

BEYOND WATER

SHAPING THE FUTURE

Why your next tap will come from a 3D printer

MEET THE SHOWER EXPERTS

Behind the scenes at GROHE's German shower factory

BOLD MISSION

Architect Marcella Hansch on her fight against plastic





A crisp, clean design, innovative LED temperature display and a water-saving spray activated by a simple hand wave – experience accurate control with GROHE Plus. **grohe.co.uk**





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GROHE took on a daunting engineering challenge. The result: ICON 3D





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BOLD MISSION

Marcella Hansch
is trying to remove
the plastic from
the oceans and
the misconceptions
from our minds

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A precise laser melting metal powder at 1,398°C, layer by layer, each no more than 0.06 mm thick, finally reveals an entire tap, slickly designed and fully functioning. It sounds like an engineer's pipe dream, but GROHE's plant in Hemer has made it a reality. 3D printing is one of the most promising manufacturing technologies of the future, and components made by 3D printers have already set GROHE's 3D metal-printing process allows them to manunew standards for premium manufacturers in various facture components and products of almost any size and industries and use cases.

Now, as one of Europe's leading sanitary brands, GROHE has created bathroom taps produced by 3D metalprinters. Combining cutting-edge technology and proven craftsmanship, the sanitary experts reinterpreted designs from their Atrio and Allure Brilliant lines, illustrating what product design in the age of 3D printing is capable of. The extremely thin walls of the GROHE Atrio Icon 3D and the hollow interior in the silhouette of the GROHE Allure Brilliant Icon 3D give the flow of water a magical, almost What's more, keeping the design of the Icon 3D minimal, hypnotic quality. An aesthetic high point, these taps are limited edition products.

Pushing the boundaries of what is deemed possible has always been part of GROHE's DNA. To manufacture the Icon 3D models, the company advanced their 3D technology expertise to meet the unique challenges of printing in metal. Thomas Fuhr, CEO at Grohe AG, explains: "With

3D metal-printing, we are ringing in a new era in production 'made in Germany'. We invest heavily in research and development, and also in innovative manufacturing processes in our plants." These investments are already showing amazing results.

shape. Trying to find the best solutions for customers' needs is a cornerstone of GROHE's identity. 3D metalprinting will open up new possibilities to design products that let customers interact with water exactly how they want to. "There is huge demand for customisation and individual personalisation," Paul Flowers, Chief Design Officer LIXIL explains. "With 3D metal-printing, we will be able to efficiently create products that satisfy our customers' requests, in small quantities."

refined to just the essence of its shapes, helps to save resources. This further promotes GROHE's commitment to sustainability.

With their two Icon 3D designs, the brand has started to tap into the potential of 3D metal-printed manufacturing. More products are to come, all adding up to the simple fact that the future of water will be shaped at 1,398°C.

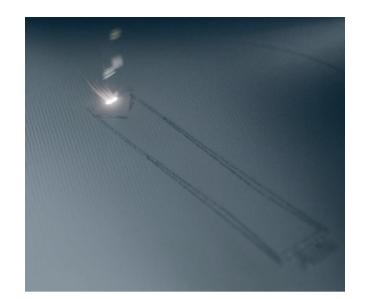
"Every innovation always starts with a bold vision." For us, rethinking what is possible is only a question of perspective. With GROHE Icon 3D, we are entering the future of product design as we are now able to create designs that at first appear impossible. By embracing the still-emerging technology of 3D metal-printing, we are pushing the boundaries of design and truly shaping the future of water."

Paul Flowers, Chief Design Officer LIXIL



THE MAGIC IS IN THE POWDER

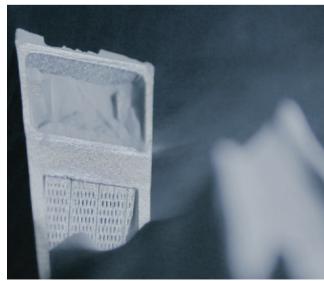
Imagine a tap that redefines everything you previously thought possible. This is how the ICON 3D is made.





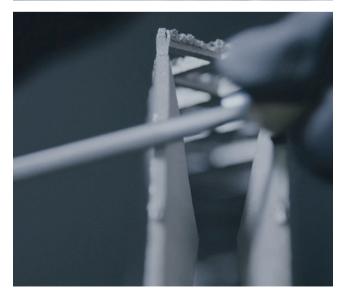


















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"IT'S OUR DUTY TO EMBRACE PROGRESS"

Newly appointed GROHE CEO Thomas Fuhr explains what it took to develop ICON 3D, and what this means for the future of GROHE

INTERVIEW: PHILIPP NAGELS PORTRAIT: RAMON HAINDL

GROHE is Europe's first leading sanitary brand to offer two tap designs produced entirely by 3D metal-printers. What were the challenges you had to overcome when creating the Icon 3D line?

In order to be a pioneer in the industry and to remain one step ahead in terms of technology, we invest heavily in research and development, and also in innovative manufacturing processes in our plants. With 3D metal-printing, we are ringing in a new era in "made in Germany" production. We focus on our core business and use our taps to

cover the entire value chain, clearly distinguishing us from our competitors. It is essential to us that we retain our proven GROHE quality and translate it into a 3D metal-printed product. That's why we invested a lot of time in developing our own printer material: it's at the heart of everything. Our engineers came up with a recipe that we have now patented. It's important to understand that drinking water is the most carefully protected substance in the world, so the base material for a tap has to fulfill many requirements. Plus: these regulations can differ from country to country. Finding one recipe that fits every market was one of the key challenges.



How did GROHE figure out how to implement the process of 3D printing metal?

We did our due diligence and decided to buy two TRUMPF 3D printers, which were subsequently optimised for our requirements. And together with TRUMPF, we will continue to develop new solutions to further push the boundaries of what 3D metal-printing can mean for the future of water. We really believe in this new technology. And if we believe in it, we need to manage it and build up expertise at GROHE. It's our duty to embrace this exciting progress.

"With 3D metal-printing, we are ringing in a new era in 'made in Germany' production."

Thomas Fuhr, GROHE CEO

3D printing is a big trend in manufacturing technology. Another important trend is personalisation. How does the Icon 3D play into this?

At GROHE we always try to look at the bigger trends, not just in our industry but beyond, and individualisation is one of them. Nowadays, consumers have become creators. They pay much more attention to detail and want to create a bathroom that suits their personal tastes and expresses their personality. In addition, as the boundaries between the individual living areas are becoming increasingly blurred, the bathroom opens up and becomes a living space, turning bathroom products into furnishing items. Here, 3D printing establishes exciting opportunities for us. In the future, we will be able to produce even small volumes efficiently, with products totally customised to the consumer's wishes:

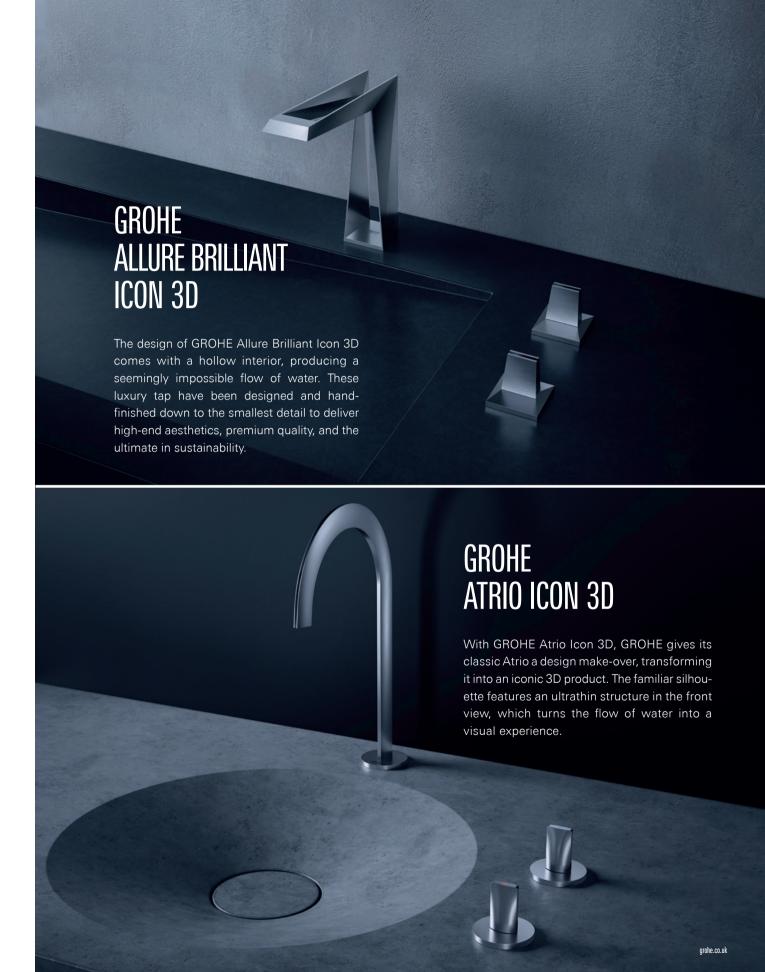
that would not be sensible with traditional manufacturing. It gives us more flexibility for late stage customisation or even individualised designs. As a first step, we decided to reinterpret our existing Atrio and Allure Brilliant line to show how we take product design and the joy of water to a whole new level.

What other possibilities does 3D metal-printing open up for GROHE?

One of our brand pillars is sustainability. If you compare the Atrio Icon 3D and the Allure Brilliant Icon 3D to other taps, it is obvious that we needed less material to produce them and the process only requires as much material as is actually needed. It's only about 50% of what we use for a conventionally produced model. 3D metal-printing offers a lot of potential to further push our commitment to sustainability. Besides, 3D metal-printing simplifies the production of prototypes and also parts of the tool construction process.

How does the Icon 3D also impact the production of other product lines?

We are continuing to explore how we can use 3D metal-printing technology to improve our current manufacturing processes. For instance, we use a lot of plastic injection process for the production of our shower systems. The productivity of a plastic injection tool depends on how well the cooling works: that's what decides the cycle time of the machine. With 3D metal-printing, we are able to get cooling channels closer than we are with a traditional tool. This means a 10% reduction in cycle time. As a result, 3D metal-printing can increase productivity while also helping to make production more sustainable because the shortened production process requires less energy.



A HISTORY OF INNOVATION

From its earliest beginnings, GROHE has always taken its forward-thinking legacy seriously

TEXT: GIULIA PINES

Any company that wishes to become a global icon has to think about the future. What will customers need, and what is the best way of delivering this? One big idea is not enough: to stay relevant, a company has to constantly reinvent itself. GROHE has been around for over 80 years, and throughout its history, the brand has always enabled its customers to enjoy Pure Freude an Wasser by predicting and shaping the future uses of water. GROHE entered a world where cities were rising fast, and forward-thinking companies were able to grow, evolve, compete, and unite in early partnerships. More and more people were living and thriving together, necessitating new concepts for clean water in private homes, businesses, and hotels. So, ironworks companies like Berkenhoff & Paschedag saw

their future in sanitary fittings, and small manufacturers like Carl Nestler and Hans Grohe strove to deliver clean water to urban homes. When Friedrich Grohe, son of Hans Grohe, set out on his own in 1936, acquiring Berkenhoff & Paschedag, the history of GROHE as we know it began – though it wasn't until twelve years later that the company was christened with the name of its owner. In 1956, Friedrich Grohe also purchased the Carl Nestler Armaturenfabrik, famous for its pioneering work in thermostat technology, and GROHE began to release state-of-the-art sanitary fittings in outstanding quality. Friedrich Grohe was always aware of the strong engineering legacy he benefited from: "Made in Germany is a synonym for precision. Precision is a synonym for GROHE," he once said.





Collaboration and teamwork are some of the driving forces of success at GROHE - both then and now.

INVENTIVE BEGINNINGS

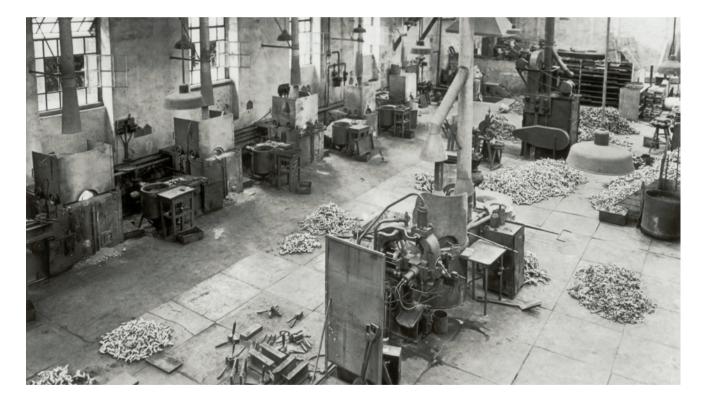
The early years of the sanitary industry had seen the introduction of industrialised manufacturing, along with the two-handled taps and automatic flush valves that were central to home plumbing, but hardly revolutionary. In the ensuing years, however, GROHE began to innovate in its designs, moving away from the basics and towards forward-thinking products that anticipated the consumer's needs. These included the 1956 Skalatherm, an automatic mixing valve with integrated thermostat. This so-called "thermostat of the people" offered a high degree of precision in terms of temperature, within seconds – making it the only mixing valve used in colour photo laboratories, which required temperatures to be absolutely accurate due to the extreme sensitivity of the films being developed. While the Skalatherm was solely aimed at the domestic

market, GROHE proved it understood the worldwide need for comfort and convenience, when it introduced its one-hand mixer on a global scale in 1968, which allowed the user to adjust water temperature and pressure with a single valve. After expanding its portfolio to include showers in the late 1970s, GROHE brought Relexor, the first shower and massage system, to the market in 1983. Wellness and fitness were the buzzwords of the time and GROHE responded to this need with a shower system that massaged the back with two rotating brushes that could be oriented towards the different parts of the body. What seems pretty standard now was really a revolution back then – much like other GROHE technologies such as SpeedClean, CoolTouch or the Movario 360 degree shower head, when they were released in the following years.

TECHNOLOGIES FOR TODAY AND TOMORROW

Sensing shifts in consumer behavior along with global trends of seismic scale – namely urbanisation and digitalisation – is what drives technological development today. As consumer needs in terms of homes and water change, GROHE is still living up to its reputation as a technologically pioneering company. The resulting innovations aren't just pushing the limits within a category: they are inventing whole new categories altogether. For example, the water management system GROHE Sense is giving water a digital dimension – shutting off the water supply automatically when it detects water leaks or a burst pipe

as well as transmitting water consumption data, tapping into the new trend for intelligent life management that increases efficiency on every level. So, as the world around us grows ever more connected, and we find ourselves tasked ever more urgently with the stewardship of our natural resources, GROHE continues to advance products that complement consumers' interests while addressing their most pressing concerns. As GROHE CEO Thomas Fuhr says, it's "about giving you intelligent, life-changing and sustainable product solutions and services. That's how we at GROHE are really shaping the future of water."



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FROM SLUDGE TO NUDGE

The new Plus tap helps to save water and energy with some smart ideas

One of the latest innovations from GROHE is Plus, a smart tap which lets you control your water precisely, thanks to a temperature indicator that shows numerical degrees. This not only allows users to carefully adjust the water temperature as they wish: it also enables them to be more sustainable. How so? The answer comes from behavioral economics and the idea of "nudging". The Plus' LED display makes users aware of the exact water temperature and indicates how often hot water is used unnecessarily. This promotes the responsible use of water as a valuable resource and saves water and energy. Or, as Richard Thaler, a leading behavioral economist, says: "If you want people to do something, make it easy". Similarly, additional features, such as the water-saving EcoJoy spray and other versions that come with a pull-out or swivel spout, help to get the job done in less time and thus save even more energy.





The strength of an arc conceals its versatility – and this is the case with GROHE Plus. Its distinctive, dynamic design draws on two classic shapes – the square and the circle. Thanks to its use of two surfaces (a circle bisected by a flat face) it works perfectly with both round and square bathroom fittings. Whether your preferred bathroom style is smooth and circular or features crisp edges and square designs, the GROHE Plus tap will work perfectly with GROHE ceramics, showers and accessories, making the design process seamless. The crisp lines of GROHE Plus make it an ideal fit with sharp, square ceramics, creating a consistent look throughout the bathroom. GROHE Plus features elegantly curved details for a softening effect that is perfectly suited to complementing round basins and adding a tactile note to a design concept.









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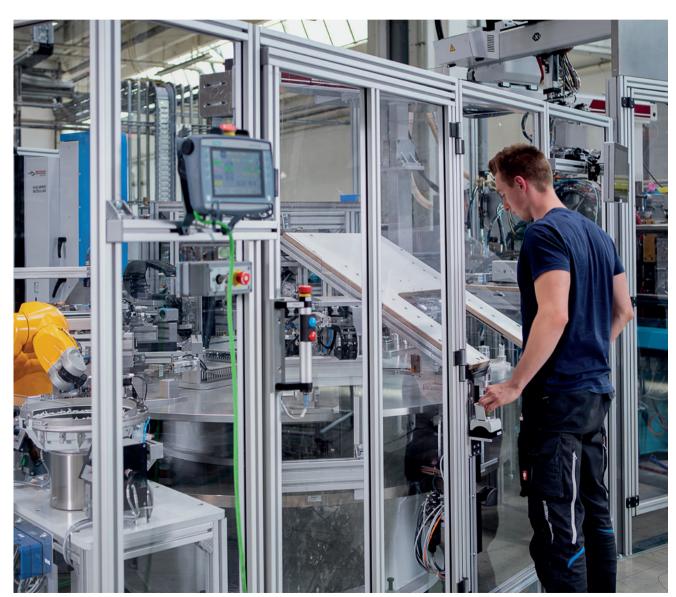


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GROHE's plant in the small city of Lahr is an international manufacturing powerhouse, producing innovative shower systems in large quantities without compromising on quality. How do they do it?

TEXT: PHILIPP NAGELS



One of the smaller Stäubli robots used in Lahr. The plant's staff work with both these and other machines to produce around ten million units per year.

Lahr is one of Germany's southernmost cities, beautifully situated between Baden's vineyards and the Black Forest. The Mediterranean climate is even warm enough for bananas and lemons to grow. It's therefore only natural that this sun-kissed region also produces leading experts in water technology. After all, it's here that the world's most innovative showers and shower systems are manufactured by 750 GROHE employees and their robotic assistants.

In one of the assembly halls, "the big Stäubli" manoeuvres gracefully in and out of a massive injection-moulding machine with power and precision. This endearingly-named robot executes between 60 and 80 different operations over the course of the one-and-a-half-minute molding cycle, at a speed too fast for the casual observer to follow. Indeed, you would need three to four human operators if you wanted to replicate the movements in exactly the same way over and over again. Together, the robot, the moulding machine and a second, smaller robot also from Swiss producer Stäubli (which gives the machines their names) form one production unit. Working in concert, they build a complex piece of fiber-reinforced plastic. Eventually, it will function as the inner water way for GROHE's Rapido SmartBox, the universal solution for concealed installations. "It's an engineering masterpiece,"

explains Hans-Martin Souchon, the plant manager. And this perfect symbiosis of state-of-the-art injection moulding process and unbeaten robotic precision is only "Made in Germany": Lahr is the only GROHE plant in the world to handle the "overmolding technology" and guarantees the highest quality in all circumstances.

It's cutting-edge technology like this that has propelled GROHE's Lahr plant to being a global competence center, with 82 injection molding machines, dozens of robots and Souchon's staff of industry experts producing around 10 million units per year, including hand and head showers, shower rails, shower systems, and more.

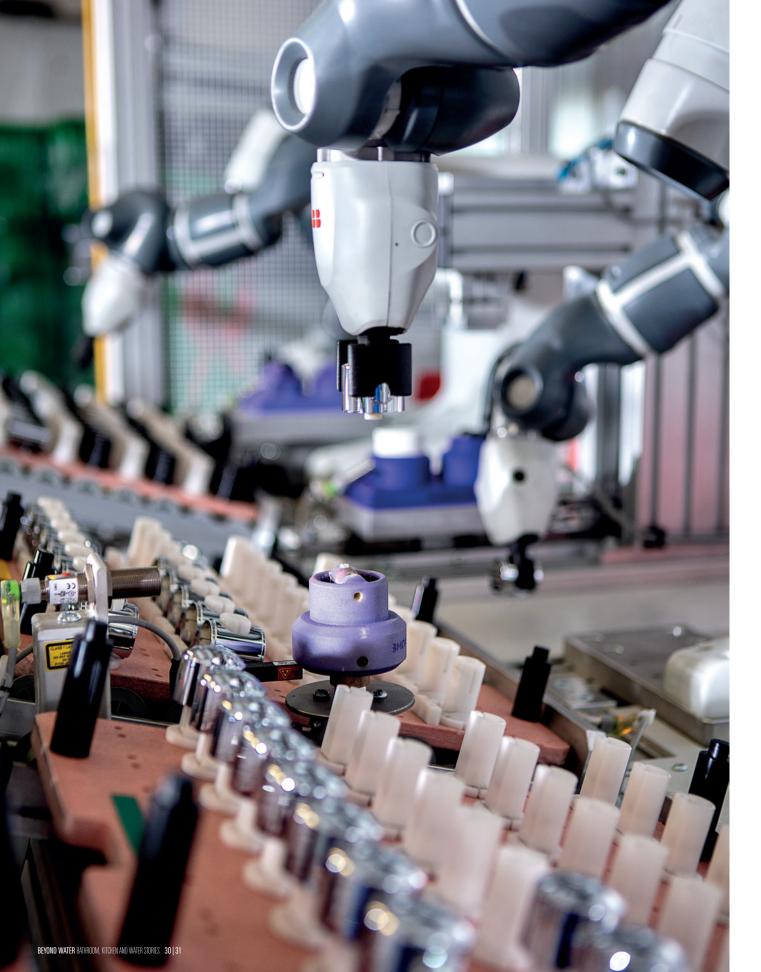
At the moment, production is ramping up for the Rainshower SmartActive hand shower, a new product in GROHE's range of shower systems. The hand shower comes in a number of designs, varying in size, shape and colour and offers three different spray types. More importantly, the portfolio's most innovative hand shower introduces two new features: GROHE SmartTip and GROHE DripStop (read more about these on page 37).

"These are real innovations that set our product apart in the market," Mario Fuchs explains. Fuchs is Head of



Plant manager Hans-Martin Souchon and Mario Fuchs, Head of Category Management Showers & Thermostats, say they "always aim to find the best solution"

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Category Management for GROHE Showers & Thermostats and the link between GROHE's headquarters in Düsseldorf and the plant in Lahr. He and Souchon have plenty of back-and-forth when working together, but in the end, it's all about getting the best result: "Our aim is always the same – to find the best solution," he says.

Putting the customer's needs first is what guides Souchon in his daily work. It's an approach that he brought to Lahr when he took over as factory manager a couple of years ago. Since then, the plant has added 150 employees and also increased automation significantly. It's no wonder that production has gone up by 50% under his leadership. This is also one of the reasons why GROHE's management decided to double down and invest in the Lahr plant. "Having people and machines working together, side by side, is one of the keys to our success," Souchon says.

Meanwhile, at the assembly station, the small but complex machine part behind the Smart-Tip controller in the new SmartActive hand shower is being put together. The "small Stäubli", a more delicate version of the larger "big Stäubli", turns three valves the size of a fingertip into one piece: arduous work for human hands if repeated over and over. But it's nothing more than a standardised process for a robot that only needs a bit of lubricant here and there.

However, the human touch is still crucial at several points in the production process. For one, no GROHE product leaves the plant without undergoing a rigorous manual and/or automated quality control process. The person who oversees this is Susanne Huber, an industrial engineer and project manager for GROHE. At the moment, 80 to 90% of her work revolves around the new SmartActive hand shower line. "It makes me proud to finally hold this finished product in my hands," she says. "So many people were involved in its production."

Huber is a company lifer, having spent all twelve years of her studies and career at GROHE. "I really appreciate my colleagues and our team spirit. We have worked through a lot of challenging projects together." It's a community sentiment that Souchon echoes: "If we manage to have fun working together, we'll get things done," he says. He's well known for leaving his office door open in the morning, for employees to come in and talk, blow off steam or suggest new ideas.

This open-door policy is what makes Lahr unique, as Fuchs, who's spent a long time in the industry, confirms. Quality, technology, design and sustainability are a given at GROHE, he says. "But to put humans first, whether it's the customer and their needs or our employees and their ideas, that's the special thing about Lahr."

Where does this culture of togetherness and fruitful friction come from? Fuchs and Souchon instantly agree: "It's the Baden mentality. People here are very open and friendly with each other."

Here, traditional German ingenuity meets an unexpected sense of cordiality, just like how tried-and-true techniques meet tomorrow's big new ideas. And most of all, it's the starting place for some of the best shower systems in the world, on their way to delight customers from L.A. to Dubai to Lahore.



Industrial engineer Susanne Huber oversees the quality control process. She takes great pride in holding the finished product in her hands.







The choice is yours: surrounded by a sleek minimalist design, three different spray types ensure limitless showering fun. With Rain, Jet or ActiveMassage, the Rainshower SmartActive hand shower lets you enjoy water, whether in the form of a mild tingling sensation on the skin or a stimulating massage. At the center of the hand shower, oval and star-shaped nozzles create the powerful ActiveMassage spray pattern. Eight other openings create a very powerful spray, which can feel invigorating right after a workout. Also, rinsing out shampoo is a breeze with this type of spray. If a more moderate spray pattern is preferred, the nozzles arranged all around the base provide the gentle, full-scale Rain spray.

So you can easily switch between different shower experiences, the innovative GROHE SmartTip technology offers the intuitive option of switching between spray patterns. Conveniently placed on the back of the ergonomically designed hand shower, the desired spray mode can be selected with just the touch of a fingertip. Any bothersome dripping after switching off the hand shower is a thing of the past, thanks to the GROHE DripStop feature.

The hand shower brackets are just 22 mm in diameter, and, along with the hand shower holder, harmonise perfectly with the sleek SmartActive design. The shower holder can be adjusted flexibly in all directions and in height. The GROHE EasyReach shelf also offers convenient storage space for shampoo and shower gels. Thanks to the QuickFix feature, the upper and lower wall brackets can be easily adjusted to align with existing drill holes. And with the help of TileFix, a tile compensation disc will no longer be necessary in the future. All these features reduce installation work to the bare minimum. The all-new Rainshower SmartActive hand shower is available in two sizes (130 mm and 150 mm) as well as in round and square designs.

THE INNER LIFE OF SHOWER HEADS

How does your shower actually work? And what exactly does a ketchup bottle have to do with shower heads? Who better to ask than the engineers at GROHE's research and development department



You might not realise it, but the inside of a shower head has much more inside than the outside might lead you to suspect. Depending on the model, there is a lot of different technology built in — gears, small moving parts, valves, seals, rockers, etc. For a shower with just one spray pattern, the technology is still relatively straightforward: the water shoots through a distribution system at the control which makes sure that the same amount of water flows from the individual jet paths (the "nozzles"). "You sometimes need to experiment a bit because if you get your physics wrong, it is entirely possible that water won't come out of the shower head in one place, but instead, air will be sucked in due to hydraulic effects at a wrong place," says Benedikt Mönig, a test and development engineer at GROHE.

But when it comes to the massage spray pattern, the technical design is a bit more complicated. Since it is simulating a massage, the water has to flow at a specific speed and pressure. Small turbines or paddle wheels with mini gears are installed in the shower head so that the stream of water flows in different directions. Switching between different types of jet pattern is also no easy feat, in terms of the technology required. Here's where the seals come in, running over a jet distributor so that the water is distributed from left to right into different chambers.

The two latest shower technologies from GROHE's Research and Development department in Hemer, Germany ing, making the act of showering even more invigorating.

are GROHE DripStop and GROHE SmartTip. The GROHE Rainshower SmartActive hand shower is equipped with both - thus making it the portfolio's most innovative hand shower. GROHE DripStop prevents a shower from continuing to drip after it has been turned off: the clue's in the name. On the one hand, this has the advantage that water is not wasted unnecessarily and on the other hand. you do not get wet again when drying off. "The GROHE DripStop principle functions like a ketchup bottle: as soon as the pressure is relieved, no further drops come out of the nozzle. In this case, the nozzle is not simply a round opening, but a membrane that opens and closes under different levels of pressure," Mönig explains.

Another highly technical solution inside GROHE's new SmartActive hand shower that makes a water aficionado's life a lot more pleasant is its GROHE SmartTip function. It makes it easy to switch between the different types of spray pattern intuively - modes can be selected with the single tap of a button on the back of the shower. Instead of working with seals, which would require a turning motion, the GROHE SmartTip's three valves, each smaller than the size of a fingertip, move in a tiny flat chamber to distribute the water stream into the different channels and thus creating the spray patters.

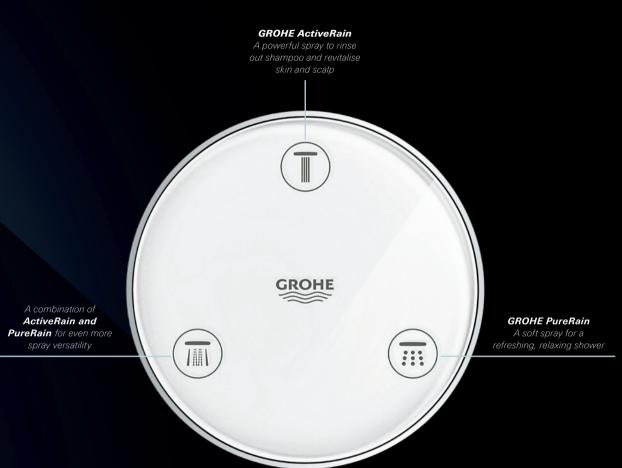
This is all proof that – thanks to Benedikt Mönig and his colleagues – GROHE's range of shower systems keeps improv-





RAMSHOWER 310 SMARTGOMEGI

WIRELESS REMOTE CONTROL OF TWO SPRAY OPTIONS WITH RAINSHOWER 310 SMARTCONNECT HEAD SHOWERS: SWITCH BETWEEN OR COMBINE TWO SPRAY PATTERNS FOR RELAXATION OR INVIGORATION WITHOUT HAVING TO REACH UP TO THE SHOWER HEAD



With the shower head Rainshower 310 SmartConnect, GROHE offers even more flexibility when equipping your bathroom and providing a shower experience that suits your personal preferences. The shower head (round or square designs are available) has a diameter of 310 mm and is connected via Bluetooth® to a battery-powered, round remote control. The wireless control can be placed anywhere you like in the shower, and lets you conveniently select from the shower head's spray types. Thanks to self-explanatory pictograms, it is possible to intuitively choose between the GROHE PureRain and ActiveRain spray pattern. The digital renovation of the shower:

The shower head can easily be mounted on any existing shower extension arms.

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At the Albergaria plant in Portugal, GROHE's innovative Physical Vapor Deposition (PVD) process is used to give kitchen and bathroom fittings a finish that provides incredible colour and exceptional durability. For almost 15 years, Cláudia Barbosa has headed up Industrial Engineering at the plant; she coordinated the introduction of the first PVD machine in 2015, and since then has handled all the projects introducing new coloured parts. Today, a dedicated team of 136 employees take care of GROHE's PVD process. The intricacies of the PVD process and the workings of the plant itself makes her job consistently engaging, she explains. "PVD does not only introduce a new technology: it also brings different and challenging requirements in terms of production management. It's been a really interesting and valuable learning process on both levels."

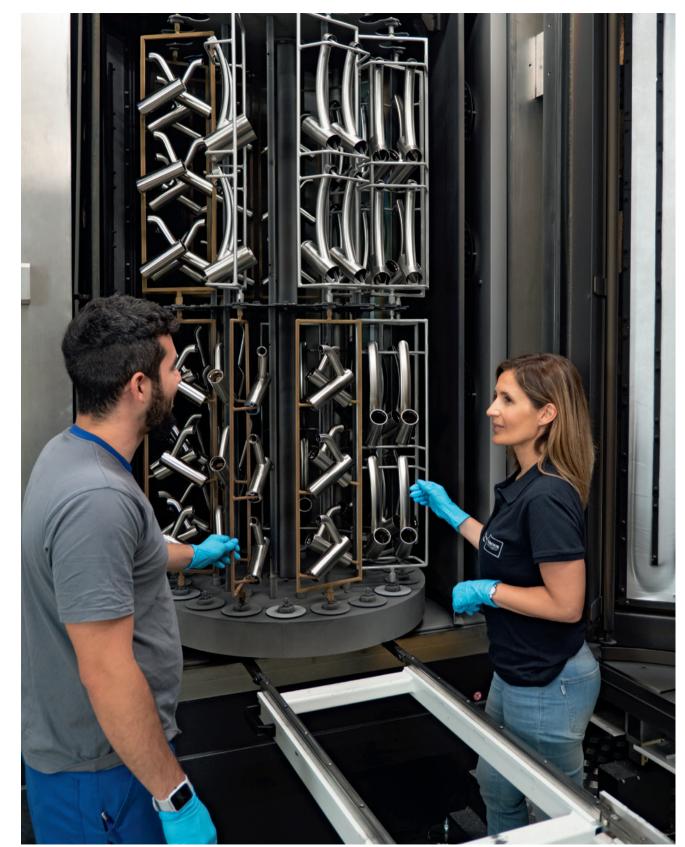


There are currently five PVD machines in use in Albergaria. By the end of October 2019 that number will have increased to seven.



The PVD process produces no waste, making it sustainable and environmentally-friendly in more ways than one.

The alchemy of PVD production, she says, is "difficult to describe without getting into technical matters". But the most important thing is the end result, which is wonderfully simple: a very thin, highly adhesive and resistant film coating. This coating acts as an industry-leading finish for bathroom and kitchen fittings, and is also widely used in the production of any tool for which wear resistance and durability is crucial, such as in the automotive, defense and medical industries. PVD even has a place in the space program, Barbosa explains: "Anything used in aerospace must withstand extreme conditions: extreme temperatures, pressure, extreme everything. The properties that can be obtained with PVD (hardness, low friction, etc.) make these coatings ideal for aerospace applications."



Cláudia Barbosa heads up Industrial Engineering at GROHE's plant in Albergaria, Portugal. She says that with PVD coating, bathroom and kitchen fittings will endure years of use without fading.

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What this means for something slightly more modest, such as a tap on planet Earth, is significantly higher resistance to abrasion, scratches and shock. "So," says Barbosa, "your bathroom fittings will endure years of use and cleaning agents, without fading and without wearing off. It's very long-lasting compared to other kinds of coatings." And in contrast to other coating processes, such as electro-plating, PVD also produces no waste, making it sustainable and environmentally-friendly in For Barbosa herself, the best fit for her own taste in more ways than one. As Barbosa explains, PVD is "a closed process, where you add nothing that needs to be disposed of afterwards."

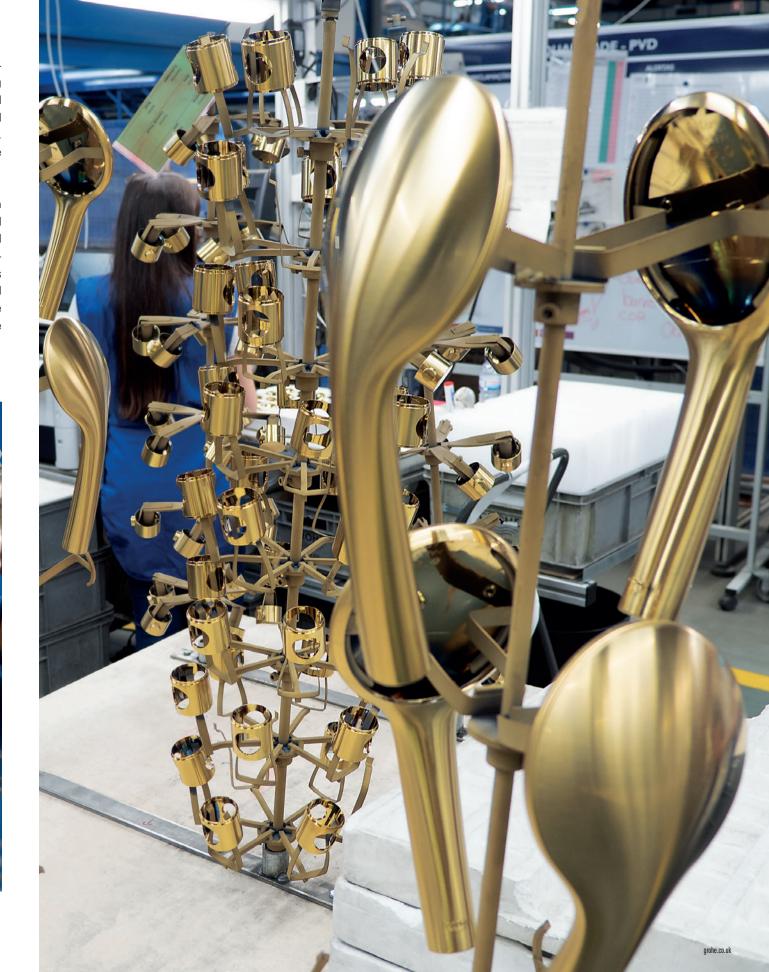
to individualise their kitchens and bathrooms, is its distinctively high-quality finish, which brings the GROHE Colour Collection to life in brilliant new ways. The range and

vibrancy of the colours offers customers what Barbosa describes as "incredible freedom of choice" when navigating the delicate balance between design and functionality. And this is greatly appreciated by customers: GROHE ordered two additional machines to meet the high demand for PVD, so seven PVD machines will be running in Albergaria by the end of October.

kitchen fittings would be the classic SuperSteel, and for a bathroom, the sophisticated look of Brushed Hard Graphite. It all depends, of course, on your own interior design preferences. Whatever they may be, GROHE's Another advantage of PVD, especially for people looking PVD fittings - designed to withstand the test of time and produced using environmentally-friendly processes – are not only sustainable from start to finish, but will continue to look striking and beautiful even after decades of use.



For sanitary fittings that shine: PVD coating gives GROHE's shower heads a distinctive high-quality finish.









Unleash your creativity – what does your bathroom say about you?









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The taps in GROHE's Essence line and a wide range of accessories are available in up to ten colours and finishes including Warm Sunset

The bathroom has become more than just a shower, sink and toilet. Bye bye wet room – hello feel-good oasis: "Home bathrooms are often overlooked, but that perspective has been changing. Bathrooms and toilets used to be in a completely separate world – purely functional and disconnected from the rest of the living area. Now, we are beginning to discover how the bathroom is an important component of our home aesthetic. The colour theme and design materials used in our home should also be reflected in our bathroom. We should think of the bathroom as an extension of our interior world by applying similar colour, materials and even furniture. There are no conceptual boundaries anymore – the design transition connects all the rooms in a home," explains Gudy Herder, trend expert at Eclectic Trends.

But how can I make my colour vision a reality? Three tips from Gudy Herder

1. Ask yourself: The focus now goes back to the person and where they are in their life. Ask yourself: "how can my bathroom counterbalance a hectic life and convey an uncluttered and calming mood? Or do I need vibrant surroundings that stimulate and energise, instead?" Colour and design can have that impact and give you the boost you need.

2. Be bold: Social media has given us many more opportunities to experience colour combinations by end consumers, which can encourage us to try new palettes. The more we see, the more likely it is that we will try bolder combinations we haven't thought of before. In addition, colour very much reflects our current lifestyle within every single corner of our home. And the bathroom is no exception. Colour theory has always told us which colour triggers which mood. We just have more access to that information now. So, it's time to find out, experiment and start using colour!

3. Get inspired: Why not create your colour story with a simple mood board? Take some time and think about the mood you would like to reflect in your home. Start with a style you feel comfortable with. Are you attracted to a more minimal, eclectic, rustic style? Once you've defined the style, see what colours speak to you and the

effect they have on you. The aesthetics and design of your bathroom should not feel separate from your home: they should be integrated, and with the trend heading towards a personal "me"-space where you can unwind and disconnect. Ceramics, tiles, and fittings are now available in a variety of colours and shapes to help you achieve the look & feel you desire, too.

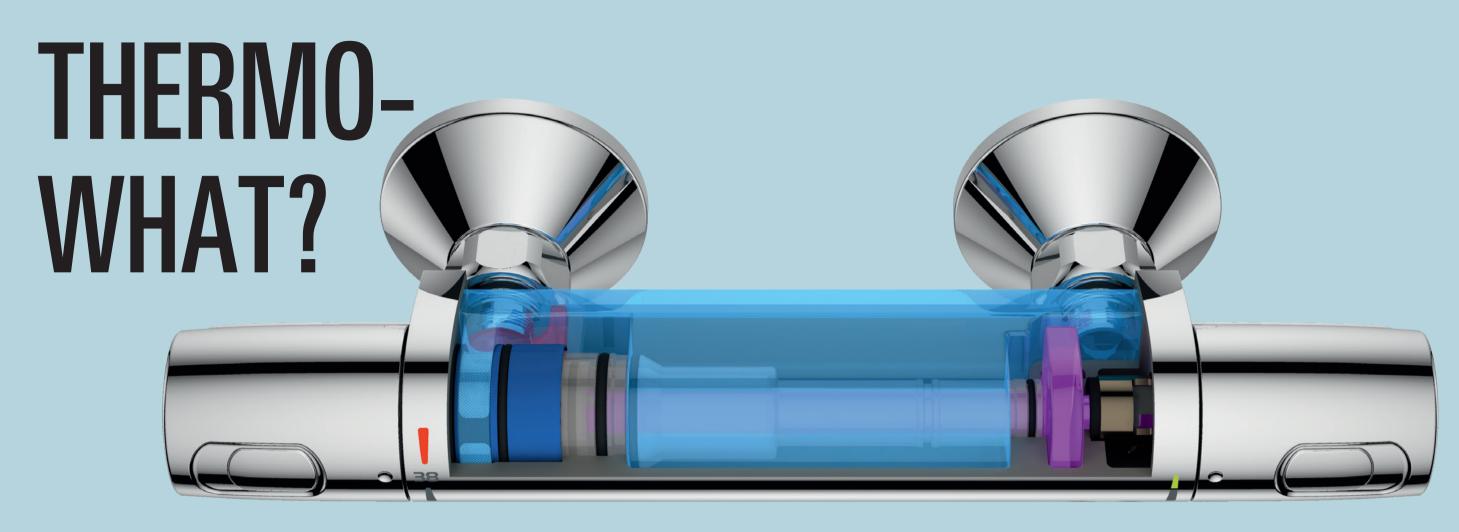
Your bathroom, your colours

With ten different colour and finish options for all touch-points in the bathroom, the GROHE Colours Collection offers a range of combinations designed to suit any taste and any lifestyle. Whatever your signature style, there is a GROHE colour to make your vision become reality. There is true consistency across every element, from taps to showers, right down to the details of accessories and flush plates, making your scheme totally seamless. Nothing is left to chance and the choice is entirely up to you, giving you total freedom to design a bathroom that effortlessly embodies your true self.



Gudy Herder is an international trend consultant, keynote speaker, and certified trainer based in Barcelona, Spain. She helps brands and businesses anticipate trends and use them to develop products that inspire people.

grothe.co.uk.VICHEN AND WATER BOTHROOM, KITCHEN AND WATER STORIES 48 | 49



How a little wax can make a big difference to your shower experience

placed within the thermostatic cartridge, which it steady for the duration of your shower. blends hot and cold streams of water and adjusts them according to temperature and pres- Safety is a priority in GROHE shower systems. to protect you against scalding.

surable. At the heart of Grohtherm thermostats perature to max. 43°C.

You might not realise it, but a small element is GROHE TurboStat. Its unrivalled sensitivity filled with a wax mixture drives the safety en- means that it mixes water at the desired temgine of your thermostatic shower mixer. It is perature within a fraction of a second and keeps

sure fluctuations. This ensures that only water The SafeStop button, set at 38°C, prevents with the desired temperature leaves the ther- children from turning up the temperature, and mostat. In the event of cold water failure, the GROHE's CoolTouch technology ensures that thermostat shuts hot water down automatically the entire outer surface never exceeds your preferred shower temperature - so your thermostat won't ever get too hot to handle and In GROHE thermostats, a range of advanced protects you against getting burnt on the hot technologies are added to the basic functions to chrome surface. GROHE SafeStop Plus also make your shower experience even more plea- gives you the option to set the shower temthe same time? No problem, just activate both one - perfect for every shower, every time.

Everyone's shower is different, and GROHE is buttons and enjoy! By turning the carefully committed to providing excellent products to designed GROHE ProGrip handle, you can suit each individual taste. That's where the adjust each flow from gentle to powerful. Your SmartControl actuation comes in. With just the preferred setting is then stored - perfect if you push of a button, you can e.g. switch between want to pause your shower or use it next time. two different shower head sprays and a hand
The innovative GROHE SmartControl technoloshower. Perhaps you'd prefer two sprays at gy offers spray selection and water control in





"I prefer a relaxed rain

shower in the morning

and a massaging spray

at night."



TEMPESTA 210



"I love that I can switch between the head and hand shower."



"The bigger the shower head, the better.

Especially when I can choose between three types of spray by using the innovative button in the middle of the shower head's plate."

EUPHORIA 310 SMARTCONTROL



"SmartControl really makes the difference for me.

Simply pushing and turning the button allows me to adjust the volume and temperature of the water, select my preferred spray or switch between the head and hand shower."

RAINSHOWER 360 SMARTCONTROL

No. of the last of



"This is the best head and shoulder massage I've ever had. Pure luxury!

And yes: I like my shower heads XXL."

WONDERING WHICH SHOWER SYSTEM IS THE RIGHT CHOICE FOR YOU? LOOK NO FURTHER THAN THIS HELPFUL GUIDE

GROHTHERM 1000

HIDDEN CHANDIONS

In the bathroom of the future, the best technology stays behind the scenes, offering you the ultimate in design freedom

TEXT: SAMI EMORY

A sleek bathroom design depends on effective plumbing technology. But that doesn't mean you always want to have that technology on show. The most important thing is that you are able to create a space for your home that represents your individual lifestyle and feels comfortable, but runs reliably and efficiently, without any fuss. For your dream bathroom redesign, you need to be able to trust that the technology that powers your bathroom fixtures will work silently and steadily, behind the scenes.

In the bathroom, space is the most valuable commodity, and GROHE's high-tech bathroom solutions are proof that even small items can have a big impact. Take the Rapido SmartBox and Rapid SLX from GROHE, for example. These are concealed technologies that offer state-of-the-art plumbing solutions for your bathroom, tools that will get you ready for the future, with zero compromises. Installed into the walls behind your bathroom fixtures, the Rapido SmartBox and Rapid SLX are invisible assets: flexible, high-performing, and plumber-friendly.

Rapid SLX is a compact frame that offers an innovative approach to flushing technology. As the perfect fit for all

rimless toilets, the integrated flow manager makes it easy to regulate or readjust the strength of the flush to avoid unwanted splashing and overflowing – in just a few seconds and without demounting it. Another plus: the new frame also has an integrated power management system and an additional waterway, so if you want to retrofit a shower toilet at a later time, it's easy and convenient to do so.

The Rapido SmartBox, meanwhile, is the brains behind endless possibilities: one concealed rough-in can be combined with single-lever mixers, thermostats or SmartControl. Plus, the GROHE Rapido SmartBox offers a plethora of connection options for even more individuality and more space in the shower.

GROHE's Pro solutions are your home's behind-the-scenes heroes that make your bathroom ready for the future. The Rapido SmartBox and Rapid SLX will revolutionise your bathroom's functionality, with concealed, adjustable technology that is as advanced as it is user-friendly. These solutions are invisibly integrated into your bathroom and let you enjoy water without any lingering worries.



GROHE The Worldwide Fund for Nature reported that the equivalent of around 27,000 trees are flushed, or otherwise dumped, daily. With the easy installation of a bidet seat, household paper usage falls exponentially. BEYOND WATER BATHROOM, KITCHEN AND WATER STORIES 56 | 57

FUTURE HYGIENE

The simple addition to your toilet that's cleaner and smarter? It's time to join the bidet revolution

TEXT: SUZE OLBRICH

Like many raised in the UK, I used to be perplexed by bidet seats. But today, with the developments in technology and design, not having one is beginning to seem like a mistake. Really, if there's a simple, plumbing-free modification that will make your bathroom and your body more hygienic, comfortable and environmentally-friendly – why wouldn't you install it?

It's this logic that has recently seen the bidet seat rocket in popularity in nations such as the USA, where they've traditionally been out of favor due to outdated misconceptions around their purpose and use. All the while, the bidet-friendly majority of the planet looked on perturbed by northern Europe and North America's reticence to get with the hygiene program. After all, the 18th century French invention has been a legal bathroom requirement in Portugal since 1975 and 97% of Italian households have one. Bidets are ubiquitous in the Gulf, Middle East, South Asia and South America. And Japan is well known to be awash with high tech, bidet-integrated toilets. Now, thankfully, it seems word of the bidet's many benefits is finally reaching the rest of us, too.

Even so, as a novice, you might not be ready to plumb in a standalone bidet, or commit to an electric, digitally-controlled, integrated version. Thankfully, following the runaway success of its Sensia Arena shower toilet, GROHE have expanded their bathroom range to include a product designed especially for the bidet-curious: the GROHE Manual Bidet Seat. This easy, simple addition to any U-shaped convenience will discreetly invite touchfree hygiene into your life. Not quite convinced? Let's get

specific. GROHE's Manual Bidet Seat doesn't require electricity, nor any additional plumbing work, since the mechanism is based solely on the water pressure from the supply line, eliminating the need for a power connection. The durable Duroplast seat is particularly easy to clean and can be used to quickly and easily upgrade any conventional toilet without having to replace the current ceramic or connect it to a power source. All you need to do is swap the toilet seat. The twin shower arm - cleaned prior to every use - ensures that you, your family and quests experience true cleanliness every single day. Rather than being a morning or evening only affair, that shower-fresh feeling can be had any time you wish. And not just wiped clean with toilet paper (which would never suffice for any other kind of mess) - but properly clean.

While we're talking paper, in 2019, there's little excuse not to make lifestyle adjustments that benefit the environment wherever possible. The Worldwide Fund for Nature reported that the equivalent of around 27,000 trees are flushed, or otherwise dumped, daily.

With the easy installation of a bidet seat, household paper usage falls exponentially. As well as saving money in the long-term, fixing a hygienic, manually-powered bidet seat to your toilet will boost your property's sustainability credentials. Another plus? Thanks to its slim and flat design, the bidet seat fits harmoniously into the bathroom and is the perfect complement to the GROHE Bau ceramics line. In conclusion: less waste, infinitely cleaner – for everyone. When will you be joining the bidet revolution?

GROHE MANUAL BIDET SEAT SPOTLESS HYGIENE

hygiene? At GROHE, we agree. That's why the GROHE Manual Bidet Seat has been developed. It offers a whole new standard of gentle personal cleaning that gives complete peace of mind.

Manual Bidet Seat offers targeted personal cleansing via two separate spray heads. There is no danger of splashing or overshooting the bowl, and no water on the floor to clean up afterwards. The spray can be adjusted for your fingertips for an effective but gentle cleaning own comfort, and hygiene is assured thanks to experience. No mess, no splashes, and no a cleaning function. The GROHE Manual Bidet stress. Made from hardwearing Duroplast, the Seat transforms your bathroom into a hygienic, seat itself creates an elegant visual addition to and convenient personal cleansing zone, where the bathroom.

When you close the bathroom door, what sort of you can enjoy gentle cleaning with a relaxing, experience do you expect? Comfort, conve- tailored experience that you control. Just take nience, no mess, no fuss and no worries about a seat and let the GROHE Manual Bidet Seat transport you to a cleaner, more comfortable place. It's that simple.

The GROHE Manual Bidet Seat transforms a simple toilet into a comfortable, hygienic place Designed to fit your existing WC, the GROHE where personal care and cleaning are second nature. Attached to the ceramics of the WC, the seat doesn't require electricity – instead, the spray is operated by a side lever powered only by water pressure, putting the control at your







A new level of hygiene is on its way and GROHE is at the forefront of this development. The Sensia Arena shower toilet is a key part of this shift, redefining what it means to be clean. GROHE's shower toilet spray technology lets you choose spray type, spray strength and position individually. Softer on the skin, more soothing, and more hygienic than wiping with paper. But there's more to it than your personal comfort so let GROHE's Sensia Arena broaden your horizons and maximise your bathroom's hygiene.

Triple Vortex

Three water outlets create a vortex effect with each flush, covering and cleaning every corner of the bowl for ultimate hygiene. The powerful flush is exceptionally silent, thorough, and effective. Despite its power, this flush requires very little water.

AquaCeramic

This innovative surface treatment for the inside of the toilet uses a hydrophilic layer to prevent residues from sticking to the bowl, and nano-technology stops limescale from latching onto the surface.

Two self-cleaning nozzles

Spray arm heads are cleaned before and after each use, and the nozzles themselves are made from 99.9% anti-bacterial material. When not in use, the shower arms are safely hidden behind a removable nozzle shutter with antibacterial properties, also preventing 99.9% of bacterial growth - so the nozzles stay germ-free at all times.

PlasmaCluster technology*

This technology releases positive and negative ions into the toilet that spread inside the toilet and in the air around it. The ions make germs or bacteria harmless upon contact by destroying their structure.

Rimless bowl

Corners and crevices are playgrounds for bacteria, especially under the rim of the toilet bowl. That's why we've created the "rimless" bowl, where every surface is easy to reach and requires minimum effort to keep clean.

arohe.co.uk

^{*}Registered trademark of Sharp Corporation



Everyone knows that at any social occasion, there's always a second, better party happening in the kitchen. That's where a small crowd gathers, leaning against the fridge, sitting on the counters; the vibe is more relaxed, more intimate. Someone tells a joke while cutting up limes for cocktails. Another person comes in, looking for a glass and lingers, getting drawn into the conversation that flows as organically and generously as the wine. There's a reason why kitchens are said to be the "heart of the home." They are spaces that have an innate ability to bring people together, and to invite warmth and comfort. kitchens now are also designed to be welcoming. Instead

But how did a room that is, at its core purely function- of a home remodel. al, become such a space of connection and intimacy? A huge part of it is obviously the fact that kitchens have always been associated with food, and human beings tend to really like food. It's a place where food is stored and prepared, where tea is brewed, ovens are heated and stomachs are filled. But they weren't always these cozy, bright, welcoming places. Up until the beginning of the 20th century, they were often dark, sooty, and cramped, and primarily a space of exclusion and isolation, where servants ate and toiled and later, where women spent their time.

But as social and cultural norms began to shift, the kitchen started becoming not just a functional space, but also an inclusive one, fully integrated into the design of a home. But increased urbanisation in the early 20th century also led to apartments (and kitchens) becoming smaller as more families settled into cities. Open kitchens meant no walls between the culinary and entertaining space, and so the kitchen became a place to flex some serious design muscles, with its furniture often leading the way in terms of style for the whole residence.

Domestic architecture was an innovative field, with 20th century movements like Bauhaus exploring how to tease maximum functionality and aesthetic appeal out of a small space. Famous designs such as the Frankfurt kitchen, a forerunner of modern fitted kitchens, used a unified design concept to maximise space usage and streamline

the work flow. And with increased attention being paid to kitchens, the materials used needed to be as spot-on as

Tessa Pearson, an expert on interiors, decor, and architecture, and the author of the recent book Kitchen Living, says: "The kitchen is the hub of the home, and gets a huge amount of traffic, so finding the right brands and suppliers is critical: their wares need to be able to stand the test of time." As the space became more inclusive, of being an afterthought, kitchens often become the star

Top-notch appliances are therefore just as important as high-quality countertops or coordinated colour schemes in creating a space that's as practical as it is welcoming. "There is a growing global trend towards developing kitchen fixtures that take the guesswork out of cooking so you can focus on what you do best," Pearson believes. "From electric cooking ranges to storage solutions that measure the freshness of produce to cut down on food waste, designers, brands, and manufacturers have crafted appliance ranges to help your kitchen run smoother and smarter via technology."

GROHE's aim is to create kitchens that are both beautiful and intuitively functional. Incorporating the latest innovations is just one of the ways that GROHE helps home owners to design a kitchen that is equipped to their needs and lifestyle. With the launch of the new SmartControl Kitchen tap, GROHE has designed a sleek kitchen tap with pull-out dual spray features and push valve technology that allows water flow and volume to be controlled with one hand – or even just with a wrist or an arm. And thanks to GROHE's Prep-station concept, which includes kitchen essentials like ergonomically designed stainless steel and composite sinks as well as a waste system that fits perfectly under the sink, people spend less time washing up and more time on the things that matter - whether that's baking cookies with the children, or simply asking "how was your day?".

ORGANISING THE WE SPACE

Turning the kitchen into the efficient, welcoming room it should be

Social spaces that are as hospitable as they are functional have become crucial to the modern home. Your kitchen can be easily streamlined to meet these demands with GROHE's innovative sink solutions, without sacrificing any of its elegance - whether you prefer sleek stainless steel or super-durable composite. GROHE's spacious sinks are equipped with an automatic waste fitting which means never having to plunge your hands into dirty water again, making washing up that little bit easier and more efficient. And under the hood, GROHE's Waste System will fit neatly into the unit under your sink, sliding out effortlessly when you open the door. The Waste System is available in different models with one or two capacious waste compartments, and for base units of 60 cm and 90 cm. Now, this won't necessarily make washing up or dealing with kitchen waste a joy, but GROHE systems can make these tasks easier - and your sink somewhere you are happy to spend some time.



With over a decade's experience working with luxury brands, agencies and publishers, London-based journalist and editor Tessa Pearson writes about design. Focusing on interiors and architecture, she works for publications such as The Observer Magazine and Elle Decoration. She is also a co-founder of the creative studio Made Good. Her book Kitchen Living is available from Gestalten (2019)

BEYOND WATER BATHROOM, KITCHEN AND WATER STORIES 64 | 65 grohe.co.uk





The new SmartControl feature is here to make life easier. Available on three tap designs and in 11 desirable finishes, this innovation creates a sleek and streamlined silhouette and puts precise control at your fingertips.

GROHE's SmartControl technology has been winning over hearts in the bathroom. Now, the innovative shower system with "Push and Turn" operation finds its way into the kitchen. Instead of a lever, you turn the flow of water on and off by pushing the button on the spray – great for those moments when you have your hands full, as it can be operated with just your wrist or elbow. Just turn the valve to control the flow, changing smoothly from an eco-flow to a powerful jet.





To adjust the water temperature, gently turn the valve on the body to the left or right. The pull-out mousseur head gives you great flexibility for rinsing the sink or prepping veg.



GROHE ZEDRA

The reinvention of a legend brings design flair and innovative handling to your kitchen – the new GROHE Zedra

With an elegantly fluted zinc body, the Zedra offers intuitive, tactile handling and great features such as lead and nickel-free water flow thanks to GROHE Zero technology. The pull-out spray is ideal for rinsing veg or the sink itself – you can select from three spray types to suit the job in hand – while water consumption is reduced by up to 75% without compromising performance. When you're finished, it retracts easily into place thanks to the magnetic docking system. The range has a model to suit every need, from a SmartControl version to a pillar tap with filter. Available in two finishes, this sleek, sophisticated tap puts you in control.





PULL-OUT SPRAY WITH 3 SPRAY TYPES

LAMINAR SPRAY

Clean spray without added air to guarantee zero splashing

SHOWER SPRAY

Powerful spray with added air to rinse fruits and vegetables

BLADE SPRAY

Very condensed spray with up to 70% less water consumption compared to the shower spray, effective for cutting through debris



Put the sweeping, sensual power of water at the center of your kitchen with the Zedra Touch. Zedra's distinctive fluted swivel spout and beautifully tactile lever combine ergonomic design with visual flair. The addition of GROHE's EasyTouch technology also enables you to control the water flow with just one touch. Choose your touch function in the standard version with an integrated mixing unit or upgrade with an under-sink Grohtherm Micro thermostat for perfectly controlled warm water with no danger of scalding.

BEYOND WATER BATHROOM, KITCHEN AND WATER STORIES 72 | 73



Innovative design is the key to improving the safety and efficiency of a modern kitchen. GROHE's kitchen taps are created to offer a huge range of practical features to make all kitchens easier, safer and more enjoyable to use. Always striking a perfect balance between elegance and practicality, these solutions to some of the most common kitchen problems and risks are addressed by our modern and uniquely crafted taps — making sure to truly enhance your everyday life.

Childlock GROHE's hot water tap is built with an innovative child lock that makes scalding small hands practically impossible. Thanks to GROHE Red's fail-safe design, worrying about (and waiting for) boiling kettles in busy family kitchens is a thing of the past.

Magnetic Docking Thanks to a powerful integrated magnet the pull-out spray head retracts easily and smoothly to the perfect position every time after use.

EasyTouch Make multitasking easier with a GROHE touch-activated tap like the Minta Touch, which lets you start and stop the flow of water with a single tap of your arm, wrist or the back of your hand – anywhere on the spout. Very useful for busy hands in the kitchen!

SmartControl Rather than a lever, you start and stop the water flow by pushing the button on the spray head, which can be operated with just your wrist or elbow. To control the flow just turn the valve, changing smoothly from an eco-flow to a powerful jet. To adjust the water temperature, gently turn the valve at the body to the left or right.

Integrated temperature limiter

GROHE's innovative cartridge with integrated temperature limiter can be individually set to the desired maximum water temperature in kitchen taps such as Eurosmart, meaning you know exactly what the hottest setting will be, so that you never have to worry about scalding water surprising you.

FootControl For hassle-free kitchens, why not go completely hands-free? Taps like GROHE's Essence FootControl can be turned on and off with a gentle tap of your foot on the base unit, keeping your tap spotless at all times.

Enhanced water Superior water quality directly from your kitchen tap – saving time, money and the environment. Effortlessly make great tasting water a part of your kitchen, with a GROHE Blue Pure Filter tap.

GROHE Zero GROHE Zero's separate internal waterways provide guaranteed lead- and nickel-free drinking water. Available on different GROHE taps like Zedra, Eurodisc Cosmopolitan, Eurostyle Cosmopolitan, Eurosmart Cosmopolitan, Eurosmart.

Spray types Put some power into your daily tasks with GROHE's range of pull-out and professional sprays. Enjoy an increased operating radius for maximum convenience and different spray types such as the laminar, the shower or the GROHE Blade spray. And on many models, like Essence and Zedra, you can also switch between two or three spray functions for even greater flexibility.

Professional spray Designed to provide professional-grade functionality, this head swivels through a full 360° while offering the choice of a fine spray jet or a powerful shower jet – for ultimate flexibility. Available in the K7 Collection.

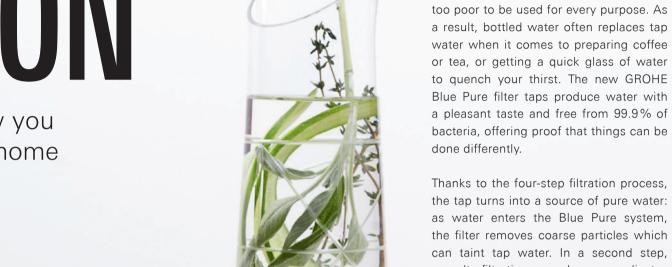
grobe, co.uk

PURE FILTRATION

How GROHE's new filter taps allow you to take control of your hydration at home

TEXT: NATHAN MA





Water is a vital resource. While it is a matter of taste in many regions of the world, there are also countries where the quality of water taken directly from the tap is water when it comes to preparing coffee or tea, or getting a quick glass of water to guench your thirst. The new GROHE Blue Pure filter taps produce water with a pleasant taste and free from 99.9% of bacteria, offering proof that things can be

Thanks to the four-step filtration process, the tap turns into a source of pure water: as water enters the Blue Pure system, the filter removes coarse particles which can taint tap water. In a second step, an ultrafiltration membrane eradicates 99.9% of all bacteria. After that, the taste of the water is improved by using activated carbon to purify the water, removing substances such as chlorine, pesticides, and biocides. The final stage filters out glass at a time.

even the finest remaining particles with precision - making it the perfect alternative for people who prefer the pure taste

And here's another plus: with the GROHE Blue Pure filtration system, you can source delicious water from within your home - 24 hours a day and seven days a week. The days of lugging around heavy bottles of water are finally over. With GROHE Blue Pure, you need zero bottles: this is not only refreshingly easy and convenient, but also helps the environment. After all, the amount of water that goes into making the bottle could be up to seven times what is inside the bottle. In other words, it can take up to seven liters of water to produce one single liter of bottled water.* In addition, it might seem obvious, but in a world that is slowly sinking in a sea of plastic, the issue is becoming more urgent than ever. So, let's enjoy this new sustainable convenience - one

Hydration is essential to regulating your body temperature | Water helps strengthen vital organs and tissues | Proper hydration has clear benefits for your immune system | Water improves your complexion by preventing spots and blemishes | Drinking enough water helps you beat dehydration, a common cause of fatigue

*npr.org/sections/thesalt/2013/10/28/241419373/how-much-water-actuallygoes-into-making-a-bottle-of-water



GROHE BLUE PURE FILTER TAPS

Add effortless great taste to your kitchen, with a GROHE Blue Pure Filter tap. GROHE Blue filter technology turns tap water into great-tasting, filtered drinking water, removing chlorine and other impurities that can impact taste. Separate internal water ways keep filtered and unfiltered water separate at all times. The GROHE filter fits easily under your sink and the tap still offers all the usual functions of a standard kitchen tap. Put pure, refreshing, filtered water at the heart of your kitchen with a GROHE Blue Pure tap.

WHICH WATER SYSTEM IS YOURS?

Say goodbye to bottled water: perfect taste, straight from the tap, with GROHE Blue Home and kettle hot water on demand from GROHE Red. Choose the combination that perfectly fits your needs



GROHE RED
Straight from the tap — kettle hot water on demand

Introducing the new GROHE Red – a beautiful and convenient system that delivers kettle hot water straight from the tap – with SGS-TÜV certified childlock and automatic stop for guaranteed GROHE safety.



GROHE BLUE Perfect tasting water straight from the tap

An elegant, intelligent system that turns drinking water into thirst-quenching pleasure. How do you prefer your water? Still, medium, or sparkling – it's all a question of taste. GROHE Blue Home has a simple, intuitive mechanism that boosts your drinking water with carbonation at the touch of a button. For delicious, freshly filtered, and chilled water – straight from the kitchen tap!

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Pacific Garbage Screening (PGS) aims to free rivers and oceans from plastic pollution. PGS was initiated by architect Marcella Hansch, who developed the PGS project triggered by a key moment in diving.

INTERVIEW: SAMI EMORY

Marcella Hansch has a vision. Actually, she has a few: she wants to clean up our oceans, repurpose the waste, and educate the public about sustainability. Her project, Pacific Garbage Screening (PGS), supported by GROHE, is designed to tackle all three. With an interdisciplinary team of scientists, engineers, and marine biologists, Hansch, a trained architect, is developing a waterborne platform that will collect plastic waste before it pollutes the ocean's ecosystems. Using cutting edge technology, the plastic will then be processed in the most sustainable way possible. But that is Hansch's end goal: for now, the project is still in progress, so she's busy shaping her vision, spreading the word near and far about her work, and educating the public about how to help the earth and its oceans.

Can you explain what the Pacific Garbage Screening project is about?

The PGS has two focus points. One is to develop a technology that frees our oceans and rivers from plastic waste and to recycle it in a sustainable way. And the other is to

raise awareness of the plastic problem with public relations work - to get people to change their behavior.

How did you get involved with this project?

It all started six years ago when I was diving. Something touched my feet and I was shocked because I thought it was a really big fish. But it was a plastic bottle. That's when I realised that there was much more plastic around me than fish. From that day on, I started to see plastic everywhere: on the beach, on the streets, in the supermarket, at home.

How has your mission developed thus far?

From a technical point of view, we started with this huge vision for the ocean. In discussions with many experts, especially marine biologists, we realised that the ocean isn't actually the best place to start, because this is plastic's final destination. Once there, a lot of it sinks to greater depths and does harm before it even reaches the great garbage patches, where we wanted to collect it. In

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The original idea of PGS was based on a floating platform with a special construction that can filter plastic particles out of the water. Now, the new focus is on implementing these platforms in rivers and estuaries.

addition, all of the plastic which floats around is already covered with microbes and other organisms. It's actually its own, new ecosystem. Our new focus is to implement these platforms in rivers and estuaries, because 80% of all the land-based plastic which enters the ocean flows from rivers into the sea, and we want to stop it there before it can enter the oceans. And getting it all funded is an ongoing challenge of course.

What are your immediate and long-term goals for PGS?

The short-term goal is to develop a prototype within the next two years, which we can implement in rivers. The long-term goal would be not just to implement it in Germany and Europe, but also in Asian and African rivers from where the most plastic is entering the ocean. We also want to find a sustainable way to recycle the plastic. And, of course, to establish a worldwide education program to motivate people to change their lifestyles.

Which technologies could help with processing the plastic to make sure PGS is as sustainable as possible?

Because material recycling is not necessarily the best option for degraded plastics recovered from the environment, we are adding a couple of partners to look into different possibilities. One would be to make oil out of the plastic, but that's not the best way, for me, because ultimately we

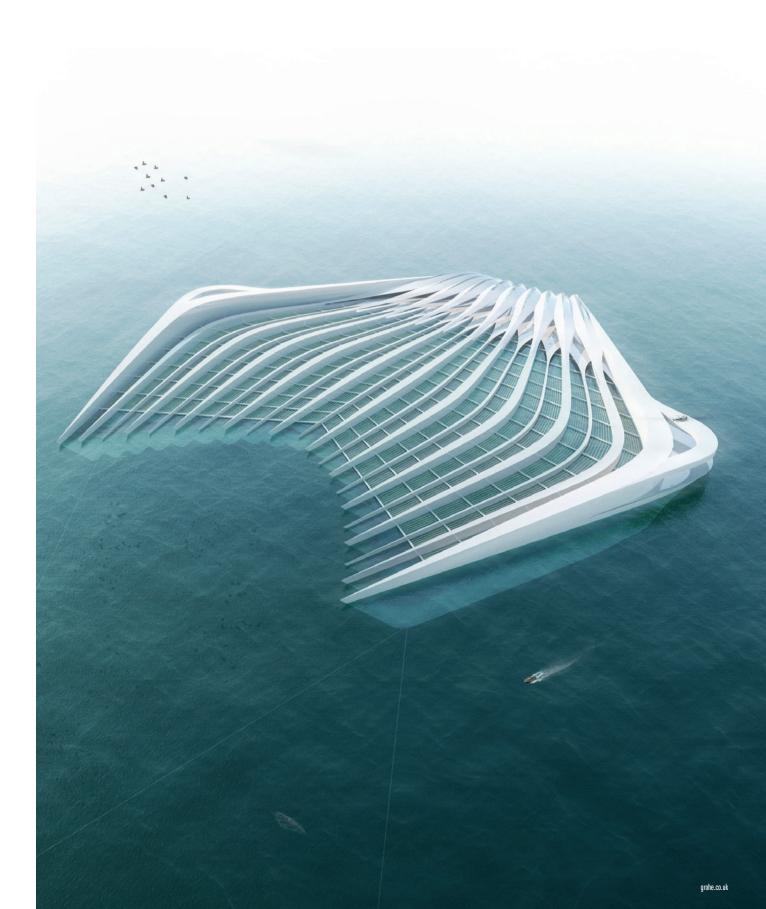
would burn it again. So, this would be just the first step. Another approach would be to gasify it to get hydrogen, to be used in a sustainable way for energy. Or we might be able to work with microbes that can break down the molecular structure of the plastic and the composite plastic, which could also upcycle the basic components to create new products of higher value.

Similar projects have faced insurmountable logistical and technical challenges in the past. Why do you think PGS will be different?

I think that ours is different in that we are not just focusing on the plastic which is floating on the surface, but also on the smaller particles underneath. And I think we could have a bigger impact on the problem because we've adapted our solution to fit with rivers and estuaries. A lot of projects also just focus on the technical solutions, but they don't think about education. We are also showing people that everyone can make a change and awareness is the first step in stopping the plastic problem before it even starts.

How can consumers support you?

Of course, we are always looking for donations to help us make this project a reality. You can become a member from just 12 Euros a year: not that much, but it helps us to continue our work. Apart from that, everybody can make a small contribution to sustainability in their everyday life – nothing is too small to make a difference.





Photovoltaic panels are installed on the roof of the factory building in Klaeng, reducing CO_2 emissions by nearly 2,000 tonnes per year.

GROHE GOES ZERO

Climate change is the biggest challenge of our time. GROHE is taking a big step towards a sustainable future and has committed itself to the goal of making its production carbon-neutral by 2020

It's in the news every day. Temperatures are constantly increasing, sea levels are rising and glaciers are melting. Needless to say, these developments have a major impact on our lives. Since CO₂ emissions are one of the main reasons for climate change, GROHE is now heading towards an important breakthrough: by 2020, the global brand has set itself the goal of being the first leading manufacturer in the sanitary industry to achieve carbon-neutral production. Indeed, GROHE converted all its production plants to run on green electricity in July 2019. The sanitary manufacturer will offset unavoidable CO₂ emissions through two compensation projects - a hydroelectric power station in India and a borehole maintenance project in Malawi – which are based on extremely stringent criteria, such as the Gold Standard, developed under the aegis of the WWF. Here, in addition, activities also contribute to sustainable, ecological, and social development in the

local environment. This milestone is the logical outcome of the sustainability efforts that GROHE has pursued so far to conserve resources. In its product lines, the brand invests in research and development to produce intelligent, sustainable solutions that help to save water, energy, and waste without compromising on comfort and performance. Plus, GROHE is constantly enhancing the sustainability of its manufacturing processes with material-saving technologies like 3D metal-printing. This attitude also applies to whole production plants - GROHE has invested in block heat and power plants in two of their German production plants, in Hemer and Lahr. For the plant in Klaeng in Thailand, GROHE was also awarded a silver certificate by the German Sustainable Building Council (DGNB). After the expansion of the factory building in 2017, it's now the most sustainable production plant of its kind in Southeast Asia.

HYDROPOWER FOR CLEAN ENERGY Himachal Pradesh India

The project is located on the Satluj River between Karcham and Wangtoo in the northern Indian state of Himachal Pradesh. As a hydropower plant, the project uses the river's natural flow to generate energy. Importantly, there is no reservoir in which the water is temporarily stored, and so the potential negative environmental impacts of water storage are avoided. In the underground turbine house, four Francis turbines are driven by the power of the river water before the water is returned to the river bed below. All the power generated by the power plant is fed into the North Indian transmission grid and replaces conventionally generated electricity, which mainly comes from coal-fired power plants.



The hydropower plant uses the river's natural flow to generate energy.



In Malawi GROHE supports a project that maintains damaged boreholes.

RESTORING BOREHOLES FOR CLEAN WATER SUPPLY Dowa & Kasungu Malawi

In the project's districts of Dowa and Kasungu in Malawi, around half of the population lives without access to clean drinking water. Part of the problem is that around one third of the existing boreholes can't be used, due to wear and tear. Repairing damaged boreholes improves living conditions for the people who live there. In addition, the project also makes it possible to set up financing mechanisms to ensure the boreholes are maintained in the long-term by the villagers, thereby guaranteeing that they will be in a usable state for years to come. Most boreholes are operated by a hand pump. The pumped water is clean and can be consumed without additional treatment. This also reduces carbon emissions, since water would otherwise be purified using fuel to boil it.

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As ever more areas of our lives are affected by digital technology, we look at how GROHE's team is working smart to shape the future of water

INTERVIEW: PHILIPP NAGELS

As the brand that promises its customers cuttingedge technology and design, GROHE is fully committed to the digital transformation of water. Indeed, the growth of the Internet of Things means that, by 2030, the number of sensors and devices is expected to increase to about 125 billion worldwide, from 21 billion in 2018. But GROHE doesn't develop digital innovations just for the sake of being innovative: it creates new products and services that enable new business models with real added

value for the brand as well as its customers and partners. So, merely connecting taps to everyone's WiFi won't do. However, how GROHE can help us make our homes intelligent, and to live better lives in the real world, as well as the virtual one? Chief Digital Officer Robert Veltrup is here to explain. He joined GROHE in 2016 with the overarching mission of digitalising water, starting with a team of six people. Today GROHE's digital unit has around 50 employees. We asked him to tell us more.

Which areas is GROHE focusing on in the digitalisation of water?

Our three core areas are e-commerce for our B2B clients, online marketing, and IoT (Internet of Things). The first two optimise how we use different digital channels to reach our customers and share with them what we call "Pure Freude an Wasser". Our IoT team looks a bit more into the future: how can we help people build better homes with intelligent, digital water solutions? We want to build a platform that will help to digitally transform living spaces in the future.

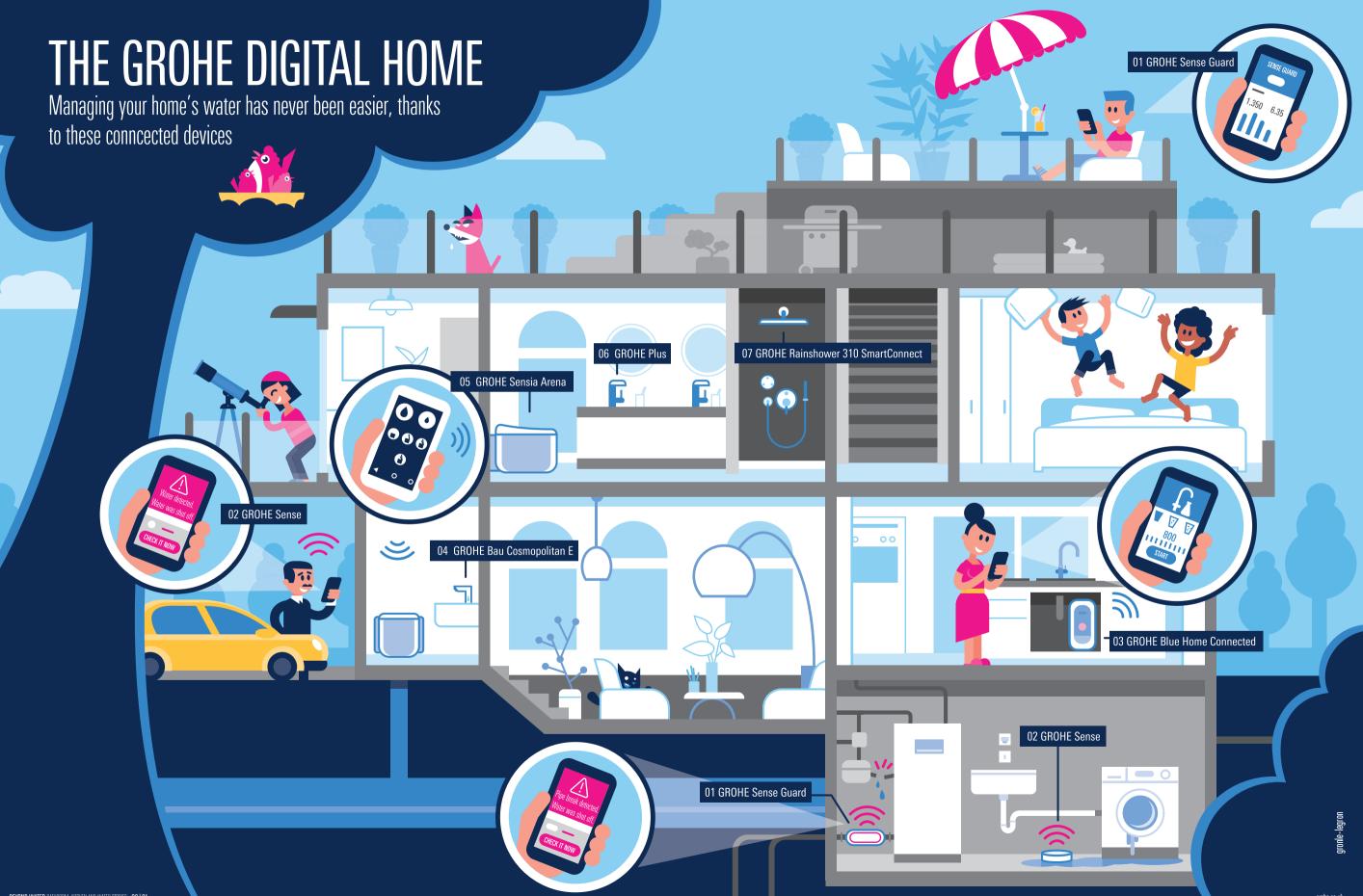
IoT is probably the biggest trend in technology today. Which smart products does GROHE currently offer and what are their benefits?

Our focus here is to build intelligent systems that understand your behavior and help you use water as smartly as possible. GROHE Sense Guard is one example: Not only does it detect leaks and burst pipes, it also studies your usage pattern and alerts you when something is off. Or take the new Blue Home Connected: a water system that lets you enjoy filtered, and, if you wish, carbonated water while allowing you to also track your water consumption. That helps you take care of your well-being. If we look a bit further into the future, we see enormous potential for our Sensia Arena shower toilet as a part of your health care system – notifying you and your doctor if it detects abnormalities.

So, it's not really about connecting every tap to the Internet: it's about introducing meaningful solutions.

Absolutely. We're not interested in digitalisation for the sake of it. We have to ask ourselves: what is meaningful to our customers? And that can also mean how and when we interact with them. On average, people renovate their bathrooms twice in their lives. These are the moments where we want to be present and make sure we offer them our best solutions. We believe that this contact will take place in the digital sphere much more in the future.

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INTELLIGENT LIVING BY GROHE

Plus' **LED** display traces a gradient from blue (cold) to red (hot)

06 GROHE Plus

This smart tap digitally displays the water temperature, increasing comfort and control when washing your hands. The colour-coded display disappears when the water is turned off.



Saves 15 kg of toilet paper every year**



07 GROHE Rainshower 310 SmartConnect

Switch between or combine two spray types for relaxation or invigoration with the wireless remote control which can be placed anywhere you like in

> It takes up to 7 liters of water to produce 1 liter of bottled water *

2 sprays

GROHE PureRain

and ActiveRain

03 GROHE Blue Home Connected

Use the Ondus app to send you notifications when your water system's filter or the CO₂ bottle need to be replaced. Simply order them within the app for even more convenience. The app can also be used to track water consumption, helping busy households stay on top of how much they're drinking - encouraging everyone to follow a healthy lifestyle.



05 GROHE Sensia Arena

Enjoy paperless hygiene with a shower toilet that can save multiple user profiles with personalised hygiene configurations. Use the Sensia Arena app to select your setting.

Touchless - no hands required



04 GROHE Bau Cosmopolitan E

The infrared sensor detects hand movement so water only runs when it's needed - making hand washing more hygienic and reducing water consumption in the process.

02 GROHE Sense

GROHE Sense responds to leaks immediately and sends an alert via the GROHE Sense App. You will also receive a notification when the room temperature and humidity reach critical upper or lower thresholds.

54% of Europeans have already suffered at least one water damage incident

01 GROHE Sense Guard

Sense Guard not only detects water leakages and shuts off water supply automatically when it detects a burst pipe: it also tracks your water consumption. Receive alerts and automatic status updates via the GROHE Sense App.

Water damage

could have been prevented in 93 % of cases if a water security system had been used



*npr.org/sections/thesalt/2013/10/28/241419373/how-much-water-actuallygoes-into-making-a-bottle-of-water

^{**}based on a family of four

A SENSE OF REASSURANCE

Make managing your water smarter, safer and more efficient, with GROHE Sense and GROHE Sense Guard



YOU MIGHT THINK IT WON'T HAPPEN TO YOU. BUT THE FACT IS THAT EVERY 2ND HOUSEHOLD HAS EXPERIENCED WATER DAMAGE AT LEAST ONCE.



GROHE SENSE The smart water sensor that detects water leakage in your home

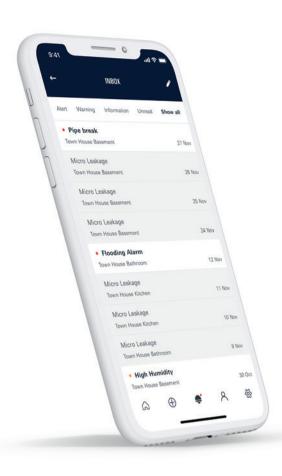
As soon as water touches the base, due to flooding or leaks, GROHE Sense will send you an alert via the connected GROHE Sense App. The smart water sensor also lets you remotely track humidity and temperature across individual rooms in your home. So wherever you are, you've got everything you need to feel totally reassured. From leaks and drips to an overflowing bath or burst pipe, GROHE's system registers every last drop. That's why GROHE's smart water management system can also offer peace of mind when it comes to protecting your home from potentially devastating leaks.



GROHE SENSE GUARD

The smart water control that tracks consumption, detects leaks, and can automatically shut off the water supply

GROHE Sense Guard gives you even more protection: installed at the mains pipe, it shuts off the water supply by itself when it detects a burst pipe. It can do the same if Sense detects water on its underside. After all, it's good to know your home is being looked after – even when you're not there. Of course, when you're going on holiday, it's wise to leave a set of keys with a neighbor, and switch your water off at the stop cock or stop valve if you'll be away for a while. But to ensure maximum protection, invest in a GROHE Sense Guard to minimise water damage before a drip becomes a flood. After all, coming home to a flooded property is a nightmare scenario. Repair bills for water damage can easily run into the thousands, and with insurance companies reimbursing an average of just 31% of the total cost, things can get expensive real fast. But there's an easy fix: with GROHE Sense Guard, you can check your home's water supply – even when you're at work or on vacation. The smart home has changed the game for homeowners in so many ways – now, thanks to GROHE, you can have the peace of mind of always having your water under control.





GROHE'S SENSE APP IS THE INTELLIGENT CONTROLLER FOR THE GROHE SENSE WATER MANAGEMENT SYSTEM

The GROHE Sense App is a critical tool — it's your comprehensive water management assistant that fits in the palm of your hand

TEXT: SAMI EMORY

A smart home is a stress-free home. The sound of your voice or the press of a button is all it takes to vacuum floors, protect your family, or even heat or cool your house on your way home from work. In a smart home, daily worries and household tasks become a thing of the past, making way for a safer, more efficient way of life. And a happier one, too: smart technology leaves you free to spend your time and energy on the things that you've never gotten around to and that have always come second to

running your home. For any home equipped with GROHE Sense and Sense Guard, the GROHE Sense App is a critical tool – it's your comprehensive water management assistant that fits in the palm of your hand. You could even call it the "digitalisation of water", as it offers an innovative way to monitor your home's water usage. Ultimately, the app even lets you protect your home against the dangers posed by water and the damage it can cause – giving you the peace of mind you need to feel risk-free.

ALWAYS LOOKING OUT FOR YOU

The brains of the state-of-the-art GROHE Sense system, the GROHE Sense App provides a digital water profile of your home via the GROHE Sense and Sense Guard water management devices. Wherever you are, the app gives you a total overview of your water consumption. How much water did you use over a given period, and how much did it cost? The answer to these questions can now easily be found in your smartphone. You can even get an estimate of your consumption of hot water and how much it cost. If worst really comes to worst and GROHE Sense Guard detects a water leak, you're notified immediately through the GROHE Sense App and the water supply is shut off completely. So, you don't only know the ins and outs of your water consumption, but also when to take measures to really ensure that water is only giving you enjoyment, and nothing else. Thanks to GROHE's new Sense App, your home's water management and security are at your fingertips.



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DISCOVER THE WORLD OF GROHE

If you're looking for ideas or solutions for your bathroom and kitchen, the **GROHE MEDIA APP** is where you will find your inspiration. This app puts all the latest content from GROHE – magazines, videos, books, and brochures – at your fingertips. This is just a small selection of what the world of GROHE has to offer: the perfect addition to your GROHE home.



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