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The Magazine of the WIRTGEN GROUP www.wirtgen-group.com 01/2020

Thinking Forward

The Wirtgen Group is moving forward with flexibility and innovation.



Dear Partners, Customers, and Friends,

The entire world is currently gripped by a single topic: COVID-19. What can be done to protect employees and simultaneously continue operations in order to provide the best possible support to customers or clients, even in these difficult times?

This is the question we have all asked ourselves - you as our customers and partners and we as a manufacturer and sales and service organization.

As an innovative company, the Wirtgen Group succeeded in quickly implementing measures that allow us to perform this delicate balancing act. Mobile work, virtual meetings - and above all else, flexibly adapting shifts and production to the availability and flow of goods. Worldwide. This has allowed us not only to protect our employees, but also to remain able to deliver our products.

Now it is important that public authorities around the world remain committed to infrastructure and construction measures and have these projects carried out to the extent possible, even in the era of COVID-19. Now is the right time to invest in mobility and infrastructure.

Looking Ahead

We all have to adapt to the new situation and look towards the future - learning from today to shape tomorrow. And that is exactly what we are doing with this issue of FORUM. We're focusing on innovation, progress, and digitization.

We also look forward to presenting our product innovations, which we introduced at the industry's leading trade show in the United States, the CONEXPO/CONAGG in Las Vegas. Our customers that attended the event were impressed by the Wirtgen Group's product innovations, and the expanded opportunities and synergies with John Deere were also well received by the trade show's visitors.

Our promise of "Close to Our Customers" is more important today than ever before. Whatever you need - be it a financing solution, a new or used machine, spare parts, or maintenance and repair services - don't hesitate to contact your local Wirtgen Group representative. We will do everything in our power to assist you quickly and effectively.

Together, we will make it through this challenging situation. Best regards,

Domenic G. Ruccolo

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Publisher WIRTGEN GROUP, Branch of John Deere GmbH & Co. KG, Reinhard-Wirtgen-Strasse 2, 53578 Windhagen, Germany,

E-mail: forum@wirtgen.de, www.wirtgen-group.com

Mannheim District Court, HRA 704371, VAT ID No.: DE 283 504 884

General Partner John Deere GmbH, limited liability company, Registered in:

Luxembourg, Commercial Registry No. R.C.S. Luxembourg B 161281 **General Managers** Rainer Otto, Markwart von Pentz, Dr. Thomas Peuntner, Domenic G. Ruccolo, Dennis Docherty

Responsible for Content Michaela Adams, Phone: +49-2645-131-0,

Fax: +49 2645-131 499, E-mail: forum@wirtgen.de

Editorial Team Michaela Adams, Mario Linnemann, Alice Alves.

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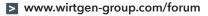
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Flexible, Innovative, Forward.



INTERVIEW ABOUT COVID-19

Thinking Forward

In this interview with our editorial team, Domenic G. Ruccolo, CEO of the Wirtgen Group, talks about the current situation in the era of COVID-19.

hat does the COVID-19 pandemic mean for the company?

Over the course of John Deere's 183year history, we have successfully overcome many challenges, including world wars, recessions, and natural disasters. Now we're facing the challenge of COVID-19 like every other company and also like every person in the world. As a part of the strong, stable John Deere Group, here at the Wirtgen Group we're doing our best every day to protect our employees and at the same time provide our customers with the best possible support. We are proceeding prudently but decisively. I'm firmly convinced that at the end of the pandemic, we'll be able to say that we've come out of it stronger and have learned from it - as a company, but above all, as people.

What is the key to coming out of the situation successfully?

It's important that companies adapt to the new situation as quickly as possible and accept this "new normal" - but proceed in a structured and careful way. Companies that allow themselves to get bogged down by fear and inaction and think they can wait until the virus disappears will have a very hard time. The key now is to come up with solutions and look ahead. If certain workflows and processes can no longer be carried out, new ones need to be implemented. This is how development and progress generally work. We need to keep moving - and in this kind of situation, with even more momentum than usual.

Have you been able to implement this for the Wirtgen Group?

The Wirtgen Group operates eight factories - in Germany, Brazil, India, and China - and has subsidiaries in many countries around the world. Protecting our employees, customers, and partners is our top priority around the globe. We immediately took steps to ensure that this was the case and adapted all of our business activities to the new situation. We are very fortunate that these measures, which were obviously tailored to the specific needs of each location, have been effective. This means that we are still in a position to provide our customers with the best possible support. The pandemic is running its course very differently in the various markets. Governments are imposing restrictions on public life, for example through shelter-in-place orders. This is obviously having a direct impact on our local business activities.

We are adapting to the circumstances and at the same time trying to prepare for the time following the lockdown. There is simply no time to lose - especially when it comes to protecting human lives.

Now obviously you have to position yourself accordingly. This means changing processes and routines and breaking free from old habits. We view this as a continuous improvement process that we are implementing deliberately.

What is now important for the industry?

The governments of many countries and nations regard the continuation of important infrastructure measures and road construction or repair projects, even in the era of COVID-19, to be essential services necessary to maintain public life and public order. We completely agree. It's important that government agencies continue to issue requests for proposals and that contractors can continue to work on their construction projects - of course only in compliance with the measures adopted to protect workers. Now is the perfect time to carry out infrastructure measures. There have never been fewer vehicles on the road. We need to use this momentum. Continuity in the construction sector helps stabilize many markets around the world.

What lessons have you learned from your experiences over the past few months?

I'm impressed by how exceptional situations can change processes and workflows. For example, how quickly we were able to implement mobile working models and how effectively they are being used. Or how smoothly our team has embraced and implemented changes and the pragmatic approach every-

"Stay healthy!"

one is taking to ensure the company remains successful. Or the solidarity coworkers are showing each other when it really counts. We are extremely fortunate to have such fantastic, top-performing, and flexible employees here at the Wirtgen Group. I'd like to take this opportunity to praise and thank the entire team for their efforts.

How do you view the group's global approach in this context?

As a company that operates around the world, we have been able to learn from each other across national boundaries and benefit from the experience our colleagues have already gained in other countries. By working together, we were able to make progress more quickly and provide targeted support. The virus isn't stopping at any border. This is a global challenge. But being a global company isn't always positive. When the flow of goods comes to a stop at a border, the situation becomes difficult. When this happens, decentralization, a local supply chain, and local warehouses are also beneficial. This is another area where we've always struck a good balance. And wherever it was necessary due to the current situation, we quickly adapted to the circumstances.

What would you like to say to your customers?

Above all else, stay healthy and ensure that your families remain healthy as well. That's the priority right now. As far as our business relationship is concerned, I can assure you that we will do everything in our power to remain a reliable partner to you during these challenging times. We are all going to get through this situation together - no matter what you need, don't hesitate to contact your local Wirtgen Group representative. From financing solutions to equipment to after-sales service, we are there for you and will try to assist you quickly and effectively. Together, we'll find a solution.



The supply chain has become more stable, leading to high spirits in the Shipping Department.

PRODUCTION IN THE ERA OF COVID-19

Back Up and Running

The world has changed since the outbreak of the ongoing pandemic. Similar to how the general public has to find a way to deal with the current state of affairs, production processes at the Wirtgen Group's factories are also being adapted to the new situation. Day-to-day business operations are now returning to normal – a new normal.

hile sales and administrative employees were forced to quickly adapt to working from home - which went relatively smoothly thanks to the IT departments' outstanding efforts - reorganizing the production facilities was a much greater challenge. The biggest unknowns at the beginning of the pandemic were whether the supply chain would remain stable and whether quarantine measures would prevent us from having enough workers to maintain the new extra shifts required by the social distancing rules. This was a challenge that those responsible for production planning had to face on a daily basis. Meanwhile, the fluctuations in the flows of goods have now since subsided.

Keeping Apart - Growing Together

At the same time, the physical distance between employees in administrative positions has been increased, cafeteria operations have been suspended, hygiene measures have been intensified, and employees are once again using staircases instead of elevators. Meetings are now only held virtually, business trips are being put on hold, trade shows and events canceled, new software introduced, and mobile work processes optimized.

"It's amazing how quickly measures can be implemented when everyone does their part," says Domenic Ruccolo, CEO of the Wirtgen Group, pleased with the company's highly motivated and



Kleemann employees hard at work - while observing hygiene rules.

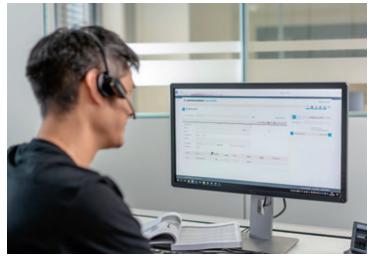
flexible team. "I'm extremely proud of all of our employees. This also goes for the solidarity being shown among the workforce. Everyone respects each other here and views themselves as part of one team, which is wonderful to see."

"I'm extremely grateful that the atmosphere is upbeat among the staff here," says Oliver Fich, manager of the Benninghoven factory in Wittlich, with a smile.

Flexibility and Solidarity

"We have no other choice but to make the best of the situation. We're once again increasing the share of components manufactured in-house in Prefabrication to ensure that we always have the parts we need. If a supplier can't deliver, we simply set up a new supply chain," explains Norbert Dinspel, head of production at Wirtgen in Windhagen, pragmatically. All of the departments are pitching in. "The Wirtgen Group's brand headquarters are working together more closely than ever before to achieve the best overall performance for the company," explains Günter Hähn, SVP of the Wirtgen Group, who is responsible for Operations, which includes production operations, for the entire group of companies.

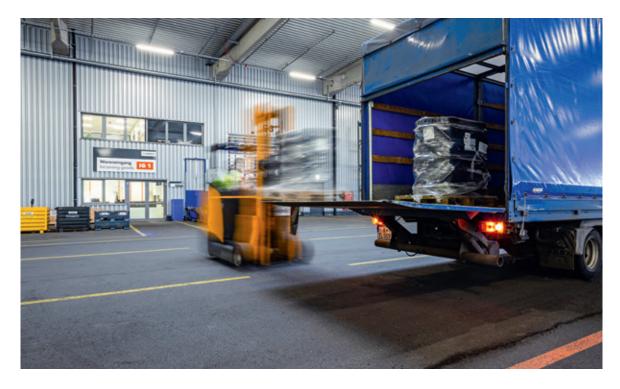
The whole workforce is pulling together and even helping out across departments - if fewer service technicians are needed at a customer's location, for example, some will instead assist their colleagues in production. And if service technicians are unavailable due to the strict quarantine rules, production staff will take over their duties and travel to customers to complete service assignments. Everyone does what they can. "In this case, it helps when you have employees who have a broad range of expertise. Given the high degree of specialization in the Wirtgen Group and the excellent vocational training system in Germany, we are fortunate to have many talented people at our locations. That helps in times



Sales and service employees can be reached as usual during the normal hours. Those that can't come to the office work from home.



Spare parts are being delivered as usual.



Deliveries are now contactless - truck drivers must remain in their vehicles while the goods are unloaded.



Physical distancing rules have been implemented on the paced assembly line. Everyone here does their part to keep each other safe.



Despite the unprecedented situation, the team remains highly motivated.

like these," explains Hähn. "But what's even more important is that we can rely on highly motivated and hard-working employees," he says, visibly pleased with the dedication shown by the entire team.

Close to Our Customers

"Since our sales and service staff is mobile and able to work from anywhere, the Wirtgen Group's representatives remain available to customers during their usual hours," explains Frank Betzelt, Wirtgen Group SVP responsible for Sales, Marketing, and Customer Support. The Wirtgen Group is keeping a very close eye on every new development and adapting further measures to the current situation in an agile manner. The key is to support customers in the best possible way.

Assuming Responsibility

"We are making sure that we act responsibly. And this doesn't just refer to the health of our employees, customers, and suppliers - which is, of course, our top priority. We're also keeping our spending to a minimum and postponing investments that aren't absolutely necessary for the time being - until it becomes clear that the global economy is on the upswing again. We are doing this based on the experience of an 183-year-old company that has successfully overcome many obstacles over the course of its history," explains Domenic Ruccolo.

"We are responding prudently to this exceptional situation that every company is currently forced to contend with, and are doing everything in our power to remain a reliable partner for our customers and a responsible employer for our employees," Ruccolo continues.

WIRTGEN GROUP TELEMATICS SOLUTIONS

Connected, Automated, Transparent

Cutting-edge construction machinery and sophisticated telematics solutions go hand in hand at the Wirtgen Group. With these systems, users are always two steps ahead on the job site.





three things in common - cost, quality, and time pressure. WITOS, the telematics platform from the Wirtgen Group, offers a seamless package of solutions for anyone that wants to increase productivity and improve their future prospects today.

WITOS is a system infrastructure that brings together a variety of different components. In addition to the FleetView fleet management solution, this also includes process management and documentation modules.

Keep Machines in Perfect Condition

The WITOS FleetView fleet management system makes processes more efficient thanks to system-supported processing, sharing, visualization, and analysis of machine and position data. The solution offers a variety of features, from systematically monitoring the operating status of machines on a daily basis to supporting maintenance and diagnostic processes - thereby minimizing response times and downtimes and optimizing maintenance work. WITOS data can also be imported into customers' existing systems via suitable interfaces.

Benefits

WITOS FleetView

- Fleet Overview: View information about machine operating modes at any time and from any location
- Reduced Workload: Optimized scheduling and planning processes to avoid unnecessary transports
- Transparency: Simplified maintenance through detailed analyses of machine operating and usage patterns
- **Speed:** Short response times in the event of malfunctions
- Efficiency: Minimization of downtimes through optimized scheduling of service appointments

The SmartServices inspection and maintenance agreements perfectly complement the fleet management features. With WITOS FleetView, customers can keep track of where their machines are and what operating mode they are in - at any time and from any location. This allows them to respond early to upcoming maintenance work in order to ensure that their machines retain their value over the long term.

Managing Processes and Increasing Quality

The Wirtgen Group has developed intelligent software solutions and integrated them into the WITOS infrastructure in the form of modules to optimize the process of connecting value chains in planning, execution, and operation. Digital processes and tools can be used to increase the profitability of construction projects.

For example, the full version of WITOS Paving Plus is Vögele's software-based process management solution for asphalt paving. It connects everyone involved, from the asphalt mixing plant to the paver operator, and consists of a total of five modules. As a result, site planning (Control), mix supply (Materials), mix transport (Transport), asphalt paving (JobSite), and subsequent process analysis (Analysis) can all be managed in real time via a single system. The site manager and paving team can respond to potential disruptions quickly and systematically and make paving processes much more efficient.

Once a construction project has been completed, it can also be analyzed and documented. This data can be used to identify ways to optimize future jobs. Because the data and information can be shared with all of the contractors working on a site, construction processes also become more transparent, allowing all of the parties involved to carry out their work based on the same, up-to-date information – thereby permanently improving the paving process.

A Smart Solution for Digital Job Site Documentation

The Wirtgen Group also offers practical WITOS modules for the documentation of projects using construction machinery from Wirtgen, Vögele, and Hamm.



With the Wirtgen Performance Tracker (WPT), information flows directly between the machine, the operator, the service workshop, and the scheduling office.



With WITOS FleetView, customers can keep track of their fleet of machines at all times.



Asphalt Paving: WITOS Paving Docu

WITOS Paving Docu offers contractors a smart solution for the digital documentation and analysis of asphalt job sites. With this system, the road paver acts as a server and is responsible for sharing data between the machine and a smartphone app via a Wi-Fi connection. Using the app, site managers and paver operators can start jobs with WITOS Paving Docu via the machine terminal and log a wealth of machine and paving data such as the working width, paving speed and stops, and the effective paving time. In addition, the system can be used to scan delivery documents via QR code (or enter them in manually) as well as continuously calculate paving areas, quantities, and surface densities. After finishing the job, site reports are automatically e-mailed to selected recipients.

Compaction: WITOS HCQ

When it comes to compaction processes in asphalt paving and earthworks, RFPs increasingly require contractors to offer detailed and comprehensive compaction measurement and documentation. To help them meet these requirements, Hamm's modular HCQ (HAMM Compaction Quality) system offers solutions for measuring, monitoring, documenting, and managing compaction and compaction processes. The HCQ Navigator, for example, is used to comprehensively monitor compaction - in a fully automated manner that includes a thorough analysis of the compaction process. In doing so, the system continuously displays compaction performance to the roller operators on their panel PC. During compaction, all of the process data is sent directly from the rollers to the Wirtgen Group's WITOS portal via a cellular connection, where it is also available to document and analyze the compaction process. WITOS HCQ also allows site managers and other authorized parties to track compaction progress in real time, even from another location - allowing them to adjust work processes as required. As a result, contractors can cut costs by reducing the number of passes and operating expenses and increase the quality of their work.

Cold Milling: Wirtgen Performance Tracker

The Wirtgen Group also uses the WITOS telematics solution's infrastructure for road rehabilitation. Wirtgen has developed a solution that, for the first

Compatible Systems

JD Link and WITOS

Customers and dealers who want to manage machines in one fleet that are equipped with both John Deere and Wirtgen Group telematics solutions can do so conveniently in one interface. The two systems are fully compatible with each other.

time, makes it possible to accurately and reliably document actual milling work completed - the Wirtgen Performance Tracker (WPT). To do so, the WPT first uses a laser scanner to measure the cross-sectional profile of the area to be milled. Surface milling performance and milling volume are then precisely measured using GPS positioning and other sensors. The machine operator can continuously monitor key performance data in real time on the control screen. After completing the milling job, a report with all of the relevant performance and consumption data is automatically generated and e-mailed to the machine owner.

Without the WPT, a surveying technician usually has to calculate the milling work performed at the end of the job manually, resulting in additional costs and delays in completing the project. With its WPT, the specialist for cold milling machines demonstrates how the automated flow of information between the machine, the operator, the service workshop, and the scheduling office makes processes easier, faster, and more cost-effective.

A Complete Modular Solution

These examples from the Wirtgen Group's different product brands show that with WITOS, customers can select the solution they need from a comprehensive range that offers the right tool for every application. As a result, contractors can save time, cut costs, and improve quality when carrying out their projects, while simultaneously managing all of their machines in a more efficient manner.

www.wirtgen-group.com/telematics

INTERVIEW WITH TORSTEN KREUTZER

Is Digital Agriculture Paving the Way for Road Construction?

In this interview, Torsten Kreutzer, Project Manager Construction Execution Systems at the Wirtgen Group, talks about his initial experiences within the Wirtgen Group and how to use the synergies with John Deere.



r. Kreutzer, you were previously with the John Deere corporation. What's your general impression of the Wirtgen Group's

R&D departments? How innovative do you consider the company to be?

The Wirtgen Group's product brands are the clear technology and market leaders in their respective niches. This is also apparent when you work with the developers and experts. It's really impressive to see how passionate they are about progress here. Due to the product brands' high degree of specialization, the development process is also much more complex than I initially imagined.

What do you think is the secret to success behind why the Wirtgen Group's product brands set technological standards?

The high degree of specialization certainly plays a major role, but also how close the company is to its customers. The developers directly interact with the users of the machines and incorporate requests and suggestions from the field directly into the development process. Many developers are also application experts and can discuss ideas and feedback with machine operators as peers. They speak the same language. This is why newly developed features and products are so well received by the machine oper-

What's your assessment of the synergies that will result from working with John Deere at the development level?

There is tremendous potential here. When it comes to telematics and control technologies, we can benefit from our John Deere colleagues' experience. Hardly any other sector is as far along in implementing the methodological approaches of Industry 4.0

as agricultural engineering. So it makes sense to analyze these approaches and apply them to the road construction sector where appropriate.

Does this imply that the road construction sector is lagging behind in terms of technological advancement?

No, because we can't compare apples and oranges. When looking at machine technologies, agriculture and road construction certainly have a lot in common. But the two sectors have very different requirements when it comes to operating processes and logistics. This becomes clear when we consider digitization, for example.

What do you see when it comes to digitization?

One reason that digitization in the road construction sector isn't as far along is that the various different activities that make up a construction project are often isolated as "job sites within a job site" and are also carried out by different contractors. This has slowed down the large-scale introduction of digital assistance systems in the industry. As the technology leader, however, the Wirtgen Group was quick to lay the foundations for the digitization of its construction machinery. Today, process sequences and details are comprehensively documented and the collected data becomes part of a digitally connected job site analysis.

How open do you think machine users are to digitization or telematics solutions in general?

The majority are immediately impressed with digital technologies as soon as they see that, for example, automatic documentation can increase quality and simultaneously ensure that it can be achieved with reliability. The possibilities they offer with respect to



Torsten Kreutzer has been responsible for the implementation and further development of Wirtgen Group telematics systems since December 1, 2019. In this context, his project team works closely with the Intelligent Solutions Group and John Deere's Global Technology Innovation Network. Kreutzer began his career with John Deere Ag Management Solutions (AMS) in April 2006. His most recent position was as Manager Digital Innovation at the European Technology Innovation Center in Kaiserslautern, and he will continue to hold this position at John Deere.

"The developers directly interact with the users of the machines."

preventive machine maintenance and remote monitoring are also greatly appreciated. Our customers already benefit from the big data collected from Wirtgen Group machines, which we make available to them via our WITOS Fleetview fleet management system.

Where do you think future development is heading? What are some potential challenges?

It's always difficult to make specific predictions since they depend on a wide variety of different factors. New communication standards such as 5G will certainly prove to be extremely beneficial in the further development of future telematics solutions. They will allow us to transmit data much faster with increased bandwidth and therefore also enable our customers

to use it more efficiently. One of the main challenges will also be to better integrate the many individual road construction processes into a combined solution. This would help the industry take a major step towards Industry 4.0. The Wirtgen Group has already come a long way with the telematics solutions for its technologies.

On a final note, let's take another look at the synergies with John Deere. Can you share some of the specific details as they pertain to your project?

The collaboration with John Deere and the Wirtgen, Vögele, Hamm, Kleemann, and Benninghoven development teams is going extremely well. The benefits for the Wirtgen Group became clear very quickly. John Deere supports our development activities with its own manpower, provides us with insights into the knowledge they have acquired, and is adapting to our challenges. We are working towards a common goal, and this gives us a competitive advantage. Many John Deere technologies and the development expertise that we now have full access to would have been difficult for the individual Wirtgen Group companies to achieve through their own development efforts and with their own budgets. Or at least not this quickly. So in the end, we are all taking a giant leap forward.





CONEXPO-CON/AGG 2020

Innovation, Performance, Partners

With more than 30 exhibits, including 10 world and North American premieres, as well as an interactive technology exhibition, the Wirtgen Group's booth became a magnet for visitors at Conexpo-Con/Agg 2020. The synergies with John Deere were also met with great interest.



The Wirtgen Group's experts were also "Close to Our Customers" in Las Vegas.

xhibiting in the outdoor area of North America's largest and most important construction trade show, the Wirtgen Group presented the company and its products as impressively as ever over a space covering nearly 2,800 square meters. "Innovation. Performance. Partners." was the company's slogan for the event, and all three were on full display - in addition to the numerous world and North American premieres that attracted large numbers of trade show visitors. The new W 220 Fi and W 250 Fi large milling machines from Wirtgen, Vögele's WITOS Paving Docu documentation system, Hamm's HP 180i tired roller, and Kleemann's MC 120 Zi Pro jaw crusher were all especially popular with the US audience. "The Wirtgen Group is exhibiting the best machines on the market. The advice from the experts and the entire exhibition are fantastic," said Mike Havel of Superior Paving from Burlington, Wisconsin, enthusiastically.

World Premiere of New Flagship Models

With the successful launch of its latest generation of large milling machines, Wirtgen has significantly increased milling performance and efficiency. At Conexpo, the specialist for cold milling machines unveiled its two flagship models - the W 220 Fi and W 250 Fi - that round out its intelligent F series. Like

all large milling machines in the new F series, they perfectly implement the operator's performance and quality specifications thanks to the innovative Mill Assist machine control system. In automatic mode, the standard Mill Assist system always maintains the ideal balance between performance and operating costs. This not only increases milling performance, but also reduces diesel, water, and pick consumption, as well as CO₂ emissions. The machine operator can also preselect one of three working strategies: cost-optimized, performance-optimized, or milling pattern quality, which gives them the ability to specify the required milling pattern quality on a scale from 1 (coarse) to 10 (very fine) in advance at the push of a button. Real-world experience shows that users already use Mill Assist more than 90% of the time their machine is in operation, significantly cutting costs as a result.

In addition, the W 380 CRi made its debut on the North American market. Wirtgen's new generation of cold recyclers are the world's most advanced machines for cold in-place recycling. The W 380 CRi is capable of recycling the entire road surface up to a depth of 300 mm, which means it is also perfect for full-depth recycling (FDR). At Conexpo, visitors were able to check out the cold recycler in combination with Vögele's SUPER 2000-3i paver equipped



Top: A real eye-catcher - the new W 220 Fi large milling machine from Wirtgen.

Bottom: Hamm's new HP series is based on a standardized platform.





Top: It's worth taking a closer look - at the high-performance pavers from Vögele.

Bottom: Visitors could explore digital solutions like WITOS Paving Docu at the Technology Center.



"The Wirtgen Group's booth at Conexpo is phenomenal. In my opinion, the new F series features the best cold milling machines in the world. I have five W 210 Fi machines myself."

Kim Butler, President of Mill It Up, LLC, Warrior, Alabama

with the AB 600 TV+ extending screed and Hamm's HD+ 140i VVHF HCQ tandem roller.

US Premiere: Smart and Digital

At the show, Vögele showcased its software-based application WITOS Paving Docu for the first time in North America. It can be used to log paving data, save delivery documents, and automatically send job site reports. To use the system, construction companies only need to install the corresponding smartphone app. The necessary hardware, telematics module, and screed width measurement are already built into the paver. The app features an intuitive menu structure so that users can quickly become familiar with the application without any special knowledge or training. WITOS Paving Docu complements two of Vögele's existing job site solutions - the RoadScan contactless temperature measurement system to monitor paving temperature across the entire paving area and the WITOS Paving Plus process management solution.

Four pavers from the SUPER line were also on display in Las Vegas. The two 10-foot machines in the Highway Class - the SUPER 2000-3i and SUPER 2003-3i - are primarily suited for highway construction and major projects where performance and productivity are the top priorities. And the SUPER 1700-3i and SUPER 1703-3i, both 8-foot pavers in the Universal Class, are perfect for a wide

range of applications from small municipal sites to highway construction and rehabilitation.

New Machine Series: Where the Rubber Hits the Road

Hamm unveiled the HP 180i tired roller at Conepo, a model from the new HP series specially adapted to the North American market. The series is full of technical innovations and advancements, particularly related to the operator's platform, the water and additive spraying system, and ballasting.

As always, the modern, spacious operator's platform or panorama cabin offers an optimum view of the machine and job site. With the help of the flexible ballasting system, the machine's operating weight can quickly be adjusted to match the type of asphalt, layer thickness, and application. In this context, prefabricated ballast weights made of steel, heavy concrete, or concrete are available. Due to the arrangement of the ballast spaces in the center of the machine, the weight is evenly distributed over both axles for optimum compaction quality. Hamm has also optimized the additive spraying system for the new HP series. When compacting special asphalts that are more difficult to process, spraying the rubber tires with an additive is the key to achieving high-quality results. Dosing from the large additive tank with fill level monitoring can be set to various different additive levels from the operator's plat-



When the going gets tough: Kleemann cone crushers really prove their worth with abrasive natural stone and in mining operations.

form. The roller then automatically doses and mixes the additive during compaction as specified.

Premiere with the Perfect Companion

The highlight of the fully compatible solutions Kleemann presented at Conexpo was the debut of the MOBICAT MC 120 Zi PRO jaw crusher. With an hourly output of up to 650 t and a feed opening of 1,200 x 800 millimeters, the high-performance plant delivers impressive results in natural stone applications and is made for demanding quarry operations. To ensure that the material flows smoothly, the Continuous Feed System adjusts the conveying speed to the crusher's fill level. While most jaw crushers require the crushing chamber to be painstakingly emptied by the operator in the event of material blockages, the MOBICAT MC 120 Zi PRO features an optional crusher unblocking system that quickly releases any obstruction at the push of a button. A secondary crushing plant of matching size and performance - the MOBICONE MCO 11i PRO cone crusher - was also on display in Las Vegas. Plants in the PRO line can be easily operated via touch panel using the SPECTIVE control concept.

Both the MOBIREX MR 130 Zi EVO2 mobile impact crusher and the EVO line of Kleemann screening plants are easy to transport and, thanks to short setup times, can be brought into operation very quickly. The new MOBISCREEN MS 952i EVO double-deck classifying screen stood in for the entire EVO line at the show, making it the perfect machine to exhibit next to the three crushing plants.

Building the Future Together

To emphasize that it's a part of John Deere and to highlight the synergies across the entire product range, the Wirtgen Group presented a John Deere 824L wheel loader at its booth, which simulated the process of filling an MS 952 EVO mobile screening plant from Kleemann. At John Deere's booth, trade show visitors had the opportunity to check out Kleemann's MOBICONE MCO 11 PRO cone crusher, which was exhibited to look like it was working in tandem with a John Deere 300G LC excavator.

Since the launch of John Deere motor graders on the European market last year, machines from both companies can now also be seen working together on real job sites. Earthworks is one example application, where John Deere graders and Hamm rollers work together to prepare and compact the soil. Road rehabilitation is another, where the graders work alongside cold recyclers and soil stabilizers from Wirtgen. One look at the Wirtgen Group's and John Deere's combined product range reveals that together, the machines cover an extremely wide range of applications.

www.wirtgen-group.com/conexpo



Top: The large milling machines in the new F series perfectly implement the operator's performance and quality specifications thanks to the innovative Mill Assist system.

Bottom: The Wirtgen Group and John Deere - a match made in heaven.





World premiere at the WOC 2020 - the WPS 62i placer/spreader.

WPS 62i PLACER/SPREADER MAKES ITS DEBUT AT THE

World of Concrete 2020

The Wirtgen Group presented innovative and market-driven solutions for concrete paving at the World of Concrete 2020 in Las Vegas. The highlight at the company's booth was the WPS 62i, which was presented as part of an inset concrete paving train from Wirtgen.

he WPS 62i/WPS 62 is available with two different strike-off units: in imperial units and in metric units for working widths between 12 ft (4.0 m) and 24 ft (7.5 m). Both of them can be used to pre-spread the concrete up to 20 inches (500 mm) thick. Due to the fully modular machine design with standard hydraulic quick-change couplings, the WPS 62i/WPS 62 can be easily reconfigured and quickly prepared for the respective job site situation or for transport, which also increases the machine's availability.

Inset Concrete Paving from Wirtgen

The WPS 62i/WPS 62 placer/spreader is designed to efficiently feed concrete from the side and spread it homogeneously in front of the slipform paver. It travels over the reinforcement as the first machine in the Wirtgen paving train. A truck feeds the concrete from the side, which the placer/spreader then evenly distributes over the entire working surface. It is followed by the SP 124i slipform paver, which paves the concrete at the required width – while simultaneously compacting and smoothing it. To complete the process, the TCM 180i texture curing machine produces a defined surface structure and sprays evaporation protection onto the fresh concrete surface.



By professionals, for professionals.

North American Debut:

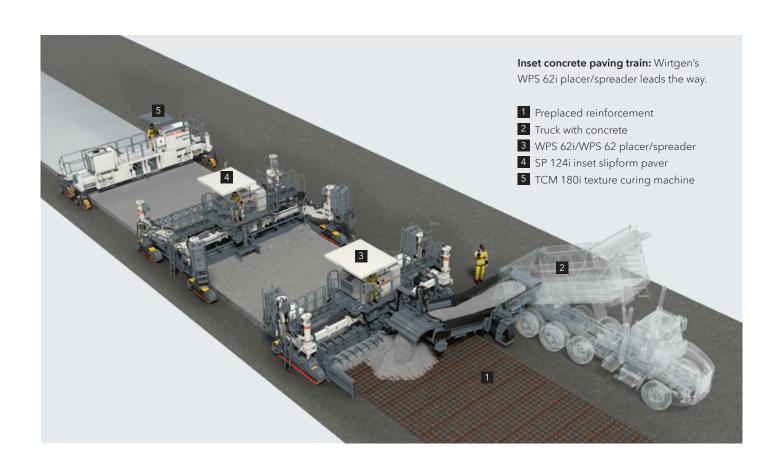


SP 124i inset slipform paver: Slipform paver for working widths up to 40 ft (12 m) with four steerable and slewing crawler units.



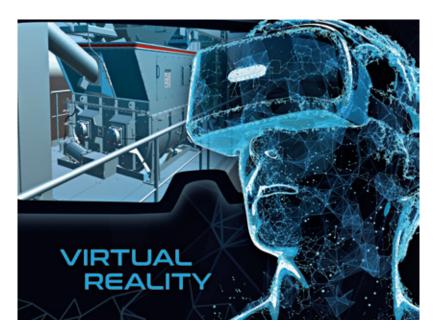
Wirtgen AutoPilot 2.0:

This 3D control system can precisely create any offset and inset profile without a stringline.



Forward!

A lot has happened in the first half of the year. Innovations, advancements - in other words, progress.



Virtual Experience

Wittlich, Germany. Since demonstrating actual asphalt mixing plants to customers isn't very practical, Benninghoven has now created a virtual solution. Not only is the ability to easily configure the modular mixing plants impressive, but so is the fact that they can be experienced virtually for the first time with VR glasses.

New General Manager

SW joined the Streumaster team. As the second general manager alongside Catherine Gutzwiller, who is also the company's owner, his goals include expanding the successful system partnership with the Wirtgen Group. In his previous position at Wirtgen GmbH, Marquardt was responsible for key accounts in the Spanish, Portuguese, and French-speaking markets.

www.streumaster.com

For a Good Cause

Windhagen, Germany. Wirtgen Group employees raised money for the Children in Need charity group - and the John Deere Foundation matched each individual donation up to a maximum of 1,000 euros. All in all, a total of 30,000 euros was collected for the charitable organization. To find out what the money will be used for, see pages 38/39.

www.kinder-in-not.de



Peak Performance

Nigeria, Africa. A total of 250 Wirtgen Group machines are currently being used to complete Nigeria's largest road construction project. With state-of-the-art equipment and professional execution, the 400 km project is sure to be a complete success.



Goodbye GRW

Tirschenreuth, Germany. Hamm's last tired roller from the old GRW series rolled off the line during a ceremony held to mark the occasion. It was an emotional farewell after 55 years - but a proud one. It's rare for a model series to last so long, which speaks to the quality of the product. From now on, the HP series will replace the old originals with their more boxy design and follow in their successful footsteps.



Digital Production

Windhagen, Germany. An increasing number of jobs in Wirtgen's production facilities are going digital. All of the information needed to manufacture a machine is provided on tablets in paperless form and is always up to date. This ensures quality and increases efficiency.



Opening Ceremony



Pune, India. The Wirtgen Group subsidiary Wirtgen India is celebrating its 25th anniversary. At a ceremony to mark the anniversary, the CEO officially opened the new machine finishing facility. Many customers also came to celebrate the inauguration. Live demos and seminars rounded out the day's events.

www.wirtgen-group.com/inauguration

Tech Talk No. 3

Göppingen, Germany. Episode 3 of Kleemann's new video format is dedicated to safety and ergonomics. Protecting personnel is the top priority when it comes to the crushing and screening plants. But safety considerations can't make it more difficult for the operator to do their work - they need to be sensibly integrated into the process. Check out the video to see how it's done!



A Match Made in Heaven

Windhagen, Germany. In the soil stabilizing job, Wirtgen and John Deere not only excelled with their sophisticated machine technologies - the tractor-towed stabilizer WS 250 and the new tractor 8R 370 - but also with the know-how in technical applications offered by these two experts.





Two Machines Two Awards

Göppingen, Germany. Kleemann has received the German Design Award 2020 for its MOBICAT MC 120 Z PRO jaw crusher and MOBISCREEN MS 702 EVO screening plant. The modern machine operation and their flexible range of applications won over the international jury.

Outstanding!

www.wirtgen-group.com/ kl-german-design-award

Award-Winning

Windhagen, Germany.

Wirtgen has received this year's iF Design Award, making it one of the winners of the world-renowned design label. The new W 210 Fi large milling machine won the award in the "Product" category. Congratulations!

> www.wirtgen-group.com/ wi-ifdesign-award





Hello America!

Alabama, USA. The Wirtgen F series has arrived, and two W 210 Fi machines instantly impressed the customer during their first job.



World Record

Pune, India. High-precision one-layer or two-layer concrete paving across an unsurpassed width of 18.75 m - this is only possible in India and only with a custom-designed version of Wirtgen's SP 1600 slipform paver. Impressive!



A Screw Loose? Never!

Ludwigshafen, Germany. Thanks to a new screw system used in screed assembly at Vögele, production operations there are even more efficient and safe. The control system, which monitors and controls up to eight screwdrivers simultaneously, is directly connected to SAP via a specially developed interface. As a result, errors like tightening a screw too fast or excessive or insufficient torque can no longer occur.



Bread and Butter

Windhagen, Germany. The two-meter milling machines have been the Wirtgen product brand's bread and butter for many years. The employees proudly said goodbye to the last two of their kind – but the pain of parting was short-lived. Their delight about the production of the new F series clearly outweighs the sadness. Everyone loves the new generation of large milling machines. #welovemilling





USED MACHINES

The First Choice for Second Hand

Anyone in the market for a pre-owned, tried-and-tested Wirtgen Group machine or system will find what they are looking for on the new online platform for used machines.

rue to its value proposition "Close to Our Customers," the Wirtgen Group is responding to its customers' needs by offering secondhand machines and systems on the new platform. Potential customers can browse through the best offers from the Wirtgen Group's brand headquarters in Germany as well as its subsidiaries and dealers worldwide. Pre-owned machines from both current and discontinued series are available. "The Wirtgen Group's system is built on John Deere's proven MachineFinder platform. This is an excellent technical solution for the Wirtgen Group," explains project manager Fabian Beck, Manager Dealer Development at the Wirtgen Group.

After each machine is returned, it first undergoes a thorough technical inspection by qualified specialists and is then appraised. The results of the inspection and appraisal are available to potential customers on the platform. Important machine data such as its age or engine hours are also listed to help customers make their decision.

Why select a pre-owned Wirtgen Group machine?

- A premium brand for a reasonable price
- Significant cost savings compared to purchasing a new machine
- Immediately available
- Wide selection of models
- Field-proven Wirtgen Group quality and first-class service

New online platform:

- www.wirtgen-group.com/used-equipment
- > www.wirtgen-group.machinefinder.com





Hamm's training area offers sufficient space to conduct practical exercises based on real-world applications.

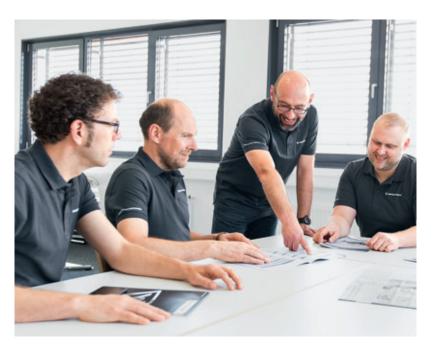
n this age of modernization, the requirements road construction and material processing machines and plants have to meet are also increasing. The Wirtgen Group's product brands strive to do more than just meet these demands. At Wirtgen, Vögele, Hamm, Kleemann, and Benninghoven, creative minds are busy developing innovative new technologies on a daily basis. To ensure that customers can fully leverage the potential of the companies' market-leading technologies during their day-to-day activities on job sites around the world, the Wirtgen Group offers a training program that covers a broad range of topics related to applications, operations, and machine technology. After all, qualified training for the relevant personnel is a basic requirement for the long-term efficient and profitable use of the machines, as is the specialized knowledge required for servicing and maintenance.

CTT - State-of-the-Art Training Centers

The Wirtgen Group runs its own training centers at its five brand headquarters in Germany and at numerous locations operated by its sales and service companies around the world to ensure that knowledge and expertise can effectively be transferred to customers and partners. These Centers for Training and Technologies, or CTT for short, were developed to create the conditions necessary to transfer knowledge in the various areas of application. At these state-of-the-art training facilities, experts from Wirtgen, Vögele, Hamm, Kleemann, and Benninghoven share their expert knowledge with operators, site managers, service technicians, and workshop staff. Equipped with whiteboards, projectors, and various simulation systems, the facilities offer everything required for professional training activities. "In addition to the training rooms, where we teach the



The Wirtgen Group's customers can also attend training courses at numerous subsidiaries around the world.



Lothar Krumscheid, Head of Customer Support Training at Wirtgen in Windhagen, and his team plan the new training program for the Windhagen location. participants theoretical concepts, the training halls are particularly important," explains Mirko Hartung, Head of Customer Support Training at Vögele in Ludwigshafen. Here the participants are also shown tips and tricks for day-to-day operations directly on the machines. "In our experience, the knowledge that our customers gain during the practical exercises is what they remember best," continues Hartung.

Thankfully, training participants do not have to worry about having to take long trips to the facilities. The dense global service and sales network ensures that the nearest training location is never too far away.

Something for Everyone

The wide range of training courses offered by the Wirtgen Group is tailored to the different challenges encountered on a job site and covers all potential audiences from operators to site managers. Divided into application, machine operator, and machine technology training courses, the product brands' highly specialized personnel train the participants in small groups. In the application training courses, a distinction is made between two main topics: application technology and application consulting. "Application consulting is geared towards government agencies and companies in order to help them select the right process prior to the start of a construction project," explains Lothar Krumscheid, Head of Customer Support Training at Wirtgen in Windhagen. In contrast, the training courses on application technology focus on machine operators, who are taught how to achieve the most effective results.

In addition to these, the program includes machine operator training courses that are also specially designed for operators. They focus on the controls - "simply put, we explain the function of every



State-of-the-art training facilities offer everything needed for high-quality, professional training.

single button and switch." Machine technology training courses round out the training program, where users learn how to carry out maintenance, service, and repair work independently.

Quick and Easy Booking

A new platform was set up at the beginning of the year to make it as easy as possible for customers to book training courses with the Wirtgen Group. The company's training portal provides potential partic-

ipants with an overview of all of the training courses available at the brand headquarters. They can then register for the training course of their choice with just a few clicks. The portal also contains an overview of the individual courses' content and learning targets. "Thanks to the new training platform, registering for a course is now even easier," says Krumscheid.

www.wirtgen-group.com/training



Working with the actual machines is an extremely important part of the Wirtgen Group's training courses.

AID PROJECT IN INDIA

Educational Opportunities for Disabled Children

A total of one billion people worldwide suffer from a disability. A total of 80% of them live in countries of the Global South. Without foreign help, they have little chance of escaping the vicious circle of disability and poverty.



ur Children in Need charity group has been working to address the special needs of disabled children and young people in India in two aid projects.

I personally visited the projects at the beginning of the year myself to see how the projects are progressing and to verify that our donations are being used properly.

One of the two projects is being carried out at the Kinder Care Special School in Palamaner, in the state of Andhra Pradesh. The school for disabled children was founded by the Children in Need charity group in 2003, back when there was no comparable facility in the region. Over the years, a health center and a vocational training department have been added to the facility.

Achieving More Together

The second project is the Snehasadan Home for the Disabled in the central Indian state of Madhya Pradesh. Children in Need took over the project in 2017, expanded it, and added a school for disabled children.

The Wirtgen Group agreeing to cover the running costs of this facility for the first year was a huge help. We were also particularly happy to be able to benefit from John Deere's "Matching Gift" program for Christmas in 2018. Through this program, donations from the Wirtgen Group's worldwide employees were matched by the John Deere Foundation up to a total of 1,000 euros per donation. The funds we received as a result were used to build a roof over the inner courtyard in Snehasadan.

During my visit, I had the opportunity to experience firsthand how this courtyard has become the center of life at the home. This is where the children eat, play, learn, and sit together. The roof now



Gisela Wirtgen visited the projects to ensure that the donated funds were being used properly.

protects them from the intense heat in the summer and the rain and cold in the winter - before it was built, this area could hardly ever be used. All of us here at Children in Need are delighted that we have been able to significantly improve the living conditions of the disabled boys and girls.



Best regards,

(Chair)

The "Children in Need" Initiative Gisela Wirtgen

HE "CHILDREN IN NEED" INITIATIVE

YOU CAN ALSO HELP CHILDREN IN NEED!

Our projects are designed to help over the long term. Every cent brings us one step closer to our goal!

Accounts for Donations

Sparkasse Neuwied

Account Number: 012 022 752 Bank Identifier Code: 574 501 20 IBAN: DE87 5745 0120 0012 0227 52 SWIFT-BIC: MALADE51NWD

Raiffeisenbank Neustadt e.G.

IBAN: DE16 5706 9238 0100 0527 24

BIC: GENODED1ASN

The Charity Group

was founded in 1983 on the initiative of Gisela Wirtgen, operates on a voluntary and charitable basis for children in need based on the idea of "helping people help themselves," is not affiliated with any political party or religious denomination, and carries out aid projects in the Philippines, India, and Brazil.

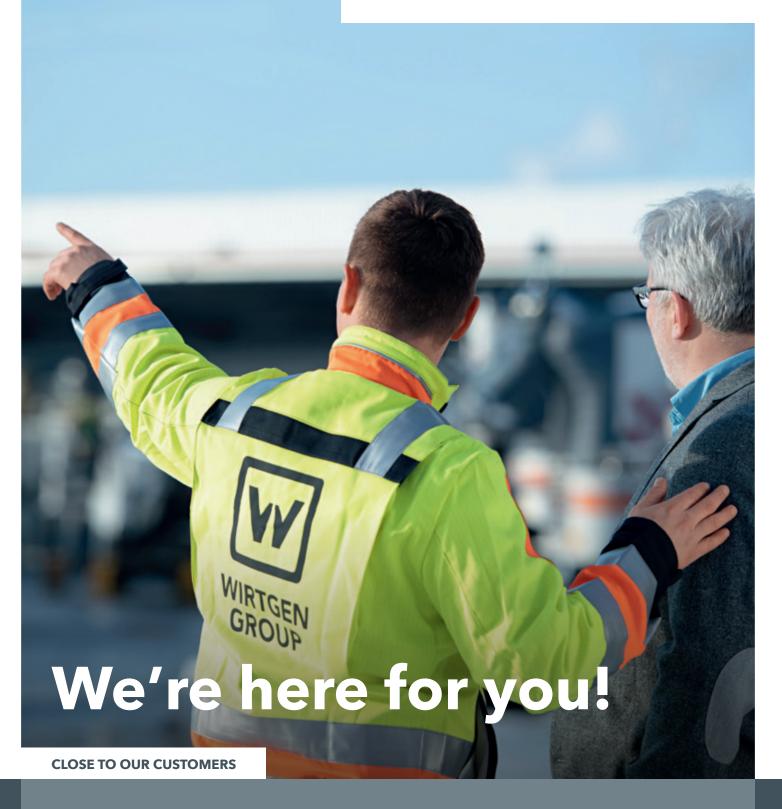
Further Information



www.kinder-in-not.de







We are aware of the uncertainties associated with the COVID-19 pandemic and the potential challenges our customers are facing. If you need any assistance, please do not hesitate to contact your local WIRTGEN GROUP representative at any time. Together, we'll find a solution.

> www.wirtgen-group.com