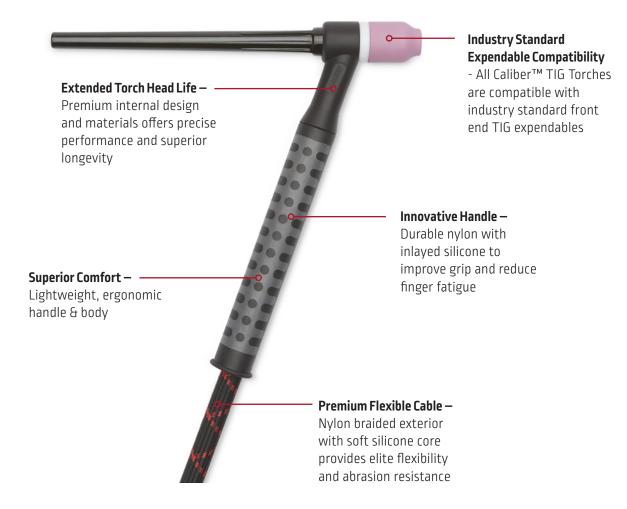
LINCOLN ELECTRIC[®] TIG TORCH AND EXPENDABLE SELECTION GUIDE





CALIBER[™] TIG TORCHES

Caliber[™] TIG Torches offer long-lasting performance and enhanced versatility for a premium TIG welding experience. Offered in the industry standard amperage classes, the addition of these key innovative design updates improve operator comfort and arc consistency.



PRO-TORCH™ TIG TORCHES

Pro-Torch[™] TIG Torches provide consistent TIG welding performance for any application. Offered in industry standard amperage ratings and torch head styles.





HOW TO SELECT TIG TORCHES

When selecting the right TIG torch, there are a few items to consider which will help simplify the process. The following information will help you ask the right questions to decide which TIG Torch is right for your application.





AIR-COOLED VS. WATER-COOLED TORCHES

Question:

What amperage does your welding procedure require?

Choosing between an Air-Cooled or Water-Cooled torch can be determined by the amperage range your welding procedure requires. Once your output amperage reaches 200A, you should consider choosing a water-cooled torch.

Air-Cooled TIG Torches – Up to 200 Amps **Water-Cooled TIG Torches** – Up to 350 Amps

Cooling Type	Torch Series	Amperage Rating	Suggested Tungsten Max* in (mm)
	9	125	1/16 (1.6)
Air Cooled	17	150	3/32 (2.4)
	26	200	1/8 (3.2)
Water Cooled	20	250	1/8 (3.2)
vvaler Cooled	18	350	5/32 (4.0)

*Note: All torches are compatible with 0.020-1/8 in. (0.5-3.2 mm) tungsten electrodes. Suggested Tungsten Max is based on each torches amperage rating and typical uses for each size of tungsten electrode.

Question:

What is the Base Material Type and Thickness?

The Type and Thickness of the Base Material which is being welded on will affect the amperage setting of your welding procedure. When welding on the base materials types and thicknesses below, using typical welding procedures, the TIG torch type can be determined based on its amperage rating and capacity.

	Aluminum		Steel/Stainless Steel						
Base Material Thickness	1/16 in. (1.6 mm)	1/8 in. (3.2 mm)	3/16 in. (4.8 mm)	1/4 in. (6.4 mm)	1/16 in. (1.6 mm)	3/32 in. (2.4 mm)	1/8 in. (3.2 mm)	3/16 in. (4.8 mm)	1/4 in. (6.4 mm)
9 Series	•				•				
17 Series		•				•	•		
26 Series		•	•				•		
20 Series			•	•				•	
18 Series				•					•

For more recommendations on welding parameters and procedures, visit lincolnelectric.com.



TORCH HEAD STYLES

There are three types of torch heads that can provide different benefits based on your TIG welding application.

Rigid Torch Head

A rigid torch head is fixed in place making it consistent and repeatable from weld to weld.

Flexible Torch Head

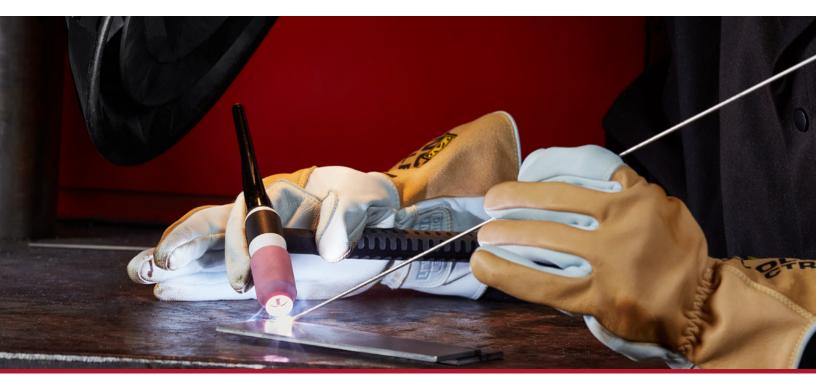
Flexible torch heads can be bent into various shapes and angles making them easy to position into unique joint configurations



Flexible/Valve **Torch Head**

The Flexible/Valve torch heads use the same flexible head technology as the standard Flexible Torch Heads but include a valve for gas flow control. This torch is ideal for connecting to a power source that does not have an internal gas solenoid







CALIBER TIG TORCHES - PART NUMBERS

Part Number	Torch Type	Torch Head Type	Duty Cycle Rating A	Cable Length ft (m)	Number of Cables	Cable Style	Cooling Type
K4844-9-1		Rigid					
K4844-9F-1		Flexible		12.5 (3.8)			
K4844-9FV-1		Flex/Valve	COO(© 135				
K4844-9-2	9 Series	Rigid	60% @ 125				
K4844-9F-2		Flexible		25 (7.6)			
K4844-9FV-2		Flex/Valve					
K4841-17-1		Rigid					
K4841-17F-1		Flexible		12.5 (3.8)			
K4841-17FV-1	17 Series	Flex/Valve	CON @ 150				Air
K4841-17-2	17 Series	Rigid	60% @ 150				
K4841-17F-2		Flexible		25 (7.6)	1	Ultra-Flex	
K4841-17FV-2		Flex/Valve					
K4842-26-1		Rigid					
K4842-26F-1	26 Series	Flexible		12.5 (3.8)			
K4842-26FV-1		Flex/Valve	60% @ 200				
K4842-26-2		Rigid	00% @ 200	25 (7.6)			
K4842-26F-2		Flexible					
K4842-26FV-2		Flex/Valve					
K5340-9-1 ⁽¹⁾	9 Series	Rigid	60% @ 125A	- 12.5 (3.8)			
K5340-9F-1 ^[1]	9 JELLE2	Flexible	00% @ 125A				
K5339-17-1 ⁽¹⁾	17 Series	Rigid	60% @ 150A				
K5339-17F-1 ⁽¹⁾	17 Series	Flexible	AUCI @ 00%				
K4845-20-1		Rigid		12.5 (3.8)			
K4845-20F-1	COMING	Flexible	10.09/ @ 250	12.9 (5.0)			
K4845-20-2	SOON	Rigid	100% @ 250 -	25 (7.6)			
K4845-20F-2		Flexible		25 (7.0)			
K4843-18-1	ING	Rigid		12.5 (3.8)	2		Water
K4843-18F-1	COMING 18 SOON	Flexible 100% @ 350	12.5 (5.0)	3		vvacei	
K4843-18-2	SOUP	Rigid		25 (7.6)			
K4843-18F-2		Flexible		25 [/.6]			
K5359-20-2 ^[2]	CONNU Series	Rigid	10.0% @ 250	25 (7.6)			
K5359-20F-2 ^[2]	SOON	Flexible	100% @ 250	20 (7.0)			

Ready-Pak[®] Torches come with front end expendables and connectors kit (K1622-1) needed to weld out of the box.
Ready-Pak[®] Torches come with front end expendables and connectors kit (K1622-4) needed to weld out of the box.



PRO-TORCH TIG TORCHES - PART NUMBERS

Part Number	Torch Type	Torch Head Type	Duty Cycle Rating A	Cable Length ft (m)	Number of Cables	Cable Style	Cooling Type
K1781-1		Rigid				Standard	
K1781-9 ¹	9 Series	Flexible	60% @ 125	12.5 (3.8)	1	Ultra-Flex™	
K1782-16 ¹		Rigid				Ultraffiex	
K1782-1		Rigid			1	Standard	
K1782-12		Rigiu			1		
K1782-14 ¹		Flexible			1	Ultra-Flex	
K1782-15			_	12.5 (3.8)			-
K1782-6		Valve	60% @ 150		1	Standard	
K1782-7	17 Series	vaive			2	Stanuaru	
K1782-13	Flex/Valve Rigid	-		1	Ultra-Flex		
K1782-3		Rigid		25 (7.6)	1	Standard	Air
K1782-10		Flexible			1		
K1782-18 ¹						Ultra-Flex	
K1782-11		Flex-Valve			1	Standard	
K1783-1		Rigid		12.5 (3.8) 1 2 1	1		
K1783-7		Valve	_		2	Standard	
K1783-3		Rigid			1		
K1783-4	26 Series		60% @ 200		2		
K1783-10		Flexible	_	25 (7.6)	1		
K1783-9		Valve			2		
K1783-11		Flex/Valve			1		
K1784-3	20 Series	Rigid	10.0% @ 250	12.5 (3.8)			
K1784-4	20 361163	i ligiu	100% @ 250	25 (7.6)	- 3	Standard	Water
K1784-1	18 Series	Rigid	10.0% @ 350	12.5 (3.8)	>	Stanuaru	vvalei
K1784-2	IU JELIES	Ingu	gid 100% @ 350	25 (7.6)			

(1) Ready-Pak® Torches come with front end expendables and connectors kit (K1622-1) needed to weld out of the box.

MACHINE CONNECTION GUIDE

Machine	Connection Type	9/17 Series 1 Cable	17/26 Series 2 Cables	26 Series 1 Cable	18/20 Series 3 Cables
Square Wave® TIG 200	35 mm Dinse Gas Thru	K1622-1	-	K1622-3	-
Precision TIG [®] 225	35 mm Dinse Gas Thru	K1622-1	-	K1622-3	K1622-4
Precision TIG 275	5/8 in. Gas Thru	K2166-3	K2166-2	K2166-1	No Adapter Required
Precision TIG 375	5/8 in. Gas Thru	K2166-3	K2166-2	K2166-1	No Adapter Required
Aspect® 230	35 mm Dinse Gas Thru	K1622-1	-	K1622-3	K1622-5
Aspect 375	35 mm Dinse Gas Thru	K1622-1	-	K1622-3	K1622-5
POWER MIG [®] 210MP	35 mm Dinse External Gas	K960-1	-	K1622-3 and K2505-1	-
POWER MIG [®] 360MP	1/2 in. Stud Terminals	K1622-1 and K2505-3	No Adapter Required	K1622-3 and K2505-3	-
Flextec® 350X/500X	Tweco External Gas	K960-4	-	K960-3	K1622-6
Ranger [®] 260MPX [™] /330MPX [™]	1/2 in. Stud Terminals	K1622-1 and K2505-3	No Adapter Required	K1622-3 and K2505-3	-
Power Wave [®] 300C	35 mm Dinse Gas Thru	K1622-1	-	K1622-3	K1622-5
Power Wave S350	Tweco External Gas	K960-4	-	K960-3	K1622-6
Power Wave S350/Adv. Module	35 mm Dinse Gas Thru	K1622-1	-	K1622-3	K1622-5
Power Wave S500	1/2 in. Stud Terminals	K1622-1 and K2505-3	-	K1622-3 and K2505-3	K1622-5 and K2505-3
Power Wave S500/Adv. Module	35 mm Dinse Gas Thru	K1622-1	-	K1622-3	K1622-5
PIPEFAB [®]	35 mm Dinse Gas Thru	K1622-1	-	K1622-3	K1622-5
	1/2 in. Stud Terminals	K1622-1 and K2505-2	No Adapter Required	K1622-3 and K2505-2	K1622-4 and K2505-2
	25 mm Dinse External Gas	K960-2	-	K1622-3 and K2505-1	-
General Connection Types	35 mm Dinse Gas Thru	K1622-1	-	K1622-3	K1622-4
	35 mm Dinse External Gas	K960-1	-	K1622-3 and K2505-1	-
	Tweco External Gas	K960-4	-	K960-3	K1622-6

TORCH CONNECTORS





HOW TO SELECT TIG TORCH EXPENDABLES

Choosing a TIG expendable configuration can be overwhelming. There are a few things to consider to help simplify the process and determine which expendables are best suited for your application.



CALIBER BACK CAPS

Back caps are used to hold tungsten electrodes firmly in place and keep atmosphere from leaking into the torch head. Back caps are available in 3 sizes – Small, Medium and Long.



Things to Consider:

- 1. Torch Type Are you using a 9, 17, 18, 20 or 26 torch? There are 2 available sizes of expendables and the type of torch you use will dictate the size you need see charts on pages 14-15.
- 2. Joint Access What type of access do you have to the joint? Small, button style back caps are convenient for welding in small, tight spaces.
- **3. Tungsten Length** Long back caps can be quickly screwed on with any industry standard tungsten electrode which are sold in lengths of 7 in. (177.8 mm). To use medium or small back caps, tungsten electrodes can be fabricated into smaller pieces.

CALIBER COLLETS

Collets are also used to hold the tungsten electrode securely in place once the back cap is tightened.



Things to Consider:

- 1. Torch Type Are you using a 9, 17, 18, 20 or 26 torch? There are 2 available sizes of expendables and the type of torch you use will dictate the size you need see charts on pages 14-15.
- 2. Tungsten Diameter The collet size is determined by the diameter of the tungsten electrode. For example, when using a 3/32 in. (2.4 mm) tungsten electrode, you would need a 3/32 in. (2.4 mm) collet.

CALIBER COLLET BODIES & GAS LENSES

Collet bodies and gas lenses both serve the same purpose – to disperse shielding gas over the weld puddle.



Things to Consider:

- 1. **Collet Body vs. Gas Lens** A collet body provides a gas flow profile similar to a MIG gun gas diffuser. A gas lens will provide a less turbulent flow since the gas must first travel through a set of screens.
- 2. Torch Type Are you using a 9, 17, 18, 20 or 26 torch? There are 2 available sizes of expendables and the type of torch you use will dictate the size you need see charts on pages 14-15.
- **3.** Tungsten Diameter Size is determined by the diameter of the tungsten electrode. For example, when using a 3/32 in. (2.4 mm) tungsten electrode, you would need a 3/32 in. (2.4 mm) collet body or gas lens.

CALIBER COLLET BODY CUPS & GAS LENS CUPS

Collet body cups and gas lens cups help disperse gas to the weld puddle and can even control the coverage profile. Industry standard sizes range from #4 - #11 depending on the torch type and size.



Things to Consider:

- 1. Torch Type Are you using a 9, 17, 18, 20 or 26 torch? There are 2 available sizes of expendables and the type of torch you use will dictate the size you need see charts on pages 14-115.
- 2. Collet Body or Gas Lens Depending on whether you're using a collet body or a gas lens, that will affect the cup you need collet bodies and lenses are different sizes and require cups specific to their thread pattern.
- **3. Gas Coverage** Smaller cup sizes will provide less gas coverage. The larger the cup opening, the more gas coverage.
- **4.** Tungsten Diameter Larger diameter tungsten electrodes are run at higher amperages and are typically used with larger cup sizes.

LINCOLN ELECTRIC TUNGSTEN ELECTRODES

Tungsten electrodes are responsible for carrying the welding current to the arc. Lincoln Electric Tungsten Electrodes deliver premium expendable performance for TIG welding, no matter the application.



Things to Consider:

- 1. Amperage Ranges Your amperage range will determine the electrode diameter
- 2. Polarity & Performances The polarity and performance needed will determine the chemical composition, or color.

Lincoln Electric has selected three types of tungsten electrodes which cover a wide range of TIG welding applications.

TYPICAL OPERATING PROCEDURES BY TUNGSTEN DIAMETER

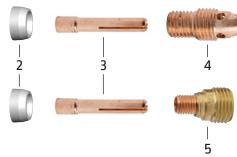
Tungsten Diameter in (mm)	Amperage (DC-)	Amperage (AC 50/50 Balance)	Amperage (AC +70/-30 Balance)
0.020 (0.5)	2 - 20 A	2 - 15 A	2 - 15 A
0.040 (1.0)	10 - 75 A	25 - 75 A	25 - 80 A
1/16 (1.6)	60 - 150 A	40 - 110 A	40 - 115 A
3/32 (2.4)	150 - 250 A	65 - 150 A	60 - 175 A
1/8 (3.2)	225 - 330 A	75 - 170 A	75 - 250 A
5/32 (4.0)	330 - 480 A	85 - 210 A	85 - 310 A

2	Grey % Ceriated EWCe-2	2%	Blue Lanthanated EWLa-2	98.34	Purple /X Multi-Oxide % W + 1.5% La2O3 6 Y2O3 + .08% ZrO2
Amperage Range:	Performs best at low to medium amperages	Amperage Range:	Performs best at medium to high amperages	Amperage Range:	
Current:	Primarily used with DC but can be used with AC	Current:	Consistent DC & AC performance	Current:	Excellent AC & DC performance
Performance Over Time:	Very consistent initial performance but will start to degrade after medium usage due to grain growth	Performance Over Time:	Great long term performance due to resistance from grain growth and contamination	Performance Over Time:	

Non-radioactive composition is an excellent replacement for Thoriated Tungsten

CALIBER EXPENDABLES FOR 9/20 TORCHES



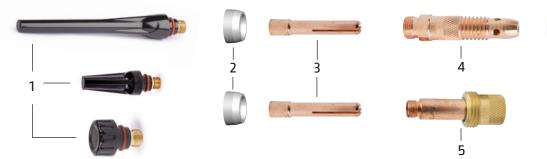




	Product Description	Direct Replacement For	Standard Packaing Part Numbers (2/pack)	Bulk Packaging Part Numbers (10/pack)
	Caliber Back Cap - Long	41V24	KP4745-L	KP4745-L-B10
1	Caliber Back Cap - Medium	41V35	KP4745-M	KP4745-M-B10
	Caliber Back Cap - Short	41V33	KP4745-S	KP4745-S-B10
2	Caliber Insulator - Standard	598882	KP4747-ST	KP4747-ST-B10
	Caliber Collet - 0.020 in (0.5 mm)	13N20	KP4749-020*	KP4749-020-B10
	Caliber Collet - 0.040 in (1.0 mm)	13N21	KP4749-040*	KP4749-040-B10
3	Caliber Collet - 1/16 in (1.6 mm)	13N22	KP4749-116*	KP4749-116-B10
	Caliber Collet - 3/32 in (2.4 mm)	13N23	KP4749-332*	KP4749-332-B10
	Caliber Collet - 1/8 in (3.2 mm)	13N24	KP4749-18*	KP4749-18-B10
	Caliber Collet Body - 0.020 in (0.5 mm)	13N25	KP4751-020	KP4751-020-B10
	Caliber Collet Body - 0.040 in (1.0 mm)	13N26	KP4751-040	KP4751-040-B10
4	Caliber Collet Body - 1/16 in (1.6 mm)	13N27	KP4751-116	KP4751-116-B10
	Caliber Collet Body - 3/32 in (2.4 mm)	13N28	KP4751-332	KP4751-332-B10
	Caliber Collet Body - 1/8 in (3.2 mm)	13N29	KP4751-18	KP4751-18-B10
	Caliber Gas Lens - 0.020 in (0.5 mm)	45V41	KP4753-020	KP4753-020-B10
	Caliber Gas Lens - 0.040 in (1.0 mm)	45V42	KP4753-040	KP4753-040-B10
5	Caliber Gas Lens - 1/16 in (1.6 mm)	45V43	KP4753-116	KP4753-116-B10
	Caliber Gas Lens - 3/32 in (2.4 mm)	45V44	KP4753-332	KP4753-332-B10
	Caliber Gas Lens - 1/8 in (3.2 mm)	45V45	KP4753-18	KP4753-18-B10
	Caliber Collet Body Cup - #4	13N08	KP4755-4	KP4755-4-B10
	Caliber Collet Body Cup - #5	13N09	KP4755-5	KP4755-5-B10
<i>c</i>	Caliber Collet Body Cup - #6	13N10	KP4755-6	KP4755-6-B10
б	Caliber Collet Body Cup - #7	13N11	KP4755-7	KP4755-7-B10
	Caliber Collet Body Cup - #8	13N12	KP4755-8	KP4755-8-B10
	Caliber Collet Body Cup - #10	13N13	KP4755-10	KP4755-10-B10
	Caliber Gas Lens Cup - #4	53N58	KP4757-4	KP4757-4-B10
	Caliber Gas Lens Cup - #5	53N59	KP4757-5	KP4757-5-B10
7	Caliber Gas Lens Cup - #6	53N60	KP4757-6	KP4757-6-B10
	Caliber Gas Lens Cup - #7	53N61	KP4757-7	KP4757-7-B10
	Caliber Gas Lens Cup - #8	53N61S	KP4757-8	KP4757-8-B10

*Small packaging for these part numbers contain 3/pack

CALIBER EXPENDABLES FOR 17/18/26 TORCHES





	Product Description	Direct Replacement For	Standard Packaing Part Numbers (2/pack)	Bulk Packaging Part Numbers (10/pack)
	Caliber Back Cap - Long	57Y02	KP4746-L	KP4746-L-B10
1	Caliber Back Cap - Medium	57Y03	KP4746-M	KP4746-M-B10
	Caliber Back Cap - Short	57Y04	KP4746-S	KP4746-S-B10
-	Caliber Insulator - Standard	18CG	KP4748-ST	KP4748-ST-B10
2	Caliber Insulator - Gas Lens	54N01	KP4748-GL	KP4748-GL-B10
	Caliber Collet - 0.020 in (0.5 mm)	10N21	KP4750-020*	KP4750-020-B10
	Caliber Collet - 0.040 in (1.0 mm)	10N22	KP4750-040*	KP4750-040-B10
3	Caliber Collet - 1/16 in (1.6 mm)	10N23	KP4750-116*	KP4750-116-B10
	Caliber Collet - 3/32 in (2.4 mm)	10N24	KP4750-332*	KP4750-332-B10
	Caliber Collet - 1/8 in (3.2 mm)	10N25	KP4750-18*	KP4750-18-B10
	Caliber Collet - 5/32 in (4.0 mm)	54N20	KP4750-532*	KP4750-532-B10
	Caliber Collet Body - 0.020 in (0.5 mm)	10N29	KP4752-020	KP4752-020-B10
	Caliber Collet Body - 0.040 in (1.0 mm)	10N30	KP4752-040	KP4752-040-B10
4	Caliber Collet Body - 1/16 in (1.6 mm)	10N31	KP4752-116	KP4752-116-B10
	Caliber Collet Body - 3/32 in (2.4 mm)	10N32	KP4752-332	KP4752-332-B10
	Caliber Collet Body - 1/8 in (3.2 mm)	10N33	KP4752-18	KP4752-18-B10
	Caliber Collet Body - 5/32 in (4.0 mm)	406488	KP4752-532	KP4752-532-B10
	Caliber Gas Lens - 0.020 in (0.5 mm)	45V29	KP4754-020	KP4754-020-B10
	Caliber Gas Lens - 0.040 in (1.0 mm)	45V24	KP4754-040	KP4754-040-B10
_	Caliber Gas Lens - 1/16 in (1.6 mm)	45V25	KP4754-116	KP4754-116-B10
5	Caliber Gas Lens - 3/32 in (2.4 mm)	45V26	KP4754-332	KP4754-332-B10
	Caliber Gas Lens - 1/8 in (3.2 mm)	45V27	KP4754-18	KP4754-18-B10
	Caliber Gas Lens - 5/32 in (4.0 mm)	45V28	KP4754-532	KP4754-532-B10
	Caliber Collet Body Cup - #4	10N50	KP4756-4	KP4756-4-B10
	Caliber Collet Body Cup - #5	10N49	KP4756-5	KP4756-5-B10
	Caliber Collet Body Cup - #6	10N48	KP4756-6	KP4756-6-B10
б	Caliber Collet Body Cup - #7	10N47	KP4756-7	KP4756-7-B10
	Caliber Collet Body Cup - #8	10N46	KP4756-8	KP4756-8-B10
	Caliber Collet Body Cup - #10	10N45	KP4756-10	KP4756-10-B10
	Caliber Gas Lens Cup - #4	54N18	KP4758-4	KP4758-4-B10
7	Caliber Gas Lens Cup - #5	54N17	KP4758-5	KP4758-5-B10
	Caliber Gas Lens Cup - #6	54N16	KP4758-6	KP4758-6-B10
	Caliber Gas Lens Cup - #7	54N15	KP4758-7	KP4758-7-B10
	Caliber Gas Lens Cup - #8	54N14	KP4758-8	KP4758-8-B10
	Caliber Gas Lens Cup - #11	54N19	KP4758-11	KP4758-11-B10

*Small packaging for these part numbers contain 3/pack

LINCOLN ELECTRIC TUNGSTEN ELECTRODES



Classification	Color	Diameter in (mm)	Part Number	Qty
		0.020 (0.5)	KP4721-020	
		0.040 (1.0)	KP4721-040	
2% Lanthanated	Blue	1/16 (1.6)	KP4721-116	
2% Lanthanateu	Diue	3/32 (2.4)	KP4721-332	
		1/8 (3.2)	KP4721-18	
		5/32 (4.0)	KP4721-532	
		0.020 (0.5)	KP4722-020	
		0.040 (1.0)	KP4722-040	- 10 per pack
2% Ceriated		1/16 (1.6)	KP4722-116	
2% Certateu	Grey	3/32 (2.4)	KP4722-332	
		1/8 (3.2)	KP4722-18	
		5/32 (4.0)	KP4722-532	
		0.020 (0.5)	KP4723-020	
		0.040 (1.0)	KP4723-040	
MANY MALIER OLDER	Duniela	1/16 (1.6)	KP4723-116	
WX Multi-Oxide	Purple	3/32 (2.4)	KP4723-332	
		1/8 (3.2)	KP4723-18	
		5/32 (4.0)	KP4723-532	

PACKAGING OPTIONS

New, Improved Packaging

- Showroom Packaging Now available in blister packs with a conveniently placed hole for displaying in showrooms
- Product Match-Out Guide Each blister pack has a part number table which lists the industry standard part number which matches with the equivalent Lincoln Electric product



Dent No.	Direct	Size	Length	
Part No.	Replacement For	(16th of an inch)	Length	
KP4755-4	13N08	4		
KP4755-5	13N09	5		
KP4755-6	13N10	6	1-5/32 in	
KP4755-7	13N11	7	(29.3 mm)	
KP4755-8	13N12	8		
KP4755-10	13N13	10		



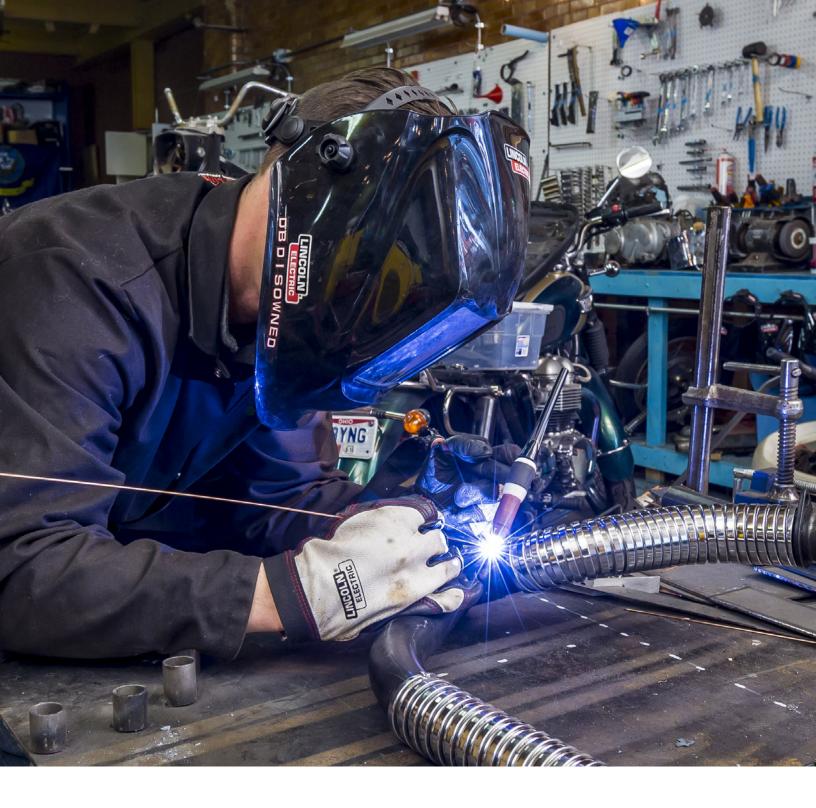
Purchasing in Large Quantities?

Consider purchasing in bulk. All bulk packages come in quantities of 10 and can help you save up to 10% off your purchase!

All Caliber Expendables can be purchased in package quantities of 10 as well. Simply add a -B10 to the end of any part number.

Ex: KP4753-332-B10





CUSTOMER ASSISTANCE POLICY

The business of The Lincoln Electric Company^{*} is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or advice about their use of our products. Our employees respond to inquiries to the best of their ability based on information 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. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or advice. Moreover, the provision of such information or advice does not urerant, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or advice, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose is specifically disclaimed.

Lincoln Electric is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

Subject to Change – This information is accurate to the best of our knowledge at the time of printing. Please refer to www.lincolnelectric.com for any updated information.

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