

KIRTILAL

*Metalworking LLP*

**TIG Brush™**

POWERED BY ENSITECH

Always Leading

"...MY ONLY HESITATION IN WRITING  
THIS [REVIEW] IS THAT MY COMPETITION  
MIGHT SEE IT AND BUY ONE."

-DAVID VINE, MANAGING DIRECTOR OF BELL STAINLESS



**2021/22**  
**PRODUCT CATALOGUE**

Buy TIG Brush and other Industrial Products  
at [www.kirtilal.com](http://www.kirtilal.com)

# QUALITY FROM START TO FINISH



## OUR STORY

In 2004, as an electrical engineer I was approached to help find a solution for a friend who had received a large contract to manufacture a coin chute panel for a fast-food chain. The panel would be strategically positioned just under the drive-through payment window so customers could drop spare coins into it as a charitable donation. Both the coin chute and panel were to be made of stainless steel. However, there was a problem, that being when the stainless steel was welded a black oxide formed over the weld. Not only did this “heat tint” look ugly, it destroyed the ability of the stainless steel to protect itself against corrosion. So, it was important to find a way to remove the heat tint and restore the properties of the metal surface, without damaging the look of the metal.

My friend had tried some traditional methods to remove the unsightly discolouration, but none had proved effective or even safe in removing the heat tint. He refused to use Pickling paste, which is particularly dangerous as it contains hydrofluoric acid. Abrasives caused damage to the surface of the panel, destroying the brushed finish the customer required. An electrolytic weld cleaner was borrowed and tried, but the felt covered electrode was too big to reach the weld around the coin chute.

I started working spare nights and weekends utilising my electronic engineering skills to determine a way to remove the heat tint. Together with my friend and an aeronautical engineer, we developed a conductive high temperature brush, that provided the perfect solution. The conductive brush delivered high current to the metal surface in the presence of a mild electrolytic fluid. In 2006 we formed Ensitech and began to manufacture the TIG Brush Stainless Steel Weld Cleaning System. The invention was a unique fast, safe and effective solution which didn’t alter the surface of the stainless steel.

We started to manufacture the TIG Brush on a small scale offering it to welding consumable distributors in Australia and the response was overwhelming. In fact, Ensitech’s new method of removing heat tint was so successful the TIG Brush brand became synonymous with stainless steel weld cleaning. The company is now recognized as a global leader in the area of metal surface finishing.

**Clive White**  
CEO & Founder





# ENSITECH® HISTORY

## WE INVENTED IT.

## EVERYONE FOLLOWED.

## THEY'RE STILL FOLLOWING.



Always Innovating. Improving. Leading.

## ENSITECH MANUFACTURER'S WARRANTY

Ensitech Inc. provides warranty against defects that are a result of faulty manufacturer workmanship or materials. You may claim on this warranty if you notify Ensitech of the defect and if you comply with the other procedures and conditions of this warranty, within:

- in the case of the TIG Brush™ control unit, two years; or
- in the case of the Propel Torch, six months; or
- in the case of clamp cables or handle cables, three months, of the date of purchase of the product by you.

The warranty applies to and can be exercised by the original purchaser of the product only. This warranty is not transferrable to any other person or party under any circumstances.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for major failure and for compensation for any reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. For full warranty details consult your User Manual or our website [www.tigbrush.com](http://www.tigbrush.com).

## BUY FROM AUTHORIZED DISTRIBUTORS

Ensitech complements its high-quality product offering by partnering with exceptional retail partners worldwide. Our extensive distribution channels allow us to service metal fabricators across all corners of the globe and offer products specifically tailored to meet the industry's needs.

You will not find our products distributed through large hardware retailers whose focus is solely on volume. Through our choice of distribution partners, we aim to ensure you are receiving the best advice, and the products that you need. We understand the importance of after sales service and this means not only meeting the needs of our customers for high-quality products, but also partnering with distributors who are able to offer advice and training specific to your application or job.

Certified TIG Brush dealers/distributors are carefully chosen because they demonstrate the same core values as our brand. While we offer three tiers of distribution partners, Elite, Pro and Resellers, Elite dealers/distributors offer the highest level of knowledge combined with high-value service, enabling customers to buy Ensitech products with confidence. Elite dealers/distributors are also active with in-field demonstrations, remain dedicated to keeping stock of consumables on hand and maintain knowledge of the correct training and use of these products.



# NEVER WAIT AGAIN.

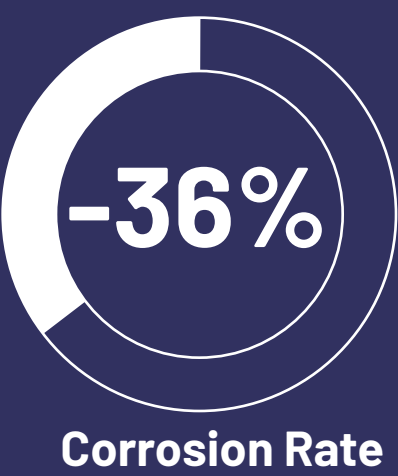
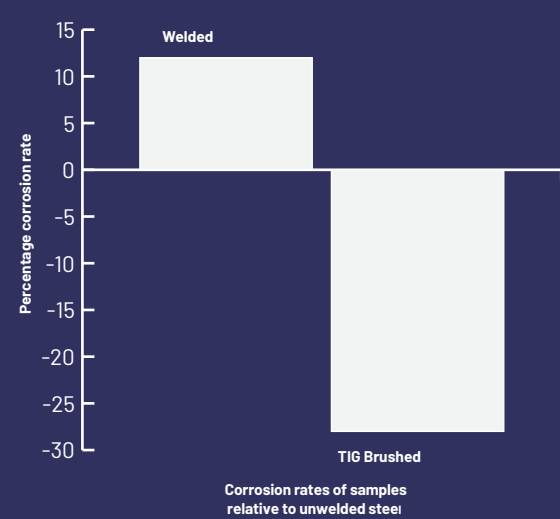
The TIG Brush delivers effortless, year-round continuous operation and each model is built to meet your need.

## CLEAN FASTER\*



Pickling paste vs TIG Brush 700 model

## REDUCE CORROSION



INSTANT RESULTS



FASTER PERFORMANCE



CONSISTENT POWER



SAFER OPERATION

vs. Pickling paste on 1 meter weld.

# CLEAN 10X FASTER.\*

BEFORE



AFTER



## Standards and Accreditations

### ASTM International Standards



Meeting the global standards for passivating stainless steel ASTM A967-05 and B912-02

### Quality Assurance



Ensitech is an accredited ISO 9001 company. This is your assurance that what we do is the highest standards.

### NSF Certification



All of Ensitech's cleaning chemicals adhere to strict international public health standards.





## Why John McKenna Chose TIG Brush for his 33-foot Stainless Steel Sculpture.

Faced with having to clean and passivate thousands of spot welds, John chose a weld cleaning machine that was simpler, faster, safer and guaranteed the highest quality of passivation compared to pickling paste.



steel sheets were joined by small plug or spot welds that suggests the rivets of the shipbuilders; masses and masses of them, so John had loads of heat mark cleaning to do as well as making sure all pieces were passivated prior to installation. John needed a process that was simple to use, faster and safer than pickling paste, and also guaranteed the highest quality of passivation.

### The solution

Long established UK TIG Brush distributor, Engineering Utilities, demonstrated the TIG Brush's capabilities to John and he was sold on the process.

In 2014, John and A4A were the proud winner of the Port Glasgow Sculpture competition, the criteria of which was to create a lasting tribute to the shipbuilders of Glasgow. Once installed, this enormous sculpture will make a mark on the global art community given the sculpture's impressive size. The original installation had been planned for November 2020 however, due to COVID this has now been set back to begin in the latter part of this year. This magnificent and colossal tribute in recognition of the UK and Glasgow community's shipbuilding history will be positioned close to the water in Bay Park, near Coronation Park in Port Glasgow.

### John's challenge

The project has taken approximately 7 years from idea to finish and is the longest & biggest work John has executed. The thousands of pieces of 316L stainless

McKenna chose to exclusively use the TIG Brush for his weld cleaning needs given the speed, efficiency, and safety of the technology. "As a professional sculptor, artwork fabricated from stainless steel has the potential to last hundreds of years given its durability, but because it is such an industrial process to create, it can be a real challenge to work with," McKenna said.

### The result

Prior to using the TIG Brush, John had used pickling paste to clean the stainless steel welds. He emphasizes, "before discovering the TIG Brush, we would clean stainless steel using strong chemicals that were unsafe to breathe or touch, and we knew we needed something better. We were amazed at how easy and safe the TIG Brush was to use and how quickly we could get a clean weld — you put your clamp on, dip the brush in and run it across the weld. Comparing the TIG Brush electrochemical weld cleaning process to the lengthy pickling paste process I have used in the past, it's a no brainer for steel fabricators to use."



# WELD CLEANING MACHINES

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# PREMIUM FINISHING FLUIDS

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# COMPONENTS & ACCESSORIES

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# 440 SERIES

“WE WERE SOLD AS SOON AS WE SAW THE TIG BRUSH CLEAN UP OUR WORST WELDS IN SECONDS.”

-TODD CULL, GM OF DIAMOND MANUFACTURING



## TIG Brush™ TBE-440

The most affordable machine while delivering the same results

DYNAMIC POWER SELECTION

DYNAMIC MODE CONTROL

FASTEST IN ITS CLASS

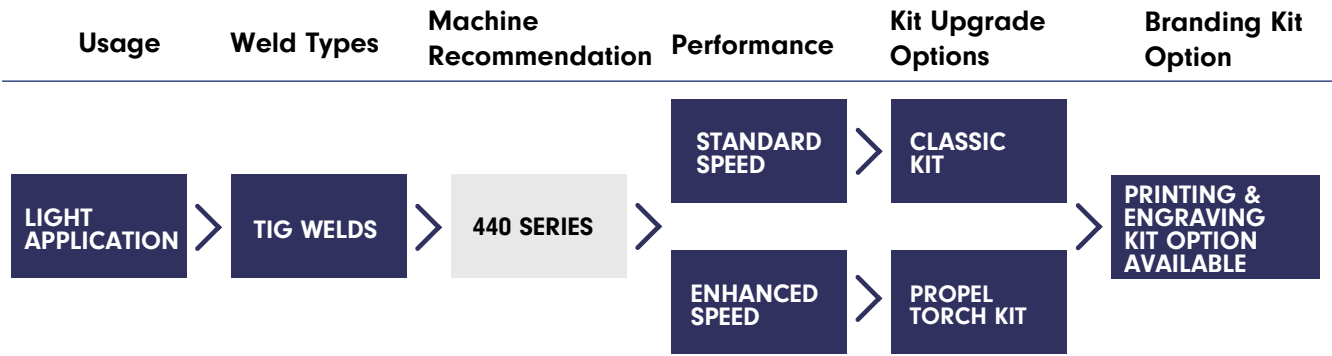
The 440 is perfect for the light user while still maintaining the reliability and quality you’ve come to expect from Ensitech. The 440’s design and innovative technology continues to utilize our proven combination of heat, chemistry and electricity to clean and passivate your welds quickly, efficiently and safely.



### LIGHT APPLICATION

|                                   | TBE-440    |
|-----------------------------------|------------|
| CLEANING, PASSIVATION & POLISHING | ✓          |
| 100% DUTY CYCLE                   | ✓          |
| IP65 DUST & WATER PROTECTION      | ✓          |
| CLEAN THICKNESS                   | Up to 1/4" |
| WELD CLEANING OPTIONS             | TIG WELD   |
| OXIDATION LEVELS                  | LIGHT      |
| PERFORMANCE & SPEED               | STANDARD   |

### MACHINE SELECTOR GUIDE





# 550 SERIES

“TIG BRUSH MACHINE IS ABOUT 3 TIMES FASTER THAN THE MACHINE WE WERE USING...”

-DAN JAMES, KEY TECHNOLOGIES



## TIG Brush™ TBE-550

The most affordable machine while delivering the same results

### DYNAMIC POWER SELECTION

### DYNAMIC MODE CONTROL

### OPTIMIZED FOR PROPEL™ TORCH

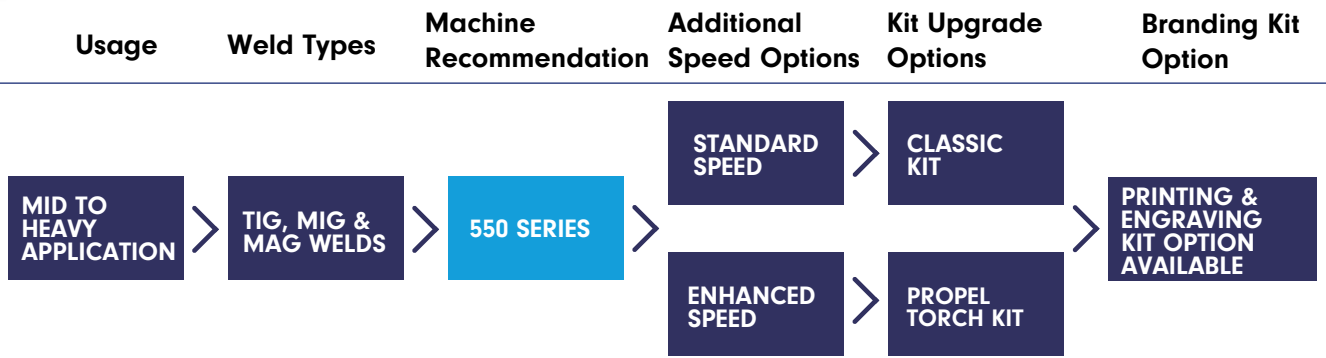
The 550 utilizes design and technology such as the 100% duty cycle and Dynamic Power Transfer to deliver fast, powerful and consistent performance for the mid to heavy applications. You can rest assured the 550 will clean and passivate the darker TIG & MIG welds and it will also polish, print and engrave.



### MID TO HEAVY APPLICATION

|                                   | TBE-550         |
|-----------------------------------|-----------------|
| CLEANING, PASSIVATION & POLISHING | ✓               |
| 100% DUTY CYCLE                   | ✓               |
| IP65 DUST & WATER PROTECTION      | ✓               |
| CLEAN THICKNESS                   | Up to 1/2"      |
| WELD CLEANING OPTIONS             | TIG & MIG, WELD |
| OXIDATION LEVELS                  | MEDIUM          |
| PERFORMANCE & SPEED               | MEDIUM          |

### MACHINE SELECTOR GUIDE



# 700 SERIES

“BY FAR THE BEST PURCHASE WE HAVE MADE IN A VERY LONG TIME ...TO BE HONEST MY ONLY HESITATION IN WRITING THIS IS THAT MY COMPETITION MIGHT SEE IT AND BUY ONE”

-DAVID VINE, MANAGING DIRECTOR OF BELL STAINLESS



## TIG Brush™ TBE-700

The fastest MIG & TIG electrolytic weld cleaner in the world

### DYNAMIC POWER SELECTION

### DYNAMIC MODE CONTROL

### HIGHEST POWER ON THE MARKET

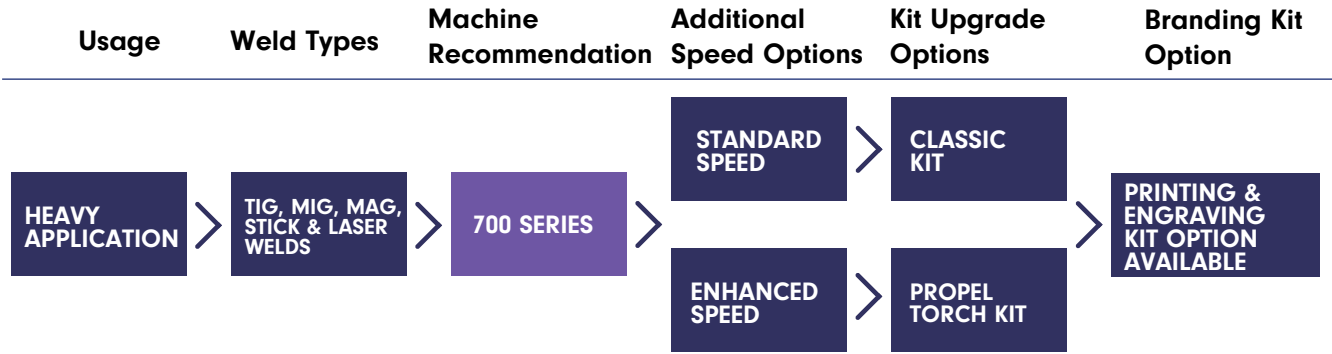
The TIG Brush 700 series is recognised throughout the industry as the fastest, and most powerful electrochemical weld cleaning system in its class. Fundamental features in design include the patented Dynamic Power Transfer and 100% Duty Cycle.

The combination of these unique features ensures the 700 has maximal and continual power to quickly remove heat tint and passivate the surface instantaneously without altering the surface finish of your work.



| HEAVY APPLICATION                 | TBE-700              |
|-----------------------------------|----------------------|
| CLEANING, PASSIVATION & POLISHING | ✓                    |
| 100% DUTY CYCLE                   | ✓                    |
| IP65 DUST & WATER PROTECTION      | ✓                    |
| CLEAN THICKNESS                   | Up to 1"             |
| WELD CLEANING OPTIONS             | HEAVY TIG & MID WELD |
| OXIDATION LEVELS                  | HEAVY                |
| PERFORMANCE & SPEED               | HIGH                 |

## MACHINE SELECTOR GUIDE





# Beautifully Branded on Stainless Steel

The TIG Brush Branding Kit allows you to permanently  
print or engrave on stainless steel with your logo,  
company name, part numbers and more.

**Print**

**Engrave**

**TIG Brush™**

POWERED BY ENSITECH

Always Leading

**Branding Kit**

POWERED BY ENSITECH

Print & Engrave on Stainless Steel

# KITS & UPGRADES



## PROPEL TORCH KIT

The world's first adjustable weld cleaning torch



The PROPEL Torch radically improves the application process of the TIG Brush. It gives you precision control over the length of your brush, a more powerful point of contact with the work surface and its ergonomic design increases the comfort of use.



## BRANDING KIT

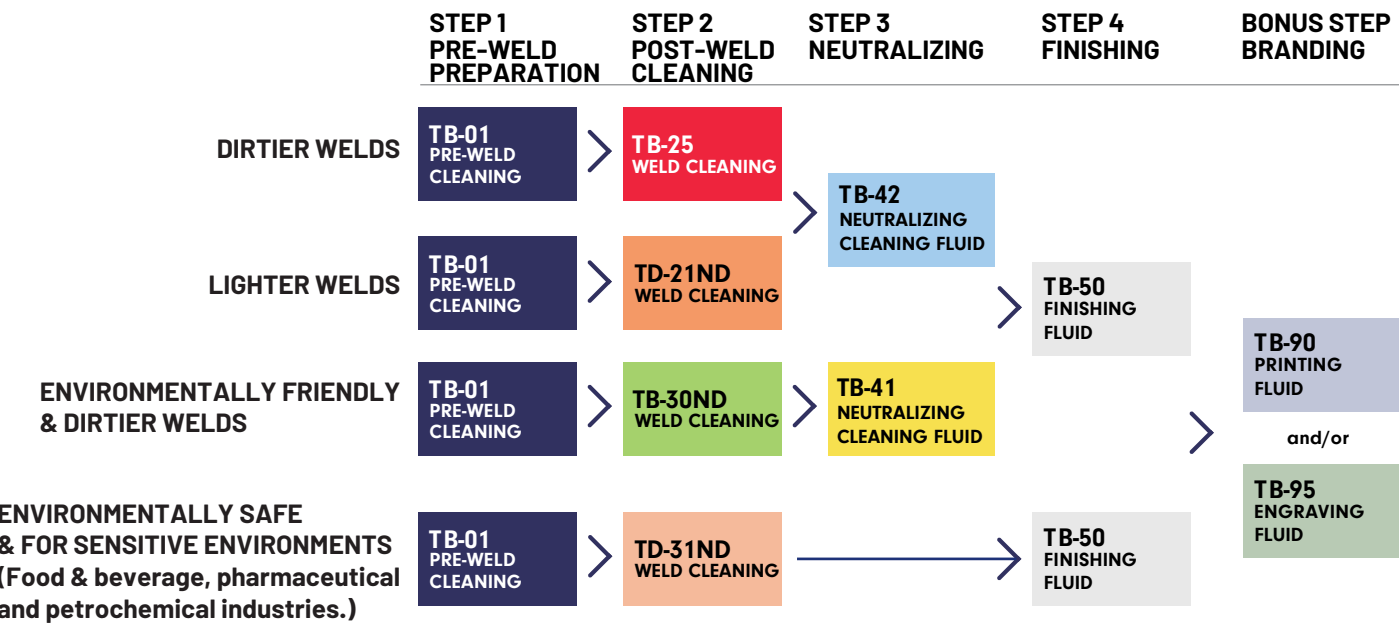
The easiest way to brand your welds



Print or Engrave on Stainless Steel

The TIG Brush can also be used together with the Branding Kit to print & engrave on stainless steel products with identifying marks such as logos, part numbers and barcodes. The Branding Kit has many possible applications including product branding, asset identification, assisting with parts ordering, and recording of maintenance work. Using a special branding head (a solid electrode in place of a brush), combined with a felt pad and appropriate fluid, permanent marking of stainless steel becomes fast and easy.

# TIG Brush™ Fluid Selector Guide



# Premium Range of Fluids



Ensitech has invested heavily in market-leading research and development to create a complete, premium range of fluids for every aspect of stainless steel surface preparation, weld cleaning and finishing. In addition to this, Ensitech fluids are NSF certified and conform to the requirements of the NSF Non-Food Compounds Registration Programme. The NSF mark is your assurance that Ensitech fluids have been tested and certified by one of the most respected independent certification organization.

## PRE-WELD CLEANING

Removal of contaminants prior to welding is a sensible strategy to ensure firstly that the best weld quality is obtained and then a quick and effective clean and passivation is achieved with the TIG Brush weld cleaning process.



### TB-01 PRE-WELD CLEANING FLUID

Developed to remove residues such as light oils and greases on stainless steel surfaces. If contaminants are not removed, they can be included in the weld, leading to unsightly and difficult to remove inclusions in the weld. Using TB-01 first to remove these contaminants will ensure a cleaner weld and provide more efficient post weld cleaning and passivation. NSF Registration number: 150959 NSF Category Code: A1

## CHOOSING THE APPROPRIATE CLEANING FLUID

With a choice of four innovative cleaning fluids from chemically stringent to high-powered, genuine TIG Brush stainless steel cleaning fluids simultaneously clean and passivate with proven results.



### TB-21ND WELD CLEANING FLUID

A light-duty, high performance fluid, which cleans, polishes and passivates stainless steel without the corrosive classification given to TB-25. Its Non-Dangerous rating makes it slightly easier to handle and economical on freight costs. For best results, neutralize with TB-42 after cleaning. NSF Registration Number: 150090 NSF Category Code: A3



### TB-25 WELD CLEANING FLUID

This high-powered premium stainless steel weld cleaning fluid is the strongest, fastest cleaning fluid in the range. With the highest quality components at high concentrations, TB-25 gives the user unequalled performance in cleaning, polishing and passivating on the harshest stainless steel welds. For best results, neutralise with TB-42 after cleaning. NSF Registration Number: 150001 NS



### TB-30ND WELD CLEANING FLUID

A biodegradable stainless steel weld-cleaning fluid developed for use in facilities where corrosive chemicals are not permitted. Environmentally friendly, it cleans as effectively as TB-25, but does not polish. For best results, neutralize with TB-41 after cleaning. NSF Registration Number: 150056 NSF Category Code A3



### TB-31ND WELD CLEANING FLUID

When you have a need for added safety, this custom designed and patented fluid is pH neutral, fast-acting and needs no separate neutralization process. It cleans and passivates without polishing, leaves no white frosting and does not alter high-polish stainless. It is especially suited to the needs of sensitive environments such as food and beverage, pharmaceutical and petrochemical industries. Environmentally safe TB-31ND allows maximum safety in use, handling, storage and transport. NSF Registration Number: 150057 NSF Category Code A1





## NEUTRALIZING THE SURFACE

Before using any of the TIG Brush neutralizing fluids, rinse off the cleaning fluid thoroughly with clean water. Then apply the appropriate neutralizing fluid to remove any of the residual acidity. If your work has tendency to form a white “frosting” on the metal surface, the TIG Brush neutralizing products reduce this. As the white frosting can occur after many days, it is important to use your neutralizing fluid as soon as possible after cleaning.



### TB-42 NEUTRALIZING FLUID FOR TB-21IND AND TB-25

A non-dangerous (non-flammable, non-corrosive) formulation specifically developed for neutralization of TB-21ND and TB-25 without the development of any toxic or corrosive products. TB-42 neutralizing fluid is an important preventative step in the complete removal of any acidic chemicals on the work surface. NSF Registration Number: 151122 NSF Category Code P1



### TB-41 NEUTRALIZING FLUID FOR TB-30ND

Also a non-dangerous (non-flammable, non-corrosive) formulation, developed for neutralizing TB-30ND, TB-41 contains a range of fast acting, effective components that neutralize any residual acidic components within seconds. TB-41 contains unique components that remove the complex chemistry of TB-30ND. NSF Registration Number: 150174 NSF Category Code P1

## FINISHING

Application of a finishing fluid will increase surface reflectability and prevent your perfect finished surfaces from marking through handling.



### TB-50 FINISHING FLUID

Cleans, brightens but also resists handling marks by leaving a molecular level layer on the surface of the stainless steel. Wipe or spray the cooled finished surface with TB-50, rinse down with water then buff with a microfiber cloth to achieve a brilliant shine and fingerprint resistance. NSF Registration Number: 150074 NSF Category Code: A1

## PRINTING & ENGRAVING

Be proud of your work. Ensitech’s marking fluid can be used to permanently mark stainless steel with branding, logos, part numbers, barcodes etc. Ask for details of our Marking Kits and custom stencils.



### TB-90 PRINTING FLUID FOR STAINLESS STEEL

Used with your TIG Brush with a specially engineered conductive head and stencils, TB-90 creates permanent sharp and dark lettering, logos, or any other design on your stainless steel. The process is user friendly, safe and fast with outstanding results within seconds. NSF Registration Number: 150170 NSF Category Code: P1



### TB-95 ENGRAVING FLUID FOR STAINLESS STEEL

Used with your TIG Brush, a specially engineered conductive head and heat resistant stencils, TB-95 creates a sharp, clear etch for lettering, logos, or any other design on your stainless steel. The process is unequalled in speed, ease and permanency in adding an etch to stainless steel. NSF Registration Number: 151123 NSF Category Code: P1



## SAMPLE PACK

Don’t take our word for it. Sample packs are the perfect way to try our full range of award-winning fluids to ensure fluid choice will give you the performance you need.

# TIG Brush™ Components & Accessories

TIG Brush components and accessories are designed and manufactured to Ensitech’s specifications to ensure complete compatibility with the TIG Brush system. For maximum safety and performance, and to maximize the value of your investment in TIG Brush technology, use only genuine Ensitech accessories and consumables.



### TIG BRUSH TIPS - 10 PACK

Ensitech brush tips are manufactured in Australia from premium quality materials to ensure the best performance from the TIG Brush. Brush tips are available in packs of 10.



### PROPEL™ TORCH BRUSH TIPS - 10 PACK

Ensitech's second generation PROPEL Torch brushes (patent pending) are manufactured in Australia with premium quality materials to ensure the best performance with your PROPEL Torch. PROPEL Torch brush tips are available in packs of ten.



### DUAL BRUSH ADAPTOR & SHROUD

Clean larger TIG welds and surfaces more quickly using a dual brush. The dual brush adaptor & shroud accepts two standard size brush tips to form a brush twice the size for greater coverage



### QUAD BRUSH ADAPTOR & SHROUD (TBE-700 ONLY)

The quad brush adaptor & shroud is designed for cleaning the largest welds and surface areas, as well as heavier-duty applications such as cleaning MIG, which require more heat and current delivered to the work surface. The quad brush adaptor & shroud accepts four standard size brush tips.



### INSULATING SHROUDS

Always use an insulating shroud in accordance with TIG Brush operating instructions. This is important for safety and to prevent damage to the equipment. Replacement shrouds are available for single brush tips (standard with all TIG Brush Units), dual brush adapters and quad brush adapter.



### WAND ASSEMBLY

Stainless steel wand with heat resistant insulating sleeve in 2 sizes: standard 4” and small 2”.



### TORCH SHROUD

PROPEL Torch replacement PTFE shroud.



### COLLET ASSEMBLY

PROPEL Torch replacement Collet Assembly.



### EXTENSION CABLES

Extension cables are available to increase reach to 20', 40' and 60' making it easy to use the TIG Brush for less-accessible work. Available individually (red or black cables) or as a pair. Check the maximum length compatible with your TIG Brush.



### GROUND CLAMP CABLE

Replacement ground clamp cables are available in 10', 13' and 20' standard lengths or different cable lengths can be customised at point of order.



### FLEXI WAND

Screws onto standard straight handle to convert it into a flexi-handle.



### FLEXI HANDLE WITH RED LEAD

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



### HANDLE CABLE

Replacement handle cables are available in 10', 13' and 20' standard lengths or different cable lengths can be customised at point of order.

### TIG BRUSH BRANDING KIT



Replacement parts for the TIG Brush Branding Kit to keep your permanent branding of stainless steel underway. Ask us for details of custom stencils to suit your requirements.

### BRANDING HEAD & ADAPTOR



### "O" RINGS



### FELT ROLL



# Featured Industries

THE TIG Brush's breakthrough electrochemical cleaning process has finally enabled manufacturers to eliminate the use of pickling paste & less efficient weld-cleaning methods and is being rapidly adopted as the preferred stainless steel weld-cleaning technology of quality and safety conscious companies and industries across the globe.



### Metal Fabrication

Metal fabricators and maintenance operators trust the TIG Brush for its reliable, high-quality results, coupled with speed and ease of use. The TIG Brush pays for itself over and over again through increased productivity and cost savings by reducing PPE requirements and OHS costs. At the same time, it enhances safety for operators and the environment, reducing the risks and costs of workplace injuries.



### Food & Beverage

Food-safety applications such as equipment for food & beverage manufacturing, dairy, wine making, brewing, as well as food preparation and service equipment, all demand the highest possible standards in surface hygiene and protection. These industries have been among the most enthusiastic adopters of TIG Brush technology, and their specific requirements and feedback have led to the expansion of Ensitech's range of products suited to their needs.



### Oil & Gas

The oil & gas industry and fuel transport industry face unique challenges in meeting the stringent safety and environmental standards associated with the handling and transportation of fuel products. Where weld integrity, surface integrity and the avoidance of potentially hazardous contaminants is vital, the TIG Brush is the perfect machine for the industry.



### Building & Construction

Aesthetics and structural integrity are important in architecture. Welds and metal surfaces used in these applications, especially in corrosive environments such as coastal locations, must be properly passivated and protected to ensure that they will withstand exposure to weather and environmental conditions, maintain their appearance, maximize asset life and lengthen maintenance cycles. Testing and comparison of welds and surfaces installed in coastal and other corrosive environments have demonstrated the superior performance of those cleaned by the TIG Brush.



### Marine

Few environments expose metal more directly to salt corrosion than marine installations. With its portable design, safety features and unparalleled ease of use, the TIG Brush is ideally suited to the cleaning and maintenance of the wide range of stainless steel and brass work found on boats and marinas.



# TIG Brush™

POWERED BY ENSITECH

## Always Leading



# TIG Brush™

Ensitech Inc.

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**YOUR LOCAL TIG BRUSH DISTRIBUTOR:**

Kirtilal Metalworking LLP

Email: [info@kirtilal.com](mailto:info@kirtilal.com)

Website: [www.kirtilal.com/tig-brush](http://www.kirtilal.com/tig-brush)

[www.tigbrush.com](http://www.tigbrush.com)

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