Type	Designation	Length m	Item no.
8	iCAT W	Collision sensor		094-012714-00000
8.1	FLANGE ABB IRB 1600	Intermediate flange, ABB IRB 1520/1600		094-019884-00000
9.1	BH ROB 500W 22° x242 y50	Torch neck with gas nozzle sensor, 22°	-	094-012936-00000
9.1	BH ROB 500W 35° x227 y81	Torch neck with gas nozzle sensor, 35°		094-012937-00000
9.1	BH ROB 500W 45° x211 y105	Torch neck with gas nozzle sensor, 45°		094-012716-00000
9.4	SP ABB 1600 W 1,03M		1,03	094-019871-00000
9.4	SPA MIG ABB IRB 1520 W	Hose package, water cooled		094-019870-00000

ABB IRB 2600 ID

Item	Type	Designation	Length m	Item no.
8	iCAT W	Collision sensor		094-012714-00000
8.1	FLANGE ABB IRB 2600	Intermediate flange, ABB IRB 2600		094-019886-00000
9.1	BH ROB 500W 22° x242 y50	Torch neck with gas nozzle sensor, 22°	-	094-012936-00000
9.1	BH ROB 500W 35° x227 y81	Torch neck with gas nozzle sensor, 35°		094-012937-00000
9.1	BH ROB 500W 45° x211 y105	Torch neck with gas nozzle sensor, 45°		094-012716-00000
9.4	SP ABB 2600ID-8/2.00 W		1,16	094-019873-00000
9.4	SP MIG ABB IRB 2600ID-15/1,85 W	Hose package, water cooled	1,38	094-019872-00000

Kuka KR5 arc HW

Item	Type	Designation	Length m	Item no.
8	iCAT W	Collision sensor		094-012714-00000
8.1	FLANGE KUKA KR5	KUKA KR5 intermediate flange		094-013316-00000
9.1	BH ROB 500W 22° x242 y50	Torch neck with gas nozzle sensor, 22°	-	094-012936-00000
9.1	BH ROB 500W 35° x227 y81	Torch neck with gas nozzle sensor, 35°		094-012937-00000
9.1	BH ROB 500W 45° x211 y105	Torch neck with gas nozzle sensor, 45°		094-012716-00000
9.4	SP KR5 W HWEWM	Hose package, water cooled	0,91	094-013317-00000

Kuka KR16 arc HW / KR16 L8 arc HW

Item	Type	Designation	Length m	Item no.
8	iCAT W	Collision sensor		094-012714-00000
8.1	FLANGE KUKA KR16 arc HW	Intermediate flange, KUKA KR16		094-019885-00000
9.1	BH ROB 500W 22° x242 y50	Torch neck with gas nozzle sensor, 22°	-	094-012936-00000
9.1	BH ROB 500W 35° x227 y81	Torch neck with gas nozzle sensor, 35°		094-012937-00000
9.1	BH ROB 500W 45° x211 y105	Torch neck with gas nozzle sensor, 45°		094-012716-00000
9.4	SPA MIG KUKA KR 16 L8 W EWM		1,43	094-019877-00000
9.4	SPA MIG KUKA KR 16 W EWM	Hose package, water cooled	1,04	094-019876-00000

MOTOMAN MA 1400/1550/1800/1900 / VA1400

Item	Type	Designation	Length m	Item no.
8	iCAT W	Collision sensor		094-012714-00000
8.1	FLANGE MOTOMAN 56mm	Intermediate flange, MOTOMAN		094-012715-00000
9.1	BH ROB 500W 22° x242 y50	Torch neck with gas nozzle sensor, 22°	-	094-012936-00000
9.1	BH ROB 500W 35° x227 y81	Torch neck with gas nozzle sensor, 35°		094-012937-00000
9.1	BH ROB 500W 45° x211 y105	Torch neck with gas nozzle sensor, 45°		094-012716-00000
9.4	SP EA 1400W EZA		0,97	094-012858-00000
9.4	SP EA 1900W EZA		1,26	094-012717-00000
9.4	SP MOTOMAN MA1550 W	Hose package, water cooled	1,11	094-019882-00000
9.4	SP MOTOMAN MA1800 W		1,13	094-019883-00000
9.4	SP MOTOMAN VA1400 W		0,97	094-019881-00000

MOTOMAN MA 2010 / MA1440 / MH24

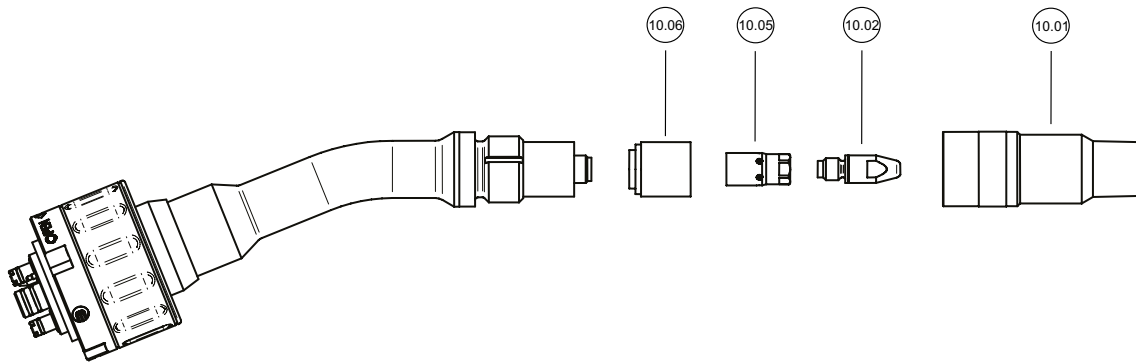
Item	Type	Designation	Length m	Item no.
8	iCAT W	Collision sensor		094-012714-00000
8.1	ZF ICAT D=56.0MM D=62	Intermediate flange		094-021590-00000
9.1	BH ROB 500W 22° x242 y50	Torch neck with gas nozzle sensor, 22°	-	094-012936-00000
9.1	BH ROB 500W 35° x227 y81	Torch neck with gas nozzle sensor, 35°		094-012937-00000
9.1	BH ROB 500W 45° x211 y105	Torch neck with gas nozzle sensor, 45°		094-012716-00000
9.4	SP MOTOMAN ICAT W MA1440		0,85	094-020964-00000
9.4	SP MOTOMAN ICAT W MA2010	Hose package, water cooled	1,37	094-021034-00001
9.4	SP MOTOMAN ICAT W MH24		1,04	094-021697-00000

► Order welding torch fully equipped. Replacement parts and equipment parts are not part of the scope of supply and must be ordered based on the specific application!

► Please note: Torch neck, collision sensor, intermediate flange and hose package are not included in the scope of supply and must be ordered separately!



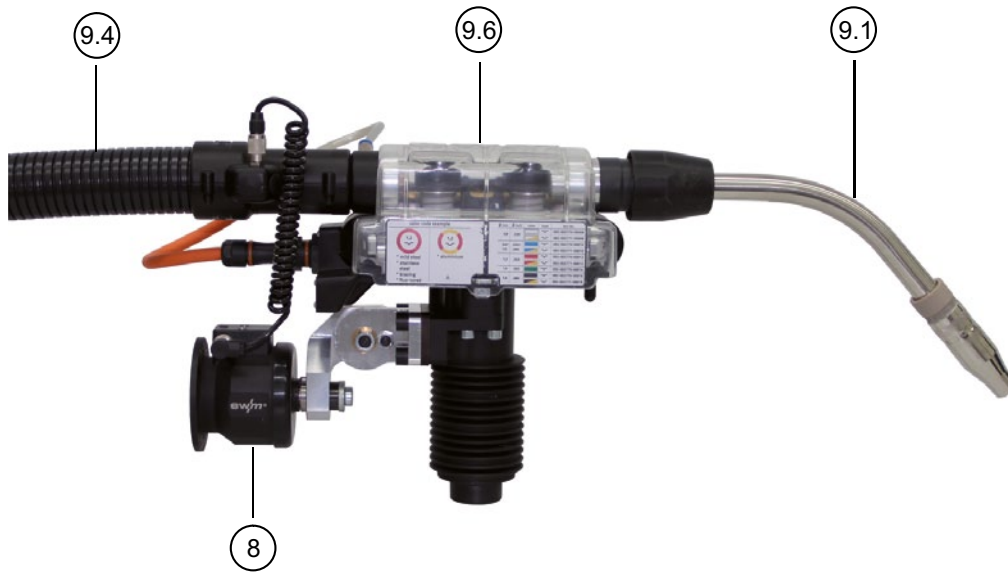
Consumables/Accessories



Item	Designation	Stickout/Recess mm	Nozzle Ø mm	Ø wire mm	Threads	Length mm	Material	PU Units	Item no.	per unit
10.01	Gas nozzle, conical	+ 1.9	15.5	-	-	72.5	-	1	094-010220-00500	
10.01	Gas nozzle, conical	- 1.1	15.5	-	-	75.5	-	1	094-010219-00000	
10.02	Contact tip	-	-	0.8	M8	-	E-Cu	10	094-001252-00000	
10.02	Contact tip	-	-	1	M8	-	E-Cu	10	094-000941-00000	
10.02	Contact tip	-	-	1.2	M8	-	E-Cu	10	094-000942-00000	
10.02	Contact tip	-	-	1.4	M8	-	E-Cu	10	094-001253-00000	
10.02	Contact tip	-	-	1.6	M8	-	E-Cu	10	094-001254-00000	
10.05	RT contact tip holder	-	-	-	M8	23.2	Copper	1	094-010891-00000	
10.06	Spatter protection, standard	-	-	-	-	17	-	1	094-009897-00000	
10.06	Spatter protection, high-temperature-resistant	-	-	-	-	21	-	1	094-013862-00000	



Robot welding torches ■ RMT301G frontDrive, gas cooled



MIG/MAG robot welding torch, gas cooled

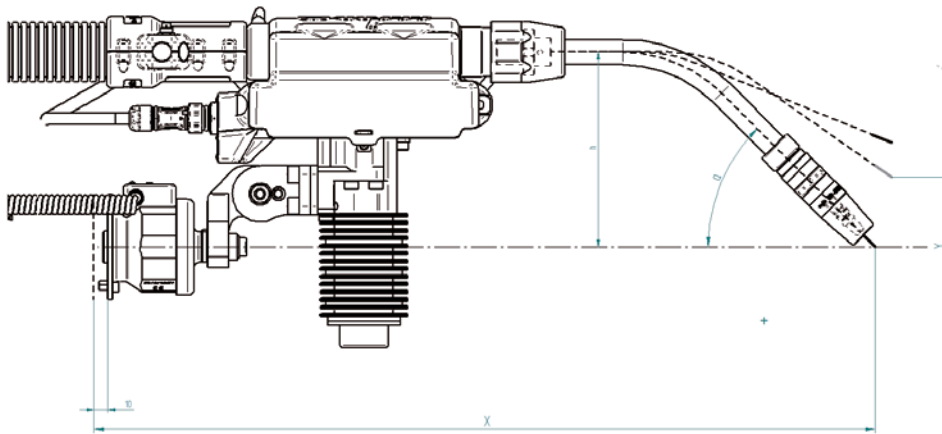
- 4-roller drive unit
- Maximum TCP security
- Modular construction
- Quick-change torch neck
- To use on alpha Q or Phoenix robot power source with F drive Rob 3

Duty cycle M21

300 A / 100 %

Ø wire

0.8 mm - 1.6 mm



Winkel a	X	Y	h
22°	571,5	75	139,5
35°	571,5	50	139,5
45°	560	0	139,5

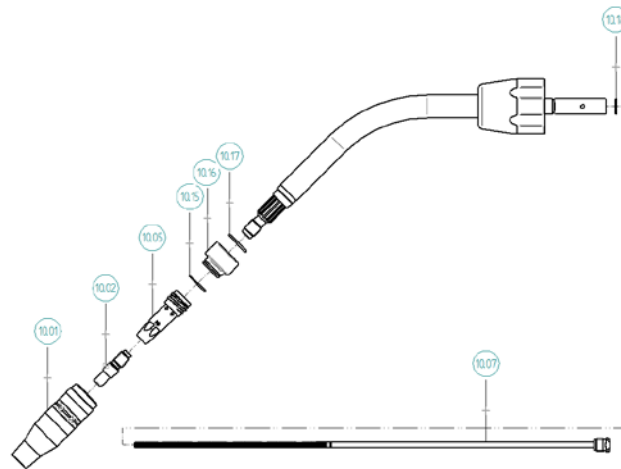
Item	Type	Designation	Length m	Item no.
8	RSA STRONG	Collision sensor		094-020727-00000
9.1	RMT301G 22° L=264MM	Torch neck	-	094-022255-00000
9.1	RMT301G 35° L=264MM			094-022256-00000
9.1	RMT301G 45° L=252MM			094-022074-00000
9.4	SP G FRONTDRIVE RSA L=1,5M	Torch hose package, gas cooled	1.5	094-020728-00000
9.6	frontDrive	Drive unit, 4 rolls	-	090-005393-00502

► Order welding torch fully equipped. Replacement parts and equipment parts are not part of the scope of supply and must be ordered based on the specific application!

► More hose package lengths, torch neck angles and replacement parts on request!



Consumables/Accessories



Item	Designation	Stickout/ Recess	Nozzle Ø	Ø wire	Inside Ø	Threads	Length	Material	PU	Item no.	per unit
		mm	mm	mm	mm		mm		Units		
10.01	Gas nozzle	-	13	-	-	-	76.5	-	1	094-022037-00001	
10.01	Gas nozzle	-	15	-	-	-	76.5	-	1	094-022038-00001	
10.01	Gas nozzle	-	18	-	-	-	76.5	-	1	094-022039-00001	
10.02	Contact tip	-	-	1	-	M9	35	CuCrZr	10	094-013530-00000	
10.02	Contact tip	-	-	1	-	M9	35	CuCrZr	10	094-013530-00000	
10.02	Contact tip	-	-	1.2	-	M9	35	CuCrZr	10	094-013531-00000	
10.02	Contact tip	-	-	1.6	-	M9	35	CuCrZr	10	094-013533-00000	
10.02	Contact tip, aluminium welding	-	-	1	-	M9	35	E-Cu	10	094-013545-00000	
10.02	Contact tip, aluminium welding	-	-	1.2	-	M9	35	E-Cu	10	094-013546-00000	
10.05	Contact tip holder	-3	-	-	-	M9	48	-	1	094-022020-00000	
10.05	Contact tip holder	0	-	-	-	M9	51	-	1	094-022263-00000	
10.05	Contact tip holder	+3	-	-	-	M9	54	-	1	094-022264-00000	
10.15	O-ring	-	-	-	16	-	-	-	1	094-022170-00001	
10.16	Pf stop ring	-	-	-	14	-	-	-	1	092-021515-00000	
10.17	O-ring	-	-	-	17	-	-	-	1	094-021611-00000	
10.18	O-ring	-	-	-	10	-	-	-	1	094-017661-00000	

Liner hose package

10.04	Steel liner, red					1 - 1.2	2500	Steel / CrNi	1	094-022258-00000	
10.04	Steel liner, yellow					1.6	2500	-Steel / CrNi	1	094-022259-00000	
10.04	Steel liner, aluminium					1 - 1.2	2500	Aluminium	1	094-022260-00000	

Liner torch neck

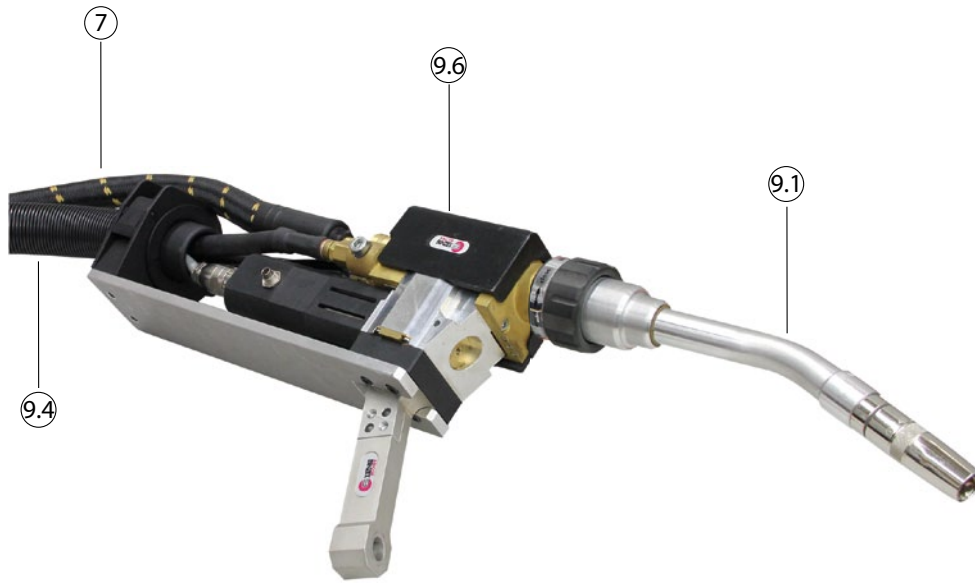
10.07	Liner					1 - 1.2	350	Steel / CrNi	1	094-022268-00000	
10.07	Liner					1.6	350	-Steel / CrNi	1	094-022271-00000	
10.07	Steel liner					1 - 1.2	350	Aluminium	1	094-022269-00000	

Options/accessories

Drive rolls	Item no.	PG
DVA FD 1,0MM U BLUE/YELLOW Drive roll for aluminium (U-groove)	092-008810-00010	
DVA FD 1,2MM U RED/YELLOW Drive roll for aluminium (U-groove)	092-008810-00012	
DVA FD 1,0MM V BLUE Drive roll for steel (V-groove)	092-019625-00010	
DVA FD 1,2MM V RED Drive roll for steel (V-groove)	092-019625-00012	
DVA FD 1,6MM V BLACK Drive roll for steel (V-groove)	092-019625-00016	
AL 4AR 0.8mm Drive roll set frontDrive, for aluminium	092-008821-00008	
AL 4AR 1.0mm Drive roll set frontDrive, for aluminium	092-008821-00010	
AL 4AR 1.2mm Drive roll set frontDrive, for aluminium	092-008821-00012	
AL 4AR 1.6mm Drive roll set frontDrive, for aluminium	092-008821-00016	
UNI 4AR 0.8mm Drive roll set frontDrive, universal	092-008820-00008	
UNI 4AR 1.0mm Drive roll set frontDrive, universal	092-008820-00010	
UNI 4AR 1.2mm Drive roll set frontDrive, universal	092-008820-00012	
UNI 4AR 1.6mm Drive roll set frontDrive, universal	092-008820-00016	



Robot welding torches ■ MIG ROB ABK A 360 MasterPull



MIG/MAG robot welding torch, gas cooled

- 4-roll drive
- Maximum TCP security
- Quick-change torch neck
- For operation on alpha Q or Phoenix MasterPull power source

Duty cycle CO2

360 A / 100 %

Duty cycle M21

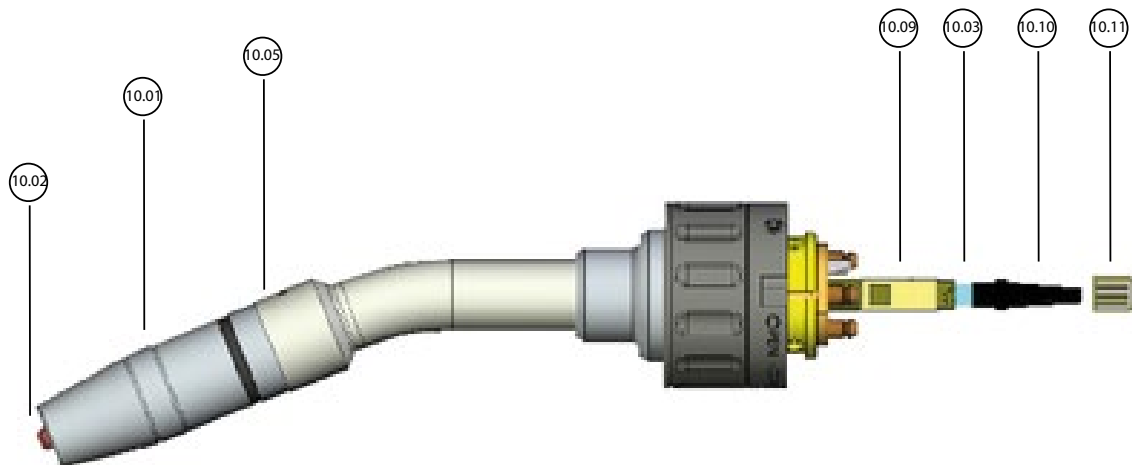
290 A / 100 %

Ø wire

0.8 mm - 1.4 mm

Item	Type	Designation	Length m	Item no.
7	Masterliner HD 4m	Wire guide		094-019127-00004
7	Masterliner HD 8m			094-019127-00000
7	Masterliner HD 10m			094-019127-00010
7	Masterliner HD 15m			094-019127-00015
7.1	SET MASTERLINER	Masterliner HD connection set, including all Masterliner connections	-	094-019128-00000
9.1	RTN MasterPull 360A 22°	Torch neck, MasterPull 22°		094-019123-00000
9.1	RTN MasterPull 360A 35°	Torch neck, MasterPull 35°		094-019124-00000
9.1	RTN MasterPull 360A 45°	Torch neck, MasterPull 45°		094-019125-00000
9.4	TBROB MasterPull 6m	Hose package, MasterPull 6 m	6.0	094-018250-00006
9.4	TBROB MasterPull 8m	Hose package, MasterPull 8 m	8.0	094-018250-00000
9.4	TBROB MasterPull 10m	Hose package, MasterPull 10 m	10.0	094-018250-00010
9.6	masterPull	Master drive with 0-20m/min wire feed speed	-	094-017455-00000

► Order welding torch fully equipped. Replacement parts and equipment parts are not part of the scope of supply and must be ordered based on the specific application!


Consumables/Accessories


Item	Designation	Stickout/Recess	Nozzle Ø	Ø wire	Threads	Length	PU	Item no.	per unit
		mm	mm	mm		mm	Units		
10.01	Gas nozzle, conical	0	14	-	-	68	1	094-010142-00500	
10.01	Gas nozzle, conical	0	16	-	-	68	1	094-010566-00500	
10.01	Gas nozzle, bottle shape	+ 3	12	-	-	65	1	094-010563-00000	
10.01	Gas nozzle, bottle shape	0	12	-	-	68	1	094-010561-00000	
10.01	Gas nozzle, bottle shape	- 2	12	-	-	70	1	094-010562-00000	
10.01	Gas nozzle, conical	+ 3	14	-	-	65	1	094-010565-00000	
10.01	Gas nozzle, conical	- 2	14	-	-	70	1	094-010564-00000	
10.01	Gas nozzle, conical	+ 3	16	-	-	65	1	094-010568-00000	
10.01	Gas nozzle, conical	- 2	16	-	-	70	1	094-010567-00000	
10.02	CuCrZr contact tip, silver plated	-	-	0.8	M6	28	10	094-010468-00000	
10.02	CuCrZr contact tip, silver plated	-	-	0.9	M6	28	10	094-010469-00000	
10.02	CuCrZr contact tip, silver plated	-	-	1	M6	28	10	094-010470-00000	
10.02	CuCrZr contact tip, silver plated	-	-	1.2	M6	28	10	094-016488-00000	
10.02	CuCrZr contact tip, silver plated	-	-	1.4	M6	28	10	094-010471-00000	
10.02	CuCrZr contact tip, silver plated	-	-	0.8	M8	30	10	094-011269-00000	
10.02	CuCrZr contact tip, silver plated	-	-	0.9	M8	30	10	094-011270-00000	
10.02	CuCrZr contact tip, silver plated	-	-	1	M8	30	10	094-011271-00000	
10.02	CuCrZr contact tip, silver plated	-	-	1.2	M8	30	10	094-011272-00000	
10.02	CuCrZr contact tip, silver plated	-	-	1.4	M8	30	10	094-011273-00000	
10.05	RT contact tip holder	-	-	-	M6	-	1	094-010143-00500	
10.05	Contact tip holder	-	-	-	M8	-	1	094-010575-00000	

Liners

Item	Designation	Ø wire	Inside Ø	Outside Ø	Length	PU	Item no.	per unit
		mm	mm	mm		Units		
10.03	PA liner for aluminium	1.4 - 1.6	2.3	4.7	3 m	1	094-001285-00000	
10.03	PA liner for aluminium	0.8 - 1.2	2	4	3 m	1	094-001282-00000	
10.09	Inlet tube	-	-	-	23 mm	1	094-011293-00000	
10.10	Wire inlet guide, PA	-	4	-	-	1	094-011292-00000	
10.10	Inlet nipple, PVC	-	4.5	-	-	1	094-010827-00000	
10.10	BSL liner for steel	0.8 - 1.2	2	4.5	3 m	1	094-010578-00000	
10.10	Inlet nipple, PVC, for BSL liner	-	-	-	-	1	094-013024-00000	
10.10	BSL liner for steel	1.4 - 1.6	2.4	4.5	3 m	1	094-010579-00000	
10.11	Sleeve	-	-	-	-	1	094-011295-00000	

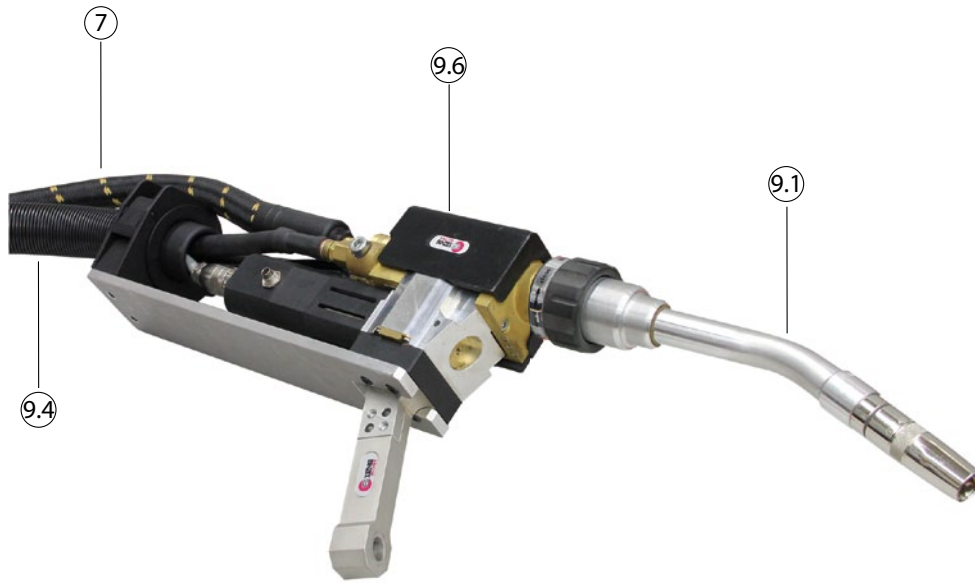


■ Options/accessories

■ Drive rolls	Item no.	PG	
WFROLL AL 0.8 Drive roll for aluminium (U-groove)	094-010214-00000		
WFROLL AL 0.9 Drive roll for aluminium (U-groove)	094-010215-00000		
WFROLL AL 1.0 Drive roll for aluminium (U-groove)	094-010216-00000		
WFROLL AL 1.2 Drive roll for aluminium (U-groove)	094-010217-00000		
WFROLL AL 1.6 Drive roll for aluminium (U-groove)	094-010218-00000		
WFROLL FE 0.8 Drive roll for steel (V-groove)	094-010211-00000		
WFROLL FE 0,9 Drive roll for steel (V-groove)	094-010883-00000		
WFROLL FE 1.2 Drive roll for steel (V-groove)	094-010207-00000		
WFROLL 1.2mm Wire feed roll, smooth	094-018246-00000		
WFROLL FE 1.0 Drive roll for steel (V-groove)	094-010212-00000		
WFROLL FE 1.6 Drive roll for steel (V-groove)	094-010213-00000		



Robot welding torches ■ MIG ROB ABK A 500 MasterPull



MIG/MAG robot welding torch, gas cooled

- 4-roll drive
- Maximum TCP security
- Quick-change torch neck
- For operation on alpha Q or Phoenix MasterPull power source

Duty cycle CO2

500 A / 100 %

Duty cycle M21

400 A / 100 %

Ø wire

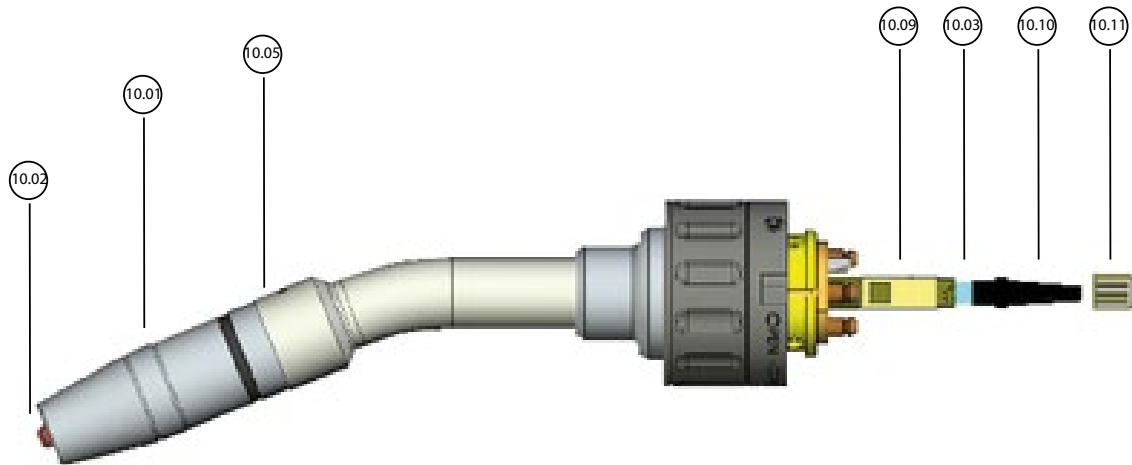
0.8 mm - 1.6 mm

Item	Type	Designation	Length m	Item no.
7	Masterliner HD 4m	Wire guide		094-019127-00004
7	Masterliner HD 8m			094-019127-00000
7	Masterliner HD 10m			094-019127-00010
7	Masterliner HD 15m			094-019127-00015
7.1	SET MASTERLINER	Masterliner HD connection set, including all Masterliner connections	-	094-019128-00000
9.1	RTN MasterPull 500A 22°	Torch neck, MasterPull 22°		094-018247-00000
9.1	RTN MasterPull 500A 35°	Torch neck, MasterPull 35°		094-019126-00000
9.4	TBROB MasterPull 6m	Hose package, MasterPull 6 m	6.0	094-018250-00006
9.4	TBROB MasterPull 8m	Hose package, MasterPull 8 m	8.0	094-018250-00000
9.4	TBROB MasterPull 10m	Hose package, MasterPull 10 m	10.0	094-018250-00010
9.6	masterPull	Master drive with 0-20m/min wire feed speed	-	094-017455-00000

► Order welding torch fully equipped. Replacement parts and equipment parts are not part of the scope of supply and must be ordered based on the specific application!



Consumables/Accessories



Item	Designation	Stickout/Recess	Nozzle Ø	Ø wire	Threads	Length	PU	Item no.	per unit
		mm	mm	mm		mm	Units		
10.01	Gas nozzle, conical	+ 3	13	-	-	72	1	094-011661-00000	
10.01	Gas nozzle, conical	0	13	-	-	75	1	094-011659-00000	
10.01	Gas nozzle, conical	- 2	13	-	-	77	1	094-011660-00000	
10.01	Gas nozzle, bottle shape	+ 3	14	-	-	72	1	094-011666-00000	
10.01	Gas nozzle, bottle shape	0	14	-	-	75	1	094-011663-00000	
10.01	Gas nozzle, bottle shape	- 2	14	-	-	77	1	094-011664-00000	
10.01	Gas nozzle, conical	+ 3	16	-	-	72	1	094-011265-00000	
10.01	Gas nozzle, conical	0	16	-	-	75	1	094-011263-00000	
10.01	Gas nozzle, conical	- 2	16	-	-	77	1	094-011264-00000	
10.01	Gas nozzle, bottle shape	+ 3	16	-	-	72	1	094-011268-00000	
10.01	Gas nozzle, bottle shape	0	16	-	-	75	1	094-011266-00000	
10.01	Gas nozzle, bottle shape	- 2	16	-	-	77	1	094-011267-00000	
10.02	CuCrZr contact tip, silver plated	-	-	0.8	M6	28	10	094-010468-00000	
10.02	CuCrZr contact tip, silver plated	-	-	0.9	M6	28	10	094-010469-00000	
10.02	CuCrZr contact tip, silver plated	-	-	1	M6	28	10	094-010470-00000	
10.02	CuCrZr contact tip, silver plated	-	-	1.2	M6	28	10	094-016488-00000	
10.02	CuCrZr contact tip, silver plated	-	-	1.4	M6	28	10	094-010471-00000	
10.02	CuCrZr contact tip, silver plated	-	-	0.8	M8	30	10	094-011269-00000	
10.02	CuCrZr contact tip, silver plated	-	-	0.9	M8	30	10	094-011270-00000	
10.02	CuCrZr contact tip, silver plated	-	-	1	M8	30	10	094-011271-00000	
10.02	CuCrZr contact tip, silver plated	-	-	1.2	M8	30	10	094-011272-00000	
10.02	CuCrZr contact tip, silver plated	-	-	1.4	M8	30	10	094-011273-00000	
10.02	CuCrZr contact tip, silver plated	-	-	1.6	M8	30	10	094-011274-00000	
10.05	Contact tip holder	-	-	-	M6	-	1	094-011275-00000	
10.05	Contact tip holder, copper	-	-	-	M8	-	1	094-018248-00000	

Liners

Item	Designation	Ø wire	Inside Ø	Outside Ø	Length	PU	Item no.	per unit
		mm	mm	mm		Units		
10.03	PA liner for aluminium	1.4 - 1.6	2.3	4.7	3 m	1	094-001285-00000	
10.03	PA liner for aluminium	0.8 - 1.2	2	4	3 m	1	094-001282-00000	
10.09	Inlet tube	-	-	-	23 mm	1	094-011293-00000	
10.10	Wire inlet guide, PA	-	4	-	-	1	094-011292-00000	
10.10	Inlet nipple, PVC	-	4.5	-	-	1	094-010827-00000	
10.10	BSL liner for steel	0.8 - 1.2	2	4.5	3 m	1	094-010578-00000	
10.10	Inlet nipple, PVC, for BSL liner	-	-	-	-	1	094-013024-00000	
10.10	BSL liner for steel	1.4 - 1.6	2.4	4.5	3 m	1	094-010579-00000	
10.11	Sleeve	-	-	-	-	1	094-011295-00000	



Options/accessories

Drive rolls	Item no.	PG
WFROLL AL 0.8 Drive roll for aluminium (U-groove)	094-010214-00000	
WFROLL AL 0.9 Drive roll for aluminium (U-groove)	094-010215-00000	
WFROLL AL 1.0 Drive roll for aluminium (U-groove)	094-010216-00000	
WFROLL AL 1.2 Drive roll for aluminium (U-groove)	094-010217-00000	
WFROLL AL 1.6 Drive roll for aluminium (U-groove)	094-010218-00000	
WFROLL FE 0.8 Drive roll for steel (V-groove)	094-010211-00000	
WFROLL FE 0,9 Drive roll for steel (V-groove)	094-010883-00000	
WFROLL FE 1.2 Drive roll for steel (V-groove)	094-010207-00000	
WFROLL 1.2mm Wire feed roll, smooth	094-018246-00000	
WFROLL FE 1.0 Drive roll for steel (V-groove)	094-010212-00000	
WFROLL FE 1.6 Drive roll for steel (V-groove)	094-010213-00000	



Automated welding torches ■ AMT301G



Gas cooled MIG/MAG automated welding torch

- Optimal cooling through moulded inner pipes
- Clamping diameter range 38 mm

Duty cycle CO2

330 A / 60 %

Duty cycle M21

300 A / 60 %

Duty cycle M21 pulse

210 A / 60 %

Ø wire

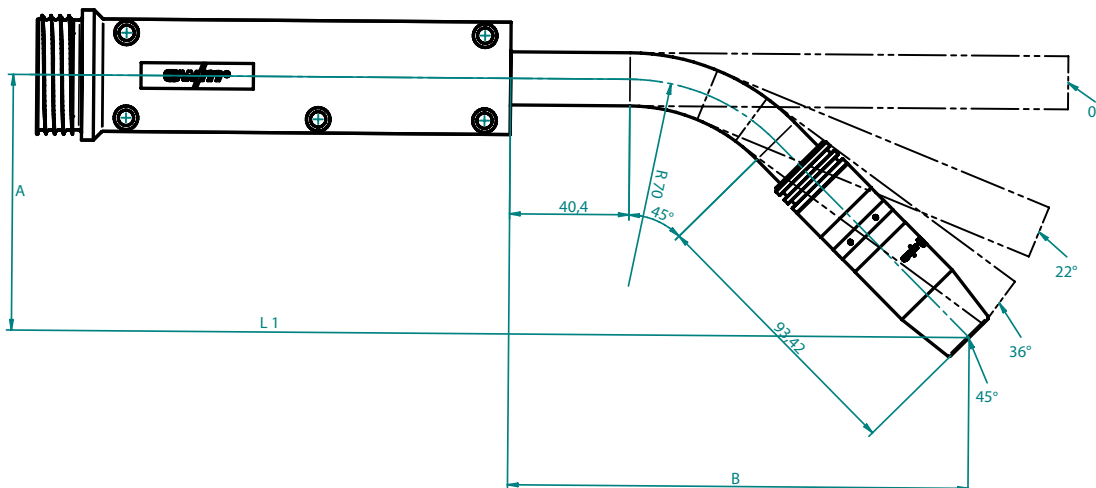
0.8 mm - 1.2 mm

Gas flow

10 l/min - 20 l/min

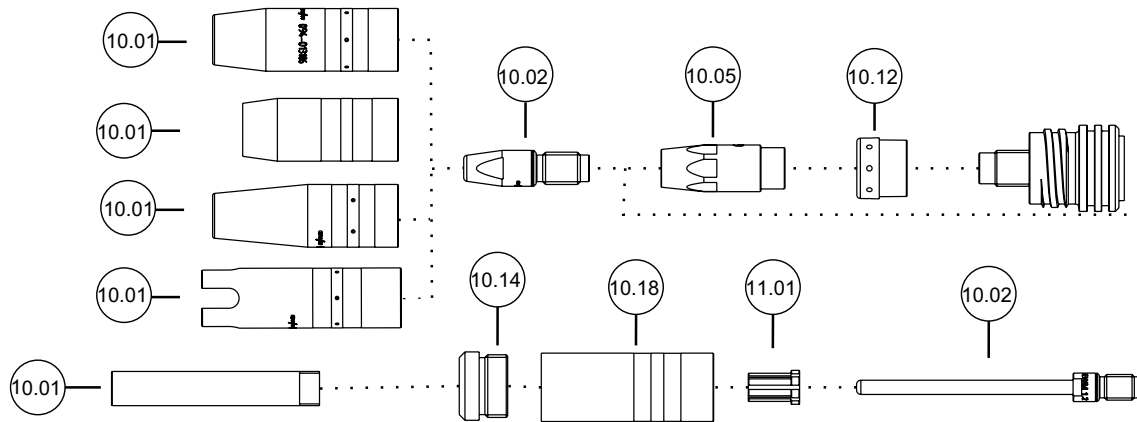
Thread, contact tip

M9

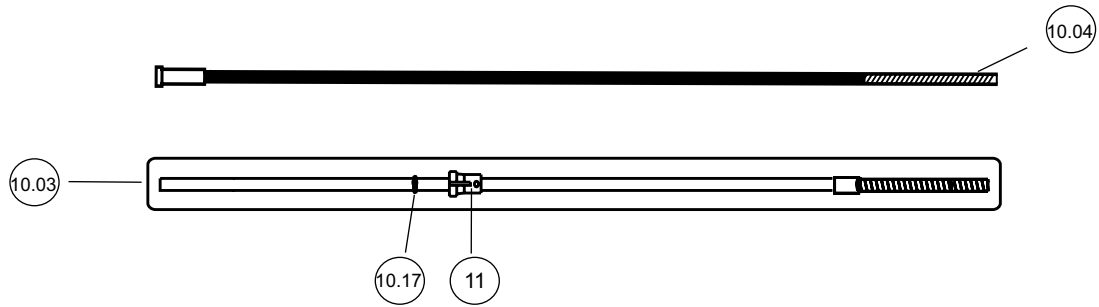


L1	Winkel X°	R	L Kreisab.	L2	Ges.-Länge	A	B
40,40	45	70	54,98	93,42	188,80	86,56	155,96
40,40	36	70	43,98	104,42	188,80	74,74	166,02
40,40	22	70	26,88	121,52	188,80	50,62	179,29
40,40	0	70	0,00	148,40	188,80	0,00	188,80

Item	Type	Designation	Length m	Item no.	
9	AMT301G 1.5m 0° M9	Automated MIG/MAG welding torch, gas-cooled	1.5	094-500061-00015	
9	AMT301G 1.5m 22° M9			094-500062-00015	
9	AMT301G 1.5m 36° M9			094-500063-00015	
9	AMT301G 1.5m 45° M9			094-500064-00015	
9	AMT301G 3m 0° M9		3.0	094-500061-00000	
9	AMT301G 3m 22° M9			094-500062-00000	
9	AMT301G 3m 36° M9			094-500063-00000	
9	AMT301G 3m 45° M9			094-500064-00000	
9	AMT301G 4m 0° M9		4.0	094-500061-00004	
9	AMT301G 4m 22° M9			094-500062-00004	
9	AMT301G 4m 36° M9			094-500063-00004	
9	AMT301G 4m 45° M9			094-500064-00004	
9	AMT301G 5m 0° M9		5.0	094-500061-00005	
9	AMT301G 5m 22° M9			094-500062-00005	
9	AMT301G 5m 36° M9			094-500063-00005	
9	AMT301G 5m 45° M9			094-500064-00005	
-	TH AMT		Torch holder suitable for AMT torches	-	092-019400-00000


Consumables/Accessories


Item	Designation	Nozzle Ø mm	Ø wire mm	Threads	Length mm	Material	PU Units	Item no.	per unit
10.01	Gas nozzle, short	15	-	-	65	-	10	094-019821-00001	
10.01	Gas nozzle, short	18	-	-	65	-	10	094-019822-00001	
10.01	Gas nozzle	13	-	-	71	-	10	094-013105-00001	
10.01	Gas nozzle	15	-	-	71	-	10	094-013106-00001	
10.01	Gas nozzle	18	-	-	71	-	10	094-013107-00001	
10.01	Gas nozzle, Innershield	-	-	-	59.5	-	10	094-019554-00000	
10.01	Gas nozzle, narrow gap welding	-	-	-	73	-	10	094-019626-00000	
10.01	Gas nozzle, narrow gap welding	-	-	-	76	-	10	094-022226-00000	
10.01	Gas nozzle, very conical, narrow gap welding	13	-	-	71	-	10	094-019853-00001	
10.01	Spot gas nozzle	20	-	-	80	-	10	094-020945-00000	
10.02	Contact tip	-	1	M9	35	CuCrZr	10	094-013530-00000	
10.02	Contact tip	-	0.8	M9	35	CuCrZr	10	094-013528-00000	
10.02	Contact tip	-	0.9	M9	35	CuCrZr	10	094-013529-00000	
10.02	Contact tip	-	1	M9	35	CuCrZr	10	094-013530-00000	
10.02	Contact tip	-	1.2	M9	35	CuCrZr	10	094-013531-00000	
10.02	Contact tip	-	1.4	M9	35	CuCrZr	10	094-013532-00000	
10.02	Contact tip	-	1.6	M9	35	CuCrZr	10	094-013533-00000	
10.02	Contact tip, aluminium welding	-	0.8	M9	35	E-Cu	10	094-013543-00000	
10.02	Contact tip, aluminium welding	-	0.9	M9	35	E-Cu	10	094-013544-00000	
10.02	Contact tip, aluminium welding	-	1	M9	35	E-Cu	10	094-013545-00000	
10.02	Contact tip, aluminium welding	-	1.2	M9	35	E-Cu	10	094-013546-00000	
10.02	Contact tip, aluminium welding	-	1.4	M9	35	E-Cu	10	094-013547-00000	
10.02	Contact tip, aluminium welding	-	1.6	M9	35	E-Cu	10	094-013548-00000	
10.02	Contact tip, aluminium welding	-	0.8	M8	30	E-Cu	10	094-016115-00000	
10.02	Contact tip, aluminium welding	-	0.9	M8	30	E-Cu	10	094-016116-00000	
10.02	Contact tip, aluminium welding	-	1	M8	30	E-Cu	10	094-016117-00000	
10.02	Contact tip, aluminium welding	-	1.2	M8	30	E-Cu	10	094-016118-00000	
10.02	Contact tip, aluminium welding	-	1.4	M8	30	E-Cu	10	094-016119-00000	
10.02	Contact tip, aluminium welding	-	1.6	M8	30	E-Cu	10	094-016120-00000	
10.02	Contact tip	-	0.8	M8	30	CuCrZr	10	094-014024-00000	
10.02	Contact tip	-	0.9	M8	30	CuCrZr	10	094-013129-00000	
10.02	Contact tip	-	1	M8	30	CuCrZr	10	094-014222-00000	
10.02	Contact tip	-	1.2	M8	30	CuCrZr	10	094-013113-00000	
10.02	Contact tip	-	1.4	M8	30	CuCrZr	10	094-014191-00000	
10.02	Contact tip	-	1.6	M8	30	CuCrZr	10	094-014192-00000	
10.02	Contact tip	-	0.8	M8	30	E-Cu	10	094-016109-00000	
10.02	Contact tip	-	0.9	M8	30	E-Cu	10	094-016110-00000	
10.02	Contact tip	-	1	M8	30	E-Cu	10	094-016111-00000	
10.02	Contact tip	-	1.2	M8	30	E-Cu	10	094-007238-00000	
10.02	Contact tip	-	1.4	M8	30	E-Cu	10	094-016112-00000	
10.02	Contact tip	-	1.6	M8	30	E-Cu	10	094-016113-00000	
10.02	Contact tip, narrow gap welding	-	0.8	M9	100	CuCrZr	10	094-021189-00000	
10.02	Contact tip, narrow gap welding	-	1	M9	100	CuCrZr	10	094-019616-00000	
10.02	Contact tip, narrow gap welding	-	1.2	M9	100	CuCrZr	10	094-019617-00000	
10.02	Contact tip, narrow gap welding	-	1.4	M9	100	CuCrZr	10	094-020019-00000	
10.02	Contact tip, narrow gap welding	-	1.6	M9	100	CuCrZr	10	094-019618-00000	
10.05	Contact tip holder	-	-	M9	34.5	CuCrZr	10	094-013539-00002	
10.05	Contact tip holder	-	-	M9	37.5	CuCrZr	10	094-013540-00002	
10.05	Contact tip holder	-	-	M8	34.1	CuCrZr	10	094-013109-00002	
10.05	Contact tip holder	-	-	M8	37.1	CuCrZr	10	094-013110-00002	
10.12	Gas diffuser	-	-	-	-	Plastic	10	094-013096-00003	
10.14	Capillary tube	-	-	-	-	-	1	094-019625-00000	
10.18	Gas nozzle body	-	-	-	-	-	1	094-019623-00000	
11.01	Centring sleeve	-	-	-	-	-	10	094-019627-00000	
-	Torch key	-	-	-	-	-	1	094-016038-00001	



Liners

Item	Designation	Ø wire	Inside Ø	Outside Ø	Length	Material	PU	Item no.	PE
		mm	mm	mm					
-	Brass liner	-	2	4	200 mm	-	5 pcs	094-013078-00000	per unit
-	Brass liner	-	2.2	4.4	300 mm	-	5 pcs	094-013872-00000	per unit
-	Connecting sleeve	-	-	-	-	Brass	20 pcs	094-013757-00000	per unit
-	Connecting sleeve	-	-	-	-	Brass	20 pcs	094-013758-00000	per unit
10.03	Combined liner, PA	1.2 - 1.6	2	4	3.5 m	PA	1 pcs	092-018706-00003	per unit
10.03	Combined liner, PA	1.2 - 1.6	2	4	4.5 m	PA	1 pcs	092-018706-00004	per unit
10.03	Combined liner, Teflon	0.6 - 1	1.5	4	3 m	Teflon	1 pcs	094-013800-00000	per unit
10.03	Combined liner, Teflon	0.6 - 1	1.5	4	4 m	Teflon	1 pcs	094-013800-00004	per unit
10.03	Combined liner, Teflon	0.6 - 1	1.5	4	5 m	Teflon	1 pcs	094-013800-00005	per unit
10.03	Combined liner, Teflon	1.2 - 1.6	2	4	3 m	Teflon	1 pcs	094-013801-00000	per unit
10.03	Combined liner, Teflon	1.2 - 1.6	2	4	4 m	Teflon	1 pcs	094-013801-00004	per unit
10.03	Combined liner, Teflon	1.2 - 1.6	2	4	5 m	Teflon	1 pcs	094-013801-00005	per unit
10.03	Combined liner, carbon Teflon	0.6 - 1	1.5	4	3 m	Carbon teflon	1 pcs	094-013871-00000	per unit
10.03	Combined liner, carbon Teflon	0.6 - 1	1.5	4	4 m	Carbon teflon	1 pcs	094-013871-00004	per unit
10.03	Combined liner, carbon Teflon	0.6 - 1	1.5	4	5 m	Carbon teflon	1 pcs	094-013871-00005	per unit
10.03	Combined liner, carbon Teflon	1.2 - 1.6	2	4	3 m	Carbon teflon	1 pcs	094-013828-00000	per unit
10.03	Combined liner, carbon Teflon	1.2 - 1.6	2	4	4 m	Carbon teflon	1 pcs	094-013828-00004	per unit
10.03	Combined liner, carbon Teflon	1.2 - 1.6	2	4	5 m	Carbon teflon	1 pcs	094-013828-00005	per unit
10.03	Combined liner, carbon Teflon	1.6 - 2	2.7	4.7	3 m	Carbon teflon	1 pcs	094-013829-00000	per unit
10.03	Combined liner, carbon Teflon	1.6 - 2	2.7	4.7	4 m	Carbon teflon	1 pcs	094-013829-00004	per unit
10.03	Combined liner, carbon Teflon	1.6 - 2	2.7	4.7	5 m	Carbon teflon	1 pcs	094-013829-00005	per unit
10.03	PA liner, by the metre	0.6 - 1	1.4	4	-	PA	200 m	094-013781-00200	per m
10.03	PA liner, by the metre	1.2 - 1.6	2	4	-	PA	200 m	094-013782-00200	per m
10.03	PA liner, by the metre	1.6 - 2	2.3	4.7	-	PA	200 m	094-013783-00200	per m
10.03	Combined liner, PA	0.6 - 1	1.5	4	3 m	PA	1 pcs	094-013687-00000	per unit
10.03	Combined liner, PA	0.6 - 1	1.5	4	4 m	PA	1 pcs	094-013687-00004	per unit
10.03	Combined liner, PA	0.6 - 1	1.5	4	5 m	PA	1 pcs	094-013687-00005	per unit
10.03	Combined liner, PA	1.6 - 2	2.3	4.7	3 m	PA	1 pcs	094-013665-00000	per unit
10.03	Combined liner, PA	1.6 - 2	2.3	4.7	4 m	PA	1 pcs	094-013666-00000	per unit
10.03	Combined liner, PA	1.6 - 2	2.3	4.7	5 m	PA	1 pcs	094-013667-00000	per unit
10.03	Combined liner, Teflon	1.6 - 2	2.7	4.7	3 m	Teflon	1 pcs	094-013802-00000	per unit
10.03	Combined liner, Teflon	1.6 - 2	2.7	4.7	4 m	Teflon	1 pcs	094-013802-00004	per unit
10.03	Combined liner, Teflon	1.6 - 2	2.7	4.7	5 m	Teflon	1 pcs	094-013802-00005	per unit
10.03	Teflon liner, by the metre	0.6 - 1	1.5	4	-	Teflon	100 m	094-013487-00100	per m
10.03	Teflon liner, by the metre	1.2 - 1.6	2	4	-	Teflon	100 m	094-013490-00100	per m
10.03	Teflon liner, by the metre	1.6 - 2	2.7	4.7	-	Teflon	100 m	094-013523-00100	per m
10.03	Combined liner, carbon Teflon	0.6 - 1	1.5	4	-	Carbon teflon	100 m	094-013870-00100	per m
10.03	Combined liner, carbon Teflon	1.2 - 1.6	2	4	-	Carbon teflon	100 m	094-013524-00100	per m
10.03	Combined liner, carbon Teflon	1.6 - 2	2.7	4.7	-	Carbon teflon	100 m	094-013525-00100	per m
10.04	Steel liner, insulated	1.6 - 2	2.4	4.6	3.6 m	-	2 Pack	094-013662-00501	per unit
10.04	Steel liner, insulated	1.6 - 2	2.4	4.6	4.6 m	-	2 Pack	094-013663-00501	per unit
10.04	Steel liner, insulated	1.6 - 2	2.4	4.6	5.6 m	-	2 Pack	094-013664-00501	per unit
10.04	Steel liner, insulated	0.8 - 1	1.5	3.8	3.6 m	-	2 Pack	094-013074-00500	per unit
10.04	Steel liner, insulated	0.8 - 1	1.5	3.8	4.6 m	-	2 Pack	094-013075-00500	per unit
10.04	Steel liner, insulated	0.8 - 1	1.5	3.8	5.6 m	-	2 Pack	094-014221-00500	per unit
10.04	Steel liner, insulated	1.2 - 1.6	2	4.6	3.6 m	-	2 Pack	094-007239-00500	per unit
10.04	Steel liner, insulated	1.2 - 1.6	2	4.6	4.6 m	-	2 Pack	094-014223-00500	per unit
10.04	Steel liner, insulated	1.2 - 1.6	2	4.6	5.6 m	-	2 Pack	094-014224-00500	per unit
10.17	O-ring	-	-	-	-	-	1 pcs	094-001249-00000	per unit
11	Collet chuck	-	-	-	-	Brass	20 pcs	094-001082-00000	per unit
11	Collet chuck	-	-	-	-	Brass	20 pcs	094-001291-00000	per unit



■ Options/accessories

■ Wearing parts kits for MT series	Item no.	PG
SRP MT301G/MT451W ST/CR M8 Consumables set, steel/chromium nickel	092-013428-40000	
SRP MT301G/MT451W AL M8 Consumables set, aluminium	092-013428-40001	
SRP MT301G/MT451W AL M9 Consumables set, aluminium	092-013428-30001	
SRP MT301G/MT451W ST/CR M9 Consumables set, steel/chromium nickel	092-013428-30000	



Automated welding torches ■ AMT451W



Water cooled MIG/MAG welding torch

- Optimal cooling through moulded inner pipes
- Fabric-reinforced coolant hoses for even more robustness
- Clamping diameter range 38 mm

Duty cycle CO2

500 A / 100 %

Duty cycle M21

450 A / 100 %

Duty cycle M21 pulse

350 A / 100 %

Ø wire

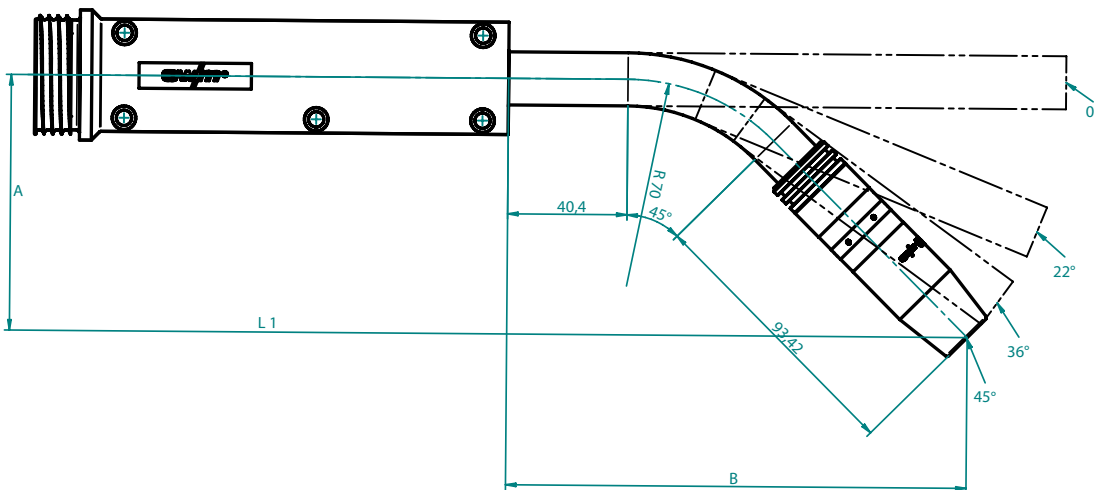
0.8 mm - 1.6 mm

Gas flow

10 l/min - 25 l/min

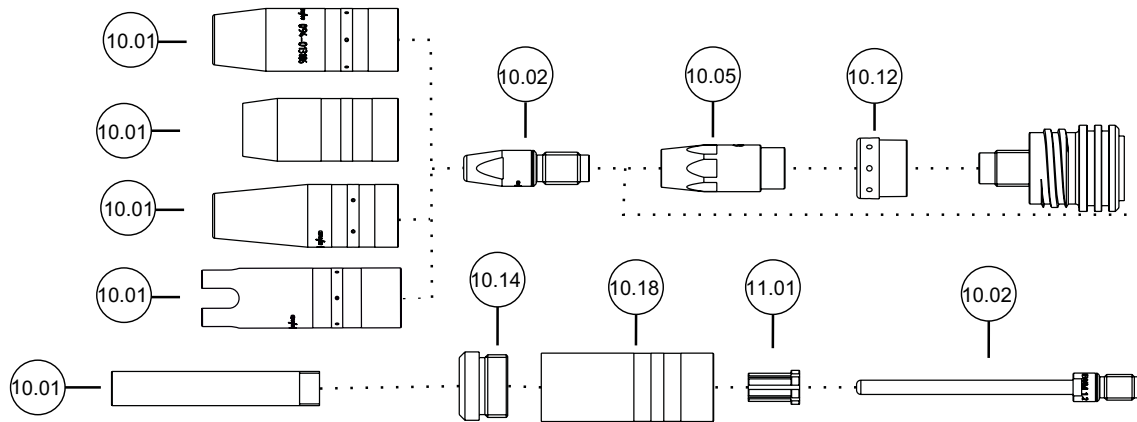
Thread, contact tip

M9

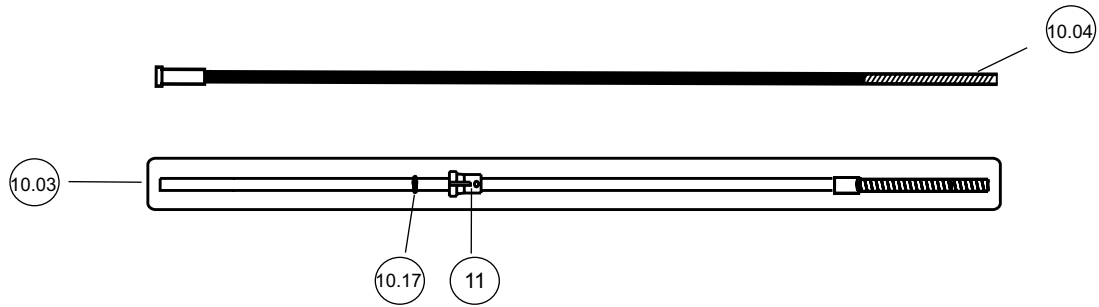


L1	Winkel X°	R	L Kreisab.	L2	Ges.-Länge	A	B
40,40	45	70	54,98	93,42	188,80	86,56	155,96
40,40	36	70	43,98	104,42	188,80	74,74	166,02
40,40	22	70	26,88	121,52	188,80	50,62	179,29
40,40	0	70	0,00	148,40	188,80	0,00	188,80

Item	Type	Designation	Length m	Item no.	
9	AMT451W 0° 1.5m M9	Automated MIG/MAG welding torch, water-cooled	1.5	094-500065-00015	
9	AMT451W 0° 3m M9		3.0	094-500065-00000	
9	AMT451W 0° 4m M9		4.0	094-500065-00004	
9	AMT451W 0° 5m M9		5.0	094-500065-00005	
9	AMT451W 22° 1.5m M9		1.5	094-500066-00015	
9	AMT451W 22° 3m M9		3.0	094-500066-00000	
9	AMT451W 22° 4m M9		4.0	094-500066-00004	
9	AMT451W 22° 5m M9		5.0	094-500066-00005	
9	AMT451W 36° 1.5m M9		1.5	094-500067-00015	
9	AMT451W 36° 3m M9		3.0	094-500067-00000	
9	AMT451W 36° 4m M9		4.0	094-500067-00004	
9	AMT451W 36° 5m M9		5.0	094-500067-00005	
9	AMT451W 45° 1.5m M9		1.5	094-500068-00015	
9	AMT451W 45° 3m M9		3.0	094-500068-00000	
9	AMT451W 45° 4m M9		4.0	094-500068-00004	
9	AMT451W 45° 5m M9		5.0	094-500068-00005	
-	TH AMT		Torch holder suitable for AMT torches	-	092-019400-00000



Item	Designation	Nozzle Ø mm	Ø wire mm	Threads	Length mm	Material	PU Units	Item no.	per unit
10.01	Gas nozzle, short	15	-	-	65	-	10	094-019821-00001	
10.01	Gas nozzle, short	18	-	-	65	-	10	094-019822-00001	
10.01	Gas nozzle	13	-	-	71	-	10	094-013105-00001	
10.01	Gas nozzle	15	-	-	71	-	10	094-013106-00001	
10.01	Gas nozzle	18	-	-	71	-	10	094-013107-00001	
10.01	Gas nozzle, Innershield	-	-	-	59.5	-	10	094-019554-00000	
10.01	Gas nozzle, narrow gap welding	-	-	-	73	-	10	094-019626-00000	
10.01	Gas nozzle, narrow gap welding	-	-	-	76	-	10	094-022226-00000	
10.01	Gas nozzle, very conical, narrow gap welding	13	-	-	71	-	10	094-019853-00001	
10.01	Spot gas nozzle	20	-	-	80	-	10	094-020945-00000	
10.02	Contact tip	-	1	M9	35	CuCrZr	10	094-013530-00000	
10.02	Contact tip	-	0.8	M9	35	CuCrZr	10	094-013528-00000	
10.02	Contact tip	-	0.9	M9	35	CuCrZr	10	094-013529-00000	
10.02	Contact tip	-	1	M9	35	CuCrZr	10	094-013530-00000	
10.02	Contact tip	-	1.2	M9	35	CuCrZr	10	094-013531-00000	
10.02	Contact tip	-	1.4	M9	35	CuCrZr	10	094-013532-00000	
10.02	Contact tip	-	1.6	M9	35	CuCrZr	10	094-013533-00000	
10.02	Contact tip, aluminium welding	-	0.8	M9	35	E-Cu	10	094-013543-00000	
10.02	Contact tip, aluminium welding	-	0.9	M9	35	E-Cu	10	094-013544-00000	
10.02	Contact tip, aluminium welding	-	1	M9	35	E-Cu	10	094-013545-00000	
10.02	Contact tip, aluminium welding	-	1.2	M9	35	E-Cu	10	094-013546-00000	
10.02	Contact tip, aluminium welding	-	1.4	M9	35	E-Cu	10	094-013547-00000	
10.02	Contact tip, aluminium welding	-	1.6	M9	35	E-Cu	10	094-013548-00000	
10.02	Contact tip, aluminium welding	-	0.8	M8	30	E-Cu	10	094-016115-00000	
10.02	Contact tip, aluminium welding	-	0.9	M8	30	E-Cu	10	094-016116-00000	
10.02	Contact tip, aluminium welding	-	1	M8	30	E-Cu	10	094-016117-00000	
10.02	Contact tip, aluminium welding	-	1.2	M8	30	E-Cu	10	094-016118-00000	
10.02	Contact tip, aluminium welding	-	1.4	M8	30	E-Cu	10	094-016119-00000	
10.02	Contact tip, aluminium welding	-	1.6	M8	30	E-Cu	10	094-016120-00000	
10.02	Contact tip	-	0.8	M8	30	CuCrZr	10	094-014024-00000	
10.02	Contact tip	-	0.9	M8	30	CuCrZr	10	094-013129-00000	
10.02	Contact tip	-	1	M8	30	CuCrZr	10	094-014222-00000	
10.02	Contact tip	-	1.2	M8	30	CuCrZr	10	094-013113-00000	
10.02	Contact tip	-	1.4	M8	30	CuCrZr	10	094-014191-00000	
10.02	Contact tip	-	1.6	M8	30	CuCrZr	10	094-014192-00000	
10.02	Contact tip	-	0.8	M8	30	E-Cu	10	094-016109-00000	
10.02	Contact tip	-	0.9	M8	30	E-Cu	10	094-016110-00000	
10.02	Contact tip	-	1	M8	30	E-Cu	10	094-016111-00000	
10.02	Contact tip	-	1.2	M8	30	E-Cu	10	094-007238-00000	
10.02	Contact tip	-	1.4	M8	30	E-Cu	10	094-016112-00000	
10.02	Contact tip	-	1.6	M8	30	E-Cu	10	094-016113-00000	
10.02	Contact tip, narrow gap welding	-	0.8	M9	100	CuCrZr	10	094-021189-00000	
10.02	Contact tip, narrow gap welding	-	1	M9	100	CuCrZr	10	094-019616-00000	
10.02	Contact tip, narrow gap welding	-	1.2	M9	100	CuCrZr	10	094-019617-00000	
10.02	Contact tip, narrow gap welding	-	1.4	M9	100	CuCrZr	10	094-020019-00000	
10.02	Contact tip, narrow gap welding	-	1.6	M9	100	CuCrZr	10	094-019618-00000	
10.05	Contact tip holder	-	-	M9	34.5	CuCrZr	10	094-013539-00002	
10.05	Contact tip holder	-	-	M9	37.5	CuCrZr	10	094-013540-00002	
10.05	Contact tip holder	-	-	M8	34.1	CuCrZr	10	094-013109-00002	
10.05	Contact tip holder	-	-	M8	37.1	CuCrZr	10	094-013110-00002	
10.12	Gas diffuser	-	-	-	-	Plastic	10	094-013096-00003	
10.14	Capillary tube	-	-	-	-	-	1	094-019625-00000	
10.18	Gas nozzle body	-	-	-	-	-	1	094-019623-00000	
11.01	Centring sleeve	-	-	-	-	-	10	094-019627-00000	
-	Torch key	-	-	-	-	-	1	094-016038-00001	



Liners

Item	Designation	Ø wire mm	Inside Ø mm	Outside Ø mm	Length	Material	PU	Item no.	PE
-	Brass liner	-	2	4	200 mm	-	5 pcs	094-013078-00000	per unit
-	Brass liner	-	2.2	4.4	300 mm	-	5 pcs	094-013872-00000	per unit
-	Connecting sleeve	-	-	-	-	Brass	20 pcs	094-013757-00000	per unit
-	Connecting sleeve	-	-	-	-	Brass	20 pcs	094-013758-00000	per unit
10.03	Combined liner, PA	1.2 - 1.6	2	4	3.5 m	PA	1 pcs	092-018706-00003	per unit
10.03	Combined liner, PA	1.2 - 1.6	2	4	4.5 m	PA	1 pcs	092-018706-00004	per unit
10.03	Combined liner, Teflon	0.6 - 1	1.5	4	3 m	Teflon	1 pcs	094-013800-00000	per unit
10.03	Combined liner, Teflon	0.6 - 1	1.5	4	4 m	Teflon	1 pcs	094-013800-00004	per unit
10.03	Combined liner, Teflon	0.6 - 1	1.5	4	5 m	Teflon	1 pcs	094-013800-00005	per unit
10.03	Combined liner, Teflon	1.2 - 1.6	2	4	3 m	Teflon	1 pcs	094-013801-00000	per unit
10.03	Combined liner, Teflon	1.2 - 1.6	2	4	4 m	Teflon	1 pcs	094-013801-00004	per unit
10.03	Combined liner, Teflon	1.2 - 1.6	2	4	5 m	Teflon	1 pcs	094-013801-00005	per unit
10.03	Combined liner, carbon Teflon	0.6 - 1	1.5	4	3 m	Carbon teflon	1 pcs	094-013871-00000	per unit
10.03	Combined liner, carbon Teflon	0.6 - 1	1.5	4	4 m	Carbon teflon	1 pcs	094-013871-00004	per unit
10.03	Combined liner, carbon Teflon	0.6 - 1	1.5	4	5 m	Carbon teflon	1 pcs	094-013871-00005	per unit
10.03	Combined liner, carbon Teflon	1.2 - 1.6	2	4	3 m	Carbon teflon	1 pcs	094-013828-00000	per unit
10.03	Combined liner, carbon Teflon	1.2 - 1.6	2	4	4 m	Carbon teflon	1 pcs	094-013828-00004	per unit
10.03	Combined liner, carbon Teflon	1.2 - 1.6	2	4	5 m	Carbon teflon	1 pcs	094-013828-00005	per unit
10.03	Combined liner, carbon Teflon	1.6 - 2	2.7	4.7	3 m	Carbon teflon	1 pcs	094-013829-00000	per unit
10.03	Combined liner, carbon Teflon	1.6 - 2	2.7	4.7	4 m	Carbon teflon	1 pcs	094-013829-00004	per unit
10.03	Combined liner, carbon Teflon	1.6 - 2	2.7	4.7	5 m	Carbon teflon	1 pcs	094-013829-00005	per unit
10.03	PA liner, by the metre	0.6 - 1	1.4	4	-	PA	200 m	094-013781-00200	per m
10.03	PA liner, by the metre	1.2 - 1.6	2	4	-	PA	200 m	094-013782-00200	per m
10.03	PA liner, by the metre	1.6 - 2	2.3	4.7	-	PA	200 m	094-013783-00200	per m
10.03	Combined liner, PA	0.6 - 1	1.5	4	3 m	PA	1 pcs	094-013687-00000	per unit
10.03	Combined liner, PA	0.6 - 1	1.5	4	4 m	PA	1 pcs	094-013687-00004	per unit
10.03	Combined liner, PA	0.6 - 1	1.5	4	5 m	PA	1 pcs	094-013687-00005	per unit
10.03	Combined liner, PA	1.6 - 2	2.3	4.7	3 m	PA	1 pcs	094-013665-00000	per unit
10.03	Combined liner, PA	1.6 - 2	2.3	4.7	4 m	PA	1 pcs	094-013666-00000	per unit
10.03	Combined liner, PA	1.6 - 2	2.3	4.7	5 m	PA	1 pcs	094-013667-00000	per unit
10.03	Combined liner, Teflon	1.6 - 2	2.7	4.7	3 m	Teflon	1 pcs	094-013802-00000	per unit
10.03	Combined liner, Teflon	1.6 - 2	2.7	4.7	4 m	Teflon	1 pcs	094-013802-00004	per unit
10.03	Combined liner, Teflon	1.6 - 2	2.7	4.7	5 m	Teflon	1 pcs	094-013802-00005	per unit
10.03	Teflon liner, by the metre	0.6 - 1	1.5	4	-	Teflon	100 m	094-013487-00100	per m
10.03	Teflon liner, by the metre	1.2 - 1.6	2	4	-	Teflon	100 m	094-013490-00100	per m
10.03	Teflon liner, by the metre	1.6 - 2	2.7	4.7	-	Teflon	100 m	094-013523-00100	per m
10.03	Combined liner, carbon Teflon	0.6 - 1	1.5	4	-	Carbon teflon	100 m	094-013870-00100	per m
10.03	Combined liner, carbon Teflon	1.2 - 1.6	2	4	-	Carbon teflon	100 m	094-013524-00100	per m
10.03	Combined liner, carbon Teflon	1.6 - 2	2.7	4.7	-	Carbon teflon	100 m	094-013525-00100	per m
10.04	Steel liner, insulated	0.8 - 1	1.5	3.8	3.6 m	-	2 Pack	094-013074-00500	per unit
10.04	Steel liner, insulated	0.8 - 1	1.5	3.8	4.6 m	-	2 Pack	094-013075-00500	per unit
10.04	Steel liner, insulated	0.8 - 1	1.5	3.8	5.6 m	-	2 Pack	094-014221-00500	per unit
10.04	Steel liner, insulated	1.2 - 1.6	2	4.6	3.6 m	-	2 Pack	094-007239-00500	per unit
10.04	Steel liner, insulated	1.2 - 1.6	2	4.6	4.6 m	-	2 Pack	094-014223-00500	per unit
10.04	Steel liner, insulated	1.2 - 1.6	2	4.6	5.6 m	-	2 Pack	094-014224-00500	per unit
10.04	Steel liner, insulated	1.6 - 2	2.4	4.6	3.6 m	-	2 Pack	094-013662-00501	per unit
10.04	Steel liner, insulated	1.6 - 2	2.4	4.6	4.6 m	-	2 Pack	094-013663-00501	per unit
10.04	Steel liner, insulated	1.6 - 2	2.4	4.6	5.6 m	-	2 Pack	094-013664-00501	per unit
10.17	O-ring	-	-	-	-	-	1 pcs	094-001249-00000	per unit
11	Collet chuck	-	-	-	-	Brass	20 pcs	094-001082-00000	per unit
11	Collet chuck	-	-	-	-	Brass	20 pcs	094-001291-00000	per unit



Options/accessories

Wearing parts kits for MT series	Item no.	PG
SRP MT301G/MT451W ST/CR M8 Consumables set, steel/chromium nickel	092-013428-40000	
SRP MT301G/MT451W AL M8 Consumables set, aluminium	092-013428-40001	
SRP MT301G/MT451W AL M9 Consumables set, aluminium	092-013428-30001	
SRP MT301G/MT451W ST/CR M9 Consumables set, steel/chromium nickel	092-013428-30000	



Automated welding torches ■ AMT551W



Water cooled MIG/MAG welding torch

- Optimal cooling through moulded inner pipes
- Fabric-reinforced coolant hoses for even more robustness
- Clamping diameter range 38 mm

Duty cycle CO2

650 A / 100 %

Duty cycle M21

550 A / 100 %

Duty cycle M21 pulse

500 A / 100 %

Ø wire

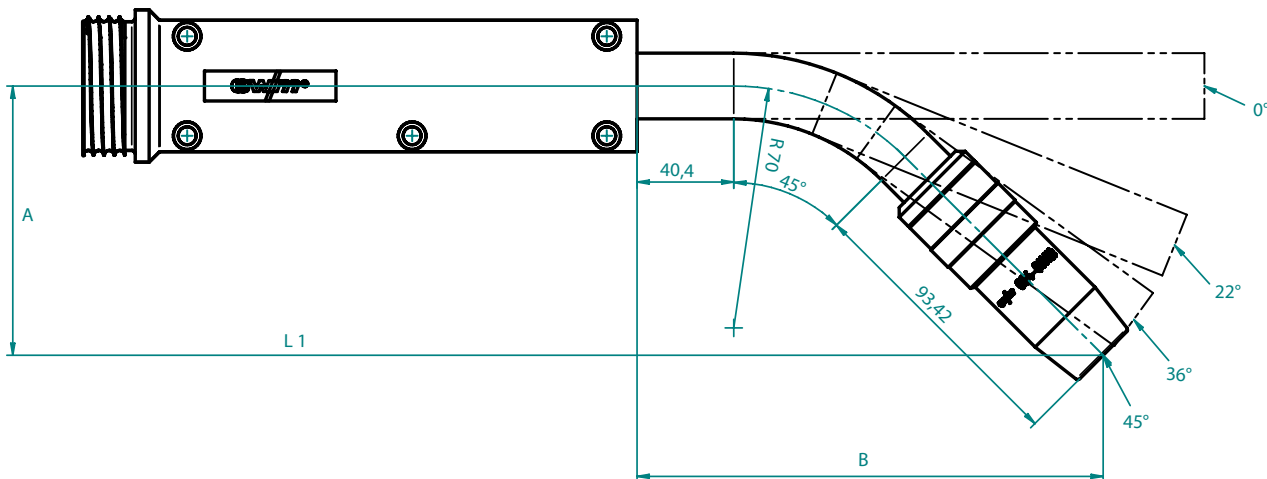
0.8 mm - 1.6 mm

Gas flow

10 l/min - 25 l/min

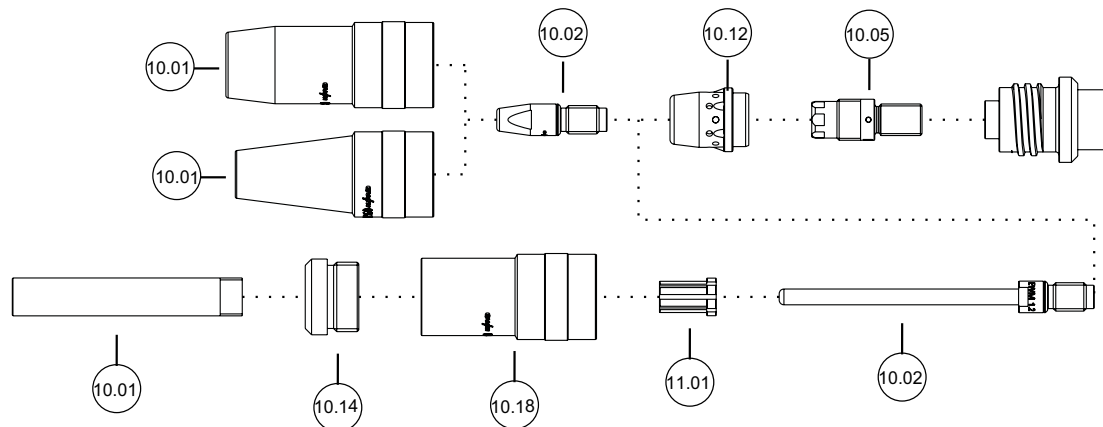
Thread, contact tip

M9

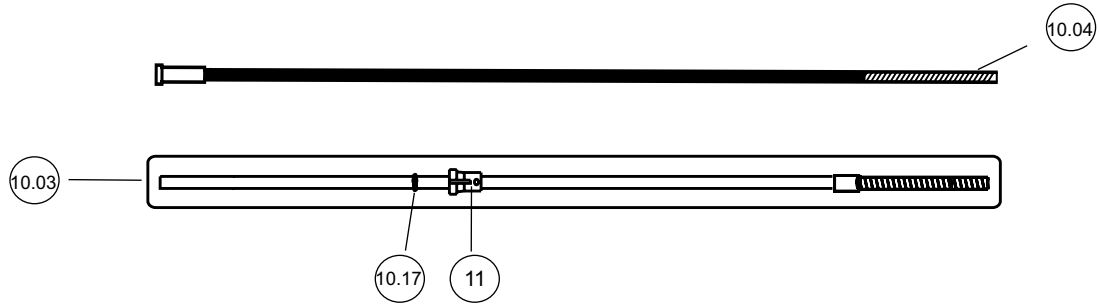


L1	Winkel X°	R	L Kreisab.	L2	Ges.-Länge	A	B
27,98	45	70	54,98	81,19	164,15	77,91	134,89
27,98	36	70	43,98	92,19	164,15	67,55	143,70
27,98	22	70	26,88	109,29	164,15	46,04	155,53
27,98	0	70	0,00	136,17	164,15	0,00	164,15

Item	Type	Designation	Length m	Item no.	
9	AMT551W 0° 1.5m M9	Automated MIG/MAG welding torch, water-cooled	1.5	094-500069-00015	
9	AMT551W 0° 3m M9		3.0	094-500069-00000	
9	AMT551W 0° 4m M9		4.0	094-500069-00004	
9	AMT551W 0° 5m M9		5.0	094-500069-00005	
9	AMT551W 22° 1.5m M9		1.5	094-500070-00015	
9	AMT551W 22° 3m M9		3.0	094-500070-00000	
9	AMT551W 22° 4m M9		4.0	094-500070-00004	
9	AMT551W 22° 5m M9		5.0	094-500070-00005	
9	AMT551W 36° 1.5m M9		1.5	094-500071-00015	
9	AMT551W 36° 3m M9		3.0	094-500071-00000	
9	AMT551W 36° 4m M9		4.0	094-500071-00004	
9	AMT551W 36° 5m M9		5.0	094-500071-00005	
9	AMT551W 45° 1.5m M9		1.5	094-500072-00015	
9	AMT551W 45° 3m M9		3.0	094-500072-00000	
9	AMT551W 45° 4m M9		4.0	094-500072-00004	
9	AMT551W 45° 5m M9		5.0	094-500072-00005	
-	TH AMT		Torch holder suitable for AMT torches	-	092-019400-00000


Consumables/Accessories


Item	Designation	Nozzle Ø	Ø wire	Threads	Length mm	Material	PU Units	Item no.	per unit
		mm	mm						
10.01	Gas nozzle	15	-	-	66	-	10	094-014178-00001	
10.01	Gas nozzle	17	-	-	66	-	10	094-014180-00001	
10.01	Gas nozzle	19	-	-	66	-	10	094-014182-00001	
10.01	Gas nozzle	15	-	-	63	-	10	094-014177-00001	
10.01	Gas nozzle	17	-	-	63	-	10	094-014179-00001	
10.01	Gas nozzle	19	-	-	63	-	10	094-014181-00001	
10.01	Gas nozzle, very conical, narrow gap welding	13	-	-	63	-	10	094-019702-00000	
10.01	Gas nozzle, very conical, narrow gap welding	13	-	-	66	-	10	094-022227-00000	
10.01	Gas nozzle, narrow gap welding	-	-	-	73	-	10	094-019626-00000	
10.01	Gas nozzle, narrow gap welding	-	-	-	76	-	10	094-022226-00000	
10.02	Contact tip	-	1	M9	35	CuCrZr	10	094-013530-00000	
10.02	Contact tip	-	0.8	M9	35	CuCrZr	10	094-013528-00000	
10.02	Contact tip	-	0.9	M9	35	CuCrZr	10	094-013529-00000	
10.02	Contact tip	-	1	M9	35	CuCrZr	10	094-013530-00000	
10.02	Contact tip	-	1.2	M9	35	CuCrZr	10	094-013531-00000	
10.02	Contact tip	-	1.4	M9	35	CuCrZr	10	094-013532-00000	
10.02	Contact tip	-	1.6	M9	35	CuCrZr	10	094-013533-00000	
10.02	Contact tip	-	2	M9	35	CuCrZr	10	094-013534-00000	
10.02	Contact tip, aluminium welding	-	0.8	M9	35	E-Cu	10	094-013543-00000	
10.02	Contact tip, aluminium welding	-	0.9	M9	35	E-Cu	10	094-013544-00000	
10.02	Contact tip, aluminium welding	-	1	M9	35	E-Cu	10	094-013545-00000	
10.02	Contact tip, aluminium welding	-	1.2	M9	35	E-Cu	10	094-013546-00000	
10.02	Contact tip, aluminium welding	-	1.4	M9	35	E-Cu	10	094-013547-00000	
10.02	Contact tip, aluminium welding	-	1.6	M9	35	E-Cu	10	094-013548-00000	
10.02	Contact tip, aluminium welding	-	2	M9	35	E-Cu	10	094-013549-00000	
10.02	Contact tip, aluminium welding	-	0.8	M8	30	E-Cu	10	094-016115-00000	
10.02	Contact tip, aluminium welding	-	0.9	M8	30	E-Cu	10	094-016116-00000	
10.02	Contact tip, aluminium welding	-	1	M8	30	E-Cu	10	094-016117-00000	
10.02	Contact tip, aluminium welding	-	1.2	M8	30	E-Cu	10	094-016118-00000	
10.02	Contact tip, aluminium welding	-	1.4	M8	30	E-Cu	10	094-016119-00000	
10.02	Contact tip, aluminium welding	-	1.6	M8	30	E-Cu	10	094-016120-00000	
10.02	Contact tip, aluminium welding	-	2	M8	30	E-Cu	10	094-016920-00000	
10.02	Contact tip	-	0.8	M8	30	CuCrZr	10	094-014024-00000	
10.02	Contact tip	-	0.9	M8	30	CuCrZr	10	094-013129-00000	
10.02	Contact tip	-	1	M8	30	CuCrZr	10	094-014222-00000	
10.02	Contact tip	-	1.2	M8	30	CuCrZr	10	094-013113-00000	
10.02	Contact tip	-	1.4	M8	30	CuCrZr	10	094-014191-00000	
10.02	Contact tip	-	1.6	M8	30	CuCrZr	10	094-014192-00000	
10.02	Contact tip	-	2	M8	30	CuCrZr	10	094-014193-00000	
10.02	Contact tip	-	0.8	M8	30	E-Cu	10	094-016109-00000	
10.02	Contact tip	-	0.9	M8	30	E-Cu	10	094-016110-00000	
10.02	Contact tip	-	1	M8	30	E-Cu	10	094-016111-00000	
10.02	Contact tip	-	1.2	M8	30	E-Cu	10	094-007238-00000	
10.02	Contact tip	-	1.4	M8	30	E-Cu	10	094-016112-00000	
10.02	Contact tip	-	1.6	M8	30	E-Cu	10	094-016113-00000	
10.02	Contact tip	-	2	M8	30	E-Cu	10	094-016114-00000	
10.02	Contact tip, narrow gap welding	-	0.8	M9	100	CuCrZr	10	094-021189-00000	
10.02	Contact tip, narrow gap welding	-	1	M9	100	CuCrZr	10	094-019616-00000	
10.02	Contact tip, narrow gap welding	-	1.2	M9	100	CuCrZr	10	094-019617-00000	
10.02	Contact tip, narrow gap welding	-	1.4	M9	100	CuCrZr	10	094-020019-00000	
10.02	Contact tip, narrow gap welding	-	1.6	M9	100	CuCrZr	10	094-019618-00000	
10.05	Contact tip holder	-	-	M9	35	CuCrZr	10	094-013856-00003	
10.05	Contact tip holder	-	-	M9	38	CuCrZr	10	094-016425-00003	
10.12	Gas diffuser	20.2	-	-	25	Plastic	10	094-013111-00002	
10.14	Capillary tube	-	-	-	-	-	1	094-019625-00000	
10.18	Gas nozzle body	-	-	-	-	-	1	094-019624-00000	
11.01	Centring sleeve	-	-	-	-	-	10	094-019627-00000	
-	Torch key	-	-	-	-	-	1	094-016038-00001	



Liners

Item	Designation	Ø wire	Inside Ø	Outside Ø	Length	Material	PU	Item no.	PE
		mm	mm	mm					
-	Brass liner	-	2	4	200 mm	-	5 pcs	094-013078-00000	per unit
-	Brass liner	-	2.2	4.4	300 mm	-	5 pcs	094-013872-00000	per unit
-	Connecting sleeve	-	-	-	-	Brass	20 pcs	094-013757-00000	per unit
-	Connecting sleeve	-	-	-	-	Brass	20 pcs	094-013758-00000	per unit
10.03	PA liner, by the metre	0.6 - 1	1.4	4	-	PA	200 m	094-013781-00200	per m
10.03	PA liner, by the metre	1.2 - 1.6	2	4	-	PA	200 m	094-013782-00200	per m
10.03	PA liner, by the metre	1.6 - 2	2.3	4.7	-	PA	200 m	094-013783-00200	per m
10.03	Combined liner, PA	0.6 - 1	1.5	4	3 m	PA	1 pcs	094-013687-00000	per unit
10.03	Combined liner, PA	0.6 - 1	1.5	4	4 m	PA	1 pcs	094-013687-00004	per unit
10.03	Combined liner, PA	0.6 - 1	1.5	4	5 m	PA	1 pcs	094-013687-00005	per unit
10.03	Combined liner, PA	1.2 - 1.6	2	4	3.5 m	PA	1 pcs	092-018706-00003	per unit
10.03	Combined liner, PA	1.2 - 1.6	2	4	4.5 m	PA	1 pcs	092-018706-00004	per unit
10.03	Combined liner, PA	1.6 - 2	2.3	4.7	3 m	PA	1 pcs	094-013665-00000	per unit
10.03	Combined liner, PA	1.6 - 2	2.3	4.7	4 m	PA	1 pcs	094-013666-00000	per unit
10.03	Combined liner, PA	1.6 - 2	2.3	4.7	5 m	PA	1 pcs	094-013667-00000	per unit
10.03	Combined liner, Teflon	0.6 - 1	1.5	4	3 m	Teflon	1 pcs	094-013800-00000	per unit
10.03	Combined liner, Teflon	0.6 - 1	1.5	4	4 m	Teflon	1 pcs	094-013800-00004	per unit
10.03	Combined liner, Teflon	0.6 - 1	1.5	4	5 m	Teflon	1 pcs	094-013800-00005	per unit
10.03	Combined liner, Teflon	1.2 - 1.6	2	4	3 m	Teflon	1 pcs	094-013801-00000	per unit
10.03	Combined liner, Teflon	1.2 - 1.6	2	4	4 m	Teflon	1 pcs	094-013801-00004	per unit
10.03	Combined liner, Teflon	1.2 - 1.6	2	4	5 m	Teflon	1 pcs	094-013801-00005	per unit
10.03	Combined liner, Teflon	1.6 - 2	2.7	4.7	3 m	Teflon	1 pcs	094-013802-00000	per unit
10.03	Combined liner, Teflon	1.6 - 2	2.7	4.7	4 m	Teflon	1 pcs	094-013802-00004	per unit
10.03	Combined liner, Teflon	1.6 - 2	2.7	4.7	5 m	Teflon	1 pcs	094-013802-00005	per unit
10.03	Combined liner, carbon Teflon	0.6 - 1	1.5	4	3 m	Carbon teflon	1 pcs	094-013871-00000	per unit
10.03	Combined liner, carbon Teflon	0.6 - 1	1.5	4	4 m	Carbon teflon	1 pcs	094-013871-00004	per unit
10.03	Combined liner, carbon Teflon	0.6 - 1	1.5	4	5 m	Carbon teflon	1 pcs	094-013871-00005	per unit
10.03	Combined liner, carbon Teflon	1.2 - 1.6	2	4	3 m	Carbon teflon	1 pcs	094-013828-00000	per unit
10.03	Combined liner, carbon Teflon	1.2 - 1.6	2	4	4 m	Carbon teflon	1 pcs	094-013828-00004	per unit
10.03	Combined liner, carbon Teflon	1.2 - 1.6	2	4	5 m	Carbon teflon	1 pcs	094-013828-00005	per unit
10.03	Combined liner, carbon Teflon	1.6 - 2	2.7	4.7	3 m	Carbon teflon	1 pcs	094-013829-00000	per unit
10.03	Combined liner, carbon Teflon	1.6 - 2	2.7	4.7	4 m	Carbon teflon	1 pcs	094-013829-00004	per unit
10.03	Combined liner, carbon Teflon	1.6 - 2	2.7	4.7	5 m	Carbon teflon	1 pcs	094-013829-00005	per unit
10.03	Teflon liner, by the metre	0.6 - 1	1.5	4	-	Teflon	100 m	094-013487-00100	per m
10.03	Teflon liner, by the metre	1.2 - 1.6	2	4	-	Teflon	100 m	094-013490-00100	per m
10.03	Teflon liner, by the metre	1.6 - 2	2.7	4.7	-	Teflon	100 m	094-013523-00100	per m
10.03	Combined liner, carbon Teflon	0.6 - 1	1.5	4	-	Carbon teflon	100 m	094-013870-00100	per m
10.03	Combined liner, carbon Teflon	1.2 - 1.6	2	4	-	Carbon teflon	100 m	094-013524-00100	per m
10.03	Combined liner, carbon Teflon	1.6 - 2	2.7	4.7	-	Carbon teflon	100 m	094-013525-00100	per m
10.04	Steel liner, insulated	1.6 - 2	2.4	4.6	3.6 m	-	2 Pack	094-013662-00501	per unit
10.04	Steel liner, insulated	1.6 - 2	2.4	4.6	4.6 m	-	2 Pack	094-013663-00501	per unit
10.04	Steel liner, insulated	1.6 - 2	2.4	4.6	5.6 m	-	2 Pack	094-013664-00501	per unit
10.04	Steel liner, insulated	0.8 - 1	1.5	3.8	3.6 m	-	2 Pack	094-013074-00500	per unit
10.04	Steel liner, insulated	0.8 - 1	1.5	3.8	4.6 m	-	2 Pack	094-013075-00500	per unit
10.04	Steel liner, insulated	0.8 - 1	1.5	3.8	5.6 m	-	2 Pack	094-014221-00500	per unit
10.04	Steel liner, insulated	1.2 - 1.6	2	4.6	3.6 m	-	2 Pack	094-007239-00500	per unit
10.04	Steel liner, insulated	1.2 - 1.6	2	4.6	4.6 m	-	2 Pack	094-014223-00500	per unit
10.04	Steel liner, insulated	1.2 - 1.6	2	4.6	5.6 m	-	2 Pack	094-014224-00500	per unit
10.17	O-ring	-	-	-	-	-	1 pcs	094-001249-00000	per unit
11	Collet chuck	-	-	-	-	Brass	20 pcs	094-001082-00000	per unit
11	Collet chuck	-	-	-	-	Brass	20 pcs	094-001291-00000	per unit



Options/accessories

Wearing parts kits for MT series	Item no.	PG
SRP MT401G/MT551W ST/CR M8 Consumables set, steel/chromium nickel	092-013429-40000	
SRP MT401G/MT551W ST/CR M9 Consumables set, steel/chromium nickel	092-013429-30000	
SRP MT401G/MT551W ALU M8 Consumables set, aluminium	092-013429-40001	
SRP MT401G/MT551W AL M9 Consumables set, aluminium	092-013429-30001	



Contact tips

CT M6 CuCrZr



- Contact tip made from copper/chrome/zirconium alloy
- For particularly long service life
- For universal use with all EWM torch series with M6 contact tip thread

Length	28 mm
Thread, contact tip	M6
Material	CuCrZr
Version	For extremely long service lives
Standards	Yes

Designation	Ø wire mm	PU Units	PE	Item no.
Contact tip	0.8	10	per unit	094-013071-00000
	0.9			094-013122-00000
	1.0			094-013072-00000
	1.2	094-014317-00000		
	0.8	5	per PU	094-013071-90005
	0.9			094-013122-90005
1.0	094-013072-90005			
	1.2			094-014317-90005

CT M6 E-Cu



- Contact tip made from E-Cu copper
- For universal use with all EWM torch series with M6 contact tip thread

Length	28 mm
Thread, contact tip	M6
Material	E-Cu
Standards	Yes

Designation	Ø wire mm	PU Units	PE	Item no.
Contact tip	0.8	10	per unit	094-016101-00000
	0.9			094-016102-00000
	1.0			094-016103-00000
	1.2	094-016104-00000		
	0.8	5	per PU	094-016101-90005
	0.9			094-016102-90005
1.0	094-016103-90005			
	1.2			094-016104-90005

CT M6 E-Cu (Alu)



- Contact tip made from E-Cu copper
- Developed specially for aluminium wires
- For universal use with all EWM torch series with M6 contact tip thread

Length	28 mm
Thread, contact tip	M6
Material	E-Cu
Version	Developed specially for aluminium wires

Designation	Ø wire mm	PU Units	Standards	PE	Item no.
Contact tip, aluminium welding	0.8	10	Yes	per unit	094-016105-00000
	0.9				094-016106-00000
	1.0				094-016107-00000
	1.2	-	094-016108-00000		
	0.8	5	Yes	per PU	094-016105-90005
	0.9				094-016106-90005
1.0	094-016107-90005				
	1.2				094-016108-90005


CT M6 E-Cu


Length	28 mm
Thread, contact tip	M6
Material	E-Cu

Designation	Ø wire mm	PU Units	Item no.	per unit
Contact tip	0.8	10	094-001191-00000	
	1.0		094-001228-00000	
	1.2		094-001229-00000	

CT M6 CuCrZr


Length	28 mm
Thread, contact tip	M6
Material	CuCrZr

Designation	Ø wire mm	PU Units	Item no.	per unit
Contact tip	0.8	10	094-005407-00000	
	0.9		094-005408-00000	
	1.0		094-003339-00000	
	1.2		094-005224-00000	

CT M6 E-Cu (Alu)


Length	28 mm
Thread, contact tip	M6
Material	E-Cu

Designation	Ø wire mm	PU Units	Item no.	per unit
Contact tip, aluminium welding	0.8	10	094-001230-00000	
	1.0		094-001231-00000	
	1.2		094-001232-00000	

CT M7 CuCrZr


- Precision-manufactured contact tip made from a copper/chrome/zirconium alloy
- For particularly long service life
- Self-centring with bore to house the steel liner/liner
- For universal application with any MT torch with M7 contact tip thread

Length	30 mm
Thread, contact tip	M7
Material	CuCrZr
Version	For extremely long service lives

Designation	Ø wire mm	PU Units	PE	Item no.	per unit
Contact tip	0.8	10	per unit	094-013535-00000	
	0.9			094-013536-00000	
	1.0			094-013537-00000	
	1.2			094-013538-00000	
	0.8	5	per PU	094-013535-90005	
	0.9			094-013536-90005	
	1.0			094-013537-90005	
	1.2			094-013538-90005	



Contact tips

CT M7 E-Cu (Alu)



- Precision-manufactured contact tip made from E-Cu copper
- Developed specially for aluminium wires
- Self-centring with fastener to secure the steel liner/liner
- For universal application with any MT torch with M7 contact tip thread

Length	30 mm
Thread, contact tip	M7
Material	E-Cu
Version	Developed specially for aluminium wires

Designation	Ø wire mm	PU Units	PE	Item no.
Contact tip, aluminium welding	0.8	10	per unit	094-013550-00000
	0.9			094-013551-00000
	1.0			094-013552-00000
	1.2	094-013553-00000		
	0.8	5	per PU	094-013550-90005
	0.9			094-013551-90005
1.0	094-013552-90005			
	1.2			094-013553-90005

CT M8 CuCrZr



- Contact tip made from copper/chrome/zirconium alloy
- For particularly long service life
- For universal use with all EWM torch series with M8 contact tip thread

Length	30 mm
Thread, contact tip	M8
Material	CuCrZr
Version	For extremely long service lives
Standards	Yes

Designation	Ø wire mm	PU Units	PE	Item no.
Contact tip	0.8	10	per unit	094-014024-00000
	0.9			094-013129-00000
	1.0			094-014222-00000
	1.2			094-013113-00000
	1.4			094-014191-00000
	1.6			094-014192-00000
	2.0	094-014193-00000		
	0.8	5	per PU	094-014024-90005
	0.9			094-013129-90005
	1.0			094-014222-90005
	1.2			094-013113-90005
	1.4			094-014191-90005
1.6	094-014192-90005			
	2.0			094-014193-90005


CT M8 E-Cu


- Contact tip made from E-Cu copper
- For universal use with all EWM torch series with M8 contact tip thread

Length	30 mm
Thread, contact tip	M8
Material	E-Cu

Designation	Ø wire mm	PU Units	Standards	PE	Item no.			
Contact tip	0.8	10	Yes	per unit	094-016109-00000			
	0.9				094-016110-00000			
	1.0				094-016111-00000			
	1.2				094-007238-00000			
	1.4				094-016112-00000			
	1.6				094-016113-00000			
	2.0				094-016114-00000			
	0.8				5	Yes	per PU	094-016109-90005
	0.9							094-016110-90005
	1.0							094-016111-90005
1.2	094-007238-90005							
1.4	094-016112-90005							
1.6	094-016113-90005							
2.0	094-016114-90005							

CT M8 E-Cu (Alu)


- Contact tip made from E-Cu copper
- Developed specially for aluminium wires
- For universal use with all EWM torch series with M8 contact tip thread

Length	30 mm
Thread, contact tip	M8
Material	E-Cu
Version	Developed specially for aluminium wires

Designation	Ø wire mm	PU Units	PE	Item no.		
Contact tip, aluminium welding	0.8	10	per unit	094-016115-00000		
	0.9			094-016116-00000		
	1.0			094-016117-00000		
	1.2			094-016118-00000		
	1.4			094-016119-00000		
	1.6			094-016120-00000		
	2.0			094-016920-00000		
	0.8			5	per PU	094-016115-90005
	0.9					094-016116-90005
	1.0					094-016117-90005
1.2	094-016118-90005					
1.4	094-016119-90005					
1.6	094-016120-90005					
2.0	094-016920-90005					

**Contact tips****CT M8 E-Cu**

Length	30 mm
Thread, contact tip	M8
Material	E-Cu

Designation	Ø wire mm	PU Units	Item no.	per unit
Contact tip	0.8	10	094-001252-00000	
	1.0		094-000941-00000	
	1.2		094-000942-00000	
	1.4		094-001253-00000	
	1.6		094-001254-00000	

CT M8 CuCrZr

Length	30 mm
Thread, contact tip	M8
Material	CuCrZr

Designation	Ø wire mm	PU Units	Item no.	per unit
Contact tip	0.8	10	094-005409-00000	
	0.9		094-005410-00000	
	1.0		094-005225-00000	
	1.2		094-004207-00000	
	1.4		094-005411-00000	
	1.6		094-005412-00000	
	2.0		094-005413-00000	

CT M8 E-Cu (Alu)

Length	30 mm
Thread, contact tip	M8
Material	E-Cu

Designation	Ø wire mm	PU Units	Item no.	per unit
Contact tip, aluminium welding	0.8	10	094-001257-00000	
	1.2		094-000944-00000	
	1.4		094-010165-00000	
	1.6		094-001258-00000	
	1.0		094-000943-00000	


CT M9 CuCrZr


- Precision-manufactured contact tip made from copper/chrome/zirconium alloy
- For particularly long service life
- Self-centring with bore to house the steel liner/liner
- For universal use with all MT torches with M9 contact tip thread

Length	35 mm
Thread, contact tip	M9
Material	CuCrZr
Version	For extremely long service lives

Designation	Ø wire mm	PU Units	PE	Item no.
Contact tip	0.8	10	per unit	094-013528-00000
	0.9			094-013529-00000
	1.0			094-013530-00000
	1.2			094-013531-00000
	1.4			094-013532-00000
	1.6			094-013533-00000
	2.0			094-013534-00000
	2.4	094-013720-00000		
	0.8	5	per PU	094-013528-90005
	0.9			094-013529-90005
	1.0			094-013530-90005
	1.2			094-013531-90005
	1.4			094-013532-90005
	1.6			094-013533-90005
2.0	094-013534-90005			
2.4	094-013720-90005			

CT M9 E-Cu (Alu)


- Precision-manufactured contact tip made from E-Cu copper
- Developed specially for aluminium wires
- Self-centring with bore to house the steel liner/liner
- For universal use with all MT torches with M9 contact tip thread

Length	35 mm
Thread, contact tip	M9
Material	E-Cu
Version	Developed specially for aluminium wires

Designation	Ø wire mm	PU Units	PE	Item no.
Contact tip, aluminium welding	0.8	10	per unit	094-013543-00000
	0.9			094-013544-00000
	1.0			094-013545-00000
	1.2			094-013546-00000
	1.4			094-013547-00000
	1.6			094-013548-00000
	2.0			094-013549-00000
	0.8	5	per PU	094-013543-90005
	0.9			094-013544-90005
	1.0			094-013545-90005
	1.2			094-013546-90005
	1.4			094-013547-90005
	1.6			094-013548-90005
	2.0			094-013549-90005



■ Contact tips

CT M12 CUCRZR 45



Length	45 mm			
Thread, contact tip	M12			
Designation	Ø wire mm	PU Units	Item no.	per unit
Contact tip	1.2	10	094-021810-00000	
	1.4		094-021811-00000	
	1.6		094-021812-00000	



Overview

TIG automation		Page		
Sample applications	Tetrix, water-cooled	Handling/welding robot system Tetrix 352 Synergic	158	
		Handling/welding robot system Tetrix 352 Synergic with TIG media separation box	159	
	tigSpeed, water cooled	Handling/welding robot system Tetrix 352 RC with cold wire	160	
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		Welding system forceTig 552 with hot wire and digital gas control	165	
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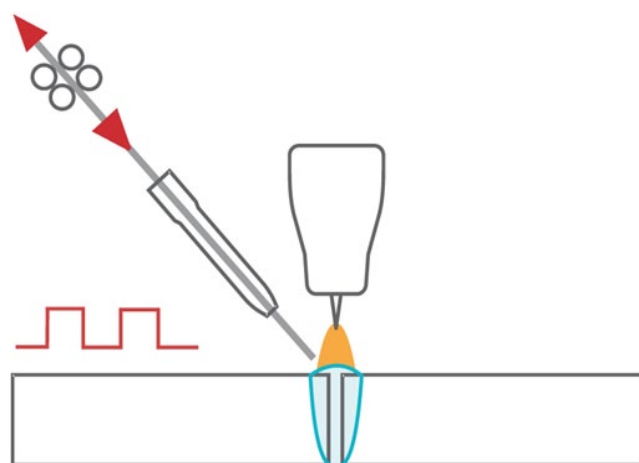
■ **tigSpeed Rob**

Dynamic wire feed system

The continuous wire feeding is superimposed by forward/backward motion of the wire. The welding process is especially stable with a simultaneously high deposition rate.

tigSpeed Drive can be used for cold wire and hot wire applications.

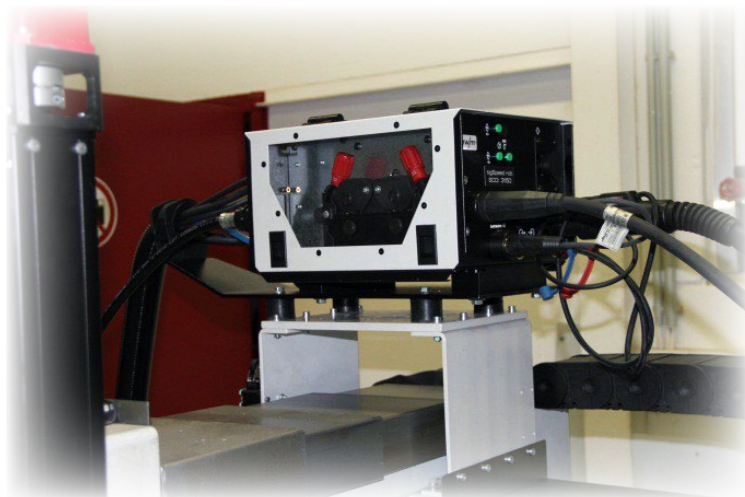
- Increases profitability, quicker than standard systems
- Perfect weld appearance





Mechanised use

- tigSpeed drive in combination with TIG MT automated welding torch
- For cold wire and hot wire applications with four-axis wire support
- For connection to tigSpeed 352 Synergic RC cold wire and tigSpeed 352 Synergic RC hot wire
- Adjustable heat input in the wire up to 180 A
- Parameter definition via BUSINTX 11

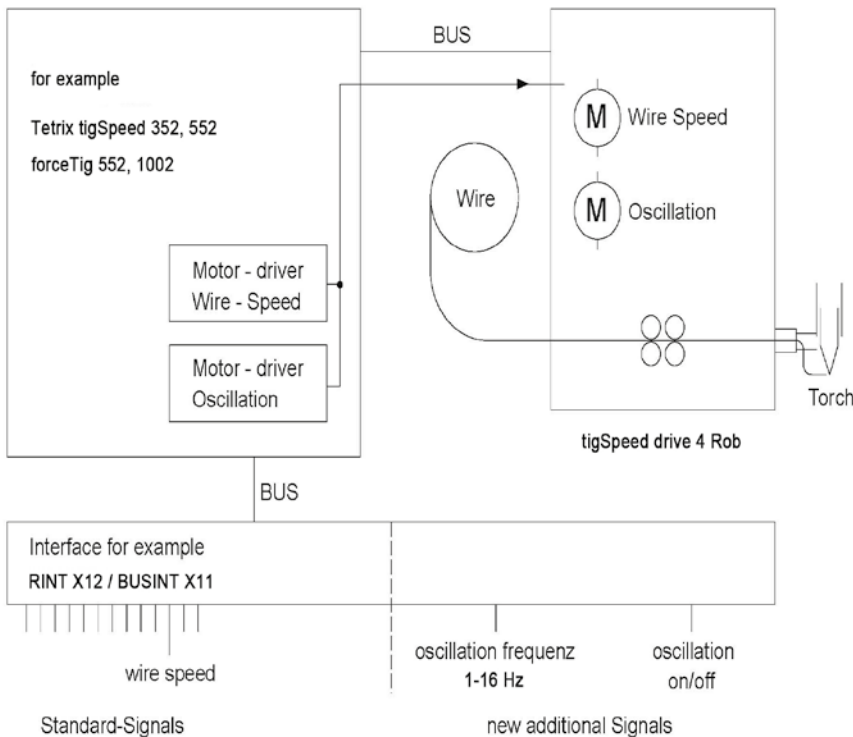




BUSINTX 11 control data for tigSpeed

Reproducible welding results thanks to digital control

- Set and view all parameters
- Forward/backward motion frequency (adjustable from 1 to 16 Hz, or disable)
- Wire feed speed (0.5 m/min to 10 m/min)
- Interface for all conventional bus systems



File View Data Zoom Help TETRIX 450 DC BUSINTX11 / Profil 0 // Ver: 0.0.3.0 / Notation: Intel

Standard

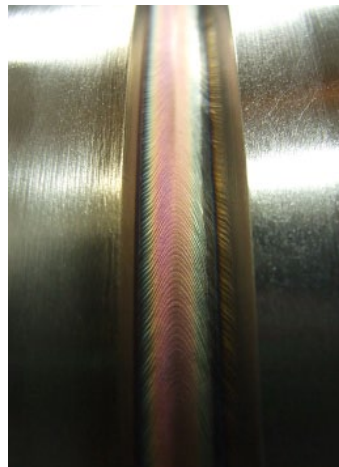
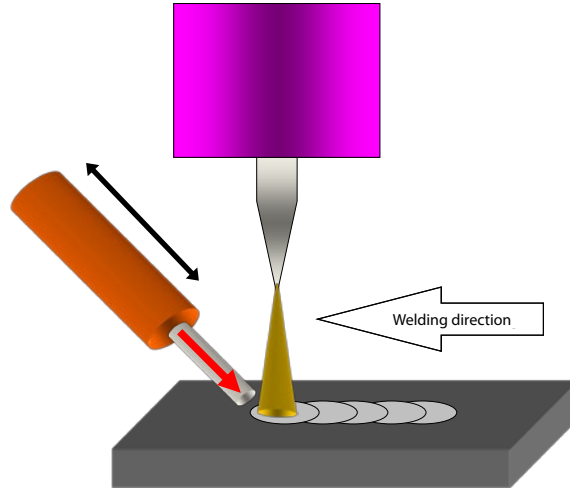
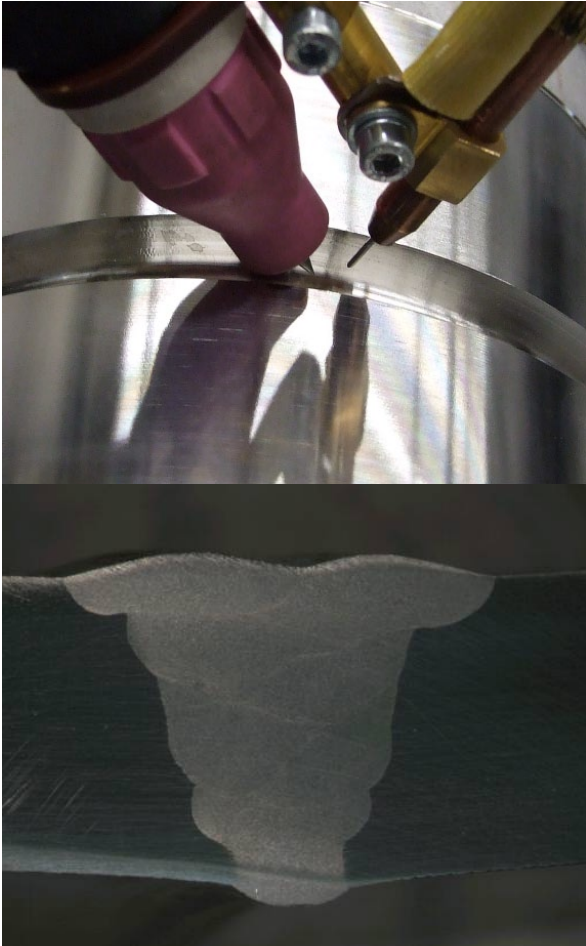
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Inputdata Welding Source					Outputdata Welding-Source				
Value	x	y	z	Parameter name	Value	x	y	z	Parameter name
●	0	0	1	operation mode bit0(2)	●	0	0	1	arc on(220)
●	0	1	1	operation mode bit1(3)	●	0	1	1	power source ready(216)
●	0	2	1	weld mode bit0(4)	●	0	2	1	wire stick signal(217)
●	0	3	1	weld mode bit1(5)	●	0	3	1	error active(218)
●	0	4	1	start main process(0)	●	0	4	1	torch collision(223)
●	0	5	1	robot ready signal(14)	●	0	5	1	main current signal(222)
●	0	6	1	shield gas on(16)	●	0	6	1	process active(219)
●	0	7	1	plasma gas on(17)	●	0	7	1	aux. arc on(221)
●	1	0	1	wire inching on(18)	●	1	0	8	error type(248)
●	1	1	1	workpiece search on(12)	●	2	0	1	threshold voltage(224)
●	1	2	1	rev. inching on(19)	●	2	1	1	threshold current(225)
●	1	3	1	start aux. process(1)	●	2	2	1	not used(0)
●	1	4	1	quit error(10)	●	2	3	1	threshold motor curr.(227)
●	1	5	1	user output 1(7)	●	2	4	3	not used(0)
●	1	6	1	job control mode on(15)	●	2	7	1	Electrode touch(238)
●	1	7	1	weld simulation on(11)	●	3	0	1	input X4/3(232)
0	2	0	4	program no(20)	●	3	1	1	input X4/5(233)
●	2	4	1	not used(0)	●	3	2	1	input X4/7(234)
●	2	5	1	TigSpeed On(132)	●	3	3	1	input X4/8(245)
●	2	6	1	process monitor on(13)	●	3	4	36	not used(0)
●	2	7	1	not used(0)	27.0 V	8	0	15	arc voltage value(256)
0	3	0	8	job no(24)	●	9	7	1	not used(0)
0 A	4	0	15	main current(96)	0 A	10	0	15	arc current value(272)
●	5	7	1	not used(0)	●	11	7	1	not used(0)
0.00 m/min	6	0	15	cold wire setting(48)	0.0 m/min	12	0	15	wire speed value(288)
●	7	7	1	not used(0)	●	13	7	1	not used(0)
0.0 Hz	8	0	15	Osc. TigSpeed(64)	0.0 A	14	0	15	motor curr. value(304)



Application examples

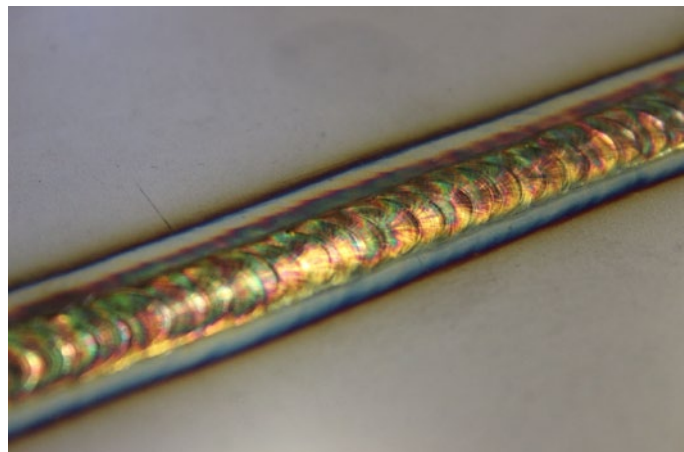
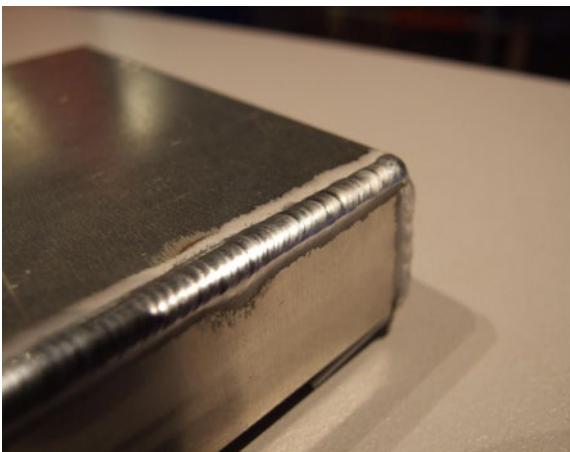
Partially mechanised on turning rolls using hot wire for a higher deposition rate



Advantage over conventional wire feeds:

Significantly improved and easier control of the weld pool in positional welding

Lower heat input reduces distortion



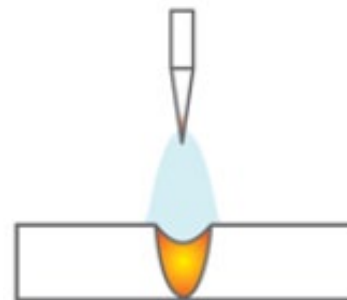
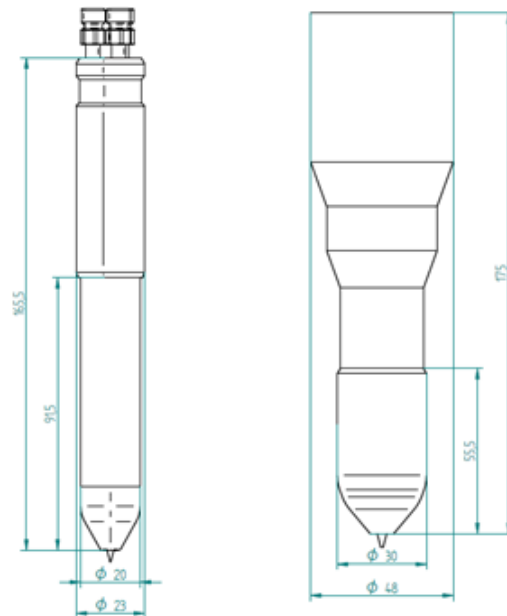


forceTig

Joining process using a highly concentrated arc

forceTig impresses users with its focussed, constricted and extremely directionally stable arc. Optimum for mechanised and automated applications, with or without welding consumables. TIG hot wire applications with considerably higher deposition rates.

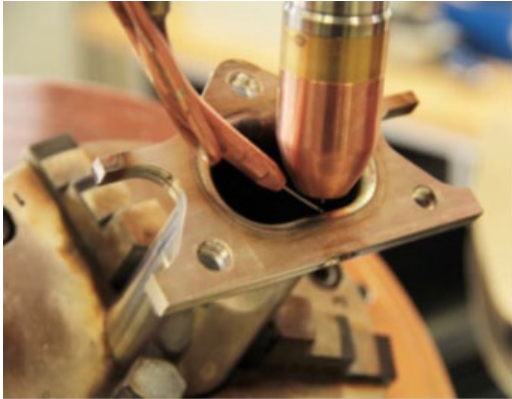
- High torch power – 800 A at 100% DC (FT1000) and 500 A at 100% DC (FT500)
- 100% reproducible TCP, perfect for automated applications
- Easy to change electrode without a setting gauge
- High current-carrying capacity, high current density
- Robust welding torch construction
- forceTig power sources with extensive accessories and up to 1000 A welding current



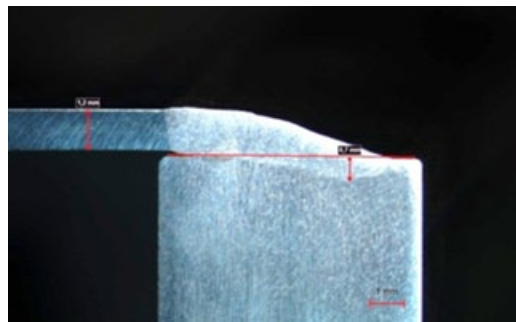
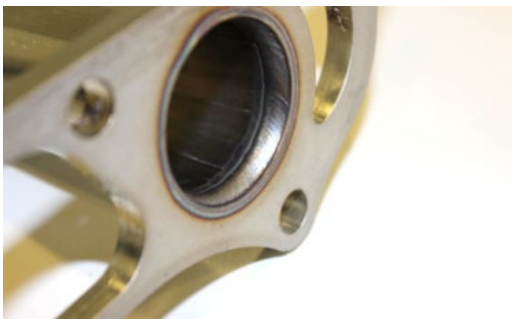


Application examples

Automated robot applications for joining pipe-flange connections

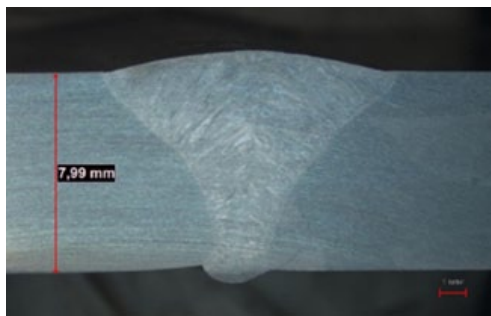


Cold wire or hot wire applications for welding a wide range of material thicknesses; forceTig is ideal for joining high-alloy steel.



Universal applications for thin and thick sheet metal

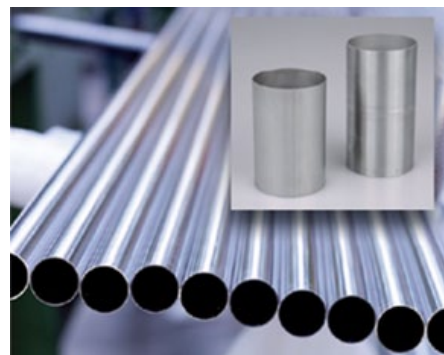
Welding thick panels



Hot wire surfacing

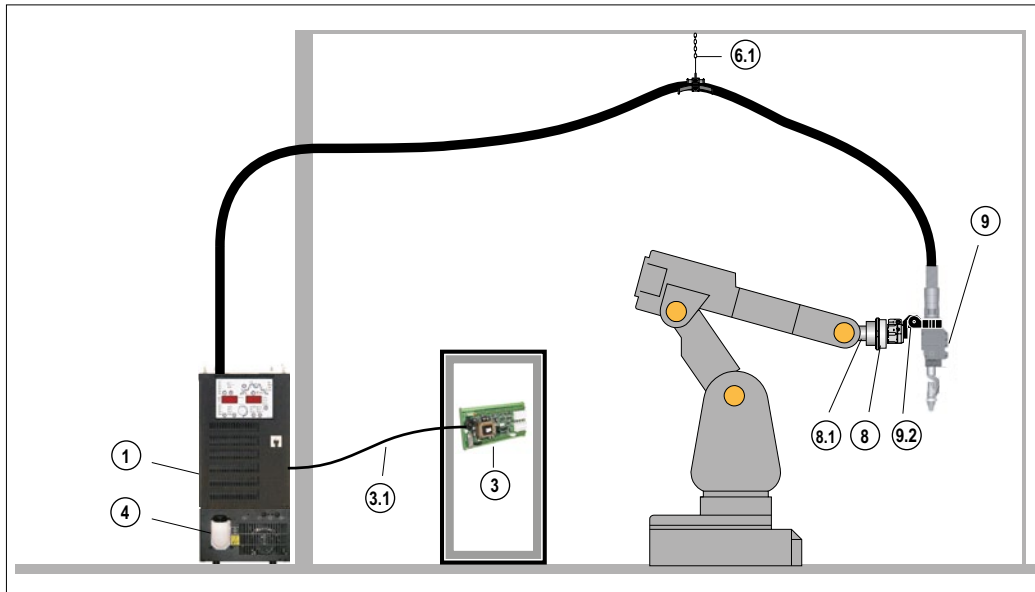


Welding thin panels and pipes without welding consumables





■ **Tetrix, water-cooled** ■ **activArc**
■ **Handling/welding robot system Tetrix 352 Synergic**



Tetrix 352 Synergic

- With Synergic control
- Water cooled
- Example shown: Motoman UP20

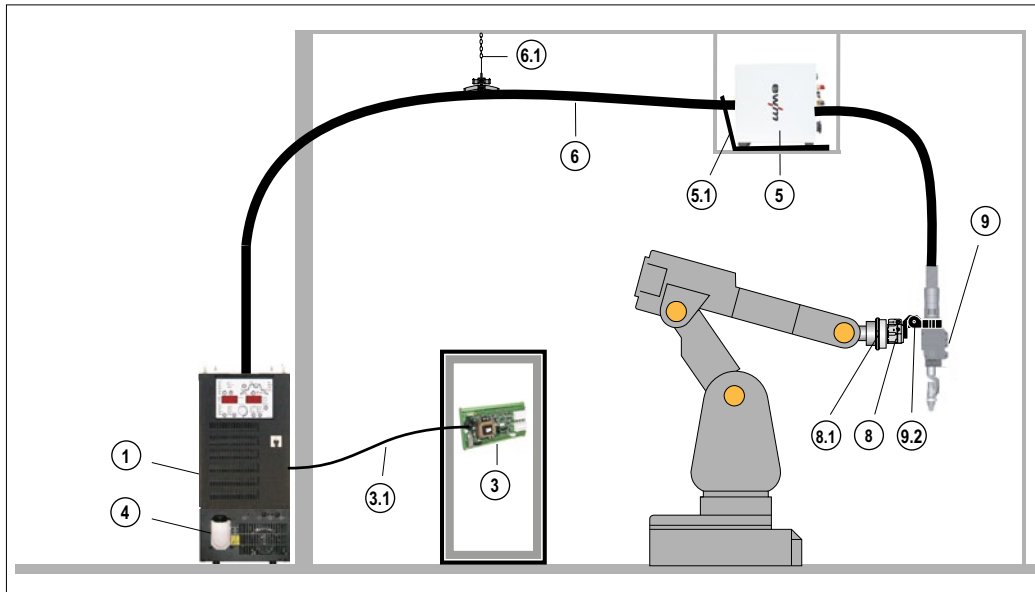
Item	Type	Designation	Item no.
1	Tetrix 352 Synergic	DC TIG welding machine with Synergic control	090-000141-00502
1.1	OW CEE 32A	Factory-fit option, mains plug including fitting	092-008215-00000
1.2	WK70/CL 5m	Workpiece lead with cable lug	092-002078-00005
1.3	Optimizer AR/MIX 200bar 20l G1/4"	Pressure regulator with flow meter	094-011839-00000
1.5	GH 2x1/4" 2m	Gas hose	094-000010-00001
1.8	RA5 19POL 1x 5M	Connection cable, 19-pole 5 m, wire end ferrules on one end	092-001569-00005
3	RINT X12 STANDARD	Standard robot interface	090-008291-00000
3.1	FRV 7POL 5m	Connection cable extension	092-000201-00003
3.2	KB MOTOMAN-RINT X12	Cable harness for RINT X12 connection to Motoman XRC/NX-100/DX-100	094-012212-00003
4	cool82 U44	Cooling unit for robot machines	090-008268-00502
4.1	KF 23E-10, -10	Coolant (-10 °C), 9.3 l	094-000530-00000
6.1	ON ZWIPA-CONNECTION	Retrofit option, third-party intermediate hose package strain relief	094-007890-00000
8	CAT2-XL	Collision sensor	094-008501-00500
8.1	FL ISO 9409-1-A40	Intermediate flange, plastic	094-013347-00500
9	TIG ROB 400W 4m	TIG welding torch, straight, water cooled, complete	094-017197-00000
9.2	CLAMPING HOLDER TIG WH	Clamping holder TIG ROB 400 W	094-010122-00000
-	ANALYZER	Software for control and status signal analysis	090-008778-00000
-	PC300.Net Set	PC300.Net welding parameter software set incl. CMSTICK, cable and interface SECINT X10 USB	090-008777-00000

- ▶ Image for conceptual purposes. Not all listed items are shown.
- ▶ For more accessories, options and machine variants please refer to the individual chapters



■ Tetrrix, water-cooled ■ activArc

■ Handling/welding robot system Tetrrix 352 Synergic with TIG media separation box



Tetrrix 352 Synergic

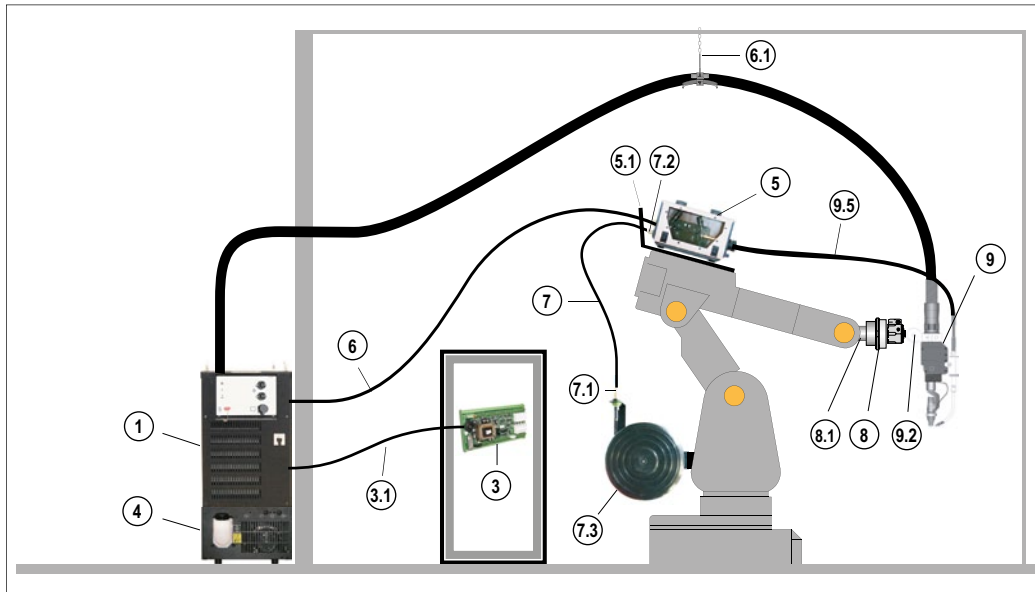
- With Synergic control
- TIG media separation box
- Water cooled
- Example shown: Kawasaki D40

Item	Type	Designation	Item no.
1	Tetrrix 352 Synergic	DC TIG welding machine with Synergic control	090-000141-00502
1.1	OW CEE 32A	Factory-fit option, mains plug including fitting	092-008215-00000
1.2	WK70/CL 5m	Workpiece lead with cable lug	092-002078-00005
1.3	Optimator AR/MIX 200bar 20l G1/4"	Pressure regulator with flow meter	094-011839-00000
1.5	GH 2x1/4" 2m	Gas hose	094-000010-00001
1.8	RA5 19POL 1x 5M	Connection cable, 19-pole 5 m, wire end ferrules on one end	092-001569-00005
3	Tetrrix BUSINT X11 PROFIBUS	PROFIBUS industrial bus interface	090-008257-00000
3.1	FRV 7POL 5m	Connection cable extension	092-000201-00003
4	cool82 U44	Cooling unit for robot machines	090-008268-00502
4.1	KF 23E-10, -10	Coolant (-10 °C), 9.3 l	094-000530-00000
5	Tig Torch Box	TIG media separation box	090-008299-00502
5.1	MONTAGE CONSOLE ROB 3 UNIVERSAL	Mounting console for wire feed unit	092-002440-00000
6	VSLP TORCHBOX 7/12 POL 95QMM	Connecting hose package for media separation box	092-007855-31105
6.1	ON ZWIPA-CONNECTION	Retrofit option, third-party intermediate hose package strain relief	094-007890-00000
8	CAT2-XL	Collision sensor	094-008501-00500
8.1	FL ISO 9409-1-A40	Intermediate flange, plastic	094-013347-00500
9	TIG ROB 400W 4m	TIG welding torch, straight, water cooled, complete	094-017197-00000
9.2	CLAMMPING HOLDER TIG WH	Clamping holder TIG ROB 400 W	094-010122-00000
-	ANALYZER	Software for control and status signal analysis	090-008778-00000
-	PC300.Net Set	PC300.Net welding parameter software set incl. CMSTICK, cable and interface SECINT X10 USB	090-008777-00000

- ▶ Image for conceptual purposes. Not all listed items are shown.
- ▶ For more accessories, options and machine variants please refer to the individual chapters



Tetrix, water-cooled ■ activArc
■ Handling/welding robot system Tetrix 352 RC with cold wire



- Tetrix 352 RC CW**
- No front control
 - Water cooled
 - T drive 4 Rob 2
 - With cold wire feed
 - As demonstrated on a Fanuc ArcMate 100i

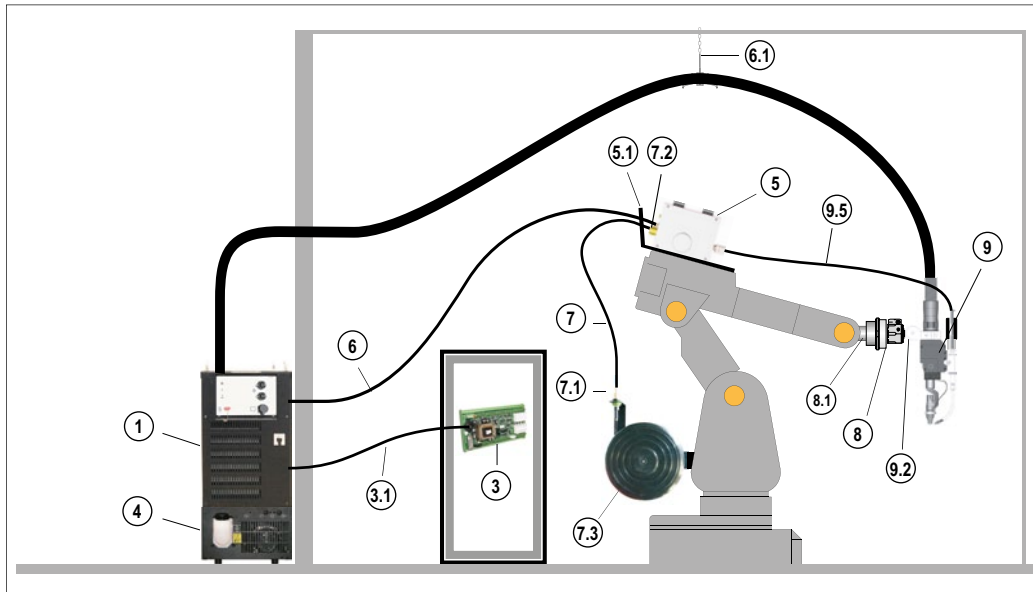
Item	Type	Designation	Item no.
1	Tetrix 352 RC CW	DC TIG welding machine incl. connection capability for additional wire, without front control	090-000166-00505
1.1	OW CEE 32A	Factory-fit option, mains plug including fitting	092-008215-00000
1.2	WK70/CL 5m	Workpiece lead with cable lug	092-002078-00005
1.3	Optimator AR/MIX 200bar 20l G1/4"	Pressure regulator with flow meter	094-011839-00000
1.5	GH 2x1/4" 2m	Gas hose	094-000010-00001
1.8	RA5 19POL 1x 5M	Connection cable, 19-pole 5 m, wire end ferrules on one end	092-001569-00005
3	RINT X12 STANDARD	Standard robot interface	090-008291-00000
3.1	FRV 7POL 5m	Connection cable extension	092-000201-00003
3.2	KB RINT X12 FANUC 34POL	Cable assembly	094-009441-00001
3.2	KB RINT X12 FANUC 50POL		094-009440-00001
4	cool82 U44	Cooling unit for robot machines	090-008268-00502
4.1	KF 23E-10, -10	Coolant (-10 °C), 9.3 l	094-000530-00000
5	T drive 4 Rob 2 IG3	Wire feeder for automated applications, IG3 speedometer solution	090-008785-00502
5.1	MONTAGE CONSOLE ROB 2 UNIVERSAL	Mounting console for wire feed unit	092-001746-00000
6	SLP 5 7/12 POL 5M	Control cable, standard protective hose	092-007855-52105
6.1	ON ZWIPIA-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	DV-CAB connection	092-007741-00000
7.2	CONNECTOR DRIVE ROB2 WIRE CONDUIT	Connection set for Rob 2 wire conduit	092-008205-00000
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	CAT2-XL	Collision sensor	094-008501-00500
8.1	FL ISO 9409-1-A40	Intermediate flange, plastic	094-013347-00500
9	TIG ROB 400W CW ZF1.0 4m	TIG welding torch, cold wire, straight, water-cooled, complete	094-017204-00000
9.2	CLAMPING HOLDER TIG WH	Clamping holder TIG ROB 400 W	094-010122-00000
9.5	AW CW 4 m Quick-Connect L	Cold wire feed, for T drive 4 Rob 2	094-020613-00000
-	ANALYZER	Software for control and status signal analysis	090-008778-00000
-	PC300.Net Set	PC300.Net welding parameter software set incl. CMSTICK, cable and interface SECINT X10 USB	090-008777-00000

- ▶ Image for conceptual purposes. Not all listed items are shown.
- ▶ For more accessories, options and machine variants please refer to the individual chapters



■ Tetrax, water-cooled ■ activArc

■ Handling/welding robot system Tetrax 352 RC with cold wire as push/push system



Tetrax 352 RC

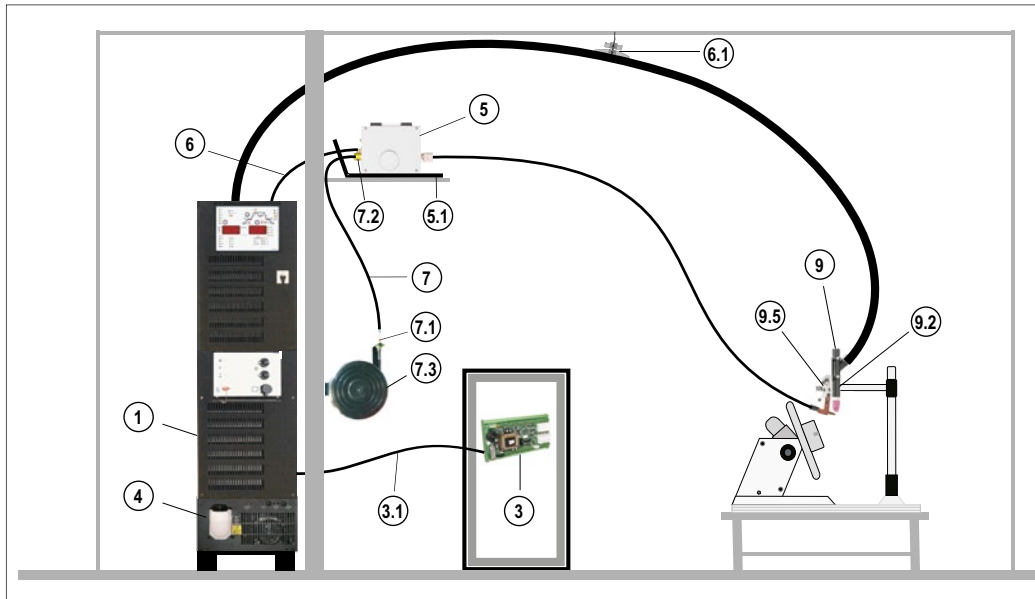
- No front control
- Water cooled
- T drive 4 Rob 3
- With push/push system
- With cold wire feed
- Example shown: Fanuc arcMate 100i

Item	Type	Designation	Item no.
1	Tetrax 352 RC CW	DC TIG welding machine incl. connection capability for additional wire, without front control	090-000166-00505
1.1	OW CEE 32A	Factory-fit option, mains plug including fitting	092-008215-00000
1.2	WK70/CL 5m	Workpiece lead with cable lug	092-002078-00005
1.3	Optimator AR/MIX 200bar 20l G1/4"	Pressure regulator with flow meter	094-011839-00000
1.5	GH 2x1/4" 2m	Gas hose	094-000010-00001
1.8	RA5 19POL 1x 5M	Connection cable, 19-pole 5 m, wire end ferrules on one end	092-001569-00005
3	RINT X12 STANDARD	Standard robot interface	090-008291-00000
3.1	FRV 7POL 5m	Connection cable extension	092-000201-00003
3.2	KB RINT X12 FANUC 34POL	Cable assembly	094-009441-00001
3.2	KB RINT X12 FANUC 50POL		094-009440-00001
4	cool82 U44	Cooling unit for robot machines	090-008268-00502
4.1	KF 23E-10, -10	Coolant (-10 °C), 9.3 l	094-000530-00000
5	T drive 4 Rob 3 RE IG3	Wire feeder for automated applications, opens on right, IG3 speedometer solution	090-008783-00502
5.1	MONTAGE CONSOLE ROB 3 UNIVERSAL	Mounting console for wire feed unit	092-002440-00000
6	SLP S 7/12 POL 5M	Control cable, standard protective hose	092-007855-52105
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	DV-CAB connection	092-007741-00000
7.2	CONNECTOR DRIVE ROB3 WIRE CONDUIT	Connection set for Rob 3 wire conduit	092-007916-00000
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	CAT2-XL	Collision sensor	094-008501-00500
8.1	FL ISO 9409-1-A40	Intermediate flange, plastic	094-013347-00500
9	TIG ROB 400W CW PP IG3 4M	TIG welding torch, cold wire, water-cooled, push/push, complete	094-019639-00000
9.2	CLAMPING HOLDER TIG WH	Clamping holder TIG ROB 400 W	094-010122-00000
9.5	AW CW 4 m Quick-Connect S	Cold wire feed, for T drive 4 Rob 3	094-020613-00001
-	ANALYZER	Software for control and status signal analysis	090-008778-00000
-	PC300.Net Set	PC300.Net welding parameter software set incl. CMSTICK, cable and interface SECINT X10 USB	090-008777-00000

- Image for conceptual purposes. Not all listed items are shown.
- For more accessories, options and machine variants please refer to the individual chapters



Tetrix, water-cooled ■ activArc
■ Mechanised welding system Tetrix 552 Synergic RC with hot wire



Tetrix 552 Synergic-RC

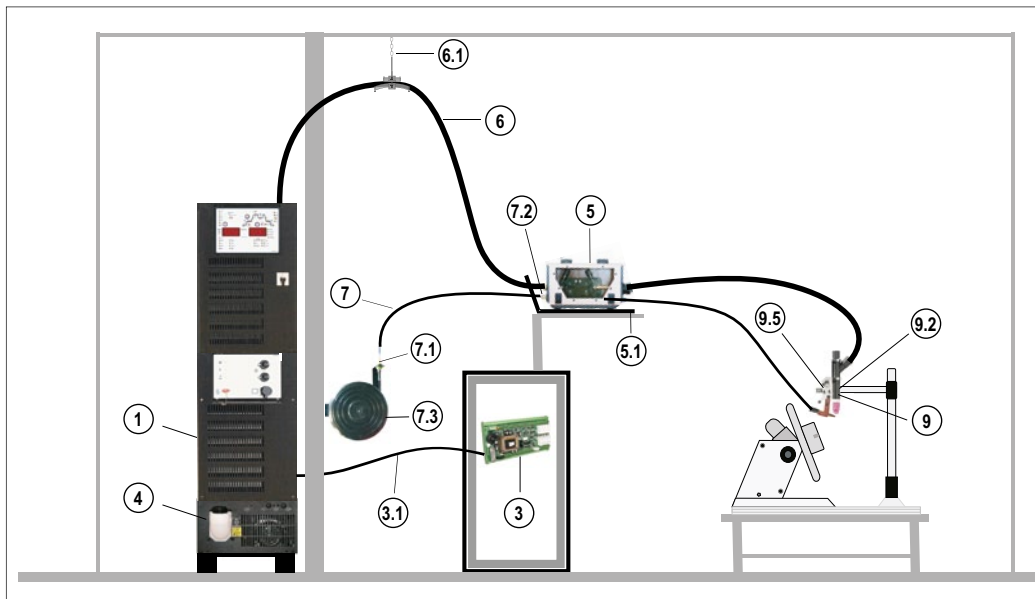
- With Synergic-RC display
- Water cooled
- T drive 4 Rob 3 for hot wire
- Hot wire power source Tetrix 552 Synergic-RC
- Example shows a mechanical application

Item	Type	Designation	Item no.
1	Tetrix 552 Synergic RC HW	DC TIG welding machine with connection capability for additional wire, with Synergic-RC display; including transport pallet	090-000214-00502
1.1	OW CEE 32A	Factory-fit option, mains plug including fitting	092-008215-00000
1.2	WK95/CL 5m	Workpiece lead with cable lug	092-001990-00005
1.3	Optimator AR/MIX 200bar 20l G1/4"	Pressure regulator with flow meter	094-011839-00000
1.5	GH 2x1/4" 2m	Gas hose	094-000010-00001
1.8	RA5 19POL 1x 5M	Connection cable, 19-pole 5 m, wire end ferrules on one end	092-001569-00005
3	Tetrix BUSINT X11 PROFIBUS	PROFIBUS industrial bus interface	090-008257-00000
3.1	FRV 7POL 5m	Connection cable extension	092-000201-00003
4	cool82 U44	Cooling unit for robot machines	090-008268-00502
4.1	KF 23E-10, -10	Coolant (-10 °C), 9.3 l	094-000530-00000
5	T drive 4 Rob 3 RE Hotwire	Wire feeder for automated applications, hot wire, opens on right, with integrated IG3 speedometer solution	090-008702-00502
5.1	MONTAGE CONSOLE ROB 3 UNIVERSAL	Mounting console for wire feed unit	092-002440-00000
6	SLP HW S 7/12 POL 5M	Control cable, standard protective hose	092-007855-62105
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	DV-CAB connection	092-007741-00000
7.2	CONNECTOR DRIVE ROB3 WIRE CONDUIT	Connection set for Rob 3 wire conduit	092-007916-00000
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
9	TIG-MT 500W 4M	Automated TIG welding torch, water-cooled	094-013706-00000
9.2	TH MT-35	Torch holder suitable for TIG-MT 500W	094-013868-00000
9.5	AWS HW 4,0 m Quick-Connect S	4 axes support, hot wire, insulated setup, for T drive 4 Rob.3	094-020614-11040
-	ANALYZER	Software for control and status signal analysis	090-008778-00000
-	PC300.Net Set	PC300.Net welding parameter software set incl. CMSTICK, cable and interface SECINT X10 USB	090-008777-00000

- ▶ Image for conceptual purposes. Not all listed items are shown.
- ▶ For more accessories, options and machine variants please refer to the individual chapters



■ **tigSpeed, water cooled** ■ **activArc**
 ■ **Mechanised welding system tigSpeed 352 Synergic RC with hot wire**


tigSpeed 352 Synergic RC HW

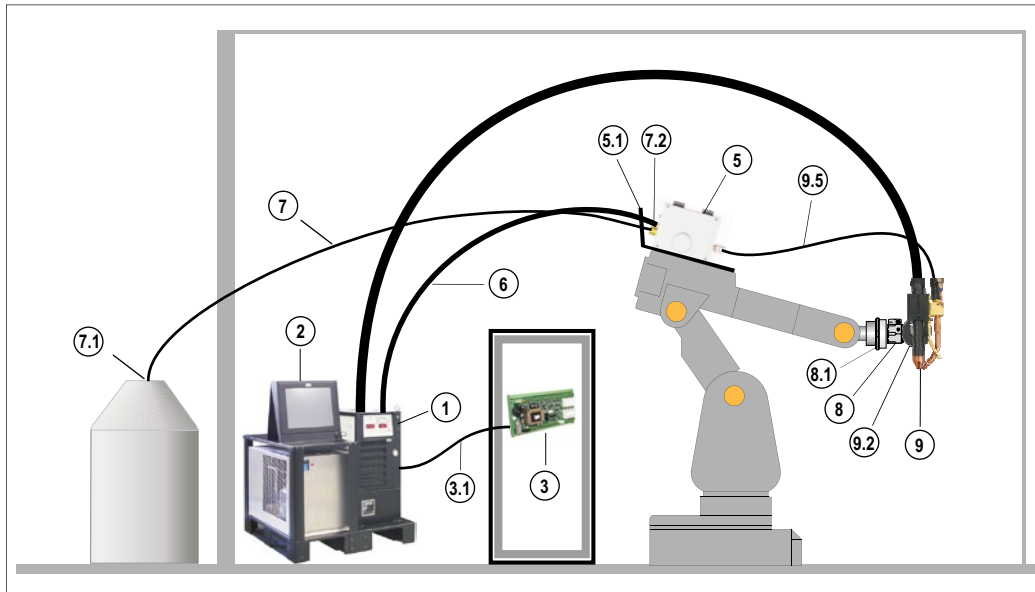
- With Synergic RC display
- Water cooled
- tigSpeed drive 4 Rob
- As demonstrated on a mechanical application

Item	Type	Designation	Item no.
1	tigSpeed 352 Synergic RC HW	DC TIG welding machine with Synergic-RC display, including connection capability for hot wire	090-000232-00502
1.1	OW CEE 32A	Factory-fit option, mains plug including fitting	092-008215-00000
1.2	WK70/CL 5m	Workpiece lead with cable lug	092-002078-00005
1.3	Optimator AR/MIX 200bar 20l G1/4"	Pressure regulator with flow meter	094-011839-00000
1.5	GH 2x1/4" 2m	Gas hose	094-000010-00001
1.8	RA5 19POL 1x 5M	Connection cable, 19-pole 5 m, wire end ferrules on one end	092-001569-00005
3	Tetrax BUSINT X11 PROFIBUS	Industrial bus interface, potential-free power supply, 24 V	090-908257-00008
3.1	FRV 7POL 5m	Connection cable extension	092-000201-00003
4	cool82 U44	Cooling unit for robot machines	090-008268-00502
4.1	KF 23E-10, -10	Coolant (-10 °C), 9,3 l	094-000530-00000
5	tigSpeed drive 4 Rob	Wire feed unit for automated applications	090-005395-00502
5.1	MONTAGE CONSOLE ROB 2 UNIVERSAL	Mounting console for wire feed unit	092-001746-00000
6	VSLP 95QMM HW WR 7/12/19POL 5M	Intermediate hose package, robot, water cooled, ribbed hose	092-007855-81205
6.1	ON ZWIPA-CONNECTION	Retrofit option, third-party intermediate hose package strain relief	094-007890-00000
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 ROB2 WIRE LEAD	Connection set for Rob 2 wire conduit	092-007913-00000
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
9	TIG-MT 500W 2M	Automated TIG welding torch, water-cooled	094-013706-00002
9.2	TH MT-35	Torch holder suitable for TIG-MT 500W	094-013868-00000
9.5	AWS HW 1,5 m DZA	4 axes support, hot wire, insulated setup, for Tetrax drive 4L/tigSpeed drive 45	094-020614-12015
-	ANALYZER	Software for control and status signal analysis	090-008778-00000
-	PC300.Net Set	PC300.Net welding parameter software set incl. CMSTICK, cable and interface SECINT X10 USB	090-008777-00000

- ▶ Image for conceptual purposes. Not all listed items are shown.
- ▶ For more accessories, options and machine variants please refer to the individual chapters



forceTig, water cooled ■ Welding system forceTig 552, cold wire

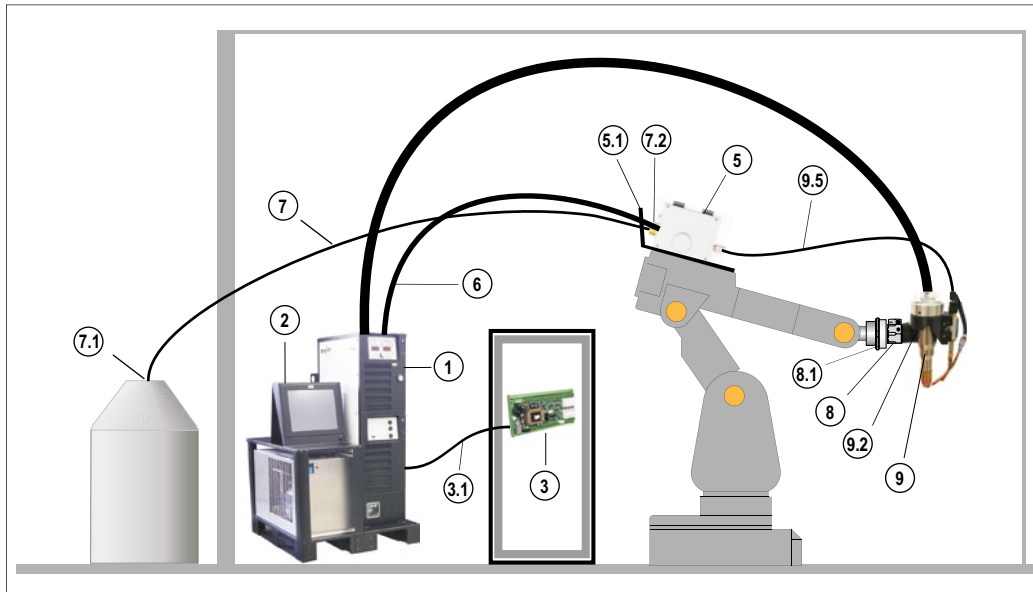


forceTig 552

- With T3.37-2 FORCETIG CONTROL
- Water cooled
- T drive 4 Rob 3
- Example shown: Fanuc Arc Mate 120iB

Item	Type	Designation	Item no.
1	forceTig 552	Welding system comprising power source, recooling unit, media separation box, power-water cable, connection capability for industrial PC, transport pallet	091-000160-00502
1.1	OW CEE 32A	Factory-fit option, mains plug including fitting	092-008215-00000
1.2	WK95/CL 5m	Workpiece lead with cable lug	092-001990-00005
1.3	Optimator AR/MIX 200bar 20l G1/4"	Pressure regulator with flow meter	094-011839-00000
1.5	GH 2X1/4" 5m	Gas hose	094-000010-00005
1.8	RA5 19POL 1x 5M	Connection cable, 19-pole 5 m, wire end ferrules on one end	092-001569-00005
2	EWM forceTig PC	Industrial panel PC with Windows operating system, 19" touch screen and PC300.Net software pre-installed	092-001182-00000
3	RINT X12 STANDARD	Standard robot interface	090-008291-00000
3.1	FRV 7POL 5m	Connection cable extension	092-000201-00003
3.2	KB RINT X12 FANUC 34POL	Cable assembly	094-009441-00001
3.2	KB RINT X12 FANUC 50POL		094-009440-00001
4.1	KF 23E-10, -10	Coolant (-10 °C), 9.3 l	094-000530-00000
5	T drive 4 Rob 3 RE IG3	Wire feeder for automated applications, opens on right, IG3 speedometer solution	090-008783-00502
5.1	MONTAGE CONSOLE ROB 3 UNIVERSAL	Mounting console for wire feed unit	092-002440-00000
5.2	ON COOL W ROB3	Retrofit option water cooling ROB 3	092-002384-00000
6	SLP WS 7/12 POL 5M	Control cable, standard protective hose	092-007855-51105
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	ROLLINER CONNECTOR DRIVE ROB3	Connection set for Rob 3 wire conduit	092-007918-00000
8	CAT2-XL/HL	Collision sensor	094-012838-00000
8.1	FL ISO 9409-1-A40	Intermediate flange, plastic	094-013347-00500
9	FT 500W 5m	forceTig welding torch with hose package	094-020100-10000
9.2	BH forceTig CAT2-HL	Torch holder for forceTig welding torch on CAT2-HL collision sensor	094-019115-00000
9.5	AWS FT500 1,5m	Wire support	090-008799-00015
10.01	GN FT4505 Ø 5 mm	Gas nozzle, copper	094-020619-00000
10.04	INS/DIF FT500	Insulator / Diffusor	094-020620-00000
10.08	CAT FT52 R0.25	Cathode, round	094-020618-00000
-	ANALYZER	Software for control and status signal analysis	090-008778-00000

- ▶ Image for conceptual purposes. Not all listed items are shown.
- ▶ For more accessories, options and machine variants please refer to the individual chapters


forceTig, water cooled ■ Welding system forceTig 552 with hot wire and digital gas control

forceTig 552

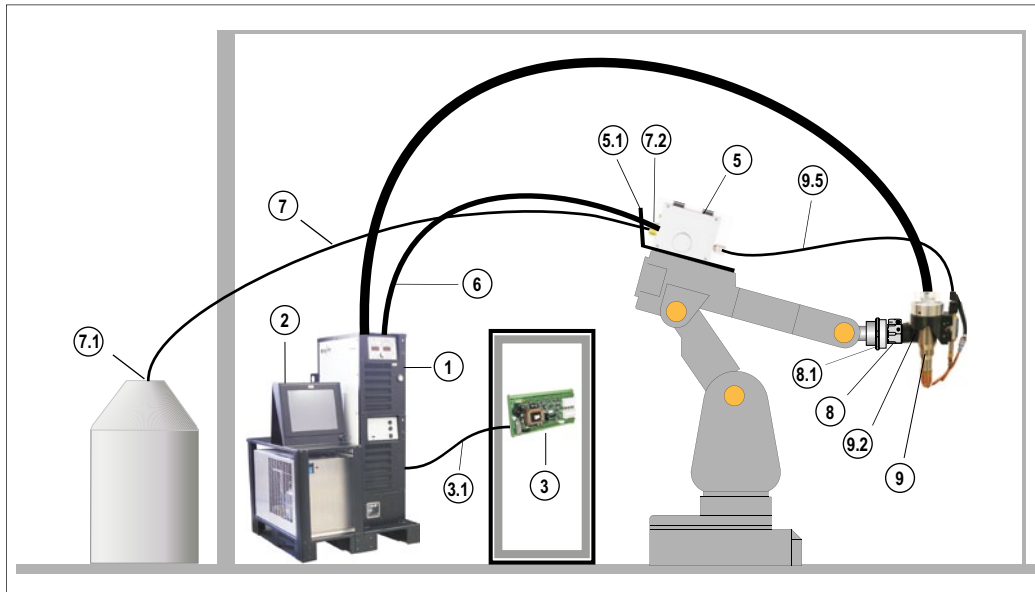
- With T3.37-2 FORCETIG CONTROL
- Integrated digital gas regulation
- Integrated hot wire inverter
- Water cooled
- T drive 4 Rob 3 Hotwire
- Example shown: Motoman DX-100

Item	Type	Designation	Item no.
1	forceTig 552 Synergic-RC HW GR	Welding system comprising power source with gas regulation and front display, recooling unit, media separation box, power-water cable, connection capability for industrial PC, transport pallet	091-000187-00502
1.1	OW CEE 32A	Factory-fit option, mains plug including fitting	092-008215-00000
1.2	WK95/CL 5m	Workpiece lead with cable lug	092-001990-00005
1.3	Maxex AR/MIX 200bar 30m ³ G1/4"	Pressure regulator	096-000000-00000
1.5	GH 2X1/4" 5m	Gas hose	094-000010-00005
1.8	RA5 19POL 1x 5M	Connection cable, 19-pole 5 m, wire end ferrules on one end	092-001569-00005
2	EWM forceTig PC	Industrial panel PC with Windows operating system, 19" touch screen and PC300.Net software pre-installed	092-001182-00000
3	RINT X12 STANDARD	Standard robot interface	090-008291-00000
3.1	FRV 7POL 5m	Connection cable extension	092-000201-00003
3.2	KB MOTOMAN-RINT X12	Cable harness for RINT X12 connection to Motoman XRC/NX-100/ DX-100	094-012212-00003
4.1	KF 23E-10, -10	Coolant (-10 °C), 9.3 l	094-000530-00000
5	T drive 4 Rob 3 RE Hotwire	Wire feeder for automated applications, hot wire, opens on right, with integrated IG3 speedometer solution	090-008702-00502
5.1	MONTAGE CONSOLE ROB 3 UNIVERSAL	Mounting console for wire feed unit	092-002440-00000
5.2	ON COOL W ROB3	Retrofit option water cooling ROB 3	092-002384-00000
6	SLP HW WS 7/12 POL 5M	Control cable, standard protective hose	092-007855-61105
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	ROLLINER CONNECTOR DRIVE ROB3	Connection set for Rob 3 wire conduit	092-007918-00000
8	CAT2-XL/HL	Collision sensor	094-012838-00000
8.1	FL ISO 9409-1-A40	Intermediate flange, plastic	094-013347-00500
9	FT 1000W 5m	forceTig welding torch with hose package	094-019480-10000
9.2	BH forceTig CAT2-HL	Torch holder for forceTig welding torch on CAT2-HL collision sensor	094-019115-00000
9.5	AWS FT1000 1.5m	Wire support	090-008775-00015
10.01	GD NW=12mm 37mm	Gas nozzle, ceramic	094-016127-00001
10.04	INS/DIF FT1000	Gas diffuser and insulator	094-015306-00001
10.08	CAT FT04 P0.8	Cathode, obtuse	094-015305-00002
-	ANALYZER	Software for control and status signal analysis	090-008778-00000

- Image for conceptual purposes. Not all listed items are shown.
- For more accessories, options and machine variants please refer to the individual chapters



forceTig, water cooled ■ Welding system forceTig 1002, cold wire



forceTig 1002

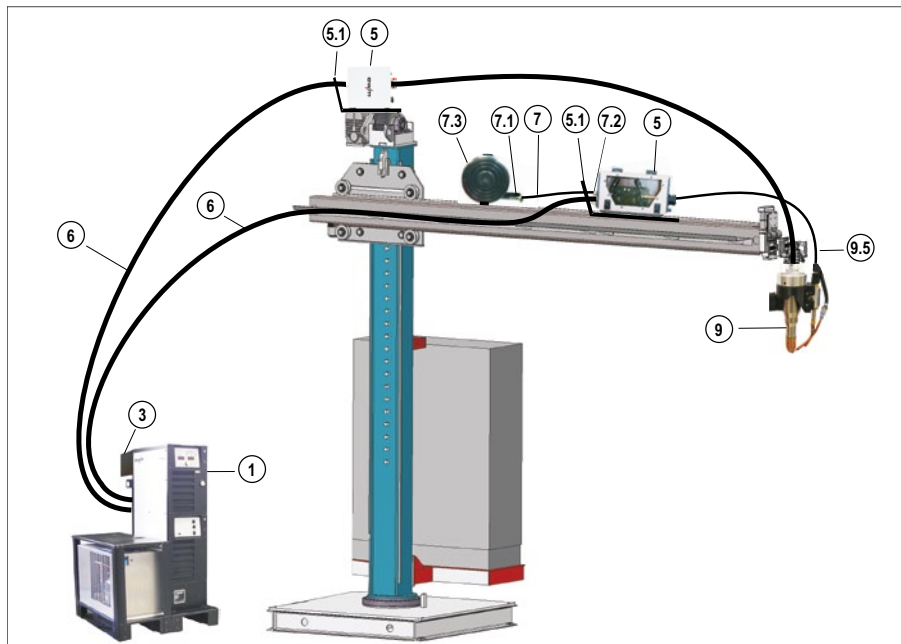
- With T3.37-2 FORCETIG CONTROL
- Water cooled
- T drive 4 Rob 3
- Example shown: Motoman XRC

Item	Type	Designation	Item no.
1	forceTig 1002	Welding system comprising power source with front display, recooling unit, media separation box, power-water cable, connection capabilityIndustrial PC, transport pallet	091-000161-00502
1.1	OW CEE 63A	Factory-fit option, mains plug including fitting	092-008216-00000
1.2	WK95/CL 5m	Workpiece lead with cable lug	092-001990-00005
1.3	Optimator AR/MIX 200bar 20l G1/4"	Pressure regulator with flow meter	094-011839-00000
1.5	GH 2X1/4" 5m	Gas hose	094-000010-00005
1.8	RA5 19POL 1x 5M	Connection cable, 19-pole 5 m, wire end ferrules on one end	092-001569-00005
2	EWM forceTig PC	Industrial panel PC with Windows operating system, 19" touch screen and PC300.Net software pre-installed	092-001182-00000
3	RINT X12 STANDARD	Standard robot interface	090-008291-00000
3.1	FRV 7POL 5m	Connection cable extension	092-000201-00003
3.2	KB MOTOMAN-RINT X12	Cable harness for RINT X12 connection to Motoman XRC/NX-100/DX-100	094-012212-00003
4.1	KF 23E-10, -10	Coolant (-10 °C), 9.3 l	094-000530-00000
5	T drive 4 Rob 3 RE IG3	Wire feeder for automated applications, opens on right, IG3 speedometer solution	090-008783-00502
5.1	MONTAGE CONSOLE ROB 3 UNIVERSAL	Mounting console for wire feed unit	092-002440-00000
5.2	ON COOL W ROB3	Retrofit option water cooling ROB 3	092-002384-00000
6	SLP WS 7/12 POL 5M	Control cable, standard protective hose	092-007855-51105
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	ROLLINER CONNECTOR DRIVE ROB3	Connection set for Rob 3 wire conduit	092-007918-00000
8	CAT2-XL/HL	Collision sensor	094-012838-00000
8.1	FL ISO 9409-1-A40	Intermediate flange, plastic	094-013347-00500
9	FT 1000W 5m	forceTig welding torch with hose package	094-019480-10000
9.2	BH forceTig CAT2-HL	Torch holder for forceTig welding torch on CAT2-HL collision sensor	094-019115-00000
9.5	AWS FT1000 1.5m	Wire support	090-008775-00015
10.01	GD NW=12mm 37mm	Gas nozzle, ceramic	094-016127-00001
10.04	INS/DIF FT1000	Gas diffuser and insulator	094-015306-00001
10.08	CAT FT04 P0.8	Cathode, obtuse	094-015305-00002
-	ANALYZER	Software for control and status signal analysis	090-008778-00000

► Image for conceptual purposes. Not all listed items are shown.
 ► For more accessories, options and machine variants please refer to the individual chapters



forceTig, water cooled ■ forceTig 1002 mechanised welding system with cold wire and media separation box



forceTig 1002 DC CW

- With T3.37-2 FORCETIG CONTROL
- Water-cooled
- T drive 4 Rob 2
- With forceTig media separation box
- As demonstrated on a mechanised application

Item	Type	Designation	Item no.
1	forceTig 1002	Welding system comprising power source with front display, recooling unit, media separation box, power-water cable, connection capability industrial PC, transport pallet	091-000161-00502
1.1	OW CEE 63A	Factory-fit option, mains plug including fitting	092-008216-00000
1.2	WK95/CL 5m	Workpiece lead with cable lug	092-001990-00005
1.3	Optimator AR/MIX 200bar 20l G1/4"	Pressure regulator with flow meter	094-011839-00000
1.5	GH 2X1/4" 5m	Gas hose	094-000010-00005
3	Tetrix BUSINT X11 PROFIBUS ATCASE	PROFIBUS industrial bus interface in casing, including potential-free voltage supply	090-908587-00008
4.1	KF 23E-10, -10	Coolant (-10 °C), 9.3 l	094-000530-00000
5	T drive 4 Rob 2 IG3	Wire feeder for automated applications, IG3 speedometer solution	090-008785-00502
5	forceTig Torch Box	forceTig media separation box	090-000245-00502
5.1	MONTAGE CONSOLE ROB 2 UNIVERSAL	Mounting console for wire feed unit	092-001746-00000
5.1	MONTAGE CONSOLE ROB 3 UNIVERSAL	Mounting console for wire feed unit	092-002440-00000
6	SLP WS 7/12 POL 18M	Control cable, standard protective hose	092-007855-51118
6	VSLP forceTig Torch Box 10m	forceTig media separation box connection hose package	094-022690-00010
7	WIRE CONDUIT 1,8M	Wire guide	094-011515-00004
7.1	CONNECTOR DV-CAB WIRE CONDUIT	DV-CAB connection	092-007741-00000
7.2	CONNECTOR DRIVE ROB2 WIRE CONDUIT	Connection set for Rob 2 wire conduit	092-008205-00000
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	CAT2-XL/HL	Collision sensor	094-012838-00000
9	FT 1000W 5m	forceTig welding torch with hose package	094-019480-10000
9.2	BH forceTig CAT2-HL	Torch holder for forceTig welding torch on CAT2-HL collision sensor	094-019115-00000
9.5	AWS FT1000 1.5m	Wire support	090-008775-00015
10.01	GD NW=12mm 37mm	Gas nozzle, ceramic	094-016127-00001
10.04	INS/DIF FT1000	Gas diffuser and insulator	094-015306-00001
10.08	CAT FT04 P0.8	Cathode, obtuse	094-015305-00002
-	Set PC300 / ANALYZER	Set comprising PC300.Net 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



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Tetrix DC ■ 352 • 452 • 552 Synergic

/activArc®



- TIG inverter welding machine, DC, with Synergic front control
- Set up on front control or notebook with PC300. NET software
- Synergic: Maximum ease-of-use – one-knob operation with up to 256 pre-defined JOBS (welding tasks)
- Standard interface for automated welding (start/stop, control voltage, current flow)
- 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: 256 JOBS, each with 15 programs, in program mode or RINT X12 welding current, secondary current, pulse time, pause time; BUSINT: Main current, secondary current, pulse time, pulse pause time, up-slope time, down-slope time, frequency via control voltage
- 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 water-cooling unit
- 5 m mains supply lead
- 100 % tested and free-welded



Tetrix	352	452	552
Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)		
Mains fuses (slow-blow)	3 x 25 A	3 x 32 A	
Open circuit voltage	80 V		
Setting range for welding current	5 A - 350 A	5 A - 450 A	5 A - 550 A
Duty cycle 40 °C	-	450 A / 80 %	550 A / 60 %
	350 A / 100 %	420 A / 100 %	
cos φ	0.99		
Efficiency	88 %	90 %	
Dimensions LxWxH in mm	780 x 375 x 625		
Weight	78.5 kg		

Type	Designation	Item no.			per unit
Tetrix 352 Synergic	DC TIG welding machine with Synergic control	090-000141-00502			
Tetrix 452 Synergic	DC TIG welding machine with Synergic control	090-000142-00502			
Tetrix 552 Synergic	DC TIG welding machine with Synergic control	090-000154-00502			

Options/accessories

Options for retrofitting	Item no.	PG	
BGA364X51X47 Panel for stacking machines	094-012294-00001		


Tetrix DC ■ 352 • 452 • 552 Synergic RC

/activArc®



- TIG inverter welding machine, DC, with Synergic RC display
- Set up on front control with PC300 software. NET software
- Standard interface for automated welding (start/stop, control voltage, current flow)
- 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: 256 JOBS, each with 15 programs, in program mode or RINT X12 welding current, secondary current, pulse time, pause time; BUSINT: Main current, secondary current, pulse time, pulse pause time, up-slope time, down-slope time, frequency via control voltage
- 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 water-cooling unit
- 5 m mains supply lead
- 100 % tested and free-welded



Tetrix	352	452	552
Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)		
Mains fuses (slow-blow)	3 x 25 A	3 x 32 A	
Open circuit voltage	80 V		
Setting range for welding current	5 A - 350 A	5 A - 450 A	5 A - 550 A
Duty cycle 40 °C	–	450 A / 80 %	550 A / 60 %
	350 A / 100 %	420 A / 100 %	
cos φ	0.99		
Efficiency	88 %	90 %	
Dimensions LxWxH in mm	780 x 375 x 625		
Weight	78.5 kg		

Type	Designation	Item no.	per unit
Tetrix 352 Synergic RC	DC TIG welding machine with Synergic-RC display	090-000189-00502	
Tetrix 452 Synergic RC	DC TIG welding machine with Synergic-RC display	090-000190-00502	
Tetrix 552 Synergic RC	DC TIG welding machine with Synergic-RC display	090-000191-00502	

Options/accessories

Options for retrofitting	Item no.	PG
BGA364X51X47 Panel for stacking machines	094-012294-00001	



Tetrix DC ■ 352 ● 452 ● 552 RC

/activArc®



- TIG inverter welding machine, DC, without front control
- Set up on front control with PC300 software. NET software
- Standard interface for automated welding (start/stop, control voltage, current flow)
- 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: 256 JOBS, each with 15 programs, in program mode or RINT X12 welding current, secondary current, pulse time, pause time; BUSINT: Main current, secondary current, pulse time, pulse pause time, up-slope time, down-slope time, frequency via control voltage
- 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 water-cooling unit
- 5 m mains supply lead
- 100 % tested and free-welded



Tetrix	352	452	552
Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)		
Mains fuses (slow-blow)	3 x 25 A	3 x 32 A	
Open circuit voltage	80 V		
Setting range for welding current	5 A - 350 A	5 A - 450 A	5 A - 550 A
Duty cycle 40 °C	–	450 A / 80 %	550 A / 60 %
	350 A / 100 %	420 A / 100 %	
cos φ	0.99		
Efficiency	88 %	90 %	
Dimensions LxWxH in mm	780 x 375 x 625		
Weight	78.5 kg		

Type	Designation	Item no.	per unit
Tetrix 352 RC	DC TIG welding machine without front control	090-000166-00502	
Tetrix 452 RC	DC TIG welding machine without front control	090-000167-00502	
Tetrix 552 RC	DC TIG welding machine without front control	090-000168-00502	

Options/accessories

Options for retrofitting	Item no.	PG
BGA364X51X47 Panel for stacking machines	094-012294-00001	


Tetrix DC CW ■ 352 ● 452 ● 552 RC cold wire

/activArc®



- TIG inverter welding machine, DC, without front control, prepared for cold wire
- Set up on front control with PC300 software. NET software
- Cold wire in combination with T Drive 4 Rob 2 or T Drive 4 Rob 3, as push/push version with TIG ROB 400W KD PP
- Standard interface for automated welding (start/stop, control voltage, current flow)
- 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: 256 JOBS, each with 15 programs, in program mode or RINT X12 welding current, secondary current, pulse time, pause time; BUSINT: Main current, secondary current, pulse time, pulse pause time, up-slope time, down-slope time, frequency via control voltage
- 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 water-cooling unit
- 5 m mains supply lead
- 100 % tested and free-welded



Tetrix	352	452	552
Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)		
Mains fuses (slow-blow)	3 x 25 A	3 x 32 A	
Open circuit voltage	80 V		
Setting range for welding current	5 A - 350 A	5 A - 450 A	5 A - 550 A
Duty cycle 40 °C	-	450 A / 80 %	550 A / 60 %
	350 A / 100 %	420 A / 100 %	
cos φ	0.99		
Efficiency	88 %	90 %	
Dimensions LxWxH in mm	780 x 375 x 625		
Weight	78.5 kg		

Type	Designation	Item no.	PG	per unit
Tetrix 352 RC CW	DC TIG welding machine incl. connection capability for additional wire, without front control	090-000166-00505		
Tetrix 452 RC CW	DC TIG welding machine incl. connection capability for additional wire, without front control	090-000167-00505		
Tetrix 552 RC CW	DC TIG welding machine incl. connection capability for additional wire, without front control	090-000168-00505		

Options/accessories

Options for retrofitting	Item no.	PG
BGA364X51X47 Panel for stacking machines	094-012294-00001	



Tetrix DC CW ■ 1002 Synergic cold wire

/activArc®



- TIG inverter welding machine, DC, with Synergic front control, prepared for cold wire
- Set up on front control or notebook with PC300. NET software
- Cold wire in combination with T Drive 4 Rob 2 or T Drive 4 Rob 3, as push/push version with TIG ROB 400W KD PP
- Synergic: Maximum ease-of-use – one-knob operation with up to 256 pre-defined JOBS (welding tasks)
- Standard interface for automated welding (start/stop, control voltage, current flow)
- 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: 256 JOBS, each with 15 programs, in program mode or RINT X12 welding current, secondary current, pulse time, pause time; BUSINT: Main current, secondary current, pulse time, pulse pause time, up-slope time, down-slope time, frequency via control voltage
- 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, with optional water-cooling unit
- 5 m mains supply lead
- 100 % tested and free-welded



Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)
Mains fuses (slow-blow)	3 x 63 A
Open circuit voltage	80 V
Setting range for welding current	10 A - 1000 A
Duty cycle 40 °C	1000 A / 80 % 750 A / 100 %
cos φ	0.99
Efficiency	90 %
Dimensions LxWxH in mm	780 x 375 x 1250
Weight	177 kg

Type	Designation	Item no.		per unit
Tetrix 1002 Synergic CW	DC TIG welding machine with Synergic control, incl. connection capability for additional wire	090-000197-00502		



Tetrix DC CW ■ 1002 Synergic RC cold wire

/activArc®



- TIG inverter welding machine, DC, with Synergic-RC display, prepared for cold wire
- Set up on front control with PC300 software. NET software
- Cold wire in combination with T Drive 4 Rob 2 or T Drive 4 Rob 3, as push/push version with TIG ROB 400W KD PP
- Standard interface for automated welding (start/stop, control voltage, current flow)
- 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: 256 JOBS, each with 15 programs, in program mode or RINT X12 welding current, secondary current, pulse time, pause time; BUSINT: Main current, secondary current, pulse time, pulse pause time, up-slope time, down-slope time, frequency via control voltage
- 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, with optional water-cooling unit
- 5 m mains supply lead
- 100 % tested and free-welded



Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)
Mains fuses (slow-blow)	3 x 63 A
Open circuit voltage	80 V
Setting range for welding current	10 A - 1000 A
Duty cycle 40 °C	1000 A / 80 % 750 A / 100 %
cos φ	0.99
Efficiency	90 %
Dimensions LxWxH in mm	780 x 375 x 1250
Weight	177 kg

Type	Designation	Item no.	per unit
Tetrix 1002 Synergic RC CW	DC TIG welding machine with Synergic-RC display, including connection capability for additional wire	090-000198-00502	



Tetrix DC HW ■ 352 ● 452 ● 552 Synergic hot wire

/activArc®



- DC TIG welding machine with Synergic controller, prepared for hot wire
- Hot wire power 5–180 A 100% DC, can be set using PC 300 software
- Set up on front control or notebook with PC300. NET software
- Hot wire in combination with T drive 4 Rob 3 Hotwire, as push/push version with TIG ROB 400W KD PP
- Synergic: Maximum ease-of-use – one-knob operation with up to 256 pre-defined JOBS (welding tasks)
- Standard interface for automated welding (start/stop, control voltage, current flow)
- 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: 256 JOBS, each with 15 programs, in program mode or RINT X12 welding current, secondary current, pulse time, pause time; BUSINT: Main current, secondary current, pulse time, pulse pause time, up-slope time, down-slope time, frequency via control voltage
- 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, with optional water-cooling unit
- 5 m mains supply lead
- 100 % tested and free-welded



Tetrix	352	452	552
Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)		
Mains fuses (slow-blow)	3 x 25 A	3 x 32 A	
Open circuit voltage	80 V		
Setting range for welding current	5 A - 350 A	5 A - 450 A	5 A - 550 A
Duty cycle 40 °C	–	450 A / 80 %	550 A / 60 %
	350 A / 100 %	420 A / 100 %	
cos φ	0.99		
Efficiency	88 %	90 %	
Dimensions LxWxH in mm	780 x 375 x 1250		
Weight	177 kg		

Type	Designation	Item no.	per unit
Tetrix 352 Synergic HW	DC TIG welding machine with Synergic control, including connection capability for hot wire	090-000215-00502	
Tetrix 452 Synergic HW	DC TIG welding machine with Synergic control, including connection capability for hot wire	090-000216-00502	
Tetrix 552 Synergic HW	DC TIG welding machine with Synergic control, including connection capability for hot wire	090-000217-00502	


Tetrix DC HW ■ 352 • 452 • 552 Synergic RC hot wire

/activArc®



- DC TIG welding machine with Synergic-RC display, prepared for hot wire
- Hot wire power 5–180 A 100% DC, can be set using PC 300 software
- Set up on front control with PC300 software. NET software
- Hot wire in combination with T drive 4 Rob 3 Hotwire, as push/push version with TIG ROB 400W KD PP
- Standard interface for automated welding (start/stop, control voltage, current flow)
- 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: 256 JOBS, each with 15 programs, in program mode or RINT X12 welding current, secondary current, pulse time, pause time; BUSINT: Main current, secondary current, pulse time, pulse pause time, up-slope time, down-slope time, frequency via control voltage
- 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, with optional water-cooling unit
- 5 m mains supply lead
- 100 % tested and free-welded



Tetrix	352	452	552
Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)		
Mains fuses (slow-blow)	3 x 25 A	3 x 32 A	
Open circuit voltage	80 V		
Setting range for welding current	5 A - 350 A	5 A - 450 A	5 A - 550 A
Duty cycle 40 °C	–	450 A / 80 %	550 A / 60 %
	350 A / 100 %	420 A / 100 %	
cos φ	0.99		
Efficiency	88 %	90 %	
Dimensions LxWxH in mm	780 x 375 x 1250		
Weight	177 kg		

Type	Designation	Item no.		per unit
Tetrix 352 Synergic RC HW	DC TIG welding machine with Synergic-RC display, including connection capability for hot wire	090-000195-00502		
Tetrix 452 Synergic RC HW	DC TIG welding machine with Synergic-RC display, including connection capability for hot wire	090-000196-00502		
Tetrix 552 Synergic RC HW	DC TIG welding machine with connection capability for additional wire, with Synergic-RC display; including transport pallet	090-000214-00502		



Tetrix AC/DC ■ 352 • 552 Synergic

/activArc®



- TIG inverter welding machine, AC/DC, with Synergic front control
- Set up on front control or notebook with PC300. NET software
- Synergic: Maximum ease-of-use – one-knob operation with up to 256 pre-defined JOBS (welding tasks)
- Standard interface for automated welding (start/stop, control voltage, current flow)
- 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: 256 JOBS, each with 15 programs, in program mode or RINT X12 welding current, secondary current, pulse time, pause time; BUSINT: Main current, secondary current, pulse time, pulse pause time, up-slope time, down-slope time, frequency via control voltage
- 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, craneable, stackable
- Gas-cooled, with optional water-cooling unit
- 5 m mains supply lead
- 100 % tested and free-welded



Tetrix	352 AC/DC	552 AC/DC
Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)	
Mains fuses (slow-blow)	3 x 20 A	3 x 32 A
Open circuit voltage	80 V	
Setting range for welding current	5 A - 350 A	5 A - 550 A
Duty cycle 40 °C	350 A / 60 %	550 A / 60 %
	300 A / 100 %	420 A / 100 %
cos φ	0.99	
Efficiency	85 %	90 %
Dimensions LxWxH in mm	780 x 375 x 625	780 x 375 x 1250
Weight	87.5 kg	177 kg

Type	Designation	Item no.	PG	per unit
Tetrix 352 AC/DC Synergic	AC/DC TIG welding machine with Synergic control	090-000140-00502		
Tetrix 552 AC/DC Synergic	AC/DC TIG welding machine with Synergic control	090-000221-00502		

► Modular, craneable, stackable; sheet metal option for stacking of machines only in conjunction with Tetrix 352

Options/accessories

Options for retrofitting	Item no.	PG
BGA364X51X47 Panel for stacking machines	094-012294-00001	


Tetrix AC/DC ■ 352 • 552 Synergic RC

/activArc®



- TIG inverter welding machine, AC/DC, with Synergic-RC display
- Set up on front control with PC300 software. NET software
- Standard interface for automated welding (start/stop, control voltage, current flow)
- 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: 256 JOBS, each with 15 programs, in program mode or RINT X12 welding current, secondary current, pulse time, pause time; BUSINT: Main current, secondary current, pulse time, pulse pause time, up-slope time, down-slope time, frequency via control voltage
- 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, craneable, stackable
- Gas-cooled, with optional water-cooling unit
- 5 m mains supply lead
- 100 % tested and free-welded



Tetrix	352 AC/DC	552 AC/DC
Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)	
Mains fuses (slow-blow)	3 x 20 A	3 x 32 A
Open circuit voltage	80 V	
Setting range for welding current	5 A - 350 A	5 A - 550 A
Duty cycle 40 °C	350 A / 60 %	550 A / 60 %
	300 A / 100 %	420 A / 100 %
cos φ	0.99	
Efficiency	85 %	90 %
Dimensions LxWxH in mm	780 x 375 x 625	780 x 375 x 1250
Weight	87.5 kg	177 kg

Type	Designation	Item no.		
Tetrix 352 AC/DC Synergic RC	AC/DC TIG welding machine with Synergic RC display	090-000192-00502		
Tetrix 552 AC/DC Synergic RC	AC/DC TIG welding machine with Synergic RC display	090-000220-00502		

► Modular, craneable, stackable; sheet metal option for stacking of machines only in conjunction with Tetrix 352

Options/accessories

Options for retrofitting	Item no.	PG
BGA364X51X47 Panel for stacking machines	094-012294-00001	



Tetrix AC/DC ■ 352 RC

/activArc®



- TIG inverter welding machine, AC/DC, without front control
- Set up on front control with PC300 software. NET software
- Standard interface for automated welding (start/stop, control voltage, current flow)
- 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: 256 JOBS, each with 15 programs, in program mode or RINT X12 welding current, secondary current, pulse time, pause time; BUSINT: Main current, secondary current, pulse time, pulse pause time, up-slope time, down-slope time, frequency via control voltage
- 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 water-cooling unit
- 5 m mains supply lead
- 100 % tested and free-welded



Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)
Mains fuses (slow-blow)	3 x 20 A
Open circuit voltage	80 V
Setting range for welding current	5 A - 350 A
Duty cycle 40 °C	350 A / 60 % 300 A / 100 %
cos φ	0.99
Efficiency	85 %
Dimensions LxWxH in mm	780 x 375 x 625
Weight	87.5 kg

Type	Designation	Item no.	per unit
Tetrix 352 AC/DC RC	AC/DC TIG welding machine without front control	090-000139-00502	

Options/accessories

Options for retrofitting	Item no.	PG
BGA364X51X47 Panel for stacking machines	094-012294-00001	


Tetrix AC/DC CW ■ 352 ● 552 Synergic CW

/activArc®



- TIG inverter welding machine, AC/DC, with Synergic front control, prepared for cold wire
- Set up on front control or notebook with PC300. NET software
- Cold wire in combination with T Drive 4 Rob 2 or T Drive 4 Rob 3, as push/push version with TIG ROB 400W KD PP
- Synergic: Maximum ease-of-use – one-knob operation with up to 256 pre-defined JOBS (welding tasks)
- Standard interface for automated welding (start/stop, control voltage, current flow)
- 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: 256 JOBS, each with 15 programs, in program mode or RINT X12 welding current, secondary current, pulse time, pause time; BUSINT: Main current, secondary current, pulse time, pulse pause time, up-slope time, down-slope time, frequency via control voltage
- 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, with optional water-cooling unit
- 5 m mains supply lead
- 100 % tested and free-welded



Tetrix	352 AC/DC	552 AC/DC
Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)	
Mains fuses (slow-blow)	3 x 20 A	3 x 32 A
Open circuit voltage	80 V	
Setting range for welding current	5 A - 350 A	5 A - 550 A
Duty cycle 40 °C	350 A / 60 % 300 A / 100 %	550 A / 60 % 420 A / 100 %
cos φ	0.99	
Efficiency	85 %	
Dimensions LxWxH in mm	780 x 375 x 1250	
Weight	177 kg	

Type	Designation	Item no.	per unit
Tetrix 352 AC/DC Synergic CW	AC/DC TIG welding machine with Synergic control, incl. connection capability for additional wire	090-000193-00502	
Tetrix 552 AC/DC Synergic CW	AC/DC TIG welding machine with Synergic control, incl. connection capability for additional wire	090-000223-00502	



Tetrix AC/DC CW ■ 352 ● 552 Synergic RC CW

/activArc®



- TIG inverter welding machine, DC, with Synergic-RC display, prepared for cold wire
- Set up on front control with PC300 software. NET software
- Cold wire in combination with T Drive 4 Rob 2 or T Drive 4 Rob 3, as push/push version with TIG ROB 400W KD PP
- Standard interface for automated welding (start/stop, control voltage, current flow)
- 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: 256 JOBS, each with 15 programs, in program mode or RINT X12 welding current, secondary current, pulse time, pause time; BUSINT: Main current, secondary current, pulse time, pulse pause time, up-slope time, down-slope time, frequency via control voltage
- 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, with optional water-cooling unit
- 5 m mains supply lead
- 100 % tested and free-welded



Tetrix	352 AC/DC	552 AC/DC
Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)	
Mains fuses (slow-blow)	3 x 20 A	3 x 32 A
Open circuit voltage	80 V	
Setting range for welding current	5 A - 350 A	5 A - 550 A
Duty cycle 40 °C	350 A / 60 %	550 A / 60 %
	300 A / 100 %	420 A / 100 %
cos φ	0.99	
Efficiency	85 %	
Dimensions LxWxH in mm	780 x 375 x 1250	
Weight	177 kg	

Type	Designation	Item no.	per unit
Tetrix 352 AC/DC Synergic RC CW	AC/DC TIG welding machine with Synergic RC display, incl. connection capability for additional wire	090-000194-00502	
Tetrix 552 AC/DC Synergic RC CW	AC/DC TIG welding machine with Synergic RC display, incl. connection capability for additional wire	090-000222-00502	



tigSpeed ■ 352 Synergic RC HW

/activArc®



- DC TIG welding machine with Synergic RC display, designed for tigSpeed hot wire
- Hot wire power 5–180 A 100% DC, can be set using PC 300 software
- Oscillation tigSpeed 1–16 Hz, setting via BUSINTX11
- Set up on front control with PC300 software. NET software
- Hot wire in combination with tigSpeed Drive 4 Rob
- Parameters adjustable via interfaces: 256 JOBS with 15 programs each, in program mode or RINTX12 welding current, wire setting, secondary current, pulse time, pause time; BUSINTX11: main current, wire setting, secondary current, pulse time, pulse pause time, down-slope time, up-slope time, oscillation, frequency via control voltage or control signal operation
- Optional RINT X12 interface, BUSINT X11 industrial bus interface, PCINT X10 documentation interface (+ QDOC 9000 V2.0 software) and ewm Xnet quality management software
- 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, with optional water-cooling unit
- 5 m mains supply lead
- 100 % tested and free-welded



Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)
Mains fuses (slow-blow)	3 x 25 A
Open circuit voltage	80 V
Setting range for welding current	5 A - 350 A
Hot wire current setting range	5 A - 180 A
Duty cycle 40 °C	350 A / 100 %
cos φ	0.99
Efficiency	88 %
Dimensions LxWxH in mm	780 x 375 x 1250
Weight	177 kg

Type	Designation	Item no.	per unit
tigSpeed 352 Synergic RC HW	DC TIG welding machine with Synergic-RC display, including connection capability for hot wire	090-000232-00502	



forceTig ■ 552 DC CW

/activArc®



- TIG high-performance inverter welding machine for automated applications with T3.37-2 FORCETIG CONTROL
- Prepared for cold wire applications in conjunction with T drive 4 Rob 3
- Set up on EWM forceTig PC or notebook using PC300.NET software
- Standard interface for automated welding (start/stop, control voltage, current flow)
- Optional RINT X12 interface, BUSINT X11 industrial bus interface, PCINT X10 documentation interface (+ QDOC 9000 V2.0 software) and ewm Xnet quality management software
- Integrated, temperature-controlled RK3.1 welding torch recooling unit with 2,700 W cooling capacity and 8-bar pump
- Cold water flow monitoring
- Torch connection via power-water cable
- Parameters adjustable via interfaces: 256 JOBS, each with 15 programs, in program mode or RINT X12 welding current, secondary current, pulse time, pause time; BUSINT: Main current, secondary current, pulse time, pulse pause time, up-slope time, down-slope time, frequency via control voltage
- 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
- Non-interchangeable connections for all mediums
- 5 m mains supply lead
- 3 x 400 V mains connection with neutral conductor (TN-S system)
- 100 % tested and free-welded



forceTig - TIG welding process with an especially focussed arc for greater penetration and faster welding speeds

Mains voltage (tolerances)	5 x 400 V (-25 % - +20 %)
Mains fuses (slow-blow)	5 x 35 A
Open circuit voltage	80 V
Setting range for welding current	5 A - 550 A
Duty cycle 40 °C	550 A / 60 % 420 A / 100 %
cos φ	0.99
Dimensions LxWxH in mm	780 x 990 x 625
Weight	183.5 kg

Type	Designation	Item no.	PG	per unit
forceTig 552	Welding system comprising power source, recooling unit, media separation box, power-water cable, connection capability for industrial PC, transport pallet	091-000160-00502		

Options/accessories

Software	Item no.	PG
EWM forceTig PC Industrial panel PC with Windows operating system, 19" touch screen and PC300. Net software pre-installed	092-001182-00000	





forceTig ■ 552 DC HW GR

/activArc®



- TIG high-performance inverter welding machine for automated applications with integrated hot wire power source, digital gas control and T3.37-2 FORCETIG CONTROL
- Hot wire power 5–180 A 100% DC, can be set using PC 300 software
- Digital gas control and monitoring, can be set via PC 300 software
- Prepared for cold wire and hot wire applications in conjunction with T drive 4 Rob 3 Hotwire
- Set up on EWM forceTig PC or notebook using PC300.NET software
- Standard interface for automated welding (start/stop, control voltage, current flow)
- Optional RINT X12 interface, BUSINT X11 industrial bus interface, PCINT X10 documentation interface (+ QDOC 9000 V2.0 software) and ewm Xnet quality management software
- Integrated, temperature-controlled RK 3.1 welding torch recooling unit with 2,700 W cooling capacity
- Monitoring of cold water flow, cold water temperature, gas flow and gas pressure
- Torch connection via power-water cable
- Parameters adjustable via interfaces: 256 JOBS, each with 15 programs, in program mode or RINT X12 welding current, secondary current, pulse time, pause time; BUSINT: Main current, secondary current, pulse time, pulse pause time, up-slope time, down-slope time, frequency via control voltage
- 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
- Non-interchangeable connections for all mediums
- 5 m mains supply lead
- 3 x 400 V mains connection with neutral conductor (TN-S system)
- 100 % tested and free-welded



forceTig - TIG welding process with an especially focussed arc for greater penetration and faster welding speeds

Mains voltage (tolerances)	5 x 400 V (-25 % - +20 %)
Mains fuses (slow-blow)	5 x 35 A
Open circuit voltage	80 V
Setting range for welding current	5 A - 550 A
Hot wire current setting range	5 A - 180 A
Duty cycle 40 °C	550 A / 60 %
	420 A / 100 %
cos φ	0.99
Dimensions LxWxH in mm	780 x 990 x 1250
Weight	282 kg

Type	Designation	Item no.	per unit
forceTig 552 Synergic-RC HW GR	Welding system comprising power source with gas regulation and front display, recooling unit, media separation box, power-water cable, connection capability for industrial PC, transport pallet	091-000187-00502	

Options/accessories

Software	Item no.	PG
EWM forceTig PC Industrial panel PC with Windows operating system, 19" touch screen and PC300. Net software pre-installed	092-001182-00000	





forceTig ■ 1002 DC CW

/activArc®



- TIG high-performance inverter welding machine for automated applications with T3.37-2 FORCETIG CONTROL
- Prepared for cold wire applications in conjunction with T drive 4 Rob 3
- Set up on EWM forceTig PC or notebook using PC300.NET software
- Standard interface for automated welding (start/stop, control voltage, current flow)
- Optional RINT X12 interface, BUSINT X11 industrial bus interface, PCINT X10 documentation interface (+ QDOC 9000 V2.0 software) and ewm Xnet quality management software
- Integrated, temperature-controlled RK 3.1 welding torch recooling unit with 2,700 W cooling capacity
- Cold water flow monitoring
- Torch connection via power-water cable
- Parameters adjustable via interfaces: 256 JOBS, each with 15 programs, in program mode or RINT X12 welding current, secondary current, pulse time, pause time; BUSINT: Main current, secondary current, pulse time, pulse pause time, up-slope time, down-slope time, frequency via control voltage
- 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
- Non-interchangeable connections for all mediums
- 5 m mains supply lead
- 3 x 400 V mains connection with neutral conductor (TN-S system)
- 100 % tested and free-welded



forceTig - TIG welding process with an especially focussed arc for greater penetration and faster welding speeds

Mains voltage (tolerances)	5 x 400 V (-25 % - +20 %)
Mains fuses (slow-blow)	5 x 63 A
Open circuit voltage	80 V
Setting range for welding current	10 A - 1000 A
Duty cycle 40 °C	1000 A / 60 % 800 A / 100 %
cos φ	0.99
Dimensions LxWxH in mm	780 x 990 x 1250
Weight	282 kg

Type	Designation	Item no.	per unit
forceTig 1002	Welding system comprising power source with front display, recooling unit, media separation box, power-water cable, connection capabilityIndustrial PC, transport pallet	091-000161-00502	












Options/accessories

Software	Item no.	PG
EWM forceTig PC Industrial panel PC with Windows operating system, 19" touch screen and PC300. Net software pre-installed	092-001182-00000	





Options/accessories

Options for welding machines	Item no.	PG
OW 440/460/480 Volt Equipment of the 355/405/505 and 351/401/451/501/551 machines for 3x 440/460/480 V mains connection (ex works only) Multi-voltage design for operation with mains voltages of 440 V, 460 V and 480 V ► Not possible with the compact 355 series machines! ON Key Switch Tetrix Key switch	 092-002647-00001	
Factory-fit option, mains plug including fitting Factory fitting (no retrofitting) ► Suitable for all machines with a welding current of 350 A and above OW CEE 32A OW CEE 63A	 092-001828-00000  092-008215-00000 092-008216-00000	
Mains plug Mains plug 32A 5POLE/CEE 63A 5POLE/CEE	 094-000207-00000 094-003410-00000	
Connection cables RA5 19POL 1x 5M Connection cable, 19-pole 5 m, wire end ferrules on one end RA10 19POL 1x 10M Connection cable, 19-pole 10 m, wire end ferrules on one end	 092-001569-00005  092-001569-00010	
Welding leads 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 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 200bar 2x34l G1/4" Optimator AR/H2 200bar 20l G3/8"L DM 842 Ar/CO2 230bar 30l D 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	 094-011839-00000 096-000220-00000 094-011841-00000 394-002910-00030 	
Pressure regulator Single-stage pressure regulator for measuring pressure Controller in front of gas metering units, for example Cylinder pressure 200 bar Working pressure 0 - 10 bar Maxex AR/MIX 200bar 30m³ G1/4" Maxex Hydrogen 200bar 30m³ G3/8"L	 096-000000-00000 096-000001-00000	
General Gas hose Equipped with plastic nuts on both sides for tool-free assembly GH 2x1/4" 2m GH 2X1/4" 5m GH 2X1/4" 10m	 094-000010-00001 094-000010-00005 094-000010-00011	



Options/accessories

Options for retrofitting

ON FILTER XX2 Dirt filter for air inlet for robot power sources

Item no.

PG

092-002714-00000

ON LG-EX



- Networking via external LAN gateway for machines with 7-pole digital interface
- For machines without a built-in LAN gateway

Type	Designation	Item no.		per unit
ON LG-EX	LAN gateway in external housing	090-008789-00502		

ON WLG-EX



- Networking via external WiFi gateway for machines with 7-pole digital interface
- For machines without a built-in WiFi gateway

Type	Designation	Item no.		per unit
ON WLG-EX	WiFi gateway in external casing	090-008790-00502		



■ Overview

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TIG ■ T drive 4 Rob 2



- Wire feed unit for high cold wire deposition rates up to 10 m/min
- Reproducible wire feed speed thanks to fully digital control with incremental transducer, adjustable in increments of 0.1 m/min
- 4-roller drive in metal construction with large rollers (37 mm), factory fitted for 1.0-/1.2-mm steel wires
- With inspection window for checking the wire feeder
- Separate buttons on the front for wire return, gas test and wire inching
- High level of process security thanks to the control, regulation and monitoring of all process data via a central, digital bus system
- Mounting plate with strain relief for fixing to the robot (optional)
- Compact unit for simple mounting on the robot

Wire speed m/min	0.3 m/min - 10 m/min
Wire-feed speed increments	0.1 m/min
Roll diameter	37 mm
Wire feeder, LxWxH in mm	407 x 201 x 229
Weight, wire feeder	9.8 kg

Type	Designation	Item no.		
T drive 4 Rob 2 IG3	Wire feeder for automated applications, IG3 speedometer solution	090-008785-00502		

► For replacement rolls and drive rolls for various welding consumables, please refer to the "Wire feeder accessories" chapter.

Options/accessories

Drive rolls – conversion kits	Item no.	PG
Conversion kit, 37 mm, 4-roll drive for aluminium		
Includes 4 twin rollers, 2 gears and 2 spacer rings		
URUE AL 4ZR4R 0.8+1.0 SF	092-002268-00000	
URUE AL 4ZR4R 1.0+1.2 SF	092-002266-00000	
URUE AL 4ZR4R 1.2-1.6 SF	092-002269-00000	
URUE AL 4ZR4R 2.4-3.2 SF	092-002270-00000	




TIG ■ T drive 4 Rob 3


- Light, compact wire feed unit for high-precision cold wire feed
- Reproducible wire feed speed thanks to fully digital control with incremental transducer, adjustable in increments of 0.01 m/min
- LED display of process status
- 4-roller drive in metal construction with large rollers (37 mm), factory fitted for 1.0-/1.2-mm steel wires
- Tool-free roller changing, captive screws
- With inspection window for checking the wire feeder
- Separate buttons on the front for wire return, gas test and wire inching
- High level of process security thanks to the control, regulation and monitoring of all process data via a central, digital bus system
- Mounting plate with strain relief for fixing to the robot (optional)
- Compact unit for simple mounting on the robot

Wire speed m/min	0.1 m/min - 5 m/min
Wire-feed speed increments	0.01 m/min
Roll diameter	37 mm
Wire feeder, LxWxH in mm	345 x 230 x 250
Weight, wire feeder	6.5 kg

Type	Designation	Item no.			pro St.
T Drive 4 Rob 3 LI IG3	Wire feeder for automated applications, opens on left, with integrated IG3 speedometer solution	090-008784-00502			
T Drive 4 Rob 3 RE IG3	Wire feeder for automated applications, opens on right, with integrated IG3 speedometer solution	090-008783-00502			

► For replacement rolls and drive rolls for various welding consumables, please refer to the "Wire feeder accessories" chapter.

Options/accessories

Options for retrofitting	Item no.	PG
ON COOL W ROB3 Retrofit option water cooling ROB 3	092-002384-00000	

Drive rolls – conversion kits	Item no.	PG
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Conversion kit, 37 mm, 4-roll drive for aluminium

Includes 4 twin rollers, 2 gears and 2 spacer rings

URUE AL 4ZR4R 0.8+1.0 SF

URUE AL 4ZR4R 1.0+1.2 SF

URUE AL 4ZR4R 1.2-1.6 SF

URUE AL 4ZR4R 2.4-3.2 SF



092-002268-00000

092-002266-00000

092-002269-00000

092-002270-00000



TIG ■ T drive 4 Rob 3 Hotwire



- Light, compact wire feed unit for highly-precise hot wire feed
- Reproducible wire feed speed thanks to fully digital control with incremental transducer, adjustable in increments of 0.01 m/min
- LED display of process status
- 4-roller drive in metal construction with large rollers (37 mm), factory fitted for 1.0-/1.2-mm steel wires
- Separate buttons on the front for wire return and inching, blow-out and gas test
- Tool-free roller changing, captive screws
- With inspection window for checking the wire feeder
- High level of process security thanks to the control, regulation and monitoring of all process data via a central, digital bus system
- Mounting plate with strain relief for fixing to the robot (optional)
- Compact unit for simple mounting on the robot

Wire speed m/min	0.1 m/min - 5 m/min
Wire-feed speed increments	0.01 m/min
Roll diameter	37 mm
Wire feeder, LxWxH in mm	345 x 230 x 250
Weight, wire feeder	6.5 kg

Type	Designation	Item no.	per unit
T drive 4 Rob 3 RE Hotwire	Wire feeder for automated applications, hot wire, opens on right, with integrated IG3 speedometer solution	090-008702-00502	
T drive 4 Rob 3 LI Hotwire	Wire feeder for automated applications, hot wire, opens on left, with integrated IG3 speedometer solution	090-008703-00502	

► For replacement rolls and drive rolls for various welding consumables, please refer to the "Wire feeder accessories" chapter.

Options/accessories

Options for retrofitting	Item no.	PG
ON COOL W ROB3 Retrofit option water cooling ROB 3	092-002384-00000	

Drive rolls – conversion kits	Item no.	PG
Conversion kit, 37 mm, 4-roll drive for aluminium		
Includes 4 twin rollers, 2 gears and 2 spacer rings		
URUE AL 4ZR4R 0.8+1.0 SF	092-002268-00000	
URUE AL 4ZR4R 1.0+1.2 SF	092-002266-00000	
URUE AL 4ZR4R 1.2-1.6 SF	092-002269-00000	
URUE AL 4ZR4R 2.4-3.2 SF	092-002270-00000	




TIG ■ T drive 4 Rob 3 Hotwire HS


- Compact, lightweight wire feeder for high cold or hot wire deposition rates of up to 24 m/min.
- Reproducible wire feed speed thanks to fully digital control with rotary transducer, adjustable in increments of 0.1 m/min.
- LED display of process status
- 4-roller drive in metal construction with large rollers (37 mm), factory fitted for 1.0-/1.2-mm steel wires
- Tool-free roller changing, captive screws
- With inspection window for checking the wire feeder
- Separate buttons on the front for wire return, gas test and wire inching
- High level of process security thanks to the control, regulation and monitoring of all process data via a central, digital bus system
- Mounting plate with strain relief for fixing to the robot (optional)
- Compact unit for simple mounting on the robot

Wire speed m/min	0.5 m/min - 24 m/min
Wire-feed speed increments	0.1 m/min
Roll diameter	37 mm
Wire feeder, LxWxH in mm	345 x 230 x 250
Weight, wire feeder	6.5 kg

Type	Designation	Item no.
T drive 4 Rob 3 RE Hotwire HS	Wire feeder for automated applications, hot wire, opens on right, with integrated IG3 speedometer solution	090-005505-00502
T drive 4 Rob 3 LI Hotwire HS	Wire feeder for automated applications, hot wire, opens on left, with integrated IG3 speedometer solution	090-005506-00502

► For replacement rolls and drive rolls for various welding consumables, please refer to the "Wire feeder accessories" chapter.

Options/accessories

Options for retrofitting	Item no.	PG
ON COOL W ROB3 Retrofit option water cooling ROB 3	092-002384-00000	

Drive rolls – conversion kits	Item no.	PG
Conversion kit, 37 mm, 4-roll drive for aluminium		
Includes 4 twin rollers, 2 gears and 2 spacer rings		
URUE AL 4ZR4R 0.8+1.0 SF	092-002268-00000	
URUE AL 4ZR4R 1.0+1.2 SF	092-002266-00000	
URUE AL 4ZR4R 1.2-1.6 SF	092-002269-00000	
URUE AL 4ZR4R 2.4-3.2 SF	092-002270-00000	





TIG ■ tigSpeed drive 4 Rob



- Wire feeder for high cold or hot wire deposition rates up to 10 m/min
- Dynamic wire feed system through superimposed forward/backward wire motion
- Reproducible wire feed speed thanks to fully digital control with incremental transducer, adjustable in increments of 0.1 m/min
- 4-roller drive in metal construction with large rollers (37 mm), factory fitted for 1.0-/1.2-mm steel wires
- With inspection window for checking the wire feeder
- Separate buttons on the front for wire return, gas test and wire inching
- High level of process security thanks to the control, regulation and monitoring of all process data via a central, digital bus system
- Mounting console with strain relief for mounting (optional)
- Compact machine for mechanisation

Wire speed m/min	0.5 m/min - 10 m/min
Wire-feed speed increments	0.1 m/min
Oscillating frequency	1 Hz - 16 Hz
Roll diameter	37 mm
Wire feeder, LxWxH in mm	407 x 281 x 229
Weight, wire feeder	12 kg

Type	Designation	Item no.
tigSpeed drive 4 Rob	Wire feed unit for automated applications	090-005395-00502

Options/accessories

Drive rolls – conversion kits	Item no.	PG
Conversion kit, 37 mm, 4-roll drive for aluminium		
Includes 4 twin rollers, 2 gears and 2 spacer rings		
URUE AL 4ZR4R 0.8+1.0 SF	092-002268-00000	
URUE AL 4ZR4R 1.0+1.2 SF	092-002266-00000	
URUE AL 4ZR4R 1.2-1.6 SF	092-002269-00000	
URUE AL 4ZR4R 2.4-3.2 SF	092-002270-00000	





Media separation box ■ Tig Torch Box



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

Dimensions LxWxH in mm

325 x 142 x 222

Weight

3 kg

Type	Designation	Item no.		
Tig Torch Box	TIG media separation box	090-008299-00502		



■ **Media separation box** ■ **forceTig Torch Box**



- forceTig media separation box, lightweight version
- For use on forceTig robot power sources in combination with forceTig FT500W and FT1000W welding torch systems
- Can be combined with T Drive 4 Rob 3 L/R (left/right)
- Integrated gas valve
- Separate push-button for gas test
- Gas pressure sensor
- Compact machine for easy installation
- Maximum overall length of welding torch and connecting hose package: 18 m
- Mounting console with strain relief for mounting (optional)

Dimensions LxWxH in mm	325 x 142 x 222
Weight	3 kg

Type	Designation	Item no.		
forceTig Torch Box	forceTig media separation box	090-000245-00502		

► See description / benefits tigSpeed on page 158

■ **Options/accessories**

General	Item no.	PG	
VSLP forceTig Torch Box 10m forceTig media separation box connection hose package	094-022690-00010		

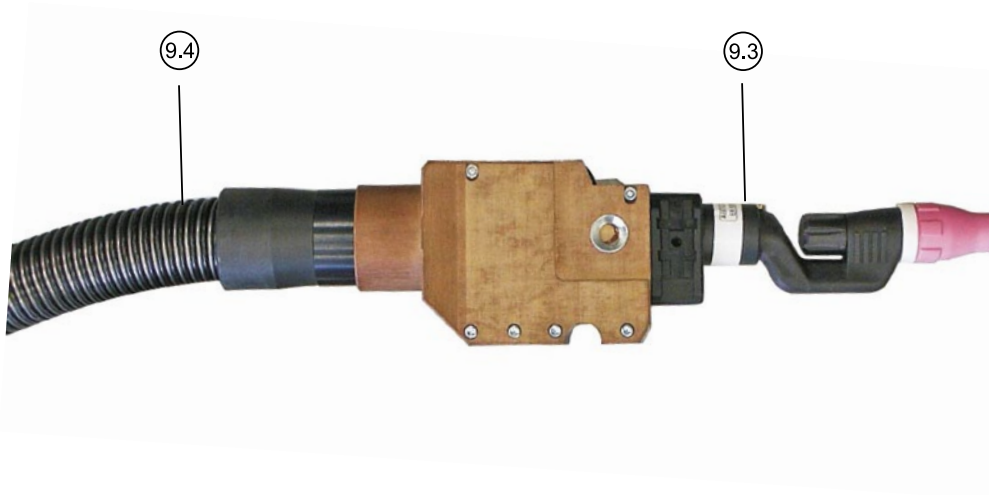


■ Overview

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Robot welding torches	TIG ROB 400W CW PP	206
	forceTig FT500W	208
	forceTig FT1000W	210
Welding torches	forceTig FT1000W AX	212
	TIG-MT 200G	214
Automated welding torches	TIG-MT 300W	218
	TIG-MT 400W	222
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Tungsten electrode grinders	Porta & Handy	230



■ Robot welding torches ■ TIG ROB 400W



Basic features:

- 4 m hose package
- Straight torch neck
- Gas nozzle dia. = 10 mm L = 37 mm
- Gas lens dia. electrode = 2.4 mm
- TIG robot welding torch, water cooled
- Fast, safe, trouble-free
- Pre-set tungsten electrode
- Reproducible torch position

Duty cycle DC-

400 A / 100 %

Duty cycle AC

280 A / 100 %

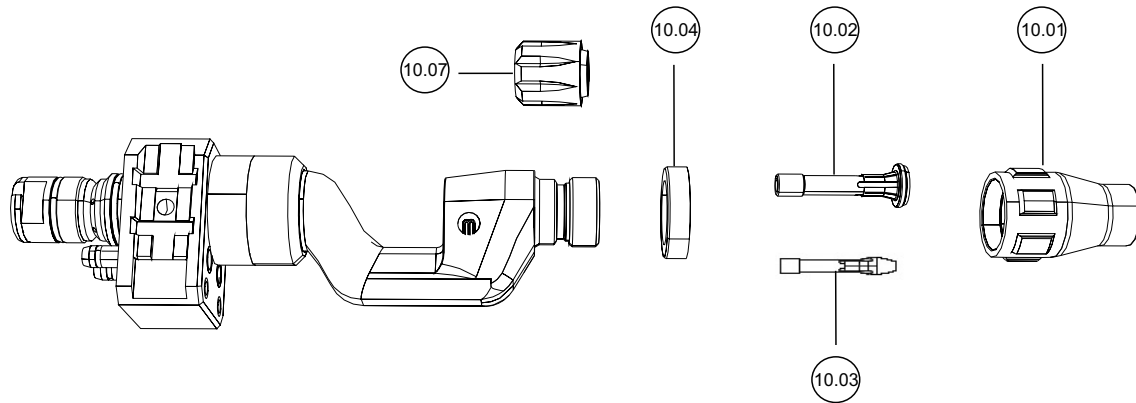
Electrode Ø

1.6 mm - 4.8 mm

Item	Type	Designation	Length m	Item no.
9	TIG ROB 400W 4m	TIG welding torch, straight, water cooled, complete	4.0	094-017197-00000
9.2	CLAMMPING HOLDER TIG WH	Clamping holder TIG ROB 400 W		094-010122-00000
9.3	TIG ROB 400W	TIG-MT torch body, straight		094-010109-00000
9.3	TIG ROB 400W 45	Torch body TIG-MT 45°	-	094-010116-00000
9.3	TIG ROB 400W 70	Torch body TIG-MT 70°		094-010117-00000
9.3	TIG ROB 400W 90	TIG-MT torch body, 90°		094-010119-00000
9.4	SPA TIG WH 4M		4.0	094-016058-00000
9.4	SPA TIG WH 6M	TIG ROB 400 W hose package	6.0	094-016058-00006
9.4	SPA TIG WH 8M		8.0	094-016058-00008



Consumables/Accessories



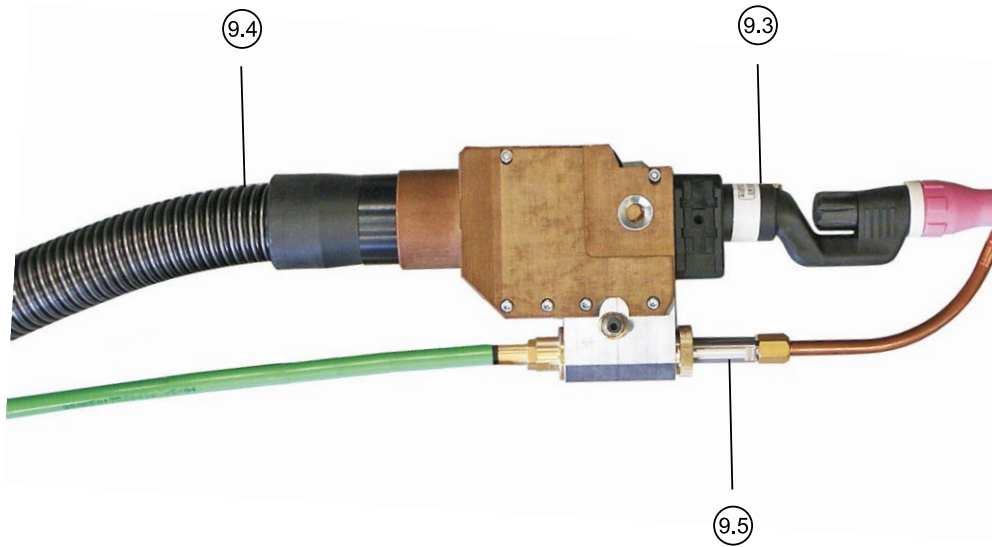
Item	Designation	Size in mm	Electrode Ø mm	Nozzle Ø mm	Length mm	Material	PU Units	Item no.	per unit
10.01	Gas nozzle	5	-	7.5	37	Ceramic	10	094-009646-00000	
10.01	Gas nozzle	6	-	10	37	Ceramic	10	094-009647-00000	
10.01	Gas nozzle	8	-	13	37	Ceramic	10	094-009648-00000	
10.01	Gas nozzle	10	-	15	37	Ceramic	10	094-009649-00000	
10.01	Gas nozzle, reinforced	8	-	13	37	Ceramic	10	094-011997-00000	
10.01	Gas nozzle, reinforced	12	-	15	37	Ceramic	10	094-011998-00000	
10.01	Gas nozzle	5	-	7.5	52	Ceramic	10	094-009650-00000	
10.01	Gas nozzle	6	-	10	52	Ceramic	10	094-009651-00000	
10.01	Gas nozzle	8	-	13	52	Ceramic	10	094-009653-00000	
10.01	Gas nozzle	10	-	15	52	Ceramic	10	094-009654-00000	
10.02	Gas diffuser	-	1.6	-	48	Brass	2	094-009640-00000	
10.02	Gas diffuser	-	2	-	48	Brass	2	094-009641-00000	
10.02	Gas diffuser	-	2.4	-	48	Brass	2	094-009642-00000	
10.02	Gas diffuser	-	3.2	-	48	Brass	2	094-009643-00000	
10.02	Gas diffuser	-	4	-	48	Brass	2	094-009644-00000	
10.02	Gas diffuser	-	4.8	-	48	Brass	2	094-009645-00000	
10.03	Electrode holders	-	1.6	-	56	Brass	5	094-009634-00000	
10.03	Electrode holders	-	2	-	56	Brass	5	094-009635-00000	
10.03	Electrode holders	-	2.4	-	56	Brass	5	094-009636-00000	
10.03	Electrode holders	-	3.2	-	56	Brass	5	094-009637-00000	
10.03	Electrode holders	-	4	-	56	Brass	5	094-009638-00000	
10.03	Electrode holders	-	4.8	-	56	Brass	5	094-009639-00000	
10.04	Insulator	Standard	-	-	-	Teflon	10	094-011759-00000	
-	Back cap	-	-	-	-	-	1	094-010112-00000	

Options/accessories

Torch accessories	Item no.	PG
ZH TIG400 Ignition aid	094-010360-00000	
RTN TIG 400W 0°/70° Adjusting device	094-017717-00000	
RTN TIG 400W 45°/90° Adjusting device	094-017718-00000	



Robot welding torches ■ TIG ROB 400W CW



TIG robot welding torch, water cooled, with cold wire feed

- Fast, safe, trouble-free
- With cold wire feed
- Pre-set tungsten electrode
- Reproducible torch position
- **Basic features:**
- 4 m hose package
- Straight torch neck
- Cold wire nozzle $\varnothing = 1$ mm
- Gas nozzle $\varnothing = 10$ mm L = 37 mm
- Gas diffuser \varnothing electrode = 2.4 mm

Duty cycle DC-
400 A / 100 %

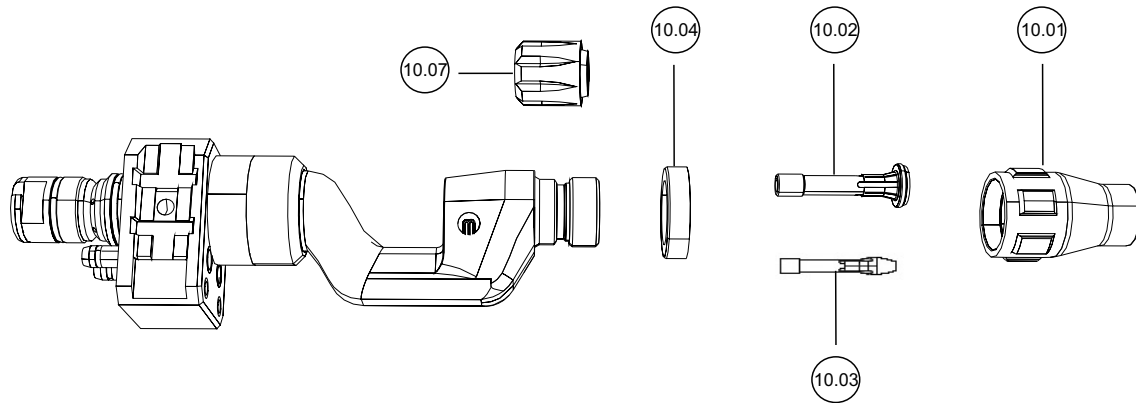
Duty cycle AC
280 A / 100 %

Electrode \varnothing
1.6 mm - 4.8 mm

Item	Type	Designation	Length m	Item no.
9	TIG ROB 400W CW ZF1.0 4m	TIG welding torch, cold wire, straight, water-cooled,	4.0	094-017204-00000
9	TIG ROB 400W CW ZF1.0 1,3m	complete	1.3	094-017204-00013
9.2	CLAMMPING HOLDER TIG WH	Clamping holder TIG ROB 400 W		094-010122-00000
9.3	TIG ROB 400W	TIG-MT torch body, straight		094-010109-00000
9.3	TIG ROB 400W 45	Torch body TIG-MT 45°	-	094-010116-00000
9.3	TIG ROB 400W 70	Torch body TIG-MT 70°		094-010117-00000
9.3	TIG ROB 400W 90	TIG-MT torch body, 90°		094-010119-00000
9.4	SPA TIG WH 4M		4.0	094-016058-00000
9.4	SPA TIG WH 6M	TIG ROB 400 W hose package	6.0	094-016058-00006
9.4	SPA TIG WH 8M		8.0	094-016058-00008
9.5	KD SUPPORT	Cold wire feed	-	094-016068-00000



Consumables/Accessories



Item	Designation	Size in mm	Electrode Ø mm	Nozzle Ø mm	Ø wire mm	Length mm	Material	PU Units	Item no.	per unit
10.01	Gas nozzle	5	-	7.5	-	37	Ceramic	10	094-009646-00000	
10.01	Gas nozzle	6	-	10	-	37	Ceramic	10	094-009647-00000	
10.01	Gas nozzle	8	-	13	-	37	Ceramic	10	094-009648-00000	
10.01	Gas nozzle	10	-	15	-	37	Ceramic	10	094-009649-00000	
10.01	Gas nozzle, reinforced	8	-	13	-	37	Ceramic	10	094-011997-00000	
10.01	Gas nozzle, reinforced	12	-	15	-	37	Ceramic	10	094-011998-00000	
10.01	Gas nozzle	5	-	7.5	-	52	Ceramic	10	094-009650-00000	
10.01	Gas nozzle	6	-	10	-	52	Ceramic	10	094-009651-00000	
10.01	Gas nozzle	8	-	13	-	52	Ceramic	10	094-009653-00000	
10.01	Gas nozzle	10	-	15	-	52	Ceramic	10	094-009654-00000	
10.02	Gas diffuser	-	1.6	-	-	48	Brass	2	094-009640-00000	
10.02	Gas diffuser	-	2	-	-	48	Brass	2	094-009641-00000	
10.02	Gas diffuser	-	2.4	-	-	48	Brass	2	094-009642-00000	
10.02	Gas diffuser	-	3.2	-	-	48	Brass	2	094-009643-00000	
10.02	Gas diffuser	-	4	-	-	48	Brass	2	094-009644-00000	
10.02	Gas diffuser	-	4.8	-	-	48	Brass	2	094-009645-00000	
10.03	Electrode holders	-	1.6	-	-	56	Brass	5	094-009634-00000	
10.03	Electrode holders	-	2	-	-	56	Brass	5	094-009635-00000	
10.03	Electrode holders	-	2.4	-	-	56	Brass	5	094-009636-00000	
10.03	Electrode holders	-	3.2	-	-	56	Brass	5	094-009637-00000	
10.03	Electrode holders	-	4	-	-	56	Brass	5	094-009638-00000	
10.03	Electrode holders	-	4.8	-	-	56	Brass	5	094-009639-00000	
10.04	Insulator	Standard	-	-	-	-	Teflon	10	094-011759-00000	
20.01	Wire feed nozzle	-	-	-	0.6	-	-	1	094-010126-00000	
20.01	Wire feed nozzle	-	-	-	0.8	-	-	1	094-010127-00000	
20.01	Wire feed nozzle	-	-	-	1	-	-	1	094-010128-00000	
20.01	Wire feed nozzle	-	-	-	1.2	-	-	1	094-010129-00000	
20.01	Wire feed nozzle	-	-	-	1.6	-	-	1	094-010130-00000	
-	Wire feed tube 0°	-	-	-	-	-	-	1	094-010123-00000	
-	Wire feed tube, 45°	-	-	-	-	-	-	1	094-010124-00000	
-	Wire feed tube, 70°/90°	-	-	-	-	-	-	1	094-010125-00000	
-	Back cap	-	-	-	-	-	-	1	094-010112-00000	

Options/accessories

Accessories hot wire feed

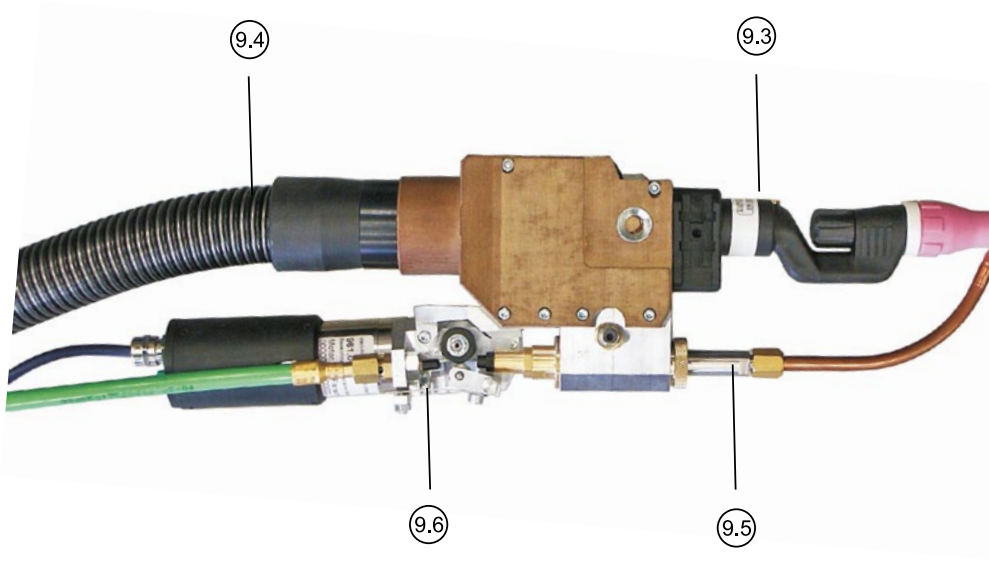
	Item no.	PG
SP AWS TIG WH 1,0m Hot wire feed, complete	090-008794-00000	
SP AWS TIG WH 1,2m Hot wire feed, complete	090-008794-00001	

Torch accessories

	Item no.	PG
ZH TIG400 Ignition aid	094-010360-00000	
RTN TIG 400W 0°/70° Adjusting device	094-017717-00000	
RTN TIG 400W 45°/90° Adjusting device	094-017718-00000	



Robot welding torches ■ TIG ROB 400W CW PP



TIG robot welding torch, water cooled, push/push

- Fast, safe, trouble-free
- With cold wire feed
- Pre-set tungsten electrode
- Reproducible torch position
- **Basic features:**
- 4 m hose package
- Straight torch neck
- Gas nozzle dia. = 10 mm L = 37 mm
- Gas lens dia. electrode = 2.4 mm
- Cold wire nozzle dia. = 1.0 mm
- Universal drive roll dia. = 1.0 mm

Duty cycle DC-

400 A / 100 %

Duty cycle AC

280 A / 100 %

Electrode Ø

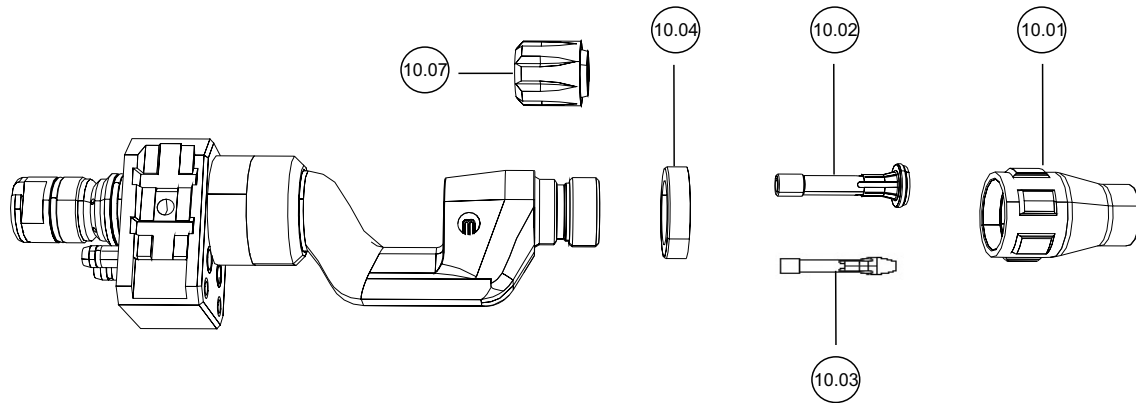
1.6 mm - 4.8 mm

Item	Type	Designation	Length m	Item no.
9	TIG ROB 400W CW PP IG3 4M	TIG welding torch, cold wire, water-cooled, push/push, complete	4.0	094-019639-00000
9.2	CLAMPING HOLDER TIG WH	Clamping holder TIG ROB 400 W		094-010122-00000
9.3	TIG ROB 400W	TIG-MT torch body, straight		094-010109-00000
9.3	TIG ROB 400W 45	Torch body TIG-MT 45°	-	094-010116-00000
9.3	TIG ROB 400W 70	Torch body TIG-MT 70°		094-010117-00000
9.3	TIG ROB 400W 90	TIG-MT torch body, 90°		094-010119-00000
9.4	SPA TIG WH 4M		4.0	094-016058-00000
9.4	SPA TIG WH 6M	TIG ROB 400 W hose package	6.0	094-016058-00006
9.4	SPA TIG WH 8M		8.0	094-016058-00008
9.5	KD SUPPORT	Cold wire feed		094-016068-00000
9.6	PUSHPUSH DRIVE TIG WH IG3	Drive unit TIG ROB 400 W	-	094-019638-00000
-	Y-PART SLP	Y-piece, control cable assembly		094-016167-00000

► Only in combination with T Drive Rob 3



Consumables/Accessories



► Only in combination with T Drive Rob 3

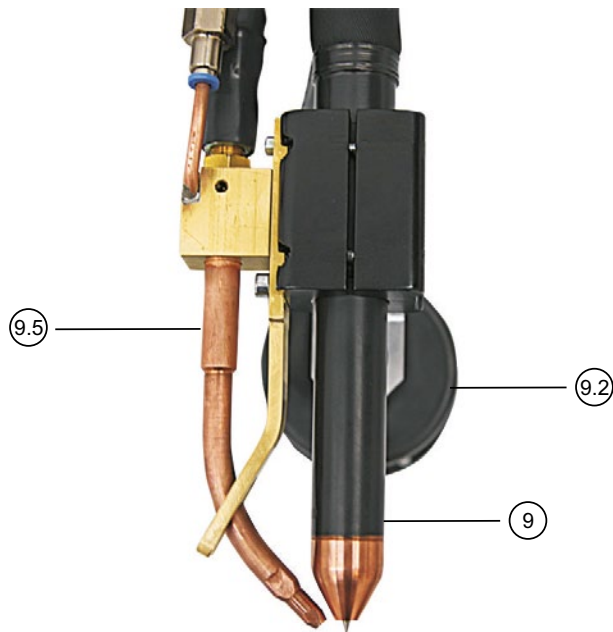
Item	Designation	Size in mm	Electrode Ø mm	Nozzle Ø mm	Ø wire mm	Length mm	Material	PU Units	Item no.	per unit
10.01	Gas nozzle	5	-	7.5	-	37	Ceramic	10	094-009646-00000	
10.01	Gas nozzle	6	-	10	-	37	Ceramic	10	094-009647-00000	
10.01	Gas nozzle	8	-	13	-	37	Ceramic	10	094-009648-00000	
10.01	Gas nozzle	10	-	15	-	37	Ceramic	10	094-009649-00000	
10.01	Gas nozzle, reinforced	8	-	13	-	37	Ceramic	10	094-011997-00000	
10.01	Gas nozzle	5	-	7.5	-	52	Ceramic	10	094-009650-00000	
10.01	Gas nozzle	6	-	10	-	52	Ceramic	10	094-009651-00000	
10.01	Gas nozzle	8	-	13	-	52	Ceramic	10	094-009653-00000	
10.01	Gas nozzle	10	-	15	-	52	Ceramic	10	094-009654-00000	
10.02	Gas diffuser	-	1.6	-	-	48	Brass	2	094-009640-00000	
10.02	Gas diffuser	-	2	-	-	48	Brass	2	094-009641-00000	
10.02	Gas diffuser	-	2.4	-	-	48	Brass	2	094-009642-00000	
10.02	Gas diffuser	-	3.2	-	-	48	Brass	2	094-009643-00000	
10.02	Gas diffuser	-	4	-	-	48	Brass	2	094-009644-00000	
10.02	Gas diffuser	-	4.8	-	-	48	Brass	2	094-009645-00000	
10.03	Electrode holders	-	1.6	-	-	56	Brass	5	094-009634-00000	
10.03	Electrode holders	-	2	-	-	56	Brass	5	094-009635-00000	
10.03	Electrode holders	-	2.4	-	-	56	Brass	5	094-009636-00000	
10.03	Electrode holders	-	3.2	-	-	56	Brass	5	094-009637-00000	
10.03	Electrode holders	-	4	-	-	56	Brass	5	094-009638-00000	
10.03	Electrode holders	-	4.8	-	-	56	Brass	5	094-009639-00000	
10.04	Insulator	Standard	-	-	-	-	Teflon	10	094-011759-00000	
20.01	Wire feed nozzle	-	-	-	0.6	-	-	1	094-010126-00000	
20.01	Wire feed nozzle	-	-	-	0.8	-	-	1	094-010127-00000	
20.01	Wire feed nozzle	-	-	-	1	-	-	1	094-010128-00000	
20.01	Wire feed nozzle	-	-	-	1.2	-	-	1	094-010129-00000	
20.01	Wire feed nozzle	-	-	-	1.6	-	-	1	094-010130-00000	
-	Wire feed tube 0°	-	-	-	-	-	-	1	094-010123-00000	
-	Wire feed tube, 45°	-	-	-	-	-	-	1	094-010124-00000	
-	Wire feed tube, 70°/90°	-	-	-	-	-	-	1	094-010125-00000	
-	Back cap	-	-	-	-	-	-	1	094-010112-00000	

Options/accessories

Torch accessories		Item no.	PG
ZH TIG400 Ignition aid		094-010360-00000	
RTN TIG 400W 0°/70° Adjusting device		094-017717-00000	
RTN TIG 400W 45°/90° Adjusting device		094-017718-00000	
Drive rolls		Item no.	PG
WFROLL UNI V 1.0 Drive roll, universal (V-groove)		094-010194-00500	
WFROLL UNI V 1.2 Drive roll, universal (V-groove)		094-010195-00500	
WFROLL UNI V 1.4 Drive roll, universal (V-groove)		094-010196-00500	
WFROLL UNI V 1.6 Drive roll, universal (V-groove)		094-010197-00500	
WFROLL UNI 0.6 Drive roll, universal (V-groove)		094-010191-00000	
WFROLL UNI 0.8 Drive roll, universal (V-groove)		094-010192-00000	
WFROLL UNI 0.9 Drive roll, universal (V-groove)		094-010193-00000	



Robot welding torches ■ forceTig FT500W

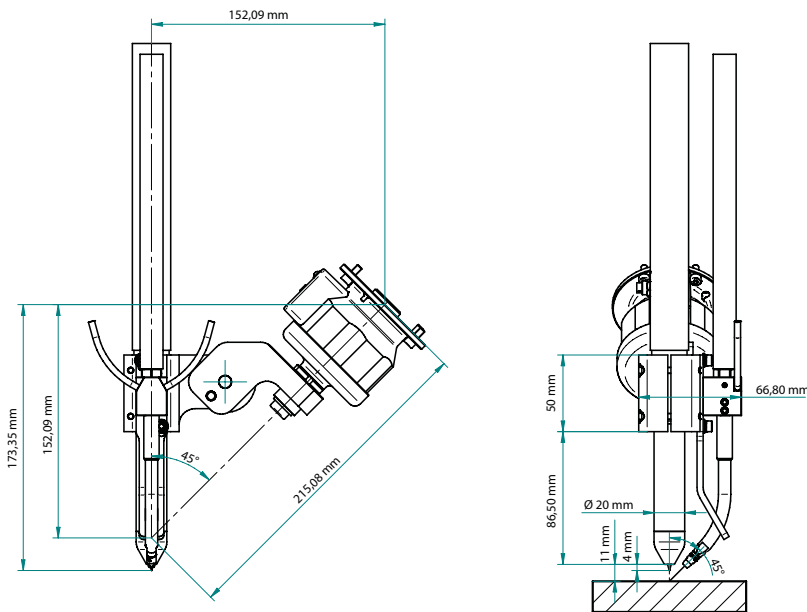


High welding torch power

- Stable design for increased crash safety
- Closed cooling circuit
- Screw-in electrode, defined calibrated geometry when changing electrodes, i.e. no need to adjust with setting gauges at replacement time
- Available with or without filler wire feed
- Basic features: Gas diffuser, round cathode, 13 mm copper gas nozzle
- Hose package outlet upwards

Duty cycle DC-

500 A / 100 %

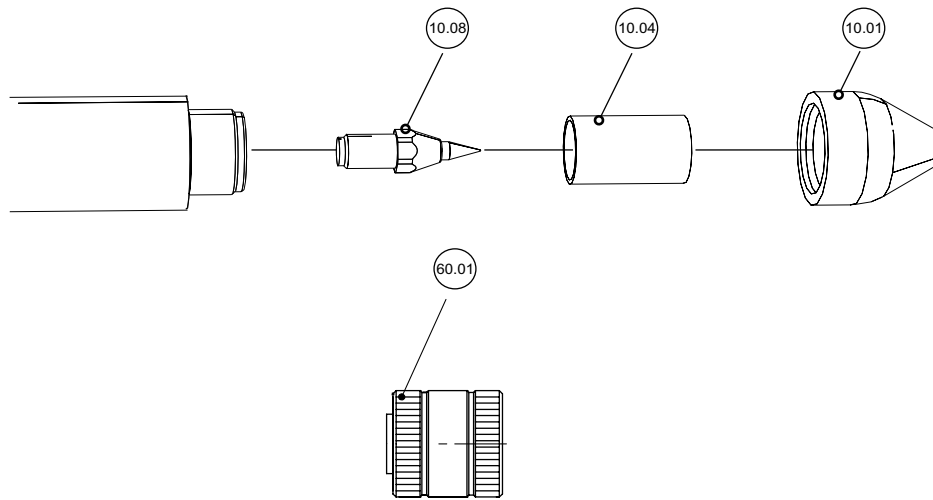


Item	Type	Designation	Length m	Item no.
9	FT 500W 5m	forceTig welding torch with hose	5.0	094-020100-10000
9	FT 500W 8m	package	8.0	094-020100-10008
9.5	AWS FT500 1,5m	Wire support	1.5	090-008799-00015
9.5	AWS FT500 3m		3.0	090-008799-00000

► See description / benefits forceTig on page 162



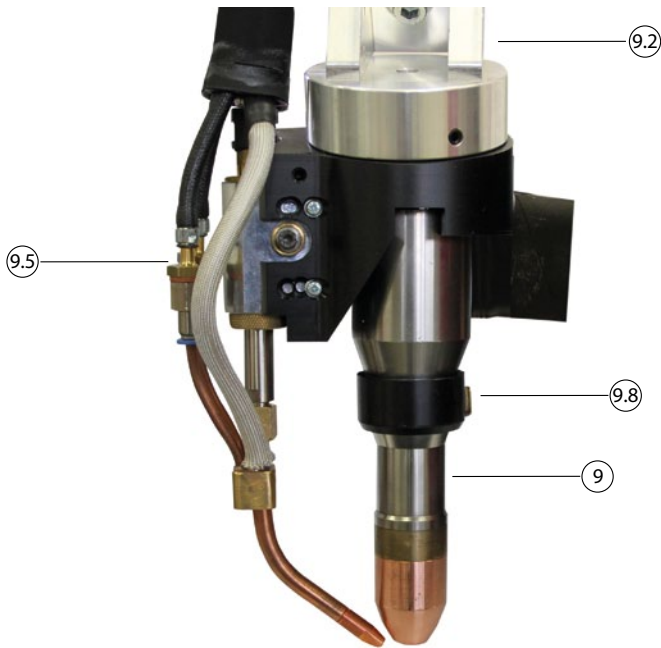
■ Consumables/Accessories



Item	Designation	Nozzle Ø mm	Length mm	PU Units	Item no.	per unit
10.01	Gas nozzle, copper	5	21.5	1	094-020619-00000	
10.04	Insulator / Diffusor	-	-	1	094-020620-00000	
10.08	Cathode, round	-	-	1	094-020618-00000	
60.01	Torch key	-	-	1	094-021232-00000	
-	Copper paste, 100g	-	-	1	094-017723-00001	



Robot welding torches ■ forceTig FT1000W



High welding torch power

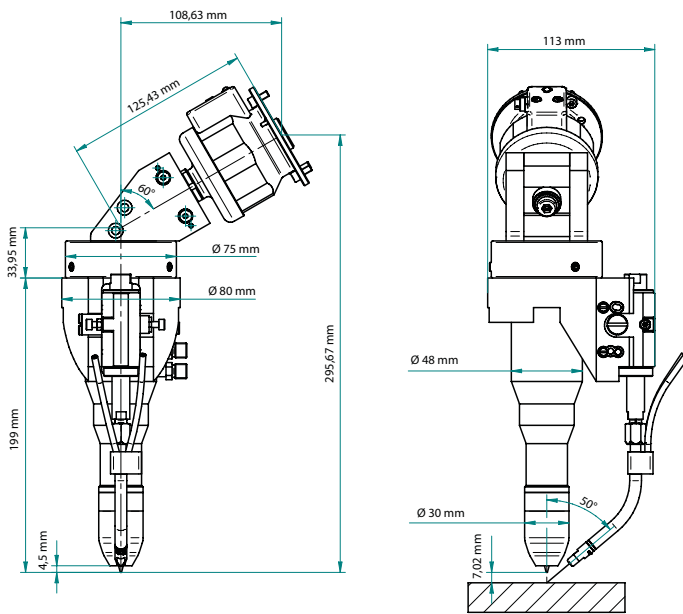
- Stable design for increased crash safety
- Closed cooling circuit
- Screw-in electrode, defined calibrated geometry when changing electrodes, i.e. no need to adjust with setting gauges at replacement time
- Available with or without filler wire feed
- Basic features: Gas diffuser, round cathode, 13 mm copper gas nozzle
- Hose package outlet on side

Duty cycle

800 A / 100 %

Load capacity

1000 A

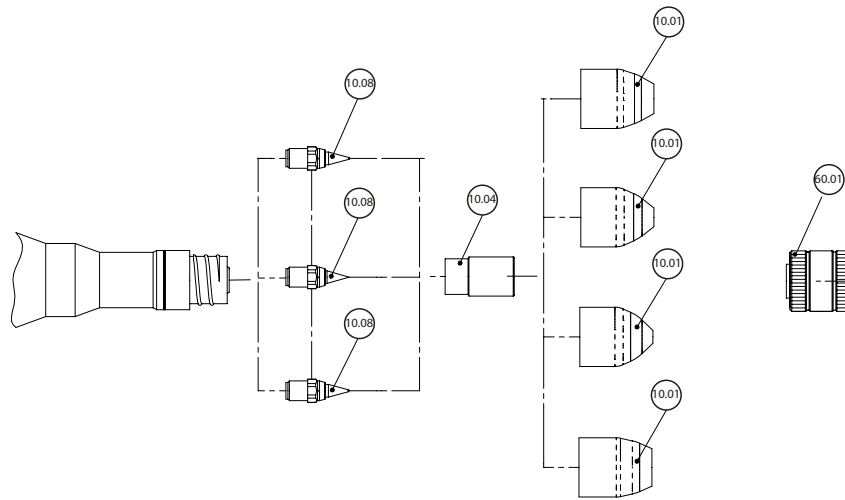


Item	Type	Designation	Length m	Item no.
9	FT 1000W 5m	forceTig welding torch with hose package	5.0	094-019480-10000
9	FT 1000W 8m		8.0	094-019480-10008
9.2	BH forceTig CAT2	Torch holder for forceTig welding torch on collision sensor		094-019116-00000
9.2	BH forceTig CAT2-HL	Torch holder for forceTig welding torch on CAT2-HL collision sensor		094-019115-00000
9.5	AWS FT1000 1.5m	Wire support		090-008775-00015
9.5	AWS FT1000 3m			090-008775-00000
9.8	IA FT1000		Ignition aid	

▶ See description / benefits forceTig on page 162



■ Consumables/Accessories



Item	Designation	Nozzle Ø		PU	Item no.	per unit
		mm	mm			
10.01	Gas nozzle, ceramic	12	37	1	094-016127-00001	
10.01	Gas nozzle, copper	5.5	37	1	094-019364-00000	
10.01	Gas nozzle, copper	8	37	1	094-015308-00000	
10.01	Gas nozzle, copper	13	37	1	094-015307-00000	
10.01	Gas nozzle, copper	16	37	1	094-019365-00000	
10.01	Gas nozzle, ceramic	16	37	1	094-021638-00000	
10.04	Gas diffuser and insulator	-	-	1	094-015306-00001	
10.08	Cathode, obtuse	6.4	-	1	094-015305-00002	
10.08	Cathode, pointed	6.4	-	1	094-015321-00001	
10.08	Cathode, round	-	-	1	094-021229-00000	
10.08	Cathode, round	-	-	1	094-021230-00000	
60.01	Torch key	-	-	1	094-021231-00000	
-	Copper paste, 100g	-	-	1	094-017723-00001	



■ Robot welding torches ■ forceTig FT1000W AX



High welding torch power

- Stable design for increased crash safety
- Closed cooling circuit
- Screw-in electrode, defined calibrated geometry when changing electrodes, i.e. no need to adjust with setting gauges at replacement time
- Available with or without filler wire feed
- Basic features: Gas diffuser, round cathode, 13 mm copper gas nozzle
- Hose package outlet upwards

Duty cycle

800 A / 100 %

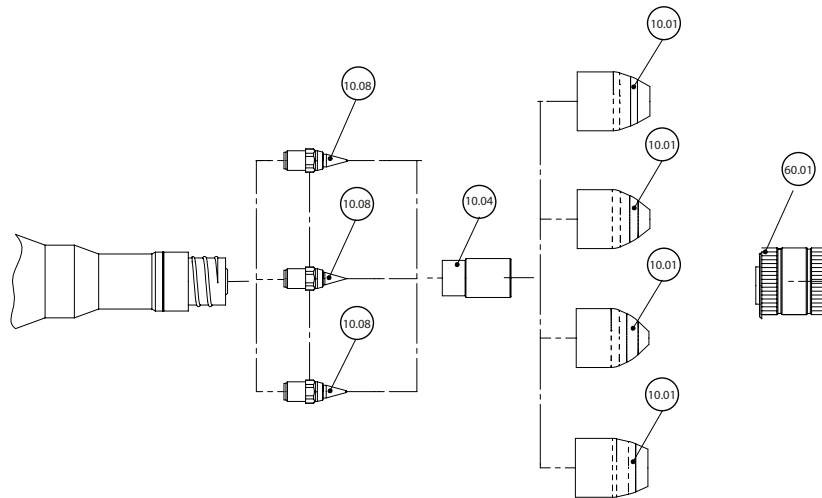
Load capacity

1000 A

Item	Type	Designation	Length m	Item no.
9	FT1000W AX 5M	forceTig welding torch with hose package	5.0	094-020390-10005
9	FT1000W AX 8M		8.0	094-020390-10008
9.2	BH FT RSA	Torch holder for forceTig welding torch on RSA collision sensor	-	094-022315-00000
9.8	IA FT1000 RSA	Ignition aid for BH FT RSA torch holder	-	094-022235-00000



■ Consumables/Accessories



Item	Designation	Nozzle Ø		Length		PU	Item no.	per unit
		mm	mm	mm	mm			
10.01	Gas nozzle, ceramic	12	37	1	094-016127-00001			
10.01	Gas nozzle, copper	5.5	37	1	094-019364-00000			
10.01	Gas nozzle, copper	8	37	1	094-015308-00000			
10.01	Gas nozzle, copper	13	37	1	094-015307-00000			
10.01	Gas nozzle, copper	16	37	1	094-019365-00000			
10.01	Gas nozzle, ceramic	16	37	1	094-021638-00000			
10.04	Gas diffuser and insulator	-	-	1	094-015306-00001			
10.08	Cathode, obtuse	6.4	-	1	094-015305-00002			
10.08	Cathode, pointed	6.4	-	1	094-015321-00001			
10.08	Cathode, round	-	-	1	094-021229-00000			
10.08	Cathode, round	-	-	1	094-021230-00000			
60.01	Torch key	-	-	1	094-021231-00000			
-	Copper paste, 100g	-	-	1	094-017723-00001			



■ Automated welding torches ■ TIG-MT 200G



Automated TIG welding torch, gas-cooled

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

Duty cycle DC-

200 A / 60 %

Duty cycle AC

140 A / 60 %

Electrode Ø

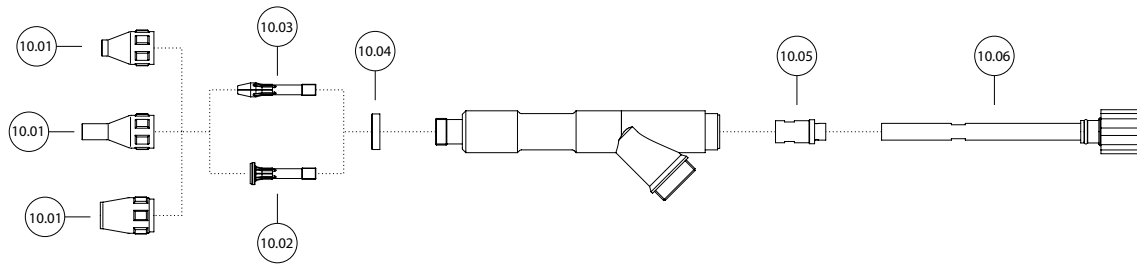
1 mm - 4.8 mm

Item	Type	Designation	Length m	Item no.
9	TIG-MT 200G 3M	Automated TIG welding torch,	3.0	094-011708-00003
9	TIG-MT 200G 4M	gas-cooled	4.0	094-011708-00000

- ▶ Please note: Consumables (gas nozzle, collet etc.) are not included in the scope of supply and must be ordered separately.
- ▶ Other lengths available on request



Consumables/Accessories



Item	Designation	Size in mm	Electrode Ø mm	Nozzle Ø mm	Length mm	Material	PU Units	Item no.	per unit
10.01	Gas nozzle	5	-	7.5	37	Ceramic	10	094-009646-00000	
10.01	Gas nozzle	6	-	10	37	Ceramic	10	094-009647-00000	
10.01	Gas nozzle	8	-	13	37	Ceramic	10	094-009648-00000	
10.01	Gas nozzle	10	-	15	37	Ceramic	10	094-009649-00000	
10.01	Gas nozzle, reinforced	8	-	13	37	Ceramic	10	094-011997-00000	
10.01	Gas nozzle, reinforced	12	-	15	37	Ceramic	10	094-011998-00000	
10.01	Gas nozzle	5	-	7.5	52	Ceramic	10	094-009650-00000	
10.01	Gas nozzle	6	-	10	52	Ceramic	10	094-009651-00000	
10.01	Gas nozzle	8	-	13	52	Ceramic	10	094-009653-00000	
10.01	Gas nozzle	10	-	15	52	Ceramic	10	094-009654-00000	
10.02	Gas diffuser	-	1.6	-	48	Brass	2	094-009640-00000	
10.02	Gas diffuser	-	2	-	48	Brass	2	094-009641-00000	
10.02	Gas diffuser	-	2.4	-	48	Brass	2	094-009642-00000	
10.02	Gas diffuser	-	3.2	-	48	Brass	2	094-009643-00000	
10.02	Gas diffuser	-	4	-	48	Brass	2	094-009644-00000	
10.02	Gas diffuser	-	4.8	-	48	Brass	2	094-009645-00000	
10.03	Electrode holders	-	1.6	-	56	Brass	5	094-009634-00000	
10.03	Electrode holders	-	2	-	56	Brass	5	094-009635-00000	
10.03	Electrode holders	-	2.4	-	56	Brass	5	094-009636-00000	
10.03	Electrode holders	-	3.2	-	56	Brass	5	094-009637-00000	
10.03	Electrode holders	-	4	-	56	Brass	5	094-009638-00000	
10.03	Electrode holders	-	4.8	-	56	Brass	5	094-009639-00000	
10.04	Insulator	Standard	-	-	-	Teflon	10	094-011759-00000	
10.05	Mount for guide tube	-	-	-	-	-	1	094-020286-00000	
10.06	Guide tube	-	-	-	-	-	1	094-020285-00000	

Options/accessories

Torch accessories

Torch holder

TH MT-26

TH MT-30

Torch holder suitable for TIG-MT 200G/300W



Item no.

PG

094-013690-00000

094-013691-00000



■ Automated welding torches ■ TIG-MT 300W



Automated TIG welding torch, water-cooled

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

Duty cycle DC-

300 A / 100 %

Duty cycle AC

210 A / 100 %

Electrode Ø

1.6 mm - 4.8 mm

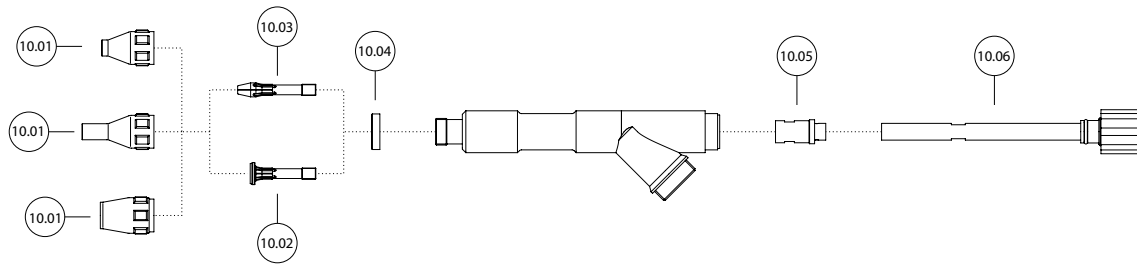
Item	Type	Designation	Length m	Item no.
9	TIG-MT 300W 3M	Automated TIG welding torch, water-cooled	3.0	094-011709-00000
9	TIG-MT 300W 4M		4.0	094-011709-00004
9	TIG-MT 300W 8M		8.0	094-011709-00008

► Please note: Consumables (gas nozzle, collet etc.) are not included in the scope of supply and must be ordered separately.

► Other lengths available on request



Consumables/Accessories



Item	Designation	Size in mm	Electrode Ø mm	Nozzle Ø mm	Length mm	Material	PU Units	Item no.	per unit
10.01	Gas nozzle	5	-	7.5	37	Ceramic	10	094-009646-00000	
10.01	Gas nozzle	6	-	10	37	Ceramic	10	094-009647-00000	
10.01	Gas nozzle	8	-	13	37	Ceramic	10	094-009648-00000	
10.01	Gas nozzle	10	-	15	37	Ceramic	10	094-009649-00000	
10.01	Gas nozzle, reinforced	8	-	13	37	Ceramic	10	094-011997-00000	
10.01	Gas nozzle, reinforced	12	-	15	37	Ceramic	10	094-011998-00000	
10.01	Gas nozzle	5	-	7.5	52	Ceramic	10	094-009650-00000	
10.01	Gas nozzle	6	-	10	52	Ceramic	10	094-009651-00000	
10.01	Gas nozzle	8	-	13	52	Ceramic	10	094-009653-00000	
10.01	Gas nozzle	10	-	15	52	Ceramic	10	094-009654-00000	
10.02	Gas diffuser	-	1.6	-	48	Brass	2	094-009640-00000	
10.02	Gas diffuser	-	2.4	-	48	Brass	2	094-009642-00000	
10.02	Gas diffuser	-	3.2	-	48	Brass	2	094-009643-00000	
10.02	Gas diffuser	-	4	-	48	Brass	2	094-009644-00000	
10.02	Gas diffuser	-	4.8	-	48	Brass	2	094-009645-00000	
10.03	Electrode holders	-	1.6	-	56	Brass	5	094-009634-00000	
10.03	Electrode holders	-	2.4	-	56	Brass	5	094-009636-00000	
10.03	Electrode holders	-	3.2	-	56	Brass	5	094-009637-00000	
10.03	Electrode holders	-	4	-	56	Brass	5	094-009638-00000	
10.03	Electrode holders	-	4.8	-	56	Brass	5	094-009639-00000	
10.04	Insulator	Standard	-	-	-	Teflon	10	094-011759-00000	
10.05	Mount for guide tube	-	-	-	-	-	1	094-020286-00000	
10.06	Guide tube	-	-	-	-	-	1	094-020285-00000	

Options/accessories

Torch accessories	Item no.	PG
Torch holder		
TH MT-26	094-013690-00000	
TH MT-30	094-013691-00000	
Torch holder suitable for TIG-MT 200G/300W		





■ Automated welding torches ■ TIG-MT 400W



Automated TIG welding torch, water-cooled

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

Duty cycle DC-

400 A / 100 %

Duty cycle AC

280 A / 100 %

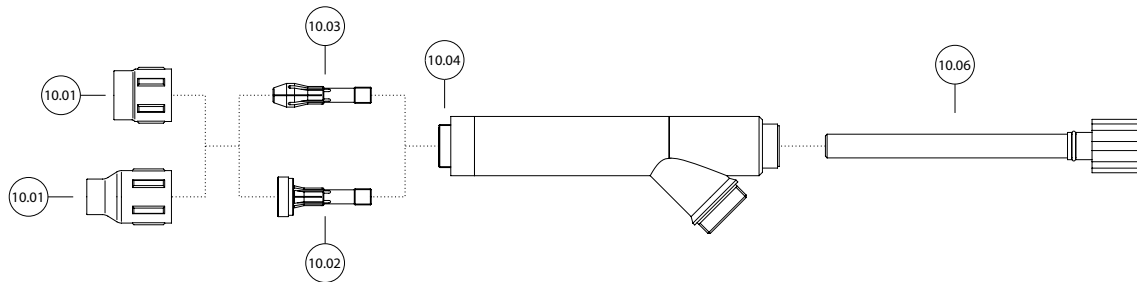
Electrode Ø

1.6 mm - 4.8 mm

Item	Type	Designation	Length m	Item no.
9	TIG-MT 400W 3M	Automated TIG welding torch,	3.0	094-022417-00003
9	TIG-MT 400W 4M	water-cooled	4.0	094-022417-00004



Consumables/Accessories



Item	Designation	Size in mm	Electrode Ø mm	Nozzle Ø mm	Length mm	Material	PU Units	Item no.	per unit
10.01	Gas nozzle	5	-	7.5	37	Ceramic	10	094-009646-00000	
10.01	Gas nozzle	6	-	10	37	Ceramic	10	094-009647-00000	
10.01	Gas nozzle	8	-	13	37	Ceramic	10	094-009648-00000	
10.01	Gas nozzle	10	-	15	37	Ceramic	10	094-009649-00000	
10.01	Gas nozzle, reinforced	8	-	13	37	Ceramic	10	094-011997-00000	
10.01	Gas nozzle, reinforced	12	-	15	37	Ceramic	10	094-011998-00000	
10.01	Gas nozzle	5	-	7.5	52	Ceramic	10	094-009650-00000	
10.01	Gas nozzle	6	-	10	52	Ceramic	10	094-009651-00000	
10.01	Gas nozzle	8	-	13	52	Ceramic	10	094-009653-00000	
10.01	Gas nozzle	10	-	15	52	Ceramic	10	094-009654-00000	
10.01	Gas nozzle for gas diffuser, JUMBO	20	-	19.5	50	Ceramic	10	094-009665-00000	
10.02	Gas diffuser	-	1.6	-	48	Brass	2	094-009640-00000	
10.02	Gas diffuser	-	2	-	48	Brass	2	094-009641-00000	
10.02	Gas diffuser	-	2.4	-	48	Brass	2	094-009642-00000	
10.02	Gas diffuser	-	3.2	-	48	Brass	2	094-009643-00000	
10.02	Gas diffuser	-	4	-	48	Brass	2	094-009644-00000	
10.02	Gas diffuser	-	4.8	-	48	Brass	2	094-009645-00000	
10.03	Electrode holders	-	1.6	-	56	Brass	5	094-009634-00000	
10.03	Electrode holders	-	2	-	56	Brass	5	094-009635-00000	
10.03	Electrode holders	-	2.4	-	56	Brass	5	094-009636-00000	
10.03	Electrode holders	-	3.2	-	56	Brass	5	094-009637-00000	
10.03	Electrode holders	-	4	-	56	Brass	5	094-009638-00000	
10.03	Electrode holders	-	4.8	-	56	Brass	5	094-009639-00000	
10.04	Insulator	-	-	-	-	-	1	094-022419-00000	
10.04	Guide tube	-	-	-	-	-	1	094-022418-00000	

Options/accessories

Torch accessories

TH MT-25
Torch holder



Item no. 094-013869-00000
PG



■ Automated welding torches ■ TIG-MT 500W



Automated TIG welding torch, water-cooled

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

Duty cycle DC-

500 A / 100 %

Duty cycle AC

350 A / 100 %

Electrode Ø

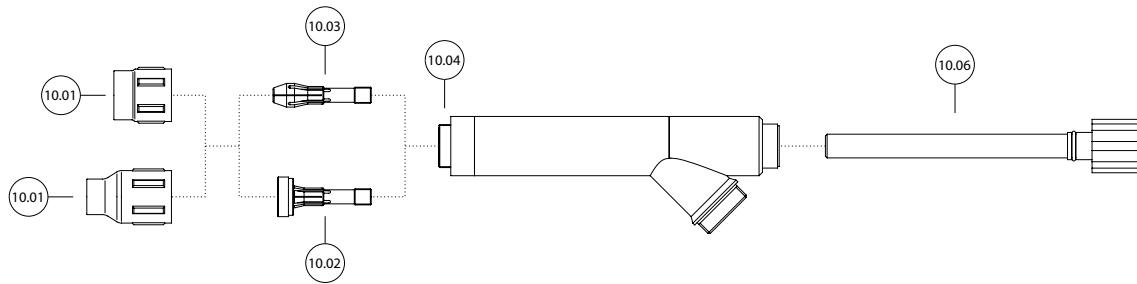
1.6 mm - 4 mm

Item	Type	Designation	Length m	Item no.
9	TIG-MT 500W 1M	Automated TIG welding torch, water-cooled	1.0	094-013706-00001
9	TIG-MT 500W 2M		2.0	094-013706-00002
9	TIG-MT 500W 3M		3.0	094-013706-00003
9	TIG-MT 500W 4M		4.0	094-013706-00000
9	TIG-MT 500W 8M		8.0	094-013706-00008

- ▶ Please note: Consumables (gas nozzle, collet etc.) are not included in the scope of supply and must be ordered separately.
- ▶ Other lengths available on request



Consumables/Accessories



Item	Designation	Size in mm	Electrode Ø mm	Nozzle Ø mm	Length mm	Material	PU Units	Item no.	per unit
10.01	Gas nozzle	24	-	24	34	Ceramic	10	094-011999-00000	
10.01	Gas nozzle for gas diffuser, JUMBO	12	-	12.5	50	Ceramic	10	094-009663-00000	
10.01	Gas nozzle for gas diffuser, JUMBO	16	-	16	50	Ceramic	10	094-009664-00000	
10.01	Gas nozzle for gas diffuser, JUMBO	20	-	19.5	50	Ceramic	10	094-009665-00000	
10.02	Gas diffuser	-	1.6	-	-	-	1	094-017223-00000	
10.02	Gas diffuser	-	2.4	-	-	-	1	094-017225-00000	
10.02	Gas diffuser	-	3.2	-	-	-	1	094-017226-00000	
10.02	Gas diffuser	-	4	-	-	-	1	094-017227-00000	
10.03	Electrode holders	-	1.6	-	-	-	1	094-017218-00000	
10.03	Electrode holders	-	2.4	-	-	-	1	094-017220-00000	
10.03	Electrode holders	-	3.2	-	-	-	1	094-017221-00000	
10.03	Electrode holders	-	4	-	-	-	1	094-017222-00000	
10.04	Insulator	-	-	-	-	-	1	094-017229-00000	
10.06	Guide tube	-	-	-	-	-	1	094-017217-00000	

Options/accessories

Torch accessories

Torch holder

TH MT-26

TH MT-30

Torch holder suitable for TIG-MT 200G/300W

TH MT-35

Torch holder suitable for TIG-MT 500W



Item no.	PG
094-013690-00000	
094-013691-00000	
094-013868-00000	



Electrodes

Item	Designation	Size in mm	Electrode Ø	Nozzle Ø	Length	Material	PU	Item no.		
			mm	mm	mm		Units			per unit
10.08	Tungsten electrode, green	-	1	-	175	-	10	094-001593-00000		
10.08	Tungsten electrode, green	-	1.6	-	175	-	10	094-001008-00000		
10.08	Tungsten electrode, green	-	2	-	175	-	10	094-001594-00000		
10.08	Tungsten electrode, green	-	2.4	-	175	-	10	094-001009-00000		
10.08	Tungsten electrode, green	-	3.2	-	175	-	10	094-001010-00000		
10.08	Tungsten electrode, green	-	4	-	175	-	10	094-001011-00000		
10.08	Tungsten electrode, green	-	4.8	-	175	-	10	094-001595-00000		
10.08	Tungsten electrode, red	-	1	-	175	< 2% ThO2	10	094-001377-00000		
10.08	Tungsten electrode, red	-	1.6	-	175	< 2% ThO2	10	094-001000-00000		
10.08	Tungsten electrode, red	-	2	-	175	< 2% ThO2	10	094-001378-00000		
10.08	Tungsten electrode, red	-	2.4	-	175	< 2% ThO2	10	094-001001-00000		
10.08	Tungsten electrode, red	-	3.2	-	175	< 2% ThO2	10	094-001002-00000		
10.08	Tungsten electrode, red	-	4	-	175	< 2% ThO2	10	094-001003-00000		
10.08	Tungsten electrode, red	-	4.8	-	175	< 2% ThO2	10	094-001379-00000		
10.08	Tungsten electrode, grey	-	1	-	175	< 2% CeO2	10	094-001380-00000		
10.08	Tungsten electrode, grey	-	1.6	-	175	< 2% CeO2	10	094-001004-00000		
10.08	Tungsten electrode, grey	-	2	-	175	< 2% CeO2	10	094-001381-00000		
10.08	Tungsten electrode, grey	-	2.4	-	175	< 2% CeO2	10	094-001005-00000		
10.08	Tungsten electrode, grey	-	3.2	-	175	< 2% CeO2	10	094-001006-00000		
10.08	Tungsten electrode, grey	-	4	-	175	< 2% CeO2	10	094-001007-00000		
10.08	Tungsten electrode, grey	-	4.8	-	175	< 2% CeO2	10	094-001382-00000		
10.08	Tungsten electrode, blue	-	1	-	175	< 2% La2O3	10	094-012958-00000		
10.08	Tungsten electrode, blue	-	1.6	-	175	< 2% La2O3	10	094-001915-00000		
10.08	Tungsten electrode, blue	-	2	-	175	< 2% La2O3	10	094-012960-00000		
10.08	Tungsten electrode, blue	-	2.4	-	175	< 2% La2O3	10	094-001916-00000		
10.08	Tungsten electrode, blue	-	3.2	-	175	< 2% La2O3	10	094-001917-00000		
10.08	Tungsten electrode, blue	-	4	-	175	< 2% La2O3	10	094-012961-00000		
10.08	Tungsten electrode, blue	-	4.8	-	175	< 2% La2O3	10	094-001918-00000		
10.08	Tungsten electrode, gold	-	1	-	175	< 1,5% La2O3	10	094-009446-00000		
10.08	Tungsten electrode, gold	-	1.6	-	175	< 1,5% La2O3	10	094-009447-00000		
10.08	Tungsten electrode, gold	-	2	-	175	< 1,5% La2O3	10	094-012962-00000		
10.08	Tungsten electrode, gold	-	2.4	-	175	< 1,5% La2O3	10	094-009276-00000		
10.08	Tungsten electrode, gold	-	3.2	-	175	< 1,5% La2O3	10	094-009527-00000		
10.08	Tungsten electrode, gold	-	4	-	175	< 1,5% La2O3	10	094-009528-00000		
10.08	Tungsten electrode, gold	-	4.8	-	175	< 1,5% La2O3	10	094-009529-00000		
10.08	Tungsten electrode, purple	-	1	-	175	< 2% noble metals	10	094-019691-00000		
10.08	Tungsten electrode, purple	-	1.6	-	175	< 2% noble metals	10	094-019692-00000		
10.08	Tungsten electrode, purple	-	2	-	175	< 2% noble metals	10	094-019693-00000		
10.08	Tungsten electrode, purple	-	2.4	-	175	< 2% noble metals	10	094-019694-00000		
10.08	Tungsten electrode, purple	-	3.2	-	175	< 2% noble metals	10	094-019695-00000		
10.08	Tungsten electrode, purple	-	4	-	175	< 2% noble metals	10	094-019696-00000		


Tungsten electrode grinders ■ Porta & Handy


- Portable tungsten electrode grinder
- For use at the welding site
- Simple operation, high efficiency and quality
- Diamond disk grinding surface can be used at three positions
- 99.9% of grinding dust is captured
- **Scope of supply:** Transport case; electrode holder; collet chucks for 1.6 mm, 2.4 mm and 3.2 mm electrodes; Allen keys (4 mm and 8 mm); open-ended spanners (13/17 and 13/14); disposal bag for disposable filters; operating instructions

Rotational speed	8000 U/min - 22000 U/min
Grinding angle	15° - 180°
Diamond disk diameter	40 mm
Electrode Ø	0.8 mm - 4 mm
Weight	2.5 kg
Protection classification	IP 21
Standards	DIN 8575
Version	1 x 230 V / 50 Hz
Approvals	CE

Type	Designation	Item no.	per unit
TGM 40230 Handy	Portable tungsten electrode grinder	098-003412-00500	



- Stationary tungsten electrode grinder
- Simple operation, high efficiency and quality
- Wet grinding for optimum grinding quality and long service life of the diamond disk
- 100% of grinding dust is captured
- **Scope of supply:** 2 m mains cable; 250 ml grinding liquid; diamond disc; collet chucks (1.6 mm–3.2 mm); electrode holder

Rotational speed	8500 U/min
Grinding angle	7.5° - 90°
Weight	9.3 kg
Protection classification	IP 21
Standards	EN 61029
Approvals	CE

Type	Designation	Item no.	per unit
TGM 40230 Porta 230V 50Hz	Stationary tungsten electrode grinder	098-003694-00000	
TGM 40230 Porta 230V 60Hz	Stationary tungsten electrode grinder	398-002559-00000	



■ Overview

TIG automation

Page

Additional wire

TIG/plasma

AW Support cold wire

234

AW support hot wire

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TIG/plasma filler wire support

Determining item numbers for cold and hot wire feeds

An item code is required for ordering cold and hot wire supports, which forms the last five positions in the item number. This is formulated according to the configuration of the support.

Filler wire support code

Basic item number: 094-0020614-**ABCDD**

Position in item number	Code	Description	Matching connection
A	0	Cold wire	
	1	Hot wire	
B	0	T drive 4 Rob.2	Quick Connect L
	1	T drive 4 Rob.3	Quick Connect S
	2	Tetrix drive 4L/tigSpeed drive 45/tigSpeed drive 4 Rob	Dinse connector
C	0	Steel design	
	1	Stainless steel design	
	2	Aluminium design	
DD	10-40	Indication of the length	

Configuration examples:

Cold wire support, T drive 4 Rob.2, steel, 3 metres/092-020614-00030

Position in item number	Code	Description
A	0	Cold wire
B	0	T drive 4 Rob.2
C	0	Steel design
DD	30	3 metres

094-0020614- **00030** End number

Hot wire support, T drive 4 Rob.3, stainless steel, 1.5 metres/092-020614-11115

Position in item number	Code	Description
A	1	Hot wire
B	1	T drive 4 Rob.3
C	1	Stainless steel design
DD	15	1.5 metres

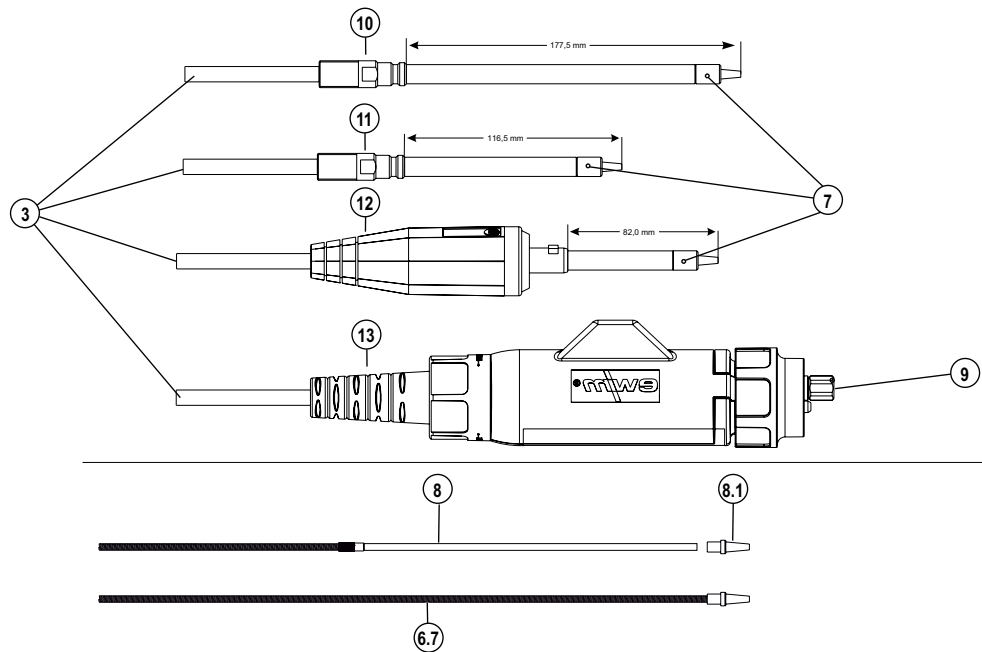
094-020614 - **11115** End number

Wire feed lengths currently available: 1.5 m, 3 m, 4 m = DD 15, 30, 40

- ▶ Other lengths available on request
- ▶ Can be used in virtually all standard TIG automated welding torches



■ Cold wire feeds



Wire feed for automated cold wire applications (TIG/plasma)

- Wire feed individually adjustable for each process
- Compatible with EMW cold wire support
- The wire feed can be reduced to the required length

► Equipment parts, such as liners and inlet guides, are not part of the scope of supply and must be ordered based on the specific application!

► Order the right wire feed for the wire feeder used!

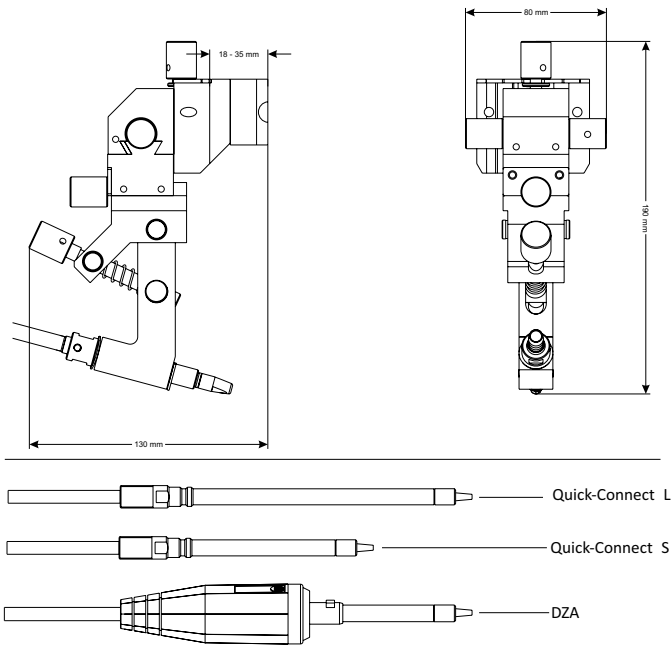
Item	Connection	Description	Length	Item no.	PG	Price per pc.
10	Quick Connect L	Cold wire feed, for T drive 4 Rob 2	4 m	094-020613-00000	A1	€70.00
11	Quick Connect S	Cold wire feed, for T drive 4 Rob 3		094-020613-00001	A1	€70.00
12	Dinse connector	Cold wire feed, for tigSpeed		094-020613-00002	A1	€110.00
13	Euro torch connector	Cold wire feed, Euro torch connector		094-020613-00003	A1	€70.00

■ Replacement parts

Item	Description	Wire Ø	Inside Ø	Outside Ø	Length	Material	Pr. U	VE	Item no.	PG	Price per pc.
		mm	mm	mm							
3	Wire transport hose	-	-	-	1	-	per m.	1	094-017104-00000	B2	€2.35
6.7	Steel liner	-	1.5	3.3	3.5	Steel	per pc.	1	092-018695-00003	B2	€20.60
6.7	Steel liner	-	1.5	3.3	4.5	Steel		1	092-018695-00004	B2	€23.80
6.7	Steel liner	-	2	4	3.5	Steel		1	092-018693-00003	B2	€10.90
6.7	Steel liner	-	2	4	4.5	Steel		1	092-018693-00004	B2	€11.90
6.7	Steel liner, stainless steel	-	1.5	3.3	3.5	CrNi		1	092-018696-00003	B2	€30.90
6.7	Steel liner, stainless steel	-	1.5	3.3	4.5	CrNi		1	092-018696-00004	B2	€37.10
6.7	Steel liner, stainless steel	-	2	4	3.5	CrNi		1	092-018694-00003	B2	€16.90
6.7	Steel liner, stainless steel	-	2	4	4.5	CrNi		1	092-018694-00004	B2	€18.90
6.7	Steel liner, brass	-	2	4	3.5	Brass		1	092-018697-00003	B2	€24.30
6.7	Steel liner, brass	-	2	4	4.5	Brass		1	092-018697-00004	B2	€27.50
7	Crown nut	-	-	-	-	-		10	094-015563-00001	B2	3,95 €
8	Combined liner, PA	1.2-1.6	2	4	3	PA		1	094-013076-00000	B2	€19.50
8	Combined liner, PA	1.2-1.6	2	4	4	PA		1	094-013077-00000	B2	€23.00
8	Combined liner, PA	1.2-1.6	2	4	5	PA		1	094-013565-00000	B2	€27,50
8	Combined liner, Teflon	0.8-1.2	1.5	4	3	Teflon	1	094-013800-00000	B2	€22.50	
8	Combined liner, Teflon	0.8-1.2	1.5	4	4	Teflon	1	094-013800-00004	B2	€25.00	
8	Combined liner, Teflon	0.8-1.2	1.5	4	5	Teflon	1	094-013800-00005	B2	€27.50	
8	Carbon Teflon liner	1-1.2	2	4	3	Teflon	1	094-013801-00000	B2	€22.50	
8	Combined liner, Teflon	1-1.2	2	4	4	Teflon	1	094-013801-00004	B2	€25.00	
8	Combined liner, carbon Teflon	0.8-1.2	1.5	4	3	Carbon Teflon	1	094-013871-00000	B2	€24.00	
8	Combined liner, carbon Teflon	0.8-1.2	1.5	4	4	Carbon Teflon	1	094-013871-00004	B2	€28.00	
8	Combined liner, carbon Teflon	1.2-1.6	2	4	3	Carbon Teflon	1	094-013828-00000	B2	€22.50	
8	Combined liner, carbon Teflon	1.2-1.6	2	4	4	Carbon Teflon	1	094-013828-00004	B2	€25.00	
8.1	Inlet guide, liner	-	-	-	-	-	2	094-014032-00001	B2	€4.80	
9	Hexagonal nut	-	-	-	-	-	10	094-001080-00000	E4	€1.35	



TIG/plasma ■ AW Support cold wire



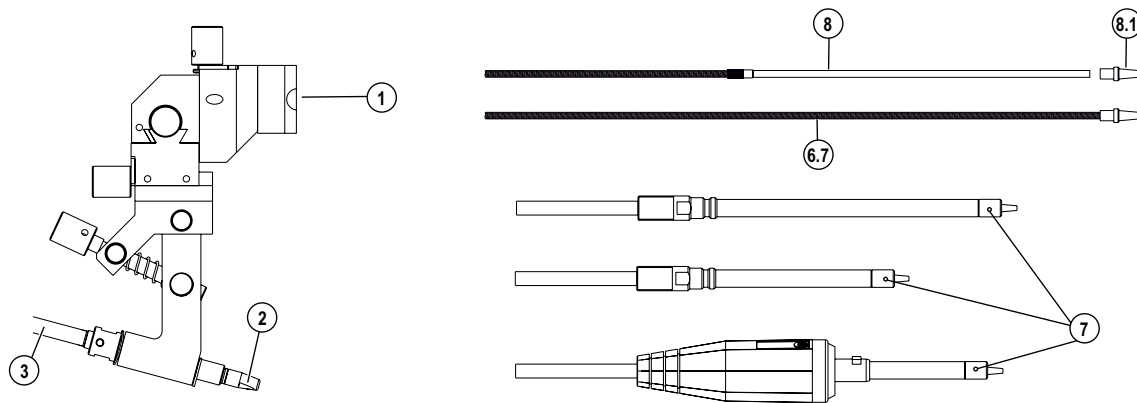
Wire feed for automated cold wire applications (TIG/plasma)

- Versatile, yet delivers optimised welding results
- XYZ axes and adjustment angle infinitely lockable and adjustable
- Insulated design (HF safe)
- Wire feed individually adjustable for each process
- Rapid, straightforward assembly
- Contact tip also compatible with EWM manual welding torches
- May be used with virtually all common TIG automated welding torches
- Clamping range from 18 mm to 35 mm
- Adjustable on four axes:
 - Up/down
 - Forwards/backwards
 - Left/right
 - Angle
- Compatible with all torches in the TIG-MT series
- Equipment ex works: Wire Ø: 1 mm

Type	Designation	Item no.
AWS CW 1,5 m DZA		094-020614-02015
AWS CW 3,0 m DZA		094-020614-02030
AWS CW 4,0 m DZA		094-020614-02040
AWS CW 1,5 m DZA Alu		094-020614-02215
AWS CW 3,0 m DZA Alu	4 axes support, cold wire, insulated setup, for Tetrax drive 4L/tigSpeed drive 45	094-020614-02230
AWS CW 4,0 m DZA Alu		094-020614-02240
AWS CW 1,5 m DZA CrNi		094-020614-02115
AWS CW 3,0 m DZA CrNi		094-020614-02130
AWS CW 4,0 m DZA CrNi		094-020614-02140
AWS CW 1,5 m Quick-Connect L		094-020614-00015
AWS CW 3,0 m Quick-Connect L		094-020614-00030
AWS CW 4,0 m Quick-Connect L		094-020614-00040
AWS CW 1,5 m Quick-Connect L Alu		094-020614-00215
AWS CW 3,0 m Quick-Connect L Alu		094-020614-00230
AWS CW 4,0 m Quick-Connect L Alu	4 axes support, cold wire, insulated setup, for T drive 4 Rob.2	094-020614-00240
AWS CW 1,5 m Quick-Connect L CrNi		094-020614-00115
AWS CW 3,0 m Quick-Connect L CrNi		094-020614-00130
AWS CW 4,0 m Quick-Connect L CrNi		094-020614-00140
AWS CW 1,5 m Quick-Connect S		094-020614-01015
AWS CW 3,0 m Quick-Connect S		094-020614-01030
AWS CW 4,0 m Quick-Connect S		094-020614-01040
AWS CW 1,5 m Quick-Connect S Alu		094-020614-01215
AWS CW 3,0 m Quick-Connect S Alu		094-020614-01230
AWS CW 4,0 m Quick-Connect S Alu	4 axes support, cold wire, insulated setup, for T drive 4 Rob.3	094-020614-01240
AWS CW 1,5 m Quick-Connect S CrNi		094-020614-01115
AWS CW 3,0 m Quick-Connect S CrNi		094-020614-01130
AWS CW 4,0 m Quick-Connect S CrNi		094-020614-01140

► Order the right wire feed for the wire feeder used!

Consumables



► Order the right wire feed for the wire feeder used!

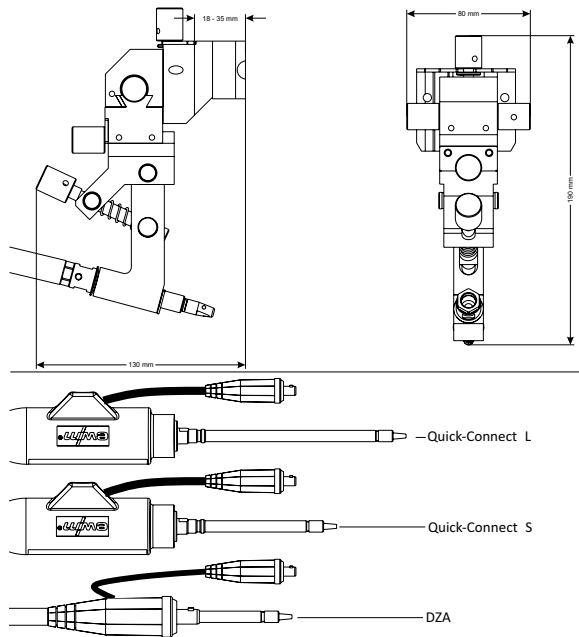
Item	Designation	Ø wire mm	Threads	Length	Material	PU	Item no.	PE
-	Crown nut	-	-	-	-	10 Units	094-015563-00001	per unit
-	4 axes support, insulated setup	-	-	-	-	1 Units	092-007868-00000	per unit
3	Wire hose	-	-	1 m	-	50 m	094-017104-00000	per m
10.02	Contact tip	0.8	M7	30 mm	CuCrZr	10 Units	094-013535-00000	per unit
10.02	Contact tip	0.9	M7	30 mm	CuCrZr	10 Units	094-013536-00000	per unit
10.02	Contact tip	1	M7	30 mm	CuCrZr	10 Units	094-013537-00000	per unit
10.02	Contact tip	1.2	M7	30 mm	CuCrZr	10 Units	094-013538-00000	per unit
10.02	Contact tip, aluminium welding	0.8	M7	30 mm	E-Cu	10 Units	094-013550-00000	per unit
10.02	Contact tip, aluminium welding	0.9	M7	30 mm	E-Cu	10 Units	094-013551-00000	per unit
10.02	Contact tip, aluminium welding	1	M7	30 mm	E-Cu	10 Units	094-013552-00000	per unit
10.02	Contact tip, aluminium welding	1.2	M7	30 mm	E-Cu	10 Units	094-013553-00000	per unit

■ Liners

Item	Designation	Ø wire mm	Inside Ø mm	Outside Ø mm	Length m	Material	PU Units	Item no.	per unit
-	Inlet guide	-	-	-	-	-	2	094-014032-00001	
10.03	Combined liner, PA	1.2 - 1.6	2	4	3.5	PA	1	092-018706-00003	
10.03	Combined liner, PA	1.2 - 1.6	2	4	4.5	PA	1	092-018706-00004	
10.03	Combined liner, Teflon	0.6 - 1	1.5	4	3	Teflon	1	094-013800-00000	
10.03	Combined liner, Teflon	0.6 - 1	1.5	4	4	Teflon	1	094-013800-00004	
10.03	Combined liner, Teflon	0.6 - 1	1.5	4	5	Teflon	1	094-013800-00005	
10.03	Combined liner, Teflon	1.2 - 1.6	2	4	3	Teflon	1	094-013801-00000	
10.03	Combined liner, Teflon	1.2 - 1.6	2	4	4	Teflon	1	094-013801-00004	
10.03	Combined liner, carbon Teflon	0.6 - 1	1.5	4	3	Carbon teflon	1	094-013871-00000	
10.03	Combined liner, carbon Teflon	0.6 - 1	1.5	4	4	Carbon teflon	1	094-013871-00004	
10.03	Combined liner, carbon Teflon	1.2 - 1.6	2	4	3	Carbon teflon	1	094-013828-00000	
10.03	Combined liner, carbon Teflon	1.2 - 1.6	2	4	4	Carbon teflon	1	094-013828-00004	
10.04	Steel liner	0.6 - 1	1.5	3.3	3.5	Steel	1	092-018695-00003	
10.04	Steel liner	0.6 - 1	1.5	3.3	4.5	Steel	1	092-018695-00004	
10.04	Steel liner	1.2 - 1.6	2	4	3.5	Steel	1	092-018693-00003	
10.04	Steel liner	1.2 - 1.6	2	4	4.5	Steel	1	092-018693-00004	
10.04	Steel liner, stainless steel	0.6 - 1	1.5	3.3	3.5	CrNi	1	092-018696-00003	
10.04	Steel liner, stainless steel	0.6 - 1	1.5	3.3	4.5	CrNi	1	092-018696-00004	
10.04	Steel liner, stainless steel	1.2 - 1.6	2	4	3.5	CrNi	1	092-018694-00003	
10.04	Steel liner, stainless steel	1.2 - 1.6	2	4	4.5	CrNi	1	092-018694-00004	
10.04	Steel liner, brass	1.2 - 1.6	2	4	3.5	Brass	1	092-018697-00003	
10.04	Steel liner, brass	1.2 - 1.6	2	4	4.5	Brass	1	092-018697-00004	



TIG/plasma ■ AW support hot wire



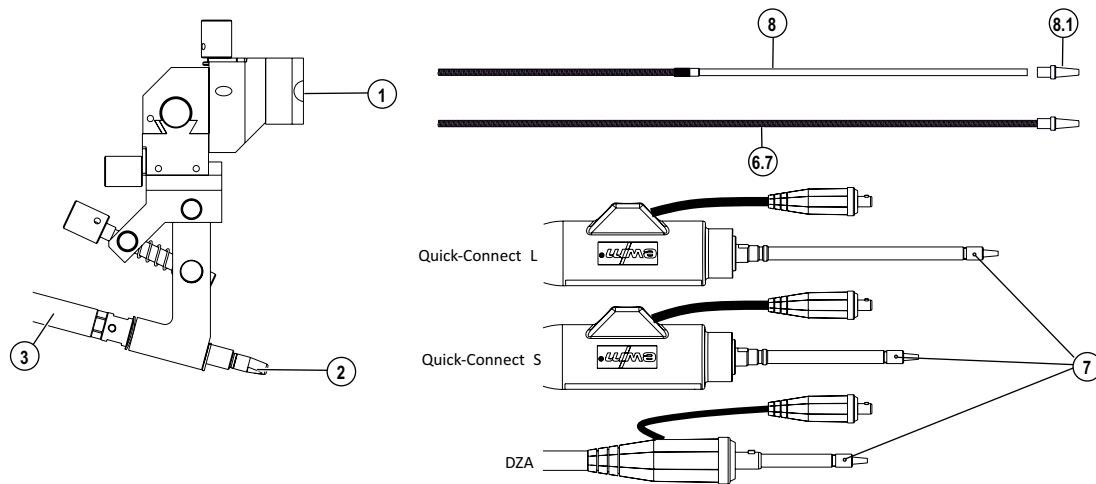
Wire feed for automated hot wire applications (TIG/plasma)

- Versatile, yet delivers optimised welding results
- XYZ axes and adjustment angle infinitely lockable and adjustable
- Insulated design (HF safe)
- Wire feed individually adjustable for each process
- Rapid, straightforward assembly
- Contact tip also compatible with EWM manual welding torches
- May be used with virtually all common TIG automated welding torches
- Adjustable on four axes:
 - Up/down
 - Forwards/backwards
 - Left/right
 - Angle
- Compatible with all torches in the TIG-MT series

Type	Designation	Item no.
AWS HW 1,5 m DZA		094-020614-12015
AWS HW 3,0 m DZA		094-020614-12030
AWS HW 4,0 m DZA		094-020614-12040
AWS HW 1,5 m DZA Alu		094-020614-12215
AWS HW 3,0 m DZA Alu	4 axes support, hot wire, insulated setup, for Tetrax drive 4L/tigSpeed drive 45	094-020614-12230
AWS HW 4,0 m DZA Alu		094-020614-12240
AWS HW 1,5 m DZA CrNi		094-020614-12115
AWS HW 3,0 m DZA CrNi		094-020614-12130
AWS HW 4,0 m DZA CrNi		094-020614-12140
AWS HW 1,5 m Quick-Connect L		094-020614-10015
AWS HW 3,0 m Quick-Connect L		094-020614-10030
AWS HW 4,0 m Quick-Connect L		094-020614-10040
AWS HW 1,5 m Quick-Connect L Alu		094-020614-10215
AWS HW 3,0 m Quick-Connect L Alu		094-020614-10230
AWS HW 4,0 m Quick-Connect L Alu	4 axes support, hot wire, insulated setup, for T drive 4 Rob.2	094-020614-10240
AWS HW 1,5 m Quick-Connect L CrNi		094-020614-10115
AWS HW 3,0 m Quick-Connect L CrNi		094-020614-10130
AWS HW 4,0 m Quick-Connect L CrNi		094-020614-10140
AWS HW 1,5 m Quick-Connect S		094-020614-11015
AWS HW 3,0 m Quick-Connect S		094-020614-11030
AWS HW 4,0 m Quick-Connect S		094-020614-11040
AWS HW 1,5 m Quick-Connect S Alu		094-020614-11215
AWS HW 3,0 m Quick-Connect S Alu		094-020614-11230
AWS HW 4,0 m Quick-Connect S Alu	4 axes support, hot wire, insulated setup, for T drive 4 Rob.3	094-020614-11240
AWS HW 1,5 m Quick-Connect S CrNi		094-020614-11115
AWS HW 3,0 m Quick-Connect S CrNi		094-020614-11130
AWS HW 4,0 m Quick-Connect S CrNi		094-020614-11140

► Order the right wire feed for the wire feeder used!

Consumables



► Order the right wire feed for the wire feeder used!

Item	Designation	Ø wire mm	Threads	Length	Material	PU Units	Item no.	per unit
-	Coaxial cable	-	-	1.5 m	-	1	094-016625-00015	
-	Coaxial cable	-	-	3 m	-	1	094-016625-00000	
-	Coaxial cable	-	-	4 m	-	1	094-016625-00004	
-	Crown nut	-	-	-	-	10	094-015563-00001	
-	4 axes support, insulated setup	-	-	-	-	1	092-007868-00000	
10.02	Contact tip	0.8	M7	30 mm	CuCrZr	10	094-013535-00000	
10.02	Contact tip	0.9	M7	30 mm	CuCrZr	10	094-013536-00000	
10.02	Contact tip	1	M7	30 mm	CuCrZr	10	094-013537-00000	
10.02	Contact tip	1.2	M7	30 mm	CuCrZr	10	094-013538-00000	
10.02	Contact tip, aluminium welding	0.8	M7	30 mm	E-Cu	10	094-013550-00000	
10.02	Contact tip, aluminium welding	0.9	M7	30 mm	E-Cu	10	094-013551-00000	
10.02	Contact tip, aluminium welding	1	M7	30 mm	E-Cu	10	094-013552-00000	
10.02	Contact tip, aluminium welding	1.2	M7	30 mm	E-Cu	10	094-013553-00000	

■ Liners

Item	Designation	Ø wire mm	Inside Ø mm	Outside Ø mm	Length m	Material	PU Units	Item no.	per unit
-	Inlet guide	-	-	-	-	-	2	094-014032-00001	
10.03	Combined liner, PA	1.2 - 1.6	2	4	3.5	PA	1	092-018706-00003	
10.03	Combined liner, PA	1.2 - 1.6	2	4	4.5	PA	1	092-018706-00004	
10.03	Combined liner, Teflon	0.6 - 1	1.5	4	3	Teflon	1	094-013800-00000	
10.03	Combined liner, Teflon	0.6 - 1	1.5	4	4	Teflon	1	094-013800-00004	
10.03	Combined liner, Teflon	0.6 - 1	1.5	4	5	Teflon	1	094-013800-00005	
10.03	Combined liner, Teflon	1.2 - 1.6	2	4	3	Teflon	1	094-013801-00000	
10.03	Combined liner, Teflon	1.2 - 1.6	2	4	4	Teflon	1	094-013801-00004	
10.03	Combined liner, carbon Teflon	0.6 - 1	1.5	4	3	Carbon teflon	1	094-013871-00000	
10.03	Combined liner, carbon Teflon	0.6 - 1	1.5	4	4	Carbon teflon	1	094-013871-00004	
10.03	Combined liner, carbon Teflon	1.2 - 1.6	2	4	3	Carbon teflon	1	094-013828-00000	
10.03	Combined liner, carbon Teflon	1.2 - 1.6	2	4	4	Carbon teflon	1	094-013828-00004	
10.04	Steel liner	0.6 - 1	1.5	3.3	3.5	Steel	1	092-018695-00003	
10.04	Steel liner	0.6 - 1	1.5	3.3	4.5	Steel	1	092-018695-00004	
10.04	Steel liner	1.2 - 1.6	2	4	3.5	Steel	1	092-018693-00003	
10.04	Steel liner	1.2 - 1.6	2	4	4.5	Steel	1	092-018693-00004	
10.04	Steel liner, stainless steel	0.6 - 1	1.5	3.3	3.5	CrNi	1	092-018696-00003	
10.04	Steel liner, stainless steel	0.6 - 1	1.5	3.3	4.5	CrNi	1	092-018696-00004	
10.04	Steel liner, stainless steel	1.2 - 1.6	2	4	3.5	CrNi	1	092-018694-00003	
10.04	Steel liner, stainless steel	1.2 - 1.6	2	4	4.5	CrNi	1	092-018694-00004	
10.04	Steel liner, brass	1.2 - 1.6	2	4	3.5	Brass	1	092-018697-00003	
10.04	Steel liner, brass	1.2 - 1.6	2	4	4.5	Brass	1	092-018697-00004	

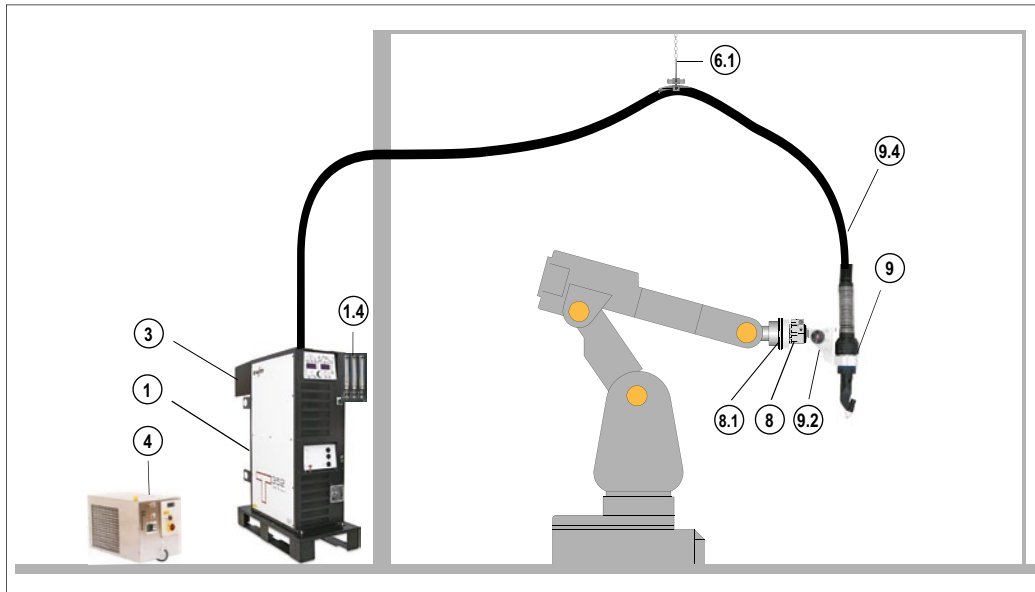


Overview

Plasma automation		Page	
Sample applications	Tetrix Plasma, water cooled	Handling/welding robot system Tetrix 152 Synergic	240
		Handling/welding robot system Tetrix 352 Synergic with cold wire	241
	Tetrix Microplasma, water cooled	Mechanised welding system Tetrix 552 Synergic with cold wire, gas control and GN gas	242
		etrix 552 Synergic mechanised welding system with cold wire, gas control and GN water-cooled	243
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		Synergic RC with cold wire and gas control	



■ Tetrix Plasma, water cooled ■ activArc
■ Handling/welding robot system Tetrix 152 Synergic



Tetrix 152 Synergic Plasma

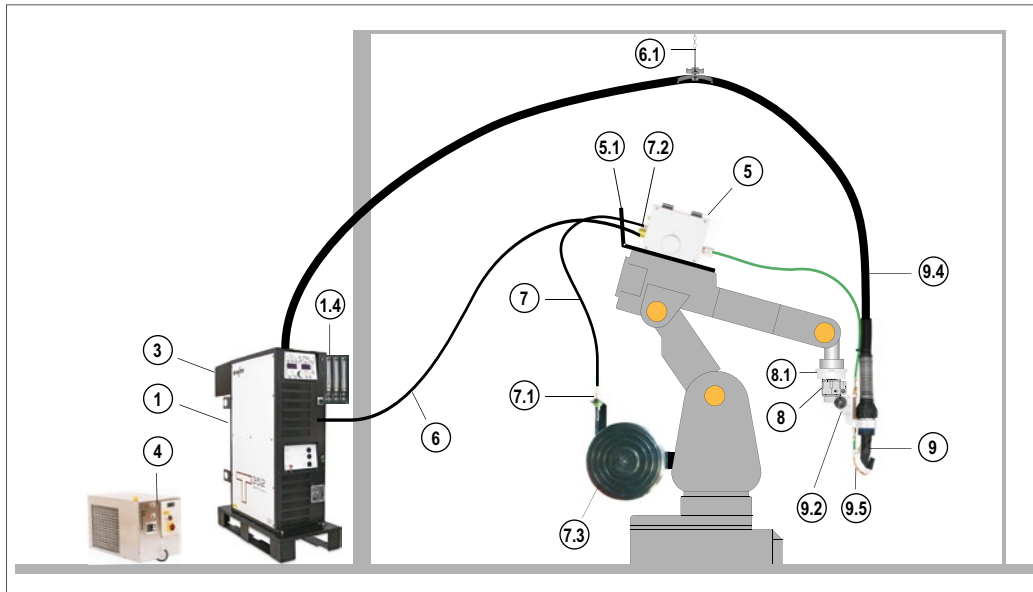
- With Synergic front control
- Water cooled
- Without cold wire
- Example shown: Kuka KR16

Item	Type	Designation	Item no.
1	Tetrix 152 Synergic Plasma	DC plasma welding machine with Synergic control, incl. ,PALETTE ROB XX2' transport pallet	090-008722-00502
1.1	OW CEE 32A	Factory-fit option, mains plug including fitting	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	096-000000-00000
1.3	Maxex Hydrogen 200bar 30m ³ G3/8"L		096-000001-00000
1.4	GDE3	Gas metering unit with 3 gas quantity meters	090-008081-00000
1.5	GH 2x1/4" 2m	Gas hose	094-000010-00001
1.5	2M-G1/4"+G3/8"/DIN EN 559		092-000525-00001
3	Tetrix BUSINT X11 PLASMA DEVICE NET ATCASE	DEVICE NET industrial bus interface in casing, including potential-free voltage supply	090-008690-00000
4	RK 2	Recooling unit	094-002284-00000
4.1	KF 23E-10, -10	Coolant (-10 °C), 9.3 l	094-000530-00000
4.2	HOSE BRIDGE	Hose bridge	092-007857-00000
6.1	ON ZWIPA-CONNECTION	Retrofit option, third-party intermediate hose package strain relief	094-007890-00000
8	CAT2-XL/HL	Collision sensor	094-012838-00000
8.1	FL ISO 9409-1-A40	Intermediate flange, plastic	094-013347-00500
9	PT150 TE2.4/PN1.8	Plasma robot welding torch	094-016988-00000
9.2	SH PLASMA CT	Segment holder for plasma torch	094-016314-00000
9.4	SP CT20 W 4m	Hose package plasma torch	094-016315-00000
-	ANALYZER	Software for control and status signal analysis	090-008778-00000
-	PC300.Net Set	PC300.Net welding parameter software set incl. CMSTICK, cable and interface SECINT X10 USB	090-008777-00000

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



■ Tetrax Plasma, water cooled ■ activArc
■ Handling/welding robot system Tetrax 352 Synergic with cold wire



Tetrax 352 Synergic Plasma CW

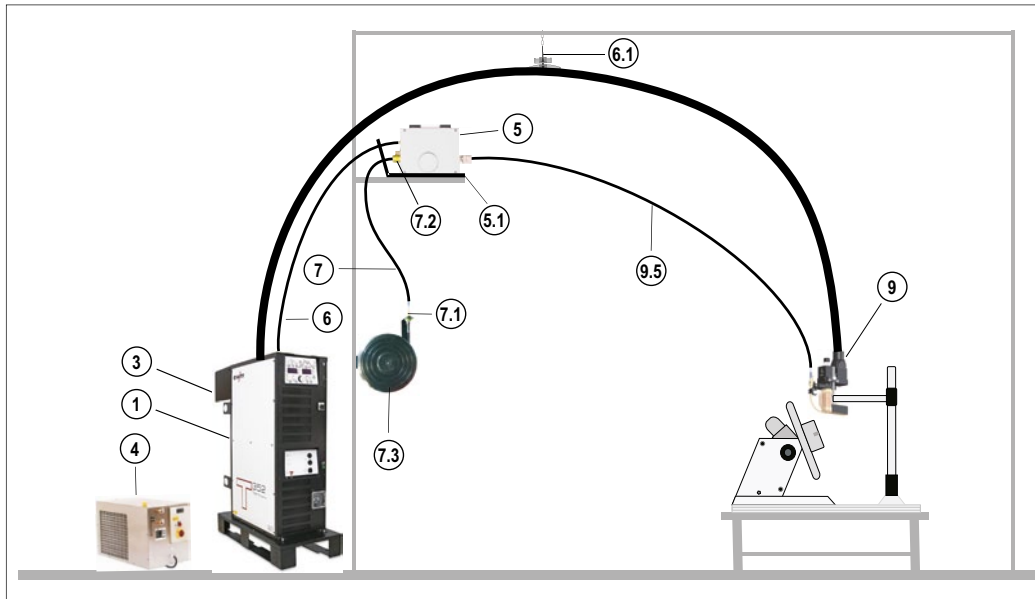
- With Synergic front control
- T drive 4 Rob 3 RE IG3
- Water cooled
- With cold wire
- Example shown: Reis RV20-6

Item	Type	Designation	Item no.
1	Tetrax 352 Synergic Plasma CW	DC plasma welding machine with Synergic control and connection capability for cold wire, incl. transport pallet, PALETTE ROB XX2'	090-000212-00502
1.1	OW CEE 32A	Factory-fit option, mains plug including fitting	092-008215-00000
1.2	WK95/CL 5m	Workpiece lead with cable lug	092-001990-00005
1.3	Maxex AR/MIX 200bar 30m ³ G1/4"	Pressure regulator	096-000000-00000
1.3	Maxex Hydrogen 200bar 30m ³ G3/8"L		096-000001-00000
1.4	GDE3	Gas metering unit with 3 gas quantity meters	090-008081-00000
1.5	GH 2x1/4" 2m	Gas hose	094-000010-00001
1.5	2M-G1/4"+G3/8"/DIN EN 559		092-000525-00001
3	Tetrax BUSINT X11 PLASMA CAN-OPEN ATCASE	CAN-OPEN industrial bus interface in casing, including potential-free voltage supply	090-008689-00000
4	RK 2.1	Recooling unit with boosted pump 8 bar	094-002284-02000
4.1	KF 23E-10, -10	Coolant (-10 °C), 9.3 l	094-000530-00000
4.2	HOSE BRIDGE	Hose bridge	092-007857-00000
5	T drive 4 Rob 3 RE IG3	Wire feeder for automated applications, opens on right, IG3 speedometer solution	090-008783-00502
5.1	MONTAGE CONSOLE ROB 3 UNIVERSAL	Mounting console for wire feed unit	092-002440-00000
6	SLP S 7/12 POL 5M	Control cable, standard protective hose	092-007855-52105
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	DV-CAB connection	092-007741-00000
7.2	CONNECTOR DRIVE ROB3 WIRE CONDUIT	Connection set for Rob 3 wire conduit	092-007916-00000
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	CAT2-XL	Collision sensor	094-008501-00500
8.1	FL ISO 9409-1-A50	Intermediate flange, plastic	094-016554-00500
9	PT250CW ZF1.0/TE5.0/PN4.0	Plasma robot welding torch, cold wire, water-cooled	094-016989-00000
9.2	SH PLASMA CT	Segment holder for plasma torch	094-016314-00000
9.4	SP CT20 W 4m	Hose package plasma torch	094-016315-00000
9.5	AW CW 4 m Quick-Connect S	Cold wire feed, for T drive 4 Rob 3	094-020613-00001
9.5	CFW SET 150/250 CT20	Plasma cold wire feed, set	094-016319-00000
-	ANALYZER	Software for control and status signal analysis	090-008778-00000
-	PC300.Net Set	PC300.Net welding parameter software set incl. CMSTICK, cable and interface SECINT X10 USB	090-008777-00000

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



■ Tetrix Plasma, water cooled ■ activArc
■ Mechanised welding system Tetrix 552 Synergic with cold wire, gas control and GN gas



Tetrix 552 Synergic Plasma CW GR

- Digital gas control
- With Synergic front control
- T drive 4 Rob 3 RE IG3
- Water cooled
- With cold wire
- Welding torch equipped with a water-cooled gas nozzle
- Example shows a mechanical application

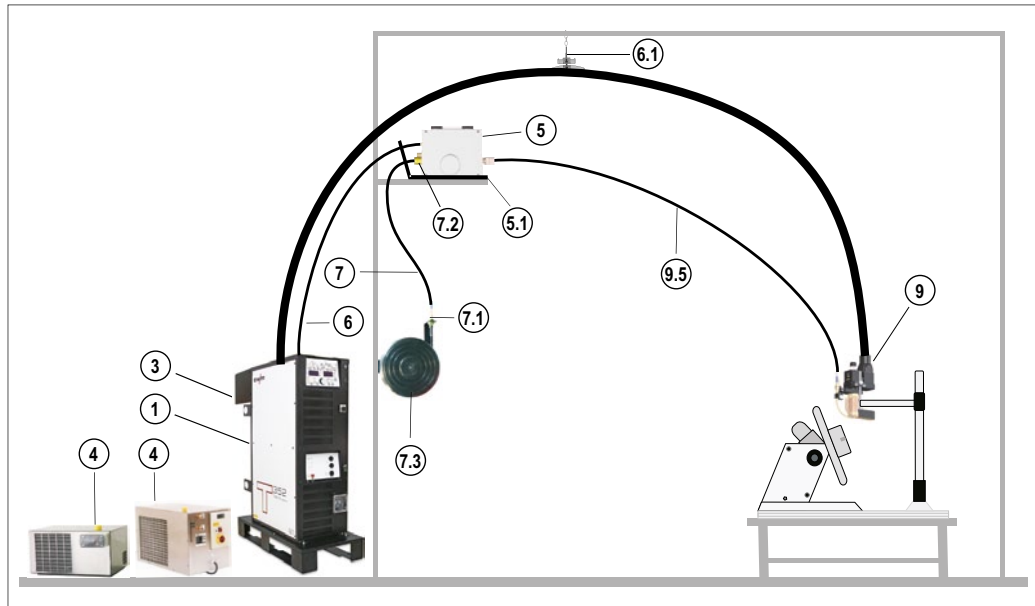
Item	Type	Designation	Item no.
1	Tetrix 552 Synergic Plasma CW GR	Plasma DC welding machine with digital gas control, Synergic control and connection capability for cold wire, including transport pallet ,PALETTE ROB XX2'	090-000210-00502
1.1	OW CEE 63A	Factory-fit option, mains plug including fitting	092-008216-00000
1.2	WK95/CL 5m	Workpiece lead with cable lug	092-001990-00005
1.3	Maxex AR/MIX 200bar 30m ³ G1/4"	Pressure regulator	096-000000-00000
1.3	Maxex Hydrogen 200bar 30m ³ G3/8"L		096-000001-00000
1.5	GH 2x1/4" 2m	Gas hose	094-000010-00001
1.5	2M-G1/4"+G3/8"/DIN EN 559		092-000525-00001
3	Tetrix BUSINT X11 PLASMA PROFIBUS ATCASE	PROFIBUS industrial bus interface in casing, including potential-free voltage supply	090-008624-00000
4	RK 3.1	Recooling unit with boosted pump 8 bar	094-002285-02000
4.1	KF 23E-10, -10	Coolant (-10 °C), 9.3 l	094-000530-00000
4.2	HOSE BRIDGE	Hose bridge	092-007857-00000
5	T drive 4 Rob 3 RE IG3	Wire feeder for automated applications, opens on right, IG3 speedometer solution	090-008783-00502
5.1	MONTAGE CONSOLE ROB 3 UNIVERSAL	Mounting console for wire feed unit	092-002440-00000
6	SLP S 7/12 POL 5M	Control cable, standard protective hose	092-007855-52105
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	DV-CAB connection	092-007741-00000
7.2	CONNECTOR DRIVE ROB3 WIRE CONDUIT	Connection set for Rob 3 wire conduit	092-007916-00000
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
9	PWM 350-S180 8m	Plasma machine welding torch	094-016544-00008
9.5	AW CW 4 m Quick-Connect S	Cold wire feed, for T drive 4 Rob 3	094-020613-00001
9.5	CWSS CPL PMW 350-S90/S180	Cold wire feed, short, for gas-cooled gas nozzles, complete	094-016613-00000
9.7	MP PMW 350	Mounting plate, for gas-cooled gas nozzles, complete	094-016129-00000
9.9	CPLUG	Coupling plug	094-013467-00000
9.9	CSLEEVE	Coupling socket	094-013466-00000
10.01	GD GR.24G PMW/PWM 350	Gas nozzle, plug fitting, gas-cooled	094-013817-00000
-	Set PC300 / ANALYZER	Set comprising PC300.Net and Analyzer software	090-008779-00000

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



■ Tetrrix Plasma, water cooled ■ activArc

■ etrix 552 Synergic mechanised welding system with cold wire, gas control and GN water-cooled



Tetrrix 552 Synergic Plasma CW GR

- Digital gas control
- With Synergic front control
- T drive 4 Rob 3 RE IG3
- Water cooled
- With cold wire
- Welding torch equipped with a water-cooled gas nozzle
- Example shows a mechanical application

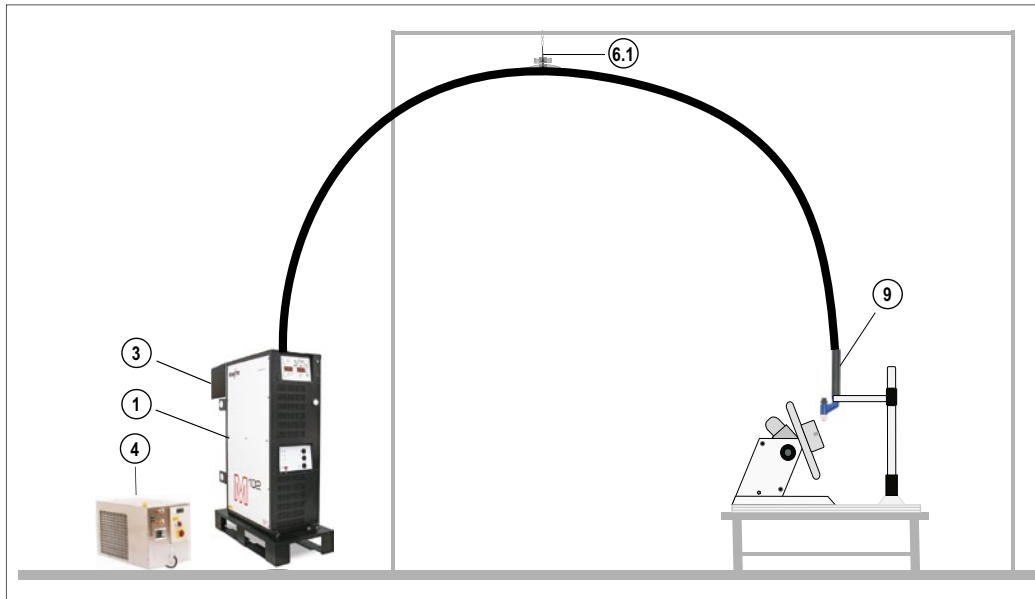
Item	Type	Designation	Item no.
1	Tetrrix 552 Synergic Plasma CW GR	Plasma DC welding machine with digital gas control, Synergic control and connection capability for cold wire, including transport pallet	090-000210-00502
1.1	OW CEE 63A	Factory-fit option, mains plug including fitting	092-008216-00000
1.2	WK95/CL 5m	Workpiece lead with cable lug	092-001990-00005
1.3	Maxex AR/MIX 200bar 30m ³ G1/4"	Pressure regulator	096-000000-00000
1.3	Maxex Hydrogen 200bar 30m ³ G3/8"L		096-000001-00000
1.5	GH 2x1/4" 2m	Gas hose	094-000010-00001
1.5	2M-G1/4"+G3/8"/DIN EN 559		092-000525-00001
3	Tetrrix BUSINT X11 PLASMA PRO-FIBUS ATCASE	PROFIBUS industrial bus interface in casing, including potential-free voltage supply	090-008624-00000
4	RK 1	Recooling unit	094-002283-00000
4	RK 3.1	Recooling unit with boosted pump 8 bar	094-002285-02000
4.1	KF 23E-10, -10	Coolant (-10 °C), 9.3 l	094-000530-00000
4.1			094-000530-00000
4.2	HOSE BRIDGE	Hose bridge	092-007857-00000
4.2			092-007857-00000
4.3	ON DFW RK	Flow monitor connection, retrofit option	092-008266-00000
5	T drive 4 Rob 3 RE IG3	Wire feeder for automated applications, opens on right, IG3 speedometer solution	090-008783-00502
5.1	MONTAGE CONSOLE ROB 3 UNIVERSAL	Mounting console for wire feed unit	092-002440-00000
5.2	ON COOL W ROB3	Retrofit option water cooling ROB 3	092-002384-00000
6	SLP WS 7/12 POL 5M	Control cable, standard protective hose	092-007855-51105
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	DV-CAB connection	092-007741-00000
7.2	CONNECTOR DRIVE ROB3 WIRE CONDUIT	Connection set for Rob 3 wire conduit	092-007916-00000
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
9	PWM 350-S180 8m	Plasma machine welding torch	094-016544-00008
9.5	AW CW 4 m Quick-Connect S	Cold wire feed, for T drive 4 Rob 3	094-020613-00001
9.5	CWS CPL PMW 350-S90/S180	Cold wire feed, standard, for water-cooled gas nozzles, complete	094-013464-00000
9.7	MP PMW 350	Mounting plate, for gas-cooled gas nozzles, complete	094-016129-00000
9.9	CPLUG	Coupling plug	094-013467-00000
9.9	CSLEEVE	Coupling socket	094-013466-00000
10.01	GNOZZ GR.29-W-CU PMW 350	Gas nozzle, screw fitting, copper, water-cooled	094-016157-00000
-	WGD PWM350	Hose set, 4 m, for water-cooled gas nozzles. Can be cut to the required length	094-022661-00000
-	Set PC300 / ANALYZER	Set comprising PC300.Net and Analyzer software	090-008779-00000

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



■ Tetrax Microplasma, water cooled ■ activArc

■ Mechanised welding system Microplasma 102 Synergic RC with cold wire and gas control



**microplasma 102 Synergic RC
CW GR**

- Digital gas control
- With Synergic-RC display
- Water cooled
- Prepared for cold wire
- Example shows a mechanical application

Item	Type	Designation	Item no.
1	Microplasma 102 Synergic RC CW GR	Plasma DC welding machine with digital gas control, Synergic RC display and connection capability for cold wire, including transport pallet ,PALETTE ROB XX2'	090-007026-00502
1.1	OW CEE 32A	Factory-fit option, mains plug including fitting	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	096-000000-00000
1.3	Maxex Hydrogen 200bar 30m ³ G3/8"L		096-000001-00000
1.5	GH 2x1/4" 2m	Gas hose	094-000010-00001
1.5	2M-G1/4"+G3/8"/DIN EN 559		092-000525-00001
3	Tetrax BUSINT X11 PLASMA PRO-FIBUS ATCASE	PROFIBUS industrial bus interface in casing, including potential-free voltage supply	090-008624-00000
4	RK 2	Recooling unit	094-002284-00000
4.1	KF 23E-10, -10	Coolant (-10 °C), 9.3 l	094-000530-00000
4.2	HOSE BRIDGE	Hose bridge	092-007857-00000
6.1	ON ZWIPA-CONNECTION	Retrofit option, third-party intermediate hose package strain relief	094-007890-00000
9	PWM 100 3M	Plasma machine welding torch	094-013799-00000
-	ADAP HILIBO	Banana jack adapter	092-001382-00000
-	Set PC300 / ANALYZER	Set comprising PC300.Net and Analyzer software	090-008779-00000
-	PWH/PWM 100	Consumables box, PWH/PWM 100	094-008270-00000

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



Overview

Plasma automation		Page
Plasma welding machines	Tetrix DC Plasma	152 - 352 - 552 Synergic 246
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	Tetrix DC Plasma, cold wire	152 - 352 - 552 Synergic CW 248
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		152 - 352 - 552 Synergic CW GR 250
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		Microplasma 102 Synergic RC CW GR 252



Tetrix DC Plasma ■ 152 • 352 • 552 Synergic

/activArc®



- DC plasma welding machine with Synergic front control
- Set up on front control or notebook with PC300. NET software
- Standard 19-pole connection socket for signal exchange, e.g. collision protection
- 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: 256 JOBS, each with 15 programs, in program mode or RINT X12 welding current, secondary current, pulse time, pause time; BUSINT: Main current, secondary current, pulse time, pulse pause time, up-slope time, down-slope time, frequency via control voltage
- Optimised for automated applications: Unique second generation digital system for reproducible welding results of the highest possible quality, easy to integrate into automated systems
- Current control 5 A to 150 A, 5 A to 350 A or 5 A to 550 A
- Operation requires a GDE2, GDE2.1 or GDE3 gas metering unit
- Pilot arc current can be set from 5 A to 80 A (if torch and torch hose package are designed for this).
- Plasma spotArc possible
- Phase failure monitoring (in combination with BUSINTX11 ATCASE)
- Emergency stop circuit in hardware for safety shut-down
- Medium monitoring for shielding gas/pilot gas pressure
- Non-interchangeable connections for all mediums
- Water flow monitoring
- 5 m mains supply lead
- 3 x 400 V mains connection with neutral conductor (TN-S system)
- 100 % tested and free-welded



Tetrix	152	352	552
Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)		
Mains fuses (slow-blow)	3 x 16 A	3 x 35 A	3 x 63 A
Setting range for welding current	5 A - 150 A	5 A - 350 A	5 A - 550 A
Duty cycle 40 °C	-		550 A / 60 %
	150 A / 100 %	350 A / 100 %	420 A / 100 %
cos φ	0.99		
Efficiency	88 %		90 %
Dimensions LxWxH in mm	660 x 380 x 1250		
Weight	116 kg		

Type	Designation	Item no.	per unit
Tetrix 152 Synergic Plasma	DC plasma welding machine with Synergic control, incl.,PALETTE ROB XX2' transport pallet	090-008722-00502	
Tetrix 352 Synergic Plasma	DC plasma welding machine with Synergic control, incl.,PALETTE ROB XX2' transport pallet	090-008725-00502	
Tetrix 552 Synergic Plasma	DC plasma welding machine with Synergic control, incl.,PALETTE ROB XX2' transport pallet	090-008728-00502	



Tetrix DC Plasma ■ 152 ● 352 ● 552 Synergic RC

/activArc®



- DC plasma welding machine with Synergic-RC display
- Set up on front control with PC300 software. NET software
- Standard 19-pole connection socket for signal exchange, e.g. collision protection
- 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: 256 JOBS, each with 15 programs, in program mode or RINT X12 welding current, secondary current, pulse time, pause time; BUSINT: Main current, secondary current, pulse time, pulse pause time, up-slope time, down-slope time, frequency via control voltage
- Optimised for automated applications: Unique second generation digital system for reproducible welding results of the highest possible quality, easy to integrate into automated systems
- Current control 5 A to 150 A, 5 A to 350 A or 5 A to 550 A
- Operation requires a GDE2, GDE2.1 or GDE3 gas metering unit
- Pilot arc current can be set from 5 A to 80 A (if torch and torch hose package are designed for this).
- Plasma spotArc possible
- Phase failure monitoring (in combination with BUSINTX11 ATCASE)
- Emergency stop circuit in hardware for safety shut-down
- Medium monitoring for shielding gas/pilot gas pressure
- Non-interchangeable connections for all mediums
- Water flow monitoring
- 5 m mains supply lead
- 3 x 400 V mains connection with neutral conductor (TN-S system)
- 100 % tested and free-welded



Tetrix	152	352	552
Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)		
Mains fuses (slow-blow)	3 x 16 A	3 x 35 A	3 x 63 A
Setting range for welding current	5 A - 150 A	5 A - 350 A	5 A - 550 A
Duty cycle 40 °C	-		550 A / 60 %
	150 A / 100 %	350 A / 100 %	420 A / 100 %
cos φ	0.99		
Efficiency	88 %		90 %
Dimensions LxWxH in mm	660 x 380 x 1250		
Weight	116 kg		

Type	Designation	Item no.	per unit
Tetrix 152 Synergic RC Plasma	DC plasma welding machine with Synergic RC display, incl. transport pallet ,PALETTE ROB XX2'	090-000199-00502	
Tetrix 352 Synergic RC Plasma	DC plasma welding machine with Synergic RC display, incl. transport pallet ,PALETTE ROB XX2'	090-000200-00502	
Tetrix 552 Synergic RC Plasma	DC plasma welding machine with Synergic RC display, incl. transport pallet ,PALETTE ROB XX2'	090-000201-00502	



Tetrix DC Plasma, cold wire ■ 152 • 352 • 552 Synergic CW

/activArc®



- DC plasma welding machine with Synergic control and cold wire connection capability
- Set up on front control or notebook with PC300. NET software
- Standard 19-pole connection socket for signal exchange, e.g. collision protection
- Prepared for connection of cold wire push/push
- 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: 256 JOBS, each with 15 programs, in program mode or RINT X12 welding current, secondary current, pulse time, pause time; BUSINT: Main current, secondary current, pulse time, pulse pause time, up-slope time, down-slope time, frequency via control voltage
- Optimised for automated applications: Unique second generation digital system for reproducible welding results of the highest possible quality, easy to integrate into automated systems
- Current control 5 A to 150 A, 5 A to 350 A or 5 A to 550 A
- Operation requires a GDE2, GDE2.1 or GDE3 gas metering unit
- Pilot arc current can be set from 5 A to 80 A (if torch and torch hose package are designed for this).
- Plasma spotArc possible
- Phase failure monitoring (in conjunction with BUSINT ATCASE), wire stick detection (dependent on torch)
- Emergency stop circuit in hardware for safety shut-down
- Medium monitoring for shielding gas/pilot gas pressure
- Non-interchangeable connections for all mediums
- Water flow monitoring
- 5 m mains supply lead
- 3 x 400 V mains connection with neutral conductor (TN-S system)
- 100 % tested and free-welded



Tetrix	152	352	552
Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)		
Mains fuses (slow-blow)	3 x 16 A	3 x 35 A	3 x 63 A
Setting range for welding current	5 A - 150 A	5 A - 350 A	5 A - 550 A
Duty cycle 40 °C	–		550 A / 60 %
	150 A / 100 %	350 A / 100 %	420 A / 100 %
cos φ	0.99		
Efficiency	88 %		90 %
Dimensions LxWxH in mm	660 x 380 x 1250		
Weight	116 kg		

Type	Designation	Item no.	per unit
Tetrix 152 Synergic Plasma CW	DC plasma welding machine with Synergic control and connection capability for cold wire, incl. transport pallet, PALETTE ROB XX2'	090-000211-00502	
Tetrix 352 Synergic Plasma CW	DC plasma welding machine with Synergic control and connection capability for cold wire, incl. transport pallet, PALETTE ROB XX2'	090-000212-00502	
Tetrix 552 Synergic Plasma CW	DC plasma welding machine with Synergic control and connection capability for cold wire, incl. transport pallet, PALETTE ROB XX2'	090-000213-00502	

Options/accessories

Options for retrofitting
ON SENSOR UNIT WIRE END
Wire end sensor



Item no. 092-001190-00000
PG



Tetrix DC Plasma, cold wire ■ 152 ● 352 ● 552 Synergic RC CW

/activArc®



- DC plasma welding machine with Synergic-RC display and cold wire connection capability
- Set up on front control with PC300 software. NET software
- Standard 19-pole connection socket for signal exchange, e.g. collision protection
- Prepared for connection of cold wire push/push
- 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: 256 JOBS, each with 15 programs, in program mode or RINT X12 welding current, secondary current, pulse time, pause time; BUSINT: Main current, secondary current, pulse time, pulse pause time, up-slope time, down-slope time, frequency via control voltage
- Optimised for automated applications: Unique second generation digital system for reproducible welding results of the highest possible quality, easy to integrate into automated systems
- Current control 5 A to 150 A, 5 A to 350 A or 5 A to 550 A
- Operation requires a GDE2, GDE2.1 or GDE3 gas metering unit
- Pilot arc current can be set from 5 A to 80 A (if torch and torch hose package are designed for this).
- Plasma spotArc possible
- Phase failure monitoring (in conjunction with BUSINT ATCASE), wire stick detection (dependent on torch)
- Emergency stop circuit in hardware for safety shut-down
- Medium monitoring for shielding gas/pilot gas pressure
- Non-interchangeable connections for all mediums
- Water flow monitoring
- 5 m mains supply lead
- 3 x 400 V mains connection with neutral conductor (TN-S system)
- 100 % tested and free-welded



Tetrix	152	352	552
Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)		
Mains fuses (slow-blow)	3 x 16 A	3 x 35 A	3 x 63 A
Setting range for welding current	5 A - 150 A	5 A - 350 A	5 A - 550 A
Duty cycle 40 °C	–		550 A / 60 %
	150 A / 100 %	350 A / 100 %	420 A / 100 %
cos φ	0.99		
Efficiency	88 %		90 %
Dimensions LxWxH in mm	660 x 380 x 1250		
Weight	116 kg		

Type	Designation	Item no.	per unit
Tetrix 152 Synergic RC Plasma CW	Plasma DC welding machine with Synergic RC display and connection capability for cold wire, including transport pallet, PALETTE ROB XX2'	090-000205-00502	
Tetrix 352 Synergic RC Plasma CW	Plasma DC welding machine with Synergic RC display and connection capability for cold wire, including transport pallet, PALETTE ROB XX2'	090-000206-00502	
Tetrix 552 Synergic RC Plasma CW	Plasma DC welding machine with Synergic RC display and connection capability for cold wire, including transport pallet, PALETTE ROB XX2'	090-000207-00502	

Options/accessories

Options for retrofitting
ON SENSOR UNIT WIRE END
Wire end sensor



Item no. PG
092-001190-00000



Tetrix DC Plasma, cold wire, digital gas control ■ 152 ● 352 ● 552 Synergic CW GR

/activArc®



- DC plasma welding machine with Synergic control, cold wire connection capability and digital gas control
- Set up on front control or notebook with PC300. NET software
- Standard 19-pole connection socket for signal exchange, e.g. collision protection
- Prepared for connection of cold wire push/push
- 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: 256 JOBS, each with 15 programs, in program mode or RINT X12 welding current, secondary current, pulse time, pause time; BUSINT: Main current, secondary current, pulse time, pulse pause time, up-slope time, down-slope time, frequency via control voltage
- 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
- Current control 5 A to 150 A, 5 A to 350 A or 5 A to 550 A
- Pilot arc current can be set from 5 A to 80 A (if torch and torch package are designed for this).
- Plasma spotArc possible
- Phase failure monitoring (in conjunction with BUSINT ATCASE), wire stick detection (dependent on torch)
- Emergency stop circuit in hardware for safety shut-down
- Non-interchangeable connections for all mediums
- Water flow monitoring
- Digital gas control for shielding gas and plasma gas
- Medium monitoring for shielding gas/pilot gas pressure and flow
- 5 m mains supply lead
- 3 x 400 V mains connection with neutral conductor (TN-S system)
- 100 % tested and free-welded



Tetrix	152	352	552
Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)		
Mains fuses (slow-blow)	3 x 16 A	3 x 35 A	3 x 63 A
Setting range for welding current	5 A - 150 A	5 A - 350 A	5 A - 550 A
Duty cycle 40 °C	-		550 A / 60 %
	150 A / 100 %	350 A / 100 %	420 A / 100 %
cos φ	0.99		
Efficiency	88 %		90 %
Dimensions LxWxH in mm	660 x 380 x 1250		
Weight	116 kg		

Type	Designation	Item no.	per unit
Tetrix 152 Synergic Plasma CW GR	Plasma DC welding machine with digital gas control, Synergic control and connection capability for cold wire, including transport pallet ,PALETTE ROB XX2'	090-000208-00502	
Tetrix 352 Synergic Plasma CW GR	Plasma DC welding machine with digital gas control, Synergic control and connection capability for cold wire, including transport pallet ,PALETTE ROB XX2'	090-000209-00502	
Tetrix 552 Synergic Plasma CW GR	Plasma DC welding machine with digital gas control, Synergic control and connection capability for cold wire, including transport pallet ,PALETTE ROB XX2'	090-000210-00502	

Options/accessories

Options for retrofitting	Item no.	PG
ON SENSOR UNIT WIRE END Wire end sensor	092-001190-00000	





Tetrix DC Plasma, cold wire, digital gas control ■ 152 • 352 • 552 Synergic RC CW GR

/activArc®



- DC plasma welding machine with Synergic-RC display, cold wire connection capability and digital gas control
- Set up on front control with PC300 software. NET software
- Standard 19-pole connection socket for signal exchange, e.g. collision protection
- Prepared for connection of cold wire push/push
- 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: 256 JOBS, each with 15 programs, in program mode or RINT X12 welding current, secondary current, pulse time, pause time; BUSINT: Main current, secondary current, pulse time, pulse pause time, up-slope time, down-slope time, frequency via control voltage
- 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
- Current control 5 A to 150 A, 5 A to 350 A or 5 A to 550 A
- Pilot arc current can be set from 5 A to 80 A (if torch and torch hose package are designed for this).
- Plasma spotArc possible
- Phase failure monitoring (in conjunction with BUSINT ATCASE), wire stick detection (dependent on torch)
- Emergency stop circuit in hardware for safety shut-down
- Non-interchangeable connections for all mediums
- Water flow monitoring
- Digital gas control for shielding gas and plasma gas
- Medium monitoring for shielding gas/pilot gas pressure and flow
- 5 m mains supply lead
- 3 x 400 V mains connection with neutral conductor (TN-S system)
- 100 % tested and free-welded



Tetrix	152	352	552
Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)		
Mains fuses (slow-blow)	3 x 16 A	3 x 35 A	3 x 63 A
Setting range for welding current	5 A - 150 A	5 A - 350 A	5 A - 550 A
Duty cycle 40 °C	-		550 A / 60 %
	150 A / 100 %	350 A / 100 %	420 A / 100 %
cos φ	0.99		
Efficiency	88 %		90 %
Dimensions LxWxH in mm	660 x 380 x 1250		
Weight	116 kg		

Type	Designation	Item no.	per unit
Tetrix 152 Synergic RC Plasma CW GR	Plasma DC welding machine with digital gas control, Synergic RC display and connection capability for cold wire, including transport pallet, PALETTE ROB XX2'	090-000202-00502	
Tetrix 352 Synergic RC Plasma CW GR	Plasma DC welding machine with digital gas control, Synergic RC display and connection capability for cold wire, including transport pallet, PALETTE ROB XX2'	090-000203-00502	
Tetrix 552 Synergic RC Plasma CW GR	Plasma DC welding machine with digital gas control, Synergic RC display and connection capability for cold wire, including transport pallet, PALETTE ROB XX2'	090-000204-00502	

Options/accessories

**Options for retrofitting
ON SENSOR UNIT WIRE END**

Wire end sensor

Item no. 092-001190-00000
PG





Tetrix DC Plasma, cold wire, digital gas control ■ Microplasma 102 Synergic RC CW GR

/activArc®



- DC plasma welding machine with Synergic-RC display, cold wire connection capability and digital gas control
- Set up on front control with PC300 software. NET software
- Standard 19-pole connection socket for signal exchange, e.g. collision protection
- Prepared for connection of cold wire push/push
- 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: 256 JOBS, each with 15 programs, in program mode or RINT X12 welding current, secondary current, pulse time, pause time; BUSINT: Main current, secondary current, pulse time, pulse pause time, up-slope time, down-slope time, frequency via control voltage
- 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
- Current control 0,5 A to 100 A
- Pilot arc current can be set from 5 A to 80 A (if torch and torch hose package are designed for this).
- Plasma spotArc possible
- Phase failure monitoring (in conjunction with BUSINT ATCASE), wire stick detection (dependent on torch)
- Emergency stop circuit in hardware for safety shut-down
- Non-interchangeable connections for all mediums
- Water flow monitoring
- Welding current adjustable in 0.1 A increments
- Digital gas control for shielding gas and plasma gas
- Medium monitoring for shielding gas/pilot gas pressure and flow
- 5 m mains supply lead
- 3 x 400 V mains connection with neutral conductor (TN-S system)
- 100 % tested and free-welded



Mains voltage (tolerances)	3 x 400 V (-25 % - +20 %)
Mains fuses (slow-blow)	3 x 16 A
Setting range for welding current	0.5 A - 100 A
Duty cycle 40 °C	100 A / 100 %
cos φ	0.99
Efficiency	98 %
Dimensions LxWxH in mm	660 x 380 x 1250
Weight	116 kg

Type	Designation	Item no.	per unit
Microplasma 102 Synergic RC CW GR	Plasma DC welding machine with digital gas control, Synergic RC display and connection capability for cold wire, including transport pallet, PALETTE ROB XX2'	090-007026-00502	

Options/accessories

Options for retrofitting
ON SENSOR UNIT WIRE END
Wire end sensor

Item no. 092-001190-00000
PG





Options/accessories

Options for welding machines		Item no.	PG
OW 440/460/480 Volt Equipment of the 355/405/505 and 351/401/451/501/551 machines for 3x 440/460/480 V mains connection (ex works only) Multi-voltage design for operation with mains voltages of 440 V, 460 V and 480 V ► Not possible with the compact 355 series machines!		092-002647-00001	
ON Key Switch Tetrix Key switch		092-001828-00000	
Factory-fit option, mains plug including fitting Factory fitting (no retrofitting) ► Suitable for all machines with a welding current of 350 A and above		092-008215-00000 092-008216-00000	
OW CEE 32A OW CEE 63A			
Mains plug		Item no.	PG
Mains plug			
32A 5POLE/CEE 63A 5POLE/CEE		094-000207-00000 094-003410-00000	
Connection cables		Item no.	PG
RA5 19POL 1x 5M Connection cable, 19-pole 5 m, wire end ferrules on one end		092-001569-00005	
RA10 19POL 1x 10M Connection cable, 19-pole 10 m, wire end ferrules on one end		092-001569-00010	
Welding leads		Item no.	PG
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.	PG
Pressure regulator Single-stage pressure regulator for measuring pressure Controller in front of gas metering units, for example Cylinder pressure 200 bar Working pressure 0 - 10 bar			
Maxex AR/MIX 200bar 30m³ G1/4" Maxex Hydrogen 200bar 30m³ G3/8"L		096-000000-00000 096-000001-00000	
General		Item no.	PG
ADAP HILIBO Banana jack adapter		092-001382-00000	
Gas hose Equipped with plastic nuts on both sides for tool-free assembly			
GH 2x1/4" 2m 2M-G1/4"+G3/8"/DIN EN 559		094-000010-00001 092-000525-00001	
Options for retrofitting		Item no.	PG
ON FILTER XX2 Dirt filter for air inlet for robot power sources		092-002714-00000	



Overview

Plasma automation

			Page
Wire feed units	TIG/plasma	T drive 4 Rob 2	256
		T drive 4 Rob 3	257



TIG/plasma ■ T drive 4 Rob 2



- Wire feed unit for high cold wire deposition rates up to 10 m/min
- Reproducible wire feed speed thanks to fully digital control with incremental transducer, adjustable in increments of 0.1 m/min
- 4-roller drive in metal construction with large rollers (37 mm), factory fitted for 1.0-/1.2-mm steel wires
- With inspection window for checking the wire feeder
- Separate buttons on the front for wire return, gas test and wire inching
- High level of process security thanks to the control, regulation and monitoring of all process data via a central, digital bus system
- Mounting plate with strain relief for fixing to the robot (optional)
- Compact unit for simple mounting on the robot

Wire speed m/min	0.3 m/min - 10 m/min
Wire-feed speed increments	0.1 m/min
Roll diameter	37 mm
Wire feeder, LxWxH in mm	407 x 201 x 229
Weight, wire feeder	9.8 kg

Type	Designation	Item no.
T drive 4 Rob 2 IG3	Wire feeder for automated applications, IG3 speedometer solution	090-008785-00502

► For replacement rolls and drive rolls for various welding consumables, please refer to the "Wire feeder accessories" chapter.

Options/accessories

Drive rolls – conversion kits	Item no.	PG
Conversion kit, 37 mm, 4-roll drive for aluminium Includes 4 twin rollers, 2 gears and 2 spacer rings		
URUE AL 4ZR4R 0.8+1.0 SF	092-002268-00000	
URUE AL 4ZR4R 1.0+1.2 SF	092-002266-00000	
URUE AL 4ZR4R 1.2-1.6 SF	092-002269-00000	
URUE AL 4ZR4R 2.4-3.2 SF	092-002270-00000	
Conversion kit, 37 mm, 4-roll drive for flux cored wire Includes 2 twin rolls, 2 gears, 2 pressure rolls and 2 spacer rings		
URUE ROE 2DR4R 0.8/0.9+0.8/0.9 SF	092-000410-00000	
URUE ROE 2DR4R 1.0/1.2+1.4/1.6 SF	092-000411-00000	
URUE ROE 2DR4R 1.4/1.6+2.0/2.4 SF	092-000412-00000	
URUE ROE 2DR4R 2.8+3.2 SF	092-000413-00000	





TIG/plasma ■ T drive 4 Rob 3



- Light, compact wire feed unit for high-precision cold wire feed
- Reproducible wire feed speed thanks to fully digital control with incremental transducer, adjustable in increments of 0.01 m/min
- LED display of process status
- 4-roller drive in metal construction with large rollers (37 mm), factory fitted for 1.0-/1.2-mm steel wires
- Tool-free roller changing, captive screws
- With inspection window for checking the wire feeder
- Separate buttons on the front for wire return, gas test and wire inching
- High level of process security thanks to the control, regulation and monitoring of all process data via a central, digital bus system
- Mounting plate with strain relief for fixing to the robot (optional)
- Compact unit for simple mounting on the robot

Wire speed m/min	0.1 m/min - 5 m/min
Wire-feed speed increments	0.01 m/min
Roll diameter	37 mm
Wire feeder, LxWxH in mm	345 x 230 x 250
Weight, wire feeder	6.5 kg

Type	Designation	Item no.
T Drive 4 Rob 3 LI IG3	Wire feeder for automated applications, opens on left, IG3 speedometer solution	090-008784-00502
T drive 4 Rob 3 RE IG3	Wire feeder for automated applications, opens on right, IG3 speedometer solution	090-008783-00502

► For replacement rolls and drive rolls for various welding consumables, please refer to the "Wire feeder accessories" chapter.

Options/accessories

Drive rolls – conversion kits	Item no.	PG
Conversion kit, 37 mm, 4-roll drive for aluminium Includes 4 twin rollers, 2 gears and 2 spacer rings		
URUE AL 4ZR4R 0.8+1.0 SF	092-002268-00000	
URUE AL 4ZR4R 1.0+1.2 SF	092-002266-00000	
URUE AL 4ZR4R 1.2-1.6 SF	092-002269-00000	
URUE AL 4ZR4R 2.4-3.2 SF	092-002270-00000	
Conversion kit, 37 mm, 4-roll drive for flux cored wire Includes 2 twin rolls, 2 gears, 2 pressure rolls and 2 spacer rings		
URUE ROE 2DR4R 0.8/0.9+0.8/0.9 SF	092-000410-00000	
URUE ROE 2DR4R 1.0/1.2+1.4/1.6 SF	092-000411-00000	
URUE ROE 2DR4R 1.4/1.6+2.0/2.4 SF	092-000412-00000	





■ Gas metering units for Tetrax plasma machines without digital gas control ■ GDE2, GDE2.1, GDE3



- Operation of the gas metering units requires upstream fitting of an appropriate CONSTANT pressure regulator
- Shielding gas 1–16.5 l/min. (GDE2, GDE2.1, GDE3)
- Pilot arc gas 0.4–5.2 l/min. (GDE2, GDE3)
- Pilot arc gas 0.08–1.08 l/min. (GDE2.1)
- **Fields of application:**
 - Plasma welding, + pole: aluminium-based alloys
 - Plasma welding, - pole: high-alloy steels, nickel, copper, titanium and special alloys

Type	Designation	Item no.			per unit
GDE2	Gas metering unit with 2 gas quantity meters	090-008077-00000			
GDE2.1	Gas metering unit with 2 gas quantity meters	090-S08077-01033			
GDE3	Gas metering unit with 3 gas quantity meters	090-008081-00000			



Overview

Plasma automation		Page
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Welding torches	PWM 150 ROB	268
	PT 150	270
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	Plasma welding torches	



■ Plasma welding torches ■ PWM 100



Mechanised plasma welding torch

- 30-mm recessed mounting shank
- Basic features: 1.5 mm tungsten electrode, 1.8 mm plasma nozzle, long 11 mm gas nozzle

Duty cycle DC-

100 A / 100 %

Duty cycle AC

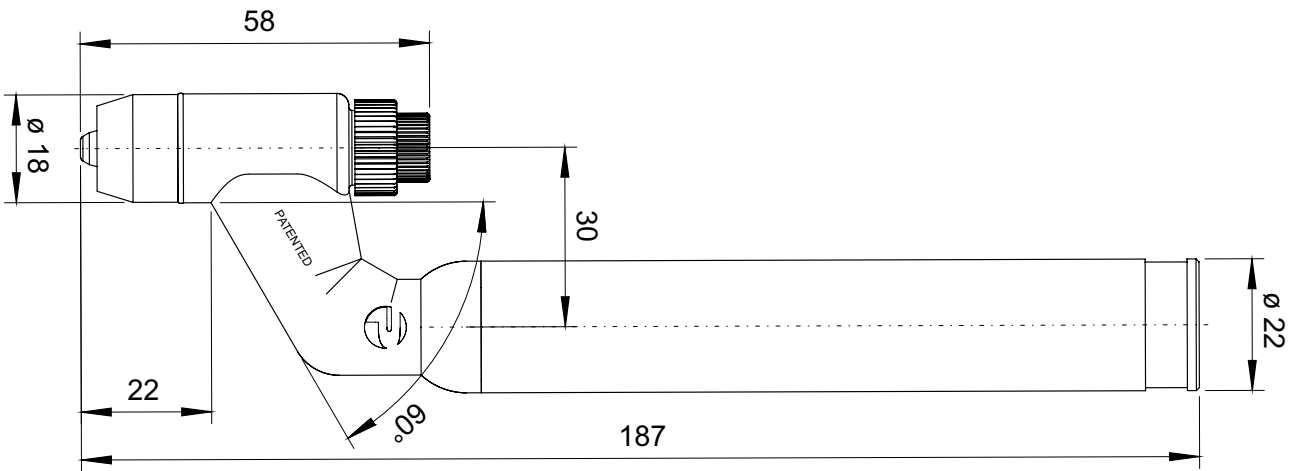
80 A / 100 %

Duty cycle DC+

35 A / 100 %

Pilot arc current

Pilot arc current, 2 A - 12 A

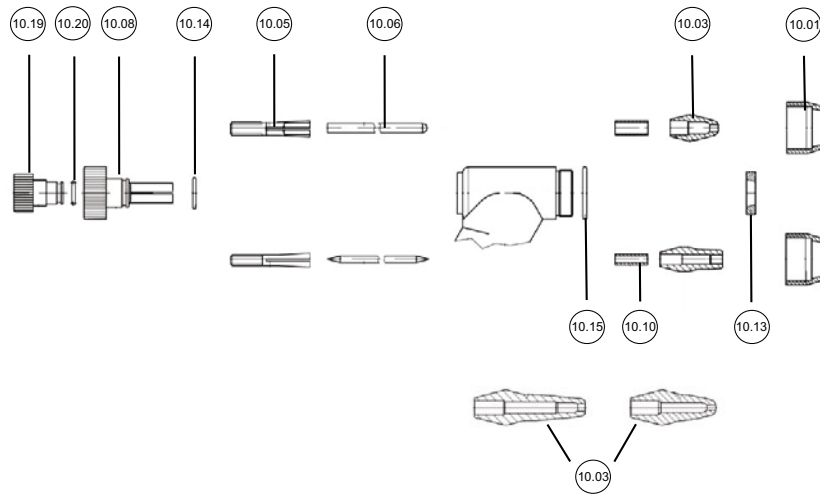


Item	Type	Designation	Item no.
9	PWM 100 3M	Plasma machine welding torch	094-013799-00000

- ▶ Use only with RK2/RK3 recooling unit
- ▶ Other lengths available on request



Consumables/Accessories



Item	Designation	Electro- de Ø	Nozzle Ø	Length	Max. welding current	PU	Item no.	per unit
		mm	mm	mm	A	Units		
10.01	Gas nozzle, long	-	9.5	-	-	1	094-008240-00000	
10.01	Gas nozzle, long	-	11	-	-	1	094-008239-00000	
10.01	Gas nozzle, short	-	11	-	-	1	094-008237-00000	
10.01	Gas nozzle, short	-	12	-	-	1	094-008238-00000	
10.03	Plasma nozzle	-	0.8	-	20	1	094-008243-00000	
10.03	Plasma nozzle	-	1	-	25	1	094-008244-00000	
10.03	Plasma nozzle	-	1.2	-	30	1	094-008245-00000	
10.03	Plasma nozzle	-	1.4	-	40	1	094-008246-00000	
10.03	Plasma nozzle	-	1.6	-	50	1	094-008247-00000	
10.03	Plasma nozzle	-	1.8	-	60	1	094-008248-00000	
10.03	Plasma nozzle	-	2	-	70	1	094-008249-00000	
10.03	Plasma nozzle	-	2.4	-	90	1	094-008250-00000	
10.03	Plasma nozzle	-	3	-	100	1	094-008251-00000	
10.03	Plasma nozzle, long	-	0.8	-	20	1	094-008252-00000	
10.03	Plasma nozzle, long	-	1	-	25	1	094-008253-00000	
10.03	Plasma nozzle, long	-	1.2	-	30	1	094-008254-00000	
10.03	Plasma nozzle, long	-	1.4	-	40	1	094-008255-00000	
10.03	Plasma nozzle, long	-	1.6	-	45	1	094-008256-00000	
10.03	Plasma nozzle, long	-	1.8	-	50	1	094-008257-00000	
10.03	Plasma nozzle, long	-	2	-	60	1	094-008258-00000	
10.03	Plasma nozzle, long	-	3	-	90	1	094-008260-00000	
10.05	Collet chuck	1.5	-	-	-	1	094-008235-00000	
10.05	Collet chuck	2.4	-	-	-	1	094-008277-00000	
10.06	Tungsten electrode, special	1.5	-	75	-	1	094-008951-00000	
10.06	Tungsten electrode, special	2.4	-	75	-	1	094-008789-00000	
10.07	Sealing ring for back cap	-	-	-	-	1	094-008263-00000	
10.08	Collet casing	-	-	-	-	1	094-008276-00000	
10.09	O-ring for back cap	-	-	-	-	10	094-008233-00000	
10.09	O-ring	-	-	-	-	10	094-008234-00000	
10.10	Gas guide insert	1.5	-	-	-	1	094-008241-00000	
10.10	Gas guide insert	2.4	-	-	-	1	094-008787-00000	
10.13	Gas lens, coarse-pore	-	-	-	-	1	094-008281-00000	
10.13	Gas lens, fine-pore	-	-	-	-	1	094-008242-00000	
10.15	O-ring for gas nozzle	-	-	-	-	10	094-008236-00000	
10.19	Back cap, complete	-	-	-	-	1	094-008274-00000	
-	Electrode setting gauge	-	-	-	-	1	094-008262-00000	

Options/accessories

Wearing parts kits	Item no.	PG
PWH/PWM 100 Consumables box, PWH/PWM 100	094-008270-00000	



■ Plasma welding torches ■ PWM 150



Mechanised plasma welding torch

- 30-mm recessed mounting shank
- Basic features: 2.4-mm electrode, 2.4-mm plasma nozzle, short 12-mm gas nozzle

Duty cycle DC-

150 A / 100 %

Duty cycle AC

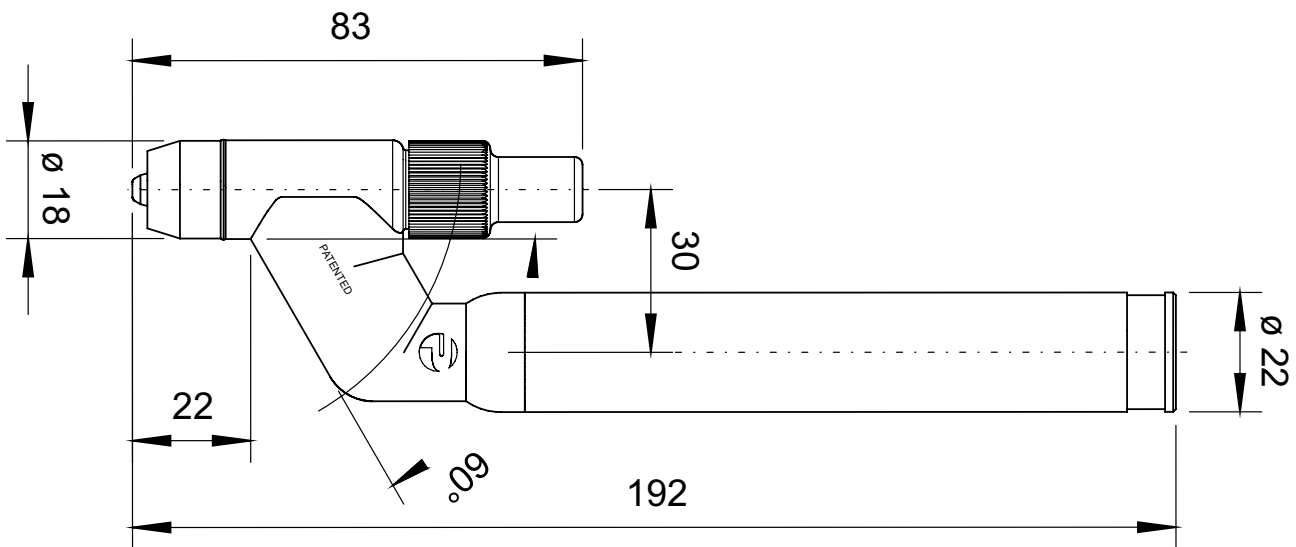
120 A / 100 %

Duty cycle DC+

50 A / 100 %

Pilot arc current

Pilot arc current, 2 A - 12 A

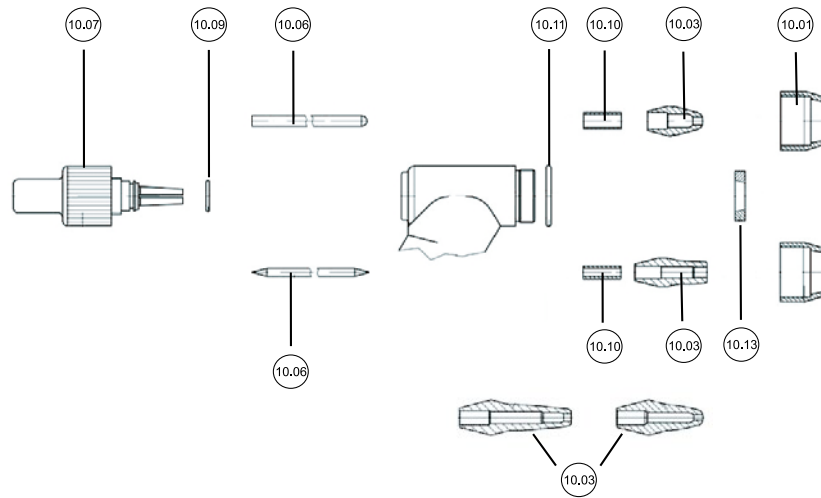


Item	Type	Designation	Length m	Item no.
9	PWM 150 4 m, 2,4 mm	Plasma machine welding torch	4.0	094-008784-00000
9	PWM 150 6m, 2,4 mm		6.0	094-008784-00006

- ▶ Use only with RK2/RK3 recooling unit
- ▶ Other lengths available on request



Consumables/Accessories



Item	Designation	Electro- de Ø	Nozzle Ø	Length	Max. welding current	PU	Item no.	per unit
		mm	mm	mm	A	Units		
10.01	Gas nozzle, long	-	9.5	-	-	1	094-008240-00000	
10.01	Gas nozzle, long	-	11	-	-	1	094-008239-00000	
10.01	Gas nozzle, short	-	11	-	-	1	094-008237-00000	
10.01	Gas nozzle, short	-	12	-	-	1	094-008238-00000	
10.03	Plasma nozzle	-	0.8	-	20	1	094-008243-00000	
10.03	Plasma nozzle	-	1.4	-	40	1	094-008246-00000	
10.03	Plasma nozzle	-	1.6	-	50	1	094-008247-00000	
10.03	Plasma nozzle	-	1.8	-	60	1	094-008248-00000	
10.03	Plasma nozzle	-	2	-	70	1	094-008249-00000	
10.03	Plasma nozzle	-	2.4	-	90	1	094-008250-00000	
10.03	Plasma nozzle	-	3	-	100	1	094-008251-00000	
10.03	Plasma nozzle, positive terminal	-	1.2	-	-	1	094-008264-00000	
10.03	Plasma nozzle, positive terminal	-	1.6	-	-	1	094-008265-00000	
10.03	Plasma nozzle, positive terminal	-	2	-	-	1	094-008266-00000	
10.03	Plasma nozzle, positive terminal	-	2.4	-	-	1	094-008267-00000	
10.03	Plasma nozzle, long	-	2.2	-	-	1	094-008550-00000	
10.03	Plasma nozzle, long	-	2.6	-	-	1	094-008551-00000	
10.03	Plasma nozzle	-	3.2	-	-	1	094-009126-00000	
10.03	Plasma nozzle	-	3.6	-	-	1	094-009395-00000	
10.05	Collet chuck	1.5	-	-	-	1	094-008235-00000	
10.06	Tungsten electrode, special	1.5	-	75	-	1	094-008951-00000	
10.07	Clamping module	2.4	-	-	-	1	094-009398-00000	
10.07	Clamping module	3.2	-	-	-	1	094-009399-00000	
10.10	Gas guide insert	1.5	-	-	-	1	094-008241-00000	
10.13	Gas lens, fine-pore	-	-	-	-	1	094-008242-00000	
-	Adjusting and test probe	-	-	27.5	-	1	094-008556-00000	
-	Electrode setting gauge	-	-	-	-	1	094-008262-00000	
-	Nozzle key	-	-	-	-	1	094-008554-00000	

Options/accessories

Wearing parts kits	Item no.	PG
PWH/PWM 150 Consumables box, PWH/PWM 150	094-009674-00000	



■ Plasma welding torches ■ PWM 250



Mechanised plasma welding torch

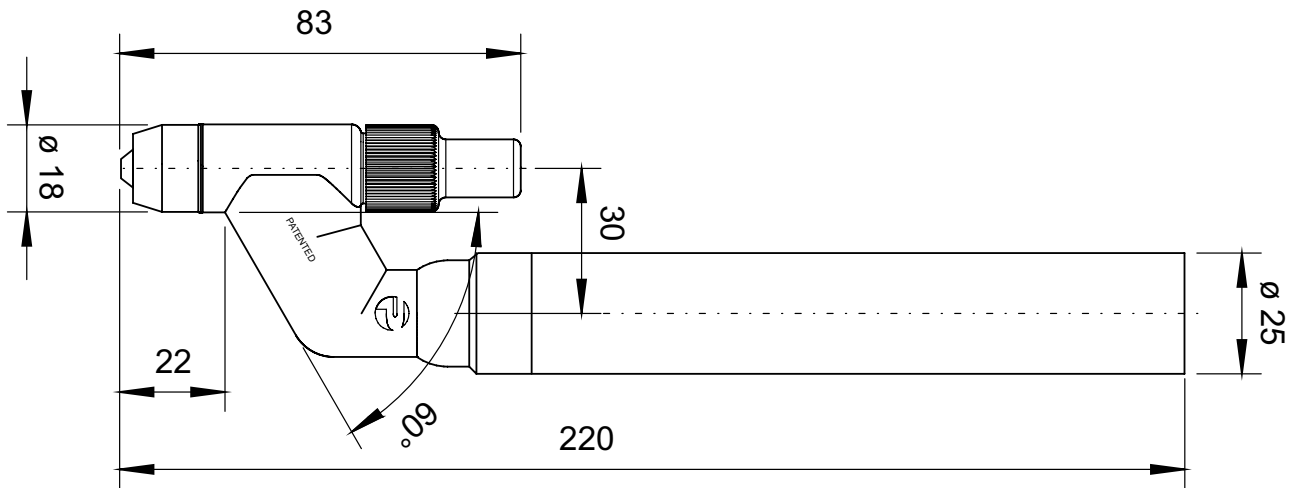
- Water-cooled
- 30-mm recessed mounting shank
- Gas nozzle: \varnothing 13.5 mm; gas guide insert: \varnothing 2.4 mm; gas lens, plasma nozzle: \varnothing 2.4 mm; clamping module: \varnothing 2.4 mm; tungsten electrode: \varnothing 2.4 mm

Duty cycle DC-
250 A / 100 %

Plasma gas
0.2 l/min - 1.5 l/min

Pilot arc current
Pilot arc current , 5 A - 12 A

Nozzle \varnothing
1 mm - 4.2 mm

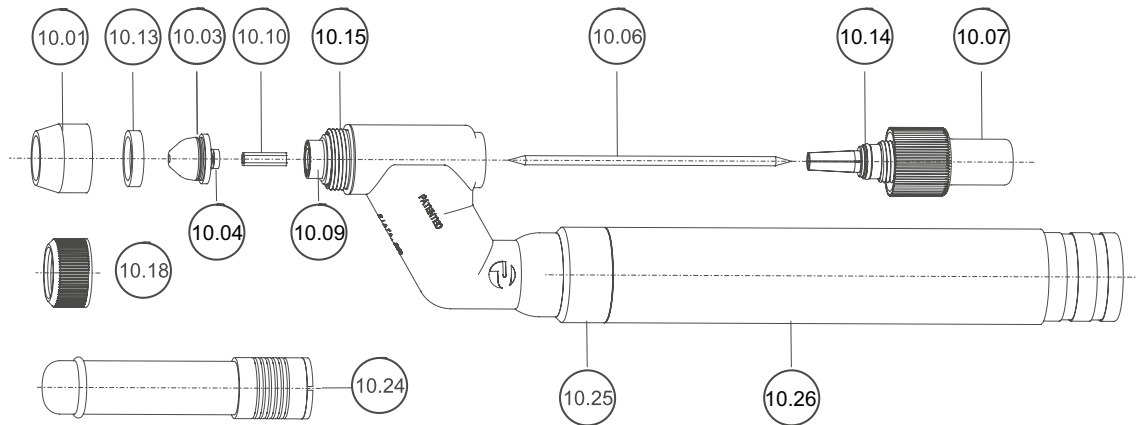


Item	Type	Designation	Length m	Item no.
9			4.0	094-019224-00000
9	PWM 250	Plasma machine welding torch	6.0	094-019224-00006
9			8.0	094-019224-00008

- ▶ Use with RK2.1/RK3.1 recooling unit only
- ▶ Other lengths available on request



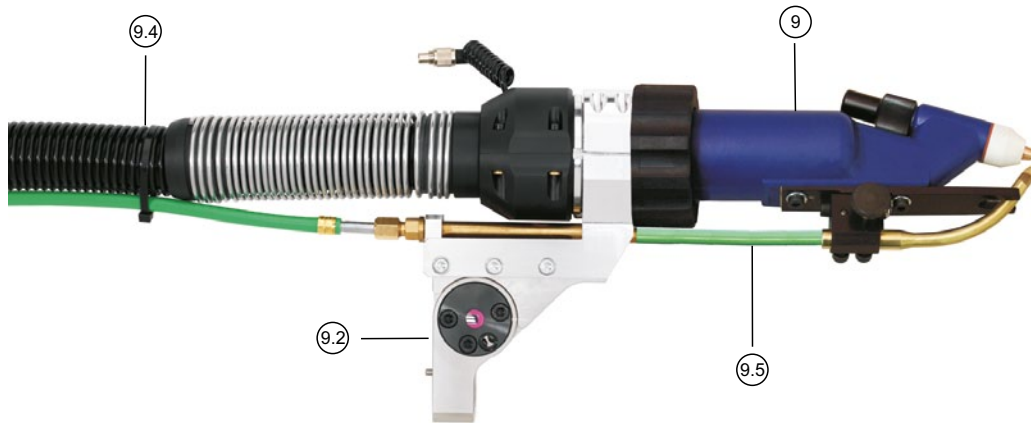
Consumables/Accessories



Item	Designation	Electro-	Nozzle Ø	Length	PU	Item no.	per unit
		de Ø			Units		
		mm	mm	mm			
10.01	Gas nozzle, short	-	11	-	1	094-008237-00000	
10.01	Gas nozzle, short	-	12	-	1	094-008238-00000	
10.03	Plasma nozzle	-	1	-	1	094-019228-00000	
10.03	Plasma nozzle	-	1.2	-	1	094-019229-00000	
10.03	Plasma nozzle	-	1.4	-	1	094-019230-00000	
10.03	Plasma nozzle	-	1.6	-	1	094-019231-00000	
10.03	Plasma nozzle	-	1.8	-	1	094-019232-00000	
10.03	Plasma nozzle	-	2	-	1	094-019233-00000	
10.03	Plasma nozzle	-	2.2	-	1	094-019234-00000	
10.03	Plasma nozzle	-	2.4	-	1	094-019235-00000	
10.03	Plasma nozzle	-	2.6	-	1	094-019236-00000	
10.03	Plasma nozzle	-	2.8	-	1	094-019237-00000	
10.03	Plasma nozzle	-	3	-	1	094-019238-00000	
10.03	Plasma nozzle	-	3.2	-	1	094-019239-00000	
10.03	Plasma nozzle	-	3.4	-	1	094-019240-00000	
10.03	Plasma nozzle	-	3.6	-	1	094-019241-00000	
10.03	Plasma nozzle	-	3.8	-	1	094-019242-00000	
10.03	Plasma nozzle	-	4	-	1	094-019243-00000	
10.03	Plasma nozzle	-	4.2	-	1	094-019244-00000	
10.06	Tungsten electrode, special	1.5	-	75	1	094-008951-00000	
10.06	Tungsten electrode, special	2.4	-	75	1	094-008789-00000	
10.06	Tungsten electrode, special	3.2	-	75	1	094-008952-00000	
10.06	Tungsten electrode, special	3.2	-	30	1	094-008268-00000	
10.07	Clamping module	1.5	-	-	1	094-008557-00000	
10.07	Clamping module	2.4	-	-	1	094-009398-00000	
10.07	Clamping module	3.2	-	-	1	094-009399-00000	
10.09	O-ring	-	-	-	10	094-008234-00000	
10.09	O-ring	-	-	-	10	094-019227-00000	
10.09	O-Ring for plasma nozzle	-	-	-	10	094-019245-00000	
10.10	Gas guide insert	1.5	-	-	1	094-008241-00000	
10.10	Gas guide insert	2.4	-	-	1	094-008787-00000	
10.13	Gas lens	-	-	-	1	094-019246-00000	
10.15	O-ring for gas nozzle	-	-	-	10	094-008236-00000	
10.18	Nozzle cap	-	-	-	1	094-019247-00000	
10.24	Nozzle wrench	-	-	-	1	094-019248-00000	
10.25	Connecting piece	-	-	-	1	094-019249-00000	
10.26	Handle	-	-	-	1	094-019250-00000	



■ Plasma welding torches ■ PWM 150 ROB



Mechanised plasma welding torch

- Maximum power density
- Cold wire feed as option
- Medium interface with quick-change unit
- Basic features: 1.5 mm special electrode, 2.8 mm plasma nozzle, 11 mm long gas nozzle, 1.1 mm wire feed nozzle

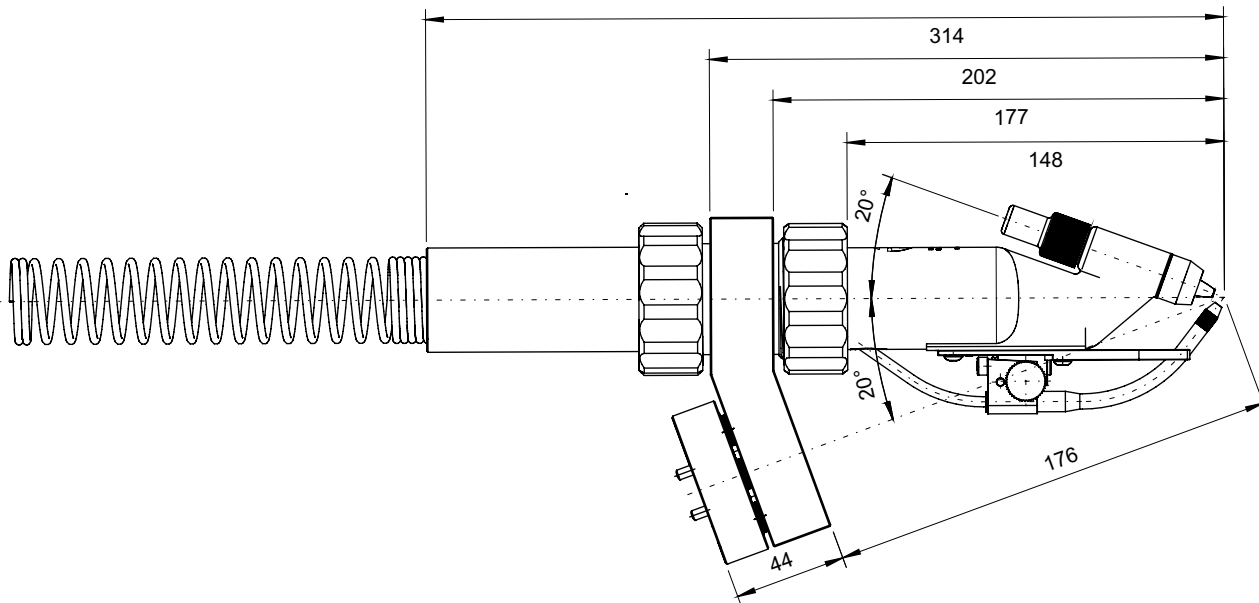
Duty cycle DC-
150 A / 100 %

Duty cycle AC
120 A / 100 %

Duty cycle DC+
50 A / 100 %

Gas flow
1.2 l/min

Pilot arc current
Pilot arc current , 2 A - 12 A

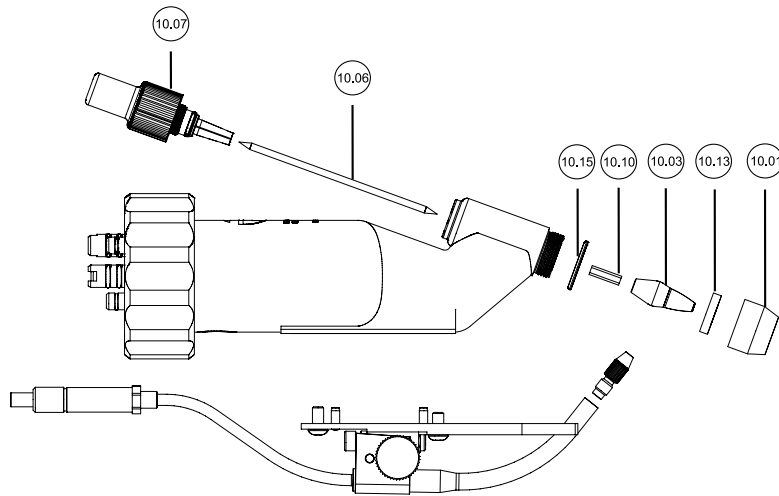


Item	Type	Designation	Length m	Item no.
9	PWM 150 ROB 20°	Plasma machine welding torch	-	094-021870-00000
9.2	SH PLASMA CT	Segment holder for plasma torch	-	094-016314-00000
9.4	SP CT20 W 4m	Hose package plasma torch	4.0	094-016315-00000
9.4	SP CT20 W 6m		6.0	094-016315-00006
9.4	SP CT20 W 8m		8.0	094-016315-00008
9.5	KDZ PMW 150 ROB TYP III	Cold wire feed	-	094-008496-00000
20.03	-	Guide for wire feed hose	-	094-016321-00000
20.04	-	Guide tube	-	094-016323-00000
20.06	-	Plasma torch crown nut	-	094-016325-00000

► Use only with RK2/RK3 recooling unit



Consumables/Accessories



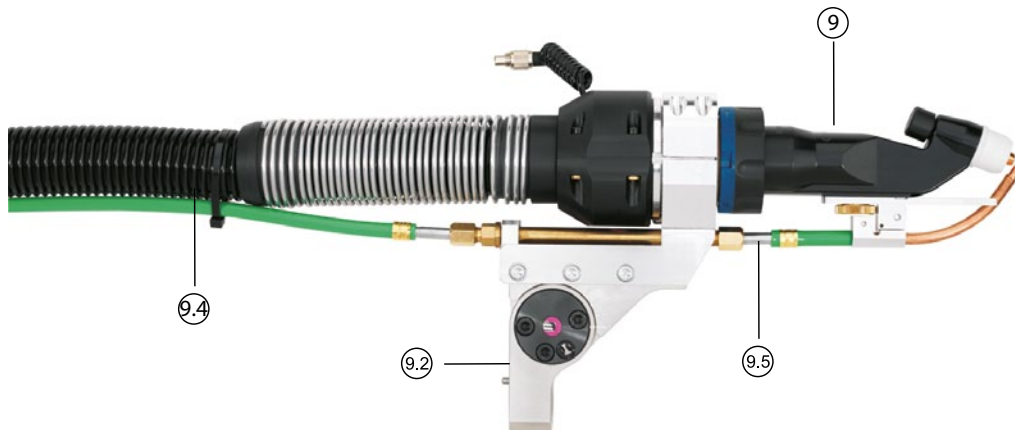
Item	Designation	Electrode Ø	Nozzle Ø	Length	Max. welding current	PU	Item no.	per unit
		mm	mm	mm	A	Units		
10.01	Gas nozzle, long	-	9.5	-	-	1	094-008240-00000	
10.01	Gas nozzle, long	-	11	-	-	1	094-008239-00000	
10.01	Gas nozzle, short	-	11	-	-	1	094-008237-00000	
10.01	Gas nozzle, short	-	12	-	-	1	094-008238-00000	
10.03	Plasma nozzle	-	0.8	-	20	1	094-008243-00000	
10.03	Plasma nozzle	-	1.4	-	40	1	094-008246-00000	
10.03	Plasma nozzle	-	1.6	-	50	1	094-008247-00000	
10.03	Plasma nozzle	-	1.8	-	60	1	094-008248-00000	
10.03	Plasma nozzle	-	2	-	70	1	094-008249-00000	
10.03	Plasma nozzle	-	2.4	-	90	1	094-008250-00000	
10.03	Plasma nozzle	-	3	-	100	1	094-008251-00000	
10.03	Plasma nozzle, positive terminal	-	1.2	-	-	1	094-008264-00000	
10.03	Plasma nozzle, positive terminal	-	1.6	-	-	1	094-008265-00000	
10.03	Plasma nozzle, positive terminal	-	2	-	-	1	094-008266-00000	
10.03	Plasma nozzle, positive terminal	-	2.4	-	-	1	094-008267-00000	
10.03	Plasma nozzle, long	-	2.2	-	-	1	094-008550-00000	
10.03	Plasma nozzle, long	-	2.6	-	-	1	094-008551-00000	
10.03	Plasma nozzle, long	-	2.8	-	-	1	094-015592-00000	
10.03	Plasma nozzle	-	3.2	-	-	1	094-009126-00000	
10.03	Plasma nozzle	-	3.6	-	-	1	094-009395-00000	
10.03	Plasma nozzle, long	-	0.8	-	20	1	094-008252-00000	
10.03	Plasma nozzle, long	-	1	-	25	1	094-008253-00000	
10.03	Plasma nozzle, long	-	1.2	-	30	1	094-008254-00000	
10.03	Plasma nozzle, long	-	1.4	-	40	1	094-008255-00000	
10.03	Plasma nozzle, long	-	1.6	-	45	1	094-008256-00000	
10.03	Plasma nozzle, long	-	1.8	-	50	1	094-008257-00000	
10.03	Plasma nozzle, long	-	2	-	60	1	094-008258-00000	
10.03	Plasma nozzle, long	-	3	-	90	1	094-008260-00000	
10.06	Tungsten electrode, special	1.5	-	75	-	1	094-008951-00000	
10.07	Sealing ring for back cap	-	-	-	-	1	094-008263-00000	
10.07	Clamping module	1.5	-	-	-	1	094-008557-00000	
10.07	Clamping module	2.4	-	-	-	1	094-009398-00000	
10.07	Clamping module	3.2	-	-	-	1	094-009399-00000	
10.10	Gas guide insert	1.5	-	-	-	1	094-008241-00000	
10.13	Gas lens, fine-pore	-	-	-	-	1	094-008242-00000	
10.15	O-ring for gas nozzle	-	-	-	-	10	094-008236-00000	
-	Adjusting and test probe	-	-	27.5	-	1	094-008556-00000	
-	Electrode setting gauge	-	-	-	-	1	094-008262-00000	
-	Nozzle key	-	-	-	-	1	094-008554-00000	

Options/accessories

Torch accessories	Item no.	PG
WFNOZZ PMW 1.1 Wire feed nozzle	094-008552-00000	
WFNOZZ PMW 1.3 Wire feed nozzle	094-008553-00000	



■ Plasma welding torches ■ PT 150



Mechanised plasma welding torch

- Excellent gas shielding due to special gas lens enables processing of sensitive materials
- Stable, soft arc ensures spatter-free joining and coating without any need for post-weld work
- Optimum cooling
- Compact design for excellent accessibility
- Basic features: Torch body, 2.4-mm sealing cap, 2.4-mm tungsten electrode, 2.4-mm centring ceramic, insulation ring, 1.8-mm plasma nozzle, gas distributor, shielding gas nozzle, setting gauge

Pilot arc current

Plasma , 80 A - 150 A

Plasma

Plasma - 80 A - 150 A

Nozzle Ø

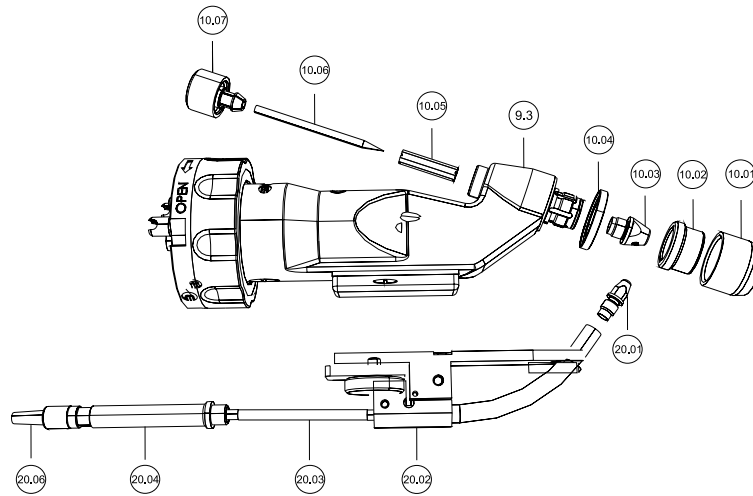
1.2 mm - 3.6 mm

Item	Type	Designation	Length m	Item no.
9	PT150 TE2.4/PN1.8	Plasma robot welding torch	-	094-016988-00000
9.2	SH PLASMA CT	Segment holder for plasma torch	-	094-016314-00000
9.4	SP CT20 W 4m	Hose package plasma torch	4.0	094-016315-00000
9.4	SP CT20 W 6m		6.0	094-016315-00006
9.4	SP CT20 W 8m		8.0	094-016315-00008
9.5	CFW 150 CT20	Plasma cold wire feed, set	-	094-016318-00000

► Use only with RK2/RK3 recooling unit



Consumables/Accessories



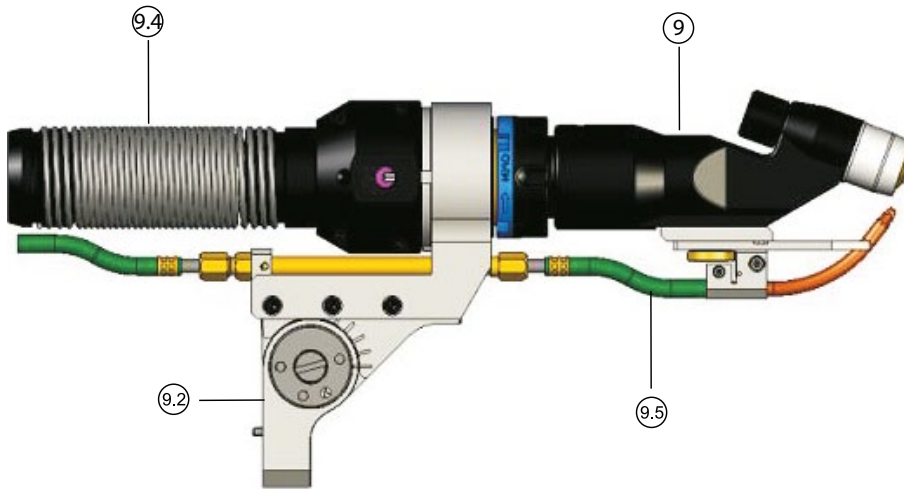
Item	Designation	Electrode Ø mm	Nozzle Ø mm	Ø wire mm	Length mm	PU Units	Item no.	per unit
10.01	Plasma torch shielding gas nozzle	-	-	-	-	1	094-016350-00000	
10.01	Plasma torch shielding gas nozzle, long	-	-	-	-	1	094-016351-00000	
10.02	Gas lens	-	-	-	-	1	094-016349-00000	
10.03	Plasma nozzle	-	1.4	-	-	1	094-016340-00000	
10.03	Plasma nozzle	-	1.6	-	-	1	094-016341-00000	
10.03	Plasma nozzle	-	1.8	-	-	1	094-016342-00000	
10.03	Plasma nozzle	-	2	-	-	1	094-016343-00000	
10.03	Plasma nozzle	-	2.3	-	-	1	094-016344-00000	
10.03	Plasma nozzle	-	2.6	-	-	1	094-016345-00000	
10.03	Plasma nozzle	-	3.6	-	-	1	094-016346-00000	
10.03	Plasma nozzle, long	-	1.6	-	-	1	094-016347-00000	
10.03	Plasma nozzle, long	-	2	-	-	1	094-015515-00000	
10.03	Plasma nozzle, long	-	2.6	-	-	1	094-016348-00000	
10.04	Insulation ring 150CT	-	-	-	-	1	094-016339-00000	
10.05	Centring ceramic	-	1.6	-	-	1	094-016336-00000	
10.05	Centring ceramic	-	2.4	-	-	1	094-016337-00000	
10.05	Centring ceramic	-	3.2	-	-	1	094-016338-00000	
10.06	Tungsten electrode	1.6	-	-	57	1	094-016332-00000	
10.06	Tungsten electrode	2.4	-	-	57	1	094-016333-00000	
10.06	Tungsten electrode	3.2	-	-	57	1	094-016334-00000	
10.07	Back cap	1.6	-	-	-	1	094-016327-00000	
10.07	Back cap	2.4	-	-	-	1	094-016328-00000	
10.07	Back cap	3.2	-	-	-	1	094-016329-00000	
10.07	Torch locking cap, long	-	-	-	75	1	094-016330-00000	
10.07	Torch locking cap, long	-	-	-	100	1	094-016331-00000	
20.01	Wire feed nozzle	-	-	0.6	-	1	094-010126-00000	
20.01	Wire feed nozzle	-	-	0.8	-	1	094-010127-00000	
20.01	Wire feed nozzle	-	-	1	-	1	094-010128-00000	
20.01	Wire feed nozzle	-	-	1.2	-	1	094-010129-00000	
20.01	Wire feed nozzle	-	-	1.6	-	1	094-010130-00000	
20.02	Cold wire feed	-	-	-	-	1	094-016320-00000	
20.03	Guide for wire feed hose	-	-	-	-	1	094-016321-00000	
20.04	Guide tube	-	-	-	-	1	094-016323-00000	
20.06	Plasma torch crown nut	-	-	-	-	1	094-016325-00000	
-	Plasma torch threaded pin	-	-	-	-	1	094-016324-00000	
-	Setting gauge for plasma torch	-	-	-	-	1	094-016352-00000	
-	Setting gauge for plasma torch, long	-	-	-	-	1	094-016353-00000	

Options/accessories

Torch accessories	Item no.	PG
TB 150CT20 Torch body	094-016312-00000	



Plasma welding torches ■ PT 250



Mechanised plasma welding torch

- Excellent gas shielding due to special gas lens enables processing of sensitive materials
- Stable, soft arc ensures spatter-free joining and coating without any need for post-weld work
- Optimum cooling
- Compact design for excellent accessibility
- Basic features: Torch body, 5.0-mm sealing cap, 5.0-mm tungsten electrode, 5.0-mm centring ceramic, insulation ring, distribution ring, gas diffuser, 4.0-mm plasma nozzle, mounting nut, shielding gas nozzle, setting gauge

Pilot arc current

Plasma , 250 A

Plasma

Plasma - 250 A

Nozzle Ø

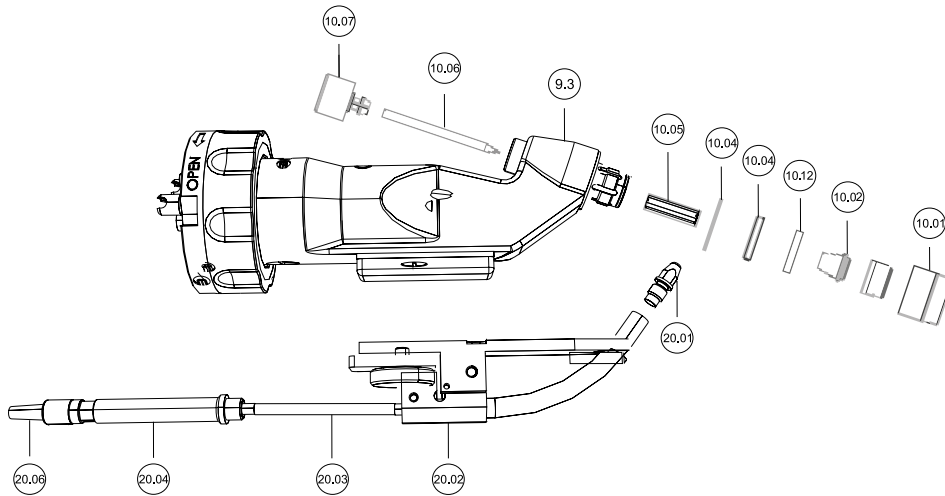
3 mm - 4.5 mm

Item	Type	Designation	Length m	Item no.
9	PT250CW ZF1.0/TE5.0/PN4.0	Plasma robot welding torch, cold wire, water-cooled	-	094-016989-00000
9.2	SH PLASMA CT	Segment holder for plasma torch	-	094-016314-00000
9.4	SP CT20 W 4m	Hose package plasma torch	4.0	094-016315-00000
9.4	SP CT20 W 6m		6.0	094-016315-00006
9.4	SP CT20 W 8m		8.0	094-016315-00008
9.5	CWF SET 150/250 CT20	Plasma cold wire feed, set	-	094-016319-00000

► Use with RK2.1/RK3.1 recooling unit only



Consumables/Accessories



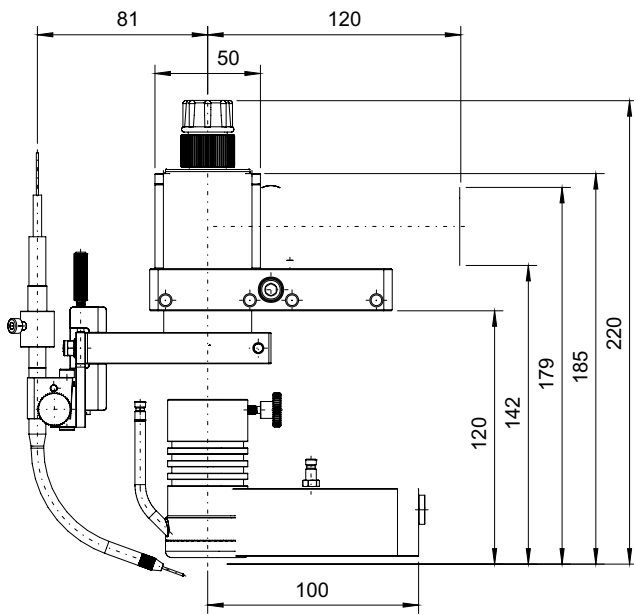
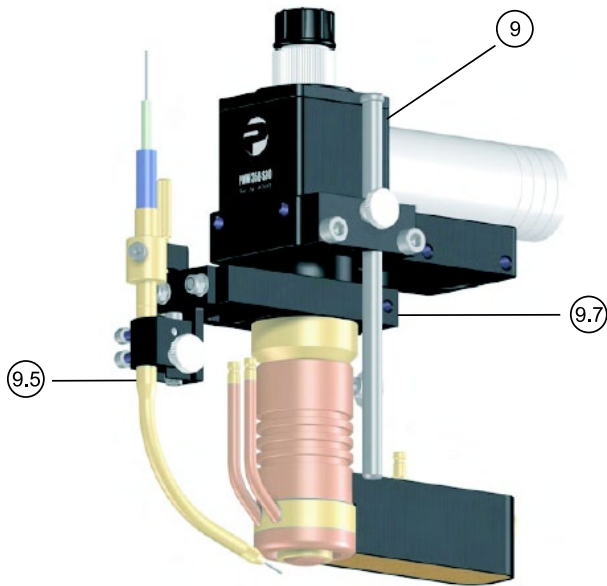
Item	Designation	Electro- de Ø mm	Nozzle Ø mm	Ø wire mm	Length mm	PU Units	Item no.	per unit
10.01	Plasma torch shielding gas nozzle	-	-	-	-	1	094-016365-00000	
10.02	Gas lens	-	-	-	-	1	094-016359-00000	
10.03	Plasma nozzle	-	3	-	-	1	094-016360-00000	
10.03	Plasma nozzle	-	3.5	-	-	1	094-016361-00000	
10.03	Plasma nozzle	-	4	-	-	1	094-016362-00000	
10.03	Plasma nozzle	-	4.5	-	-	1	094-016363-00000	
10.04	Insulation ring 250CT	-	-	-	-	1	094-016357-00000	
10.05	Centring ceramic	-	-	-	-	1	094-016356-00000	
10.06	Tungsten electrode	1.6	-	-	57	1	094-016332-00000	
10.06	Tungsten electrode	2.4	-	-	57	1	094-016333-00000	
10.06	Tungsten electrode	3.2	-	-	57	1	094-016334-00000	
10.07	Back cap	5	-	-	-	1	094-016354-00000	
10.12	Plasma torch distributor ring	-	-	-	-	1	094-016358-00000	
20.01	Wire feed nozzle	-	-	0.6	-	1	094-010126-00000	
20.01	Wire feed nozzle	-	-	0.8	-	1	094-010127-00000	
20.01	Wire feed nozzle	-	-	1	-	1	094-010128-00000	
20.01	Wire feed nozzle	-	-	1.2	-	1	094-010129-00000	
20.01	Wire feed nozzle	-	-	1.6	-	1	094-010130-00000	
20.02	Cold wire feed	-	-	-	-	1	094-016320-00000	
20.03	Guide for wire feed hose	-	-	-	-	1	094-016322-00000	
20.04	Guide tube	-	-	-	-	1	094-016323-00000	
20.06	Plasma torch crown nut	-	-	-	-	1	094-016325-00000	
-	Plasma torch threaded pin	-	-	-	-	1	094-016324-00000	
-	Torch holder TB250, complete	-	-	-	-	1	094-016326-00000	
-	Mounting nut	-	-	-	-	1	094-016364-00000	
-	Setting gauge for plasma torch	-	-	-	-	1	094-016366-00000	

Options/accessories

Torch accessories	Item no.	PG
Torch body	094-016313-00000	



■ Plasma welding torches ■ PWM 350-S90



Mechanised plasma welding torch

- Laminar flow of shielding gas via special trailing gas nozzle or water cooled gas nozzle
- Longer service life of the welding nozzle thanks to intensive cooling
- The position of the electrode relative to the nozzle can be adjusted slightly during welding
- Basic features: 4.0 x 175-mm special electrode, 2.8-mm welding nozzle

Duty cycle

350 A / 100 %

Workpiece diameter

2 mm - 10 mm

Pilot arc current

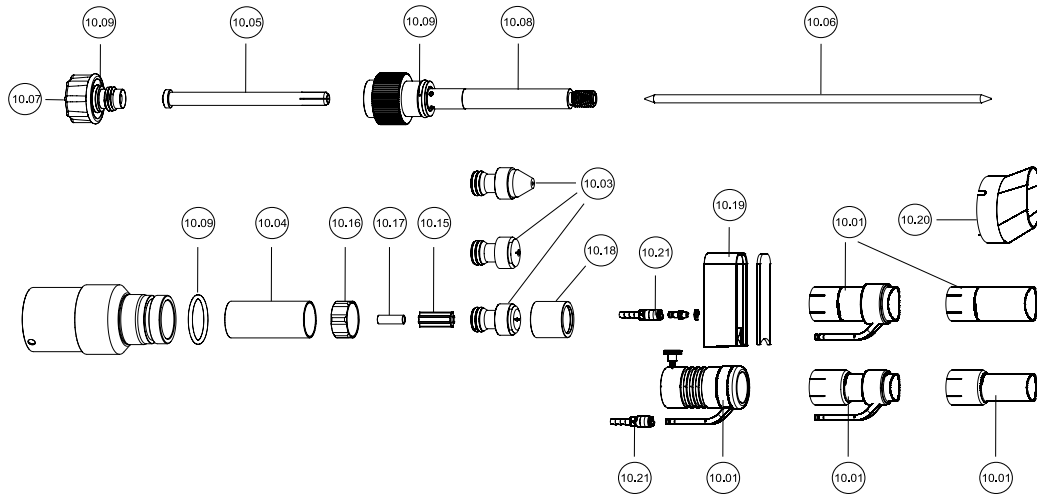
Pilot arc current , 10 A - 20 A

Item	Type	Designation	Length m	Item no.
9	PWM 350-S90 4m	Plasma machine welding torch	4.0	094-016543-00000
9	PWM 350-S90 6m		6.0	094-016543-00006
9	PWM 350-S90 8m		8.0	094-016543-00008
9.5	CWS CPL PMW 350-S90/S180	Cold wire feed, standard, for water-cooled gas nozzles, complete		094-013464-00000
9.5	CWSS CPL PMW 350-S90/S180	Cold wire feed, short, for gas-cooled gas nozzles, complete		094-016613-00000
9.7	MP PMW 350	Mounting plate, for gas-cooled gas nozzles, complete		094-016129-00000
9.7	MPS PMW 350	Mounting plate, short, for gas-cooled gas nozzles, complete		094-016592-00000
9.9	CPLUG	Coupling plug		094-013467-00000
9.9	CSLEEVE	Coupling socket		094-013466-00000
-	CWADJ	Compact, water cooled		094-013468-00000

- ▶ Use only with RK3.1 recooling unit
- ▶ The torch is supplied without gas nozzle. Order this part as required.



Consumables/Accessories



Item	Designation	Size in mm	Electrode Ø mm	Nozzle Ø mm	Max. welding current A	PU Units	Item no.	per unit
10.01	Gas nozzle, plug fitting, gas-cooled	24	-	-	-	1	094-013817-00000	
10.01	Gas nozzle, plug fitting, gas-cooled	30	-	-	-	1	094-013819-00000	
10.01	Gas nozzle, plug fitting, stainless steel, water-cooled	24	-	-	-	1	094-013818-00000	
10.01	Gas nozzle, plug fitting, stainless steel, water-cooled	30	-	-	-	1	094-013820-00000	
10.01	Gas nozzle, screw fitting, copper, water-cooled	29	-	-	-	1	094-016157-00000	
10.03	Plasma nozzle	-	-	2	100	1	094-013805-00000	
10.03	Plasma nozzle	-	-	2.8	180	1	094-013806-00000	
10.03	Plasma nozzle	-	-	3.2	240	1	094-013807-00000	
10.03	Plasma nozzle	-	-	3.5	280	1	094-013808-00000	
10.03	Plasma nozzle	-	-	4	350	1	094-013809-00000	
10.03	Plasma nozzle, pointed	-	-	1.6	80	1	094-016593-00000	
10.03	Plasma nozzle, pointed	-	-	1.8	90	1	094-016594-00000	
10.03	Plasma nozzle, pointed	-	-	2	100	1	094-016595-00000	
10.03	Plasma nozzle, pointed	-	-	2.8	180	1	094-016596-00000	
10.03	Plasma nozzle, pointed	-	-	3.2	240	1	094-016597-00000	
10.03	Plasma nozzle, pointed	-	-	3.5	280	1	094-016598-00000	
10.03	Plasma nozzle, long	-	-	1.4	-	1	094-016599-00000	
10.03	Plasma nozzle, long	-	-	1.6	-	1	094-016600-00000	
10.03	Plasma nozzle, long	-	-	1.8	-	1	094-016601-00000	
10.03	Plasma nozzle, long	-	-	2	-	1	094-016602-00000	
10.03	Plasma nozzle, long	-	-	2.8	-	1	094-016603-00000	
10.03	Plasma nozzle, long	-	-	3.2	-	1	094-016604-00000	
10.03	Plasma nozzle, long	-	-	3.5	-	1	094-016605-00000	
10.03	Plasma nozzle, long	-	-	4	-	1	094-016606-00000	
10.03	Plasma nozzle, long	-	-	4.5	-	1	094-016607-00000	
10.04	Insulator	-	-	-	-	1	094-013814-00000	
10.05	Collet	-	-	-	-	1	094-016587-00000	
10.06	Tungsten electrode, special	-	4	-	-	1	094-017010-00000	
10.07	Back cap	-	-	-	-	1	094-001965-00000	
10.08	Collet bodies	-	-	-	-	1	094-016589-00000	
10.09	O-ring	9,5 x 1,6	-	-	-	1	094-016584-00000	
10.09	O-ring	14,0 x 2,0	-	-	-	1	094-016588-00000	
10.15	Centring piece	-	-	-	-	1	094-013812-00000	
10.16	Spacing sleeve	-	-	-	-	1	094-013815-00000	
10.17	Sleeve	-	-	-	-	1	094-013813-00000	
10.18	Nozzle cap	-	-	-	-	1	094-013816-00000	
10.19	Shielding gas trailing shield	-	-	-	-	1	094-016465-00000	
10.20	Trailing gas nozzle	-	-	-	-	1	094-013822-00000	
10.21	Quick connect coupling	-	-	-	-	1	094-013821-00000	
-	Setting gauge for plasma torch	-	-	-	-	1	094-013825-00000	



Options/accessories

Cold wire feed accessories

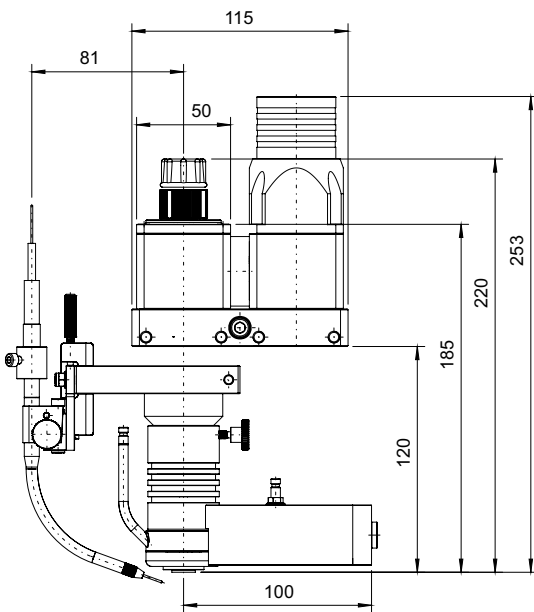
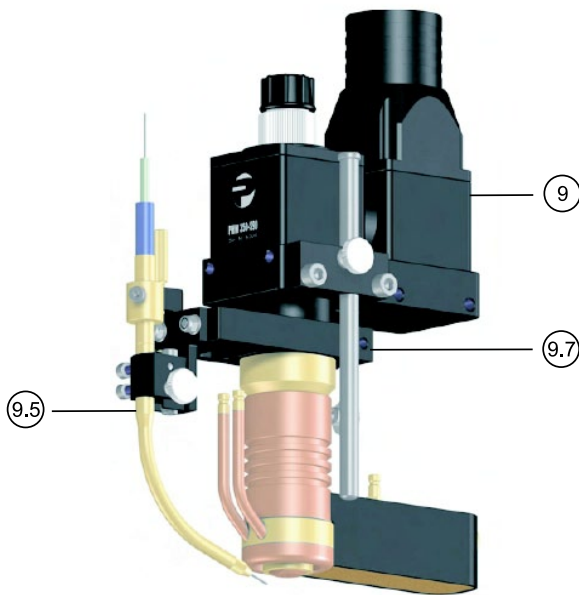
	Item no.	PG
WFT 70° PMW Wire feed tube	094-012465-00000	
WFNOZZ PMW 0.7 Wire feed nozzle	094-016591-00000	
WFNOZZ PMW 0.9 Wire feed nozzle	094-009400-00000	
WFNOZZ PMW 1.1 Wire feed nozzle	094-008552-00000	
WFNOZZ PMW 1.3 Wire feed nozzle	094-008553-00000	
WFNOZZ PMW 1.7 Wire feed nozzle	094-009401-00000	

Torch accessories

	Item no.	PG
PP PWM350 420A Power package increases duty cycle for PWM 350 plasma machine welding torch to 420A/100%	094-021854-00000	
WGD PWM350 Hose set, 4 m, for water-cooled gas nozzles. Can be cut to the required length	094-022661-00000	



■ Plasma welding torches ■ PWM 350-S180



Mechanised plasma welding torch

- Laminar flow of shielding gas via special trailing gas nozzle or water cooled gas nozzle
- Longer service life of the welding nozzle thanks to intensive cooling
- The position of the electrode relative to the nozzle can be adjusted slightly during welding
- Basic features: 4.0 x 175-mm special electrode, 2.8-mm welding nozzle

Duty cycle

350 A / 100 %

Workpiece diameter

2 mm - 10 mm

Pilot arc current

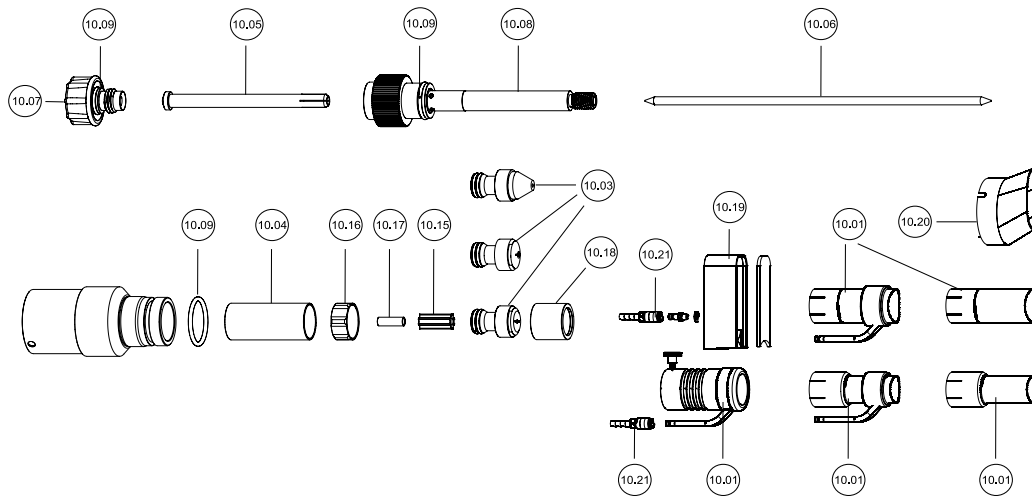
Pilot arc current , 10 A - 20 A

Item	Type	Designation	Length m	Item no.
9	PWM 350-S180 4m	Plasma machine welding torch	4.0	094-016544-00000
9	PWM 350-S180 6m		6.0	094-016544-00006
9	PWM 350-S180 8m		8.0	094-016544-00008
9.5	CWS CPL PMW 350-S90/S180	Cold wire feed, standard, for water-cooled gas nozzles, complete		094-013464-00000
9.5	CWSS CPL PMW 350-S90/S180	Cold wire feed, short, for gas-cooled gas nozzles, complete		094-016613-00000
9.7	MP PMW 350	Mounting plate, for gas-cooled gas nozzles, complete		094-016129-00000
9.7	MPS PMW 350	Mounting plate, short, for gas-cooled gas nozzles, complete		094-016592-00000
9.9	CPLUG	Coupling plug		094-013467-00000
9.9	CSLEEVE	Coupling socket		094-013466-00000
-	CWADJ	Compact, water cooled		094-013468-00000

- ▶ Use only with RK3.1 recooling unit
- ▶ The torch is supplied without gas nozzle. Order this part as required.



Consumables/Accessories



Item	Designation	Size in mm	Electrode Ø mm	Nozzle Ø mm	Max. welding current A	PU Units	Item no.	per unit
10.01	Gas nozzle, plug fitting, gas-cooled	24	-	-	-	1	094-013817-00000	
10.01	Gas nozzle, plug fitting, gas-cooled	30	-	-	-	1	094-013819-00000	
10.01	Gas nozzle, plug fitting, stainless steel, water-cooled	24	-	-	-	1	094-013818-00000	
10.01	Gas nozzle, plug fitting, stainless steel, water-cooled	30	-	-	-	1	094-013820-00000	
10.01	Gas nozzle, screw fitting, copper, water-cooled	29	-	-	-	1	094-016157-00000	
10.03	Plasma nozzle	-	-	2	100	1	094-013805-00000	
10.03	Plasma nozzle	-	-	2.8	180	1	094-013806-00000	
10.03	Plasma nozzle	-	-	3.2	240	1	094-013807-00000	
10.03	Plasma nozzle	-	-	3.5	280	1	094-013808-00000	
10.03	Plasma nozzle	-	-	4	350	1	094-013809-00000	
10.03	Plasma nozzle, pointed	-	-	1.6	80	1	094-016593-00000	
10.03	Plasma nozzle, pointed	-	-	1.8	90	1	094-016594-00000	
10.03	Plasma nozzle, pointed	-	-	2	100	1	094-016595-00000	
10.03	Plasma nozzle, pointed	-	-	2.8	180	1	094-016596-00000	
10.03	Plasma nozzle, pointed	-	-	3.2	240	1	094-016597-00000	
10.03	Plasma nozzle, pointed	-	-	3.5	280	1	094-016598-00000	
10.03	Plasma nozzle, long	-	-	1.4	-	1	094-016599-00000	
10.03	Plasma nozzle, long	-	-	1.6	-	1	094-016600-00000	
10.03	Plasma nozzle, long	-	-	1.8	-	1	094-016601-00000	
10.03	Plasma nozzle, long	-	-	2	-	1	094-016602-00000	
10.03	Plasma nozzle, long	-	-	2.8	-	1	094-016603-00000	
10.03	Plasma nozzle, long	-	-	3.2	-	1	094-016604-00000	
10.03	Plasma nozzle, long	-	-	3.5	-	1	094-016605-00000	
10.03	Plasma nozzle, long	-	-	4	-	1	094-016606-00000	
10.03	Plasma nozzle, long	-	-	4.5	-	1	094-016607-00000	
10.04	Insulator	-	-	-	-	1	094-013814-00000	
10.05	Collet	-	-	-	-	1	094-016587-00000	
10.06	Tungsten electrode, special	-	4	-	-	1	094-017010-00000	
10.07	Back cap	-	-	-	-	1	094-001965-00000	
10.08	Collet bodies	-	-	-	-	1	094-016589-00000	
10.09	O-ring	9,5 x 1,6	-	-	-	1	094-016584-00000	
10.09	O-ring	14,0 x 2,0	-	-	-	1	094-016588-00000	
10.15	Centring piece	-	-	-	-	1	094-013812-00000	
10.16	Spacing sleeve	-	-	-	-	1	094-013815-00000	
10.17	Sleeve	-	-	-	-	1	094-013813-00000	
10.18	Nozzle cap	-	-	-	-	1	094-013816-00000	
10.19	Shielding gas trailing shield	-	-	-	-	1	094-016465-00000	
10.20	Trailing gas nozzle	-	-	-	-	1	094-013822-00000	
10.21	Quick connect coupling	-	-	-	-	1	094-013821-00000	
99	Setting gauge for plasma torch	-	-	-	-	1	094-013825-00000	



Options/accessories

Cold wire feed accessories

	Item no.	PG
WFT 70° PMW Wire feed tube	094-012465-00000	
WFNOZZ PMW 0.7 Wire feed nozzle	094-016591-00000	
WFNOZZ PMW 0.9 Wire feed nozzle	094-009400-00000	
WFNOZZ PMW 1.1 Wire feed nozzle	094-008552-00000	
WFNOZZ PMW 1.3 Wire feed nozzle	094-008553-00000	
WFNOZZ PMW 1.7 Wire feed nozzle	094-009401-00000	

Torch accessories

	Item no.	PG
PP PWM350 420A Power package increases duty cycle for PWM 350 plasma machine welding torch to 420A/100%	094-021854-00000	
WGD PWM350 Hose set, 4 m, for water-cooled gas nozzles. Can be cut to the required length	094-022661-00000	



■ Overview

Accessories		Page	
	RINT X12	RINT X12 STANDARD	284
		RINT X12 STANDARD ATCASE	285
Interfaces	BUSINT X11	MIG/MAG	287
		MIG/MAG Atcase	288
		TIG	292
		TIG Atcase	293
		Plasma Atcase	294



Function overview

Outputs

RINT X12 option



BUSINT X11 option



As standard:

- 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


MIG/MAG / TIG / Plasma
Matching EWM interfaces to robot controls from a variety of manufacturers

Manufacturer	ABB					COMAU		FANUC					IGM			KAWASAKI		KUKA					MOTOMAN				OTC	PANASONIC	REIS			
	S3	S4	S4C	S4C+	IRC5	C3G+	C4G	R-J2	R-J3	R-J3IB	R-J3IC	R-J30IB	RT K3, K4	RTI K5	RTI K6	C 40	D 40	KF 30/51	KRC1	VKRC1	KRC2	VKRC2	KRC4	ERC	MRC	XRC	NX 100	DX 100	EN 5624	G1/G2	RS4	RS5
Interface for automated welding	○	○	○					○	○	○	○					○	○	○	○	○	○	○		○	○	○	○		○	○	○	○
RINT X12	●	●	●	■	□	□	□	●	●	●	●	■	●	■		●	●	●	○	○	○	○		●	●	●	●	●	●	●	●	□
BUSINT X11 PROFIBUS				■				□	□	□	□					□	□		□	□	□	□										
BUSINT X11 INTERBUS						□										□	□		□	□	□	□										
BUSINT X11 DEVICE NET				●	●					□	□		●			□	□		●	□	●	□				●	■					
BUSINT X11 CAN-OPEN																□	□		□	□	□	□										●
BUSINT X11 RUGGED LINE																			□	●	□	●										
BUSINT X11 ETHERNET IP												■	●															□				
BUSINT X11 PROFINET																							■					□				●
BUSINT X11 ETHERCAT														●									●									

- recommended version
- possible version
- possible, contact EWM
- additional option

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



■ RINT X12 ■ RINT X12 STANDARD



- Robot interface
- For installation in external switching cabinet
- Interface for controlling machines in the alpha Q, forceTig, Tetrax and Phoenix series in a single device (switching via jumper)
- Control signals, analog: MIG/MAG control voltage for wire-feed speed (welding performance), arc voltage correction, 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 LxWxH in mm	235 x 130 x 100
Weight	ca.1 kg

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

■ Options/accessories

Options for retrofitting	Item no.	PG
ON PLUG SET RINT X12 Retrofit option EWM plug set for RINT X12/DVINT X11	092-001822-00000	
Cable sets	Item no.	PG
KB MOTOMAN-RINT X12 Cable harness for RINT X12 connection to Motoman XRC/NX-100/DX-100	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 ■ RINT X12 STANDARD ATCASE



- Robot interface in separate casing for fitting to all xx2 casings
- Interface for controlling machines in the alpha Q, forceTig, Tetrax and Phoenix series in a single device (switching via jumper)
- Control signals, analog: MIG/MAG control voltage for wire-feed speed (welding performance), arc voltage correction, 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

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

■ Options/accessories

ATCASE connection cable	Item no.	PG
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	 092-007731-00005	
RA5 23POL 10M MOTOMAN Connection cable, 23-pole, for Motoman XRC/ NX-100/DX-100	 092-007731-00010	


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 PROFINET LWL 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 LxWxH in mm

235 x 130 x 100

Weight

ca.1 kg

Type	Designation	Item no.	per unit
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	

Options/accessories

Factory-fit options	Item no.	PG
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 IBUS3 Factory-fit option: external potential-free voltage supply, 24 V	00008	

Options for retrofitting	Item no.	PG
ON VOLTAGE SUPPLY IBUS3 Retrofit option: external potential-free voltage supply, 24 V	092-008197-00000	



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 and PROFINET LWL 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)

Type	Designation	Item no.	per unit
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	

Options/accessories

Factory-fit options	Item no.	PG
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 for retrofitting	Item no.	PG
ON VOLTAGE SUPPLY SV+/-15 Retrofit option: external potential-free voltage supply, 24 V	092-008198-00000	



BUSINT X11 ■ TIG



- 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 PROFINET LWL systems
- Start/Stop; gas test 1, 2; inching 1, 2; rotation direction; welding type (standard welding, pulsing, AC special pulsing – AC mode only – thermal DC pulsing), JOB mode
- Digital inputs for JOB selection
- Up to 256 JOBS and 15 programs available
- Welding data monitoring: Current, voltage, wire feed speed, armature current
- Control voltage for main current, wire feeder, secondary current, pulse time and pause time
- Diagnostic interface for set up, problem analysis and operation of the Analyzer software
- Optionally available with signal conditioning for AVC using fast actual process values (V, I)
- Optional switching between several cold wire drive units

Dimensions LxWxH in mm	235 x 130 x 100
Weight	ca.1 kg

Type	Designation	Item no.	per unit
Tetrix BUSINT X11 PROFINET LWL	PROFINET LWL industrial bus interface	090-008763-00000	
Tetrix BUSINT X11 CAN-OPEN	CAN-OPEN industrial bus interface	090-008259-00000	
Tetrix BUSINT X11 DEVICE-NET	DEVICE-NET industrial bus interface	090-008258-00000	
Tetrix BUSINT X11 INTERBUS	INTERBUS industrial bus interface	090-008256-00000	
Tetrix BUSINT X11 PROFIBUS	PROFIBUS industrial bus interface	090-008257-00000	
Tetrix BUSINT X11 PROFINET	PROFINET industrial bus interface	090-008260-00000	
Tetrix BUSINT X11 ETHERCAT	ETHERCAT industrial bus interface	090-008621-00000	
Tetrix BUSINT X11 ETHERNET IP	ETHERNET IP industrial bus interface	090-008622-00000	

Options/accessories

Factory-fit options	Item no.	PG
OW DV SWITCH T Operation of two wire feeders in automated systems	00001	
OW AVC Factory-fit option, AVC support	00002	
OW VOLTAGE SUPPLY IBUS3 Factory-fit option: external potential-free voltage supply, 24 V	00008	
Options for retrofitting	Item no.	PG
ON VOLTAGE SUPPLY IBUS3 Retrofit option: external potential-free voltage supply, 24 V	092-008197-00000	


BUSINT X11 ■ TIG 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 and PROFINET LWL systems
- Interface for plasma already contains external potential-free voltage supply
- Start/Stop; gas test 1, 2; inching 1, 2; rotation direction; welding type (standard welding, pulsing, AC special pulsing – AC mode only – thermal DC pulsing), JOB mode
- Digital inputs for JOB selection
- Up to 256 JOBS and 15 programs available
- Welding data monitoring: Current, voltage, wire feed speed, armature current
- Control voltage for main current, wire feeder, secondary current, pulse time and pause time
- Diagnostic interface for set up, problem analysis and operation of the Analyzer software
- Optionally available with signal conditioning for AVC using fast actual process values (V, I)
- Optional switching between several cold wire drive units

Type	Designation	Item no.		
Tetrix BUSINT X11 INTERBUS RUGGED LINE ATCASE	INTERBUS RUGGED LINE industrial bus interface in casing	090-008597-00000		
Tetrix BUSINT X11 PROFINET LWL ATCASE	PROFINET LWL industrial bus interface in casing	090-008609-00000		
Tetrix BUSINT X11 PROFINET CU ATCASE	PROFINET industrial bus interface in casing, copper	090-008590-00000		
Tetrix BUSINT X11 INTERBUS ATCASE	INTERBUS industrial bus interface in casing	090-008586-00000		
Tetrix BUSINT X11 PROFIBUS ATCASE	PROFIBUS industrial bus interface in casing	090-008587-00000		
Tetrix BUSINT X11 DEVICE NET ATCASE	DEVICE NET industrial bus interface in casing	090-008588-00000		
Tetrix BUSINT X11 CAN-OPEN ATCASE	CAN-OPEN industrial bus interface in casing	090-008589-00000		
Tetrix BUSINT X11 ETHERCAT ATCASE	ETHERCAT industrial bus interface in casing	090-008619-00000		
Tetrix BUSINT X11 ETHERNET IP ATCASE	ETHERNET IP industrial bus interface in casing	090-008627-00000		

Options/accessories

Factory-fit options	Item no.	PG
OW DV SWITCH T Operation of two wire feeders in automated systems	00001	
OW AVC Factory-fit option, AVC support	00002	
OW VOLTAGE SUPPLY SV+/-15 Retrofit option: external potential-free voltage supply, 24 V	00008	
Options for retrofitting	Item no.	PG
OW VOLTAGE SUPPLY SV+/-15 Retrofit option: external potential-free voltage supply, 24 V	092-008198-00000	


■ BUSINT X11 ■ Plasma 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 and PROFINET LWL systems
- Interface for plasma already contains external potential-free voltage supply
- Start/Stop; gas test 1, 2; inching 1, 2; rotation direction; welding type (standard welding, pulsing, AC special pulsing – AC mode only – thermal DC pulsing), JOB mode
- Digital inputs for JOB selection
- Up to 256 JOBS and 15 programs available
- Welding data monitoring: Current, voltage, wire feed speed, armature current
- Control voltage for main current, wire feeder, secondary current, pulse time and pause time
- Diagnostic interface for set up, problem analysis and operation of the Analyzer software
- Optionally available with signal conditioning for AVC using fast actual process values (V, I)
- Optional switching between several cold wire drive units

Type	Designation	Item no.		
Tetrix BUSINT X11 PLASMA PRO-FINET KUPFER ATCASE	PROFINET Copper industrial bus interface in casing, including potential-free voltage supply	090-008693-00000		
Tetrix BUSINT X11 ETHERNET IP ATCASE	ETHERNET IP industrial bus interface in casing, including potential-free voltage supply	090-008692-00000		
Tetrix BUSINT X11 Plasma INTERBUS LWL ATCASE	Interbus LWL industrial bus interface in casing, including potential-free voltage supply	090-008691-00000		
Tetrix BUSINT X11 PLASMA RUGGED LINE ATCASE	RUGGED LINE industrial bus interface in casing, including potential-free voltage supply	090-008623-00000		
Tetrix BUSINT X11 PLASMA PROFIBUS ATCASE	PROFIBUS industrial bus interface in casing, including potential-free voltage supply	090-008624-00000		
Tetrix BUSINT X11 PLASMA PRO-FINET LWL ATCASE	PROFINET LWL industrial bus interface in casing, including potential-free voltage supply	090-008625-00000		
Tetrix BUSINT X11 PLASMA CAN-OPEN ATCASE	CAN-OPEN industrial bus interface in casing, including potential-free voltage supply	090-008689-00000		
Tetrix BUSINT X11 PLASMA DEVICE NET ATCASE	DEVICE NET industrial bus interface in casing, including potential-free voltage supply	090-008690-00000		

■ Options/accessories

Factory-fit options	Item no.	PG
OW DV SWITCH T Operation of two wire feeders in automated systems	00001	
OW AVC Factory-fit option, AVC support	00002	



Options/accessories

Network cable

Plug for network cable
Cable stripping knife

Item no. **PG**

094-020407-00000

094-020409-00000

094-020408-00500

LAN Cable

Network cable, sold by the metre
For industrial use



Connection cable extension

Connection cable extension

FRV 7POL 0.5m

FRV 7POL 1m

FRV 7POL 5m

FRV 7POL 10m

FRV 7POL 15m

FRV 7POL 20m

FRV 7POL 25m



Item no. **PG**

092-000201-00004

092-000201-00002

092-000201-00003

092-000201-00000

092-000201-00005

092-000201-00001

092-000201-00007

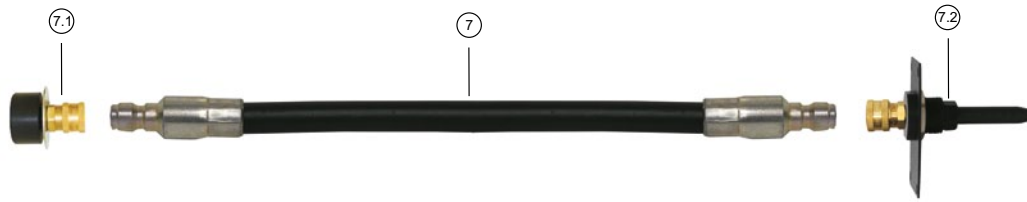


Overview

Accessories		Page	
Wire guide	Wire feed	WIRE LEAD	298
		WIRE LEAD SOFT	299
		WIRE CONDUIT	300
		MASTERLINER	301
		ROLLINER	302



■ Wire feed ■ WIRE LEAD

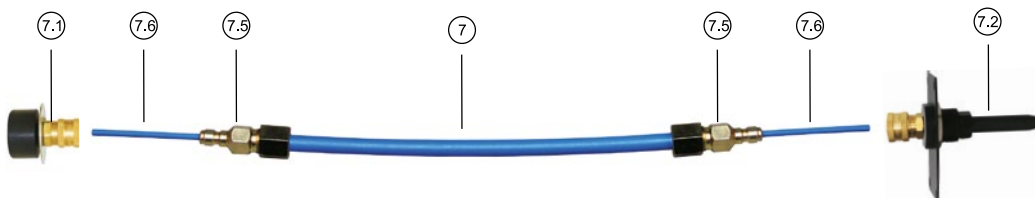


Wire lead

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

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
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 Rob 2 wire conduit	092-007913-00000
7.2	CONNECTOR DRIVE ROB3 WIRE LEAD	Connection set for Rob 3 wire conduit	092-007912-00000
-	CONNECTOR WIRE LEAD PRO	End piece wire guide for material sold by the metre	094-018278-00000

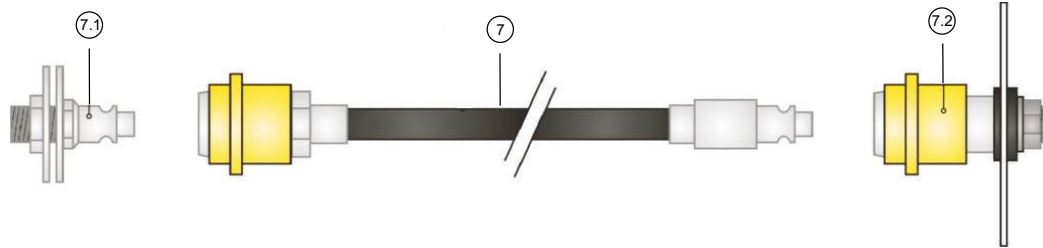
■ Wire feed ■ WIRE LEAD SOFT



Soft wire lead

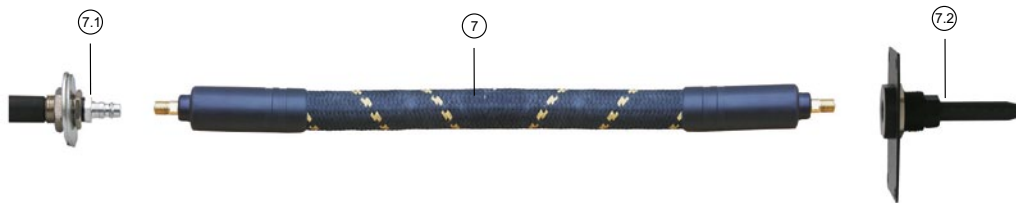
- For aluminium and stainless steel wire, round wires
- Outside dia.: 12 mm
- Wire dia. up to 1.6 mm

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 Rob 2 wire conduit	092-007913-00000
7.2	CONNECTOR DRIVE ROB3 WIRE LEAD	Connection set for Rob 3 wire conduit	092-007912-00000
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


Wire feed ■ WIRE CONDUIT

Wire conduit

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

Item	Type	Designation	Item no.
7	WIRE CONDUIT 1,8M	Wire guide	094-011515-00004
7	WIRE CONDUIT 3M		094-011515-00000
7	WIRE CONDUIT 4,5M		094-011515-00001
7	WIRE CONDUIT 8M		094-011515-00002
7	WIRE CONDUIT 12M		094-011515-00003
7.1	CONNECTOR BARREL	Connection for large spool/drum	094-011517-00000
7.1	CONNECTOR DV-CAB WIRE CONDUIT	DV-CAB connection	092-007741-00000
7.2	CONNECTOR DRIVE ROB2 WIRE CONDUIT	Connection set for Rob 2 wire conduit	092-008205-00000
7.2	CONNECTOR DRIVE ROB3 WIRE CONDUIT	Connection set for Rob 3 wire conduit	092-007916-00000

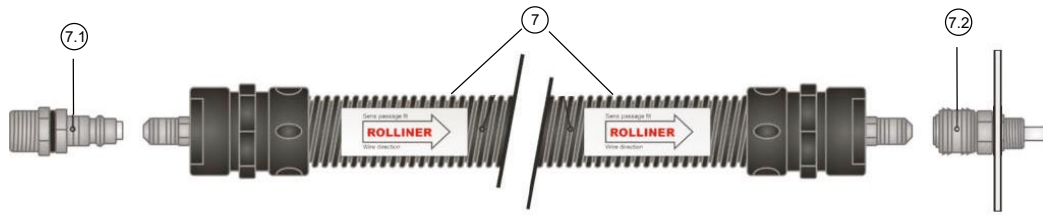
Wire feed ■ MASTERLINER

Masterliner HW

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

Item	Type	Designation	Item no.
7	Masterliner HD 4m	Wire guide	094-019127-00004
7	Masterliner HD 8m		094-019127-00000
7	Masterliner HD 10m		094-019127-00010
7	Masterliner HD 15m		094-019127-00015
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	Masterliner Connector Drive Rob2	Connection set for Rob 2 wire conduit	092-003639-00000
7.2	Masterliner Connector Drive Rob3	Connection set for Rob 3 wire conduit	092-003640-00000



■ Wire feed ■ ROLLINER



Rolliner HW

- For all material types, round wires
- Outside dia.: 50 mm
- Wire dia. up to 4.0 mm
- Weight: Approx. 600 g/m

Item	Type	Designation	Item no.
7	ROLLINER 5M		092-002575-00000
7	ROLLINER 10M		092-002575-00001
7	ROLLINER 15M	Wire guide with plastic rolls	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	ROLLINER CONNECTOR DRIVE ROB2	Connection set for Rob 2 wire conduit	092-007917-00000
7.2	ROLLINER CONNECTOR DRIVE ROB3	Connection set for Rob 3 wire conduit	092-007918-00000



Overview

Accessories		Page
		eFeed drive rolls
		Wire feed rolls
Accessories	Wire feed unit accessories	Wire spool holder
		Assembly consoles
		Intermediate hose packages

**eFeed drive rolls****FE 4DR4R 0.8****Colour**

White



Type	Designation	Colour	PU Units	Item no.	per PU
FE 4R 0.8 MM/0.03 INCH WHITE	Drive roll set, 37 mm, 4 rolls, V-groove for steel, stainless steel and brazing	White		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	4	092-002771-00008	
FUEL 4R 0.8 MM/0.03 INCH WHITE/ORANGE	Drive roll set, 37 mm, 4 rolls, V-groove/knurled for flux cored wire	White/orange		092-002848-00008	

► Four roll set

FE 4DR4R 1,0**Colour**

Blue



Type	Designation	Colour	PU Units	Item no.	per PU
FE 4R 1.0 MM/0.04 INCH BLUE	Drive roll set, 37 mm, 4 rolls, V-groove for steel, stainless steel and brazing	Blue		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	4	092-002771-00010	
FUEL 4R 1.0 MM/0.04 INCH BLUE/ORANGE	Drive roll set, 37 mm, 4 rolls, V-groove/knurled for flux cored wire	Blue/orange		092-002848-00010	

► Four roll set

FE 4DR4R 1,2**Colour**

Red



Type	Designation	Colour	PU Units	Item no.	per PU
FE 4R 1.2 MM/0.045 INCH RED	Drive roll set, 37 mm, 4 rolls, V-groove for steel, stainless steel and brazing	Red		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	4	092-002771-00012	
FUEL 4R 1.2 MM/0.045 INCH RED/ORANGE	Drive roll set, 37 mm, 4 rolls, V-groove/knurled for flux cored wire	Red/orange		092-002848-00012	

► Four roll set


FE 4DR4R 1,4
Colour

Green



Type	Designation	Colour	PU Units	Item no.	per PU
FE 4R 1.4 MM/0.052 INCH GREEN	Drive roll set, 37 mm, 4 rolls, V-groove for steel, stainless steel and brazing	Green	4	092-002770-00014	
FUEL 4R 1.4 MM/0.052 INCH GREEN/ORANGE	Drive roll set, 37 mm, 4 rolls, V-groove/knurled for flux cored wire	Green/orange		092-002848-00014	

► Four roll set

FE 4DR4R 1,6
Colour

Black



Type	Designation	Colour	PU Units	Item no.	per PU
FE 4R 1.6 MM/0.06 INCH BLACK	Drive roll set, 37 mm, 4 rolls, V-groove for steel, stainless steel and brazing	Black	4	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		092-002771-00016	
FUEL 4R 1.6 MM/0.06 INCH BLACK/ORANGE	Drive roll set, 37 mm, 4 rolls, V-groove/knurled for flux cored wire	Black/orange		092-002848-00016	

► Four roll set

FE 4DR4R 2,0
Colour

Grey



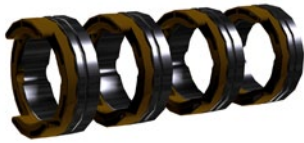
Type	Designation	Colour	PU Units	Item no.	per PU
FE 4R 2.0 MM/0.08 INCH GREY	Drive roll set, 37 mm, 4 rolls, V-groove for steel, stainless steel and brazing	Grey	4	092-002770-00020	
AL 4R 2.0 MM/0.08 INCH GREY/YELLOW	Drive roll set, 37 mm, 4 rollers, U-groove for aluminium	Grey/yellow		092-002771-00020	
FUEL 4R 2.0 MM/0.08 INCH GREY/ORANGE	Drive roll set, 37 mm, 4 rolls, V-groove/knurled for flux cored wire	Grey/orange		092-002848-00020	

► Four roll set

**eFeed drive rolls****FE 4DR4R 2,4**

Colour

Brown



Type	Designation	Colour	PU Units	Item no.	per PU
FE 4R 2.4 MM/0.095 INCH BROWN	Drive roll set, 37 mm, 4 rolls, V-groove for steel, stainless steel and brazing	Brown		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	4	092-002771-00024	
FUEL 4R 2.4 MM/0.095 INCH BROWN/ORANGE	Drive roll set, 37 mm, 4 rolls, V-groove/knurled for flux cored wire	Brown/orange		092-002848-00024	

► Four roll set

FE 4DR4R 2,8

Colour

Light green



Type	Designation	Item no.	PU Units	per PU
FE 4R 2.8 MM/0.11 INCH LIGHT GREEN	Drive roll set, 37 mm, 4 rolls, V-groove for steel, stainless steel and brazing	092-002770-00028	4	

► Four roll set

FE 4DR4R 3,2

Colour

Violet



Type	Designation	Item no.	PU Units	per PU
FE 4R 3.2 MM/0.12 INCH VIOLET	Drive roll set, 37 mm, 4 rolls, V-groove for steel, stainless steel and brazing	092-002770-00032	4	

► Four roll set



Wire feed rolls

FE 2DR4R



- Spare rolls for steel wire (standard steel model)
- Includes two drive rolls

Type	Designation	Ø wire mm	Roll diameter mm	PU Units	Item no.	per PU
FE 2DR4R 0.6+0.8	Drive roll set, 37 mm, for steel	0.6 - 0.8	37	2	092-000839-00000	
FE 2DR4R 0.8+1.0		0.8 - 1			092-000840-00000	
FE 2DR4R 0.9+1.2		0.9 - 1.2			092-000841-00000	
FE 2DR4R 1.0+1.2		1 - 1.2			092-000842-00000	
FE 2DR4R 1.2+1.6		1.2 - 1.6			092-000843-00000	

FE 1DR2R



- Spare rolls for steel wire (standard steel model)
- Includes one drive roll

Type	Designation	Ø wire mm	Roll diameter mm	Item no.	per unit
FE 1DR2R 0.6+0.8	Drive roll, 37 mm, for steel	0.6 - 0.8	37	094-003217-00000	
FE 1DR2R 0.8+1.0		0.8 - 1		094-003218-00000	
FE 1DR2R 1.0+1.2		1 - 1.2		094-003219-00000	

FE/AL 2GR4R



- Spare pressure rolls, steel, standard

Roll diameter

37 mm

Type	Designation	Item no.	PU Units	per PU
FE/AL 2GR4R	Pressure rolls, smooth, 37 mm	092-000844-00000	2	

AL 2ZR4R



- Replacement rolls for aluminium wire
- Includes two drive rolls

Type	Designation	Ø wire mm	Roll diameter mm	PU Units	Item no.	per PU
AL 2ZR4R 0.8+1.0	Drive roll set, 37 mm, for aluminium	0.8 - 1	37	2	092-000873-00000	
AL 2ZR4R 1.0+1.2		1 - 1.2			092-000828-00000	

**Wire feed rolls****AL 4ZR4R**

- Replacement rolls for aluminium wire
- Includes four drive rolls

Type	Designation	Ø wire mm	Roll diameter mm	PU Units	Item no.	per PU
AL 4ZR4R 0.8+1.0	Drive roll set, 37 mm, for aluminium	0.8 - 1	37	4	092-000869-00000	
AL 4ZR4R 1.0+1.2		1 - 1.2			092-000848-00000	
AL 4ZR4R 1.2+1.6		1.2 - 1.6			092-000849-00000	
AL 4ZR4R 2.4+3.2		2.4 - 3.2			092-000870-00000	

AL-Z-RO

- Replacement rolls for aluminium wire

Ø wire	0.8 mm - 1 mm
Roll diameter	37 mm

Type	Designation	Item no.	per unit
0.8+1.0/U/AL-Z-RO/37mm	Drive roll, 37 mm, for aluminium	094-005428-00000	

ROE 2DR4R

- Spare rollers flux cored wire
- Includes two drive rolls

Type	Designation	Ø wire mm	Roll diameter mm	PU Units	Item no.	per PU
ROE 2DR4R 0.8/0.9+0.8/0.9	Drive roll set, 37 mm, for flux cored wire	0.8 - 0.9	37	2	092-000834-00000	
ROE 2DR4R 1.0/1.2+1.4/1.6		1 - 1.2			092-000835-00000	
ROE 2DR4R 1.4/1.6+2.0/2.4		1.4 - 1.6			092-000836-00000	
ROE 2DR4R 2.8+3.2		2.8			092-000837-00000	

ROE 2GR4R

- Replacement pressure rollers for flux cored wire

Roll diameter	37 mm
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Type	Designation	Item no.	per unit
ROE 2GR4R	Pressure roll, knurled, 37 mm	092-000838-00000	

WFROLL

Ø wire	1.2 mm
Roll diameter	20 mm

Type	Designation	Item no.	per unit
WFROLL 1.2mm	Wire feed roll, smooth	094-018246-00000	



■ Wire spool holder

DV-CAP WALL

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



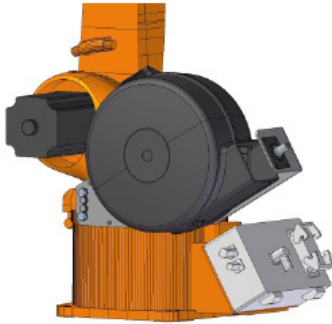
Type	Designation	Item no.		per unit
DV-CAP WALL	Wall holder for wire spools, including pin and accessories	092-001985-00000		

AK300

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



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

**Overview for wire spool holder – 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

Item no.	Robot brand	Robot type
092-003251-00000	ABB	IRB 1410
092-002558-00000	ABB	IRB 1600
092-003252-00000	ABB	IRB 2400_10
092-003253-00000	ABB	IRB 2600 12-165
092-003253-00000	ABB	IRB 2600-12-185
092-003254-00000	ABB	IRB 4600
092-003255-00000	ABB	IRB 1520 ID
092-002558-00000	ABB	IRB 1600 ID
092-003255-00000	ABB	IRB 1620 ID
092-003253-00000	ABB	IRB 2600 ID
092-003253-00000	ABB	IRB 2600 ID-8-200
092-003256-00000	COMAU	RACER 999
092-003257-00000	COMAU	SMART5
*	FANUC	Mate 0iB
*	FANUC	50iD
*	FANUC	50iD 7L
092-003258-00000	FANUC	R-2000iA
092-003259-00000	FANUC	M-710iC 12L
092-002559-00000	FANUC	100 iC
092-002559-00000	FANUC	100 iC 12
092-002559-00000	FANUC	100 iC/12S
092-002559-00000	FANUC	100 iC 7L
092-002559-00000	FANUC	100 iC 8L
092-002580-00000	FANUC	120 iC
092-002580-00000	FANUC	120 iC/12L
092-002580-00000	FANUC	M-20iA12L
092-002580-00000	FANUC	M-20iA-20M2
092-002580-00000	FANUC	M-20iA-35M2
092-003260-00000	Kawasaki	FS10L
092-003261-00000	Kawasaki	RA010L



Item no.	Robot brand	Robot type
092-002558-00000	KUKA	KR5
092-003207-00000	KUKA	KR16
092-003262-00000	KUKA	KR30L16
092-003263-00000	KUKA	KR6 R1820 HP
092-003263-00000	KUKA	KR8 R1620 HP
092-003263-00000	KUKA	KR10 R1420 HP
092-002558-00000	KUKA	KR5 ARC HW
092-002558-00000	KUKA	KR16 ARC HW
092-003207-00000	KUKA	KR16L8 ARC HW
092-003263-00000	KUKA	KR6 R1820 HW
092-003263-00000	KUKA	KR8 1420 HW
092-003263-00000	KUKA	KR8 R1620 HW
092-001250-00000	Motoman	HP20
092-001250-00000	Motoman	HP20D-6
092-001250-00000	Motoman	HP20D
092-001250-00000	Motoman	HP20RD
092-001250-00000	Motoman	HP20F
092-001250-00000	Motoman	HP20F-CR7
*	Motoman	MH5
*	Motoman	MH5L
*	Motoman	MH6
*	Motoman	MH6-10
*	Motoman	MH6S
*	Motoman	MH6S-10
092-003264-00000	Motoman	MH50
092-003264-00000	Motoman	MH50-20
092-003264-00000	Motoman	MH50-35
092-002558-00000	Motoman	EA1400
092-001250-00000	Motoman	EA1800
092-001250-00000	Motoman	EA1900
092-002558-00000	Motoman	MA1400
092-003210-00000	Motoman	MA1440
092-002558-00000	Motoman	MA1550
092-001250-00000	Motoman	MA1800
092-001250-00000	Motoman	MA1900
092-003210-00000	Motoman	MA2010
092-002558-00000	Motoman	VA1400
092-003265-00000	Motoman	MH24
092-003266-00000	REIS	RV10-6
092-003266-00000	REIS	RV20-6

*Robot too small or poor fastening capability for the wire spool holder. Use external DV-CAP wall holder.



Assembly consoles

MONTAGE CONSOLE ROB2



- Console for Drive 4 Rob 2, Rob 2 MF and Rob Highspeed for fixing onto the robot arm
- Strain relief for EWM intermediate hose packages
- Fits on the 3rd robot axis
- Insulated assembly

Robot types

FANUC ARC Mate 100iC/120iC/M-710iC/20L
 Kawasaki FS
 KUKA KR5/KR6/KR16
 MOTOMAN HP6/HP20
 OTC
 Panasonic
 Reis RV

Type	Designation	Item no.	per unit
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



- Console for Drive 4 Rob 3, left or right versions, for fixing onto the robot arm
- Strain relief for EWM intermediate hose packages
- Fits on the 3rd robot axis
- Insulated assembly

Robot types

FANUC ARC Mate 100iB/120iB
 Kawasaki FS
 KUKA KR5/KR6/KR16
 MOTOMAN HP6/HP20
 OTC
 Panasonic
 Reis RV

Type	Designation	Item no.	per unit
MONTAGE CONSOLE ROB 3 UNIVERSAL	Mounting console for wire feed unit	092-002440-00000	

► Other robot-specific mounting consoles available on request!

MONTAGE CONSOLE UNIVERSAL



- Console for Drive 4 Rob 2, Rob 2 MF and Rob Highspeed for fixing onto the robot arm
- Strain relief for EWM intermediate hose packages
- Fits on the 3rd robot axis
- Insulated assembly

Type	Designation	Robot types	Item no.	per unit
MONTAGE CONSOLE ABB IRB 1600	Mounting console for wire feed unit	ABB IRB 1600	092-002562-00000	
MONTAGE CONSOLE ABB 2600-12-165/185		ABB IRB 2600-12-165	092-002793-00000	
		ABB IRB 2600-12-185		



MONTAGE CONSOLE ROB3 2 DV



- Console for Drive 4 Rob 3, to hold two wire feed units
- Strain relief for EWM intermediate hose packages
- Fits on the 3rd robot axis
- Insulated assembly

Robot types

FANUC ARC Mate 100iB/120iB
KUKA KR5/KR6/KR16
MOTOMAN HP6/HP20

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

► Other robot-specific mounting consoles available on request!

MONTAGE CONSOLE HW



- Mounting console for hollow shaft robot
- Console for mounting on the rear of the robot
- Insulated assembly
- **Only suitable for Drive 4 Rob 3 left side wire feed unit**

Type	Designation	Robot types	Item no.	per unit
MONTAGE CONSOLE ROB3 KUKA KR5 HW	Mounting console for wire feed unit	KUKA KR5 Arc HW	092-002441-00000	
MONTAGE CONSOLE ROB3 KUKA KR 16 HW		KUKA KR 16 arc HW	092-003641-00000	
MONTAGE CONSOLE ROB3 ABB IRB 1600ID		KUKA KR 16 L8 arc HW ABB IRB 1600	092-002563-00000	
MONTAGE CONSOLE ROB3 ABB IRB 15200ID		ABB IRB 1520ID	092-007909-00000	
MONTAGE CONSOLE ROB3 FANUC ARC Mate 100iC/120iC		FANUC ARC Mate 100iC/120iC	092-002497-00000	
MONTAGE CONSOLE ROB3 MOTOMAN EA1800/1900		MOTOMAN EA1800/EA1900	092-002507-00000	
MONTAGE CONSOLE ROB3 MOTOMAN EA1400/SSA200		MOTOMAN EA1400/SSA2000	092-002506-00000	
MONTAGE CONSOLE ROB3 MOTOMAN MA1440/2010/MH24		MOTOMAN MA 1440 MOTOMAN MA 2010 MOTOMAN MH24	092-002877-00000	
MONTAGE CONSOLE ROB3 COMAU SMART5 ARC4		Comau SMART5 ARC4	092-003073-00000	

► Other robot-specific mounting consoles available on request!

MONTAGE CONSOLE HW



- Mounting console for hollow shaft robot
- Console for mounting on the rear of the robot
- Insulated assembly
- **Only suitable for right-side Drive 4 Rob 3 wire feeder**

Robot types

FANUC M710iC-12L

Type	Designation	Item no.	per unit
MONTAGE CONSOLE ROB3 FANUC M-710iC-12L	Mounting console for wire feeder drive 4 Rob 3 RE	092-003075-00000	

► Other robot-specific mounting consoles available on request!



Wire feed unit and intermediate hose package accessories

Item numbers and price calculation for robot intermediate hose packages and control lead packages (SLP)

An item code is needed to order robot intermediate hose packages /control cable assembly. It forms the final five digits of the item number. These correspond to the configuration of the hose package. The basic price refers to a hose package length of 1 m.

Codes for robot intermediate hose packages Basic item number: 092-007855-**ABCDD**

Position in item no.	Code	Name
A	0	70 mm ²
	1	95 mm ²
	2	2*95 mm ² , Screw-in power connection
	3	VSLP TORCHBOX
	4	VSLP TORCHBOX + WF
	5	SLP 7/12 pol
	6	SLP 7/12 pol hotwire
	7	VSLP PIPETRUCK
	8	VSLP TORCHBOX + WF + HW / TIGSPEED ▶ only with or without ribbed protective hose, no standard protective hose
B	0	Gas-cooled (not at SLP)
	1	Water-cooled (always at VSLP)
	2	without gas or water (when using hose assembly)
C	0	No protective hose
	1	Standard protective hose (not at 2* 95QMM)
	2	Ribbed protective hose
DD	01-30; at VSLP 1-15	Indication of length (1 m included in basic price) Intermediate hose package Control cable assembly

▶ All intermediate hose packages are equipped with the 7-pole and 12-pole control cable.

Sample calculations:

95 mm² intermediate hose package, water-cooled, no protective hose, 10 m

Position in item no.	Code	Name
A	1	95 mm ²
B	1	Water-cooled
C	0	No protective hose
DD	10	Length 10 m

092-007855- **1 1 0 10**

Control lead package, ribbed protective hose, 12 m

Position in item no.	Code	Name
A	5	SLP 7/12 pol
B	2	without gas or water
C	2	Ribbed protective hose
DD	12	Length 12 m

092-007855- **5 2 2 12**

▶ If a control lead package is used, the coding for Position B will always be 2.



Intermediate hose packages

70QMM G 7/12POL



- The gas hoses are diffusion-proof according to EN 559
- Highly flexible and durable
- Intermediate hose package, 7-/12-pole
- Resistant to even high lateral and torsion forces

Type	Designation	Hose package length m	Cross-section mm ²	Item no.	per unit
70QMM GS 7/12 POL 3M	Robot intermediate hose	3.0	70	092-007855-00103	
70QMM GS 7/12 POL 5M	package, gas cooled, standard protective hose, 7/12-pole	5.0		092-007855-00105	
70QMM WS 7/12POL 3M	Robot intermediate hose	3.0	95	092-007855-01103	
70QMM WS 7/12POL 5M	package, water cooled, standard protective	5.0		092-007855-01105	
95QMM WS 7/12 POL 3M	standard protective	3.0	95	092-007855-11103	
95QMM WS 7/12 POL 5M	hose, 7/12-pole	5.0		092-007855-11105	

95QMM x 2



- The gas hoses are diffusion-proof according to EN 559
- Highly flexible and durable
- Used on Phoenix 1002 and M drive 4 HS
- Intermediate hose package with ribbed hose
- Screw-in power connection
- Resistant to even high lateral and torsion forces

Hose package length	5 m
Cross-section	95 mm ²
Version	Ribbed hose

Type	Designation	Item no.	per unit
2x95QMM WR 7/12POL 5M	Robot intermediate hose package, 2 x 95 sq mm, water cooled, ribbed hose, 7/12-pole	092-007855-21205	

95QMM WR 7/12POL



- The gas hoses are diffusion-proof according to EN 559
- Highly flexible and durable
- Intermediate hose package with ribbed hose
- Resistant to even high lateral and torsion forces

Hose package length	5 m
Version	Ribbed hose

Type	Designation	Cross-section mm ²	Item no.	per unit
70QMM GR 7/12 POL 5M	Robot intermediate hose package, gas cooled, ribbed hose, 7/12-pole	70	092-007855-00205	
95QMM WR 7/12 POL 5M	Robot intermediate hose package, water cooled, ribbed hose, 7/12-pole	95	092-007855-11205	



SLP 7+12 2,5M

Type	Designation	Hose package length m	Version	Item no.	per unit
SLP HW S 7/12 POL 5M	Control cable, standard protective hose	5.0	ROB HOTWIRE	092-007855-62105	
SLP S 7/12 POL 5M			Standard protective hose	092-007855-52105	
SLP S 7+12 12M		12.0		092-007855-52112	
SLP 7+12 5M	Control cable assembly	5.0	Without protective hose	092-007855-52005	

ON ZWIPA-CONNECTION



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

LS KV D=60MM

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

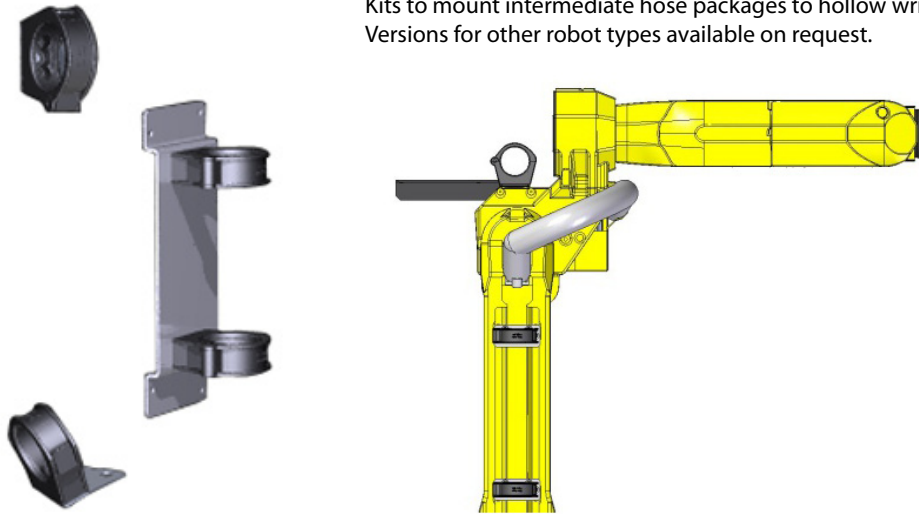
► Minimum order quantity: 5 m



Overview for intermediate hose packages

MONTAGE SET ZWIPA

Kits to mount intermediate hose packages to hollow wrist robots.
Versions for other robot types available on request.



Item no.	Robot brand	Robot type	Robot type 3rd axis
092-007910-00000	ABB	IRB 1520 ID	Hollow shaft
092-002569-00000	ABB	IRB 1600 ID	Hollow shaft
092-007910-00000	ABB	IRB 1620 ID	Hollow shaft
092-003056-00000	ABB	IRB 2600 ID	Hollow shaft
092-003056-00000	ABB	IRB 2600 ID-8-200	Hollow shaft
092-003228-00000	ABB	IRb 4600	Hollow shaft
092-003072-00000	COMAU	SMART5	Hollow shaft
			Hollow shaft
092-003246-00000	FANUC	M-710iC 12L	Hollow shaft
092-002567-00000	FANUC	100 iC	Hollow shaft
092-002567-00000	FANUC	100 iC 12	Hollow shaft
092-003247-00000	FANUC	100 iC/12S	Hollow shaft
092-002567-00000	FANUC	100 iC 7L	Hollow shaft
092-002567-00000	FANUC	100 iC 8L	Hollow shaft
092-002581-00000	FANUC	120 iC	Hollow shaft
092-002581-00000	FANUC	120 iC/12L	Hollow shaft
092-002581-00000	FANUC	M-20iA12L	Hollow shaft
092-002581-00000	FANUC	M-20iA-20M2	Hollow shaft
092-002581-00000	FANUC	M-20iA-35M2	Hollow shaft
092-002510-00000	KUKA	KR5 ARC HW	Hollow shaft
092-003070-00000	KUKA	KR16L8 ARC HW	Hollow shaft
092-003248-00000	KUKA	KR6 R1820 HW	Hollow shaft
092-003248-00000	KUKA	KR8 1420 HW	Hollow shaft
092-003248-00000	KUKA	KR8 R1620 HW	Hollow shaft



Wire feed unit accessories

Item no.	Robot brand	Robot type	Robot type 3rd axis
092-002566-00000	Motoman	EA1400	Hollow shaft
092-002564-00000	Motoman	EA1800	Hollow shaft
092-002564-00000	Motoman	EA1900	Hollow shaft
092-002566-00000	Motoman	MA1400	Hollow shaft
092-002879-00000	Motoman	MA1440	Hollow shaft
092-002566-00000	Motoman	MA1550	Hollow shaft
092-002564-00001	Motoman	MA1800	Hollow shaft
092-002564-00001	Motoman	MA1900	Hollow shaft
092-002880-00000	Motoman	MA2010	Hollow shaft
092-003250-00000	Motoman	VA1400	Hollow shaft
092-003249-00000	Motoman	MH24	Hollow shaft



■ Overview

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Machine and welding torch accessories	Cooling units	Cool-Serie	320
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	Service accessories	Service accessories	334
	Software and hardware	PC300, Analyzer, QDOC, Xnet, WPQ Manager	340

**Cool-Serie****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 output	1600 W (1l/min)
Flow rate	5 l/min
Tank capacity	7 l
Coolant outlet pressure	3.5 bar
Dimensions cooling unit in mm	650 x 370 x 250
Weight, cooling unit	ca.24 kg

Type	Designation	Item no.			per unit
cool82 U44	Cooling unit for robot machines	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 output	1600 W (1l/min)
Flow rate	5 l/min
Tank capacity	7 l
Coolant outlet pressure	3.5 bar
Dimensions cooling unit in mm	650 x 370 x 250
Weight, cooling unit	ca.24 kg

Type	Designation	Item no.			per unit
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 performance Recommended for hoses over 15 m in length, etc.

Cooling output	1800 W (2l/min) 1600 W (1l/min)
Flow rate	20 l/min
Tank capacity	7 l
Coolant outlet pressure	4.5 bar
Dimensions cooling unit in mm	650 x 370 x 250
Weight, cooling unit	27.5 kg

Type	Designation	Item no.			per unit
cool82 U45	Cooling unit for robot machines, 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 performance Recommended for hoses over 15 m in length, etc.

Cooling output	1800 W (2l/min)
	1600 W (1l/min)
Flow rate	20 l/min
Tank capacity	7 l
Coolant outlet pressure	4.5 bar
Dimensions cooling unit in mm	650 x 370 x 250
Weight, cooling unit	27.5 kg

Type	Designation	PU Units	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	1	090-008280-13502		

ON FILTER COOL

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

KF 23E-10


Freezing point	-10 °C
Contents	9.3 l

Type	Designation	Item no.			per unit
KF 23E-10, -10	Coolant (-10 °C), 9.3 l	094-000530-00000			

KF 23E-200, -10°


Freezing point	-10 °C
Contents	200 l

Type	Designation	Item no.			per unit
KF 23E-200, -10	Coolant (-10 °C), 200 l	094-000530-00001			

**RK-Serie****RK 1**

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

Cooling output	900 W
Tank capacity	6 l
Dimensions cooling unit in mm	565 x 440 x 345
Weight, cooling unit	42 kg
Mains voltage	1 x 230 V

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

RK 2/3

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

Tank capacity	15 l
Dimensions cooling unit in mm	750 x 450 x 500
Weight, cooling unit	85 kg

Type	Designation	Cooling output W	Mains voltage V	Item no.	per unit
RK 2	Recooling unit	2000	1 x 230	094-002284-00000	
RK 3		2700	3 x 400	094-002285-00000	

RK 2.1/3.1

- High-performance recooling unit with fully thermal motor compressor
- Temperature control and LED display
- Connections at rear
- Heavy-duty 8 bar pump, temperature-controlled fan
- Coolant drain valve and coolant level indicator

Tank capacity	15 l
Dimensions cooling unit in mm	750 x 450 x 500
Weight, cooling unit	85 kg

Type	Designation	Cooling output W	Mains voltage V	Item no.	per unit
RK 2.1	Recooling unit with boosted pump 8 bar	2000	1 x 230	094-002284-02000	
RK 3.1		2700	3 x 400	094-002285-02000	

KF 23E-10

Freezing point	-10 °C
Contents	9.3 l

Type	Designation	Item no.	per unit
KF 23E-10, -10	Coolant (-10 °C), 9.3 l	094-000530-00000	


KF 23E-200, -10°

Freezing point

-10 °C

Contents

200 l

Type	Designation	Item no.	per unit
KF 23E-200, -10	Coolant (-10 °C), 200 l	094-000530-00001	

ON DFW RK


- Connection for flow monitor FL200 at RK 1-3

Type	Designation	Item no.	per unit
ON DFW RK	Flow monitor connection, retrofit option	092-008266-00000	

HOSE BRIDGE


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

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



■ 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 x 495 x 200

Trolley weight 28.5 kg

Type	Designation	Item no.		per unit
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 x 495 x 200

Trolley weight 28.5 kg

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

► For power sources without pre-installed pallet



Torch cleaning

BRS COMP



- System comprising torch cleaning station, spraying unit and wire cutter
- Precise and effective cleaning for nearly all robot welding torches
- Tried-and-tested cutting principle works even on tough spatters
- Precise fixing of the gas nozzle via 3-point clamp
- Targeted, economical spraying of anti-spatter spray
- Rugged and compact design

Type	Designation	Diameter mm	Item no.	per unit
BRS COMP	Torch cleaning station		094-016560-00000	
CUT MTR242W NW=15,5MM			094-016577-00500	
CUT MTR360G NW=16MM			094-016566-00500	
CUT MTR360G NW=14MM			094-016570-00500	
CUT MTR500G NW=16MM	Cutter	-	094-016573-00500	
CUT MTR500W NW=15,5MM			094-010274-00500	
FR 500W GD NW=15,5 L=72MM			094-021222-00000	
FR 500G GD NW=16 L=72MM			094-022396-00000	
PRIS 21		21	094-010292-00500	
PRIS 22	Standard protective hose	22	094-016561-00500	
PRIS 25		25	094-010294-00500	
PRIS 28		28	094-010296-00500	

**Collision sensor****CAT2-XL**

- Collision sensor
- Rotatable and adjustable in all directions
- Perfectly suited for precision applications on thin metal sheets
- Fits all robot types (using aluminium or plastic intermediate flange)

Version	CAT2-XL
Dimensions in mm	75 x 65 x 87
Weight (including bracket and flange)	850 g

Type	Designation	Item no.			per unit
CAT2-XL	Collision sensor	094-008501-00500			

CAT2XL HL

- Collision sensor
- Rotatable and adjustable in all directions
- Perfectly suited for precision applications on thin metal sheets
- Fits all robot types (using aluminium or plastic intermediate flange)

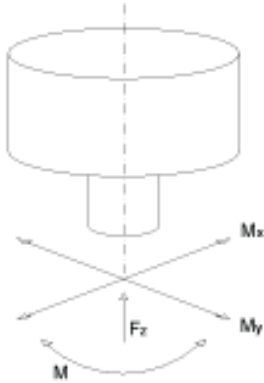
Version	CAT2-XL/HL
Dimensions in mm	75 x 65 x 87
Weight (including bracket and flange)	850 g

Type	Designation	Item no.			per unit
CAT2-XL/HL	Collision sensor	094-012838-00000			



Collision sensor

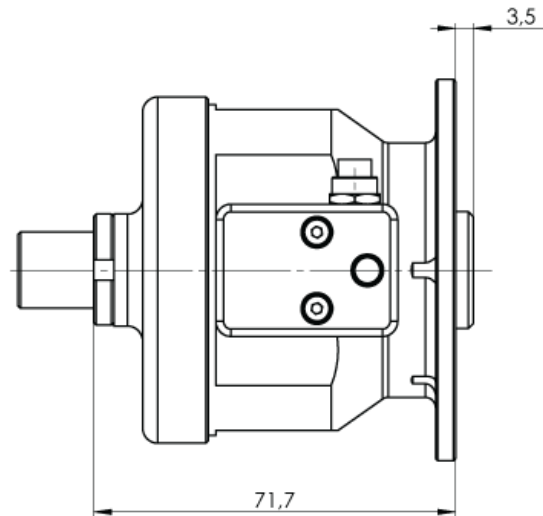
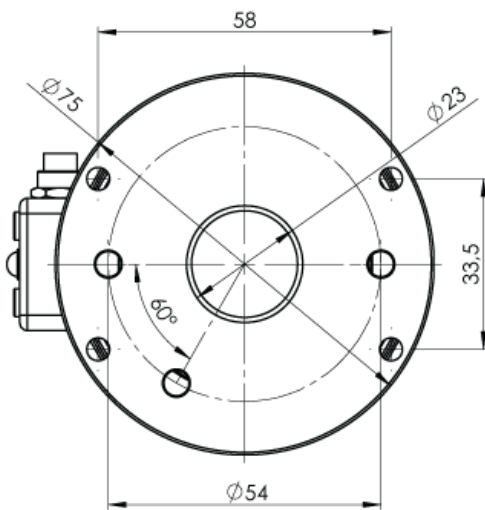
RSA



- Collision sensor for the robot, welding torch or the rig in teach or automatic mode
- Orientation in all directions
- High reset precision after orientation
- Precise switch points
- Visual function display (LED)
- Three triggering characteristics
- Low weight
- Scope of supply: Collision sensor, bracket, helix cable, assembly material

Type	Soft	Medium	Strong
Principle	mechanical		
Cut-out	Opening contact max. 24V / 20 mA		
Resetting (automatic)	+/- 0,2 mm at 400 mm distance to the flange		
Orientation	+/- 14°		
Rotatable	360°		
Release torque (Mx, My)	7,5 Nm	14,0 Nm	33 Nm
Torsion (M)	8,0 Nm	11,0 Nm	22 Nm
Weight	560 g		

Type	Designation	Item no.
RSA SOFT	Collision sensor	094-020725-00000
RSA MEDIUM		094-020726-00000
RSA STRONG		094-020727-00000





Robot intermediate flange

Robot flange for RSA/CAT2



- Intermediate flange for fastening RSA and CAT2 robot collision sensors
 - Intermediate flange made of plastic or aluminium
- Please specify the robot type with each order.
- Please use plastic flanges only for the MTR360G and MTR500G torch series.

Robot brand	Robot type	Item number			Item number		
		Intermediate flange RSA/CAT2, aluminium			Intermediate flange RSA/CAT2, plastic		
ABB	IRB 1410	094-010198-00000			094-013347-00000		
ABB	IRB 1600	094-010198-00000			094-013347-00000		
ABB	IRB 2400_10	094-020593-00000			094-020981-00000		
ABB	IRB 2600 12-165	094-020593-00000			094-020981-00000		
ABB	IRB 2600-12-185	094-020593-00000			094-020981-00000		
ABB	IRB 4600	094-020593-00000			094-020981-00000		
ABB	IRB 1520 ID	094-022612-00000			094-016371-00000		
ABB	IRB 1600 ID	*			094-022615-00000		
ABB	IRB 1620 ID	*			094-022615-00000		
ABB	IRB 2600 ID	094-022612-00000			094-016371-00000		
ABB	IRB 2600 ID-8-200	094-022612-00000			094-016371-00000		
COMAU	RACER 999	094-013011-00000			094-022616-00000		
COMAU	SMART5	*			*		
FANUC	Mate 0iB	094-016556-00000			094-016367-00000		
FANUC	50iD	094-010198-00000			094-013347-00000		
FANUC	50iD 7L	094-010198-00000			094-013347-00000		
FANUC	R-2000iA	094-022613-00000			094-016373-00000		
FANUC	M-710iC 12L	094-022614-00000			094-022618-00000		
FANUC	100 iC	094-020737-00000			094-013478-00000		
FANUC	100 iC 12	094-020737-00000			094-013478-00000		
FANUC	100 iC/12S	094-020737-00000			094-013478-00000		
FANUC	100 iC 7L	094-020737-00000			094-013478-00000		
FANUC	100 iC 8L	094-020737-00000			094-013478-00000		
FANUC	120 iC	094-020737-00000			094-013478-00000		
FANUC	120 iC/12L	094-020737-00000			094-013478-00000		
FANUC	M-20iA12L	094-020737-00000			094-013478-00000		
FANUC	M-20iA-20M2	094-020737-00000			094-013478-00000		
FANUC	M-20iA-35M2	094-020737-00000			094-013478-00000		
Kawasaki	FS10L	094-020594-00000			094-022617-00000		
Kawasaki	RA010L	094-020594-00000			094-022617-00000		



KUKA	KR5	094-010198-00000			094-013347-00000		
KUKA	KR16	094-010150-00000			094-016554-00000		
KUKA	KR30L16	094-010150-00000			094-016554-00000		
KUKA	KR6 R1820 HP	094-022420-00000			094-022421-00000		
KUKA	KR8 R1620 HP	094-022420-00000			094-022421-00000		
KUKA	KR10 R1420 HP	094-022420-00000			094-022421-00000		
KUKA	KR5 ARC HW	*			094-022621-00000		
KUKA	KR16 ARC HW	094-022832-00000			094-022833-00000		
KUKA	KR16L8 ARC HW	*			094-022621-00000		
KUKA	KR6 R1820 HW	*			*		
KUKA	KR8 1420 HW	*			*		
KUKA	KR8 R1620 HW	*			*		
Motoman	HP20	094-010198-00000			094-022616-00000		
Motoman	HP20D-6	094-013011-00000			094-022616-00000		
Motoman	HP20D	094-013011-00000			094-022616-00000		
Motoman	HP20RD	094-013011-00000			094-022616-00000		
Motoman	HP20F	094-013011-00000			094-022616-00000		
Motoman	HP20F-CR7	094-013011-00000			094-022616-00000		
Motoman	MH5	094-022622-00000			094-022623-00000		
Motoman	MH5L	094-022420-00000			094-022421-00000		
Motoman	MH6	094-010198-00000			094-013347-00000		
Motoman	MH6-10	094-010198-00000			094-013347-00000		
Motoman	MH6S	094-010198-00000			094-013347-00000		
Motoman	MH6S-10	094-010198-00000			094-013347-00000		
Motoman	MH50	094-022612-00000			094-016371-00000		
Motoman	MH50-20	094-010198-00000			094-013347-00000		
Motoman	MH50-35	094-022612-00000			094-016371-00000		
Motoman	EA1400	094-020737-00000			094-013478-00000		
Motoman	EA1800	094-020737-00000			094-013478-00000		
Motoman	EA1900	094-020737-00000			094-013478-00000		
Motoman	MA1400	094-020737-00000			094-013478-00000		
Motoman	MA1440	094-020737-00000			094-013478-00000		
Motoman	MA1550	094-020737-00000			094-013478-00000		
Motoman	MA1800	094-020737-00000			094-013478-00000		
Motoman	MA1900	094-020737-00000			094-013478-00000		
Motoman	MA2010	094-020737-00000			094-013478-00000		
Motoman	VA1400	094-020737-00000			094-013478-00000		
Motoman	MH24	094-020737-00000			094-013478-00000		
REIS	RV10-6	094-010150-00000			094-016554-00000		
REIS	RV20-6	094-010150-00000			094-016554-00000		

*Other intermediate flanges available on request.



Service accessories

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.	per unit
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.	per unit
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	Item no.	per unit
SERVICE CASE SC01	–	092-007782-00001	
SERVICE CASE SC02	Assortment box 2: Rotary dials and covers, gas valves, spacers, lifting eyes	092-007783-00001	
SERVICE CASE SC03	–	092-007784-00001	
SERVICE CASE SC04	–	092-007785-00001	
SERVICE CASE SC05	–	092-007787-00001	
SERVICE CASE SC06	–	092-007788-00001	
SERVICE CASE SC07	–	092-007789-00001	
SERVICE CASE SC08	–	092-007790-00001	


Calibration device


- Calibration device, portable
- Measurement data recording for mains input current, mains input voltage
- Measurement data display: One ammeter each for the mains currents, one voltmeter with changeover switch for the mains voltages
- Measurement data recording for actual value welding current and welding voltage
- Digital measurement data display for welding current and welding voltage
- Digital instrument for ambient temperature
- Measuring circuit for measuring the open circuit voltage as per IEC 60974
- Included: Two measuring lines for external voltage metering (2 m), four connection cables for calibration (4 m)

Mains voltage (tolerances)	3 x 400 V
Mains fuses (slow-blow)	3 x 32 A
Dimensions in mm	625 x 300 x 535
Weight	25 kg

Type	Designation	Item no.		
KLE 2	Calibration device	090-008297-00502		
KOS60	Calibration costs per welding machine	KOS-S00018-00000		
-	Calibration certificate	KOS-V00038-00000		

Miete KLE

Type	Designation	Item no.			per unit
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


- Load-simulation equipment up to 600 A, mobile
- The load voltage can be adjusted for MIG/MAG, TIG and MMA

Mains voltage (tolerances)	3 x 400 V
Mains fuses (slow-blow)	3 x 32 A
Dimensions in mm	1110 x 550 x 890
Weight	139,5 kg

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

TESTO 470


- Measurements of rotation speeds, speeds and lengths
- 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.			per unit
TESTO 470	Measuring instrument for rotational speeds, velocities and lengths	098-005120-00000			

**Service accessories****A/V EN 1090**

- External indication unit for welding current (A) and welding voltage (V)
- For retrofitting all welding machines without digital control
- Fastening by means of hooks at lifting eyes of the welding machine or by means of magnets

Mains voltage (tolerances)	1 x 230 V (-25 % - +20 %)
Mains fuses (slow-blow)	1 x 16 A
Dimensions in mm	390 x 270 x 110
Weight	5 kg

Type	Designation	Item no.		
A/V EN1090	Display unit for non digital welding machines within the scope of EN 1090	090-008788-00000		



A3-SH SET



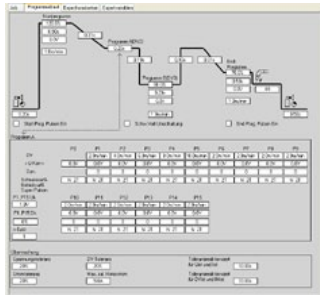
- Test machine with CE mark for repetition tests as per IEC/EN 60974-4 and VDE 0701-0702 for arc welding machines as follows: Single phase machines with 230 V connection voltage, three-phase machines between 230 V and 500 V
- All measurements performed according to IEC/EN 60974-4
- Special test routines for EWM machines
- Universal test routines also for testing other manufacturers' machines
- Extensive database functions
- Test logs printed with your customer logo
- **Scope of supply:**
 - Test Machine A3-SH
 - Measuring leads
 - 230 V connecting cable/AC
 - Control/testing/logging software
 - Test log as per IEC/EN 60974-4 and VDE 0701-0702
 - Free software upgrades for changes or modifications to test procedures
 - EWM specific software with test programs (EWM machines and machines by other manufacturers)

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



PC300, Analyzer, QDOC, Xnet, WPQ Manager

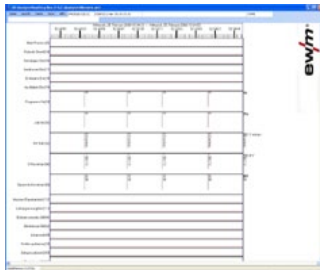
PC300.Net



- Welding parameter software
- Windows interface makes operation straightforward
- Structured operating menus and levels for changing, setting and programming all welding parameters
- Management of 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, WF 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.	per unit
PC300.Net Set	PC300.Net welding parameter software set incl. CMSTICK, cable and interface SECINT X10 USB	090-008777-00000	

ANALYZER



- Analysis software for control data
- Can be used with BUSINT X11 fieldbus interfaces for the alpha Q, Phoenix and Tetrax welding systems
- Can be used with RINT X12 analogue/digital interfaces for the alpha Q, Phoenix and Tetrax 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

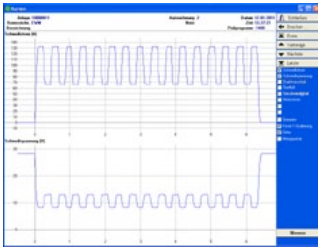
Type	Designation	Item no.	per unit
ANALYZER	Software for control and status signal analysis	090-008778-00000	

Set PC300/ANALYZER



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

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


Set QDOC9000-2


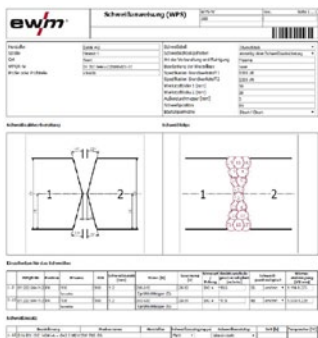
- Welding data documentation software
- Windows interface makes operation straightforward
- Quality control for welding production
- Suitable for creating welding instructions
- Also ideal for welding tasks requiring documentation
- Important tool in welding training
- Recording, monitoring and documentation 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.		per unit
QDOC9000 V2.0	Set consisting of interface, documentation software, connection lead	090-008713-00000		

xNet 1.0


- QM software for analysing of welding processes
- Record, view and analyse welding data
- Fast identification of disruptive factors thanks to realtime monitoring
- Suitable for manual, automated and robot -controlled applications
- Network can be expanded to any number of welding machines and computers
- Customisable user and machine management
- Ethernet networking, Wi-Fi also possible

Type	Designation	Item no.		per unit
ewm Xnet Starter-Set	Set: QM software, a dongle (contains the installation files and software licence)	091-008788-00001		

WPQ Manager


- Most simple and efficient WPS creation and management
- Graphical seam definition (runs/passes)
- Graphics editor for seam preparation
- The software is available as a module for ewm Xnet (WPQ-X Manager) or as a stand-alone package (WPQ Manager)
- Advantages of integration into Xnet: Seam/WPS assignment, automatic process control by WPS specifications

Type	Designation	Item no.		per unit
WPQ-Manager	Software for WPS creation and management	090-008813-00000		
WPQ-X-Manager	Xnet software module for WPS creation and management	090-008814-00000		



■ 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

- 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	092-002686-00001		
KOS26	Customised configuration with assembly for decompact systems	092-002685-00001		



■ 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	KOS-A00000-I0003		
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		



■ 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	KOS-A00000-I0003		
KOS3-I	Hourly rate for development staff, technicians/engineers	KOS-A00000-I0002		

Preparing a characteristic

■ Costs

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

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	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	KOS-V00013-00001		
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		



■ 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		



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	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	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	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	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

In accordance with Germany's Used Electrical Equipment Law (Elektro-Altgeräte-Gesetz), this machine does not belong in domestic waste.



In Germany, waste equipment from private households can be disposed of free of charge at local community collection points. Your local administration point can provide information on the options available.

EWM participates in an approved waste disposal and recycling system and is registered in the Used Electrical Equipment Register (EAR) under number WEEE DE 57686922.

■ Manufacturer's declaration to end user

- According to European provisions (guideline 2002/96/EG of the European Parliament and the Council of January 27, 2003), 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 contribute to environmental protection and ensure that this machine is placed in the appropriate collection category when you no longer intend to use the machine.
- According to German law (law governing the distribution, taking back and environmentally correct disposal of electric and electronic equipment (ElektroG) from March 16, 2005), you are required to place used machines in a collection system separate from unsorted municipal waste. The public waste management utilities (communities) have created collection points at which used equipment from private households can be disposed of free of charge. 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 inquire with your state or municipal government about options available in your area for returning or collecting used equipment.

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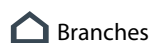
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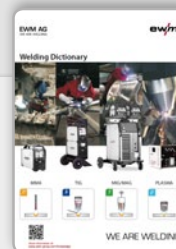
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Mechanisation Brochures
Products and Services
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Handbook
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