



A production system comprising a Wirtgen small milling machine, a Vögele MINI class paver and a compact roller from Hamm confidently masters the challenges of a small construction site – with zero operating emissions, too.

IMAGE SOURCE: WIRTGEN GROUP

Small machines with great performance for small construction sites

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- Wirtgen Group offers a range of small milling machines, MINI class pavers, and compact rollers for small-scale repair jobs with zero operating emissions.
- The small machines are ideal for various applications including road construction, cycleways, footpaths, and industrial building floors.
- Wirtgen's small milling machines, such as the W 35 Ri and W 120 Ri, provide high productivity and versatility with features like the FCS quick-change system.

- Vögele's MINI and Compact Class pavers, including models like the SUPER 700i and SUPER 1300-3i, offer paving widths from 0.25 m to 5.00 m, suitable for tight spaces.
- Hamm's HD CompactLine series, including electric models like the HD 10e, provide efficient compaction with zero operating emissions.
- The Wirtgen Group's modular production system, featuring battery-electric machines and the MULTI JET burner, supports sustainable road construction with zero CO2 emissions.

Small milling machines, MINI class pavers and compact rollers work in perfect harmony when it comes to small-scale repair jobs – with zero operating emissions, too

On small project sites, whether the work is to be carried out on small areas or is a matter of repairing surface damage in certain places, the quality of the final results must still fulfil the highest standards. For jobs like these, the **Wirtgen Group** product portfolio offers a range of machines that harmonise perfectly in terms of application-specific suitability and cost-efficiency. In addition to the small milling machines from Wirtgen, these include the MINI class pavers from Vögele and the compact rollers from Hamm.

No more temporary patching

Among the classical applications are, primarily, small-scale repair and maintenance jobs in road construction. Removing road markings, working around road fixtures and the milling of gutters and slots are just as frequently represented here as repair work in flowing traffic, and the construction of cycleways and footpaths, farm tracks, car parks and sports facilities. The small machines fill in sewer trenches, pave floors inside industrial buildings or underground car parks and are also used on gardening and landscaping projects. The compact machines are particularly useful for repair and maintenance projects that have to be achieved within tight deadlines and deliver high-quality results with long-term structural integrity.



The Wirtgen small milling machine W 35 Ri rapidly mills off the surface layer or even several layers at a time.

IMAGE SOURCE: WIRTGEN GROUP

Small, versatile and multi-talented

The portfolio of small milling machines from Wirtgen ranges from the smallest milling machine, the W 35 Ri, and the half-metre class W 50 Ri to the 1-metre class models. Despite their compact dimensions, their daily productivity is enormous. Which they impressively confirm when rapidly removing surface layers or milling out several layers at a time. Small rear loaders such as the W 120 Ri can even remove complete asphalt packages up to a depth of 30 cm and a maximum width of 1.2 m.

The rapid completion of construction projects with small milling machines is enabled by single-handed operating and high travel speeds of up to 12 km/h. A further advantage here is the FCS quick-change system for milling drums. It allows the fast and simple exchange of milling drums with a variety of working widths

and tool spacings. This means that both standard milling and fine milling applications are possible. The outstanding manoeuvrability of the machines enables the milling of tight radii when milling around manhole covers.

Small size guarantees efficiency in all situations

Whether on construction sites with narrow or tight situations or low headroom – wherever space is severely restricted or small paving widths are required, the smallest Vögele pavers, the MINI 500 and MINI 502, or the compact SUPER 700i and SUPER 800i pavers, are always the ideal choice. They offer paving widths as low as 0.25 m to 3.5 m and can eliminate the need for manual work. The MINI class pavers enable contractors to achieve even the smallest projects more conveniently and with higher efficiency and quality with a machine.

Vögele Compact Class pavers are therefore the ideal choice for small to medium scale construction projects. Depending on the model, the SUPER 1000i, SUPER 1003i, SUPER 1300-3i and SUPER 1303-3i machines offer paving widths from 0.75 m to a maximum of 5.00 m.



Thanks to its compact dimensions, variable paving widths and outstanding capabilities, the SUPER 700i is ideal not only for the construction of cycleways and footpaths but also for small-scale construction projects and repair and maintenance work.

IMAGE SOURCE: WIRTGEN GROUP

Small and versatile

With operating weights of between 1.5 and 4.5 t, the HD 8 - HD 14(i) articulation steered tandem rollers are true all-rounders not only in the use of construction of roads and paths, but also on gardening and landscaping projects. Not only crushed stone, frost protection and base layers, but also water-bound road surfaces and asphalt layers can be ideally compacted with the tandem rollers of the HD CompactLine series. Depending on the construction material and the required compaction depth, the best results are achieved with vibration, oscillation or combination rollers. With eight electrically powered rollers, Hamm also offers a range of solutions for zero operating emission compaction. The HD 10e / HD 12e models (drum width: 1 m / 1.20 m, operating weight: 2.5 t / 2.7 t) offer exactly the same compaction performance as their combustion-

engined counterparts, but with zero operating emissions. The operating system of the e-rollers is almost identical to that of the other models in the HD CompactLine series.



Battery-electric tandem rollers such as the HD 12e VO with one vibration and one oscillation drum are ideal for compaction work in areas particularly sensitive to noise and vibration.

IMAGE SOURCE: WIRTGEN GROUP

A special highlight: more creative freedom with coloured asphalt

Promote sustainability by adding specialities: the use of coloured asphalt is an excellent way for urban planners, landscape designers and construction companies to create special paving effects. The mix is produced using 'colourless bitumen', a synthetic binding agent based on mineral oil that can be coloured with pigments. From signalling functions at road intersections to traffic flow guidance and attractive design

features in gardening and landscaping scenarios, the project sites show particular highlights that, above all, can be achieved quickly and easily by the small machines.

Sustainability on small to medium-sized construction sites: zero operating emission construction

The already strict stipulations in calls for tender for municipal construction projects in urban settings are becoming more and more stringent. At the same time, potential investors are increasingly demanding sustainable project realisation as a proviso for project financing, and more and more construction contractors themselves are actively pursuing their own sustainability goals. For the first time, the modular concept from the Wirtgen Group offers road construction contractors an end-to-end production system that enables the achievement of future road construction projects with zero operating emissions. Solutions from a single source also mean high operational reliability and perfectly coordinated processes in all machines and telematics solutions.



The Wirtgen Group production system for construction sites with zero operating emissions makes it possible to assure compliance with the strict threshold values for emissions that apply especially on urban construction sites and simultaneously increase profitability.

IMAGE SOURCE: WIRTGEN GROUP

The production system is based on a battery-electric drive concept that can be expanded with additional modules. In the case of the road construction machines, this is a technological proof-of-concept project involving the Wirtgen cold milling machine W 50 Re, the Vögele SUPER 1300-5e road paver, and the Hamm HX 70e tandem roller. The electrically powered machines enable the achievement of road rehabilitation projects with zero operating emissions.

The production system can also be expanded when and as required. The MULTI JET burner from Benninghoven can be fuelled exclusively with 100% green hydrogen and is the first of its kind to enable asphalt production with zero CO₂ emissions. The Kleemann MR 100i NEOe mobile impact crusher enables

sustainable processing of the milled material re-used in the production of the new asphalt mix in the asphalt mixing plant. Exclusively electric operation is possible thanks to the ability to connect to an external power grid. As a back-up option in the event of an inadequate local power supply, the plant can, however, also be powered with a smaller carbon footprint by a diesel-electric system using the alternative fuel HVO100.

Source: WIRTGEN GROUP

TANDEM ROLLERS