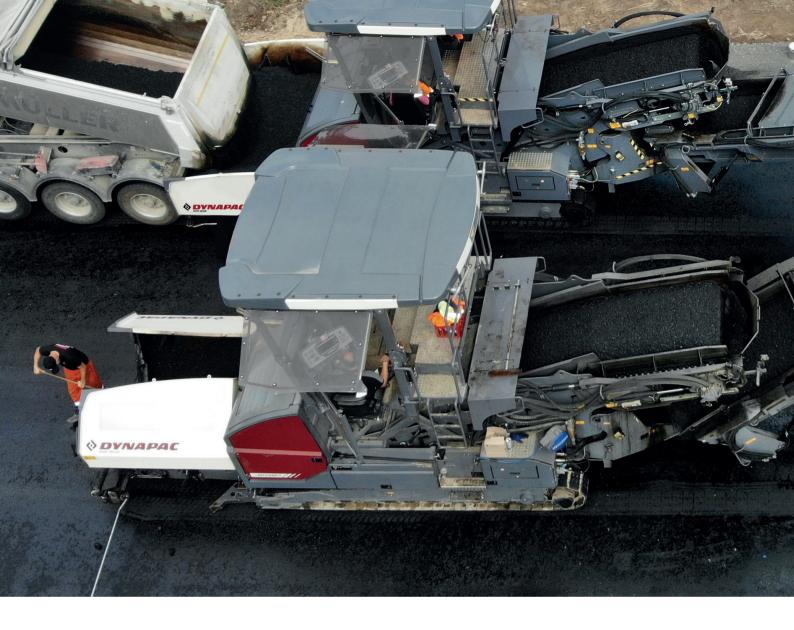
DYNAPAC

MF2500CS MF2500CS SWINGAPP MF2500CM

MOBILE FEEDERS PORTFOLIO

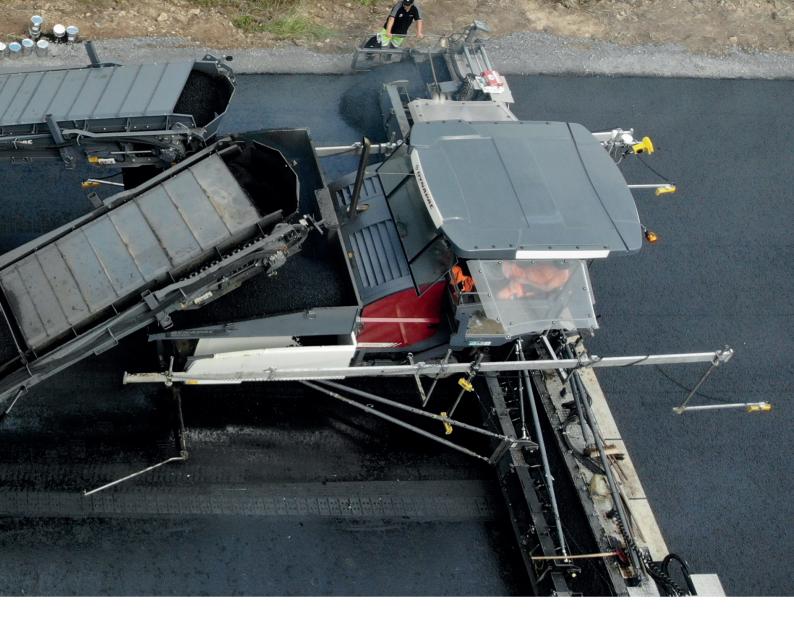






MOBILE FEEDER FAMILY

COMPACT POWERFUL VERSATILE



Impressive conveying capacity

Nominal transport width of 2.55 m

Extremely versatile

All-round visibility with the liftable platform

Conveyor belt lifetime up to 3000h

The heart of the Dynapac MF2500 is its reliable high performance conveying system. With a feeding capacity of up to 4000 tons per hour it can transport 30 tons of asphalt, sand or gravel in just 35 seconds. The durable belt is directly mounted on metal bracing for a long service lifetime.

The only 2.55 m feeder in it's class the Dynapac MF2500 combines cost effective transport with impressive feeding capacity.

An optional SwingApp makes the MF2500CS incredible flexible and versatile.

AMAZING FEDING PRODUCTIVITY

BRINGS PAVING QUALITY TO A NEW LEVEL

MATERIAL HANDLING

Empties a truck in 35 seconds thanks to a wide belt and large conveyor tunnel. The bulk material transfer ensures an homogenous mix.

LOW COST OF OWNERSHIP

With a width of just 2.55 m, the paver doesn't need any special permits when being moved. The high feed capacity and low fuel consumption also keep running costs low.

LONG LASTING BELT

The rubber belt is directly mounted on metal braces, which eliminates the temperature impact from the hot asphalt on the belt.

LIGHTASSIST

The working light can be switched on with the central battery switch from ground level for convenient access to the operator platform in the dark. Additional side lights allow a more convenient and safe loading on the truck.

SMART FEEDING

The filling sensor on the conveyor end monitors the filling degree in the paver hopper and controls the belt speed automatically. The release agent quantity can be dosed precisely to the according asphalt. Twice per day for dry asphalt up to multiple times per day. The optional steering device automatically guides the feeder.



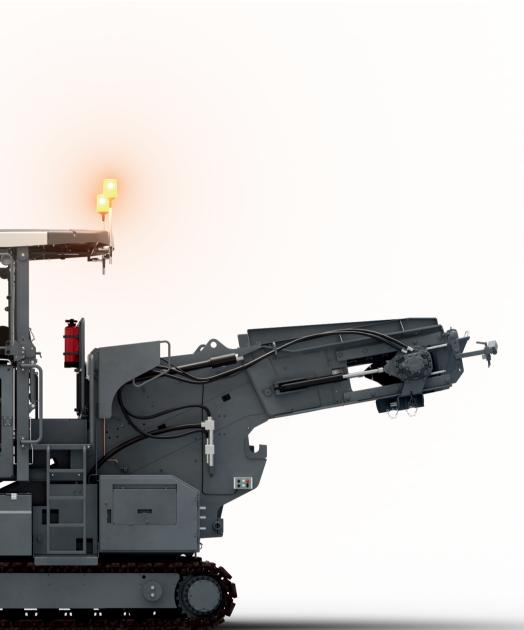
ERGONOMIC WORKPLACE

Spacious platform with pivotable seats and dashboard for an ergonomic working place and excellent view. Optional weather house is available.

HOMOGENEOUS MATERIAL

The wide and high conveyor ensures smooth material flow with minimal segregation.





WANT TO FIND OUT MORE?

Got to Dynapac Product Information: Scan the QR code to enter the mobile feeder product site.



SWINGAPP

You can easily convert the standard short feeder to an offset feeder in lapproximately 10 minutes, using SwingApp.

SWINGASSIST

With the optional SwingAssist the SwingApp height and angle as well as the feeder positions can be memorized and recalled easily by pressing a button on the dashboard. This feature helps the operator by supporting him during his demanding job.

EASY CLEANING

The integrated release agent spray system makes cleaning more convenient.

LAPTOP STATION

The feeder features a lockable rain-protected laptop station with a 24V socket for a convenient ground working.

EXCELLENT OVERVIEW

The operator seat can be pivoted up to 90° and shifted to the outside.

The entire operator platform can be raised hydraulically by more than one meter. This ensures an excellent overview.

SECOND OPERATOR

Some functions of the Dynapac MF2500 can be performed from a second operator station on the ground, such as opening and closing the hopper. A handy rain-protected laptop station with a 24V (optional 12V) socket can also be found in this area.

INTEGRATED WORKING LIGHTS

Comprehensive lighting system for night work: 4 LED lights integrated in the canopy, 2 for the conveyor, 1 at the back. Optional 24V LED-lighting balloon can be easily plugged in.

AUTOMATIC DISTANCE SENSOR

The automatic distance sensor keeps the distance betweem feeder and paver constant on the presetted value.

9

JOB SITE CONFIDENCE

Keep your team confident and healthy when operating on the job site. Ensure good working safety, ergonomics and easy to use operating systems.

MACHINE USABILITY

INTUITIVE SMART DASHBOARD WITH DISPLAY

Functionally arranged controls for an intuitive and ergonomic use. The 7" colored display provides you all necessary information and functions such as monitoring, adjustments, settings, service and failure control.

ALL-ROUND VISIBILITY

Dynapac LED light package, optional Light-Assist and the Powermoon brighten up your night jobs. The back lighted dashboard buttons safeguard the correct operation also during night.

COMPLETE ASSIST PACKAGE

The feeder supports you in a smart way with Distance-, Swing-, Steering-, Truck- and Feeding Assist. Allow these intelligent support systems to relief your work load.

COMFORTABLY IN CONTROL

Control the Swing conveyor, the belt speed and the drive lever with the integrated joystick. This joystick position can be adjusted to the operator and be connected to the left and right seat.

ERGONOMICS

COMFORTABLE WORKPLACE

Stay relaxed in control always taking the optimum position with the adjustable comfort seats with optional joystick, a liftable platform and a turnable seat position by 90°.

EASY START UP

Start and end your day without any stress. Quick start up without any heat up time or preparation time. Convenient MH2500 hopper insert mounting, easy to use dashboard and get the belt ready with a single push of a button.

CONVENIENT GROUND CONTROL

Reduced work ways with the ground control station, here you can handle all logistics and records collections. The slidable laptop table with the 24V socket and control panel provide an ergonomic work space for the banks man.

HEALTH & SAFETY

AVOID WORKING IN DANGER ZONES With the liftable platform, the laptop station and the optional camera system you don't need to access danger zones during operations. With the walk through alarm the machines prevents also others to walk between payer and feeder.

KEEP THE FUMES AWAY

With height adjustable platform the drivers distance himself from the asphalt fumes.

WEATHER PROTECTION ALL AROUND Stay protected from wind, rain & sun with the weather house option. The tinted side windows keep the sunlight away.

SAFE BELT EXCHANGE

Easy and stress free belt exchange due to the simple conveyor system. No dismounting of any supporting rods needed, pull the new conveyor belt with the old into the machine in less than 4 hours.

LATEST STANDARD

Dynapac always takes care about the latest safety and emission standards.













HIGH PRODUCTIVITY

Increase the productivity of your job sites through efficient paving and compaction operation. Reduce non-productive times on the job site.

APPLICATION THROUGHPUT & OUTPUT

EMPTY A TRUCK A 35 SECONDS

The high capacity conveyor can empty a truck in 35 seconds. In case of a delay this can make the difference, if the asphalt train needs to stop or can continue.

STORE MORE THAN 45 TONNES

On the wide belt in combination with the 7m³ hopper and the MH2500 with 24 tonnes, enough material can be stored to buffer lack of material from the asphalt plant.

POWERFUL AND EFFICIENT POWER PACK The Dynapac material feeder has enough

power to easily overcome gradient difficulties, maximized loads or unbound surfaces.

THE FEEDING POSSIBILITIES ARE ENDLESS. Sand, gravel, dry concrete or asphalt. Roads, airports, cargo areas, land filling, railway construction.

HOT ON HOT MEETS HIGH PRODUCTIVITY Combine the possibility to feed a hot on hot asphalt train with unique feeding capacity of more 2000t/h.

SET-UP, DISMANTLING & CLEANING TIME

SHORT START UP TIME

Quick start up without any heat up time or preparation time, just start the machines and start feeding. Fork lift holes allow to insert the MH2500 hopper within a few minutes.

FAST FINISH TO A LONG DAY

Quickly overcome the inconvenience of cleaning the feeder: Activate the automatic belt cleaning system, relief the piano scraper in 2 steps and use the release agent lance to clean the complete machine in less than 1 h.

SWITCH APPLICATION QUICKLY

Going from straight feeding to swing applications in less than 10 minutes. Adapt to new feeding situations fast without any tools.

EFFICIENT FOLLOW UP & DOCUMENTATION PROCESSES

KEEP THE OVERVIEW

Have the possibility to track your jobsite live with our management systems Dyn@Link. Working out efficiency possibilities by training drivers to save fuel and other lubricants.

LOCK YOUR MACHINE

Have the possibility to lock the machine to prevent misuse and stay safe, since only the feeding function is locked.

DOCUMENTATION AS A PART OF YOUR JOB Simple jobsite documentation with the Laptop station with slidable drawer and 24V and optional 12V socket.

IDLE & WAITING TIME

SPEED UP YOUR TRUCK EXCHANGE TIMES Clear visual indication for the truck driver with TruckAssist increases paving speed and avoids stops due to miscommunication.

NO TIME TO WASTE

The Dynapac unique conveyor does not require heat up time. Get started directly.

SAVE A LITTLE BIT OF TIME EVERY DAY Maintenance free components or accessible service elements make your daily start up inspection time minimal.

KEEP GOING

The 360 I diesel tank allows the feeder to drive up to 60 hours without a refilling stop.



MAXIMUM UPTIME

A machine has to run to make money! Minimize non-productive times, avoid unscheduled break-downs.

MACHINE RELIABILITY

RELIABLE BELT SYSTEM

You can rely on the Dynapac belt, which is designed for asphalt application. Local damages can be repaired on the jobsite with the belt repair kit or 1m belt pieces. A worn off belt can be monitored and the exchange can be scheduled.

AN ENGINE FOR TOUGH CONDITION The quiet and well proven Cummins engine without cooled EGR minimizes the potential for maintenance and cooling issues.

STAY COOL – IN ALL SITUATIONS
The 4 section cooler ensures high efficiency
and cooling capacity, even in extreme
situations.

SELF DIAGNOSIS AND DISPLAY ALARMS Be always aware of the machine's status with Dyn@link. The operator gets a acoustic and visual warning for relevant fluid levels (like AdBlue) or engine temperature.

STARTUP + OPERATION

SHORT START UP TIME

Quick start up without any heat up time or preparation time, just start the machines and start feeding. Fork lift holes allow to insert the MH2500 hopper within a few minutes. The SW6500 SwingApp can be mounted in less than 10 minutes.

RELY ON AUTOMATIC MAINTENANCE SYSTEMS

With the automatic chain lubrication and the automatic belt spraying system, the maintenance becomes easy and convenient. Ensuring a long machine lifetime.

MAINTENANCE & REPAIRS

FIX THE PROBLEM RIGHT ON SIGHT Should something happed to you belt, it can easily repaired with the belt repair kit or the belt repair glue, depending on the size and depth of the damaged area.

MODULAR CONCEPT

One fleet, one family. The Dynapac paver and feeder share a lot of common components. This saves stock and shares know-how.

PEACE OF MIND

We confidently support an extended warranty and offer customized service agreements for your Dynapac fleet.

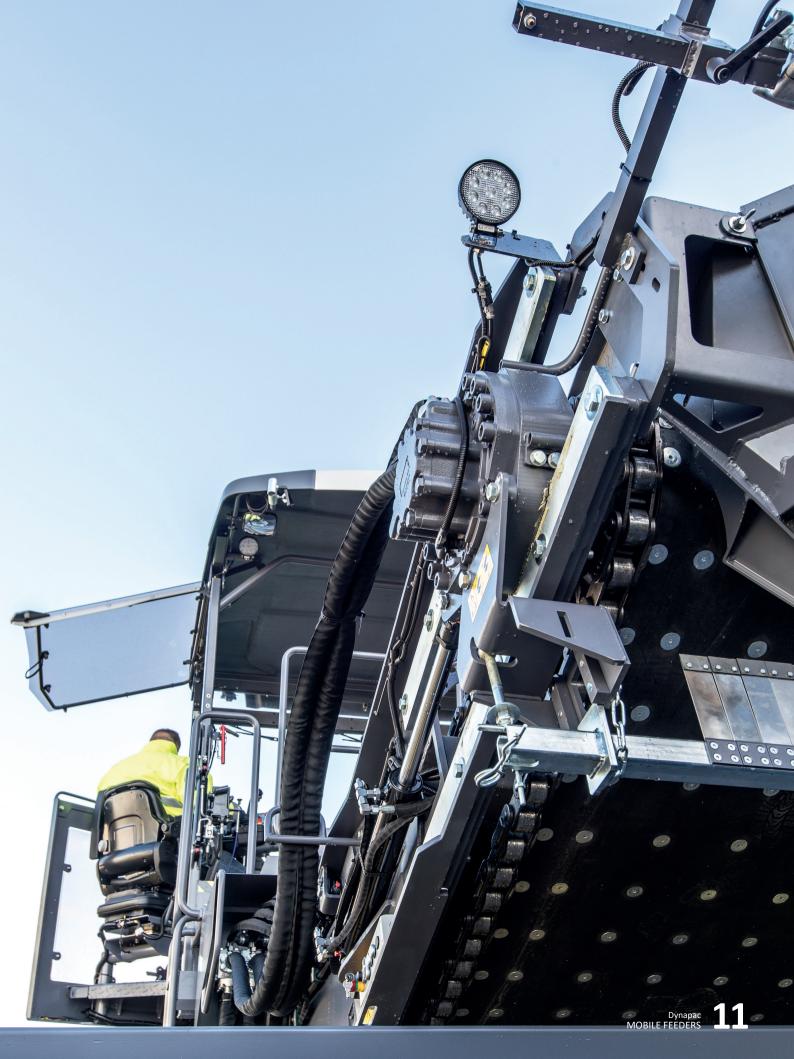
SERVICE KITS

All service kits are prepacked and can be ordered with a single part number. This simplifies your service and reduces mistakes.













HIGH QUALITY RESULTS

Avoid penalties and rework! Stabilize the quality of your paving and compaction jobs.

AVOIDANCE OF SEGREGATION

DO NOT ALLOW AIR INTO THE MIX Oxygen in the asphalt lets the mix age. Minimum number of transfer points reduce the risk of aging, since the risk of oxygen ingress is reduced. Least interference to the asphalt mix ensures a high quality mix.

KEEP THE MATERIAL HOT

The material stays hot during transport on the belt due to the width and speed of the conveyor. Covers minimize the heat loss. Large tunnel and the unique Dynapac conveyor ensure bulk material transfer, which ensures that the mix stays hot.

DISMOUNTABLE SWINGAPP FOR BETTER MIX OUALITY

If not needed you can dismount the SwingApp to keep the transfer points to a minimum. This reduces the risk of aging. But even with SwingApp only 3 transfer points are necessary to transfer the material to the paver.

CONTINUOUS FEEDING QUALITY

NON-STOP FEEDING

A feeder ensures paving without stops.

Together with the MH2500 hopper insert on the paver, a large volume of material holds the mixture temperature high for longer.

OPTIMIZED MATERIAL FLOW

Harness the power to select feeding speeds at the push of a button. Set up to four different belt speeds on the MF2500 display, allowing for optimal material flow control, customized to your project's specific requirements.

ONE FEEDER TO RULE THEM ALL Hot-to-hot applications, where two pavers side by side are paving together, are made easy with the SW6500 SwingApp.

CONTINUOUS PAVING QUALITY

NON-STOP PAVING

A constant material flow, enabled by the usage of a Dynapac feeder, results in a constant head of material in front of the paver screed, which improves the evenness and quality of the mat.

WORKING IN TANDEM

Thanks to the DistanceAssist system, the paver controls the feeder's speed, enabling a improved paving operation and minimizing material segregation across the paving application.









LOW COST OF OWNERSHIP

Improve the overall profitability of your investment by reducing the costs of operating the machine while maintaining a high equipment value.

MAINTENANCE COST

FAST ACCESS

Daily maintenance points are fast and easy to access with the Dynapac Service concept.

PERFECT TIMING

Plan your maintenance when the machine will have free slots with Dyn@link.

BELT CONCEPT

The Dynapac belt concept allows to monitor and plan the belt exchange intervals. Do not get surprised by a torn belt, enjoy the knowing of a long lasting belt concept.

IN THE BEST POSSIBLE CONDITION Automated chain lubrication, acoustic and visual Adblue warning, maintenance intervals on display and on Dyn@link.

LOW WEARING AND SERVICE COST
The wearing cost are little, since the number or turning parts are little. And due to one power pack concept with the paver the service parts are shared, which ends up in less stock.

RESALE VALUE

THE FEEDER WITH THE BEST RESALE VALUE Known for their enduring reliability, Dynapac feeders are a desired asset in the used equipment markets. This guarantees strong resale value, making them an appealing investment for both second-hand customers and resellers.

A FEEDER, WHICH IS BUILD TO LAST The design ensures an easy service and maintenance concept. Enjoy the simplicity.

VERSATILE USAGE KEEPS THE VALUE HIGH A premium product, with endless feeding possibilities, makes it easy to keep the value.

PERSONNEL COST

SIMPLE & SWIFT SETUP

Just start the machine and feeding job without any heat up or preparation time. Fork lift holes allow to insert the MH2500 hopper quickly.

RUNNING COST

OPTIMIZED EFFICIENCY, NO EXCESS

The Dynapac MF2500, the crucial intermediary between the paver and the trucks, is streamlined to perfection. We've included only what is needed for exceptional performance, eliminating unnecessary components for lean, effective operation.

UNMATCHED FUEL EFFICIENCY

Under standard conditions, the Dynapac MF2500 impresses with less than 10l/hour diesel consumption. With EcoMode, these numbers go as low as 6.7l/hour, maintaining uncompromised output and driving significant cost savings.

LOW TRANSPORT COST

The Dynapac MF2500, with its compact 2.55m width and 20t weight, needs no special permissions for trailer transportation. Enhanced by the detachable SwingApp and the MH2500, you're offered versatile, costeffective transport options.













ENVIRONMENT & SUSTAINABILITY

Protect the environment. Show your social responsibility and collect on tenders that require low CO2 and noise emissions.

RECYCLING CONTENT

RE-USE IS A CORE VALUE
All Dynapac machines are made out of up to
95% of recyclable material.

SIMPLICITY: THE KEY TO SUSTAINABILITY Our Dynapac feeder's sustainability lies in its minimalist design - no unnecessary moving parts, just what's essential for efficient material feeding.

ONE FEEDER FOR EVERYTHING
Whether it's sand, gravel, dry concrete, or
asphalt, be it for roads, airports, cargo areas,
landfills, or railway construction, the Dynapac
feeder is your versatile solution. No need for
additional machines; one feeder caters to all
your project needs.

NOISE EMISSION

LOWEST ENGINE POWER NEEDED
Powered by the efficient Cummins engine,
the majority jobs are executed at 1600rpm or
less, providing noticeable noise reduction for a
quieter working environment.

COMMITTED TO LOWER NOISE LEVELS In our pursuit for a more comfortable work environment, we've set an ambitious goal: to ensure all our machines operate below a noise level of 104 dB(A). Creating quieter, more pleasant job sites is our promise to you.

NO IDLING TIME IN THE MORNING
Just start the machines and start feeding - Do
not annoy the environment with heating up or
preparation time.

CARBON FOOTPRINT

REDUCED EMISSIONS

Our Dynapac feeder operates at a lean fuel consumption of just 6.5l/h, translating into significantly reduced emissions. Compliant with the stringent Stage V/Tier 4f emission regulations, it minimizes pollutant emissions, contributing to a reduced carbon footprint and an environmentally friendly operation.

DO NOT BE SCARED OF TUNNELS
The special requirement of a jobsite within a tunnel are easily fulfilled with the Dynapac MF2500CS. The authorities and employees will notice and appreciate the low noise and low emissions of the Dynapac MF2500.

MEETING THE REGULATION

Reduce your carbon footprint and the particle emission. The Stage V engine combines SOR with Adblue injection with a particle filter. With this set up you meet the regulations of almost every city council.

BUILD OUT OF RECYCLABLES

The material Dynapac machines are build with are to 95% recyclable to reduce the carbon footprint in production.







FEEDING ESSENTIALS

Better roads, easy and fast. To achieve the best paving quality a constant paving speed is mandatory. The Dynapac MF2500 feeder in combination with the paver hopper container MH2500 guarantees uninterrupted material supply.

ALL ROUND VISIBILITY

YOU ARE IN CONTROL

For an easy and smooth operation it is important that the driver can communicate with the truck and paver drivers, whilst monitoring the amount of material in the feeder and paver hoppers. The MF2500CS provides all of that and more. The two swing-out seats allow the driver to sit variably up to a 90° angle to the driving direction to ensure an excellent view. Both seats can be individually adjusted for height and distance for a comfortable working position.

The convenient platform lift option gives the operator excellent visibility, especially while working with the SwingApp mounted on the Dynapac MF2500CS. The view is further enhanced by optional cameras and mirrors.

SMART FEEDING

CONTINUOUS & SMOOTH PAVING PROCESS

The filling sensor on the conveyor end monitors the filling degree in the paver hopper and controls the belt speed automatically. The release agent quantity can be dosed precisely to the according asphalt. Twice per day for dry asphalt up to multiple times per day. The optional steering device automatically guides the feeder.

The track driven feeder has large pivotable pushrollers with scrapers to dock easily with diverse kind of trucks.

HOMOGENOUS MIX

CONVEYING TECHNOLOGY

Dynapac feeders are best known for their powerful and durable conveying systems. The 1200 mm wide conveyor with highly reliable rubber belt has been designed for optimal flow and minimal segregation. Stiffening bars together with roller chains make the conveyor system extremely robust. Special alloy steel supports for the bars ensure optimal conveying performance.

The material stays hot during transport on the belt due to the width and speed of the conveyor. Covers minimize the heat loss. Large tunnel and the unique Dynapac conveyor ensure bulk material transfer, which ensures that the mix stays hot. The feeders are equipped with foldable hopper wings with front hopper flaps. Chamfered hopper corners prevent cold asphalt being left in the hopper. The new tri-flap system allows even faster material transfer.

Minimum number of transfer points reduce the asphalt aging caused by oxygen to a minimum. Least interference to the asphalt mix ensures a high quality mix.







ASSIST SYSTEMS

DISTANCEASSIST

The distance to the paver and the speed of the feeder is automatically controlled by a reliable sensor. Consequently the Dynapac MF2500 stays on course and the operator can concentrate on the feeding process. This ensures highest daily work capacity and quality. And due to the LED-bar at the back of the feeder canopy the paver driver is always informed about the status of the DistanceAssist system.

TRUCKASSIST

Dynapac's TruckAssist system is designed to help trucks dock correctly and safely with the feeder by simplifying communication between the feeder and truck driver. The system comprises two sturdy, LED bars which are positioned on the hopper edges.

SWINGASSIST

With the optional SwingAssist the SwingApp height and angle as weill as the feeder positions can be memorized and recalled easily by pressing a button on the dashboard. This feature helps the operator by supporting him during his demanding job.



FULL CONTROL AT GLANCE

MAIN VIEW

The main screen gives you an overview of the complete feeding process, displaying all essential parameters. From here you monitor the feeding amount in the paver/hopper, conveyor speed, release agent spray tank level and distance between the paver and feeder. Also featuring shortcuts in other menus.

Additional to the visual indicators the integrated speaker warns the driver acoustically when DistanceAssist recognizes a failure or when important fluids are low e.g., Ad-blue.

CUSTOMIZABLE MATERIAL FLOW

With Dynapac's intuitive interface, easily adjust settings like the conveyor belt speed and filling degree. Tailor operations for slow movement and automatic control to suit your specific project needs.

AUTOMATED CLEANING & HEATED SCRAPERS

AUTOMATIC SPRAYING SYSTEM

Efficiency and convenience should be a part of every job, which is why the Dynapac MF2500 comes with an optimized cleaning concept.

The spraying system ensures that there is a permanent release agent coating on the conveyor belt. This effectively prevents the adherence of bitumen. The 90-liter tank for the release agent fluid guarantees a long operating time.

Additionally, the special heated scraper offers crews quick and easy cleaning after every use. Thanks to its unique design, it guarantees that residue and even particularly stick material does not get stuck on the machinery or fall on the floor. The heated scraper can also be switched off when cold material is conveyed.





An optional SwingApp makes the MF2500CS incredible flexible and versatile.

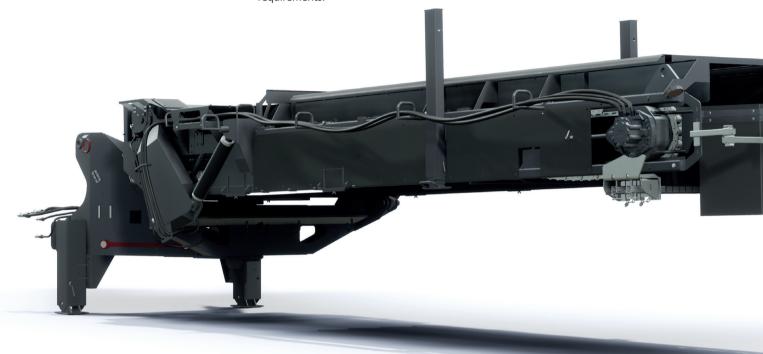
FLEXIBILITY

Equipped with a short conveyor as standard, the MF2500CS mobile feeder can also work with an add-on SwingApp. SwingApp transforms the MF2500CS to a feeder suitable for offset feeding applications – feeding two pavers side by side, feeding one paver from a different lane, fill medians etc. The SwingApp conveyor can swing 55° to both sides.

LOW COST

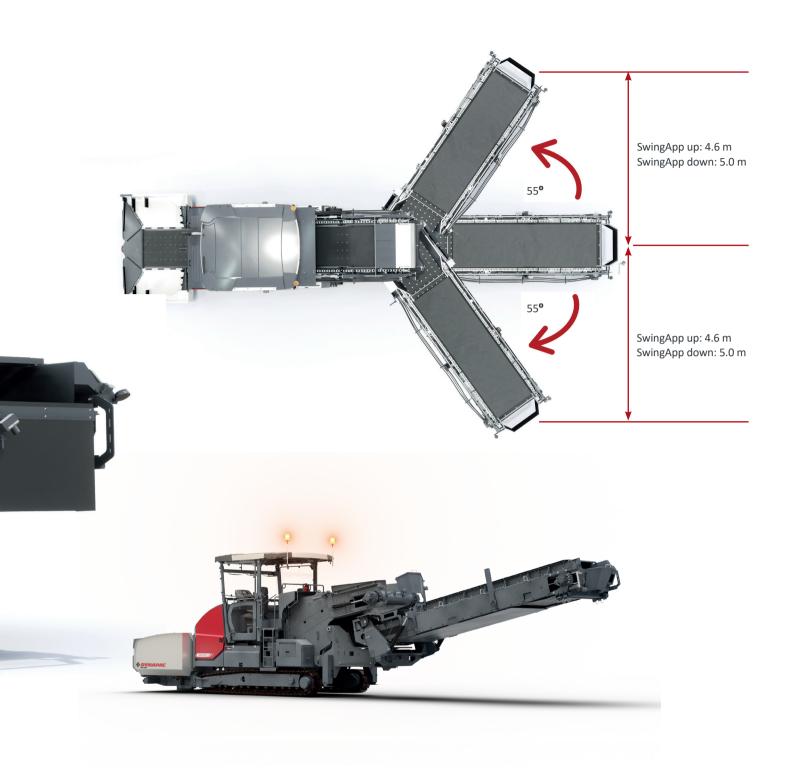
Our innovative design helps you to keep your investment costs low as the SwingApp can transform a MF2500CS to an 'offset feeder'. The same SwingApp can be mounted on any MF2500CS allowing optimal fleet management. A mounting/dismounting time of approximately 10 minutes enables you to respond more quickly to changing job site requirements.

When not required, the SwingApp can be removed, which considerably prolongs the lifetime of the belt and minimizes costs.



SW6500

ADD-ON SWINGAPP UNIQUE & PATENTED



With the unique Dynapac SW6500 a standard MF2500CS can be transformed into a swinging feeder in less than 30 minutes. The hydraulic jacks make the mounting easy and convenient, since it takes approximately 10 minutes. With a swing angle of 55° and a side reach of 3.4m, the Dynapac feeder is the perfect machine for a lot of applications.



COST CONTROL THAT SAVES BIG

Being active in the Road Construction business requires considerable investment. Every square meter involves an operational cost composed of fixed costs such as interest on equipment acquired, labor costs, insurance and equipment depreciation, but also variable costs such as expenses for fuel, wear and maintenance.

SERVICE COMMITTED TO YOUR FUTURE

GENUINE PARTS AND KITS

- · Preventive maintenence kits
- Genuine Filters
- Fluids and lubricants
- Wear and repair kits
- Upgrade Kits

SERVICE

- Right competence
- Training program
- Inspection & service program
- Extended Warranty & Service Agreement

CONSUMABLES

· Road Milling Tools (bits)

PREVENT THE COST OF A BREAKDOWN

REGULAR MAINTENANCE PREVENTS COSTLY STANDSTILLS

Equipment breakdowns have a direct impact on your productivity. No production means no revenue, but the fixed costs stay the same, resulting in lower profitability. By avoiding breakdowns and increasing the reliability of your machine, you will be able to produce more per year, which will immediately improve your profitability.

PREVENTIVE MAINTENANCE KITS

EASY OF ACCESS TO ALL MAINTENANCE POINTS

- Hydraulic components conveniently located on the left side
- Coolers, air filter as well as generator access on right side
- Engine from front, top and bottom
- Electrical components from the platform
- Oil drain facility on the left side
- Fuel tank accessible from left side









MOBILE FEEDER RANGE

	MF2500CS	MF2500CS SWING APP	MF2500CM
WEIGHT			
Weight, t	20	24,5	21
DIMENSIONS			
Basic width, m	2.55	2.55	2.55
Transport length, m	9.20	15.30	10.30
Transport height, m	3.10	3.10	3.10
CAPACITY			
Feeding capacity, t/h	4000	2000	4000
MATERIAL HOPPER			
Dumping height center, mm	580	580	580
Hopper width (internal), mm	3255	3255	3255
Hopper capacity, m ³	7	7	7
TRACTION			
Operating speed, m/min	25	25	25
Transport speed, km/h	4	4	4
ENGINE			
Engine model (Stage IIIA/V)	Cummins QSB6.7-C220/B6.7-C225		
Engine power @ 2200 rpm (Stage IIIA/V), kW	164/168	164/168	164/168
Electrical system, V	24	24	24
Fuel tank capacity, I	300	300	300
CRAWLER			
Crawler length, mm	3900	3900	3900
Crawler width, mm	320	320	320
Final drive	Hydrostatic direct drives comprising planetary gear units & hydraulic motors, integrated in the crawler track frame		
CONVEYOR			
Conveyor type	Rubber belt mounted on two chains with metal stiffeners		
Conveyor width, mm	1200	1200	1200
Conveyor speed	Constantly variable	Constantly variable	Constantly variable
Feeding height, m	2.2 up to 2.5	1.1 up to 4.15	2.1 up to 3.0

