

MAGNUM[®] PRO WATER-COOLED ROBOTIC TORCH

RUNS COOLER, LASTS LONGER



KEY FEATURES

Utilizing an innovative cooling design, the Magnum[®] PRO Water-Cooled Robotic Torch can run at higher amperages without sacrificing torch and expendable life.

- **Withstands High Duty Cycle Applications** – Compared to traditional air-cooled torches, the Magnum[®] PRO Water-Cooled Robotic Torch can run at 100% duty cycle at 650A with 90/10 mixed gas.
- **Extended Expendable Life** – Conduction and convection cooling near the end of the torch keeps expendables cool. This expands the life of the expendables, increases the amount of arc-on time, and lowers replacement parts costs.
- **TCP Repeatability** – The gun tubes are designed with a robust inner and outer sheath that minimize damage upon crashing and improve TCP repeatability.
- **Minimized Spatter Adhesion** – The unique design of the gun tubes cools both the inner and outer sheath of material. This allows the outside of the gun tubes to remain cool, which minimizes the amount of spatter that adheres to the gun tubes.

Processes »

MIG, Pulsed MIG, FCAW

Applications »

Heavy Fabrication, Agriculture, Automotive/Transportation

Output »



Input »



Product Number »

See product specifications table

WHAT'S INCLUDED »

Thru-Arm Models

(K3593-XX) include:

Cable Assembly (See Chart)
Nose Cone (See Chart)
Torch Housing (See Chart)
Breakaway Disk (See Chart)
Contact Tip (KP2745-045)
Gas Nozzle (KP4120-1-62R)
Diffuser (KP4380-1)
Cable Liner (KP44-564-15)
Gun Tube (KP4403-45)

External Dress Models

(K5415-XX) include:

Cable Assembly (See Chart)
Nose Cone (See Chart)
Contact Tip (KP2745-045)
Gas Nozzle (KP4120-1-62R)
Diffuser (KP4380-1)
Cable Liner (KP44-564-15)
Gun Tube (KP4403-22)

THRU-ARM CABLE ASSEMBLIES

Robot Arm	Product Number	Cable Length in. (mm)
FANUC 100iC/6L	KP4399-1	42.7 (1084)
FANUC 120iC/10L	KP4399-2	49.9 (1268)
FANUC 100iC	KP4399-3	34.1 (866)
FANUC 100iC/8L	KP4399-4	50.9 (1293)
FANUC 120iC	KP4399-5	42.0 (1066)
FANUC M710iC/12L WITH SIDE MOUNT FEEDER	KP4399-6	125.4 (3185)
FANUC 100iD	KP4399-7	36.5 (927)
FANUC 100iD/10L & 120iD	KP4399-8	42.7 (1084)
FANUC M710iC/12L WITH TOP MOUNT FEEDER	KP4399-10	91.9 (2334)
ABB IRB 1520ID	KP4399-12	47.1 (1198)
ABB IRB 1660ID	KP4399-14	51.9 (1319)
ABB IRB 2600ID-15/1.85	KP4399-15	50.7 (1288)
ABB IRB 2600ID-8/2.0	KP4399-16	59.2 (1505)
KUKA KR6R1820HW	KP4399-20	48.1 (1221)
KUKA KR8R1420HW	KP4399-21	38.9 (988)
KUKA KR8R2100HW and FANUC 100iD/8L	KP4399-22	52.5 (1334)
MOTOMAN MA1440 FOR K2685-1 FEEDER	KP4399-23	38.9 (988)
MOTOMAN MA2010	KP4399-24	56.1 (1424)
MOTOMAN MA1440 FOR K3561-1 FEEDER	KP4399-28	40.6 (1031)
FANUC 120iD/12L	KP4399-29	40.7 (1033)



THRU-ARM BREAKAWAY DISKS

Robot Arm	Product Number
FANUC 100iC/6L	KP2920-4
FANUC 120iC/10L	
FANUC 100iC	
FANUC 100iC/8L	
FANUC 120iC	
FANUC M710iC/12L WITH SIDE MOUNT FEEDER	
FANUC M710iC/12L WITH TOP MOUNT FEEDER	
MOTOMAN MA1440 FOR K2685-1 FEEDER	
MOTOMAN MA2010	
MOTOMAN MA1440 FOR K3561-1 FEEDER	
KUKA KR6R1820HW	KP2920-5
KUKA KR8R1420HW	
KUKA KR8R2100HW	
ABB IRB 1660ID	KP2920-8
ABB IRB 2600ID-15/1.85	
ABB IRB 2600ID-8/2.0	
FANUC 100iD	KP2920-9
FANUC 100iD/10L & 120iD	
FANUC 100iD/8L	
FANUC 120iD/12L	
ABB IRB 1520ID	KP2920-11



EXTERNAL DRESS CABLE ASSEMBLIES

Product Number	Cable Length ft. (m)
KP5385-4	4 (1.2)
KP5385-4L	4.5 (1.4)
KP5385-5L	5.5 (1.7)
KP5385-6L	6.5 (2.0)
KP5385-8	8 (2.4)
KP5385-9L	9.5 (2.9)
KP5385-11	11 (3.4)



EXTERNAL DRESS NOSE CONES

Product Number	Product Description
K5386-1	External Dress Nose Cone - Standard
K5386-2	External Dress Nose Cone - Wire Brake



EXTERNAL DRESS BREAKAWAY DISKS

Product Number	Robot Arm
KP3194-1	Fanuc iB
KP3194-2	Fanuc 50 iC
KP3194-3	Fanuc iC
KP3194-4	ABB
KP3194-5	KUKA



EXTERNAL DRESS MOUNTING ARMS

Product Number	Robot Arm	Angle
KP5388-22	Fanuc	22
KP5388-45		45
KP5388-180		180
KP5389-22	ABB/KUKA	22
KP5389-45		45
KP5389-180		180



EXTERNAL DRESS WIRE GUIDES

Product Number	Wire Diameter in. (mm)
KP5390-1	0.035-0.045 (0.9-1.2)
KP5390-2	0.052-1/16 (1.3-1.6)
KP5390-3	5/64 (2.0)
KP5390-4	3/32 (2.4)



EXPENDABLE PARTS

DIFFUSERS

Quantity	Product Number
1	KP4380-1
25	KP4380-1-B25

GUN TUBES

Degree	Product Number
22	KP4403-22
	KP4403-22-6L
45	KP4403-45
	KP4403-45-6L
60	KP4403-60-6L
180	KP4403-180
	KP4403-180-6L

NOZZLES

Nozzle Type	Quantity	5/8 in. ID	1/2 in. ID	3/4 in. ID
1/8 in. Recess	1	KP4120-1-62R	KP4120-1-50R	KP4120-1-75R
	25	KP4120-1-62R-B25	KP4120-1-50R-B25	KP4120-1-75R-B25
Flush	1	KP4120-1-62F	KP4120-1-50F	KP4120-1-75F
	25	KP4120-1-62F-B25	KP4120-1-50F-B25	KP4120-1-75F-B25
1/8 in. Stickout	1	KP4120-1-62S	KP4120-1-50S	KP4120-1-75S
	25	KP4120-1-62S-B25	KP4120-1-50S-B25	KP4120-1-75S-B25
1/8 in. Recess Bottleneck	1	KP4121-1-62R	KP4121-1-50R	---
	25	KP4121-1-62R-B25	KP4121-1-50R-B25	---
Flush Bottleneck	1	KP4121-1-62F	KP4121-1-50F	---
	25	KP4121-1-62F-B25	KP4121-1-50F-B25	---
1/8 in. Stickout Bottleneck	1	KP4121-1-62S	KP4121-1-50S	---
	25	KP4121-1-62S-B25	KP4121-1-50S-B25	---

LINERS

Wire Diameter, in. (mm)	Product Number	Length ft (m)
0.035-0.045 (0.9-1.2)	KP44-3545-15	15 (4.5)
	KP44-3545-25	25 (7.6)
0.052-1/16 (1.3-1.6)	KP44-116-15	15 (4.5)
	KP44-116-25	25 (7.6)
1/16-5/64 (1.6-2.0)	KP44-564-15	15 (4.5)
	KP44-564-25	25 (7.6)
3/32 (2.4)	KP44-332-6	6 (1.8)
	KP44-332-15	15 (4.5)
	KP44-332-25	25 (7.6)

RECOMMENDED ACCESSORIES



GENERAL OPTIONS

Air Blast Kit

Blows spatter from the nozzle orifice. Includes 20 ft hose and fitting. This kit is included with every Air Blast Torch (see product specification table).

Order **K3352-1**



One Gallon of Low Conductivity Coolant

Low conductivity coolant recommended for the Cool Wave™ 20S Water Cooling System.

Order **KP4159-1**



WC Robotic Gun Tube Straightener

Water Cooled Robotic Gun Tube Straightener used in the event of a robot crash to check and correct robotic gun tube alignment.

Order **K4768-1**

SPECIFICATIONS

Product Name	Product Number	Robot Arm	Torch Type	Cable	Breakaway Disk	Torch Housing	Amperage Rating (with 90/10 Ar/CO ₂)	Wire Diameter Range, in. (mm)
Magnum® PRO Water-Cooled Robotic Torch One-Pak®	K3593-1	Fanuc 100iC/6L	Standard	KP4399-1	KP2920-4	K4398-1	100% @ 650A ⁽¹⁾	0.035-5/64 in. (0.9-2.0 mm)
	K35393-1A		Air Blast					
	K3593-2	Fanuc 120iC/10L	Standard	KP4399-2				
	K3593-2A		Air Blast					
	K3593-3	Fanuc 100iC	Standard	KP4399-3				
	K53593-3A		Air Blast					
	K3593-4	Fanuc 100iC/8L	Standard	KP4399-4				
	K35393-4A		Air Blast					
	K3593-5	Fanuc 120iC	Standard	KP4399-5				
	K53593-5A		Air Blast					
	K3593-6	Fanuc M710iC/12L	Standard	KP4399-6				
	K3593-6A		Air Blast					
	K3593-7	Fanuc 100iD	Standard	KP4399-7	KP2920-9			
	K35393-7A		Air Blast					
	K3593-8	Fanuc 100iD/10L and Fanuc 120iD	Standard	KP4399-8				
	K35393-8A		Air Blast					
	K3593-9	Fanuc 100iD/8L	Standard	KP4399-22				
	K35393-9A		Air Blast					
	K3593-10	Fanuc M710iC/12L with Top Mount Feeder	Standard	KP4399-10	KP2920-4			
	K3593-10A		Air Blast					
	K3593-12	ABB IRB 1520iD	Standard	KP4399-12	KP2920-11	K4398-3		
	K35393-12A		Air Blast					
	K3593-14	ABB IRB 1660iD	Standard	KP4399-14	KP2920-8	K4398-1		
	K35393-14A		Air Blast					
	K3593-15	ABB IRB 2600iD-15/1.85	Standard	KP4399-17				
	K35393-15A		Air Blast					
	K3593-16	ABB IRB 2600iD-8/2.0	Standard	KP4399-16				
	K3593-16A		Air Blast					
	K3593-20	KUKA KR6R1820HW	Standard	KP4399-20	KP2920-5	K4398-2		
K3593-20A		Air Blast						
K3593-21	KUKA KR8R1420HW	Standard	KP4399-21					
K3593-21A		Air Blast						
K3593-22	KUKA KR8R2100HW	Standard	KP4399-22					
K3593-22A		Air Blast						
K3593-23	Motoman MA1440 (with K2685-1 Feeder)	Standard	KP4399-23	KP2920-4	K4398-1			
K3593-23A		Air Blast						
K3593-24	Motoman MA2010	Standard	KP4399-24					
K3593-24A		Air Blast						
K3593-28	Motoman MA1440 (with K3561-1 Feeder)	Standard	KP4399-24					
K3593-28A		Air Blast						
K3593-29	Fanuc 120iD/12L	Standard	KP4399-29	KP2920-9				
K35393-29A		Air Blast						

(1) The use of the Cooled Wave 20S water cooler is required for a 100% Duty Cycle at 650A. Extreme ambient temperatures may diminish the duty cycle. Testing is recommended for applications utilizing the full duty cycle in high heat ambient environments.

SPECIFICATIONS

Product Name	Product Number	Cable Length ft (m)	Torch Type	Nose Cone	Cable	Wire Guide	Jump Liner	Amperage Rating (with 90/10 Ar CO ₂)	Wire Diameter Range in. (mm)
Magnum® PRO Water-Cooled External Dress Robotic Torch One-Pak®	K5415-4	4 (1.2)	Standard	K5386-1	KP5385-4	-	-	100% @ 650A ¹	0.035 - 3/32 (0.9-2.0)
	K5415-4W		Wire Brake	K5386-2		KP5390-3	KP3364-3		
	K5415-4L	4.5 (1.4)	Standard	K5386-1	KP5385-4L	-	-		
	K5415-4LW		Wire Brake	K5386-2		KP5390-3	KP3364-3		
	K5415-5L	5.5 (1.7)	Standard	K5386-1	KP5385-5L	-	-		
	K5415-5LW		Wire Brake	K5386-2		KP5390-3	KP3364-3		
	K5415-6L	6.5 (2.0)	Standard	K5386-1	KP5385-6L	-	-		
	K5415-6LW		Wire Brake	K5386-2		KP5390-3	KP3364-3		
	K5415-8	8 (2.4)	Standard	K5386-1	KP5385-8	-	-		
	K5415-8W		Wire Brake	K5386-2		KP5390-3	KP3364-3		
	K5415-9L	9.5 (2.9)	Standard	K5386-1	KP5385-9L	-	-		
	K5415-9LW		Wire Brake	K5386-2		KP5390-3	KP3364-3		
	K5415-11	11 (3.4)	Standard	K5386-1	KP5385-11	-	-		
	K5415-11W		Wire Brake	K5386-2		KP5390-3	KP3364-3		

[1] The use of the Cooled Wave 20S water cooler is required for a 100% Duty Cycle. Extreme ambient temperatures may diminish the duty cycle. Testing is recommended for applications utilizing the full duty cycle in high heat ambient environments.

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