

HSF GROUP
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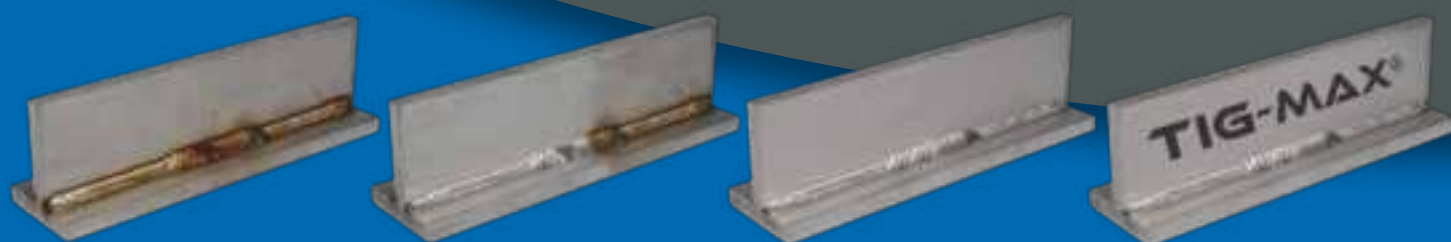
TIG-MAX®

XT 2500 | XT 4000 | XT 6000 | XT 7000 | XT 9000

The next
generation
in weld
cleaning



Easy,
quick,
clean!



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ABOUT US

HSF GROUP GmbH is your steadfast partner when it comes to first-class solutions, rapid delivery times and high service standards. Our highly skilled team is by your side 24/7 with innovative products and the attractive prices that come with large inventories.

We operate in numerous market sectors Europe-wide, allowing us to offer custom solutions for every application. Thanks to our sales representatives and your personal customer adviser, you can always be sure of keeping up with the latest developments. You can depend on our certified quality and our rapid response and delivery times.

We specialise in manufacturing and shipping TIG-MAX® equipment and supplies for cleaning stainless-steel surfaces. TIG-MAX® not only puts a shine on your stainless steel but also makes your everyday working life easier thanks to cutting-edge inverter technology.

Our mission is to ensure that you can work comfortably and cost-effectively. Thanks to ongoing customer and requirement analyses, we offer the perfect solutions for your applications with our range of TIG-MAX® equipment and accessories.

HSF Industrietechnik GmbH was founded in 2006 as an individual enterprise. The company has been expanding ever since and is now HSF GROUP GmbH.

We are a DIN EN ISO 9001:2015 certified company, providing constant peace of mind to our employees, customers and suppliers.



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THE TIG-MAX® CONCEPT

Why clean welds? The cleaning of stainless steel welds is required for aesthetic reasons. Let's take a closer look at the technical aspect.

1. What happens when welding stainless steel

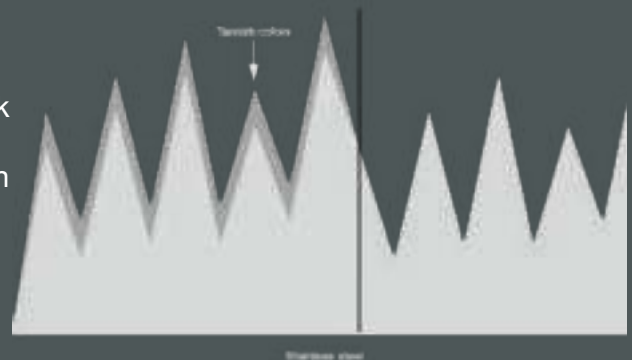
Due to the high heat generated when welding stainless steel, the chrome is broken around the weld and an iron-rich zone remains. The high iron concentration at the surface and the high temperatures during welding oxidize the iron immediately. This leads to the characteristic blue tone and a brown discoloration around the weld. The discolored area is susceptible to corrosion because the low chromium concentration cannot protect the metal. The TIG-MAX® quickly removes the discolored oxides, passivating the underlying surface without altering the appearance or texture of the metal. The reason why the TIG-MAX® succeeds so quickly and reliably is explained below.

2. Why the TIG-MAX®?

The TIG-MAX® works with a brush through which electrical current is passed. With the brush, a cleaning liquid is absorbed and applied to the areas to be cleaned. The liquid is used to remove the iron oxide stains formed during welding. The brush converts the electrical current into high temperatures, especially at the bristle ends. The liquid, which is relatively harmless at room temperature, is heated by the brush to temperatures at which it becomes much more reactive, resulting in an accelerated chemical action on the stainless steel surface. Unlike pickling paste, the active ingredients of the cleaning fluid are not inherently harmful to health. When used correctly, the fluids are non-toxic to the environment.

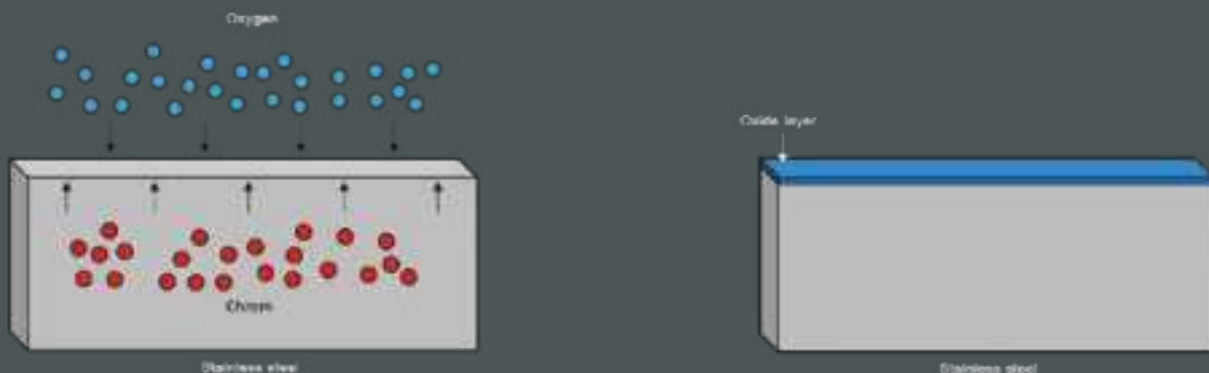
3. Chemical effect No. 1: Cleaning

The blue and brown spots that result from welding are iron and ferrous oxides. The iron oxide layers are relatively weak and the working temperature of the TIG-MAX® can break up the iron oxides quickly. The released iron ions are kept in the solution and separated (i.e. put into a state where they can no longer form oxides). When the TIG-MAX® settles and wipes off the liquid, it leaves a stainless steel surface that is free of iron ions and iron oxides.



4. Chemical effect No. 2: Passivation

Iron oxides can only badly protect the metal surface from contamination. For this reason, discolored areas begin to rust soon after welding, even when they have been cleaned. To stop this corrosion, the metal surface must be "passivated". When the TIG-MAX® removes the iron oxide layer, the underlying metal, which is rich in chromium, is exposed. The high temperature of the TIG-MAX® allows the chromium to be rapidly oxidized, so that instead of the iron oxide layer, a chromiumoxide layer is now formed. This process, forming a chromium oxide layer, is also called "passivation".



THE TIG-MAX® CONCEPT

c as well as technical reasons. The aesthetic aspect is self-evident, so let's

5. What speaks against other procedures?

Traditionally, stainless steel is cleaned with pickling paste or mechanical abrasion. Both methods for cleaning stainless steel are subject to problems. Pickling paste contains two **very strong acids**, which decompose the surface of the stainless steel. This process is also called "**etching**".

Pickling paste

The surface of the stainless steel becomes damaged. Although pickling paste can remove the iron oxide discoloration, it leaves the metal surface **without a protective oxide layer**. This can cause contamination **corrosion** and **rust**. Therefore, a separate passivation step is necessary. In addition, pickling paste is **extremely harmful to health** and **dangerous** to the environment due to the acids contained in it.



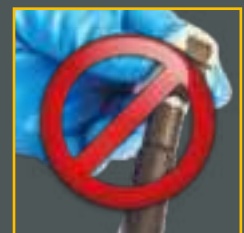
Mechanical abrasion

Is understood to mean the removal of the metal surface by grinding or other methods, such as sandblasting. Although the iron oxide layers are removed, but also the **metal surface is changed or damaged**. Also this process **does not passivate the metal**. Further treatment steps are therefore necessary to protect the stainless steel surface. In abrasives and wire brushes can also **hide impurities** that further increase the damage.



Conventional electrolytic devices

These devices pursue a basically good approach and are widely used. However, due to the relatively low temperature during cleaning, **the passive layer is not restored**. The main problem with such devices is that the pads or felt covers **wear out very quickly** and the electrode comes into contact with the workpiece. This causes **black discoloration**, which are very difficult to remove.



6. Conclusion

The **TIG-MAX®** is a **safe and effective** device for cleaning the surfaces of stainless steel, especially after welding. It **quickly and easily** removes the blue and brown iron oxide stains without altering the surface finish of the metal. In addition, the TIG MAX® **passivates** the metal in the same operation, so that the complete, **desired result can be achieved even faster**. The fluids used by the TIG-MAX® become reactive only at high temperatures. Under normal conditions, therefore, they are relatively harmless to the user and the environment.

BECAUSE TIG-MAX®, ONLY THE BEST

STAINLESS STEEL, ONLY THE BEST!

An easy-to-understand guide!

Transformer Conventional pickling devices	VS.	TIG-MAX® XT – inverter Maximum performance with no rework
<ul style="list-style-type: none"> - Brushes burn quickly High brush wear - Guzzlers electricity High electricity consumption 	COSTS	<ul style="list-style-type: none"> + Durable brushes Minimises wear ► Lower costs + Optimal power supply Lower costs ► Higher performance
<ul style="list-style-type: none"> - Slow cleaning Longer cleaning duration White spots, shadows, edges 	CLEANING	<ul style="list-style-type: none"> + Rapid results Rapid cleaning of anything from small seams to large areas + Direct passivation Instant protection with no extra operations required + No white spots, shadows or edges Avoidance of complaints and rework
<ul style="list-style-type: none"> - Short duty cycle Frequent shut-downs because the transformer gets extremely hot 	READY TO USE	<ul style="list-style-type: none"> + 100% duty cycle Rapid cooling ► Long-term operation
<ul style="list-style-type: none"> - Fixed performance setting Cannot be precisely adjusted for the degree of soiling or material 	PERFORMANCE	<ul style="list-style-type: none"> + Continuously variable adjustment Precise adjustment for the degree of soiling and material
<ul style="list-style-type: none"> - Heavy Not suitable for mobile use 	WEIGHT	<ul style="list-style-type: none"> + Lightweight Light, mobile and transportable ► Ideal for construction and assembly sites
= HIGH COSTS AND LOW PERFORMANCE!		= OPTIMAL PERFORMANCE IN EVERY OPERATION!

Great performance is good...
... amazing performance
is better ;)

Experience the difference
for yourself – live!

SAVE TIME AND MONEY WITH TIG-MAX®

TIG-MAX® XT

STAINLESS STEEL, ONLY THE BEST!

An easy-to-understand guide!

Safe 3 full working days with just 1000 m welding. – Time is money –

TIG-MAX® XT with carbon fiber cleaning brush

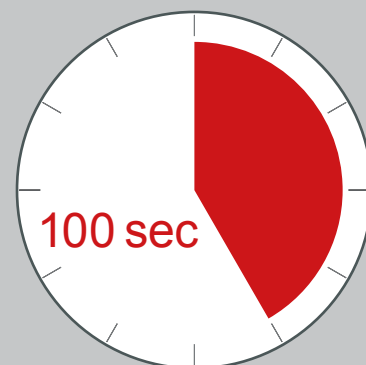


1 m = 23 sec
1000 m = 6 h 23 min



0 hours rework

Conventional devices without carbon fiber cleaning brush



1 m = 100 sec
1000 m = 27 h 46 min



+ rework



WOW!

Safe up to
21 h 23 min

Request a test device now and test it yourself!

THE TIG-MAX® ADVANTAGES

**FAST
SAFE
EFFICIENT**

**PROFESSIONAL
WELD
CLEANING**

POWERFUL

LIGHT WEIGHT

**100 %
DUTY CYCLE**

**HIGH QUALITY
MATERIALS**

**LESS WEAR
AND TEAR**

**SIMPLE
HANDLING**



Cleans



Polishes



Passivates



Marks

OUR TIG-MAX® XT SERIES

TIG-MAX® XT 90

Marking Device

SKU: **2014135**

Dimensions: **220 x 115 x 113**

(LxWxH in mm)

Protection class: **IP23**

Weight: **2.5 kg**



Marks



TIG-MAX® XT 90 Marking Device – Complete Set

Included in the set:

- | | |
|---------------------------------------------------------|-------------------------------------|
| 1 TIG-MAX® XT 90 marking device | 1 HSF marking felt tape (0,5 m) |
| 1 TIG-MAX® XT 90 cable with handle - complete set (3 m) | 5 HSF O-Rings (ø 25 mm) |
| 1 TIG-MAX® XT earth cable (3 m) | 1 TM-90 marking-electrolyte (0,5 L) |
| 1 TIG-MAX® XT marking adapter | 1 transport box for TIG-MAX® XT 90 |
| 1 TIG-MAX® XT marking electrode (34 mm) | 1 TIG-MAX® XT 90 user manual |

OUR TIG-MAX® XT SERIES

TIG-MAX® XT 2500

The entry-level model

SKU: **2014139**
 Power max.: **456 W**
 Dimensions: **240 x 130 x 160**
 (LxWxH in mm)
 Protection class: **IP23**
 Weight: **6 kg**


Cleans

Polishes

Passivates

Marks



TIG-MAX® XT 2500 Stainless Steel Cleaning Device (Weld Cleaner) – Complete Set

Complete set
including robust
accessories!

Included in the set:

- 1 x TIG-MAX® XT 2500 stainless steel cleaning device (weld cleaner)
- 1 x TIG-MAX® XT cable with handle – complete set „Brush“ (3 m)
- 1 x TIG-MAX® XT earth cable (3 m)
- 2 x TIG-MAX® XT carbon-fibre cleaning brush „Brush“
- 1 x TC-275 cleaning- & polishing-electrolyte (1 L)
- 1 x TC-510 neutraliser (1 L)
- 1 x HSF liquid container
- 1 x HSF spray bottle (0.5 L)
- 1 x Transport box for TIG-MAX® XT 2500
- 1 x TIG-MAX® XT user manual
- 1 x TIG-MAX® XT catalogue

OUR TIG-MAX® XT SERIES

TIG-MAX® XT 4000

The smart one

SKU: **2014140-II**
 Power max.: **1440 W**
 Dimensions: **350 x 133 x 213**
 (LxWxH in mm)
 Protection class: **IP23**
 Weight: **7.0 kg**



Cleans



Polishes



Passivates



Marks

Complete set
including robust
accessories!



Suitable for continuous industrial use every day

→ Includes high-quality, robust accessories

TIG-MAX® XT 4000 Stainless Steel Cleaning Device (Weld Cleaner) – Complete Set

Included in the set:

- | | |
|---------------------------------------------------------------------|------------------------------|
| 1 x TIG-MAX® XT 4000 stainless steel cleaning device (weld cleaner) | 1 x HSF spray bottle (0.5 L) |
| 1 x TIG-MAX® XT cable with handle – complete set „Brush“ (3 m) | 1 x HSF safety goggles |
| 1 x TIG-MAX® XT earth cable (3 m) | 1 x HSF respirator |
| 2 x TIG-MAX® XT carbon-fibre cleaning brush „Brush“ | 1 x HSF chemical gloves |
| 1 x TC-225 cleaning-electrolyte (1 L) | 1 x HSF wire brush „Mini“ |
| 1 x TC-275 cleaning- & polishing-electrolyte (250ml) | 1 x TIG-MAX® XT user manual |
| 1 x TC-510 neutraliser (1 L) | 1 x TIG-MAX® XT catalogue |
| 2 x Microfiber cloths „Superclean“ | Optional: |
| 1 x HSF liquid container | 1 x HSF transport box (L) |

OUR TIG-MAX® XT SERIES

TIG-MAX® XT 6000

The all-rounder



Cleans



Polishes



Passivates



Marks

SKU: **2014145-II**
Power max.: **2880 W**
Dimensions: **350 x 133 x 213**
(LxWxH in mm)
Protection class: **IP23**
Weight: **7.5 kg**



Complete set
including robust
accessories!



Suitable for continuous industrial use every day

→ Includes high-quality, robust accessories

TIG-MAX® XT 6000 Stainless Steel Cleaning Device (Weld Cleaner) – Complete Set

Included in the set:

- | | |
|---------------------------------------------------------------------|---------------------------------------|
| 1 x TIG-MAX® XT 6000 stainless steel cleaning device (weld cleaner) | 1 x HSF pressure pump sprayer (1.2 L) |
| 1 x TIG-MAX® XT cable with handle – complete set „Brush“ (3 m) | 1 x HSF safety goggles |
| 1 x TIG-MAX® XT earth cable (3 m) | 1 x HSF respirator |
| 3 x TIG-MAX® XT carbon-fibre cleaning brush „Brush“ | 1 x HSF chemical gloves |
| 1 x TC-275 cleaning- & polishing-electrolyte (1 L) | 1 x HSF wire brush „Mini“ |
| 1 x TC-510 neutraliser (1 L) | 1 x HSF transport box (L) |
| 2 x Microfiber cloths „Superclean“ | 1 x TIG-MAX® XT user manual |
| 1 x HSF liquid container | 1 x TIG-MAX® XT catalogue |

OUR TIG-MAX® XT SERIES

TIG-MAX® XT 7000

The high-performance one

SKU: **2014147-II**

Power max.: **2500 W**

Dimensions: **385 x 170 x 315**

(LxWxH in mm)

Protection class: **IP23**

Weight: **17.0 kg**



Cleans



Polishes



Passivates



Marks

Complete set
including robust
accessories!



Suitable for continuous industrial use every day

→ Includes high-quality, robust accessories

TIG-MAX® XT 7000 Stainless Steel Cleaning Device (Weld Cleaner) – Complete Set

Included in the set:

- | | |
|---------------------------------------------------------------------|-----------------------------------------|
| 1 x TIG-MAX® XT 7000 stainless steel cleaning device (weld cleaner) | 1 x HSF pressure pump sprayer (1.2 L) |
| 1 x TIG-MAX® XT "Superbrush" shape grip cable – complete set (3 m) | 1 x HSF safety goggles |
| 1 x TIG-MAX® XT earth cable (3 m) | 1 x HSF respirator |
| 3 x TIG-MAX® XT carbon-fibre cleaning brush „Superbrush“ | 1 x HSF chemical gloves |
| 1 x TC-275 cleaning- & polishing-electrolyte (1 L) | 1 x HSF wire brush „Mini“ |
| 1 x TC-510 neutraliser (1 L) | 1 x Transport case for TIG-MAX® XT 7000 |
| 2 x Microfiber cloths „Superclean“ | 1 x TIG-MAX® XT user manual |
| 1 x HSF liquid container | 1 x TIG-MAX® XT catalogue |

OUR TIG-MAX® XT SERIES

TIG-MAX® XT 9000

Our flagship



Cleans



Polishes



Passivates



Marks

SKU: **2014150-II**
Power max.: **4000 W**
Dimensions: **385 x 170 x 315**
(LxWxH in mm)
Protection class: **IP23**
Weight: **17.0 kg**

Complete set
including robust
accessories!

Inverter

Quality

Made in



TIG-MAX



Suitable for continuous industrial use every day

→ Includes high-quality, robust accessories

TIG-MAX® XT 9000 Stainless Steel Cleaning Device (Weld Cleaner) – Complete Set

Included in the set:

- | | |
|---------------------------------------------------------------------|-----------------------------------------|
| 1 x TIG-MAX® XT 9000 stainless steel cleaning device (weld cleaner) | 1 x HSF liquid container |
| 1 x TIG-MAX® XT cable with handle - complete set „Superbrush“ (6 m) | 1 x HSF pressure pump sprayer (1.2 L) |
| 1 x TIG-MAX® XT earth cable (6 m) | 1 x HSF safety goggles |
| 5 x TIG-MAX® XT carbon-fibre cleaning brush „Superbrush“ | 1 x HSF respirator |
| 1 x TIG-MAX® XT double brush adapter | 1 x HSF chemical gloves |
| 1 x TIG-MAX® XT sliding shroud for double brush | 1 x HSF wire brush „Mini“ |
| 1 x TC-275 cleaning- & polishing-electrolyte (1 L) | 1 x Transport case for TIG-MAX® XT 9000 |
| 1 x TC-510 neutraliser (1 L) | 1 x TIG-MAX® XT user manual |
| 5 x Microfiber cloths „Superclean“ | 1 x TIG-MAX® XT catalogue |

TIG-MAX® XT 9000 WITH TROLLEY



Cleans



Polishes



Passivates



Marks



SKU: **2014150-IIW**

Power max.: **4000 W**

Dimensions: **385 x 170 x 315**

(LxWxH in mm)

Protection class: **IP23**

Weight: **17.0 kg**



Suitable for continuous industrial use every day

→ Includes high-quality, robust accessories

TIG-MAX® XT 9000 – Complete Set with Trolley

Included in the set:

- | | |
|-------------------------------------------------------------------|-------------------------------------|
| 1 TIG-MAX® XT 9000 stainless steel cleaning device (weld cleaner) | 5 Microfiber cloths „Superclean“ |
| 1 TIG-MAX® XT trolley | 1 HSF liquid container |
| 1 TIG-MAX® XT cable with handle - complete set „Superbrush“ (6 m) | 1 HSF pressure pump sprayer (1.2 L) |
| 1 TIG-MAX® XT earth cable (6 m) | 1 HSF safety goggles |
| 5 TIG-MAX® XT carbon-fibre cleaning brush „Superbrush“ | 1 HSF respirator |
| 1 TIG-MAX® XT double brush adapter | 1 HSF chemical gloves |
| 1 TIG-MAX® XT sliding shroud for double brush | 1 HSF wire brush „Mini“ |
| 1 TC-275 cleaning- & polishing-electrolyte (1 L) | 1 TIG-MAX® XT user manual |
| 1 TC-510 neutraliser (1 L) | 1 TIG-MAX® XT catalogue |

STAINLESS STEEL SURFACE CLEANER

Included in the set:

- TIG-MAX® XT stainless steel surface cleaner (13 cm OR 33 cm)
 - incl. 7 m cable and a telescopic rod length of 0.6 - 1.2 m
- 5 TIG-MAX® XT surface cleaner (13 cm OR 33 cm)
- 1 TIG-MAX® XT bucket incl. plastic hook

- **Cleaning!**
- **Derusting!**
- **Passivating!**

Suitable for:

- **facades**
- **surfaces**
- **container**
- **tanks etc.**



SKU 13 cm: 2014351

SKU 33 cm: 2014350

STAINLESS STEEL, ONLY THE BEST!

4 *Must-have* FUNCTIONS IN JUST ONE DEVICE:



CLEANING...

- ▶ anything from small seams to large areas
- ▶ without attacking the surface structure
- ▶ removes tempering colours + white spots, edges and streaks



PASSIVATING...

- ▶ for 100 % protection from corrosion (rust)
- ▶ for better quality
- ▶ for greater customer satisfaction



POLISHING...

- ▶ various components
- ▶ weld seams created subsequently on electropolished material
- ▶ residues and scorch marks
- ▶ small scratches



MARKING...

- ▶ your own labels...
 - ▶ graphics...
 - ▶ lettering... (e.g. product names, part numbers)
 - ▶ QR codes...
- On your products
- Permanently, without fading!*



Safe for all applications:



THE TIG-MAX® EFFECT!

MIG-welding

**WIG-welding in
two passes**

WIG-welding

Spot-welding

**Reciprocal
pollution**

Heat penetration

FLUIDS

TC-225 Cleaning-Electrolyte

Compared to the TC-275, the TC-225 is about half as strong, making it particularly suitable for TIG welds.

- NO toxic chemicals



SKU 1 liter: 4319

SKU 5 liter: 4318



Cleaning
- weak -



Cleaning
- medium -



Cleaning
- strong -



Polishing



Passivating

TC-275 Cleaning- & Polishing-Electrolyte

It's a powerful electrolyte for cleaning more heavily oxidized welds. Due to the special composition, this is the fastest working electrolyte for weld seam processing and is also suitable for severe discoloration.

It is also particularly suitable for electrolytic polishing.

- NO toxic chemicals

3 in 1

- Highest cleaning performance
- Highest polishing performance
- Highest passivating performance

OUR CHOICE



SKU 1 liter: 4321

SKU 5 liter: 4320



Cleaning
- weak -



Cleaning
- medium -



Cleaning
- strong -



Polishing



Passivating



NSF-
approval

FLUIDS

TC-275

Cleaning- & Polishing-Electrolyte



Use:

- STEP 1 ► Fill the TC-275 cleaning- & polishing-electrolyte into a wide-necked container
- STEP 2 ► Set the device to cleaning
- STEP 3 ► Dip the TIG-MAX® carbon-fibre cleaning brush in the TC-275 cleaning- & polishing-electrolyte
- STEP 4 ► Slide the TIG-MAX® sliding shroud sleeve forward
- STEP 5 ► TIG-MAX® carbon-fibre cleaning brush slowly over the weld seam with circular movements
- STEP 7 ► Immediately spray the workpiece with the TC-510 neutraliser
- STEP 6 ► Rinse the workpiece with plenty of water

FLUIDS

TM-21 Cleaning-Electrolyte (TB-21)

* TM-21 replaced TB-21



Cleaning
- weak -



Cleaning
- medium -



Cleaning
- strong -



Polishing



Passivating



SKU 1 liter: 4376

SKU 5 liter: 4377

TM-25 Cleaning- & Polishing-Electrolyte (TB-25)

* TM-25 replaced TB-25



Cleaning
- weak -



Cleaning
- medium -



Cleaning
- strong -



Polishing



Passivating



NSF-
approval



SKU 1 liter: 4371

SKU 5 liter: 4372

TB-30ND Cleaning-Electrolyte "Citric Acid"

ECO FRIENDLY



Cleaning
- weak -



Cleaning
- medium -



Cleaning
- strong -



Polishing



Passivating



NSF-
approval



SKU 1 liter: 4308

SKU 5 liter: 4307

TB-31ND Cleaning-Electrolyte "Neutral"

ECO FRIENDLY



Cleaning
- weak -



Cleaning
- medium -



Cleaning
- strong -



Polishing



Passivating



NSF-
approval



SKU 1 liter: 4309

SKU 5 liter: 4310

FLUIDS



**1
LITER**



**5
LITER**



**10
LITER**



**20
LITER**

**We have the right volume
for you!**



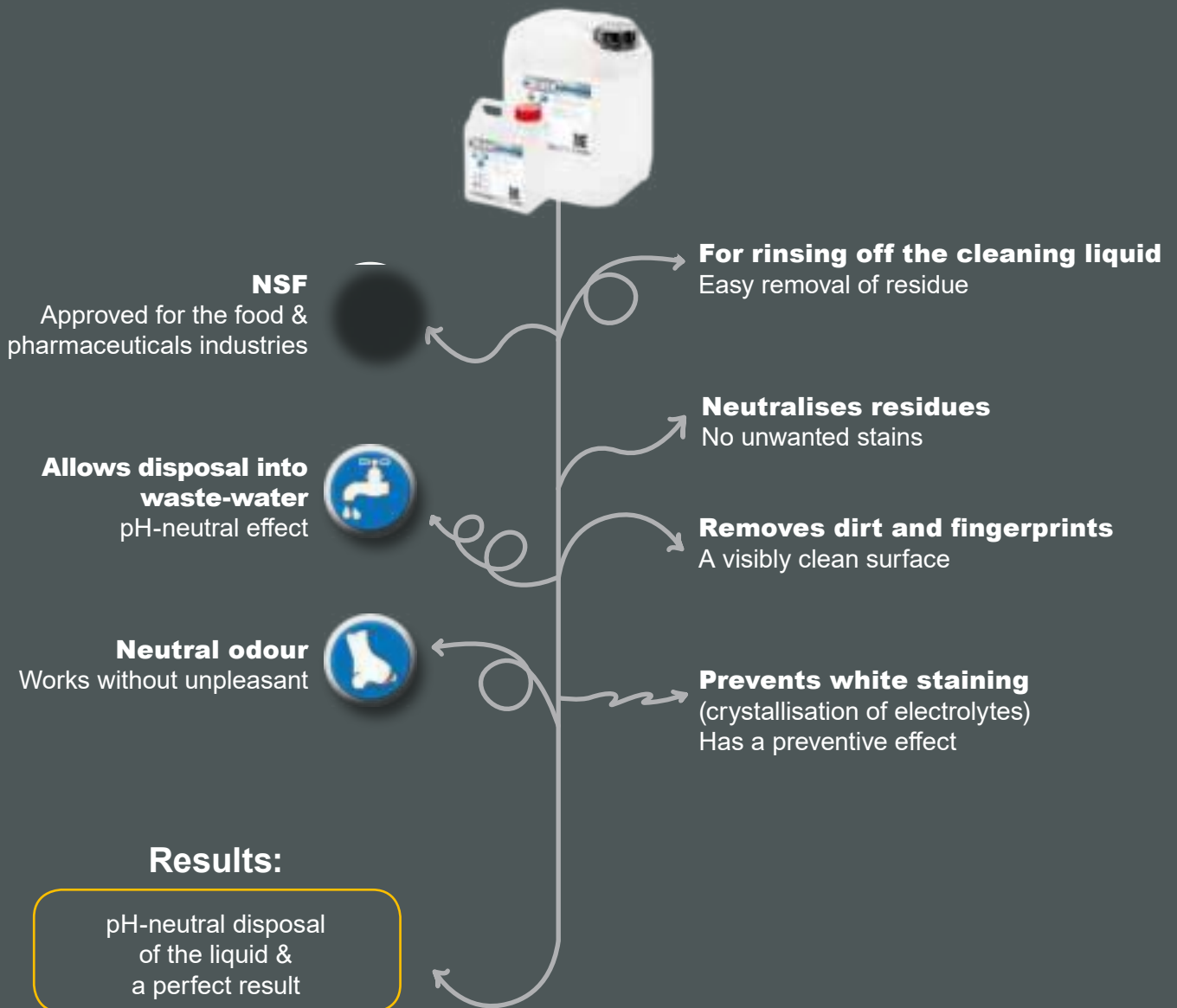
**200
LITER**



**1000
LITER**

FLUIDS

TC-510 Neutraliser



Use:

- STEP 1 ► Fill the TC-510 neutraliser into a spray bottle
- STEP 2 ► Clean your workpiece with the TC-275 cleaning- & polishing-electrolyte
- STEP 3 ► Immediately spray the workpiece with the TC-510 neutraliser
- STEP 4 ► Rinse the workpiece with plenty of water

FLUIDS

TM-40 Neutraliser (TB-40)

* TM-40 replaced TB-40

To wash off the TM-21 (TB-21) cleaning-electrolyte and the TM-25 (TB-25) cleaning-& polishing-electrolyt

SKU 1 liter: 4361 SKU 5 liter: 4312



TB-41 Neutraliser

To wash off the TB-30ND cleaning-electrolyte and the TB-31ND cleaning-electrolyte

SKU 1 liter: 4313 SKU 5 liter: 4314



TC-510 Neutraliser

To wash off the TC-225 cleaning-electrolyte and the TC-275 cleaning-& polishing-electrolyt



SKU 1 liter: 4323 SKU 5 liter: 4322

TM-F100 Pre-Cleaner & Finisher

For a perfect finish. Stainless steel, only THE BEST!

SKU 1 liter: 4335 SKU 5 liter: 4336



TM-F200 Degreaser, Pre- & Finish-Cleaner

The alternativ for solvents and nitro thinners

SKU 1 liter: 4333 SKU 5 liter: 4334



TM-F700 Finisher & Care Oil

For an even and perfect finish

SKU 1 liter: 4338 SKU 5 liter: 4339



MARK AND LABEL**MARK AND ADVERTISE**

Quick and precise marking on all
conductive metals:

(e.g. on your products)



customer reference

www.ideenausstahl-hillebrand.de

- ▶ **Own logos**
- ▶ **Designs**
- ▶ **Texts and numbers**
(e.g. product names, part numbers)
- ▶ **QR-codes**
- ▶ **Single- & multiple use stencil**

MARK AND LABEL

TIG-MAX® XT Marking Kit



Included in the kit:

- 1 TIG-MAX® XT marking adapter
- 1 TIG-MAX® XT marking electrode (34 mm)
- 1 individual marking stencil (ca. 80 x 55 mm)
- 1 TM-90 marking-electrolyte (1 L)
- 10 HSF O-Rings for marking electrode (ø 25 mm)
- 1 HSF marking felt tape (1 m)
- 1 HSF masking tape
- 1 HSF scissors
- 1 open-end wrench (13 mm)
- 1 HSF transport box (M)

SKU: 20144212

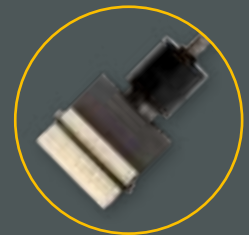
TIG-MAX® XT Marking Set



Included in the set:

- 1 TIG-MAX® XT marking adapter
- 1 TIG-MAX® XT marking electrode (34 mm)
- 1 TM-90 marking-electrolyte (0,5 L)
- 1 HSF marking felt tape (0,5 m)
- 5 HSF O-Rings for marking electrode (ø 25 mm)

SKU: 20144211



Individual Marking Stencil



Single-use stencil



Multiple-use stencil without plastic frame



Multiple-use stencil with plastic frame

Print with our professional thermal stencil printer quickly and easily your individual marking stencils. (single-use stencil!)

Let us create your individual marking stencil, which you can use up to **500 times**.

Step 1: You submit layout and desired size by e-mail to info@hsf-group.de (file formats: TIFF, SVG, JPG, BMP, PDF, Word etc.)

Step 2: We will send a proof and a quotation.

Step 3: You approve the proof.

Step 4: We deliver the stencil within 10 working days.

SKU: 4210

MARK AND LABEL

TIG-MAX® XT Marking Adapter

The marking adapter makes it possible to mark stainless steel with your TIG-MAX®



SKU: 20144251

TIG-MAX® XT Marking Electrode

For use with the TIG-MAX® XT marking adapter



SKU 34 mm: 42061

SKU 61 mm: 42065

TM-90 Marking-Electrolyte

Use it in conjunction with the cleaning device and marking set to chemically engrave black markings on stainless steel



SKU 0,5 liter: 42091

SKU 1 liter: 4209

HSF Marking Felt Tape

High quality marking felt for etching
Cut to size as required
60x1000x2mm



SKU: 4207

HSF O-Ring for Marking Electrode (ø 25 mm)

Neoprene O-rings to attach felt on to the marking electrode



SKU ø 25 mm: 4208

Other sizes on request

MARK AND LABEL

Stencil Printer 18-24mm

Professional labeling device including color display, print resolution 180 dpi, printing widths: 18-24 mm, incl. power cable, USB cable, suitcase, 1x standard tape and 1x template tape



SKU: 4202

Stencil Printer 18-36mm

Professional PC labeling device including Wi-fi and separate LCD keyboard, print resolution 360 dpi, printing widths 18-36 mm, incl. power cable/USB cable



SKU: 42022

Thermal Stencil Printer

For large print volumes, print resolution 300 dpi, tape width 100mm endless tape, incl. power and USB cable



SKU: 42021

P-Touch Stencil Tapes

Stencil tapes in 18,24 and 36mm width. Suitable for P-TOUCH D600VP and D800W



SKU 18 mm: 4203

SKU 24 mm: 4204

SKU 36 mm: 42041

Stencil Paper

Stencil paper, endless tape for Themo stencil printer. Width: 100mm



SKU 3 m: 42045

SKU 45 m: 42047

CABLE

Für **TIG-MAX® | XT | RS**
and other models

TIG-MAX® CABLE WITH HANDLE - COMPLETE SET

Simple use with constant power!

- ✓ **Ergonomic, teflon, shaped grip**
– **light, small and comfortable** –
 - ▶ Flexible working, even in hard-to-reach corners
 - ▶ Ideal for small corners
- ✓ **Constant power** (even with long cables)
 - ▶ Precise cleaning possible even at greater distances from the device
 - ▶ Ideal for assembly
- ✓ **Cable with handle - complete set**
 - ▶ Simple sliding shroud system
- ✓ **Robust – „tear-proof“**
 - ▶ Long service life
 - ▶ Low follow-up costs
- Long brush service life!
- Reusable & Sustainable
 - Each part can be ordered individually
- Quality Made in Germany
- TIP:** Clean threads!
Ensure clean threads and increase conductivity with copper paste

Use:

- STEP 1 ▶ Insert the plug of the blue cable into the top receptacle on the device
 STEP 2 ▶ Screw the grip onto the cable
 STEP 3 ▶ Screw the pin onto the grip and then plug on the sliding insulation sleeve
 STEP 4 ▶ Screw the brush onto the pin and slide the insulation sleeve forward

CABLE

TIG-MAX® XT Cable with Handle - Complete Set

Blue cable, handle, wand and sliding shroud

"Brush" for XT 2500/4000/6000

SKU:

3 m: 2014300

6 m: 2014308

10 m: 20143082



"Superbrush" for XT 7000/9000

SKU:

3 m: 2014300-2

6 m: 20143081

10 m: 20143072



TIG-MAX® XT Cable with connection thread M8

Blue cable

SKU:

3 m: 2014322

6 m: 2014323

10 m: 2014325



TIG-MAX® XT Extension Cable for cable with handle

Blue cable

SKU:

3 m: 2014315

6 m: 2014317

10 m: 2014319



TIG-MAX® XT Earth Cable

Black cable, Earth cable

SKU

3 m: 2014309

6 m: 20143110



TIG-MAX® XT Extension Cable for earth cable

Black cable

SKU:

3 m: 2014324

6 m: 2014326



TIG-MAX® XT 90 Cable with Handle - Complete Set

Blue cable, handle, wand and sliding shroud

SKU

3 m: 2014327



TIG-MAX® XT 90 Earth Cable

Black cable, Earth cable

SKU:

3 m: 2014328



**CUSTOMS LENGTHS
AVAILABLE ON REQUEST!**

HANDLES, WANDS AND SHROUD

Für **TIG-MAX®** | **XT** | **RS**
and other models

TIG-MAX® HANDLE

Ergonomic and flexible working!

- ✓ **Heat-resistant**
 - ▶ No burning / melting
 - ▶ Ideal for continuous use



- ✓ **Light, small & flexible**
 - ▶ Ideal for pickling in small corners and edges

- ✓ **Milled recess on the top**
 - ▶ Protection against liquid contact
 - ▶ Protection against corrosion

TIG-MAX®

SLIDING SHROUD SYSTEM

Easy handling & clean working!



To slide and insulate!

- ✓ **Heat-resistant**
- ✓ **Sliding**
 - ▶ Simple and precise working
 - ▶ Longer brush life
 - ▶ No turning required
- ✓ **Bundling of the brush fibres**
 - ▶ Direct power transmission to the material via the tips of the brush
- ✓ **All-round protection**
 - ▶ Protection of the threads
 - ▶ Protection against short-circuit
 - ▶ Protection against brush wear

HANDLES, WANDS AND SHROUD

TIG-MAX® XT Handle + Wand + Sliding Shroud



"Brush"

for XT 2500/4000/6000
SKU: 20143392

"Superbrush"

for XT 7000/9000
SKU: 20143393

TIG-MAX® XT Handle + Wand



SKU: 2014339

TIG-MAX® XT Handle



SKU: 2014334

TIG-MAX® XT Wand

SKU

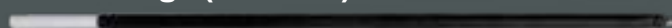
85 mm straight: 2014335

45° tilt: 20143361

90° tilt: 20143371



"extralong" (500 mm): 20143356



TIG-MAX® XT Wand + Sliding Shroud



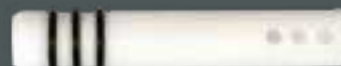
"Brush"

for XT 2500/4000/6000
SKU: 20143351

"Superbrush"

for XT 7000/9000
SKU: 20143352

TIG-MAX® XT Sliding Shroud



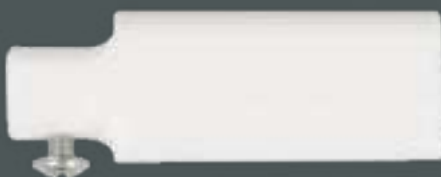
"Brush"

for XT 2500/4000/6000
SKU: 470312

"Superbrush"

for XT 7000/9000
SKU: 4703121

TIG-MAX® XT Sliding Shroud for Double Brush



SKU: 470411

TIG-MAX® XT Sliding Shroud for Fourfold Brush



SKU: 47055

Upgrade your device to our HIGH PERFORMANCE BRUSHES!

Conversion Wand M10 Inner Thread (100 mm)



SKU: 47093

Conversion Wand M10 Inner Thread (100 mm) + Sliding Shroud

"Brush"

SKU: 470931

"Superbrush"

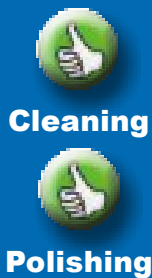
SKU: 470932



BRUSHES

TIG-MAX® CARBON-FIBRE CLEANING BRUSH

Long-life brushes!



- ✓ **Carbon fibre**
 - ▶ Heat-resistant & conductive
- ✓ **Copper**
 - ▶ Best performance
- ✓ **Stainless steel**
 - ▶ Corrosion resistant
- ✓ **Long service life**
 - ▶ In conjunction with XT
- ✓ **Cost-effective**
 - ▶ Low follow-up costs
- ✓ **High-quality materials**
 - ▶ Best quality
- ✓ **Strong & flexible**
 - ▶ For all surfaces
- ✓ **Various threads**
 - ▶ Suitable for your device



In conjunction with a TIG-MAX® XT cleaning device, the associated cleaning fluids and the TIG-MAX® sliding insulating sleeve system, TIG-MAX® brushes can clean more than 1000 m of weld seam. This saves costly time, making them very attractive financially. Users achieve unique results quickly and easily! Stainless steel – only BETTER!

INFO: There's a TIG-MAX® brush for every application.

Better than pads!

- ✓ **Extra fine**
 - Pliable in corners and edges
- X No short circuits**
- X No black burn marks**

Use:

- STEP 1** ▶ Screw the TIG-MAX® carbon-fibre cleaning brush onto the pin
- STEP 2** ▶ Select the cleaning mode and set the required voltage
- STEP 3** ▶ Dip the TIG-MAX® carbon-fibre cleaning brush in the TC-275 cleaning- & polishing-electrolyte
- STEP 4** ▶ Slide the TIG-MAX® sliding shroud insulating sleeve forward
- STEP 5** ▶ TIG-MAX® carbon-fibre cleaning brush slowly over the weld seam with circular movements
- STEP 6** ▶ Keep the TIG-MAX® carbon-fibre cleaning brush wet! A dry brush is less effective and wears down faster
- Care** ▶ Rinse the TIG-MAX® carbon-fibre cleaning brush after use to remove the solution
- ▶ Unscrew the TIG-MAX® carbon-fibre cleaning brush (CAUTION - HOT!) and clean the threads

BRUSHES

TIG-MAX® XT Carbon-Fibre Cleaning Brush

"Brush" for XT 2500/4000/6000 - M6 thread



SKU 1 piece: 440112

SKU 10 piece: 44021

"Superbrush" for XT 7000/9000 - M6 thread



SKU 1 piece: 44101

SKU 10 piece: 44201

TIG-MAX® XT Carbon-Fibre Cleaning Brush "Stainless Steel Threads"

M6 thread



SKU 1 piece: 44011

SKU 10 piece: 44012

TIG-MAX® Carbon-Fibre Cleaning Brush

M7 Conical thread



SKU 1 piece: 2014201

SKU 10 piece: 2014202

Carbon-Fibre Cleaning Brush M10 "Brass Threads"

M10 x 1,5 inner thread



SKU 1 piece: 4415

SKU. 10 piece: 4416

TIG-MAX® XT Carbon-Fibre Cleaning Flat Brush

M6 thread



"S"

SKU: 44040

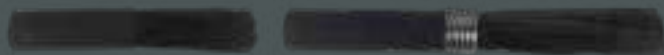
"M"

SKU: 44041

Carbon-Fibre Cleaning Brush M10 for Electrolyte Supply

M10 x 1,5 inner thread

For devices with automatic electrolyte supply



30 mm

SKU: 4417

60 mm

SKU: 4418

HSF Box for brushes



SKU: 4720

TIG-MAX® XT Double Brush Adapter



SKU: 47061

Sliding shroud and brush not included

TIG-MAX® XT Fourfold Brush Adapter



SKU: 47071

Sliding shroud and brush not included

TIG-MAX® CLEANING TABLE

Functional equipment & robust construction!



- ✓ **Various holding devices***
- For cables, liquid containers etc.

Completely made of stainless steel!

- ✓ **Splash guard on three sides**
- Dirt remains in the working area

- ✓ **Grounding point on the table**
- Makes work easier

Material: **Stainless steel**
 Dimensions: **128 x 67.5 x 108.5**
 Worktop: **114 x 66 x 96**
 (LxWxH in cm)

- ✓ **Sturdy construction**
- High load capacity

- ✓ **Liquid drain**
- Allows easy collection of residual liquids

- ✓ **Locking wheel**
- Stable working

- ✓ **Mobile thanks to castors**
- Mobile use in the workshop

*** The table has 2 x holders for the pressure pump sprayers and 3 x holders for winding up the cables.**



SKU: 5200

WORKPLACE

TIG-MAX® CHEMat

Oil and acid resistant

broad: 40 / 80 cm
length: sold by
the metre



SKU: 6000

TIG-MAX® XT Trolley

height: 69 cm
length: 43 cm
broad: 53 cm



SKU: 5100

Transport Case for TIG-MAX® XT 9000

(LxWxH in mm)

external dimensions:

687 x 528 x 276

internal dimensions:

620 x 460 x 250

weight empty: 6.98 kg



SKU: 20142170

Transport Case for TIG-MAX® XT 7000

(LxWxH in mm)

external dimensions:

615 x 410 x 330

internal dimensions:

570 x 370 x 320

weight empty: 1.6 kg



SKU: 20142175

HSF Transport Box (L)

(LxWxH in mm)

external dimensions:

396 x 296 x 427

internal dimensions:

381 x 265 x 384

weight empty: 3.0 kg



SKU: 4601

HSF Transport Box (M)

(LxWxH in mm)

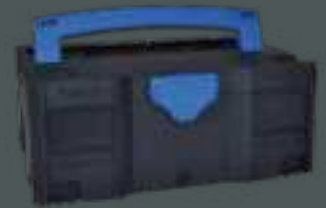
external dimensions:

396 x 296 x 164

internal dimensions:

384 x 265 x 125

weight empty: 1.5 kg



SKU: 4600

HSF Transport Box (S)

(LxWxH in mm)

external dimensions:

320 x 285 x 120

internal dimensions:

315 x 220 x 113

weight empty: 0.47 kg



SKU: 20142180

Transport Box for TIG-MAX® XT 2500

(LxWxH in mm)

external dimensions:

402 x 261 x 243

internal dimensions:

362 x 211 x 200

weight empty: 0.85 kg

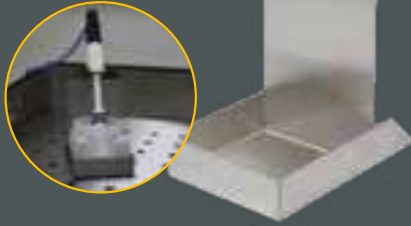


SKU: 4603

OPTIMIZE YOUR WORKPLACE!

OTHER ACCESSORIES

TIG-MAX® Handleholder
out stainless steel for liquid container



SKU: 5210

HSF Liquid Container
capacity: 250 ml



SKU: 4702

Microfiber Cloth
(40 x 40 cm)



"Superclean"
SKU: 4711



"Ultimate"
SKU: 47112

HSF Wire Brush
each with stainless steel bristles



"Mini"
SKU: 4406



"Maxi"
SKU: 4405

HSF Pressure Pump Sprayer (1.2 L)



SKU: 4699

HSF Spray Bottle (0,5 L)



SKU: 4700

HSF Safety Goggles



SKU: 4716

HSF Respirator



SKU: 4717

HSF Chemical Gloves



SKU: 4715

Copper Paste



SKU: 4718

OTHER ACCESSORIES

TIG-MAX® VA SUPER WIPES

Wipes for the safe and easy cleaning of stainless steel



REMOVES:

- ✓ Grease
- ✓ Deposits
- ✓ Chemicals
- ✓ Water stains
- ✓ Fingerprints
- ✓ Other tough dirt stains

Colour: orange
Quantity: 1 tub = 30 wipes



Cleaning
- rough side -



Polishing
- smooth side -



Protecting

PERFECT FOR:



BEFORE



AFTER

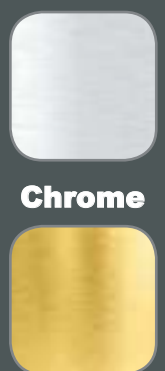


**Stainless
steel**



Copper

Aluminium



Chrome

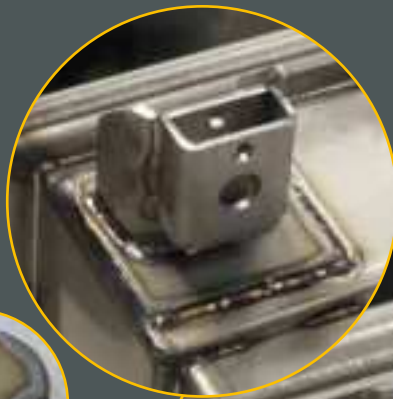
Brass

Use:

- STEP 1 ► Open the TIG-MAX® VA SUPER WIPES and unfold it fully
- STEP 2 ► Wipe off stains and deposits using the rough side
- STEP 3 ► Wipe again and polish the surface using the smooth side
- STEP 4 ► Buff using „Superclean“ or „Ultimate“ Microfiber Cloth for additional shine (p 36)



SKU: 2014360

BEFORE - AFTER EXAMPLES**Our****TIG-MAX® XT****gets****EVERYTHING****clean.**

CUSTOMER OPINIONS

What our customers say about the TIG-MAX® XT

- » The TIG-MAX® XT is faster and gives better results than other methods. «
- » It's fast and easy to use, and most of all, I can let inexperienced people work with it without worrying about employee safety! «
- » We take our TIG-MAX® XT really hard and he never let us down! «
- » A solid, well thought-out weld cleaning solution that's tough enough for the harsh workshop or assembly environment! «
- » The TIG-MAX® XT works better than older electrolytic devices. He has proven to be extremely robust and we would buy it again anytime! «
- » A small, lightweight but very powerful device, we are thrilled. «
- » We use the TIG-MAX® XT in 3-shift operation. The device delivers always full power and is consistently ready for use. «
- » We had a device with Pad before and are very pleasantly surprised how much time we save now. «
- » Since we used the TIG-MAX® XT we do not have white borders after cleaning and we do not have to treat again! «
- » Despite the high performance, the Carbon brush works incredibly long! «

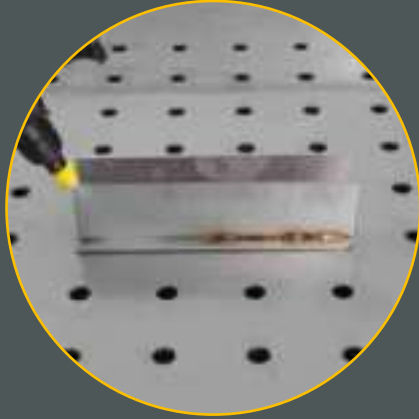


Find out which device could revolutionize your business
and arrange just today under
+49 2776 92278-0 a FREE demonstration!

AFTERCARE

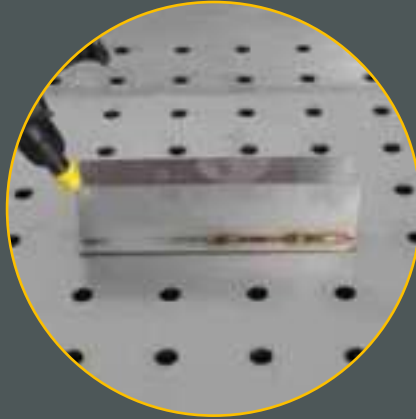
Technical tips after welding seam cleaning

In order to avoid soiled or smudged workpieces or the formation of edges or tempering colors, it is important to correct the welds correctly after cleaning.



1. Neutralize

Fill the neutralizing fluid (e.g. TC-510) into a pressure pump sprayer or spray bottle. Spray the neutralizer on the treated surface. Be sure to spray the entire surface of the weld elektrolyte.



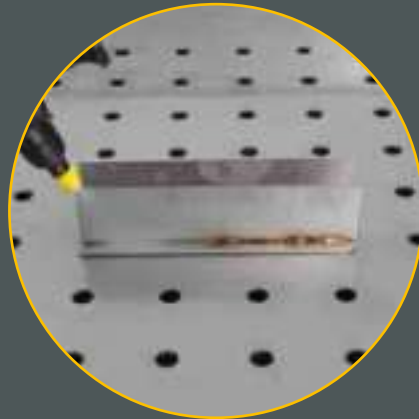
2. Rinse off

Rinse the treated area with clean water. Use plenty of water and be sure to remove all liquid from the surface. The rinsing of the treated surface can be done for example with a high-pressure cleaner.



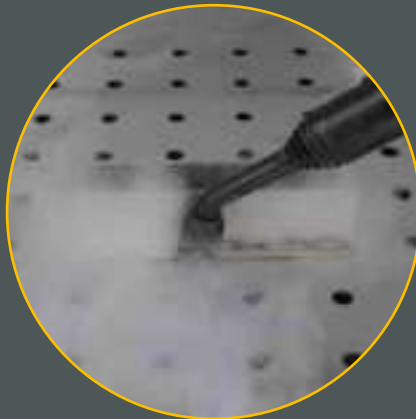
3. Drying

Now dry the treated area with a clean microfibre cloth as needed.



1. Neutralize

Fill the neutralizing fluid (e.g., TC-510) into a pressure pump sprayer or spray bottle. Spray the neutralizer on the treated surface. Be sure to spray the entire surface of the weld elektrolyte.



2. Evaporation

Use our special steam cleaner to remove the liquid from the surface. Drive over the treated area as often as necessary until all residues of the elektrolyte have been removed.



3. Drying

Now dry the treated area with a clean microfibre cloth as needed.

CARE AND MAINTENANCE

Cleaning and maintenance after the end of work

After completing work with the TIG-MAX® XT observe the following simple care and maintenance instructions!

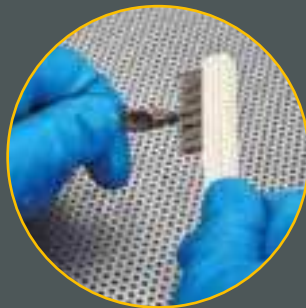


1. Turn off the device and unplug the blue cable.
2. Unscrew the brush from the wand.
3. Remove the sliding shroud.

4. Unscrew the wand from the handle.
5. Wash all parts thoroughly under running water.
6. Allow the parts to dry overnight before packing them away.



1. Thoroughly rinse the brushes with warm water after each weld cleaning and allow them to dry thoroughly, taking care to keep the fibers straight.



2. If the copper socket on the brush starts to run or becomes dirty, clean it with a small stainless steel wire brush to ensure good electrical contact.



3. If pads form on or in the threads of the brush, wand or handle, clean them with a mini wire brush. The threads could otherwise seize and the cleaning performance could be reduced or completely lost.



Care of the earth clamp

Dirt, corrosion or deposits on the earth clamp can affect the electrical continuity, which reduces the cleaning performance!



1. Turn off the device and disconnect the earth cable from the TIG-MAX® device. Lock the clamp in a vice with soft jaws.



2. Clean the clamp and especially the prongs with a fine wire brush.



3. The earth clamp now has the full electrical continuity again.

TIG-MAX® FRAMEWORK AGREEMENTS

Secure reliable supply &
best prices through our
FRAME AGREEMENT

**Individual advice**

with solutions tailored to your needs

Call-off orders

delivery on request

Scheduled orders

delivery as per agreed schedule

Guaranteed prompt delivery

due to scheduled delivery dates

Reduced costs

due to low / no storage costs

ORDER by FAX, MAIL or PHONE

fax: +49 2776 921295 | info@hsf-group.de | phone: +49 2776 92278-0

<input type="checkbox"/>	description	SKU	unit	amount
<input type="checkbox"/>	TC-275 Cleaning- & Polishing-Electrolyte	4321 4320	<input type="checkbox"/> 1 liter <input type="checkbox"/> 5 liter	___ x 1 liter ___ x 5 liter
<input type="checkbox"/>	TC-510 Neutraliser	4323 4322	<input type="checkbox"/> 1 liter <input type="checkbox"/> 5 liter	___ x 1 liter ___ x 5 liter
<input type="checkbox"/>	TIG-MAX® XT Carbon-Fibre Cleaning Brush "Brush"	440112 44021	<input type="checkbox"/> 1 piece <input type="checkbox"/> 10 piece	___ x 1 piece ___ x 10 piece
<input type="checkbox"/>	TIG-MAX® XT Carbon-Fibre Cleaning Brush "Superbrush"	44101 44201	<input type="checkbox"/> 1 piece <input type="checkbox"/> 10 piece	___ x 1 piece ___ x 10 piece
<input type="checkbox"/>	TIG-MAX® XT Cable with Handle - Complete Set "Brush"	2014300 2014308	<input type="checkbox"/> 3 meter <input type="checkbox"/> 6 meter	___ x 3 meter ___ x 6 meter
<input type="checkbox"/>	TIG-MAX® XT Cable with Handle - Complete Set "Superbrush"	2014300-2 20143081	<input type="checkbox"/> 3 meter <input type="checkbox"/> 6 meter	___ x 3 meter ___ x 6 meter
<input type="checkbox"/>	TIG-MAX® XT Handle + Wand + Sliding Shroud "Brush"	20143392	1 piece	
<input type="checkbox"/>	TIG-MAX® XT Handle + Wand + Sliding Shroud "Superbrush"	20143393	1 piece	
<input type="checkbox"/>	TIG-MAX® XT Sliding Shroud "Brush"	470312	1 piece	
<input type="checkbox"/>	TIG-MAX® XT Sliding Shroud "Superbrush"	4703121	1 piece	
<input type="checkbox"/>	TIG-MAX® XT Wand	2014335	1 piece	
<input type="checkbox"/>	TIG-MAX® VA SUPER WIPES	2014360	1 piece	___ x 1 piece
<input type="checkbox"/>	Other			

name / company name

order number / others

street / house number

postcode / location / country

phone number

company stamp / signature

REASONS TO CHOOSE HSF GROUP GMBH

Personal advice and support

- Test machine on request
- On-site service: free demonstration at your workshop/construction site etc.
- Commissioning and training
- Technical advice: Our technical consultants can answer any technical queries about your product fast and professionally.



Fast and on-time delivery

- Order by 2 PM, same day shipping!
- Large stockholding: enabling fast and effective delivery of spare parts, accessories and machines
- Call-off orders: We store for you and deliver to you at your agreed time!



Easy financing

- Low priced ex-demo machines!
(With full warranty and training, just as new equipment)
- Lease / rental / leasing and instalment a payment plans possible



Low maintenance and fast service

- Fast and efficient repair service in the unlikely event your machine needs to be repaired.
- Replacement machine during maintenance

HSF GROUP
GmbH

Your dealer:

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Landstraße 55a · 35080 Bad Endbach · Germany
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info@hsf-group.de · www.hsf-group.de

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