

THE
PROPELTM
TORCH

HIGH PERFORMANCE CLEANING



INSTRUCTION MANUAL

Contents

Introduction.....	3
Installing & Replacing the Brush.....	4
Operating the PROPEL Torch.....	5
PROPEL Torch Care.....	6
Replacing the Collet Assembly.....	7
Consumables & Replacement Parts.....	9
TIG Brush Accessories.....	10

Introduction

Congratulations on purchasing a new TIG Brush PROPEL Torch. We expect this will provide you with many years of Stainless Steel weld cleaning satisfaction.

Take the time to read through this instruction manual before operating your new PROPEL Torch. This will ensure that the tool performs at its peak at all times, whilst operating within the recommended safety parameters.

Warning

- Do not operate the PROPEL Torch without TIG Brush weld cleaning fluids.
- Do not allow the Brush to dry out during use, as this will result in damage to components.
- The Brush may become very hot during use. Allow the Brush to cool before removal.
- Do not use the PROPEL Torch for any other purpose than recommended in this manual.
- Do not alter or modify the PROPEL Torch. Only use genuine TIG Brush replacement parts for service or repairs.
- The PROPEL Torch has been designed for exclusive use with selected TIG Brush units manufactured by Ensitech. Using the PROPEL Torch with any third party machines may result in personal injury and damage to the product or property.

Installing & Replacing the Brush

1. To install or replace the Brush, turn the Drive Sleeve clockwise until it stops.
Do NOT overwind the Drive Sleeve!
2. Insert the brass end of the Brush into the nose of the Shroud until it is seated in the Collet. The Brush should slide into the Collet with minimal resistance (see figure 1).

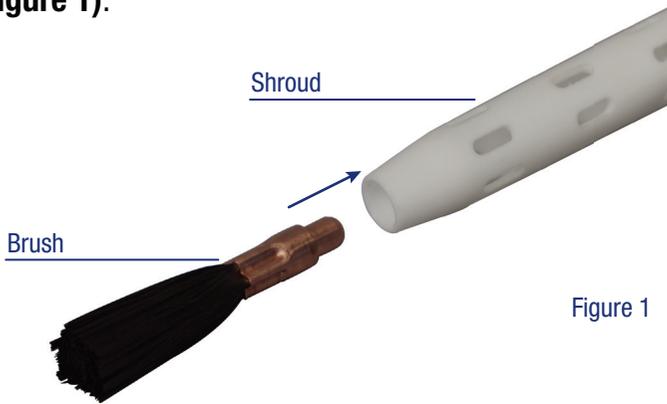


Figure 1

3. Once the Brush is seated in the Collet, turn the Drive Sleeve anti-clockwise half a turn, and lightly pull the Brush to ensure it is securely seated. Now that the Brush is secure, retract the Brush back into the Shroud by turning the Drive Sleeve anti-clockwise, until it leaves approximately 1/2" – 5/8" of the Brush exposed.
4. When the Brush requires replacement, repeat steps 1- 3 for Brush replacement.

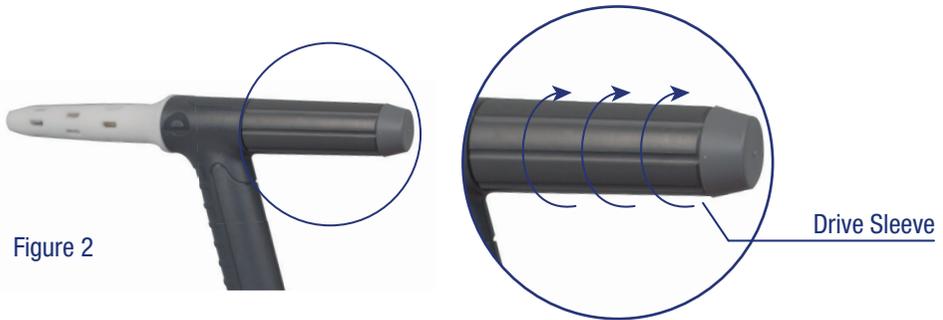
Note: If the Shroud becomes warped due to overheating the Brush will become difficult to fit or remove. To prevent this, make sure the Brush does not dry out while in use.

Warning! The Brush may be extremely hot from use.

Operating the PROPEL Torch

Turn the Drive Sleeve clockwise to adjust the length of the Brush protruding from the Shroud. For optimal performance, 1/2" – 5/8" of the Brush is only required to be exposed.

1. Dip the Brush into the Weld Cleaning fluid, making sure the Brush is soaked.
2. Apply the tip of the Brush to the workpiece and use small circular motions over the area to be cleaned, until the desired result is achieved. Do NOT push down on the Brush. This will not improve the cleaning performance and will result in premature Brush wear.
3. As the Brush wears, adjust the length by turning the Drive Sleeve clockwise (see figure 2). When the Brush is unable to protrude 1/2" – 5/8" from the tip of the Shroud, replace the Brush by following the 'Installing & Replacing the Brush' Instructions.



Important! Do not allow the Brush to dry out during use. Re-dip the Brush as required to keep it wet during use. Cleaning with a dry Brush will result in an increase of Brush sparking and will leave Brush burn marks on the workpiece.

PROPEL Torch Care

The PROPEL Torch, Collet Assembly and Brush must be kept clean to provide trouble-free service. Regular cleaning of the PROPEL Torch will prolong the service life of the components.

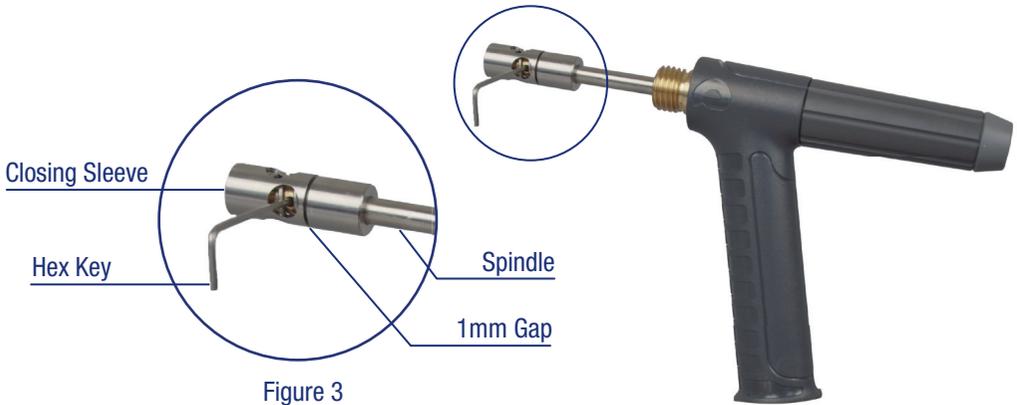
1. At the end of use, remove the Brush and the Shroud as previously described and rinse with clean water. Rinse the Collet Assembly and any part of the PROPEL Torch which may have cleaning fluid residue on it after use.
2. After rinsing components with clean water, spray with neutralising fluid (**see below for compatible neutralizing fluids**) and re-rinse.
 - Neutralise with TB-42 if using TB-25 & TB-21ND weld cleaning fluid
 - Neutralise with TB-41 if using TB30ND weld cleaning fluid
3. Allow to dry before reassembling.

Important! If residue from weld cleaning fluids remains on the Brush, Brush base or Collet, corrosion will form and seize the threads. Corrosion will reduce the PROPEL Torch performance and increase wear of components.

Replacing the Collet Assembly

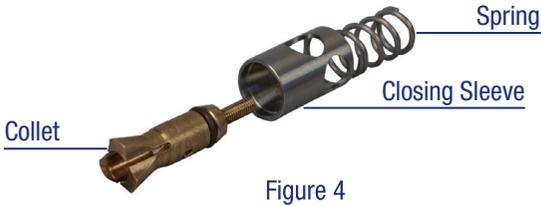
The PROPEL Collet is a consumable item which may last for approximately 20 Brushes. Replacement Collet Assemblies are supplied with a Spring which should be replaced with the Collet.

1. Remove the Brush as previously described from the PROPEL Torch.
2. Wind the Collet back slightly by turning the Drive Sleeve half a turn anti-clock wise.
3. Remove the Shroud by unscrewing it anti-clockwise.
4. Use a tool, such as a 3/32" hex key, through the side hole in the Collet. Rotate it anti-clockwise to undo the Collet (**see figure 3**).



Note: You may need to rotate the Closing Sleeve to expose the hole in the Collet side.

5. Fit the new Spring over the Collet inside the Closing Sleeve (**see figure 4**) and screw the Collet thread through the Spring Retainer and into the Spindle (**see figure 5**).



6. Secure the Collet using the 3/32" hex key through the hole in the brass Collet and rotate it clockwise to tighten the Collet. The Collet should be firmly fitted but not overtightened. Only apply light pressure when tightening.

Note: A loose fitted Collet may overheat and damage the PROPEL Torch.

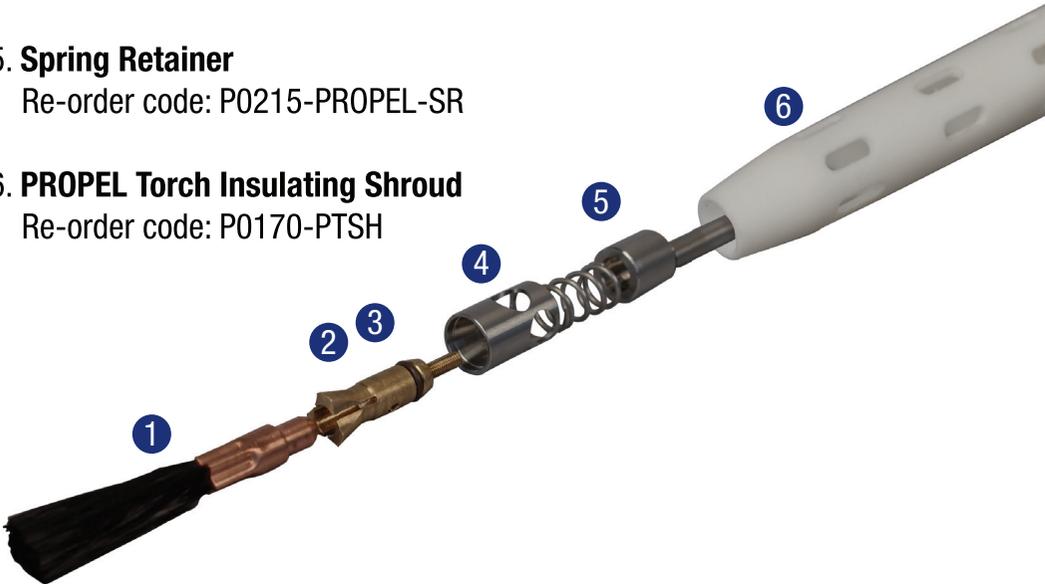
7. Refit the Shroud and the Brush before use.

Note: The Collet should be checked regularly to ensure it has not become loose. When correctly fitted, there should be a 1/25" gap between the Closing Sleeve and the Spring Retainer (**see figure 3**). The Closing Sleeve should move to touch the Spring Retainer and spring back.

Consumable & Replacement Parts

The combination of electrical current, heat and acid places extreme stress on the working end of the PROPEL Torch. Certain parts of the PROPEL will degrade during normal use and need to be replaced overtime. The following replacement parts are available.

- 1. PROPEL Torch Brushes (10 pack)**
Re-order code: P1106-0010
- 2. PROPEL Torch Collet (1 pack)**
Re-order code: K-PROPL-CSPck-0001
- 3. PROPEL Torch Collet (5 pack)**
Re-order code: K-PROPL-CSPck-0005
- 4. Closing Sleeve**
Re-order code: P0208-SLEEVE-PROPEL
- 5. Spring Retainer**
Re-order code: P0215-PROPEL-SR
- 6. PROPEL Torch Insulating Shroud**
Re-order code: P0170-PTSH



TIG Brush Accessories

TIG Brush components and accessories are designed and manufactured to Ensitech's specifications, ensuring complete compatibility with the TIG Brush weld cleaning system. This offers both, flexibility and control of your cleaning requirements.

For maximum safety, performance, and to maximise the value of your investment in TIG Brush technology, you should insist on genuine TIG Brush accessories and consumables from your local supplier.



Branding Kit

The TIG Brush can also be used to print & engrave on stainless steel products with identifying marks such as logos, part numbers and barcodes.



Flexi Handle Cable

Ergonomic flexible handle – can be positioned to suit operator and/or work piece.



Extension Cables

Available to increase reach to 20ft, 40ft and 60ft, making it easy to use the TIG Brush for less-accessible work. Available individually (red or black cables)

Notes

What is TIG Brush Technology?

The TIG Brush Stainless Steel Weld Cleaning System uses a unique combination of electricity, heat and chemistry to deliver superior results in weld cleaning and metal surface finishing.

Driving the TIG Brush is Ensitech's Dynamic Power Transfer®. This patented technology maximizes the efficiency of heat transfer to the work surface and ensures optimum performance in demanding operating conditions. The TIG Brush uses low-toxicity fluids that are custom-designed to maximise efficiency and user safety while protecting the environment. This powerful combination is the result of continued product development, to provide each industry with innovative products that are 'Always Leading'.

Notes:

Serial Number:



Ensitech Inc.
+1 630 405 6440
sales@tigbrush.com
340 Marshall Ave, Bldg #104
Aurora IL 60506

MARCH 2021