

**FORUM**

Ergonomics

**MAIN TOPIC**

Sustainability

**IN PRACTICE**

Flooring

# GLOBAL CLEANING

a media brand of rationell reinigen

ISSUE **2019**



DO YOU WANT TO JOIN THE CIRCULAR ECONOMY?  
LEARN MORE ABOUT THE ADDED VALUE TO YOUR CUSTOMERS!



A CIRCULAR FUTURE.



Service and information instantly available via scan: Hako-connect is the smart interface to all your machine data.



**Experience Hako live!**

24.-27.09.2019  
Hall 1.2/Stand 200-200c  
Berlin ExpoCenter City

## *This machine cleans even on gradients of up to 15%!*

### **Scrubmaster B175 R – with automatic brush-changing function!**

Available in different working widths and equipped with either cylindrical or disc brushes, the Scrubmaster B175 R expertly masters every cleaning task. The machine's wide range of superior features enabling comfortable cleaning include our 1-button operating system, which allows starting all cleaning functions simultaneously, a 90-degree steering angle providing a minimum turning circle, the squeegee with evasive-action function and our patented squeegee-cleaning system as well as an overall ergonomic workplace.

**Hako – Cleanliness without compromise.**



Can be installed at the blink of an eye: the front-mounted, modular vacuum sweeper unit saves laborious pre-sweeping! (Available as of 12/2018)

For more information visit us at [www.hako.com/scrubmaster](http://www.hako.com/scrubmaster)





MARKUS J. TARGIEL

Editor

markus.targiel@holzmann-medien.de

## ON THE HOME STRETCH TO THE GLOBAL CLEANING SUMMIT

We're on the home stretch to this year's premier event: the international "CMS Berlin 2019 – Cleaning. Management. Services" trade fair and exhibition will be opening its doors from 24 to 27 September.

One of the main highlights will be the CMS World Summit 2019, which will take place for the first time as part of the trade fair. Under the main theme "Inject Innovation," the summit will address new trends in exciting keynotes and spark debate in interesting panel discussions.

At a preview press conference on CMS, the three supporting associations – the Federal Guild Association of Contract Cleaners (BIV), the Cleaning Systems Association within the German Engineering Federation (VDMA), and the Industry Association for Hygiene and Surface Protection (IHO) – provided keen insights as to where the industry stands today and where it is headed.

The BIV represents the interests of around 2,500 member companies, which accounts for around 85 percent of the market and achieved sales of 17.9 billion euros in 2018, an increase of 5.9 percent. The current challenge is to find new employees. "Attracting talent for the various sectors of our trade is increasingly becoming the number one concern we need to tackle for the future," is how Federal Guild Master Thomas Dietrich describes the situation. In this context, the momentum of digitization, automation and robotics takes on a new significance. "These advances are not only making cleaning jobs easier, but also making them more interesting and more attractive, especially for younger candidates," says Dietrich.

Besides the economic outlook, digitization and automation are also topmost on the boardroom agendas of cleaning machine and equipment manufacturers. According to Markus Asch, Chairman of the Cleaning Systems Association of the VDMA, the aim is to improve performance, efficiency and competitiveness. Werner Schulze, Chairman of the IHO's Building Cleaning Division, sees the trend towards sustainability further reinforced as more and more customers are imposing the use of sustainable products.

Against this background, CMS Berlin 2019 takes on particular significance: as a platform for innovation, as reflected in the CMS Purus Innovation Award that recognizes intelligent products and solutions, but also as a unique forum for intensive exchange of information.

The CMS World Summit 2019, which will be bringing together top decision-makers from all continents, is an excellent example of living up to this promise.

Yours sincerely,  
Markus J. Targiel

**Purus Innovation Award,  
CMS World Summit, Mobility Cleaning Circle and much more - this year's Global Cleaning Summit is happening in Berlin.**





## ERGONOMICS

Facility cleaning is one of those areas in which personnel is potentially exposed to high physical stress. Sound ergonomics is key to creating safe, healthy and comfortable working conditions.

06

## SUSTAINABILITY

At the Monte Mare water park, a spa, sauna and wellness paradise in Kaiserslautern, hygiene has the highest priority.

10

## MAIN TOPIC

## 11 Environmentally responsible cleaning

Sustainably does it at Monte Mare in Kaiserslautern

## 14 Choosing hygienic paper wisely

### Recycled fibers for lower impact

## FORUM

## 6 Enhancing productivity through healthier work conditions

Ergonomics is the sum of many factors

## IN PRACTICE

## 18 Stripping and finishing

### Preparation and execution: the bare essentials of success

## 22 Parquet floor surfaces

Great protection and great looks:  
It's all in the finish

**24 Disc brushes, pads or cylindrical brushes?**

## What to watch out for when choosing and using

## 26 Facility services in sync with the times

## Rethinking efficient cleaning through process digitization

### 30 Processing cleaning textiles

50 shades of clean?

### 33 Cleanliness and hygiene for walls, tiles and equipment

Hygiene is never a small matter in big kitchens

## 36 Züriseh eye clinic

The best in both worlds  
maximizing hygiene synergies

#### 40 Hygiene measures in hospitals

At stake are human lives

#### 44 Municipal cleaning

Silence is golden and  
sometimes green and white



### FLOORING

There is no way around regular cleaning and maintenance to ensure an attractive, long lasting and safe floor. That makes stripping and finishing a frequent challenge for facility cleaning and care services providers.

**18**



### DIGITIZATION

Sweeping changes: Digitization is bound to vastly extend the boundaries of performance based cleaning services provision.

**26**



### HYGIENE

Züriseh eye clinic combines an ophthalmology practice with a fully equipped surgery – two contiguous areas with very different hygiene requirements.

**36**



### LOOSE INSERT NOTICE:

This issue includes the "CMS BERLIN UPDATE 3 – THE TRADE SHOW MAGAZINE"

---

### HEADINGS:

- 1 Topic No. 1
- 2 Contents
- 4 News
- 46 Products
- 48 Imprint



---

## SCHNEIDEREIT STRENGTHENS ACTIVITIES ABROAD

Schneidereit Professional is expanding its activities outside the home market. In particular, the company will be rolling out the Service 360° program currently offered in German-speaking countries to other markets. According to Managing Director Uwe Rütjes, the initial focus will be on France, the Benelux countries and Switzerland. Production and administration will remain in Solingen, Germany. "Accessing these markets will ensure that all washing processes carried out with Schneidereit technology are adapted to the hygiene requirements in the respective countries," explains Philippe Hanquer, Key Account Manager International at Schneidereit. Schneidereit's service of being on site at the customer's premises within 24 hours is to be implemented with its own service partners, he adds. All in all, the company expects strong growth impulses for exports as a result of these measures.

---

## EFCI: A NEW NAME AND A NEW LOGO AFTER 30 YEARS

At the celebration of the 30th anniversary since the creation of the European Federation of Cleaning Industries (EFCI) in Brussels, the European association not only unveiled a new logo, but also a new name: European Cleaning and Facility Services Industry.

The EFCI was founded in 1988 as a joint organization of the cleaning and facility services industry in 15 EU countries. Today, the association represents around 420,000 companies and over 3.6 million employees.

The 30th anniversary celebration brought together representatives of the member associations and representatives of the EU and industry associations. Opening the event, EFCI President Ivan Fieremans said: "Although cleaning is the core of our business and our historical root, EFCI must follow the evolving market and be ready for the future of our industry. We want to celebrate the 30th anniversary of the association, but also set a sign for the future." Added EFCI Director Isabel



The new logo of the EFCI, which now goes by European Cleaning and Facility Services Industry.

Yglesias: "Today, we are presenting our new profile at the same time as our new offices in the European Quarter in Brussels and a new strategy."

---

## ISS PRESENTS **SOLID FIGURES FOR 2018**

ISS, a global provider of facility services, has published its financial results for the full year 2018. Organic growth amounted to 3.4 percent and the operating margin to 5.5 percent.

According to the company, total revenues remained unchanged for the year as organic growth was impacted by negative currency effects of 3.4 percent and a negative net effect from acquisitions and divestments of 0.5 percent. Total revenues in 2017 were 10.73 billion euros. ISS currently employs approximately 500,000 people and has offices in more than 75 countries. For 2019, the company expects organic growth of five to seven percent.

ISS has been active in Germany since 1960. In 2017, ISS Germany achieved an annual turnover of 394 million euros and today has over 10,000 employees.

---

## **KENTER WINS AT EUROPEAN CLEANING & HYGIENE AWARDS**

On 15 November 2018, the Hotel Palace in Berlin provided a sterling setting for the European Cleaning & Hygiene Awards, where the winners of the year 2018 were announced at a gala dinner.

Kenter from Leipheim, Bavaria, won the award in the category "Excellence in added value initiatives" with Kenter Next, beating the finalists Impacs and Probiotex in this category.

Kenter Next summarizes the symbiosis of productivity, workflow, digitization and sustainability as a holistic concept. These four challenges and opportunities of the future were brought into focus and aligned for optimum impact. All elements of Kenter Next must be innovative and link at least two, or better three, of the topics of the future. These interlocking segments were combined and illustrated in Kenter Next.

The awards, which recognize the highest standards in the professional cleaning industry, are the only pan-European awards for the industry. With well over 100 entries this year, the jury nominated a selection of 36 service providers, manufacturers and dealers in a total of ten categories.

---

## BUZIL: **THOMAS ULBRICHT** JOINS SENATE OF ECONOMIC AFFAIRS

Thomas Ulbricht, Managing Director at Buzil, is now a member of the German Senate for Economic Affairs. The certificate of appointment was awarded at the spring parliamentary session of the Senate in March 2019 in the German Bundestag in Berlin by the Chairman of the Board of the Senate for Economic Affairs, Honorary Consul General Dieter Härthe.

The Senate is made up of personalities from business, science and society who, according to their own statements, are particularly aware of their responsibility towards the state and society. Together, they contribute to the practical implementation of goals for the common good, such as with regard to sustainability in the sense of an eco-social market economy on a national and international level. The Senate for Economic Affairs is oriented towards the common good and in constant dialogue with representatives from politics and science. The work of the Senate is characterized by fairness and partnership in business life as well as the social competence of entrepreneurs and executives.

"The appointment to the Senate for Economic Affairs is a special distinction for our company and our work, and I am deeply humbled by this honor," says Ulbricht. Buzil's managing director can fully identify with the values and goals of the Senate. In addition, the Senate offers an excellent opportunity to exchange ideas with key representatives from business and politics at the European level.



Dr. Walter Döring, former Minister of Economic Affairs, Thomas Ulbricht, Managing Director Buzil, and Dieter Härthe, Chairman of the Board of the Senate for Economic Affairs (from left), at the award ceremony for the certificate of appointment.



---

## **FRANK LEDOSQUET** APPOINTED VICE PRESIDENT SALES AND MARKETING AT METSÄ TISSUE

Frank Ledosquet has been appointed Vice President Sales and Marketing West Europe (B2B and B2C) at Metsä Tissue. Ledosquet has been with the Finnish tissue manufacturer for 15 years, most recently as Sales and Marketing Director in Western Europe, responsible for the further development of the B2B sector. This management move correlates with the restructuring of the European sales regions: The activities of the Professional segment will be combined with those of the Consumer segment. Metsä Tissue is confident that this will enable the company to focus its strengths and resources on better leveraging its expertise for the future.

---

## CAVERION WINS **TWO MAJOR FM CONTRACTS**

Caverion was awarded two international facility management contracts. Caverion will be working for Technopolis at five locations in three countries. For Gasum, Caverion will be responsible for the technical maintenance of gas filling stations in three countries. The parties have agreed not to disclose the contract amounts.

"We have succeeded in applying our extensive technical know-how across national borders. This makes us an attractive partner for international customers who expect consistency and a uniformly high level of performance at every location," comments Caverion Managing Director Frank Krause. "We offer tailored operator models that can be implemented one-to-one in all the countries in which our customers are located. Digital solutions also played an important role: "Both customers have decided to have their building services systems monitored remotely. All systems are monitored and evaluated centrally in the respective operational centers in Finland and Sweden."

Technopolis provides flexible office and coworking spaces and maintains 17 campuses in seven Nordic countries. Around 1,600 companies with 50,000 employees use the services of Technopolis. Since early 2019, Caverion has been responsible for technical maintenance, energy monitoring and remote monitoring at five locations in Finland, Sweden and Norway.

---

## KUBOTA DONATES TO **REBUILD NOTRE-DAME**

The Japanese manufacturer Kubota is donating 250,000 euros for the reconstruction of Notre-Dame Cathedral in Paris, which was severely damaged by a fire on 15 April 2019. With this amount, the manufacturer of construction machinery would like to express its support for the reconstruction of the historic landmark, as Kubota has always had very close ties to France and Paris. The donation will go to the fund "La Fondation Avenir du Patrimoine à Paris," which is dedicated to preserving Paris monuments and landmarks, and will consist of several instalments from diverse Kubota organizations, including Kubota Corporation (Japan) with 100,000 euros, Kubota Holdings Europe B.V. (Netherlands) with 40,000 euros, Kubota Europe S.A.S. with 45,000 euros, Kubota Farm Machinery Europe S.A.S. with 20,000 euros, Kverneland Group Les Landes-Genusson S.A.S. with 15,000 euros, Kverneland Group France S.A.S. with 15,000 euros and Kverneland Group Metz S.A.S. with 15,000 euros.

As early as 1974, the company founded the sales company Kubota Europe S.A.S. in Paris and a sales centre in Cavaillon, which is responsible for sales and service of industrial engines as well as agricultural and construction machinery. Kubota's implementation business also includes the Kverneland Group Les Landes-Genusson S.A.S. and Kverneland France S.A.S. in Orleans. Due to the continued growth in France, a new R&D centre in Crépy-en-Valois is planned for completion in 2020.





Ergonomically thought-out planning helps to keep employees healthier over the long term.

# ERGONOMICS IS THE **SUM OF MANY FACTORS**

Applying the principles of ergonomics is a core concern in today's facility cleaning trade. The scope is vast, as it covers workplace conditions, work processes and the tools and equipment used on the job. The objective is clear: To bring all these factors into alignment in terms of function, time and space and create the optimal workflow for maximizing efficiency and comfort – at no detriment to human health. The goal and the overarching ambition here is reduce any potential risk or burden to personal health, and to prevent fatigue or injury, and thus improve overall well-being. By definition, ergonomics (from the Greek: ergon = work and nomos = law) means adapting work conditions to the ability and characteristics of the people doing the job – and not vice versa. The starting

point is full awareness in the execution of the physical movements involved in carrying out a task, e.g. the correct – i.e., vertical – wringing out of cleaning cloths, the user-friendly design of the implements used for that task, and the appropriate distribution of muscular effort on the individual muscles during the task. Ergonomics reaches far beyond the reduction of physical strain. Applied correctly and consistently, it delivers qualitatively and hygienically better results, has a motivating effect, saves time and saves money, too. Many tasks in the facility cleaning trade are carried out manually, which makes it all the more important to put ergonomics front and center in this domain. From a business point of view, this is particularly significant because it reduces downtimes. Ergonomically



designed work processes and equipment help to keep employees healthier in the long term.

One keyword in facility cleaning is prevention and that's essentially what ergonomics is all about. Today, higher and higher performance levels are expected while meeting consistently high quality standards. This means creating an effective and workable framework in terms of care and prevention, among other things with the help of a company health management system.

This is where all health-related activities come together: in an integrated policy that incorporates measures for occupational health and safety, integration management and company-wide health promotion. The main task is to train the employees and to keep sensitizing them about the importance of using the correct posture and movements when carrying out their tasks, and especially to consciously apply the ergonomic principles they learn and make use of the tools available to them. Here, upper and lower back training courses organized by German health insurers are a good example of a proactive, pragmatic and effective approach to preventing work-related health issues.

#### **MUSCULOSKELETAL DISORDERS TOP THE LIST**

In their Health Report published in 2018, the DAK, a major German health insurer, reported that more than half (53.9 percent) of all sick days in 2017 were related to the musculoskeletal system, mental illnesses and respiratory system illnesses. In particular, at 326.9 days of incapacity to work per 100 insured persons, musculoskeletal system-related issues remained at the top of the illness ranking. Here, back illnesses and injuries accounted for the majority of lost work days. In the previous year, the number of sick days was slightly lower at 319.5 days.

Musculoskeletal disorders can be caused by various factors: lifting, carrying, pulling or pushing heavy loads, working in forced postures, extended repetitive motion with high handling frequencies, or exert great physical efforts. The study also shows that these health issues can effectively be remedied – and in future prevented – by instituting healthier working conditions. Applied ergonomics would help avoid almost all the downtime and a large part of productivity losses directly linked to work-related illnesses or injuries to the musculoskeletal system.

There is another important aspect to consider as well: Health issues caused by musculoskeletal disorders don't just concern those directly affected, but also have a major impact on the bottom line. "By optimizing ergonomics at the workplace, and thus ensuring that cleaning utensils, equipment and machines are used correctly, businesses can avoid or at least reduce expensive personnel losses," says Martin Lutz, a state-certified cleaning and hygiene technician and managing director of the FIGR Research and Testing Institute for Facility Management in Metzingen. ►



**EVA FLEMISCH**

Managing Director, Kalka Services Company

## **OUR PEOPLE ARE OUR GREATEST ASSET**

This guiding principle is behind the thoughts and actions of our company and our managers. In 1996, as part of obtaining ISO certification, we expanded our quality management system to include occupational safety. The dedicated committee we set up for this purpose also addresses ergonomics. On this front, we are continuously improving our operations through our involvement in industry associations, close cooperation with manufacturers and suppliers, visits to trade fairs and desk research. But here's the thing: New solutions and technologies shouldn't just be talked about; they need to be applied.

At the core of ergonomics, you have a person. And everyone is familiar with the challenge: "Change is bad!" It's only human. Our aim is to promote ergonomics and help our people to internalize its benefits through repeated training and sensitization. That's why our property managers are always in close contact with cleaning staff, so issues are identified before they become problems, and so we can create a positive dynamic for ensuring a healthier and more enjoyable work experience over the long term. It's also why we attach great attention to a detailed analysis of the premises already in the bid phase: so we can plan for the appropriate techniques, machines and equipment in advance. Besides the actual work time involved, these are decisive factors for ensuring optimum ergonomics. That still leaves other challenges to contend with, like inadequately sized supply rooms, elevators too few in number and too far apart, or surfaces that pose care and maintenance problems which could have been avoided at the planning stage, and of course the permanent imperative to minimize costs.

We meet them thanks to experience and expertise, and a proactive attitude towards new and better solutions. Here, I also see a need for us as a trade to enable clients to gain a better understanding of our role and take it into account in their site design and budget planning.

**CONSTANCE RETTLER**

Chief Administrator, Dr. Rettler Service

## FACILITATING A VIRTUOUS CIRCLE

Lost work days in our industry are unfortunately an all too common occurrence: In hardly any other trade will you find similar statistics when it comes to ailment or injury-related absences. The main cause of this is the stress to the human musculoskeletal system that can be caused by many of the activities involved in the facility cleaning trade.

For us as a business, and for all of us as a trade, these work absences represent significant additional costs and an added administrative and organizational burden. It also raises concerns on the part of our customers, which over time is never good for building a strong and lasting relationship.

That's why, against this backdrop, it is so important that the idea of occupational health and safety be firmly anchored throughout every facet of our business. This is a people business and our task is to ensure the safety and health of our people.

At Dr. Rettler Service, we have a "back school" for training our employees in the correct and ergonomic use of their cleaning equipment and machines. The program we developed in close concert with health insurance companies looks at all the aspects in which the tasks our employees perform impact their health and well-being, and where as well as how discomfort or even injury can be prevented.

Ultimately, a way of working that doesn't stress the body's musculoskeletal system not only improves cleaning outcomes, but also reduces downtime and increases job satisfaction. That's also why we pay particular attention to user friendliness when purchasing new cleaning equipment and machines. By the way, wherever possible we use machines to relieve any physical strain, which has a positive impact on performance and efficiency.

Promoting a healthier work environment is investing in the future of our business. It's about creating and maintaining a virtuous circle.

## Wetter isn't always better. Martin Lutz

If there is one area in which healthy, efficient and engaged coworkers represent a strategic success factor, it's the service sector, and, not least, the facility cleaning trade.

### THE MANY FACETS OF USER-FRIENDLINESS

When it comes to manually cleaning and disinfecting larger surfaces, user-friendliness is just as critical as purpose-designed, ergonomically sound work equipment. With regard to all aspects relevant to ergonomics, a cleaning system must meet numerous requirements:

- height-adjustable or correctly positioned handles to ensure an optimum height setting and avoid unnecessary effort;
- easily accessible, correctly positioned components so that all necessary activities, e.g. soaking and wringing out, can be carried out in an upright position, i.e. with the back straight;
- plastic handles for greater comfort (instead of cold metal);
- dust mops with a telescopic handle for cleaning high-up horizontal surfaces or lighting fixtures;
- practical and intuitively arranged tubs, buckets and boxes, so that users can work comfortably and efficiently from any position;
- appropriately sized cleaning trolleys (not too large) with disconnectable units so that cleaning staff do not have to park the trolleys in front of difficult-to-access areas (narrow aisles, elevators...) and cover extra distances on foot;
- presses that can be operated with little effort without losing accuracy in the operating process;
- smooth-running rollers so that the cleaning system can be moved effortlessly;
- no heavy containers on the trolley to prevent fatigue or injury.
- high-quality textiles, i.e. microfiber instead of cotton blends, to ensure smooth and thorough wiping;
- modular systems with easy to attach and detach implements;
- purpose-designed containers that reduce the need to continually load/unload and rummage around the trolley and maximize storage space.

User friendliness and practicality usually go hand in hand. As Martin Lutz points out, full-surface dust-binding mopping has decisive advantages over wet mopping. It achieves a better cleaning outcome because dust, fine sand or hair are more effectively – and last-

ingly removed. Also, hygiene is better compared to wet mopping, especially when cleaning agents without a disinfecting effect are used, since dry mopping leaves no moist film that could promote microorganism growth. Martin Lutz sums it up in a nutshell: "Wetter isn't always better."

#### GETTING SERVICE PROVIDERS, ASSOCIATES AND CUSTOMERS ON THE SAME PAGE

In addition to meeting ergonomic standards, it is important to bring the interests of the three stakeholders in alignment. The first group is represented by the service providers who attach equal importance to economics and sustainability. They focus on key aspects such as high-quality, durable products and materials, complete modularity and downward compatibility – and a ten-year spare parts availability guarantee. The second group, the people who actually do the work, have a vital stake in seeing ergonomic principles applied throughout the workplace and workday to preserve their own personal health and well-being. The third group are the end customers, i.e. facility owners, operators or managers, who require a clean or hygienically clean end result, depending on the agreed-upon outcome and standards to be met. Here, customers may require service providers to use verifiably certified cleaning processes.

If we look at ergonomic cleaning products, we also see a common denominator: Although these products are often more expensive than standard versions, they are much more effective and efficient. "In the long run, the only way to improve efficiency is to invest in modern and ergonomically proven cleaning equipment and machines," summarizes Martin Lutz. The human factor remains an integral part of the equation, however. Constant education, and above all regular training, in the correct handling of cleaning devices and machines will always remain key to ensuring that improved ergonomics also equals improved economics. ■

**Simone Bittner-Posavec, Maintext**  
markus.targiel@holzmann-medien.de

**Improving efficiency requires investing in modern, ergonomic cleaning equipment and machines.** Martin Lutz



**THOMAS BRAUN**

Managing Director, Lattemann & Geiger Services Group

## ENSURING A MORE ATTRACTIVE WORKPLACE

Ergonomics is and always has been core to our operations as a cleaning services provider. The fact that we have Occupational Health and Safety Assessment Series certification speaks to that, too.

Cost benefits, such as fewer sick days and continued wage payment savings, are not the only drivers, here. We can all agree that when an associate doesn't show up for work for health reasons, or any other reason for that matter, getting a replacement sorted and rearranging schedules creates time-consuming disruption. And customers are not always fine with seeing an unfamiliar face or having to explain things over and over again.

Over the past two years we've been working in close concert with a major health insurer to develop a training unit specifically designed to promote a healthy back posture and prevent work-related discomfort and injuries. Based on extensive clinical analysis and available in 14 different languages, it's part of our onboarding package for new employees and included in our annual occupational health and safety refresher sessions for all our employees.

This is just one example of the kind of concrete measure that contributes to a healthy and motivated team, especially in the facility cleaning services trade, where most of the work involves a physical effort of some kind.

Today, in addition to our company health and safety management system, we try to make workplaces more ergonomic and more attractive by providing machine support. In terms of cleaning technology, we believe in using machines even for smaller areas. Systems such as the i-Mop from Kenter or Clara Clean are examples of the solutions we use.

Robots for large-scale floor cleaning are no longer science fiction. They're already a standard component of facility and investment planning at Lattemann & Geiger.





# ENVIRONMENT AND SUSTAINABILITY

- 11** Environmentally responsible cleaning  
Sustainably does it at Monte Mare in Kaiserslautern
- 14** Choosing hygienic paper wisely  
Recycled fibers for lower impact



# SUSTAINABLY DOES IT AT MONTE MARE IN KAISERSLAUTERN

At the Monte Mare water park, a spa, sauna and wellness paradise in Kaiserslautern, hygiene has the highest priority. If the environmental responsibility and sustainability boxes can be ticked without having to compromise on cleaning performance, then bio-degradable cleaning agents are always the first choice.

All the charm, beauty and magic of a day in Tuscany – Monte Mare in Kaiserslautern takes you there. A sandstone decor in magnificent shades of terracotta, amphorae, wicker chairs, mosaic tables, and a Roman fountain decorated with cherubs adorn the entrance to the wellness area. Whoever dines, bathes or relaxes here looking for nothing more than some peace and quiet finds perfect serenity.

"The most important thing for our guests is relaxation," says Operations Manager Holger Samuelsen, who welcomes an average of 300 guests here every day. "That's why we attach particular importance to general cleanliness and top level hygiene. All floor and wall surfaces must be professionally cleaned every day and disinfected at regular intervals according to a set schedule."

## MANY SURFACES - DIFFERENT REQUIREMENTS

Early in the morning at 6 a.m., long before the spa opens, is when professional cleaning begins. 2,500 square meters of floor space, 500 square meters of wall

space, plus glass doors and window panes up to two meters high are cleaned and polished to a dazzling shine by the dawn cleaning patrol. Since January 2015, Jeblick Facility Services in Kaiserslautern has been making sure that no dust or lime deposits, and not even the smallest grain of dirt, mar the overall impression of beauty, cleanliness, order and harmony. Christian Knoll, Jeblick's Managing Director, knows that this is not easy in an environment as particular as Monte Mare. "One aspect that makes wellness and spa facilities so challenging is the sheer number and diversity of surfaces that human skin comes into direct contact with. And they all need to be kept hygienically clean. For this reason, the hygiene requirements are much tougher here than elsewhere. This also explains why Area Manager Gabi Heidermann and her colleague Kerstine Sander, Jeblick's Facility Manager in charge of the Monte Mare account, visit the site several times a week to make sure their specialist cleaning crews are getting the job done right. ►



Foam is increasingly popular for cleaning because its viscosity translates into longer contact times, which significantly boosts cleaning effectiveness.



### A QUESTION OF TRUST

Every day, there are three Jeblick employees working in the wellness area alone. If the cleaning is carried out with products from Tana-Chemie, it's because Knoll knows from experience that he can count on the biodegradable cleaning agents from the Green Care Professional range to perform as advertised. "Tana-Chemie is constantly optimizing its product formulations, and our confidence in the products has always been justified. So far, we've increased our share of sustainable products to 76 percent."

For Samuelsen, certifications are also an important aspect of the solid relationship Monte Mare enjoys with Jeblick. But as important as having a clear conscience may be with regard to the environment and the climate, there can be no compromises when it comes to disinfection in the spa area. Hygiene always takes precedence. Here, there is no way around the Apesin SDR san disinfectant cleaner, which isn't in the Green Care Professional range.

In other places, such as in the passages around the plunge pool, using Green Care products is already standard procedure. "Hygiene is always the highest priority, of course. However, wherever better environmental compatibility can be achieved without having to compromise on cleaning quality, we will choose the more sustainable option. And it shows in our cleaning product selection on this site and on others, too."

## SUSTAINABLE FOOTPRINT AT YOUR FINGERTIP

Werner Schulze, Managing Director of Tana-Chemie, took the opportunity to explain the "Green Effective Performance Calculator" to Christian Knoll (Jeblick) and Holger Samuelsen (Monte Mare). The online tool calculates the respective savings in heating oil, packaging plastic and carbon dioxide when using Green Care products – to the nearest gram. Not only can the quantities of cleaning agents ordered be calculated according to their life cycle assessment, but sustainable action can now be certified as well.



Demonstrating the "Green Effective Performance Calculator" for Christian Knoll (left) and Holger Samuelsen.

### HONEY IS NO MATCH FOR FOAM AND SCRUBBER

All the cleaning is done wet and preferably with foam. That's because the nature and viscosity of foam cleaner prolongs contact time, which in turn increases cleaning thoroughness and effectiveness. The crew starts with the steam baths, then works its way up the side staircases to a gallery where there are rest rooms and massage booths. Next on the cleaning plan, on the lower ground floor, you have the brine bath, shower rooms and separate toilet facilities. Everybody on the cleaning crews wears acid-resistant rubber boots to protect their feet from any risk of contact with the cleaning agents. Pure water, which is used for clear rinsing, is simply not adequate for cleaning. Operating the steam bath, for example, involves using honey, which makes work steps such as spraying, scrubbing and rinsing the tiles a daily necessity.

### A VIRTUOUS CIRCLE

Outside the sensitive areas, such as the heated bench or the steam bath, Green Care products are the first choice for surface cleaning. "This is also consistent with our philosophy," says Samuelsen, who sees good planning as the key to successful, effective and sus-



tainable cleaning. "It starts with asking the right questions when selecting the tiles. Large pores or fine pores? What stresses must the flooring be able to withstand under normal use conditions?"

Guests, in any case, very much appreciate the environmental awareness that comes through at Monte Mare, which has lost none of its appeal since it was built in 2004. "There's a really good vibe," says Werner Schulze, Managing Director of Tana-Chemie.

#### REST AND RELAXATION IN A MAGICAL SETTING

Sustainability, in the sense of nurturing what is precious and taking the long view, not only applies to the choice of cleaning agents. It also characterizes the long-standing collaboration between Monte Mare, Jeblick and Tana-Chemie. Christian Knoll from Jeblick plays a pivotal role here, having built a lasting friendship with Tana's Werner Schulze as well as with Holger Samuelsen at Monte Mare. Knoll himself likes to come here to sweat away the stress and relax after a strenuous day at work. The property includes a large garden with an ecofriendly sauna and a rest house whose architecture exudes the sublime charm and peacefulness of a cathedral. Far from the crowds at the leisure pool, guests can relax outside the buildings under grapevine arches near a small picturesque saltworks or gaze out over a

charming water landscape. An idyll on the outskirts of Kaiserslautern. The house's motto is a promise easily kept: "A day's holiday at your doorstep." ■

#### rationell reinigen

markus.targiel@holzmann-medien.de

- 1 When cleaning the baths, acid-resistant rubber boots protect the personnel from hazardous contact with cleaning agents.
- 2 Werner Schulze, managing director Tana-Chemie, Christian Knoll, managing director Jeblick Facility Services, and Holger Samuelsen, operations manager at Monte Mare Kaiserslautern, have an eye on ecology (from left).
- 3 A winning team: Holger Samuelsen, Werner Schulze and Christian Knoll (standing, from the left) with Gabi Heidermann, area manager, and Kerstine Sander, project manager at Jeblick (front from left) at the Monte Mare water park in Kaiserslautern.



# CMS19 BERLIN

**Cleaning. Management. Services.**  
International Trade Fair and Congress  
24–27 Sep 2019  
[www.cms-berlin.com](http://www.cms-berlin.com)

The Next Level  
of Cleaning  
**CMS  
WORLD  
SUMMIT**  
2019





In Germany, annual per capita consumption of hygiene paper is close to 18 kilograms.

#### CHOOSING HYGIENIC PAPER WISELY

## RECYCLED FIBERS FOR LOWER IMPACT

Hygienic tissue paper production severely impacts the environment: It consumes a lot of wood, energy and water, and leads to hazardous substances being discharged into the natural water supply. Re-utilizing waste paper more effectively and applying state-of-the-art technology in paper production goes a long way towards reducing the burden on our environment.

Besides the issues associated with manufacturing hygienic paper, there is also the problem of the tissue being disposed of after use via the sewage system or as waste. This causes precious fibers to escape the recycling loop.

#### **CONSUMPTION DRAMATICALLY ON THE RISE**

Hygienic paper tissues include toilet paper, paper towels, handkerchiefs, cosmetic tissues, napkins, kitchen

towels, cleaning wipes, and masks (e.g. for the medical sector). In Germany, paper tissue consumption is just under 18 kilograms per person per year (the figure is from 2010). Over the past ten years, demand for hygienic papers in Germany has risen from one million to 1.5 million tons. At the same time, according to the Association of German Paper Mills (Verband deutscher Papierfabriken), the share of recovered/recycled paper in overall paper production has fallen



from 75 to 50 percent. In other words, entire forests are being flushed down the toilet because hygienic tissue paper is basically designed for single use. It ends up in the sewage or waste disposal system and therefore can't get recycled effectively.

### **USING SECONDARY FIBERS THAT ARE RECYCLED MULTIPLE TIMES**

Ideally, hygienic papers would exclusively consist of secondary fibers from medium and low-quality waste paper that has already been recycled several times. These types of waste paper account for more than 85 percent of total waste paper volume. Re-utilizing these recovered paper grades has a decisive impact on the number of times paper fibers are used, thus significantly reducing the pressure on the finite lumber resources used for cellulose production.

In Germany, the ecological and social norms for paper and pulp production, but also for forest management, are high by global standards. Still, 57 percent of the paper, cardboard, paperboard and over 80 percent of the pulp, used by the German paper industry comes from abroad – an increasing proportion of which originates from plantations in developing and emerging nations. In southern regions, producing cellulose often causes massive problems. More and more paper fibers for the German hygiene paper market come from Brazil – from ecologically controversial plantations. In the Brazilian state of Espírito Santo, thousands of hectares of rain forest have been cleared by pulp producers such as FIBRA (formerly Aracruz) to make room for eucalyptus plantations. Originally, the "Mata Atlântica" (Atlantic rain forest) covered large parts of the state of Espírito Santo. Today, only ten million hectares remain, just 7.5 percent of the original stock. There are now twice as many plantations as natural forests. The pulp and paper industry played a major role in this development.

### **RECYCLED PAPER: IT'S HIGH-QUALITY...**

Something can be done: For every type of hygienic tissue paper made from fresh high-grade cellulose, there is a high-quality alternative made from recycled fibers. There are plenty of recycled paper products that more than hold their own in terms of user comfort compared to those made from virgin fibers, as confirmed in a test conducted by "Stiftung Warentest" – the German equivalent of "Consumer Report" in the US. This applies to paper handkerchiefs, kitchen rolls, napkins and toilet paper. In Germany, the "Blue Angel" environmental label guarantees that 100% of the fibers are obtained from waste paper and that no hazardous chemicals are used. Other labels such as FSC or PEFC, or the term "chlorine-free bleached," leave too much room for ambiguity from an environmental impact point of view.

### **...AND SAFE**

Hygienic tissue papers made from recycled paper and certified "Blue Angel" are suitable for all intended

applications. The paper grades and chemicals used comply with the recommendations of the Federal Institute for Risk Assessment on "Paper and Board for Food Contact." They comply with the thresholds for potentially hazardous substances listed in the supplemental notes on hygienic tissue paper assessments. Colorants containing heavy metals such as mercury, lead, cadmium or chromium VI are prohibited, as are substances classified as carcinogenic, mutagenic or toxic to reproduction. In other words, the standards that apply to "Blue Angel"-certified tissue paper are actually more stringent than for tissue paper made from primary or virgin fibers.

### **MARKET FORCES AND THE REGULATORY ENVIRONMENT**

The principles and obligations of the Closed Substance Cycle Act ("Kreislaufwirtschaftsgesetz" - KrWG) apply here, too. Although Recommendation XXXVI "Paper and Board for Food Contact" of the Federal Institute for Risk Assessment does not represent a legal basis, it is widely accepted in the market as a helpful product standard.

In Germany, the "Blue Angel" is the best benchmark for hygienic tissue papers. Other labels are less helpful, particularly with regard to environmental responsibility:

- FSC and PEFC on paper – These two labels apply to sustainable forest management. What you find in the marketplace are mainly FSC blended papers. "Blended" means that at least 70 percent of the

## **A WIN FOR THE ENVIRONMENT**

In Germany, anybody who wants to do something for the environment looks out for the "Blue Angel" when buying hygienic tissues. The symbol certifies the following:

- Paper fibers made from 100-percent recovered paper.
- Toilet tissue papers contain only low, middle and special fiber grades.
- All other hygienic tissue products consist of at least 60 percent of lower, medium, strong and special grades.
- Only manufacturing auxiliaries listed in the XXXVI "Recommendation for Paper and Board for Food Contact" of the Federal Institute for Risk Assessment" may be used in paper production.
- Threshold values apply for formaldehyde and pentachlorophenol levels.

**Source: Blauer Engel (Blue Angel)**

fibers come from FSC wood and/or waste paper. Most of the time, however, they are derived from pure virgin fibers. Although some papers have the FSC recycling label, they don't meet the strict requirements of the "Blue Angel," e.g. with regard to the minimum proportion of low grades of recovered paper, maximum thresholds for energy and water consumption, or the use of chemicals in production. That makes hygienic papers with the FSC or PEFC label less recommendable than "Blue Angel"-certified products.

- Chlorine-free bleached – This only means the product contains no recycled paper and gives no indication as to the type of forest management. It only speaks to the use of chemicals in bleaching. Today, elemental chlorine-free bleaching (ECF) predominates (90%) over completely chlorine-free bleaching (TCF) at 5% of total production. Today, pure chlorine is still being used for 5% of total global paper production.
- EU Ecolabel for tissue papers – The European Ecolabel defines requirements for energy consumption, water pollution and the chemicals used. Unfortunately, it does not make the use of recycled paper mandatory, and the proportion of certified fibers can be as high as 50 percent. The label therefore offers little added value compared to papers without certification.

#### THE "BLUE ANGEL" BENCHMARK

Products with the "Blue Angel" label are particularly recommended for environmental reasons. Manufactur-

ers are allowed to use the "Blue Angel" label only for a certain period of time. Hygienic papers that are certified "Blue Angel" are made from 100 percent waste paper and they are certified 100% free of problematic dyes, bleaching agents containing chlorine, or other harmful chemicals. Choosing tissue paper made from waste paper instead of virgin fiber paper helps the environment in many ways: It conserves forest resources because no trees have to be felled for these products; and greenhouse gas emissions associated with paper production are reduced, as are fresh water consumption and waste water pollution.

#### RECYCLED FIBERS HELP CONSERVE NATURAL RESOURCES

When it comes to resource consumption, wastewater pollution, water and energy consumption, an ecological comparison clearly shows that paper products made from waste paper perform much better than those made from wood fibers: Per kilogram of finished paper, utilizing recycled fibers saves up to 2.4 kilograms of wood and consumes about half as much energy and around 67 percent less water.

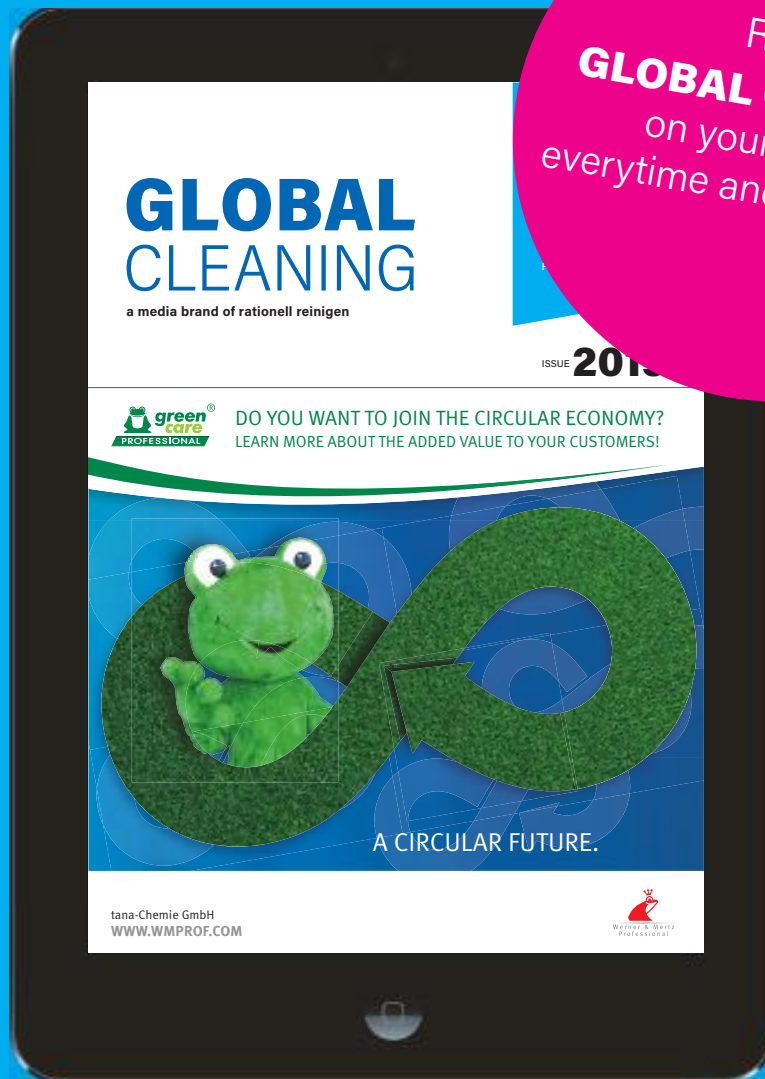
This makes a pretty solid case for banking on recycled fibers in the hygienic paper sector. That way, valuable fresh fibers are not lost to the raw material cycle after having been used just once!

**Source: German Federal Environmental Agency**  
peter.hartmann@holzmann-medien.de

Waste paper is an ideal raw material for environmentally responsible hygienic paper production.



Read  
**GLOBAL CLEANING**  
on your tablet -  
everytime and everywhere



Now available in your App Store.

## YOUR ADVANTAGES:

- Free subscription
- Complete archive available
- and many many more.

Visit us at CMS in hall 1.2 – booth 102

 **HOLZMANN**. MEDIEN

Kunden-Service | rationell reinigen | Gewerbestr. 2 | 86825 Bad Wörishofen  
Telefon +49 8247 354-142 | [www.rationell-reinigen.de](http://www.rationell-reinigen.de)



## IN PRACTICE

- FLOORING
- DIGITIZATION
- TEXTILE CLEANING



Rinsing and vacuuming  
are important working steps.

## STRIPPING AND FINISHING

# PREPARATION AND EXECUTION: THE BARE ESSENTIALS OF SUCCESS

There is no way around regular cleaning and maintenance to ensure an attractive, long lasting and safe floor. That makes stripping and finishing a frequent challenge for facility cleaning and care services providers. Meeting it starts with making the right product choices – and avoiding the typical pitfalls – to prevent the risk of expensive damage.



Stripping means completely removing any old layers of wax or finish, soil and clinging dirt and debris that over time have fused with the floor. It's a multi-stage cleaning procedure that is carried out at extended intervals over the covering's useful life.

Prior to stripping, the floor should be completely cleared of movable furniture. Should an underfloor heating system be installed, it should be turned off at least one day before the stripping operations begin.

In terms of equipment, a single disc scrubber is recommended for applying the stripping solution.

**Caution:** For safety reasons, always make sure the power supply is disconnected when attaching the brush and/or the disc holder.

Before getting started with the stripping, it's important that any loose, coarse dirt and dust be removed by giving the floor a good sweeping and/or mopping.

Wearing adequate personal protective equipment when preparing the cleaning solution, but also during the subsequent stripping procedure, is a must. This includes waterproof footwear, protective gloves and goggles.

The stripping solution should be prepared according to the manufacturer's instructions and then carefully filled into the tank. Using the machine, the stripping compound is then applied to the floor in slightly overlapping lanes. Always start the process at a point opposite the exit. ►



Two-stage wet mopping will pick up the last residues of stripping compound.

**If a match can float on the surface, you know you have the right amount of stripping solution on the floor.**

Janette Horvath-Knobloch



Stripping is best carried out in sections. Edges need to be done separately and manually.



The pH value can be conveniently checked with an indicator strip.



## A perfect finish requires comprehensive and uniform coverage of the entire floor area.

Janette Horvath-Knobloch

**TIP:** There is a simple way to make sure that the correct amount of stripping solution has been poured on the floor: A match should be able to float on the surface. Also, wetting the floor incrementally, say 20 to 25 square meters at a time, keeps the stripping solution from drying up before the area is scrubbed. The type of floor covering and surface condition are of course key factors for determining which cleaning chemicals and mechanical aids should be used. Floor areas that the machine won't be able to reach, like edges, niches or corners are best handled with an edge cleaning device and hand pad.



A pour spout on the canister makes it easier to apply the finishing compound evenly.



The next step is to systematically scrub the floor in a circular motion with the single disc machine and a disc pad suitable for the type of floor covering. On the fringes, manual cleaning with the hand pad is the best option.

Before removing the dirty solution from the stripped floor, first check the outcome and make sure you're satisfied with the stripping result and that all residues from old finish layers have been completely scrubbed off.

**TIP:** Pull a squeegee over a few places to check for shiny areas (a tell-tale sign that the old finish layer has not been completely removed). Once that's done, you can remove the dirty solution completely with a wet vacuum. Next, rinse with clear water using the single-disc scrubber – and vacuum again.

In a final step, the floor is wet mopped in two stages with clear water. While the floor is still wet, be sure to check the pH – easily done with an indicator strip. A neutral pH or no alkalinity means that the stripping solution is completely gone and the floor can be refinished. Allow for sufficient drying time before applying the finishing coat.

#### PREP THE FINISH

A polymer dispersion is usually recommended for smooth floorings that are subject to heavy wear and high mechanical stress: It creates a durable film that effectively protects the floor. Depending on the requirements, different coating compounds are available which can be applied to coatable and water-resistant floor coverings, such as linoleum, PVC and sealed parquet.

Before applying the finish, be sure that the floor is free of any dirt, cleaning product or film buildup.

The finishing solution is applied with the aid of suitable mop covers, e.g. a velour-like microfiber mop.

**TIP:** Use a lint roller or a strip of adhesive tape to remove any fuzz present on the mop. Then wet the mop with clear water and wring it out thoroughly to minimize shrinkage. You're now all set to start applying the finishing coat.

The finishing compound is applied undiluted, directly to the floor, and then evenly distributed with the mop. When spreading the dispersion, make sure you create a uniform film that covers the entire floor. Stay away from natural light sources (e.g. windows) when visually checking your progress to ensure there are no gaps because the glare and shadows can be deceptive.

When applying the finishing coats, never let the previous coat dry out completely, and make sure there's a slight overlap on each lane. Any spots missed when the first coat is applied will be easily noticeable later on, so it's very important that all those difficult-to-reach areas – like corners, edges, recesses and other nooks and crannies – be covered in the first pass.

**TIP:** One way to ensure smooth and even application of the finishing compound is to attach a pouring spout to the container.



Use a strip of adhesive tape to remove any fuzz from the mop.



Don't wait for the previous finishing coat to be completely dry before applying the next one, and work in overlapping lanes.

As a rule, two to three coats should suffice. After each application, factor in adequate drying time. Make sure that the heating systems are switched off and that the windows are closed to ensure uniform curing. Put up signs to prevent anyone from walking on the finished surface during the drying phase. As a rule of thumb, wait at least 24 hours before allowing full access to the floor. ■

**Janette Horvath-Knobloch, Buzil**  
peter.hartmann@holzmann-medien.de





Only the correct surface treatment will turn parquet into the high-quality floor covering that customers want.

## PARQUET FLOOR SURFACES

# GREAT PROTECTION AND GREAT LOOKS: **IT'S ALL IN THE FINISH**

Each parquet floor requires a specific surface treatment that's up to the job of protecting the wood from scratches, stains and dirt. Most floors are sealed with varnish, but oil and wax also have their advantages.

### THE FINISH SHIELDS THE WOOD

In the Middle Ages, raw wooden floors were simply covered with sand or straw. Cleaning them was a straightforward proposition: when they got dirty, you simply tossed in an armful of straw or a shovel of fresh sand. Later on, the wooden planks would be rubbed in with bacon rind. It was only 50 years ago that parquet floors started to get sealed the way we are accustomed to. But even today, valuable wooden floors are still being laid in the raw, unfinished state. Only after the floor is completely installed is the surface then sanded down and the finish applied.

### A MATTER OF TASTE

While customers in the US tend to prefer glossy parquet floors with sealed pores, Europeans seem to fancy a semi-matte finish and a more natural look and feel. Many surface treatments have the effect of slightly darkening the original color of the wood, while some emphasize the color contrasts in the grain.

### OIL - THE TRADITIONAL METHOD

What's in vogue today, parquet-wise, is the matte look of oiled wooden floors. One of the reasons is no doubt aesthetic: the oil treatment brings out the natural

grain and beauty of the wood. At the same, oiling is very effective in keeping liquids from seeping into the wood without creating an airtight film the way conventional sealants do. The pores continue absorbing and releasing humidity naturally, contributing to a pleasant and healthy room climate. Although oiled floors are somewhat more sensitive, any damage is usually easy to repair. Oiled parquet should be buffed regularly and treated with a special care oil two to three times a year. Always consult an expert first to determine which oil is best suited for a particular floor.

#### **WAX - THE NATURAL ALTERNATIVE**

Wax has a water-repellent effect, is usually odorless, and will only slightly impact the wood's natural color. Like oil, it preserves the wood's natural "breathing" properties. The floor should be treated with care wax about once a year. Make sure the wax coat is not too thick, otherwise the floor will become slippery and sticky. Waxing may take a little more practice than oiling, but the floor will be ready for use right after polishing.

#### **VARNISH - THE DURABLE SOLUTION**

Sealing a parquet floor with varnish affords permanent protection against moisture seepage and abrasion damage. Although the varnish forms a closed and robust barrier, the wood still "breathes" through the lacquer. As a rule, a primer is applied before the so-called top seal. If water-based varnishes for parquet are increasingly popular, it's no doubt because of the fact that they contain little or no solvents and are very easy to apply.

### **TIP**

How the finish affects wood coloring also depends on the type of wood. If you want to treat the surface of a parquet floor, you should first treat a small area for testing purposes and wait for the result.

After the floor has been sealed with varnish, it's important to cordon it off and let it cure for several days. Thereafter, cleaning is pretty uncomplicated: vacuuming or sweeping is usually all it takes. Stains are usually handled with a moist cloth and some care product if necessary. One thing to keep in mind: If the lacquer layer is damaged in one place, the board must be completely sanded off and replaced. On average, however, a sealed parquet floor only needs a new varnish every 15 years. ■

**German Parquet Manufacturers Association**  
redrr@holzmann-medien.de



Tedious, but necessary: sanding.



A finishing coat effectively preserves the wood flooring.



## DISC BRUSHES, PADS OR CYLINDRICAL BRUSHES?

# WHAT TO WATCH OUT FOR WHEN CHOOSING AND USING

The vast spectrum of available tools and technologies turns the choice of floor cleaning equipment into a challenge for facility cleaning services providers. One thing to keep in mind: Maintenance counts as much as the machine.

There are disc brushes, pads and cylindrical brushes specifically designed for virtually any application. For the cleaning services provider, it's a matter of making sure that hardness and abrasiveness match the recommendations for the surfaces to be cleaned, often as specified by the manufacturer.

The age-old principle that "the darker the pad or brush, the higher the abrasiveness," is no longer valid and has been far outpaced by innovation. This makes it all the more important to follow the manufacturers' product data sheets, especially because more and more products cover multiple trades and application areas (the masonry sector is a good example).

## DEVELOPMENTS IN BRUSH TECHNOLOGY

The brush sector in particular has come a long way in recent years, with bristle types that range from ultra soft for textile floor coverings all the way to aggressive but gentle stripping brushes for removing old or caked layers of coatings and care products. Here, the big ad-

vantage of brushes over pads is that their service life is considerably longer. In addition, brushes are much more effective at reaching deeper into recesses than pads could ever be.

## PAD COSTS AND WEAR

Compared to brushes, machine pads are much less cost-intensive and can be quickly adapted to different cleaning situations by simply switching them on-site. However, depending on the workload, they can wear out more or less rapidly. It's very important to regularly check the wear indicator to avoid damage to the surfaces being cleaned. If those surfaces are microporous, however, there is currently no better alternative than to use the melamine pads offered by various manufacturers.

## THE RIGHT BRUSH - CYLINDRICAL OR DISC?

Cylindrical brushes are really the first choice when the flooring is heavily textured. They are so superior to disc brushes and cleaning pads in terms of cleaning performance and outcome quality that it is only a matter of selecting the degree of hardness to achieve the best possible cleaning result without damaging the surface.

In those facilities where large areas need to be cleaned regularly, and where the floor surfaces are relatively homogeneous in terms of texture and condition, and where no cylindrical brushes are used, the issue is really to select the best disc brush option for achieving the desired cleaning result.

The same goes for industrial environments where extremely heavy soiling is to be expected (mostly caused by production processes) and where the dirt particles are often larger and have a coarse structure. Here, brushes are considerably superior to pads due to their more stable properties.

## PADS FOR FREQUENT TOOL CHANGES

Ready availability and easy handling gives cleaning pads a major advantage on sites where scrubbing implements have to be changed frequently. It's not uncommon, for instance, to have one area that needs



Finding the right scrubbing equipment for facility cleaning among the many options out there is serious business.



## Complete range of environmentally friendly products Innovative – compact – and perfect!

KIEHL, the high-performance manufacturer of  
professional product solutions for perfect cleaning,  
maintenance and hygiene.

KIEHL offers the complete range of innovative products in  
all fields of business from professional cleaning to automatic  
vehicle washing, in the guaranteed KIEHL quality.



Surface and equipment  
disinfection



Hand cleaning &  
hygiene



Kitchen cleaning &  
hygiene



Preparation of cleaning  
textiles



Vehicle cleaning, exterior /  
interior, road / rail



Textile washing &  
hygiene



Building surface cleaning &  
hygiene

**CMS 2019 in Berlin**  
vom 24. - 27. 9. 2019  
Halle 3.2 - Stand 218

[www.kiehl-group.com](http://www.kiehl-group.com)

polishing and another that needs stripping. With pads, switching from one job to another is convenient and a matter of seconds.

If wear in the sense of longevity is an important aspect to take into account when selecting the type of cleaning pad, so is the degree of soiling the pads can take over time. Wet stripping in particular is one of those areas that requires that pads be changed more often to ensure the optimum cleaning outcome. If the cleaning pad is not changed frequently enough, the result is a kind of hydroplaning effect and, consequently, a less than satisfactory scrubbing performance.

### NO MAINTENANCE, NO JOY

Whether it's pads, disc brushes or cylindrical brushes, maintenance is essential. Pads must be checked regularly for wear. This involves both checking the wear and tear and checking the cleaning capability (to prevent losses in cleaning performance due to clogged pad fibers). There's a simple rule to avoid unpleasant surprises: When in doubt, change the pad. In addition, pads that can be used over a longer period of time (due to low soiling and low wear on the site) should be checked regularly for foreign matter. You wouldn't believe the damage a stray thumbtack or push-pin can cause to an elastic floor covering.



### Sascha Hintze

is a master craftsman in facility cleaning and a publicly appointed and sworn expert; Experts for Facility Cleaning & Development, Duisburg; [hintze@sachverstaendigenbuero-hintze.de](mailto:hintze@sachverstaendigenbuero-hintze.de)

Even disc and cylindrical brushes are not immune to debris ingress (e.g. textile fibers, rope cords or the like) and should be checked and cleaned regularly. However, they do prove more forgiving should foreign matter get lodged between the bristles.

One last point: It's important to correctly store the brushes in-between jobs. After use, make sure nothing is weighing down on the bristles to prevent them from bending out of shape. This preserves the structural integrity of the brushes and maximizes their useful life. ■

### Sascha Hintze

[markus.targiel@holzmann-medien.de](mailto:markus.targiel@holzmann-medien.de)



Sweeping changes: Digitization is bound to vastly extend the boundaries of performance based cleaning services provision.

## FACILITY SERVICES IN SYNC WITH THE TIMES

# RETHINKING EFFICIENT CLEANING THROUGH PROCESS DIGITIZATION

A new reality: Digitization is instrumental in maximizing the benefits of performance based cleaning services. Supported by new technologies such as the Internet of Things in combination with sensor technology, the whole idea of cleaning is being rethought as the focus shifts from process to outcome.

The facility management industry has always been characterized by great competitive pressures. The constant focus on cost and price today requires agility and efficiency. When it comes to facility cleaning services, this means maximizing returns, i.e. focusing on a more outcome driven execution of services. It's a shift away

from the classic approach of activity-focused provision of facility services, where the focus is on process and value is seen mainly in sticking to schedules, intervals and agreements. The client's expectations in terms of cleaning services are, however, based on an outcome, i.e. clean premises, not just clean processes. Fixed

Images: rationell reinigen

cleaning intervals and procedures are in themselves no guarantee of fulfilling that expectation. In fact, the degree of specification on the client's part as to how the cleaning is to be carried out, combined with very clear requirements of the outcome to be achieved, all too often makes it impossible to achieve the expected results over the long term.

#### PROS LEAD THE WAY TO BETTER OUTCOMES

It was against this background of potentially conflicting goals that the performance based approach to providing cleaning services emerged, with the client and the contractor agreeing on a specific outcome rather than on procedures and schedules.

Here, the path to the agreed-upon outcome is determined exclusively by the service provider and no longer by the customer. No more meetings and contracts about intervals and process steps: Designing an optimum cleaning plan now lies in the hands of the service provider, and thus in the hands of a professional.

There is no way around new technologies and digitization when it comes to achieving strategic goals. Megatrends such as globalization continue to gain momentum, too, leading to increasing international competitive pressure among facility services providers. Understandably, the optimum cost-quality balance is becoming the key criterion when awarding of service contracts. This makes it all the more important to confront the associated challenges – like quality requirements, descriptions and analyses – and implement a suitable system for meeting these requirements and supporting the cleaning process. [1]

As customer requirements evolve, advances in available technologies pave the way for digital value-added services that have a positive impact on facility management services and customer retention. The growing trend towards high quality services is reshaping the rapport between client and contractor. But what are the underlying prerequisites for this shift? And what are the main drivers of change in the market?



**There is no way around new technologies and digitization in today's entrepreneurial focus on achieving strategic goals.**

#### A FUNDAMENTAL RETHINKING

Sustainability and viability should be elementary building blocks of entrepreneurial thinking. The shift from activity-focused to performance based execution is initially associated with an increased investment in costs and time for setting up the service level agreement (SLA), and thus may seem daunting at first.

However, taking the performance based approach soon results in numerous advantages over the long term, building trust and strengthening client loyalty in particular. Ultimately, taking a results-oriented stance will not only lead to a richer customer experience using the same resources, but also facilitate operational excellence for the contractor.

The first step in converting service specifications to a performance based format is to conduct a detailed analysis of the current situation. This will help to precisely define the deliverables for a service level agreement on a contractual basis. Here, the customer's demands in terms of quality and scope of the service(s) to be provided can be clearly defined beforehand, thus ensuring that the customer's needs and requirements will be met (No surprises!). The result is a contract agreeable to both sides that leaves nothing to doubt and forms the basis for a successful partnership. ►



## For perfect industrial cleaning

**Volume 1** of the guide series „Compact Industrial Cleaning“ provides the theoretical underpinning for the basics of day-to-day practice.

**Volume 2** provides trainees, beginners and cleaning forces with application security when carrying out professional cleaning work.

**Volume 3** delivers the practical fundamentals for working security and accident prevention on site.

All books are only available in German language!

 **HOLZMANN** . MEDIEN

[www.holzmann-medienshop.de](http://www.holzmann-medienshop.de)



When costing the project, it is important to take into account any staff training that may be necessary. The desired customer experience can only be achieved if all technical possibilities are fully exploited. Decisive in this preliminary process is a clear and objective description of the condition in which the facility is to be maintained on an ongoing basis. Making a photographic record of the different quality levels for the cleaning services, for instance, goes a long way towards precluding any misunderstandings between the client and the contractor regarding the actual condition of the facility and the expected cleaning outcome. The net effect is to make quality measurable and no longer have it depend on the subjective assessment of the persons involved. This creates the basis for effective accountability and quality assurance after the work has been carried out. Also, categorizing the cleaning scope into various service levels makes it possible to meaningfully grade the contractor's performance.



**Those who master the ins and outs of performance based contracting have a clear advantage over their competitors.**

Once the scope of delivery has thus been defined, the next step is to agree on penalties in case of non-compliance, and then on performance based billing for services rendered. Companies already familiar with the organizational and contractual framework of performance based services provision have a clear advantage over their competitors. Maximizing the advantages of a results-oriented approach is only possible if all the parties involved pull together. Experience shows that a facility owner, operator or management company benefits from a clear competitive and economic advantage as soon as the conversion to performance based contracting has been successfully implemented. [2]

#### **DIGITIZATION AS AN ENABLING FACTOR**

As digitization continues to advance, it will further expand the scope of performance based cleaning services. The added value for the client in terms of improving returns and reducing complexity, and for the facility in terms of maintaining its everyday condition

at a top level and preserving the asset over its lifetime, will also have a positive effect on cleaning staff motivation. In the start-up scene, a handful of young and innovative technology companies are already achieving notable successes with their facility services business models. Using new measurement systems, they generate data in office buildings that introduces more accountability while optimizing processes. IT-supported processes are just starting to revolutionize facility management and professionally manage and optimize the multitude of different activities.

Performance based cleaning requires a system that not only records, creates and manages service level agreements, but also measures, monitors and helps to continuously improve performance. This system, when it is adapted to the specifics of the facility, can also be the platform for communications between the persons involved in the project. This way, helpful documentation, data, or even images, can be added to the system, leading to a transparent process and keeping the admin workload to a minimum.

One key corollary of increased digitization is that the level of quality management will rise enormously. For one, decision-makers will obtain analyses and evaluations of executed processes, automatically and in real time. This dramatically improves quality by enabling the contractor to quickly react to customer needs and short-term inquiries. Having a continuous exchange between customer and contractor minimizes the risks of process disturbances and allows for any deviations in the agreed quality of the service to be detected immediately. As all the benefits come together and play off each other, the result is a win-win situation for all parties.

Performance based cleaning fosters a new awareness of the best way to handle contractual relationships and realize the potential for saving costs and time while fully addressing the customer's requirements. The enormous complexity and interconnectivity that arises from the combination of digitization and automation makes it all the more important to identify and limit risks in the forefront, and then focus on maximizing the benefits.

#### **OUTLOOK FOR RESEARCH**

Cleaning procedures and processes are influenced by different factors: temperature, chemistry, time and equipment. [3]

Other factors influencing the process are being discussed in a current research project at the Beuth University of Applied Sciences in Berlin, which is funded by the "Construction of Tomorrow" research initiative of the Federal Institute for Research on Building, Urban Affairs and Spatial Development. Here, researchers investigate social and sustainability-related aspects of performance based cleaning and develop a model for correlations between weather conditions and the condition of buildings.

The study empirically investigates time and cost pressures as well as the degree of satisfaction of the stakeholders. A further focus is on the cleaning methods and how they integrate quality measurement and assurance systems.

Sensors have been installed on residential properties to collect inputs for a database that will reveal the interdependencies of various factors.

Besides the factors related to the facility, the study also looks at the impact on personnel. For instance, what skills will cleaning services providers be looking for in future hires?

Sustainability, too, is a key concern in the research: How much cleaning agent is actually used and does this fit in with the required resources? And how are the highly concentrated cleaning agents, some of which are harmful to the environment, disposed of properly? These are just some of the many questions posed in the research whose goal is to identify where and how cleaning outcomes can be optimized throughout the entire value chain.

## CONCLUSION

The benefits of facility cleaning are primarily asset preservation, hygiene, safety, comfort and perception of the building and its occupants. [4]

In an evolving market, the paths and procedures for achieving these benefits are in flux, and so are the demands on the cleaning contractor. Although promising approaches for optimizing cleaning services in the digital age are being tested in the marketplace, so far no standard solution has asserted itself. ■

Sc. Katharina Götzen;

Prof. Dr.-Ing. Dipl.-Wirt.Ing. Josef Kraus,  
Beuth University of Applied Sciences Berlin;

Prof. Dr.-Ing. Jan Hofmann,  
University of Stuttgart, Institute of Construction Materials

peter.hartmann@holzmann-medien.de

## Sources:

Erdt, Marie-Sophie: Bachelor thesis: Service Levels and Service Level Agreements and their Impact on Facility Management, Berlin: University of Applied Sciences, 2018

Gluhova, Anna: Bachelor thesis: Satisfaction Analysis in the Facility Cleaning Sector for Clients, Contractors and Users, Berlin: University of Applied Sciences, 2018

[1] Erdt, Service Levels and Service Level Agreements and their Impact on Facility Management (2018)

[2] Erdt, Service Levels and Service Level Agreements and their Impact on Facility Management (2018)

[3] Gluhova, Satisfaction Analysis in the Facility Cleaning Sector for Clients, Contractors and Users (2018)

[4] See ibid..

**NEW**  
**FULL COLOURS**

*... the leading manufacturer of high-quality hygiene brushes now also in full colours!*

**Hall 4.2  
No. 201**

**haug® bürsten**

**haug bürsten KG** | Föllstraße 6 | D-86343 Königsbrunn  
Tel. (+49) 08231/9 63 00 | Fax (+49) 08231/96 30 96  
haugbuersten@t-online.de | www.haugbuersten.de

**BVLK**

**Made in Germany**

PROCESSING CLEANING TEXTILES

# 50 SHADES OF CLEAN?

According to a survey by a major commercial laundry machine manufacturer, no less than 42 percent of facility cleaners use household washing machines for their own laundry. The quality of the cleaning results is not the only thing to suffer. It hurts the bottom line, too.

Three essential factors are decisive for the success and profitability of facility cleaning contractors:

- **Personnel:** The challenge of finding qualified and committed personnel in the cleaning sector is getting tougher and tougher. It's no longer a competition for skilled workers, it's an outright battle. Fair enough. After all, having the right people is a key success factor when it comes to running a cleaning business, or any business for that matter.

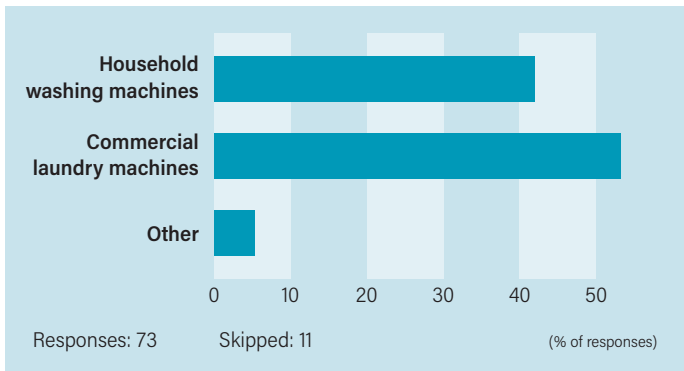


TABLE 1: "If you have an in-house laundry service for your cleaning textiles, what machines do you use?"

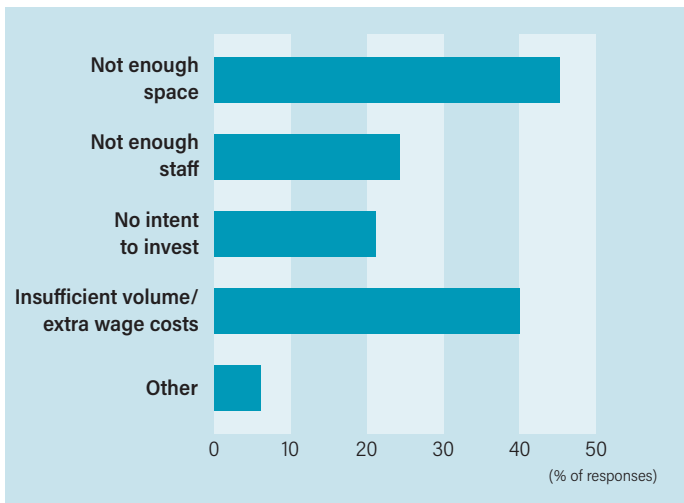


TABLE 2: "If you don't launder in-house, please indicate the reason."

- **Cleaning products:** Cleaning agents that reliably and effectively get the job done of removing the various kinds of dirt and stains without posing a health hazard, that's the second important factor for retaining existing customers in the long run and winning new ones. Product selection depends on the "cleaning challenge" at hand and it is imperative to cover all requirements. The cleaning products used in hygiene-sensitive areas like hospitals or the food processing sector aren't the same as those used in an office building or on a factory floor. Each type of environment has its own requirements and they should all be met without having to compromise on the desired cleaning outcome.
- **Cleaning textiles:** The textiles used for cleaning are effectively the tools of the trade for every facility cleaning professional. The quality of the various types of textiles is a key aspect – as is the intensity and frequency with which they are used – when it comes to ensuring that the textiles remain effective for as long as possible and avoiding unnecessary costs. Here, there still are quite a number of businesses that are taking unnecessary risks. Even though the majority of the cleaning sector has recognized that professional results can only be expected if the job is done professionally, i.e. with professionals using professional products, there is still a disconnect where cleaning textiles are concerned.

No competent facility cleaner worth his or her salt would dream of using household cleaners from the supermarket shelf for a professional facility cleaning job. Surprisingly, 42 percent of facility cleaners use household washing machines for their cleaning textiles. This is just one of several interesting findings of a survey conducted last year by German commercial laundry systems manufacturer Gottlob Stahl among facility cleaning services providers.

Based in the same town as a star of the German auto industry, Stahl, specialized exclusively in commercial laundry machines, cautions facility cleaners not to take the washing of cleaning textiles lightly: "There are good reasons why professional facility cleaners shouldn't use machines designed for household use to launder their cleaning textiles. Apart from the fact



that the quality of the washing results achieved with a regular household appliance cannot be guaranteed, professional-grade laundry systems are ultimately also more cost-effective," explains Sebastian Hatz, Sales Manager at Gottlob Stahl. But why is that so?

#### **INCREASINGLY TECHNICAL TEXTILES**

Even though cleaning a facility involves using a wide variety of textiles, they all have one thing in common: their care is extremely demanding. Mops, microfiber cloths, sponges, work clothing or dirt traps, for example, need to be optimally cleaned according to the degree of soiling. Laundry expert Sebastian Hatz sees two essential aspects that must be considered.

First and foremost, textile quality must match the requirements. Especially in the case of critical soiling, it must be ensured that all dirt has been removed without leaving any residue. "Mops used in healthcare facilities, for example, must be cleaned in accordance with strict regulations. The latter may include compliance with prescribed holding times – a function that only commercial washing machines can reliably perform." If one considers the regulations for changing cleaning textiles in hygiene-sensitive areas, which are very strict (one fresh textile per room, whereby the bathroom is also regarded as a separate room), it quickly becomes clear that, at the end of the day, the quantity of textiles that needs to be correctly and reliably washed after each cleaning can be huge.

#### **KEEPING AN EYE ON THE BOTTOM LINE**

Besides being better adapted to handle various textile grades and preserve their durability, the other key criterion that commercial laundry machines are better equipped to meet is cost-effectiveness. "There are really three factors that come into play when looking at the cost aspect," explains Hatz. "Energy consumption, service life, and cleaning outcome. And by outcome I mean the ability to effectively yet gently clean the textiles."

Cleaning textiles are a classic consumable and thus a cost factor for the facility cleaning company. The quality of the washing result is paramount, but care should also be taken to ensure that the textiles are not overstressed by the cleaning process. What matters is to maximize the useful life of the cleaning textiles. Depending on cleaning volumes and frequencies, energy consumption also plays an enormous role. "Our laundry machines are designed for professional use and therefore also feature energy-saving functionalities, such as our PTS 3 power transmission or our innovative Speed-Flow system, to reduce power consumption," says Sebastian Hatz whose experience so far has shown that service life and performance often fall by the wayside when it comes to making the purchase decision.

A household washing machine available today for as little as 400 euros – and which may be perfectly

# 40 %

of respondents said their laundry volume was too small to justify an in-house laundry service..

suitable for a small family – might seem like an attractive solution. However, looking at the purchase price alone may set you up for real problems down the line. For one thing, if the household washing machine falls apart after two years of trying to handle commercial laundry loads, it's usually beyond repair and has to be replaced.

"Household washing machines simply can't hold up to the requirements of professional cleaning, be it in terms of quality or performance," explains Sebastian Hatz. In addition, they are generally not cheaper when you spread the costs over the service life of the machines. "Many of our customers have been using the same machines for 20 years or more. Of course, this always depends on the workload, but a Stahl built in 1998 and operating the same as on its first day of service is not an unusual sight. One of our customers is still washing strong with a model from the 1980s."

There is no mystery as to why the laundry machines made by this family-owned brand are so durable: Only high-quality materials are used on the production lines in Sindelfingen. Even those parts that are subject to predictable wear and tear are made of exceptionally durable materials. In addition, the mechanics of the machines are designed in such a way that parts subject to wear and tear as well as other consumables can easily and quickly be replaced by in-house technicians.



**It's a myth that commercial laundry machines only pay off for large operations with large laundry volumes. There are systems that handle loads as small as 5.5 kilograms.** Sebastian Hatz



Sebastian Hatz is Sales Manager at Gottlob Stahl in Sindelfingen, Germany.

# 42 %

of facility cleaning services providers surveyed said they use household washing machines for their professional cleaning textiles.

## THE RIGHT MACHINE FOR THE JOB

Facility cleaning operations involve various types of textiles: In addition to employee work wear, there are mops, microfiber cloths and other types of laundry that need to be washed in large quantities. Some companies also offer to clean dirt trap mats. Which ultimately begs the question: Which machine is best suited to meet all the different laundry requirements? There are many machines on the market that are specifically designed to handle mops and microfiber cloths, for instance. Does this mean that you actually have to purchase three or more different machines?

"Basically, machines for cleaning textiles all share the same requirements: a wide spectrum of recommended settings; consistent cleaning outcomes even with large loads and heavy soiling; and thorough yet gentle and energy-efficient operation," says Hatz. In other words, it's a myth that facility cleaners need to invest in a special machine for each type of textile they use.

The important thing is to set up the laundry machine for the specific textile to be laundered. Not so easy with a household washing machine, but no problem for a commercial laundry machine. The Atoll, for example, one of Stahl's bestsellers, offers 99 programmable settings for individual washing programs. This is more than sufficient even for very large contractors with a diverse customer structure. Nevertheless, it sometimes makes sense to operate several machines, depending on laundry volume, type and process. Here, it is recommended to seek advice from the manufacturer.

## IT'S NOT A MATTER OF SIZE

Around 20 percent of the facility cleaning contractors surveyed in the Stahl study said they did not wash their laundry in-house and instead sent it to a service provider. Besides "not enough room for an in-house laundry facility" (45 percent, see Figure 1), 40 percent of the respondents stated that their laundry volume was too low to justify an in-house laundry room.

"The preconceived notion that commercial laundry machines only pay off for large companies with large laundry volumes is, unfortunately, quite prevalent. Commercial laundry machine capacities start as low as 5.5 kilograms, with all the benefits in terms of cleaning outcome quality and consistency, reliability and cost-effectiveness," underscores Sebastian Hatz. These systems are perfectly suitable for very small businesses and have a very small footprint.

If there is a recommendation for facility cleaner of all sizes and stripes, it would be this: "Unless you are already doing your washing in-house, check out the options and keep in mind that what makes professionals professionals is also professional equipment." ■

**rationell reinigen**

markus.targiel@holzmann-medien.de



Pressure washers equipped with foam nozzles are the best recipe for dealing with soiled walls and other vertical surfaces.

## CLEANLINESS AND HYGIENE FOR WALLS, TILES AND EQUIPMENT

# HYGIENE IS NEVER A SMALL MATTER IN **BIG KITCHENS**

Where there's cooking, there's stubborn soiling. HACCP guidelines call for consistently removing grease and food residues. They are a key factor in preventing viruses and bacteria from gaining a foothold. Here's an overview of what high-pressure, surface and steam cleaners, but also scrubbers and scrubber dryers can do, what to watch out for during cleaning, and how to ensure thorough disinfection.

The kitchen environment, all of the associated areas, and all equipment and appliances must be carefully cleaned or disinfected in accordance with HACCP (Hazard Analysis and Critical Control Points) principles. Depending on the task at hand, various methods are available for achieving the required hygiene level.

### FOAM FOR WALLS AND VERTICAL SURFACES

White tiles and stainless steel just about sums up the color scheme in commercial kitchens. Where tiles are concerned, getting them clean again at the end of the day generally involves a pressure washer with a foam nozzle or a cup foam lance. The special nozzle, which mixes the cleaning solution (alkaline/neutral/acidic) with air and the water jet, generates an active foam ►

# 100°C

Steam-powered hygiene: With steam cleaners, the steam exits the nozzle in very fine droplets at a temperature of 100 degrees centigrade and a pressure of three to four bar – and a speed of up to 170 kilometers per hour.



## PRECISION PLANNING: CLEANING AND DISINFECTION ACCORDING TO HACCP

In order to prevent any health hazards when handling food-stuffs, the kitchen and associated rooms (storage rooms, refrigeration facilities) as well as any equipment and appliances must all be kept hygienically safe by carefully and thoroughly cleaning all the surfaces, and, if necessary, disinfecting them. As the various areas and types of equipment require different cleaning routines and intervals, it's critically important to draw up a cleaning plan – and post it visibly in the area to be cleaned.

This plan clearly specifies the following:

- What (equipment, surfaces, floors)
- When (after use, daily, weekly)
- How (cleaning product and dosage) and
- Who (person in charge, task owner).

After the work is done, it must be accurately logged and documented as well as signed off on for traceability and better control. Here, it should be underscored that cleaning and disinfection are two different processes. Cleaning is aimed at removing dirt, i.e. any undesirable substance or debris, including product residue, microorganisms, and cleaning and disinfectant residues. Disinfection involves chemical and physical procedures to kill microorganisms to a level that is neither harmful to health nor detrimental to food quality.

– best sprayed onto the wall tiles from the bottom up and at a distance of between one and two meters to maximize coverage.

There are clear advantages to working with foam: On the one hand, you see where the cleaning agent is doing its job, so there's little risk of missing a spot; on the other, foam doesn't run off so fast, so there's a longer contact time. The net result is a better cleaning outcome thanks to greater efficiency. Here, it's important to use only the amount of foam it takes to coat the surface once. In other words: No layering. Or more isn't necessarily better. This not only prevents waste, but also plays to the strengths of foam cleaning. If there's too much foam, gravity will just make it slide down the surface, neutralizing all the advantages of extended contact time. Always rinse from top to bottom.

The other important thing to keep in mind is to alternate between acidic and alkaline foam cleaners. This reliably prevents microorganisms from proliferating. When using acidic foams, always hose down the tiles beforehand to keep the grout from absorbing the acid and corroding.

### PRESSURE OR STEAM FOR PANS, UTENSILS, KNOBS, EQUIPMENT ET

The best bet for a grimy tilting frying pan is a pressure washer that allows the user to adjust water pressure and throughput. This way, you can ensure optimum cleaning and avoid splashback. Also, being able to reduce pressure to a minimum makes it possible to clean more sensitive areas and components, like those close to electrical fittings. Here, very short lances (25 centimeters, or about 10 inches) or short spray units, such as a power nozzle directly on the trigger gun, have often proved the wiser choice.

Getting machines and kitchen utensils hygienically clean also works with a steam cleaner. The steam exits the nozzle in very fine droplets at a temperature of 100 degrees centigrade and a pressure of three to four bar (roughly between 45 and 60 psi), at a speed of around 170 kilometers per hour. This explains why the steam jet reaches cracks or rubber folds that are virtually impossible to reach with brushes or cloths. It works wonders on the edges of dishwasher front plates, stove switches and corrugated surfaces – and gets them all thoroughly and hygienically cleaned. Freezers can be defrosted in considerably less time simply by injecting steam between the ice and the inner wall.

Industrial steam cleaners also offer the option of mixing cleaning agents into the steam jet to get rid of heavy soiling. Besides having a vacuum for dirty water, they also feature self-cleaning programs for the suction hose and pipe to remove any residues.

### SURFACE CLEANERS, SCRUBBERS OR SCRUBBER DRYERS FOR THE FLOOR

Cleaning the floor in a large commercial kitchen is particularly challenging. It starts with the fact that it



Industrial steam cleaners are convenient because the cleaning parameters can be adjusted directly on the gun. In addition, the dissolved dirt and debris are immediately vacuumed up.



ON THE LEFT: For some areas, a surface cleaner is just right. With a high quality brand there is no risk of scuff marks from the wheels or hose.

ON THE RIGHT: An effective solution for cleaning kitchen floors: Compact scrubbers with roller brushes reach deeper into the grooves.

has to be safe to walk on – even run on – at all times. If a basic or “normal” floor comes with an anti slip rating of R9 (at the beginning of the scale, i.e. no particular anti slip properties whatsoever), the kind you find in commercial kitchens will range between R11 and R13 (see box: Accident Prevention). The studs on the structured tiles with these high ratings are also arranged in such a way as to minimize the risk of slipping even if the floor is wet. They also trap the fat, grease and food residues that drop on the floor during an average day in the kitchen.

Surface cleaners with a rotating bar and slightly offset power nozzles will spray water onto the floor surface at high pressure to effectively remove dirt and debris. The bristle wreath deflects the water spray, preventing it from soiling walls and furniture. Depending on the floor, the dirty water will either naturally flow towards the drain, or you may need to force it there with a squeegee. As an alternative to surface cleaners, and just as suitable for kitchen floor cleaning, you have single-disc scrubbers or roller scrubbers. Keep in mind: Cleaning a rough floor with a single disc machine requires quite a bit of extra effort because the uneven surface accentuates the machine’s rotational drift to the right, forcing the operator to constantly compensate in the other direction.

Roller scrubbers, on the other hand, work with counter-rotating brush cylinders to eliminate drift for easy guidance, allowing the operator to work in precise lanes in all directions. Better and easier control also minimizes the risk of damage to door frames or the edges of built-in cabinets. In addition, the smaller contact area means more downward pressure and, due to the cylindrical shape of the brush, greater effectiveness in cleaning structured tiles and grout. The high

rpm at which the rollers operate keeps dirt from accumulating among the bristles, so the brushes virtually keep themselves clean. Compact machines feature a vacuum system for collecting the dirty water, which means the floor is dry again and absolutely safe for walking within minutes after cleaning. ■

**Alexandra Lachner, freelance journalist,**  
**Gerd Heidrich, Kärcher**  
markus.targiel@holzmann-medien.de

## ACCIDENT PREVENTION: ANTI-SLIP TILES AND STICTION

To prevent accidents, floor tiles used in work rooms, commercial and public areas must have the prescribed anti slip rating, which is expressed by a value ranging from R9 (low or no slip resistance) all the way to R13 (high slip resistance). The ‘R’ stands for “ramp test.” Here, a test person wearing protective shoes first stands then walks on an inclined plane with an oily surface. The higher the R rating, the greater the angle of inclination of the surface to be tested. It goes from > 6°-10° with a low static friction or stiction coefficient (R9) to > 35° with a very high stiction coefficient (R13).

## ZÜRISCH EYE CLINIC

# THE BEST IN BOTH WORLDS

## MAXIMIZING HYGIENE SYNERGIES

In April 2018, the Züriseh eye clinic opened its new facilities in Wollishofen, Switzerland. This specialized facility located just outside Zürich combines an ophthalmology practice with a fully equipped surgery – two contiguous areas with very different hygiene requirements. A Swiss cleaning equipment manufacturer was brought on board to develop a bespoke cleaning and disinfection concept to maximize potential synergies.

She gently stretches out her gloved left hand, then slides her left arm into the sleeve of the disposable gown. Now the right. Next, she ties the drawstring behind her neck, then the one around her waist. The long elasticated sleeves taper down to a narrow tunnel at the wrist. As she steps into her freshly disinfected rubber soled shoes, she nudges her surgical cap into place. Only now does she press the handle of the door to the operating room. Ljubica Krizan is a sterilization technician at the Züriseh Eye Clinic and she's responsible for cleaning and disinfection

on the premises. An expert in her field and always ensuring that the clinic is compliant with the latest regulations, she continually transitions between the clinic's various areas.

### CONTACT LENS FITTING AND LASER EYE SURGERY IN THE SAME BUILDING

In April 2018, the clinic moved from downtown Zürich to the idyllic shore of Lake Zürich. The name of the clinic couldn't be more apt: It's a play on the words "seh" (look, see) and "See" (lake) – both are phonetical-



Images: Vetrok



2



3



**1** Just three cleaning agents and a basic sanitation to keep all surfaces clean and hygienically safe.

**2** Sterilization technician Ljubica Krizan is also responsible for cleaning and disinfection at the Züriseh clinic.

**3** Ljubica Krizan prepares the cleaning and disinfection solutions using a single dosing pump.

ly identical – and it cleverly captures both the clinic's specialization and its beautiful setting. Customers come to the clinic for all types of eye-related issues, from cataract and glaucoma surgery, to have their drooping eyelids tightened, or to get their divergent strabismus corrected. At the same time, Züriseh also comprises a full-fledged eye care center that addresses the entire spectrum of ophthalmology, from vision training to contact lens fitting.

Only a narrow corridor separates the two facilities. Step over the threshold into the clinic area, and you're in an environment that requires a much higher level of hygiene than the building's vision care section. Maintaining specific hygiene standards for the respective areas to ensure compliance was a tough challenge. Realizing potential synergies to maximize efficiencies and optimize costs came in a close second. The clinic's management brought hygiene specialist Wetrok on board to develop a comprehensive, tailored cleaning and disinfection concept.

#### **ALMOST 30 PERCENT COST AND TIME SAVINGS**

A customized concept for cleaning and disinfection covers all the areas and aspects of cleaning and disinfection, and takes full advantage of a more efficient, holistic approach. Here, the client determines where the bar for the hygiene level is to be set, and Wetrok then works out a solution for achieving that objective. In concrete terms, it's about looking at the various areas, cleaning methods, cleaning intervals, and cleaning products that come into the mix, and mapping out ways for addressing all these factors to increase efficiency while reducing resource consumption. The

Wetrok approach delivers: Over the long term, customers register savings of between 20 and 30 percent in terms of cleaning time and costs while consuming around 70 percent less water.

#### **ALREADY ON BOARD AT THE PLANNING STAGE**

Having Wetrok's cleaning and disinfection experts on board from the outset, i.e. when the clinic's premises were being redesigned for the new site, played a key role in avoiding all sorts of classic planning mistakes and pitfalls. Besides determining the optimal locations for installing disinfectant dispensers, for instance, their knowledge also informed the choice of floor covering underneath the dispensers. This may seem a bit too granular at first glance, but the wrong choices ►

## **CLINIC ZÜRSEH**

Klinik Züriseh is a private clinic for outpatient eye surgery. It specializes in operations on cataracts, eyelids and corneas, as well as intravitreal injections (surgical medication delivery into the eye). The clinic also comprises an affiliated vision care center that covers the entire spectrum of ophthalmology services, from vision training to contact lens fitting.

for the seemingly small things at the planning level can have serious implications on cleaning and disinfection processes – and costs – down the line.

For cleaning expert Walter Utzinger from Wetrok, it was important to consider the requirements of the practice and the clinic separately when developing the concept: "An eye care practice must project cleanliness, which is largely subjective, whereas an eye surgery facility must meet objective, measurable hygiene standards. In developing the concept for Züriseh, I had to continually switch between an 'optical' and an 'hygiene' perspective." The obligation to purchase the cleaning equipment, i.e. wiping and mopping utensils, trolleys and cleaning agents, in pairs (one set for surgery area, one for the eye care center) made it all the more challenging to minimize additional costs by optimizing processes.

#### EVERY SPACE HAS ITS OWN REQUIREMENTS

The diversity of spaces and their specific cleaning and hygiene requirements was also an issue that could not be underestimated. From the entrance area to the operating theatre area to the sanitary facilities, each environment had to be considered on its own. The differences in floor types – from natural stone in the reception area to polyurethane in the operating theater to porcelain in the sanitary areas – and the degree to which each surface is covered by fixed or movable furniture also played a role. All these aspects are also reflected in the cleaning methods: Where a professional vacuum cleaner can handle the reception area, you need wet mops with disposable covers for hygiene-sensitive floors.

#### INTERNALIZING HYGIENE THROUGH TRAINING

The cleaning staff must be fully aware of their responsibility and the consequences of inadequate cleaning if they are to lean into the job and be thorough at every stage. That is one of the main reasons why comprehensive user training is key to implementing an in-



The diversity of working spaces is reflected in the different cleaning methods. Here, the floors are cleaned by machine.

telligent, effective and sustainable cleaning concept. At Züriseh, however, an additional special factor had to be taken into account: Although Ljubica Krizan is responsible for cleaning and hygiene, actual maintenance cleaning is largely carried out by an external facility services contractor. Here, involving the cleaning service provider's employees in the training alongside the clinic's own staff made all the difference in ensuring that everybody was on the same page.

During the training sessions, employees learned, for instance, that the tank lid of a vacuum scrubber should only be closed during active cleaning. During storage, the lid should be left slightly ajar so that the tank can air out completely. The team also had no trouble internalizing a new dosing method because it made the process so much simpler: one pump, one cleaning agent, with just a different number of pump strokes depending on the type of surface to be cleaned. Ergonomics was another important topic on the joint training curriculum. Here, experts demonstrated how to minimize, and where possible avoid, unnecessary strain on the back and shoulders. For instance, by correctly adjusting a mop's telescopic handle to one's own body size.

#### CUTTING COSTS, NOT CORNERS

At the surgery clinic, the improvements achieved by implementing the Wetrok concept primarily center around new, more efficient and time-saving cleaning methods. Here, manual wiping with a foam cleaner made a huge difference with sanitary facilities and

### MANUAL FOAM CLEANING

A simple and effective proposition: You fill the foam dispenser with the right amounts water and detergent, give it a good shake, squeeze a gob onto a microfiber cloth, and wipe. The advantages: no aerosol particles in the air, no wringing out of soppy cloths, and no heavy water bucket to carry around.

surfaces (see box). Ljubica Krizan praises the effectiveness of Alcosal, a foam maintenance cleaner, and the on-the-job advantages when applying it: "With this foam cleaner, I don't have to make a second pass to dry up the surface; I can remove fingerprints with a single wipe; and I don't have to lug a heavy bucket of water around. She also appreciates the fact that the number of cleaning products is down to just a few multipurpose products: "Three agents and a basic sanitary formula, and it's all cleaned to the highest standards. Including the windows," the clinic's go-to person for cleaning and disinfection reports with satisfaction.

#### **PATIENTS ARE IN THE BEST HANDS**

Technical operations specialist Xenia Pozar is also clearly impressed by the new cleaning procedures: "Thanks to the improved cleaning and disinfection performance, all of us in the clinic's new surgery section now also work in much safer environment. We can be sure that hygiene regulations are adhered to without compromises. For me, nothing is more important than knowing that my patients are in good hands. And they appreciate the peace of mind that comes with that kind professionalism."

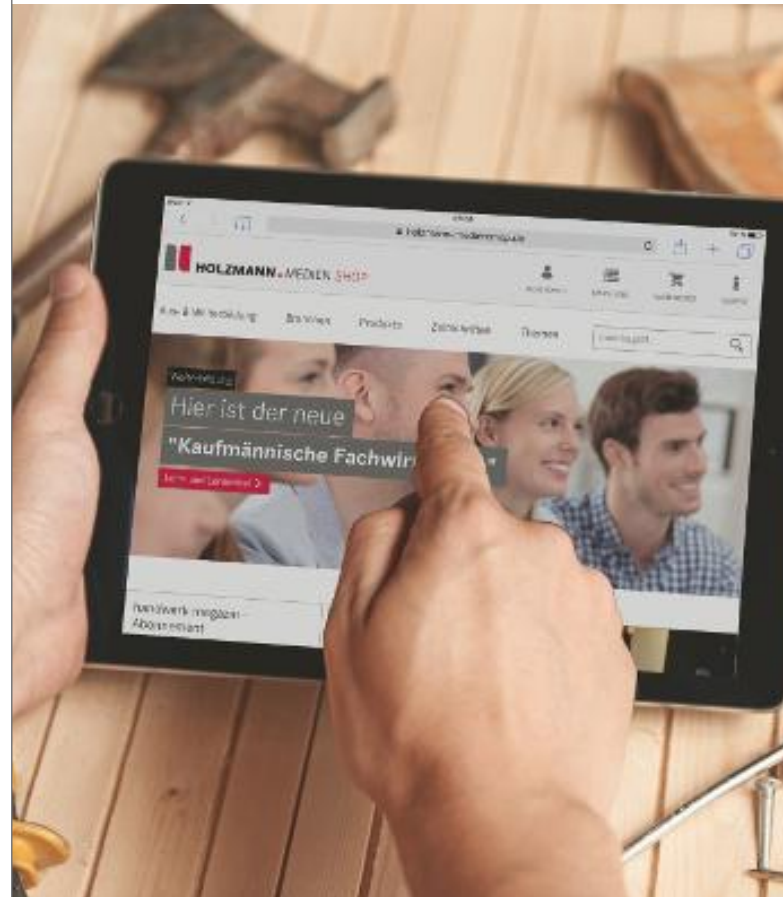
Once the work is done, it's time for Ljubica Krizan to close the surgery door, slip out of her gown and into her everyday clothes, and head out for an early evening stroll along the bank of Lake Zürich. ■

**Nadja Grendelmeier**

markus.targiel@holzmann-medien.de



**Both medical and cleaning personnel immediately see the benefits of a customized cleaning and disinfection concept. There simply is no arguing with better hygiene and better efficiency – and peace of mind.** Ljubica Krizan



The Holzmann Medienshop – expert knowledge for medium-sized enterprises and crafters.

**Competence and know-how for your professional success!**

[www.holzmann-medienshop.de](http://www.holzmann-medienshop.de)



## HYGIENE MEASURES IN HOSPITALS

AT STAKE ARE **HUMAN LIVES**

One would assume that uncompromising cleanliness and hygiene are self-evident in hospitals. After all, their mission is to help people get well again and leave in better shape than when they arrived. Sometimes, however, the exact opposite occurs – when patients become infected with the multiresistant pathogens or germs that have become the scourge of healthcare facilities (e.g. noroviruses, *Clostridium difficile* or *Pseudomonas*). Professional cleaning services providers play a key role in ensuring a significantly higher level of hygiene in this critical environment.

The National Reference Center for Monitoring Hospital Infections at the Charité Hospital in Berlin estimates the number of hospital infections in Germany at around 500,000 per year, 15,000 of which have a fatal outcome. At least one third result from a lack of hygiene, but also the corollary aspect of inadequate staffing. Quite apart from the personal suffering of those affected, the high number of infections also has a major negative economic impact in terms of prolonged absences from the workplace, not to mention medical treatment costs. Professional cleaning services providers, because they take a holistic view and work with trained personnel, bring a holistic perspective to hygiene and disinfection strategies for this demanding environment. And this translates into a significantly higher level of cleanliness and hygiene where it counts.

**SQUARING THE CIRCLE - HYGIENE VS. COSTS**

Hospital and nursing facilities face enormous cost pressures. Here, the problem of stagnating revenues is compounded by ever higher expenditures, for example on new medical technology and treatment methods, facility modernization and scale wage increases. As a consequence, cost-cutting becomes a daily concern – and it doesn't spare hygienic cleaning. The hope is that the same high hygiene standards can be main-

tained even if corners are being cut, i.e. with shorter cleaning passes and pared-down cleaning services. Staffing in particular – which accounts for around 80 percent of the total costs of hospital cleaning – often bears the brunt of cost reduction measures.

Cost pressures, but also the shortage of skilled workers, force many hospitals to farm out cleaning and disinfection to contractors. This means that facility cleaners, hygiene specialists and cleaning staff are integrated into the hospital's hygiene strategy at the earliest stage, with the added value of the specialist hygiene know-how they bring to the table, including the state of the art in cleaning methods and equipment in the health care sector, an area in constant evolution. In order to meet budget targets while at the same time mitigating the risk of patient infection by ensuring the proper level of hygienic cleaning, i.e. preventing the spread of germs from high-risk areas, it is the cleaning services provider's task to select proven – and cost-effective – cleaning technologies that guarantee optimum hygiene safety on a consistent basis.

**POWERFUL SURFACE DISINFECTION**

Pathogens can be quite persistent, representing a threat over weeks, even months if left to their devices. Air circulation alone will ensure they can spread across entire areas and on all surfaces. In other words, they are a very real potential source of infection, especially because many pathogens are transmitted by hand contact. Here, the so-called multibarrier system has proved to be effective in preventing germ proliferation and cross-contamination: Creating additional barriers for germs and pathogens by instituting hand and instrument disinfection protocols ensures much greater hygiene security than just disinfecting the surfaces in and around patient areas.

Case in point: nosocomial infections. There are now various ways of preventing them. For example: Copper-based surface coatings impede germ growth; silver



**By experience, pre-soaked microfiber textiles are the simplest, most effective hygiene solution.** Mike Fischer

threads in cleaning textiles or nanoscale silver ions in microfiber cloths reduce germination in improperly cleaned and/or stored cleaning textiles. However, the most effective measure against the spread of nosocomial infections is to adequately disinfect surfaces in the patients' vicinity because that's where pathogenic germs can spread most easily. This means everything that gets touched, starting with handles and switches: door handles, bedside cabinets, light switches and bed handles and controls... If disinfecting floors plays a subordinate role, here, it's because patients usually do not touch them.

Cleaning and disinfecting surfaces plays a decisive role in that it accounts for a large part of systematic maintenance cleaning in hospitals and care facilities. To ensure maximum effectiveness at this stage, two factors have to be considered: the efficacy of the disinfecting agent in dealing with germs and pathogens; and its compatibility with the surface material. Choosing the right disinfectant is key when it comes to breaking the infection chain, bearing in mind, of course, that the efficacy must match the risk area. Generally, the disinfectants used should be effective against bacteria, viruses and yeasts.

#### **HYGIENICALLY SIMPLE: PRE-SOAKING**

When the job is surface disinfection, the cleaning and hygiene specialists at Niederberger Group bank on pre-soaked microfiber textiles: "From our point of view, this is the simplest and most effective hygienic solution. The fact that our wipes and mop covers come already soaked in a solution with the right active ingredient concentration means a significant workload reduction because it saves the time-consuming dosing step. At the same, we eliminate the risk that comes from potentially underdosing: If the concentration is inadequate, germs will survive and transfer over to other textiles. It also means extra protection for our employees because they have to handle less cleaning and disinfection chemicals, and used textiles get thrown into a laundry bag immediately after use," says Mike Fischer, certified facility cleaner at Niederberger Strausberg. As section manager, he specializes in hospitals and care facilities and is currently responsible for cleaning at five properties in Berlin and the Brandenburg region.

#### **CHEMO-THERMAL TEXTILE DISINFECTION**

The cleaning textiles are pre-soaked with a disinfectant cleaning agent according to the individual hygiene plan determined by the hospital's hygiene commission. Depending on the thickness of the material, between 30 and 50 milliliters of disinfectant solution are calculated for wipes and between 300 and 500 milliliters for mops. It must also be borne in mind that the textiles are soaked in the disinfectant solution for an entire working day. This means that at the end of this period, even though the solution has been correctly



Disinfecting floors is important, but more so in the operating theater than in the in-patient area.

prepared, the active ingredient content in a cloth or mop is lower than at the beginning. This adsorption effect is compensated by slightly increasing the application concentration from the outset and preparing a slightly higher dosage of the solution.

At Niederberger Strausberg, the chemo-thermal disinfection and pre-soaking of wipes, cleaning cloths and mops is carried out by machine. From disinfectant washing to pre-soaking, including correct dosage of all agents, the process steps are carried out in large industrial washing machines. This ensures that dirt and organic contaminants are removed from the textiles and that no pathogens remain after cleaning.

Manual pre-soaking is of course an option, but it really only makes sense for smaller facilities with few rooms. "It is important to integrate onward hygiene measures throughout the entire workflow to prevent recon- ►



Alcohol-free, virucidal disinfectant wipes prove highly effective in the operating room because of they are easy to use and reliable.

# 15,000

people, approximately, die every year from the consequences of hospital-acquired infections. Just as frightening: There are an estimated 500,000 hospital infections every year.

tamination after disinfection. Preventing recontamination starts with a strict separation between clean and dirty utensils. It is therefore imperative to ensure that no microorganisms are transferred to fresh cleaning textiles from the rinsing water or from the staff's hands," adds Mike Fischer.

## ALCOHOL-FREE DISINFECTANTS

Alcohol-free, virucidal disinfectant wipes are consistently proving their worth in daily use in operating rooms and intensive care areas – they provide a high level of hygiene safety and can easily be integrated into daily work routines. Surface disinfection with alcohol-based agents, on the other hand, requires caution. It makes sense when large surfaces have to be disinfected quickly and no long application times need to be observed. Due to the existing fire hazard, however, disinfectant dosage must not exceed 50 milliliters per square meter. In addition, there is the issue that not all viruses, in particular non-enveloped viruses such as rota and noroviruses, can be effectively neutralized with alcoholic disinfectants. Finally, one must consider that sensitive surfaces may also be damaged if continually wiped clean with alcohol-based solutions.

## STOPPING GERMS IN THEIR TRACKS

At Niederberger, the one room rule applies: All cleaning textiles used in one patient room are used only in that room and nowhere else. Once the job is done, they are discarded and then fed back into the chemo-thermal processing loop. Only after that step is completed are they again made available for cleaning. Depending on the size of a clinic, about 2,000 mop covers and 2,500 cleaning cloths are used each day.



**Peter Hollmann**

Certified facility cleaner and operations manager at Niederberger's Berlin and Strausberg locations

A quick glance at a cleaning and hygiene specialist's trolley shows: Everything here is designed to prevent the spread of germs. All the areas above floor level that need to be cleaned are classified into four "hygiene areas," each one is assigned its own color and so we have blue, green, yellow and red buckets and cloths. Floor cleaning is also carried out using the cover change method: since a mop cover is only used for one room, each trolley is stocked with the adequate number of pre-soaked covers. Laundry and waste are collected separately in the disposal unit: used mop covers go into the laundry bag, and microfiber cloths into the laundry net. In addition, the staff must also wear the required personal protective equipment to prevent the transmission of infections and the development of skin diseases: mouth protection, disposable gloves, protective gowns, glasses and hood. Hand disinfectant dispensers are always within reach to ensure hygienically clean hands at any time. Cleaning agents and disinfectants are kept in lockable bottle holders. Also on hand: all the necessary information on the cleaning agents and disinfectants used, including specifications, dosage tables and specific advisories, a cleaning directory, along with the schedule and daily documentation. Naturally, the service trolleys and materials themselves are subjected to rigorous disinfection and product levels are regularly refilled according to the checklist.

## DISINFECTION IN THE OPERATING THEATER

Surgical cleaning poses particular challenges because of the high – and uncompromising – hygiene standards that must be met. Operating theaters, but also intensive care departments, are areas with a very high risk of infection. Here, Niederberger's specially trained surgical cleaning team wears the same gear as the medical staff: surgical scrubs, cap, mask for mouth and nose, and gloves. They are indistinguishable from the hospital's health professionals and they are part and parcel of the hygiene chain. That's because the end of the surgical intervention, when the patient leaves the operating room, signals the beginning of a thorough and comprehensive disinfection process in the operating room. The scope, type and frequency of the measures are always determined by the in-house hygiene commission. Cleaning and disinfection takes place between two operations and at the end of an operating program – basically around the clock – and covers all category 1 and 2 contamination areas, such as walls, work tables, stands, all inventory installed in the room, and the floors of course. Here, the level of soiling usually determines when mops and solutions need to be changed. In any case, any moist cleaning aids used are immediately added to the laundry. During the final cleaning, i.e. at the end of a surgical intervention, the inventory is also disinfected and removed from the operating room before the floors and walls get disinfected. "We carry out scouring and wip-





Hood, mouth protection and gloves as well as the corresponding clothing are mandatory for cleaning personnel during surgical cleaning.

ing disinfections every day using a listed disinfectant in accordance with the hygiene plan of the respective clinic. If all we did was clean, the risk would be huge of simply shifting germs from one place to another instead of actually getting rid of them," adds Mike Fischer. Disinfection success, especially in risk areas such as the operating theatre and intensive care unit, is verified regularly via microbiological tests. This is the only way to ascertain the effectiveness of the disinfection measures and achieve the highest possible standard of hygiene.

#### RESPONSIBILITY AND PROFESSIONALISM

No state-of-the-art operating room or the latest medical findings or toughest hygiene protocol will bring down postoperative infection rates if the personnel is not clear on the fact that they are the decisive link in the chain. Having highly competent and reliable profes-

sionals on permanent staff is core to surgical cleaning. "Grabbing a bite at the clinic in surgical garb, for instance, is an absolute no-no," explains Mike Fischer. Regular training courses keep the cleaning staff proficient with regard to the special features of hospital hygiene, with a focus on avoiding infection risks and correct behavior after injuries, as well as specific knowledge on surgical cleaning. Close coordination with the hygiene specialists and surgical nurses of the clinics must be ensured, too. Preventive vaccinations – mainly against hepatitis B – and accompanying care by the company's occupational health service should also be a prerequisite for providing surgical cleaning services. ■

**Peter Hollmann, Niederberger**  
peter.hartmann@holzmann-medien.de

#### IN ADDITION TO THE FRONT COVER



**WANT TO BE PART OF THE CIRCULAR ECONOMY?**  
**LEARN MORE ABOUT THE ADDED VALUE TO YOUR CUSTOMERS!**

tana-Chemie GmbH  
**WWW.WMPROF.COM**

**A CIRCULAR FUTURE.**

Werner & Mertz  
Professional

## MUNICIPAL CLEANING

# SILENCE IS GOLDEN AND SOMETIMES GREEN AND WHITE

Quiet, emissions-free and CO<sup>2</sup>-neutral, a fully electric, two-cubic-meter sweeper sets out every day to clean the city center of Freiburg in the Black Forest. The noise level is so low, work can start at the crack of dawn. The net effect: A greater area can now be cleaned more effectively before rush hour kicks in. And the bottom line is left sparkling, too.

Sporting serial number 00001, this Bucher CityCat 2020ev is keeping the streets of Freiburg clean as part of its daily morning exercise – as the first, but likely not the last electric sweeper in the special vehicle fleet of the city of Freiburg's municipal cleaning and waste management department (ASF). Deputy managing director Andreas Sawatzki explains the investment: "As the municipal services department of this 'eco-metropolis' in southwestern Germany, we try as best we can to live up to our ambitions by keeping our operations as environmentally responsible as we possibly can." Of course, there also were practical reasons for going with the two-cubic-meter sweeper from Swiss manufacturer Bucher Municipal.

## QUIETLY GETTING THE JOB DONE ON E-POWER

As far as the residents are concerned, it goes without saying that keeping the historic city center around the famed Münsterplatz always looking its best goes a long way towards maximizing Freiburg's appeal as a tourist destination. The streets and squares are therefore

cleaned seven days a week. The best time to do this is in the early hours of the morning, before the commuter and delivery traffic takes hold. And because the electric sweeper is extremely quiet on the road, it can start operating at six o'clock in the morning – in accordance with the local noise abatement ordinance – without disturbing the peace and quiet of the population.

In concrete terms: By 9 a.m. regular driver Lars Niederhüfner is usually done with cleaning downtown Freiburg with its 8 kilometers of road and 35,000 square meters of spaces to be swept, and on his way back to the depot where he recharges his sweeper's 56-kilowatt-hour lithium-ion battery during the morning coffee break. On weekdays he then goes out again to cover the surrounding residential areas of Freiburg, returning around noon to recharge during his lunch break. This charging routine always keeps the lithium-ion battery at a high level of charge, thus prolonging its service life.

On the job, the all-electric sweeper delivers the same top sweeping performance as its successful

ON THE LEFT:  
The all-electric Bucher CityCat 2020ev takes center stage on Freiburg's historic Münsterplatz.



ON THE RIGHT: The sweeper and the leaf blower are both electric, and generate little noise. Cleaning can begin early in the morning.







Driver Lars Niederhüfner uses the lunch break to recharge the battery of his electric sweeper at the depot.



No performance trade-offs vs. the diesel version: The CityCat 2020ev is just as good at its job, minus the emissions.

# 35,000 m<sup>2</sup>

is about the area driver Lars Niederhüfner usually covers in downtown Freiburg – along with eight kilometers of streets and roads – by 9 a.m. every morning.

diesel-powered sister model, has the same container volume, and can handle almost the same payload. “When I’m at the wheel,” says municipal cleaning professional Lars Niederhüfner, “this sweeper easily holds its own against any diesel vehicle. But it’s not just a lot quieter. The vibrations are very low, too, and that makes for a much more comfortable ride. Also, being electrically powered, it accelerates and decelerates much more smoothly and consistently than a comparable sweeper with a diesel engine.”

## OPERATING COSTS IN THE GREEN

Looking sharp in the bright green and white livery of the ASF’s vehicle fleet, Freiburg’s fully electric sweeper also delivers multiple benefits for citizens and the environment. Powered by truly green electricity, it’s not only cost-effective, but also completely CO<sub>2</sub>-neutral: During the charging cycles, it draws energy from a solar panel system installed on the ASF’s premises. According to the department’s management, acquisition costs were kept within acceptable limits thanks to a subsidy from the Federal Ministry of Transport and Digital Infrastructure (BMVI) as part of the “Local Electric Mobility” initiative. Extra funding from the Innovation Fund for Climate and Water Protection, which is financed by regional energy provider badenova, also helped make the investment a no-brainer. “With this combination of federal and regional subsidies, the cost of an electric sweeper came in at just over ten percent above a diesel version,” says ASF vice president Andreas Sawatzki. In his opinion, municipal

departments and private-sector city cleaning contractors would be well advised to inquire about regional funding opportunities in addition to federal subsidies. Andreas Sawatzki also points out that the municipal service benefits from its close partnership with the manufacturer on an ongoing basis: “As part of this pilot project, we succeeded in negotiating favorable terms with Bucher Municipal regarding response times and spare parts availability. By mid-May 2018, after just over two years of service in Freiburg’s city center, the sweeper had driven almost 7,000 kilometers in just under 1,300 operating hours. A quiet, emissions-free and (because it is charged with solar energy) carbon-neutral win-win.”

Andreas Sawatzki is not yet able to exactly quantify whether Freiburg’s Bucher CityCat 2020ev will also perform better than a diesel model in terms of total cost of ownership (TCO), but he is confident: “This is still early days. Our project with the electric sweeper is still too young to precisely forecast total operating costs. But the savings in operating costs alone, in particular with regard to fuel, are bound to offset the higher upfront acquisition costs. We are pretty sure that our all-electric sweeper will more than pay for itself. In fact, we plan to expand our fleet of e-powered vehicles.” ■

## rationell reinigen

markus.targiel@holzmann-medien.de





Research shows that Kärcher's gun design provides effective physical relief, particularly for the fingers. As a result, the wrist, elbow and back undergo less stress, too.

## PRESSURE CLEANING GUN WINS ERGONOMICS AWARD

Kärcher's "EASY!Force" high-pressure cleaning gun was recognized by the VDE Association for Electrical, Electronic & Information Technologies for its exemplary ergonomics and handling. The VDE's experts confirm that this assembly design significantly contributes to relieving strain on the hand and back, and protecting muscles and joints while operating a high-pressure cleaner.

The ergonomics test was carried out by the VDE Testing and Certification Institute in cooperation with the University of Kassel (Institute for Occupational Science and Process Management, Department of Work and Organizational Psychology) and the DLG Test Center for Technology and Equipment.

The research consisted essentially of two parts: a standardized survey to collect subjective assessment data, and an objective evaluation using scientific methods. The researchers recorded physical effort measurements and conducted various motion sequences.

The results demonstrate how Kärcher's gun design provides physical relief, particularly for the fingers, as the user no longer has to form a fist to actuate the trigger as well as to hold and operate the gun. This means a significant reduction in mechanical stress to the wrist, elbow and back. Fine motor skills of the elbow and wrist are also supported, affording improved control without strain – even over extended periods of time. The risk of injury, especially fatigue-related injury caused by repetitive movements, is significantly reduced. In individual questionnaires all test persons independently of each other rated the handling of Kärcher's high-pressure cleaning gun as very good to excellent.

The essential feature of "EASY!Force" is the trigger, which is pushed into the handle with the ball of the thumb. This eliminates effort or strain after activating the gun because the force of the recoil from the water jet pushes the trigger into the hand, keeping it depressed. In other words, there is no longer a need for the permanent tension of the hand and finger muscles that used to be required. This translates into an immediate improvement in comfort and control while preventing muscle cramping. A yellow safety lever on the inside of the handle, which can be actuated with a single flick of the finger, prevents unintentional activation.

[www.kaercher.com](http://www.kaercher.com)

## HAND CLEANING FOAM EARNS EU ECOLABEL

The Stephalen Fresh Foam hand cleansing foam, developed by Peter Greven Physioderm (PGP) has been awarded the EU Ecolabel, which aims to provide consumers with a means to quickly identify environmentally friendly products. PGP focuses on sustainable products and, for instance, increasingly uses raw materials based on RSPO-certified palm oil.

The label on the cleaning foam now also features the EU Ecolabel. Stephalen Fresh Foam is the third product for which PGP has been awarded the "EU Flower" label. It shows a stylized flower with a blossom of twelve stars around the Greek letter "e" for Europe. The European Commission awards the EU Ecolabel to products and services that have a lower impact on the environment than comparable products. The EU Ecolabel is recognized in all 28 EU Member States as well as in Norway, Iceland, Switzerland and Turkey. This makes the EU Flower a European reference for consumers who want to promote sustainable production and environmentally responsible products.



Optimum credentials: PGP's Stephalen Fresh Foam cleaning agent earned the EU Ecolabel.

[www.pgp-hautschutz.com](http://www.pgp-hautschutz.com)

## NEW SANITARY CLEANER WITH ACTIVE ODOR BLOCKER



Based on citric acid and restriction-free, Bucasan® Sanibreeze G 454 is Buzil's latest formulation for sanitary maintenance cleaning.

Bucasan® Sanibreeze G 454 is Buzil's latest development: a citric acid-based sanitary maintenance cleaner that completes the company's line-up of cleaning products developed for odor-contaminated facilities. Fully compliant with health and safety regulations, it doesn't require special precautions when applied as per instructions.

According to the manufacturer, Bucasan® Sanibreeze G 454 can be used on all acid-resistant materials and surfaces such as tiles, washbasins and toilets and is particularly suitable for sanitary porcelain, chrome, stainless steel

and aluminum surfaces. Bucasan® Sanibreeze G 454 delivers excellent cleaning results, enabling effortless removal of sanitary-specific impurities such as lime, dirt and soap residues. The beading effect designed into the formulation ensures a streak-free shine without additional drying, while reliably protecting treated surfaces against water stains and soiling. In addition, Bucasan® Sanibreeze G 454 combines an active odor blocker with a deodorizing fresh citrus scent to provide dependable and long-lasting protection against odors in the sanitary and wet area environment. The product, which can be applied by foam gun and single-disc machine, is available in 1-liter bottles and 10-liter containers. With Bucasan® Sanibreeze G 454 for the sanitary sector, Drizzle® Blue SP 20 for surface cleaning, Corridor® Cibreeze Wipe S 790 for floor cleaning and the ready-to-use air freshener Buz® Fresh Magic G 567, Buzil now offers a comprehensive range of efficient hygiene solutions for both the living and sanitary areas.

[www.buzil.de](http://www.buzil.de)

## HEAVY DUTY SWEEPER MEETS TOUGH DEMANDS

Cleaning and municipal technology manufacturer Hako presents the new Citymaster 1250plus sweeper: a fully integrated truck-mounted sweeper with a dirt hopper capacity of one cubic meter that is purpose-designed to keep pedestrian zones as well as cycling lanes and footpaths clean with maximum efficiency and minimum disruption.

According to the manufacturer, the new sweeping unit, featuring an optional single brush and brush head adjustment on the right hand side, offers additional options for adapting the vehicle to specific operating conditions along with an extensive selection of broom sizes and types: small for narrow passage widths, large for maximum area coverage, and noise-abating for running in "quiet mode."



Hako's new Citymaster 1250plus meets the toughest challenges with proven technology.

The high-capacity dirt hopper, designed to facilitate long-range operation, is also easy and quick to clean thanks to its wide-opening lid, smooth walls and high-dump design. The sprinkler system, combining freshwater and recirculated water, keeps fine particles in suspension to a minimum (PM10 certificate), Hako says.

For intensive wet cleaning, there is the CityCleaner scrub deck which, according to German certifier DEKRA, is also suitable for cleaning traffic areas after oil spills.

In addition to the pure sweeper version, there is also a multi-purpose C variant for snow clearing, gritting and mowing. In summer, with the appropriate attachments, the machine can also be used as a combination lawn mower/vacuum.

[www.hako.com](http://www.hako.com)



The Discomatic Bolero comes with two tank sizes for greater versatility.

## VERSATILITY SQUARED **WITH TWO TANKS**

With the Bolero, Wetrok introduces a new addition to its Discomatic range of scrubber-dryers. For greater usage flexibility, the Bolero offers the choice of two tanks: 10 liters and 20 liters. Equipped with the smaller tank, the Bolero is a compact cleaning machine with a lower clearance. Install the larger one, and the Bolero can cover a larger area without interruption. Also, the vacuum action can be engaged in both forward and reverse directions. The Bolero's tanks and vacuum accessories can be attached and removed completely without tools: A patented magnet fastening system holds the vacuum nozzles, and a clever click mechanism makes it a cinch to clip the squeegees in and out.

Wetrok's Bolero offers extras that are specifically designed to relieve user workload. The touchscreen comes with just four buttons for easy and straightforward operation without having to consult the manual. Ergonomics also took a front seat in the Bolero's development: The draw bar is adjustable to individual body size and the machine can be moved effortlessly from site to site thanks to the automatic support wheel.

[www.wetrok.com](http://www.wetrok.com)







# THE VOICE OF THE INDUSTRY



D I A I C H

[www.rationell-reinigen.de](http://www.rationell-reinigen.de)



**rationell  
reinigen**



Visit us in hall 1.2 – booth 102  
and refresh yourself with a delicious ice cream.  
We look forward to your visit!

# LEVEL

# UP

## OUR MODULAR SYSTEM STRENGTHENS YOU ON THE MARKET

In the cleaning sector, productivity is the decisive factor for success.

When you increase your productivity, you directly improve your operating result. For this purpose, you can start at specific points or across all areas. The company to boost you to the next level is Kärcher. You can thus obtain technology, know-how and services precisely in those areas that you wish to strengthen. Right up to the complete solution.

[www.kaercher.com](http://www.kaercher.com)



**24-27 Sept**

Hall 3.2  
Stand 100

# KÄRCHER

makes a difference