

# FORUM

The magazine for customers, dealers and staff of the Wirtgen Group

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AMERICA

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Close to  
our customers

## Arizona: Double-duty crushing

FLORIDA: Rebuilding Interstate 4 with SP 84i slipform paver

LOUISIANA: Shift to technologically advanced machines

CALIFORNIA: Wirtgen cold mills help Apple go 'green'



ROAD AND MINERAL TECHNOLOGIES

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# ROAD

Wirtgen Group Products stand for the world's leading road building and mineral technologies. Every single one of the four strong brands in the group – Wirtgen, Vögele, Hamm and Kleemann – have been influencing the development of machines and applications all over the world. Our passion is our motivation to continuously perfect our range of products with the customer as the focus of all our activities.



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## Top-flight Conexpo-Con/Agg exhibit equals top tier for Wirtgen America

**T**hey say when the stars are aligned just right, the whole can be bigger than the sum of its parts.

At Conexpo-Con/Agg 2014 earlier this year, Wirtgen America's diverse, long-standing efforts came together in one spot at one point in time. And to the surprise of us all, our exhibit revealed that our "whole" truly is bigger than the sum of its parts.

At Conexpo, Wirtgen America consolidated its position in the top tier of the road machinery and minerals technology equipment manufacturers. Underscored by the hard work of our staff and allies – and a magnificent lineup of technologically advanced equipment showcased in the most attractive stand at the show – our exhibition demonstrated in startling fashion that in North America, Wirtgen America now stands shoulder-to-shoulder with the most established names in the business.

Our showing at Conexpo-Con/Agg was a powerful statement by our company as to the level of technology, quality and professionalism that Wirtgen America brings to the table. This becomes evident when you look back six years ago.

If you go back two Conexpos, it will take you to a time during which we at Wirtgen America were trying to get our customers and the industry in North America to understand who we were on a global basis. We are fortunate that in the following years it was a successful effort, and that success manifested itself very well at this year's Conexpo.

It took the customers who visited our stand to tell us that. After a walk around the stand, seeing our offerings in four product lines, our long-standing customers told us, "Now, this is Wirtgen Group! We get it. Now we understand who you are." And we had new customers – major industry consolidators – who formed or cemented their image of us as a top tier equipment provider by what they saw in our display.

What are the parts that provided the synergy at Conexpo-Con/Agg? We can begin with our four product lines: asphalt reclaiming/recycling, concrete slipform and surface mining equipment from Wirtgen, asphalt pavers from Vögele, asphalt and soil compactors from Hamm, and construction materials processing equipment from Kleemann.

The models we produce have great value in terms of innovation, quality and reliability. At our Conexpo stand we showed dozens of new machines with tons of new features that weren't even on display at Conexpo three years ago.

Our image, so to speak, derives from the reputation and success of the long-standing Wirtgen line of cold mills and recyclers. Over the decades, that line built an extraordinary reputation. Now, with the Wirtgen name as the foundation, our subsequent product lines have grown from niche brands with foreign-sounding names to formidable competitors in the top tiers of their markets.

So often customers have purchased these paver, compactor and aggregate processing brands relying on their experience with Wirtgen cold mills. Now, it's evident from Conexpo that these brands are standing on their own and leading their markets in North America, and we saw that at Conexpo.

Lastly, our distributors, sales and support staffs have been critical in familiarizing our products to new and existing customers, and after the sale, making sure they use their features to the best advantage, and keep them working year after year. Our distributors were very proactive in bringing people to our exhibit. They set up meeting after meeting with our staff, and it resulted in a large amount of equipment sales right at the show.

And that leads us to the final piece that makes our "whole" bigger than the sum of its parts, and that is you, the customer. We at Wirtgen America thank you for your interest and support, and want you to know that we will do our part to stay in that top tier in providing equipment of advanced technology that will work for you.

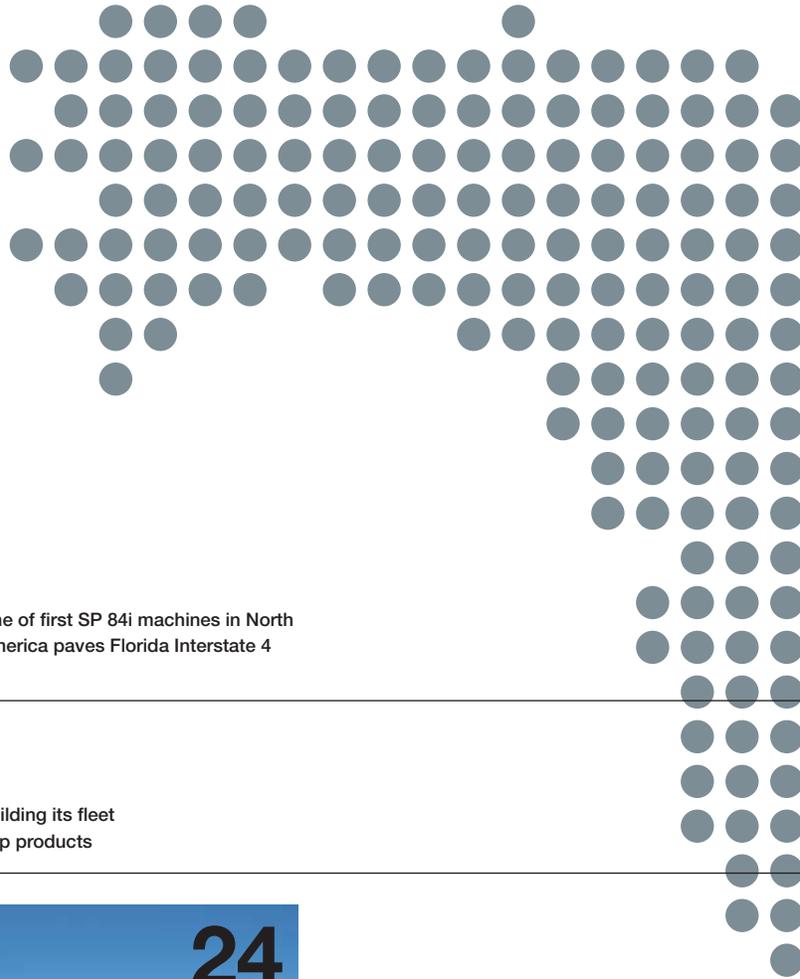
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President / CEO

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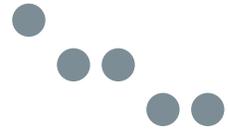
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WIRTGEN: SP84i SLIPFORM PAVER IN FLORIDA

# Race to the finish

Just west of Daytona International Speedway in Daytona Beach, Fla., a new Wirtgen SP 84i concrete slipform paver is rebuilding I-4 in a \$134 million widening for the Florida DOT.



As an i-class machine, the SP 84i features advanced intelligent operational, power and emissions control systems



“We are reconstructing about 13 miles of I-4,” said Shawn Free, president of Concrete Services LLC, based in Boynton Beach, Fla. “We are widening the interstate by adding a third driving lane. It involves both new construction and reconstruction; we are replacing the existing asphalt road with a new 12-in. thick concrete pavement.”

The limited-access roadway will consist of two 12-ft. lanes and an additional 14-ft. lane that includes 2-ft. of shoulder. “The existing freeway was prepped by milling,” Free said. “A subcontractor milled off 3-in. using a Wirtgen mill followed by micromilling and profiling each lane to the correct cross-slope. Then we were ready to pave: first installing the outside 14-ft. lane, and lastly latching on the two remaining 12-ft. lanes simultaneously. When completed the concrete surface is a total of 38-ft. wide.”

Concrete was being brought from an onsite batch plant via dump truck, then placed ahead of a spreader in advance of the SP 84i paver, which when visited was paving 24 ft. wide. “The mix consists of No. 57 stone, a ¾-in. stone, and natural sand, bound with Type I cement and Class F fly ash,” said Joe Ishmael, paving superintendent for Concrete Services. Air entraining and water reducing admixtures also were being employed.

Ishmael estimated that by project’s end in 2015, a total of 210,000 cu. yd. of concrete would be produced from the central-mix, double-drum portable plant, rated at 700 cu. yd. per hour.

“Generally we achieve sufficient strength to drive on the pavement in three to four days,” Ishmael said. “Normally we are sawing within six to eight hours after placement, by the end of the day.” Joints were being sawed at 15-ft. intervals, and the concrete must reach 2,200 psi in order to drive on it, he said. Ultimately,

the 28-day strength will be greater than 4,000 psi.

On completion the driving surface will be diamond-ground to ensure smoothness. “All concrete pavement laid for the state of Florida is 100 percent diamond-grind,” Free said. “I don’t believe it’s necessary given the smoothness we can achieve. I believe that we should look around the country at what other DOTs are doing and perform a rideability test on the new pavement, and depending on the Profilograph or IRI number, either do corrective grinding, or zero grinding.”

## ONE OF FIRST SP 84I PAVERS

For this high-profile project, Concrete Services was using a new SP 84i slipform paver – one of the first in North America – from local distributor Linder Industrial Machinery Co., Orlando. “It’s a good deal for everybody,” Free said. “Wirtgen and Linder get to showcase their paver on one of the prominent jobs in Florida, and we get to examine the new technology from Wirtgen.”

As an “i-class” machine, the SP 84i features advanced intelligent operational, power and emissions control systems. The SP 84i is Tier 4 interim emissions-compliant.

The SP 84i used on I-4 is a permutation of the modular SP 80i platform from Wirtgen. The SP 80i’s modular design permits different configurations. The SP 80i can be set up as an offset SP 81i for very large sections, or as an inset paver with two-tracks (SP 82i) or four-tracks (SP 84i). However, the modular design of the SP 80i platform means any model can be reconfigured into another with the right options.

For inset paving like at I-4, the SP 80i platform’s fully modular inset mold system permits paving of concrete slabs



Next-generation controls provide superior regulation of machine performance, and the diagnostic system has a standardized interface for quick, targeted service when necessary



Wirtgen SP 84i slipform paver follows spreader receiving concrete from dump trailers



with central crown from 12 to 26 ft. wide. Concrete can be spread by spreading plow or spreading auger; a plow was used on the SP 84i on I-4 near Daytona Beach.

"It's my personal opinion that the spreader plow does a better job of moving 'mud'," Ishmael said. "I've run both auger and spreader plows, and also find that the plow receives less wear than the augers and bearings."

The SP 80i pavers can use up to 24 electric or hydraulic vibrators. On I-4, 24 Minnich "smart" vibrators were used with an Auto-Vibe III controller. As specified by Ishmael, two outside vibrators were located 6 in. from the edge of the slab, with all others on 16-in. spacings.

Next-generation controls provide superior regulation of machine performance, and the diagnostic system has a standardized interface for quick, targeted service when necessary

A "Super Smoother" was used immediately behind the SP 84i. "It seals up the concrete very well, and removes the blemishes like porous holes," Ishmael said. "The hand finishers wind up with very little work behind the paver."

"The SP 84i lays a good-looking mat," Ishmael added. "I like the four-track machines like the SP 84i versus the two-track because you get a better ride with the four tracks. If we need to sectionalize or change widths on the SP 84i it's pretty simple, and very easy to work on. It's a well-made machine!"

'Super Smoother' is used immediately in back of the SP 84i

Concrete is brought from an onsite portable plant via dump trailers



**“The Super Smoother seals up the concrete very well, and removes the blemishes like porous holes. The hand finishers wind up with very little work behind the paver.”**

Joe Ishmael, paving superintendent, Concrete Services



Wirtgen W 200 trims right-of-way in advance of concrete placement



WIRTGEN GROUP: ROAD TECHNOLOGIES PRODUCT LINE IN LOUISIANA

# Diamond B's crown jewels

A shift to the technologically advanced road construction machines of the Wirtgen Group is underway for a major Louisiana contractor, who sees major advantages to Wirtgen Group technology in coming years.



On two-lane rural road, Diamond B places overlay with Vögele Vision 5200-2 and HR 500 E screed, Hamm HD+ 140 VV HF, and HD+ 120 VV HF

That's significant in the Deep South, where traditions are not easily discarded.

"We are a little over 60 years old, and we were started by my grandfather, L.H. Bossier," said Phillip Bossier, chief operations officer, Diamond B Construction, LLC, Alexandria, La. "Diamond B in its present form was founded in 1978, but we've been in asphalt paving for over 50 years."

Today, Diamond B has five asphalt plants spread across the state, and is entering a new market, New Orleans, with one of them. Most of these expansions took place under the tenure of Phillip's father, Bryan Leonard Bossier Sr., who remains as president.

Diamond B is one of the major players in bituminous paving in Louisiana. "We are producers, and a construction company also," Bossier said. "That goes with the territory. When you are in a rural area you have to lay your own asphalt to be competitive. We also do other asphalt-related construction, and will do whatever it takes to put the icing on the cake."

That means cutting soil-cement, which is universally essential due to Louisiana's expansive road bases. For this Diamond B uses its Wirtgen WR 2400 stabilizer/reclaimer, but has just acquired a WR 240i, the new high-tech, Tier 4 interim emissions-compliant stabilizer/reclaimer from Wirtgen.

"We'll do base work, subgrade work and cold mill as well," he said. "The alluvial soils of south Louisiana need a lot of work, and we even build the occasional project below sea level. While the bases are somewhat better in central and north Louisiana, we always have a long way to go regarding highway bases, and we stabilize them everywhere." ➤

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**"At first, our operators did not know how to handle the new technology. Now they don't want to go back. They like the electronics, they like to be engaged, and they like to learn more."**

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Phillip Bossier, chief operating officer, Diamond B Construction

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New Vögele Vision 5200-2i used by Diamond B is Tier 4 interim emissions-compliant



## MIGRATION TO WIRTGEN GROUP PRODUCTS

Diamond B's interest in Wirtgen Group products comes as it evaluates the future of road construction, and its position among roadbuilders in the Pelican State.

"We'd been running much of the same equipment for a very long time," Bossier said. "Our employees were familiar with it, but it got to a point where we could see new technology coming our way, and we wanted to try something different. There are better ways to be more efficient and explore new boundaries. And it didn't take long for us to see what Wirtgen Group could do, with our Hamm rollers and Wirtgen mills and stabilizers."

With long traditions of equipment operation being handed from father to son at Diamond B, Bossier made changes slowly. But now he's committed to bringing Wirtgen Group equipment on board and employees are adapting quickly.

"We are very pleased with the new options and efficiencies that Wirtgen Group products provide," Bossier said. "At first, our

operators did not know how to handle the new technology. Now they don't want to go back. They like the electronics, they like to be engaged, and they like to learn more. With 'Brand X' they went as far as they could in terms of getting better with their machines. But now, when you see what the Wirtgen Group technologies offer, and how they can make our product better on the roadway, their possibilities are wide open.

"Little things that should have been changed on existing equipment were changed by Wirtgen to help us get the common-sense efficiencies that help you operate, get the grade you want, move a machine or tweak it so it's doing exactly what you want," Bossier said. "It's all Wirtgen. Now we are figuring out how to best utilize these innovative operating technologies."

Diamond B's fleet now includes a Wirtgen W 210 mill with 7-ft., 3-in. (2.2-meter) drum, W 250i mill with 12-ft., 6-in. (3.8-meter) full-lane drum, WR 2400 and WR 240i stabilizer/recyclers, a Vögele Vision 5200-2 paver, two Hamm HD+ 120 VV HF rollers, five HD+ 140 VV HF rollers, and two Hamm 3410 P padfoot single drum rollers, all from local distributor H&E Equipment Services.



Diamond B's new W 250i mill with 12-ft., 6-in. (3.8-meter) full-lane drum is Wirtgen's largest and most powerful cold mill

In May Diamond B was demo'ing a new Vision 5200-2i paver, with Tier 4 interim emissions technology.

"Like with many companies, our operators are a big part of the success," Bossier said. "Most of our area managers have an operator background and have a feel for the technological aspects of the equipment. They're the ones who make the decisions. We are searching for quality and we won't yank operators off of equipment with which they are comfortable, and give them something they don't want to be on. But we are gradually getting into the new equipment, with some people continuing with existing equipment, and others who like to try new products, and they are seeing the differences and realizing they have more control with the Wirtgen Group products."

## BREAKING IN WITH WR 2400

Three years ago, the WR 2400 was the first Wirtgen product acquired by Diamond B, and it's illustrative of how attractive new technology can be.

"We had an area superintendent who had been cutting soil-cement for a very long time, and he really appreciated the new aspects the WR 2400 introduced," Bossier said. "I spent a lot of time with him and the new equipment. In studying the new equipment it caused us to discuss where construction equipment technology is going, and where we wanted to be as a company with a modern fleet that's ahead of its competitors, and whose quality also is ahead of the competitors, because that's how we earn incentives and bonuses in low-bid situations."

And Diamond B's Wirtgen fleet is enabling that success, Bossier said. "Wirtgen Group is a major part of that," he said. "With reduced down time, and the enhanced quality of the work itself, Wirtgen Group has helped us." 

These could be milling machines, stabilizers, rollers or pavers, he said. “When I walk around the Wirtgen Group products I see how they have designed the machine to make our job easier. And now we see various other brands starting to copy those little tweaks or features that make our lives easier.”

For example, on Diamond B’s new mills, equipment operators can now use the machine’s electronics and computers to troubleshoot problems, which they’ve never been able to do through electronics, he said, which in the past required a very high level of familiarity with the diagnostic system.

Now, he said, an experienced milling superintendent can tweak what he’s doing to make the machine perform better, but also become more intimately involved with the insides of the machine without having to call someone for advice. “This leads to less downtime,” Bossier said.

Simple things like marks showing the center of the drum that are visible to the operator are examples of how the little features of Wirtgen Group roadbuilding equipment makes paving simpler and of better quality, he added.

“With Wirtgen Group products you can go from the very small, incremental things like that, and take it to the next level of high-tech electronic and computer systems that let us do more with less,” Bossier said. “Is that what we are looking for? Yes!”

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Along with its existing WR 2400, Diamond B’s new WR 2401 recycler/stabilizer gets heavy use stabilizing expansive Louisiana road bases



Diamond B uses Hamm HD+ 140 VV HF in breakdown mode, HD+ 120 VV HF in intermediate mode, with HD+ 140 VV (not shown) to finish



Tracked Vision 5200-2i with Vögele VR 600 screed used by Diamond B has a maximum paving width of 28 ft., with a maximum laydown rate of 1,300 tph, and a transport width of 10 ft.

WIRTGEN: COLD MILLS CLEAR WAY IN CALIFORNIA

# 'Green' Apple



Anrak's new Tier 4 interim emissions-compliant W 200i is built on same machine platform as the W 210, only without the dual diesel engine design

It may not have looked like it in early 2014, but in a few years a 680-acre tract in Cupertino, Calif., will be the site of a spaceship-like office building – bigger than the Pentagon – on a new corporate campus for computer industry titan Apple, Inc.



Of advanced environmental design, the \$5.5 billion future Apple corporate campus – being constructed on the former headquarters sites of Hewlett-Packard and Compaq – now requires demolition of existing structures, utility removal, relocation of mature trees, and the complete excavation of acres of aged asphalt parking lots and tons of base material.

Handling that high profile excavation is major California milling contractor Anrak Corporation, and its new Wirtgen W 200i cold mill with a 6-ft., 7-in. (2.0-meter) drum, abetted by a W 210 with a 7-ft., 3-in. (2.2-meter) drum, and its predecessor, the W 2100, with 7 ft., 3 in. drum.

The W 200i is Tier 4 interim emissions-compliant, which makes it especially appropriate for the “green” ambitions of Apple’s new headquarters. When the W 200i’s green attributes are combined with its 600 hp power plant, it’s clear that the fuel-sipping W 200i is the right choice for the project.

“We’re taking out all the asphalt surfaces – the parking lots, all the drives, all the thoroughfares – and after that, we’re removing all base down to the native dirt,” said Christopher Anderson, estimator and project manager for Anrak. “Some 6.5 million sq. ft. of asphalt will come off this job. The asphalt varies from 2 to 3 in., and the base is anywhere from 6 to 7 in.”

With a number of contractors involved in the demolition, the logistics of who is doing what is paramount. “We are going piece by piece, figuring out what will be ahead,” Anderson said. “We’ve been very busy, keeping the crews running, hitting what we have to get done for the day, and maintaining the phases on schedule. At this time we really don’t know how much base will come out, but it will be a lot.”

Initially, Anrak was using two cold mills, with a spare on standby. “In this phase, we are getting what we need done with two grinders,” Anrak said. “But each phase has a different time frame, and then we will move to a different area. Before we go in, an area will have planter boxes, light poles, piles of demolition material, even mature trees. After we leave, other companies come in and pull utilities out and do dirt work. By the time everything is said and done, this will be a big, big dirt field.”

The mills were reducing the reclaimed asphalt pavement down to minus 1/2-in. size, and both RAP and base were being stockpiled adjacent to the construction site.

## ‘GREEN’ FOOTPRINT

As might be expected for such a cutting edge company, the project involves ‘green’ demolition as well as construction and architectural design. “This job has a big green footprint,” Anderson said. “That’s why we have the first Tier 4 interim cold mill in northern California out here. In fact, we have one of the most modern, environmentally sustainable ‘grinder’ fleets in California, and that’s one of the reasons we’re out here.”

In addition, the W 210 in use is equipped with the available Vacuum Cutting System, which helps keep contaminants away from the critical parts of the cold mill. Without VCS, fine debris creates wear between moving surfaces, potentially shortening component life.

The VCS creates negative pressure which pulls fine particles from inside the drum assembly into the milling machine’s short conveyor channel. There, a suction hood located above the conveyor channel sucks the particles into two hoses which extract

**“The Wirtgen machines are very reliable, and user friendly. The crews love them.”**

Chris Anderson, estimator/project manager, Anrak Corporation



At Apple headquarters site, W 210 removes 6 to 8 in. of base material from former parking lot

the particulate matter directly to the long conveyor of the loading system and into the truck, reducing wear and providing an enhanced work environment.

The W 200i is essentially the same machine platform as the W 210, only without the dual diesel engine design. “We went with the W 200i because of its Tier 4 interim technology,” Anderson said. “We’ve launched a new office in the Bay Area, and there, being ‘green’ is a very important thing. The 200i is a nice, compact size for getting around tight city streets, and that’s one big reason we acquired it. We already had the larger machines with more power when we need it, so the W 200i is the ideal choice for urban areas and small city streets where we don’t need all that power. It’s versatility is amazing.”

## W 200i: ADVANCED DESIGN

“The Wirtgen machines are very reliable, and user friendly,” Anderson said. “The crews love them. They have the best grade control out there, *Level Pro*, which keeps grade really well. Even though we are ‘chasing’ the asphalt lift, which varies from 2 to 3 in., the grade control keeps the mill right where it needs to be. The Level Pro system is really accurate; if you have it at 3 in., it’s cutting 3 in. And maintenance on Wirtgen grinders is really easy; they just don’t have the downtime we’ve experienced with other mills.”

Both the W 200i and the W 210 have full-function control consoles that nonetheless are simple in appearance and operation. “Our new machines are very similar up-top,” Anderson said.

“They’ve eliminated a lot of the controls for the operator while adding a joystick. They’ve made it really user-friendly and have taken a lot of operator error out of running the machine.”

For example, the machine self-levels, and it throttles up and down when it starts or stops, Anderson added. “By contrast our W 2100 has a lot more operator involvement, such as leveling the rear legs out, and idling up and down,” he said. “When you go into a cut, and start going at your depth, the rear tracks have to drop into the cut. These new machines self-level so you don’t have to touch the rear legs; they automatically make sure the machine is level. With the 2100 you have to look back at your rear leg indicator and bump it up until it’s level.”

“The technology Wirtgen has come up with is amazing,” said Anrak’s general superintendent Corey Wilson. “It’s awesome; Wirtgen thinks of everything, and that makes it so much easier on the operator.”

“I have been in this business for 36 years, and have bought every brand of mill that’s been made,” said Anrak owner Mark Anderson. “Nothing is better than mills from Wirtgen. Their engineering, quality and performance is second to none. With my management team of Tom Schmidt (vice president/general manager), Corey Wilson (general superintendent), Christopher Anderson (estimator/project manager), Patrick Anderson (dispatcher/estimator), Les Anderson, Jr., (shop foreman/equipment manager) – plus our Wirtgen milling machines – I have nothing but the best to offer our customers.”

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Anrak’s W 210 with 7-ft., 3-in. (2.2-meter) drum makes quick work of compacted base material

KLEEMANN: NEW JAW CRUSHER DOES DOUBLE DUTY IN ARIZONA

# Desert dynamo



In Arizona's Valley of the Sun, a new Mobicat MC 110 Zi EVO jaw crusher is producing aggregate from demolition concrete, reclaimed asphalt pavement, and virgin stone brought to the yard from housing sites in the mountains above Phoenix and suburbs.

**A**nd ultimately, it will take its place up on the mountainsides, crushing excavated virgin stone from home sites for use right there on the spot.

The new Mobicat MC 110 Ri EVO and MC 110 Zi EVO mobile jaw crushers from Kleemann were introduced to the North American market at Conexpo-Con/Agg 2014, and the same MC 110 Zi EVO shown at Conexpo now is at work with multiple applications for Domres Grading Inc., an Arizona contractor, and its recycling subsidiary.

Both models are Tier 4 final emissions-compliant. The new MC 110 Ri EVO has a vibratory feeder with integrated grizzly, while the value-added MC 110 Zi EVO incorporates a vibrating feeder with an independent, double-deck, heavy-duty prescreen. Both feature a crusher inlet of 28 X 44 in.

Both machines have been completely redesigned with a lighter transport weight to ease portability, with the MC 110 Ri EVO weighing 85,000 lb., and the MC 110 Zi EVO weighing 87,100 lb. The new design includes hopper walls integrated in the chassis, and a fully hydraulic crushing gap adjustment via touch panel.

## HOMES WITH A VIEW

The MC 110 Zi EVO acquired by Domres Grading Inc. with independent double-deck prescreen does more for its owners, who use it in their yard for processing demolition concrete and milled asphalt into recycled concrete aggregate (RCA) and reclaimed asphalt pavement (RAP), and for crushing virgin stone removed from construction sites.

But in the Phoenix area, mountainside homes – with their scenic views and cooler breezes – are preferred places to live. Domres specializes in preparing sites for mountainside residences, and ultimately Domres will use the portability and mobility of its new MC 110Zi EVO tracked jaw crusher to bring the machine to the mountainside construction sites, crushing excavated stone for re-use right there.

“We needed a machine that would produce for us in our yard, but also have the mobility to get into small, tight areas, like our hillside excavation work on the sides of mountains,” said company president Tom Domres. “We do custom homes, and need to

**“We needed a machine that would produce for us in our yard, but also have the mobility to get into small, tight areas, like our hillside excavation work on the sides of mountains.”**

Tom Domres (left), president, Domres Grading Inc., with Ryan Domres (right)

be able to climb up a mountain, get on a small site and crush. Not only is this machine more maneuverable, but it has a big jaw in a small body, so to speak. We can get onto a small, postage stamp-sized site and produce a lot of material. We will take the rock out of the ground, drop it in the hopper, and it will come out the other end at minus 3 in., ready to lay down.”

The MC 110Zi EVO’s compact size and powerful tracks make work on mountainside home sites possible, he said. “That’s where this crusher will shine, because until track-mounted crushers came out, we had to haul the excavated rock out and crush it down below, at considerable expense,” he added.

This process cuts costs in a number of ways, Domres said. “We eliminate the trucking costs, plus no dump fees for bad material, no fees for purchasing new material to replace the bad, and no fees for hauling new material back in,” he said. Exhaust emissions and airborne particulate matter from haul trucks also are eliminated.

Also, reuse of excavation material on site makes the residential project eligible for *Leadership in Environmental and Energy Design* (LEED) certification, desirable for owners of upscale architect-designed residences, as points may be awarded for LEED Materials & Resources credits based on diversion of construction waste from landfills, resource reuse, recycled content, and use of regional materials.

“Our nation is moving toward recycling and reuse, and we want to be a part of that,” Tom Domres said.

## PRE-SCREEN BOOSTS THROUGHPUT

The crusher’s independent pre-screen beats their older crusher hands-down. “The pre-screen is a real big deal for us,” said Ryan Domres, manager of Resource Recycling of Arizona ➤





LLC, an affiliated firm. "With the grizzly in our old machine, mud would build up and bind over to where it could not be side-discharged. It would pack up with mud all the way to the grizzly, and all the fines would be forced through the jaw.

"The way this pre-screen shakes, all the mud and wet material falls through," Domres said, "whereas with the old machine it would be compacted into a blob that would ride across the grizzly feeder and into the jaw. It would then lock up in the jaw and you would be crushing wet, sticky mud, sand and dirt."

"The pre-screen provides a totally different motion from the vibrating grizzly," said Tom Domres. "The grizzly has a linear motion, while the pre-screen has an elliptical motion, just like a stand-alone screen would have. It separates the material instantly, and that's big for us."

Nonetheless, Kleemann offers both vibrating grizzly (R) and independent pre-screen (Z) models in modern configurations for 2014. "We want to offer a machine with the same features as competing manufacturers, while presenting a different model that may cost a little more, but provides the enhanced productivity of the independent pre-screen," said Kleemann technical service manager Kelly Graves.

## MISERLY FUEL CONSUMPTION

Users of the new MC 110 Zi and MC 110 Ri benefit from a newly designed crusher unit with extra-long, articulated crusher jaw. Like the EVO Mobirex mobile impact crushers, the new Mobicat EVO mobile jaw crushers utilize direct drive crushers and electric drives for the vibrating conveyors, belts and the prescreen. This permits extremely efficient operation with low fuel consump-

tion, and allows optimal loading of the crusher. Beneath the crusher a deflector plate keeps tramp metal from degrading the conveyor belt.

Although he had less than 100 hours on the machine when interviewed, Tom Domres already could see substantial fuel savings due to the Mobicat's diesel-electric drive system.

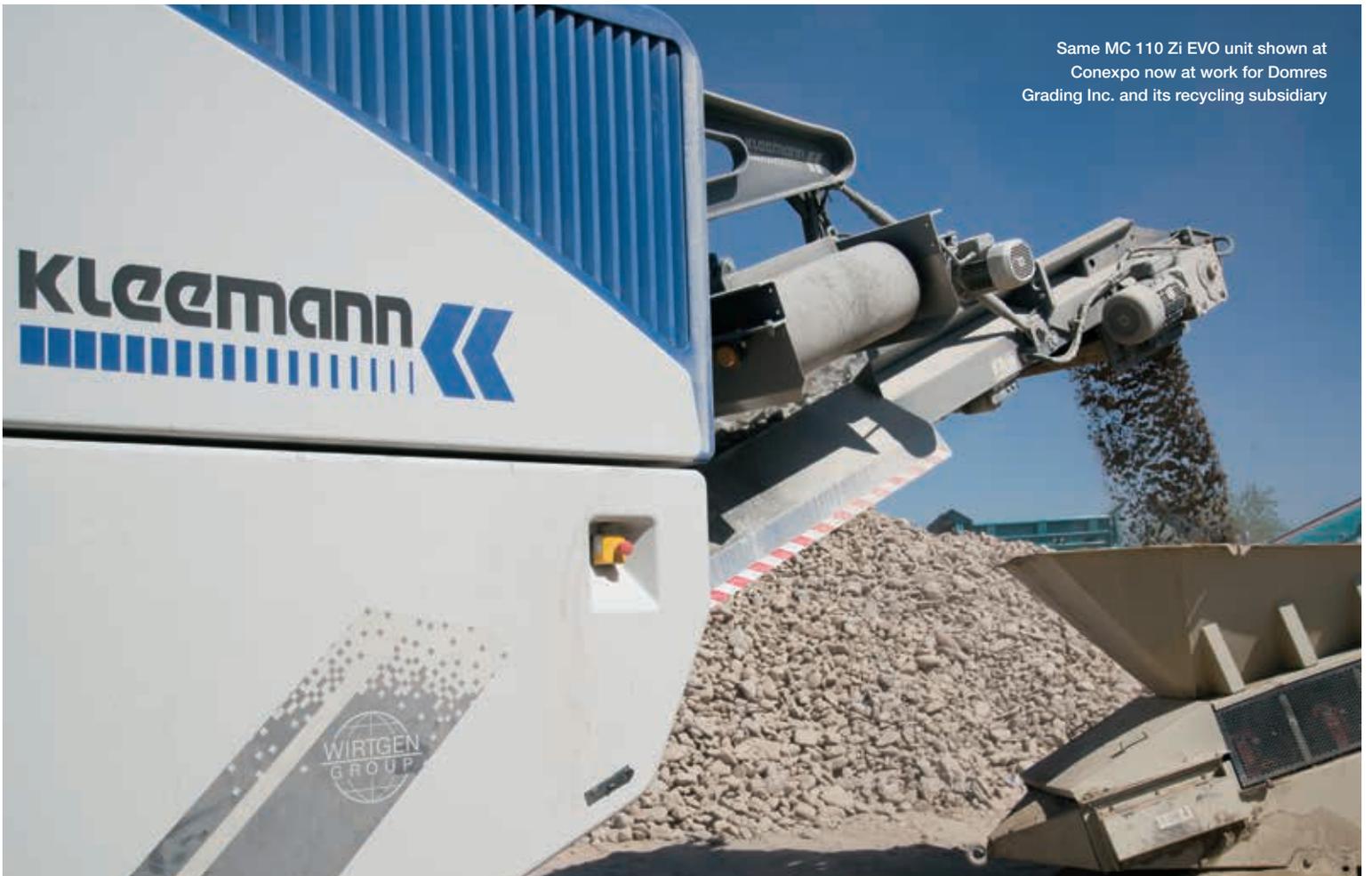
"Today, fuel consumption is a big deal," Domres said. "We don't have the exact numbers this early, but not only is the Mobicat 'crushing' our other crushers, but all our other equipment in fuel consumption. We can't believe the amount of fuel that we are not using. We had not been familiar with the diesel-electric drive but now are believers in its fuel economy."

The Kleemann Continuous Feed System (CFS) manages a more equal loading of the crushing area, in which the conveying frequencies of the feeder trough and the prescreen are adapted independently of each other to the level of the crusher, thus significantly boosting performance.

The new Mobicat crushers incorporate a newly designed longer swing jaw, which prevents blocking of coarse material while moving all mounting elements of the crusher jaw from the wear area. In addition, the transfer from the prescreen or the feeder trough is designed so material simply tilts into the crushing jaw, providing an even material flow. With this property and other features the new Kleemann Mobicat MC 110 Ri and MC 110 Zi achieve outputs of up to 300 tons per hour.



MC 110 Zi EVO's vibrating feeder with independent prescreen below keeps fines out of crushing path, reducing wear, lowering fuel consumption and creating a saleable product



Same MC 110 Zi EVO unit shown at Conexpo now at work for Domres Grading Inc. and its recycling subsidiary



Kleemann's technologically advanced Continuous Feed System (CFS) Mobicat jaw crusher is boosting aggregate production from demolition concrete, reclaimed asphalt pavement, and virgin stone brought to the yard from housing sites in the mountains above Phoenix and suburbs.

#### CFS = FASTER MATERIAL FLOW

With the Kleemann Continuous Feed System (CFS), each step the material goes through in the plant is wider than the width of the one before it, eliminating choke or wear points

#### CFS = CHOKE FEEDING

Kleemann's exclusive CFS also maintains a choke feed to the crusher, eliminating stop/starts of the feed system, improving production, material shape and wear

#### CFS = EQUAL LOADING

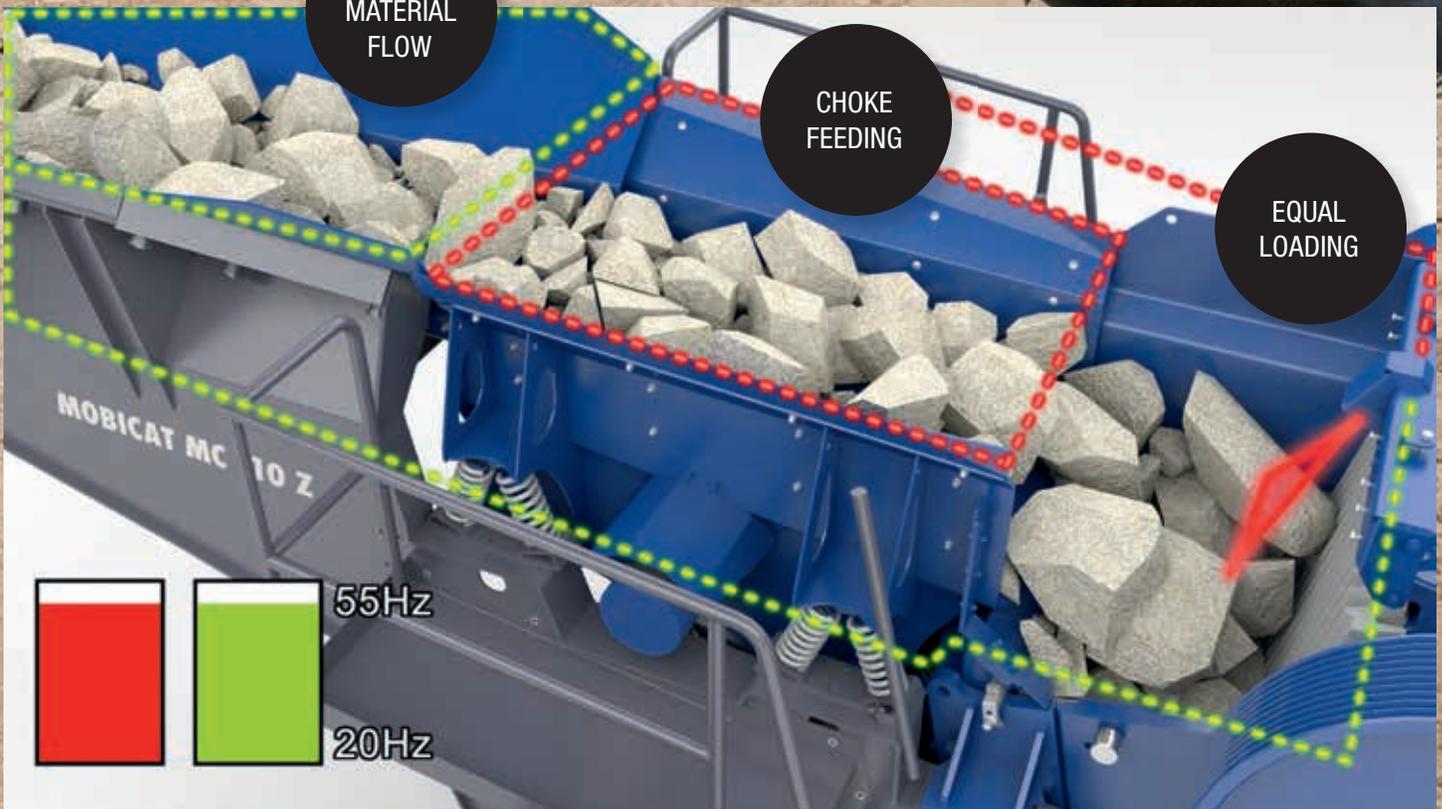
The Kleemann CFS manages a more equal loading of the crushing area, in which the conveying frequencies of the feeder trough and the prescreen are adapted independently of each other to the level of the crusher, thus significantly boosting performance



FASTER  
MATERIAL  
FLOW

CHOKE  
FEEDING

EQUAL  
LOADING



55Hz

20Hz

WIRTGEN: NEW W 250i COLD MILL WINS IN LAS VEGAS

# Sure bet

A new W 250i cold mill with a full-lane 12-ft., 6-in. cutter drum is turning out to be a sure bet for the owner, Las Vegas Paving Corporation.



**A**cquired in early 2014, Las Vegas Paving's W 250i was put to work immediately on Nevada's main north/south interstate while Conexpo-Con/Agg 2014 was underway to the south.

The W 250i is the first Wirtgen full-lane machine in Las Vegas Paving's fleet. The 12-ft., 6-in. (3.8-meter) drum lets the contractor remove extraordinary quantities of aged asphalt from pavements while maintaining an exceptionally smooth base for overlay.

"We are cold milling and paving 27 miles in both directions – north and south – of I-15 north of Las Vegas," said Jason Torres, project superintendent for Las Vegas Paving. "We're removing the asphalt 3 in. and replacing it with 3 in., including all off ramps and intersections."

The W 250i is Wirtgen's biggest and most powerful cold mill. As the W 250i generates a total of 991 hp with two engines engaged – while still meeting Tier 4 interim emission regulations, important for work in states like California – performance of the W 250i was not one of Torres' concerns during the project.

"So far, with the Wirtgen, we've been loading 8 to 23 percent faster than our competitive machines, depending on how opened-up the job is for us," he said. "When we are dumping on the shoulders, we're getting a 25 percent improvement over our competitive machines. Out here in the travel lanes, where we are loading trucks, we have seen a big increase in productivity."

The muscular W 250i is optimizing milling for Las Vegas Paving in many ways, Torres said. "It leaves a real clean surface, a real smooth surface," he said. "Originally the spec would not let any traffic on off-ramp milled surfaces. But when the state saw how smooth the surface is, they allowed us to put traffic on the

ramps after we mill them, and that helps us a lot."

And the contractor benefits from the clean cut as well as work zone traffic. "We only have to run the kick-broom one time to get it clean, not a pickup broom," he said. "We then just run a vac broom once in front of the paver to do a final clean-up, and it's ready to pave. The clean cut's really cutting down a lot on the mechanical broom time."

With the machine producing more than expected, traffic posed the biggest problem on the job. "The hardest thing about this job is the high-density traffic," Torres said. "We are having to bring two lanes down to one lane for five miles at a time. We are completing five miles, leave open five miles, do five miles, and open them in five-mile increments all the way through."

The material is very abrasive, Torres said. "We are not removing layers and layers of asphalt, but at some points we have full removal, 12 in. of abrasive RAP," he said. "We did it with two 6-in. passes. But in general we're removing 3 in. off the main line and 2 in. off the ramps."

Like its downsized brothers, the W 220i, W 210i and W 200i, the W 250i boasts a host of innovative features that improve performance and productivity in the field. For example, its available Vacuum Cutting System (VCS) reduces particulate emissions at the cutter head, and Las Vegas Paving took advantage of the technology.

Torres said he runs the VCS water spray bar – integral to the design – at less than full spray, but enough to keep the dust down. "In the summer, when it heats up, it will keep the dust down and away from the crew," he said.

At the operator's platform, a multifunctional control display serves as a practical information hub. It can be swung to the left or right of the operator, together with the Level Pro control panel, and displays operating status and service data.

"The operators really like the machine and the joystick operation," Torres said. "It's easy for them to use. The grade control has seven points of control, and what we really like is that it's holding the 2 percent crossfall really well. We just set the machine at 2 percent in a 3-in. cut, and we just go."

The control display provides user-friendly diagnostic options with clear graphics for identifying the source of any problem. Wirtgen's WIDRIVE machine management system handles many tasks for the operator in automatic process chains, making it easy to learn how to operate and control the W 250i.

This sophisticated machine management means savings in fuel costs. "It's doing real good on the fuel consumption, less than other brands we've used," Torres said. "Anything we save puts more money back in the company."

The upshot is the W 250i was an easy bet for Las Vegas Paving. "We're happy with it," Torres said. "We're getting what we wanted, and more. It's letting us complete the job quicker, better and more profitably. And those are the main things for us: getting done quicker, and doing more with what we have."





WIRTGEN GROUP: TRADE SHOWS/NEW EQUIPMENT INTRODUCTIONS 2014

# Winning hand

Wirtgen Group played a winning hand in Las Vegas at Conexpo-Con/Agg 2014 in March, where it welcomed thousands of delegates to its spacious, high-profile stand of advanced design.

**T**here, Wirtgen Group displayed 41 machines – most of them new i-series products – in the most memorable exhibit of the exposition.

“Wirtgen Group had the most distinguished stand at Conexpo-Con/Agg, and it was the talk of the show,” said Jim McEvoy, president of Wirtgen America Inc. “Our exhibit highlighted our machines and showcased the advanced technology that has come to personify Wirtgen Group. Some of our machines were so innovative and unique that they were like no others on the floor, or in the market today.”

The total registration of 129,364 surpassed Conexpo-Con/Agg 2011 and achieved the second-highest attendance in the show’s history. With more than 2.35 million net square feet of displays, and more than 2,000 exhibitors, the 2014 expo set a new record for exhibit space sold, and for number of exhibitors.

Conexpo-Con/Agg 2014 maintained its growing international reach, with international registrations totaling more than 31,000, or an increase of nine percent from 2011.

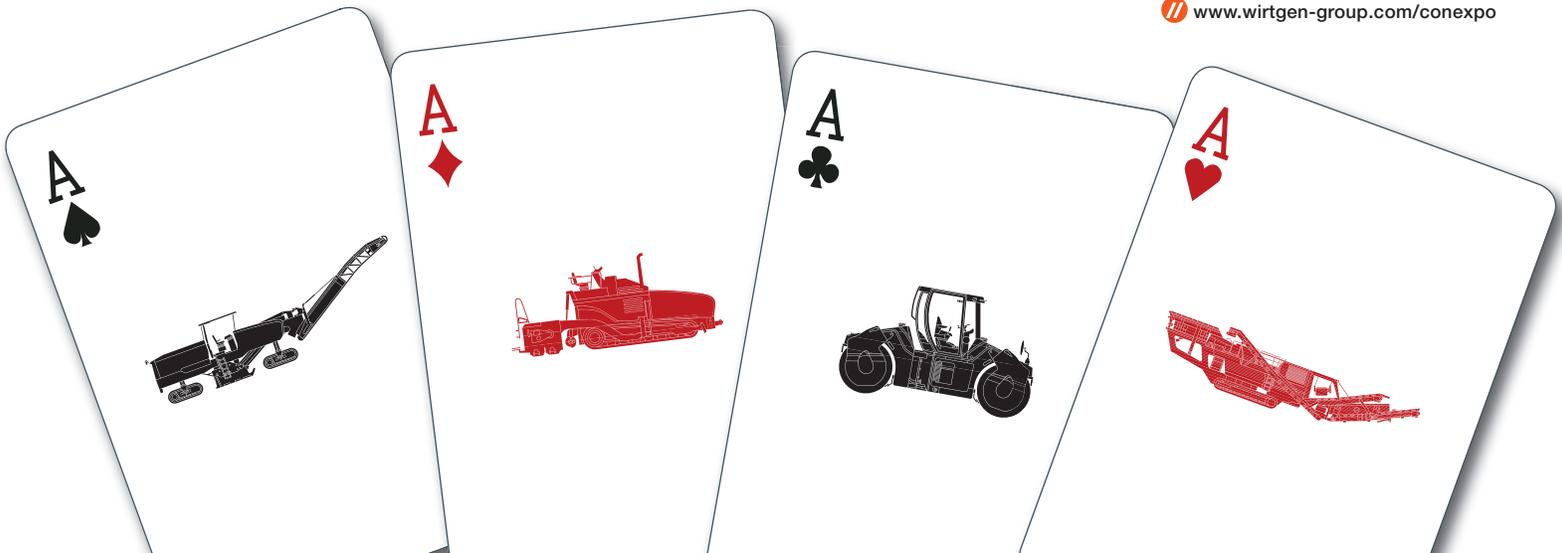
Wirtgen Group occupied a 39,600-sq. ft. stand in the Central Hall of the Las Vegas Convention Center. It displayed new concrete slipform pavers, cold mills and recyclers from Wirtgen, asphalt pavers of all sizes from Vögele, asphalt and soil compactors from Hamm, and mobile crushers from Kleemann. Interpretive displays highlighted products like the HT 22 and Generation X cutting tools, Wirtgen surface miners, and a Kleemann wobblers feeder in action.

New Tier 4 interim- and final-compliant equipment from Wirtgen Group featuring intelligent technology – designated “i-series” models – dominated the 41-machine exhibit.

The indoor stand featured a lighted perimeter header and a multilevel pavilion containing meeting rooms, a fan shop with Wirtgen Group-branded products, and a hospitality area in which Wirtgen America hosted its friends.

For more information about the products seen on these pages or at Conexpo-Con/Agg 2014, please visit your regional distributor or visit [www.wirtgenamerica.com](http://www.wirtgenamerica.com).

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





Wirtgen's largest cold mill, the new Tier 4 interim-compliant W 250i, drew admiring crowds. But what got contractor hearts really beating was the very special W 200 Hi (above), an innovative cold mill with hydraulic drum drive instead of conventional belt drive, which powers a milling drum assembly which can move laterally for precise milling. HT 22 and Generation X cutting tools also were exhibited (below).

Vögele's flagship paver is the new Super 2100-3i, displayed with AB 600-3 TP2 screed (opposite page, top left). Another highlight was the new 10-ft. Vision 5200-2i track paver with VR 600 rear-mount screed, and Vision 5203-2i wheel paver with VF 600 front-mount screed.

Hamm's new H i-series of soil compactors was shown, as was the complete line of HD+ i-series tandem asphalt rollers. Among the new Hamm tandem smooth-drum compactors on display, the new Compact Line HD 12 VO featured both Oscillation and vibration compaction for the first time in a small roller. But the exciting new Hamm H 25i VC (right) – a single-drum vibrating compactor outfitted with specially designed teeth that has the potential of replacing dedicated guillotine, "finger" or ultrasonic concrete breakers – drew crowds all show long.

Kleemann exhibited four new products. Two new crushers first seen at bauma 2013 in Munich – the MC 110 Ri EVO and MC 110 Zi EVO mobile jaw crushers – were introduced to North America. Joining them on the stand were two new impact crushers from Kleemann, the MR 110 ZSi EVO 2 and MR 130 Zi EVO 2 (far right). All four machines are Tier 4 final-compliant.





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