PFE PRO-FUME MIG TORCH

EN **PFE Pro-Fume MIG Welding Torch**
User Manual

Issue 4

parweld
WELDING THE FUTURE

WARNING

EN English

Safety

WARNING

Read Instructions
Before using this product, read the instructions and any related data sheets. (See www.parweld.com).

Fumes and Gases
Fumes and gases emitted during welding may be dangerous, use adequate ventilation and extraction equipment.

Arc Rays
Arc rays may burn eyes and skin. Wear protective clothing.

Electric Shock
Electric shocks can kill, use adequate protective equipment. Ensure a safe earth connection. Do not touch electrical parts or electrode.

Burn and Fire Hazard
Weld and metal parts are hot and cause serious burn injuries if touched. Sparks can cause burns and fire. Remove all flammable materials from the welding area.

Injury can occur from bodily contact with hot parts, sparks, fumes, dust, noise and vibration.

Protect your eyes and face with a mask fitted with a filter lens. Use welding screens.

Wear protective clothing to protect your body and ears.

Use adequate ventilation or wear respirator equipment to prevent dust, fumes and gases from entering your lungs.

Torch Key Features

Parwelds' PRO-Fume Extraction (PFE) MIG torches, air and water cooled, are designed to the highest industrial standards for capture of welding fumes over the weld pool, minimising fume in the welders environment.

The PFE MIG torches must be used in conjunction with a fume extraction unit rated for MIG welding applications. The PFE MIG torches are compatible with all fume extraction units using a standard 2" bore hose connection. Refer to the fume extraction unit manufacturer's documentation for rating and connection.

Front end consumables are light weight, durable, fully insulated from the neck conductor, and fully sealed to prevent vacuum ingress into the protective gas nozzle chamber.

A large opening suction nozzle design ensures maximum volume of flow at the front end. Removing welding fume most efficiently.

The grip handle is designed with our tried and tested grip geometry and the handle size has been kept to a minimum without reducing the vacuum and flow volume. The perfect grip is combined with the balance and as low weight as possible by using from inventive component design.

We have included a thumb adjustable sliding vent to allow vacuum regulation when required, such as reducing front end suction when in tight corners.

The handle ball joint is fully sealed, minimising vacuum losses and increasing manoeuvrability for the welder.

Protective leather cover on the torch end hose, eliminates hose punctures from hot sparks and sharp edges.

Flexible and puncture resistance hosing has been used along the torch length. A stepped hose size design increases vacuum suction at the front of the torch.

At the machine end there is a rotatable outlet for perfect positioning of the hose connection towards the extraction unit. Joints are fully sealed to minimise vacuum losses. And a standard 2" size connection can be adapted to other hose sizes with hose connector options if required.

Most importantly, our torches are tested and comply with ISO 21904-1 achieving the required volumetric flow of welding fume.

Torch Data

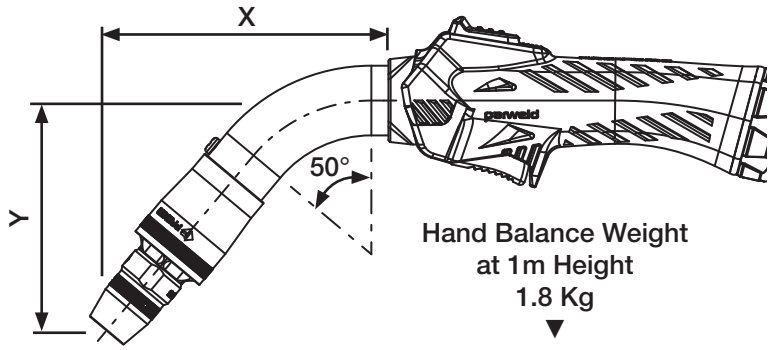
Range	PFE PRO-FUME	PFE PRO-FUME
Model	360A	501W
Torch Type	Manual	Manual
Process	MIG/MAG	MIG/MAG
Cooling	Air cooled	Water cooled
Max Amp Rating		
CO_2 @ 60%	300	520
Mixed Gas @ 60%	270	430
Contact Tip Thread	M6 x 1	M8 x 1.25
Wire Diameter Range (mm)	0.8 -to- 1.2	0.9 -to- 1.6
Torch Harness Lengths (m)	3, 4 and 5	3, 4 and 5
Machine Connection Type	Euro	Euro
Comply with standards	EN60974-7 ISO 21904-1	EN60974-7 ISO 21904-1

Fume Extraction Data

PFE PRO-FUME Model	Cooling Type	Torch Length (m)	*Induced velocity of 0.35 m/s at Inlet (Ref EN ISO 21904-1 and 21904-4)*		
			Volume Flow Rate (m^3/hr)		Static Pressure (kpa)
			Suction Nozzle	Extraction Connector	Extraction Connector
360A	Air	3 - 6	63	75	4.8
501W	Water	3 - 6	70	98	10.3

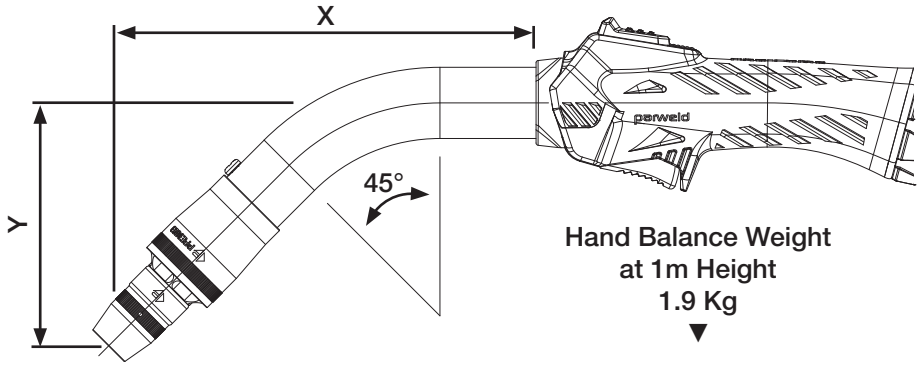
Torch Dimensions

Standard Neck Torch



PFE Pro-Fume Model	Dim X	Dim Y
360A	128mm (5”)	105mm (4.1”)
501W	131mm (5.2”)	107mm (4.2”)

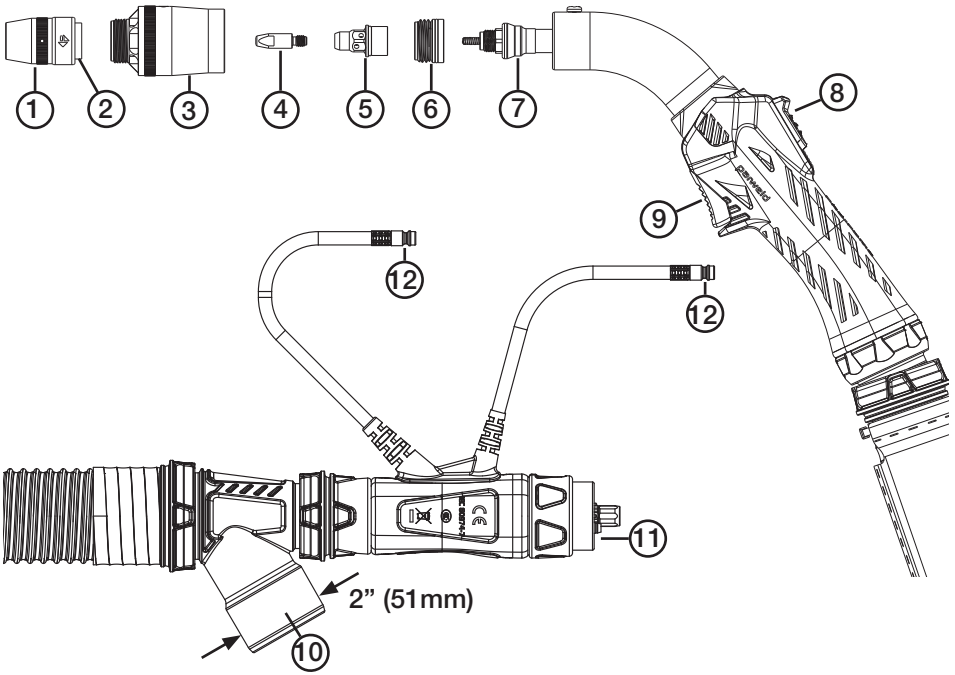
Extended Neck Torch



PFE Pro-Fume Model	Dim X	Dim Y
360A	191mm (7.5”)	108mm (4.25”)
501W	193mm (7.6”)	111mm (4.6”)

Torch Overview

1. Gas Nozzle
2. Gas Nozzle insulator
3. Fume Suction Nozzle
4. Contact Tip
5. Tip Adaptor
6. Head Insulator
7. Swan Neck
8. Suction Regulator Vent
9. Trigger
10. Suction Hose Connection Port [2” / 51mm Bore Hose]
11. Machine Euro Plug Connector
12. Water Hose Inlet (Blue) / Outlet (Red) [Water Cooled Only]



Note: For full product details and parts breakdowns visit www.parweld.com or contact Parweld Sales by phone or email.

Introduction - Getting Started

Please read thoroughly and understand this user manual to ensure correct, safe and effective use of the equipment. Failure to do so can result in serious injury.
Also keep the manual safely for future reference.

Warning: When welding, use additional safety equipment that provides suitable protection against harmful fumes and gasses, burns from hot objects and radiation.

Warning: Always disconnect from the equipment from power supply when setting up or performing maintenance checks.

Warning: Allow equipment to cool after use before handling to avoid burns.

Warning: PFE Fume MIG torches must be used in conjunction with “On-Torch” fume extraction equipment capable of extracting fume at a sufficient pressure and flow rate through the torch length to achieve the required flow rate at the torch front end suction nozzle inlet to comply with the local safety standards.

Warning: Not connecting suitable extraction equipment to the torch will cause it to malfunction and invalidate any warranty.

Before use;

- Check equipment, that all parts are present and not damaged.
- Check front end is clean, free of debris and no spatter is trapped between mating parts that may cause vacuum failure or short circuit.
- Check extraction nozzle is clean, free of debris with not blockage that may cause vacuum failure.
- Check you have a suitable on-torch fume extraction equipment with the correct connection.
- Before welding commences check the fume extraction equipment is turned on and functioning.

Consumables Fitting - Gas Nozzle

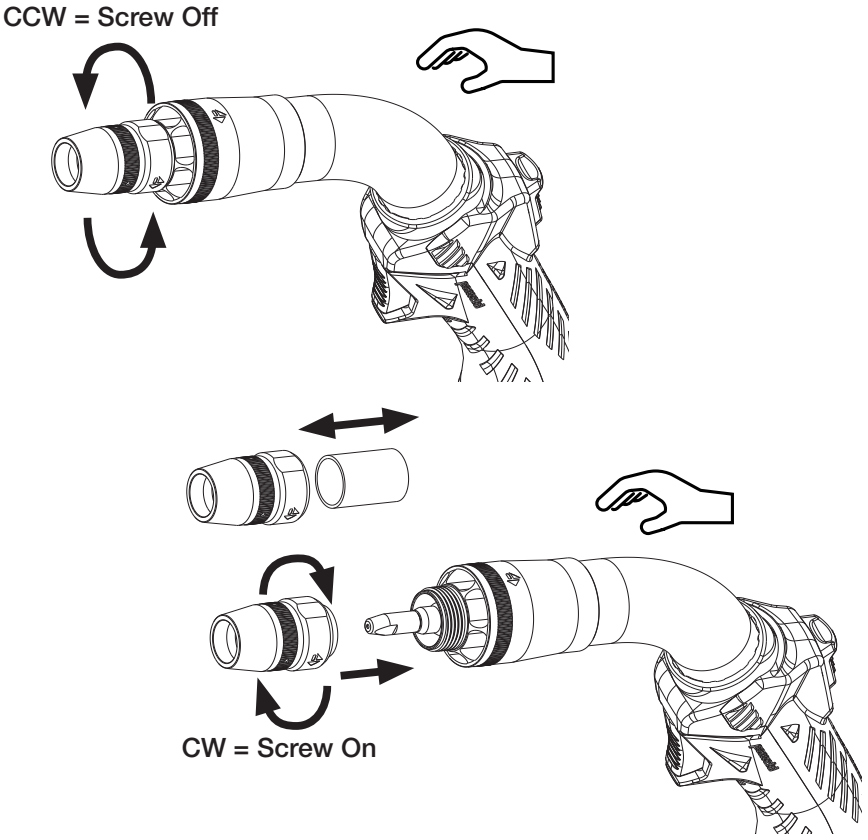
Removal

Grip the suction nozzle with one hand to prevent rotation. Twist the gas nozzle counter clockwise to unscrew and remove it with your other hand. The nozzle insulator should remain inside the gas nozzle when removed. If the gas nozzle is tight, a 26mm A/F spanner can be used.

The nozzle insulator is removed by pulling it out of the gas nozzle. To refit with a new insulator simply push it into the gas nozzle until it reaches the bottom internal shoulder.

Refit

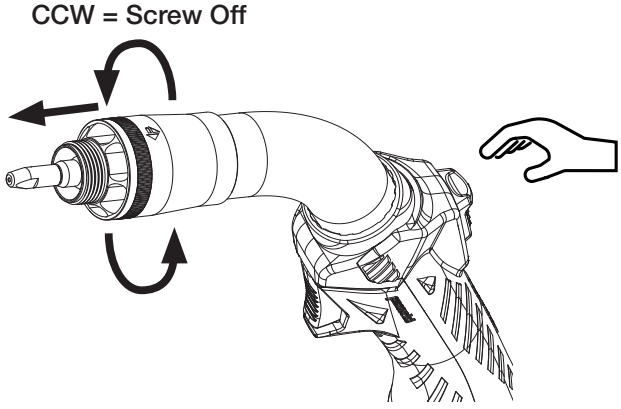
Make sure the insulator is pushed inside the gas nozzle. Fit the assembly onto the suction nozzle and twist clockwise until fully threaded on. While doing this hold the suction nozzle in your other hand to prevent it rotating.

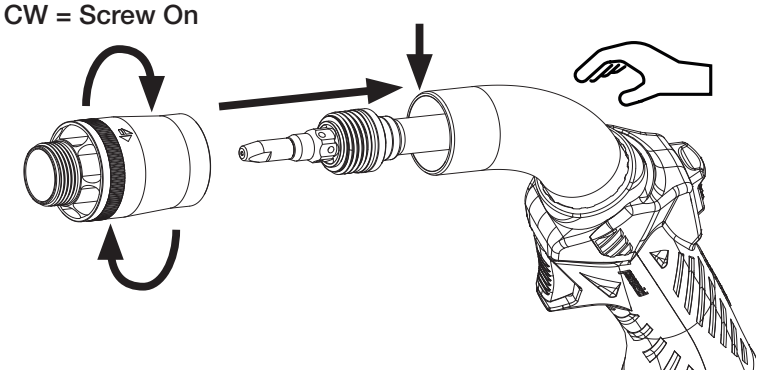


Consumables Fitting - Extraction Nozzle

Removal
Grip the extraction nozzle with one hand while holding the torch with your other hand. Twist the extraction nozzle counter clockwise to unscrew and remove it from the swan neck head. Once unscrewed slide off the assembly.

Refit
Slide over swan neck. The twist clockwise onto the neck head insulator thread. At the same time align the neck fume chamber end with the extraction nozzle bore.



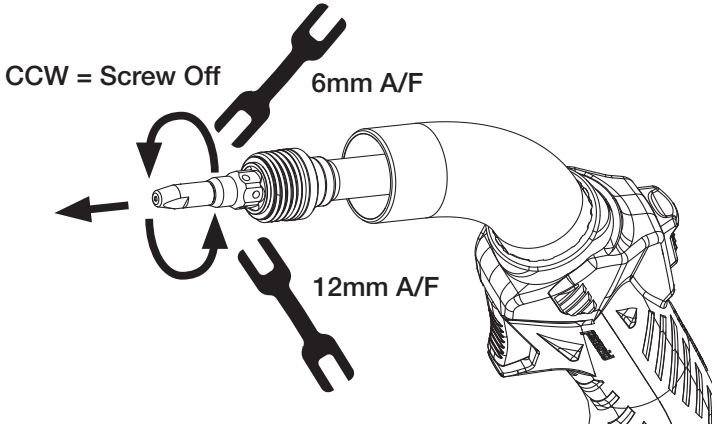


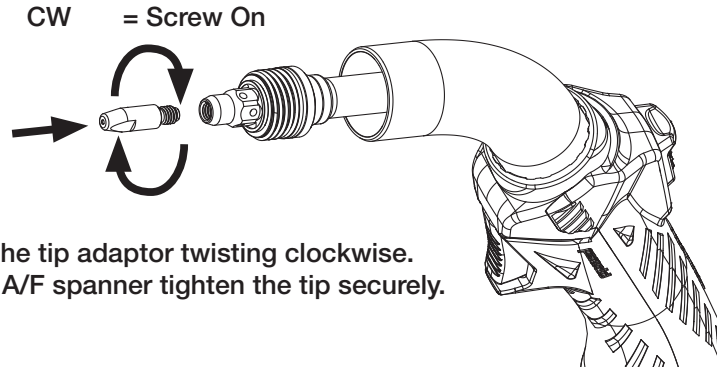
Note: If the extraction nozzle unscrews and the tip adaptor and head insulator all seize inside and unscrew together with the suction nozzle, see instructions on next page about how to dis-assemble.

Consumables Fitting - Contact Tip

Removal

Use a 12mm A/F spanner to hold the tip adaptor in place an prevent it from rotating. Use a 6mm A/F spanner to unscrew the contact tip counter clockwise.





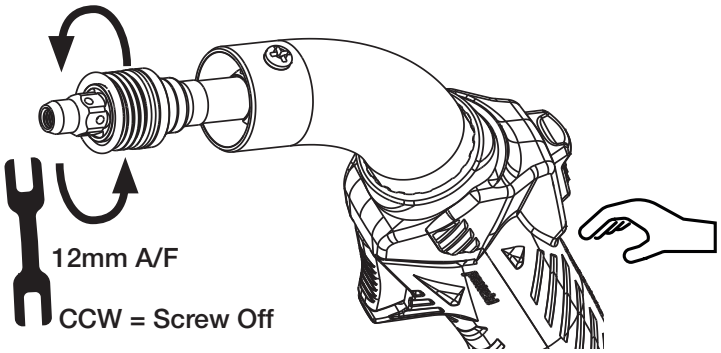
Refit

Screw the tip into the tip adaptor twisting clockwise. Then using a 6mm A/F spanner tighten the tip securely.

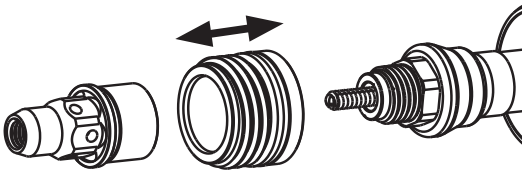
Consumables Fitting - Tip Adaptor and Insulator

Removal

Grip the torch by the handle. Using a 12mm A/F spanner unscrew the tip adaptor counter clockwise. The tip adaptor will unscrew from the neck. The head insulator is fitted over the tip adaptor and prevented from rotating on a locking nut fitted to the neck.

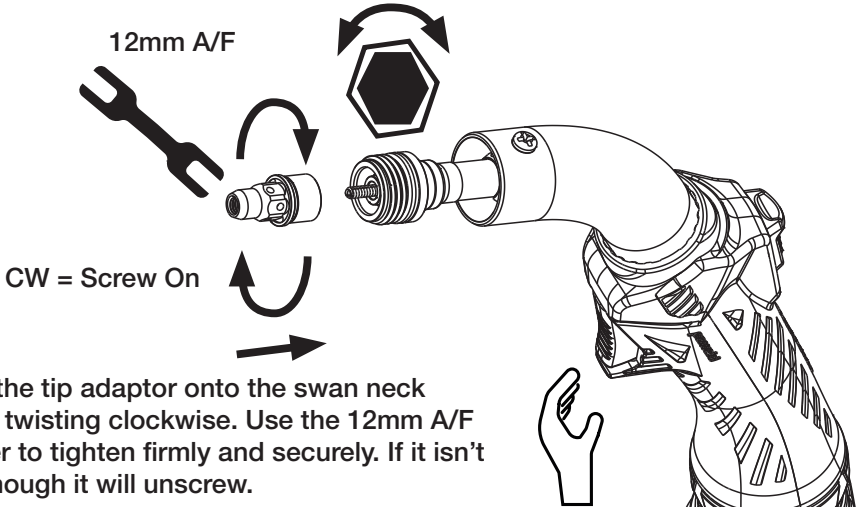


The head insulator can be removed from the conductor once the tip adaptor is removed.



Refit

Slide the head insulator over the conductor. Align the hexagonal profiles of the insulator and conductor lock nut, wriggle it slightly to get the hexagon to align and it should then push up against the neck shoulder.



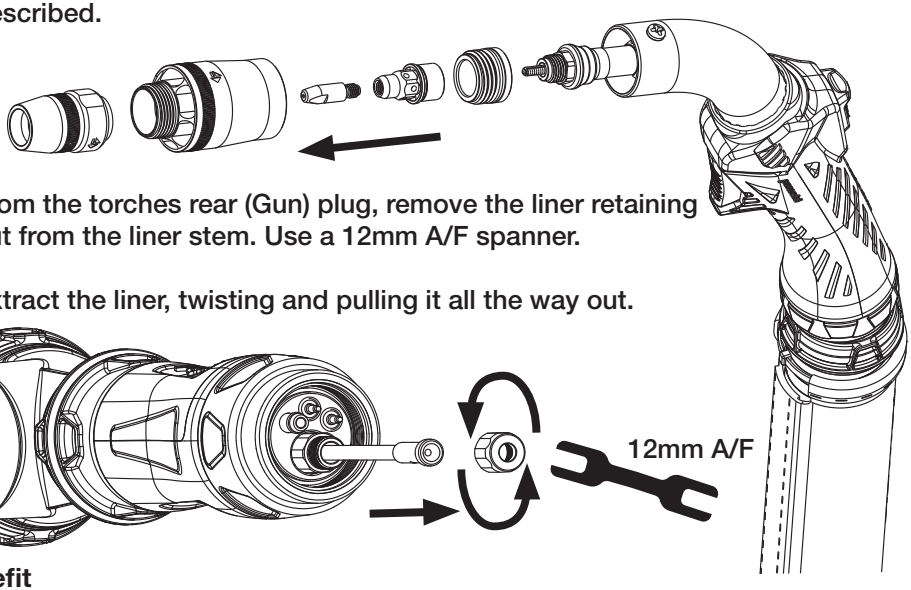
Screw the tip adaptor onto the swan neck thread, twisting clockwise. Use the 12mm A/F spanner to tighten firmly and securely. If it isn't tight enough it will unscrew.

Consumables Fitting - Torch Liner

Removal

Lay the torch out on a flat surface and straighten the harness out.

Remove the front consumables, including the tip adaptor, as already described.



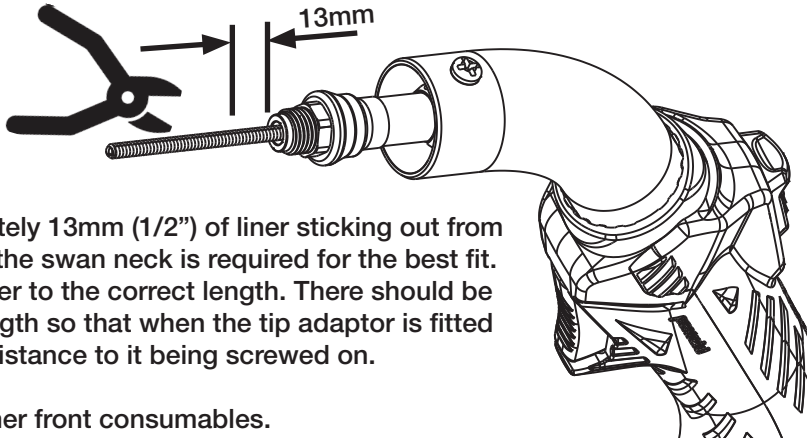
From the torches rear (Gun) plug, remove the liner retaining nut from the liner stem. Use a 12mm A/F spanner.

Extract the liner, twisting and pulling it all the way out.

Refit

Feed the replacement liner into the torch (Gun) plug liner stem. Push the liner nipple fully in and replace the liner retaining nut. Tighten with a spanner.

Excess liner material should stick-out of the end of the torch swan neck. If it is not, the wrong liner length has been selected.



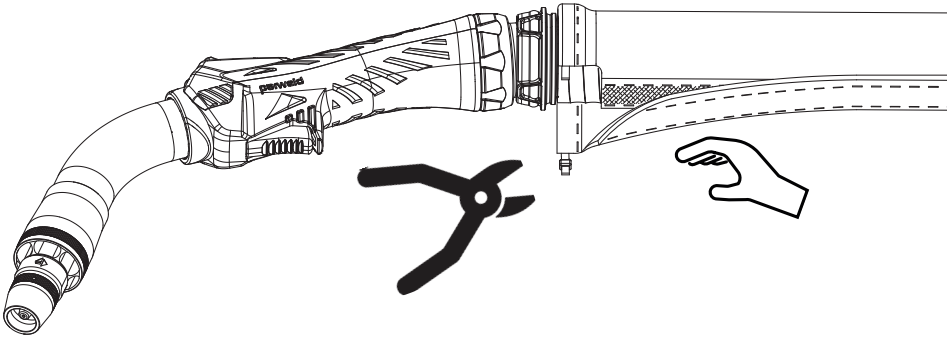
Approximately 13mm (1/2”) of liner sticking out from the end of the swan neck is required for the best fit. Trim the liner to the correct length. There should be enough length so that when the tip adaptor is fitted there is resistance to it being screwed on.

Refit all other front consumables.

Consumables Fitting - Hose Covers

Front End Cover (38mm Bore Hose)
Removal
Lay the torch out on a flat surface and straighten the harness out.

Cut the cable tie that is holding the cover secure at the handle knuckle joint. Then peel apart the cover Velcro seam, down the whole length. Once open remove it from the harness.



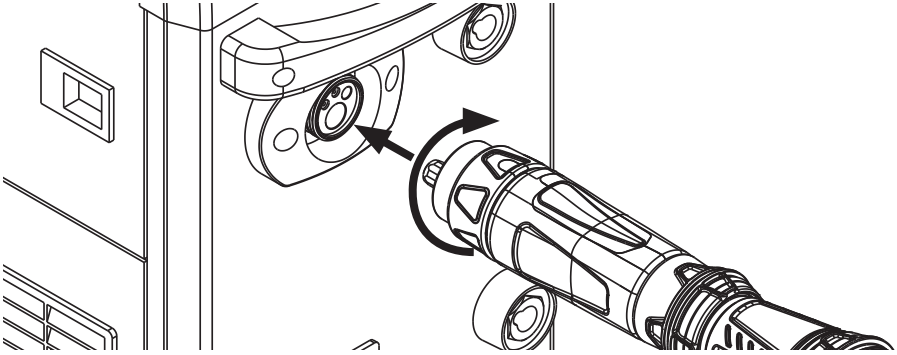
Refit
Slide the cover flat underneath the harness hose, positioning the looped seam at the handle knuckle joint end. Fold the cover over the hose and join the Velcro edges together. Finally fit a cable tie though the looped seam of the cover, wrapping around the hose. Then feed the tie end through the tie latch and pull tight to secure the cover.

Rear Harness Cover (50mm Bore Hose)
Removal and fitting it the same procedure as the front hose cover. The only difference is there are two cable ties holding the cover ends in place.

The length of the large cover is oversize to allow some overlap and the hose junction large-to-small.

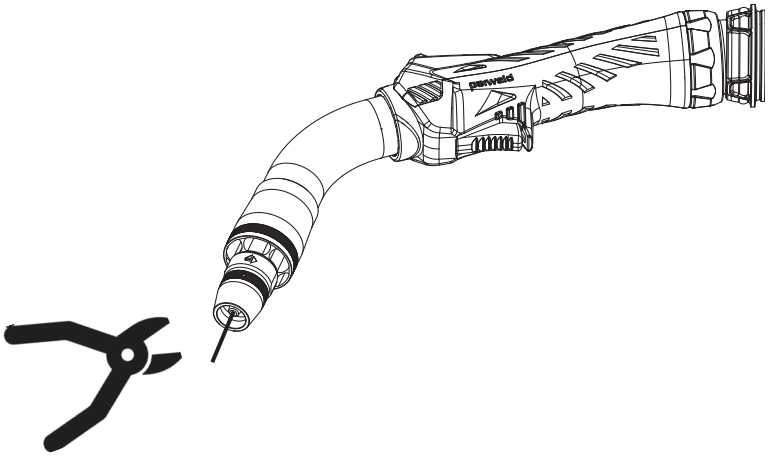
Torch Set Up - Connecting Torch to Machine

Connect the torches rear gun plug to the MIG welding machines torch socket. Screwing the plug nut on tight.



Lay torch out straight and flat. Feed the wire through the torch, using the power source inching control, until it extends from the contact tip.

Trim back to about 10-to-12mm.

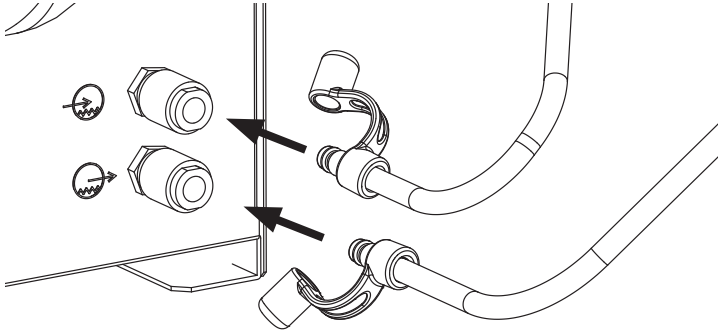


Torch Set Up - Connecting Torch to Machine

If using a water cooled torch, connect the rear water hoses to the machine water inlet and outlet.

Note the colour code for the hoses. Connect the red hose to the red return socket and the blue hose to the blue outlet socket.

Warning: Connecting these hoses to the wrong sockets will cause the torch to overheat.



Fume Extraction - Equipment

Warning: PFE MIG fume torches must be connected to an “On-Torch” fume extraction system, capable of extracting fume at a sufficient pressure and flow rate.

Warning: If the PFE MIG Fume torch is not connected to an extraction system, the fume will not be extracted from the welding environment, and the use of this type of torch is then pointless.

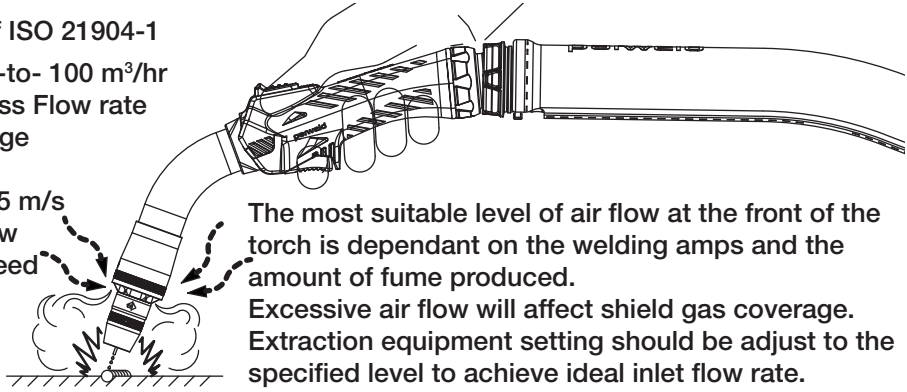
Warning: The process of fume extraction has a cooling affect on the torch. Not connecting an extraction system will cause the torch to overheat and burn out at the front.

On-Torch fume extraction equipment must provide sufficient suction to achieve the required volume of air flow through the torch, and the required flow rate at the torch front end suction nozzle inlet.

Ref ISO 21904-1

50 -to- 100 m^3/hr Mass Flow rate range

0.35 m/s Flow Speed



The most suitable level of air flow at the front of the torch is dependant on the welding amps and the amount of fume produced.
Excessive air flow will affect shield gas coverage.
Extraction equipment setting should be adjust to the specified level to achieve ideal inlet flow rate.

On-Torch fume extraction equipment capability varies and is often rated by pump negative pressure (Suction) max and air flow max capacity.

For the Pro-Fume MIG torches we advise that a single torch extraction unit has a minimum rating of at least

- 24 kPa Negative pressure.
- 180 m^3/hr Air flow rate.

High rating may be necessary when welding high amperage, and/or using long torch lengths.

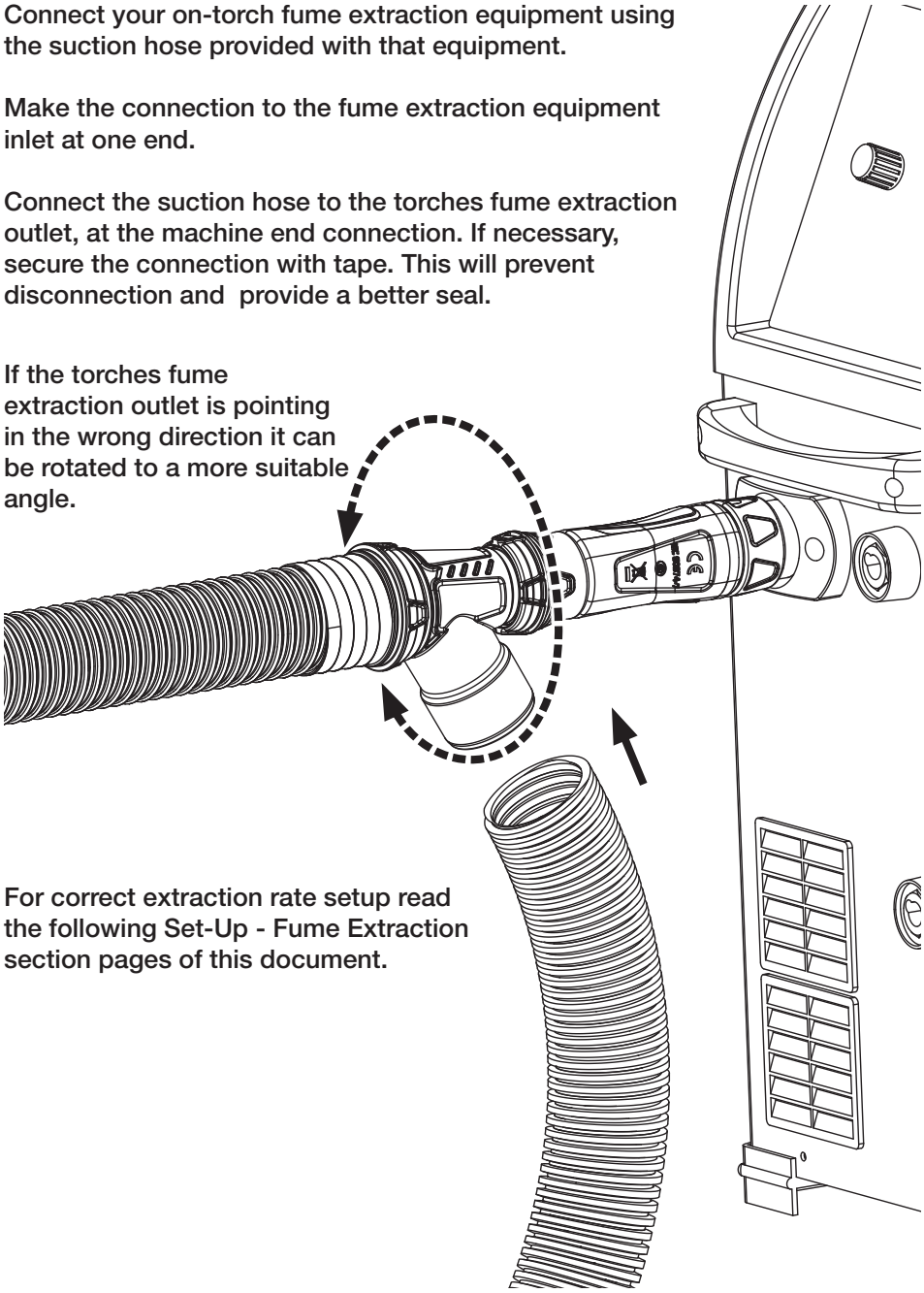
Fume Extraction - Equipment Connection

Connect your on-torch fume extraction equipment using the suction hose provided with that equipment.

Make the connection to the fume extraction equipment inlet at one end.

Connect the suction hose to the torches fume extraction outlet, at the machine end connection. If necessary, secure the connection with tape. This will prevent disconnection and provide a better seal.

If the torches fume extraction outlet is pointing in the wrong direction it can be rotated to a more suitable angle.



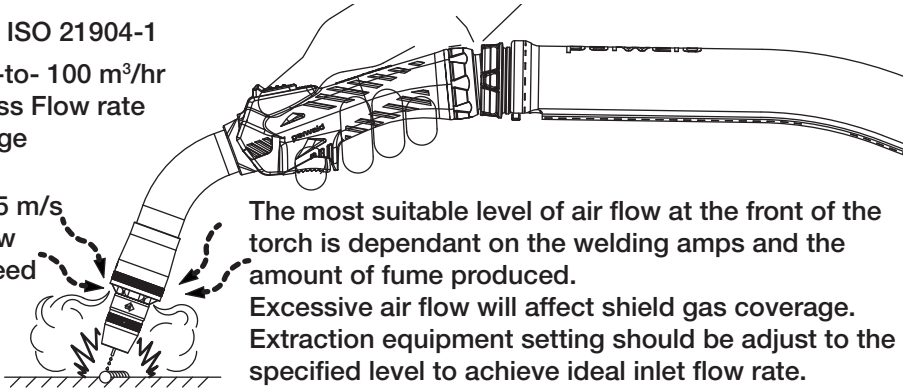
For correct extraction rate setup read the following Set-Up - Fume Extraction section pages of this document.

EXTRACTION

Fume Extraction - Flow Rate

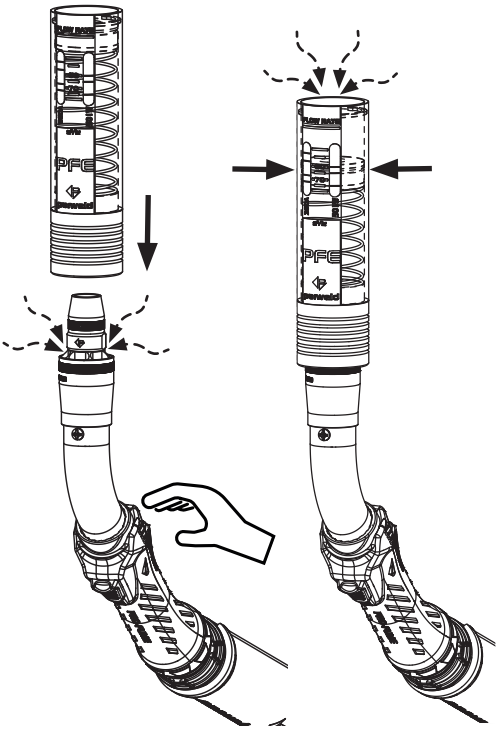
Ref ISO 21904-1

50 -to- 100 m^3/hr Mass Flow rate range



The most suitable level of air flow at the front of the torch is dependant on the welding amps and the amount of fume produced.
Excessive air flow will affect shield gas coverage.
Extraction equipment setting should be adjust to the specified level to achieve ideal inlet flow rate.

The Parweld extraction nozzle flow rate indicator is designed to help check the fume flow rate into PFE Pro-Fume MIG torches and acts as a guide when setting negative pressure level at the torch extraction outlet connection with fume extraction equipment. Application, PFE Pro-Fume 360A and 501W only.



Flow Rate Indicator Use
With extraction unit on and sucking, hold the torch so the front end is pointing upwards.

Place the indicator over the gas nozzle, onto the face of the suction nozzle inlet holes, until sealed and the air is pull through the indicator.

The indicator float should immediately be pulled down by the air flow. The level of air/fume flowing into the torch can be read against the gauge at the level of the float red line.

The indicator gauge is colour coded for the 360A and 501W torches. The ideal flow rate is somewhere in the green band corresponding with the torch model.

Adjust extraction pressure to achieve the ideal flow rate.

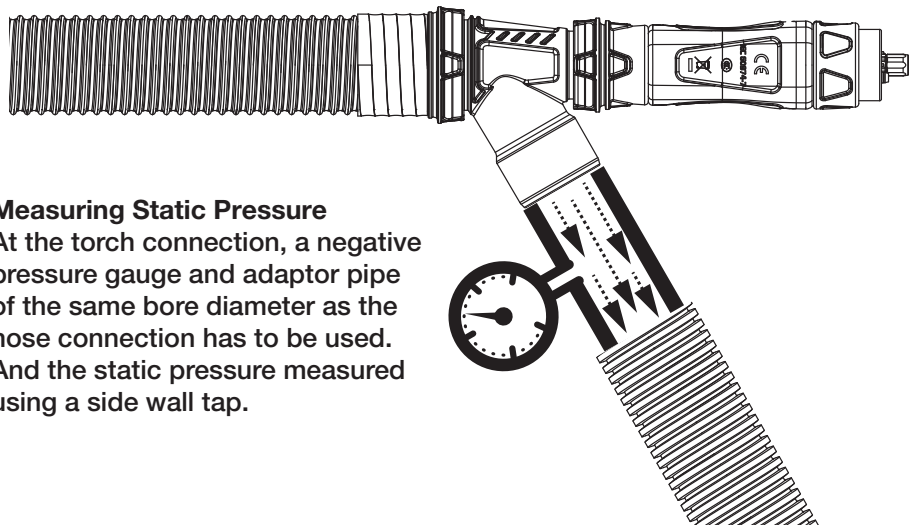
Fume Extraction - Connection Pressure

PRO-FUME Model	Cooling Type	Torch Length (m)	*Induced velocity of 0.35 m/s at Inlet (Ref EN ISO 21904-1 and 21904-4)*		
			Volume Flow Rate (m^3/hr)		Static Pressure (kpa)
			Suction Nozzle	Extraction Connector	Extraction Connector
360A	Air	3 - 6	63	81	4.8
501W	Water	3 - 6	70	98	10.3

The fume extraction rate can also be set by measuring the static pressure level at the torch outlet hose connection point with the fume extraction unit.

The table above details the outlet connection static pressure required to achieve the ideal induced air flow rate (Velocity) at the torches inlet nozzle. Corresponding flow volumes are also listed.

Some advanced fume extraction units are able to determine the volumetric flow and static pressure level into the extraction unit and can be adjusted via a digital control.



Measuring Static Pressure
At the torch connection, a negative pressure gauge and adaptor pipe of the same bore diameter as the hose connection has to be used. And the static pressure measured using a side wall tap.

Operation - Torch

Before welding check your torch and machine connections.
Earth return lead is properly clamped.
Shielding gas hose connected to supply and machine gas inlet.
Torch machine plug connection tightened securely.

Make all the front end consumables component checks to ensure your torch is in good condition, setup, ready for welding.

Turn on the fume “On Torch” extraction equipment.

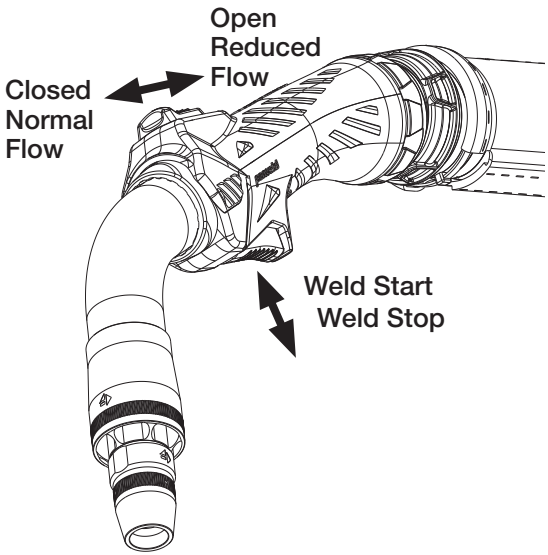
Warning: Do not use the fume torch without “On Torch” fume extraction.

Checking and adjust the fume extraction airflow. Work to the setting suggest by the manufacturer of the fume extraction equipment. If possible measure the air flow at the front of the torch to gauge if it is set correctly for the welding amperage to be used.

To start welding, depress the torch trigger.

During welding the hot fumes pass through the torch handle. This will affect the temperature of the handle and you will feel this change in your hand.

When welding into tight corners it may be necessary to decrease the extraction air flow to minimise the affect on the shield gas over weld pool. To decrease the air flow, use the air flow suction regulator vent that is positioned on the top of the torch handle. Remember to close it again after leaving the tight welding position, otherwise the fume extraction rate will remain reduced.



To stop welding, release the torches trigger.

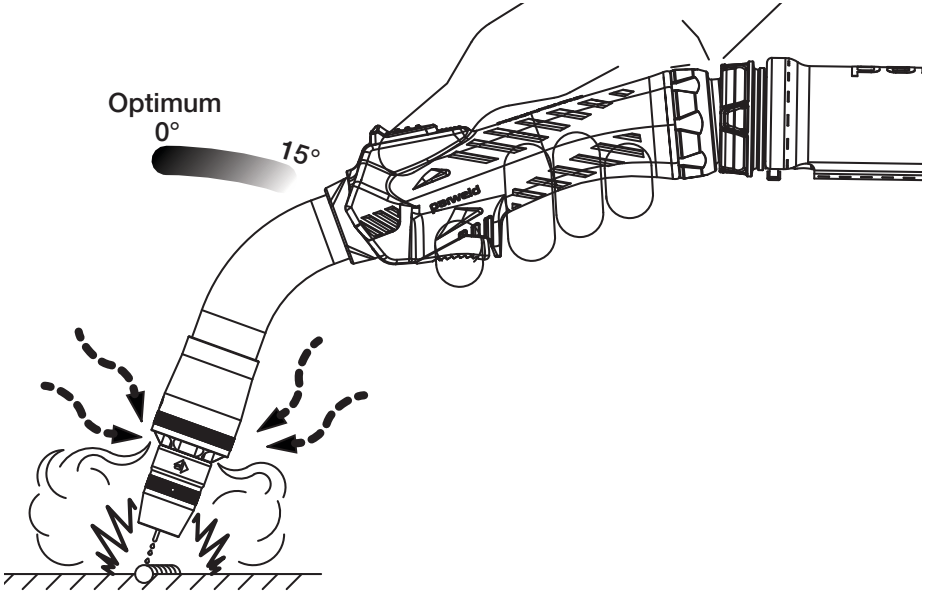
Work to the rated duty cycle whenever possible, otherwise the torch will overheat and fail to function correctly.

Operation - Optimum Fume Extraction

Welding Positions
The most effective position for fume extraction is the vertical position because the hot fumes rise upward and will be pulled into the suction nozzle.

Maintain the vertical, or near vertical position during welding. A maximum offset angle of 150 will still work well if the vertical position is not possible.

If not enough fume is being extracted during welding, adjust the setting of the on torch fume extraction equipment to increase the air flow rate.



End of Weld Residual fumes
At the end of welding, hold the fume extraction torch in place for 5 to 10 seconds. This allows removal of any residual fumes as the weld is cooling.

Additional Fume Extraction and Filtration
It is advised that overhead external extraction is also used as a secondary method of fume extraction to remove as much fume from the environment as possible.

Also use a welding mask filtered air system to prevent inhalation of any welding fumes that are not extracted by the on torch and external fume extraction systems..

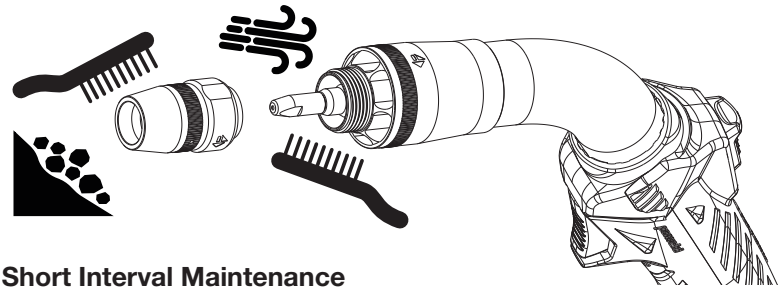
Scheduled Maintenance and Cleaning - Short Interval

Warning:
Allow equipment to cool after use before handling to avoid burns.

Wear the correct protective clothing and gloves.

Warning:
At any point should the fume extraction flow became reduced or stops,

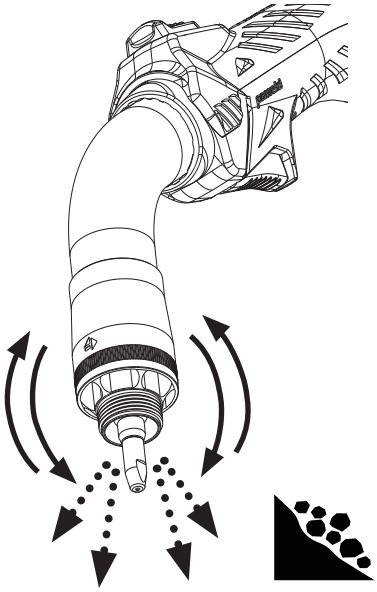
- **IMMEDIATELY STOP WELDING.**
- Identify the cause.
- Check the fume extraction equipment. Perform the manufacturer's advised maintenance checks and repairs.
- Check the torch, perform both the short interval and weekly/monthly maintenance checks and repairs.



Regular Short Interval Maintenance

Before welding, daily or shorter depending on torch usage.

- Remove the gas nozzle and inspect all front end consumable parts, look for wear, damage and spatter debris build up.
- Clear all spatter debris from the nozzle, tip and from around the tip adaptor.
- Tip out any residue spatter from inside the torch front, once cleaned, and before replacing the gas nozzle.
- Make sure the suction nozzle front vents are clear of debris and are not blocked.



Any parts that are damaged should be replaced immediately to ensure the torch performs efficiently.

Scheduled Maintenance and Cleaning - Long Interval

Warning:
Allow equipment to cool after use before handling to avoid burns.

Wear the correct protective clothing and gloves.

Weekly or Monthly Maintenance

Depending and the torches usage, the following must be made on the full torch assembly.

- Remove all front consumables, open the torch handle and disconnect the extraction housing to allow access through the torch assembly.
- Check for debris build up and points of blockage along the torch length.
- Check and clean inside the extraction nozzle and the neck chamber.
- Check and clean inside the handle, around the trigger, removing debris that could short circuit the trigger. Repair trigger connection protection cover.
- Check, blow through and clean the harness ducting and rear extraction chamber. Removing any large deposits.
- Check harness ducting for any damage, puncture holes, that may cause a loss of suction.

Replace any components that have signs of damage.

Extra care is need for the trigger connection. This can deteriorate quickly and will need regular clean and replacement of the protective covering.

The ducting must be damage free and completely sealed to ensure efficient suction air flow to from the front inlet of the torch, to the rear outlet connection.

Fault Finding

Fault	Cause and Remedy
Welding arc does not start when trigger is depressed	Check power supply is working Check torch connection Check torch trigger is working Rectify or repair fault
Weld is poor	Check welding settings and adjust Check earth connection Check torch connection Check front consumable parts for damage, clean and replace
Weld is contaminated, porous and discoloured	Check shield gas flow rate Check fume extraction rate is not set too high
Excess spatter, fume and poor arc penetration	Check shield gas flow rate Check fume extraction rate is not set too high
Wire feed not working properly	Check wire feed roll pressure adjustment Check wire feed through torch Check feed roll wear Replace fault rolls or torch liner
Gas porosity in tight corner welds	Check shield gas flow rate Use handle regulator vent to reduce suction temporarily in the tight positions
Gas porosity along an open weld run	Check shield gas flow rate Check for external drafts. Position welding screen to shield weld run. Check extraction pressure is not set too high.
Fume is not being extracted	Check extraction equipment is operating correctly and filter is not blocked Check torch for blockage Check fume ducting for holes and joints for leaks. Replace and repair Hold torch at optimum angle above weld
Torch handle is getting hot	Fume extraction rate is set too low Check fume extraction equipment is functioning correctly
Front consumables have failed and head insulator melted	Fume extraction rate has not been set high enough, or has not been turned on, overheating the front end fittings Check fume extraction equipment is functioning

Fault Finding

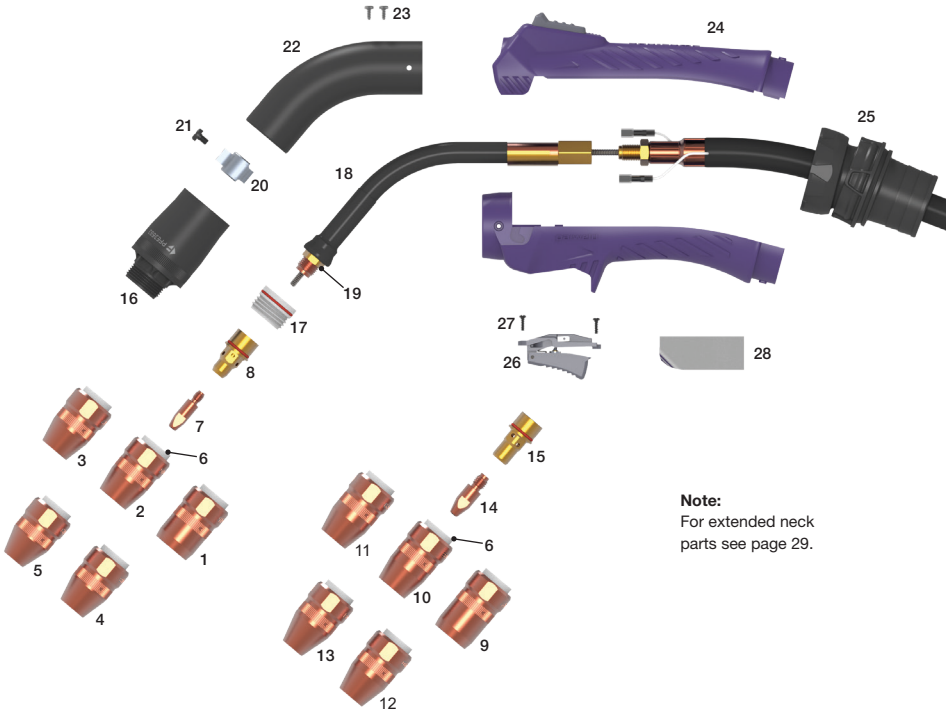
Fault	Cause and Remedy
Front shield gas and extraction nozzles have shorted with tip adaptor	Gas nozzle is not fitted correctly Spatter build up not removed, follow short interval maintenance schedule. Check fume extraction equipment is functioning correctly.

PARTS

PRO-FUME 360A

AIR COOLED FUME EXTRACTION MIG WELDING TORCH

300A CO_2, 270A Mixed Gas @ 60% Duty Cycle, EN60974-7 0.8mm-1.2mm (.030”-.045”) Wires



Note:
For extended neck parts see page 29.

Torch Packages

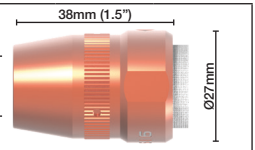
STOCK CODE	DESCRIPTION
PFE3600 -30ER	Torch c/w Euro Fitting x 3m
PFE3600 -40ER	Torch c/w Euro Fitting x 4m
PFE3600 -50ER	Torch c/w Euro Fitting x 5m
PFE3600 -30ER/M8	Torch c/w Euro Fitting x 3m (M8)
PFE3600 -40ER/M8	Torch c/w Euro Fitting x 4m (M8)
PFE3600 -50ER/M8	Torch c/w Euro Fitting x 5m (M8)
PFE3685 -30ER	Ext. Neck Torch c/w Euro Fitting x 3m
PFE3685 -40ER	Ext. Neck Torch c/w Euro Fitting x 4m
PFE3685 -50ER	Ext. Neck Torch c/w Euro Fitting x 5m
PFE3685 -30ER/M8	Ext. Neck Torch c/w Euro Fitting x 3m (M8)
PFE3685 -40ER/M8	Ext. Neck Torch c/w Euro Fitting x 4m (M8)
PFE3685 -50ER/M8	Ext. Neck Torch c/w Euro Fitting x 5m (M8)

Components

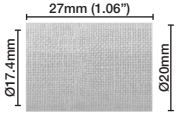
	STOCK CODE	DESCRIPTION
18	PFE3603	Swan Neck
19	PFE3604	Lock Nut
20	PFE3609	3 Point Spacer
21	PFE3610	Fixing Screw x1 (Spacer)
22	PFE3611	Extraction Chamber
23	PFE3613	Fixing Screws x2 (Ext. Chamber)
24	PFE3620	Handle c/w Vent
25	PFE3634	Handle Swivel Lock Nut
26	PFE3621	Trigger
27	PFE3622	Fixing Screws x2 (Trigger)
28	PFE3623	Foil Tape (Trigger Terminals)

Consumables

Nozzles (M6 Fittings)



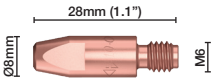
	STOCK CODE	DESCRIPTION	BORE
1	PFE3615	Cylindrical	19mm (3/4")
2	PFE3616*	Conical	16mm (5/8")
3	PFE3617	Tapered	14.3mm (9/16")
4	PFE3618	Tapered	12.7mm (1/2")
5	PFE3619	Small Bore	9.5mm (3/8")



6	PFE3605	Spatter Insulator	

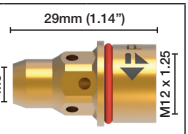
NB: All nozzles are supplied with insulator fitted

Contact Tips (M6)



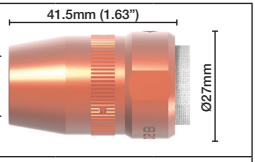
	STOCK CODE	WIRE SIZE	MATERIAL
7	B2504-08	0.8mm (.030")	ECu
	B2504-09	0.9mm (.035")	ECu
	B2504-10	1.0mm (.040")	ECu
	B2504-12*	1.2mm (.045")	ECu
	B2504-08CR	0.8mm (.030")	ECu, CR Plated
	B2504-10CR	1.0mm (.040")	ECu, CR Plated
	B2504-12CR	1.2mm (.045")	ECu, CR Plated
	B2504-10A	1.0mm (.040")	ECu, Al
	B2504-12A	1.2mm (.045")	ECu, Al
	B2505-08	0.8mm (.030")	CuCrZr
	B2505-09	0.9mm (.035")	CuCrZr
	B2505-10	1.0mm (.040")	CuCrZr
	B2505-12	1.2mm (.045")	CuCrZr

Tip Adaptor (M6)

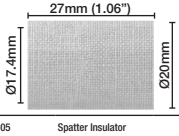


	STOCK CODE	TIP THREAD
8	PFE3612*	M6

Nozzles (M8 Fittings)



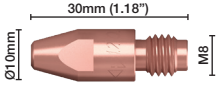
	Stock Code	Description	Bore
9	PFE5027	Cylindrical	19mm (3/4")
10	PFE5028	Conical	16mm (5/8")
11	PFE5029	Tapered	14.3mm (9/16")
12	PFE5030	Tapered	12.7mm (1/2")
13	PFE5031	Small Bore	9.5mm (3/8")



6	PFE3605	Spatter Insulator	

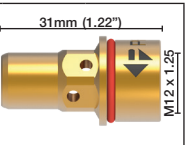
NB: All nozzles are supplied with insulator fitted

Contact Tips (M8)



	STOCK CODE	WIRE SIZE	MATERIAL
14	B4014-09	0.9mm (.035")	ECu
	B4014-10	1.0mm (.040")	ECu
	B4014-12	1.2mm (.045")	ECu
	B4014-14	1.4mm (.055")	ECu
	B4014-16	1.6mm (1/16")	ECu
	B4014-10CR	1.0mm (.040")	ECu, CR Plated
	B4014-12CR	1.2mm (.045")	ECu, CR Plated
	B4014-10A	1.0mm (.040")	ECu, Al
	B4014-12A	1.2mm (.045")	ECu, Al
	B4014-16A	1.6mm (1/16")	ECu, Al
	B4015-10	1.0mm (.040")	CuCrZr
	B4015-12	1.2mm (.045")	CuCrZr
	B4015-14	1.4mm (0.55")	CuCrZr
	B4015-16	1.6mm (1/16")	CuCrZr

Tip Adaptor (M8)

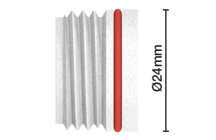


	STOCK CODE	TIP THREAD
15	PFE5001	M8

Extraction Nozzle

	STOCK CODE	DESCRIPTION
16	PFE3693*	Extraction Nozzle c/w '0' Ring
	PFE3694	'0' Ring for Extraction Nozzle

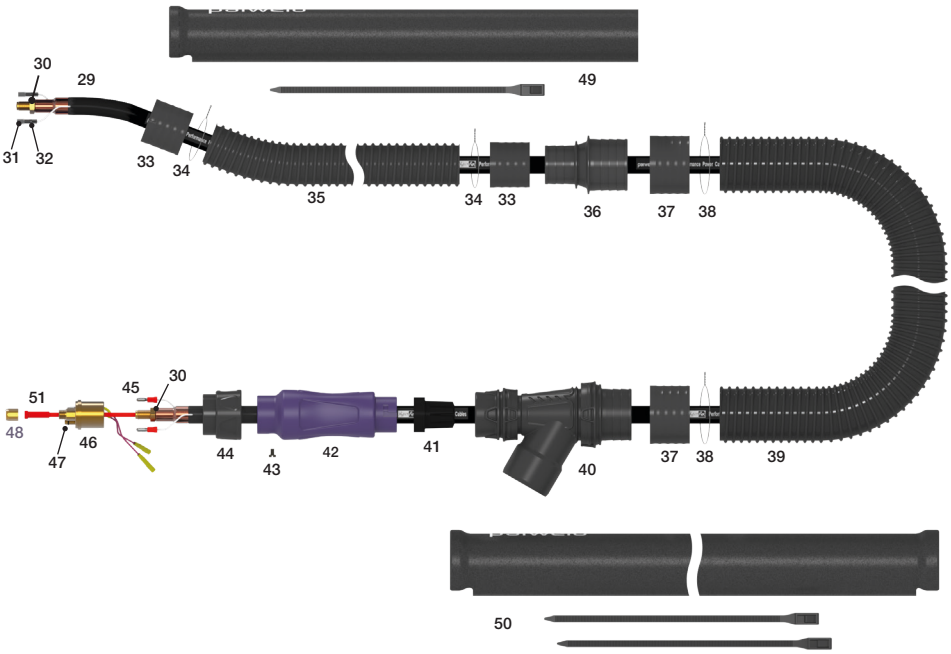
Head Insulator



	STOCK CODE	DESCRIPTION
17	PFE3606*	Head Insulator c/w '0' Ring
	PFE3608	'0' Ring for Head Insulator

PARTS

A/C Harness Components



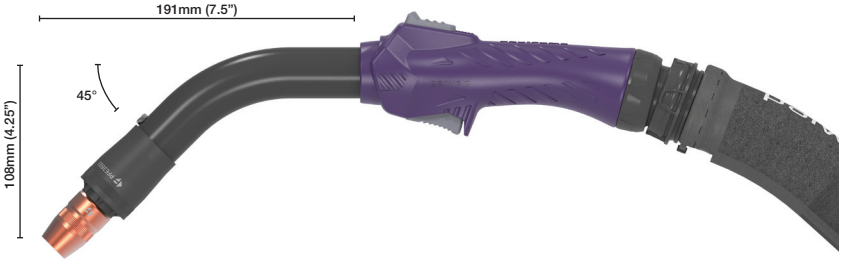
Components		
	Stock Code	Description
29	B3609-30	Cable Assembly x 3m (10ft)
	B3609-40	Cable Assembly x 4m (13ft)
	B3609-50	Cable Assembly x 5m (16ft)
30	B1505	Lock Nut
31	B1521	Switch Lead Terminal
32	B1521-C	Terminal Cover
33	PFE3624	Heatshrink (50mm Exp)
34	PFE3625	Locking Wire Clamp, Small
35	PFE3626	Hose (38mm Bore) x 1.2m
36	PFE3627	Hose Connector (38-to-52mm Bore)
37	PFE3628	Heatshrink (76mm Exp)
38	PFE3629	Locking Wire Clamp, Large
39	PFE3630-13	Hose (52mm Bore) x 1.3m
	PFE3630-23	Hose (52mm Bore) x 2.3m
	PFE3630-33	Hose (52mm Bore) x 3.3m
40	PFE0018	Fume Extraction Housing Assembly
41	PFE3631	Housing-to-Harness Fume Seal
42	PFE1518	Gun Plug Housing
43	B1526	Gun Plug Screw
44	B1519/BK	Gun Plug Nut Black
45	B1522	Cable Terminal Male
46	B1528	Gun Plug Body c/w Spring Pins
47	B1524	Gun Plug 'O' Ring
48	B1525	Liner Nut

Components		
	Stock Code	Description
49	PFE3632	Leather Cover c/w Tie Wrap x 1.2m
50	PFE3633-15	Leather Cover c/w Tie Wraps x 1.5m (3m Torch)
	PFE3633-25	Leather Cover c/w Tie Wraps x 2.5m (4m Torch)
	PFE3633-35	Leather Cover c/w Tie Wraps x 3.5m (5m Torch)

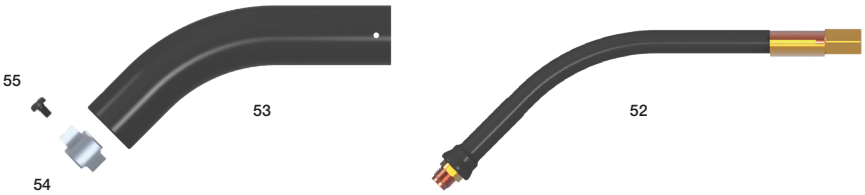
Torch Liners					
	Stock Code	Description	Wire Size	Wire Size	Length
51	B2524-30*	Steel	1.2 - 1.6mm	0.045" - 1/16"	3.0m
	B2524-40*	Steel	1.2 - 1.6mm	0.045" - 1/16"	4.0m
	B2524-50*	Steel	1.2 - 1.6mm	0.045" - 1/16"	5.0m
	B2513-30	Teflon Liner	1.0 - 1.2mm	0.040" - 0.045"	3.0m
	B2513-40	Teflon Liner	1.0 - 1.2mm	0.040" - 0.045"	4.0m
	B2513-50	Teflon Liner	1.0 - 1.2mm	0.040" - 0.045"	5.0m

* Denotes standard build

Extended Neck



Extended Neck Components		
	Stock Code	Description
52	PFE3685	Extended Swan Neck
53	PFE3686	Extended Extraction Chamber
54	PFE3609	3 Point Spacer
55	PFE3610	Fixing Screw x1 (Spacer)



Fume Extraction Air Flow Rate Checking

Air Flow Rate Indicator		
	Stock Code	Description
56	PFE3635	Torch Extraction Nozzle Air Flow Rate Indicator

Designed for checking air flow rate into PFE Pro-Fume MIG torch extraction nozzle and acts as a guide when setting negative pressure level at torch extraction outlet.

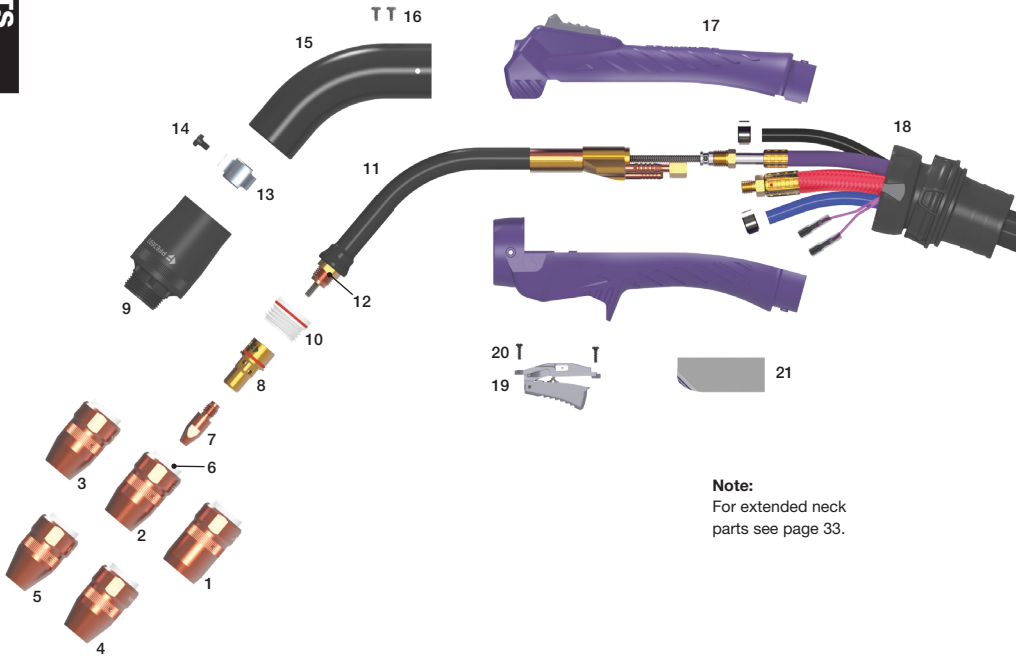
Application, PFE Pro-Fume 360A and 501W only.

PARTS

PRO-FUME 501W

WATER COOLED FUME EXTRACTION MIG WELDING TORCH

520A CO_2, 430A Mixed Gas @ 60% Duty Cycle, EN60974-7 1.0mm-1.6mm (.040”-1/16”) Wires



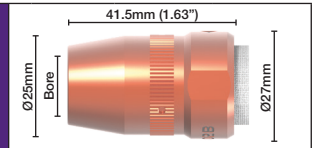
Note:
For extended neck parts see page 33.

Torch Packages	
STOCK CODE	DESCRIPTION
PFE5000 -30ER	Torch c/w Euro Fitting x 3m
PFE5000 -40ER	Torch c/w Euro Fitting x 4m
PFE5000 -50ER	Torch c/w Euro Fitting x 5m
PFE5085 -30ER	Ext. Neck Torch c/w Euro Fitting x 3m
PFE5085 -40ER	Ext. Neck Torch c/w Euro Fitting x 4m
PFE5085 -50ER	Ext. Neck Torch c/w Euro Fitting x 5m

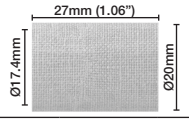
Components		
	STOCK CODE	DESCRIPTION
11	PFE5002	Swan Neck
12	PFE3604	Lock Nut
13	PFE3609	3 Point Spacer
14	PFE3610	Fixing Screw x1 (Spacer)
15	PFE3611	Extraction Chamber
16	PFE3613	Fixing Screws x2 (Ext. Chamber)
17	PFE3620	Handle c/w Vent
18	PFE3634	Handle Swivel Lock Nut
19	PFE3621	Trigger
20	PFE3622	Fixing Screws x2 (Trigger)
21	PFE3623	Foil Tape (Trigger Terminals)

Consumables

Nozzles (M8 Fittings)



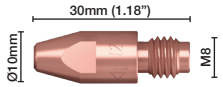
	Stock Code	Description	Bore
1	PFE5027	Cylindrical	19mm (3/4")
2	PFE5028	Conical	16mm (5/8")
3	PFE5029	Tapered	14.3mm (9/16")
4	PFE5030	Tapered	12.7mm (1/2")
5	PFE5031	Small Bore	9.5mm (3/8")



6	PFE3605	Spatter Insulator

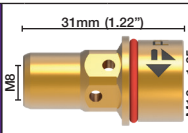
NB: All nozzles are supplied with insulator fitted

Contact Tips (M8)



	STOCK CODE	WIRE SIZE	MATERIAL
7	B4014-09	0.9mm (.035")	ECu
	B4014-10	1.0mm (.040")	ECu
	B4014-12	1.2mm (.045")	ECu
	B4014-14	1.4mm (.055")	ECu
	B4014-16	1.6mm (1/16")	ECu
	B4014-10CR	1.0mm (.040")	ECu, CR Plated
	B4014-12CR	1.2mm (.045")	ECu, CR Plated
	B4014-10A	1.0mm (.040")	ECu, Al
	B4014-12A	1.2mm (.045")	ECu, Al
	B4014-16A	1.6mm (1/16")	ECu, Al
	B4015-10	1.0mm (.040")	CuCrZr
	B4015-12	1.2mm (.045")	CuCrZr
	B4015-14	1.4mm (0.55")	CuCrZr
	B4015-16	1.6mm (1/16")	CuCrZr

Tip Adaptor (M8)

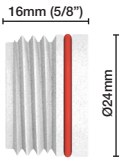


	STOCK CODE	TIP THREAD
8	PFE5001	M8

Extraction Nozzle

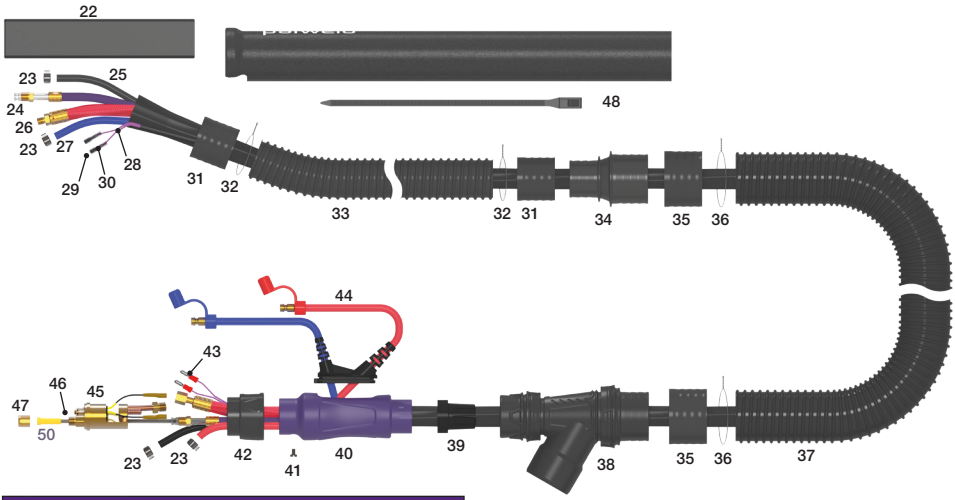
	STOCK CODE	DESCRIPTION
9	PFE3693*	Extraction Nozzle c/w '0' Ring
	PFE3694	'0' Ring for Extraction Nozzle

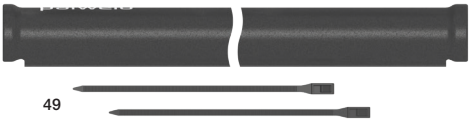
Head Insulator



	STOCK CODE	DESCRIPTION
10	PFE3606*	Head Insulator c/w '0' Ring
	PFE3608	'0' Ring for Head Insulator

W/C Harness Components





Components

	Stock Code	Description
22	PFE5034	Heatshrink (25mm Exp x 200mm)
23	B5024	Water Hose Clamp 9.5mm
24	B5008-30	Outer Liner Assembly x 3m
	B5008-40	Outer Liner Assembly x 4m
	B5008-50	Outer Liner Assembly x 5m
25	B5013-30	Gas Hose Assembly x 3m
	B5013-40	Gas Hose Assembly x 4m
	B5013-50	Gas Hose Assembly x 5m
26	B5015-30 PVC	Power Cable Assembly x 3m
	B5015-40 PVC	Power Cable Assembly x 4m
	B5015-50 PVC	Power Cable Assembly x 5m
27	B5012-30 PVC	Water Inlet Hose Assembly x 3m
	B5012-40 PVC	Water Inlet Hose Assembly x 4m
	B5012-50 PVC	Water Inlet Hose Assembly x 5m
28	B5010-30	Switch Lead Assembly x 3m
	B5010-40	Switch Lead Assembly x 4m
	B5010-50	Switch Lead Assembly x 5m
29	B1521	Switch Lead Terminal
30	B1521-C	Terminal Cover
31	PFE3624	Heatshrink (50mm Exp)
32	PFE3625	Locking Wire Clamp, Small
33	PFE3626	Hose (38mm Bore) x 1.2m
34	PFE3627	Hose Connector (38-to-52mm Bore)
35	PFE3628	Heatshrink (76mm Exp)
36	PFE3629	Locking Wire Clamp, Large
37	PFE5030-15	Hose (52mm Bore) x 1.5m
	PFE5030-25	Hose (52mm Bore) x 2.5m
	PFE5030-35	Hose (52mm Bore) x 3.5m
38	PFE0018	Fume Extraction Housing Assembly
39	PFE3631	Housing-to-Harness Fume Seal
40	PFE1518	Gun Plug Housing
41	B1526	Gun Plug Screw
42	B1519/BK	Gun Plug Nut Black

Components

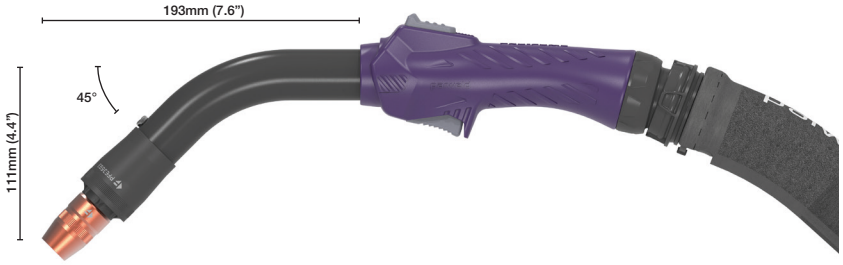
	Stock Code	Description
43	B1522	Cable Terminal Male
44	B5017 PVC	Water Return Hose Assembly
45	B5098	Gun Plug Body c/w Spring Pins
46	B1524	Gun Plug 'O' Ring
47	B1525	Liner Nut
48	PFE3632	Leather Cover c/w Tie Wrap x 1.2m
49	PFE3633-15	Leather Cover c/w Tie Wraps x 1.5m (3m Torch)
	PFE3633-25	Leather Cover c/w Tie Wraps x 2.5m (4m Torch)
	PFE3633-35	Leather Cover c/w Tie Wraps x 3.5m (5m Torch)

Torch Liners

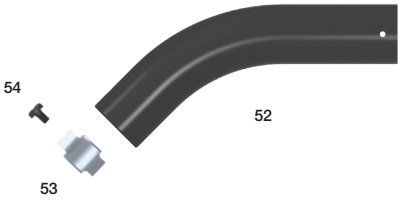
	Stock Code	Description	Wire Size	Wire Size	Length
50	B5033-30	Plain Steel	1.0 - 1.2mm	.040" - .045"	3m
	B5033-40	Plain Steel	1.0 - 1.2mm	.040" - .045"	4m
	B5033-50	Plain Steel	1.0 - 1.2mm	.040" - .045"	5m
	B5034-30*	Plain Steel	1.2 - 1.6mm	.045" - 1/16"	3m
	B5034-40*	Plain Steel	1.2 - 1.6mm	.045" - 1/16"	4m
	B5034-50*	Plain Steel	1.2 - 1.6mm	.045" - 1/16"	5m
	B2513-30	Teflon Liner	1.0 - 1.2mm	.040" - .045"	3m
	B2513-40	Teflon Liner	1.0 - 1.2mm	.040" - .045"	4m
	B2513-50	Teflon Liner	1.0 - 1.2mm	.040" - .045"	5m
	B3626-30	Teflon Liner	1.2 - 1.6mm	.045" - 1/16"	3m
	B3626-40	Teflon Liner	1.2 - 1.6mm	.045" - 1/16"	4m
	B3626-50	Teflon Liner	1.2 - 1.6mm	.045" - 1/16"	5m

* Denotes standard build

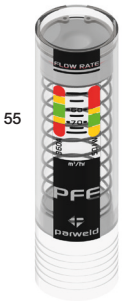
Extended Neck



Extended Neck Components		
	Stock Code	Description
51	PFE5085	Extended Swan Neck
52	PFE3686	Extended Extraction Chamber
53	PFE3609	3 Point Spacer
54	PFE3610	Fixing Screw x1 (Spacer)



Fume Extraction Air Flow Rate Checking



Air Flow Rate Indicator		
	Stock Code	Description
55	PFE3635	Torch Extraction Nozzle Air Flow Rate Indicator

Designed for checking air flow rate into PFE Pro-Fume MIG torch extraction nozzle and acts as a guide when setting negative pressure level at torch extraction outlet.

Application, PFE Pro-Fume 360A and 501W only.

PARWELD LIMITED
Bewdley Business Park, Long Bank,
Bewdley, Worcestershire, DY12 2TZ

Tel: +44 (0) 1299 266 800

UK and Ireland Sales Tel: +44 (0) 1299 269 500
Export Sales Tel: +44 (0) 1299 269 507

Email: info@parweld.co.uk

Website: www.parweld.com

parweld
WELDING THE FUTURE