WELD CLEANING SYSTEM SURFOX**

The safest & most efficient way to clean stainless steel welds





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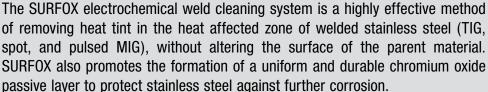
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Electrochemical Weld Cleaning System for Stainless Steel





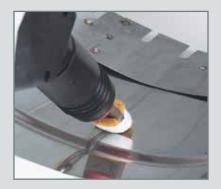
SURFOX is safer, faster, and a more cost effective alternative to very hazardous pickling pastes and abrasive weld cleaning processes like wire brushing and grinding.

SAFE SURFOX cleaning electrolytes are NSF registered to be used in food plants and pose no health hazards to operators.

FAST Uniform cleaning and passivation at a rate of 3 to 5 feet per minute.

EASY TO USE The integrated reservoir and dispensing pump automatically delivers the cleaning electrolyte to the tip of the SURFOX machine to ensure no interruption in the cleaning process.









passivation

Why is passivation important?

Stainless steel is generally able to resist corrosion thanks to a passive chromium oxide layer that forms on its surface. The formation of this protective layer is called passivation. However, abrasion or excessive heat - usually caused during welding - will destroy this protective layer and expose the area to corrosion.



Watch a short video about passivation on your smart phone.



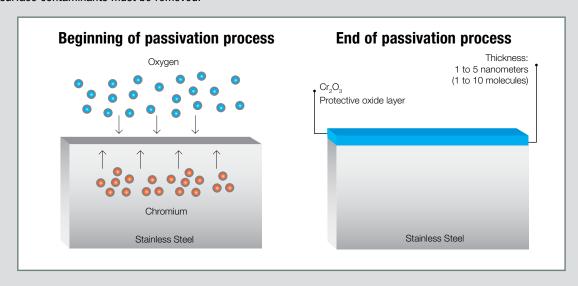
Passivation occurs when the chromium contained in the stainless steel comes in contact with the oxygen in the air. This chemical reaction forms a passive chromium oxide layer, which will protect the surface of stainless steel. To form a thick and uniform chromium oxide passive layer, the surface of the parent material must be perfectly clean and free of any contaminants.

Mechanical abrasion, thermal treatment, welding, salt, strong acids and galvanic contamination will damage the chromium oxide layer and lead to unwanted oxidation. In order to fully restore the corrosion resistance of stainless steel and avoid any interference in the passivation process, the heat tint as well as other surface contaminants must be removed.

SURFOX is a safe, effective and fast electrochemical cleaning system. The rate of cleaning welds with this system is between 3-5 feet per minute.

The SURFOX system combines both the cleaning power of electrical current and the passivation properties of electroyte cleaning solutions.

Passivation instantaneously begins after the SURFOX electrochemical cleaning process is completed. It usually takes between 24 to 48 hours for passivation to be completed and stabilized.



electrochemical cleaning

Using SURFOX-G and SURFOX-T electrolyte solutions

AC mode

Using SURFOX-G and SURFOX-T electrolyte solutions



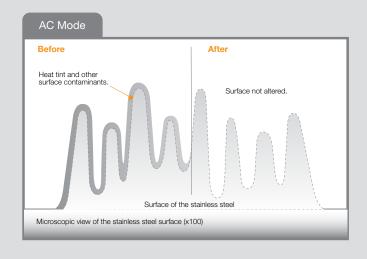
The electrochemical cleaning process uses the power of electrical current and the electrolyte cleaning solution to remove heat tint in heat affected zones without altering or damaging the surface of the parent material. It will leave a clean surface, free of residue and promote the formation of a uniform and stable chromium oxide passive layer that will protect the surface of stainless steel from oxidation. The electrochemical cleaning should always be done on AC (Alternate Current) mode available on all SURFOX machine models.

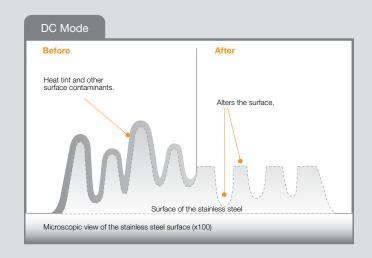
DC mode

Using SURFOX-T electrolyte solution



Electrochemical polishing is a process which removes parent material from the work piece and brightens the weld. This process will alter the surface and is mostly used to clean welds on mirror finished material. Electrochemical polishing is done on DC (Direct Current) mode available on the SURFOX MINI and SURFOX 204 models and can only be performed with SURFOX-T.





overview

SURFOX[™] 204

The most versatile unit for a wide variety of jobs



SURFOX 204 is an industrial, self-contained weld cleaning system with an integrated electrolyte solution tank, a low level indicator and an automatic dispensing pump. A variable speed pump (manual or automatic) continuously delivers the desired amount of electrolyte to the work piece.

This system is equipped with a self-regulating inverter board which automatically monitors and adjusts the current to ensure maximum cleaning effectiveness without loss of productivity.

The unit comes with:

- Variable current output knob, allowing the end user to pre-set the desired current level.
- Wand with on/off pump cycling controls.
- Electrical outlet for optional marking hand piece (hand piece not included)
- Switchable output: AC mode for cleaning and marking, DC mode for polishing and etching.
- Built in vapor elimination system (for confined work areas).

Also available as a kit with the carbon fiber brush with mini-wand kit (54-B 133) for small narrow areas. Order no. 54-D 264.



Specifications:

Order no. 54-D 214

Electrical

Input: 120V, 50/60 Hz, 4.0 A Output: 12-30 V AC/DC, 15 A

Dimensions

 Length:
 18.5" (47 cm)

 Width:
 9 ¾" (25 cm)

 Height:
 15" (38 cm)

 Tank capacity:
 64.2 oz (1.9 leter)

 Length of hose:
 13' (4 meter)

 Weight:
 38 lbs.(17.3 Kg)

Features:

- Electrochemical cleaning with AC mode: settings low, medium, high (6-12 A)
- > Electrochemical polishing in DC mode
- > Marking and etching options
- Vapor elimination system

Standard Equipment:

- 3 standard cleaning pads (54-B 026)
- > 1 tungsten insert 90° (48-R 133)
- > 1 clamp ring (54-B 002)
- > 1 protective carry case

overview

SURFOX[™] 104

The perfect unit for production work



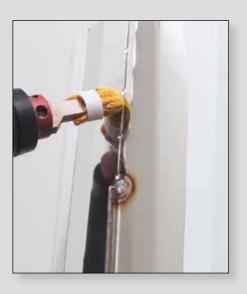
The SURFOX 104 is an industrial, self-contained weld cleaning system with an integrated electrolyte solution tank and an automatic dispensing pump. A variable speed pump (manual or automatic) continuously delivers the desired amount of electrolyte to the work piece.

This system is equipped with a self-regulating inverter board, which automatically monitors and adjusts the current to ensure maximum cleaning effectiveness without loss of productivity.

The unit comes with:

- Wand with on/off pump cycling controls
- Electrical outlet for optional marking hand piece (hand piece not included)

Also available as a kit with the carbon fiber brush with mini-wand kit (54-B 133) for small narrow areas. Order no. 54-D 164.



Specifications:

Order no. 54-D 114

Electrical

Input: 120V, 50/60 Hz, 4.0 A Output: 12-30 V AC, 12 A

Dimensions

 Length:
 18.5" (47 cm)

 Width:
 9 ¾" (25 cm)

 Height:
 15" (38 cm)

 Tank capacity:
 64.2 oz (1.9 liter)

 Length of hose:
 13' (4 meter)

 Weight:
 36.4 lbs. (16.5 Kg)

Features:

- > Electrochemical cleaning in AC mode
- Marking option

Standard Equipment:

- 3 standard cleaning pads (54-B 026)
- > 1 tungsten insert 90° (48-R 133)
- > 1 clamp ring (54-B 002)
- > 1 protective carry case

MINI SURFOX

Light and portable, ideal for onsite jobs and repairs



The ergonomically designed SURFOX MINI is the most compact member of the SURFOX family. The system has many important features built into a light and portable package which utilizes easy to carry liquid cartridges for dispensing the electrolyte solution. The SURFOX MINI is ideal for repairs, touch ups and small jobs.





Specifications:

Order no. 54-D 054

Electrical

Input: 120V, 50/60 Hz, 2.0 A Output: 10-30 V AC/DC, 1.5 A

Dimensions

 Length:
 11" (28 cm)

 Width:
 4 ½" (11 cm)

 Height:
 6 ½" (17 cm)

 Weight:
 7 lbs. (3.2 kg)

Features:

- > Electrochemical cleaning in AC mode
- > Electrochemical polishing in DC mode
- > Marking and etching options
- > Current output adjustment

Standard Equipment:

- 3 standard cleaning pads (54-B 026)
- > 1 tungsten insert 90° (54-B 036)
- > 1 clamp ring (54-B 002)
- 1 protective carry case
- > 1 wand stand
- > 1 shoulder carry strap

CLEANING & POLISHING ELECTROLYTES



SURFOX-G pH Neutral Formulation

Apply with high conductivity SURFOX pads: 54-B 026, 54-B 027 or 54-B 028.

Features

- Great TIG and Spot weld cleaning on stainless or steel
- > pH neutral
- > Less fumes
- Safe alternative to pickling paste and strong acids
- Non-corrosive



SURFOX-T

Heavy duty formula

Apply with high conductivity SURFOX pads: 54-B 026, 54-B 027 or 54-B 028.

Features

- > Formulated for the most demanding TIG, spot and pulsed MIG weld cleaning applications
- > Safe alternative to pickling pastes and harsh acids
- > Free from hydrofluoric acid and nitric acid
- > Will remove light scaling

This heavy-duty electrolyte solution is composed of phosphoric acid and other additives which makes it ideal for the most demanding weld cleaning applications. SURFOX-T is formulated for cleaning TIG, spot and pulsed MIG welds.

When SURFOX-T is used in DC mode, it will electropolish the weld. SURFOX-T is formulated with built-in additives to promote polishing while cleaning heat tint and other contaminants from the weld.

SURFOX-G

Description	Size	Order No.	Std. Pkg
SURFOX-G (6/pkg)	3.4 oz./100 ml	54-A 061	6
SURFOX-G	51 oz./1.5 L	54-A 065	1
SURFOX-G	5.3 gal./20 L	54-A 067	1
SURF0X-G	55 gal./208 L	54-A 068	1

MSDS: S-10E

SURFOX-T

Description	Size	Order No.	Std. Pkg
SURFOX-T (6/pkg)	3.4 oz./100 ml	54-A 001	6
SURFOX-T	51 oz./1.5 L	54-A 005	1
SURF0X-T	5.3 gal./20 L	54-A 007	1
SURF0X-T	55 gal./208 L	54-A 008	1

MSDS: S-01E

- > Both SURFOX-G and SURFOX-T electrolyte cleaning solutions are NSF registered for food plant applications
- > The SURFOX system is ASTM A967 (ASTM A380) certified for passivation

NEUTRALIZATION



SURFOX-N

Neutralizing formula

Features

Neutralizes SURFOX-G and SURFOX-T solutions. Apply to work surface after the electrochemical cleaning process.

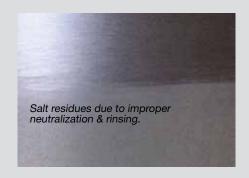
Neutralization is necessary to stop the action of the acid used during electrochemical and electro polishing processes. If the acid is not completely neutralized, it will continue to interact with the surface of the stainless steel. Rinsing with water is not enough to properly neutralize. Rinsing with water will only dilute the acid.

For full neutralization first remove any excess electrolyte solution from the base material using a cleaning rag or a paper towel. Then neutralize by spraying SURFOX-N onto the surface and subsequently wiping the surface thoroughly with another clean cloth.

SURFOX-N

Description	Size	Order No.	Std. Pkg
SURFOX-N	16.9 oz./500 ml	54-A 023	12
SURFOX-N	5.3 gal./20 L	54-A 027	1
SURFOX-N	55 gal./208 L	54-A 028	1

MSDS: S-03E



SURFOX™ accessories

SURFOX™ MINI



Tungsten insert 90° Order No.: 54-B 036

Use with cleaning pads 54-B 026 or 54-B 040 and clamp ring 54-B 002, or boots 54-B 005 or 54-B 055



Tungsten insert 60° Order No.: 54-B 037

Use with cleaning pad 54-B 027 and clamp ring 54-B 002 or boots 54-B 006 or 54-B 056



Large graphite insert for Micro-Wand Order No.: 54-B 048

1.4" W - Ideal for surface renewing or restoring, and to clean the back of MIG



Narrow tungsten insert 90° Order No.: 54-B 038

Use with cleaning pads 54-B 028 or 54-B 041 and clamp ring 54-B 020, or boots 54-B 007 or 54-B 057



Narrow tungsten insert 60° Order No.: 54-B 039

Use with cleaning pad 54-B 028 and clamp ring 54-B 020 or boots 54-B 008 or54-B 058



Large pads for large graphite insert Order No.: 54-B 051

Pack of 10 with 0-ring

Electrolyte straw Order No.: 48-R 294 10 per package

Tungsten insert kit for **MINI SURFOX** Order No.: 54-B 042

Includes:

1 x 54-B 036 1 x 54-B 037

1 x 54-B 038

1 x 54-B 039

Tungsten insert kit for SURFOX 104 and 204

Order No.: 54-B 012

Includes:

1 x 48-R 133 1 X 54-B 017 1 X 54-B 016

1 X 54-B 018



SURFOX 104 & SURFOX 204



Tungsten insert 90° Order No.: 48-R 133

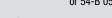
Use with cleaning pads 54-B 026 or 54-B 040 and clamp ring 54-B 002, or boots 54-B 005 or 54-B 055



Narrow tungsten insert 90°

Order No.: 54-B 017

Use with cleaning pads 54-B 028 or 54-B 041 and clamp ring 54-B 020, or boots 54-B 007 or 54-B 057



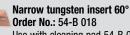
Large graphite insert for SURFOX 204

Order No.: 54-B 009 1.8" W - Ideal for surface renewing or restoring, and to clean the back of MIG welds



Tungsten insert 60° Order No.: 54-B 016

Use with cleaning pad 54-B 027 and clamp ring 54-B 002 or boot 54-B 006 or 54-B 056



Use with cleaning pad 54-B 028 and clamp ring 54-B 020 or boot 54-B 008 or 54-B 058

Order No.: 54-B 043



Large pads for large graphite insert

3.5" L x 2" W x 0.8" T Pack of 10 with 0-ring



OR ALL MODELS



Narrow clamp ring for narrow pads

Order No.: 54-B 020

Use with narrow inserts 54-B 017, 54-B 018, 54-B 038 and 54-B 039

10 per package



Carbon fiber brush for micro-wand Order No.: 54-B 029

Ideal for tight corners and intricate areas. Pack of 5



Clamp ring for cleaning pads Order No.: 54-B 002

Use with inserts 48-R 133, 54-B 016, 54-B 036 and 54-B 037 10 per package

SURFOX POWERCLOTH Order No.: 54-B 090





Micro-Wand and brush kit Order No.: 54-B 133 With carbon fiber brush for cleaning corners and intricate areas

SURFOX station Order No: 54-B 050

Increased Efficiency for Production Units

This sturdy, portable workstation was designed from the ground up to offer convenient storage and handling for all things SURFOX. Keep your work area neat and organized while increasing the portability of your SURFOX 104 or 204 unit with the new SURFOX STATION.



HIGH CONDUCTIVITY CLEANING PADS

Designed to be used with SURFOX-G and SURFOX-T



Standard cleaning pad

Order no: 54-B 026 1.8" L x .9" W x .15" T 46 mm L x 24 mm W x 4 mm T Use with inserts 48-R 133 and 54-B 036, 10 per package plus 1 clamp ring



Inside corners cleaning

Order no: 54-B 027 2.3" L x 1.4" W x .07" T 60 mm L x 38 mm W x 2 mm T Use with inserts 54-B 016 and 54-B 037, 10 per package plus 1 clamp ring



Narrow cleaning pad

Order no: 54-B 028 1.8" L x .9" W x .07" T 46 mm L x 24 mm W x 2 mm T Use with inserts 54-B 017. 54-B 018, 54-B 038 and 54-B 039, 10 per package plus 1 clamp ring

HIGH CONDUCTIVITY CLEANING BOOTS

Designed to be used with SURFOX-G and SURFOX-T



Cleaning boots kit

Order no: 54-B 059 Includes: 10 of each boot 54-B 055, 54-B 056, 54-B 057 and 54-B 058



Cleaning boot for inside corners 90°

Order no: 54-B 055 Use with inserts 48-R 133 and 54-B 021 10 per package





Narrow cleaning boot 60°

Order no: 54-B 057 Use with inserts 54-B 018 and 54-B 025 10 per package



Cleaning boot for inside corners 60°

Order no: 54-B 058 Use with inserts 54-B 016 and 54-B 024 10 per package

CLASSIC CLEANING PADS

Designed to be used with SURFOX-T liquid.



Standard cleaning pad

Order no: 54-B 040 1.8" L x .9" W x .15" T 46 mm L x 24 mm W x 4 mm T To be used with inserts 48-R 133 and 54-B 036. 10 per package plus 1 clamp ring



Cleaning boot 90°

Order no: 54-B 005 To be used with inserts 48-R 133 and 54-B 036 5 per package



Cleaning boot narrow 90°

Order no: 54-B 007 To be used with inserts 54-B 017 and 54-B 038 5 per package



Cleaning boot narrow 60°

Order no: 54-B 008 To be used with inserts 54-B 018 and 54-B 039 5 per package



Narrow cleaning pad

Order no: 54-B 041 1.8" L x .45" W x .15" T 46 mm L x 12 mm W x 4 mm T Use with inserts 54-B 017 and 54-B 038. 10 per package plus 1 clamp ring



Cleaning boot 60°

Order no: 54-B 006 To be used with inserts 54-B 016 and 54-B 037 5 per package



Application of a cleaning pad

1. Insert the clamp ring into the bracket.



2. Place the cleaning pad.*



* Classic pads: Ensure the Ω sign is facing up.

3. Push insert through the pad & into the clamp ring.



4. The cleaning pad has been applied successfully.



passivation & id tester

SURFOX

Passivation tester

Order no: 54-T 010

Standard equipment

- > Testing device/hand piece
- > Data entry software with USB port
-) Hand piece

Product description

It's important to properly passivate your workpiece to prevent pitting and corrosion. On site repair and refurbishment is costly in time and money when it could be avoided completely.

The Passivation tester is a clear diagnostic tool capable of monitoring the state of the passivation before it leaves the shop. Our solution is an electrochemical test probe based on a technology called open circuit potential. The test probe provides the user with a numeric value of the quality of the protective chromium oxide layer on the surface of the stainless steel. A negative value indicates that the protective layer is damaged or non-existent. A value of zero and above indicates that the surface is passivated. The readout is a quantitative representation of the quality and thickness of the protective chromium oxide layer.

For a fabricator, stating that the workpiece has a minimal passive value on delivery not only gives the assurance to the end-user that he is dealing with a professional, but also makes eventual claims concerning corrosion easier to deal with.







Use the SURFOX passivation tester and see how you can easily record your passivation data for future access and reference!

The importance of recording your data! More and more, for quality purposes, it will become key to record and store all the information related to your stainless steel production and transformation processes. To help you achieve this objective, the passivation tester is equipped with built-in memory to allow end-users to keep secure records of their passivation data. Over time, this will enable you to monitor the quality of your work and make sure it always meets your customers' standards.

SURFOX

Stainless Steel Grade ID Tester

Order no: 54-T 001

Standard equipment

- > Testing device/hand piece
- Molybdenum reagent, 3.4 oz./100 ml
- > Blotting paper
- > Test coupons



Product description

Provides a visual representation of the grade of stainless steel. There are countless types of stainless steel, mainly grouped in 3 categories or grades: 200, 300 and 400 series.

Since it is visually impossible to differentiate between 200, 304, 316 and 400 grade stainless steel, WALTER provides a test kit that allows customers to instantly identify the grade of stainless steel.

Marking & etching kits

SURFOX Marking and Etching Kits make company logos, part numbers, serial numbers, lot and batch numbers, model numbers, barcodes, QR codes and more easy to achieve.

SURFOX marking kits use a fast and simple electrochemical process that permanently marks and etches stainless steel surfaces. The marking & etching wand plugs directly into the SURFOX machine and is used with permanent or disposable stencils.

SURFOX

Standard marking kit

Order no.: 54-B 080 Standard equipment:

- Marking and etching wand with cable and graphite tip 1.4" x 0.4"
- 20 marking pads and 5 o-rings
- > SURFOX-M 3.4 oz black marking electrolyte solution
- > SURFOX-E 3.4 oz etching electrolyte solution



SURFOX

PRO marking kit

Order no.: 54-B 081 Standard equipment:

- Marking and etching wand with cable and graphite tip 1.4" x 0.4"
- 20 marking pads and 5 o-rings
- > SURFOX-M 3.4 oz black marking electrolyte solution
- > SURFOX-E 3.4 oz etching electrolyte solution
- > Stencil printer, software and a 65.6 ft roll of stencil paper

SURFOX-M

Marking solution

3.4 oz (100 ml) squeeze bottle

Order no.: 54-A 031

SURFOX-M is an electrolyte solution specially formulated to permanently black mark stainless steel on AC (alternating current) mode. This oxidation process will leave a dark mark on the surface of stainless steel without altering it. Marking on stainless steel is resistant against chemical attacks.



SURFOX-E

Etching solution

3.4 oz (100 ml) squeeze bottle

Order no.: 54-A 041

SURFOX-E is an electrolyte solution specially formulated to permanently etch stainless steel on DC (direct current) mode which is available on SURFOX MINI and SURFOX 204 machines. Similar to polishing, the etching of stainless steel will remove material and alter the surface.



Marking kits accessories



Marking pads Pack of 20 No. 54-B 083



Graphite marking insert No. 54-B 088



0-rings Pack of 5 No. 54-B 089





Stencil paper roll 65.6' x 4" No. 54-B 086 164' x 4" No. 54-B 087



marking stencils

Permanent stencils

Custom made stencils from a .bmp, .jpg, .tiff, .dwg, .ai, .cdr, .doc, .pdf document. Many sizes are available. Permanent stencils are ideal for the marking of your company logo and address as well as other recurring information from one part to another.

Permanent stencils can be reused hundreds of times if well maintained. For increased durability, neutralize the stencil with SURFOX-N and rinse after use and store in a sealable jar of water.



Marking with permanent stencils.



Result of black marking with permanent stencils.



Disposable stencils are ideal for serial numbers, lots and batch numbers, barcodes, QR codes and other information that require constant change and evolution. You may now print labels on which the data changes for each label, for example, counter, serial numbers, date, and time. Use it once and dispose of it. Printing disposable stencils has never been easier with the PRO marking kit that includes a thermal printer and stencil paper rolls to suit your needs.



Marking with disposable stencils.



Result of black marking with disposable stencils.



Stencil printer and software (laptop not included).

Disposable stencil printer and software

The stencil printer is part of the PRO marking kit and is a user-friendly way of creating and printing disposable stencils to fit your needs.

There's good, there's better and there's..."Only the best"

WALTER Surface Technologies has been a leader in the industry for more than 50 years, and has been providing high productivity abrasives, power tools, tooling, chemical tools and environmental solutions. Founded in 1952, WALTER Surface Technologies is now established in 7 countries in North America, South America and Europe.

Our purpose is to contribute to our customers success by helping them work better. Our products and solutions are known throughout the industry for their uncompromising performance and quality. As a company, we continuously design and develop new tools to increase productivity, innovation and safety. Our corporate taglines, ONLY THE BEST and MAKING GREEN WORK, reflect the quest for excellence and quality that is embedded in each product we develop, each service we provide, and each solution we bring forward.

WALTER Surface Technologies is proud to have its research, development and distribution quality system certified under the International Standard ISO 9001: 1994.





"Only the best"

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