



The high weight of the H 25i VC and the vibrating drum produce point loads of up to 50 t under each cutting tool. This load is able to crush the mineral waste immediately.

IMAGE SOURCE: WIRTGEN GROUP

Landfill site increases its capacity with VC compactor

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Landfill capacity is a scarce resource in Germany. That is why operators aim for optimal compaction of all waste. Since 2020, a Hamm H 25i VC compactor has been used at the Steinmühle mixed-waste landfill site to professionally compact waste containing asbestos, glass wool and similar contaminated mineral waste. This allows more material to be disposed of there than originally planned, increasing its efficiency.

The Steinmühle landfill is located in a former basalt quarry. Since basalt naturally contains asbestos, this site is an ideal repository for construction waste containing asbestos and other mineral waste from landfill class 1. Packaged waste containing asbestos has been disposed of here for over 30 years now. Compacted glass wool is also deposited – wrapped so that it is dust-tight and shaped into cuboids. These packages are arranged in layers up to 2 m high. Each of these layers is covered with uncontaminated construction waste

material, tile fragments, concrete residues and ash from waste combustion. Since the end of 2020, these layers have been compacted using an H 25i VC crushing compactor from Hamm. It features special safety ventilation to protect the machine operators.

Crushing and compacting in a single process

The crushing compactor crushes and compacts material in a single process. "The waste delivered here can be easily compacted using a combination of weight force and vibration. This creates a wide variety of different particle sizes," explains Peter Förster, manager of the mixed-waste landfill site. After putting various machines and solutions through their paces, he opted for the Hamm roller: "We wanted to minimise hollow space during compaction, as landfill capacity is becoming increasingly valuable. In our opinion, the VC concept is the most efficient solution for this task."



At the Steinmühle landfill site, the H 25i VC compactor from Hamm compacts the layers of construction waste and ash that are distributed over the contaminated waste. The material comes packaged in sheets and is arranged in layers approx. 2 m high.

Image source: WIRTGEN GROUP

High waste density creates more space

Compacting waste using the H 25i VC allows more material to be stored at the landfill site than originally planned. "We used to use a landfill compactor without vibration. With the VC compactor, we are now achieving a waste density of 1.3 t/m³ at the landfill site. This enables us to use the landfill site for longer, which ultimately increases its profitability," reports Förster. The compaction process was also important to the team: "We are able to optimally intermesh the crushed materials in just a few passes. The vibration is a major benefit here. We cannot achieve the required degree of compaction with static compaction alone." An efficient process for disposing of the waste has become established at the landfill site: Construction waste, together with other waste from the same class, is distributed over each layer of contaminated material to a

height of approx. 30 cm. Two members of staff are responsible for crushing and compacting using the VC compactor. Both alternate between operating the VC compactor and other machines. They enjoy working in the cab of the Hamm roller, as it provides a good overview and ease of operation. Operator Markus Döberl sums it up: "There's nothing simpler than operating this roller."



The cab on the H 25i VC has been equipped with safety ventilation to prevent the ingress of harmful suspended solids.

Image source: WIRTGEN GROUP

Heavy-duty equipment included

Since the machine components are being used more intensively when crushing stone than during the usual compaction, Hamm has designed the VC compactors as heavy-duty equipment. This means that, amongst others, the 3-point articulation, underbody, front frame and drum suspension with drum drive have been reinforced compared to normal compactors. In addition, all VC compactors are set on highly robust EM tyres

and drivers benefit from a seat with an extra-high backrest. The VC compactor is also equipped as standard with the Hammtronic machine control system and the Hamm Compaction Meter (HCM). Despite this version being reinforced, its fuel requirement remains low – approx. 20 l/h at the Steinmühle landfill site.



The H 25i VC compactor from Hamm is also able to crush rubble consisting of road construction material containing tar, which is also stored at the landfill site, without any hassle.

Image source: WIRTGEN GROUP

Efficient solution for the long term

The decision to choose the VC compactor from Hamm was made with the next few decades in mind as "with waste from landfill class 1 expected to increase, the landfill site will be operated for the next 30 to 40 years," explains Peter Förster. The type of waste being disposed of will change during this time. The majority of construction waste containing asbestos that is currently being produced during many building renovations

will be removed at some point and the volume will drop considerably. On the other hand, road construction waste in the form of asphalt rubble containing tar will be created. This material also comes under mineral waste from landfill class 1 and is likewise easy to crush using the VC compactor.



The team at the mixed-waste landfill site for the Tirschenreuth district from left to right: Andreas Meyer (environmental engineer), Robert Schaumberger (roller driver), Markus Döberl (roller driver in the roller), Peter Förster (manager of the mixed-waste landfill site).

Image source: WIRTGEN GROUP

VC compactor: Minimal wear, easy servicing

The team prioritised minimal wear and easy servicing, especially because the compactor is an investment for the next few decades. Roller driver Robert Schaumberger finds that "replacing the cutting tool is no hassle at all". The same applies to maintenance. "From this point of view too, the VC compactor from Hamm has

proven to be a robust and efficient solution for our landfill site," states Peter Förster.

Source: WIRTGEN GROUP; Hamm

SOIL COMPACTORS

Hamm H 25i VC On LECTURA Specs