arc TORCHOLOGY
INTELLIGENT TORCH SOLUTIONS

MAKE WORK
LIFE EASIER

SET-UP AND MAINTENANCE GUIDE

MULTIJUST SERIES

ARC M MULTIJUST SERIES

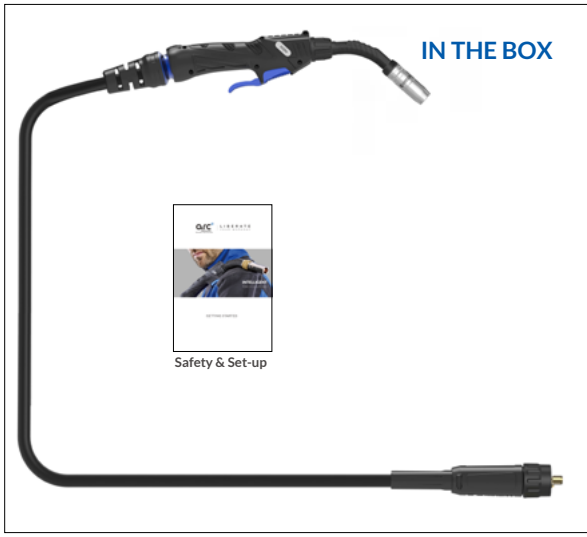
Contents

Multijust Industrial Series

M2M Air-Cooled Multijust Mig Welding Torch

MAKE WORK LIFE EASIER

Ideal for 0.8-1.0mm hard wires and industrial environments.
Fitted with a longer neck with 360° rotation, perfect for multiple positions in difficult to reach areas.



TECHNICAL SPECIFICATIONS

IEC/EN 60974-7

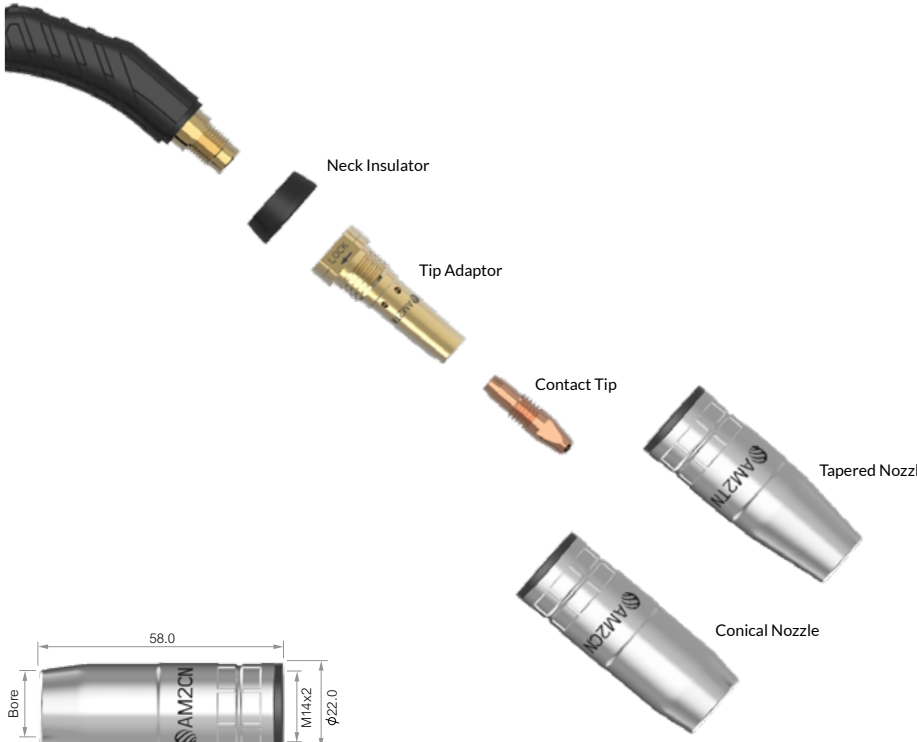
M2M

Cooling Method		Air-Cooled
Rating:	CO_2	230A
	Mixed Gas M21	200A
	Pulse	110A
Duty Cycle		60%
Wire Size		0.8-1.2mm

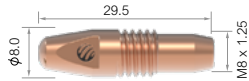
M2M SET-UP GUIDE

MAKE WORK LIFE EASIER

M2M 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	

• AM2AP

• Denotes torch package standard wear part set-up

M22M Air-Cooled Multijust Mig Welding Torch

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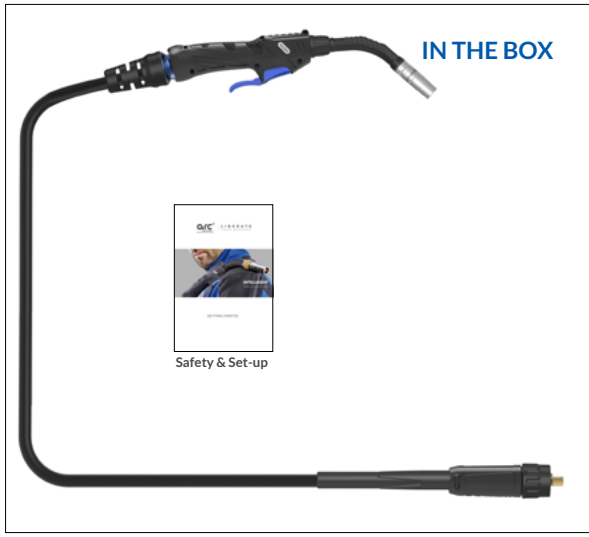
A great all-round Industrial torch for high duty 200 Amp solid wires and low duty Pulse Mig Aluminium applications.
Fitted with a longer neck with 360° rotation, perfect for multiple positions in difficult to reach areas.



TECHNICAL SPECIFICATIONS

IEC/EN 60974-7

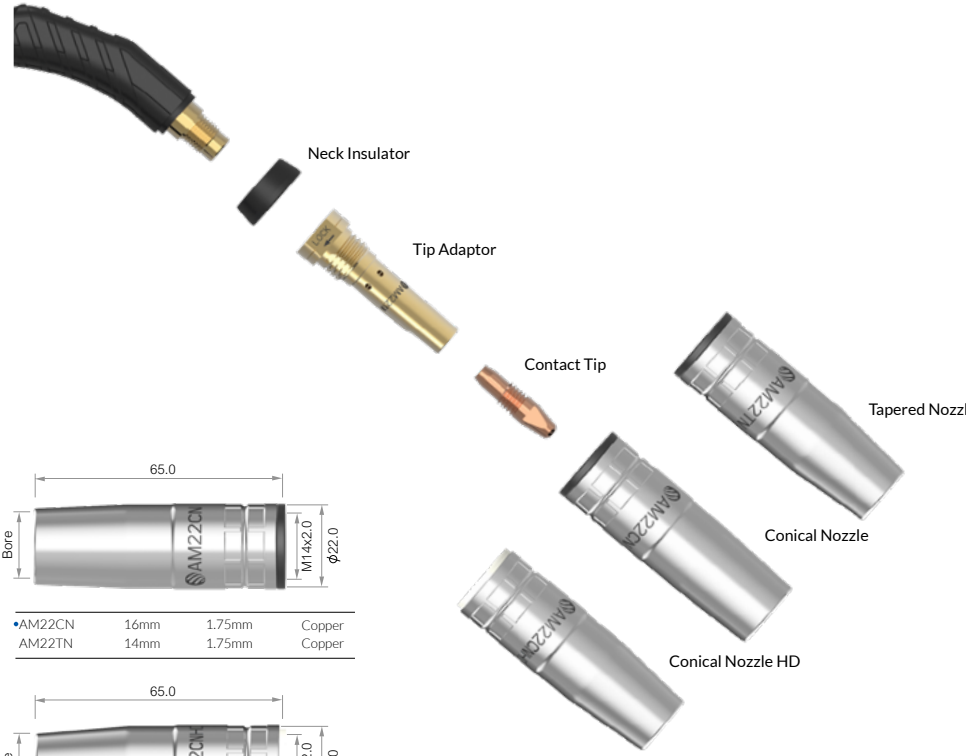
M22M

Cooling Method		Air-Cooled
Rating:	CO_2	250A
	Mixed Gas M21	220A
	Pulse	120A
Duty Cycle		60%
Wire Size		0.8-1.2mm

M22M SET-UP GUIDE

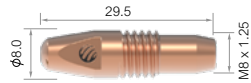
MAKE WORK LIFE EASIER

M22M 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



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

• 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

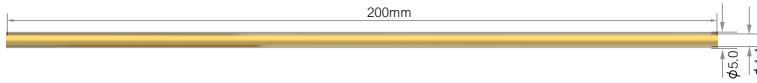
Part No.	Description	Wire Size mm	M2M	M22M
AM1535-30	Steel Liner x 3mt	0.6-0.9	●	●
AM1535-40	Steel Liner x 4mt	0.6-0.9	●	●
AM1535-50	Steel Liner x 5mt	0.6-0.9	●	●
AM2524-30	Steel Liner x 3mt	1.0-1.2	●	●
AM2524-40	Steel Liner x 4mt	1.0-1.2	●	●
AM2524-50	Steel Liner x 5mt	1.0-1.2	●	●
AM2MJL	Neck Jump Liner - Hard Wire (L:170mm)	0.8-1.2	●	
AM22MJL	Neck Jump Liner - Hard Wire (L:186.5mm)	0.8-1.2		●

Al - Soft Wire Liner Recommended for: Air-cooled torches with AlMg. Can be used for SS-MC/FC wires Note: Uses 4.0mm Wire Guide

AM1564A-30	Soft Wire Liner x 3mt	0.8-1.2	●	●
AM1564A-40	Soft Wire Liner x 4mt	0.8-1.2	●	●
AM1564A-50	Soft Wire Liner x 5mt	0.8-1.2	●	●
AM2MJL-B	Neck Jump Liner - Soft Wire (L:170mm)	0.8-1.2	●	
AM22MJL-B	Neck Jump Liner - Soft Wire (L:186.5mm)	0.8-1.2		●

Soft Wire Liner Guide

AM15L-4.4X200	Wire Guide for Core Liners upto 4.0mm	●	●



Welding with Soft Wires
For welding with Aluminum wires use a Soft Wire Liner.
Optimum installation is achieved when using the Combi-liner set-up kit.

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

M5WM

Liquid-Cooled Mig Welding Torch-Multijust

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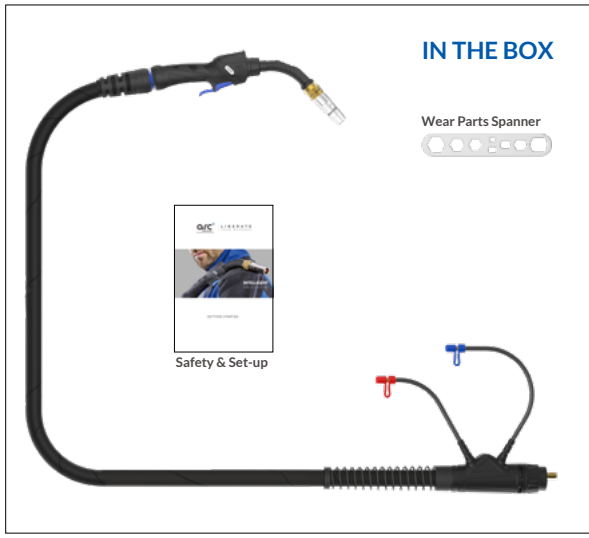
Ideal for heavy duty 1.2mm high deposition and pulse applications with all wire types.
Fitted with a long neck with 360° rotation, perfect for multiple positions in difficult to reach areas.



TECHNICAL SPECIFICATIONS

IEC/EN 60974-7

M5WM

Cooling Method	Liquid-Cooled			
	Cooler Rating	**Max. A**	**Pulse**	**Max. Load**
Rating: CO_2	**1600W**	560A	-	**24KW**
	1200W	540A	-	**22KW**
	1000W	510A	-	**20KW**
Rating: Mixed Gas M21	**1600W**	540A	380A	**22KW**
	1200W	520A	350A	**21KW**
	1000W	500A	340A	**19.5KW**
Duty Cycle		100%	100%	
Wire Size	**Filler Wires**	Fe, Fe-MC / FC		**0.9-1.6mm**
	Filler Wires	Ss, Ss-MC / FC		**0.9-1.6mm**
	Filler Wires	Al		**1.0-1.6mm**

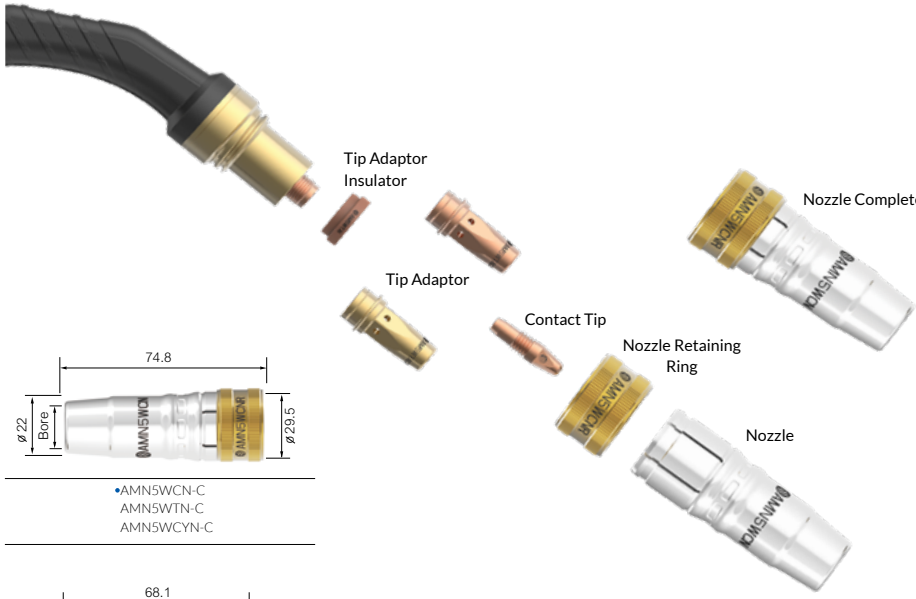
Minimum Liquid Flow Rate	1.5 l/min
Minimum Liquid Inlet Pressure	2.5 Bar
Maximum Liquid Inlet Pressure	5.0 Bar
Maximum Liquid Inlet Temperature	50°C
Operating Temperature Range	-10...+40°C

Important:
Please note minimum inlet pressure and flow rate.
Low pressure will affect torch performance

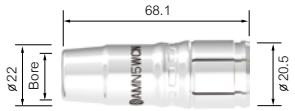
M5WM SET-UP GUIDE

MAKE WORK LIFE EASIER

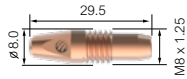
M5WM Torches are supplied “ready to weld” with all wear parts installed in accordance with the items listed below



•AMN5WCN-C AMN5WTN-C AMN5WCYN-C	



•AMN5WCN	13.5mm	3.0mm	Copper
AMN5WTN	11.5mm	3.0mm	Copper
AMN5WCYN	16.0mm	3.0mm	Copper



Standard Series

AM5CT09	M8*29.5	0.9-0.035	CuCrZr
AM5CT10	M8*29.5	1.0-0.040	CuCrZr
•AM5CT12	M8*29.5	1.2-0.045	CuCrZr
AM5CT14	M8*29.5	1.4-0.055	CuCrZr
AM5CT16	M8*29.5	1.6-0.063	CuCrZr

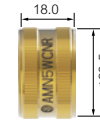
Wire Type
Fe, Fe-FC/MC
SS, SS-FC/MC
upto 1.2mm

A Series

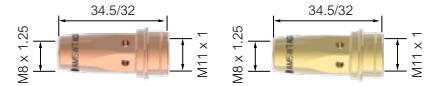
AM5CT10A	M8*29.5	1.0-0.040	CuCrZr
AM5CT12A	M8*29.5	1.2-0.045	CuCrZr
AM5CT16A	M8*29.5	1.6-0.063	CuCrZr
AM2CT10A	M8*29.5	1.0-0.040	Copper
AM2CT12A	M8*29.5	1.2-0.045	Copper

Wire Type
Aluminium
SS, SS-FC/MC
1.6mm

• Denotes torch package standard wear part set-up



•AMN5WCNR	29.5mm	Brass



	Length	Material	Tip Recess
•AM5WTAC-20	34.5mm	Copper	2.0mm
AM5WTAC-45	32mm	Copper	4.5mm
AM5WTAB-20	34.5mm	Brass	2.0mm
AM5WTAB-45	32mm	Brass	4.5mm

•AM5WTAI

M55WM

Liquid-Cooled Mig Welding Torch-Multijust

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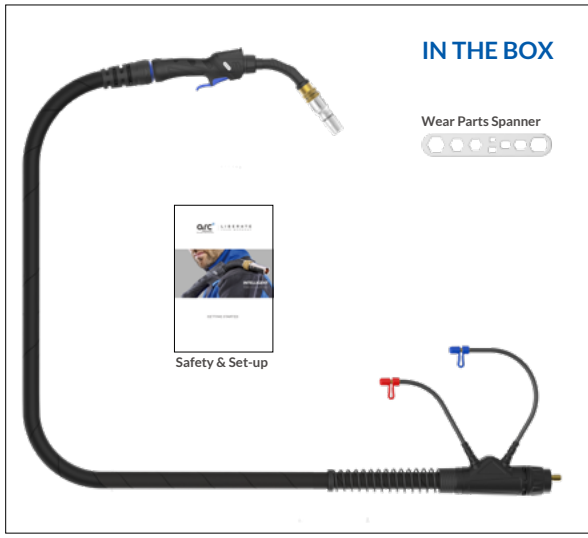
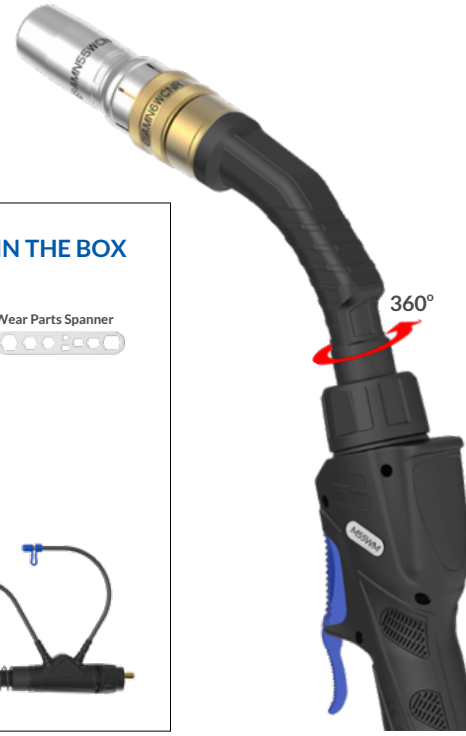
Ideal for all high deposition applications with high reflected heat.
Fitted with a long neck with 360° rotation, perfect for multiple positions in difficult to reach areas.





TECHNICAL SPECIFICATIONS

IEC/EN 60974-7

M55WM

Cooling Method	Liquid-Cooled			
	Cooler Rating	**Max. A**	**Pulse**	**Max. Load**
Rating: CO_2	**1600W**	580A	-	**25KW**
	1200W	550A	-	**23KW**
	1000W	520A	-	**21KW**
Rating: Mixed Gas M21	**1600W**	560A	400A	**23KW**
	1200W	530A	360A	**21.5KW**
	1000W	510A	350A	**20KW**
Duty Cycle		100%	100%	
Wire Size	**Filler Wires**	Fe, Fe-MC / FC		**0.9-2.0mm**
	Filler Wires	Ss, Ss-MC / FC		**0.9-1.6mm**
	Filler Wires	Al		**1.0-2.0mm**

Minimum Liquid Flow Rate	1.5 l/min
Minimum Liquid Inlet Pressure	2.5 Bar
Maximum Liquid Inlet Pressure	5.0 Bar
Maximum Liquid Inlet Temperature	50°C
Operating Temperature Range	-10...+40°C

Important:
Please note minimum inlet pressure and flow rate.
Low pressure will affect torch performance

M55WM SET-UP GUIDE

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M55WM Torches are supplied 'ready to weld' with an M10 set-up in accordance with the items listed below

Tip Adaptor
Insulator

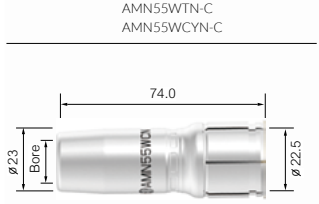
Tip Adaptor

Contact Tip

Nozzle Complete

Nozzle Retaining Ring

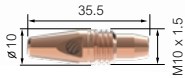
Nozzle



•AMN55WCN-C			
AMN55WTN-C			
AMN55WCYN-C			

•AMN55WCN	15mm	3.0mm	Copper
AMN55WTN	13mm	3.0mm	Copper
AMN55WCYN	17mm	3.0mm	Copper

•AMN6WCNR	30.5mm	Brass



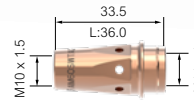
Standard Series

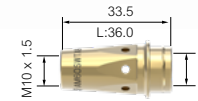
AM6WCT09	M10*35.5	0.9-0.035	CuCrZr	
AM6WCT10	M10*35.5	1.0-0.040	CuCrZr	**Wire Type**
•AM6WCT12	M10*35.5	1.2-0.045	CuCrZr	Fe, Fe-FC/MC
AM6WCT14	M10*35.5	1.4-0.055	CuCrZr	SS, SS-FC/MC
AM6WCT16	M10*35.5	1.6-0.063	CuCrZr	upto 1.2mm
AM6WCT20	M10*35.5	2.0-0.080	CuCrZr	

A Series

AM6WCT10A	M10*35.5	1.0-0.040	CuCrZr	
AM6WCT12A	M10*35.5	1.2-0.045	CuCrZr	**Wire Type**
AM6WCT16A	M10*35.5	1.6-0.063	CuCrZr	Aluminium
AM6WCT20A	M10*35.5	2.0-0.080	CuCrZr	SS, SS-FC/MC
AMC6WCT10A	M10*35.5	1.0-0.040	Copper	1.6mm
AMC6WCT12A	M10*35.5	1.2-0.045	Copper	

• Denotes torch package standard wear part set-up





	Length	Material	Recess	Transfer	Amps / Pulse
•AM6OSWTAC-20	36.0mm	Copper	2.0mm	Short Circuit	<200A Low Current Pulse
AM6OSWTAC-45	33.5mm	Copper	4.5mm	Spray	>200A High Current Pulse
AM6OSWTAB-20	36.0mm	Brass	2.0mm	Short Circuit	<200A Low Current Pulse
AM6OSWTAB-45	33.5mm	Brass	4.5mm	Spray	>200A High Current Pulse

•AM55WTAI

LINER OPTIONS

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Liners

Filler Metal Fe, Fe-MC/FC

Steel Liner Recommended for: Light and medium duty applications

Part No.	Description	Wire Size mm	M5WM	M55WM
AM6SL-1012-30	Steel Liner x 3mt	1.0-1.2	●	●
AM6SL-1012-40	Steel Liner x 4mt	1.0-1.2	●	●
AM6SL-1012-50	Steel Liner x 5mt	1.0-1.2	●	●
AM6SL-16-30	Steel Liner x 3mt	1.6	●	●
AM6SL-16-40	Steel Liner x 4mt	1.6	●	●
AM6SL-16-50	Steel Liner x 5mt	1.6	●	●
AM6SL-20-30	Steel Liner x 3mt	2.0	●	●
AM6SL-20-40	Steel Liner x 4mt	2.0	●	●
AM6SL-20-50	Steel Liner x 5mt	2.0	●	●

Filler Metal SS, SS-MC/FC

Stainless Steel Liner Recommended for: Heavy Duty Fe. High amperages and heavy deposition welding

Part No.	Description	Contact Tip	Wire Size mm	M5WM	M55WM
AM6SSTL-1012-30	Stainless Steel Liner x 3mt	Standard Series	1.0-1.2	●	●
AM6SSTL-1012-40	Stainless Steel Liner x 4mt	Standard Series	1.0-1.2	●	●
AM6SSTL-1012-50	Stainless Steel Liner x 5mt	Standard Series	1.0-1.2	●	●
AM6SSTL-16-30	Stainless Steel Liner x 3mt	A Series	1.6	●	●
AM6SSTL-16-40	Stainless Steel Liner x 4mt	A Series	1.6	●	●
AM6SSTL-16-50	Stainless Steel Liner x 5mt	A Series	1.6	●	●

Filler Metal

Al - Polyamide Liner

Part No.	Description	Contact Tip	Wire Size	M5WM	M55WM
AM5PL-1012-30	Polyamide Liner x 3mt	A Series	1.0-1.2	●	●
AM5PL-1012-40	Polyamide Liner x 4mt	A Series	1.0-1.2	●	●
AM5PL-1012-50	Polyamide Liner x 5mt	A Series	1.0-1.2	●	●
AM5PL-1620-30	Polyamide Liner x 3mt	A Series	1.6-2.0	●	●
AM5PL-1620-40	Polyamide Liner x 4mt	A Series	1.6-2.0	●	●
AM5PL-1620-50	Polyamide Liner x 5mt	A Series	1.6-2.0	●	●

Welding with Soft Wires
For welding with Aluminum wires use a Soft Wire Liner.
Optimum installation is achieved when using the Combi-liner set-up kit.

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

LINER OPTIONS

Neck Jump Liners

Filler Metal Fe, Fe-FC/MC

Part No.	Description	Nipple	Wire Size mm	M5WM	M55WM
AM5WMJL-1012	Neck Jump Liner - Hard Wire(L:181mm)	Brass Nipple	1.0-1.2	●	○
AM5WMJL-1620	Neck Jump Liner - Hard Wire(L:181mm)	Brass Nipple	1.6-2.0	◐	○
AM55WMJL-1012	Neck Jump Liner - Hard Wire(L:184.8mm)	Brass Nipple	1.0-1.2	○	●
AM55WMJL-1620	Neck Jump Liner - Hard Wire(L:184.8mm)	Brass Nipple	1.6-2.0	○	◐

Al, Copper, SS, SS-FC/MC

AM5WMJL-1012-B	Neck Jump Liner - Soft Wire(L:181mm)	Brass Nipple	1.0-1.2	◐	○
AM5WMJL-1620-B	Neck Jump Liner - Soft Wire(L:181mm)	Brass Nipple	1.6-2.0	◐	○
AM55WMJL-1012-B	Neck Jump Liner - Soft Wire(L:184.8mm)	Brass Nipple	1.0-1.2	○	◐
AM55WMJL-1620-B	Neck Jump Liner - Soft Wire(L:184.8mm)	Brass Nipple	1.6-2.0	○	◐

Welding with Soft Wires
For welding with Aluminum wires use a Soft Wire Liner.
Optimum installation is achieved when using the Combi-liner set-up kit.

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

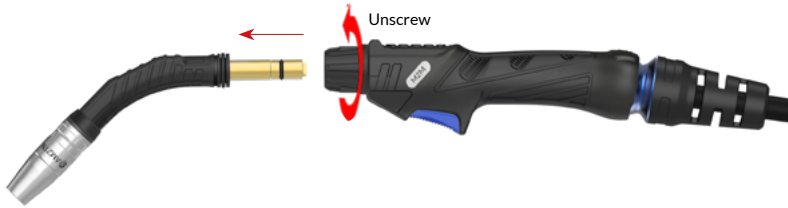
NECK LINER SET–UP

Hard Wire/Soft Wire

Installing/Replacing a Neck Liner (Hard Wire To Soft Wire)

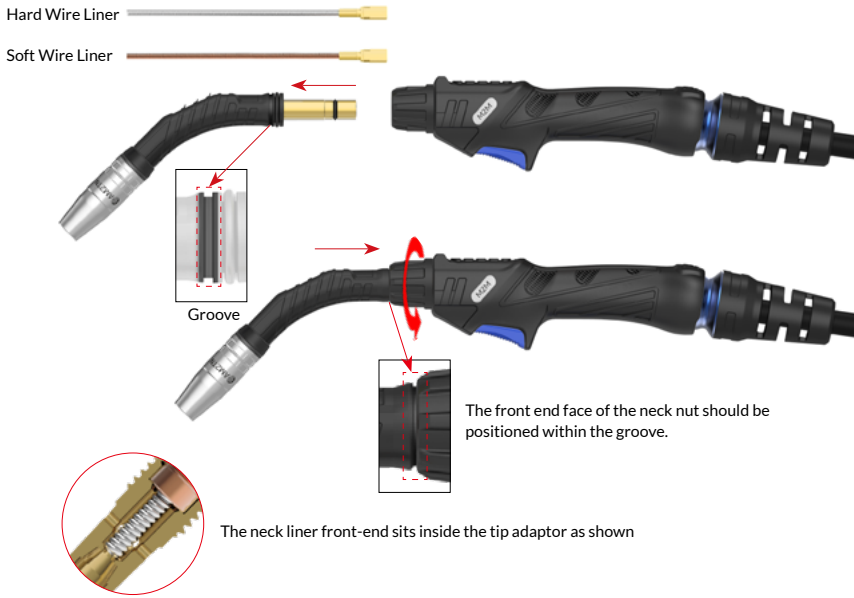
- Unscrew the neck nut anti-clockwise.
- Remove the swan neck by pulling it out.

Step 1



- Unscrew the existing neck liner and replace with new neck liner.
- Remove the liner retaining nut, and pull out the existing torch liner about 10cm.
- Ensure that the swan neck is located to the position (Groove) marked on the swan neck. Screw tight.
- No need to trim the neck liner.

Step 2



TORCH LINER SET-UP - HARD WIRES

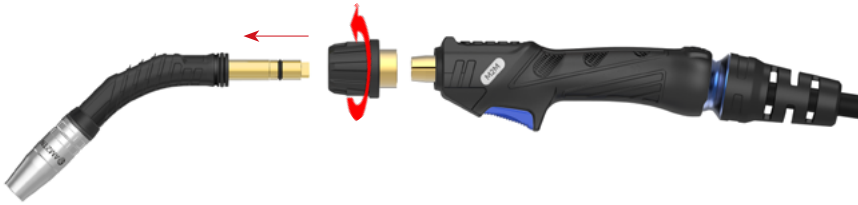
Installing a Torch Liner

Prepare the Torch

Step 1

- Lay the torch out flat and straight.
- Unscrew swan neck retaining nut, pull out the swan neck and remove swan neck retaining nut.
- Remove the liner retaining nut, twist and pull out the old liner.

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



Install the New Liner

Step 2

- Feed in the new liner in short strokes 20cm per time. (Fig 1)
- Continue to feed until the liner nipple is inside the gun plug body. Fit liner retaining nut. (Fig 2)
- Trim the excess steel liner align with swan neck holder's front end. (Fig 3)

Important:
Do not use a kinked liner

Fig 1

Fig 2

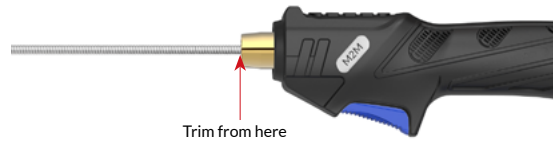


Fig 3

Install the New Liner

Step 3

- Pull out the liner from the Torch , and trim liner 30mm from front end. (Fig 1)
- Remove sharp burr from any internal and external surfaces from liner front-end with a file or a grinder. (Fig 2)
- Assemble swan neck retaining nut to swan neck holder, assemble swan neck to swan neck holder. Be careful not to damage the O-Ring. Make sure the swan neck is in position. Finally tighten the swan neck retaining nut. (The torque is 5N.m) (Fig 3)
- Feed in the new liner in short strokes 20cm per time. (Fig 4)
- Fit liner nut. The torque is 2.5N.m. (Fig 5)
- The liner front-end sits inside the neck liner nipple as shown (Fig 6)

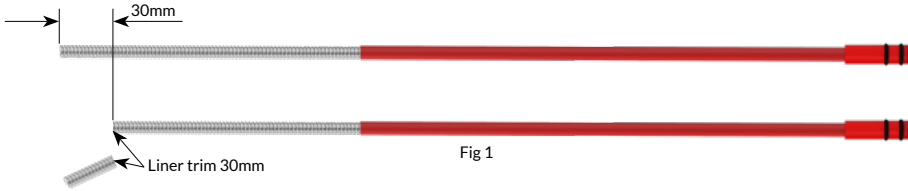


Fig 1

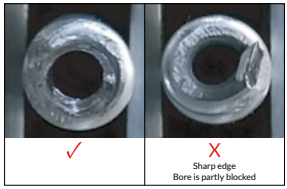


Fig 2

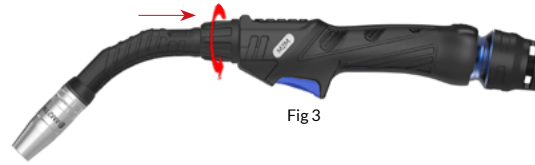


Fig 3

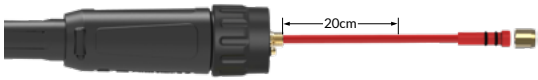


Fig 4

Fig 5

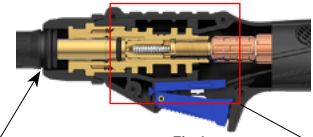
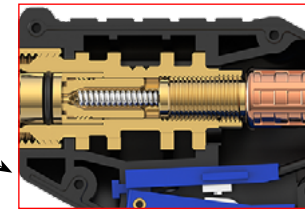


Fig 6

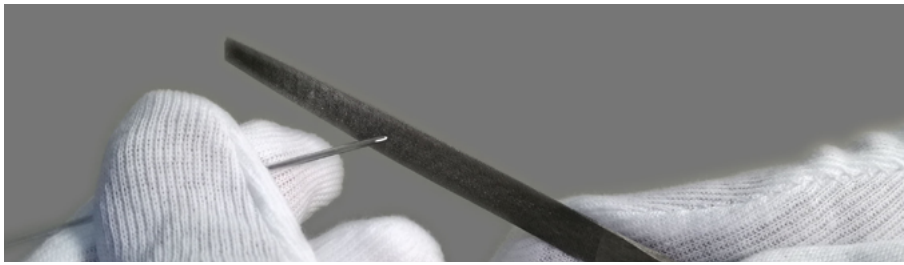
The front end face of the neck nut should be positioned within the groove.



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!

TORCH LINER SET-UP - SOFT WIRES

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

Installing/Replacing a Neck Liner (Soft Wires)

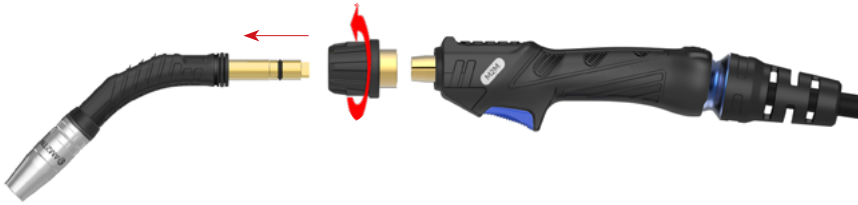
- Lay the torch out flat and straight.
- Remove the liner retaining nut, pull out the old liner.
- Installing/Replacing a Neck Liner (Hard Wire/Soft Wire) see Page 12 “Neck Liner Set-Up”

Installing a Torch Liner

Prepare the Torch **Step 1**

- Lay the torch out flat and straight.
- Unscrew swan neck retaining nut, pull out the swan neck and remove swan neck retaining nut.
- Remove the liner retaining nut, twist and pull out the old liner.

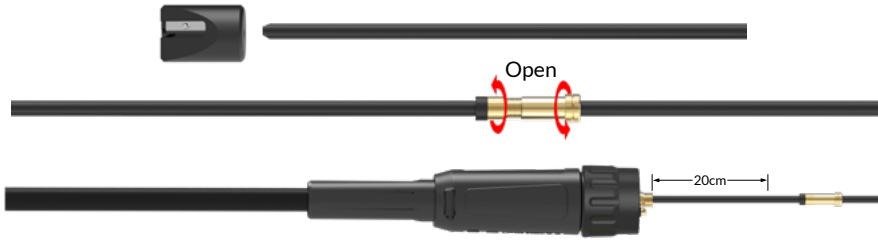
Important:
Liners should not be fitted if the torch is bent or coiled



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



Install the New Liner, Cont.

Step 3

- Ensure the liner is under slight compression within the torch conduit. Mark the position at the rear of the liner collet (Fig 1).
- Retract the liner back slightly and position the collet by tightening it to the liner at the marked position (Fig 2).
- Reposition and tighten the liner retaining nut (Fig 3,4).
- The liner front-end sits inside the neck liner nipple as shown (Fig 5).

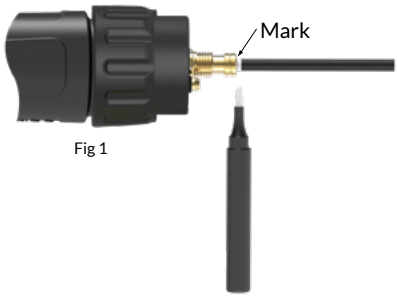


Fig 1

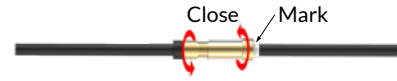


Fig 2

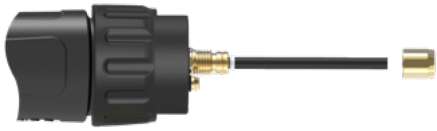


Fig 3

Fig 4

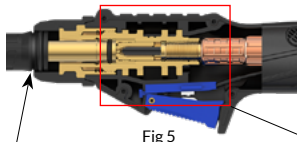
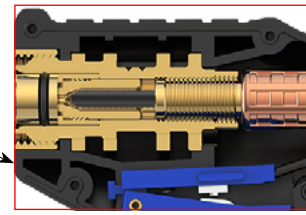


Fig 5

The front end face of the neck nut should be positioned within the groove.



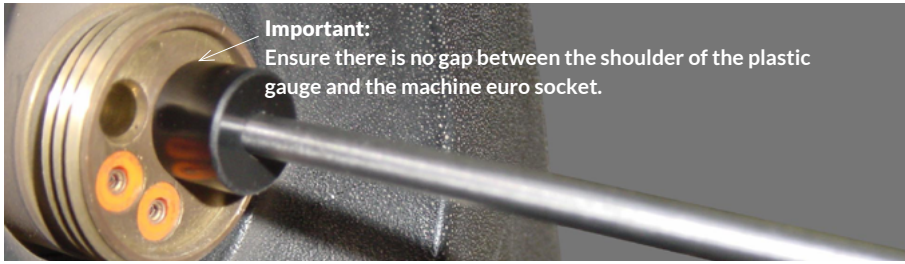
Preparing the Machine to Fit the Torch

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.

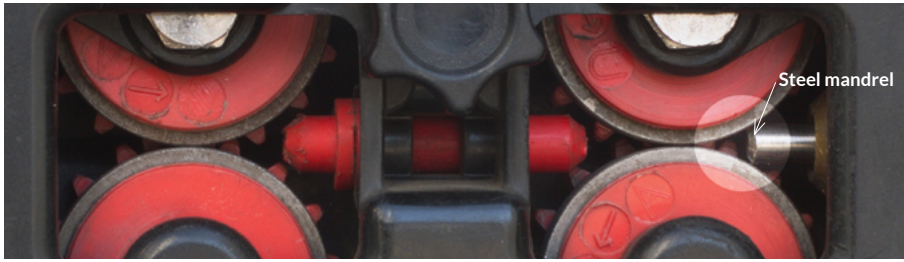
- Ensure there is no gap between the shoulder of the plastic gauge and the machine Euro socket.



Using the Liner Measuring Jig.

Step 2

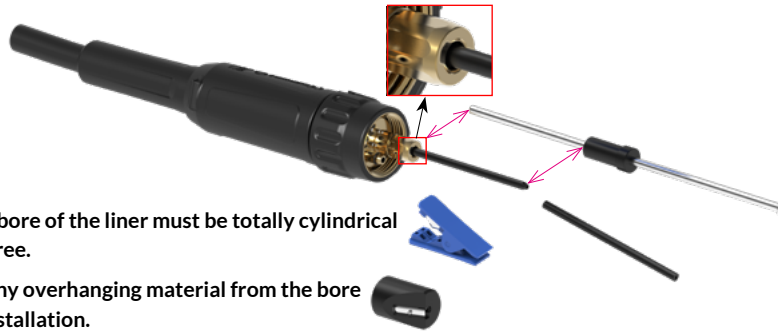
- Gently push the steel mandrel until the front-end touches the wire feed rollers.
- Remove the Jig from the machine ensuring there is no movement between the plastic gauge and the mandrel.



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.



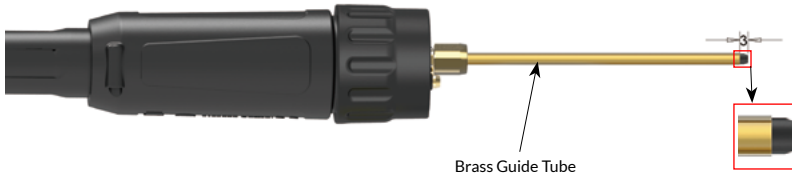
Important
The inner bore of the liner must be totally cylindrical and burr free.

Remove any overhanging material from the bore prior to installation.

Assemble Guide Tube

Step 4

- Assemble brass guide tube over the soft wire liner.
- The brass guide tube is 3mm shorter than the soft wire liner(if not,cut accordingly).



The Correct Set-up

Step 5

- 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.

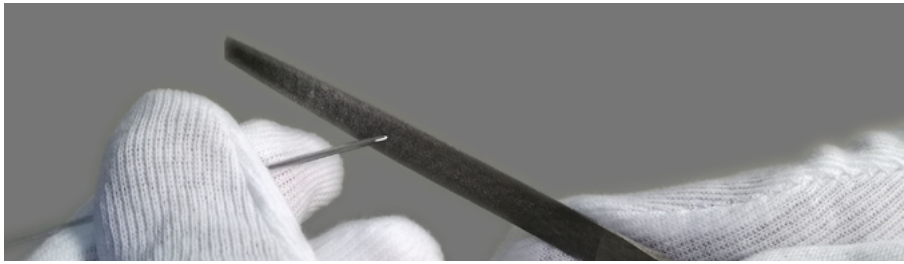
Feeding Wire Through the Torch

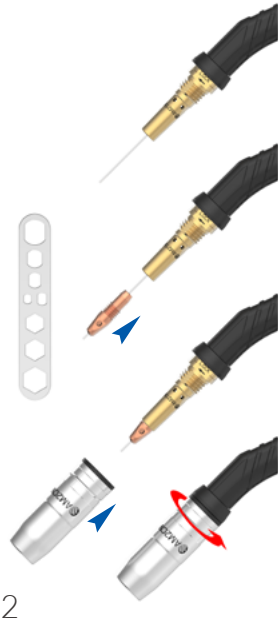
Important:
Remove the torch from the machine / feed unit

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!

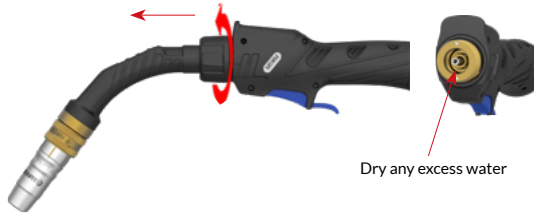
NECK LINER SET–UP

Hard Wire/Soft Wire

Installing/Replacing a Neck Liner (Hard Wire To Soft Wire)

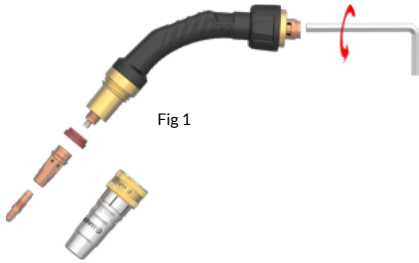
- Unscrew the neck nut anti-clockwise.
- Remove the swan neck by pulling it out.
- Dry any excess water (this will prevent contamination of the torch liner).

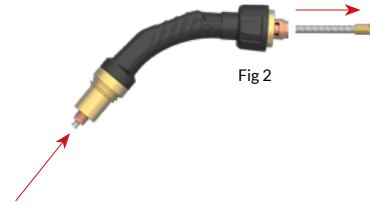
Step 1



- Unscrew the wear parts. (Fig 1)
- Unscrew the existing neck liner. (Fig 2)

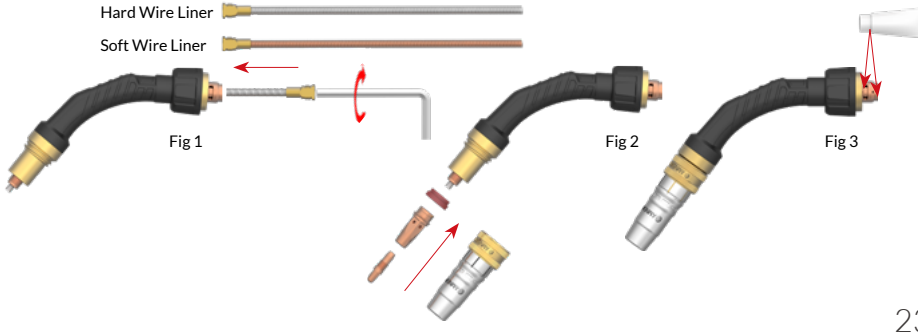
Step 2





- Replace with new neck liner and tighten. (Fig 1)
- Assemble the wear parts. (Fig 2)
- Coat lubricant grease to the inner and outer surface of the conductor tube. (Fig 3)

Step 3



CHANGE / INSTALL / ADJUST SWAN NECK

- Screw swan neck to the swan neck holder. (Fig 1)
- Rotate the swan neck to the required angle (0°-360°) until the nut is 2mm from the handle. (Fig 2)
- Hold the neck still and tighten the nut.
- Rotate the swan swan neck to ensure the pins are in position (in the location holes).
- Screw tight. (Fig 3)

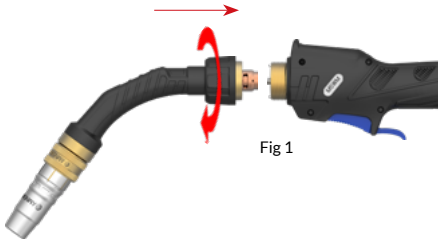


Fig 1

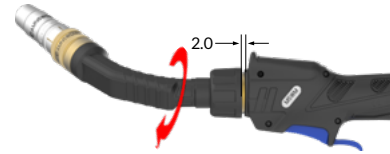


Fig 2

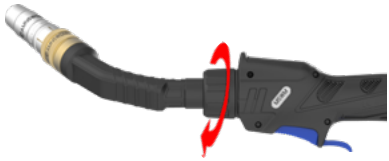


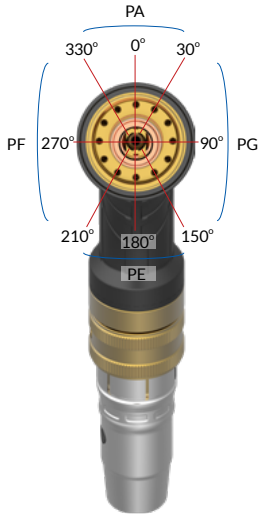
Fig 3

MULTI-JUST SWAN NECK SET-UPS

Different angles are required for different welding positions and the following are recommended:

Desired angle (0°,30°,60°,-360°)

- Flat welding — PA Settings
- Horizontal and Vertical welding — PG/PF Settings
- Overhead welding — PE Settings



Torch continues to cool and recirculate the water whilst changing the neck or neck angle

TORCH LINER SET-UP - HARD WIRES

Installing a Torch Liner

Step 1

Prepare the Torch

- Lay the torch out flat and straight.
- Unscrew swan neck retaining nut, pull out the swan neck.
- Dry any excess water from the holder (this will prevent contamination of the torch liner). (Fig 1)
- Remove the liner retaining nut, twist and pull out the old liner. (Fig 2)

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

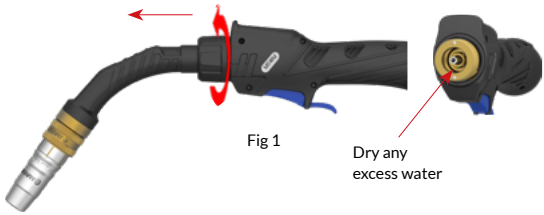


Fig 1

Fig 2

Step 2

Install the New Liner

- Feed in the new liner in short strokes 20cm per time. (Fig 1)
- Continue to feed until the liner nipple is inside the gun plug body. Fit liner retaining nut. (Fig 2, 3)
- Trim the excess steel liner from 0-2mm of swan neck holder's front end. (Fig 4)

Important:
Do not use a kinked liner

Fig 1

Fig 2

Fig 3

Fig 4

Install the New Liner

Step 3

- Pull out the liner from the Torch , and trim liner 4-6mm from front end. (Fig 1)
- Remove sharp burr from any internal and external surfaces from liner front-end with a file or a grinder. (Fig 2)
- Assemble swan neck to swan neck holder and screw tight. (Fig 3)
- Feed in the new liner in short strokes 20cm per time. (Fig 4)
- Fit liner nut. The torque is 2.5N.m. (Fig 5)

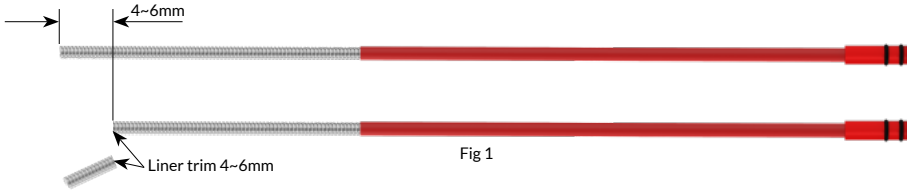


Fig 1

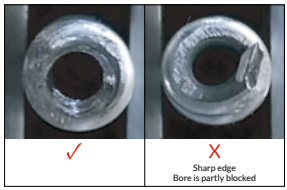


Fig 2

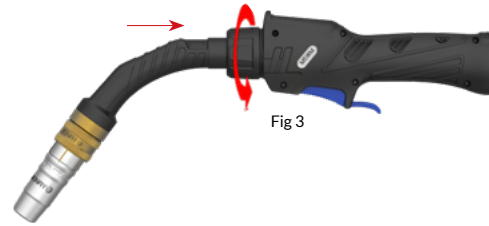


Fig 3

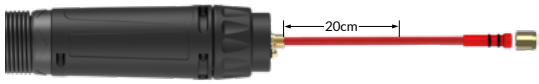


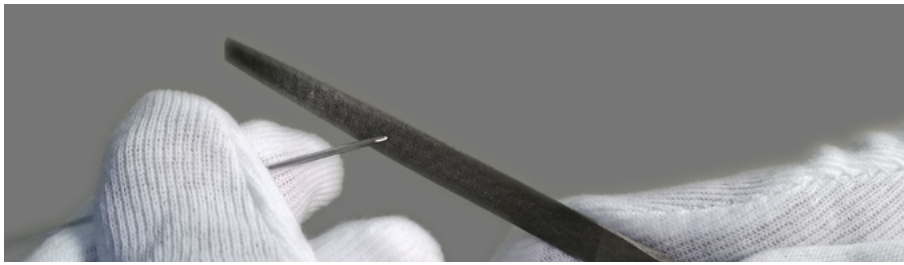
Fig 4

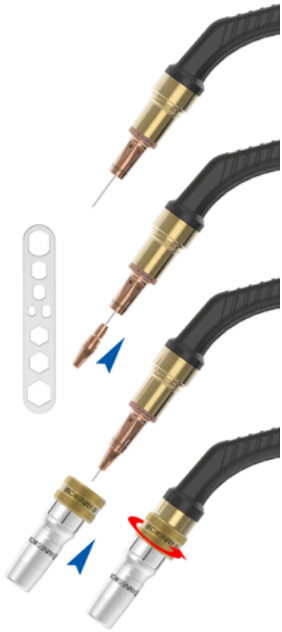
Fig 5

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!

TORCH LINER SET-UP - SOFT WIRES

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 : AMOSW-LINER-T

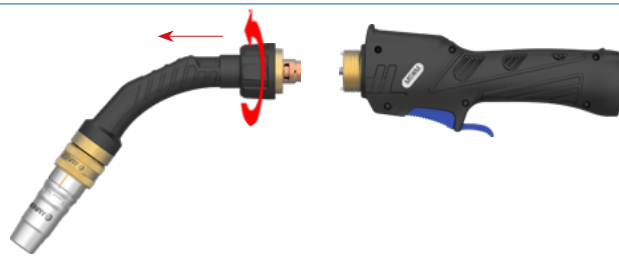
Installing a Torch Liner

Prepare the Torch

Step 1

- Lay the torch out flat and straight.
- Unscrew swan neck retaining nut, pull out the swan neck.
- Dry any excess water from neck holder.
- Remove the liner retaining nut, twist and pull out the old liner.

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

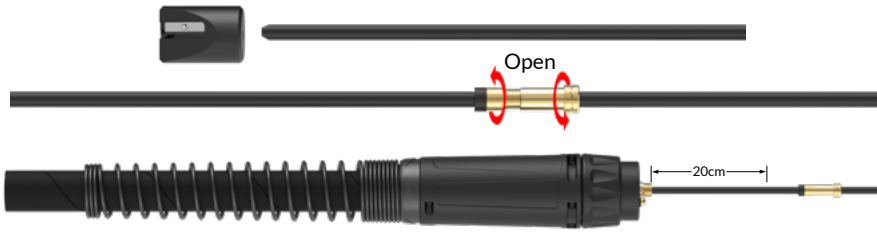


Install the New Soft Wire Liner

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



Install the New Liner, Cont.

Step 3

- Ensure the liner is under slight compression within the torch conduit. Mark the position at the rear of the liner collet. (Fig 1)
- Retract the liner back slightly and position the collet by tightening it to the liner at the marked position. (Fig 2)
- Reposition and tighten the liner retaining nut. (Fig 3, 4)
- The liner front-end sits inside the neck liner nipple as shown. (Fig 5)

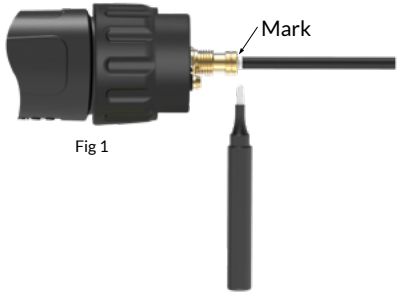


Fig 1

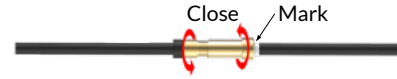


Fig 2

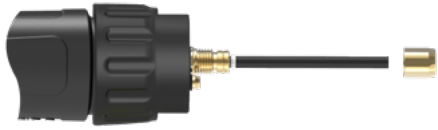


Fig 3

Fig 4

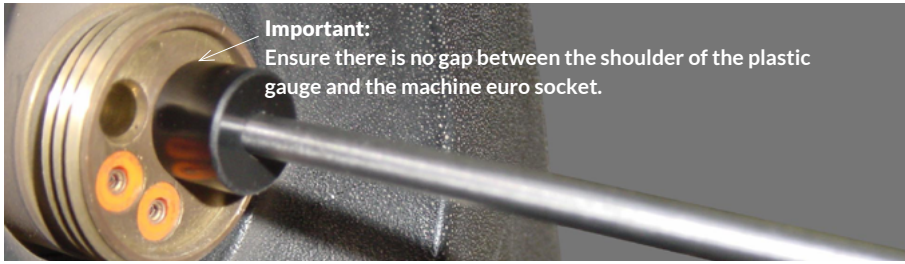
Preparing the Machine to Fit the Torch

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.

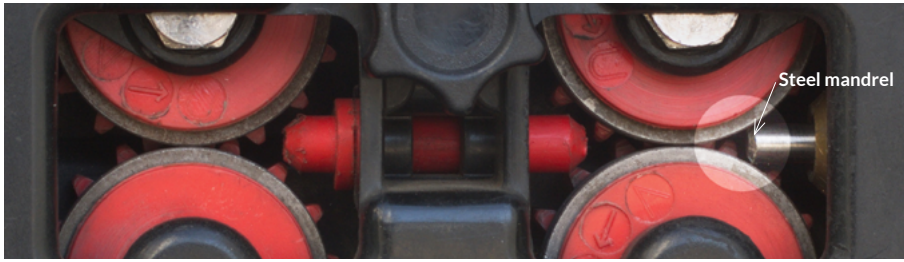
- Ensure there is no gap between the shoulder of the plastic gauge and the machine Euro socket.



Using the Liner Measuring Jig.

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.



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.

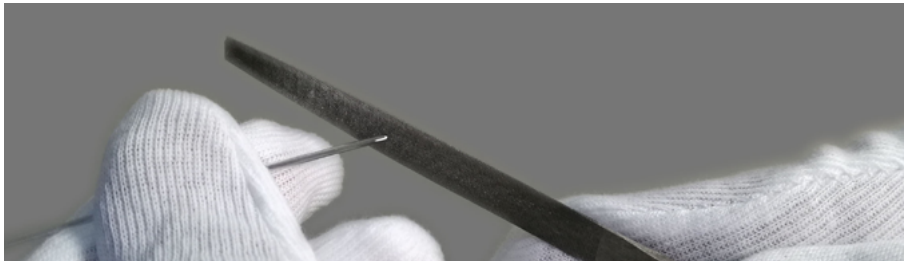
Feeding Wire Through the Torch

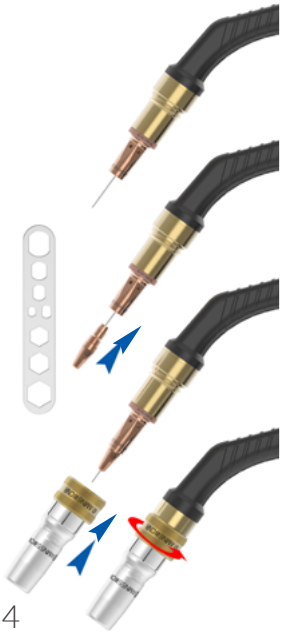
Important:
Remove the torch from the machine / feed unit

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!

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