

Product Catalogue

Robotic Welding





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KempArc Synergic 50

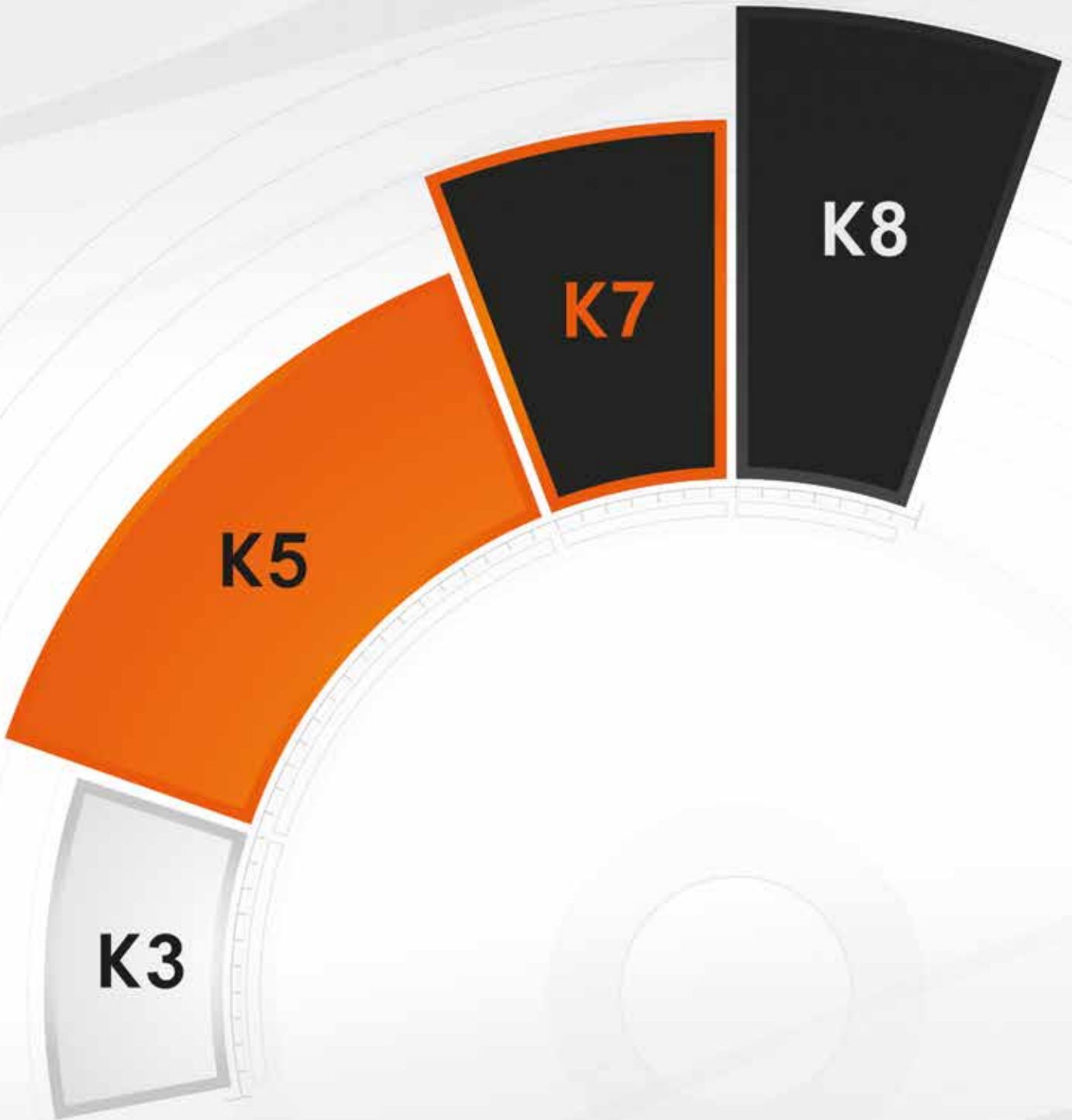
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Example set ups **90**





Kemppi value levels

No matter your need, there is always a Kemppi solution for you. Our welding equipment is divided into value levels - K8, K7, K5 and K3 - in order to provide you with the most suitable equipment for your purposes. The higher the value level, the more features and functions you get in terms of performance, usability and modern connectivity.



K8 value level

Kemppi's value level K8 equipment offers you the best. Today industrial welding is a smart, highly digitized operation that enables maximized profitability, quality, and personal safety. Our flagship K8 equipment will give you exactly that with extreme performance, modern connectivity, intelligent features and excellent usability.



K7 value level

The Kemppi K7 value level equipment is defined by appropriate and professional equipment where form follows function. From now on you no longer need to compromise - you can weld with precision and quality with proven technology, allowing you to take your welding to the next level.



K5 value level

Kemppi's value level K5 items are easy to use and usable in multiple environments. If you are looking for something better than ordinary, K5 equipment is your choice. Their design includes some intelligent features to make your welding job more pleasurable, efficient and cost-effective.



K3 value level

Kemppi's K3 value level equipment features everything that Kemppi stands for - solid build quality and arc characteristics without compromises. K3 equipment provides fabricators with a smart investment route to increase efficiency and quality in a wide variety of welding jobs.





Introduction

Kemppi develops and offers cutting edge solutions for robotic and automated arc welding applications.

Kemppi offers arc welding equipment for highly efficient and cost-effective robotic welding applications, ranging from thin sheet products to heavy plates and from mild and stainless steel to aluminum applications.

Our complete process packages consist of robust welding gun, reliable wire feeder, modern powers source, clever connection cable solutions and complete offering of process related accessories.

With Kemppi's unique Wise processes you reach new levels of productivity in robotic welding. There are application specific Wise solutions available to help you win a competitive edge over your competitors. Our intense research and development of the welding processes guarantees the best support for every Kemppi customer today and in the future, during the entire life cycle of the robotic arc welding system.

Kemppi solutions can be selected from different technology and cost levels and thus the final solution always provides best value for the investment – without compromising the quality.

Kemppi arc welding process packages are easy to install and work perfectly with all well-known robot brands. Solutions can utilize all common modern fieldbus protocols for communication between the robot controller and the power source. Also analogue interface is available for retrofit cases.



Also with CANOpen and ModBus.





Wise products

Achieve competitive edge with Kemppi application software. Solutions are designed to make the welding equipment perform optimally at any work.

For Automation Kemppi offers two advanced functions, WiseFusion and WisePenetration. With these functions you can perform better on everyday welding tasks. If you like to guarantee an excellent penetration and low heat input as well as speed up welding in any position, choose WiseFusion. For elimination of unwanted effects of stick-out length variations during welding choose WisePenetration.

Combined together these two functions are enabling use of Kemppi Reduced Gap Technology (RGT) which can reduce welding time and costs radically in thick plate welding applications.

In addition to Wise functions Kemppi offers two advanced Wise processes, WiseRoot and WiseThin. WiseRoot is designed for welding of root passes of pipes or plates with higher speed and high quality. WiseThin is developed for thin sheet applications where you get an easily controllable and stable arc as well as faster welding speed in any welding position.

| Welding performance properties | WiseFusion | WisePenetration | WiseThin | WiseRoot | RGT |
|---|------------|-----------------|----------|----------|-----|
| Efficient welding penetration | ** | * | | | *** |
| Reduced groove volume because of energy dense arc | ** | * | | | *** |
| Welding penetration stability regardless stick-out length | * | *** | | | *** |
| Higher travel speed with same throath thickness | *** | * | | | *** |
| Reduced heat input in plate thicknesses above 3 mm | *** | * | * | | ** |
| Reduced heat input in plate thicknesses under 3 mm | * | | *** | ** | |
| Less distortion in sheet metal welding | * | | ** | * | |
| High productivity root pass welding | | | * | *** | |

| Suitable materials | WiseFusion | WisePenetration | WiseThin | WiseRoot | RGT |
|----------------------------------|------------|-----------------|----------|----------|-----|
| Unalloyed and low alloyed steels | ● | ● | ● | ● | ● |
| High strength steels | ● | — | ● | ● | ○ |
| Stainless steels | ● | ○ | ● | ● | ○ |
| High alloyed steels | ● | ○ | ● | ● | ○ |
| Aluminum | ● | — | — | — | — |
| Copper/brazing | ● | — | ● | — | — |

| | WiseFusion | WisePenetration | WiseThin | WiseRoot | RGT |
|---------------|------------|-----------------|----------|----------|-----|
| A7 MIG Welder | ● | ● | ● | ● | ● |
| KempArc Pulse | ● | ● | ● | ● | |
| KempArc SYN | | | ● | ● | |



WISEFUSION



WiseFusion optimized welding function produces a very narrow and energy dense welding arc making welding faster and heat input lower. Focused penetration area allows the welding of narrow and deep grooves. WiseFusion results in excellent penetration without a risk of undercut. Narrower arc also facilitates weld pool control in position welding. WiseFusion ensures optimum arc length eliminating the need for constant parameter settings. Adaptive and automatic arc length regulation maintains the arc always within the short circuit boundaries and raises your arc-on time.

BENEFITS

- Higher welding speed
- Lower heat input resulting in less distortion and better mechanical properties of the weld
- Possibility to weld narrower and deeper grooves
- Excellent weld pool control in position welding
- Easy to weld in all positions
- Automatic arc length control granting always the right parameters
- Easy to use
- Uniform weld quality



1-MIG

VS



1-MIG with WiseFusion

| | Ordering code | Description |
|---------------|---------------|--------------|
| A7 MIG Welder | A7500000 | WiseFusion |
| KempArc Pulse | 9991015 | WiseFusion-A |



WISEPENETRATION

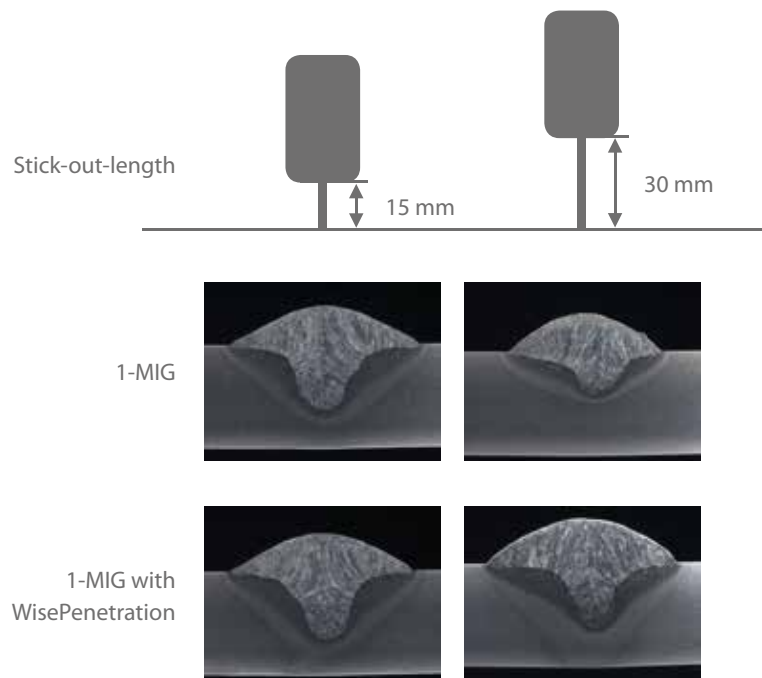


WisePenetration optimized welding function is designed to keep welding current and thus penetration invariable regardless of the changes in stick-out length in manual welding. Normally in MIG/MAG welding the power to the weld pool is changing as the welder or weld piece dictates the distance between the joint and welding gun nozzle. These deviations may result in quality issues such as lack of fusion, incomplete or inconsistent penetration, changes in weld profile and of course welding spatter. WisePenetration solves these issues and reduces the need for post-grinding and repair work. The function prevents the current from dropping down by actively adjusting wire feeding. This helps to keep the weld mechanical properties on a desired level and prevents welding defects. The user sets the wished current level, and with the help of WisePenetration, the current level does not drop below this level when stick-out length increases.

WisePenetration welding function is available for ferritic synergic MAG welding programs. WisePenetration is an optional software product for Kemppi FastMig M, and FastMig X welding equipment, but featured as standard in FastMig X Intelligent setup.

BENEFITS

- Ensured penetration even in case of:
- Narrow structures where visibility of the arc is a problem
 - Limited visibility or accessibility
 - Position welding
 - Difficult-to-weld joints



| | Ordering code | Description |
|---------------|---------------|-------------------|
| A7 MIG Welder | A7500001 | WisePenetration |
| KempArc Pulse | 9991010 | WisePenetration-A |



WISETHIN

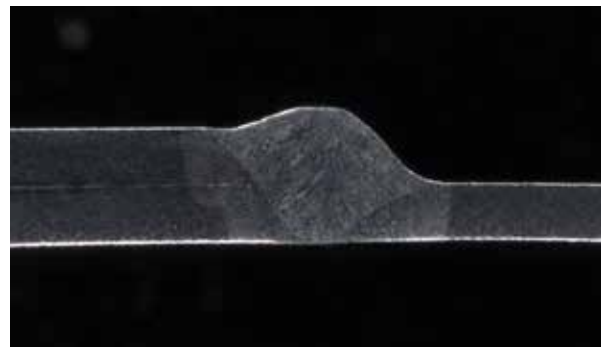


WiseThin is developed for faster and productive manual sheet welding, for ferrous and non ferrous materials. With the process you can weld in any position and also down hand, even with wide gap or varying gap tolerances. Weld pool control is excellent and the amount and size of spatters reduced. WiseThin provides even 25% lower heat input than normal MIG/MAG welding, reducing material distortion and post weld rework.

Process offers excellent welding characteristics in plate thicknesses 0.8 - 3.0 mm, even with CO₂ shielding gas. Welding speed is higher than in traditional short arc welding. Refinement of the process is based on accurate and real-time voltage measurement and filler wire droplet detachment. Thus droplet transfer to the weld pool is soft and controlled. WiseThin+ is a MIG/MAG welding process 131, 133, 135, 136 and 138 according to standard EN ISO 4063. WiseThin+ welding process is a further developed process mode for A7 mig welder.

BENEFITS

- Higher welding speed than in traditional shot arc welding
- High quality welds, reduced post weld rework
- Lower heat input and thus also less deformation
- Decreased amount and size of spatters
- Stable arc for positional welding for thicker plate thicknesses
- Excellent arc ignition for tack and intermittent welds
- Savings in welding costs as you get mixed gas welding characteristics with pure CO₂
- Down hand and all positional welding
- Easy to make short welds because of accurate arc control
- Suitable for brazing
- Expands the parameter window and thus reduces the need to use smaller wire diameters
- Soft and pleasant arc characteristics
- Easy to use



| | Ordering code | Description |
|------------------|---------------|-------------|
| A7 MIG Welder | 9990419 | WiseThin+ |
| KempArc Pulse | 6265013 | WiseThin-A |
| KempArc Synergic | 6265013 | WiseThin-A |



WISEROOT

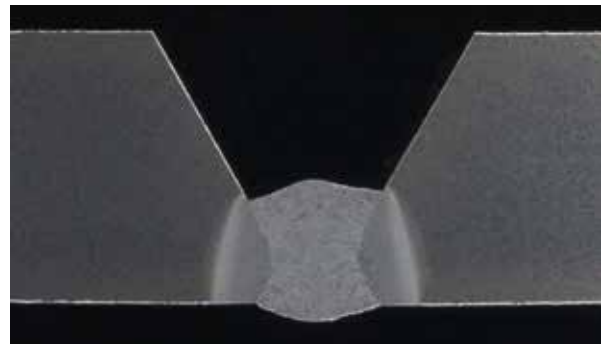


WiseRoot is an optimized short arc process for root pass welding without backing. The process is highly effective being significantly faster than stick (MMA), TIG and standard MIG/MAG short arc welding, yet producing high quality welds. The welding of fixed pipes in any position is possible and groove angle can be reduced by even 40%, depending on the application.

A stable and efficient arc resulting in excellent weld quality is enabled through precise real time voltage measuring, current control and right in time filler metal droplet releasing. Filler metal transfer is smooth and spatter-free. WiseRoot is a MIG/MAG welding process 131, 133, 135, 136 or 138 according to standard EN ISO 4063. WiseRoot+ welding process is a further developed process mode for A7 mig welder.

BENEFITS

- Increases welding speed compared to MMA, TIG and standard MAG short arc welding
- Gives the possibility to reduce groove volume
- Allows wide range of root gaps and faces without incomplete or excessive penetration
- Easier to learn welding technique
- No need for backing ring
- Less spatter
- Allows welding of fixed pipes in all positions
- Allows welding of rotated pipes
- Allows welding with long cables
- Processes can be used with different materials; steel, stainless steels and high alloyed steels
- In WiseRoot+ excellent arc characteristic also with CO₂
- Wide selection of wire diameter (0.8 – 1.2)



| | Ordering code | Description |
|------------------|---------------|-------------|
| A7 MIG Welder | 9990418 | WiseRoot+ |
| KempArc Pulse | 9991011 | WiseRoot-A |
| KempArc Synergic | 9991011 | WiseRoot-A |



KEMPPI REDUCED GAP TECHNOLOGY (RGT) SOLUTION



In A7 MIG Welder both WiseFusion and WisePenetration can be activated simultaneously thus enabling new benefits in form of RGT solution.

Reducing the groove angle can add significantly to the efficiency and productivity of welding of heavy metal structures. Kemppi has developed a new solution, Reduced Gap Technology (RGT). This technology allows reliable and efficient narrow gap welding with no need for special equipment or accessories for material thicknesses of up to 30 mm. The RGT combines intelligent arc control with Kemppi's high-tech power source, wire feeder and mechanization equipment.

EXAMPLE BENEFITS

- 20° Groove angle instead of 45° – 60°
- 38% savings in arc time
- 25% savings in filler material
- 5 weld passes needed instead of 7



| | Ordering code | Description |
|---------------|---------------|-----------------|
| A7 MIG Welder | A7500000 | WiseFusion |
| A7 MIG Welder | A7500001 | WisePenetration |





- | | | | |
|---|--------------------------------|----|-----------------------------------|
| 1 | Power source | 9 | Wire conduit |
| 2 | Wire feeder | 10 | Wire spool holder |
| 3 | Wire feeder roller kit | 11 | Wire spool protective cover |
| 4 | Water cooling unit | 12 | Floor stand for wire spool holder |
| 5 | Robot interface module | 13 | Wire feeder attachment bracket |
| 6 | Interconnection cables | 14 | Wise processes |
| 7 | Interconnection cable brackets | 15 | Welding gun package |
| 8 | Earth return cable | 16 | Welding gun cleaning station |



A7 MIG Welder

Engineered for your profit

A7 MIG Welder is the state-of-the-art solution for robotic arc welding, ideal for integration with any robot brand. It is a complete, perfectly balanced process package that includes a welding gun, wire feeder, power source, and cooling unit. The equipment is designed to meet the highest Kemppi standards, which guarantee reliable welding performance with no compromises. The Kemppi Wise software provides added value for customers by significantly improving welding speed, boosting production efficiency, and enabling the same equipment to be used for a variety of welding tasks. The system's modern, browser-based user interface allows easy access to the power source from a standard computer with a regular browser. This enables unprecedented savings in setup time and provides quality control benefits throughout the equipment's life cycle.

BENEFITS

- Quick and easy integration with any robot brand with modern fieldbus hardware modules.
- Access to the power source from an external computer via ethernet with a regular web browser. No extra programs needed. Enables radical savings in setup time, as well as quick and easy parameter configuration, system management, and monitoring throughout the equipment's life cycle.
- Increased productivity and a short payback period thanks to the Wise software and a wide range of available functions. Wise processes are fine-tuned and pre-set to optimize productivity with welding speeds typically used in automated welding. The same equipment can be used for a wide variety of welding tasks and applications.
- A comprehensive, completely balanced package from one supplier results in significant savings in time and effort when integrating the arc-welding package with the robot application.
- Suitable for any industry using robotic welding for thin and thick mild steel, stainless steel, and aluminum components.
- Enhanced arc ignition functionality (Touch Sense Ignition) delivers minimum spatter and stabilizes the arc immediately after ignition.
- The robust wire feeding casing with integrated wire feeder controller electronics enables faster and more accurate control with better resistance to external interference.
- An integrated gas-flow sensor in the wire feeder enables the shielding gas flow to be monitored closer to the arc by default – no need for additional sensors.
- Search voltage level for the system can be set up freely from web browser interface





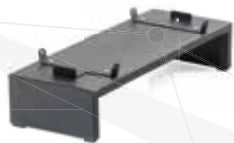
① A7 POWER SOURCE 350 / 450



A7 MIG Welder 350 and 450 are welding power sources designed for demanding professional use in robotic welding systems. They are suitable for synergic pulsed MIG/MAG, synergic 1-MIG and basic MIG/MAG welding, as well as the modified WiseRoot+™ and WiseThin+™ processes. The robot interface unit on top of the power source handles the communication with a robot and contains all necessary connections to integrate with a welding cell. The unit has an internal web server for easy control of welding and setup parameters via any device equipped with an internet browser including robot teach pendants.

TECHNICAL SPECIFICATIONS

| | A7 Power Source 350 | A7 Power Source 450 |
|---|------------------------------|------------------------------|
| Ordering code | 6201350 | 6201450 |
| Connection voltage 1~ 50/60 Hz | N/A | N/A |
| Connection voltage 3~ 50/60 Hz | 400 V, -15 %...+20 % | 400 V, -15 %...+20 % |
| Fuse (delayed) | 25 A | 35 A |
| Minimum generator power | 35 kVA | 35 kVA |
| Welding range | 20 A / 12 V - 350 A / 46 V | 20 A / 12 V - 450 A / 46 V |
| Output 60% ED | 350 A | 450 A |
| Output 100% ED | 330 A | 350 A |
| Mains connection cable | 4G6 (5 m) | 4G6 (5 m) |
| Supply current (maximum) | 23 A | 32 A |
| Supply current (effective) | 21 A | 25 A |
| Idle power | 25 W | 25 W |
| Power factor at max. current | 0.85 | 0.88 |
| No-load voltage (peak) | U ₀ = 80 V - 98 V | U ₀ = 80 V - 98 V |
| Open circuit voltage (average) | 85 V - 103 V | 85 V - 103 V |
| Efficiency (100 % duty cycle) | 87 % | 87 % |
| Minimum short circuit power S _{sc} of supply network | 5.5 MVA | 5.5 MVA |
| Max apparent power | 22 kVA | 22 kVA |
| Power supply for cooling unit | 24 V DC / 50 VA | 24 V DC / 50 VA |
| Power supply for auxiliary unit | 50 V DC / 100 W | 50 V DC / 100 W |
| Operating temperature range | -20 ... +40 °C | -20 ... +40 °C |



STAND FOR POWER SOURCE

Ordering code 6185295

For easy transport and keeping floor free under welder



② A7 WIRE FEEDER 25



The A7 Wire Feeder 25 is a durable and powerful two motor for 4-wheel feeding system designed to work seamlessly with A7 MIG Welder power sources. A separate attachment bracket is required for mounting the wire feeder on robot.

Integrated functionalities:

- Gas test button
- Wire feed and wire retract buttons
- Integrated gas flow sensor
- Min. flow rate monitoring
- Compressed air blow valve to gun cleaning
- Euro/Power pin -connector versions available
- Back light provided behind drive wheels
- Support for push/pull torches

TECHNICAL SPECIFICATIONS

| | A7 Wire Feeder 25-LH-EUR | A7 Wire Feeder 25-LH-PP |
|------------------------------------|--------------------------|-------------------------|
| Ordering code | 6203510 | 6203502 |
| Wire feed mechanism | 4-roll, two motors | 4-roll, two motors |
| Wire feed speed adjustment | 0.5 – 25 m/min | 0.5 – 25 m/min |
| Gun connection | Euro | PP |
| Filler wire sizes (Fe solid) | 0.8 – 1.6 mm | 0.8 – 1.6 mm |
| Filler wire sizes (Fe cored) | 1.0 – 1.6 mm | 1.0 – 1.6 mm |
| Filler wire sizes (Ss) | 0.8 – 1.6 mm | 0.8 – 1.6 mm |
| Filler wire sizes (Al) | 1.0 – 2.4 mm | 1.0 – 2.4 mm |
| Filler wire sizes (CuSi) | 0.8 – 1.2 mm | 0.8 – 1.2 mm |
| Operating voltage (safety voltage) | 50 V DC | 50 V DC |
| Operating temperature range | -20 ... +40 °C | -20 ... +40 °C |
| External dimensions LxWxH | 380 x 250 x 170 mm | 380 x 250 x 170 mm |
| Weight (no accessories) | 7.8 kg | 7.8 kg |
| Degree of protection | IP21S | IP21S |
| EMC class | A | A |
| Storage temperature range | -40 ... +60 °C | -40 ... +60 °C |



3 WIRE FEED ROLL KITS



FE = Mild Steel
 SS = Stainless Steel
 AL = Aluminium
 U = U Groove
 V = Plain V Groove
 VK = Knurled V Groove
 T = Trapezoid Groove
 HD = Heavy Duty kit (contains metal feed rolls)
 MC/FC = Metal/Flux Cored
 Front guide tube length for kits is optimized as follows:

"GT04 T #3" = A7 MIG WIRE FEEDER A 25 – EUR
 Kemppi robotic welding guns
 Binzel robotic welding guns

"GT04 T #4" = A7 MIG WIRE FEEDER A 25 – EUR
 Dinse robotic welding guns

"GT04 T #5" = A7 MIG WIRE FEEDER A 25 - PP
 Binzel robotic welding guns

"GT04 T #6" = A7 MIG WIRE FEEDER A 25 - PP
 Dinse robotic welding guns

| Ordering code | Description |
|---------------|--------------------------------------|
| F000367 | FE (MC/FC) V0.8-0.9 GT04 T KIT #3 |
| F000368 | FE (MC/FC) V1.0 GT04 T KIT #3 |
| F000369 | FE (MC/FC) V1.2 GT04 T KIT #3 |
| F000370 | FE (MC/FC) V1.4 GT04 T KIT #3 |
| F000371 | FE (MC/FC) V1.6 GT04 T KIT #3 |
| F000372 | FE (MC/FC) V0.8-0.9 HD GT04 T KIT #3 |
| F000373 | FE (MC/FC) V1.0 HD GT04 T KIT #3 |
| F000374 | FE (MC/FC) V1.2 HD GT04 T KIT #3 |
| F000375 | FE (MC/FC) V1.6 HD GT04 T KIT #3 |
| F000376 | SS,CU (FE) V0.8-0.9 GT04 T KIT #3 |
| F000377 | SS,CU (FE) V1.0 GT04 T KIT #3 |
| F000378 | SS,CU (FE) V1.2 GT04 T KIT #3 |
| F000379 | SS,CU (FE) V1.4 GT04 T KIT #3 |
| F000380 | SS,CU (FE) V1.6 GT04 T KIT #3 |
| F000381 | SS,CU (FE) V2.0 GT04 T KIT #3 |
| F000382 | SS,CU (FE) V2.4 GT04 T KIT #3 |
| F000383 | SS (FE) V0.8-0.9 HD GT04 T KIT #3 |
| F000384 | SS (FE) V1.0 HD GT04 T KIT #3 |
| F000385 | SS (FE) V1.2 HD GT04 T KIT #3 |
| F000386 | SS (FE) V1.6 HD GT04 T KIT #3 |
| F000387 | MC/FC VK1.0 GT04 T KIT #3 |
| F000388 | MC/FC VK1.2 GT04 T KIT #3 |
| F000389 | MC/FC VK1.4-1.6 GT04 T KIT #3 |
| F000390 | MC/FC VK1.0 HD GT04 T KIT #3 |
| F000391 | MC/FC VK1.2 HD GT04 T KIT #3 |
| F000392 | MC/FC VK1.4-1.6 HD GT04 T KIT #3 |
| F000393 | AL U1.0 GT04 T KIT #3 |

| Ordering code | Description |
|---------------|-----------------------------------|
| F000394 | AL U1.2 GT04 T KIT #3 |
| F000395 | AL U1.4 GT04 T KIT #3 |
| F000396 | AL U1.6 GT04 T KIT #3 |
| F000397 | SS,CU (FE) V0.8-0.9 GT04 T KIT #4 |
| F000398 | SS,CU (FE) V1.0 GT04 T KIT #4 |
| F000399 | SS,CU (FE) V1.2 GT04 T KIT #4 |
| F000400 | SS (FE) V0.8-0.9 HD GT04 T KIT #4 |
| F000401 | SS (FE) V1.0 HD GT04 T KIT #4 |
| F000402 | SS (FE) V1.2 HD GT04 T KIT #4 |
| F000403 | AL U1.0 GT04 T KIT #4 |
| F000404 | AL U1.2 GT04 T KIT #4 |
| F000405 | SS,CU (FE) V0.8-0.9 GT04 T KIT #5 |
| F000406 | SS,CU (FE) V1.0 GT04 T KIT #5 |
| F000407 | SS,CU (FE) V1.2 GT04 T KIT #5 |
| F000408 | SS (FE) V0.8-0.9 HD GT04 T KIT #5 |
| F000409 | SS (FE) V1.0 HD GT04 T KIT #5 |
| F000410 | SS (FE) V1.2 HD GT04 T KIT #5 |
| F000411 | AL U1.0 GT04 T KIT #5 |
| F000412 | AL U1.2 GT04 T KIT #5 |
| F000413 | SS,CU (FE) V0.8-0.9 GT04 T KIT #6 |
| F000414 | SS,CU (FE) V1.0 GT04 T KIT #6 |
| F000415 | SS,CU (FE) V1.2 GT04 T KIT #6 |
| F000416 | SS (FE) V0.8-0.9 HD GT04 T KIT #6 |
| F000417 | SS (FE) V1.0 HD GT04 T KIT #6 |
| F000418 | SS (FE) V1.2 HD GT04 T KIT #6 |
| F000419 | AL U1.0 GT04 T KIT #6 |
| F000420 | AL U1.2 GT04 T KIT #6 |



4 WATER COOLING UNIT



These Cooling units are designed to be used with A7 MIG Welder for cooling the welding gun. The operation of these units is microprocessor-controlled.

TECHNICAL SPECIFICATIONS

| | A7 Cooler | Cool X |
|------------------------------------|--------------------|--------------------|
| Ordering code | 6068220 | 6068200 |
| Operating voltage (safety voltage) | 400 V -15 ...+20 % | 400 V -15 ...+20 % |
| Maximum pressure | 0.4 Mpa | 0.4 Mpa |
| External dimensions LxWxH | 570 x 230 x 280 mm | 570 x 230 x 280 mm |
| Weight (no accessories) | 11 kg | 11 kg |
| Degree of protection | IP23S | IP23S |
| Tank volume | ~3 L | ~3 L |
| EMC class | A | A |
| Cooling power | 1 kW | 1 kW |
| Storage temperature range | -40 ...+60 °C | -40 ...+60 °C |
| Operating temperature | -20 ...+40 °C | -20 ...+40 °C |
| Flow sensor type | [l/min] | [bar] |

COOLING LIQUID

| | | |
|---------------|-----------|--------------|
| Ordering code | SP9810765 | 10 liter can |
|---------------|-----------|--------------|



5 ROBOT INTERFACE MODULE



Fieldbus communication between power source and robot controller is enabled with modules. The protocol can be chosen based on customer preference.

| Ordering code | Description |
|---------------|----------------------------------|
| 9774121DEV | ANYBUS-CC M30 DEVICENET |
| 9774121DEV12 | ANYBUS-CC M30 DEVICENET M12 |
| 9774121ETC | ANYBUS-CC M30 ETHERCAT |
| 9774121ETH2 | ANYBUS-CC M30 ETHERNET/IP 2-PORT |
| 9774121MBR | ANYBUS-CC M30 MODBUS-RTU |
| 9774121MBT | ANYBUS-CC M30 MODBUS-TCP |
| 9774121MBT2 | ANYBUS-CC M30 MODBUS-TCP 2-PORT |
| 9774121PRF | ANYBUS-CC M30 PROFIBUS |
| 9774121PRN | ANYBUS-CC M30 PROFINET IO |
| 9774121PRN2 | ANYBUS-CC M30 PROFINET IO 2-PORT |



6 INTERCONNECTION CABLES



The interconnection cable set contains several cables and hoses. The cable set is used for delivering the welding power, shielding gas, cooling liquid, and control signals from the welding power source to the wire feeder. Interconnection cable sets are available in zipper bags or in corrugated sleeves.



GAS COOLED CABLE SETS

| Ordering code | Description | Additional info |
|---------------|---------------------------|---|
| 6260449 | ROBOT 70-10-GH CABLE SHOE | Zipper bag, 70 mm ² , 10 m , screw connection to wire feeder (non dix), dix connector to powersource, gas cooled |
| 6260458 | ROBOT 70-5-GH CABLE SHOE | Zipper bag, 70 mm ² , 5 m , screw connection to wire feeder (non dix), dix connector to powersource, gas cooled |
| 6260484 | ROBOT 70-15-GH CABLE SHOE | Zipper bag, 70 mm ² , 15 m , screw connection to wire feeder (non dix), dix connector to powersource, gas cooled |
| 6260480 | ROBOT 70-20-GH CABLE SHOE | Zipper bag, 70 mm ² , 20 m , screw connection to wire feeder (non dix), dix connector to powersource, gas cooled |
| 6260483 | A7 ROBOT 70-5-GH | Corrugated sleeve, 70 mm ² , 5 m, cable shoe, gas cooled |

WATER COOLED CABLE SETS

| Ordering code | Description | Additional info |
|---------------|---------------------------|---|
| 6260459 | ROBOT 70-5-WH CABLE SHOE | Zipper bag, 70 mm ² , 5 m , screw connection to wire feeder (non dix), dix connector to powersource, water cooled |
| 6260460 | ROBOT 70-10-WH CABLE SHOE | Zipper bag, 70 mm ² , 10 m , screw connection to wire feeder (non dix), dix connector to powersource, water cooled |
| 6260481C1 | ROBOT 70-15-WH CABLE SHOE | Zipper bag, 70 mm ² , 15 m , screw connection to wire feeder (non dix), dix connector to powersource, water cooled |
| 6260481 | ROBOT 70-20-WH CABLE SHOE | Zipper bag, 70 mm ² , 20 m , screw connection to wire feeder (non dix), dix connector to powersource, water cooled |
| 6260482 | A7 ROBOT 70-5-WH | Corrugated sleeve, 70 mm ² , 5 m, cable shoe, water cooled |



7 INTERCONNECTION CABLE BRACKETS



Items in picture as example,
clamp design may vary

| Ordering code | Additional info |
|---------------|--|
| SP800888 | Works together with interconnection cables with corrugated sleeve. Kit includes an adapter plate for KUKA KR CYBERTECH series robots for 2nd joint attachment. |
| 9370131 | Works together with interconnection cables with corrugated sleeve. For each clamp (9370131) also 2x jaws are required (9370133) |



| | | |
|---------------|----------|--|
| Ordering code | SP008072 | Metal attachment piece, two cable ties, for zipper bag |
|---------------|----------|--|

8 EARTH RETURN CABLE



| Ordering code | Description | Additional info |
|---------------|---|--|
| 6184711 | EARTH RETURN CABLE 70 MM ² 5M | Dix connector for the power source, 5 m, 70 mm ² |
| 6184712 | EARTH RETURN CABLE 70 MM ² 10M | Dix connector for the power source, 10 m, 70 mm ² |
| 6184713 | EARTH RETURN CABLE 70 MM ² 15M | Dix connector for the power source, 15 m, 70 mm ² |



9 WIRE CONDUIT FOR WIRE SPOOLS

High quality wire conduit delivers the filler wire smoothly from wire spool to wire feeder. Male connectors on both ends fit to Kempfi feeder and Kempfi wire spool support. Order codes do not include female snap connector for wire spool holder or wire drum. It must be ordered separately. In case of stainless steel or aluminium, a separate chili liner is also required.

WIRE CONDUITS (STANDARD LENGTH)



| Ordering code | Description |
|---------------|---|
| SP600535 | WIRE CONDUIT-1.8M ROBOT KEMPFI |
| SP600536 | WIRE CONDUIT-3.0M ROBOT KEMPFI |
| SP800803 | WIRE CONDUIT-4.0M ROBOT KEMPFI |
| SP600537 | WIRE CONDUIT-5.0M ROBOT KEMPFI |
| SP600686 | WIRE CONDUIT-8.0M ROBOT KEMPFI |
| SP600731 | ADDITIONAL CHILI LINER KIT FOR STAINLESS STEEL AND ALUMINUM WELDING CASES |

9 WIRE CONDUIT FOR WIRE DRUMS

Alternative solution for wire conduit when distance between wire feeder and wire drum is greater than 5 meters. NOTE: When ordering W005195 with the desired length, you also need snap connectors: two male (W005197) and one female (W005189).

9.1 WIRE CONDUITS (CUSTOM LENGTH)



| | | |
|---------------|---------|---|
| Ordering code | W005195 | Custom length for your delivery (max. 27 m) |
|---------------|---------|---|



9.2 SNAP CONNECTOR FOR WIRE CONDUIT (MALE)



Ordering code W005197

Male connector for wire conduit, two pieces needed per conduit

9.3 SNAP CONNECTOR FOR DRUM OR SPOOL HOLDER (FEMALE)



Ordering code W005189

Female connector for the wire drum or spool holder



10 WIRE SPOOL HOLDER



Suitable for standard 15 kg wire coil. NOTE: Female connector for wire conduit not included. Must be ordered separately.

| Ordering code | Description | Additional info |
|---------------|--------------------------|-------------------|
| W007628 | WIRE SPOOL SUPPORT RIGHT | wire spool holder |
| W007629 | WIRE SPOOL SUPPORT LEFT | wire spool holder |

11 PROTECTIVE COVER FOR WIRE SPOOL



| | | |
|---------------|----------|-------------------------------------|
| Ordering code | SP007940 | Plastic cover for wire spool holder |
|---------------|----------|-------------------------------------|

12 FLOOR STAND FOR WIRE SPOOL HOLDER



| | | |
|---------------|---------|-----------------------------------|
| Ordering code | W007356 | Floor stand for wire spool holder |
|---------------|---------|-----------------------------------|



13 WIRE FEEDER MOUNTING BRACKETS



Brackets for mounting the wire feeder on the robot's 3rd axis. The design is robot model specific. Order code includes metal plates, insulation rings and screws. Screws for robot's 3rd axis are not included.

| | | |
|----------|------------------------------------|---|
| SP800710 | A7 WF BRACKET ABB 1520ID | NA |
| SP800715 | A7 WF BRACKET ABB IRB 1400 | NA |
| SP800711 | A7 WF BRACKET ABB IRB 1600 | ABB IRB 1600-6 1.2 / 1.45, ABB IRB 1600-10 1.2 |
| SP800713 | A7 WF BRACKET ABB IRB 2400 | ABB IRB 2400-10, ABB IRB 2400-16 |
| SP012956 | A7 WF BRACKET ABB IRB2600 | |
| SP800712 | A7 WF BRACKET ABB IRB 2600ID | ABB IRB 2600ID-15/1.85, ABB IRB 2600ID-8/2.00 |
| SP800890 | A7/DT400 BRACKET ABB IRB 4400 | NA |
| SP800806 | A7 WF BRACKET ABB IRB 4600 20 | NA |
| SP800714 | A7 WF BRACKET ABB IRB1600ID | ABB IRB 1660ID |
| SP800778 | A7 WF BRACKET ABB IRB6700 | NA |
| SP800910 | A7 WF BRACKET FANUC 0IB | |
| SP800716 | A7 WF BRACKET FANUC ARC MATE 100IC | FANUC ARC MATE 120iC/12L |
| SP800981 | A7 WF BRACKET FANUC ARCMATE 100ID | |
| SP800717 | A7 WF BRACKET KAWASAKI BA006N | KAWASAKI BA006L |
| SP800776 | A7 WF BRACKET KAWASAKI RA10L | NA |
| SP800709 | A7 WF BRACKET KUKA KR 16ARC HW | NA |
| SP800987 | A7 WF BRACKET KUKA KR210 R2700 | |
| SP800986 | A7 WF BRACKET KUKA KR30L16-2 | |
| SP800707 | A7 WF BRACKET KUKA KR5 ARC | KUKA KR10 R1420, KUKA KR16 L6-2, KUKA KR6 R1820 |
| SP800708 | A7 WF BRACKET KUKA KR5ARC HW | NA |
| SP800755 | A7 WF BRACKET KUKA KR6 R1820 HW | KUKA KR8 R1420 HW, KUKA KR8 R1620 HW |
| SP800900 | A7 WF BRACKET KUKA KR8 R2100 HW | NA |
| SP800810 | A7/DT400 BRACKET KUKA KR10 R1420 | KUKA KR8 R1620, KUKA KR6 R1620, KUKA KR8 R2010, KUKA KR12 R1810, KUKA KR16 R1610, KUKA KR16 R2010, KUKA KR20 R1810, KUKA KR22 R1610, GSK RP08 |
| SP800988 | A7 WF BRACKET YASKAWA MH50-20II | |
| SP800721 | A7 WF BRACKET YASKAWA HP 20 D | YASKAWA HP 20 RD, KAWASAKI RS010L, KAWASAKI RA005L, KAWASAKI RA006L KAWASAKI RA010L/N. KAWASAKI RA020N |
| SP800719 | A7 WF BRACKET YASKAWA MA 1800 | YASKAWA EA1900, EA1900N |
| SP800720 | A7 WF BRACKET YASKAWA MA1400 | YASKAWA VA1400 |
| SP800718 | A7 WF BRACKET YASKAWA MA1440 | NA |
| SP800775 | A7 WF BRACKET YASKAWA MA2010 | NA |



14 WISE PROCESSES



| Ordering code | Description |
|---------------|-----------------|
| A7500000 | WiseFusion |
| A7500001 | WisePenetration |
| 9990419 | WiseThin+ |
| 9990418 | WiseRoot+ |

15 WELDING GUN PACKAGE



See robotic gun packages page 67

16 WELDING GUN CLEANING STATION



See robotic gun packages page 88 more information.

| | | |
|---------------|----------|----------------------------|
| Ordering code | SP600674 | Robot gun cleaning station |
|---------------|----------|----------------------------|



OPTIONAL ITEMS

17 I/O EXTENTION FOR ROBOT INTERFACE



| Ordering code | Description | Additional info |
|---------------|------------------------------|--|
| 6203520 | A7 I/O DEVICE | Enables control of external devices via fieldbus 4/4 |
| SP800873 | A7 I/O DEVICE EXTENSION CARD | Expands number of I/O's to 8/8 |

I/O Extension is engineered to fit the application needs, pelase contact Kemppi sales for details

18 MOUNTING KIT A7 DUAL FEEDER

For non-hollow wrist robot models and applications where welding gun exchange unit is used this set enables use of two wire feeders and one power source combination. Switching between two wire feeders can be done from robot controller. The kit includes a wire feeder switching card, a flat band cable, and a harness with connectors for the wire feeder and for the mother board of the robot interface unit.

| | | |
|---------------|----------|--|
| Ordering code | SP013699 | Enables switching between two A7 wire feeders with one A7 power source |
|---------------|----------|--|





- 1 Power source
- 2 Wire feeder
- 3 Wire feeder roller kit
- 4 Water cooling unit
- 5 Robot interface module
- 6 Interconnection cables
- 7 Interconnection cable brackets
- 8 Earth return cable
- 9 Wire conduit
- 10 Wire spool holder
- 11 Wire spool protective cover
- 12 Floor stand for wire spool holder
- 13 Wire feeder mounting bracket
- 14 Wise processes
- 15 Welding gun package
- 16 Welding gun cleaning station



KempArc Pulse

Automated quality and productivity

KempArc Pulse is a modular pulsed MIG/MAG welding automation system that offers productivity, flexibility, and much more. By combining the reliable and consistent weld quality of robotic welding with the excellent arc characteristics and fast communication of KempArc Pulse, you are able to boost your production to a whole new level. In addition, you are able to unlock the full potential of Kemppi Wise welding processes for automated welding. They offer additional productivity boost in thin sheet as well as in heavy duty applications. KempArc Pulse is available both in analogue and digital models for integration with different robotic control systems.

BENEFITS

- Robot interface integrated in the power source
- Compatible with Kemppi Wise welding functions and processes
- Fast fieldbus-based communication guarantees integration with all common robot brands
- Available in digital and analogue models for varied integration possibilities
- Compact and lightweight wire drive mechanism
- Remote control options bring flexibility



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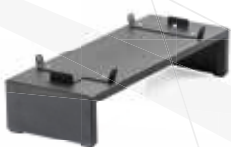
① KEMPARC PULSE 350 / 450 POWER SOURCE



KempArc Pulse 350, 450 are CC/CV power sources, designed for demanding professional use. They are suitable for synergic MIG/MAG, synergic 1-MIG and basic MIG/MAG. There is analog model available from KempArc Pulse 450 (AN). For digital models select interface card separately.

TECHNICAL SPECIFICATIONS

| | KEMPARC PULSE 350 POWER SOURCE | KEMPARC PULSE 450 POWER SOURCE |
|---|--------------------------------|--------------------------------|
| Ordering code | 6200350 | 6200450 / 6200450AN |
| Connection voltage 3~ 50/60 Hz | 400 V -15...+20% | 400 V -15...+20% |
| Fuse (delayed) | 25 A | 35 A |
| Minimum generator power | 35 kVA | 35 kVA |
| Welding range | 10 ... 50 V | 10 ... 50 V |
| Open circuit voltage | 50 V | 50 V |
| Rated power 80% ED | 16.0 kVA | 221.1 kVA |
| Rated power 100% ED | 15.3 kVA | 17.8 kVA |
| Idle power (no load power) | 100 W | 100 W |
| Efficiency | 88 % | 88 % |
| Power factor | 0.85 | 0.90 |
| Voltage supply for auxiliary devices | 50 V / 100 W | 50 V / 100 W |
| Auxiliary device supply fuse (X14, X15) | 6.3 A delayed | 6.3 A delayed |
| Voltage supply for the cooling device | 24 VDC / 50 W | 24 VDC / 50 W |
| Max. output current | 350 A (80 %) | 450 A (60 %) |
| Operating temperature range | -20 ... +40 °C | -20 ... +40 ÅãC |
| External dimensions LxWxH | 590 x 230 x 430 mm | 590 x 230 x 430 mm |
| Weight (no accessories) | 36 kg | 37 kg |
| Degree of protection | IP23S | IP23S |
| EMC class | A | A |
| Storage temperature range | -40 ... +60 °C | -40 ... +60 °C |
| Operating temperature range | -20 ... +40 °C | -20 ... +40 °C |



STAND FOR POWER SOURCE

Ordering code 6185295

For easy transport and keeping floor free under welder



② KEMPARC DT400 / DT400L / DT410L WIRE FEEDER



Wire feeder for automated welding with a reliable 4-roll wire feed mechanism and full metal feed rolls. DT400 can be mounted on the back of the robot arm or integrated with any mechanized welding system. A separate attachment bracket is required for mounting the wire feeder on robot. Wire feeder with Euro connector is available in right and left hand models (L) and PowerPin version is available in left hand version.

TECHNICAL SPECIFICATIONS

| | KEMPARC DT400 WIRE FEEDER | KEMPARC DT 410 L WIRE FEEDER |
|-----------------------------|---------------------------|------------------------------|
| Ordering code | 6203400 / 6203400L | 6203410 |
| Operating voltage | 50 VDC | 50 VDC |
| Rated power | 100 W | 100 W |
| Loadability | 40°C 100%ED 500 A | 40°C 100%ED 500 A |
| Wire feed speed | 0...25 m/min | 0...25 m/min |
| Filler wires | 0.8...1.6 mm | 0.8...1.6 mm |
| Welding gun connector | Euro | PowerPin |
| Operating temperature range | -20...+40°C | -20...+40°C |
| EMC | class A | class A |
| Degree of protection | n IP23S | n IP23S |
| External dimensions | 269 x 175 x 169 mm | 269 x 175 x 169 mm |
| Weight | 4.5 kg | 4.5 kg |



3 FEED ROLL KITS FOR DT400 WIRE FEEDER



U = U Groove
V = Plain V Groove
VK = Knurled V Groove
T = Trapezoid Groove
HD = Heavy Duty kit (contains metal feed rolls)
MC/FC = Metal/Flux Cored

| Ordering code | Description |
|---------------|--|
| F000350 | FE (MC/FC) V0.8-0.9 HD DURATORQUE KIT #3 |
| F000351 | FE (MC/FC) V1.0 HD DURATORQUE KIT #3 |
| F000352 | FE (MC/FC) V1.2 HD DURATORQUE KIT #3 |
| F000353 | FE (MC/FC) V1.6 HD DURATORQUE KIT #3 |
| F000354 | SS (FE) V0.8-0.9 HD DURATORQUE KIT #3 |
| F000355 | SS (FE) V1.0 HD DURATORQUE KIT #3 |
| F000356 | SS (FE) V1.2 HD DURATORQUE KIT #3 |
| F000357 | SS (FE) V1.6 HD DURATORQUE KIT #3 |
| F000358 | MC/FC VK1.0 HD DURATORQUE KIT #3 |
| F000359 | MC/FC VK1.2 HD DURATORQUE KIT #3 |
| F000360 | MC/FC VK1.4-1.6 HD DURATORQUE KIT #3 |
| F000361 | MC/FC VK2.0 HD DURATORQUE KIT #3 |
| F000362 | AL U1.0 HD DURATORQUE KIT #3 |
| F000363 | AL U1.2 HD DURATORQUE KIT #3 |
| F000364 | AL U1.6 HD DURATORQUE KIT #3 |



4 KEMPCOOL 10 COOLING UNIT



Cooling unit suitable for use with Kemppi KempArc welding equipment. KempCool 10 performs 1 kW of cooling power with a three liter tank that can be filled with 20%-40% ethanol/water mixture, or any other suitable antifreeze agent.

TECHNICAL SPECIFICATIONS

| | |
|--------------------------------|-------------------------------------|
| Ordering code | 6208100 |
| Connection voltage 3~ 50/60 Hz | 400 V -15...+20% |
| Rated power | 250 W (100 %) |
| Rated power 100% ED | 250 W |
| Cooling liquid | 20 - 40% Monopropylenglycol - water |
| Max. pressure at output | 0.4 MPa |
| Operating temperature range | -20 ... +40 °C |
| External dimensions LxWxH | 570 × 230 × 280 mm |
| Weight (no accessories) | 11 kg |
| Degree of protection | IP23S |
| EMC class | A |
| Cooler tank volume | 3 l |
| Cooling power | 1 kW |
| Storage temperature range | -40 ... +60 °C |

COOLING LIQUID

| | | |
|---------------|-----------|--------------|
| Ordering code | SP9810765 | 10 liter can |
|---------------|-----------|--------------|



5 ROBOT INTERFACE CARDS

Fieldbus communication between power source and robot controller is enabled with modules. The protocol can be chosen based on customer preference. Modules are placed inside the KempArc robot interface chassis.



| Ordering code | Description |
|---------------|------------------------------------|
| 9774120CAN | INTERFACE CARD CAN OPEN |
| 9774120DEV | FIELD BUS ADAPTER DEVICENET |
| 9774120ETC | FIELD BUS INTERFACE ETHERCAT |
| 9774120ETH | FIELD BUS ADAPTER ETHERNET |
| 9774120IBC | FIELD BUS ADAPTER INTERBUS COPPER |
| 9774120IBO | FIELD BUS ADAPTER INTERBUS OPTICAL |
| 9774120PRF | FIELD BUS ADAPTER PROFIBUS |
| 9774120PRN | FIELD BUS ADAPTER PROFINET |



6 INTERCONNECTION CABLES



The interconnection cable set contains several cables and hoses. The cable set is used for delivering the welding power, shielding gas, cooling liquid, and control signals from the welding power source to the wire feeder. Interconnection cable sets are available in zipper bags or in corrugated sleeves.



GAS COOLED CABLE SETS

| Ordering code | Description | Additional info |
|---------------|---------------------------|---|
| 6260441 | ROBOT 70-5-GH | Corrugated sleeve, 70 mm ² , 5m, Dix connector on both ends, Gas cooled |
| 6260445 | ROBOT 70-10-GH | Corrugated sleeve, 70 mm ² , 10m, Dix connector on both ends, Gas cooled |
| 6260446 | ROBOT 70-5-GH DIX | Zipper bag, 70 mm ² , 5 m, dix connector on both ends, Gas cooled |
| 6260447 | ROBOT 70-10-GH DIX | Zipper bag, 70 mm ² , 10 m, dix connector on both ends, Gas cooled |
| 6260442 | ROBOT 70-5-GH CABLE SHOE | Suitable for DT 410 feeder, PowerPin connector for welding gun, cable shoe for feeder connection and dix for power source, 5 m, Gas cooled |
| 6260443 | ROBOT 70-10-GH CABLE SHOE | Suitable for DT 410 feeder, PowerPin connector for welding gun, cable shoe for feeder connection and dix for power source, 10 m, Gas cooled |

WATER COOLED CABLE SETS

| Ordering code | Description | Additional info |
|---------------|--------------------|---|
| 6260461 | ROBOT 95-5-WH | Corrugated sleeve, 95 mm ² , 5m, Dix connector on both ends, Water cooled |
| 6260465 | ROBOT 95-10-WH | Corrugated sleeve, 95 mm ² , 10m, Dix connector on both ends, Water cooled |
| 6260465C2 | ROBOT 95-30-WH | Corrugated sleeve, 95 mm ² , 30m, Dix connector on both ends, Water cooled |
| 6260465C3 | ROBOT 95-20-WH | Corrugated sleeve, 95 mm ² , 20m, Dix connector on both ends, Water cooled |
| 6260465C4 | ROBOT 95-15-WH | Corrugated sleeve, 95 mm ² , 15m, Dix connector on both ends, Water cooled |
| 6260478 | ROBOT 70-5-WH DIX | Zipper bag, 70 mm ² , 5 m, dix connector on both ends, Water cooled |
| 6260479 | ROBOT 70-10-WH DIX | Zipper bag, 70 mm ² , 10 m, dix connector on both ends, Water cooled |
| 6260465C1 | ROBOT 70-25-WH DIX | Zipper bag, 70 mm ² , 25 m, dix connector on both ends, Water cooled |



7 INTERCONNECTION CABLE BRACKETS



Items in picture as example,
clamp design may vary

| Ordering code | Additional info |
|---------------|--|
| SP800888 | Works together with interconnection cables with corrugated sleeve. Kit includes an adapter plate for KUKA KR CYBERTECH series robots for 2nd joint attachment. |
| 9370131 | Works together with interconnection cables with corrugated sleeve. For each clamp (9370131) also 2x jaws are required (9370133) |



| | | |
|---------------|----------|--|
| Ordering code | SP008072 | Metal attachment piece, two cable ties, for zipper bag |
|---------------|----------|--|

8 EARTH RETURN CABLE



| Ordering code | Description | Additional info |
|---------------|---|---|
| 6184711 | EARTH RETURN CABLE 70 MM ² 5M | Dix connector for the power source, 5 m , 70 mm ² |
| 6184712 | EARTH RETURN CABLE 70 MM ² 10M | Dix connector for the power source, 10 m , 70 mm ² |
| 6184713 | EARTH RETURN CABLE 70 MM ² 15M | Dix connector for the power source, 15 m , 70 mm ² |



9 WIRE CONDUIT FOR WIRE SPOOLS

High quality wire conduit delivers the filler wire smoothly from wire spool to wire feeder. Male connectors on both ends fit to Kemppi feeder and Kemppi wire spool support. Order codes does not include female snap connector for wire spool holder or wire drum. It must be ordered separately. In case of stainless steel or aluminium, a separate chili liner is also required.

WIRE CONDUITS (STANDARD LENGTH)



| Ordering code | Description |
|---------------|---|
| SP600535 | WIRE CONDUIT-1.8M ROBOT KEMPPPI |
| SP600536 | WIRE CONDUIT-3.0M ROBOT KEMPPPI |
| SP800803 | WIRE CONDUIT-4.0M ROBOT KEMPPPI |
| SP600537 | WIRE CONDUIT-5.0M ROBOT KEMPPPI |
| SP600686 | WIRE CONDUIT-8.0M ROBOT KEMPPPI |
| SP600731 | ADDITIONAL CHILI LINER KIT FOR STAINLESS STEEL AND ALUMINUM WELDING CASES |



9 WIRE CONDUIT FOR WIRE DRUMS

Alternative solution for wire conduit when distance between wire feeder and wire drum is greater than 5 meters. NOTE: When ordering W005195 with the desired length, you also need snap connectors: two male (W005197) and one female (W005189).

9.1 WIRE CONDUITS (CUSTOM LENGTH)



Ordering code W005195

Custom length for your delivery (max. 27 m)

9.2 SNAP CONNECTOR FOR WIRE CONDUIT (MALE)



Ordering code W005197

Male connector for wire conduit, two pieces needed per conduit

9.3 SNAP CONNECTOR FOR DRUM OR SPOOL HOLDER (FEMALE)



Ordering code W005189

Female connector for the wire drum or spool holder



10 WIRE SPOOL HOLDER



Suitable for standard 15 kg wire coil. NOTE: Female connector for wire conduit not included. Must be ordered separately.

| Ordering code | Description | Additional info |
|---------------|--------------------------|-------------------|
| W007628 | WIRE SPOOL SUPPORT RIGHT | wire spool holder |
| W007629 | WIRE SPOOL SUPPORT LEFT | wire spool holder |

11 PROTECTIVE COVER FOR WIRE SPOOL



| | | |
|---------------|----------|-------------------------------------|
| Ordering code | SP007940 | Plastic cover for wire spool holder |
|---------------|----------|-------------------------------------|

12 FLOOR STAND FOR WIRE WIRE SPOOL HOLDER



| | | |
|---------------|---------|-----------------------------------|
| Ordering code | W007356 | Floor stand for wire spool holder |
|---------------|---------|-----------------------------------|



13 WIRE FEEDER MOUNTING BRACKETS



Brackets for mounting the wire feeder on the robot's 3rd axis. The design is robot model specific. Order code includes metal plates. Insulation rings and Screws are not included if order code begins with W.

| Ordering code | Description | |
|---------------|-----------------------------------|---|
| SP800810 | A7/DT400 BRACKET KUKA KR10 R1420 | KUKA KR8 R1620, KUKA KR6 R1620, KUKA KR8 R2010, KUKA KR12 R1810, KUKA KR16 R1610, KUKA KR16 R2010, KUKA KR20 R1810, KUKA KR22 R1610, GSK RP08 |
| SP800828 | BRACKET ABB IRB2600 - DT 400 | |
| SP800872 | BRACKET KUKA KR8 R1820 HW - DT400 | |
| SP800890 | BRACKET ABB IRB 4400 A7/DT400 | |
| SP800892 | BRACKET YASKAWA MA2010 - DT400 | |
| W004107 | SUPPORT BRACKET MOTOMAN EA1900 | |
| W003367 | Fanuc 100iC / DT 400 support | |
| W003696 | Kuka KR5HW / DT 400 support | |
| W004135 | ABB IRB 2400L SUPPORT DT 400 | |
| W004137 | ABB IRB 1600 SUPPORT DT 400 | |
| W004138 | ABB IRB 1600ID SUPPORT DT 400 | |
| W008292 | ABB IRB 1520ID SUPPORT DT 400 | |
| W008509 | ABB IRB 2600ID SUPPORT DT 400 | |
| W007812 | ABB IRB 4600 SUPPORT DT 400 | |



14 WISE PROCESSES



| Ordering code | Description |
|---------------|-------------------|
| 6265013 | WiseThin-A |
| 9991011 | WiseRoot-A |
| 9991015 | WiseFusion-A |
| 9991010 | WisePenetration-A |

15 WELDING GUN PACKAGE



See robotic gun packages page 67

16 WELDING GUN CLEANING STATION



See robotic gun packages page 88 more information.

| | | |
|---------------|----------|----------------------------|
| Ordering code | SP600674 | Robot gun cleaning station |
|---------------|----------|----------------------------|



OPTIONAL ITEMS

17 REMOTE CONTROL PANEL



| Ordering code | Description | Additional info |
|---------------|----------------------------|--------------------------------|
| 6200800 | KF 62 Remote control panel | With 10-meter connecting cable |

18 GAS FLOW KIT

| Ordering code | Description | Additional info |
|---------------|--------------|------------------------------------|
| SP600434 | Gas flow kit | Monitors minimum limit of gas flow |





- 1 Power source
- 2 Wire feeder
- 3 Wire feeder roller kit
- 4 Water cooling unit
- 5 Robot interface module
- 6 Interconnection cables
- 7 Interconnection cable brackets
- 8 Earth return cable
- 9 Wire conduit
- 10 Wire spool holder
- 11 Wire spool protective cover
- 12 Floor stand for wire spool holder
- 13 Wire feeder mounting bracket
- 14 Wise processes
- 15 Welding gun package
- 16 Welding gun cleaning station



KempArc SYN

Automated quality and productivity

If you are looking for a productive and reliable robotic welding solution, we have just the thing for you. The compact and powerful KempArc SYN 500 is designed for synergic MIG/MAG welding automation. Its excellent arc characteristics will deliver high quality welds. All common fieldbus protocols can be used for the robot interface.. KempArc SYN 500 is especially well suited for cost-effective retrofit cases and heavy duty applications, delivering 430 A at 100% duty cycle. It is available both in analogue and digital models for integration with different robotic control systems.

BENEFITS

- Robot interface integrated in the power source
- Easy programming with the synergic welding programs and 90 memory channels
- Fast fieldbus-based communication guarantees integration with all common robot brands
- Available in digital and analogue models for varied integration possibilities
- Compact and lightweight wire feed mechanism



1 KEMPARC SYN 500 POWER SOURCE



Synergic MIG/MAG welding automation system, especially well-suited for cost-effective retrofit cases and heavy duty applications. KempArc SYN 500 is available in digital and analogue (AN) models for integration with different robotic control systems.

TECHNICAL SPECIFICATIONS

| | |
|---|-----------------------------|
| Ordering code | 6201500 / 6201500AN |
| Connection voltage 3~ 50/60 Hz | 400 V -15...+20% |
| Fuse (delayed) | 35 A |
| Minimum generator power | 27kVA (60%) 20kVA (100%) |
| Welding range | 10 ... 42 V |
| Open circuit voltage | 50 V |
| Rated power 60% ED | 26.1 kVA |
| Rated power 100% ED | 20.3 kVA |
| Primary current 50% ED | I1max 40.0 A |
| Primary current 100% ED | I1 31.0 A |
| Connection cable size | 6 mm ² |
| Idle power (no load power) | 25 W |
| Efficiency | 87% |
| Power factor | 0.9 |
| Voltage supply for auxiliary devices | 50 V |
| Auxiliary device supply fuse (X14, X15) | 6.3 A delayed |
| Voltage supply for the cooling device | 1-ph 400 VAC/250 VA |
| Max. welding voltage | 46 V |
| Max. output current | 500 A (60 %) |
| Operating temperature range | -20 ... +40 °C |
| External dimensions LxWxH | 590 × 230 × 500 mm |
| Weight (no accessories) | 37 kg |
| Degree of protection | IP23C |
| EMC class | A |



STAND FOR POWER SOURCE

Ordering code 6185295

For easy transport and keeping floor free under welder



② KEMPARC DT400 / DT400L / DT410L WIRE FEEDER



Wire feeder for automated welding with a reliable 4-roll wire feed mechanism and full metal feed rolls. DT400 can be mounted on the back of the robot arm or integrated with any mechanized welding system. A separate mounting bracket is required for mounting the wire feeder on robot. Wire feeder with Euro connector is available in right and left hand models (L) and PowerPin version is available in left hand version.

TECHNICAL SPECIFICATIONS

| | KEMPARC DT400 WIRE FEEDER | KEMPARC DT 410 L WIRE FEEDER |
|-----------------------------|---------------------------|------------------------------|
| Ordering code | 6203400 / 6203400L | 6203410 |
| Operating voltage | 50 VDC | 50 VDC |
| Rated power | 100 W | 100 W |
| Loadability | 40°C 100%ED 500 A | 40°C 100%ED 500 A |
| Wire feed speed | 0...25 m/min | 0...25 m/min |
| Filler wires | 0.8...1.6 mm | 0.8...1.6 mm |
| Welding gun connector | Euro | PowerPin |
| Operating temperature range | -20...+40°C | -20...+40°C |
| EMC | class A | class A |
| Degree of protection | n IP23S | n IP23S |
| External dimensions | 269 x 175 x 169 mm | 269 x 175 x 169 mm |
| Weight | 4.5 kg | 4.5 kg |



3 FEED ROLL KITS FOR DT400 WIRE FEEDER



U = U Groove
V = Plain V Groove
VK = Knurled V Groove
T = Trapezoid Groove
HD = Heavy Duty kit (contains metal feed rolls)
MC/FC = Metal/Flux Cored

| Ordering code | Description |
|---------------|--|
| F000350 | FE (MC/FC) V0.8-0.9 HD DURATORQUE KIT #3 |
| F000351 | FE (MC/FC) V1.0 HD DURATORQUE KIT #3 |
| F000352 | FE (MC/FC) V1.2 HD DURATORQUE KIT #3 |
| F000353 | FE (MC/FC) V1.6 HD DURATORQUE KIT #3 |
| F000354 | SS (FE) V0.8-0.9 HD DURATORQUE KIT #3 |
| F000355 | SS (FE) V1.0 HD DURATORQUE KIT #3 |
| F000356 | SS (FE) V1.2 HD DURATORQUE KIT #3 |
| F000357 | SS (FE) V1.6 HD DURATORQUE KIT #3 |
| F000358 | MC/FC VK1.0 HD DURATORQUE KIT #3 |
| F000359 | MC/FC VK1.2 HD DURATORQUE KIT #3 |
| F000360 | MC/FC VK1.4-1.6 HD DURATORQUE KIT #3 |
| F000361 | MC/FC VK2.0 HD DURATORQUE KIT #3 |
| F000362 | AL U1.0 HD DURATORQUE KIT #3 |
| F000363 | AL U1.2 HD DURATORQUE KIT #3 |
| F000364 | AL U1.6 HD DURATORQUE KIT #3 |



4 KEMPCOOL 10 COOLING UNIT



Cooling unit suitable for use with Kemppi KempArc welding equipment. KempCool 10 performs 1 kW of cooling power with a three liter tank that can be filled with 20%-40% ethanol/water mixture, or any other suitable antifreeze agent.

TECHNICAL SPECIFICATIONS

| | |
|--------------------------------|-------------------------------------|
| Ordering code | 6208100 |
| Connection voltage 3~ 50/60 Hz | 400 V -15...+20% |
| Rated power | 250 W (100 %) |
| Rated power 100% ED | 250 W |
| Cooling liquid | 20 - 40% Monopropylenglycol - water |
| Max. pressure at output | 0.4 MPa |
| Operating temperature range | -20 ... +40 °C |
| External dimensions LxWxH | 570 × 230 × 280 mm |
| Weight (no accessories) | 11 kg |
| Degree of protection | IP23S |
| EMC class | A |
| Cooler tank volume | 3 l |
| Cooling power | 1 kW |
| Storage temperature range | -40 ... +60 °C |

COOLING LIQUID

| | | |
|---------------|-----------|--------------|
| Ordering code | SP9810765 | 10 liter can |
|---------------|-----------|--------------|



5 ROBOT INTERFACE CARDS

Fieldbus communication between power source and robot controller is enabled with modules. The protocol can be chosen based on customer preference. Modules are placed inside the KempArc robot interface chassis.



| Ordering code | Description |
|---------------|------------------------------------|
| 9774120CAN | INTERFACE CARD CAN OPEN |
| 9774120DEV | FIELD BUS ADAPTER DEVICENET |
| 9774120ETC | FIELD BUS INTERFACE ETHERCAT |
| 9774120ETH | FIELD BUS ADAPTER ETHERNET |
| 9774120IBC | FIELD BUS ADAPTER INTERBUS COPPER |
| 9774120IBO | FIELD BUS ADAPTER INTERBUS OPTICAL |
| 9774120PRF | FIELD BUS ADAPTER PROFIBUS |
| 9774120PRN | FIELD BUS ADAPTER PROFINET |



6 INTERCONNECTION CABLES



The interconnection cable set contains several cables and hoses. The cable set is used for delivering the welding power, shielding gas, cooling liquid, and control signals from the welding power source to the wire feeder. Interconnection cable sets are available in zipper bags or in corrugated sleeves.



GAS COOLED CABLE SETS

| Ordering code | Description | Additional info |
|---------------|---------------------------|---|
| 6260441 | ROBOT 70-5-GH | Corrugated sleeve, 70 mm ² , 5m, Dix connector on both ends, Gas cooled |
| 6260445 | ROBOT 70-10-GH | Corrugated sleeve, 70 mm ² , 10m, Dix connector on both ends, Gas cooled |
| 6260446 | ROBOT 70-5-GH DIX | Zipper bag, 70 mm ² , 5 m, dix connector on both ends, Gas cooled |
| 6260447 | ROBOT 70-10-GH DIX | Zipper bag, 70 mm ² , 10 m, dix connector on both ends, Gas cooled |
| 6260442 | ROBOT 70-5-GH CABLE SHOE | Suitable for DT 410 feeder, PowerPin connector for welding gun, cable shoe for feeder connection and dix for power source, 5 m, Gas cooled |
| 6260443 | ROBOT 70-10-GH CABLE SHOE | Suitable for DT 410 feeder, PowerPin connector for welding gun, cable shoe for feeder connection and dix for power source, 10 m, Gas cooled |

WATER COOLED CABLE SETS

| Ordering code | Description | Additional info |
|---------------|--------------------|---|
| 6260461 | ROBOT 95-5-WH | Corrugated sleeve, 95 mm ² , 5m, Dix connector on both ends, Water cooled |
| 6260465 | ROBOT 95-10-WH | Corrugated sleeve, 95 mm ² , 10m, Dix connector on both ends, Water cooled |
| 6260465C2 | ROBOT 95-30-WH | Corrugated sleeve, 95 mm ² , 30m, Dix connector on both ends, Water cooled |
| 6260465C3 | ROBOT 95-20-WH | Corrugated sleeve, 95 mm ² , 20m, Dix connector on both ends, Water cooled |
| 6260465C4 | ROBOT 95-15-WH | Corrugated sleeve, 95 mm ² , 15m, Dix connector on both ends, Water cooled |
| 6260478 | ROBOT 70-5-WH DIX | Zipper bag, 70 mm ² , 5 m, dix connector on both ends, Water cooled |
| 6260479 | ROBOT 70-10-WH DIX | Zipper bag, 70 mm ² , 10 m, dix connector on both ends, Water cooled |
| 6260465C1 | ROBOT 70-25-WH DIX | Zipper bag, 70 mm ² , 25 m, dix connector on both ends, Water cooled |



7 INTERCONNECTION CABLE BRACKETS



Items in picture as example,
clamp design may vary

| Ordering code | Additional info |
|---------------|--|
| SP800888 | Works together with interconnection cables with corrugated sleeve. Kit includes an adapter plate for KUKA KR CYBERTECH series robots for 2nd joint attachment. |
| 9370131 | Works together with interconnection cables with corrugated sleeve. For each clamp (9370131) also 2x jaws are required (9370133) |



| | | |
|---------------|----------|--|
| Ordering code | SP008072 | Metal attachment piece, two cable ties, for zipper bag |
|---------------|----------|--|

8 EARTH RETURN CABLE



| Ordering code | Description | Additional info |
|---------------|---|---|
| 6184711 | EARTH RETURN CABLE 70 MM ² 5M | Dix connector for the power source, 5 m , 70 mm ² |
| 6184712 | EARTH RETURN CABLE 70 MM ² 10M | Dix connector for the power source, 10 m , 70 mm ² |
| 6184713 | EARTH RETURN CABLE 70 MM ² 15M | Dix connector for the power source, 15 m , 70 mm ² |



9 WIRE CONDUIT FOR WIRE SPOOLS

High quality wire conduit delivers the filler wire smoothly from wire spool to wire feeder. Male connectors on both ends fit to Kemppi feeder and Kemppi wire spool support. Order codes does not include female snap connector for wire spool holder or wire drum. It must be ordered separately. In case of stainless steel or aluminium, a separate chili liner is also required.

WIRE CONDUITS (STANDARD LENGTH)



| Ordering code | Description |
|---------------|---|
| SP600535 | WIRE CONDUIT-1.8M ROBOT KEMPPPI |
| SP600536 | WIRE CONDUIT-3.0M ROBOT KEMPPPI |
| SP800803 | WIRE CONDUIT-4.0M ROBOT KEMPPPI |
| SP600537 | WIRE CONDUIT-5.0M ROBOT KEMPPPI |
| SP600686 | WIRE CONDUIT-8.0M ROBOT KEMPPPI |
| SP600731 | ADDITIONAL CHILI LINER KIT FOR STAINLESS STEEL AND ALUMINUM WELDING CASES |



9 WIRE CONDUIT FOR WIRE DRUMS

Alternative solution for wire conduit when distance between wire feeder and wire drum is greater than 5 meters. NOTE: When ordering W005195 with the desired length, you also need snap connectors: two male (W005197) and one female (W005189).

9.1 WIRE CONDUITS (CUSTOM LENGTH)



Ordering code W005195

Custom length for your delivery (max. 27 m)

9.2 SNAP CONNECTOR FOR WIRE CONDUIT (MALE)



Ordering code W005197

Male connector for wire conduit, two pieces needed per conduit

9.3 SNAP CONNECTOR FOR DRUM OR SPOOL HOLDER (FEMALE)



Ordering code W005189

Female connector for the wire drum or spool holder



10 WIRE SPOOL HOLDER



Suitable for standard 15 kg wire coil. NOTE: Female connector for wire conduit not included. Must be ordered separately.

| Ordering code | Description | Additional info |
|---------------|--------------------------|-------------------|
| W007628 | WIRE SPOOL SUPPORT RIGHT | wire spool holder |
| W007629 | WIRE SPOOL SUPPORT LEFT | wire spool holder |

11 PROTECTIVE COVER FOR WIRE SPOOL



Ordering code SP007940 Plastic cover for wire spool holder

12 FLOOR STAND FOR WIRE SPOOL HOLDER



Ordering code W007356 Floor stand for wire spool holder



13 WIRE FEEDER MOUNTING BRACKETS



Brackets for mounting the wire feeder on the robot's 3rd axis. The design is robot model specific. Order code includes metal plates. Insulation rings and Screws are not included if order code begins with W.

| Ordering code | Description | |
|---------------|-----------------------------------|---|
| SP800810 | A7/DT400 BRACKET KUKA KR10 R1420 | KUKA KR8 R1620, KUKA KR6 R1620, KUKA KR8 R2010, KUKA KR12 R1810, KUKA KR16 R1610, KUKA KR16 R2010, KUKA KR20 R1810, KUKA KR22 R1610, GSK RP08 |
| SP800828 | BRACKET ABB IRB2600 - DT 400 | |
| SP800872 | BRACKET KUKA KR8 R1820 HW - DT400 | |
| SP800890 | BRACKET ABB IRB 4400 A7/DT400 | |
| SP800892 | BRACKET YASKAWA MA2010 - DT400 | |
| W004107 | SUPPORT BRACKET MOTOMAN EA1900 | |
| W003367 | Fanuc 100iC / DT 400 support | |
| W003696 | Kuka KR5HW / DT 400 support | |
| W004135 | ABB IRB 2400L SUPPORT DT 400 | |
| W004137 | ABB IRB 1600 SUPPORT DT 400 | |
| W004138 | ABB IRB 1600ID SUPPORT DT 400 | |
| W008292 | ABB IRB 1520ID SUPPORT DT 400 | |
| W008509 | ABB IRB 2600ID SUPPORT DT 400 | |
| W007812 | ABB IRB 4600 SUPPORT DT 400 | |



14 WISE PROCESSES



| Ordering code | Description |
|---------------|-------------|
| 6265013 | WiseThin-A |
| 9991011 | WiseRoot-A |

15 WELDING GUN PACKAGE



See robotic gun packages page 67

16 WELDING GUN CLEANING STATION



See robotic gun packages page 88 more information.

| | | |
|---------------|----------|----------------------------|
| Ordering code | SP600674 | Robot gun cleaning station |
|---------------|----------|----------------------------|



OPTIONAL ITEMS

17 GAS FLOW KIT

| Ordering code | Description | Additional info |
|---------------|--------------|------------------------------------|
| SP600434 | Gas flow kit | Monitors minimum limit of gas flow |







Robotic gun packages

A perfect welding gun system for robotic arc welding consist of gun neck with a contact tip holder, a gas nozzle and a cable assembly. Robotic gun can be mounted on suitable Kempfi Gun Mount.

Accurate TCP location contributes to constant and reliable welding results. Robust design constructed from centralized inner tube & stainless steel made outer tube, guarantees best possible usability during daily operations and minimizes the risk of damages to system in case of collisions. Low maintenance need and easy to change components increase system availability.

Four standard swan neck designs are available for both gas and water cooled variants. Engineered designs available at request.

Robotic gun cleaning station is available for Kempfi robotic gun packages.

The choice of the correct robotic gun package is based mainly on robot brand and model and required cooling. The following tables guide you in choosing the correct items based on the application.

Use table 1 to select the gun mount type, flange, cable assembly and the liner.

| Table 1 | Start from the top, proceed line by line in numerical order | | | | | | | | | | | |
|-------------------------------------|---|----|--------|----|--------|----|--------|----|------------------|------|-------|------|
| Robot upper arm design | Hollow wrist | | | | | | | | Non hollow wrist | | | |
| Cooling type | Gas | | | | Water | | | | Gas | | Water | |
| Gun mount type | T1 g ① | | T3 g ② | | T1 w ① | | T3 w ② | | T2 ③ | T4 ④ | T2 ③ | T4 ④ |
| Flange type based on robot model | ⑤ | | ⑥ | | ⑤ | | ⑥ | | ⑦ | | ⑦ | |
| Wire feeder connector type | euro | pp | euro | pp | euro | pp | euro | pp | euro | pp | euro | pp |
| Cable assembly based on robot model | ⑧ | ⑨ | ⑩ | ⑪ | ⑫ | ⑬ | ⑭ | ⑮ | ⑯ | ⑰ | ⑱ | ⑲ |
| Liner for cable assembly | ⑳ | ㉑ | ⑳ | ㉑ | ⑳ | ㉑ | ⑳ | ㉑ | ⑳ | ㉑ | ⑳ | ㉑ |

Use table 2 to select the gun neck, gas nozzle, contact tip holder and the contact tip.

| Table 2 | Start from the top, proceed line by line in numerical order | | | |
|--------------------|---|----------|-----------|----------|
| Cooling type | Gas | | Water | |
| Contact tip holder | ⑳ | | ㉑ | |
| Neck form | ㉒ | | ㉓ | |
| Gas nozzle form | conical ㉔ | bottle ㉕ | conical ㉖ | bottle ㉗ |
| Contact tip | ㉘ | | | |



① GUN MOUNT T1

Kempfi T1 Gun Mount for robotic guns is meant to be used with hollow wrist type robot models where the cable assembly is run through the 6th axis of the robot.

T1 Gun Mount is equipped with collision sensors and signal is to be connected with robot controller. Collision detection is an essential function in arc welding robotics and helps to avoid or minimize damage to welding equipment, work piece or tooling in case of gun neck makes unplanned contact with its surroundings. Separate versions available for water cooled and gas cooled applications. Robot specific flange is required for final assembly, see 5.



| Ordering code | Description | Additional info |
|---------------|----------------------|--------------------------|
| SP600588 | Robot gun mount T1 W | for water cooled systems |

| Ordering code | Description | Additional info |
|---------------|----------------------|------------------------|
| SP600589 | Robot gun mount T1 G | for gas cooled systems |

② GUN MOUNT T3

Kempfi T3 Gun Mount for robotic guns is meant to be used with hollow wrist type robot models where the cable assembly is run through the 6th axis of the robot.

T3 Gun Mount is not equipped with collision sensors and so the robot model, which is used, should have software functionalities itself to handle collision detection. Collision detection is an essential function in arc welding robotics and helps to avoid or minimize damage to welding equipment, work piece or tooling in case of gun neck makes unplanned contact with its surroundings. Separate versions available for water cooled and gas cooled applications. Robot specific flange is required for final assembly, see 6.



| Ordering code | Description | Additional info |
|---------------|----------------------|--------------------------|
| SP600574 | Robot gun mount T3 W | for water cooled systems |

| Ordering code | Description | Additional info |
|---------------|----------------------|------------------------|
| SP600575 | Robot gun mount T3 G | for gas cooled systems |



3 GUN MOUNT T2

Kempfi T2 Gun Mount for robotic guns is meant to be used with non hollow wrist type robot models. T2 Gun Mount is equipped with collision sensors and signal is to be connected with robot controller. Collision detection is an essential function in arc welding robotics and helps to avoid or minimize damage to welding equipment, work piece or tooling in case of gun neck makes unplanned contact with its surroundings. A separate segment holder is used to attach the T2 gun mount to the robot. Robot specific flange is required for final assembly, see 7.



| Ordering code | Description | Additional info |
|---------------|-----------------------|---------------------------------|
| SP600605 | Robot gun mount T2 L | Default version for normal guns |
| SP600606 | Robot gun mount T2 XL | For tandem welding guns |

| Ordering code | Description | Additional info |
|---------------|---------------------------------|------------------------------------|
| SP600608 | Segment holder for gun mount T2 | Adjustable gun neck mounting angle |

4 GUN MOUNT T4

Kempfi T4 Gun Mount for robotic guns is meant to be used with non hollow wrist type robot models. T4 Gun Mount is not equipped with collision sensors and so the robot model, which is used, should have software functionalities itself to handle collision detection. Collision detection is an essential function in arc welding robotics and helps to avoid or minimize damage to welding equipment, work piece or tooling in case of gun neck makes unplanned contact with its surroundings. T4 Gun Mount T4 Gun Mount consist of upper and lower bracket parts. Robot specific flange is required for final assembly, see 7.



| Ordering code | Description | Additional info |
|---------------|--------------------|------------------------------------|
| SP600604 | Robot gun mount T4 | Adjustable gun neck mounting angle |



5 ADAPTER FLANGES FOR T1 GUN MOUNTS

The choice of the adapter flange is based on exact robot brand and model. Flanges for T1 gun mounts are meant for HW-robot models and fit both T1 W and T1 G mount models.



| Ordering code | Description | Additional info |
|---------------|---|---|
| SP600724 | FLANGE T1 ABB IRB 2600 ID | |
| SP600581 | FLANGE T1 ABB IRB 1600 ID | IRB 1520ID |
| SP600587 | FLANGE T1 COMAU | |
| SP600583 | FLANGE T1 FANUC ARC MATE IC SERIES | |
| SP600695 | FLANGE T1 KAWASAKI BA006N | |
| SP600582 | FLANGE T1 KUKA KR5 Arc HW/KR16 L8 Arc HW/KR | KUKA KR8 R1420 arc HW, KR8 R1620 arc HW, KR6 R1820 arc HW |
| SP600584 | FLANGE T1 OTC Almega All NB4/NB4L | |
| SP600586 | FLANGE T1 PANASONIC TB1400 | |
| SP600585 | FLANGE T1 REIS RV 20-6HW/20-10HW/30-10HW | |
| SP600580 | FLANGE T1 YASKAWA EA1400N/1900N/SSA | |
| SP600648 | FLANGE T1 YASKAWA MA1440/2010 | |

6 ADAPTER FLANGES FOR T3 GUN MOUNTS

The choice of the adapter flange is based on exact robot brand and model. Flanges for T3 gun mounts are meant for HW-robot models and fit both T3 W and T3 G mount models.



| Ordering code | Description | Additional info |
|---------------|------------------------------------|-----------------|
| SP600570 | FLANGE T3 ABB IRB 1600ID | IRB 1520ID |
| SP600571 | FLANGE T3 ABB IRB 2600ID | IRB 1660ID |
| SP600572 | FLANGE T3 FANUC ARC MATE IC SERIES | |

| Ordering code | Description | Additional info |
|---------------|---|------------------------|
| SP600573 | INTERMED. MODULE FLANGE T3 FANUC ArcMate iC | Required with SP600572 |



7 ADAPTER FLANGES FOR T2 AND T4 GUN MOUNTS

The choice of the adapter flange is based on exact robot brand and model. Flanges for T2 / T4 gun mounts are meant for non-HW-robot models.



| Ordering code | Description | Additional info |
|---------------|------------------------------|---|
| SP600639 | FLANGE T2 ABB IRB 1600/2400L | ABB IRB 140, ABB IRB 1400, ABB IRB 1410, ABB IRB 1600, KUKA KR5 arc, KUKA KR6-2, KUKA KR 16 L6-2 |
| SP600640 | FLANGE T2 ABB IRB 2400/4600 | |
| SP600637 | FLANGE T2 ISO 9409-1A100 | ABB IRB 4400/60 |
| SP600603 | FLANGE T2 ISO 9409-1A125 | |
| SP600633 | FLANGE T2 ISO 9409-1A31.5 | KUKA KR10 R1420, KUKA KR8 R1620, KUKA KR6 R1820 |
| SP600634 | FLANGE T2 ISO 9409-1A50 | ABB IRB 4440/L10, KUKA KR 30 L16-2, KUKA KR 16-2, KUKA KR8 R2010, KUKA KR12 R1810, KUKA KR16 R1610, KUKA KR16 R2010, KUKA KR20 R1810, KUKA KR22 R1610 |
| SP600635 | FLANGE T2 ISO 9409-1A63 | |
| SP600636 | FLANGE T2 ISO 9409-1A80 | |



8 CABLE ASSEMBLIES FOR HW-ROBOTS, GAS COOLED, T1 MOUNT AND EURO CONNECTOR

Cable assemblies for HW-robots must be accurate in length. Cable lengths are designed for certain wire feeder and bracket combination. For additional combinations consult Kemppi sales.

| Ordering code | Description | Additional info |
|---------------|--|--|
| SP600698 | CABLE ASSEMBLY T1 G KAWASAKI BA006N EURO | For A7 Wire feeder with Kemppi bracket |
| SP600708 | CABLE ASSEMBLY T1 G KR 6 R1820 ARC HW EURO | For A7 Wire feeder with Kemppi bracket |
| SP600710 | CABLE ASSEMBLY T1 G KUKA KR 5-2 HW EURO | For A7 Wire feeder with Kemppi bracket |
| SP600658 | CABLE ASSEMBLY T1 G YASKAWA MA1440 EURO | For A7 Wire feeder with Kemppi bracket |

9 CABLE ASSEMBLIES FOR HW-ROBOTS, GAS COOLED, T1 MOUNT AND POWER PIN CONNECTOR

Cable assemblies for HW-robots must be accurate in length. Cable lengths are designed for certain wire feeder - bracket combination. For additional combinations consult Kemppi sales.

| Ordering code | Description | Additional info |
|---------------|--|--|
| SP600590 | CABLE ASSEMBLY T1 G YASKAWA EA1400N PP | For A7 Wire feeder with Kemppi bracket |
| SP600591 | CABLE ASSEMBLY T1 G YASKAWA EA1900N PP | For A7 Wire feeder with Kemppi bracket |



10 CABLE ASSEMBLIES FOR HW-ROBOTS, GAS COOLED, T3 MOUNT AND EURO CONNECTOR

Cable assemblies for HW-robots must be accurate in length. Cable lengths are designed for certain wire feeder - bracket combination. For additional combinations consult Kemppi sales.

| Ordering code | Description | Additional info |
|---------------|---|--|
| SP600679 | CABLE ASSEMBLY T3 G ArcMate100iC/12L EURO | For A7 Wire feeder with Kemppi bracket |
| SP600680 | CABLE ASSEMBLY T3 G ArcMate 100iC/8L EURO | For A7 Wire feeder with Kemppi bracket |

11 CABLE ASSEMBLIES FOR HW-ROBOTS, GAS COOLED, T3 MOUNT AND POWER PIN CONNECTOR

Cable assemblies for HW-robots must be accurate in length. Cable lengths are designed for certain wire feeder - bracket combination. For additional combinations consult Kemppi sales.

| Ordering code | Description | Additional info |
|---------------|---|--|
| SP600676 | CABLE ASSEMBLY T3 G ABB IRB 1600ID PP | For A7 Wire feeder with Kemppi bracket |
| SP600677 | CABLE ASSEMBLY T3 G ABB IRB 1520ID PP | For A7 Wire feeder with Kemppi bracket |
| SP600576 | CABLE ASSEMBLY T3 G FANUC ARCMATE 100iC/12 PP | For A7 Wire feeder with Kemppi bracket |



12 CABLE ASSEMBLIES FOR HW-ROBOTS, WATER COOLED, T1 MOUNT AND EURO CONNECTOR



Cable assemblies for HW-robots must be accurate in length. Cable lengths are designed for certain wire feeder - bracket combination. For additional combinations consult Kemppi sales.

| Ordering code | Description | Additional info |
|---------------|---|--|
| SP600702 | CABLE ASSEMBLY T1 W KUKA KR8 1620 HW EURO (DT400) | For DT400 Wire feeder with Kemppi bracket, also used with KR8 R1420 HW model |
| SP600675 | CABLE ASSEMBLY T1 W KAWASAKI BA006N EURO | For A7 Wire feeder with Kemppi bracket |
| SP600649 | CABLE ASSEMBLY T1 W KUKA KR16 HW EURO | For A7 Wire feeder with Kemppi bracket |
| SP600699 | CABLE ASSEMBLY T1 W KUKA KR6 1820 EURO | For A7 Wire feeder with Kemppi bracket |
| SP600688 | CABLE ASSEMBLY T1 W KUKA KR8 R1420 HW EURO | For A7 Wire feeder with Kemppi bracket, also used with KR8 R1620 HW model |
| SP600650 | CABLE ASSEMBLY T1 W YASKAWA MA1440 EURO | For A7 Wire feeder with Kemppi bracket |
| SP600709 | CABLE ASSEMBLY T1 W YASKAWA MA2010 EURO | For A7 Wire feeder with Kemppi bracket |

13 CABLE ASSEMBLIES FOR HW-ROBOTS, WATER COOLED, T1 MOUNT AND POWER PIN CONNECTOR

Cable assemblies for HW-robots must be accurate in length. Cable lengths are designed for certain wire feeder - bracket combination. For additional combinations consult Kemppi sales.

| Ordering code | Description | Additional info |
|---------------|--|--|
| SP600593 | CABLE ASSEMBLY T1 W FANUC 100iC/12 PP | For A7 Wire feeder with Kemppi bracket |
| SP600594 | CABLE ASSEMBLY T1 W EA1900N PP | For A7 Wire feeder with Kemppi bracket |
| SP600592 | CABLE ASSEMBLY T1 W L=1.34 PP | For A7 Wire feeder with Kemppi bracket |
| SP600595 | CABLE ASSEMBLY T1 W YASKAWA EA1400N PP | For A7 Wire feeder with Kemppi bracket |



14 CABLE ASSEMBLIES FOR HW-ROBOTS, WATER COOLED, T3 MOUNT AND EURO CONNECTOR

Cable assemblies for HW-robots must be accurate in length. Cable lengths are designed for certain wire feeder - bracket combination. For additional combinations consult Kemppi sales.

| Ordering code | Description | Additional info |
|---------------|---|--|
| SP600706 | CABLE ASSEMBLY T3 W FANUC 100iC 7L EURO | For A7 Wire feeder with Kemppi bracket |
| SP600577 | CABLE ASSEMBLY T3 W FANUC ARCMATE 100iC/12 EURO | For A7 Wire feeder with Kemppi bracket |
| SP600641 | CABLE ASSEMBLY T3 W FANUC ARCMATE 120iC EURO | For A7 Wire feeder with Kemppi bracket |

15 CABLE ASSEMBLIES FOR HW-ROBOTS, WATER COOLED, T3 MOUNT AND POWER PIN CONNECTOR

Cable assemblies for HW-robots must be accurate in length. Cable lengths are designed for certain wire feeder - bracket combination. For additional combinations consult Kemppi sales.



16 CABLE ASSEMBLIES FOR NON-HW-ROBOTS, GAS COOLED, T2/T4 MOUNT AND EURO CONNECTOR

Cable assemblies for non-HW-robots are selected from standard lengths. A dimensional drawing showing distance from wire feeder front face to robot 6th axis is required for cable assembly length selection. For additional lengths consult Kemppi sales.

| Ordering code | Description | Additional info |
|---------------|---------------------------------|-----------------|
| SP600712 | CABLE ASSEMBLY T2 G EURO L=0.90 | |
| SP600610 | CABLE ASSEMBLY T2 G EURO L=1.10 | |
| SP600611 | CABLE ASSEMBLY T2 G EURO L=1.35 | |
| SP600612 | CABLE ASSEMBLY T2 G EURO L=1.50 | |
| SP600613 | CABLE ASSEMBLY T2 G EURO L=1.60 | |

17 CABLE ASSEMBLIES FOR NON-HW-ROBOTS, GAS COOLED, T2/T4 MOUNT AND POWER PIN CONNECTOR

Cable assemblies for non-HW-robots are selected from standard lengths. A dimensional drawing showing distance from wire feeder front face to robot 6th axis is required for cable assembly length selection. For additional lengths consult Kemppi sales.



18 CABLE ASSEMBLIES FOR NON-HW-ROBOTS, WATER COOLED, T2/T4 MOUNT AND EURO CONNECTOR



Cable assemblies for non-HW-robots are selected from standard lengths. A dimensional drawing showing distance from wire feeder front face to robot 6th axis is required for cable assembly length selection. For additional lengths consult Kemppi sales.

| Ordering code | Description | Additional info |
|---------------|--------------------------------|-----------------|
| SP600711 | CABLE ASSEMBLY T2 W EURO 0.90M | |
| SP600651 | CABLE ASSEMBLY T2 W EURO 1.10M | |
| SP600652 | CABLE ASSEMBLY T2 W EURO 1.35M | |
| SP600653 | CABLE ASSEMBLY T2 W EURO 1.50M | |
| SP600654 | CABLE ASSEMBLY T2 W EURO 1.60M | |
| SP600705 | CABLE ASSEMBLY T2 W EURO 3.25M | |

When using T2 cable assembly and the seam searching function is using the filler wire as the sensing tool, there might be a request to guarantee certain fixed stick-out length for wire during seam searching operation. For these applications Kemppi offers three cable assemblies with additional wire break module. Operation principle: Pneumatic valve releases a piston, which clamps the wire inside the cable assembly holder part. Requires an additional neck liner item: SP600564 for 1.0-1.2 mm wires.



| Ordering code | Description | Additional info |
|---------------|---|---|
| SP600656 | CABLE ASSEMBLY T2 W EURO 1.35M WIRE BRAKE | |
| SP600655 | CABLE ASSEMBLY T2 W EURO 1.10M WIRE BRAKE | |
| SP600657 | CABLE ASSEMBLY T2 W EURO 1.50M WIRE BRAKE | |
| SP600564 | Neckliner T2 / T4 | Steel liner. Required when wire break is used |

19 CABLE ASSEMBLIES FOR NON-HW-ROBOTS, WATER COOLED, T2/T4 MOUNT AND POWER PIN CONNECTOR

Cable assemblies for non-HW-robots are selected from standard lengths. A dimensional drawing showing distance from wire feeder front face to robot 6th axis is required for cable assembly length selection. For additional lengths consult Kemppi sales.



20 WIRE LINERS FOR EURO CONNECTORS

Kempfi gun liners are strong, durable and efficient. Designed to suit specific filler wire materials and applications, Kempfi liners support the filler wire and ensure reliable delivery to the welding arc. Steel spiral liners are suitable for welding solid and cored filler wires of corresponding wire diameter. Kempfi DL Chili -Teflon liners are the latest solution for reliable feeding of aluminum, stainless steel, acid-resistant and solid steel filler wires. Kempfi's patented technology, two layer DL Chili liner material significantly reduces friction losses between the filler wire material and liner wall, ensuring reliable and worry-free feeding for listed wires types.



| Ordering code | Description | Additional info |
|---------------|--------------------------------------|-----------------|
| SP600666 | LINER CHILI HP 2.0/4.7 2.5M ROBOT EU | |
| SP600725 | LINER STEEL 1.6/4.6 2M ROBOT EU | |

21 WIRE LINERS FOR POWER PIN CONNECTORS

Kempfi gun liners are strong, durable and efficient. Designed to suit specific filler wire materials and applications, Kempfi liners support the filler wire and ensure reliable delivery to the welding arc. Steel spiral liners are suitable for welding solid and cored filler wires of corresponding wire diameter. Kempfi DL Chili -Teflon liners are the latest solution for reliable feeding of aluminum, stainless steel, acid-resistant and solid steel filler wires. Kempfi's patented technology, two layer DL Chili liner material significantly reduces friction losses between the filler wire material and liner wall, ensuring reliable and worry-free feeding for listed wires types.



| Ordering code | Description | Additional info |
|---------------|---------------------------------------|-----------------|
| SP600668 | LINER CHILI HP 2.0/4.7 2.5 M ROBOT PP | |
| SP600726 | LINER STEEL 1.6/4.6 2M ROBOT PP | |



22 CONTACT TIP HOLDER FOR GAS COOLED GUN

Features:

- Beryllium/Copper mix for optimal material properties
- Less spatter sensitive
- Massive, rugged and long design
- Better gas cooling through long gas flowing way
- Better gas protection (laminar flow) – see bores in pic
- Very good current transition
- Interrupted thread hence less dirt sensitive – better to clean
- Spanner flat area for easy opening/tightening operation



| Ordering code | Description | Additional info |
|---------------|------------------------------|----------------------|
| SP600629 | CONTACT TIP ADAPTER M8 500-G | for gas cooled necks |

23 CONTACT TIP HOLDER FOR WATER COOLED GUN



| Ordering code | Description | Additional info |
|---------------|------------------------------|------------------------|
| SP600560 | CONTACT TIP ADAPTER M8 500-W | for water cooled necks |



24 WELDING GUN NECKS FOR GAS COOLED SYSTEMS

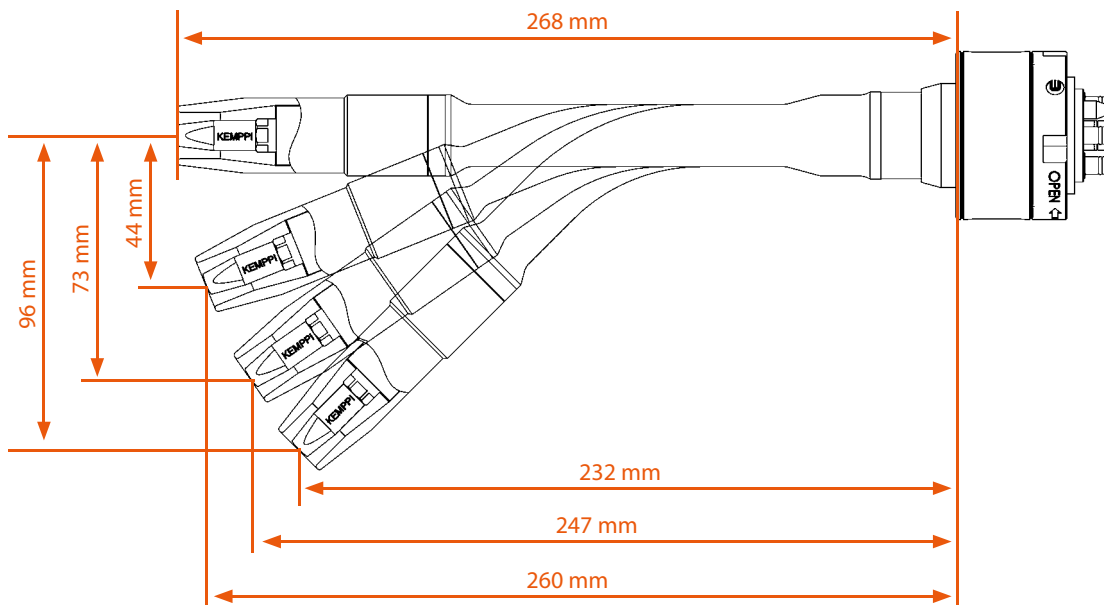


| Ordering code | Description | Additional info |
|---------------|--------------------|------------------------|
| SP600621 | GUN NECK 500-G 0° | |
| SP600622 | GUN NECK 500-G 22° | Recommended as default |
| SP600623 | GUN NECK 500-G 35° | |
| SP600624 | GUN NECK 500-G 45° | |

TECHNICAL SPECIFICATIONS

| | |
|--------------|---|
| Loadability | 100%ED 500 A / CO ₂ , 100%ED 400 A / M ₂₁ |
| Filler wires | 0.8–1.6 mm |
| Gas flow | 10-30 liters |
| Weight | 0.9 kg |

EN 60974-7. For pulse processes load figures are reduced by 35 %.





25 WELDING GUN NECKS FOR WATER COOLED SYSTEMS

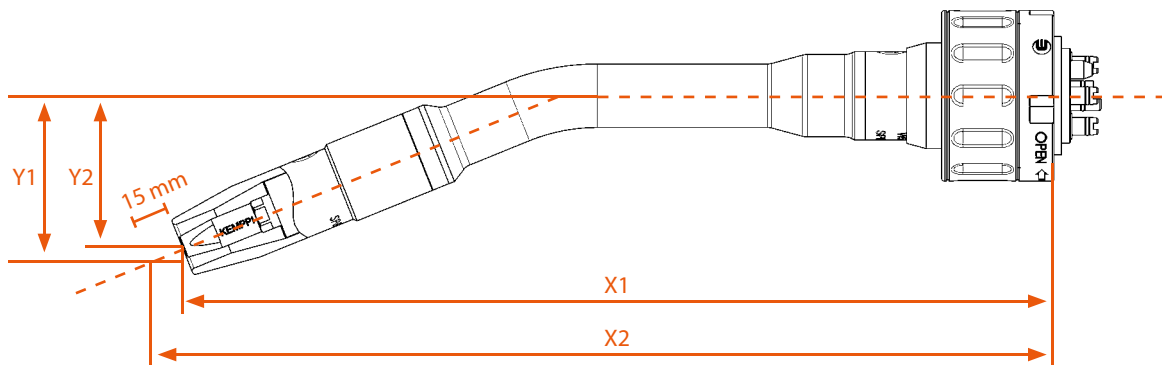


| Ordering code | Description | Additional info |
|---------------|---|--|
| SP600550 | GUN NECK 500-W 0° | |
| SP600551 | GUN NECK MIG 500-W 22° | Recommended as default |
| SP600552 | GUN NECK 500-W 35° | |
| SP600553 | GUN NECK MIG 500-W 45° | |
| Consumables | | |
| SP600561 | INSULATING RING 500-W | Default for water cooled necks. One included in gun neck delivery. |
| SP600562 | INSULATING RING, HIGH TEMPERATURE 500-W | |
| SP600563 | GAS DIFFUSER 500-W | Replacing insulation ring in aluminium welding applications |

TECHNICAL SPECIFICATIONS

| | |
|--------------|--|
| Loadability | 100%ED 500 A / CO ₂ , 100%ED 500 A / M ² 1 |
| Filler wires | 0.8...1.6 mm |
| Gas flow | min. 25 l / min |
| Water flow | min. 1.25 l / min |
| Weight | 0.9 kg |

EN 60974-7. For pulse processes load figures are reduced by 35 %.



| Ordering code | | X1 mm | X2 mm | Y1 mm | Y2 mm |
|---------------|-----|-------|-------|-------|-------|
| SP600550 | 0° | 236 | 251 | | |
| SP600551 | 22° | 228 | 242 | 44 | 50 |
| SP600552 | 35° | 215 | 227 | 73 | 81 |
| SP600553 | 45° | 200 | 211 | 94 | 105 |



26 CONICAL GAS NOZZLES FOR GAS COOLED GUN NECKS

Screw-on type connection to neck. Massive design for long life and heat transfer purposes. Good insulation properties separating front end of the gas nozzle from cable connection – against heat and electricity.



| Ordering code | Description | Additional info |
|---------------|--------------------------------|------------------------|
| SP600645 | GAS NOZZLE CONICAL 500-G 16/+3 | |
| SP600646 | GAS NOZZLE CONICAL 500-G 16/-2 | |
| SP600627 | GAS NOZZLE CONICAL 500-G 16/0 | Recommended as default |

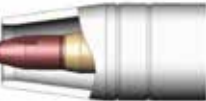
Three lengths to choose from (TCP remains the same)



-2 mm, best gas flow, gas nozzle most sensitive against spatter



0 mm, recommended as default



+3 mm, best accessibility, gas nozzle less sensitive against spatter generation, gas shielding reduced



| Ordering code | Description | Additional info |
|---------------|------------------------------|--|
| SP600663 | GAS NOZZLE SENSOR CLIP 500-G | Needed if seam searching uses gas nozzle as the sensing tool |



27 BOTTLE SHAPED GAS NOZZLES FOR GAS COOLED GUN NECKS

For optimized accessibility screw-on type connection to neck. Massive design for long life and heat transfer purposes. Good insulation properties separating front end of the gas nozzle from cable connection – against heat and electricity.



| Ordering code | Description | Additional info |
|---------------|------------------------------------|-----------------|
| SP600643 | GAS NOZZLE, BOTTLE FORM 500-G 16/0 | |
| SP600644 | GAS NOZZLE BOTTLE FORM 500-G 16/-2 | |
| SP600626 | GAS NOZZLE 500-G BOTTLE FORM 16/+3 | |

Three lengths to choose from (TCP remains the same)



-2 mm, best gas flow, gas nozzle most sensitive against spatter



0 mm, recommended as default



+3 mm, best accessibility, gas nozzle less sensitive against spatter generation, gas shielding reduced



| Ordering code | Description | Additional info |
|---------------|------------------------------|--|
| SP600663 | GAS NOZZLE SENSOR CLIP 500-G | Needed if seam searching uses gas nozzle as the sensing tool |



28 CONICAL GAS NOZZLES FOR WATER COOLED GUN NECKS

Screw-on type connection to neck. Designed for long life and heat transfer purposes.

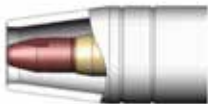


| Ordering code | Description | Additional info |
|---------------|--------------------------------|------------------------|
| SP600557 | GAS NOZZLE CONICAL 500-W 16/+3 | |
| SP600558 | GAS NOZZLE CONICAL 500-W 16/0 | recommended as default |
| SP600559 | GAS NOZZLE CONICAL 500-W 16/-2 | |

Three lengths to choose from (TCP remains the same)



-2 mm, best gas flow, gas nozzle most sensitive against spatter



0 mm, recommended as default



+3 mm, best accessibility, gas nozzle less sensitive against spatter generation, gas shielding reduced



29 BOTTLE SHAPED GAS NOZZLES FOR WATER COOLED GUN NECKS

Screw-on type connection to neck. Designed for long life and heat transfer purposes.

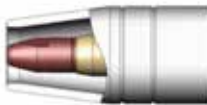


| Ordering code | Description | Additional info |
|---------------|------------------------------------|-----------------|
| SP600554 | GAS NOZZLE BOTTLE FORM 500-W 16/+3 | |
| SP600555 | GAS NOZZLE BOTTLE FORM 500-W 16/0 | |
| SP600556 | GAS NOZZLE BOTTLE FORM 500-W 16/-2 | |

Three lengths to choose from (TCP remains the same)



-2 mm, best gas flow, gas nozzle most sensitive against spatter



0 mm, recommended as default



+3 mm, best accessibility, gas nozzle less sensitive against spatter generation, gas shielding reduced

30 CONTACT TIPS

Kemppi LiFE+ contact tips last up to 5 times longer than standard copper tips, due to innovative alloying and hardening techniques. The LiFE+ core element retains its hardness and refined micro structure, even after elevated welding temperatures of 1000°C.



| Ordering code | Description | Additional info |
|---------------|--------------------------------|-----------------|
| W006518 | CONTACT TIP 1.2/D10 M8 LiFE+ | |
| W006826 | CONTACT TIP 1.0/D10 M8 / LiFE+ | |
| W007919 | CONTACT TIP 0.8/D10 M8 / LiFE+ | |
| W007920 | CONTACT TIP 0.9/D10 M8 / LiFE+ | |
| W007921 | CONTACT TIP 1.6/D10 M8 / LiFE+ | |
| W010309 | CONTACT TIP 1.4/D10 M8 / LiFE+ | |



ACCESSORIES FOR WATER COOLED NECKS

WRENCH - TOOL FOR 500-W NECK



Ordering code SP600569

Pin wrench to unscrew the gun connection easily

ALIGNMENT TOOL FOR GUN NECK INNER TUBE



Ordering code SP600568

Alignment tool to align Contact Tip with Gas Nozzle

ALIGNMENT JIG FOR 500-W NECK



Ordering code SP600565

Alignment jig for water cooled necks

THREAD CUTTER TOOL FOR GUN NECK INNER TUBE



SP600707

THREAD CUTTER TOOL
FOR GUN NECK 500-W

Thread cleaning/cutter tool for gun neck inner tube

TEACHING TIP



SP600567

TEACHING TIP M8 STICKOUT 17 MM / SP600566 also available Teaching TIP M8
Stickout 15 MM



ACCESSORIES FOR GAS COOLED NECKS

ALIGNMENT TOOL FOR GUN NECK INNER TUBE



Ordering code SP600568 Alignment tool to align Contact Tip with Gas Nozzle

ALIGNMENT JIG FOR 500-G NECK



SP600632 ALIGNMENT JIG 500-G Alignment jig for gas cooled necks

THREAD CUTTER TOOL FOR GUN NECK INNER TUBE



SP600662 THREAD CUTTER TOOL FOR GUN NECK 500-G Thread cleaning/cutter tool for gun neck inner tube

TEACHING TIP



SP600567 TEACHING TIP M8 STICKOUT 17 MM



ROBOTIC GUN CLEANING STATION



Reduce downtime - less manual maintenance work required. Contributes significantly to weld quality and welding performance of a robot.

Regular mechanical cleaning of the internal surfaces of the gas nozzle provides steady and good shielding gas flow for welding. Helps to avoid spatter to form electrical connection bridges between contact tip and the gas nozzle.

Wire cutting provides accurate stick-out length for search functions. Sharp wire end for better arc ignition.

Provides anti-spatter oil on outer surfaces of gas nozzle to support longer life time.

Delivered with reamer tool and centering V-block (prism) for both gas and water cooled Kemppi Guns.

No liquids included, must be ordered separately

| Ordering code | Description | Additional info |
|---------------|----------------------------|--|
| SP600674 | ROBOT GUN CLEANING STATION | Equipped with wire cutter, gas nozzle inside reamer and anti-spatter spray unit; order code includes reamer setup for both gas and water cooled nozzles. |

TECHNICAL SPECIFICATIONS

| Pneumatic equipment | |
|--------------------------|--|
| Nominal pressure | 6 bar 88 psi |
| Nominal flow | Approx. 500 l/min |
| operating pressure | 6 – 8 bar / 88 - 116 psi |
| Nominal rotational speed | 800 rpm |
| Max. Wire size | 1.6mm (by 6 bar 7 88 psi air pressure) |
| Weight | 22 kg |
| Ambient temperature | +5° to +50°C |
| Protection | IP 21 |

| Electrical equipment | |
|----------------------|--------------|
| 5/2 way valves | |
| Rated voltage | 24 V DC |
| Power consumption | 4.5 W (EACU) |

| Inductive proximity switch, normally-open contact, (pnp) | |
|--|-----------------------|
| Operating voltage | 10 to 30 V DC |
| Permitted residual ripple | V _{pp} < 10% |
| Continuous current | Max. 200 mA |
| Current consumption | approx. 4 mA (24 V) |
| Voltage drop | approx 1.2 V (200 mA) |



CONSUMABLES FOR ROBOTIC GUN CLEANING STATION



| Ordering code | Description | Additional info |
|---------------|-------------|----------------------|
| SP600681 | Reamer tool | for water cooled gun |
| SP600682 | Reamer tool | for gas cooled gun |



| Ordering code | Description | Additional info |
|---------------|-------------|---|
| SP600683 | Prism | for outer Ø 25mm nozzles water cooled gun |
| SP600684 | Prism | for outer Ø 28mm nozzles gas cooled gun |

ANTI-SPATTER SPRAY LIQUID - RECOMMENDATION

The anti-spatter spray unit can be used with high quality liquid designed specifically for protecting gas nozzle, contact tip and rest of the front end of the welding gun in welding environment. An example of Kemppi approved suitable liquid type is ABI-Mist Anti-Spatter liquid from Abicor Binzel. Note also local environmental laws and restrictions when selecting the liquid.



A7 MIG WELDER EXAMPLE SETUP 1

Gas cooled set for a hollow wrist robot

POWER SOURCE

| | Code | Qty | Notes |
|-----------------------------|--------------|-----|-------|
| A7 MIG POWER SOURCE 350 | 6201350 | 1 | |
| ANYBUS-CC M30 DEVICENET M12 | 9774121DEV12 | 1 | |
| STAND FOR A7 MIG WELDER | 6185295 | 1 | |

WIRE FEEDER

| | | | |
|--|----------|---|-----|
| A7 MIG WIRE FEEDER 25-LH-EUR | 6203510 | 1 | EA |
| FE (MC/FC) V1.0 HD GT04 T KIT #3 | F000373 | 1 | pcs |
| BRACKET: A7 WF BRACKET KAWASAKI BA006N | SP800717 | 1 | pcs |
| WIRE CONDUIT-1.8M ROBOT KEMPPI | SP600535 | 1 | pcs |
| SNAP CONNECTOR MARATHONPACK | W005189 | 1 | pcs |
| SNAP CONNECTOR MARATHONPACK | W005189 | 1 | |
| SNAP CONNECTOR MALE MARATHONPACK | W005197 | 2 | |
| WIRE SPOOL SUPPORT RIGHT | W007628 | 1 | pcs |
| WIRE SPOOLPROTECTION | SP007940 | 1 | pcs |
| FLOOR ASSEMBLY WIRE BOBBIN | W007356 | 1 | pcs |

CABLES

| | | | |
|--|----------|---|-----|
| INTERCONNECTION CABLE: A7 ROBOT 70-5-GH | 6260483 | 1 | EA |
| INTERCONNECTION CABLE CLAMPS: CABLE BRACKET SET REIKU 52 | SP800888 | 1 | pcs |
| EARTH RETURN CABLE 70 MM ² 5M | 6184711 | 1 | pcs |

WELDING GUN PACKAGE

| | | | |
|--|----------|---|-------|
| GUN NECK 500-G 22° | 6260482 | 1 | pcs |
| CONTACT TIP ADAPTER: CONTACT TIP ADAPTER M8 500-G | SP600629 | 1 | pck5 |
| CONTACT TIP 1.0/D10 M8 / LIFE+ | W006826 | 1 | pck50 |
| GAS NOZZLE CONICAL 500-G 16 | SP600627 | 1 | pck10 |
| ROBOT GUN MOUNT T1 G | SP600589 | 1 | pcs |
| CABLE ALIGNMENT TOOL FOR GUN MOUNT T1 | SP600602 | 1 | pcs |
| FLANGE FOR ROBOT 6TH AXIS: FLANGE T1 KAWASAKI BA006N | SP600695 | 1 | pcs |
| CABLE ASSEMBLY T1 G KAWASAKI BA006N EURO | SP600698 | 1 | pcs |
| LINER STEEL 1.6/4.6 2M ROBOT EU | SP600725 | 1 | pcs |

CLEANING STATION

| | | | |
|----------------------------|----------|---|-----|
| ROBOT GUN CLEANING STATION | SP600674 | 1 | pcs |
|----------------------------|----------|---|-----|

WELDING SOFTWARE

| | | | |
|------------------|----------|---|-----|
| WiseThin-A | 9990419 | 1 | pcs |
| F03 WiseThin+ Fe | 99904317 | 1 | pcs |

Consult Kemppi sales for available pre-set curves WiseThin-A



A7 MIG WELDER EXAMPLE SETUP 2

Water cooled set for a non-hollow wrist robot

POWER SOURCE

| | Code | Qty | Notes |
|-------------------------------|--------------|-----|-------|
| A7 MIG POWER SOURCE 450 | 6201450 | 1 | |
| ANYBUS-CC M30 ETHERCAT 2-PORT | 9774121ETC12 | 1 | |
| STAND FOR A7 MIG WELDER | 6185295 | 1 | |

COOLING UNIT

| | | | |
|-----------|---------|---|--|
| A7 COOLER | 6068220 | 1 | |
|-----------|---------|---|--|

WIRE FEEDER

| | | | |
|---|----------|---|-----|
| A7 MIG WIRE FEEDER 25-LH-EUR | 6203510 | 1 | EA |
| FE (MC/FC) V1.2 HD GT04 T KIT #3 | F000374 | 1 | pcs |
| BRACKET: A7/DT400 BRACKET KUKA KR10 R1420 | SP800810 | 1 | pcs |
| WIRE CONDUIT-1.8M ROBOT KEMPPI | SP600535 | 1 | pcs |
| SNAP CONNECTOR MARATHONPACK | W005189 | 1 | pcs |
| LINER MARATHONPACK (MAX 27 M) | W005195 | 1 | m |
| SNAP CONNECTOR MARATHONPACK | W005189 | 1 | |
| SNAP CONNECTOR MALE MARATHONPACK | W005197 | 2 | |

CABLES

| | | | |
|--|----------|---|----------------------|
| INTERCONNECTION CABLE: A7 ROBOT 70-5-WH | 6260482 | 1 | EA Corrugated sleeve |
| INTERCONNECTION CABLE CLAMPS: CABLE BRACKET SET REIKU 52 | SP800888 | 1 | pcs |
| EARTH RETURN CABLE 70 MM ² 5M | 6184711 | 1 | pcs |

WELDING GUN PACKAGE

| | | | |
|--|----------|---|-------|
| GUN NECK MIG 500-W 22° | SP600551 | 1 | pcs |
| CONTACT TIP ADAPTER M8 500-W | SP600560 | 1 | pck5 |
| CONTACT TIP 1.2/D10 M8 LIFE+ | W006518 | 1 | pck50 |
| GAS NOZZLE CONICAL 500-W 16/0 | SP600558 | 1 | pck10 |
| ROBOT GUN MOUNT T2 L | SP600605 | 1 | pcs |
| SEGMENT HOLDER FOR GUN MOUNT T2 | SP600608 | 1 | pcs |
| FLANGE FOR ROBOT 6TH AXIS: FLANGE T2 ISO 9409-1A31.5 | SP600633 | 1 | pcs |
| CABLE ASSEMBLY T2 W EURO 0.90M | SP600711 | 1 | pcs |
| LINER STEEL 1.6/4.6 2M ROBOT EU | SP600725 | 1 | pcs |

CLEANING STATION

| | | | |
|----------------------------|----------|---|-----|
| ROBOT GUN CLEANING STATION | SP600674 | 1 | pcs |
|----------------------------|----------|---|-----|

WELDING SOFTWARE

| | | | |
|--------------|----------|---|-----|
| WiseFusion-A | 9991014 | 1 | pcs |
| F14 PMIG Fe | 99904150 | 1 | pcs |

Consult Kemppi sales for available pre-set curves



KEMPARC PULSE EXAMPLE SETUP 1

Water cooled set for a hollow wrist robot

POWER SOURCE SETUP

| | Code | Qty | Notes |
|--------------------------------|------------|-----|-------|
| KEMPARC PULSE 450 POWER SOURCE | 6200450 | 1 | |
| FIELD BUS INTERFACE ETHERCAT | 9774120ETC | 1 | |

WATER COOLING UNIT

| | | | |
|--------------------------|---------|---|--|
| KEMPCOOL 10 COOLING UNIT | 6208100 | 1 | |
|--------------------------|---------|---|--|

WIRE FEEDER SETUP

| | | | |
|--------------------------------------|----------|----|--------------------------------|
| KEMPARC DT400 WIRE FEEDER | 6203400 | 1 | |
| FE (MC/FC) V1.2 HD DURATORQUE KIT #3 | F000352 | 1 | Consumable item |
| BRACKET KUKA KR8 R1820 HW - DT400 | SP800872 | 1 | Robot brand and model specific |
| SNAP CONNECTOR MARATHONPACK | W005189 | 1 | |
| LINER MARATHONPACK (MAX 27 M) | W005195 | 10 | |
| SNAP CONNECTOR MALE MARATHONPACK | W005197 | 2 | |

CABLE SET

| | | | |
|--|----------|---|--|
| ROBOT 70-5-WH DIX | 6260478 | 1 | |
| CABLE BRAKECT KIT | SP800755 | 1 | |
| EARTH RETURN CABLE 70 MM ² 5M | 6184711 | 1 | |

WELDING GUN SETUP

| | | | |
|--|----------|---|--------------------------------|
| GUN NECK MIG 500-W 22° | SP600551 | 1 | |
| CONTACT TIP ADAPTER M8 500-W | SP600560 | 1 | Consumable item |
| CONTACT TIP 1.2/D10 M8 LIFE+ | W006518 | 1 | Consumable item |
| GAS NOZZLE CONICAL 500-W 16/0 | SP600558 | 1 | Consumable item |
| ROBOT GUN MOUNT T1 W | SP600588 | 1 | |
| FLANGE T1 | SP600582 | 1 | Robot brand and model specific |
| CABLE ASSEMBLY T1 W KUKA KR8 1620 EURO | SP600702 | 1 | Robot brand and model specific |
| LINER STEEL HP 2.0/4.7 2.5M ROBOT EU | SP600xxx | 1 | Consumable item |
| ROBOT GUN CLEANING STATION | SP600674 | 1 | |

WELDING SOFTWARE

| | | | |
|--------------|----------|---|---|
| WiseFusion-A | 9991015 | 1 | |
| F104 PMIG Fe | 99904427 | 1 | Consult Kemppi sales for available pre-set curves |



KEMPARC PULSE EXAMPLE SETUP 2

Gas cooled set for a non-hollow wrist robot

POWER SOURCE SETUP

| | Code | Qty | Notes |
|--------------------------------|------------|-----|-------|
| KEMPARC PULSE 350 POWER SOURCE | 6200350 | 1 | |
| FIELD BUS ADAPTER DEVICENET | 9774120DEV | 1 | |

WIRE FEEDER SETUP

| | | | |
|--------------------------------------|----------|---|--------------------------------|
| KEMPARC DT400 WIRE FEEDER | 6203400 | 1 | |
| FE (MC/FC) V1.0 HD DURATORQUE KIT #3 | F000351 | 1 | Consumable item |
| ABB IRB 1600 SUPPORT DT 400 | W004137 | 1 | Robot brand and model specific |
| WIRE SPOOL SUPPORT RIGHT | W007628 | 1 | |
| WIRE SPOOL PROTECTION | SP007940 | 1 | |
| FLOOR ASSEMBLY WIRE BOBBIN | W007356 | 1 | |
| WIRE CONDUIT-1.8M ROBOT KEMPPPI | SP600535 | 1 | Consumable item |
| SNAP CONNECTOR MARATHONPACK | W005189 | 1 | |

CABLE SET

| | | | |
|--|----------|---|--|
| ROBOT 70-5-GH DIX | 6260446 | 1 | |
| cable brackect set Reiku 52 | SP800888 | 2 | |
| EARTH RETURN CABLE 70 MM ² 5M | 6184711 | 1 | |

WELDING GUN SETUP

| | | | |
|--------------------------------------|----------|---|--|
| GUN NECK 500-G 22° | SP600622 | 1 | |
| CONTACT TIP ADAPTER M8 500-G | SP600629 | 1 | Consumable item |
| CONTACT TIP 1.0/D10 M8 / LIFE+ | W006826 | 1 | Consumable item |
| GAS NOZZLE CONICAL 500-G 16/0 | SP600627 | 1 | Consumable item |
| ROBOT GUN MOUNT T2 L | SP600605 | 1 | |
| SEGMENT HOLDER FOR GUN MOUNT T2 | SP600608 | 1 | |
| FLANGE T2 ABB IRB 1600/2400L | SP600639 | 1 | Robot brand and model specific, consult Kemppi Sales |
| CABLE ASSEMBLY T2 G EURO L=1.10 | SP600610 | 1 | Robot model specific |
| LINER STEEL HP 2.0/4.7 2.5M ROBOT EU | SP600xxx | 1 | Consumable item |
| ROBOT GUN CLEANING STATION | SP600674 | 1 | |

WELDING SOFTWARE

| | | | |
|--------------|----------|---|---|
| F03 1-MIG Fe | 99904136 | 1 | Consult Kemppi sales for available pre-set curves |
|--------------|----------|---|---|



KEMPARC SYNERGIC EXAMPLE SETUP

Water cooled set for a hollow wrist robot

POWER SOURCE SETUP

| | Code | Qty | Notes |
|------------------------------|------------|-----|-------|
| KEMPARC SYN 500 POWER SOURCE | 6201500 | 1 | |
| FIELD BUS INTERFACE ETHERCAT | 9774120ETC | 1 | |

WATER COOLING UNIT

| | | | |
|--------------------------|---------|---|--|
| KEMPCOOL 10 COOLING UNIT | 6208100 | 1 | |
|--------------------------|---------|---|--|

WIRE FEEDER SETUP

| | | | |
|--------------------------------------|----------|----|--------------------------------|
| KEMPARC DT400 WIRE FEEDER | 6203400 | 1 | |
| FE (MC/FC) V1.2 HD DURATORQUE KIT #3 | F000352 | 1 | Consumable item |
| BRACKET KUKA KR8 R1820 HW - DT400 | SP800872 | 1 | Robot brand and model specific |
| SNAP CONNECTOR MARATHONPACK | W005189 | 1 | |
| LINER MARATHONPACK (MAX 27 M) | W005195 | 10 | |
| SNAP CONNECTOR MALE MARATHONPACK | W005197 | 2 | |

CABLE SET

| | | | |
|--|----------|---|--|
| ROBOT 70-5-WH DIX | 6260478 | 1 | |
| CABLE BRAKECT KIT | SP800755 | 1 | |
| EARTH RETURN CABLE 70 MM ² 5M | 6184711 | 1 | |

WELDING GUN SETUP

| | | | |
|--|----------|---|--------------------------------|
| GUN NECK MIG 500-W 22° | SP600551 | 1 | |
| CONTACT TIP ADAPTER M8 500-W | SP600560 | 1 | Consumable item |
| CONTACT TIP 1.2/D10 M8 LIFE+ | W006518 | 1 | Consumable item |
| GAS NOZZLE CONICAL 500-W 16/0 | SP600558 | 1 | Consumable item |
| ROBOT GUN MOUNT T1 W | SP600588 | 1 | |
| FLANGE T1 | SP600582 | 1 | Robot brand and model specific |
| CABLE ASSEMBLY T1 W KUKA KR8 1620 EURO | SP600702 | 1 | Robot brand and model specific |
| LINER STEEL HP 2.0/4.7 2.5M ROBOT EU | SP600xxx | 1 | Consumable item |
| ROBOT GUN CLEANING STATION | SP600674 | 1 | Consumable item |



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Kemppi is the pioneering company within the welding industry. It is our role to develop solutions that make you win business. Headquartered in Lahti, Finland, Kemppi employs over 600 welding experts in 13 countries and has a revenue of more than 110 MEUR. Our offering includes welding solutions - intelligent equipment, welding management software and expert services - for both demanding industrial applications and ready-to-weld needs. Local expertise is available via our global partner network covering over 60 countries.

