The new SP 94i sets record

CALIFORNIA: Vögele and Hamm make one “smooth” team

SERVICE + TRAINING: Take advantage of the winter season

EXHIBITS + EVENTS: Reviews and previews
Two words sum up Wirtgen concrete pavers: **Ride and Utilization.** In today’s competitive paving market, specs are tight, schedules even tighter. To maximize bonuses, you need to excel at both.

Products of state-of-the-art manufacturing and the latest technology, Wirtgen concrete pavers are built to the most exacting standards. And their all-new, innovative designs allow for unparalleled flexibility and ease of mobilization. This means you spend less time setting up and more time paving. Paving with the precision you expect from a Wirtgen: precision your competition can’t match.
Wirtgen: World leader in concrete paving

“As with our asphalt paving products, Wirtgen Group is the world leader in concrete slipform paving, with a pedigree that dates back five decades.”

Until six years ago, when we launched the SP line of concrete paving equipment in North America, the name Wirtgen America meant “asphalt”.

We were distinguished as the world leader in asphalt cold milling machines and recycler/reclaimers, having sold them on this continent since the early 1980s. In September 2000, we began marketing Hamm asphalt and soil compactors and less than a year later, we started selling Vögele asphalt pavers.

With that kind of history in asphalt equipment, no wonder there were doubters as to whether Wirtgen Group could also be a contender in the concrete paving market.

LONG PEDIGREE OF CONCRETE PAVERS

Our success in concrete pavers didn’t come out of the blue. Instead, it’s the culmination of decades of paver production outside of North America.

As with our asphalt paving products, Wirtgen Group is the world leader in concrete slipform paving, with a pedigree that dates back five decades. Wirtgen had been manufacturing concrete pavers for a long time, and the line itself has a long history, but Wirtgen did not sell them in the North American market until the time was right.

FOCUS ON WHAT COUNTS

Now is the time and we will be sure that North America is no exception to the leadership position. We’ve cemented ourselves in the field and we invite you to read about it in this issue of Forum North America.

This newly expanded issue of Forum North America takes a close look at our line of products for concrete paving. We show how the new SP 94i met great success in the field last summer, provide a Q&A with our two experts on concrete paving equipment, and take a special look at the machines and advanced technologies that will be exhibited at World of Concrete.

Take a moment to see how Wirtgen America is making concrete slipform paving easier, more productive and profitable for you.

James P. McEvoy
President / CEO
FOCUS

FORUM NORTH AMERICA 31 focuses on Wirtgen concrete machines and their applications

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Airport advantage
The first use of the new Wirtgen SP 94i slipform paver – the complete reconstruction of a 6,000-ft. runway at Jefferson City Memorial Airport in central Missouri – resulted in immediate smoothness records being set for concrete runways for the state of Missouri, as well as a satisfied contractor.
Despite not receiving commercial flights, JEF is among the busiest in Missouri, with some 30,000 aircraft using the facility each year. With the Missouri state capitol in sight on a bluff above the Missouri River, the airport offers visitors easy access to state executive offices, legislature and associated businesses.

Work began in late April 2015, and weather pending, the closure and demolition of Runway 12-30 was to last 125 calendar days. During this phase, the airport’s 3,400-ft. crosswind runway remained open. Before reopening, both runways were to be closed while workers rebuilt the intersection between the two.

The new Wirtgen SP 90i series of large slipform pavers – which permits paving from 6 to 31 ft. – includes the two-track SP 92i, and the four-track SP 94i.

The new SP 90i series comprises the world’s most versatile, highest production slipform machines. It offers dowel-and-tie bar inserters, finishing beam, super smoother and many other options. It can be controlled either with stringline, or stringless by a variety of aftermarket systems.

The benefits of the SP 92i and SP 94i include unprecedented accuracy and smoothness, which leads to higher production and record-setting ride numbers; utmost machine flexibility to meet changing job site requirements; ease of use with a quick learning curve; and ease of troubleshooting.

**SMOOTHNESS ‘OUT OF THE BOX’**

These benefits were evident to owner Lehman Construction Company, California, Mo., as it was able to place exceptionally smooth pavement immediately after set up, right “out of the box.”

In April, demolition began on the existing runway, and the concrete was hauled off-site. The rebuilt runway is 6,000 ft. long by 100 ft. wide, and 10 in. deep, above a 10-in. virgin aggregate base. With the exception of dowel bars on 12.5-ft. spacing, 18 in. apart across the runway, the runway is not reinforced. Some 26,000 cu. yd. of concrete was going into the project, in 8-yard truck loads, the maximum allowed for haul roads.

“The guys from Wirtgen came and we set the machine up in two days on the job site,” said Danny Monroe, paver operator for Lehman. “No test runs were needed. We started out on the first slab of the runway, and that was it!”

“The number they need to be under is 7.0 in./mile, said Tim Nash, director, Concrete Products, for Wirtgen America Inc. in August 2015. “Lehman has not had a pour since starting this machine up that has had a profilograph reading of over 1 in./mile. Six out of the first eight pours were at or under 0.5 in./mile, with nothing over 0.8 in./mile on any of the pours. And there have been numerous segments that have been zero. This machine is setting smoothness records in the state of Missouri.”

“Our ride numbers here at the airport are phenomenal,” Monroe said. “The specialist who was measuring our ride numbers said she’s been doing it for 13 years, and she’s never had a piece of concrete that smooth come out of the back of a paver.”

“The smoothness we’ve been getting is unreal, said Adam Carroll, superintendent with Lehman. “The technology of the machine does it. The augers in the front and the pan system in the back are a big part of it.” Carroll said.

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Danny Monroe, paver operator for Lehman Construction Company
Concrete is dumped by truckload placing conveyor ahead of SP 94i.
The SP 94i easily was getting 2,000 ft. per shift, 25 ft. wide,” said John Gibson, resident inspector with Burns & McDonnell in Kansas City, Mo. “It’s getting excellent smoothness,” he said. “The weight of the machine – and how it was designed – helps it to put out a good, smooth slab.

“The quality is built into it,” he continued. “You can see from the fit and the finish, the way the technicians torqued the bolts. They put a mark on every bolt that was torqued, and that was very impressive.”

Although the paver is set up for stringless paving, for this first job, the contractor was using stringline. With the SP 94i, Lehman was doing as much as 2,500 x 25 ft. pours in one day. Due to high summer temperatures, in excess of 85 deg F, much placement was done at night.

RAZOR-SHARP EDGES

Because this project is an airfield pavement, the authorities look closely at the edges of the pavement, which by specification requirement need to be a sharp, 90 deg edge. “Authorities have stated on several occasions that they have not seen edges come out of a slipform paver so sharp and clean,” Wirtgen’s Nash said.

“Having a vertical edge on your concrete – especially your pilot lanes – is critical to a successful joining with the next lane,” said Burns & McDonnell’s Gibson. “You always want a true vertical edge; it’s very important. I am seeing a very good edge with this machine.”

Thus the SP 94i was making razor-sharp edges easy for Lehman Construction. “We have to do very little to the edge, and that’s the way we like it,” said Kenny Lehman, managing member (and owner), Lehman Construction Company. “We were prepared for not-a-very-good-edge, and the SP 94i delivered the complete opposite. We had to take our eyes off of it or else we’d overwork it.”

SHOPPING FOR PAVER

Lehman looked long and hard for a new highway class slipform paver. The new SP 94i is significantly larger than its existing paver, which offers variable width from 8 to 22 ft., and dates to 2005.

As part of their research, Lehman personnel traveled to Daytona Beach, Fla., to see a Wirtgen SP 84i concrete slipform paver rebuilding I-4 in a $134 million widening for the Florida DOT. That trip was facilitated by Jerry Hess, territory manager, and James Jesuit, vice president/general manager, of distributor Roland Machinery Co., St. Louis.

“I don’t want to take anything away from our existing paver, but the SP 94i is better built, and we were very impressed with the ride numbers they were getting out of the similar Wirtgen paver we saw in Florida,” said Lehman’s operator Monroe.

“Wirtgen and Roland worked with us to make it possible,” said Lehman. “And we wanted to try something different, because the information I heard was that this machine was getting a better ride than either of my two other brands. And now that we have it, the ride numbers are way better than we anticipated.”

The legs work very well and the sensors set up easily, Lehman said. “Adjustments are very quick, and much of its performance I attribute to the way it was set up by the Wirtgen technicians. They just didn’t get ‘close’ to spec and let it go at that, they were very, very picky. These guys were meticulous, and they know how to set it up right.”

While the SP 94i likely would have qualified Lehman for smoothness bonuses, none existed on this job, although there were penalties for out-of-spec placements.

“Everything on it is a very tight spec, and everything’s got to be just right,” Lehman said. “This machine will make us more competitive. Highway specs will be that much easier to achieve.

“We’re really happy with this paver,” he added. “If we can maintain this performance, the customer will have a great project, a high quality airport runway here.”
Lehman crew prepares for night's work

Super Smoother (between tracks) speeds hand-finishing of slab
EXCEPTIONAL FLEXIBILITY IN CONCRETE PAVING
The slipform paver achieves perfection in the highly precise paving of concrete slabs with widths ranging from 6' to 31' and paving thicknesses of up to 18” (450 mm) in standard configuration.

CHOICE OF INSET SLAB PAVING MOLDS
Imperial inset slab paving molds of the 1300 wi series are available, optionally with crown profile.

STATE-OF-THE-ART ENGINE TECHNOLOGY
The state-of-the-art engine technology of the SP 94i offers maximum engine power (231 kW/310 HP/314 PS) and complies with the exhaust emission standards of EC Stage 4/US Tier 4f.

FULLY MODULAR MACHINE DESIGN
The paver’s fully modular design stands for flexible modification, retrofitting of customer options and application-related adjustment to site conditions.

EFFICIENT ENGINE MANAGEMENT
The “ECO MODE” engine output is automatically adjusted to the paver’s current performance requirements, thus ensuring reduced diesel consumption and low noise levels.
The most important innovations at a glance

HIGHLY PRECISE STEERING AND DRIVE SYSTEMS
Precision in concrete paving is ensured by intelligent steering and control systems offering exceptionally smooth operation even in narrow bends.

MACHINE CONTROL SYSTEMS FEATURING ADVANCED INTELLIGENCE
The standardized interface for quick and targeted diagnostics and the state-of-the-art WITOS telematics system increase efficiency in everyday operation.

3D INTERFACE
The proven interface guarantees intelligent compatibility with 3D control systems of leading suppliers.

PERFECT ERGONOMIC DESIGN AND HANDLING
Relaxed working is ensured by the ergonomically designed workplace offering a user-friendly operating concept and optimum visibility.

INTELLIGENT TRANSPORT CONCEPT
Compact dimensions and minimum handling required to prepare the paver for transport ensure ease of loading and cost-effective transport.

ALTERNATIVE VIBRATION TECHNOLOGY
Depending on customer requirements, the paver can be equipped with a hydraulic or electric vibrator drive. In standard design, it comes with 12 hydraulic connections, optionally 16 or 24, alternatively fitted with 12 electric connections.

MACHINE-INTEGRATED INSERTION OF STEEL REINFORCEMENT
A self-loading dowel bar inserter, central tie bar inserter(s) and side tie bar inserter(s) are available as optional features in accordance with customer requirements.

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The most important innovations at a glance
Productive PCC paving

FORUM: What makes Wirtgen slipform pavers different from other brands?

Tim Nash: Wirtgen has been manufacturing concrete pavers for a long time, but entered the North American market five years ago. Today, our customers look to Wirtgen concrete slipform pavers for the same reasons they have chosen our other lines, and the Wirtgen cold mills are a good example.

Both the concrete slipform pavers and the cold mills are characterized by higher attention to detail, better componentry, and better engineering. It all leads to a better machine and better product out the back end. And that’s what it boils down to for concrete slipform contractors, what’s coming out the back end of the machine.

Wade Bowman: We are confident that our slipform pavers will pour more accurately, and require less handwork, than other machines on the market. For example, the SP 15i’s trimmer – a drum with teeth that rotates and levels the grade immediately ahead of the concrete – comes from the market leader in milling technology, so it’s no surprise that we have the best trimmer on the market.

The trimmer is well-balanced and its torque is the highest of any trimmer in its class. Trimmers in this class tend to induce vibration into the machine, which then impacts the quality of what’s coming out of the back end of the paver. Any vibration or instability of the machine – in this case, induced by the trimmer – will wind up in the product. But our trimmer is so well balanced, and trims so efficiently, that most people don’t even know it’s running. And it certainly doesn’t induce those imperfections in the product.

Another example is the posts, or the legs, of the machine. We actually machine these on a lathe, so they are made to exacting specifications. There is no ‘slop’ on our legs. If there is slop in the legs of the machine, that also translates into inferior product coming out the back end.

If a machine does not accurately steer or hold grade, the poured section will be all over the place. This results in lots of expensive hand finishing, perhaps at $50 per man-hour and margins go out the window.

When Wirtgen Group introduced its line of portland cement concrete (PCC) slipform pavers to North America in 2010, it launched a new era in productive PCC paving in the United States and Canada.

The applications experts at the Wirtgen Group staged exciting live demonstrations of how these elements can come together in practice.

The array of innovative technologies that’s in the DNA of other Wirtgen Group brands is built into Wirtgen’s SP slipform paver line.

To shine a light on just what makes Wirtgen slipform pavers different from the pack, FORUM: NORTH AMERICA conducted this question-and-answer interview with Tim Nash, Director, Concrete Products, and Wade Bowman, National Sales Manager, Concrete Slipform Products.
FORUM: What is the ECO mode and how does it enhance the SP paver line’s operation?

Nash: The ECO mode matches the output of the machine’s engine to the demands of the job at the time. For example, if we are in ECO mode on the SP 15i or SP 25i, and we need to turn on the trimmer, the machine will automatically increase the RPMs to provide the power to run the trimmer. The same goes for the concrete vibrator circuits and other features; the machine will rev up or down accordingly.

The benefit is that ECO mode cuts fuel consumption considerably. Operators typically run a machine’s engine at or near full throttle so that it can handle all requirements. Also, during idle periods, operators will oftentimes leave machines running at high RPM. In our case the machine will idle itself down, saving fuel, cutting noise and stack emissions, and lowering wear and tear on the engine. ECO Mode is standard on our machines.

One contractor told us he saved at 12-15 gallons of fuel per day in ECO mode. When multiplied times the price of fuel, then five or seven times a week, throughout the year, that adds up.

FORUM: How else does Wirtgen make the operation of slipform pavers easier?

Bowman: The SP 25i and other SP models from Wirtgen have operator’s platforms that are isolated to greatly reduce vibration and end-of-day operator fatigue. Our operator’s platform, basically, is mounted on rubber “doughnuts.” The rubber isolates the operator from the vibration of the machine. That seems like a simple affair, but at the end of the work day, most operators are amazed at how they feel. They feel great after a full day, whereas typically their back or knees would be killing them.

Whether or not a contractor thinks much about operator personal comfort – and most probably do – they surely care about what the machine is doing during the day to reduce fatigue, because a fatigued operator does not perform as well as one who is fresh and comfortable.

But the operator benefits from something else: routing of hot engine fluids away from the operator.

The operator’s feet are not ‘on fire’ anymore. Some contractors put down rubber mats to lower vibration, but the way the oil is routed in the SP pavers, operators are no longer standing over a tub of hot oil. Wirtgen has put that tank in the rear, venting heat out the back. That's important when you are working on a slipform paver for eight or 10 hours.

FORUM: If they acquire an SP paver, do customers have to scrap their existing inventory of molds?

Nash: Most concrete contractors have a large, existing inventory of slipform molds. Contractors can have hundreds of thousands of dollars in molds, ranging in price from $16,000 to $80,000. That the SP pavers can use virtually any other maker’s mold – or molds they make themselves – means a contractor need not spend large sums buying new molds to fit the new paver.

Contractors needing a barrier/pavement machine can obtain a side-mount barrier system. Mounting the mold will be simple. Owners report it takes less than two hours from the time they get to the job, to the time they can start forming barrier, and that’s extremely important.

FORUM: As the Wirtgen machines are German-sourced, doesn’t that make them more difficult for new operators to learn?

Bowman: The machines are simple to use, and that helps crews get up to speed. Simplicity makes it easier to train workers. A contractor doesn’t want training to take six or eight months; they want to put somebody up there and have him run the paver within a month.

If the operator has used other slipform pavers, the training period is much shorter. We know a contractor in Colorado who would put an operator on the machine, and he literally would be running the machine within a matter of hours. SP pavers’ ease of operation, and simplicity of design – with everything wide open, clean, without clutter with plenty of work space – is good for productivity, contractors have said.

User presets boost productivity and consistency as well. You can set the machine and put in operator up there to watch the mold. The operator just turns one switch because of the presets. You can preset speed and vibrators, so once you get a consistent slump, the operator just moves – or not moves – with a single switch.

FORUM: What are some of the other reasons a contractor would buy a Wirtgen concrete slipform paver?

Nash: A fair number of potential customers already have Wirtgen equipment. If they do, the basic concepts of the hydraulic and electronic systems are very similar, and in many cases, the componentry is the same. We’ve had operators demo our machine who have run our mills, who have just jumped on the SP 15i and run it right away with no difficulty. So the transition is very easy for them.

Likewise, it will be very easy for their mechanics and service personnel to work with our equipment. And because of the overlap of components, decreased parts inventory is possible.

Getting to more of the specifics, one advantage that no one else can match or claim is that we have true left- and right-side capable machines. If you look at the SP 15i and SP 25i, you will see that left/right they are the same, so switching from a left- to a right-side pouring position is quick and easy, and can be done on-site. Until we entered the market, no one else had this capability.

Bowman: Switching from a left- to a right-side pour has not been a big issue in North America because most machines have worked in housing developments. These have typically been “greenfield” projects, and it did not matter what direction in which they poured concrete because there was no traffic. Now, rehab and DOT work is taking a bigger percentage of the work, and having the ability to work within job site constraints as being increasingly important. To us, having that extra flexibility is a real plus.

As contractors look for ways to keep their businesses growing in these difficult times, having extra flexibility can equate to getting more jobs.

www.wirtgenamerica.com
Smooth operators

On a rural highway in central California, a new Vögele MT 3000-2i material transfer vehicle – paired with a new Vision 5200-2i paver with VR 600 screed – provided one of the smoothest asphalt pavements ever seen by the inspector.
This Caltrans “pilot” project in October 2015 demonstrated both a material transfer vehicle (MTV) and asphalt intelligent compaction (IC) on a two-lane highway in San Benito County, Calif., on S.R. 25 near Tres Pinos, about 95 miles south of the Bay Area.

Prior to the overlay, existing Calif. 25 had been cold in-place recycled (CIR) to a depth of 0.2 ft. (2.4 in.) by Pavement Recycling Systems, Inc. (PRS) of California. The six-mile project was being paved 28 to 30 ft. wide in two 14 to 15-ft wide lanes, to a depth of 0.15 ft. (1.8 in.). Some 11,500 tons was being placed by Graniterock, and target density ranged from 91 to 97 percent, with 94 being the average.

Intelligent Compaction (IC) was provided by the Hamm Compaction Quality (HCQ) system, mounted on an HD+ 140 VO breakdown roller, a GRW 280i pneumatic roller as intermediate roller, and an HD+ 120 HF compactor in finish mode. HD+ 70i and HD 90 VO compactors were used for the CIR layer, and also were equipped for HCQ (see following article).

**MTV PILOT PROJECT**

On Calif. 25, in its pilot project, Caltrans was evaluating the use of a material transfer vehicle in obtaining a superior HMA pavement.

Material transfer vehicles were developed to eliminate contact between truck and paver, resulting in smoother mats. They also fight thermal and material segregation. Essentially, they provide noncontact paving between truck and paver, and surge capacity to allow the paving process to continue during truck exchanges.
As is the practice in the west, where asphalt plants may be a great distance away, HMA is placed in large volumes by bottom-dump trailers in windrows down the center of the lane. The HMA then is picked up by a windrow elevator and placed in the hopper of a paver, or in this case, the hopper of the MT 3000-2i, and then to the hopper insert of the paver.

The combination of MTV, Vision 5200-2i paver and VR 600 screed – all from Vögele – was resulting in an exceptionally smooth mat.

“From what I have seen in just the past few days, the mat looks absolutely perfect,” said Abdalla Naas, assistant regional engineer for Caltrans District 5, San Luis Obispo. “There is no segregation, and no raveling. When you drive on the mat it’s as smooth as can be, and it’s because of three factors: first, these two machines; second, an experienced foreman for Graniterock, Robert Lauderdale and his crew; and third, the HMA mix design. Combined, all are playing a major role in such a good paving project.”

The MTV provides a continuous flow of asphalt to the paver, precluding bumps and stops and starts, he said. “The MTV provides mix with no segregation and consistent temperature throughout,” Naas said. “And when the MTV puts the mix in the hopper insert of the paver, the paver lays it down without issue. I have never seen two machines that work together so well to produce such a good mat. It’s superb.”

The VR 600 screed and Niveltronic Plus grade and slope control system also play a role, he said. “When you see the quality of the mat, it says that the screed is excellent,” Naas said. “Also, the side-mounted sensors are providing a really good mat, as they catch irregular spots in the pavement and smooth over them completely.”

While a penalty would apply for a mat’s failure to meet profilograph specs, with what he’s seen, Naas said that won’t be an issue. “I would not expect a penalty with this good mat,” he said.

MTVs are not required under Caltrans specs; instead, they are used at the option of the contractor. “They may be required in the future,” Naas said. “If it comes to that I would like to see these machines work in California more often.”

NO STOPS, NO STARTS

“The MT 3000-2i allows paving to continue at a consistent speed without any problems with starting and stopping,” said Mike Burns, Wirtgen Group product specialist for Nixon-Egli Equipment Co. “It also fights segregation by moving material belt to belt, rather than with paddles. And when it drops into the hopper insert of the paver, the hopper funnels the material to the center, instead of allowing large rock to roll to the sides.” A grid plate across the top of the receiving hopper breaks up chunks of asphalt as well.

A distance control feature of the Vögele MTV is making it easier for the operator to pace movement in relation to the paver. This propel system – featuring a unique auto distance
control – keeps the feeder at a pre-set distance from the paver, so the operator can focus only on steering and the trucks dumping in front. In essence, the paver electronically pushes the feeder.

“Just like the sonics on the grade control, or on augers, where you control the pile height or the depth of the screed by bouncing a signal off a fixed location, the lasers of the MTV do the same thing between the MTV and the paver,” Burns said. “By adjusting the laser to point at the front of the paver, you set minimum and maximum distances, and the MTV holds forward movement in the middle, based on the speed of the paver. The paver then dictates the speed of the MTV, and the MTV operator doesn’t have to constantly adjust speed to stay in range, but just concentrates on staying the course. It works fantastic.”

The MT 3000-2i can move 1,300 tons per hour, and active remixing is achieved by two 16-in. diameter conical augers in the receiving hopper. Both primary and secondary conveyor belts are 43 in. wide, and are heated to keep material from sticking and eliminate “warm up” loads. The secondary conveyor can swing 55 deg to left or right. Heated scrapers also keep the belts constantly clean with a minimum of fuss.

On the MT 3000-2i, as the receiving hopper empties in advance of the next dump, a rear-tilting front of the hopper will move stray material toward the conical augers. Conical augers themselves minimize end-of-load and start-of-load segregation.

Any remixing system has to have variable volume, which comes with variable pitch or variable diameter. With conical au-
gers, the surface area of the blade is smaller at the larger end of the shaft, and the largest blade at the narrowest end of the shaft. As the material moves, it creates a difference of volume from one end to the other.

Its feed system has an auto feed function that will automatically slow or shut down feeding when the paver hopper insert is filled, while a maximum delivery override switch will deliver material at maximum throughput for instant filling of the hopper insert. Unlike the shuttle/flight chain concept of conventional MTVs, the MT 3000-2i belt conveyors can unload any typical dump from haul trucks without coking. This, together with the auto feed control system, eliminates the need for a dump person.

A collision bar on the paver insert will halt Vögele pavers if they get too close to the MTV. Also, the water-cooled Deutz engine features 215 hp and is Tier 4-interim emissions-compliant. “The elimination of the stops and starts is resulting in a very smooth pavement,” Burns said. “The screed lays a beautiful mat, it’s amazing how good it looks, seemingly good enough to drive on immediately. There seems to be no shadowing from segregation. With other pavers, as the material comes out of the screed, you will see shadows of segregation, or highs and lows from the extensions where they can’t get them quite equal with the main screed. The VR 600 is doing a beautiful job out here.”

“The MTV provides mix with no segregation and consistent temperature throughout. And when the MTV puts the mix in the hopper insert of the paver, the paver lays it down without issue. I have never seen two machines that work together so well to produce such a good mat. It’s superb.”

Abdalla Naas, assistant regional engineer for Caltrans District 5, San Luis Obispo
HCQ is A-OK!

In a California Department of Transportation “pilot” project, Hamm’s exclusive intelligent compaction system complemented the use of the new Vögele material transfer vehicle (MTV) on a rural highway in central California.
The new Vögele MT 3000-2i material transfer vehicle – paired with a new Vision 5200-2i paver with VR 600 screed – placed a mat that was compacted using the Hamm Compaction Quality (HCQ) system, on a two-lane highway in San Benito County, Calif., on S.R. 25 near Tres Pinos, about 95 miles south of the Bay Area.

Prior to the overlay, existing Calif. 25 had been cold in-place recycled (CIR) to a depth of 0.2 ft. (2.4 in.) by Pavement Recycling Systems, Inc. (PRS) of California. The six-mile project was being paved 28 to 30 ft. wide in two 14 to 15-ft wide lanes, to a depth of 0.15 ft. (1.8 in.). Some 11,500 tons was being placed by Graniterock, and target density ranged from 91 to 97 percent, with 94 being the average.

Hamm HCQ components were mounted on an HD+ 140 VO breakdown roller, a GRW 280i pneumatic roller as intermediate roller, and an HD+ 120 HF compactor in finish mode. Separately, HD+ 70i and HD 90 VO compactors were used for the CIR layer, and also were equipped for HCQ.

“We are reviewing Intelligent Compaction (IC) applications in the field, and we will continue to do them in the future,” said Abdalla Naas, inspector, Caltrans District 5, San Luis Obispo. “We want to have longer life asphalt with good placements. We hope to use IC to get the best pavements in California. On this project, we are getting the best compaction so far, as the material is very tight and it’s a good job.”

“We’ve been doing IC projects with Caltrans and FHWA for the last few years,” said Mike Burns, Wirtgen Group product specialist for Nixon-Egli Equipment Co. “Pilot projects around the state evaluate performance and specs. This is one of many pilot projects in which it’s not mandatory, but by doing it, Caltrans gets feedback and the contractor gets experience.”

IC projects have been aimed at correlating mat temperature stiffness of the asphalt with the number of rolls to a particular density, Burns said.

IC was used for compaction of the CIR layer, and IC was being used for the overlay, Burns said. “Now they can layer the two patterns over each other, and if there is a soft spot or bad area underneath the CIR layer, then it should show up on the hot mix, and it won’t look as though it was a problem with the hot mix layer in the first place,” he said. “It will show overall how well the CIR layer was placed.”

GLOBAL POSITIONING

The land-based global positioning system used by most manufacturers offers real-time kinematic (RTK) precision via a GPS base station, GPS radio and roller-mounted receiver, and a GPS rover, all connected by radio signals.

Hamm, however, avoids this system’s setup by using the proprietary, subscription-based OmniSTAR HP system, which should provide location precision of 2 to 4 in. (5 to 10 cm) directly from the differential global navigation system satellites, operating in real time, and without the need for local base stations or telemetry links. This eliminates the need to set up and move the base station and rover as work progresses.
“Once work is complete, the data that were generated can be easily backed up via the USB interface,” said Tim Kowalski, Hamm Applications Support Manager. “The resulting data provide documentation of the continuous compaction control, with no need for transformation or further processing. Data collection and backup also serve as a basis for individual evaluation and preparation of statistics.”

At the core of the application is a rugged panel touchscreen PC with USB interface. This computer provides processing power as well as a monitor and data storage facilities. It is based on military standards, has a fully enclosed metal case, and is protected against water and vibrations.

The differential global navigation system receiver is a heavy-duty version with magnetic feet, and only takes seconds to mount on the template on the roof of the roller. This device receives the satellite signals, along with a DGNSS correction signal. Licenses for these signals are available in different accuracy classes by subscription.

The HCQ Navigator retains the GPS signal for up to 16 hours even after the machine is shut down; this eliminates wait time for system initialization when starting work, after breaks, at the start of shifts, etc. When compacting under bridges or in locations with radio shadowing, sensors combine with the intelligent software to bridge over insufficient GPS signals for up to one minute.

The HCQ Indicator measures the stiffness of asphalt or soil beneath the drum, and consists of an accelerometer mounted on the drum framework inside the rubber buffers, a processor and a display. With the accelerometer mounted this way, users get the actual reaction of the drum against the material it is trying to compact. Based on these data, the processor calculates the HMV (Hamm Measurement Value) – indicating the degree of compaction as a stiffness measurement derived from the measured signals – and displays this value to the driver in the cab.

A WLAN data network can be used to interconnect a group of rollers so they can exchange measurement results continuously. Each of the roller operators can watch the current progress of the group’s work, e.g. the number of passes by all of the rollers, achieved mat stiffness, or mat temperature.

During the compaction process, the panel PC shows the operator how stiffness is progressing. Separate graphics depict, for example, the number of completed passes or the current asphalt temperature, and the operator has the ability to monitor two of these functions simultaneously on the split screen.
“An ounce of prevention...”

“... is worth a pound of cure” and “pay me now or pay me later!” ring too true in the construction business. For most areas of North America, the lull of winter provides a window of downtime for contractors to bring their equipment back to optimal working order.
Wirtgen America and its factory-trained dealer/distributor technicians are prepared to help you be ready for anything your work has to offer. These equipment experts can assist you and your team when you prepare and re-energize your Wirtgen, Vögele, Hamm and Kleemann equipment during the off season.

Be sure your mills, pavers, rollers and crushers are ready to take on the construction season by taking every precaution to minimize downtime. Machines in tip-top condition are the ones that complete jobs on schedule and win performance bonuses.

And for this winter, your Wirtgen/dealer team is offering these services with attractive incentives.

**MACHINE INSPECTION PROGRAM**

It all begins with Wirtgen America’s free Machine Inspection Program. Available through dealers for all Wirtgen milling machines, stabilizers and slipform pavers, Vögele pavers, Hamm compactors and Kleemann crushers and screens, the Machine Inspection Program is the perfect opportunity to get your Wirtgen Group equipment ready for the upcoming season and help prevent downtime.

Plus, every product inspection comes with free Wirtgen Group hats for your machine’s crew!

The inspection can take place at your shop, or at your dealer’s shop. Wirtgen-trained personnel will closely examine your road building and minerals processing equipment. Inspections include wear part assessments, function tests, maintenance reviews, and parts recommendations.

“It all starts with the inspection,” said Brodie Hutchins, Vice President, Dealer Development. “In most parts of North America, when the construction season comes to an end, the machines get parked and do not operate for extended periods. During that time we want to get out and have a look at the machines, following specific processes that we use for the walk-around inspection.”

It can take half a day or more to do a quick visual inspection, perform function tests, take measurements, and identify what needs to be replaced, or what may not last through another construction season.

“The dealer personnel will need access to the machine for the initial inspection,” Hutchins said. “At the conclusion they will provide to the owner a condition report that shows the date, hours and their detailed findings. Taking a snapshot of the condition of that machine at a point of time is critical, because you can prevent equipment from failing when the contractor needs it the most. When the machine is down, you have the opportunity to examine the entire machine to make sure it will be ready for the upcoming season.”

**MACHINE REBUILD PROGRAM**

For every piece of your Wirtgen Group equipment, the free Machine Inspection Program provides a condition baseline that will identify worn or compromised parts. At the owner’s option, these may be repaired or replaced either a la carte, or all at once via Wirtgen’s Machine Rebuild Program. The created baseline is a document of value to fleet managers as they track equipment condition through the years.

“Through the inspection, parts will be found that will need repair or replacement,” said Tommy Wilson, Parts Marketing Specialist. “Wear parts are easy; they are the ones that are consumed as the equipment operates. Others will be logged as the tech walks around the machine.”

As a follow-up to the free inspection, the dealer will propose
parts replacement, up to a complete rebuild, Wilson added. “They will present the results to the customer,” he said. “Here’s what we’ve found, here’s what we suggest. He then might say here’s what the price normally would be, but if it qualifies for our rebuild program now, we can offer incentives like free freight on parts, parts discounts and perhaps a discount on the labor. It’s the dealer’s opportunity to take care of the customer, and the customer’s opportunity to get the machines back to 100 percent.”

There are strong reasons to utilize Wirtgen’s Machine Rebuild Program. One main reason is the confidence you will have that both you and your dealer are taking care of your investment throughout the life of the machine, while minimizing downtime when machines go back to work.

But there are financial reasons as well. For a limited time this winter, customers will receive an additional discount on all qualifying orders for Wirtgen Group parts generated under the Machine Inspection Program.

“Many owners are very good at maintenance and do an excellent job,” said Scott Lyons, Parts Sales Director. “They know these machines well, and their operators are good technicians, especially if they’ve been to the training sessions at our Reinhard Wirtgen Learning Center. They will also benefit from having the dealer at their side, because they have to go back to the dealer for parts. This is also the perfect time to spend with the customers, without the demands or pressures of the job. It has always been and will always be a relationship business.”

WHAT TO LOOK FOR?

Your own service staff may know what it takes to keep equipment running day-to-day but, will they really know what to look for deep down inside in a meticulous equipment inspection?

Your Wirtgen dealer/distributor team is formally trained to dig deep to look for existing and potential problems that could bring your project to a halt when you most need to keep going.

“Dealer personnel have extensive in-depth training and detailed training on the technical side,” said Anthony Bridges, Inside Parts Sales Manager. “These factory-trained technicians know how to troubleshoot and understand all operating aspects of the machines. More and more, end-users are running the machines productively and efficiently, however, with machines becoming more specialized and sophisticated, service personnel need ongoing training that’s required to keep the equipment running at 100 percent. The value to the customer is that the dealers see more machines, have more time on machines than the end users, so they know what to look for.”

For more information, contact your Wirtgen America dealer/distributor.

www.wirtgenamerica.com

Scott Lyons
Parts Sales Director

Anthony Bridges
Inside Parts Sales Manager
The holidays are over, but long months of winter remain. That means it’s a good time for your staff to head to Wirtgen America's ultramodern training and education facility and learn how to best utilize your cutting-edge equipment from Wirtgen, Hamm, Vögele and Kleemann.
The Reinhard Wirtgen Learning Center, located on the grounds of the Wirtgen America corporate offices in suburban Nashville, provides a world-class training facility that makes Wirtgen America the industry leader for customer and dealer training.

The learning center has two lecture class rooms, each with 50-person capacity, and two lab classrooms, each with 50-person capacity. The labs accelerate training for equipment electronics and hydraulics systems.

The learning center adds value to its customers and dealers in other ways that include:

- **Show Room.** A centrally located show room between two wings permits display of Wirtgen Group’s largest machines.
- **Shop Area.** The training shop area with four large, fully equipped service bays provide hands-on experience to Wirtgen Group contractor and dealer/distributor personnel.
- **Dining Area.** A dining area is provided that will accommodate 80 patrons.
- **Company Store.** The company store lets visitors browse official Wirtgen Group logo merchandise.
- **Outdoor Demonstration Site.** A five-acre site permits demonstrations of the Wirtgen Road Technologies of cold milling, soil stabilization, asphalt and soil compaction, and asphalt and concrete paving; but also demos of Wirtgen Mineral Technologies crushing and screening plants from Kleemann, and surface miners from Wirtgen.

**CUSTOMER-DRIVEN TRAINING**

As Director, Technical Training, Bill Stetar heads the Reinhard Wirtgen Learning Center.

“We are building on the performance-based, customer-driven program that has made the learning center a world-class operation,” Stetar said. “Our instructors have done a great job of creating and delivering courses that have a powerful and positive impact. As we move forward, we also are putting a strong emphasis on supporting dealer development, with courses more attuned to the skills, experience and training that our dealer personnel bring to the table.”

The Reinhard Wirtgen Learning Center serves two classes or populations of students, the customer end users, and the dealer network, Stetar said, and both benefit from enhanced “hands-on” training classes.

“Our instructors are a creative group with many years of industry experience. As a team, we will look for opportunities to incorporate hands-on activities where practical and feasible,” Stetar says. “For our dealers – a very special and important population – we tailor courses that are better tuned to the existing skills and abilities their technicians have.”

Outside the learning center, the outdoor demo area provides an exceptional opportunity for real-world training. “Unless we can have live equipment operating, it’s impossible to train and teach someone how to set up a machine, how to calibrate it, or how to use it,” said Jan Schmidt, Vice President, Product Support. “With our outdoor demonstration area, we do hands-on, live training with all the different products.”

**WHY THE LEARNING CENTER?**

The learning center is required because the Wirtgen Group sells unique construction, maintenance, recycling and materials processing products that are very technically advanced. They are the industry-leading products in terms of their technology and innovation, but for the customer to get maximum value, he or she must know how to utilize the products in an optimal way.

The Wirtgen Group does this by educating the people who operate the machines, and service them, whether they are on a contractor’s staff, or that of an equipment dealer. Wirtgen machines, while utilizing a high degree of computer control and integration, can be challenging to operate and service, at least in the beginning, but the learning center is showing customers how they can be successful.

In addition, customer needs are evolving, as they are pressed to provide a higher quality product in shorter amounts of time, often under increasingly difficult conditions. Wirtgen is determined to make sure customer personnel are able to utilize or service their products to the best of their ability.

When the increase in product features and variety of equipment models is combined with the huge increase in Wirtgen’s customer and dealer network, the need for the Reinhard Wirtgen Learning Center is evident.

**MORE FROM WIRTGEN**

In addition to the extensive onsite training facility, the Wirtgen North America team can also bring training directly to the customer and dealer.

Wirtgen Group’s training software, WITRAIN, also is available; this software provides detailed information on Wirtgen Group machines.

To view class offerings for 2016, or for more information, visit [www.wirtgenamerica.com](http://www.wirtgenamerica.com/en-us/customer-service/training/), or contact your district sales manager.
WIRTGEN GROUP: MINERAL TECHNOLOGY DAYS

Muscle in minerals

In September, Wirtgen Group showed off its “Muscle in minerals” at Technology Days 2015, focusing on Wirtgen Mineral Technologies of Kleemann crushers, Wirtgen surface miners, and the asphalt plants of Wirtgen Group’s 2014 acquisition, Benninghoven GmbH & Co. KG.

Held on the grounds of Benninghoven’s manufacturing plants at Mülheim an der Mosel in the Mosel wine country of west-central Germany, the event drew more than 2,500 delegates from over 100 countries. They were treated to a demonstration of Wirtgen mineral sector solutions which involved the mining, processing and incorporation of aggregates into hot mix asphalt, all involving Wirtgen Group products.

The applications experts at the Wirtgen Group staged exciting live demonstrations of how these elements can come together in practice.

Two powerful surface miners – the 2200 SM 3.8 and 2500 SM – demonstrated the wide range of applications for which Wirtgen surface miners are used in the productive extraction of soft to hard stone. Before a jammed grandstand, the 2500 SM operated at an impressive 1,065 hp when mining material and loading it directly onto trucks via a conveyor belt.

Kleemann demonstrated how interlinked machines joining the Mobicat MC 110 Z EVO mobile jaw crusher, the Mobicone MCO 9 EVO mobile cone crusher, and the Mobiscreen MS 16 D mobile screen processed natural stone in various high-quality final gradations in a three-stage process chain.

The Mobirex MR 130 ZS EVO 2 mobile impact crusher showed how impactors are ideal for processing natural stone, and then, with the Mobicat MC 110 Z EVO mobile jaw crusher, showed how both machines can also deal effortlessly with high-performance concrete and construction waste recycling.

A static display of Kleemann aggregate processing equipment, additional Wirtgen surface miners, the KMA 220 mobile cold recycling plant, and asphalt plants was available for hands-on examination. Lectures on application of Wirtgen mineral technologies were held, and interactive technology centers featuring displays on Wirtgen surface miners, Kleemann aggregate processing equipment, and Benninghoven asphalt mix plants were available for browsing.

A customer service pavilion showed how the Wirtgen Group continues to be “Close to its Customers”, and delegates were treated to Wirtgen hospitality at a grand dinner event opening day, and the entire next day.

Wirtgen Group chairmen Stefan and Jürgen Wirtgen at Technology Days press conference
WIRTGEN SURFACE MINERS

Surface mining is a mechanical process for material extraction that replaces drilling, blasting, crushing and loading in open cast mines with one single machine. Surface miners cut and crush the rock with a special cutting drum and load it onto haul trucks in a single pass via a stable conveyor system.

Alternatively, the rock can be deposited as windrows between the crawler tracks, or side-cast. These three different processes make for a high level of versatility in surface mining applications. With cutting widths of between 7.2 ft. (2.20 m) and 13.8 ft. (4.20 m), Wirtgen surface miners can cut to a depth of up to 32.6 in. (83 cm) deep, and to an unconfined compressive strength of 17,404 psi (120 MPa). Special machines for rock construction can even cut hard granite up to 37710 psi (260 MPa). Wirtgen is the only manufacturer which can offer a performance range of 100 to 3,000 tons per hour with direct loading by conveyor belt.

Wirtgen offers three time-proven performance classes which can be configured variably to meet the needs of each project: the 2200 SM/2200 SM 3.8, the 2500 SM and the 4200 SM. They are used mainly in surface mining. Limestone, coal, iron ore, gypsum, bauxite, phosphate, salt, granite, kimberlite and oil shale can be extracted selectively to a high purity level. In addition to mining applications, surface miners are also used for routing work on roads, train tracks and tunnels.

Requiring no blasting, the process avoids ground vibrations, noise and dust, minimizing environmental impact. Surface mining also increases safety in the mines. Selective extraction not only improves the quality of the material mined, but permits as much as 95 percent of the deposits to be exploited (only some 70 percent of deposits can be exploited on average with conventional methods).
A Kleemann MR 130 Z impact crusher processes demolition concrete at Technology Days demo.

KLEEMANN CRUSHERS AND SCREENS

The Wirtgen Group offers cutting-edge technologies and processes from Kleemann for processing mineral raw materials and recycling building materials. Recycling materials and the chunks of rock obtained from drilling and blasting work in quarries are processed into defined gradations. These classified final sizes are used in all construction for concrete as well as for asphalt base, binder and surface courses.

Kleemann’s product brand names are the Mobicat mobile primary jaw on crawler chassis with feeding unit, pre-screen and conveyors built in various sizes ranging from 100-1,000 tph capacity; the Mobirex mobile primary impactor on crawler chassis with feeding unit, pre-screen and conveyors built in various sizes ranging from 100 to 1,000 tph capacity; the Mobifox mobile secondary crushing machines with feeding unit, impact crusher and a screen producing up to three particle sizes; the Mobicone mobile secondary crushing machines with feeding unit, cone crusher and a screen to produce up to three particle sizes;
North American contractors are among thousands enjoying the gala dinner in advance of field demos next day.

Kleemann's Contractor Line plants which include the suffix "EVO" in their model names are designed for use in a variety of situations in feed material and the mobility of the plants. They are relatively lightweight, and as a result are easy to transport. Their drive concepts take account of changing working conditions, both in recycling applications, and when operating with natural stone.

In contrast, Kleemann's Quarry Line plants are specially designed to cope with the requirements and conditions found in rough quarrying operations. One of their key attributes is their extremely robust design, which makes them ideal for intense and sustained use in a quarry.

The jaw crushers in the Mobicat series are used mainly as conventional primary crushers for natural stone, but also for re-processing residual construction materials. The performance range of these mobile machines extends from 200 to 1,500 tph. Extremely robust, high-performance machines with feed capacities of 450 to 1,500 tph are used for traditional quarry applications.

The impact crushers in the Mobirex series are suitable for processing both blasted natural stone and demolition waste of mineral origin.

Kleemann secondary crushers, which include cone crushers in the Mobicone series for the secondary and tertiary crushing stages with hard stone, as well as impact crushers in the Mobifox series for applications with soft to medium-hard stone. These can be electronically interlinked and teamed with Kleemann primary crushers and screens.

The product portfolio is rounded off by the Mobiscreen series for screen areas of between 36 sq. ft. (3.4 sq. m.) and 198 sq. ft. (18.4 sq. m.). Offering a range of feed capacities of up to 800 t/h, the screening units can handle high outputs and material that is difficult to screen. As a result, there is a mobile screen to suit each mobile crusher, be it for primary or secondary screening or as a double-deck or triple-deck version.

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At dinner, delegates viewed equipment on parade in an exciting laser light show.

A Mobicat MC 110 Z jaw crusher is equally at home crushing reclaimed asphalt pavement as well as demolition concrete for reuse.

The compact Mobicat MC 100 R jaw crusher from Kleemann is ideal for processing materials from raw feed to recycled products.

A Mobicat MC 110 Z jaw crusher is equally at home crushing reclaimed asphalt pavement as well as demolition concrete for reuse.

After dinner, delegates viewed equipment on parade in an exciting laser light show.
In February 2016, slipform products and mobile crushers from Wirtgen America Inc. will take center-stage at World of Concrete in Las Vegas.
WIRTGEB SP 90i SERIES

The new Wirtgen SP 90i series of large slipform pavers comprises the world’s most versatile, highest production slipform machines. The SP 90i series includes the two-track SP 92i, and the four-track SP 94i. The SP 94i will be the centerpiece of the Wirtgen America indoor stand.

The SP 90i series offers dowel-and-tie bar inserters, finishing beam, super smoother and many other state-of-the-art options. SP 90i series machines can be controlled either with string-line, or stringless by a variety of aftermarket systems. Its proven interface guarantees intelligent compatibility with 3D control systems of leading suppliers.

This new slipform paver series achieves success in the highly precise paving of concrete slabs with widths ranging from 6 to 31 ft., and paving thicknesses of up to 18 in. (450 mm) in standard configuration.

ACCURACY OF OPERATION

The benefits of the SP 92i and SP 94i include unprecedented accuracy, which leads to higher production with unparalleled ride; utmost machine flexibility to meet changing job site requirements; ease of use with a quick learning curve; and ease of troubleshooting.

Relaxed operation is provided by the ergonomically designed workplace, which offers a user-friendly operating concept with optimum visibility and quiet operating conditions.

The “i” in SP 90i designates these pavers as having “intelligent” power and emissions control systems. Next-generation controls provide superior regulation of machine performance, and the diagnostic system has a standardized interface for quick, targeted service when necessary.

ECO MODE SYSTEM

The SP 92i and SP 94i’s Eco mode system provides power on demand, automatically matching engine output to jobsite performance requirements, ensuring maximum engine efficiency, with reduced diesel fuel consumption and noise levels.

Both the SP 92i and SP 94i are powered by a Cummins QSL 9 diesel engine. The state-of-the-art engine technology of the SP 94i offers maximum engine power of 310 hp (231 kW), and complies with U.S. Tier 4i Final emission standards.

Depending on customer requirements, the paver can be equipped with an hydraulic or electric vibrator drive. In standard design, it comes with 12 hydraulic connections (optionally 18 or 24), alternatively it can optionally be fitted with 12, 20 or 28 electric connections. Positioning of the electric or hydraulic vibrators can be adjusted hydraulically.

Machine-integrated, self-loading dowel bar inserter, central tie bar inserter(s) and side tie bar inserter(s) are available as optional features as the customer requests.

FULLY MODULAR DESIGNS

The paver’s fully modular design makes modification flexible, facilitating retrofitting of customer options, and application-related adjustments to site conditions.

The SP 90i series’ fully modular inset mold system permits paving of concrete slabs with central crown from 6 to 31 ft. wide, using automatic crown adjustment. Edge slump adjustment is done hydraulically, and concrete can be spread by spreading plow or spreading auger. The SP 90i series offers integral curb capability and zero clearance paving.

Precise steering and drive systems are a hallmark of the SP 90i series. Precision in concrete paving is ensured by intelligent steering and control systems, which offer exceptionally smooth operation.

And when it’s time to move the paver, the SP 90i series has the moves! An intelligent transport concept has been built into these pavers. Compact transport dimensions make loading easier and transport cost-effective with minimal fuss.

Depending on configuration, the SP 92i will weigh 65,000 to 100,000 lb., and the SP 94i 65,000 to 145,000 lb.
WIRTGEN SP 15i

The SP 15i updates its predecessor, the SP 15, with Tier 4 interim emissions technology, but both are true multipurpose machines that lay curb and gutter, barrier, sidewalk, V-ditch, special applications and slabs. Both of these versatile machines can be quickly configured on-site for left- or right-side pouring.

Like the SP 25i, the SP 15i accepts AutoPilot technology from Wirtgen, a GPS-based system that ensures highest precision and optimum efficiency in slipform paving, regardless of whether straight profiles, highly complex curved paths, or closed profile configurations need to be placed.

The SP 15i has a maximum paving width of 6 ft., maximum barrier/parapet placement height of 4 ft., 3 in., and a maximum operating weight of 28,500 lb. It has best-in-class trimming capacity, quick on-site changes for left or right side pouring, unsurpassed job site mobility, and pours the tightest, smoothest radius in the industry with all-track steering and positioning. The SP 15i also features an Eco mode which matches engine rpm to machine power requirements, thus saving fuel and reducing emissions. It’s powered by a Deutz TCD 4.1 L4 engine generating 127 hp.

The SP 15i slipform paver sets new standards as a multi-purpose machine for offset concrete paving. The compact machine has a heavy-duty design for tough day-to-day operation, exceptional maneuverability, and ease of operation. It’s the ideal choice for pouring offset profiles and for sidewalk up to 6 ft.

The SP 15i owes its broad range of capabilities to the highly flexible arrangement of its mold and track units, as the great variety of setup options make the machine adaptable to most job site conditions, resulting in unrivaled operating efficiency.

The flexibility of the SP 15i is enhanced by options such as trimmer, concrete feeding via belt conveyor or auger conveyor, and electric or hydraulic vibrators. The compact, overall dimensions of the SP 15i allow for easy transport.

WIRTGEN SP 25i WITH AUTOPILOT

The new SP 25i concrete slipform paver updates the preceding SP 25 with Tier 4 interim-compliant emissions technology, and will be shown operating with Wirtgen’s AutoPilot technology at Wirtgen’s outdoor stand O31100.

The Wirtgen SP 25i paves 12 ft. wide, and places barrier/parapet up to 6.5 ft. It also features quick on-site changes to left- or right-side pouring. The SP 25i differs from the SP 25 in its engine specifications, with a Deutz TCD 4.1 L4 engine generating 154 hp.

The SP 25i’s modular design allows for a wide array of applications with either three or four tracks. They’re fitted with an integrated machine management system of the highest quality, and they feature fuel-saving intelligent operation, including an Eco mode which matches engine rpm to machine power requirements, thus saving fuel and reducing emissions. Their maximum operating weight is 44,000 lb., depending on configuration and application.

Like the SP 25, the SP 25i features quick on-site changes to left- or right-side pouring. The SP 25i is the ideal candidate for a large variety of special jobs, using either stringline or state-of-the-art Wirtgen AutoPilot 3D control technology.

Mold changes or conversion of the SP 25i from inset to offset configuration can be accomplished quickly and easily on site. An advanced electronic steering and control system ensures that profiles are poured with the highest precision.

Easy and convenient operation of the slipform paver guarantees short training periods and high productivity.
WIRTGEN AUTOPilot

In addition to interfacing seamlessly with all major stringless 3D machine control systems, Wirtgen offers its own system. The Wirtgen AutoPilot™ is an innovative stringless control system for use with Wirtgen SP 15/SP 15i and SP 25/25i concrete slipform pavers which offers reduced costs of construction, faster setup times, and enhanced accuracy for paving projects.

AutoPilot is a user-friendly, cost-effective control system for poured-in-place concrete profiles, such as curbs, safety barriers or slabs. AutoPilot is a GPS-based system that ensures highest precision and optimum efficiency in slipform paving, regardless of whether straight profiles or highly complex curved paths are being poured.

The proprietary Wirtgen AutoPilot control system gives construction companies a distinct competitive edge, as it gives them the choice to either build a virtual stringline using the system’s rover pole, or use existing digital terrain models.

The AutoPilot system utilizes a computer integrated in the machine, as well as a control panel that allows intuitive operation. For course control, two machine-mounted GPS receivers communicate with an additional GPS reference station positioned on-site.

For precise grade control, a laser, ultrasonic sensor or total station is used. The machine control software is a proprietary Wirtgen development.

WIRTGEN TCM 1800

The versatile TCM 1800 texture curing machine from Wirtgen America offers high productivity curing and texturing of portland cement concrete slabs.

This self-propelled, track-mounted texture curing machine follows behind the slipform paver when placing concrete slabs, and is equipped with an automatic brooming and spraying system which adds pavement texture, and then a thin film of curing compound.

Its four-track propulsion is particularly useful on ground with low bearing capacities. The four hydraulically driven, height-adjustable and steerable track units provide optimal propulsion. Hydraulically telescoping frame elements, left and right, complement the TCM 1800’s modular design. A walk-through operator’s platform is paired with a wide working platform.

A spraying unit with three nozzles that moves back and forth automatically, and broom unit in various designs, are mounted at the transverse drive. Optimal application of the curing compound is ensured in both stop-and-go operation and continuous advance mode. A 211-gal. (800-liter) curing compound tank with integrated agitator provides a reliable flow of material while paving.

Different broom patterns are available for the TCM 1800 to give concrete pavements their specified surface texture and grip. The broom unit is automatically raised at both ends to prevent the concrete edge from damage. The machine also can be equipped with a broom unit operating in longitudinal direction. If specified, a burlap or artificial turf can be dragged across fresh pavement instead of a broom finish.

The TCM 1800 is equipped with an innovative self-loading feature. Its sophisticated pivot steering system does not require any conversion to pivot track units 90 deg from working position into transport position.

The machine’s flexible steering system enables small turning radii when in working position, and easy maneuvering is ensured also when in transport position.
One of two new impact crushers from Kleemann – the Tier 4 final-compliant Mobirex MR 110 ZSi EVO 2 – will be shown at Wirtgen’s indoor stand No. C6127.

The MR 110 ZSi EVO 2 is the slightly smaller version of the MR 130 Zi EVO 2. EVO 2 represents the continuing evolution of the successful EVO Contractor Line, with additional benefits in terms of economy and operational safety. These new impact crushers are differentiated by their size and productivity; the MR 110 ZSi EVO 2 has a crusher inlet opening of 43.3 in. (1100 mm), and the MR 130 Zi EVO 2 a crusher inlet opening of 51 in. (1300 mm). These provide feed capacities of up to 350 or 450 tph, respectively.

The “S” indicates a Mobirex unit with optional, highly productive secondary vibrating screen with extra-large screening surface mounted on the discharge conveyor. This secondary screen unit can produce spec material, potentially eliminating the need for a separate screen.

Impact crushers are ideal for processing demolition materials to spec, such as recycled concrete aggregate (RCA) and reclaimed asphalt pavement (RAP).

The feeding unit has hydraulically folding hopper walls and locking system, which speeds setup. A vibrating double-deck prescreen between hopper and crusher eliminates fines from the product flow before they ever enter the crusher, reducing wear and cutting fuel costs.

The new EVO 2 Mobirex mobile impact crushers utilize direct drive crushers and electric drives for the vibrating conveyors, belts and the prescreen. This permits high fuel efficiency and allows optimal loading of the crusher.

These crushers feature a new inlet geometry which allows even better penetration of the material into the range of the rotor. Also, the wear behavior of the new C-form impact ledges has been improved to such an extent that the edges remain sharper longer, leading to improved material shape. The rotor ledges are held securely by a new and extremely user-friendly clamping system, which means that they can be changed even quicker, and thus contribute to greater plant uptime.

Outstanding performance is made possible in part by the extremely efficient direct drive, with which the machines are equipped. A latest-generation diesel engine transmits its power almost loss-free directly to the flywheel of the crusher, via a robust fluid coupling and V-belts. This drive concept enables enormous versatility, as the rotor speed can be adjusted in four stages to suit different processing applications.
Kleemann’s 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.

For the optional S version with secondary screen mounted, the oversize gradation return conveyor has been redesigned from the predecessor models, eliminating a vertical bend and integrating the transfer chute at the feed hopper.

**AUTO GAP ADJUSTMENT**

With these new Mobirex impact crushers, the fully hydraulic adjustment capability of the crushing gap permits greater plant uptime, while improving quality of end product.

Not only can the crushing gap be completely adjusted via the touchpanel electronic control unit, but the calculation of the zero point is possible while the rotor is running. This ability to accurately set the crusher aprons from the control panel with automatic detection of zero point and target value setting saves time, and improves the overall efficiency and handling of the crusher.

In a Kleemann Mobirex impact crusher, zero point is the distance between the ledges of the rotor and the impact plates of the lower impact toggle, plus a defined safety distance. The desired crushing gap is approached from this zero point.

While the upper impact toggle is adjusted via simple hydraulic cylinders, the lower impact toggle has a hydraulic crushing gap adjustment device, which is secured electronically and mechanically against collision with the rotor. The crushing gap is set via the touch screen and approached hydraulically. Prior to setting of the crushing gap, the zero point is determined automatically.

For automatic zero-point determination, with the rotor running, the impact toggle moves slowly onto the rotor ledges until it makes contact, which is detected by a sensor. The impact toggle is then retracted by the defined safety distance. During this procedure, a stop ring slides on the piston rod. When the zero point is reached, the locking chamber is locked hydraulically and the stop ring is fixed in position. The stop ring now serves as a mechanical detent for the piston rod.

During the stop ring check, which is carried out for every crusher restart, the saved zero point is compared with the actual value via the electronic limit switch. If the value deviates, a zero-point determination is carried out once again.

www.wirtgenamerica.com
WIRTGEN GOLF CLASSIC: ANOTHER GREAT SUCCESS!

Hole in one!

The annual golf outing — sponsored by Wirtgen America Inc. with its valued industry partners — raised over $110,000 for cancer research.
Some unexpected tropical storms on the east coast kept some teams from traveling to Nashville for the 9th annual Wirtgen America Charity Golf Classic in early October, but it didn’t put a damper on the festivities.

“This year was our best year yet,” said Sandy Draper, tournament director and Wirtgen America Director of Inside Sales Operations. “We had the best weather we ever had, everyone enjoyed themselves and the entertainment was awesome. Once again, thanks to all of our sponsors and participants. They make it possible for us to continue to raise this kind of money for a great charity.”

The Wirtgen America Golf Classic benefits the T.J. Martell Foundation, a national non-profit organization that supports innovative research to fight leukemia, cancer and AIDS through six top research hospitals in the United States. In Nashville, the foundation annually supports cancer research at the Frances Williams Preston Laboratories at the Vanderbilt-Ingram Cancer Center.

The foundation was established by music industry executive Tony Martell and his colleagues in loving memory of his son T.J., who died of leukemia. The year 2015 marks the 40th anniversary of the foundation, which has provided more than $270 million to top research hospitals in the United States.

“Wirtgen America started this event in 2006 to honor its employees we had passed on to cancer,” Draper said. “It’s an effort that’s very near and dear to our hearts, and we will continue to support it.”

The event began Sunday evening, Oct. 4 with a kick-off reception at the popular Silver Dollar Saloon in downtown Nashville. There was a live and silent auction overseen by celebrity host Shawn Parr, the “Ambassador of Country Music.” Parr has spent over two decades on the country music scene, hosting radio, television and music award shows.

Entertainment was provided by Kristian Bush. Bush is a singer/songwriter and with Jennifer Nettles performs as the award-winning country music duo, Sugarland.

Monday Oct. 5, was an awesome fall day where 32 teams gathered for a shotgun start at the renowned Hermitage Golf Course. A full day of excitement, enthusiasm and camaraderie was enjoyed by everyone!

The first place trophy went to a team from United Parcel Service, second place to Coyote Logistics, and third place to Creative Artists Agency.

The second place team from Coyote Logistics (left to right): Taylor Hamon, Chris Petrie, Carter Garrett and Matt Wild

The 10th annual Wirtgen America Charity Golf Classic is scheduled for Oct. 6-7, 2016. For more information, or to hear about sponsor opportunities, please contact Sandy Draper at (615) 501-0600.

http://wirtgengolfclassic.com

OUR VALUED SPONSORS WERE:
- Cumberland Hospitality Group
- Bank of the West Equipment Finance
- The Crichton Group
- Icon International
- First Tennessee Bank
- Wells Fargo Equipment Financing
- Signature Transportation Services
- Hatec/Hansa Flex Group
- Deutsche Leasing
- Custom Advertising
- Total Transport, LLC,
- Tractor & Equipment Company
- Coyote Logistics
- Enterprise Fleet Management
Local Nashville artist, Britt Stokes, kicking off the reception.

Grammy award winning singer/songwriter Kristian Bush not only performed but also donated to the live auction.

Kristian Bush, Shawn Parr and his wife Joella Courchaine enjoying the silent auction offerings.

Wirtgen America employees and our vendors enjoy volunteering for this event.

OUR PEOPLE

Service Awards

Wirtgen America would like to recognize the following employees for their years of service. Thank you for your dedication.

5 Years:  Phillip Abshire, Clint Pearce, Doug Sanborn, John Weigel
10 Years:  Debbie Bason, Robert Bauer, Richard Gaines, Steve Howard, Mark Inman, Ingo Lindemann, Christine Trost
15 Years:  Van Carroll, Evan Clarke, Greg Cox, Jim Griffith, Cindy Hart, Jim McEvoy, Bruce Monical, Steve Strom, Gene White
20 Years:  Marty Burks, Scott Lyons