



More than 25 years of success and experience with Oscillation!



Oscillation:
The proven technology!
Thousands of Oscillation compactors
in use around the globe.

0-2 cm



The compaction technology of the future
Proven successful for decades

Benefits of Oscillation

- The ultimate in compaction performance
- You cannot over-compact – no grain crushing
- No chatter marks for perfect smoothness
- No vibration to sensitive surroundings or the machine
- No damage to cold joints
- Able to work effectively and safely on cooler mixes
- Fewer passes required
- Uniform density
- Self adjusting

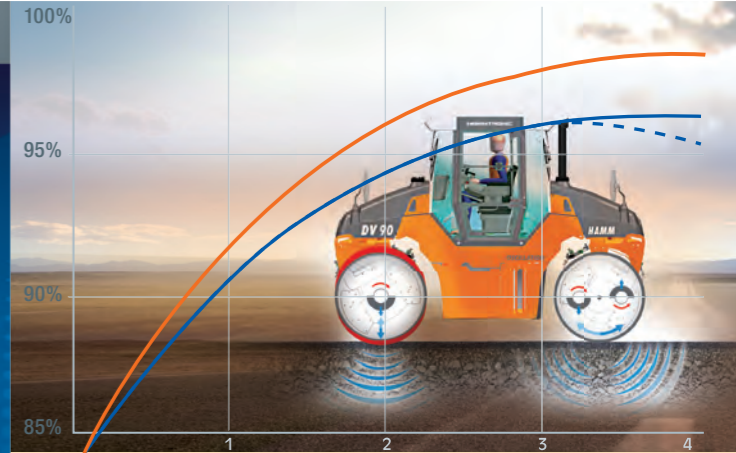
**Oscillation is the most
intelligent compactor!**

© HAMM - 08.11 - 2200179 E



HAMM AG
Hammstrasse 1
D-95643 Tirschenreuth
Tel +49 9631/ 80-0
Fax +49 9631/ 80-111
www.hamm.eu

Vibration – Oscillation:



Vibration
A rotating eccentric mass provides fast up-and-down movement of the roller drum.

Oscillation
Two eccentric masses rotate in sync. This produces a rapidly changing forward/reverse, rocking movement of the roller drum.

Vibration

The compaction energy is introduced vertically in the downward direction. Due to the up-and-down movement, the roller drum loses contact with the ground after each impact. For approximately 50% of the time, it is not in contact with the ground.

Oscillation

The compaction energy is introduced both vertically and horizontally to the front and rear of the drum. During the rocking movement, the roller drum does not lift off of the ground. On the contrary: It maintains continuous contact with material so that constant compaction occurs.

Faster compaction results

Oscillation makes it possible to achieve a faster increase in compaction. Why? During the forward and rearward movements of the drum, the compaction force is directed into the material, with the maximum utilization of the available compaction window.

Advantages

- Fewer passes needed compared to vibration
- Faster increase in compaction

Self adjusting compaction power

The principle of Oscillation involves intelligent exploitation of the laws of physics. Depending on the rigidity of the material, the movement of the oscillating drum changes automatically: The more rigid the material, the less the movement. The system adapts automatically to the conditions without any presettings or preselection of the vibratory system.

Advantages

- Optimum compaction power at all times
- No presettings → No faulty settings

More time for compaction

Compaction work is possible only within a specific temperature range in relation to the asphalt type. To avoid displacing the material, vibrating rollers do not begin compaction until the right asphalt temperature is reached. In contrast, Oscillation rollers can begin efficient dynamic compaction at high temperatures. As the asphalt begins to cool, vibration can result in grain crushing or destruction of the granular structure. On the other hand, Oscillation continuous to compact even at lower temperatures, without damage to the material.

Advantages

- With Oscillation, time frame for compaction is enlarged
- More flexibility
- Excellent results in lower temperatures and/or windy conditions

Masters even the biggest challenges

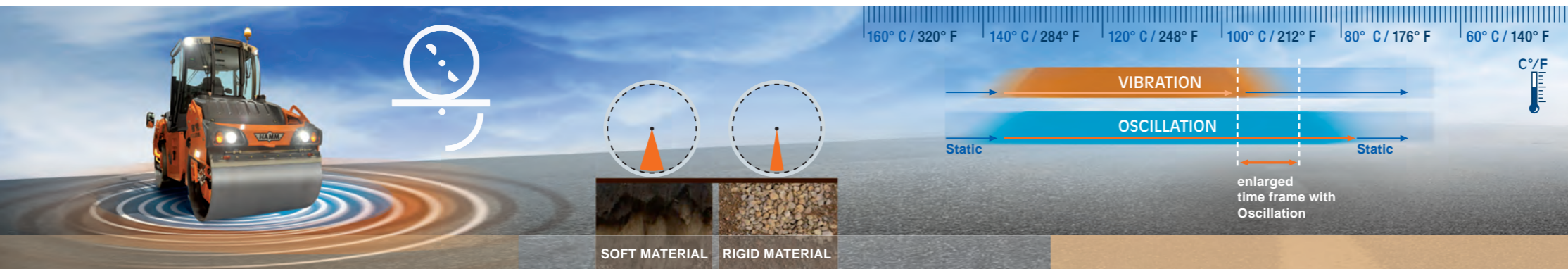
Oscillation rollers are your trump card when you need to compact thin layers or hard-to-handle materials, or when working on vibration-sensitive structures. In all of these cases, these rollers provide high compaction power combined with efficient, dynamic compaction.

When paving asphalt on bridges or installing thin layers, the asphalt cools off more quickly. Using the oscillation technique, this is not a problem since the rollers still deliver efficient compaction at lower asphalt temperatures.

Oscillation rollers can also be used to perform high-quality compaction of hard-to-handle modern mixes such as stone mastic asphalt.

Advantages

- Also suitable for hard-to-compact types of asphalt
- Ideal for dynamic compaction of thin-layer asphalts
- Ideal for dynamic compaction on/or near sensitive structures



Continuous ground contact

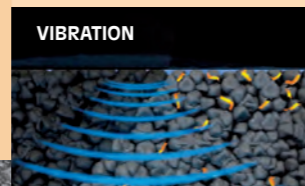
Another benefit: Compared to the vibration technique, only about 15% of the vibratory affect is directed into the surrounding environment. This means that efficient dynamic Oscillation compaction can easily be performed even in the vicinity of sensitive buildings or structures like bridges.

Advantages

- Continuous dynamic compaction
- Little vibratory affect of surroundings
- Dynamic compaction even in sensitive areas and bridges
- Ideal for dynamic compaction on bridges
- Ideal for dynamic compaction over gas and water lines, near railroad tracks, etc.

No over-compaction and no grain crushing

In vibratory compaction, there is a risk of destroying the granular structure or grain crushing after a certain point is reached. However, this is not the case with Oscillation. The rigidity increases after each pass – without any undesired side-effects.



Advantages

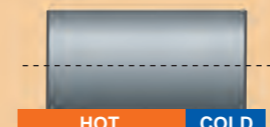
- High degree of compaction
- No over-compaction
- Intact granular structure
- No grain crushing
- Achieving optimal density levels

Excellent compaction on joints

At the joint between two driving lanes, e.g. when one lane is repaved, Oscillation avoids damage to the other lane, that is already finished, compacted and cooled down. Transverse passes are also no problem. The existing, cold road surface is not damaged or destroyed.

Advantages

- Optimal, dynamic compaction all the way to the joint
- No destruction of cold road surface
- Long-lasting joint



Perfect smoothness

Another result of Oscillation is a perfectly smooth surface finish.

Due to the absence of any vertical impacts on the material, no bumps are formed. This means that roadways compacted with Oscillation result in a perfectly smooth finish.

Advantages

- Excellent ride ability
- No chatter marks

