

ROBOTIC WELDING TORCH PACKAGES

PRODUCT CATALOGUE



2024





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Kemppi

Globally local

GLOBAL SERVICE NETWORK
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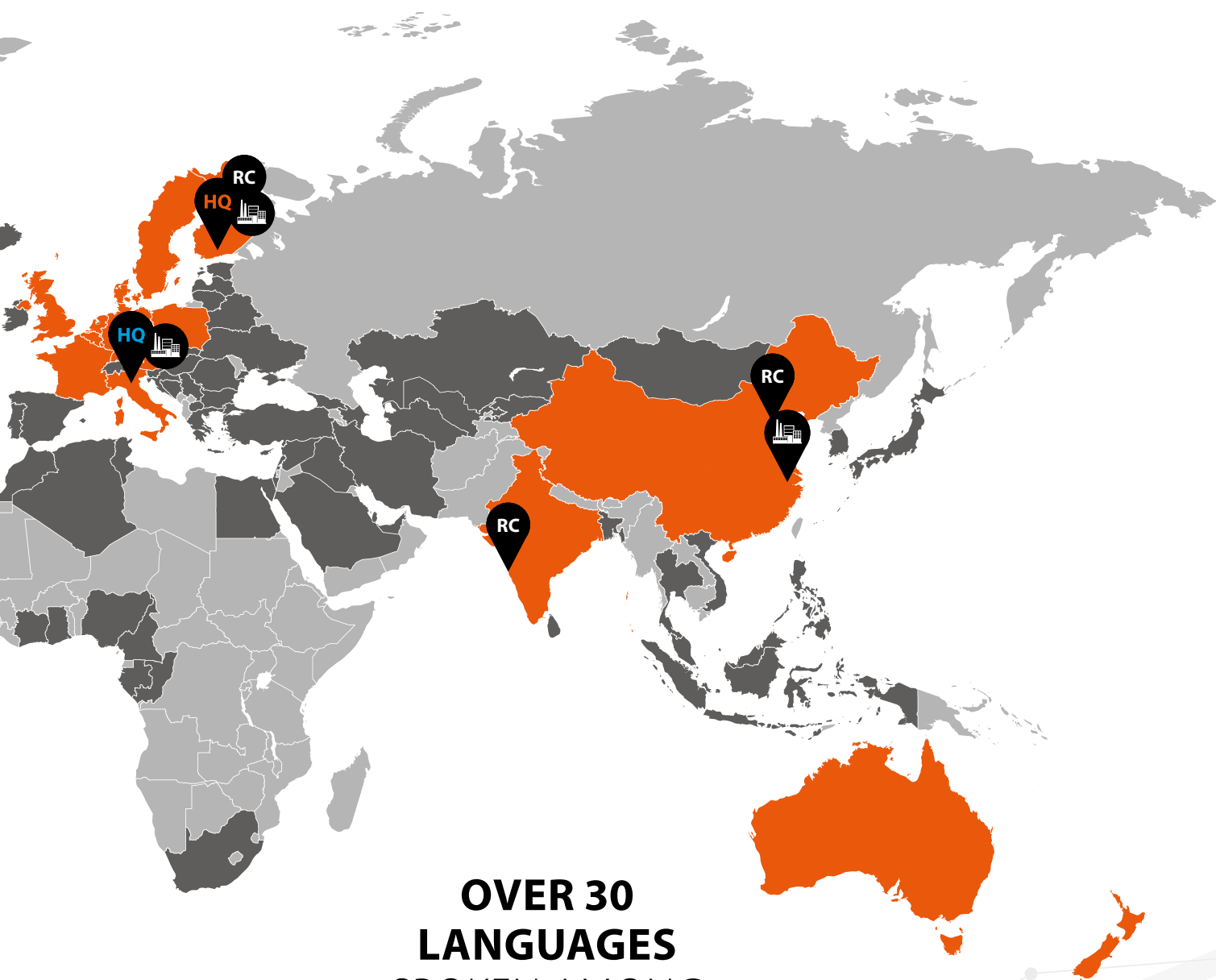
 ROBOTIC WELDING APPLICATION CENTER

 PRODUCTION PLANT

DELIVERIES TO OVER
70 COUNTRIES

Kemppi's business operates globally. The company headquarters and main production units are located in Finland. Kemppi sales organizations are established in Finland, Sweden, Norway, Denmark, Germany, France, United Kingdom, Netherlands, Poland, Italy, Australia, India, and China. Kemppi also has representatives in more than 60 countries who are responsible for country-based product distribution, sales, and customer service.

For a full list of Kemppi sales companies, distributors and dealers, visit www.kemppi.com



**OVER 30
LANGUAGES**
SPOKEN AMONG
EMPLOYEES



Introduction to Kemppt's robotic offering

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

We offer 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 a modern power source, a reliable wire feeder, a robust welding torch, clever connection cable solutions and a complete offering of process related accessories.

With Kemppt's unique MAX and Wise special welding processes, you can reach new levels of productivity in robotic welding. Application specific solutions are 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 Kemppt customer today and in the future, during the entire life cycle of the robotic arc welding system.

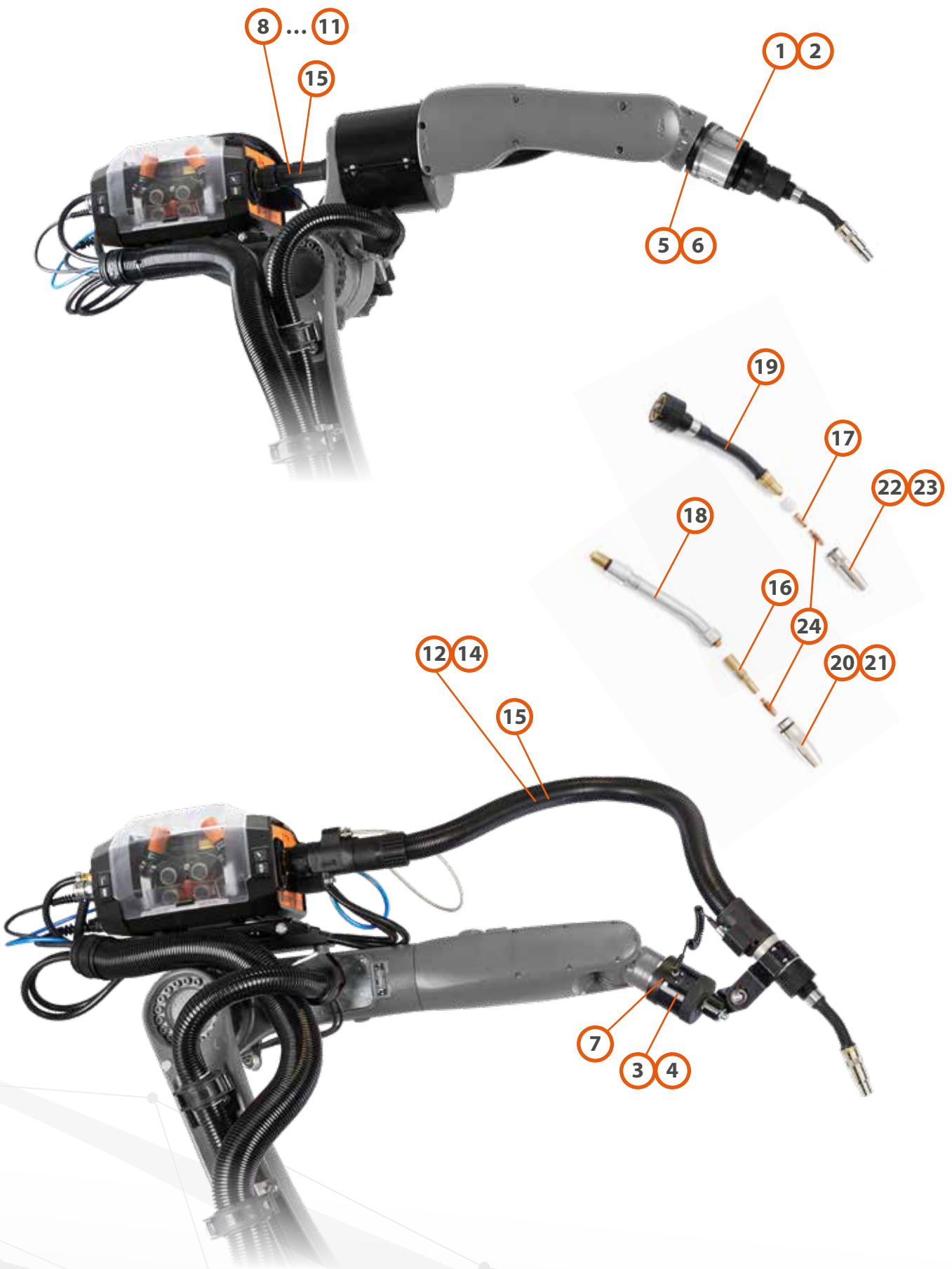
Kemppt solutions can be selected from different technology and cost levels, and thus the solution you choose always provides the best value for the investment – without compromising quality.

Kemppt arc welding solution packages are easy to install and work perfectly with all well-known robot brands. Our solutions can utilize all common modern fieldbus protocols for communication between the robot controller and the power source. An analogue interface is also available for retrofit cases.

ABB KUKA YASKAWA FANUC UNIVERSAL ROBOTS Kawasaki

Ether**CAT**  EtherNet/IP[®] DeviceNet[®]   Modbus

This catalogue describes Kemppt's offer for robotic welding torches only. For detailed offer for powersources, wire feeders, cooling units etc. – see "robotic welding – product catalogue"



Robotic Torch packages

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

Accurate TCP (Tool Center Point) 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.

The choice of the correct robotic torch 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.

NOTE: All images in the catalogue are indicative and may deviate from the real product.

Use table 1 to select the torch 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	
Collision sensors	yes	no	yes	no	yes	no		
Torch 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	euro	euro	euro	euro		euro	
Cable assembly based on robot model	8	9	10	11	12		13	
Liner for cable assembly	15	15	15	15	15		15	

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

Table 2	Start from the top, proceed line by line in numerical order			
Robot upper arm design	Hollow wrist & Non hollow wrist		Hollow wrist & Non hollow wrist	
Cooling type	Gas		Water	
Contact tip holder	16		17	
Neck form	18		19	
Gas nozzle form	conical 20	bottle 21	conical 22	bottle 23
Contact tip	24			

1 TORCH MOUNT T1

(with collision sensors; for hollow wrist type robotic arms)

Kemppi T1 Torch Mount for robotic torches 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 Torch Mount is equipped with collision sensors *) and signal is to be connected with robot controller. Separate versions available for water cooled and gas cooled applications. Robot specific flange is required for final assembly, see 5.

*) 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 torch neck makes unplanned contact with its surroundings.



Ordering code	Description	Additional info
SP600588	Robot torch mount/Collision sensor T1 W	For water cooled systems

Ordering code	Description	Additional info
SP600589	Robot torch mount/Collision sensor T1 G	For gas cooled systems

2 TORCH MOUNT T3

(without collision sensors; for hollow wrist type robotic arm)

Kemppi T3 Torch Mount for robotic torches 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 Torch Mount is not equipped with collision sensors *) and so the robot model, which is used, should have software functionalities itself to handle collision detection. Separate versions available for water cooled and gas cooled applications. Robot specific flange is required for final assembly, see 6.

*) 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 torch neck makes unplanned contact with its surroundings.



Ordering code	Description	Additional info
SP600574	Robot torch mount T3 W	for water cooled systems

Ordering code	Description	Additional info
SP600575	Robot torch mount T3 G	for gas cooled systems

3 TORCH MOUNT T2

(with collision sensors; for non-hollow wrist type robotic arm)

Kemppi T2 Torch Mount for robotic torches is meant to be used with non-hollow wrist type robot models.

T2 Torch Mount is equipped with collision sensors *) and signal is to be connected with robot controller. A separate segment holder is used to attach the T2 torch mount to the robot. Robot specific flange is required for final assembly, see 7.

*) 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 torch neck makes unplanned contact with its surroundings.



Ordering code	Description	Additional info
SP600605	Robot torch mount/Collision sensor T2 L	Version for standard welding torches
SP600606	Robot torch mount/Collision sensor T2 XL	Version for tandem welding torches



Ordering code	Description	Additional info
SP600608	Segment holder for torch mount T2	Torch neck mounting with adjustable angle

4 TORCH MOUNT T4

(without collision sensors; for non-hollow wrist type robotic arm)

Kemppi T4 Torch Mount for robotic torches is meant to be used with non-hollow wrist type robot models.

T4 Torch 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 Torch Mount consists of upper and lower bracket parts. Robot specific flange is required for final assembly, see 7.

*) 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 torch neck makes unplanned contact with its surroundings.



Ordering code	Description	Additional info
SP600604	Robot torch mount T4	Torch neck mounting with adjustable angle

5 ADAPTER FLANGES FOR T1 TORCH MOUNTS

The choice of the adapter flange is based on specific robot brand and model.

T1 torch mount flanges are designed for HW robot models and will fit both T1 W and T1 G models.



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

An up-to-date list is in the Kemppi Configurator.
Check the compatibility with your own robot model from here:
<https://configurator.kemppi.com/welcome>



6 ADAPTER FLANGES FOR T3 TORCH MOUNTS

The choice of the adapter flange is based on specific robot brand and model.

T3 torch mount flanges are designed for HW robot models and will fit both T3 W and T3 G mount models.



Robot brand	Robot model	Ordering code
ABB	IRB 1520ID	SP600570
ABB	IRB 1600ID	SP600570
ABB	IRB 2600ID-15/1,85	SP600571
ABB	IRB 2600ID-8/2,00	SP600571
Fanuc	Arc Mate 100iC-7L	SP600572 + SP600573
Fanuc	Arc Mate 100iC-8L	SP600572 + SP600573
Fanuc	Arc Mate 100iC-12	SP600572 + SP600573
Fanuc	Arc Mate 100iC-12S	SP600572 + SP600573
Fanuc	Arc Mate 120iC	SP600572 + SP600573
Fanuc	Arc Mate 120iC-12L	SP600572 + SP600573
Fanuc	Arc Mate 100iD	SP600801
Fanuc	Arc Mate 100iD-10L	SP600801

An up-to-date list is in the Kemppi Configurator.
Check the compatibility with your own robot model from here:
<https://configurator.kemppi.com/welcome>



7 ADAPTER FLANGES FOR T2 AND T4 TORCH MOUNTS

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



Robot brand	Robot model	Ordering code
ABB	IRB 2400/10	SP600634
ABB	IRB 2400/16	SP600634
ABB	IRB 2400L	SP600639
ABB	IRB 1600-X/120	SP600639
ABB	IRB 1600-X/145	SP600639
ABB	IRB 2600-12/165	SP600640
ABB	IRB 2600-12/185	SP600640
ABB	IRB 2600-20/165	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 4600-60/205	SP600637
Kawasaki	RA005L	SP600633
Kawasaki	RA006L	SP600639
Kawasaki	RA010N	SP600639
Kawasaki	RA010L	SP600635
Kawasaki	RA020N	SP600635
KUKA	KR5 Arc	SP600639
KUKA	KR6-2	SP600639
KUKA	KR6 R1820	SP600633
KUKA	KR8 R1620	SP600633
KUKA	KR8 R2010	SP600634
KUKA	KR10 R1420	SP600633
Yaskawa/Motoman	MH50	SP600636
Yaskawa/Motoman	MH50-35II	SP600636
Yaskawa/Motoman	MH50II	SP600636
Yaskawa/Motoman	MH50-20II	SP600639
Yaskawa/Motoman	MH6	SP600639
Yaskawa/Motoman	MH6S	SP600639
Yaskawa/Motoman	HP20D	SP600639
Yaskawa/Motoman	HP20D-6	SP600639
Yaskawa/Motoman	UP6	SP600639
Hyundai	HA006	SP600639
ISO 9409-1 flange	A31	SP600633
ISO 9409-1 flange	A40	SP600639
ISO 9409-1 flange	A50	SP600634
ISO 9409-1 flange	A63	SP600635
ISO 9409-1 flange	A80	SP600636
ISO 9409-1 flange	A100	SP600637
ISO 9409-1 flange	A125	SP600603

An up-to-date list is in the Kemppi Configurator.
Check the compatibility with your own robot model from here:
<https://configurator.kemppi.com/welcome>



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.

Robot brand	Robot model	Type	Ordering code	Length
Fanuc	100iC-8L	T1	SP600811	1,39 m
Kawasaki	BA006N	T1	SP600698	1,01 m
Yaskawa/Motoman	MA2010	T1	SP600720	1,39 m

9 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.

Not available. Ask details from local sales.

An up-to-date list is in the Kemppi Configurator.
Check the compatibility with your own robot model from here:
<https://configurator.kemppi.com/welcome>



10 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.

Robot brand	Robot model	Type	Ordering code	Length
ABB	IRB 1660ID EURO	T1	SP600721	1,10 m
ABB	IRB 2600ID 1.85 EURO	T1	SP600722	1,16 m
ABB	IRB 1600ID EURO	T1	SP600818	1,10 m
Fanuc	Arc Mate 100iC 7L EURO	T1	SP600706	1,14 m
Fanuc	Arc Mate 120iC EURO	T1	SP600736	1,14 m
Fanuc	M-710iC/12L EURO	T1	SP600831	2,20 m
Fanuc	Arc Mate 100iD	T1	SP600743	0,96 m
Fanuc	Arc Mate iC100/8L	T1	SP600810	1,39 m
KUKA	KR5-2 ARC HW EURO	T1	SP600670	1,00 m
KUKA	KR16 HW EURO	T1	SP600649	1,10 m
KUKA	KR6 1820 EURO	T1	SP600699	1,10 m
Yaskawa/Motoman	BA006L EURO	T1	SP600735	1,34 m
Yaskawa/Motoman	MA1440 EURO	T1	SP600650	0,97 m

11 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.

Robot brand	Robot model	Type	Ordering code	Length
ABB	IRB 2600ID EURO	T3	SP600814	1,12 m
ABB	IRB 1600ID-4/150 EURO	T3	SP600818	1,09 m
Fanuc	Arc Mate 120iC 12L EURO	T3	SP600719	1,34 m
Fanuc	Arc Mate 120iC EURO	T3	SP600641	1,05 m
Fanuc	Arc Mate iC100/8L	T3	SP600812	1,39 m

An up-to-date list is in the Kemppi Configurator.
Check the compatibility with your own robot model from here:
<https://configurator.kemppi.com/welcome>



12 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.

Robot brand	Robot model	Type	Ordering code	Length
ABB	IRB 2400/10	T2/T4	SP600712	0,90 m
ABB	IRB 2400/16	T2/T4	SP600712	0,90 m
ABB	IRB 2400L	T2/T4	SP600694	1,10 m
Kawasaki	BA006L	T2/T4	SP600693	1,35 m
Kawasaki	RA010N	T2/T4	SP600694	1,10 m
Kawasaki	RA010L	T2/T4	SP600693	1,35 m
Kawasaki	RA020N	T2/T4	SP600694	1,10 m
KUKA	KR5 Arc	T2/T4	SP600694	1,10 m
KUKA	KR6-2	T2/T4	SP600694	1,10 m
KUKA	KR6 R1820	T2/T4	SP600694	1,10 m
KUKA	KR8 R1620	T2/T4	SP600712	0,90 m
KUKA	KR10 R1420	T2/T4	SP600712	0,90 m
Yaskawa/Motoman	MH50	T2/T4	SP600693	1,35 m
Yaskawa/Motoman	MH50-35II	T2/T4	SP600692	1,50 m
Yaskawa/Motoman	MH50-20II	T2/T4	SP600728	2,00 m
Yaskawa/Motoman	HP20D	T2/T4	SP600694	1,10 m
Yaskawa/Motoman	HP20D-6	T2/T4	SP600693	1,35 m
Yaskawa/Motoman	UP6	T2/T4	SP600712	0,90 m
Universal Robot	UR	T2/T4	SP600742	3,25 m
General use		T2/T4	SP600691	1,60 m
General use		T2/T4	SP600728	2,00 m

An up-to-date list is in the Kemppi Configurator.
Check the compatibility with your own robot model from here:
<https://configurator.kemppi.com/welcome>



13 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.

Robot brand	Robot model	Type	Ordering code	Length
ABB	IRB 2400/10	T2/T4	SP600711	0,90 m
ABB	IRB 2400/16	T2/T4	SP600711	0,90 m
ABB	IRB 2400L	T2/T4	SP600651	1,10 m
Kawasaki	RA006L	T2/T4	SP600652	1,35 m
Kawasaki	RA010N	T2/T4	SP600651	1,10 m
Kawasaki	RA010L	T2/T4	SP600652	1,35 m
Kawasaki	RA020N	T2/T4	SP600651	1,10 m
KUKA	KR5 Arc	T2/T4	SP600651	1,10 m
KUKA	KR6-2	T2/T4	SP600651	1,10 m
KUKA	KR6 R1820	T2/T4	SP600651	1,10 m
KUKA	KR8 R1620	T2/T4	SP600711	0,90 m
KUKA	KR10 R1420	T2/T4	SP600711	0,90 m
Yaskawa/Motoman	MH50	T2/T4	SP600652	1,35 m
Yaskawa/Motoman	MH50-35II	T2/T4	SP600653	1,50 m
Yaskawa/Motoman	MH50-20II	T2/T4	SP600729	2,00 m
Yaskawa/Motoman	HP20D	T2/T4	SP600651	1,10 m
Yaskawa/Motoman	HP20D-6	T2/T4	SP600652	1,35 m
Yaskawa/Motoman	UP6	T2/T4	SP600711	0,90 m

An up-to-date list is in the Kemppi Configurator.
Check the compatibility with your own robot model from here:
<https://configurator.kemppi.com/welcome>



14 CABLE ASSEMBLY WIRE BREAKS FOR NON-HW-ROBOTS, T2/T4 MOUNT AND EURO CONNECTOR



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.

Ordering code	Description	Additional info
SP600656	CABLE ASSEMBLY T2/T4 W EURO 1.35M WIRE BRAKE	Requires an additional SP600564 for 1.0-1.2 mm wires.
SP600655	CABLE ASSEMBLY T2/T4 W EURO 1.10M WIRE BRAKE	Requires an additional SP600564 for 1.0-1.2 mm wires.
SP600657	CABLE ASSEMBLY T2/T4 W EURO 1.50M WIRE BRAKE	Requires an additional SP600564 for 1.0-1.2 mm wires.
SP600564	Neckliner T2 / T4	Required when wire break is used

An up-to-date list is in the Kemppi Configurator.
Check the compatibility with your own robot model from here:
<https://configurator.kemppi.com/welcome>



15 WIRE LINERS FOR EURO CONNECTORS

Kemppi torch 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.

Steel spiral liners are suitable for welding solid and cored filler wires of corresponding wire diameter.

Kemppi DL Chili -Teflon liners are the latest solution for reliable feeding of aluminum, stainless steel, acid-resistant and solid steel filler wires. Kemppi'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 wire types.



Ordering code	Description	Additional info
SP600725	LINER STEEL 1.6/4.6 2M ROBOT EU	
SP600740	LINER STEEL 1.6/4.6 4M ROBOT EU	
SP600666	LINER CHILI HP 2.0/4.7 2.5M ROBOT EU	
SP600738	LINER CHILI HP 2.0/4.7 4.0M ROBOT EU	

An up-to-date list is in the Kemppi Configurator.
Check the compatibility with your own robot model from here:
<https://configurator.kemppi.com/welcome>



16 CONTACT TIP HOLDER FOR GAS COOLED TORCH

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)
- 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
SP600629B	CONTACT TIP ADAPTER M8 500-G	for gas cooled necks

17 CONTACT TIP HOLDER FOR WATER COOLED TORCH



Ordering code	Description	Additional info
SP600560B	CONTACT TIP ADAPTER M8 500-W	for water cooled necks

18 WELDING TORCH NECKS FOR GAS COOLED SYSTEMS



Ordering code	Description	Additional info
SP600622B	TORCH NECK 500-G 22°	Recommended as default
SP600623B	TORCH NECK 500-G 35°	
SP600624B	TORCH NECK 500-G 45°	

TECHNICAL SPECIFICATIONS

Loadability	100%ED 500 A / CO ₂ , 100%ED 400 A / M21
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 %.

19 WELDING TORCH NECKS FOR WATER COOLED SYSTEMS



Ordering code	Description	Additional info
SP600550B	TORCH NECK 500-W 0°	
SP600551B	TORCH NECK 500-W 22°	Recommended as default
SP600552B	TORCH NECK 500-W 35°	
SP600553B	TORCH NECK 500-W 45°	
Consumables		
SP600561	INSULATING RING 500-W	Default for water cooled necks
SP600562	INSULATING RING, HIGH TEMP. 500-W	
SP600563	GAS DIFFUSER 500-W	

TECHNICAL SPECIFICATIONS

Loadability	100%ED 500 A / CO ₂ , 100%ED 500 A / M21
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 %.

20 CONICAL GAS NOZZLES FOR GAS COOLED TORCH 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
SP600646B	GAS NOZZLE CONICAL 500-G 16/-2	
SP600627B	GAS NOZZLE CONICAL 500-G 16/0	Recommended as default

21 BOTTLE SHAPED GAS NOZZLES FOR GAS COOLED TORCH 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
SP600643B	GAS NOZZLE, BOTTLE FORM 500-G 16/0	

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

22 CONICAL GAS NOZZLES FOR WATER COOLED TORCH NECKS

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



Ordering code	Description	Additional info
SP600557B	GAS NOZZLE CONICAL 500-W 15,5/+2,4	
SP600558B	GAS NOZZLE CONICAL 500-W 15,5/-1,1	recommended as default

23 BOTTLE SHAPED GAS NOZZLES FOR WATER COOLED TORCH NECKS

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



Ordering code	Description	Additional info
SP600554B	GAS NOZZLE BOTTLE FORM 500-W 15,5/+2,4	
SP600555B	GAS NOZZLE BOTTLE FORM 500-W 15,5/-1,1	

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

24 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
CuCrZr		
W022083	CONTACT TIP M8x30 0,8 CuCrZr	
W022084	CONTACT TIP M8x30 0,9 CuCrZr	
W022085	CONTACT TIP M8x30 1,0 CuCrZr	
W022086	CONTACT TIP M8x30 1,2 CuCrZr	
W022087	CONTACT TIP M8x30 1,4 CuCrZr	
W022088	CONTACT TIP M8x30 1,6 CuCrZr	
E-Cu		
W022089	CONTACT TIP M8x30 1,0 mm Al	For Aluminium welding applications
W022090	CONTACT TIP M8x30 1,2 mm Al	For Aluminium welding applications
W022091	CONTACT TIP M8x30 1,4 mm Al	For Aluminium welding applications
W022092	CONTACT TIP M8x30 1,4 mm Al	For Aluminium welding applications

ACCESSORIES FOR WATER COOLED NECKS

ALIGNMENT TOOL FOR TORCH NECK INNER TUBE



Ordering code	Description	Additional info
SP600568	Alignment tool	For Alignment Contact Tip with Gas Nozzle

ALIGNMENT JIG FOR 500-W NECK



Ordering code	Description	Additional info
SP600565B	Alignment jig	For water cooled necks

TEACHING TIP



Ordering code	Description	Additional info
SP600567B	Teaching Tip M8	Stickout 20 mm
SP600566B	Teaching Tip M8	Stickout 15 mm

WRENCH - TOOL FOR 500-W NECK



Ordering code	Description	Additional info
SP600569	Pin wrench	to unscrew the torch connection easily

ACCESSORIES FOR GAS COOLED NECKS

ALIGNMENT TOOL FOR TORCH NECK INNER TUBE



Ordering code	Description	Additional info
SP600568	Alignment tool	For Alignment Contact Tip with Gas Nozzle

ALIGNMENT JIG FOR 500-G NECK



Ordering code	Description	Additional info
SP600632B	Alignment jig	For gas cooled necks

TEACHING TIP



Ordering code	Description	Additional info
SP600567B	Teaching Tip M8	Stickout 20 mm
SP600566B	Teaching Tip M8	Stickout 15 mm

ROBOTIC TORCH 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 Torches.

No liquids included, must be ordered separately.

Ordering code	Description	Additional info
SP600674	ROBOT TORCH CLEANING STATION	Equipped with wire cutter, gas nozzle inside reamer and anti-spatter spray unit

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 TORCH CLEANING STATION



Ordering code	Description	Additional info
SP600681B	Reamer tool	For water cooled torch
SP600682B	Reamer tool	For gas cooled torch

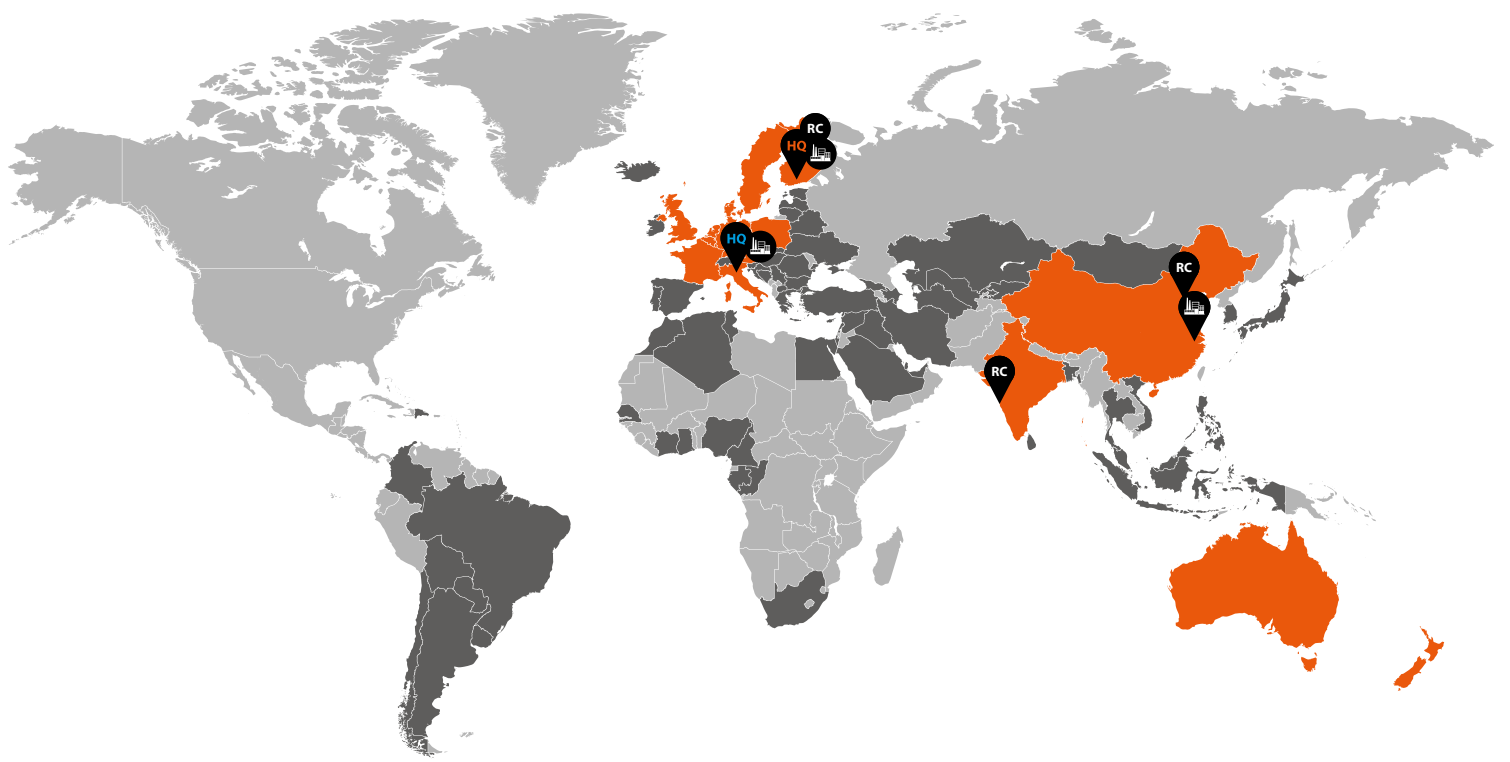


Ordering code	Description	Additional info
SP600683	Prism	for outer Ø 25mm nozzles, water cooled torch
SP600684	Prism	for outer Ø 28mm nozzles, gas cooled torch

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 torch 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.



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Designed for welders

Kemppi is the design leader of 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.

www.kemppi.com

