



The new dimension in compaction

SMART COMPACT



SMART COMPACT FOR EARTHWORKS

Compaction assistant for process reliability

Using the Smart Compact compaction assistant, HAMM automates the adjustment of the compaction energy in the compactors to the condition of the soil. This increases the process reliability, and the quality of the compaction reaches a new level. At the same time, this significantly reduces the drivers' workload.



Earthworks prerequisites

- > VA drum
- > Smart Compaction Meter (SCM)

Smart Compact is available for selected models in the HC series.

Flexible rotary vibrator

The VA drum (VA = variable amplitude) works according to the principle of the rotary vibrator. It has an imbalance system with fixed and adjustable weights. The amplitude of the vibration changes depending on the position of the weights from each other.

Variable compaction energy

In earthworks, Smart Compact can be used on all compactors with VA drum to extremely efficiently feed the energy into the soil. In automatic mode, the driver selects the target value for the load-bearing capacity of the soil in MN/m² on the display.

During the compaction, Smart Compact determines the current load-bearing capacity value SCV (Smart Compaction Value) of the soil in MN/m², which has been specially developed for Smart Compact. In all situations, the compaction assistant then automatically positions the unbalances in the VA drum that was precisely developed for this so that it always vibrates at the optimum amplitude.

In this way, Smart Compact automatically adapts the compaction force to the load-bearing capacity that was previously reached. This means that the compaction target is reached quickly and reliably without the roller going into jump operation. At the same time, it prevents over-compaction, and reduces the number of passes.

Specifically using the depth effect

Thanks to the variable amplitude, the depth effect of the compaction can be specifically influenced. In this case, if there are big amplitudes, a large depth effect is achieved and, if there are small amplitudes, a lower depth effect is achieved.

Fuel savings included

With Smart Compact, the amplitude of the VA drum can be set automatically infinitely or manually in five stages. Whenever the maximum compaction force is required, the drum vibrates at the maximum amplitude. The fuel consumption is reduced in all other situations.

The required ground stiffness and the frequency are selected via the display in the operator's platform. The current load-bearing capacity value (SCV) in MN/m² and the current compaction setting for the drum are also displayed there.



SMART COMPACTION FOR ASPHALT CONSTRUCTION

Always the best compaction mode

In the tandem rollers, HAMM uses the Smart Compact compaction assistant to automate the adjustment of the compaction parameters to the condition of the asphalt and selects the right compaction mode. This increases the process reliability, and the quality of the compaction reaches a new level.



Asphalt construction prerequisites

- > Smart Display
- > HAMM Compaction Meter (HCM)
- > HAMM Temperature Meter (HTM)
- > Speedometer
- > Weather station (option)

Smart Compact is available for all models in the HX series.



Data is input and output via the additional Smart Display on the dashboard. This is where the driver sees the layer that is currently processed, the direction of travel, the wind speed, the asphalt temperature, the compaction value (HMV), and the current compaction settings for each drum.

Automatic selection of the compaction type

In asphalt construction, Smart Compact makes the driver's life very easy: They specify whether a base, binder or asphalt surface course is to be compacted. The digital compaction assistant handles the rest automatically as the system selects the optimal compaction mode. This means that Smart Compact decides how to compact for each drum individually, whether statically, with oscillation or vibration, with small or big amplitude.

The system does this by evaluating physical properties of the asphalt, such as the temperature or rigidity. Furthermore, a weather station on the roller records various data such as wind direction and wind speed in order to take into account the complex cooling behaviour of the asphalt.

Fuel savings included

Smart Compact detects when dynamic compaction is not useful - for example, when the asphalt temperature is too low, or when reversing. The system then automatically switches to static compaction, and puts the roller into ECO mode. This reduces the fuel consumption by up to 15%.

Always informed

In addition to Smart Compact, there is also an on-board computer on the display. This provides information about operating hours, fuel consumption, the distance driven, and when the next DPF cleaning is due. The fill levels of the diesel, AdBlue, water, and additive tanks are displayed. A warning is issued as soon as the value falls below a certain limit.

AT A GLANCE: THE ADVANTAGES OF SMART COMPACT

Smart Compact in earthworks

> Actively takes pressure off the drivers

Inexperienced drivers in particular benefit from the assistant. The drivers only have to concentrate on driving; Smart Compact guarantees homogeneous compaction.

> Saves fuel

The drum only vibrates at maximum amplitude if the maximum compaction force is required. The fuel consumption is reduced in all other situations.

> Increases the quality of compaction

The jump operation is actively prevented.

> Always selects the right amplitude in automatic mode

The amplitude is automatically adapted to the achieved load-bearing capacity.

> Allows for greater layers

The maximum amplitude of the VA drum is greater than on the vibrating roller drums. In this setting, the centrifugal forces are also greater. This is why the VA drum, can compact layers with significantly higher thicknesses homogeneously, compared to pure vibrating roller drums.



Smart Compact: Easy to use

Only three steps are required for full support from Smart Compact:

1. Activate vibration
2. Select "Automatic"
3. Select the target value for the load-bearing capacity

Then simply start the vibration, get started and compact!

Smart Compact in asphalt construction

> Actively takes pressure off the drivers

Inexperienced drivers in particular benefit from the assistant. The drivers only have to concentrate on driving; Smart Compact guarantees homogeneous compaction.

> Saves fuel

If required, the roller automatically moves into ECO mode. This reduces the fuel consumption by up to 15%.

> Increases the quality of the compaction

The automated adjustment of the parameters guarantees homogeneously compacted layers and a high level of quality of the surfaces, which is particularly important for surface courses.

> Automatically selects compaction mode

The assistant automatically switches to the right mode. This means that it selects whether static, with vibration or oscillation, and with small or big amplitude.

> Automatically switches between static and dynamic compaction

As soon as the dynamic compaction, i.e. vibration or oscillation, is not useful, Smart Compact automatically switches to static compaction. This increases quality and saves fuel.

Smart Compact: Easy to use

Only three steps are required to activate the full support from Smart Compact:

1. Select the project
2. Select the layer to be processed
3. Start the assistant

Then simply get started and compact!





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