

Is it a mystery?

No. It's
Electrochemistry!



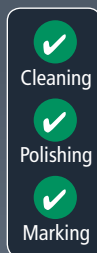
The **AkkuCleanox**:
Fully portable power for ≥ 90 min.

The first battery-powered
weld cleaner
in the world

see Page 8



Electrochemical Cleaning, Polishing, Marking



Electrochemical Cleaning, Polishing,

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All prices are non-binding price recommendations and apply without VAT and freight costs. Subject to price revisions. Version: October 2017

The welding dilemma

Stainless steels are corrosion resistant due to a thin passive coating of chromium oxide. **Heat during welding destroys this layer; the surface is then susceptible to corrosion.** Tarnish colours and oxidation layers must therefore be removed after welding and the surface must be re-passivated.



This is done either chemically or mechanically. **Chemical cleaning** by pickling is poisonous, requires long exposure times and leaves unsightly pickling edges. **Mechanical methods** by brushing or grinding are not poisonous – but mostly leave ferrite or iron oxides on the surface that cause new rust. Blasting methods, on the other hand, are associated with high vibrations.

All methods have a major common disadvantage: **The surfaces must be passivated in a further work step.** This can be done either by storage under controlled air humidity and oxygen supply conditions, or with the aid of a passivation agent that will again affect health and the environment.

Magic? No – electrochemistry!

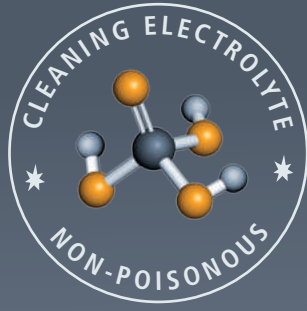
Our newly developed method **cleans and passivates metal surfaces** electrochemically using high-current electric arcs – **in one work step!** The user wets the work piece with non-poisonous electrolyte fluid and passes a carbon fibre brush over it – millions of electric arcs do the rest.

A similar principle has already been applied for two decades with the tampon method, which is based on moving a piece of electrolyte-soaked felt on a carbon electrode. However, this method never grew beyond a niche market, due to the low electrical output and the small contact area of the electrode.



Old method: Welding seam cleaning with tampon

Only our newly developed carbon fibre brush in combination with new, high-power device technology have made this intelligent electrochemical method with all its advantages suitable for industrial applications.



Marking

Cleaning with carbon fibres

Carbon fibres are excellent conductors. Our carbon fibre brush contains up to 1.5 million of them; they conduct high current to the work piece with a current density of up to 250 A per cm². **Electric arcs form at the tips of the carbon fibres** – similar to the process in TIG welding. These millions of small electrical charges are electronically limited to a length of 5 µm. **They remove tarnish colours, oxidation layers** and even minor scaling **at lightening speed** without damaging the surface.

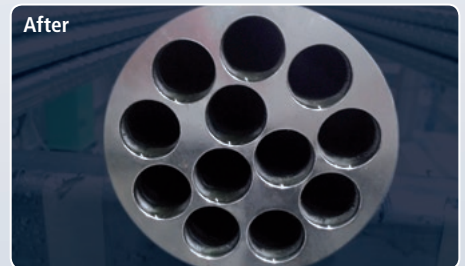
The electrolyte liquid is used to increase electrical conductivity and provide cooling. Evaporation generates a protective gas atmosphere that protects against new corrosion. The split-off oxygen forms chromium dioxide during the cleaning process – **which restores the protective passivation layer!** This effect was confirmed for us by the IGOS Institute in Solingen after standardised tests with salt spray.

The cleaning effect is not achieved by etching or pickling – as is the case with the devices made by our competitors – but almost exclusively through the extremely high energy density. **Our cleaning electrolyte is the non-poisonous E338 food additive** – which is also used in cool drinks.



Carbon fibre brush in action

The fibres of the carbon fibre brush hug the shape of the work piece during the cleaning process; different brush sizes, shapes and types make any cleaning task easier. Flexible extension of fibres from a Teflon sliding sheath can be used to reach corners and gaps. And our patented in-pipe brushes allow pipes and holes to be cleaned from the inside.

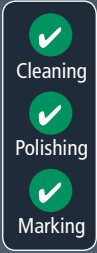


Mirror-smooth polish

Our switchable AC/DC devices also facilitate direct current (DC) mode for high-gloss polishing. Strong discolouration can be removed or evened out and dull areas in the heat-impact zone can be treated to the desired level of gloss.

Forgery-proof marking

A writing template or label printer can be used to produce individual signatures on your work pieces. **Dark marking** applies an oxidation layer to the surface; **bright marking** removes parts of the surface - like engraving, but does not look dark. Both methods are permanent and resistant against chemicals and abrasion – and are therefore often used for surgical instruments, tools, sanitary fittings, etc.



Cleaning

Polishing

Marking

The SuperCleanox family:

Power for the industry



The SuperCleanox range has been designed for heavy-duty industrial use and has proven itself after years of use in multi-shift operation by reputable customers. Capability and reliability were the top priorities during the development phase. The devices are designed for a 100% duty cycle; they reach peak currents of up to 400 A during cleaning and polishing – the highest performance level on the market.

Devices by competitors only reach a maximum of 60 A and are then switched off or throttled. The SuperCleanox series achieves a significantly higher output, facilitating faster and interruption-free work. An additional benefit: The cable length to the work piece can be drastically increased, which is particularly advantageous on building sites.

The SuperCleanox series are AC/DC devices – in other words, they take both alternating and direct current to clean, polish and create both light and dark marking patterns.



Our SuperCleanox devices are sold as complete kits; giving you everything you need to get started straight away.

The illustration shows everything included with the SuperCleanox VI.

SuperCleanox VI HD

Item No.:	EP-01-017 HD
Power output:	3,450 VA
Weight (set):	32 kg
Dimensions:	190x200x450 mm
Mains voltage:	230 V / 50 Hz / 16 A
Secondary voltage:	6-21 V AC/DC
Protection class:	IP23

Heavy duty!

At 3,450 VA, this is currently the most powerful welding seam cleaning device in the world. Three power levels cover all requirements: from gentle cleaning of thin, TIG-welded metal sheets to polishing strongly tarnished or scaled MAG welding seams. The power electronics were adapted to provide the high output. Thermal fuses only switch off above 140 A permanent current (100% duty cycle) or 400 A pulse current. Brush and mass cables with a cross-section of 16 mm² provide power to the work piece without electrical and thermal losses and without interruption during permanent operation, using cables with a length up to 100 m.

SuperCleanox VI

Item No.:	EP-01-017
Power output:	2,500 VA
Weight (set):	28 kg
Dimensions:	190x200x450 mm
Mains voltage:	230 V / 50 Hz / 10A
Secondary voltage:	9-32 V AC/DC
Protection class:	IP23

The pioneer

The SuperCleanox VI has set the standards in the market for a long time: its output of 2,500 VA provides 80 A continuous current (100 % duty cycle) or 200 A pulse current to the work piece. Three power levels each for cleaning and polishing solve almost any cleaning task: all welding seams, from TIG-welded thin metal sheets to MAG-welded beams, can be cleaned and polished in heavy-duty industrial applications.

You can continue to use cleaning and polishing handles with rigid carbon electrodes and felts – but you can also work at top efficiency with a large-surface cleaner or a 4-fold brush.

SuperCleanox IV+

Item No.:	EP-01-021
Power output:	1,500 VA
Weight (set):	25 kg
Dimensions:	190x200x450 mm
Mains voltage:	230 V / 50 Hz / 8A
Secondary voltage:	9-18 V AC/DC
Protection class:	IP23

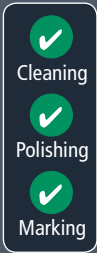
Enter the professional league!

The SuperCleanox IV+ has been designed for heavy-duty, long-term use in 3-shift industrial applications. An output power of 1,500 VA facilitates cleaning and polishing at two power levels and provides up to 80 A continuous current (100% duty cycle) or 140 A pulse current. This output power is completely sufficient for most cleaning tasks.

However, the 4-fold brush and large surface cleaner can only be used to a limited extent and the use of rigid carbon electrodes is also restricted.

Like all SuperCleanox devices, the IV+ is also suitable for marking.

Item No.	Description	Quantity	Set VI HD	Set VI	Set IV+
EP-01-017-HD	Set SuperCleanox VI HD – weight 38 kg	1 set	✓		
EP-01-017	Set SuperCleanox VI – weight 36 kg	1 set		✓	
EP-01-021	Set SuperCleanox IV+ – weight 32 kg	1 set			✓
	Device set: The accessories				
EP-07-600	Teflon handle with 4m cable 10 mm ²	1 unit		✓	✓
EP-07-693	Teflon handle with 10m cable 16mm ²	1 unit	✓		
EP-07-605	Earthing cable, 10 mm ² , 4 m, with 850 A clamp	1 unit		✓	✓
EP-07-691	Earthing cable, 16mm ² , 10m, with 850 A clamp	1 unit	✓		
EP-02-912	Carbon fibre brush XL	1 unit	✓	✓	✓
EP-02-033	Marking handle with 90° carbon electrode	1 unit	✓		✓
EP-02-018	Cleaning handle with 60° carbon electrode	1 unit		✓	
	Cleaning and polishing felts made of Kevlar, yellow	5 unit		✓	
EP-02-003	90° carbon electrode for marking	1 unit		✓	
	Marking felts, white	5 unit	✓	✓	✓
	O-rings	5 unit	✓	✓	✓
EP-07-005	Connection cable 1.5 mm ² , marking handle	1 unit	✓	✓	✓
	Cleaning and polishing electrolyte	2x 0.5 kg	✓	✓	✓
	Marking electrolyte, universal	50 ml	✓	✓	✓
	Protective goggles, gloves, PVC apron	1 unit each	✓	✓	✓
EP-07-019	Plastic box	1 unit	✓	✓	✓
EP-07-100	Wide-mouth container	1 unit	✓	✓	✓
EP-07-002	Spray bottle for water	1 unit	✓	✓	✓



Cleaning

Polishing

Marking

The Cleanox series:

Flexibility for workshop and assembly



Compact & light, reliable and powerful: These are the characteristics of our new Cleanox device series. It was made for metal construction companies that want to use their cleaning devices in a flexible manner – either in the workshop or on a construction site.



The three models of the Cleanox series differ in their functional scope to provide for individual needs. All of them are among the most powerful devices in the market. 70 A continuous current at 100% duty cycle and pulse currents of up to 140 A – achieved with very light and transportable devices – make our competitors take note.

The weight was significantly reduced compared to the previous series by using plastic and aluminium. The front and rear are made of acid-resistant and food-safe polypropylene, and are very rugged.

Our Cleanox devices are sold as complete kits, giving you everything you need to get started straight away.

Cleanox 4.2

115 V
+
230V

Item No.: EP-01-042
Power output: 1,000 VA
Weight: 15 kg
Dimensions: 250x150x300 mm
Mains voltage: 115/230 V / 50 Hz / 6 A
Secondary voltage: 10.5–18 V AC/DC
Protection class: IP21

The globetrotter

Cleaning and polishing of TIG and MAG seams at two power levels and bright or dark marking, 115 or 230 V: The power levels also enable the Cleanox 4.2 to perform intensive cleaning and polishing. Another feature: The input voltage can be switched between 115 and 230 V, so the device can be used all over the world.

The Cleanox 4.2 in combination with an optionally available marking set, can also be used for bright or dark marking.

Cleanox 4.0

Item No.: EP-01-040
Power output: 1,000 VA
Weight: 14 kg
Dimensions: 250x150x300 mm
Mains voltage: 230 V / 50 Hz / 6 A
Secondary voltage: 10.5-12.5V AC/DC
Protection class: IP21

The multi-talent

Cleaning and polishing of TIG seams, bright or dark marking: The Cleanox 4.0 is the entry device into the AC/DC class. It cleans speedily, using our XL carbon fibre brushes. It can also be used in direct current (DC) mode for polishing to create a mirror-like surface. Work pieces can be marked with bright or dark patterns using the optionally available marking set.

Cleanox 2.0

Item No.: EP-01-020
Power output: 1,000 VA
Weight: 13 kg
Dimensions: 250x150x300 mm
Mains voltage: 230 V / 50 Hz / 6 A
Secondary voltage: 10.5V AC
Protection class: IP21

The specialist

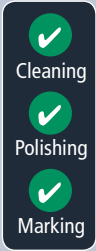
Cleaning of TIG seams, dark marking: The Cleanox 2.0 is a pure AC device and only intended for cleaning of welding seams using the carbon fibre brush. It can do this just as well as its bigger brother. Simple operation makes the device ideal for building sites and pipe installations.

The optional marking set can be used to apply dark labelling, e.g. batch numbers or name plates.

Item No.	Description	Quantity	Set Cleanox 4.2	Set Cleanox 4.0	Set Cleanox 2.0
EP-01-042	Set Cleanox 4.2 – weight 20 kg	1 set	✓		
EP-01-040	Set Cleanox 4.0 – weight 19 kg	1 set		✓	
EP-01-020	Set Cleanox 2.0 – weight 18 kg	1 set			✓
	Device set: The accessories				
EP-07-600	Teflon handle with 4m cable 10 mm ²	1 unit	✓	✓	✓
EP-07-606	Earthing cable, 10 mm ² , 4 m, with 200 A clamp	1 unit	✓	✓	✓
EP-02-912	Carbon fibre brush XL	1 unit	✓	✓	✓
	Cleaning and polishing electrolyte	2x 0.5 kg	✓	✓	✓
EP-07-100	Wide-mouth container	1 unit	✓	✓	✓
EP-07-002	Spray bottle for water	1 unit	✓	✓	✓
EP-07-017	Plastic box	1 unit	✓	✓	✓
	Optional accessories *				
EP-02-050	Marking set in plastic case	1 unit			
EP-04-021	Cleaner electrolyte	2 kg			
EP-04-012	Super-cleaner electrolyte	2 kg			
EP-04-013	Polisher electrolyte	2 kg			
EP-04-909	Neutralyte in canister with spray bottle	5 l			
EP-06-004	Gloves, acid-resistant CAT III, Size 8	1 pair			
EP-06-004-11	Gloves, acid-resistant CAT III, Size 11	1 pair			
EP-06-005	Apron, acid-resistant, rugged version	1 unit			
EP-06-003	Protective goggles, closed at the side	1 unit			
EP-07-024	Pressure spray bottle, 2 litres	1 unit			

* Further accessories can be found from page 11 onwards





The AkkuCleanox

Fully portable power for ≥ 90 min.



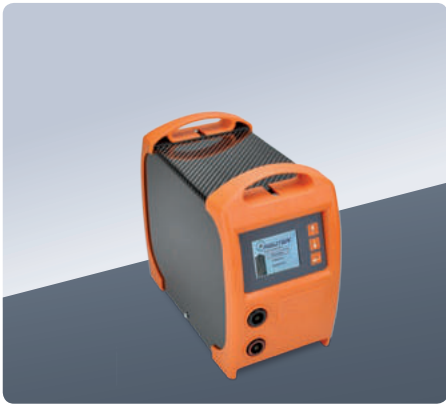
The first battery-powered weld cleaner in the world

High up on a wind turbine, right in the middle of a stainless steel silo, somewhere up on the scaffolding: what do you do when your extension cable just isn't long enough? With the AkkuCleanox you can go anywhere. Weighing just 7 kg, it is one of the lightest devices on the market – and is extremely powerful, with up to 100 A continuous current. In standard mode, the batteries last for up to two hours.

This is made possible by combining the latest battery innovations with high-performance inverter technology. Packed into an ultra-lightweight carbon sandwich housing, featuring a large colour screen and user-friendly menu controls – it's the perfect device for outdoor, offshore and offline.

Our charge booster recharges empty batteries to 95% in just 30 minutes. Alternatively, you can also use it for mains operation: coupled with the charge booster, the AkkuCleanox runs at 100% indefinitely without draining the battery. This lets you use the portable device in the workshop without any restrictions.

AkkuCleanox



Item No.: EP-01-050
Power output: 1,250 VA
Weight: 7.0 kg
Dimensions: 250 x 150 x 300 mm
Battery: 16 V LiFePo, 320 Wh
Efficiency: 95%
Battery life: min. 1 hour
Housing: Hybrid carbon fibre aluminium PP material

Charger supplied:
Mains voltage: 115–240 V/50 Hz, 3A
Secondary voltage: 6-12 V AC/DC
Charging time: 8 hours
Protection class: IP23

Charge booster



Item No.: EP-01-151
Power output: 600 VA
Weight: 2.5 kg
Dimensions: 325x180x75 mm
Mains voltage: 100-240V, 7 A 50/60Hz
Protection class: IP67

The charge booster recharges the battery in just 30 minutes. Alternatively, it assists the battery and transforms the AkkuCleanox into a stationary workshop unit.

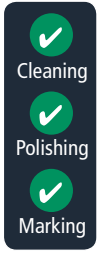
Buy the charge booster separately or together with the AkkuCleanox in a great value kit.



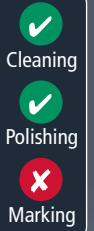
Combine the AkkuCleanox and charge booster into one unit with the Quickbelt – and use it as a portable unit while connected to the mains.

Item No.	Description	Quantity	AkkuCleanox	AkkuCleanox and charge booster	Charge booster
EP-01-050	Set AkkuCleanox – 19 kg	1 set	✓		
EP-01-050-B	Set AkkuCleanox with charge booster – 23 kg	1 set		✓	
EP-01-151	Charge booster – 4 kg	1 set			✓
	Charger included:				
EP-07-600	Teflon handle with 4m cable 10 mm ²	1 unit	✓	✓	
EP-07-605	Earthing cable, 4 m, with 850A clamp	1 unit	✓	✓	
EP-02-912	Carbon fibre brush XL (M10)	1 unit	✓	✓	
EP-02-908	Carbon fibre brush M (M6)	1 unit	✓	✓	
EP-02-915	Carbon bottle brush DN10-50	1 unit	✓	✓	
EP-02-917	Carbon bottle brush DN8-20	1 unit	✓	✓	
EP-02-902	An M6-to-M10 adapter	1 unit	✓	✓	
EP-02-904	Elbow piece 40° M10	1 unit	✓	✓	
EP-02-901	PTFE Teflon sliding sheath	1 unit	✓	✓	
EP-07-223	Mounting pins for brush	2 unit	✓	✓	
EP-02-050	Marking kit in plastic box	1 unit	✓	✓	
EP-01-151	30 A charge booster and plastic case	1 unit		✓	✓
EP-01-152	Charger and 230V adapter plug D	1 unit	✓		
	Cleaning and polishing electrolyte	2x 0.5 kg	✓	✓	
EP-07-100	Wide-mouth container	1 unit	✓	✓	
EP-07-002	Spray bottle for water	1 unit	✓	✓	
EP-07-068	Travel case, large – 575x470x270mm	1 unit	✓	✓	
EP-07-071	Trolley for case	1 unit	✓	✓	
EP-07-049	Small grey plastic case for charge booster	1 unit		✓	✓
	Optional accessories: *				
EP-01-151-UK	Adapter plug for charger, UK	1 unit			
EP-01-151-EU	Adapter plug for charger, EU 2-pin	1 unit			
EP-01-151-USA	Adapter plug for charger, USA/Taiwan	1 unit			
EP-01-151-CH	Adapter plug for charger, Switzerland	1 unit			
EP-01-153	Vehicle charger 12 V	1 unit			

* Further accessories can be found from page 11 onwards



Carbon fibre brush: The quality makes the difference



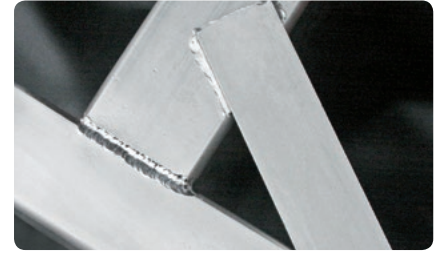
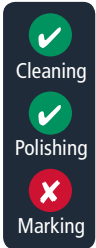
Electrochemical cleaning with carbon fibres - who invented this? Correct: Reuter! We have been producing this innovative solution at our site in Erkrath since 2012. We have also invented the sliding sleeves made of Teflon. Numerous utility models and patents secure our advantage over our competitors.

We ensure the use of high-quality materials and careful processing during production. This is the only way to achieve permanent acid resistance, rugged durability and maximum performance. It is the reason why up to 1.5 million carbon fibres fit the work piece so snugly.

We have, for example, made brush holders out of 1.4571 material and bonded them with hydraulic tools developed in-house at 700 bar. The handles and sliding sleeves consist of PTFE (Teflon) - and easily withstand the process temperatures of approx. 200°C.

Our brushes are available in a variety of shapes and sizes – for large areas, narrow spaces, for cleaning holes or the insides of pipes.





Carbon fibre brush

Price/performance ratio using the example of the carbon fibre brush XL, compared to that of our competitors

Fibre length: 40% more
Cross-section: 30% more
Total carbon fibre: 70% more

The 70% higher proportion of carbon fibre, together with robust processing, is responsible for the faster and more effective cleaning. In direct comparison, Reuter carbon fibre brushes are clearly the price/performance winners!




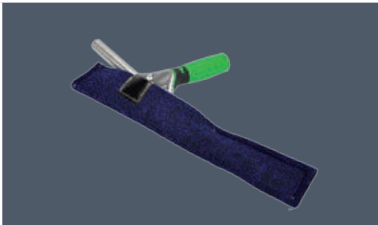


Item No.	Description	
EP-02-912	XL brushes , 60 mm usable length, approx. 1.5 million fibres	
EP-02-908	M brushes , 60 mm usable length, approx. 0.8 million fibres	
EP-02-902	An M6-to-M10 adapter is required for M-brush type EP-02-908 and the bottle brush	
EP-02-901	Teflon sliding sleeve – without brush – turned from solid PTFE, with M22 clamping nut, 50x20 mm, as replacement for XL brush standard sliding sleeve that is too thin for the increased thermal stress during continuous operation	
EP-02-901-F	Teflon sliding sleeve, flat shaped mouth	
EP-02-901-K	Teflon sliding sleeve, conical shaped mouth	
EP-02-901-M	Union nut M22	
EP-02-915	Carbon bottle brush Type DN10-50	
EP-02-917	Carbon bottle brush Type DN8-20 Both bottle brushes require adapter EP-02-902	
EP-02-909	4-fold brush incl. 4 units M-brush, mounted	
EP-02-905	2-fold brush incl. 2 units M-brush, mounted	
EP-02-903	Extension for brush / handle M10x75mm	
EP-02-904	Angle piece 40° M10 for brush / handle	

Surface cleaner

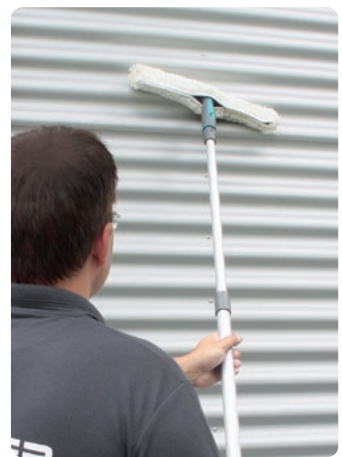
For cleaning, rust removal and passivating of large stainless steel surfaces such as tanks, silos, facades etc. For efficient cleaning, the surface cleaner requires the highest energy performance; it can therefore only be used together with the VI SuperCleanox HD. Welds should first be cleaned with a carbon fibre brush.

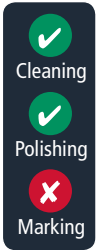
- ✓
Cleaning
- ✗
Polishing
- ✗
Marking

Item No.	Description	
EP-02-913	Surface cleaner , 35 cm width, with telescopic handle up to 180 cm (optional 250 cm), Stainless steel electrode 350 mm, Cleaning pad with Velcro fastening, 10 mm ² / 10 m connection cable with 200 A high current socket, bucket	
EP-02-914	Cleaning pad for surface cleaner for cleaning and passivating, 350 x 60 mm, white	
EP-02-919	Cleaning pad for surface cleaner for cleaning and passivating, longer service life 400 x 60 mm, white	
EP-02-920	Cleaning pad for surface cleaner for cleaning, passivating and polishing, longer service life 400 x 60 mm, brown/blue	



For the SuperCleanox VI HD only – see Page 4





Electrolytes for marking can be found on page 25

Electrolytes for cleaning & polishing

Item No.	Description
	CLEANER – electrolyte for cleaning slightly oxidised TIG weld seams
EP-04-021	2 kg container ¹ (net 1.71 l)
EP-04-211	4 x 2 kg container ¹ in carton ≈ approx. 10% discount (net 6.84 l)
EP-04-041	5 kg bottle ² with handle (net 4.22 l)
EP-04-355	4 x 5 kg bottle ² with handle in carton ≈ approx. 10% discount (net 21.1 l)
EP-04-351	30 kg ³ canister (net 26.34 l)
	NEUTRAL CLEANER PH 5,5 – skin neutral electrolyte – exclusively for cleaning TIG VA welds
EP-04-801	1 kg bottle ⁴ (net 0.9 l)
EP-04-802	6 x 1 kg bottle ⁴ in carton ≈ approx. 10% discount (net 5.4 l)

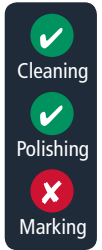
Item No.	Description
	SUPERCLEANER – to clean severely tarnished or oxidised weld seams
EP-04-012	2 kg container ¹ (net 1.48 l)
EP-04-212	4 x 2 kg container ¹ in carton ≈ approx. 10% discount (net 5.92 l)
EP-04-042	6 kg bottle ² with handle (net 4.51 l)
EP-04-356	4 x 6 kg bottle ² with handle in carton ≈ approx. 10% discount (net 18.04 l)
EP-04-220	35 kg canister (net 26.84 l)
	POLISHER – for polishing stainless steel surfaces; also very suitable for cleaning
EP-04-013	2 kg container ¹ (net 1.18 l)
EP-04-330	4 x 2 kg container ¹ in carton ≈ approx. 10% discount (net 4.72 l)
EP-04-043	7 kg bottle ² with handle (net 4.21 l)
EP-04-357	4 x 7 kg bottle ² with handle in carton ≈ approx. 10% discount (net 16.84 l)
EP-04-353	35 kg canister ³ (net 21.32 l)
EP-07-503	Tap for 30 l canister ³



Note: Weight information for electrolytes always relates to the gross weight. The filling height of the containers varies due to the different density of the electrolytes and the filling process.

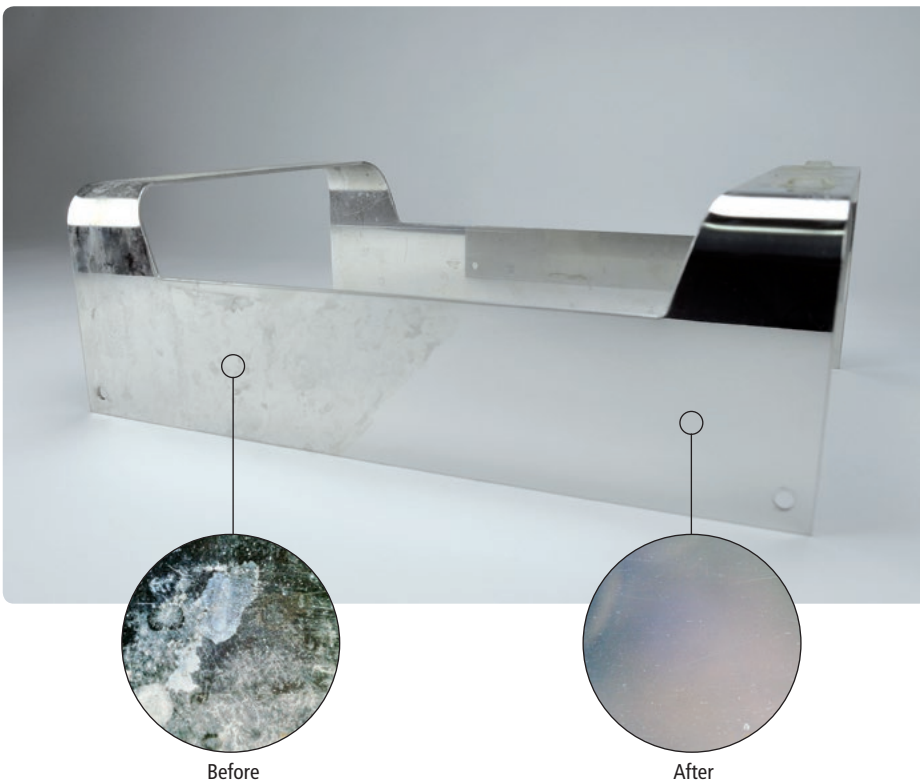
Surface finishing treatment

Item No.	Description
EP-04-800	SFC STAINLESS FINISHING CLEANER – 2 kg container – SFC removes grease and cleans stainless steel and other metal surfaces gently and reliably. Used on stainless steel, it renews and reinforces the passive layer at the same time.
EP-04-901	FPR STAINLESS STEEL CARE PRODUCT – 1.5 kg container – for finishing treatment of cleaned steel surfaces (fingerprint remover)
EP-04-909 EP-04-990	NEUTRALYT SOFT for removing electrolyte residues directly after cleaning 5 kg canister with integrated 350 ml spray bottle 30 kg in canister



Have electrolyte residues dried on after cleaning or polishing?

Are white streaks, clouding or scaling visible?
With our SFC cleaner, you can easily wipe it off.



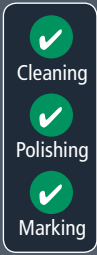
Does your stainless steel surface still look rather dull after cleaning, polishing or marking?

Take advantage of our stainless steel care product FPR. It brings out the contrast in your marking and leaves a waxy film as protection against fingerprints.

Do you still have stains on your surface after rinsing?

Is your tap water too hard?
Use our Neutralyt-Soft!





Ergonomic Cleaning, Polishing, Marking

Our workstations turn your Cleanox into a fully-fledged workplace – stationary or mobile.
Sufficient shelves for equipment and accessories as well as a working surface with integrated drain, enables ergonomic working.
The soft plastic surfaces protect your workpieces from scratches.



The Workstation
– stationary workplace –
Dimensions: 110x110x70 cm, weight 80 kg
Item no.: EP-06-020 & EP-06-024



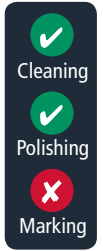
The Rolly
– mobile equipment trolley –
Dimensions: 42x90x55 cm, weight 20 kg
Item no.: EP-06-010

Item no.	Description	Rolly	Workstation
EP-06-010	Rolly – mobile equipment trolley	✓	
EP-06-020	Workstation – stationary workplace		✓
	Optional accessories:		
EP-06-021	Doors, rear wall and splash guard		•
EP-06-023	Extraction system		•
EP-06-024	Automatic electrolyt supply system consisting of Hose bundle 4m, teflon handle with integrated nozzle, motor-controlled hose pump. Only with AutoCleanox (EP-01-133)	•	•

• compatible accessories

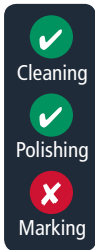
Accessories and consumables for cleaning & polishing




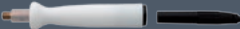





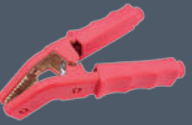



Item No.	Description	
EP-02-001	Carbon electrode 60°, M10 x 1.5 thread	
EP-02-001-By	Version with M10 x 1.0 fine thread (BYMAT)	
EP-02-002	Carbon electrode 30°, M10 x1.5 thread more pointed electrode for thin fillet welds for cleaning and polishing with cleaning handle	
EP-03-222	Kevlar felts, yellow, 40 x 60 x 2 mm suitable for 60 ° carbon electrode/cleaning handle for cleaning and polishing at stage III with the SuperCleanox VI	
EP-03-002	10 pieces	
EP-03-002	20 pieces	
EP-03-022	100 pieces	
EP-03-220	Kevlar felts, yellow, 40 x 100 x 2 mm suitable for 30° carbon electrode/cleaning handle for cleaning and polishing at stage III with the SuperCleanox VI	
EP-03-000	O-rings for fixing the felts to the carbon electrode O-rings, black, PU 10 pieces	
EP-03-000-g	High temperature O-rings, green, PU 10 pieces	
EP-02-018	Cleaning handle with 60° carbon electrode for 1.5 mm ² cable, 4 mm power socket Note: Only for stage III with Cleanox IV, SuperCleanox VI	
EP-07-005	Connection cable black, for cleaning handle	
EP-07-600	Teflon handle with highly flexible cable Handle air cooled inside – will not get hot in your hand; incl. 200 A insulated high-current plug with gold-plated laminated contacts with 4 m / 10 mm ² cable	
EP-07-601	with 6 m / 10 mm ² cable	
EP-07-603	with 10m / 10 mm ² cable	
EP-07-693	with 10 m / 16 mm ² cable	



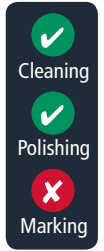
Accessories for marking can be found from page 26 onwards





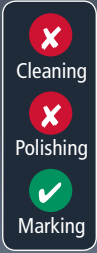
Item No.	Description	
EP-07-309	Teflonhandle without inner parts	
EP-07-059	Inner part for electrode handle complete 10 mm²	
EP-07-059-16	Inner part for electrode handle complete 16 mm² CAUTION! The inner part cables must be connected by crimping with a pneumatic crimping tool!	
EP-02-999	Teflon handle solo with integrated 200 A high-current socket for 10 mm ² cable	
EP-07-607	Teflon handle with high-current socket with 4 m / 10 mm² cable Handle is air cooled inside and will not get hot in your hand; incl. 200 A insulated high-current plug/socket with gold-plated laminated contacts	
EP-07-618	Connection cable with 2 high-current sockets 4 m	
EP-07-619	Connection cable with 2 high-current sockets 10m	
EP-07-608	Extension cable with high-current socket and high-current plug 4 m / 10 mm ²	
EP-07-609	10m / 10 mm ²	
EP-07-699	10m / 16 mm ²	
EP-07-605	Earthing cable, highly flexible 10 mm ² , with 850 A clamp, incl. 200 A high-current plug with gold-plated laminated contacts 4 m / 10 mm ²	
EP-07-602	6m / 10 mm ²	
EP-07-604	10m / 10 mm ²	
EP-07-691	10m / 16 mm ²	
EP-07-606	Earthing cable, highly flexible 10 mm ² , with 200 A clamp, incl. 200 A high-current plug with gold-plated laminated contacts 4 m / 10 mm ²	
EP-07-610	10 m / 10 mm ²	
EP-07-301	200 A earthing clamp made of cast brass with large opening angle 80 mm, especially for pipes	
EP-07-300	850 A earthing clamp made of cast brass Opening angle 40 mm, plastic coating red, fully insulated	
EP-07-222	Mounting kit for 200A high-current socket comprising socket spanner and special nose spanner	
EP-07-206	High current socket black with lock nut	
EP-07-207	High current socket red with lock nut	
EP-07-106	Power socket / plug for brush handle cable, 10 mm², black	
EP-07-107	Power socket / plug for brush handle cable, 10 mm², red	
EP-07-106-16	Power socket / plug for brush handle cable, 16mm², black	
EP-07-107-16	Power socket / plug for brush handle cable, 16mm², red	

Item No.	Description	
EP-07-100	Wide-mouth container, 500 ml Working container, to be filled with electrolyte Note: maximum fill level 2 cm! Note: immerse brush often and long enough to cool!	
EP-07-102	Safety brush holder made from VA sheet metal for wide-mouth container 500 ml with glue clamp black/green	
EP-07-002	Spray bottle for water 500 ml For filling with tap water or demineralised water if the water hardness exceeds 10 dH	
EP-07-024	Pressure spray bottle, 2 litres For filling with tap water or demineralised water if the water hardness exceeds 10 dH	
EP-06-003	Protective glasses closed design with elasticated band	
EP-06-004 EP-06-004-11	Gloves, acid-resistant Cat III velour coated on the inside, reusable gloves, to protect your skin from drying out due to the electrolyte acids Size 8 Size 11	
EP-06-005	Acid-resistant apron, robust design, black, reusable	
EP-06-002	Stainless steel bath approx. 300 x 200 x 20 mm integrated drip tray made of stainless steel ideal for cleaning and marking small parts	
EP-06-006	Barrier cream (liquid glove), 500 ml to protect your skin from drying out due to the electrolyte acids, apply before working	
EP-07-019 EP-07-017	Plastic box, orange with REUTER logo, sturdy design, suitable for: – SuperCleanox IV+/VI/VI HD; 600x400x320 mm – Cleanox 2.0/4.0/4.2; 300x400x320 mm	
EP-07-023	Trolley for one large or two small plastic boxes, orange with robust PVC rollers	



Accessories for marking can be found from page 26 onwards





The Signox series: Marking for eternity



Nameplates, logos, bar codes,...: Initially, the application of markings with our cleaning devices was just an additional benefit.

It has, however, generated huge demand. We have therefore developed the Signox device series - specifically focused on forge-proof and permanent marking on all electrically conductive objects.

Electrolytic marking is a very cost-effective and economical method. After only 3–4 seconds you obtain high-contrast, permanent marking: corrosion free, seawater, abrasion, acid and sterilisation resistant. It is therefore often used for surgical instruments, tools, sanitary fittings, etc.

The patented AkkuSignox is a network-independent, mobile device; it creates oxidation patterns on the metal surface that result in dark markings - dark brown to deep black.

The Signox II is an AC/DC device and can also provide bright marking; it looks similar to laser engraving, i.e. is a bright marking that is slightly recessed in the work piece surface. Metals without ferrite or plastic can also be labelled, e.g. aluminium, brass or copper.

We have securely packed three complete sets of equipment into one practical case, so that everything you need for marking is always at hand, wherever you are.

AkkuSignox I

Set with battery WLAN printer

Item No.:	EP-01-025
Power output:	50 VA
Weight:	3.5 kg
Dimensions, case:	380x300x150 mm
Mains voltage:	Lithium/ion batteries
Charger:	115-240 V / 50 Hz
Protection class:	IP64

Completely independent

Maximum flexibility without a power socket, USB or network cable: Transfer the logos by wireless link from your smart phone to your printer - the iPrint&Scan software, including smart phone app, makes this possible. Easily create labelling on your keyboard. Simply print the marking templates with 360 dpi on site. The battery of our AkkuSignox manages up to 250 dark markings before it has to be recharged.

AkkuSignox I

Set with battery-powered USB printer

Item No.:	EP-01-026
Power output:	50 VA
Weight:	3.0 kg
Dimensions, case:	380x300x150 mm
Charger:	115-240 V / 50 Hz
Protection class:	IP64

The mobile marker

Design markings on site and apply them directly: This battery-powered printer can also communicate with a PC via a USB interface and create and print labels right away with the P-touch editor and printer keyboard. The AkkuSignox will then transfer your design up to 250 times onto work pieces. We pack and deliver all you need safely in one case.



Set IV: AkkuSignox with battery WLAN printer

Item No.	Description	Quantity	Set battery	Set battery
EP-01-025	AkkuSignox with battery WLAN printer	1 set	✓	
EP-01-026	AkkuSignox I with battery USB printer	1 set		✓
	AkkuSignox I device set: The accessories			
EP-05-220	Printer E550WVP, WLAN, USB, Li-Ion battery	1 unit	✓	
EP-05-221	Printer H500, USB, battery	1 unit		✓
EP-05-229	Lithium/ion battery for printer	1 unit	✓	
EP-05-228	Printer charger	1 unit	✓	
EP-07-066	Lithium/ion battery for Signox	2 unit	✓	✓
EP-07-065	Charger for Signox batteries	1 unit	✓	✓
EP-07-064	Earthing cable with stainless steel crocodile clamp	1 unit	✓	✓
EP-02-060	Carbon electrode, semi-circular	1 unit	✓	✓
EP-07-045	Case with foam insert	1 unit	✓	✓
EP-05-211	24 mm template marking band	1 unit	✓	✓
EP-03-010-1	O-rings, small 15x1.8	5 unit	✓	✓
EP-03-001-2	Marking felts, white	5 unit	✓	✓
	Marking electrolyte 50ml and neutralyte 50ml	2x 50 ml	✓	✓
	Optional accessories			
EP-05-208	Label printer Brother P-touch P900W	1 unit		
EP-05-213	Label printer Brother P-touch D800W	1 unit		
EP-05-210	Labelling band, 18mm	3 m		
EP-05-212	Labelling band, 36mm	3 m		

* Further accessories can be found from page 23 onwards



- ✗ Cleaning
- ✗ Polishing
- ✓ Marking

BRIGHT MARKING DARK MARKING

- ✓ permanent
- ✓ forge-proof
- ✓ low cost



Signox II: Set with transformer for 230 V mains

Signox II

Set with transformer-powered device for 230 V network

Item No.:	EP-01-024
Power output:	120 VA
Weight:	5 kg
Dimensions, case:	300x400x320 mm
Mains voltage:	230 V / 50 Hz / 1A
Secondary voltage:	12V AC/DC
Protection class:	IP23

The heavyweight

This workshop device is intended for bright and dark marking: The Signox II is connected to the mains and is provided without a printer – but sports a powerful transformer and a large rectifier with considerably higher output. It facilitates the use of large templates with up to 2,400 dpi as well as fast and powerful marking of large areas.

The Signox II can handle dark marking as well as bright marking – which looks stylish, similar to laser engraving.



Item No.	Description	Quantity	Set Signox II
EP-01-024	Signox II without printer	1 set	✓
	The accessories		
EP-07-044	Connection cable, red, 2 m, 1.5 mm ²	1 unit	✓
EP-02-055	Connection cable, black, 2 m, 1,5 mm ²	1 unit	✓
EP-07-003	Crocodile clip, red, plastic-coated	1 unit	✓
EP-02-033	Marking handle with 90° carbon electrode	1 unit	✓
EP-07-045	Case with foam insert	1 unit	✓
EP-03-000-1	O-rings, large, 26x2	5 unit	✓
EP-03-001-1	Marking felts, white	5 unit	✓
EP-04-004	Marking electrolyte for stainless steel dark / aluminium bright	100 ml	✓
EP-04-009	Neutralyte highly concentrated	100 ml	✓
--	Elektrolyte samples	3 units	✓

Further printer accessories can be found from page 23 onwards

- ✗
Cleaning
- ✗
Polishing
- ✓
Marking

From a single source

We supply everything you need for marking:
Equipment, templates, electrolytes, accessories.
This means you can be sure
that everything will work perfectly.

Long-term templates

Long-term templates can be used up to 5000 times. Due to the high resolution of 2400 dpi, even small 4-point fonts can be marked on the work piece.

A plastic frame is available as an option, to give the film more stability and facilitate alignment on the work piece.

The maximum template size is 80x50 cm (4000 cm²).

Price calculation: To create a long-term template, we charge an order fee (reproduction / photosetting costs and proofs - not charged for reorder). In addition, a price per cm² will be charged according to the template size (see table). When calculating the size of the template, please note that your subject requires a margin of 2 cm on each side - for aligning and fixing on your work piece.



Item No.	Template size
	Template <u>with</u> plastic frame
EP-05-003	up to 100 cm ²
EP-05-004	101 to 200 cm ²
EP-05-005	201 to 500 cm ²
EP-05-006	501 to 4000 cm ²

Item No.	Template size
	Template <u>without</u> plastic frame
EP-05-007	up to 100 cm ²
EP-05-008	101 to 200 cm ²
EP-05-009	201 to 500 cm ²
EP-05-010	501 to 4000 cm ²

* For templates over 500 cm² we recommend: for curved surfaces, unframed templates, for flat surfaces, an aluminium frame - we are happy to calculate this for you on request.

Example: long-term template with plastic frame



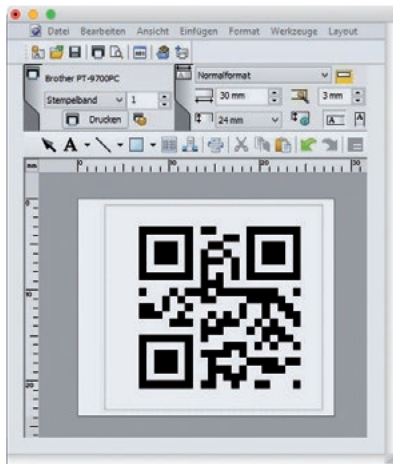
Image size: 8 cm x 3 cm
corresponds to template size: 12 cm x 7 cm

Calculation example:
12 cm x 7 cm = 84 cm²

Print your own marking templates



With the help of a labelling machine, you can create your own single-use marking templates – the ideal solution for marking your products with individual product numbers. On the display printers, you can create text and numbers on the spot and print them directly. By connecting the printer to the PC, you can embed logos, frames, or bar codes in the label layout.

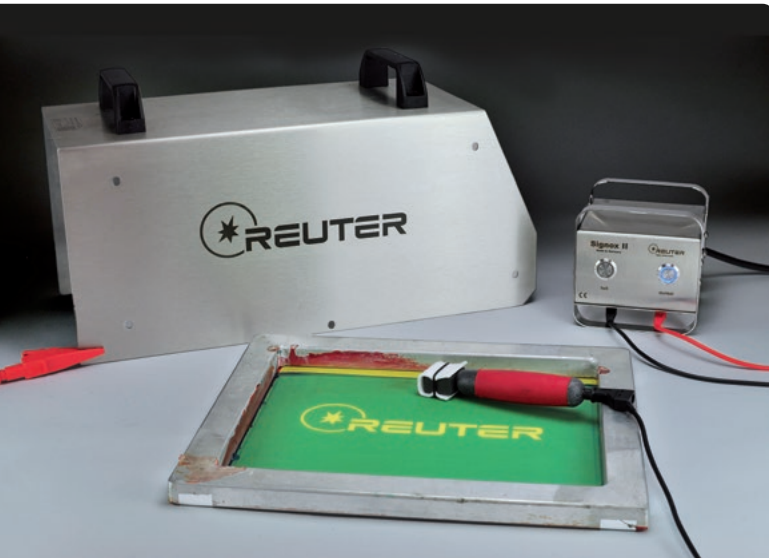


Screenshot
Labelling software

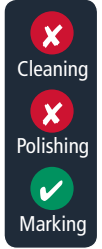


Item No.	Description	
EP-05-221	Label Printer Brother PT-H500 Professional labelling machine with PC connection, print resolution 180 dpi, band width 18-24 mm supplied without batteries / power cord, incl. USB cable	
EP-05-228	Optional accessories: Mains adapter	
EP-05-229	Lithium/ion batteries	
EP-05-220	Brother PT-E550WVP Professional labelling machine for industrial application, print resolution 180 dpi, band width 18-24 mm, WLAN, incl. Li-Ion battery, mains cable / USB cable, carrying case	
EP-05-204	Brother PT-D600VP Professional labelling machine including colour display, print resolution 180 dpi, band width 18-24 mm, incl. mains cable / USB cable, carrying case	
EP-05-208	Brother P-touch P900W Professional labelling machine for the PC, print resolution 360 dpi, band width 18-36 mm, incl. mains cable / USB / WLAN	
EP-05-209	Brother P-touch P950NW Equipment as above plus network connection	
EP-05-213	Brother P-touch D800W Professional labelling machine incl. WLAN and separate LCD keyboard, print resolution 360 dpi, band width 18-36 mm, incl. mains cable / USB / WLAN	
EP-05-223	Brother TD-4000 Professional label printer for high print volumes, print resolution 300 dpi, for 100 mm continuous label roll, incl. mains cable / USB cable	
EP-05-224	Brother TD-4100N Equipment as above plus network connection	
EP-05-210	Labelling bands, 3 m for Label Printer PT-H500, PT E550WVP, PT-D600VP, PT-9700PC, PT-9800PCN	
EP-05-211	18 mm band width	
EP-05-212	24 mm band width	
EP-05-911	Template paper 100 mm for thermal template printer TD-4000 / TD-4100N	
EP-05-912	45 m continuous label roll 3 m continuous label roll other sizes on request	

Electrolytes for marking



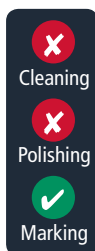
Dark marking applies an oxidation layer to the surface; **bright marking** removes parts of the surface - like engraving, but does not look dark. Both methods are permanent and resistant to chemicals and abrasion - and are therefore often used for surgical instruments, tools, sanitary fittings, etc.













Item No.	Description
EP-04-004	Electrolyte for dark marking on stainless steel (AC) and bright marking on aluminium (DC)
EP-04-014	100 ml
EP-04-014	500 ml
EP-04-044	1,000 ml
EP-04-007	Electrolyte for marking aluminium (not anodized) - DC
EP-04-018	100 ml
EP-04-018	500 ml
EP-04-077	1,000 ml
EP-04-006	Electrolyte for marking corrosion-sensitive structural steels - AC
EP-04-016	100 ml
EP-04-016	500 ml
EP-04-066	1,000 ml
EP-04-053	Electrolyte for marking burnished surfaces - DC
EP-04-054	100 ml
EP-04-054	500 ml
EP-04-056	1,000 ml
EP-04-106	Electrolyte for marking surgical instruments and gold-plated surfaces - AC
EP-04-020	100 ml
EP-04-020	500 ml
EP-04-038	1,000 ml
EP-04-045	Electrolyte for bright marking on stainless steel – DC
EP-04-046	100 ml
EP-04-046	500 ml
EP-04-049	1,000 ml

Item No.	Description
EP-04-005	Electrolyte for marking brass, bronze, copper and zinc - AC
EP-04-015	100 ml
EP-04-015	500 ml
EP-04-055	1,000 ml
EP-04-050	Electrolyte for marking titanium – AC
EP-04-051	100 ml
EP-04-051	500 ml
EP-04-052	1,000 ml
EP-04-017	Electrolyte for marking chrome-plated and nickel-plated surfaces - AC
EP-04-047	100 ml
EP-04-047	500 ml
EP-04-048	1,000 ml
EP-04-008	Electrolyte for marking tool steel (hardened) – AC
EP-04-039	100 ml
EP-04-039	500 ml
EP-04-088	1,000 ml
EP-04-009	Highly concentrated neutralyte for neutralising after marking
EP-04-019	100 ml
EP-04-019	500 ml
EP-04-099	1,000 ml

Accessories and consumables for marking



Item No.	Description	
EP-03-111 EP-03-001 EP-03-011	Marking felts, white, 40 x 60 x 2 mm suitable for 90 ° carbon electrode / marking handle for marking lettering using a marking electrolyte 10 pieces 20 pieces 100 pieces	
EP-03-110	Marking felt roll 40 x 5000 x 1.70 mm	
EP-03-000	O-rings, 10 pieces For attaching the felts to the carbon electrodes	
EP-02-033	Marking handle with 90° carbon electrode for 1.5 mm ² cable, 4 mm power socket	
EP-07-005	Connection cable black, for marking handle	
EP-02-003 EP-02-003-By	Carbon electrode 90°, M10 x1.5 thread for marking with templates and white marking felts, universally usable with marking or cleaning handle Version with M10 x 1.0 fine thread (BYMAT)	
EP-07-044 EP-07-055	Connection cables 1 m / 1.5 mm ² , with angled plug for Signox devices for cleaning and marking with carbon electrode and red handle. Not suitable for cleaning with carbon fibre brushes! Connection cable red Connection cable black	
EP-07-003	Crocodile clamp, red For marking small parts in connection with connection cables 1.5 mm ² Opening angle 35 mm, max 15 A continuous load Not suitable for cleaning with carbon fibre brushes!	
EP-07-006 EP-07-007 EP-07-008	Power sockets for Cleanox IV, Signox II and polishing handle, 4 mm Device socket red Device socket black Handle socket black	
EP-02-050	Marking set complete basic marking equipment in a case Contents: <ul style="list-style-type: none"> • red Softtouch marking handle, 90 ° marking electrode • 2 m bl, 1.5 mm² connection cable • 1 x 100 ml marking electrolyte for stainless steel (universal) • 1 x 50 ml Neutralyt • 5 white marking felts • 5 O-Rings • Sample marking template 	



May we introduce ourselves?

Reuter GmbH & Co. KG manufactures state of the art technology for electrochemical cleaning, polishing and marking, in Erkrath near Düsseldorf. All the devices offered have been developed by us and are produced in series. Numerous technologies have been patented or are subject to utility model protection. Our in-house claim 'magic metal works' is the motivating power behind each device line:

- smart solutions that can replace significantly more complex technologies;
- ease of use
- scalable product range - for workshop and industry
- 100 % Made in Germany
- high continuous loading capability with 100% duty cycle
- outstanding price-performance ratio

Do you have questions about our products – or perhaps a special task which is proving to be difficult?

Please feel free to contact us. Send us your samples. We will work it out for you.

www.reuter.works



Mechanical engineer and welding engineer
Dipl.-Eng. Olaf Reuter, owner of Reuter GmbH & Co. KG, stands for solid know-how in this sector.
Over 25 years of experience in arc welding technology and voluntary engagement in DIN committees stands for practical expertise.

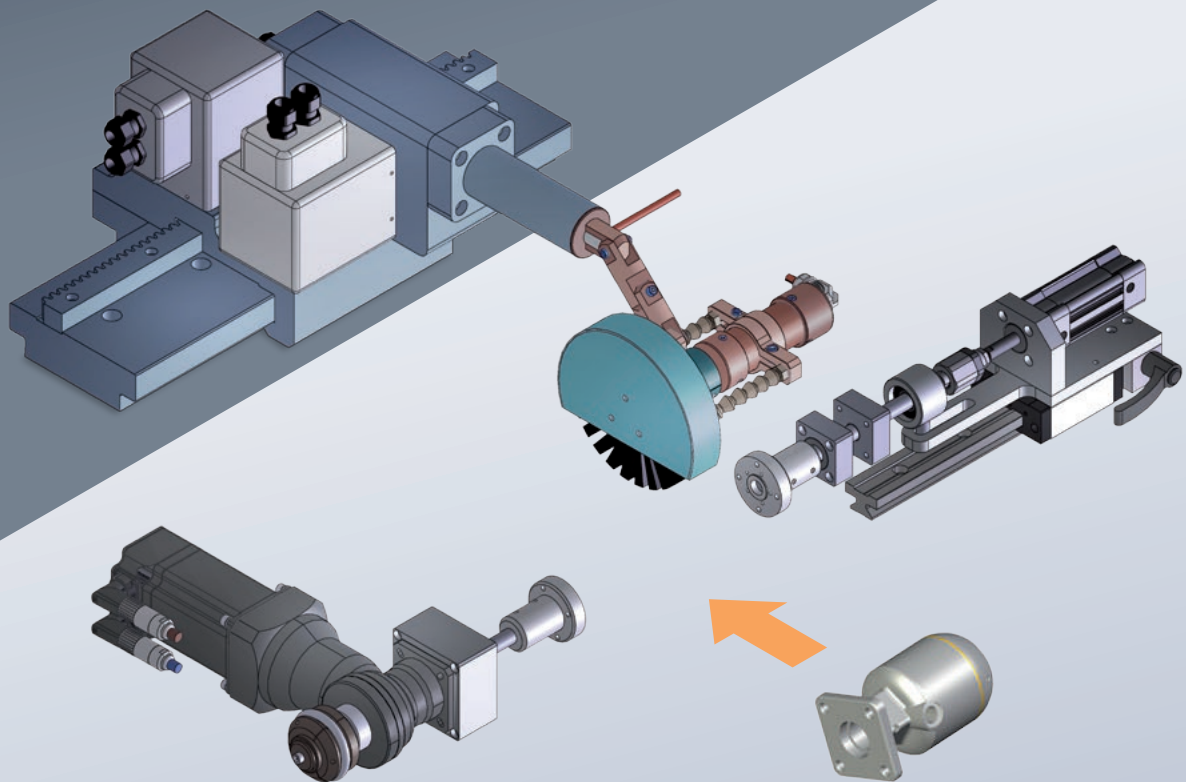
PREVIEW
2018



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AutoCleanox 4.0



The AutoCleanox 4.0

- cleans, polishes, passivates, rinses & dries
fully automatic in one operation
with up to 75% time and cost savings
- Full automation with up to 4 CNC axes
- CNC control with program memory
and can-bus interface
- patented electromechanical brush drive
- patented high-performance
electrolyte intelligent feeding
- automatic rinsing and drying program
- integrated exhaust system with
condensate and carbon filter