

A robotic arm with a white and blue body and a green stripe is welding a metal part. A bright blue flame and a shower of orange sparks emanate from the torch. In the background, a welder wearing a tan jacket and a black helmet is visible. The scene is set in an industrial environment with a large metal tank on the left.

MAGNUM PRO® COBOT TORCH SELECTION GUIDE



ABOUT COBOT TORCHES

Industrial vs. Collaborative Robots: What's the Difference?

Unlike traditional robotic cells, cobots are designed to work alongside human beings without the need for traditional, protective fencing. Small, lightweight and easy to assemble, cobots are safer than traditional robots and mobile. They can be used throughout a shop for various parts lines, as opposed to larger, static, traditional automated cell that are programmed for one specific function.



Robotic welding Torch Styles

The two types of robotic torches are **thru-arm** and **external dress**. Industrial robots primarily use **thru-arm** torches. These torches' cables are integrated into the robotic arm and must be configured precisely to the arm length. Alternatively, Cobots' smaller profile makes them more suitable for **external dress** torches, which mount to an extension on the end of the arm.



WHY MAGNUM PRO?

Magnum PRO welding torches and expendables are built to withstand the toughest of welding environments. Their long-lasting expendables help reduce downtime, increase throughput, and save time and money, while ensuring your welding torch stays cool to the touch. Designed with welding efficiency in mind, there is a Magnum PRO solution for any job!



**SAVE
MONEY**



**INCREASE
PART LIFE**



**EASY
TO USE**



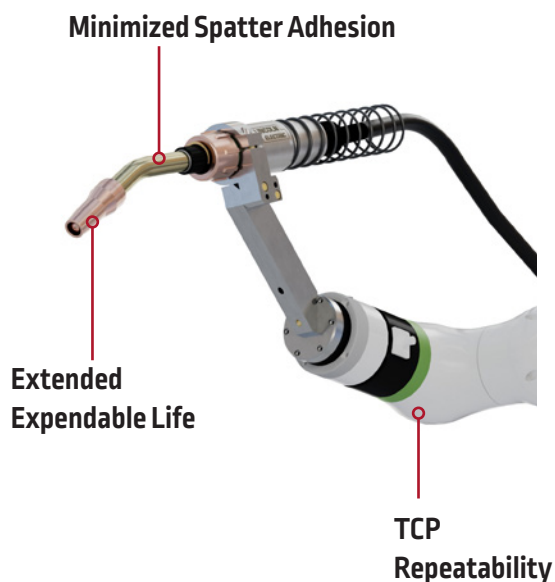
**INCREASE
PRODUCTIVITY**

KEY FEATURES

Air-Cooled Magnum PRO



Water-Cooled Magnum PRO





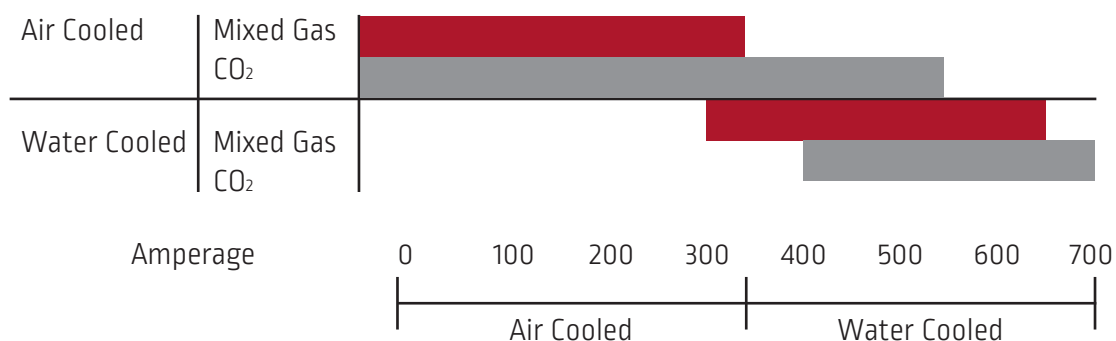
AIR-COOLED VS. WATER-COOLED

The welding torch used on a Cobot determines not only the system's performance, but also the parts used with the torch, including the gun tube, mounting brackets, and torch expendables.

Water cooled torches can stay cool at higher amperages than air-cooled torches, making them more suitable for higher-amperage applications. Unlike water-cooled torches, air-cooled torches do not require a cooler, and are therefore simpler, and more suitable for lighter-duty applications.

Magnum PRO Robotic Air-Cooled Torches – 200-550 A

Magnum PRO Robotic Water-Cooled Torches – 300+ A



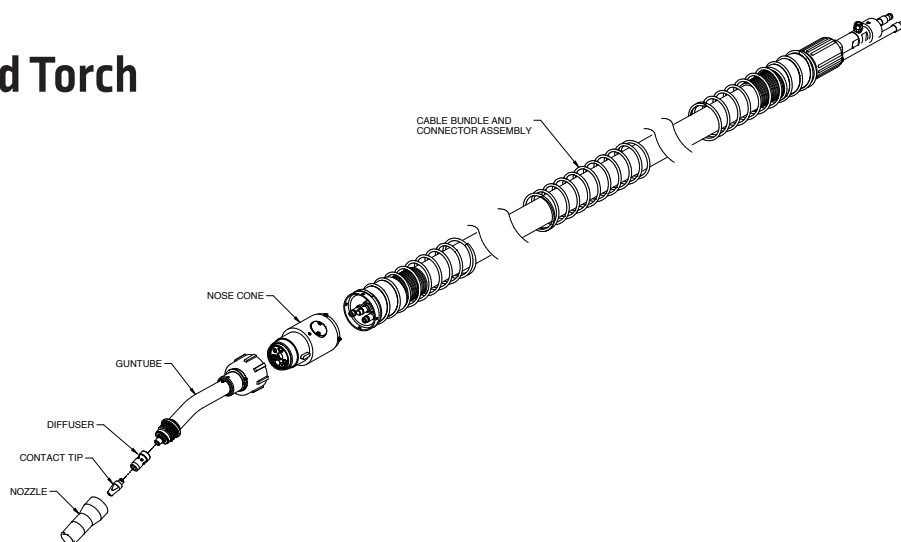
Torch Part Numbers

Product Name	Part Number	Cooling Type	Cable Length	Amperage rating (Mixed Gas)	Amperage Rating (CO ₂)	Wire Brake Capable?
Magnum® PRO Air-Cooled External Dress Robotic Torch One-Pak®	K2647-11	Air	11 ft	385 @ 100%	550 @ 100%	No
Magnum® PRO Water-Cooled External Dress Robotic Torch One-Pak®	K5415-11	Water	11 ft	650 @ 100%	N/A	No
Magnum® PRO Water-Cooled External Dress Robotic Torch One-Pak® - Wire Brake	K5415-11W	Water	11 ft	650 @ 100%	N/A	Yes

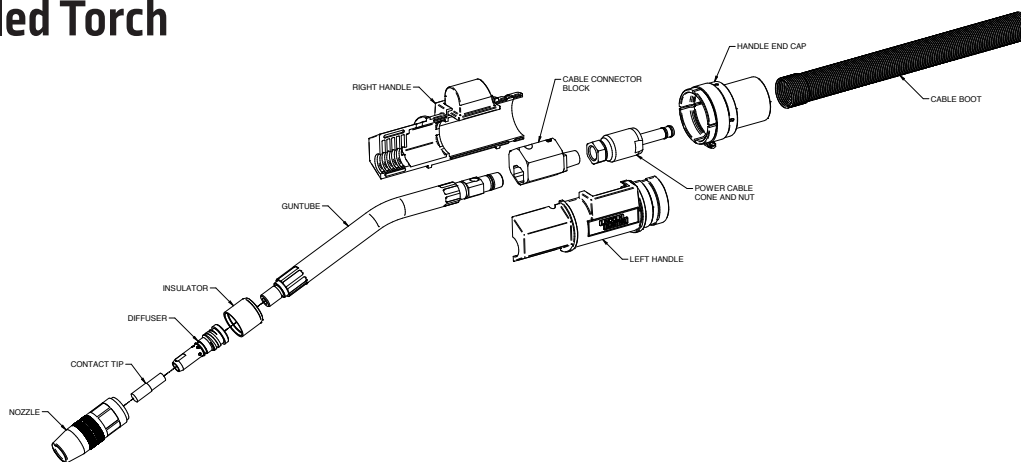


WHAT'S INCLUDED

Water-Cooled Torch



Air-Cooled Torch



Additional Parts Included in CRX Packages

Part Number	Description	Package Included With
A3118126	Cobot Control Button Harness	Air Cooled, Water Cooled
A2078743	Torch Mount Isolation Disk	Air Cooled, Water Cooled
A3091495	Cobot Mounting Arm Base	Air Cooled, Water Cooled
A3086883	Integrated Control Torch Mount	Air Cooled, Water Cooled
A2044280	Water-Cooled Cobot Torch Handle Clamp	Water Cooled
A3091116	Air-Cooled Cobot Torch Handle Clamp	Air Cooled



OPTIONAL SETUP CUSTOMIZATIONS

Gun Tube Options

Cobot systems come standard with 22 degree gun tubes, but are compatible with 45 and 180 degree gun tubes as well.

	Air Cooled	Water Cooled
22 Degrees	KP3056-22	KP4403-22
45 Degrees	KP3056-45	KP4403-45
180 Degrees	KP3056-180	KP4403-180



Standard External Dress Mounting Brackets

Mounting brackets attach the torch to the end of the Cobot's arm. The necessary mounting bracket depends on the gun tube degree and cooling type. Lincoln Electric Cobot packages include a smart mounting bracket, while standard external dress setups include classic mounting brackets:

	Air Cooled	Water Cooled
22 Degrees	KP2769-22	KP5388-22
45 Degrees	KP2769-45	KP5388-45
180 Degrees	KP2769-180	KP5388-180



Wire Brake*

To convert a torch to wire brake, a new nose cone, jump liner, and wire guide are required. Wire brake torches are capable of wire touch sensing.

Wire Size	Housing	Jump Liner	Wire Guide
.035-.045	K5386-2	KP3364-1	KP5390-1
.052-1/16		KP3364-2	KP5390-2
5/64		KP3364-3	KP5390-3
3/32		KP3364-11	KP5390-4

*Only available for Water-Cooled Torches



MAGNUM PRO AIR COOLED EXPENDABLES

Lincoln Electric Magnum PRO expendables are built to withstand the toughest of welding environments. Their long-lasting materials help reduce downtime, increase throughput, and save money while maintaining premium performance at high amperages.

Contact Tips

Wire Diameter in. (mm)	Standard		Tapered		Extended Life		HyperFill – FCAW
	Pkg. Qty. – 10	Pkg. Qty. – 100	Pkg. Qty. – 10	Pkg. Qty. – 100	Pkg. Qty. – 10	Pkg. Qty. – 100	
0.035 (0.9)	KP2745-035	KP2745-035-B100	KP2745-035T	KP2745-035T-B100	KP2745-035R	KP2745-035R-B100	-
0.040 (1.0)	KP2745-040	KP2745-040-B100	KP2745-040T	KP2745-040T-B100	-	-	-
0.045 (1.2)	KP2745-045	KP2745-045-B100	KP2745-045T	KP2745-045T-B100	KP2745-045R	KP2745-045R-B100	KP5344-047
0.052 (1.3)	KP2745-052	KP2745-052-B100	KP2745-052T	KP2745-052T-B100	KP2745-052R	KP2745-052R-B100	KP5344-052
1/16 (1.6)	KP2745-116	KP2745-116-B100	KP2745-116T	KP2745-116T-B100	KP2745-116R	KP2745-116R-B100	-



Tapered 550A
Magnum PRO
Contact Tips

Gas Diffusers

Material	Pkg. Qty.	Type				
		Thread-on 1/8 in. Recess	Thread-on 1/4 in. Recess	Thread-on, Extended Reach	Slip-on	HyperFill
Brass	1	KP2747-1	KP3155-1	KP4781-1	KP2747-2	KP5367-1
	25	KP2747-1-B25	KP3155-1-B25	KP4781-1-B25	KP2747-2-B25	-
Copper	1	KP4766-1	-	-	KP4766-2	-
	25	KP4766-1-B25	-	-	KP4766-2-B25	-



Magnum PRO
550A Diffuser

Cable Liners

Cable Length ft. (m)	Wire Diameter – in. (mm)	
	0.035-0.045 (0.9-1.2)	0.052-1/16 (1.3-1.6)
15 (4.5)	KP45-3545-15	KP45-116-15

Gun Tube Insulators

Pkg. Qty.	Part Number
1	KP2773-1
25	KP2773-1-B25



Magnum PRO
550A Insulator

Nozzles

Nozzle in. (mm)	Pkg. Qty.	Gas Nozzle Diameter – in. (mm)				
		Standard 0.375 (9.5)	Standard 0.5 (12.7)	Standard 0.625 (15.9)	Bottleneck 0.625 (15.9)	Standard 0.75 (19)
1/8 (3.2) Recess	1	KP2743-1-38R	KP2743-1-50R	KP2743-1-62R	KP3161-1-62R	KP2743-1-75R
	25	KP2743-1-38R-B25	KP2745-1-50R-B25	KP2743-1-62R-B25	KP3161-1-62R-B25	KP2743-1-75R-B25
Flush	1	KP2743-1-38F	KP2745-1-50F	KP2743-1-62F	KP3161-1-62F	KP2743-1-75F
	25	KP2743-1-38F-B25	KP2743-1-50F-B25	KP2743-1-62F-B25	KP3161-1-62F-B25	KP2743-1-75F-B25
1/8 (3.2) Stickout	1	KP2743-1-38S	KP2743-1-50S	KP2743-1-62S	KP3161-1-62S	KP2743-1-75S
	25	KP2743-1-38S-B25	KP2743-1-50S-B25	KP2743-1-62S-B25	KP3161-1-62S-B25	KP2743-1-75S-B25
1/8 (3.2) Recess Slip-On	1	-	-	KP2743-2-62R	-	KP2743-2-75R
	25	-	-	KP2743-2-62R-B25	-	KP2743-2-75R-B25
Flush Slip-On	1	-	-	KP2743-2-62F	-	KP2743-2-75F
	25	-	-	KP2743-2-62F-B25	-	KP2743-2-75F-B25
1/8 (3.2) Stickout Slip-On	1	-	-	KP2743-2-62S	-	KP2743-2-75S
	25	-	-	KP2743-2-62S-B25	-	KP2743-2-75S-B25



Magnum PRO
550A Nozzles

* For more info on HyperFill please see lit number E12.4203



MAGNUM PRO WATER COOLED EXPENDABLES

Magnum PRO water cooled expendables' premium durability and performance pair with the Magnum PRO robotic water-cooled gun tube's innovative cooling technology to maximize expendable life.

Tapered 550A Magnum PRO
Contact Tips



Contact Tips

Wire Diameter in. (mm)	Standard		Standard		Tapered		Extended Life		HyperFill – FCAW
	Pkg. Qty. – 10	Pkg. Qty. – 100	Pkg. Qty. – 10	Pkg. Qty. – 100	Pkg. Qty. – 10	Pkg. Qty. – 100	Pkg. Qty. – 10	Pkg. Qty. – 100	Pkg. Qty. – 10
0.035 [0.9]	KP2745-035	KP2745-035-B100	KP2745-035T	KP2745-035T-B100	KP2745-035R	KP2745-035R-B100	KP4482-035	KP4482-035-B100	-
0.040 [1.0]	KP2745-040	KP2745-040-B100	KP2745-040T	KP2745-040T-B100	-	-	KP4482-040	KP4482-040-B100	-
0.045 [1.2]	KP2745-045	KP2745-045-B100	KP2745-045T	KP2745-045T-B100	KP2745-045R	KP2745-045R-B100	KP4482-045	KP4482-045-B100	KP5344-047
0.052 [1.3]	KP2745-052	KP2745-052-B100	KP2745-052T	KP2745-052T-B100	KP2745-052R	KP2745-052R-B100	-	-	KP5344-052
1/16 [1.6]	KP2745-116	KP2745-116-B100	KP2745-116T	KP2745-116T-B100	KP2745-116R	KP2745-116R-B100	-	-	-
0.072 [1.8]	KP2745-072	KP2745-072-B100	-	-	KP2745-072R	KP2745-072R-B100	-	-	-
5/64 [2.0]	KP2745-564	KP2745-564-B100	-	-	KP2745-564R	KP2745-564R-B100	-	-	-

Gas Diffusers

Pkg. Qty.	Process	
	Single Wire	HyperFill
1	KP4380-1	KP4481-1
25	KP4380-1-B25	KP4481-1-B25



Magnum PRO
Water Cooled
Gas Diffuser

Cable Liners

ft. (m)	0.035-0.045 [0.9-1.2]	0.052-1/16 [1.3-1.6]	5/64 [2.1]	3/32 [2.4]
15 [4.5]	KP44-3545-15	KP44-116-15	KP44-564-15	KP44-332-15

Nozzles

Nozzle Type	Pkg. Qty.	Gas Nozzle Diameter – in. (mm)				
		Standard 0.5 [12.7]	Bottleneck 0.5 [12.7]	Standard 0.625 [15.9]	Bottleneck 0.625 [15.9]	Standard 0.75 [19]
1/8 [3.2] Recess	1	KP4120-1-50R	KP4121-1-50R	KP4120-1-62R	KP4121-1-62R	KP4120-1-75R
	25	KP4120-1-50R-B25	KP4121-1-50R-B25	KP4120-1-62R-B25	KP4121-1-62R-B25	KP4120-1-75R-B25
Flush	1	KP4120-1-50F	KP4121-1-50F	KP4120-1-62F	KP4121-1-62F	KP4120-1-75F
	25	KP4120-1-50F-B25	KP4121-1-50F-B25	KP4120-1-62F-B25	KP4121-1-62F-B25	KP4120-1-75F-B25
1/8 [3.2] Stickout	1	KP4120-1-50S	KP4121-1-50S	KP4120-1-62S	KP4121-1-62S	KP4120-1-75S
	25	KP4120-1-50S-B25	KP4121-1-50S-B25	KP4120-62S-B25	KP4121-1-62S	KP4120-1-75S-B25



Magnum PRO
Water Cooled
Nozzle

* For more info on HyperFill please see lit number E12.4203



Test Results Disclaimer

Test results for deposition rates, arc time, and mechanical properties were obtained from a weld produced and tested according to prescribed standards. Actual results will vary depending on many factors, including, but not limited to: the base material or substrate being welded, the welding procedure and welding process, and the unique conditions present in the workplace or welding environment. Users and employers have the sole responsibility for and control over workplace conditions, including the manner in which work is performed and the safety measures taken. Always read and follow applicable OSHA regulations as well as all information on product labeling and safety data sheets when using Lincoln Electric products. Safety data sheets for Lincoln Electric products can be found at <http://www.lincolnelectric.com/en-us/support/msds/Pages/sds-search.aspx>. Users and employers should have an industrial hygienist check worker exposure levels to be certain that they are within applicable OSHA PEL and ACGIH TLV limits for the particular application or weldment.

CUSTOMER ASSISTANCE POLICY

The business of Lincoln Electric is manufacturing and selling high quality welding equipment, automated welding systems, consumables, and cutting equipment. Our challenge is to meet the needs of our customers, who are experts in their fields, and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or technical information about their use of our products. Our employees respond to inquiries to the best of their ability based on information and specifications provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment, or to provide engineering advice in relation to a specific situation. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or communications. Moreover, the provision of such information or technical information does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or technical information, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose or any other equivalent or similar warranty is specifically disclaimed.

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