Wirtgen | Global Market Launch – Rock Crusher WRC 240(i)

The New Specialist for Layer Processing in Road Construction

The WRC 240(i) breaks coarse rocks in-situ, as found in hand-packed pavement layers (e.g. Telford bases) or stony soils, and produces a homogeneous mix in a continuous process. The working width of 2,320 mm and a working depth of up to 510 mm enables an output of up to 600 tons per hour. The market launch of the Rock Crusher will take place in November 2023.

Sustainable Processing of Stony Ground

The WRC 240(i) from Wirtgen expands the portfolio of wheeled soil stabilizers designed especially for the processing of stony ground. In addition to the crushing of rocks and stones with an edge length of up to 300 mm and a compressive strength of up to 200 MPa, the machine can add cement and water in the same pass, for instance in the preparation of base layers. Here, the cement is pre-spread with a binding agent spreader and the water required is sprayed into the mixing chamber of the Rock Crusher via the machine’s Varioinjection bar. The machine can also be used for soil stabilization. For this application, the pre-spread binding agents such as lime or cement are mixed into the existing soil with insufficient bearing capacity, transform it in-situ into a high-grade construction material, and deposit it evenly behind the machine. The main task of the WRC is the granulation and mixing of a variety of soils, courses, and layers to produce a homogeneous final product in a continuous process. As opposed to the removal and replacement of material, the processes here are characterized by shorter construction times, conservation of resources, and lower CO2 emissions.

New Development - the Crushing and Mixing Rotor

The rugged and resilient crushing and mixing rotor with toolholders developed especially for crushing applications with the HT18 enables optimal results when working in stony ground. The tools are fitted with large, impact-resistant carbide cutting edges and the holder bases are protected by wear-resistant protective elements made from high-tensile steel. This ensures high machine utilization rates and process reliability in demanding applications. Robust edge protectors reduce wear on the edge ring segments of the rotor. The rotor is driven via a transmission developed especially for the WRC that enables the realization of high rotor speeds.

Armored Rotor Housing

In order to ensure long-term resistance to the enormous stresses encountered when crushing rocks, the rotor housing of the Rock Crusher is lined with abrasion-resistant wearing plates made from extremely tough high-tensile steel. These guarantee a longer service life and increase the overall stability of the housing. The entire mixing chamber is lined with these extremely hard-wearing plates, which can be individually replaced if and when required.

Homogeneous Grain Sizes in All Applications

The WRC 240(i) offers several setting options that enable the achievement of the desired grain size and consistently uniform distribution in a wide range of applications. Nine rotor speeds, a variable crushing stage, exchangeable screens with a range of clear mesh sizes and adjustable distance from the rotor, adjustable rotor plate pressure, and the machine advance rate enable the configuration of the machine to meet the needs of actual site conditions and the desired application.

**Digital Assistance Systems Improve Process Quality**

By enabling precise, automatic steering, the satellite-based AutoTrac system helps the WRC to achieve greater process efficiency and, as a result of this, a high degree of environmental compatibility. It steers the machine accurately within tolerances of a few centimeters on the basis of a previously calculated reference strip and a specified overlap of adjacent strips, thus enabling consistent utilization of the machine’s ideal working width. The Wirtgen Performance Tracker (WPT) registers all relevant location-specific working parameters to provide a comprehensive database for the analysis and documentation of the construction site.

Photos:

  
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The Wirtgen Rock Crusher 240(i) enables the crushing, processing, and homogenization of hard core, concrete fragments, cobblestones, and stony ground.

  
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The vertically-stacked, hydraulically-adjustable classifying screens of the WRC 240(i) ensure that only material that has reached the desired grain size is output from the crushing process in the rotor housing.

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.

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