



HD CompactLine with oscillation

30 years ago, Hamm revolutionised compaction technique with oscillation. Today, road builders around the world can deploy this intelligent technology in the compact class. Thereby, Hamm is responding to the increasing demands for high quality compaction – even in the smallest spaces or for special applications.

Many applications

- on bridges
- on ramps or in parking structures
- in inner city areas
- on thin layers
- over underground utilities

Most extensive series of compact rollers

With 16 machine types, the HD CompactLine is the world's most extensive range of compact articulated tandem rollers in the sub-4.5 t weight class. Four of the models employ oscillation technology. They can be tailored with numerous practical options to suit contractors' special requirements.



HD CompactLine with oscillation



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Many advantages

- fewer passes
- no over-compaction and no grain crushing
- dynamic and efficient compaction, even in the vicinity of sensitive structures
- self-regulating compaction system, thus preventing incorrect settings.
- tight joints without damage to cold asphalt
- effective compaction at lower asphalt temperatures



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HD CompactLine with oscillation

The principles of vibration and oscillation in comparison: In the oscillating drum (rear), two imbalances rotate synchronously. This generates a quick forward-reverse rotation in the drum.



Oscillation

Some good reasons for oscillation

1 Good quality compaction in inner cities

On narrow building sites, compact tandem rollers now can also compact dynamically using oscillation. This is safe and efficient as it does not disturb buildings or utilities below the road surface as a result of strong vibrations. At the same time it achieves a high compaction effect in a shorter time.

4 Better compaction in landscaping

Oscillation compaction optimises a great many applications in landscaping construction, as water-bound surfaces or asphalt tracks can be compacted far more efficiently using the new compact rollers.



Quick and gentle

The degree of compaction increases very quickly during oscillation because the drum discharges its entire compression force into the ground both in the forward movement and in the backward movement. In comparison to vibration, the compaction force is on the ground for twice as long. Thereby, the drum never leaves the ground. In this way there is a continuous load on the ground that not only accelerates the compaction process but also ensures an extremely flat surface.

Another plus: Despite full utilization of the compaction energy, only a small portion of the shock is directed into the surrounding environment in comparison to vibration. This means that efficient dynamic oscillation compaction can easily be performed even in the vicinity of sensitive buildings or utilities.

Oscillatory rollers in the HD CompactLine

	Weight class (ton)	Drum width (in)	Engine power (hp)
HD 10 VO	2.8	39.4	30.7
HD 12 VO	3.0	47.2	30.7
HD 13 VO	4.4	51.2	46.4
HD 14 VO	4.9	54.3	46.4

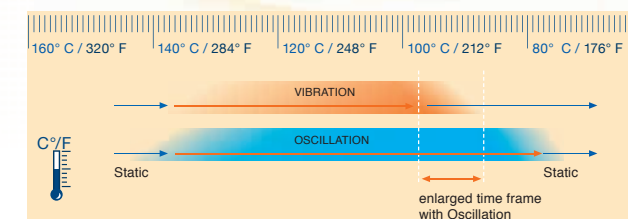
Oscillation compaction makes intelligent use of physics. The appropriate amplitude is adjusted automatically depending on the stiffness of the material to be compacted: The stiffer it is, the smaller the amplitude. And the smaller the amplitude, the greater the transmitted power. This adjustment is made automatically without presettings and without complex control technology. Operator errors due to incorrect settings are therefore eliminated. Instead, the principle impresses with its quick and direct response and with its efficient compaction – even on changing subsurfaces.

2 Protecting joints

At the seam between two driving lanes, e.g. when repaving a single lane, oscillation avoids damage to the other lane that is already finished and cooled down. This makes it possible to compact even the smallest areas – to a high and enduring quality. Transverse passes are also no problem because the cold layer remains undamaged.

3 Larger temperature window creates more time for compaction

If the asphalt temperature drops below a material-dependent value, vibration can result in grain destruction or damage to the material structure. This is not the case with oscillation, which compacts efficiently and without damage to the material also at lower asphalt temperatures.



5 Thin asphalt surfaces

With their high compaction performance and efficient dynamic compaction, oscillation rollers are your trump card for compaction of thin layers or on bridges. The asphalt cools off quickly in both of these applications, and so you benefit above all from the rapid increase in compaction. Because they also provide highly effective compaction at lower asphalt temperatures, this is no issue for compact rollers with oscillation.

6 Good smoothness

During compaction with oscillation, the drum is in permanent contact with the ground. Oscillating drums thus produce surfaces with high smoothness, even if compaction has taken place at higher driving speeds.

