

# Robotic Welding Gun packages



18.04.2024



Designed for welders



## Robotic Welding Gun packages



Kemppi offers robotic gun packages both hollow wrist and non-hollow wrist robot arm designs. The perfect welding gun system for robotic arc welding consists of the gun neck with a tip holder, a gas nozzle and a cable assembly. A robotic gun can be mounted on a suitable Kemppi Gun Mount.

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

The choice of the correct robotic gun package is based mainly on robot brand and model and required cooling.



## KEY BENEFITS



### MODULAR DESIGN

Allows you to build a setup that fits your specified needs.



### COMPLETE PACKAGE

Everything you need in the same package: a gun neck with a tip holder, a gas nozzle, a gun mount, an adapter flange and a cable assembly.

---

## BENEFITS

- Four standard swan neck designs are available for both gas-cooled and water-cooled variants
- Constant and reliable welding results
- Robust design guarantees the best possible usability
- Low maintenance need
- Easy-to-change components increase productivity and system availability
- Engineered designs available at request



## PRODUCT OPTIONS



### Gun mount T1

Kemppi 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. Separate versions available for water-cooled and gas-cooled applications. T1 Gun Mount is equipped with collision sensors and a signal is to be connected with the robot controller. Robot specific flange is required for final assembly.



### Gun mount T2

Kemppi T2 Gun Mount for robotic guns is meant to be used with nonhollow wrist type robot models. A separate segment holder is used to attach the T2 gun mount to the robot. T2 Gun Mount is equipped with collision sensors and a signal is to be connected with the robot controller. Robot specific flange is required for final assembly.



### Segment holder for gun mount T2

Adjustable gun neck mounting angle.



### Gun mount T3

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, which is used, should have software functionalities itself to handle collision detection. Robot specific flange is required for final assembly.



### Gun mount T4

Kemppi T4 Gun Mount for robotic guns is meant to be used with nonhollow 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. T4 Gun Mount consists of upper and lower bracket parts. Robot specific flange is required for final assembly.



### Adapter flanges for T1 gun mounts

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



### Adapter flanges for T2 and T4 gun mounts

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



### Adapter flanges for T3 gun mounts

Adapter flanges for T3 gun mounts. The choice of the adapter flange is based on the exact robot brand and model. Flanges for T3 gun mounts are for hollow wrist robot models and fit both T3 W and T3 G mount models.



### Welding gun necks for gas-cooled systems

Welding gun neck for gas-cooled systems



### Welding gun necks for water-cooled systems

Welding gun necks for water-cooled systems





## ACCESSORIES



### 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.



### 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 and bracket combinations. For additional combinations consult Kemppi sales.



### 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 and bracket combinations. For additional combinations consult Kemppi sales.



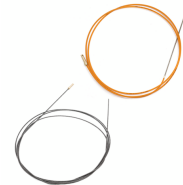
### Cable assemblies for non-HW-robots, gas-cooled, T2/T4 mount and Euro connector

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.



### 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.



### Wire liners for euro connectors

Kemppi gun liners are strong, durable and efficient. Designed to suit specific filler wire materials and applications, Kemppi liners support the filler wire and ensure reliable delivery to the welding arc.



### Wire liners for power pin connectors

Kemppi gun liners are strong, durable and efficient. Designed to suit specific filler wire materials and applications, Kemppi liners support the filler wire and ensure reliable delivery to the welding arc.



### Contact tip holder for gas-cooled guns

Contact tip adapter M8 500-G.



### Contact tip holder for water-cooled guns

Contact tip adapter M8 500-W.



### Conical gas nozzles for water-cooled gun necks

Conical gas nozzle for water-cooled gun necks with screw-on type connection to the neck. Designed for long life and heat transfer purposes.



### Bottle shaped gas nozzles for water-cooled gun necks

Bottle shaped gas nozzles for water-cooled gun necks with screw-on type connection to the neck. Designed for long life and heat transfer purposes.



### Gas nozzle sensor clip 500-G

Needed if seam searching uses gas nozzle as the sensing tool



### Wrench - tool for 500-W neck

Pin wrench to unscrew the gun connection easily.



### Alignment tool for gun neck inner tube

Alignment tool to align Contact tip with Gas nozzle.



### Thread cutter tool for gun neck 500-W

Thread cleaning/cutter tool for gun neck 500-W inner tube.



### Teaching tip

Teaching tip M8 stickout 17 mm.  
Also available SP600566 Teaching tip M8 stickout 15 mm



### Robotic gun cleaning station

Robot gun cleaning station equipped with wire cutter, gas nozzle inside reamer and anti-spatter spray unit. Delivered with reamer tool and centering V-block (prism) for both gas and water-cooled Kemppi Guns. No liquids included, must be ordered separately.



### Contact tips

Original Kemppi contact tips ensure optimized welding current transfer to filler wire. 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 microstructure, even after elevated welding temperatures of 1000 °C.



## TECHNICAL SPECIFICATIONS

### GUN MOUNTS

#### Gun mount T1

|              |  |
|--------------|--|
| Product code | SP600588 - Robot gun mount/Collision sensor T1 W for water-cooled systems<br>SP600589 - Robot gun mount/Collision sensor T1 G for gas-cooled systems |
|--------------|--|

#### Gun mount T2

|              |  |
|--------------|--|
| Product code | SP600605 - Robot gun mount/Collision sensor T2 L - Default version fo normal guns<br>SP600606 - Robot gun mount/Collision sensor T2 XL - For tandem welding guns |
|--------------|--|

#### Segment holder for gun mount T2

|              |          |
|--------------|----------|
| Product code | SP600608 |
|--------------|----------|

#### Shock sensor signal cable T2

|              |          |
|--------------|----------|
| Product code | SP600607 |
|--------------|----------|

#### Gun mount T3

|              |  |
|--------------|--|
| Product code | SP600574 - Robot gun mount T3 W for water-cooled systems<br>SP600575 - Robot gun mount T3 G for gas-cooled systems |
|--------------|--|

#### Gun mount T4

|              |  |
|--------------|--|
| Product code | SP600604 - Robot gun mount T4 - Adjustable gun neck mounting angle |
|--------------|--|





## ADAPTER FLANGES

### Adapter flanges for T1 gun mounts

| Product code |   |
|--------------|---|
|              | ABB - 1660ID 6/155 - SP600724           |
|              | ABB - IRB 1520ID - SP600570             |
|              | ABB - IRB 1600ID - SP600570             |
|              | ABB - IRB 2600ID-15/1,85 - SP600724     |
|              | ABB - IRB 2600ID-8/2,00 - SP600724      |
|              | Fanuc - 100iC-12 - SP600583 + SP600573  |
|              | Fanuc - 100iC-12S - SP600583 + SP600573 |
|              | Fanuc - 100iC-7L - SP600583 + SP600573  |
|              | Fanuc - 100iC-8L - SP600583 + SP600573  |
|              | Fanuc - 100iD - SP600800                |
|              | Fanuc - 100iD-10L 100iD-10L - SP600800  |
|              | Fanuc - 120iC - SP600583 + SP600573     |
|              | Fanuc - 120iC-12L - SP600583 + SP600573 |
|              | Kawasaki - BA006L - SP600695            |
|              | Kawasaki - BA006N - SP600695            |
|              | KUKA - KR 5 ARC HW - SP600582           |
|              | KUKA - KR 5-2 ARC HW - SP600582         |
|              | KUKA - KR6 R1820 ARC HW - SP600582      |
|              | KUKA - KR8 R1420 ARC HW - SP600582      |
|              | KUKA - KR8 R1620 ARC HW - SP600582      |
|              | KUKA - KR8 R2100 ARC HW - SP600582      |
|              | MOTOMAN - EA1400N - SP600580            |
|              | MOTOMAN - EA1900 - SP600580             |
|              | MOTOMAN - EA1900N - SP600580            |
|              | MOTOMAN - GP12 - SP600648               |
|              | MOTOMAN - GP25 - SP600648               |
|              | MOTOMAN - GP25-12 - SP600648            |
|              | MOTOMAN - MA1440 - SP600648             |
|              | MOTOMAN - MA1550 - SP600580             |
|              | MOTOMAN - MA1800 - SP600580             |
|              | MOTOMAN - MA1900 - SP600580             |
|              | MOTOMAN - MA2010 - SP600648             |
|              | MOTOMAN - VA1400 - SP600580             |



## Adapter flanges for T2 and T4 gun mounts

|              |                                    |
|--------------|------------------------------------|
| Product code | ABB - 2600-12/185 - SP600640       |
|              | ABB - 2600-20/165 - SP600640       |
|              | ABB - IRB 1600-X/120 - SP600639    |
|              | ABB - IRB 1600-X/145 - SP600639    |
|              | ABB - IRB 2400/10 - SP600634       |
|              | ABB - IRB 2400/16 - SP600634       |
|              | ABB - IRB 2400L - SP600639         |
|              | ABB - IRB 2600-12/165 - SP600640   |
|              | ABB - IRB 4400-60/195 - SP600637   |
|              | ABB - IRB 4600-20/205 - SP600640   |
|              | ABB - IRB 4600-40/255 - SP600637   |
|              | ABB - IRB 4600-45/205 - SP600637   |
|              | ABB - IRB 4600-60/255 - SP600637   |
|              | FLANGE - ISO 9409-1-A40 - SP600639 |
|              | FLANGE - ISO 9409-1A100 - SP600637 |
|              | FLANGE - ISO 9409-1A125 - SP600603 |
|              | FLANGE - ISO 9409-1A31 - SP600633  |
|              | FLANGE - ISO 9409-1A50 - SP600634  |
|              | FLANGE - ISO 9409-1A63 - SP600635  |
|              | FLANGE - ISO 9409-1A80 - SP600636  |
|              | Hyundai - HA006 - SP600639         |
|              | Kawasaki - RA005L - SP600633       |
|              | Kawasaki - RA006L - SP600639       |
|              | Kawasaki - RA010L - SP600635       |
|              | Kawasaki - RA010N - SP600639       |
|              | Kawasaki - RA020N - SP600635       |
|              | KUKA - KR10 R1420 - SP600633       |
|              | KUKA - KR5 Arc - SP600639          |
|              | KUKA - KR6 R1820 - SP600633        |
|              | KUKA - KR6-2 - SP600639            |
|              | KUKA - KR8 R1620 - SP600633        |
|              | KUKA - KR8 R2020 - SP600634        |
|              | MOTOMAN - HP20D - SP600639         |
|              | MOTOMAN - HP20D-6 - SP600639       |
|              | MOTOMAN - MH50 - SP600636          |
|              | MOTOMAN - MH50-20II - SP600639     |
|              | MOTOMAN - MH50-35II - SP600636     |
|              | MOTOMAN - MH50II - SP600636        |
|              | MOTOMAN - MH6 - SP600639           |
|              | MOTOMAN - MH6S - SP600639          |
|              | MOTOMAN - UP6 - SP600639           |
|              | Universal robots - UR10 - SP600634 |
|              | Universal robots - UR5 - SP600634  |



## Adapter flanges for T3 gun mounts

|              |  |
|--------------|--|
| Product code | ABB - IRB 1520ID - SP600570<br>ABB - IRB 1600ID - SP600570<br>ABB - IRB 2600ID-15/1,85 - SP600571<br>ABB - IRB 2600ID-8/2,00 - SP600571<br>FANUC - 100iC-12 - SP600572 + SP600573<br>FANUC - 100iC-12S - SP600572 + SP600573<br>FANUC - 100iC-7L - SP600572 + SP600573<br>FANUC - 100iC-8L - SP600572 + SP600573<br>FANUC - 100iD - SP600801<br>FANUC - 100iD-10L - SP600801<br>FANUC - 120iC - SP600572 + SP600573<br>FANUC - 120iC-12L - SP600572 + SP600573 |
|--------------|--|

## WELDING GUN NECKS

### Welding gun necks for gas-cooled systems

|              |   |
|--------------|---|
| Product code | SP600621B - GUN NECK 500-G 0°<br>SP600622B - GUN NECK 500-G 22° (Recommended default)<br>SP600623B - GUN NECK 500-G 35°<br>SP600624B - GUN NECK 500-G 45° |
| Filler wires | 0.8-1.6 mm  |
| Weight       | 0.9 kg  |
| Loadability  | 100%ED 500 A / CO?, 100%ED 400 A / M <sup>2</sup> 1   |
| Gas flow     | 10-30 liters  |

### Welding gun necks for water-cooled systems

|              |  |
|--------------|--|
| Product code | SP600550B - GUN NECK 500-W 0°<br>SP600551B - GUN NECK 500-W 22° (Recommended as default)<br>SP600552B - GUN NECK 500-W 35°<br>SP600553B - GUN NECK 500-W 45° |
| Filler wires | 0.8-1.6 mm   |
| Weight       | 0.9 kg   |
| Loadability  | 100%ED 500 A / CO?, 100%ED 500 A / M <sup>2</sup> 1  |
| Consumables  | SP600561 - Insulating ring 500-W<br>SP600562 - Insulating ring, high temperature 500-W<br>SP600563 - Gas diffuser 500-W                                      |
| Gas flow     | min. 25 l / min  |
| Water flow   | min 1.25 l / min   |

## ACCESSORIES

### Cable assemblies for HW-robots, gas-cooled, T1 mount and Euro connector

|              |  |
|--------------|--|
| Product code | See the technical specifications list. |
|--------------|--|



### Cable assemblies for HW-robots, water-cooled, T1 mount and Euro connector

|              |  |
|--------------|--|
| Product code | See the technical specifications list. |
|--------------|--|

### Cable assemblies for HW-robots, water-cooled, T3 mount and Euro connector

|              |  |
|--------------|--|
| Product code | See the technical specifications list. |
|--------------|--|

### Cable assemblies for non-HW-robots, gas-cooled, T2/T4 mount and Euro connector

|              |  |
|--------------|--|
| Product code | See the technical specifications list. |
|--------------|--|

### Cable assemblies for non-HW-robots, water-cooled, T2/T4 mount and Euro connector

|              |  |
|--------------|--|
| Product code | See the technical specifications list. |
|--------------|--|

### Wire liners for euro connectors

|              |  |
|--------------|--|
| Product code | SP600666 Liner Chili HP 2.0/4.7, 2.5 M Robot EU<br>SP600725 Liner Steel 1.6/4.6, 2.0 M Robot EU<br>SP600738 Liner Chili HP 2.0/4.7, 4.0 M Robot EU<br>SP600740 Liner Steel 1.6/4.6, 4.0 M Robot EU |
|--------------|--|

### Wire liners for power pin connectors

|              |   |
|--------------|---|
| Product code | SP600668 Liner Chili HP 2.0/4.7, 2.5 M Robot PP<br>SP600726 Liner Steel 1.6/4.6, 2.0 M Robot PP<br>SP600739 Liner Chili 2.0/4.6, 4.0 M Robot PP<br>SP600741 Liner Steel 1.6/4.6, 4.0 M Robot PP |
|--------------|---|

### Contact tip holder for gas-cooled guns

|              |           |
|--------------|-----------|
| Product code | SP600629B |
|--------------|-----------|

### Contact tip holder for water-cooled guns

|              |           |
|--------------|-----------|
| Product code | SP600560B |
|--------------|-----------|

### Conical gas nozzles for water-cooled gun necks

|              |   |
|--------------|---|
| Product code | SP600557B, 500-W 15,5 / +2,4<br>SP600558B, 500-W 15,5 / -1,1 (recommended as default) |
|--------------|---|

### Bottle shaped gas nozzles for water-cooled gun necks

|              |  |
|--------------|--|
| Product code | SP600554B, 500-W 15,5 / +2,4<br>SP600555B, 500-W 15,5 / +2,4<br>SP600556B, 500-W 15,5 / -2,6 |
|--------------|--|



### Gas nozzle sensor clip 500-G

|              |          |
|--------------|----------|
| Product code | SP600663 |
|--------------|----------|

### Wrench - tool for 500-W neck

|              |          |
|--------------|----------|
| Product code | SP600569 |
|--------------|----------|

### Alignment tool for gun neck inner tube

|              |          |
|--------------|----------|
| Product code | SP600568 |
|--------------|----------|

### Thread cutter tool for gun neck 500-W

|              |          |
|--------------|----------|
| Product code | SP600707 |
|--------------|----------|

### Teaching tip

|              |           |
|--------------|-----------|
| Product code | SP600567B |
|--------------|-----------|

### Robotic gun cleaning station

|                           |  |
|---------------------------|--|
| Product code              | SP600674   |
| Operating voltage         | 10 to 30 V DC  |
| Weight                    | 22 kg  |
| 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            | 1.6 mm (by 6 bar 7 88 psi air pressure)  |
| Ambient temperature       | +5° to +50°C   |
| Protection                | IP 21  |
| Rated voltage             | 24 V DC  |
| Power consumption         | 4.5 W (EACU)   |
| Permitted residual ripple | V <sub>pp</sub> < 10%  |
| Continuous current        | Max. 200 mA  |
| Current consumption       | Approx. 4 mA (24V)   |
| Voltage drop              | Approx. 1.2 V (200 mA)   |
| Consumables               | SP600681 - Reamer tool for water-cooled gun<br>SP600682 - Reamer tool for gas-cooled gun<br>SP600683 - Prism for outer Ø 25mm nozzles water-cooled gun<br>SP600684 - Prism for outer Ø 28mm nozzles gas-cooled gun |



Contact tips - Robotic welding guns

| Description  | Robotic welding guns   |
|--------------|--|
| Product code | CuCrZr:<br>W022083 , CONTACT TIP M8x30 0,8 CuCrZr<br>W022084 , CONTACT TIP M8x30 0,9 CuCrZr<br>W022085 , CONTACT TIP M8x30 1,0 CuCrZr<br>W022086, CONTACT TIP M8x30 1,2 CuCrZr<br>W022087 , CONTACT TIP M8x30 1,4 CuCrZr<br>W022088, CONTACT TIP M8x30 1,6 CuCrZr<br>E-Cu, Al:<br>W022089, CONTACT TIP M8x30 1,0 mm Al<br>W022090, CONTACT TIP M8x30 1,2 mm Al<br>W022091, CONTACT TIP M8x30 1,4 mm Al<br>W022092, CONTACT TIP M8x30 1,6 mm Al |



[WWW.KEMPPI.COM](http://WWW.KEMPPI.COM)

---

**Kemppi** is the design leader in the arc welding industry. We are committed to boosting the quality and productivity of welding by continuous development of the welding arc and by working for a greener and more equal world. Kemppi supplies sustainable products, digital solutions, and services for professionals from industrial welding companies to single contractors. The usability and reliability of our products is our guiding principle. We operate with a highly skilled partner network covering over 70 countries to make its expertise locally available. Headquartered in Lahti, Finland, Kemppi employs close to 800 professionals in 16 countries and has a revenue of 195 MEUR in 2022.

