



MAKE WORK  
LIFE EASIER

A man with a beard and short hair, wearing a blue and black high-visibility work jacket, is shown from the chest up. He is holding a large, black industrial torch cable over his shoulder. The cable has "ARC" and "TORCHOLOGY" printed on it. The background is a plain, light gray.

# SET-UP AND MAINTENANCE GUIDE

## INDUSTRIAL SERIES

**INTELLIGENT**  
TORCH SOLUTIONS

ARC M SERIES

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### Industrial Series

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# M1 Air-Cooled Mig Welding Torch



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Tackles everyday jobs effortlessly



## TECHNICAL SPECIFICATIONS

IEC/EN 60974-7

### M1

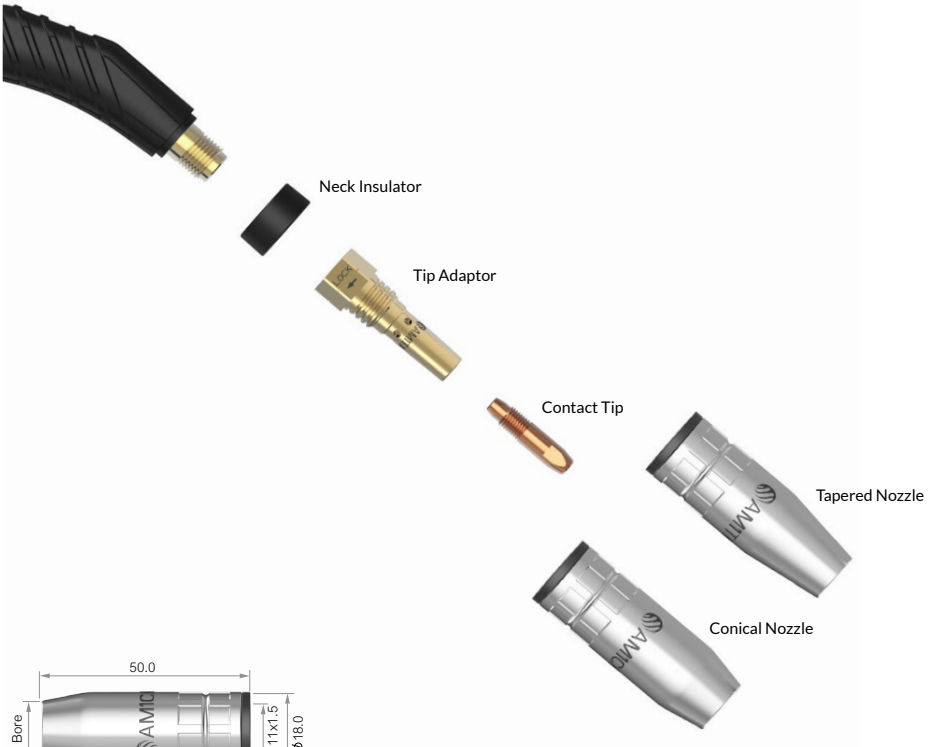
Cooling Method	Air-Cooled	
Rating:	CO <sub>2</sub>	180A
	Mixed Gas M21	150A
Duty Cycle	60%	
Wire Size	0.6-1.0mm	

# M1 SET-UP GUIDE

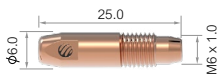


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M1 Torches are supplied “ready to weld” with all wear parts fitted in accordance with the items listed below •



•AM1CN	12mm	1.0mm	Copper
AM1TN	10.6mm	1.0mm	Copper



AM1CT06	M6*25.0	0.6 - 0.023"	Copper
•AM1CT08	M6*25.0	0.8 - 0.030"	Copper
AM1CT09	M6*25.0	0.9 - 0.035"	Copper
AM1CT10	M6*25.0	1.0 - 0.040"	Copper
AM1CT08A	M6*25.0	0.8 - 0.030"	Copper
AM1CT10A	M6*25.0	1.0 - 0.040"	Copper
AM1CT12A	M6*25.0	1.2 - 0.045"	Copper



•AM1TA	Brass
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• AM1AP

• Denotes torch package standard wear part set-up

# M18 Air-Cooled Mig Welding Torch



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Ideal for 0.8mm hard wires and semi-industrial environments



IN THE BOX

Wear Parts Spanner

Safety & Set-up



## TECHNICAL SPECIFICATIONS

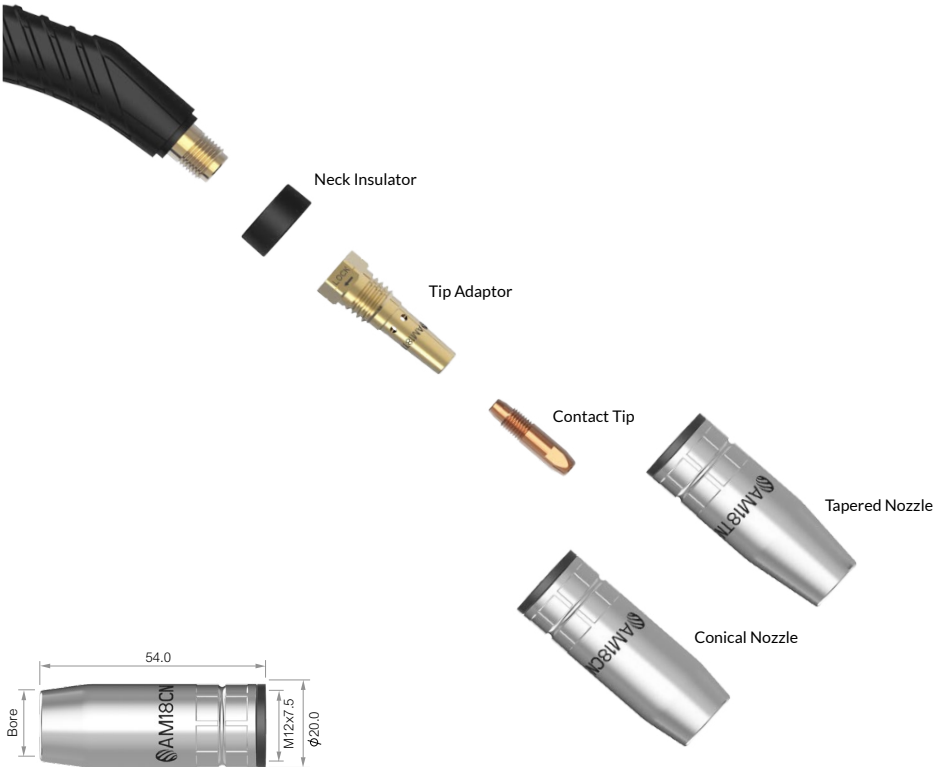
IEC/EN 60974-7

### M18

Cooling Method	Air-Cooled	
Rating:	CO <sub>2</sub>	210A
	Mixed Gas M21	180A
Duty Cycle	60%	
Wire Size	0.6-1.0mm	

# M18 SET-UP GUIDE

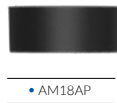
M18 Torches are supplied “ready to weld” with all wear parts fitted in accordance with the items listed below •



	54.0		
Bore			
		M12x7.5	ø20.0
•AM18CN	14mm	1.5mm	Copper
AM18TN	12mm	1.5mm	Copper

	25.0		
ø6.0			
		M6 x 1.0	
AM1CT06	M6*25.0	0.6 - 0.023"	Copper
•AM1CT08	M6*25.0	0.8 - 0.030"	Copper
AM1CT09	M6*25.0	0.9 - 0.035"	Copper
AM1CT10	M6*25.0	1.0 - 0.040"	Copper
AM1CT12	M6*25.0	1.2 - 0.045"	Copper
AM1CT08A	M6*25.0	0.8 - 0.030"	Copper
AM1CT10A	M6*25.0	1.0 - 0.040"	Copper
AM1CT12A	M6*25.0	1.2 - 0.045"	Copper

	42.5		
M6 x 1.0			
		LOCK	
			M10 x 1.0-L
• AM18TA	Brass		



• Denotes torch package standard wear part set-up

# M2 Air-Cooled Mig Welding Torch



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Ideal for 0.8-1.0mm hard wires and industrial environments



IN THE BOX

Wear Parts Spanner



Safety & Set-up



## TECHNICAL SPECIFICATIONS

IEC/EN 60974-7

### M2

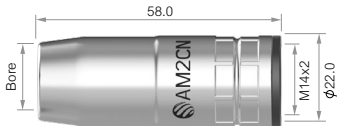
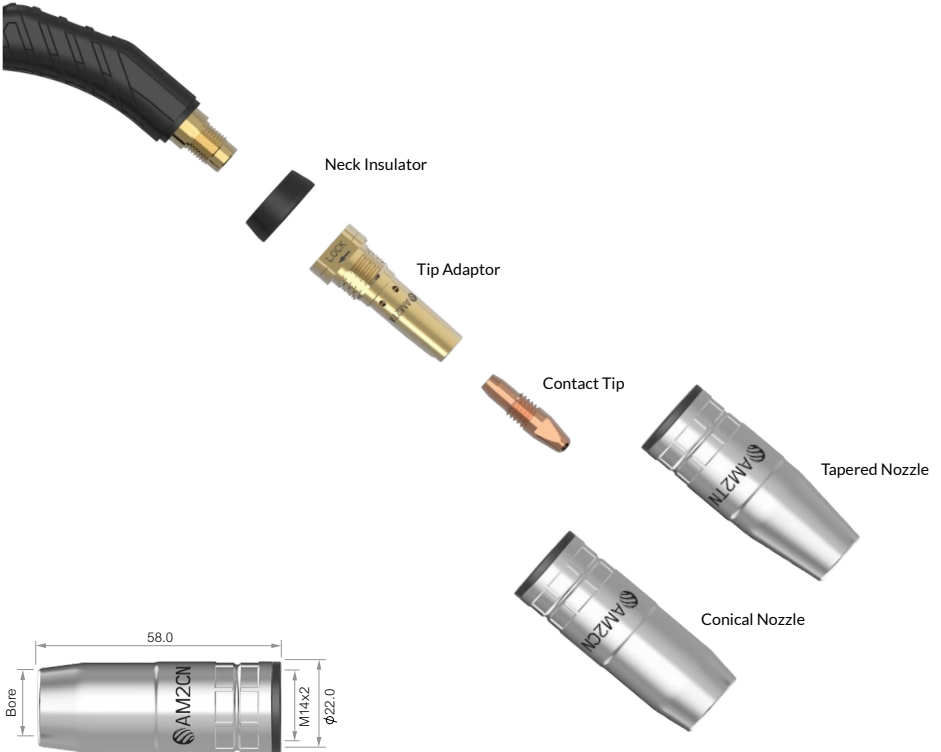
Cooling Method	Air-Cooled	
Rating:	CO <sub>2</sub>	230A
	Mixed Gas M21	200A
	Pulse	110A
Duty Cycle	60%	
Wire Size	0.8-1.2mm	

# M2 SET-UP GUIDE

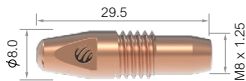


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M2 Torches are supplied “ready to weld” with all wear parts fitted in accordance with the items listed below •



•AM2CN	15mm	1.9mm	Copper
AM2TN	12mm	1.9mm	Copper



AM2CT08	M8*29.5	0.8 - 0.030"	Copper
AM2CT09	M8*29.5	0.9 - 0.035"	Copper
•AM2CT10	M8*29.5	1.0 - 0.040"	Copper
AM2CT12	M8*29.5	1.2 - 0.045"	Copper
AM2CT08A	M8*29.5	0.8 - 0.030"	Copper
AM2CT10A	M8*29.5	1.0 - 0.040"	Copper
AM2CT12A	M8*29.5	1.2 - 0.045"	Copper



• AM2TA	Brass
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• AM2AP

• Denotes torch package standard wear part set-up



# M22 Air-Cooled Mig Welding Torch



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A great all-round industrial torch for high duty 200 Amp solid wires and low duty Pulse Mig Aluminium applications



## TECHNICAL SPECIFICATIONS

IEC/EN 60974-7

### M22

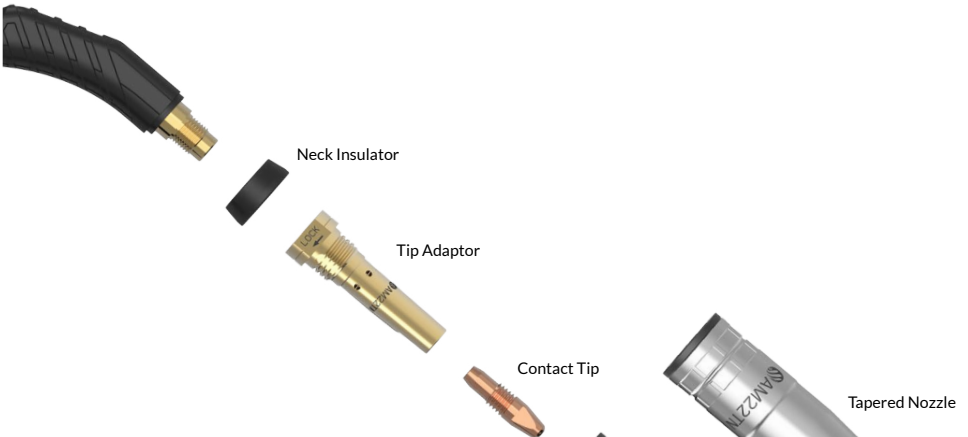
Cooling Method	Air-Cooled	
Rating:	CO <sub>2</sub>	250A
	Mixed Gas M21	220A
	Pulse	120A
Duty Cycle	60%	
Wire Size	0.8-1.2mm	

# M22 SET-UP GUIDE



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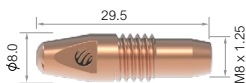
M22 Torches are supplied “ready to weld” with all wear parts fitted in accordance with the items listed below •



•AM22CN	16mm	1.75mm	Copper
AM22TN	14mm	1.75mm	Copper



AM22CNHD	16mm	2.00mm	Copper
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AM2CT08	M8*29.5	0.8 - 0.030"	Copper
AM2CT09	M8*29.5	0.9 - 0.035"	Copper
•AM2CT10	M8*29.5	1.0 - 0.040"	Copper
AM2CT12	M8*29.5	1.2 - 0.045"	Copper
AM2CT08A	M8*29.5	0.8 - 0.030"	Copper
AM2CT10A	M8*29.5	1.0 - 0.040"	Copper
AM2CT12A	M8*29.5	1.2 - 0.045"	Copper



• AM22TA	Brass
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• AM2AP

• Denotes torch package standard wear part set-up

# LINER OPTIONS



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## Liners

### Filler Metal

**Steel Liner** Recommended for: Fe, Fe-MC/FC. Light and medium duty applications

Part No.	Description	Wire Size mm	M1	M18	M2	M22
AM1535-30	Steel Liner x 3mt	0.6-0.9	●	●	●	●
AM1535-40	Steel Liner x 4mt	0.6-0.9	●	●	●	●
AM1535-50	Steel Liner x 5mt	0.6-0.9	●	●	●	●



AM2524-30	Steel Liner x 3mt	1.0-1.2	●	●	●	●
AM2524-40	Steel Liner x 4mt	1.0-1.2	●	●	●	●
AM2524-50	Steel Liner x 5mt	1.0-1.2	●	●	●	●



**Al - Combi Liner** Recommended for: Air-cooled torches with AlMg. Can be used for SS-MC/FC wires

AM1564-30	Combi-Liner x 3mt	0.8-1.2	●	●	●	●
AM1564-40	Combi-Liner x 4mt	0.8-1.2	●	●	●	●
AM1564-50	Combi-Liner x 5mt	0.8-1.2	●	●	●	●



### Welding with Soft Wires

For welding with Aluminum wires use a Combi-liner.

Optimum installation is achieved when using the Combi-liner set-up kit.

● Standard wear part range ● Torch package standard wear part set-up

# HARD WIRE LINER SET-UP

Fe, Fe-MC/FC



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## Preparing the Torch and Fitting the Liner

### Prepare the Torch

### Step 1

Lay the torch out flat and straight

- Remove the nozzle.
- Remove the contact tip and tip adaptor.
- Remove the liner retaining nut, twist and pull out the old liner if necessary.

#### Important:

Liners should not be fitted if the torch is bent or coiled



Note:  
Tip adaptor to swan neck  
thread is left hand

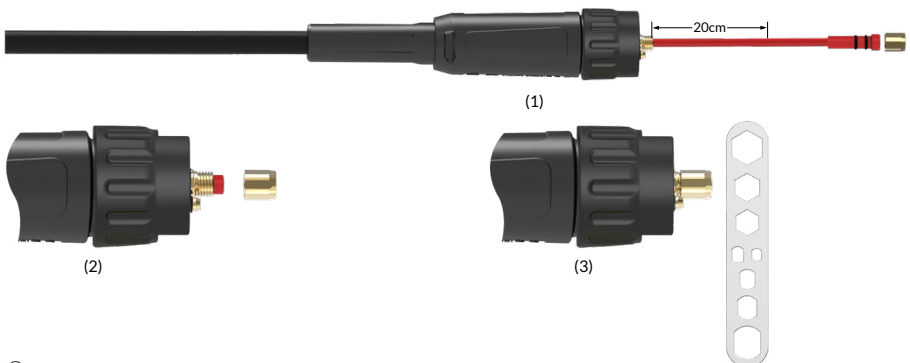
### Install the New Liner

### Step 2

- Feed in the new liner in short strokes of 20cm per time. (Figure 1)
- Twist the handle if the liner sticks when feeding the liner through the swan neck. (Figure 2)
- Continue to feed until the liner nipple is inside gun plug body.
- Fit liner nut. The torque is about 2.5Nm. (Figure 3)

#### Important:

Do not use a kinked liner



# HARD WIRE LINER SET-UP

Fe, Fe-MC/FC

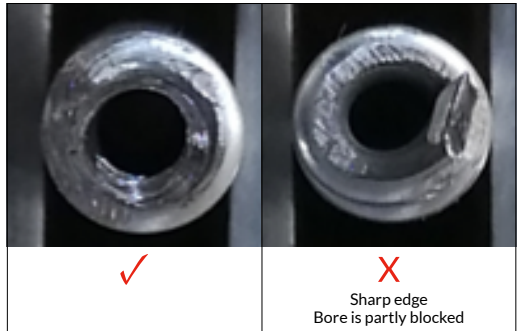
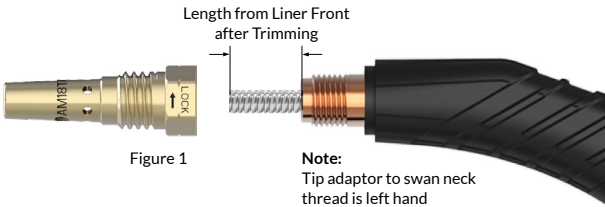


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## Install the New Liner, Cont.

## Step 3

- Cut the excess liner so the liner stick out is: M1 - 16mm, M18 - 18mm, M2 - 14mm, M22 - 21mm from the front end of the swan neck.
- Replace the tip adaptor and measure the gap from the tip adaptor to the front of the swan neck thread (Figure 1).
- Remove excess liner material.
- Remove all sharp burrs with a file or grinder.



### Important:

The inner bore of the liner must be totally cylindrical and burr free.

Remove any external overhanging material prior to fitting the tip adaptor.

# HARD WIRE LINER SET-UP

Fe, Fe-MC/FC



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## Install the New Liner, Cont.

## Step 4

- Refit the tip adaptor.
- The liner front-end sits inside the tip adaptor as shown in detail A.

**Note:**  
Tip adaptor to swan neck thread is left hand



Detail A



Section A

### **Important:**

The liner should always remain under slight compression within the torch.

# HARD WIRE LINER SET-UP

Fe, Fe-MC/FC



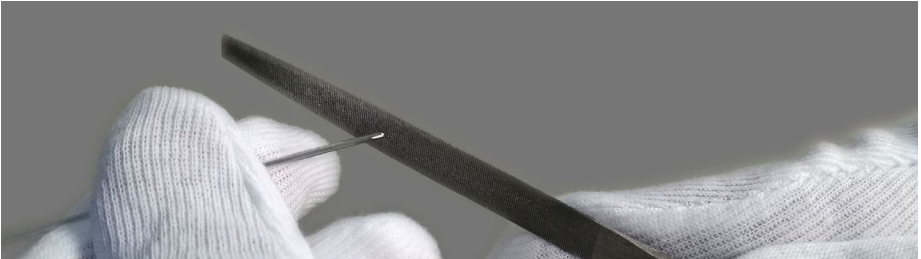
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## Feeding Wire Through the Torch

### Preparing the Wire

### Step 1

- Inch the wire out through the machine by 15-20cm. Using a file remove all sharp burrs from the leading edge of the filler metal.
- Feed the wire directly into the torch liner, carefully pulling the torch towards the machine if necessary.
- Mount the torch to the machine or feed unit

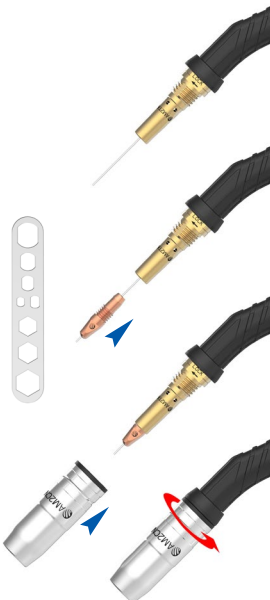


### Feeding the Wire Through the Torch

### Step 2

- Slowly inch the wire through the torch until it appears at the end of the tip adaptor.
- Feed the wire through the tip being careful not to scratch the bore.
- Tighten the contact tip and refit the nozzle.

**You are ready to weld!**



# COMBI-LINER SET-UP

SS,SS-MC/FC



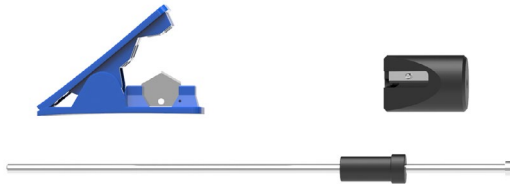
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The Arc M Combi liner system has been developed specifically for aluminium welding wires. It picks up the filler metal directly at the drive rolls and delivers it to the contact tip.

In order to achieve the most reliable torch performance and weld quality it is essential to follow the correct liner set-up procedure.



Optimum installation is achieved when using the Combi-liner set-up kit - stock code reference : AMCLST-KIT





# COMBI-LINER SET-UP

SS,SS-MC/FC



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## Preparing the Torch and Fitting the Liner

### Prepare the Torch

### Step 1

Lay the torch out flat and straight

- Remove the nozzle.
- Remove the contact tip.
- Remove the liner retaining nut, twist and pull out the old liner if necessary.

#### Important:

Liners should not be fitted if the torch is bent or coiled.

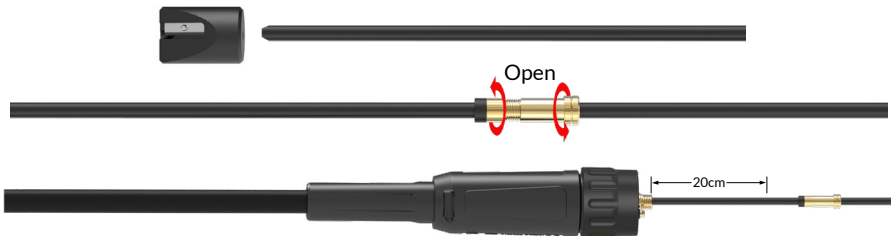
### Install the New Soft Wire Liner

### Step 2

- Use the liner sharpener provided to sharpen the front end of the liner. The sharpener is preset to the correct angle.
- Open the liner collet by twisting the two halves.
- Feed in the new soft wire liner in short strokes 20cm per time.
- Twist the handle if the liner sticks when feeding the liner through the swan neck.
- Continue to feed until the soft wire liner can be assembled in position.

#### Important:

Do not use a kinked liner



# COMBI-LINER SET-UP

SS,SS-MC/FC

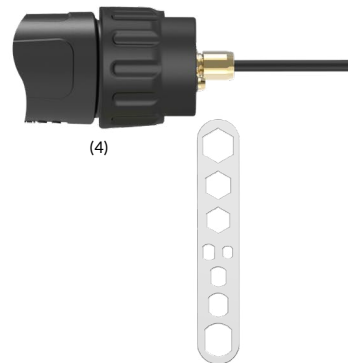
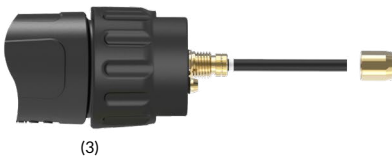
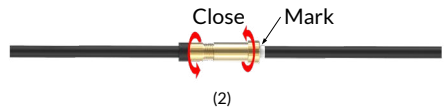
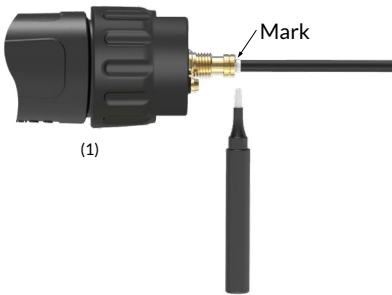


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## Install the New Liner, Cont.

## Step 3

- Ensure the liner is under slight compression within the torch conduit and the front nipple can be seen through the tip adaptor holes. Mark the position at the rear of the liner nipple (Figure 1).
- Retract the liner back slightly and position the collet by tightening it to the liner at the marked position (Figure 2).
- Reposition and tighten the liner retaining nut (Figure 3).



# COMBI-LINER SET-UP

SS,SS-MC/FC



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## Preparing the Machine to Fit the Torch

### Measuring the Distance to the Drive Rolls

### Step 1

- Remove the old wire guide from the machine / wire feed unit if necessary.
- Insert the liner measuring jig supplied into the machine Euro socket as shown.



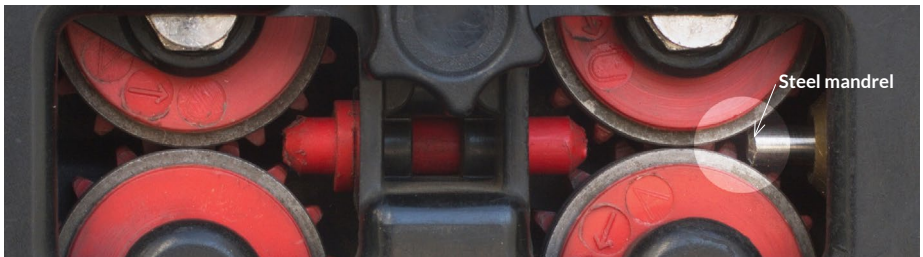
- Ensure there is no gap between the shoulder of the plastic gauge and the machine Euro socket.



### Using the Liner Measuring Jig, Cont.

### Step 2

- Gently push the steel mandrel until the front-end touches the wire feed rollers.
- Remove the Jig from the machine ensuring there is no movement between the plastic gauge and the mandrel.



# COMBI-LINER SET-UP

SS,SS-MC/FC

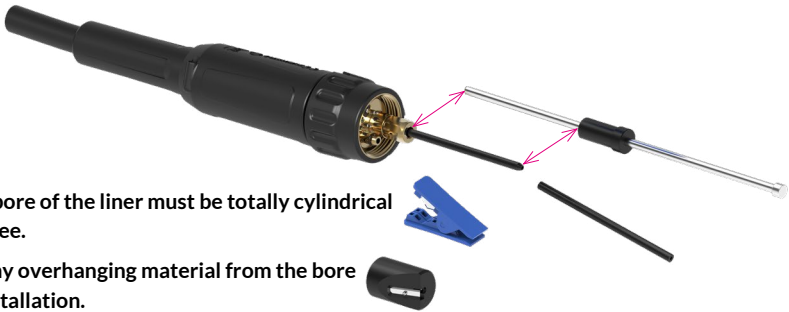


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## Cutting and Trimming the Liner

### Step 3

- Offer the liner to the Jig and mark the point at the face of the plastic gauge.
- Cut the liner with the liner cutter provided.
- Use the liner sharpener provided to sharpen the leading edge of the liner.
- The sharpener is preset to the correct angle.



### Important

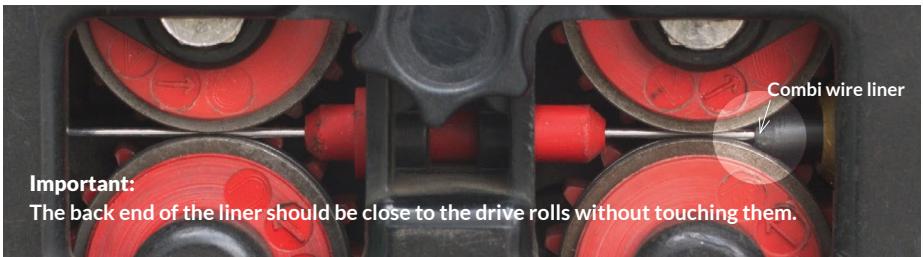
The inner bore of the liner must be totally cylindrical and burr free.

Remove any overhanging material from the bore prior to installation.

## The Correct Set-up

### Step 4

- Refit the torch to the machine and tighten the torch lock nut slowly, being mindful of the interface between the end of the liner and the drive rolls.
- The liner should now sit close to the drive rolls.



### Important:

The back end of the liner should be close to the drive rolls without touching them.

# COMBI-LINER SET-UP

SS,SS-MC/FC



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## Feeding Wire Through the Torch

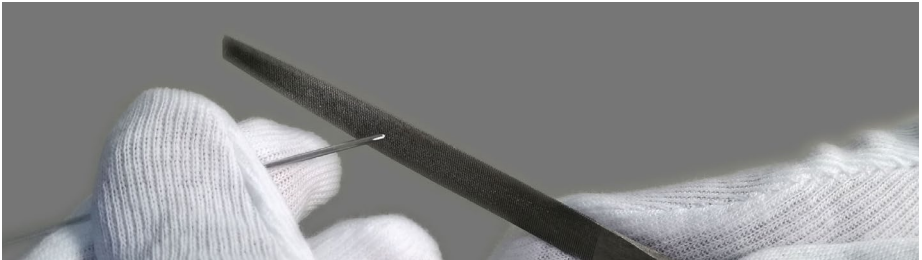
### Important:

Remove the torch from the machine / feed unit

## Step 1

### Preparing the Wire

- Inch the wire out through the machine by 15-20cm. Using a file remove all sharp burrs from the leading edge of the filler metal.
- Feed the wire directly into the torch liner, carefully pulling the torch towards the machine if necessary.
- Mount the torch to the machine or feed unit.



### Feeding the Wire Through the Torch

## Step 2

- Slowly inch the wire through the torch until it appears at the end of the tip adaptor.
- Feed the wire through the tip being careful not to scratch the bore.
- Tighten the contact tip and refit the nozzle.

**You are ready to weld!**

ARC M INDUSTRIAL MIG SERIES

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MPA011 / 2023.03



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