



# Seismic

## Shaking up compaction



 **DYNAPAC**  
FAYAT GROUP



## THE BEAT OF A DIFFERENT DRUM

Why waste valuable energy by letting the drum hit the soil randomly? For many years, the soil and the drum were considered to be two separate systems. Thanks to Dynapac's engineering team, they were able to recognize that the soil and drum actually work together as one system. This finding opened the door for the development of the Dynapac Seismic system. All drum and soil combinations have their own unique natural frequencies. Dynapac Seismic automatically detects the frequency of the soil characteristics, works together with it, and applies the correct amount of energy exactly when required.

*Listen carefully to the beat of a different drum - it will use lower frequencies and give lower noise levels.*

*Listen quickly to the beat of a different drum - it will optimize the number of passes.*

*Listen closely to the beat of a different drum - it will prolong the lifetime of the machine.*

## DYNAPAC SEISMIC DOES IT DIFFERENTLY

Conventional vibratory compactors deliver a rapid succession of impacts to the soil surface at a frequency that is either pre-set at a high or low amplitude or at a frequency that is adjusted manually.

Dynapac Seismic does it differently. Since the drum and the soil act as one dynamic system, several benefits can be found from the system's natural frequency. At the natural frequency, the drum amplitude is enhanced significantly, since energy is automatically fed to the system

at exactly the right time. This, in turn, maximizes the contact force between the drum and the ground, yielding maximized compaction and energy efficiency.

The best compaction parameters guarantee an optimal output. A machine that can determine soil characteristics and then automatically interact with them, will make the world of difference in compaction results. Let the machine feel the soil and cooperate with it.



## DYNAPAC SEISMIC SOUNDS GOOD

Dynapac is renowned for their quiet machines, with unique engine installations that bring noise levels far below the limit values in Europe. Dynapac's ECO-mode, which provides the roller with the minimum amount of power necessary to operate at any given time, is an additional contributor to the machines quietness. Dynapac Seismic takes it one step further. Now that the machine vibrates in harmony with the soil, the process noise is reduced to a minimum and the soil compacts at a lower frequency. Operator comfort is still a priority for us at Dynapac and the entire machine is secured for vibrations emitted at these lower frequencies.

Dynapac Seismic sounds good – less is more.

## AT YOUR FINGERTIPS

The operator's interface provides the operator with all of the necessary setting options required and presents the operator with the correct information at all times. This allows the operator to maximize uptime. Dynapac Seismic increases productivity with top-quality results in the shortest amount of time. Dynapac Compaction Meter and Dyn@lyzer displays the compaction results in easy to understand graphics and eliminates any wasted time on unnecessary passes that are often made "just to be on the safe side". By using Dynapac's tools, you can avoid needless wear and tear and secure Dynapac's great second hand value.

## A WINNING TRACK

Dynapac's first step in letting a machine automatically decide compaction parameters was the introduction of Active Bouncing Control. If the compaction energy returns to the machine with the possibility of causing damage, vibration is actively shut off. This technology prevents unnecessary bouncing which saves the machine from downtime and secures a high second-hand value. With Dynapac Seismic, we continue to stay on our winning track of technology by automatically controlling the frequency to get perfect compaction.

## TURN ON, TUNE IN AND ROLL OUT

Even though operators have had the possibility to adjust the frequency by themselves, rollers have had standard frequencies between 28 to 40 Hz (1,680 – 2,400 vpm) and indicators with recommendations to go down manually with adjustable frequencies, depending on soil types. Recognizing the dynamic characteristics of a certain soil just by looking at it is impossible. With Dynapac Seismic, the roller automatically determines the natural frequency of the soil and adjusts to it. This saves both time and fuel consumption, makes it easier on the environment and reduces the wear of the machine.

## EASY RIDING

Thanks to Dynapac Seismic, the operator no longer has to manually set the frequency or guess what soil type or frequency should be used at any given time. By using the pre-set on the speed limiter, a constant speed and optimal compaction is ensured, thus allowing the operator to focus on meeting the compaction requirements. Dynapac's well-renowned tools such as Dynapac Compaction Meter and Dyn@lyzer ensure that these requirements are met.

Dynapac Seismic is the innovation that lets the roller determine the optimal frequency for any compacted material, monitoring the variations and constantly adjusting to the changing conditions automatically. The SEISMIC system, that includes the Dynapac Compaction Meter, is available as a factory installed option for Dynapac CA1500-6500 rollers.

With the frequency automatically optimized at all times, Dynapac Seismic will reduce fuel consumption, eliminate any unnecessary wear and tear and even reduce the number of passes required to reach the optimum compaction. Let the machine feel the soil and cooperate with it!





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