Wirtgen │ Technologies for sustainable road construction at Conexpo 2023

Innovative solutions for cold milling, recycling, soil stabilising and concrete paving

Wirtgen will be presenting a cross-section of its premium cold milling, recycling, soil stabilising and concrete paving products on the joint booth shared by Wirtgen Group and John Deere. Alongside nine exhibits from three product sectors, the focus will also be on digital system solutions and assistance systems.

Cold milling for all construction site sizes

With the W 50 Ri, Wirtgen will present its powerful half-metre cold milling machine with rear loading. Its winning features include a simple operating concept and automatic functions. The W 120 Fi front loader has been designed for working widths of up to 4 ft 3 in (1,3 m). The F-Series compact milling machine is fitted with a John Deere engine that has been customised to meet the special demands of cold milling applications. Two large F-Series milling machines complete the cold milling machine range on show. A broad spectrum of applications can be covered using the W 210 Fi, spanning everything from surface layer rehabilitation or complete paving removal to fine milling work. The W 250 Fi, the most powerful large milling machine, was developed with an eye to material loading capacity and performance to maximise productivity.

F-Series cold milling machines are available with the innovative Mill Assist machine control system as well as the Wirtgen Performance Tracker for digital construction site documentation.

Cold recycling and soil stabilising – sustainable and economical

The responsible use of resources is a key element of the W 380 CRi as well as the WR 200 XLi and WR 250i. The W 380 CRi with rear loading and a mixing performance of up to 800 t/h is used for rehabilitating wide roads. It can be deployed in both cold in-place recycling (CIR) and in full-depth reclaiming (FDR) projects. Besides cold recycling, the WR-Series wheel-driven recyclers can also carry out soil stabilising tasks. With a working width of 7 ft 10 (2.4 m) in as well as high milling and mixing performances, they are well-equipped for use in demanding projects with high daily outputs. The digital system solutions, the AutoTrac steering system and the WPT (Wirtgen Performance Tracker) documentation system further increase process efficiency.

Flexibility during inset and offset concrete paving

With the SP 15i and SP 94i, Wirtgen will showcase two very customisable concrete paving machines. The SP 15i allows flexible slipform paver positioning, which is a huge advantage when producing monolithic profiles in an offset process. The machine also has a telescopic operating platform extension for a better view of the working area and the paving result. Furthermore, the machine can be controlled without a stringline using the specially developed AutoPilot 2.0 control system. The SP 94i is a fully modular inset slipform paver in the 30 ft class. The 4-crawler paver with the TeleMold system will be presented in Las Vegas. This paver allows fast and flexible working width changes up to 3 ft on each side, making a total of 6 ft.

**Innovative cold milling technologies**

The Mill Assist machine control system increases process efficiency during cold milling. In automatic mode, this system establishes an optimum ratio between performance and operating costs. The engine speed and therefore the milling drum speed are controlled automatically. The lower speed range enables fuel consumption and pick wear to be significantly reduced. In the upper speed range, an optimum milling pattern can be achieved, even in the case of higher area performance rates. The operator can also select one of three operating strategies, ‘ECO’, ‘performance-optimised’ or ‘milling pattern quality’.

The milling performance can be documented precisely and reliably using Wirtgen Performance Tracker (WPT). The laser scanner defines the cross-sectional profile to be milled. Surface milling performance and milling volume are then precisely defined using GPS positioning and other sensors. Important information is displayed on the machine’s control panel. An automatically generated report can be sent by email to the machine operator. This reduces the time and costs involved in job processing.

Cold milling expert Tom Chastain from Wirtgen America will provide an in-depth look at milling and profiling best practices and technologies during the Conexpo Education Sessions that will be held on March 16, 2023, in West Hall 208 - 210 in the Las Vegas Convention Center.

**Resource-saving technologies for recycling and soil stabilising**

The satellite-based AutoTrac steering system used in Wirtgen WR-Series recyclers makes precise and efficient project processing easier. It steers the machine accurately within tolerances of a few centimetres on the basis of a previously determined reference strip and a specified overlap of adjacent strips, enabling consistent utilisation of the machine’s ideal working width. This results in greater process efficiency and therefore a higher degree of environmental compatibility.

The Wirtgen Performance Tracker is also available with WR-Series machines. The system balances all relevant working parameters on a site-specific basis to provide a comprehensive database for construction site analysis and documentation. For soil stabilising projects, this includes working width and depth, area and distance worked, fuel consumption, and much more.

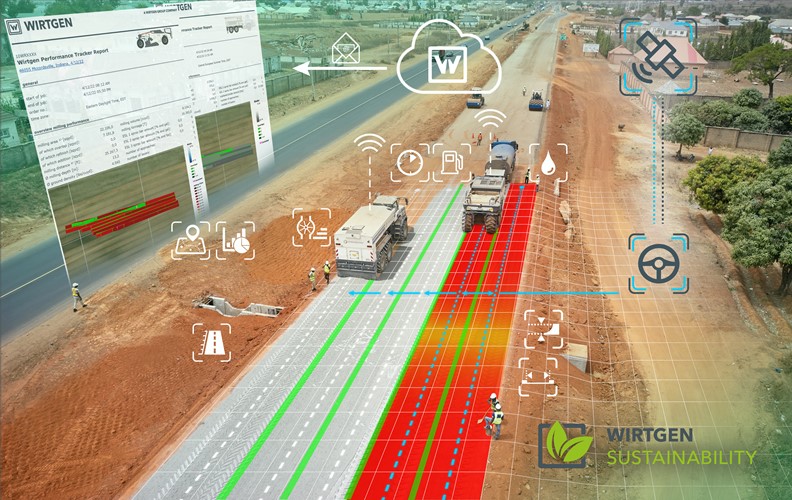
**Non-stringline control increases efficiency and safety**

The AutoPilot 2.0 is a control system developed by Wirtgen for non-stringline paving as an alternative to conventional scanning along a stringline. The system, which precisely controls both the machine’s height adjustment and steering, is available for all offset pavers and placers/spreaders. A GNSS signal and, depending on the configuration, various local sensors, such as an ultrasonic sensor on the machine, act as a reference. The stringline is completely eliminated and, with it of course, the time needed to set it up and take it down. It also enables fast and precise paving of tight radii and complex geometries. The Wirtgen AutoPilot 2.0 system provides machine control and remote control from a single source.

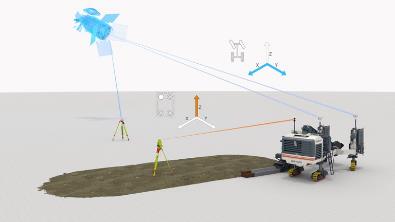
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Wirtgen compact and large milling machines of the F-Series are available with Mill Assist and Wirtgen Performance Tracker.

  
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AutoTrac and WPT make a significant contribution to resource conservation during soil stabilising.

  
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The Wirtgen AutoPilot 2.0 for non-stringline paving increases process efficiency and safety.

Please note: The photographs shown here are only previews. If you wish to publish them in other media, please download the higher resolution (300 dpi) versions from the Wirtgen Group websites.

For further information, please contact us at:

WIRTGEN GROUP

Public Relations

Reinhard-Wirtgen-Strasse 2

53578 Windhagen

Germany

Phone: +49 (0)2645 131 1966

Fax: +49 (0) 2645 131 499

E-mail: PR@wirtgen-group.comPR@wirtgen-group.com

www.wirtgen-group.com