

# Compactasphalt 2500

MF300C - CM2500 - DF145CS - CC142

**DYNAPAC**

Part of the Atlas Copco Group



**COMPACTASPHALT®**



### ► Binder and wearing courses – “hot on hot”

True innovations are rare. However, Compactasphalt® technology from Dynapac is a real road-paving innovation!

During traditional road paving, the binder and wearing courses are applied in two separate operations. Hours or even days may go by in between applications. With Compactasphalt® this paving process takes place simultaneously, in one single operation.

The core of this process is a paver with a special module so that two material hoppers and two screeds are in use.

**The first screed** applies the highly compacted binder course.

**The second screed** lays the wearing course – “hot on hot” – directly behind the first. The initial compaction is carried out by a roller with a low linear load.

The use of Compactasphalt® has proven successful over many years and has passed numerous tests with flying colours.

Thanks to the **modular concept** you can operate the paver with or without the module, giving the flexibility of a conventional or Compactasphalt® machine.

#### ► Front hopper: Binder material

Generous size with an enormous capacity of 31 t. Funnel shaped for uniform emptying without segregation.

#### ► Great overview

Four cameras steadily monitor both hoppers, the first screed and the averted front side of the machine.



#### ► Weight in perfect balance

The drive unit for the module is positioned at the very front. As a result, it is very accessible and serves as a counterweight for transportation and paving.

► **Upper hopper: Wearing course material**

Seventeen-ton capacity and a shorter route to the rear screed, which saves energy by eliminating the need for additional electrical heating.



► **Transport friendly**

Thanks to its compact dimensions, the paver and the module can be transported together on a low bed trailer.



► **Modular design**

The standard DF145CS paver becomes a Compactasphalt® unit by connection to the CM2500 module. Connection and separation take only a few hours (see page 6). This makes two paving processes possible with just one paver.

► **Front screed: Binder course**

The front screed is a high-compaction unit with tampers, vibration and final compaction unit (pressure plate) for an optimally compacted binder course. This screed can be raised and deactivated for structures such as bridge decks where no binder course is required.

► **Rear screed: Wearing course**

A standard Dynapac tamping, vibrating screed applies the wearing course. It is positioned directly behind the front high-compaction screed. The surface profile and slope for both screeds can be synchronized from one display. This makes changing the slope when driving around curves extremely easy.

# Enormous advantages for road paving

## ► Quality advantages

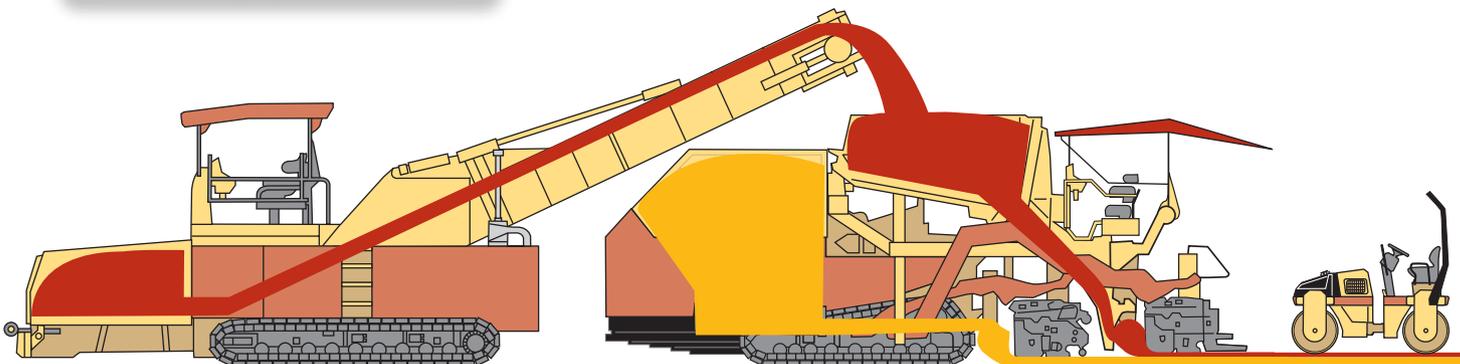
Intense interlocking of courses is achieved through "hot on hot" paving. It is not necessary to compact the binder course as with other two-course processes. Uniform course thicknesses are achieved through the synchronization of the slope and surface profiles for both screeds.

## ► Shorter paving times

Two asphalt courses are applied in one single operation. It is not necessary to spray bitumen emulsion on the binder course prior to applying the wearing course.

## ► Process safety

The paver does not sink into the hot mat during interruptions in material flow. In case of material supply interruptions, the paver is always on a stable surface.



## ► For a world worth living in

Dynapac is fully committed to sustainability. We continuously develop new technologies in order to minimize fuel consumption and CO2 emissions and overall energy use.

The Compactasphalt® method stands out for its enormous material savings. Wearing courses are as much as 50% thinner and the use of bitumen emulsions is eliminated. The entire paving process saves time, energy and resources.

We will be happy to provide you with detailed information on the far-reaching advantages of Compactasphalt® for the environment, road pavement durability, and cost effectiveness.



## ► Material savings

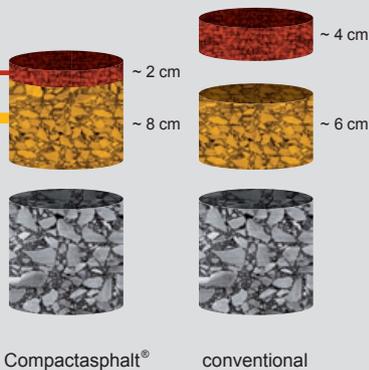
In comparison to conventional paving methods, the wearing course has been reduced by half to 2 cm. This provides savings on expensive material, yet achieves higher quality results. Spray-on bitumen emulsions are no longer needed.

## ► Longer paving season

The Compactasphalt® method is less dependent on weather conditions. Thicker layers hold heat longer, allowing more time for compaction even in cooler weather. You get more weeks each year to complete more jobs.

## Compactasphalt® – Comparing methods

### ► Two courses – one operation



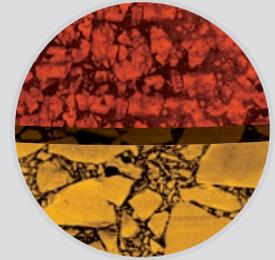
The wearing course (1.5 cm to 2.5 cm thick) is applied immediately after the binder course (6 cm to 10 cm thick). In addition to the savings in material, the lifespan of the wearing course increases, roughly corresponding to the life of the binder course.

### ► Top quality and durability

**Intensive** interlocking is achieved when the wearing course flows onto the binder course.



Compactasphalt®



conventional



# The power behind the placement

DF145CS - Compactasphalt®-Ready

## ► The modular concept

The Compactasphalt® paver is the result of connecting the **CM2500 module** to a **DF145CS Compactasphalt®-Ready** paver.

To carry the module, the DF145CS is built with various modifications and reinforcements and special control units. Just order the DF145CS “Compactasphalt®-ready”.

## ► What is “Compactasphalt®-Ready”?

Reinforced tracks

Removable operator console

Repositioned heating and generator controls

Lowered display for leveling height

## ► Quick conversion

As shown below, conversion can be done in around four hours. The basic paver is equipped with an enlarged hopper, an additional hopper for the wearing course and a second screed unit, among other things.

## ► Two paving methods with one single paver

The DF145CS can be used **with the module** for Compactasphalt® paving, and **without the module** for conventional road paving. Several pavers can share the same module, so it is possible to alternate between Compactasphalt® and conventional paving on each machine, increasing your paving options.

### ► Power Pack

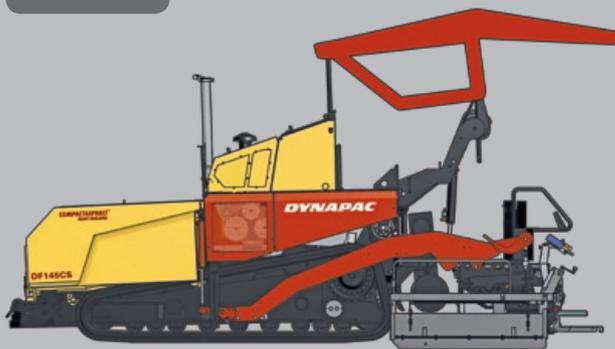
The high-performance and quiet Cummins motor allows for a potential paving capacity of 900 t/h.

### ► Spectrum of use

For conventional paving, screeds with gas heating can be used for working widths up to 13.5m. With Compactasphalt® methods, working widths of up to 7.5m are achievable.



8:00 AM



1

DF145CS - Compactasphalt®-Ready

10:00 AM



2

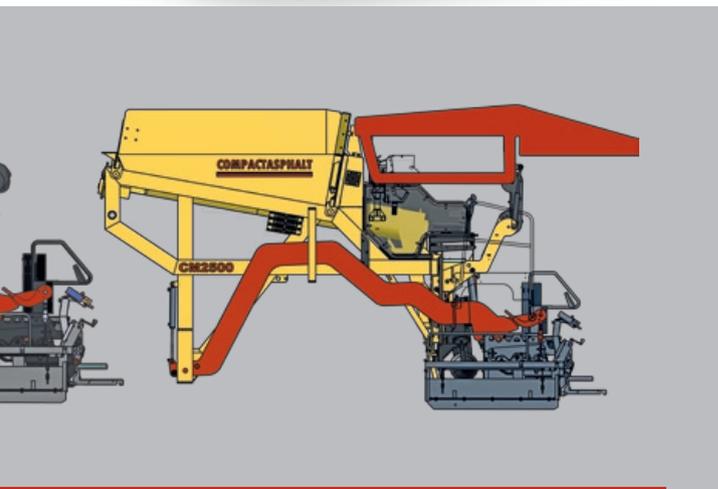
Partial dismantling of the paver (front hopper and roof)

► **Top quality and easy to maintain**

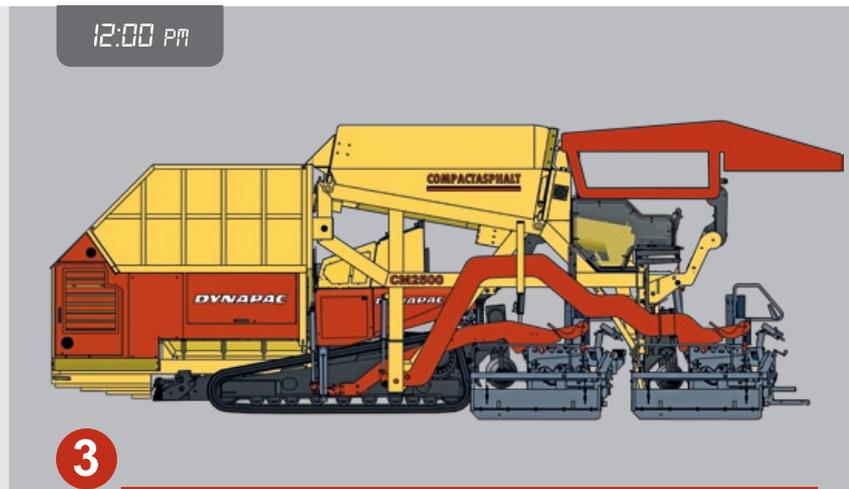
The DF145CS uses sturdy components made by reputable manufacturers. Even with the attached module, the engine and other central units are easily accessible.

► **Control platform**

Equipped with a PLC system, the control platform can be optionally extended to achieve the best all-round view.

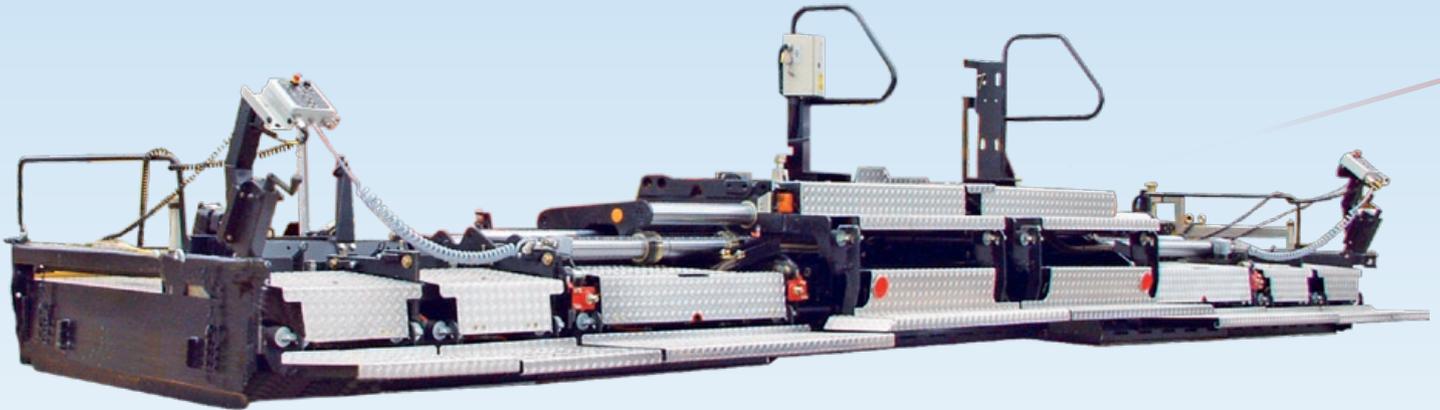


Attachment of the CM2500 module, front and rear



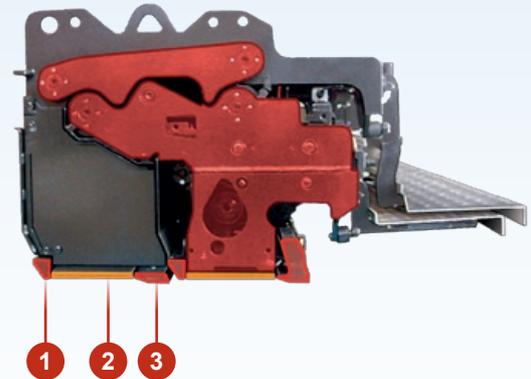
Compactasphalt® paver, ready for use

# Central components: The screed team



## ► High-compactation screed VB805 TV-E Plus

- 1 Pre-compactation** The material to be applied is pre-compacted with the tamper and pressed under the screed's bottom plates. The tamper frequency can be adjusted by a screed control unit and can, therefore, be adapted to various paving materials.
- 2 Vibration** The screed bottom plates undertake the ongoing compaction and smoothing of the material with the aid of the vibration unit that is installed in the screed sub-assemblies. The vibration frequency can also be adjusted by the screed control unit.
- 3 Secondary compaction** An additional compaction of the material by the secondary compactor is the final step. This unit can be loaded or unloaded hydraulically. The operator can view the pressure (between 0 and 10 bar) on the display. The vibration of the re-compaction unit is coupled with the vibration of the screed sub-assemblies.



### ► Critical pre-compactation

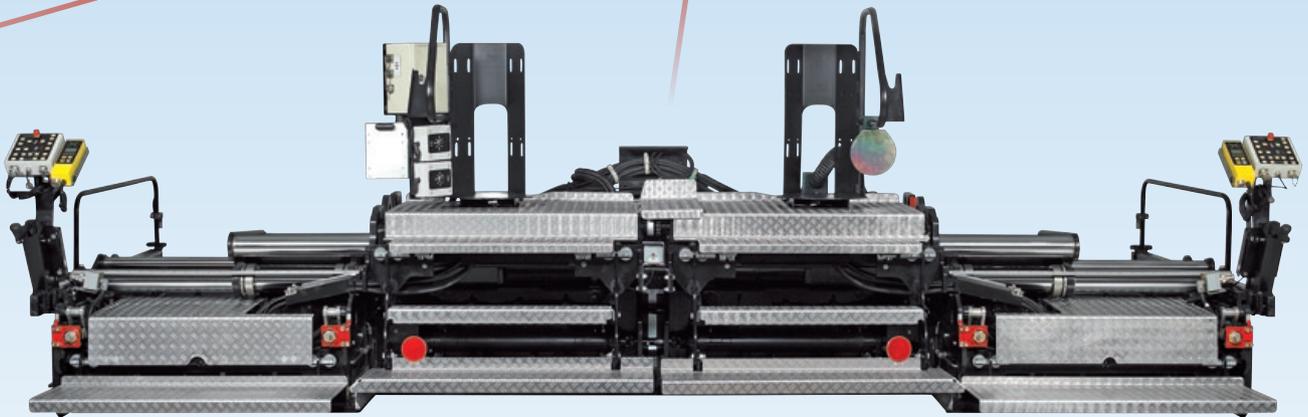
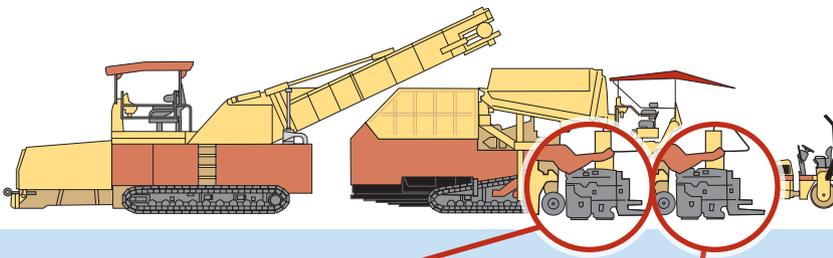
The plus screed can achieve pre-compactation of up to 97%. For an optimum interlocking of Compactasphalt® and for efficient use of wear components, we recommend pre-compactation only up to 92%.

### ► Patented excenter adjustment

Thanks to the patented and unique excenter lever, the screed can be set within a matter of seconds to the top, binder or base course. The result: time saving during operation and less wear and tear on the screed's rear edge.

### ► Easy crank operation

The adjustment of the side plate is impressive due to its simplicity. Height and slope are jointly controlled by a crank lever. This saves a step, once again.



► **Screed VB5100 TV-E**

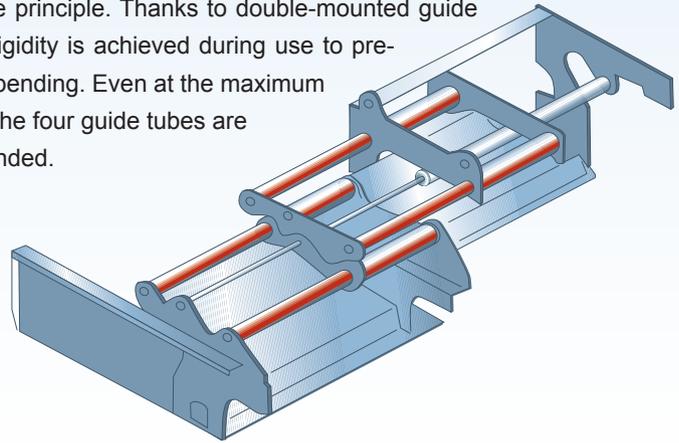
► **Short overview**

- Patented four-tube principle
- No supporting rods needed, or bracing back to the paver
- 380 mm-deep bottom plates
- Patented excenter adjustment
- Swiveling remote control
- Side plate adjustment: One crank for both height and slope
- Foldable steps save valuable space during paving and transportation



► **Incomparably stable**

All Dynapac screeds are built with the patented four-tube principle. Thanks to double-mounted guide tubes, unique rigidity is achieved during use to prevent turning or bending. Even at the maximum working width, the four guide tubes are only 50 % expanded.



# Additional components: Mobile feeder and roller



## ► Short overview

- Important buffer function, essential for the paving of Compactasphalt®
- High-performance conveying system with automatic tensioning system for the conveying belt
- The operator console swivels and can be repositioned anywhere within the entire platform
- Emulsion spraying system to prevent asphalt build up
- Effective band cleaning using spring-loaded scrapers
- PLC control and operating functions are arranged in a logical and user-friendly manner

## ► Feeder MF300C

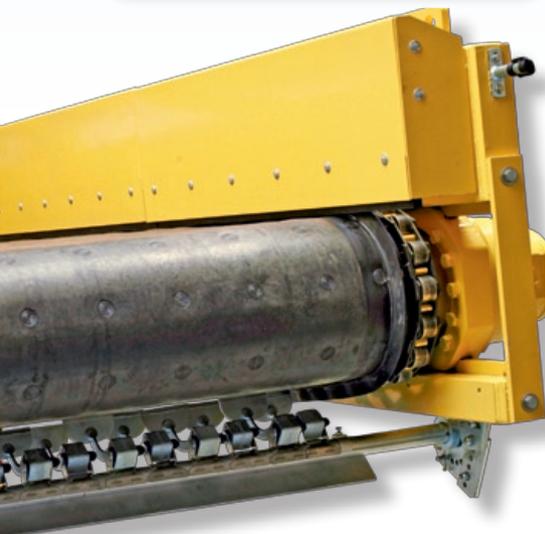
A mobile feeder is required to fill both hoppers of the Compactasphalt® paver. Due to their important buffering function, however, feeders are also gaining greater importance in conventional street paving. They allow for the paving of large widths without interruption, improving both the work schedule and paving quality requirements.

## ► High tech from beginning to end

The core of the MF300C is its high-performance conveying system, which can transport 27 tons of mix to its destination in just 35 seconds. From the materials hopper, the conveying system measures 8.5 m<sup>3</sup>, to a height of up to 5 m. The innovative design of the conveyor belt, which is reinforced with tightly-arranged metal bracing, guarantees the highest load capacity. Its tension is automatically controlled, making manual adjustments almost unnecessary.

## ► Adaptable

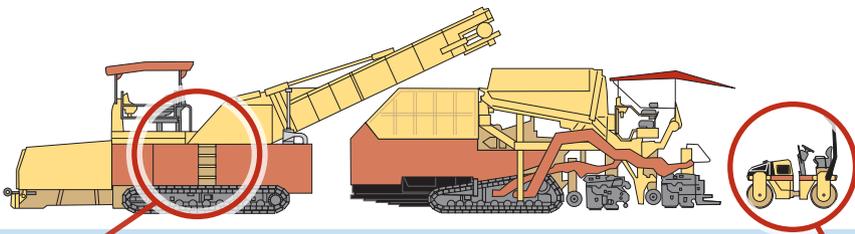
The entire control platform can be raised hydraulically by more than one meter. This allows for the best view to the hopper being filled. The cover can be placed in transportation position and the entire feeder can be sloped toward the ramp ascent.



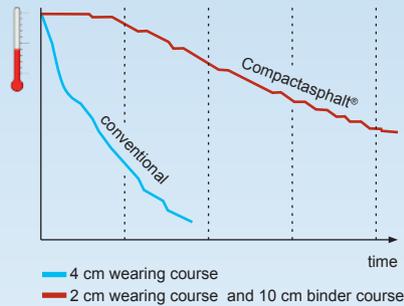
Transportation setting, cover is folded down



Slope adjustment for ramp ascent



**Temperature drop**  
when compacting  
in conventional and  
Compactasphalt®  
methods



#### ► Short overview

- Weight: 3,900 kg / Drum width: 160 cm
- Designed for static uses
- Linear load approx. 12 kg/cm
- For smooth pre-compaction
- Highly responsive vehicle operation
- Rolling characteristics minimize material displacement



#### ► Roller CC142

The binder and wearing courses applied during Compactasphalt® placement have variable compaction degrees of 92% and 84%, respectively. The main function of the CC142 is to approximate these compaction densities before the final main compaction with the tandem vibratory rollers can take place. The light roller

is tailored for a course that remains hot for a long time (see diagram). It provides a smooth static pressing so that the excellent interlocking between the top and binder courses remains in place. Additional tasks are, among other things, the compaction of (double layer-) open porous asphalt.

#### ► Approximating courses

Wearing course — 84%  
Binder course — 92%

Compaction after application of the courses prior to using the CC142 roller.



# Highlights of the Compactasphalt® method



Save time



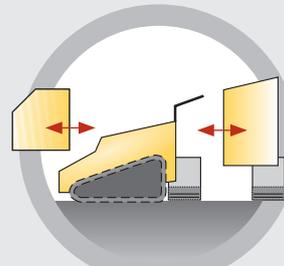
Safer application process



Longer paving season



Save material



Flexibility

[www.compactasphalt.com](http://www.compactasphalt.com)

## **DYNAPAC**

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