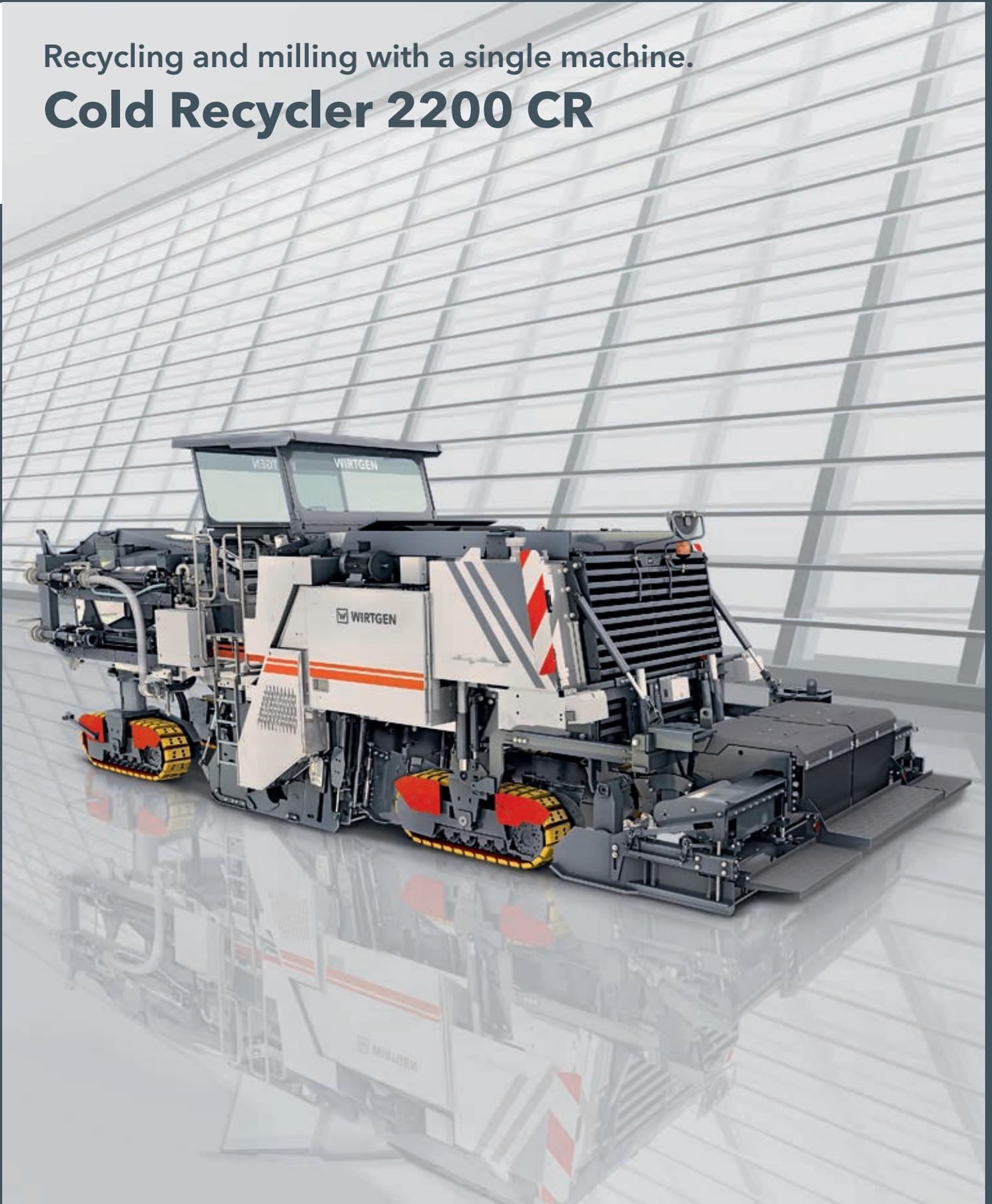


Recycling and milling with a single machine.

Cold Recycler 2200 CR



Outstanding features of the 2200 CR cold recycler

02
03

21 COLD MILLING MACHINE AND COLD RECYCLER IN A SINGLE MACHINE

2200 CR suitable for use as a powerful cold recycler featuring a working width of 2.2 m or as a high-performance cold milling machine.

31 HIGH-PRECISION "LEVEL PRO" AUTOMATIC LEVELLING SYSTEM

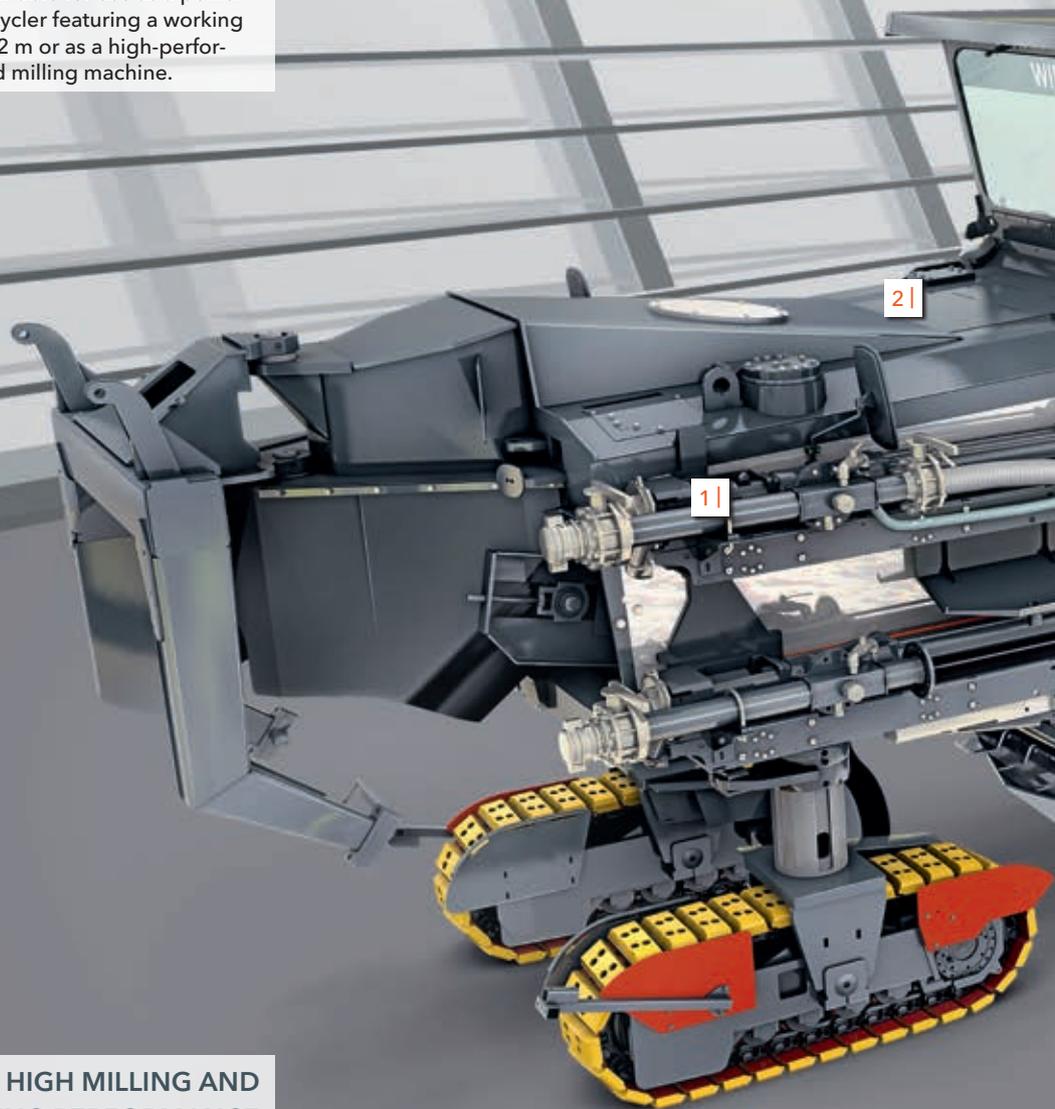
LEVEL PRO levelling system including milling depth sensor for high-quality, highly accurate milling results.

11 HIGH-PRECISION INJECTION SYSTEMS

Highly precise injection of water, water-cement slurry, bitumen emulsion or foamed bitumen for maximum flexibility in operation.

81 HIGH MILLING AND MIXING PERFORMANCE

Heavy-duty, high-performance milling and mixing rotor for the production of homogeneous cold mixes.



4 |

SIMPLE, INTUITIVE OPERATING CONCEPT

Walk-through operator's platform with self-explanatory controls arranged within easy reach for easy operation.

5 |

OUTSTANDING ENGINE POWER

Engine performance of 708 kW/963 PS and intelligent machine management system for high advance rates.

3 |

4 |

5 |

6 |

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6 |

STATE-OF-THE-ART VÖGELE PAVING SCREED

Continuously adjustable VÖGELE paving screed equipped with tamper and spreading auger for perfect paving true to grade and slope.

7 |

HEAVY-DUTY MILLING ROTOR UNIT

Rotor housing, side plates and scraper blade from extremely wear-resistant materials for tough operating conditions.





POWER. EFFICIENCY. VERSATILITY. CONCEPTS THAT COMBINE INTO A SINGLE MACHINE - THE WIRTGEN 2200 CR COLD RECYCLER. COMMITTED TO COLD RECYCLING IN ITS PUREST FORM. SEAL OF QUALITY INCLUDED. ON BOARD: TRIED-AND-TESTED, INNOVATIVE TECHNOLOGIES. MASTER OF ITS TRADE ALSO IN COLD MILLING. LARGE CONSTRUCTION JOBS - COMPLETED QUICKLY AND SUPREME WELL WITH THE 2200 CR.

No compromises

in cold recycling.





The 2200 CR - top performance times two

FULL-SCALE MILLING MACHINE AND RECYCLER BROUGHT TOGETHER

The 2200 CR cold recycler with a working width of 2.2 m puts up a compelling performance on many construction projects in two different ways. On the one hand, it is the powerful prime candidate when it comes to repairing damaged asphalt pavements with added binding agents. For this purpose, various injection systems make it particularly flexible. On the other hand, the compact 2200 CR can be used as a highly efficient, high-end cold milling machine on large-scale construction projects. Here, the removal of pavements at full depth and high advance rates ensures unrivalled productivity.

The 2200 CR recycles asphalt pavements with added cement, water-cement slurry, bitumen emulsion or foamed bitumen. The integrated spreading auger and paving screed create high-quality, pre-compacted base layers.

The 2200 CR can be used as an enormously powerful cold milling machine capable of milling off layers at depths of up to 35 cm without requiring modification.



1 | As a high-performance in-situ cold recycler, the 2200 CR recycles asphalt roads in a single pass.

2 | The 2200 CR also scores top marks as an efficient front loader with ample reserve capacity.

The cold recycling process in detail

08
09

HIGH-QUALITY BASE LAYERS IN A SINGLE PASS

Where specified, cement is pre-spread by a Streumaster binder spreader which is followed by water and binder tanker trucks. The 2200 CR is equipped with injection systems which convey the liquid binding agents, via hose connections, from the tanker trucks coupled to the machine for precise injection into the mixing chamber.

Rotating against the direction of travel, the heavy-duty milling and mixing rotor granulates the existing damaged asphalt pavement to a depth of up to 25 cm. The granulated material is then mixed with the pre-spread cement and injected water and bitumen emulsion or foamed bitumen in the machine's mixing chamber, thus creating a new homogeneous mix in an in-situ process.

In the next step, the recycled mix is deposited between the rear track units via a material guide plate system.

The spreading auger spreads the material evenly across the full working width, enabling the integrated VÖGELE paving screed to precisely pave and pre-compact it true to line and level at layer thicknesses of up to 25 cm.

Following final compaction by HAMM tandem and pneumatic-tyred rollers, the recycled layer serves as a high-quality base for the new road.

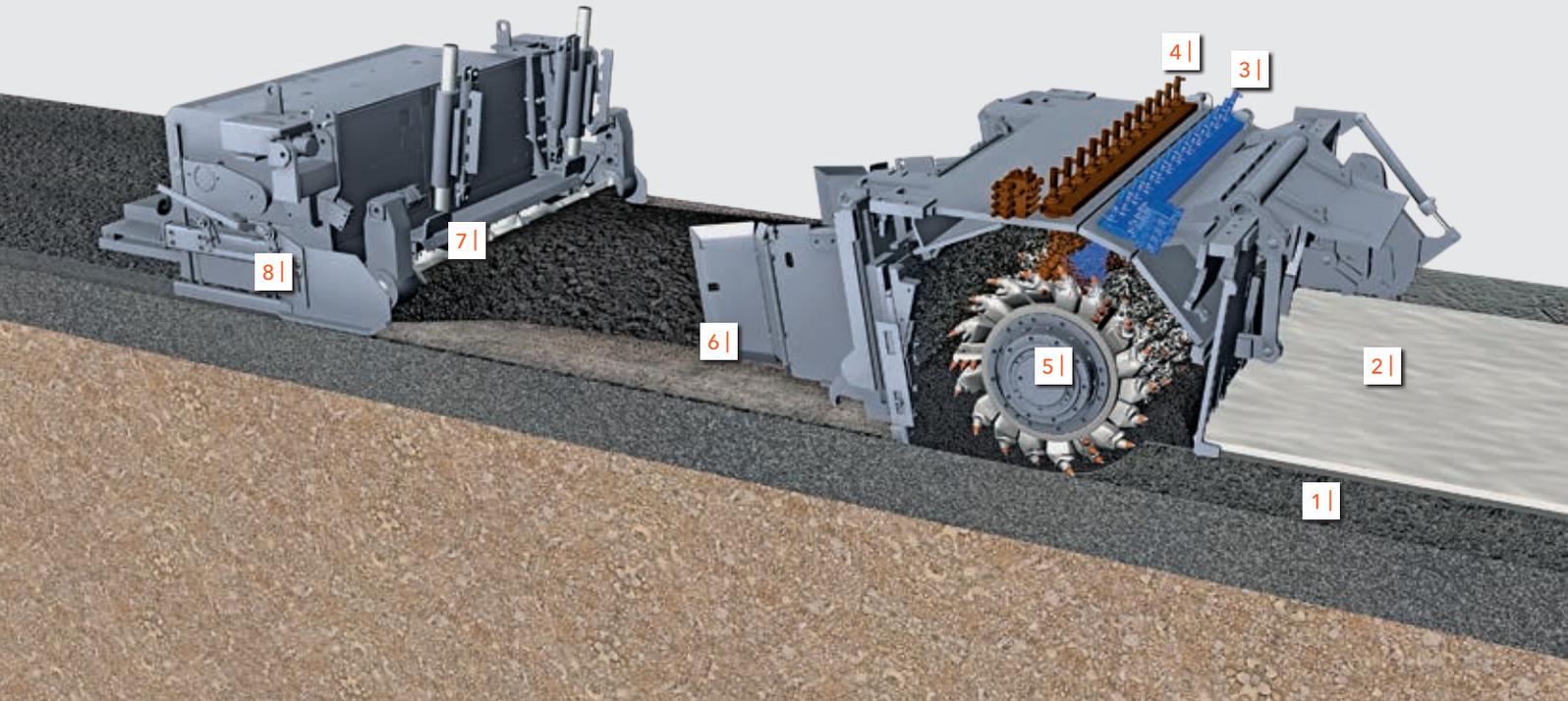
RECYCLING TRAIN INCLUDING THE 2200 CR



MATERIAL PROCESSING WITH THE 2200 CR

- | | | | |
|---|----------------------------------|---|-----------------------------|
| 1 | Damaged asphalt layer | 5 | Milling and mixing rotor |
| 2 | Pre-spread cement | 6 | Material guide plate system |
| 3 | Injection bar for water | 7 | Spreading auger |
| 4 | Injection bar for binding agents | 8 | Paving screed |


Working direction



- | | | | |
|---|-------------------------------|---|-----------------------------|
| 1 | Streumaster binder spreader | 5 | HAMM tandem roller |
| 2 | Water tanker truck | 6 | HAMM pneumatic-tyred roller |
| 3 | Binder tanker truck | | |
| 4 | WIRTGEN 2200 CR cold recycler | | |





High milling and mixing performance

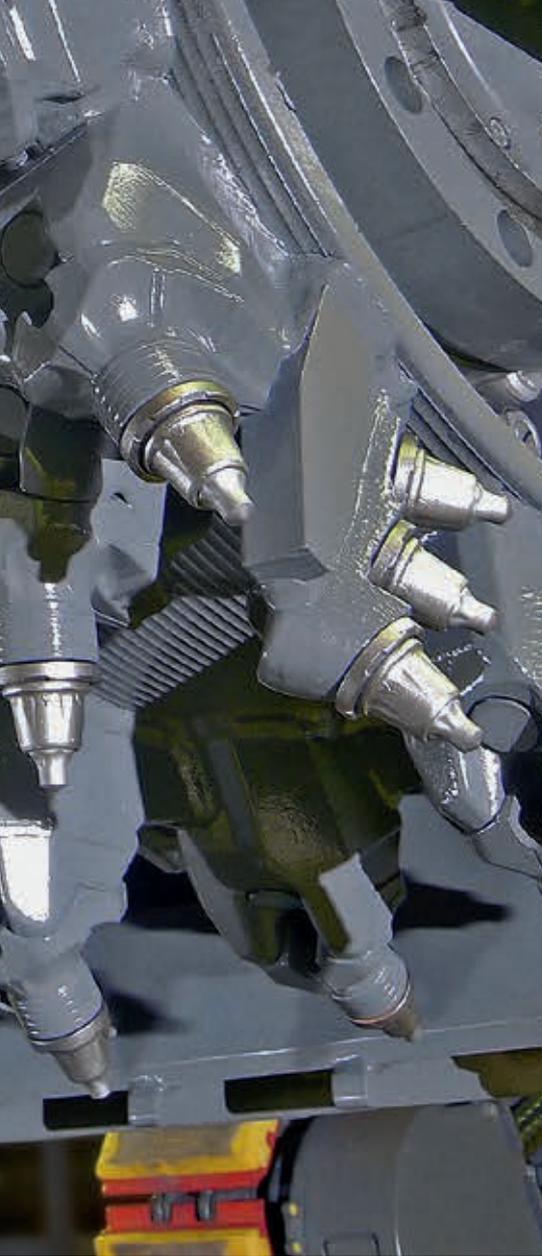
INTELLIGENT FEATURES COME AS STANDARD

The 2.2 m wide, robust milling and mixing rotor is based on the many decades of experience WIRTGEN has gained in milling technology. Rotating against the recycler's direction of travel, the powerful rotor mixes the different materials to produce a homogeneous construction material mix.

When in lowered position, the scraper blade enables complete loading of the material. When raised and locked, the material can

either be partially loaded or remain in the cut. The scraper blade can be raised hydraulically to optimize the entire process: it provides easy access to the milling and mixing rotor for the replacement of cutting tools.

Point-attack cutting tools are replaced quickly and easily using the hydraulic tool extractor and automatic drum turning device. The extremely hard-wearing HT22 toolholder system is distinctive for its exceptionally high durability which pays off in everyday operation on site by significantly extended replacement intervals.



1 | In lowered position, the side plates move over the surface.



2 | In raised position, the side plates enable the road surface to be milled off accurately along kerbs.



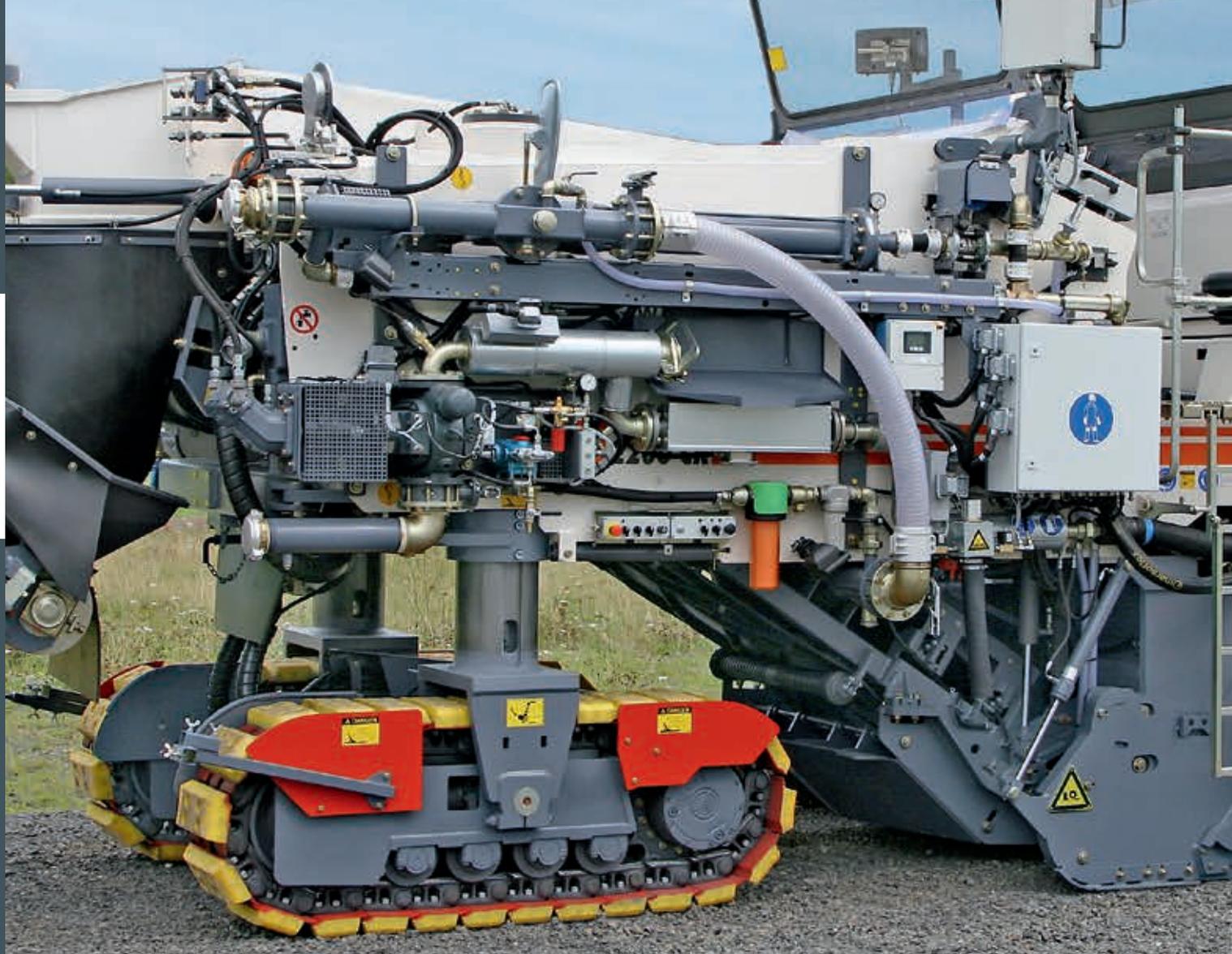
3 | The heavy-duty gradation control beam protects the conveyor belt and prevents the material from breaking into larger slabs.



4 | Swing-open baffle plates conduct the recycled material between the rear track units.



5 | The effective hydraulic cutting tool extractor ensures extremely easy handling with only little effort required.



Innovative injection systems for highly precise addition of binders

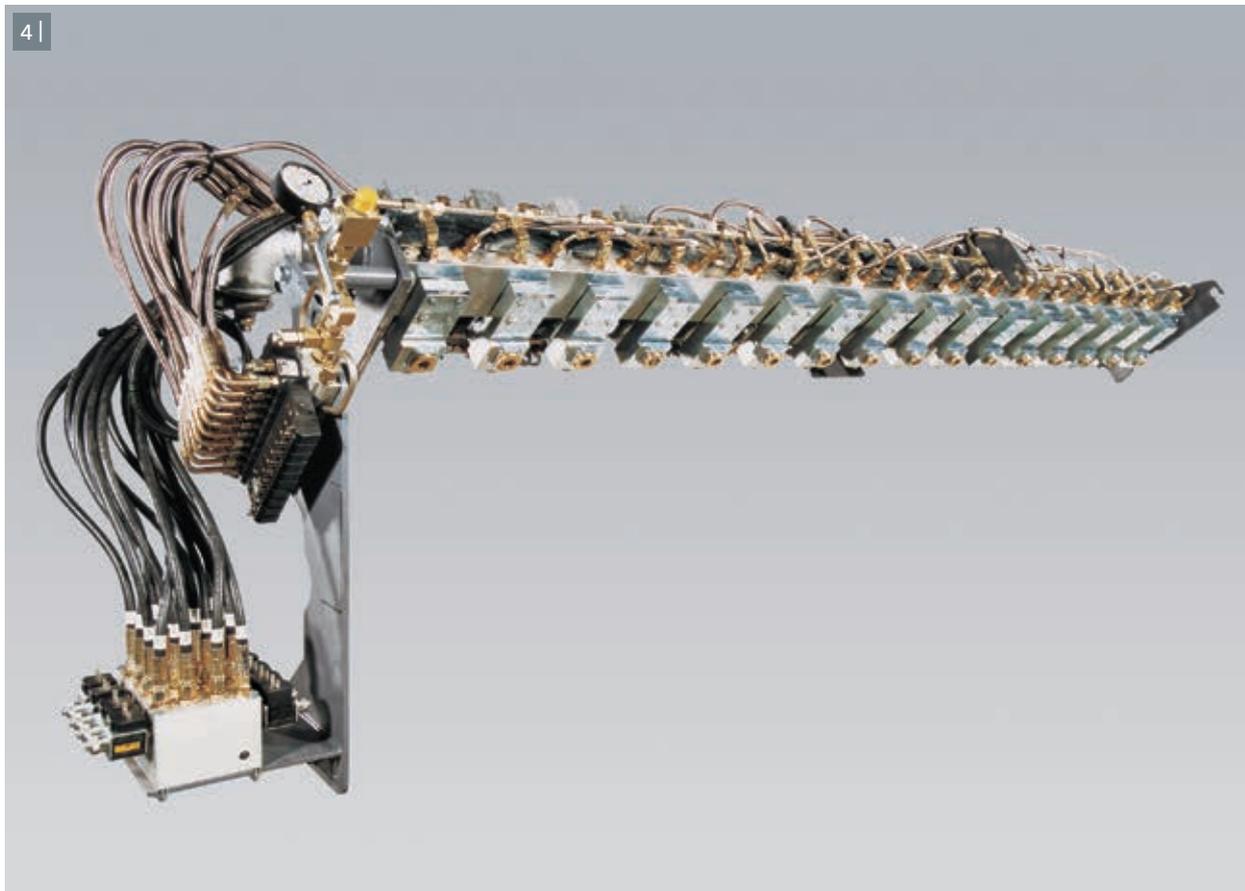
WIDE VARIETY OF MIXING OPTIONS

As binders need to be added in precise quantities to produce perfect mixes and base layers of high quality, the 2200 CR is equipped with state-of-the-art injection systems.

Tanker trucks pushed by the 2200 CR deliver water and bitumen emulsion or hot bitumen to the recycler's injection systems via coupled hose connections. Hot bitumen is foamed prior to injection. Foamed bitumen is produced by adding precisely metered quantities of water and compressed air to hot bitumen which has a temperature of 175° C. Production takes place in the recycler's injection system.

Foamed bitumen is distinctive for its economic efficiency and ease of handling. It is eminently suitable for mixing with cold and moist construction materials.

The binders are injected into the mixing chamber via special injection bars. Microprocessors ensure injection in precisely metered quantities across the recycler's full working width and in accordance with the machine's advance speed and recycling depth.



1-2 | The binder quantities to be added are keyed in at the control panel - the system is governed by microprocessors.

3 | Foamed bitumen is a highly economical binder as it requires very low application rates.

4 | All components of the foamed bitumen system transporting hot bitumen are heated.



2.2-m wide paving unit with high-compaction VÖGELE paving screed and spreading auger.

State-of-the-art screed for high-quality paving

PAVING TRUE TO LINE AND LEVEL

The 2200 CR relies on tried-and-tested VÖGELE technology to guarantee perfect paving of the mix true to line and level. The continuously adjustable AB 375 T screed makes paving easy even in bends or when having to navigate permanent fixtures. A spreading auger installed in front of the screed distributes the mix across the full working width.

Paving around road fixtures is no problem at all thanks to the hydraulically adjustable screed.



The centrally divided auger is operated in clockwise or counter-clockwise direction, the conveying speed of both sections being continuously adjustable. The screed's hydraulic tamper ensures reliable pre-compaction of the recycled pavement layer.

The integrated automatic levelling system ensures paving of the recycled mix precisely to the specified level. The resulting base layer provides an ideal foundation for the subsequent construction of a new asphalt surfacing. The screed's hydraulically movable side plate is yet another useful feature as it is capable, for example, of redirecting excess material for shoulder reinforcement.

The 2200 CR as a high-performance milling machine

TREMENDOUS RANGE OF APPLICATIONS

To ensure full machine utilization, the 2200 CR can be operated not only as a recycler but also as an efficient high-performance milling machine. An ultra-strong engine and high conveying capacity make it the ideal choice for milling jobs involving extremely high outputs such as the removal of asphalt pavements at full depth. The high-performance conveyor can be slewed by 55 degrees to the right and 45 degrees to the left to ensure full loading flexibility. High advance rates and milling depths of up to 35 cm ensure the quick completion of large construction projects, such as the replacement of surface courses on motorways or airport runways. The machine can also be used to mill off thin pavement layers prior to recycling in order to retain the previous level after construction of a new surface course on top of the recycled layer.

The variable discharge conveyor belt speed enables even large articulated trucks to be loaded to full capacity. Wide slewing angles allow trucks to change "on the fly", enabling the milling operation to continue non-stop.



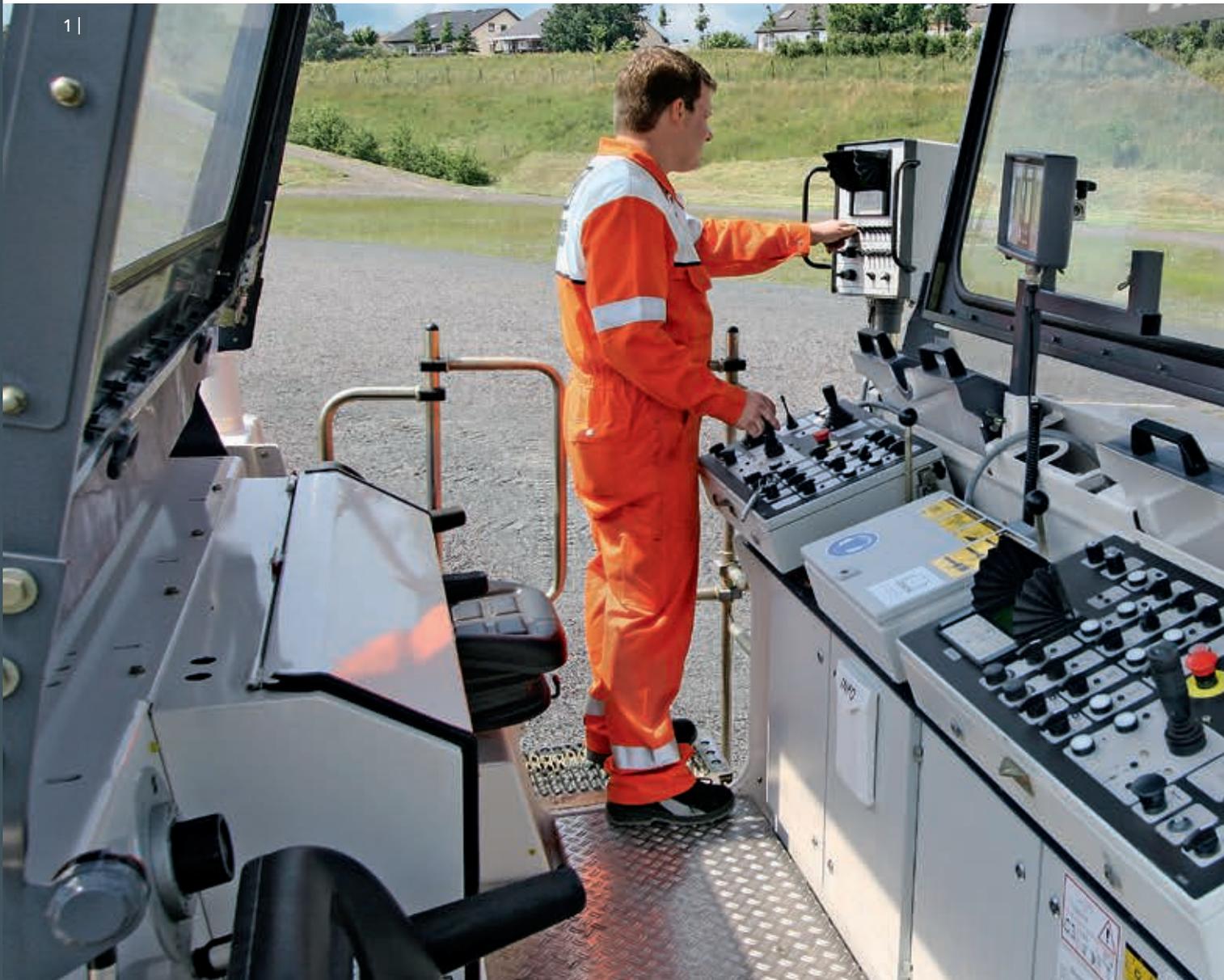
Ease of operation enables productive working

IDEAL WORKING CONDITIONS

In its double role as a cold recycler and cold milling machine, the 2200 CR completes highly complex jobs - yet it can be operated with just a few simple flicks of the wrist. In line with this approach, the clearly arranged controls ensure easy and intuitive operation. The WIDIS 32 multifunctional screen is installed in the centre of the clearly structured operator's platform. It provides comprehensive information on all relevant parameters pertaining to the machine, engine and hydraulic system. The user-friendly LEVEL PRO levelling system is yet another very useful feature. It guarantees highly precise results regardless of the job to be performed.

1 | *The simple operating concept enables the operator to remain fully focused on the job.*

The operator enjoys ample legroom on the walk-through operator's platform in both standing and seated position. In addition, he can adjust the control panels on the left and right side individually in height and tilt to suit his personal preferences. Anti-vibration mounted treads minimize the impact of machine vibrations on the operator.



2 |

2 | The LEVEL PRO panel is located within easy reach and in the operator's direct field of view.

3 | Just like the two seats, the panels can be moved to project over the outer edge of the machine.

4 | Crew members on the ground can set or modify key machine parameters via additional control panels mounted on both sides.



Intelligent power control

1 | Maintenance is made totally easy as the entire machine offers ready access.

2 | Mechanical milling drum drive provides maximum efficiency.



UNRIVALLED ENGINE PERFORMANCE RESERVES

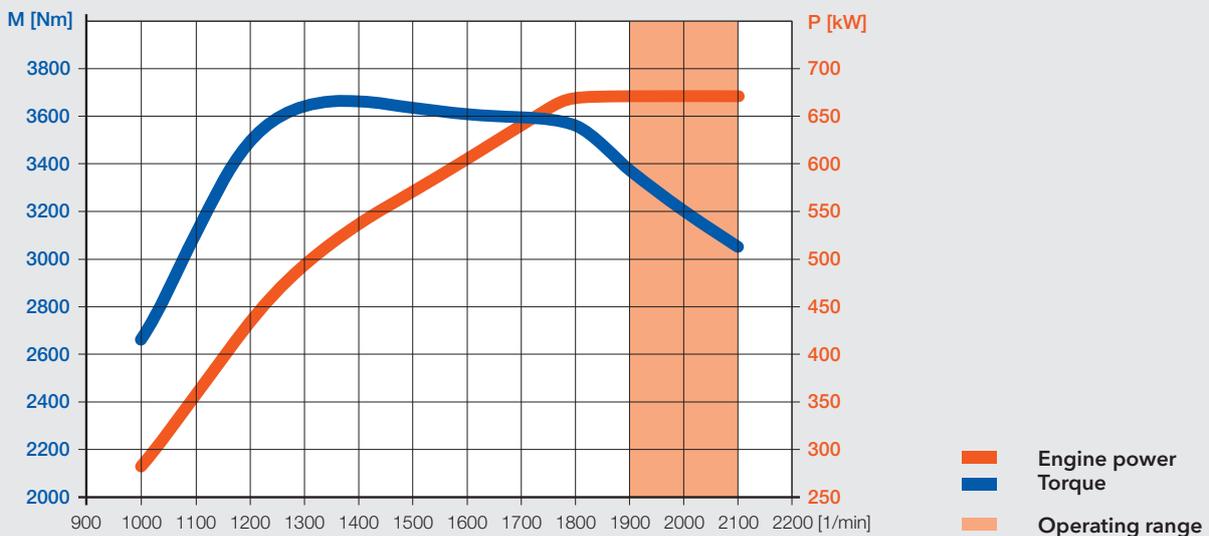
The powerful diesel engine offers technology designed for top performance. In addition, an intelligent machine management system controls the machine's advance rate in accordance with the engine load.

The mechanical milling and mixing rotor drive enables permanently high output rates while ensuring highly efficient operation at the same time. Additional benefits of the smooth power belt drive in tough everyday operation on site

are low fuel consumption, high wear resistance and ease of maintenance. An automatic belt tensioner ensures uniform power transmission at all times.

All points of maintenance are arranged in a clear pattern and offer convenient access. Replacing the hydraulic, air, fuel, return line and bitumen filters poses no problem at all. To simplify maintenance procedures, lubrication and servicing points have also been grouped together intelligently.

In the operating range of the 2200 CR, the engine output remains constant even in case of extreme engine lugging.



Not a single minute wasted during transport

ARRIVING ON THE NEXT JOB IN NO TIME AT ALL

The machine can be easily transported on a flatbed truck. Ample ground clearance simplifies the loading procedure. Sturdy conveyor support legs are on offer as an optional feature.

In order to not exceed the permissible transport height, the protective canopy is folded down for transport hydraulically at the mere flick of a switch.

Strong loading and lashing lugs enable the machine to be safely lashed down on a flatbed truck or loaded by crane. The transport length of the 2200 CR is reduced significantly by the folding conveyor design.

1 | *The hydraulically folding discharge conveyor reduces the transport length.*

2 | *Easy loading of the 2200 CR onto a flatbed truck.*



Technical specification

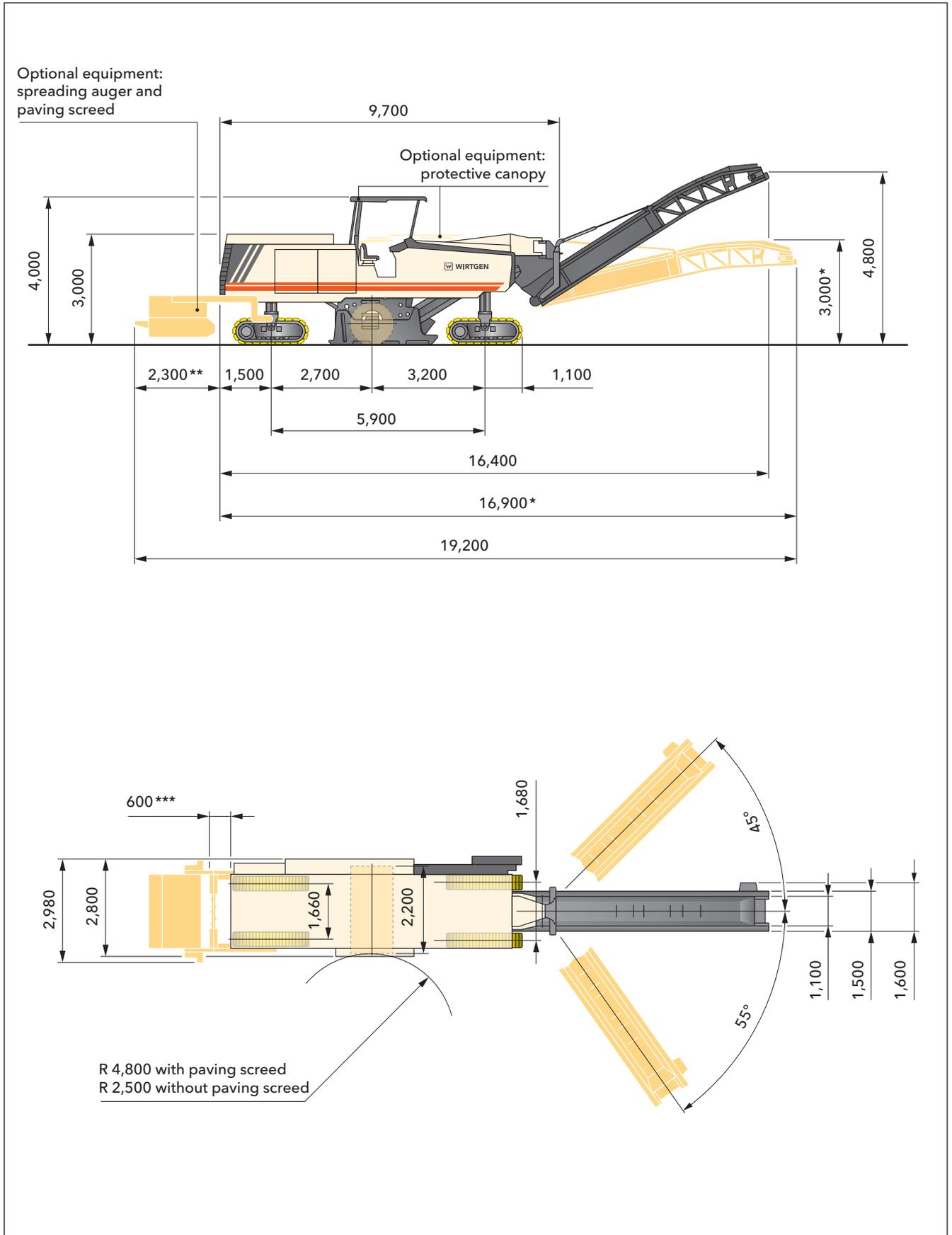
Milling drum	
Working width	2,200 mm
Milling depth / recycling depth *1	0-350 mm / 0-250 mm
Tool spacing	15 mm
Number of cutting tools	188
Drum diameter with tools	1,140 mm
Engine	
Engine manufacturer	Caterpillar
Type	C27 ATAAC
Cooling	water
Number of cylinders	12
Rated power at 2,100 min ⁻¹	708 kW / 950 HP / 963 PS
Fuel consumption at rated power	187 l/h
Fuel consumption, field mix	75 l/h
Emission standards	EC not regulated / US EPA Tier 2
Electrical system	
Electrical power supply	24 V
Tank capacities	
Fuel tank	1,400 l
Hydraulic oil tank	550 l
Water tank	5,000 l
Driving properties	
Working and travel speed	0 to 84 m/min (0 to 5 km/h)
Theoretical gradeability	90%
Ground clearance	370 mm
Track units	
Track units (L x W x H)	2,200 x 370 x 790 mm
Conveyor system	
Belt width of primary conveyor	1,100 mm
Belt width of discharge conveyor	1,100 mm
Theoretical capacity of discharge conveyor	668 m ³ /h
Shipping dimensions	
Machine (L x W x H)	9,700 x 2,800 x 3,000 mm
Machine including spreading auger and paving screed (L x W x H)	12,000 x 3,000 x 3,000 mm
Discharge conveyor (L x W x H)	8,700 x 1,700 x 1,300 mm
Paving screed including screed arms (L x W x H)	3,600 x 2,850 x 1,900 mm

*1 = The maximum milling depth may deviate from the value indicated, due to tolerances and wear.

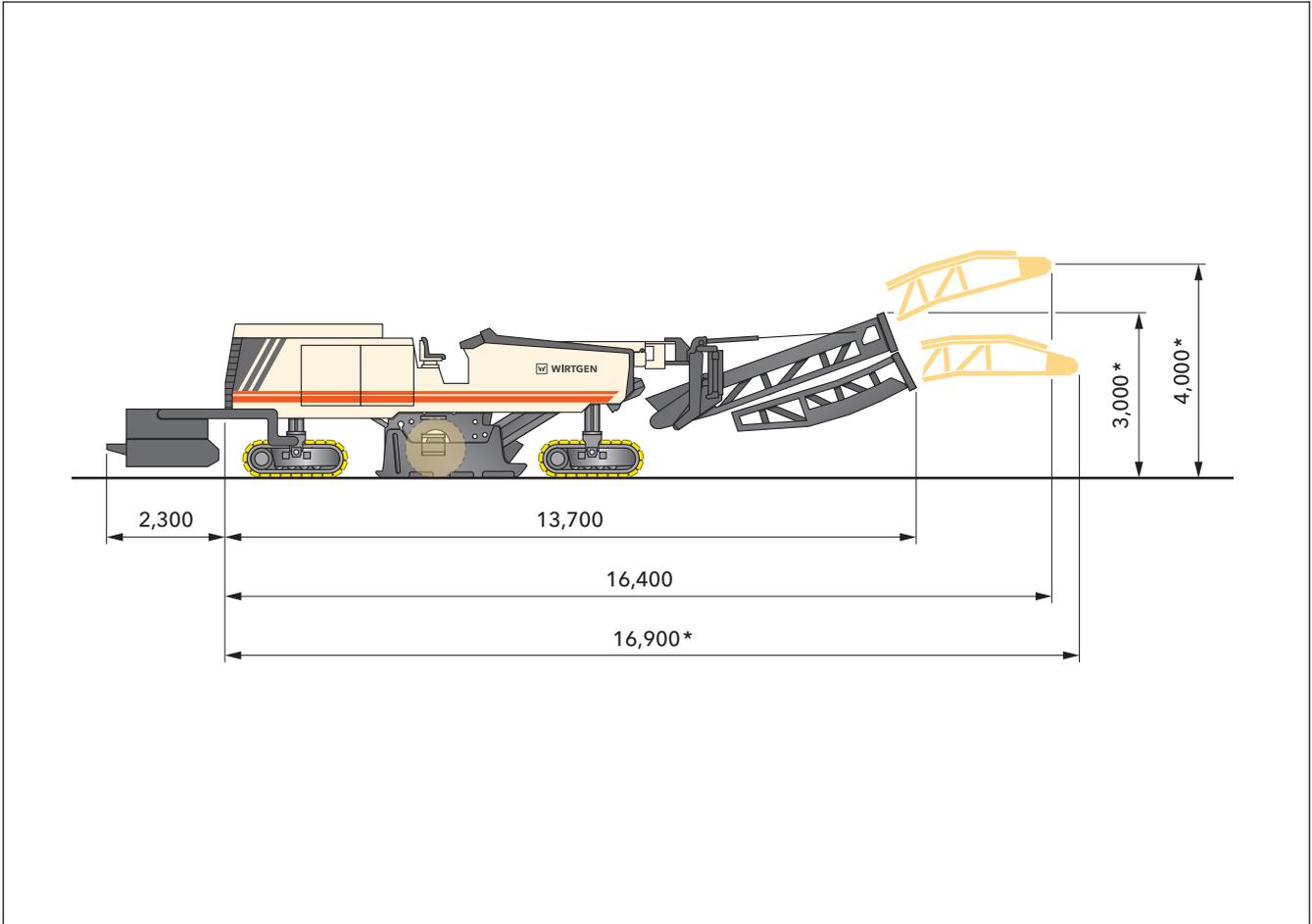
Weight of base machine	
Empty weight of machine without tank contents	42,970 kg
Operating weight, CE* ²	46,200 kg
Maximum operating weight (full tanks, full range of equipment)	52,800 kg
Transport weights of individual components	
Weight of machine	41,170 kg
Weight of discharge conveyor	1,800 kg
Weights of tank contents	
Water tank filling	5,000 kg
Diesel tank filling (0.83 kg/l)	1,160 kg
Additional add-on weights	
Driver and tools	
Driver	75 kg
On-board tools	30 kg
Optional additional equipment	
Spreading auger and paving screed	4,000 kg
Protective canopy	280 kg
Discharge conveyor, 8,700 mm long, 1,100 mm wide, with hydraulic folding device	800 kg

*² = Weight of machine, half-full water tank, half-full fuel tank, driver, on-board tools, excluding optional equipment features

Dimensions



Dimensions in mm
 * = Dimensions for transport on a flatbed truck
 ** = Paving screed and spreading auger
 *** = Spreading auger



Optional equipment: folding discharge conveyor

Dimensions in mm

* = Dimensions for transport on a flatbed truck

Standard equipment

Base machine	
Basic machine with engine	■
Diesel engine power controller for optimum milling result	■
Air intake with cyclone preliminary separator	■
Lockable, hydraulically opening engine cover with integrated soundproofing	■
Filling of the machine hydraulics with mineral hydraulic oil VG46	■
Mechanical milling drum drive via three drive belts (total 15-groove) with automatic belt tensioner	■
Two possible cutting speeds by exchanging drive belt pulleys	■
Wide-opening, electrohydraulically actuated drum door/scrapper plate combination, self-locking	■
The scrapper plate is hydraulically operated and equipped with exchangeable carbide metal elements	■
A large ejection opening in combination with a guide plate system permits the milled material to be deposited between the rear crawler units	■
Water pressure system (20 bar max., adjustable pressure and quantity), including cleaner unit complete with hose, gun and hose roller	■
Milling and mixing unit	
Milling drum housing FB2200 CR	■
Milling and mixing rotor	
Milling drum FB2200 HT22 LA15 with 188 picks	■
Milled-out material loading	
Two-piece loading conveyor system, complete with cover;	■
Primary conveyor: 1,100 mm, discharge conveyor belt width: 1,100 mm belt width, with 100° slewing range and height-adjustable, with material depressor	■
Discharge conveyor, 8,700 mm long, 1,100 mm wide	□
Lock parts instead of VCS extraction system	□
Spraying unit/binding agent addition	
Spraying system for water or bitumen emulsion	□
Water filling front - without filling pump	□
Machine control and levelling system	
Advance control across the entire speed range via joystick with proportional control	■
Freely selectable steering functions for the crawler unit tracks	■
Crawler unit position display in the control display, without levelling system functions	■

- = Standard equipment
- ▣ = Standard equipment, replaceable with optional equipment
- = Optional equipment

Operator's stand	
Continuous operator's stand with one control panel each on right and left and two adjustable seats	■
The control panels are adjustable in height and angle, as well as movable from side to side	■
A multi-function display is permanently installed in the right control panel	■
Ladders to the operator's stand right and left	■
Mirrors: The machine is equipped with 2 mirrors at front and one mirror at rear	■
Operator's stand without roof	□
Chassis and height adjustment	
Infinitely variable, hydraulic four-track drive with hydraulic differential lock (flow distributor)	■
Equipped with extremely wear-resistant polyurethane track pads	■
Four-track steering "Crab", "cornering" or "straight ahead" steering types are possible	■
Others	
Lighting package with 5 halogen floodlights	■
Safety package with 6 emergency stop switches	■
Lockable tool box with set of tools for maintenance and servicing	■
European type test certificate, Euro Test-mark and CE conformity	■
Paint standard cream white RAL 9001	□
Halogen lighting package 24 V with rotary beacons	□
Paving unit	
Version without spreader auger and without tamping beam	□

■ = Standard equipment
 ■ = Standard equipment, replaceable with optional equipment
 □ = Optional equipment

Optional equipment

Milling and mixing unit	
Transport carriage for milling drum units from FB2200 to FB4400	<input type="checkbox"/>
Milled-out material loading	
Discharge conveyor, 8,700 mm long, 1,100 mm wide, with hydraulic folding device	<input type="checkbox"/>
Version without loading conveyor system	<input type="checkbox"/>
VCS extraction system	<input type="checkbox"/>
Supporting device discharge conveyor	<input type="checkbox"/>
Framework semitrailer for discharge conveyor	<input type="checkbox"/>
Spraying unit/binding agent addition	
Spraying system for water and bitumen emulsion or cement suspension	<input type="checkbox"/>
Spraying system for water and foam bitumen	<input type="checkbox"/>
Spraying system for cement suspension	<input type="checkbox"/>
Water tank filling with hydraulic filling pump	<input type="checkbox"/>
High-pressure water cleaner with water filling front	<input type="checkbox"/>
High-pressure water cleaner with hydraulic filling pump	<input type="checkbox"/>
Machine control and levelling system	
Turning angle sensor with connection cable	<input type="checkbox"/>
Sonic Ski sensor with connection cable	<input type="checkbox"/>
Ultrasonic sensor for scanning left	<input type="checkbox"/>
Wire-rope sensor for scanning ahead of the milling drum right	<input type="checkbox"/>
Operating display LEVEL PRO additionally	<input type="checkbox"/>
Multiplex changeover box	<input type="checkbox"/>
Multiplex 3-way right with 2 ultrasonic sensors	<input type="checkbox"/>
Multiplex 3-way right + left with 4 ultrasonic sensors	<input type="checkbox"/>
Machine slope control sensor	<input type="checkbox"/>
Operator's stand	
Weather canopy folds in hydraulically	<input type="checkbox"/>
Monitor system with 2 cameras and monitor for machine with discharge conveyor	<input type="checkbox"/>
Monitor system with 2 cameras and monitor for machine without discharge conveyor	<input type="checkbox"/>

- = Standard equipment
- = Standard equipment, replaceable with optional equipment
- = Optional equipment

Others	
Paint in one special colour (RAL)	<input type="checkbox"/>
Paint in two special colours (RAL)	<input type="checkbox"/>
Paint in maximum two special colours with substructure in special colour (RAL)	<input type="checkbox"/>
Powerful LED lighting package 24 V with rotary beacons	<input type="checkbox"/>
Milling drum rotation device for milling drum unit FB2200/FB 2500	<input type="checkbox"/>
Pneumatic hammer with pick ejector/insertor	<input type="checkbox"/>
Pick ejector drift (D42) incl. milling drum rotation device, electrohydraulic	<input type="checkbox"/>
Electrical diesel suction and pressure pump (50 l/min) with 7.50 m suction hose	<input type="checkbox"/>
Hot bitumen hose 4", 4000 LG	<input type="checkbox"/>
Hot bitumen hose 4", 8000 LG	<input type="checkbox"/>
Suction hose for water or emulsion	<input type="checkbox"/>
Connecting rod	<input type="checkbox"/>
Paving unit	
Spreader auger	<input type="checkbox"/>
Tamping beam type 375 T + spreader auger	<input type="checkbox"/>
One-sided, automatic Vario screed control with ultrasonic sensors	<input type="checkbox"/>
Two-sided, automatic Vario screed control with ultrasonic sensors	<input type="checkbox"/>
Vario screed slope control sensor	<input type="checkbox"/>

= Standard equipment
 = Standard equipment, replaceable with optional equipment
 = Optional equipment



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