



WHEELBLOWER

SMARTBOXBLOWER

BIGBOXBLOWER

# SURFACE MASTER SYSTEM

Microfine surface treatment for the perfect finish



Eddy current-rotation process – blowing instead of grinding  
Maximum perfection, time and cost savings

# CARTEC

## The masters of micro-fine matting

We - CARTEC Autotechnik Fuchs GmbH - are primarily known for our solutions for professional alloy wheel reconditioning.

Painters know that sanding rims by hand is hard work. That's why we developed the WheelBlower and launched it on the market in 2014. The in-house developed eddy current rotation process for micro-fine matting ensures fast and precise results - without the need for tedious manual sanding. In line with our own credo 'It has to be better!' and with a great deal of Swabian ingenuity, we subsequently developed further machines in the current 'SurfaceMaster product family' in the company's own CARTEC research and development department.

As a result, we have made the eddy current rotation process for paint preparation for (almost) all surfaces and customer requirements state of the art.

Our motivation - We make paint preparation quick and easy.  
Bye bye sandpaper

Surfaces of all kinds - light alloy rims, bumpers, plastic parts made of PP/EPDM, PUR-RIM or GRP, bonnets and doors made of aluminium or steel, spoilers and trim parts made of carbon, chrome-plated taps that are to be coated in stylish white or black, but also structured wooden surfaces can be prepared perfectly and extremely quickly for painting.

This is where the members of the SurfaceMaster product family ensure fast and optimum results as well as the highest possible technical and economic benefits with maximum quality.

As a medium-sized, family-run company based in Plüderhausen near Stuttgart, we know the daily tasks and challenges of car dealerships, vehicle workshops, body and paint shops inside out. Even well-known German car manufacturers and suppliers as well as industrial painters from the medical technology sector rely on our more than 30 years of expertise.

### Your Advantage

- fine peeling instead of tiresome grinding
- Unequalled perfection and maximum paint adhesion due to the CARTEC eddy current rotation method



# Grinding rethought: the CARTEC eddy current rotation method



The eddy current rotation method reaches all corners and edges effortlessly

Whether manual or mechanical, the manual preparation of surfaces for painting ties up a lot of resources in terms of time, material and labour - and the end result is usually the end result is usually an unconvincing finish. The SurfaceMaster product family puts an end to this!



Sanding, sanding, sanding. Manual paint preparation takes a lot of time, nerves and material. Especially in tight spaces and with complex designs



Perfectly matted bumpers down to the finest detail.

## Ihr Vorteil

- keine aufwendige Handarbeit
- maximale Zeitersparnis
- präzise Ergebnisse
- nahezu alle Oberflächen

### The solution:

The innovative eddy current rotation method from CARTEC enables micro-fine matting of surfaces and therefore brings maximum time and cost saving.

**The method is not like sandblasting – its principle is more similar to that of a rotary sander**

### And this is how it works:

Propelled by compressed air, micro-fine particles of a special matting substrate are set in an extremely fast rotational circular movement. The sensitive surfaces are not damaged by the rotation and edges cannot be ground round. The eddy current achieves an optimum surface finish even down to the most complex contours. This completely rules out uneven grinding marks.

The surface is therefore optimally prepared for re-coating and guarantees perfect paint adhesion. The innovative technique is therefore the perfect alternative to manual grinding for all soft and sensitive surfaces such as plastics, aluminium and many other applications. The method can even be applied to carbon and chrome trim parts without any problems.

# SURFACE MASTER – painting preparation for the highest demands



Are you a paint shop or industrial company?  
Do you place the highest demands on quality and efficiency? Then you've come to the right place: With the innovative CARTEC eddy current rotation process, we offer you a greatly improved and reliable alternative to conventional sanding. The process used in the SurfaceMaster machines enables up to eight times faster, simpler and, above all, absolutely reliable processing of sensitive materials of all kinds. Depending on the distance between the nozzle and the object, the surface is given a defined roughness depth in the range of P400 - P1500 eccentric sanding. The result at the end of the machining process is a scratch-free, uniform matt finish - even in hard-to-reach areas.

## Your advantages

A much higher process reliability, no through-grinding as well as added efficiency and ecological sustainability.



Surface enlarged 300 times

## You can even see it:

Viewed under a microscope, the object matted using the eddy current rotation process has an absolutely uniform surface area that is up to 100 times larger per cm<sup>2</sup>. This allows paints to optimally interlock with the substrate during coating - for significantly better paint adhesion than with manual sanding. Such a surface cannot be achieved with currently available sanding tools

For example, it is not normally possible to achieve a reasonable adhesion on chrome surfaces. One of our customers used the CARTEC eddy current rotation process to obtain exclusive approval for the repainting of chrome-plated taps for a world-renowned sanitary equipment supplier. Extensive tests had to be completed. A cross-cut 0 paint adhesion is then achieved even on chrome. In addition, the eddy current matting process ensures precisely drawn edges for masking.



# Blowern is the new grinding!



» The eddy current reaches places where hands can never go. This ensures unrivalled perfection and speed. «

Andre Hoffmann  
Identica-Hoffmann, Berlin

From small to large, from manual to automated: The machines in the SurfaceMaster product family offer a suitable solution for every application in the field of eddy current rotation - an all-round range that covers all your requirements reliably and efficiently.



# Der WheelBlower WB1000 for the perfectly matt rim and everything else that fits inside



Grinding rims manually or mechanically is tedious, time-consuming and often does not produce the desired result. Particularly in the case of intricately structured aluminium rims with correspondingly narrow gaps, optimum preparation by hand is almost impossible. However, precise matting of the surface is essential for ideal adhesion of the subsequent paint coating.

With the WheelBlower WB1000, you can matt the surfaces to be coated with maximum time and cost savings. This is ensured by the eddy current rotation process used in the WheelBlower WB1000. Evenly matt-finished, scratch-free (aluminium) rims that are optimally prepared for application in one to three minutes instead of 30 to 60 minutes are the standard here - including savings in resources and costs.

With the optionally available nozzle head holder and perforated plate insert, you can also extend the WheelBlower WB1000 for processing small parts such as radiator grilles and the like up to approx. 80 cm.



## Technical data

- Dimensions WxDxH: 1.20 x 1.40 x 2.40 m
- Electrical connection: 400 V, 16 A
- Compressed air connection: 650 litres/minute

## Your advantages

- 1 to 3 minutes per rim
- Seamless, precise and even matting
- Costs only 35 cent per rim
- Expandable for small parts

» The gentle micro-fine matting creates a perfectly even surface without shadows or sanding scratches. The WheelBlower WB1000 helps us enormously in meeting urgent deadlines. We use it to matt both wheel rims and other parts. Our trainees are now extremely fast and highly highly motivated. They are enthusiastic because the WheelBlower delivers high quality and unwanted chipped paint on the spokes is a thing of the past.«



Torsten Stüting  
von Werner Bollwinkel, Bremen



# The WheelBlower WB2000 the solution for rims and medium-sized components



The WheelBlower WB2000 from CARTEC is the ideal solution for precise and efficient surface matting of small and medium-sized components. The interior cabin measures 2.00 x 1.00 metres, offers plenty of space for a wide variety of components and is therefore ideally suited for trade and industrial customers. In addition to special holders for aluminium rims, the system can also be equipped with various push-through options and other optional features.

With the optional axis system, the WheelBlower WB2000 can also be operated fully automatically.

This also ensures maximum process reliability and efficiency for industrial applications. Our innovative eddy current rotation technology enables effortless matting of components made of plastic, aluminium and other surfaces. This allows coated surfaces to be processed quickly, efficiently and precisely. Without manual effort and with a guaranteed better and seamless result.

Depending on the distance between the components, the user can produce roughness depths between P400 and P1,500. For optimum visibility in the work area, two dust-tight LED lights are fitted in the cabin roof, the cover of which can be easily replaced. The viewing windows with toughened safety glass panes provide a clear view and are sealed against dust on both sides, while a wear film offers additional protection.

## Technical data

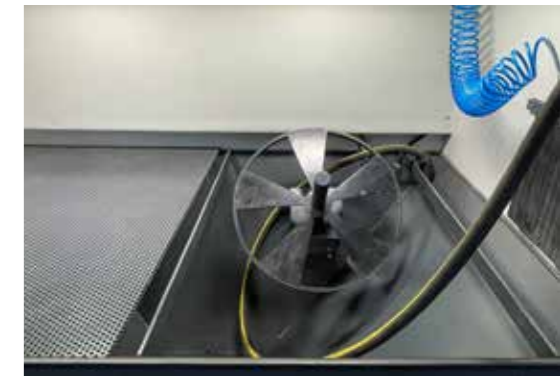
- Dimensions WxDxH: 2,40 x 1,70 x 2,45 m
- Power connection: 400V, 16A
- Compressed air connection: 800 litres / minute

## Your advantage

- 1 to 3 minutes per rim
- Option for automated processing
- Large inner surface for versatile use
- Expandable with many extras

Our system has been developed with an effective room dedusting system to ensure a consistently clear view in the swirl jet chamber and to minimise residual dust content. The ventilation air is evenly distributed in the vortex chamber by a sophisticated air system before it is extracted through an exhaust air opening. The matting substrate is automatically recirculated and recycled, which contributes to low running costs.

Discover the future of surface matting with the CARTEC eddy current rotation process in the WheelBlower WB2000. It gives you maximum efficiency and first-class results







# SmartboxBlower

## The space miracle for bumpers, rims and co.



Faster, more efficient and more precise - that is the motto of the SmartBoxBlower. Its design alone shows what the system was developed for: To be able to process bumpers in the smallest of spaces and yet be accessible from all sides. In addition to the rounded side sections, the intelligent rotation-flex system of the bumper holder ensures maximum ergonomics. This makes the SmartBoxBlower ideal for processing rims, mudguards and other small parts in the paint shop in addition to bumpers.

Machine instead of manual - in times of a shortage of skilled labour and increasingly complex component geometries, paint preparation with the SmartBoxBlower is of better quality and approx. 80% faster than by hand. The painting preparation of bumpers now takes less than five minutes instead of the 30 to 40 minutes previously required. The process guarantees an even and perfectly sanded surface. Depending on the distance between the nozzle and the component, roughness depths of P400 to P1,500 can be achieved.

The rounded side parts of the SmartBoxBlower enable precise matting of the bumper sides in particular. The machine cover can be opened completely upwards. For particularly quick and easy loading, the workpiece carrier can be moved into a front loading position and into the machining position.

### Technical data

- Dimensions LxWXH: 3,0 x 2,25 x 1,95 m
- Power connection: 400V, 16A
- Compressed air connection: 1200 litres / minute

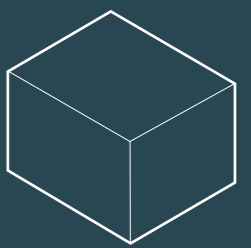
### Your advantage

- 80 % time saving
- No time-consuming manual work
- Seamless, precise and even matting



The innovative rotating FLEX system is one of the outstanding features of the SmartBoxBlower. For the first time, it is possible for the user to stand outside the cabin without a protective suit and rotate the bumpers so that they can be blown all round and from 'ear to ear'.





# The BigBoxBlower for big challenges

Do you want to precisely mat components such as bumpers, bonnets, tailgates, spoilers, aluminium rims or other large and small machine components? Previously, this meant tedious manual work using a sanding block or eccentric. Nevertheless, the result was often unsatisfactory after many hours of work, the material removal was uneven, removal and Reworking ate up valuable resources. And then there were difficult components with narrow gaps and undercuts - a real nightmare in terms of time, material and labour as well as paint adhesion ...

» Finding suitable skilled labour has been one of the biggest challenges in recent years. Thanks to the BigBoxBlower, we no longer have employees sanding by hand, but can use them specifically for productive work. This is how we manage the work with the existing team.«

**Kevin Bürk,**  
Geschäftsleitung Identica-Bürk,  
Winterbach



## Technical data

- Dimensions WxDxH  
3,80 x 3,20 x 2,80 m
- Weight: 3,800 kg
- Power connection: 400V, 16A16A
- Compressed air connection: 1,700 litres / minute

## Ihr Vorteil

- 8 times faster than by hand
- Seamless, precise and even matting
- Up to 50% cost savings compared to sandpaper
- Reduced labour costs

The BigBoxBlower is the size of a small spray booth and can therefore be used universally for almost everything that needs to be in trade and industrial operations.

The maintenance and service flaps for the system technology are accessible from the inside so that you can also operate the system in a small space. To ensure a clear view of the components at all times, the Big-BoxBlower is equipped with a powerful extraction system, high-quality LED interior lighting and fully automatic substrate recovery via our floor conveyor system.

The Big-BoxBlower is a lucrative alternative to manual sanding, even for just a few parts a day, thanks to the extreme reduction in working time, better surface quality and reduced workload for employees. In most cases, the investment is fully amortised within the first year. Because regardless of how complex the geometry of the components to be processed is - with the BigBoxBlower you only need approx. 4 minutes processing time per square metre of surface for a perfectly matted surface. For a front bumper only 5 minutes.



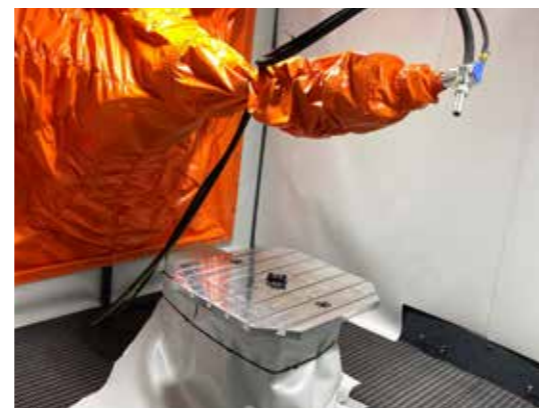
# The BigBoxBlower Robotics for small and large series



The production of small and large series repeatedly presents industrial companies with challenges: As identical components often have to be processed quickly and in absolutely identical quality, very high process reliability and the reproducibility of paint preparation are the key to success. A quick and reliable changeover between a wide variety of parts made of almost all materials at high throughput is also on the list of requirements here.

CARTEC combines the BigBoxBlower with clever robot technology at the customer's request to increase process reliability and cost-effectiveness. The ARPP software specially developed by CARTEC for matting components is used for this purpose. This means that new component variants can be programmed in just a few hours instead of the days or weeks required by other suppliers.

In addition to automated robot processing, the BigBoxBlower can also be used fully manually by an employee. It goes without saying that even the trickiest moulds, including corners and edges, are perfectly prepared for painting and the company benefits from increased process reliability and cost-effectiveness.



## Technical data

- Dimensions WxDxH: 5,80 x 3,20 x 3,50 m
- Weight: 5,200 kg
- Power connection: 400V, 16A
- Compressed air connection: 1,700 litres / minute

## Ihr Vorteil

- hoher Durchsatz durch Reduzierung der Prozesszeiten
- reproduzierbare Qualität
- Reduzierung von Ausschussteilen
- exakt gezogene Kanten bei Maskierungen



Simple programming  
Thanks to the 3D CAD programming of the robot, components like this can usually be converted for automatic processing in less than one working day

» The components are absolutely even and precisely matted. This is not possible manually. Since we have been working with the BBB, we have seen an increase in process reliability and reproducibility as well as a reduction in process times and material consumption in the sanding area. The BigBoxBlower nobody here would want to do without.«

Uwe Walter Betriebsleiter  
Ritzi Lackiertechnik





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