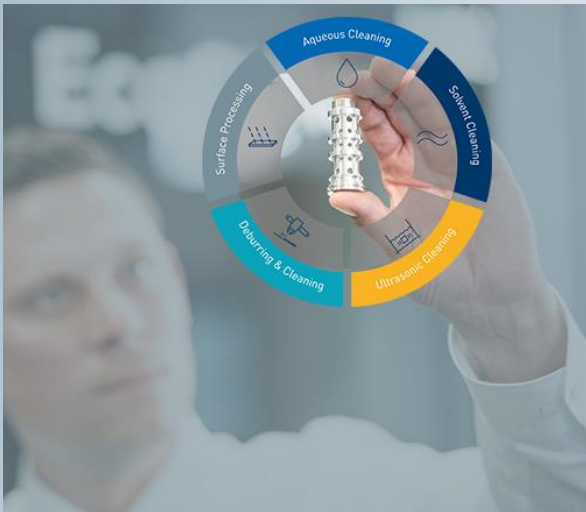


## EcoCNews Autumn 2020

### Innovations 2020

#### Introduction: a few words from the Global Management Team



How full of challenges this year has been for all of us! Lockdowns have kept us from following the daily routine, economic consequences of the – still ongoing – pandemic, forcing projects to be put on hold or even to be cancelled, and the uncertainty towards new investments impacting several branches worldwide. Also, our Group was forced by the economic consequences of the pandemic to reduce working hours in some regions and even to restructure local companies in other regions.

But not only the economic aspects deserve our attention. Since the beginning of this year we have been engaged worldwide in following all local measures and taking further precautions to keep our employees safe.

By focusing on our employees' health, despite the limitations caused by the pandemic, we needed to just move forward. To adapt to the circumstances, where we were already flexible, we have increased our flexibility; where we were already agile, we have made procedures and processes even simpler; and in addition to areas that had already been digitized, we have digitized even further. And we must say that our digital solutions like the Service App and the EcocleanConnect were what kept the business running, since personal contact was forced to be drastically reduced. With the result that in 2020 there was no standstill in our developments. We took the time to look inside and reevaluate our processes and map further opportunities, markets and industries that we can support with our solutions.

In 2020 we reiterate the SBS Ecoclean Group's position in the light of the current challenges and changes, affirming that, at our Group, it is no longer only about industrial parts cleaning – it is also about processing and treating. Next to water-based cleaning of diverse industrial parts, we have further developed our solutions for deburring, degreasing, surface activating, removing residues and surface preparation, with the result that we have modern cleaning & surface processing solutions that can easily be integrated into existing production and assembly lines. Which is a great thing, considering that to face the current changes in the industries, many customers need to redesign, optimize or adapt their production lines.

Finally, not only challenges marked 2020. Some industries come out stronger from the current situation, gain visibility and attest their relevance – like the MedTech industry. And exactly for this industry we have developed our newest machine – the UCMSmartLine!

Enjoy reading & stay healthy!

Hongsheng Guo Dr. Zhisen Yu Michael Förster Ralf Dienel Mark Jackson Frank Gijsen

UCMSmartLine: fits perfectly thanks to its modular concept.



Companies from sectors such as medical technology, optics, automotive & supplier industries, machine tool manufactures, precision parts and microtechnology, watch & jewellery industry, coating industries and the high-purity sector are faced with the challenge of meeting increasing demands for stringent particulate and film cleanliness specifications. A similar situation can also be observed in the MRO (maintenance, repair, overhaul) sector, and also when it comes to processing products from such industries as aviation and electronics,

among others.

These demands can often only be met by precision cleaning processes. With the UCMSmartLine customized systems for preliminary, intermediate and final cleaning are configured and extended as required.



### Optimally adaptable and future-proof expandable:

The machine can be configured from two and three modules for the process steps “cleaning & rinsing” or “cleaning, cleaning & rinsing”, which can be combined as desired. With a further module, two-stage fine and precision rinsing processes can be integrated with cascaded osmosis or demineralized water. The ultrasonic cleaning modules, which are heated and fitted with a filter circuit as standard, can also be adapted to suit a wide range of applications. This enables the use of mono (25, 40, 80 kHz), twin (25/50, 40/80 kHz) as well as multi-frequency ultrasonics (40/80/120 kHz). And depending on the respective applications, drying technologies can also be combined. For loading and unloading (manually or automatically) the UCMSmartLine can be arranged either at the front or at the side, depending on the space available. For cleaning applications requiring an exceptionally clean environment, one or two HEPA filters can be installed on the top of the housing, depending on the length of the system. The UCMSmartLine can also be connected up to a cleanroom.

## Fields of application:



- Thin film coating: cleaning before PVD/CVD coating of e.g. tools like mountings, drills, cutting inserts, automotive parts, fittings, etc.;
- Precision optics e.g. sapphire wafers, micro optical components, lenses, mirrors, prisms, masks, laser components, glassware;
- Medical technology e.g. implants, surgical instruments, medical devices, orthopedic parts, prostheses, dental devices, syringes & cannulas;
- Precision mechanics / precision parts e.g. sensor parts for the automotive and aviation industry, watch & jewelry components, injection components, valve train components.

## The advantages of the UCMSmartLine at a glance:

- Modular, multi-stage ultrasonic immersion cleaning system for high to highest cleanliness requirements;
- Variable use of mono, twin or multi-frequency ultrasonics;
- Flexible transport system for optimized throughput and gentle part handling;
- Space-saving design with electrical and control technology integrated into each module;
- High-quality machine enclosure protects parts and personnel from contamination and emissions;
- High adaptability through optional subsequent module expansion;
- Process validation by cleaning tests in the SBS Ecoclean Group worldwide test centers;
- Short delivery times & flexible delivery options (in one piece or modular).

## More information

- [Deburring components for particulate cleanliness](#) in Industrial Cleaning Technologies N. 16, 2019 October
- [The EcoCvelox from Ecoclean.](#)

## German Innovation Award: EcoCvelox won gold!

The SBS Ecoclean Group convinced the jury with our EcoCvelox, the modular, all-in-one system for deburring, cleaning & drying of machined components. With the German Innovation Award, the German Design Council honors trend-setting innovations that have a lasting effect and offer added value for the user. A total of 700 entries were received, including applications from industry giants as well as from hidden



champions and start-ups. As stated by the jury, “Usually, the processing of the components – high-pressure water jet deburring, component cleaning and drying – was carried out on two systems. With the EcoCvelox, for the first time a system concept that combines the two steps in one system is available, taking into account the need for flexibility and individualization. The result is not only lower costs, e.g. due to short changeover and conversion times, but also fewer disruptions in the subsequent operation of the

components.”

**This is technology that inspires:**

What makes this innovative solution so unique?



- Everything from a single source: high-pressure water jet deburring and cleaning in a single system;
- High flexibility: in terms of system configuration and process sequence thanks to its modular, space-saving unit design, which is individually expandable at any time;
- Short down time: fastest CNC axes on the market, minimum idle times of 0.5 sec;
- Reduced costs: short changeover and conversion times, simple adaptation to new parts, 50 percent longer tool service life;
- Flexible component handling: manual or automatic loading possible, can be integrated into island production and transfer lines;
- Intuitive system operation: new HMI panel with touch display, CAD/CAM interface for fast and easy application programming.

**Modular CNC deburring, cleaning and drying in one!**

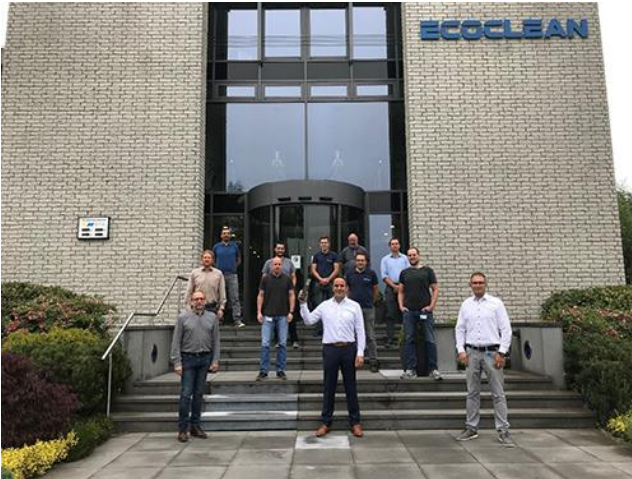
See it in action!

**Deburring components for particulate cleanliness**

Especially in the case of machined components with complex geometries, cleanliness specifications for particles just a few 100 micrometers in size can only be reliably fulfilled if an effective deburring process is carried out beforehand. But is deburring a manufacturing task or a cleaning task? In a Technical Article about

Particulate Cleanliness and Deburring, you can learn more about the details of this combined technology of deburring & cleaning.

## Our people and the EcoCvelox:



Members of the EcoCvelox development team talk about their personal favorite machine features and the recognition of the German Innovation Award 2020.

“The development is the result of outstanding teamwork with motivated colleagues at all locations. The SBS Ecoclean Group has given us the budget and trust to develop a highly innovative product with many unique selling points. Together we have successfully implemented this to meet the needs of the market!”

### **Marko Flatten, Team Manager Product Development.**

“As mechanical engineer I was responsible for the development of the CNC axes within the high-pressure module. With this CNC system based on a machine tool, a wide range of workpiece geometries can be covered. In combination with the high-pressure tool changer, the customer is guaranteed a high degree of flexibility. This is only one of many reasons why we deserved to win this award!”

Klaus Sommer, Mechanical Engineering.

“The combination of the flexible workpiece management, flexible recipe management and the innovative transport system allows the customer a completely flexible use of the machine, which is entirely adapted to the workpiece.”

### **Rene Stickelmann, Electrical Engineering.**

“Through the combination of high-pressure water jet deburring and component cleaning, the EcoCvelox made it possible to match innovative technology with modern design. Thanks to the compact modular design, the machine can be quickly configured and offers customers many possibilities. This flexibility deserves an award!”

### **Manuel Stollenwerk, Product Development.**



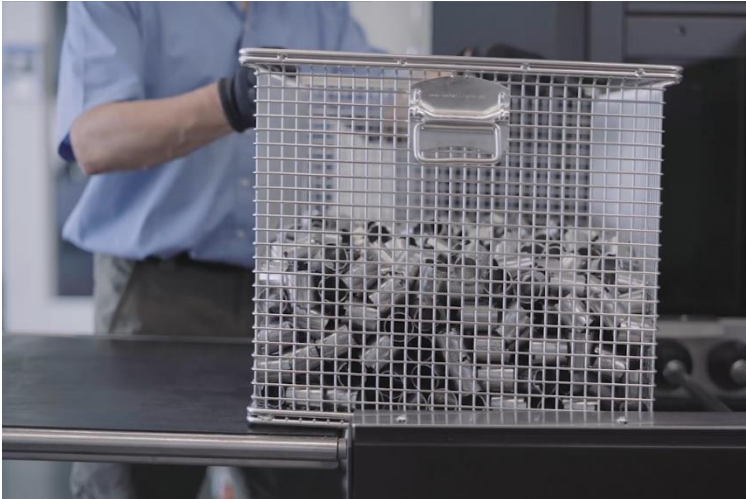
## Contact

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You are also faced with the challenge of having to replace an existing cleaning process? Then do not hesitate to contact us:

[sales.monschau\(at\)ecoclean-group.net](mailto:sales.monschau(at)ecoclean-group.net)

## Cleaning fasteners: Handling different sizes and quantities



Be it to achieve the required cleanliness for subsequent process steps or to ensure the quality and functionality of the component to be cleaned, the requirements placed on fasteners increase.

Ever more filigree and complex spiral springs, screws and brackets must be available fast, reliable and in large quantities.

But by far not every cleaning method fits every fastener. Remaining metal residues and traces of fats or oils are not the only risks when choosing a non-optimal cleaning technology. Parts cleaned can also

be scratched, bent or they don't dry properly and thus lose some of their functionality. Additionally, the level of cleanliness requirements differs from customer to customer.

To prevent manufacturers of fasteners from having to buy a separate cleaning machine for each of their products and customers, a high degree of flexibility is required from the cleaning technologies:

- Thanks to its two- / three-tank configuration, the EcoCwave can be used not only for wet chemical part cleaning but also for surface treatments.
- With the EcoCcore, the customer can switch from hydrocarbons to modified alcohols as production requirements change. The machine also offers a variety of available load compositions, combining filter housing and component preservation options.
- And with the Mega 86W, the expert for particularly high throughputs and surface quality through ultrafine cleaning, the throughput capacity and cleaning quality can be adjusted in order to optimize energy consumption.

This way, we can ensure maximum flexibility for different batch sizes and scenarios, regardless of whether they are bulk or set goods.