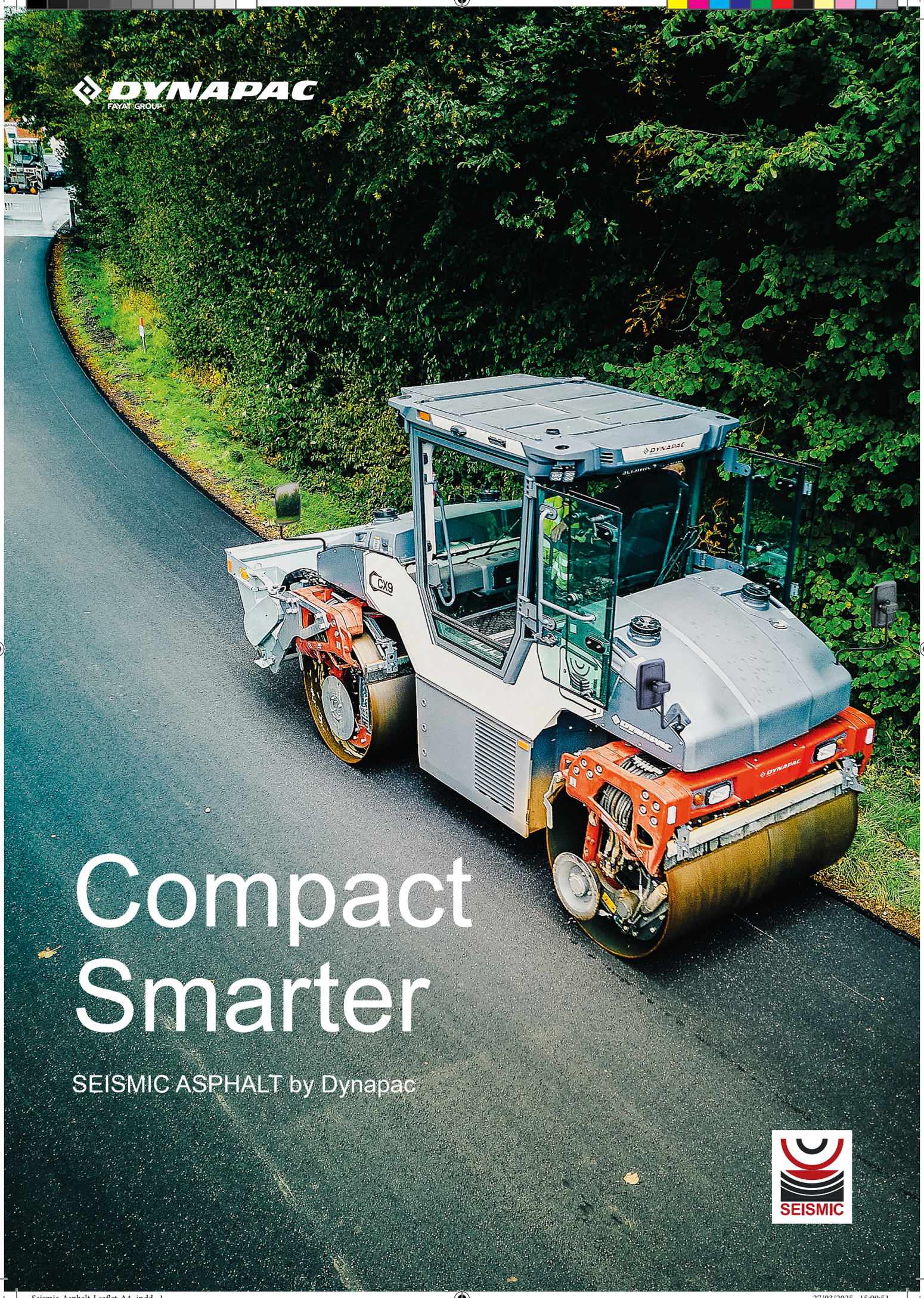


Compact Smarter

SEISMIC ASPHALT by Dynapac

A SEISMIC Shift in Compaction

The Benefits of SEISMIC

SEISMIC ASPHALT monitors the natural frequency of the drum and asphalt mix system, while also considering the temperature of the asphalt mix. The vibration frequency of the drum is then continuously adjusted to deliver the best compaction result in the most energy efficient way. All of this happens in real-time and fully automatic without any intervention from the operator. With the one-of-a-kind SEISMIC ASPHALT system, you get high-quality results, increased productivity, and energy efficiency, as well as operator comfort and simplicity.

Perfect Results

The fully automatic compaction process eliminates any guesswork by the operator, ensuring optimal performance regardless of the material or layer type. Operation is seamless with the system adjusting five times per second.

5
Times/second

Fuel Savings

When vibrating near the natural frequency, the drum amplitude increases, optimizing compaction results with minimal energy and fuel. Using SEISMIC ASPHALT in combination with EcoMode can save up to 25% in fuel.

25%
Less fuel required

Carbon Reductions

The fuel savings achieved through the energy-efficient SEISMIC technology directly translate into significant CO_2 reductions. It is possible to save 4,800 kg of CO_2 per machine annually by using SEISMIC ASPHALT.

4.8 t
Lower CO_2

Operator Comfort

Since the roller works in harmony with the asphalt, the machine operates smoothly without bouncing. Fewer vibrations are transmitted to the cab due to reduced frequency levels, resulting in lower noise and safer operation.

2 dB
Less noise

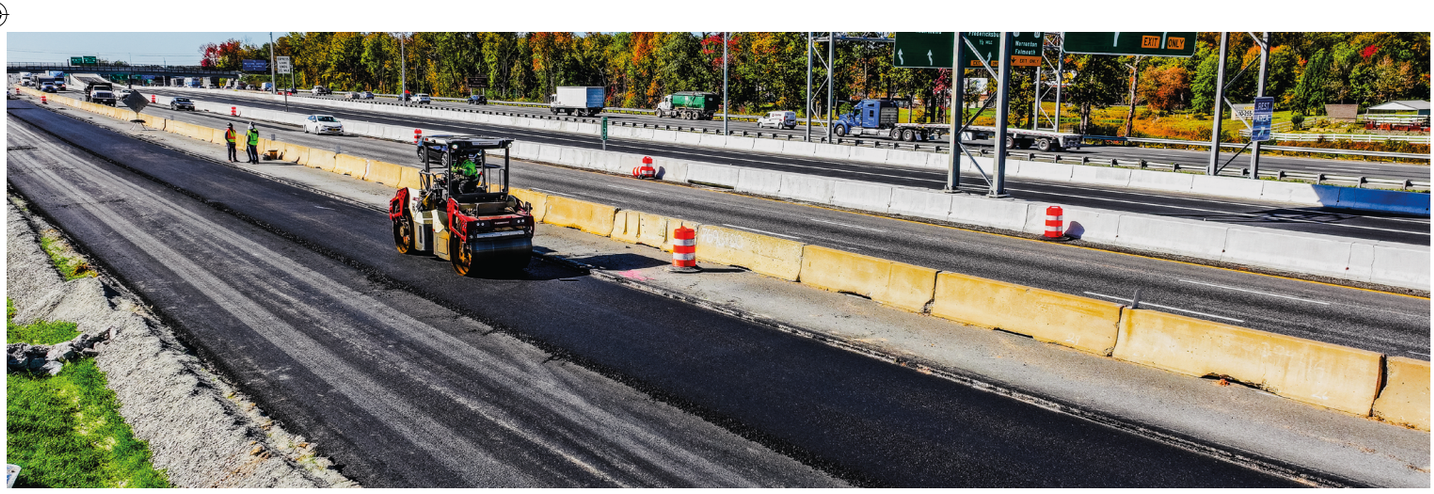
Easy Upkeep

With the roller operating at optimal vibration levels and experiencing reduced bouncing, the wear and tear is minimized. Under normal operation, the components of the vibration system have on average a 25% longer lifetime.

25%
Longer lifespan

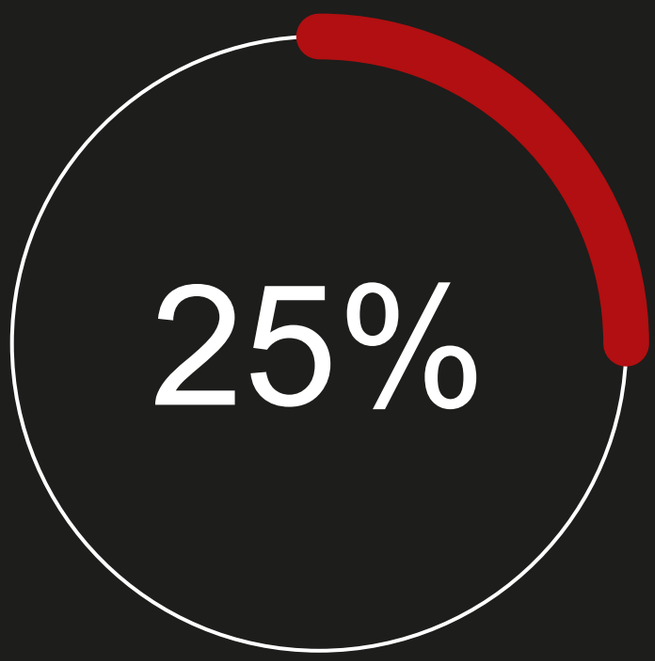
Proven Performance

SEISMIC **automatically adjusts the drum vibration frequency in real-time** for optimal, energy-efficient compaction – without operator intervention.



To make sure that the SEISMIC ASPHALT technology performs as expected, we have performed a series of trials and field tests. The trials were performed on various asphalt mix types and layer thicknesses. From the paved and compacted lanes, no less than 360 core samples were drilled and analyzed with respect to degree of compaction. What's the verdict? The tests show that the SEISMIC machine operates at a much lower frequency, thus with a much lower energy and fuel consumption, while still delivering a high quality compaction result.

SEISMIC ASPHALT reduces fuel usage by up to 25%, offering a more sustainable, cost-efficient solution.



By optimizing energy consumption, SEISMIC ASPHALT minimizes fuel usage, which not only lowers operational costs but also reduces the environmental impact. Substantial CO_2 savings contribute to a more sustainable operation and align with global efforts to combat climate change by reducing the carbon footprint associated with construction activities. This dual benefit of cost reduction and environmental responsibility makes SEISMIC ASPHALT ideal for modern construction projects, ensuring both efficiency and sustainability.

The Uniqueness of SEISMIC

SEISMIC is the **only fully automatic technology on the market** combinding superior performance and effortless operation – without additional training.

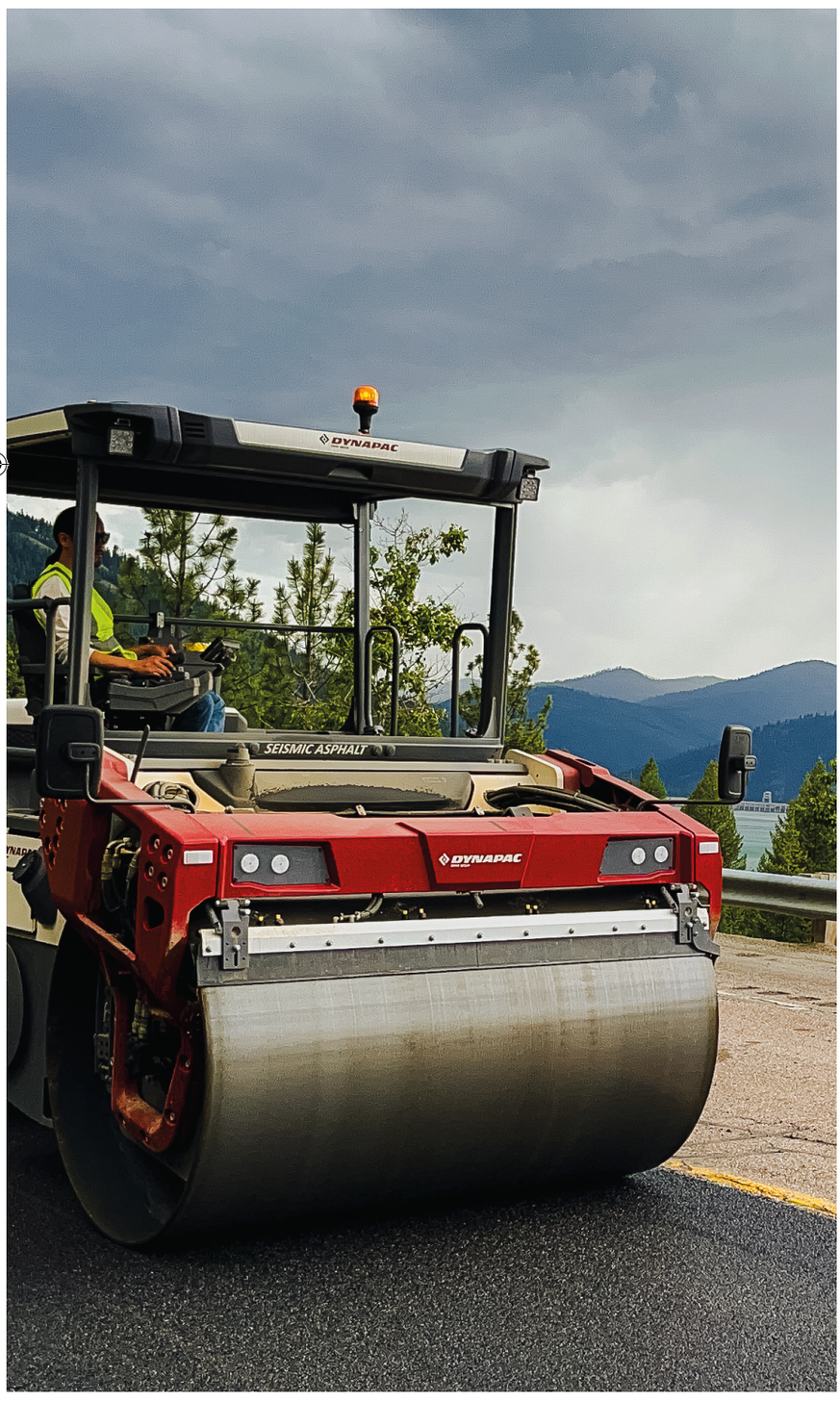
FULLY AUTOMATIC

SEISMIC ASPHALT continuously monitors the natural frequency of the drum-material system. The vibration frequency of the drum is then continuously adjusted to the optimal level. All of this happens automatically in real-time and without any intervention from the operator.

ASPHALT TEMPERATURE

The temperature of the asphalt mix plays an important role in the plasticity of the material and therefore in its optimal compaction frequency. When an asphalt mix is hot it is flexible and rather easy to compact. As it cools down, which can happen quickly depending on the weather conditions, it stiffens and becomes significantly more difficult to compact. The compaction effort, amplitude, must be increased to be able to further increase the density as the mix temperature drops. An intelligent tandem roller should be able to account for this “stiffening process” and remain effective even at lower temperatures. Our SEISMIC roller is equipped with two temperature sensors and combines this information with the natural frequency measurement to ensure optimal performance.

The Principle behind SEISMIC



NATURAL FREQUENCY

Conventional vibratory compaction deliver a rapid and random succession of impacts to the surface at a frequency that is either pre-set or adjusted manually. The new Dynapac SEISMIC ASPHALT technology considers the drum and the material as one dynamic system and operates at its natural frequency.

RIGHT TIMING

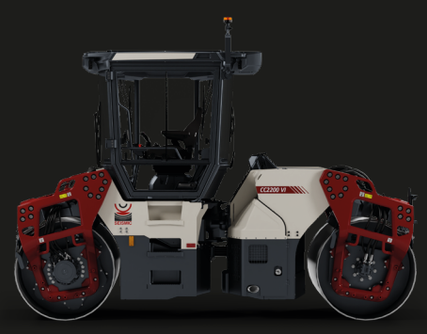
At the natural frequency, the drum amplitude is enhanced, since energy is fed automatically into the system at exactly the right time. This can be likened to the principle of a swing where applying the force at the right time creates the best momentum and effect. This, in turn, maximizes the compaction force between the drum and the ground, yielding maximized compaction and energy efficiency.

WORKING IN HARMONY

Working at the natural frequency allows the drum to transmit the energy at the right time, and not randomly. This harmonious way of compacting the material helps avoid crushing the aggregates and delivers high quality compaction.

Questions?
We’re Happy to Help

Find your closest dealer at dynapac.com



SEISMIC ASPHALT Compaction