

PFE PRO-FUME TIG TORCH



EN PFE Pro-Fume TIG Welding Torch
User Manual

Issue 1

parweld 
WELDING THE FUTURE

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) TIG 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 TIG torches must be used in conjunction with a fume extraction unit rated for TIG welding applications. The PFE TIG 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 standard to the torch type, and fully sealed to prevent extraction ingress into the protective gas sleeve chamber.

A large opening suction sleeve 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 extraction and flow volume. The perfect grip is combined with the balance and as low weight as possible by using from inventive component design.

The extraction system is fully sealed from the front to rear of the torch ensuring high efficiency.

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 extraction 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.

TECHNICAL DATA

Torch Operating Data (EN 60974-7)

Model	Cooling	Load Type		Duty Cycle	Electrode size mm	Gas Flow l/min
		DC	AC			
PFE9	Air	125A	88A	60%	0.5-2.4	5-12
PFE17	Air	150A	105A	60%	0.5-3.2	5-12
PFE20	Liquid	250A	175A	100%	0.5-3.2	7-18
PFE20HY	Liquid	300A	210A	100%	0.5-4.0	7-18

Usage Requirements

Storage and Transportation -20 to +55°C
 Operating Temperature Temp 0 to +40°C
 Voltage Rating 113V Peak
 Arc Ignition and Stabilisation Voltage
 10Kv, 50Hz Max
 Voltage of Control Circuit 1-42V AC/DC
 Control Circuit Current 1A Maximum

Cooling (Liquid)

Flow Rate Minimum 0.7 lpm
 Pressure 2.5 Bar Nominal
 (3.5 Bar Maximum)
 Max Liquid Temperature 50°C
 Cooling Capacity 800W Minimum

Extraction Requirements (EN ISO 21904-1)

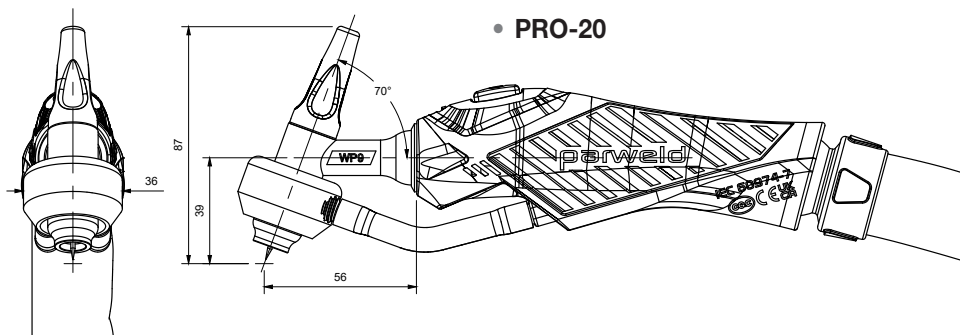
Based on induced velocity of 0.35 m/s

Model	Length	Volume flow m³/hr		Negative pressure at connector
		Suction Sleeve	Rear Connector	
PFE9, 20, 20HY, 17 (53N series Consumables)	4m	2.0	3.7	1.0 Kpa
	8m	2.0	4.5	4.3 Kpa
PFE17 (10N series Consumables)	4m	7.5	9.5	13.3 Kpa
	8m	7.5	13.2	21.1 Kpa

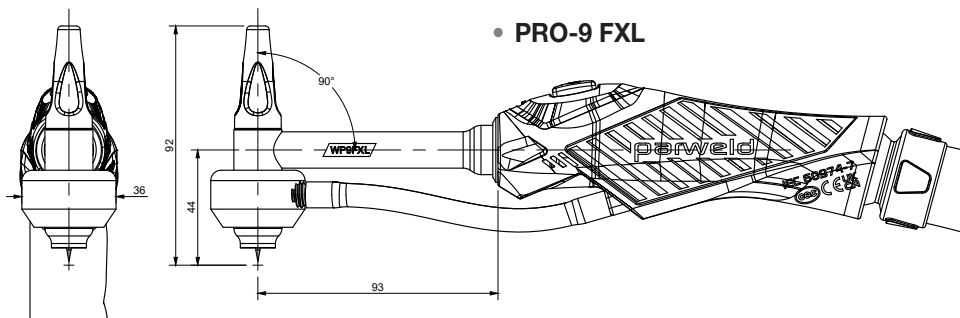
Torch Dimensions

Standard Neck Torch

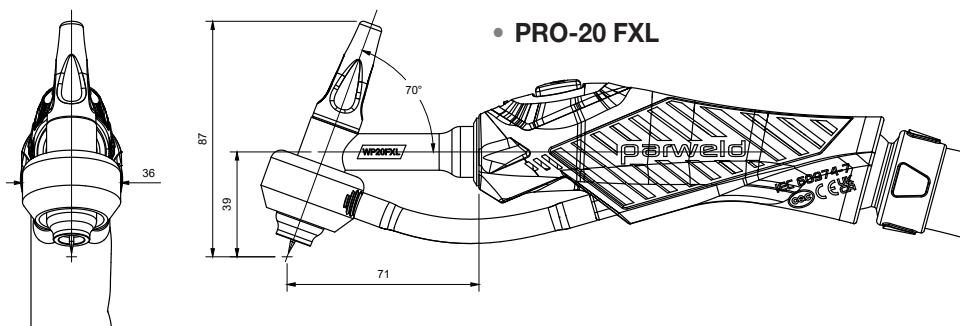
- PRO-9
- PRO-20



- PRO-9 FXL

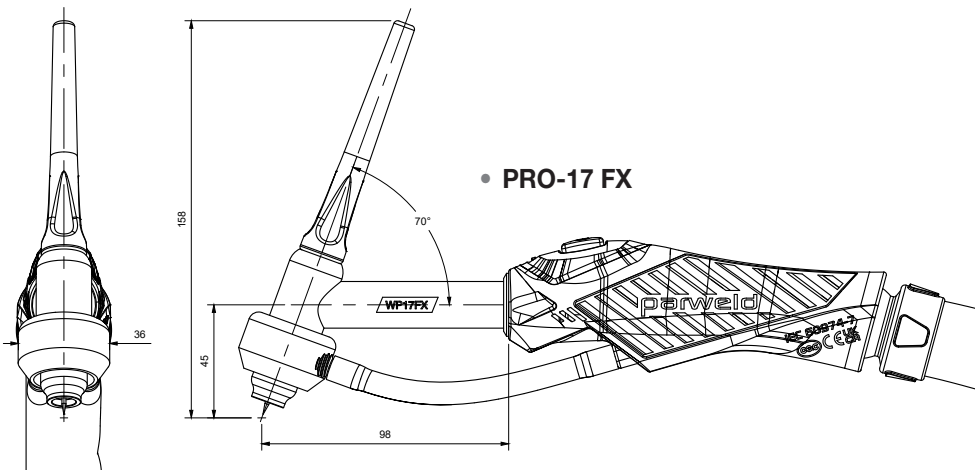
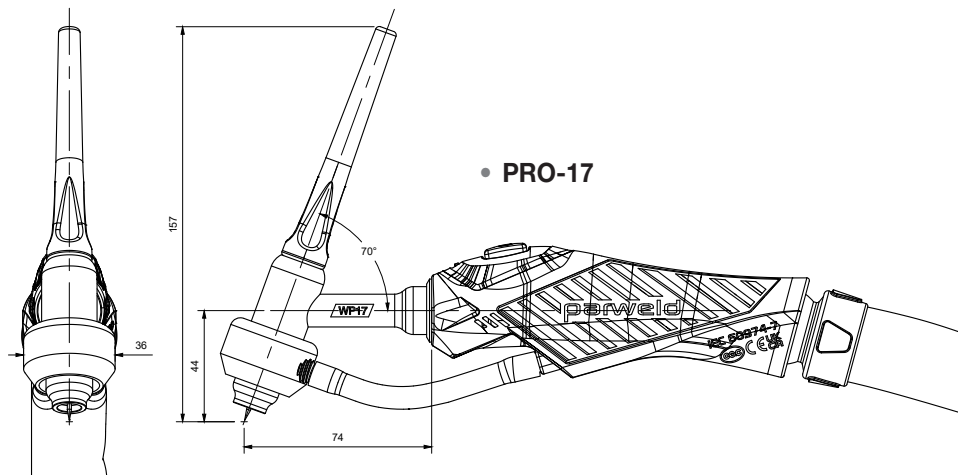


- PRO-20 FXL



Torch Dimensions

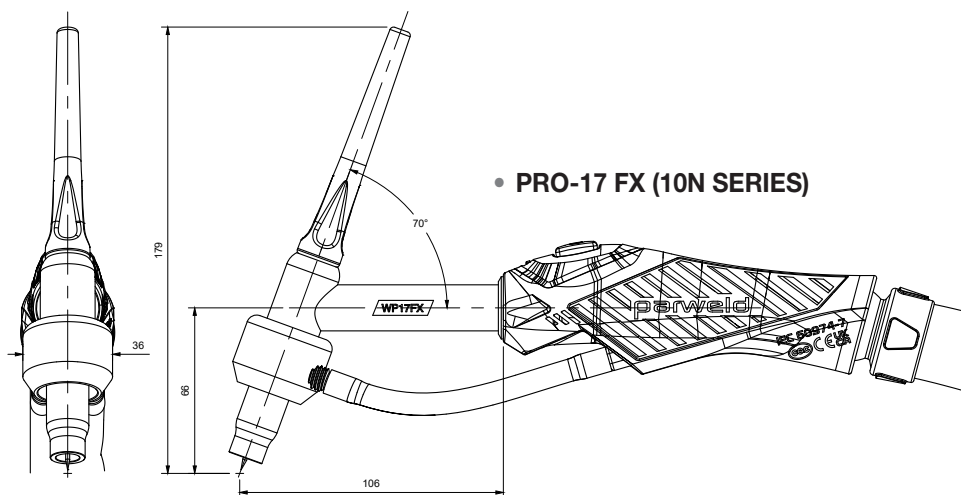
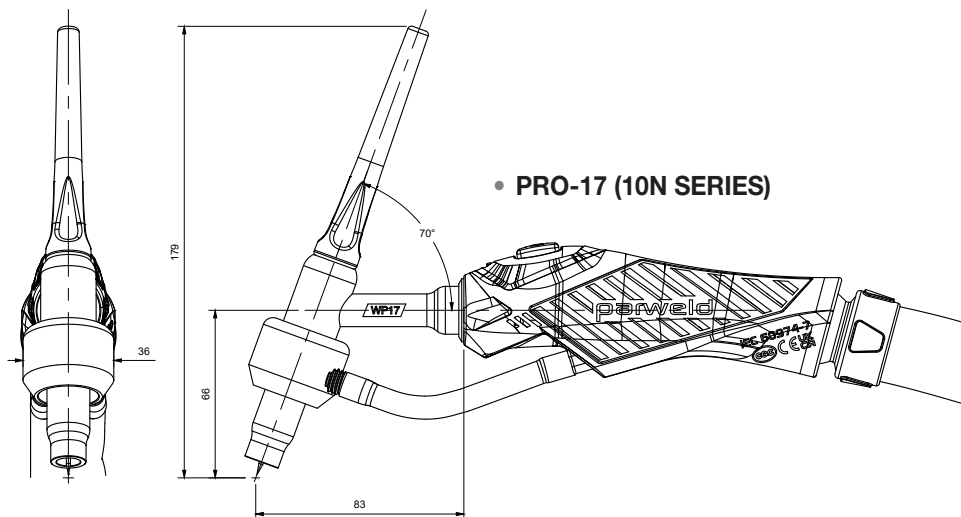
Standard Neck Torch



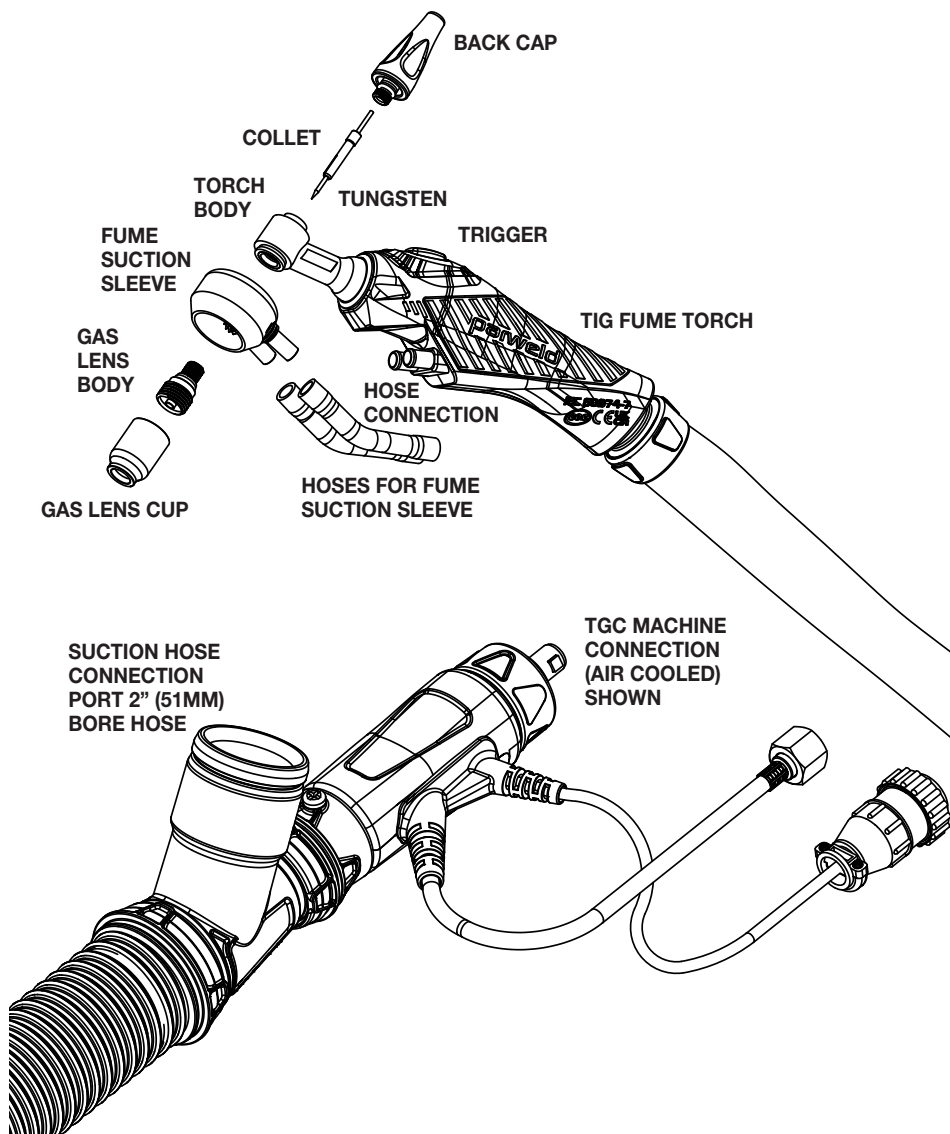
Torch Dimensions

Standard Neck Torch

TORCH DIMS



TORCH OVERVIEW



NB: WATER-COOLED ALSO AVAILABLE

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 TIG 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 sleeve 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.

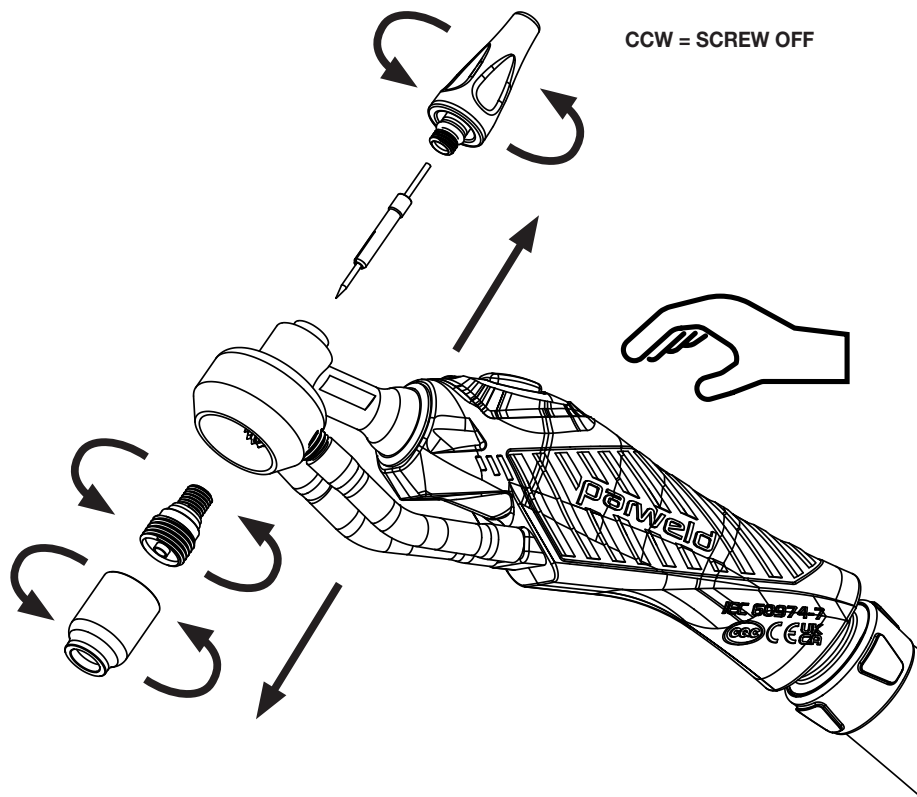
Before use;

- 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 extraction failure or short circuit.
- Check extraction sleeve is clean, free of debris with not blockage that may cause extraction 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 Replacement

Removal

Grip the ceramic cup. Twist counter clockwise to unscrew and remove it. Loosen the backcap and then unscrew the collet body/gas lens.



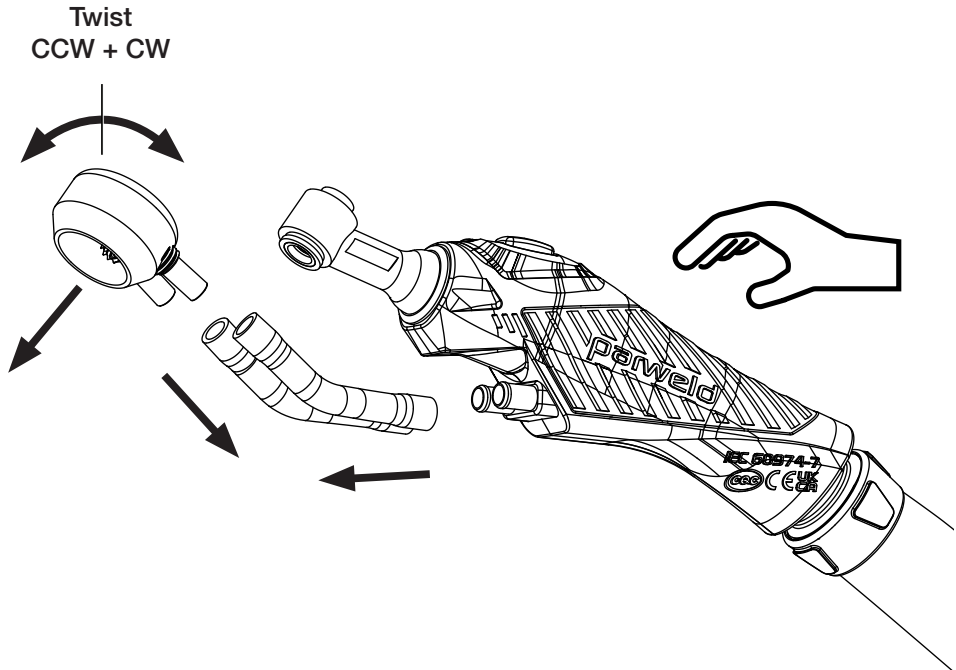
Refit

Screw the gas lens into the head. Screw on the ceramic cup. Fit collet over tungsten then into back of head. Screw in back cap.

Consumables Replacement - Extraction Sleeve

Removal

Remove consumables from the welding head as in the previous section, then twist and pull extraction sleeve off head. Then pull hoses off sleeve stems and handle stems.



Refit

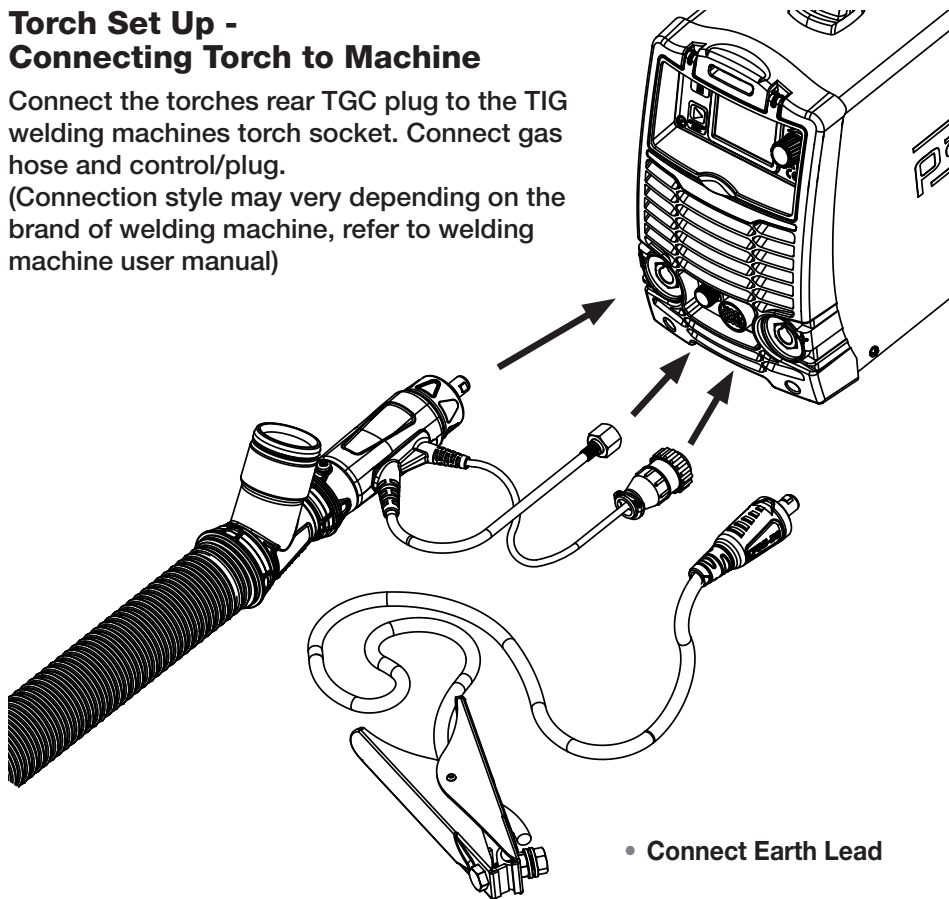
Push hoses onto the handle stems.

Push hoses onto the extraction sleeve.

Push sleeve onto head, it should locate onto the rubber lip.

Torch Set Up - Connecting Torch to Machine

Connect the torches rear TGC plug to the TIG welding machines torch socket. Connect gas hose and control/plug.
(Connection style may vary depending on the brand of welding machine, refer to welding machine user manual)

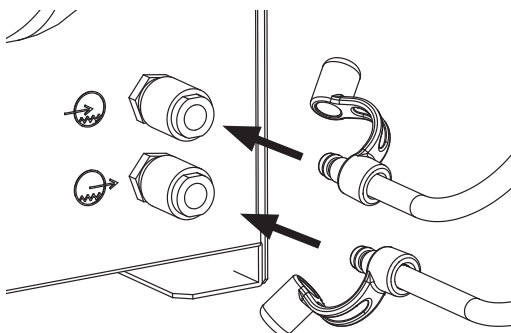


Torch Set Up - Water Cooled

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

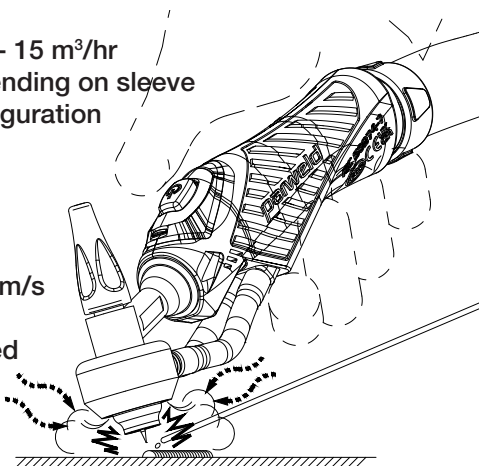
WARNING: If the PFE TIG Fume torch is not connected to an extraction system, the fume will not be extracted from the welding environment, and the use of this type of torch is then pointless.

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 sleeve inlet.

3 -to- 15 m³/hr
depending on sleeve
configuration

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 TIG torches we advise that a single torch extraction unit has a minimum rating of at least

- 16 kPa Negative pressure.
- 150 m³/hr Air flow rate.

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

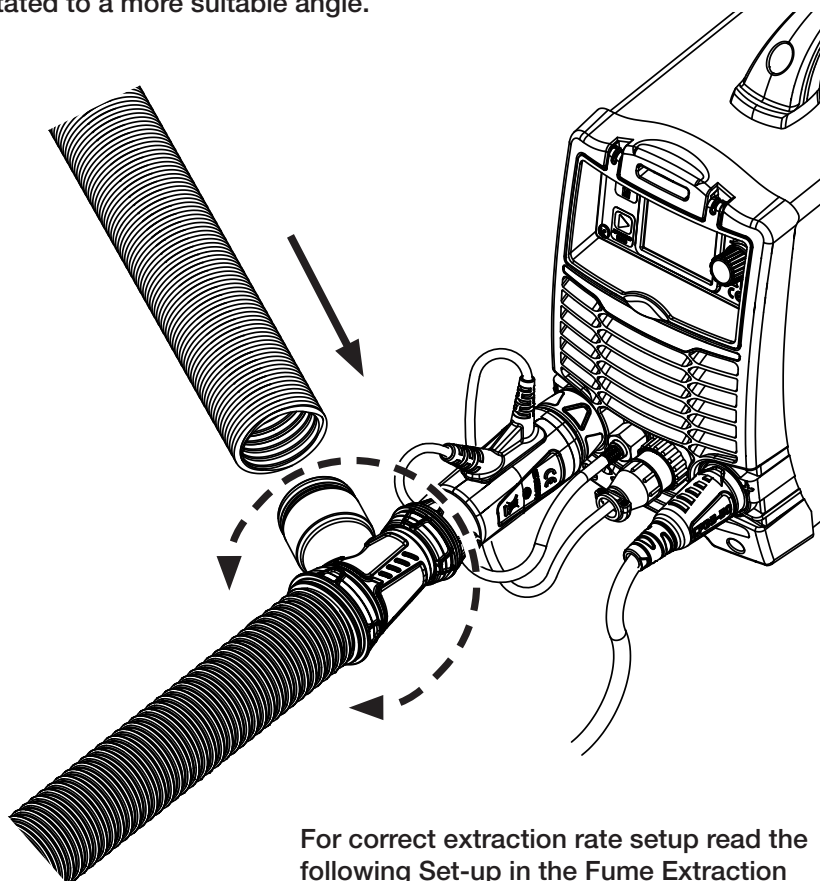
Fume Extraction - Equipment Connection

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.

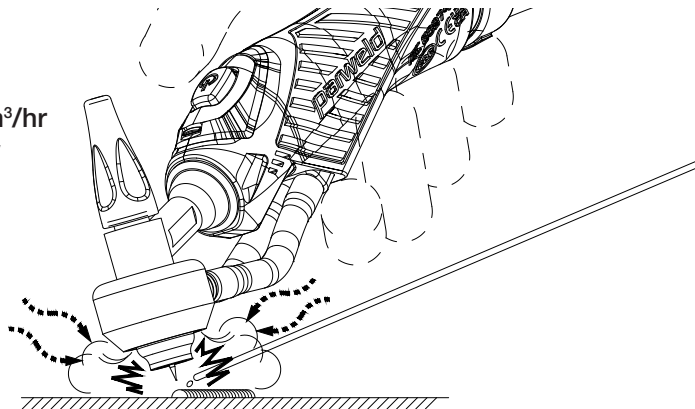


For correct extraction rate setup read the following Set-up in the Fume Extraction section pages of this document.

Fume Extraction - Flow Rate

3 -to- 15 m³/hr
Mass Flow
rate range

0.35 m/s
Flow
Speed



FUME EXTRACTION

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.

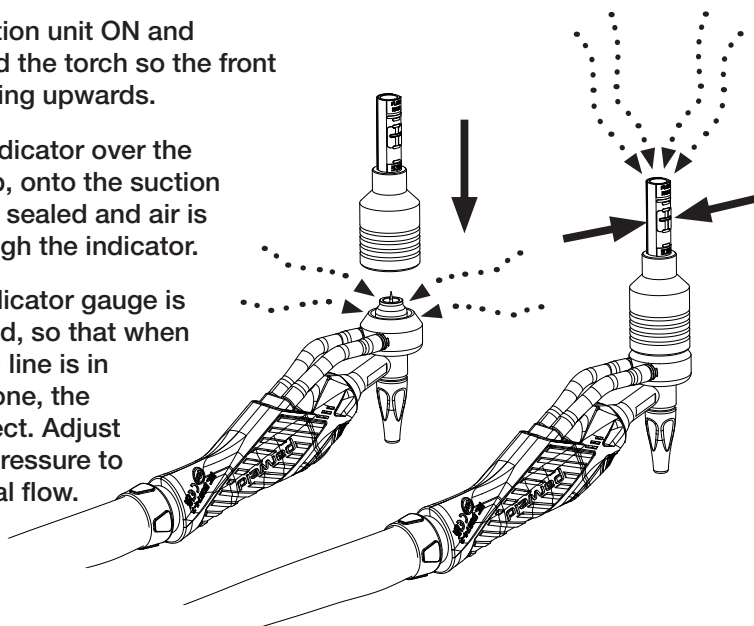
Extraction equipment setting should be adjust to the specified level to achieve ideal inlet flow rate.

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 ceramic cup, onto the suction sleeve, until sealed and air is pulled through the indicator.

The flow indicator gauge is colour coded, so that when the float red line is in the green zone, the flow is correct. Adjust extraction pressure to achieve ideal flow.



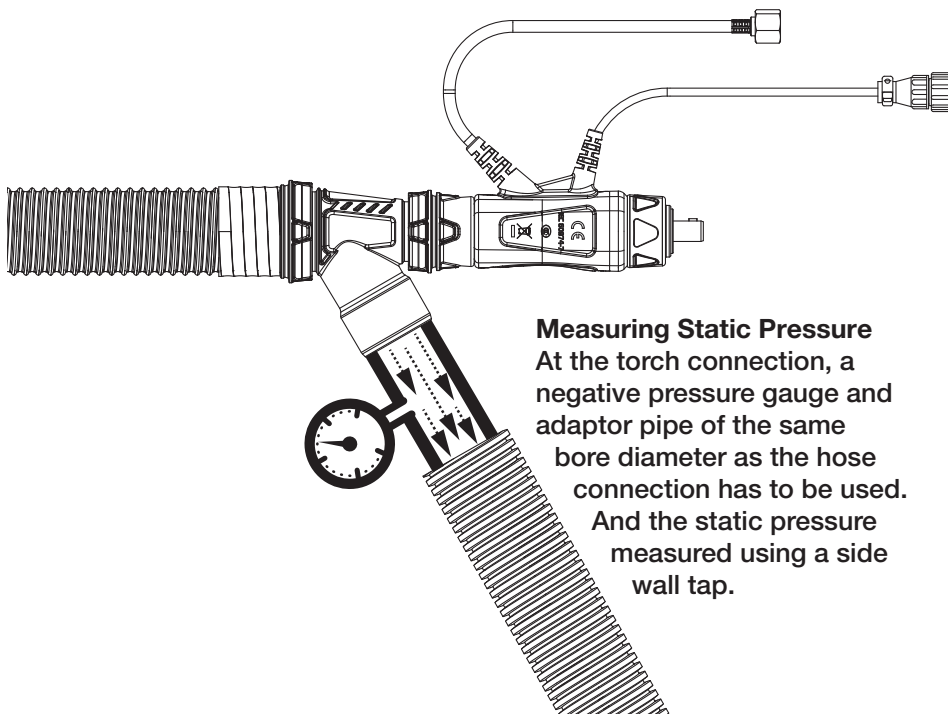
Fume Extraction - Connection Pressure

Model	Length	Volume flow m ³ /hr		Negative pressure at connector
		Suction Sleeve	Rear Connector	
PFE9, 20, 20HY, 17 (53N series Consumables)	4m	2.0	3.7	1.0 Kpa
	8m	2.0	4.5	4.3 Kpa
PFE17 (10N series Consumables)	4m	7.5	9.5	13.3 Kpa
	8m	7.5	13.2	21.1 Kpa

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 suction sleeve inlet. 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.



Torch - Operation

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.

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.

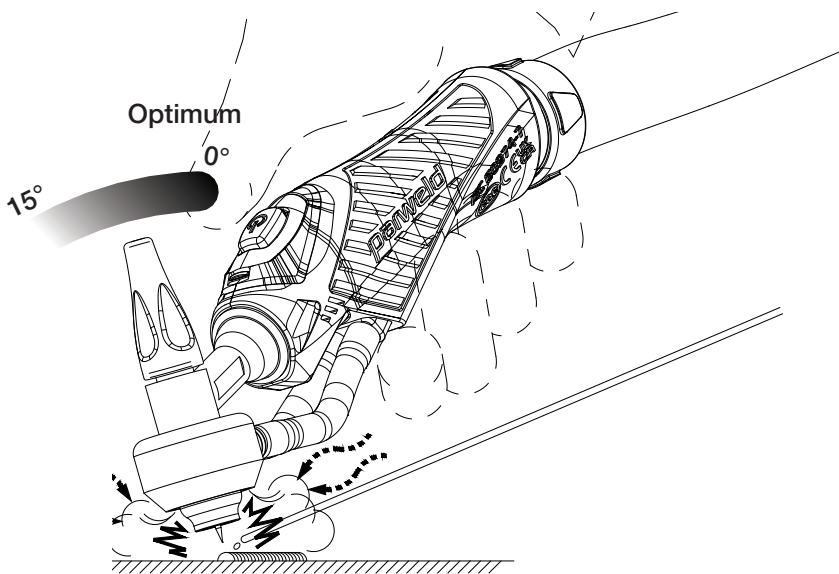
Operation - Optimum Fume Extraction

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 sleeve.

Maintain the vertical, or near vertical position during welding. A maximum offset angle of 15° 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 become reduced or stop, **IMMEDIATELY STOP WELDING.**

- Identify the cause.
- Check the fume extraction equipment.
- Perform the manufacturer's advised maintenance checks and repairs.
- Check the torch, and 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.

- Inspect all front end consumable parts, look for wear, damage and spatter debris build up.
- Clear all spatter debris from the suction sleeve.
- Make sure the suction hoses are not damaged.

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

- Check ceramic cup for cracks.
- Clean gas lens mesh of splatter.
- Check and resharpen tungsten.

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

- Repair trigger connection protection cover.
- Check, 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.

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.

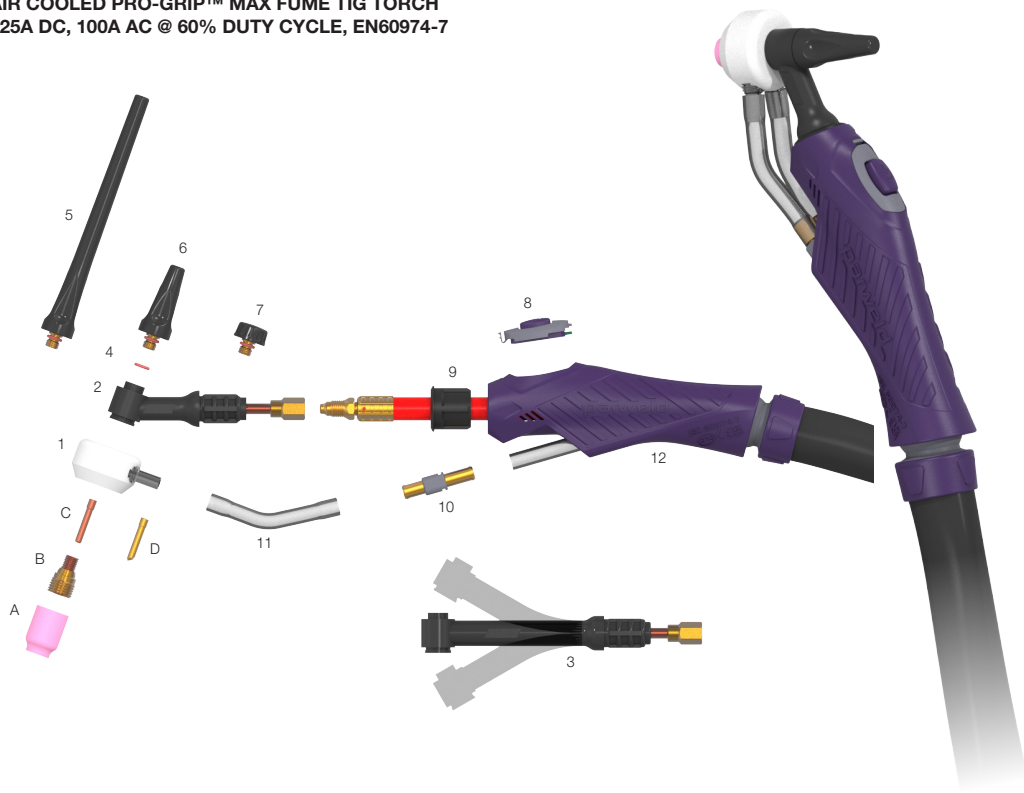
- Check 'O' rings on back cap and gas valves. These can tear and degrade.
- Check sleeve intakes for blockages.
- Check back caps and collet body for damage.

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 polarity. Check torch connection polarity. Check front consumable parts for damage, clean and replace.
Weld is contaminated, porous and discoloured	Check shield gas flow rate and correct type. 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.
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.

PFE PRO9 FUME - Front End Components

AIR COOLED PRO-GRIP™ MAX FUME TIG TORCH
125A DC, 100A AC @ 60% DUTY CYCLE, EN60974-7



STOCK CODE	DESCRIPTION
1 TX001	Fume Suction Sleeve
2 PR09	Torch Body
3 PR09FXL	Torch Body Flexible
4 98W18	Back Cap 'O' Ring
5 PR057Y02	Pro Grip Back Cap Long 112mm (4.41")
6 PR041V35	Pro Grip Back Cap Medium 49mm (1.9")

STOCK CODE	DESCRIPTION
7 PR057Y04	Pro Grip Back Cap Short 24mm (0.94")
8	TRIGGER KITS AVAILABLE
9 PROADP	Torch Head Handle Adaptor
10 PROBLK	Fume Hose Connector Block
11 PROH2	Hose for Suction Sleeve (Set of 2 x 200mm)
12 PROF200	Fume Handle Kit

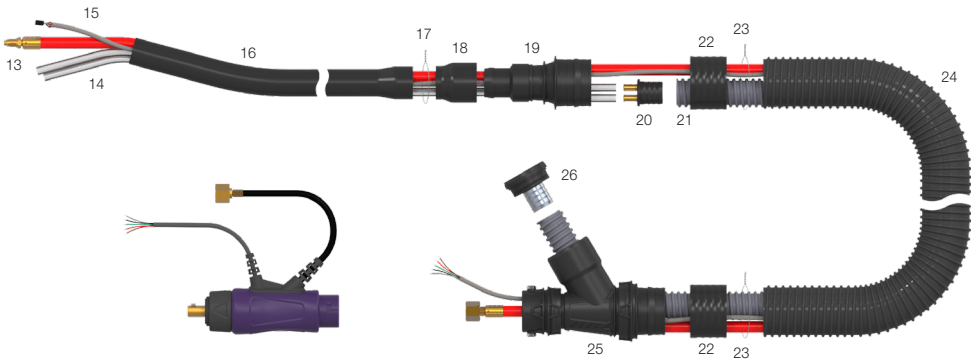
Gas Lens Cups		
A		
STOCK CODE	SIZE	BORE
53N58	4	6mm (1/4")
53N59	5	8mm (5/16")
53N60	6	10mm (3/8")
53N61	7	11mm (7/16")
53N61-S	8	13mm (1/2")

Gas Lens Bodies	
B	
STOCK CODE	ELECTRODE SIZE
45V41	0.5mm (.020")
45V42	1.0mm (.040")
45V43	1.6mm (1/16")
45V43M	2.0mm (5/64")
45V44	2.4mm (3/32")

Collets	
C	
STOCK CODE	ELECTRODE SIZE
13N20	0.5mm (.020")
13N21	1.0mm (.040")
13N22	1.6mm (1/16")
13N22M	2.0mm (5/64")
13N23	2.4mm (3/32")

Wedge Collets	
D	
STOCK CODE	ELECTRODE SIZE
13N21W	1.0mm (.040")
13N22W	1.6mm (1/16")
13N23W	2.4mm (3/32")

PFE PRO9 FUME - A/C Harness Components



For End Terminations Refer to the Fume TIG Datasheet

STOCK CODE	DESCRIPTION	STOCK CODE	DESCRIPTION
13 57Y010B 57Y030B	Power Cable x4m (12.5ft) O/Braid Power Cable x8m (25ft) O/Braid	21 PFE940 PFE980	Secondary Suction Hose for 4m (12.5ft) Secondary Suction Hose for 8m (25ft)
14 PROH2X2M	Primary Suction Hose (Set of 2 x 2m)	22 PFE3628	Heat Shrink (76mm Exp)
15 PROSWL04 PROSWL08	Switch Lead x4m (12.5ft) Switch Lead x8m (25ft)	23 PFE3629	Locking Wire clamp, Large
16 609123X2M	Sheath for Primary Harness	24 PFE5030-12 PFE5030-25	Secondary Ducting for 4m (12.5ft) Secondary Ducting for 8m (25ft)
17 PFE3625	Locking Wire Clamp, Small	25 PFE0018	Extraction Hose Connection Housing
18 PFE3624	Heat Shrink (50mm Exp)	26 PFE902	Extraction Outlet Hose Connector
19 PFE3627TIG	Sheath to Ducting Adaptor Assembly		
20 PFE901	Suction Hose Junction Fitting		

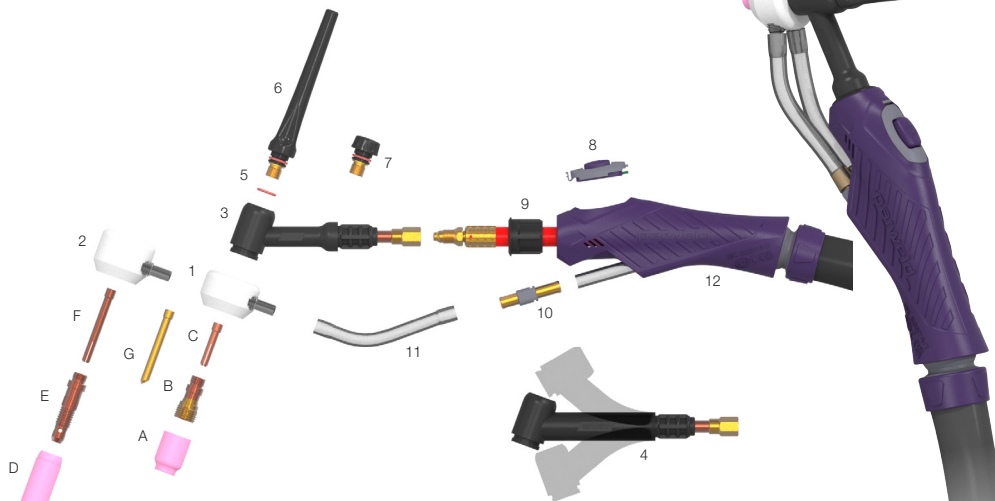
Fume Extraction Air Flow Rate Checking

Air Flow Rate Indicator	
STOCK CODE	DESCRIPTION
PFE53N	53N Series Fittings Flow Rate Indicator
PFE10N	10N Series Fittings Flow Rate Indicator



PFE PRO17 FUME - Front End Components

AIR COOLED PRO-GRIP™ MAX FUME TIG TORCH
150A DC, 115A AC @ 60% DUTY CYCLE, EN60974-7



STOCK CODE	DESCRIPTION
1 TX002	Fume Suction Sleeve
2 TX003	Fume Suction Sleeve 10N Series
3 PRO17	Torch Body
4 PRO17FX	Torch Body Flexible
5 98W18	Back Cap 'O' Ring
6 PRO57Y02	Pro Grip Back Cap Long 112mm (4.41")

STOCK CODE	DESCRIPTION
7 PRO57Y04	Pro Grip Back Cap Short 24mm (0.94")
8	TRIGGER KITS AVAILABLE
9 PROADP	Torch Head Handle Adaptor
10 PROBLK	Fume Hose Connector Block
11 PROH2	Hose for Suction Sleeve (Set of 2 x 200mm)
12 PROF200	Fume Handle Kit

Gas Lens Cups			
A			
	25mm (1")		
	Bore	9/16" UNF	
STOCK CODE	SIZE	BORE	
53N58	4	6mm (1/4")	
53N59	5	8mm (5/16")	
53N60	6	10mm (3/8")	
53N61	7	11mm (7/16")	
53N61-S	8	13mm (1/2")	

Gas Lens Bodies			
B			
	29mm (1 1/8")		
	9/16" UNF	3/8" UNEF	
STOCK CODE	ELECTRODE SIZE		
17GL020	0.5mm (.020")		
17GL040	1.0mm (.040")		
17GL116	1.6mm (1/16")		
17GL332	2.4mm (3/32")		
17GL18	3.2mm (1/8")		

Collets			
C			
	29mm (1.41")		
STOCK CODE	ELECTRODE SIZE		
10N21S	0.5mm (.020")		
10N22S	1.0mm (.040")		
10N23S	1.6mm (1/16")		
10N24S	2.4mm (3/32")		
10N25S	3.2mm (1/8")		

Ceramic Cups			
D			
	47mm (1.73")		
	Bore	13/32" UNS	
STOCK CODE	SIZE	BORE	
10N50	4	6mm (1/4")	
10N49	5	8mm (5/16")	
10N48	6	10mm (3/8")	
10N47	7	11mm (7/16")	
10N46	8	13mm (1/2")	
10N45	10	16mm (5/8")	
10N44	12	19mm (3/4")	

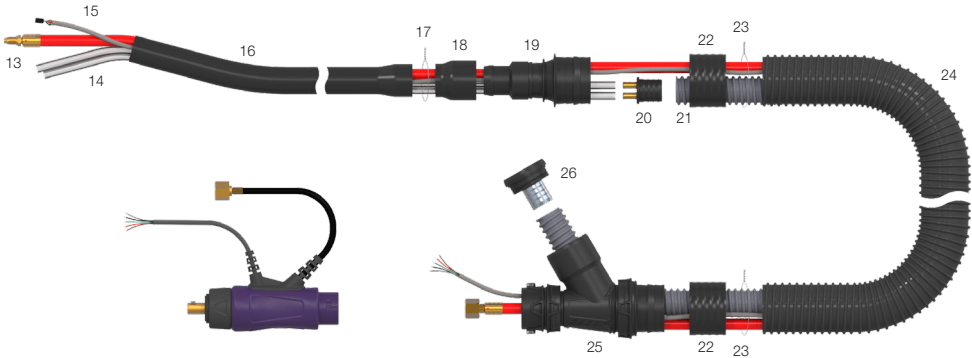
Collet Bodies			
E			
	47mm (1.73")		
	13/32" UNS	3/8" UNEF	
STOCK CODE	ELECTRODE SIZE		
10N29	0.5mm (.020")		
10N30	1.0mm (.040")		
10N31	1.6mm (1/16")		
10N31M	2.0mm (5/64")		
10N32	2.4mm (3/32")		
10N28	3.2mm (1/8")		

Collets			
F			
	50mm (2")		
STOCK CODE	ELECTRODE SIZE		
10N21	0.5mm (.020")		
10N22	1.0mm (.040")		
10N23	1.6mm (1/16")		
10N23M	2.0mm (5/64")		
10N24	2.4mm (3/32")		
10N25	3.2mm (1/8")		

Wedge Collets			
G			
	50mm (2")		
STOCK CODE	ELECTRODE SIZE		
10N22W	1.0mm (.040")		
10N23W	1.6mm (1/16")		
10N24W	2.4mm (3/32")		
10N25W	3.2mm (1/8")		

PFE PRO17 FUME - A/C Harness Components

TORCH COMPONENTS



For End Terminations Refer to the Fume TIG Datasheet

STOCK CODE	DESCRIPTION	STOCK CODE	DESCRIPTION
13 57Y010B 57Y030B	Power Cable x4m (12.5ft) O/Braid Power Cable x8m (25ft) O/Braid	21 PFE940 PFE980	Secondary Suction Hose for 4m (12.5ft) Secondary Suction Hose for 8m (25ft)
14 PROH2X2M	Primary Suction Hose (Set of 2 x 2m)	22 PFE3628	Heat Shrink (76mm Exp)
15 PROSWL04 PROSWL08	Switch Lead x4m (12.5ft) Switch Lead x8m (25ft)	23 PFE3629	Locking Wire clamp, Large
16 609123X2M	Sheath for Primary Harness	24 PFE5030-12 PFE5030-25	Secondary Ducting for 4m (12.5ft) Secondary Ducting for 8m (25ft)
17 PFE3625	Locking Wire Clamp, Small	25 PFE0018	Extraction Hose Connection Housing
18 PFE3624	Heat Shrink (50mm Exp)	26 PFE902	Extraction Outlet Hose Connector
19 PFE3627TIG	Sheath to Ducting Adaptor Assembly		
20 PFE901	Suction Hose Junction Fitting		

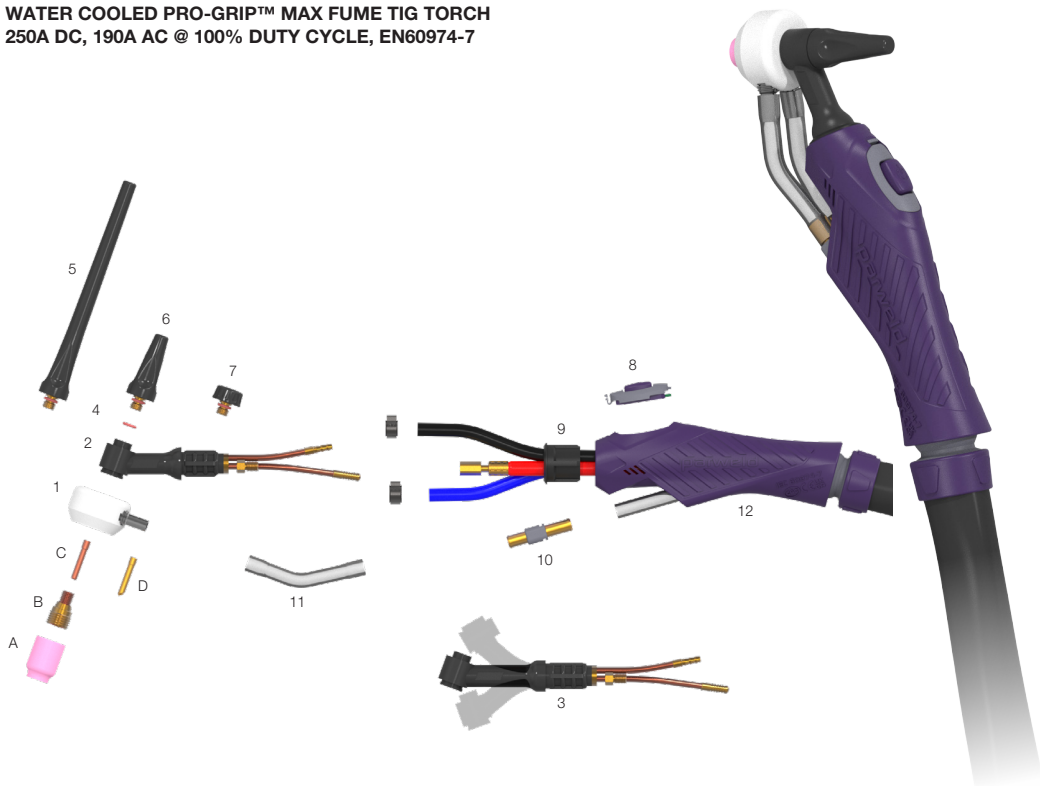
Fume Extraction Air Flow Rate Checking

Air Flow Rate Indicator	
STOCK CODE	DESCRIPTION
PFE53N	53N Series Fittings Flow Rate Indicator
PFE10N	10N Series Fittings Flow Rate Indicator



PFE PRO20 FUME - Front End Components

WATER COOLED PRO-GRIP™ MAX FUME TIG TORCH
250A DC, 190A AC @ 100% DUTY CYCLE, EN60974-7



STOCK CODE	DESCRIPTION
1 TX001	Fume Suction Sleeve
2 PRO20	Torch Body
3 PRO20FXL	Torch Body Flexible
4 98W18	Back Cap 'O' Ring
5 PRO57Y02	Pro Grip Back Cap Long 112mm (4.41")
6 PRO41V35	Pro Grip Back Cap Medium 49mm (1.9")

STOCK CODE	DESCRIPTION
7 PRO57Y04	Pro Grip Back Cap Short 24mm (0.94")
8	TRIGGER KITS AVAILABLE
9 PROADP	Torch Head Handle Adaptor
10 PROBLK	Fume Hose Connector Block
11 PROH2	Hose for Suction Sleeve (Set of 2 x 200mm)
12 PROF200	Fume Handle Kit

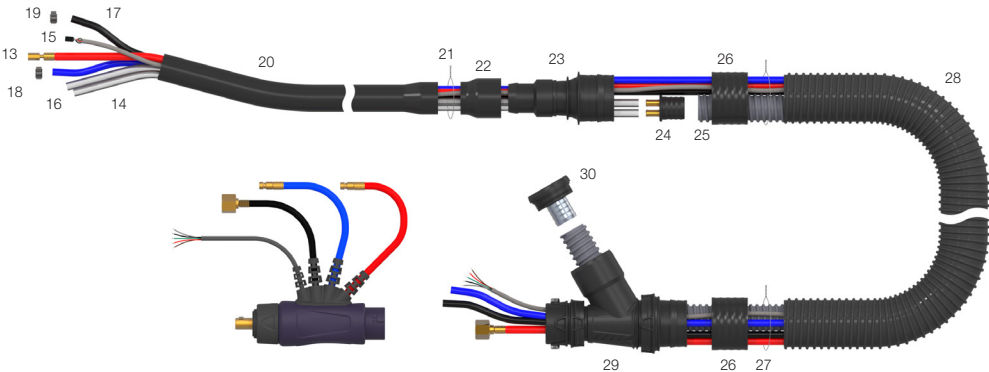
Gas Lens Cups		
A		
STOCK CODE	SIZE	BORE
53N58	4	6mm (1/4")
53N59	5	8mm (5/16")
53N60	6	10mm (3/8")
53N61	7	11mm (7/16")
53N61-S	8	13mm (1/2")

Gas Lens Bodies	
B	
STOCK CODE	ELECTRODE SIZE
45V41	0.5mm (.020")
45V42	1.0mm (.040")
45V43	1.6mm (1/16")
45V43M	2.0mm (5/64")
45V44	2.4mm (3/32")

Collets	
C	
STOCK CODE	ELECTRODE SIZE
13N20	0.5mm (.020")
13N21	1.0mm (.040")
13N22	1.6mm (1/16")
13N22M	2.0mm (5/64")
13N23	2.4mm (3/32")

Wedge Collets	
D	
STOCK CODE	ELECTRODE SIZE
13N21W	1.0mm (.040")
13N22W	1.6mm (1/16")
13N23W	2.4mm (3/32")

PFE PRO20 FUME - W/C Harness Components



For End Terminations Refer to the Fume TIG Datasheet

STOCK CODE	DESCRIPTION
13 45V030B	Power Cable x4m (12.5ft) O/Braid
45V040B	Power Cable x8m (25ft) O/Braid
14 PROH2X2M	Primary Suction Hose (Set of 2 x 2m)
15 PROSWL04	Switch Lead x4m (12.5ft)
PROSWL08	Switch Lead x8m (25ft)
16 45V070B	Water Hose x4m (12.5ft) O/Braid
45V080B	Water Hose x8m (25ft) O/Braid
17 45V090B	Gas Hose x4m (12.5ft) O/Braid
45V100B	Gas Hose x8m (25ft) O/Braid
18 B5025	Hose Clamp 9.5mm
19 B5024	Hose Clamp 8.7mm
20 609123X2M	Sheath for Primary Harness

STOCK CODE	DESCRIPTION
21 PFE3625	Locking Wire Clamp, Small
22 PFE3624	Heat Shrink (50mm Exp)
23 PFE3627TIG	Sheath to Ducting Adaptor Assembly
24 PFE901	Suction Hose Junction Fitting
25 PFE940	Secondary Suction Hose for 4m (12.5ft)
PFE980	Secondary Suction Hose for 8m (25ft)
26 PFE3628	Heat Shrink (76mm Exp)
27 PFE3629	Locking Wire clamp, Large
28 PFE5030-12	Secondary Ducting for 4m (12.5ft)
PFE5030-25	Secondary Ducting for 8m (25ft)
29 PFE0018	Extraction Hose Connection Housing
30 PFE902	Extraction Outlet Hose Connector

Fume Extraction Air Flow Rate Checking

Air Flow Rate Indicator	
STOCK CODE	DESCRIPTION
PFE53N	53N Series Fittings Flow Rate Indicator
PFE10N	10N Series Fittings Flow Rate Indicator





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