# The New Wirtgen 220 SM/220 SMi: Surface Miner for Raw Material Extraction and Routing Operations

With the introduction of the 220 SM/220 SMi surface miner, Wirtgen is unveiling a new machine designed especially for use in small and medium-sized mining operations as well as for routing work and infrastructure projects.

**Selective Extraction of Raw Materials**

With a cutting width of 2.2 m and a cutting depth of up to 300 mm, the 220 SM/ 220 SMi can extract raw materials up to a uniaxial compressive strength of 50 MPa. The extracted material is deposited behind the machine in a windrow and then loaded onto trucks with wheel loaders. Selective extraction makes it possible to mine raw materials with a high level of purity. The use of surface miners also reduces the amount of equipment, maintenance, and time required compared to drilling and blasting or rip-and-stack mining. In addition, refraining from drilling and blasting makes it possible to efficiently mine materials close to industrial sites and other infrastructure like pipelines or high-voltage power lines, which ultimately results in the optimized exploitation of the deposit.

Thanks to its compact dimensions and smooth, hydraulic, all-track steering, the smallest Wirtgen surface miner has a tight turning radius, which is particularly beneficial in small mining fields.

**Routing Operations and Infrastructure Projects**

The 220 SM/220 SMi can also be used for routing work and infrastructure projects. Where excavators or other machinery reach their performance limits, the 708 kW powerhouse can cut even the hardest rock, reduce it to the desired maximum grain size, and create stable and even surfaces with extreme precision. The excellent maneuverability of the 220 SM/220 SMi also makes it ideal for routing narrow sections such as ramps.

**Highly Productive Cutting Drum Unit**

The heart of the 220 SM/220 SMi is the optimized cutting drum unit. Specially designed for challenging windrow applications, the cutting drum turns the power delivered by the engine into maximum cutting power, and as a result, increased productivity. In this process, the high, narrow sides of the holder base ensure that material flows smoothly and energy consumption is kept to a minimum. This results in reduced wear and tear on the housing, holders, point-attack cutting tools, and scraper blade – even when mining hard, abrasive material.

All of the 220 SM/220 SMi’s components are designed for extremely demanding open-cast mining applications. This also applies to the massive track units with strong dual-bar base plates for excellent advance, even in difficult conditions.

**LEVEL PRO *PLUS* Leveling System**

The LEVEL PRO *PLUS* leveling system has a proven track record in road construction and mining and is intuitive and easy to operate. A flat or inclined formation level can be created with absolute precision thanks to side plate scanning and the cross-slope sensor. The machine is also ready to be equipped with GPS or laser control.

**Effective Safety Concept**

The safety of operating and maintenance personnel is the highest priority in open-cast mining In the ROPS/FOPS operator’s cabin, the operator is protected from external hazards. The cutting drum is easily and safely accessible from the rear through the scraper blade, which opens hydraulically. Pick changes are only carried out when the engine is off. Plenty of space to move, a hydraulic pick ejector, and a milling drum rotation device further simplify this process. Unintentionally switching on the miner can be prevented mechanically by locking the battery and starter isolator, which allows maintenance work to be carried out safely when the machine is shut down. The rear view camera offers excellent visibility for fast, safe maneuvering. When reversing, Reverse Assist offers the operator added support.

Photos:

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|  | W\_photo\_220SM\_00017\_HI The new Wirtgen 220 SM/220 SMi surface miner is extremely versatile. With a cutting width of 2.2 m and a cutting depth of up to 300 mm, the 708 kW powerhouse is used for the selective extraction of raw materials up to a uniaxial compressive strength of 50 MPa, as well as for routing operations and infrastructure projects. |
|  | W\_photo\_220SM\_00011\_HI One highlight of Wirtgen’s 220 SM/220 SMi surface miner is the spacious ROPS/FOPS operator’s cabin. It can be heated or air-conditioned and is soundproofed and isolated from vibrations. All of the machine’s key functions have been integrated into the multifunctional joystick. |

*Note: These photographs are only intended as a preview. For printing in publications, please use the photographs in 300 dpi resolution that are available for download from the Wirtgen GmbH / Wirtgen Group websites.*

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