

Innovative, high-performance machine for a variety of applications.

# W 210 F / W 210 Fi Cold Milling Machine



# Innovative, High-Performance Machine for a Variety of Applications



The high-performance cold milling machine with compact dimensions is designed for a wide range of applications, from surface layer rehabilitation to complete pavement removal and fine milling.

The machine's wide range of applications is expanded thanks to fast milling drum assembly changes and particularly fast milling drum changes for milling widths of 2.0 m, 2.2 m, or 2.5 m with the MCS (Multiple Cutting System).

In automatic mode, the innovative MILL ASSIST machine control system always selects the best ratio between performance and costs - in addition, an operating strategy can be selected based on cost, performance, or quality.

Thanks to the unique DUAL SHIFT powershift transmission with extended milling drum speed, the W 210 F / W 210 Fi is the perfect choice for particularly demanding milling tasks.

The new LEVEL PRO **ACTIVE** leveling system built directly into the machine control system optimizes precision in height control and machine's positioning.



WIRTGEN

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W 210 Fi

WIRTGEN

# Highlights of the Cold Milling Machine at a Glance

04  
05

## Operation

### 1 | EXCEPTIONAL COMFORT ON THE OPERATOR'S PLATFORM

- > Perfect view of important working areas
- > High-performance LED lighting
- > Generously sized storage space
- > Powerful heater for operator's platform
- > Variable, vertically adjustable weather canopy

### 2 | INTUITIVE MMI - MAN-MACHINE INTERFACE

- > Flexible control panel concept for maximum machine control
- > 2" control panel with favorites buttons
- > 5" control panels for leveling
- > 7" control panel conveniently displays important information
- > Heavy-duty, high-quality camera / monitor system with 10" control panel

## Quality

### 3 | HIGH-PRECISION, VERSATILE LEVEL PRO *ACTIVE* LEVELING SYSTEM

- > New, easy-to-use **LEVEL PRO *ACTIVE*** operating concept
- > Numerous additional and automatic functions
- > Optimized 3D and laser leveling
- > Leveling boom on the right or leveling boom on both sides with Sonic-Ski sensor
- > Optimized multiplex system

### 4 | OUTSTANDING RELIABILITY

- > Groundbreaking diagnostic concept
- > Redundant machine control
- > Dual CAN network
- > Reliable vandalism protection
- > Time-saving service and maintenance concept



## Milling

### 5 | ONE-OF-A-KIND CUTTING TECHNOLOGY

- > Easy milling drum changes in record time
- > Rapid milling drum assembly changes
- > Optimized protection against milling drum assembly wear
- > Extremely wear-resistant HT22 quick-change toolholder system
- > New HT22 **PLUS** toolholder upper part with increased service life

### 6 | INNOVATIVE MILL ASSIST

- > **MILL ASSIST** automatic mode
- > New **DUAL SHIFT** powershift transmission
- > Additional pre-selection of an operating strategy in automatic mode
- > Clear pre-selection of constant milling pattern quality
- > Innovative efficiency indicator



## Performance

### 7 | MAXIMUM MILLING PERFORMANCE

- > Powerful diesel engine
- > Increased ballasting flexibility
- > Large scraper lift
- > Flexible and powerful loading of milled material
- > "Booster" function for increased discharge parabola

### 8 | INFORMATIVE WPT - WIRTGEN PERFORMANCE TRACKER

- > Field-tested WITOS FleetView telematics system with WPT as optional additional equipment
- > Transparent milling performance documentation
- > Automatically generated measurement reports
- > Job site tracking via satellite map display
- > Direct display of the actual milling width

## Cost-Effectiveness

### 9 | REDUCED DIESEL CONSUMPTION

- > 2-speed powershift transmission for a wide range of usable milling drum speeds
- > Diesel engine with automatic stop feature
- > Maximum performance in the low speed range
- > Milling drum with automatic start-stop feature
- > Intelligent dual fan concept

### 10 | ENVIRONMENTALLY FRIENDLY MACHINE TECHNOLOGY

- > Maximum exhaust gas purification for low exhaust emissions
- > Reduced noise emissions during relocation
- > Optimized VCS extraction system
- > Start-stop engine function via external control panel
- > Efficient water management

# CONNECTED MILLING

COLD MILLING  
MACHINE



CONNECTED  
MILLING



MACHINE  
OWNER





**OPERATOR**

An efficient flow of information is the key to making processes easier, faster, and more cost-effective. WIRTGEN has been committed to this approach for many years and calls this area in the field of milling technology **CONNECTED MILLING**.

**CONNECTED MILLING** refers to the innovative, diverse flow of information between the machine and its various components, the machine operator, the service workshop, and the scheduling offices. This available data and information can be used to make milling operations even more efficient and further increase machine reliability.

In the new generation of large milling machines, the latest, innovative **CONNECTED MILLING** features include the **MILL ASSIST** intelligent assistance system and the **WIRTGEN PERFORMANCE TRACKER** high-precision milling performance measurement system.

**MILL ASSIST** can be used to assess relevant information such as engine load, milling drum type, milling depth, or advance drive pressure, for example, in order to set the optimum milling drum speed. In addition, the machine operator can pre-select an operating strategy with respect to costs, performance, or quality.

The **WIRTGEN PERFORMANCE TRACKER** uses a laser scanner to measure the cross-sectional profile to be milled. Surface milling performance and milling volume are then precisely measured using GPS positioning and other sensors. Afterwards, an automatically generated report is created that documents the daily milling performance, including all consumables, a precise site plan, and a wealth of other information, which is then sent to the machine dispatcher, for example. The machine operator receives important information directly via the control panel display.

In WIRTGEN's new generation of large milling machines, **CONNECTED MILLING** becomes even more important for machine operators.

## Operation

# Exceptional Comfort on the Operator's Platform

08  
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### PERFECT VIEW OF IMPORTANT WORKING AREAS

The large milling machine's intelligently designed visibility concept makes the operator's work much easier and results in precise milling results. For example, the operator's platform can be extended to the right by more than 20 cm beyond the edge of the machine to guarantee that the operator has an unobstructed view of the area to be milled and the loading of the milled material. In addition, the narrow chassis is designed with a wasp waist at the front left and right as well as at the back right. This means that the operator always has a good view of the crawler unit and milled edge.

### HIGH-PERFORMANCE LED LIGHTING

The W 210 F / W 210 Fi has particularly powerful LED working lights all around the machine, lighting for the operator's platform, and "welcome and go home" lighting for easy, convenient access to the platform. In

addition, the machine also features control panel lighting, lighting for the milling drum assembly including auxiliary working lights for pick changes, and optional LED lighting balloons. This ensures that the machine is perfectly illuminated, even in difficult lighting conditions.

### GENEROUSLY SIZED STORAGE SPACE

The W 210 F / W 210 Fi offers plenty of storage space for leveling sensors, pick ejectors, and pick containers. The 1,380 liter additional and optional XXL storage compartment at the rear of the machine can hold up to 69 pick containers, while another 265 liter storage compartment on the operator's platform is also available as an optional extra.

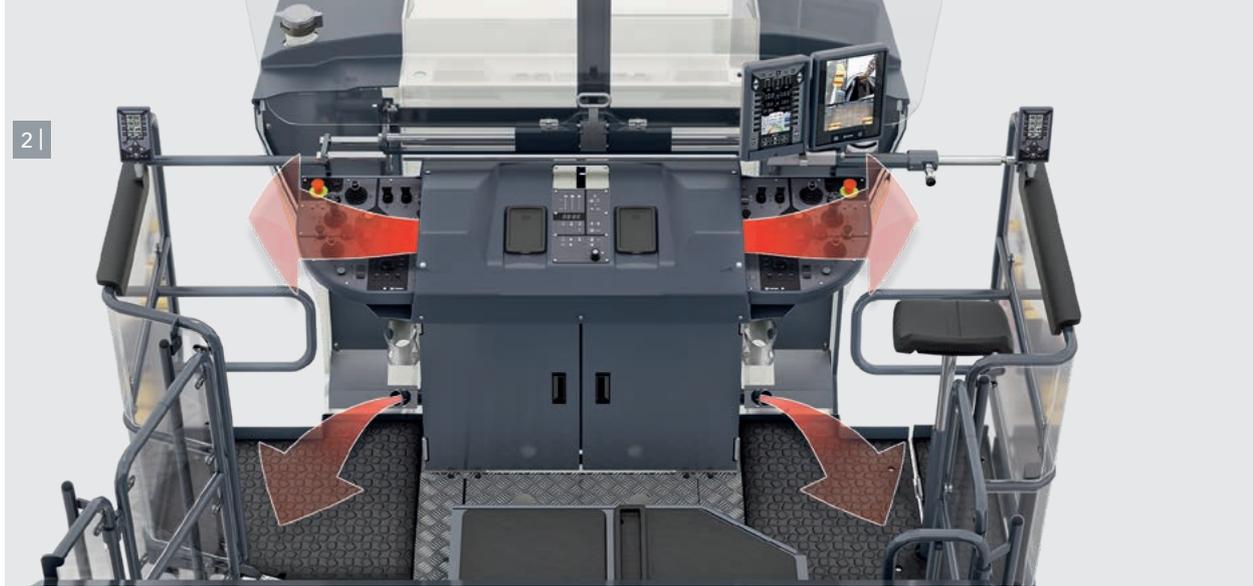


1 | Ergonomically designed operator's platform.

2 | Optimum heating for the operator's hands and feet.

3 | Individually, vertically height-adjustable weather canopy.

4 | Weather canopy in transport position.



### POWERFUL HEATER FOR OPERATOR'S PLATFORM

The cold milling machine is equipped with a high-performance heater for the operator's platform. Intelligently arranged air vents positioned near the operator's hands and feet ensure that the operator remains warm at all times. In addition, the generated heat is effectively kept close to the operator by lateral wind and weather protection elements and the lowerable weather canopy.

### VARIABLE, VERTICALLY ADJUSTABLE WEATHER CANOPY

The height of the hydraulically height-adjustable weather canopy can be individually adjusted based on the respective operating and weather conditions. The height of the canopy can be adjusted at the

touch of a button during milling operation, e.g. to avoid low-hanging branches on a street lined with trees. In addition, the heavy-duty windshields are equipped with window wipers. Exterior canopy panels that can be moved independently of each other provide additional protection in the event of rain. The operator's platform railings are also equipped with wind protection elements.

## Operation

# Intuitive MMI - Man-Machine Interface

10  
11

### FLEXIBLE CONTROL PANEL CONCEPT FOR MAXIMUM MACHINE CONTROL

The new control panel concept makes it possible to combine different control panels to meet specific customer requirements. The comprehensive and clear display of machine status, diagnostics, and information to the machine operator was an essential requirement for WIRTGEN's development engineers. The new, easy-to-understand, intuitive control panel concept optimally meets these requirements.

### 2" CONTROL PANEL WITH FAVORITES BUTTONS

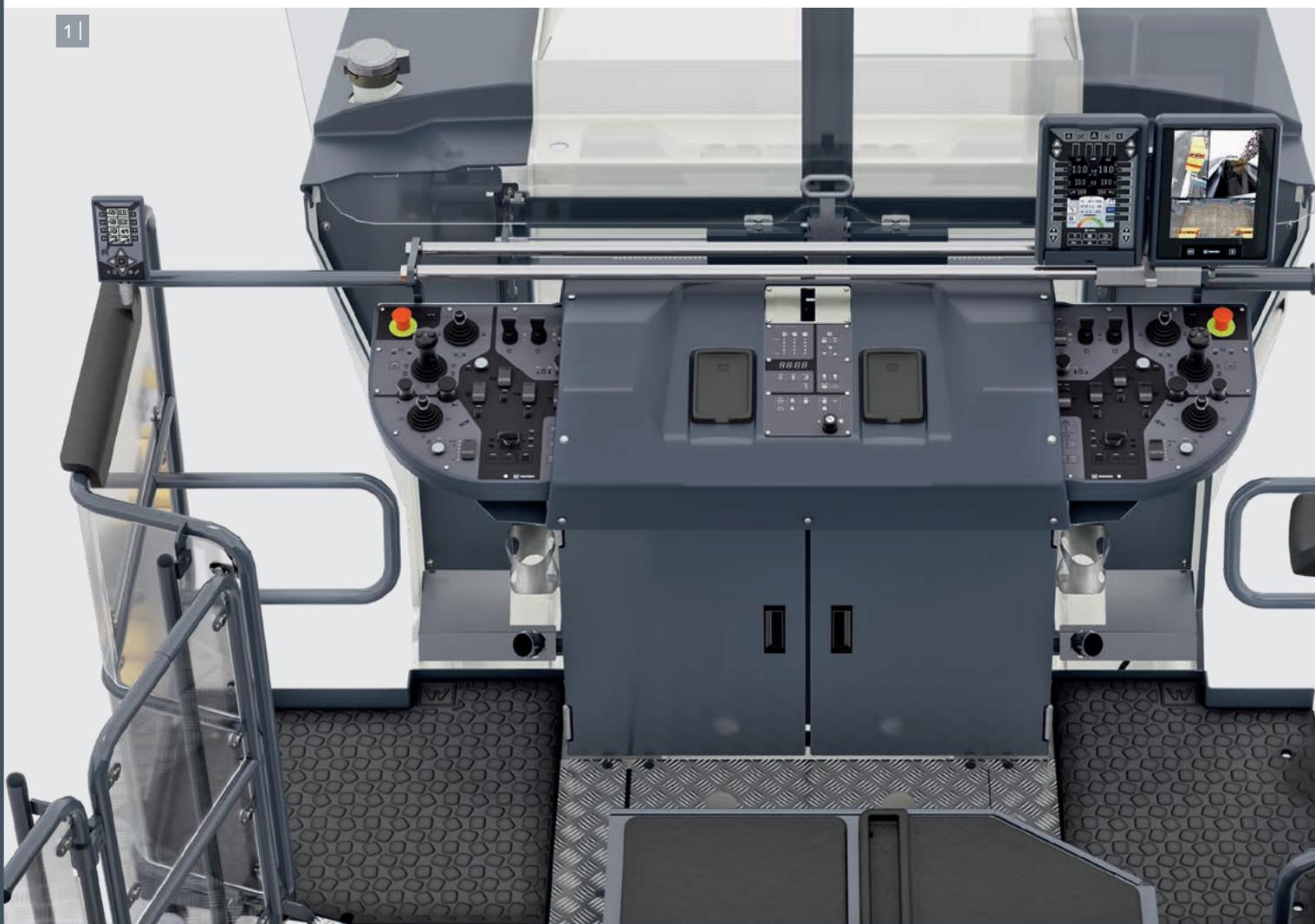
In addition, up to two 2" control panels can be integrated into the operator's platform. In this context, the ability to position the panel on the left or right external railings of the operator's platform makes operation easier and more effective. Each can be programmed with up to 21 individually selected functions, such as swinging the discharge conveyor.

### 5" CONTROL PANELS FOR LEVELING

For leveling with the **LEVEL PRO ACTIVE** leveling system, up to two additional 5" control panels can be optionally mounted to the right and left sides of the machine for ground crews.

### 7" CONTROL PANEL TO CONVENIENTLY DISPLAY IMPORTANT INFORMATION

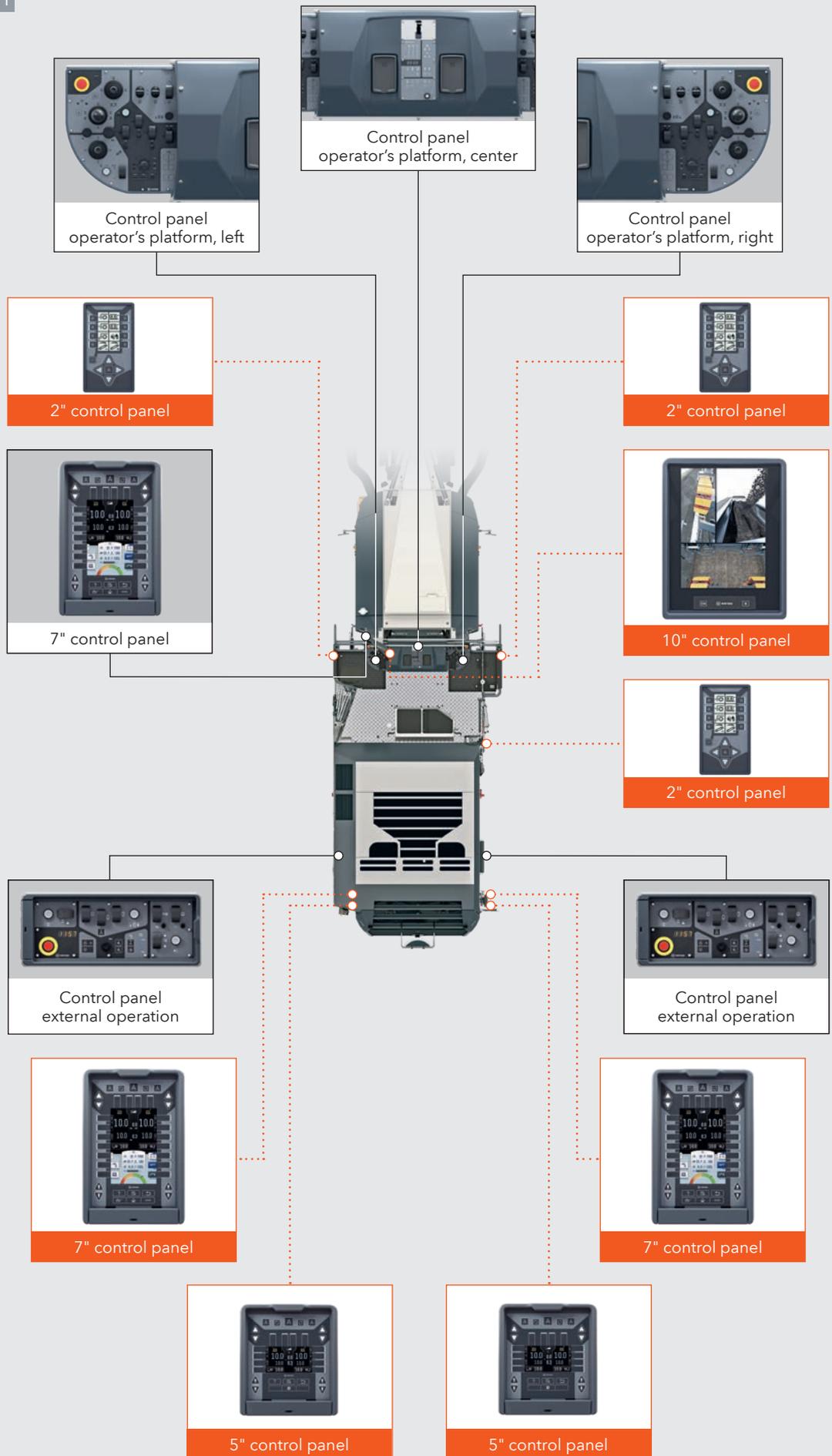
Whether up top on the operator's platform or at the lower operating positions, the new control panel concept clearly and comprehensively provides information. As such, the 7" control panel can display the following information to all of the machine operators: machine load conditions, temperatures, hydraulic pressures, diesel and water levels, leveling control, status and diagnostic messages, and general information such as the current time.



1 | Individual, user-friendly panel layout.

2 | Overview of the different control panels and their positions.

2 |



□ = Standard control panels  
□ = Optional control panels



## Operation

# Intuitive MMI - Man-Machine Interface

### HEAVY-DUTY, HIGH-QUALITY CAMERA / MONITOR SYSTEM WITH 10" CONTROL PANEL

A camera / monitor system with two, four, or eight cameras is also optionally available. The camera / monitor system with two cameras displays the camera images on the 7" control panel on the operator's platform. The camera / monitor systems with four and eight cameras come with an additional 10" control panel that

can display several camera images simultaneously via split screen. The heavy-duty camera / monitor systems provide the operator a clear view of important working areas, such as where the material is loaded onto trucks or the milled surface behind the scraper.

11



1 | 10" control panel with split screen to simultaneously display several camera images.

2 | Optional 5" control panel to display leveling information to ground crews.

3 | Various camera / monitor systems to provide a clear view of important areas.



3 |

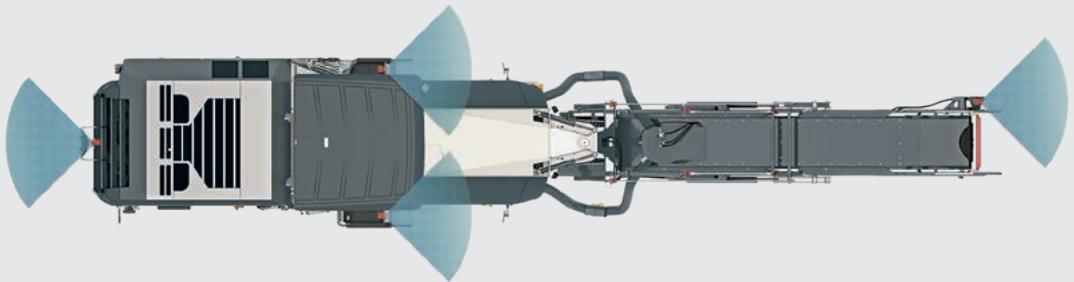
#### Two-camera system:

Camera for rear area / camera for loading situation



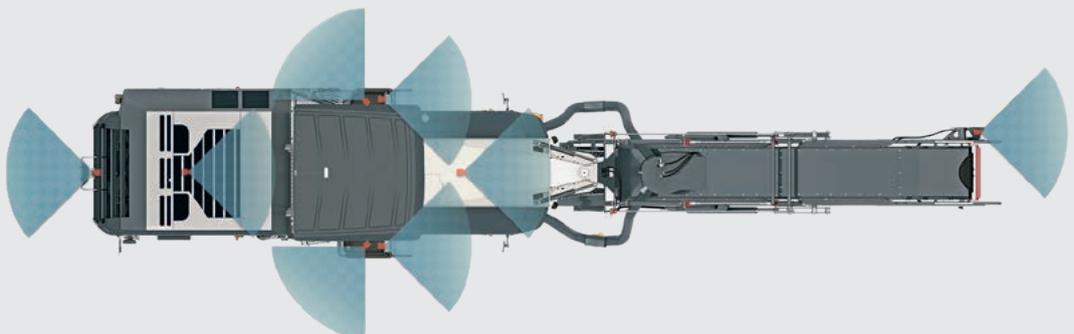
#### Four-camera system:

Two-camera system plus additional cameras on the right and left sides of the machine facing forwards



#### Eight-camera system:

Four-camera system plus additional cameras on the right and left sides of the machine facing the rear / camera for the scraper / camera in front of milling drum



# Quality High-Precision, Versatile Leveling with LEVEL PRO ACTIVE

## NEW, EASY-TO-USE LEVEL PRO ACTIVE OPERATING CONCEPT

The new **LEVEL PRO ACTIVE** leveling system especially developed for cold milling machines and featuring innovative control panels is intuitive and easy to operate. Fully integrated into the machine control system, it enables a high degree of automation because important machine functions are directly linked to each other, guaranteeing precise milling results. In addition, **LEVEL PRO ACTIVE** offers a simple and field-tested 3D system interface with the 3D kit.

## NUMEROUS ADDITIONAL AND AUTOMATIC FUNCTIONS

The **LEVEL PRO ACTIVE** leveling system offers many automatic and additional functions that make the operator's job easier. All of the connected sensors are displayed and can be selected on the control panel. This

also speeds up work processes. As a result, the entire machine can be lifted quickly and easily to drive over a manhole cover, for example.

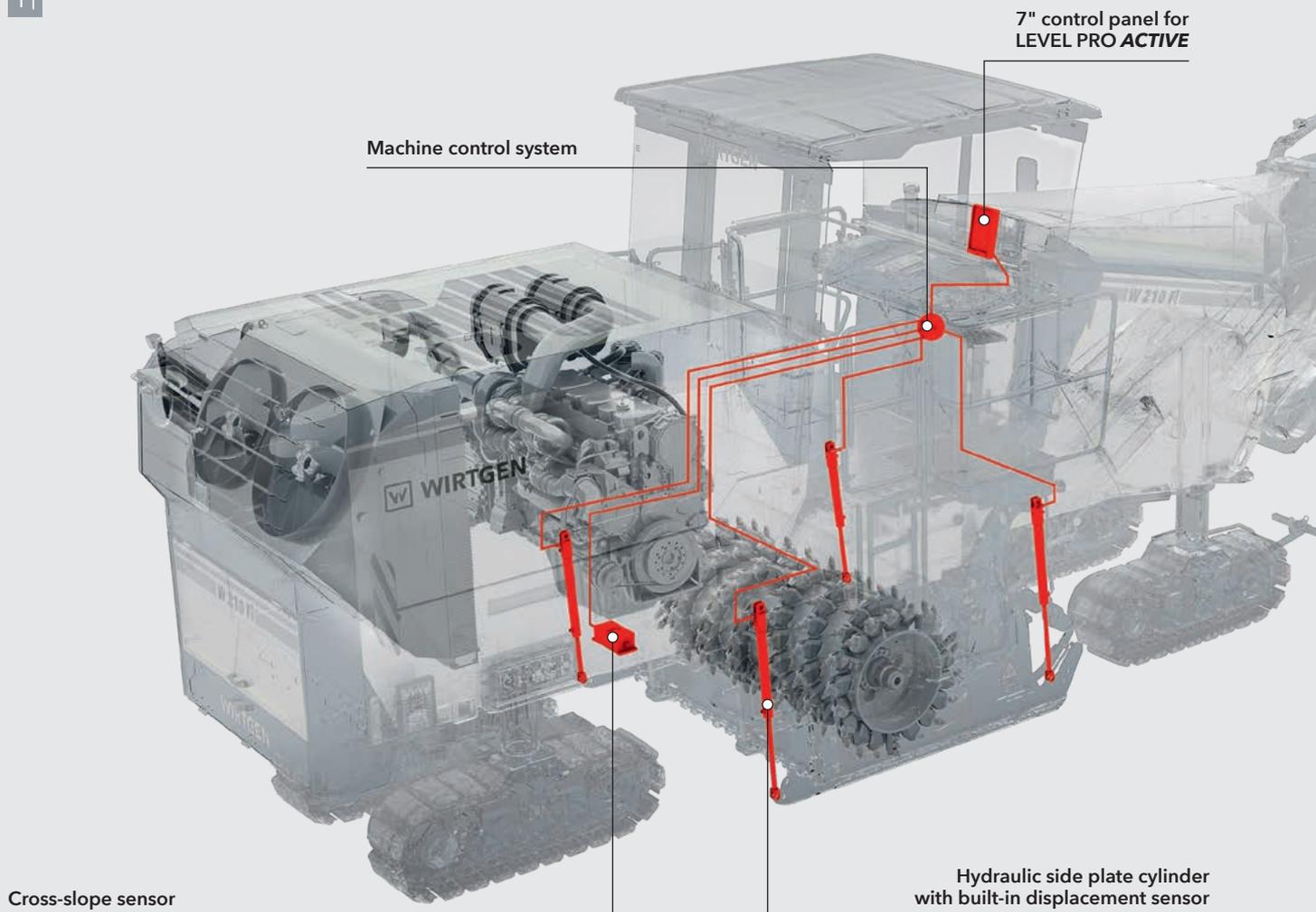
## OPTIMIZED 3D AND LASER LEVELING

The drastically simplified method of mounting laser sensors to the cold milling machine's weather canopy makes it easier to use 3D systems.

## LEVELING BOOM ON THE RIGHT OR LEVELING BOOM ON THE RIGHT AND LEFT WITH SONIC-SKI SENSOR

The new leveling booms with Sonic-Ski sensor make the contactless scanning of a wire or a reference surface on both sides at a distance of up to 1,900 mm from the milled edge possible. In this context, the boom can be adjusted hydraulically from the operator's platform by up to 840 mm to the outside using the Sonic-Ski sensor

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Machine control system

7" control panel for LEVEL PRO ACTIVE

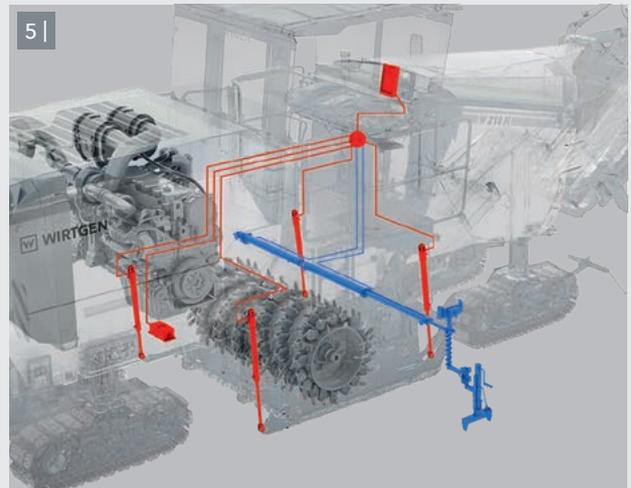
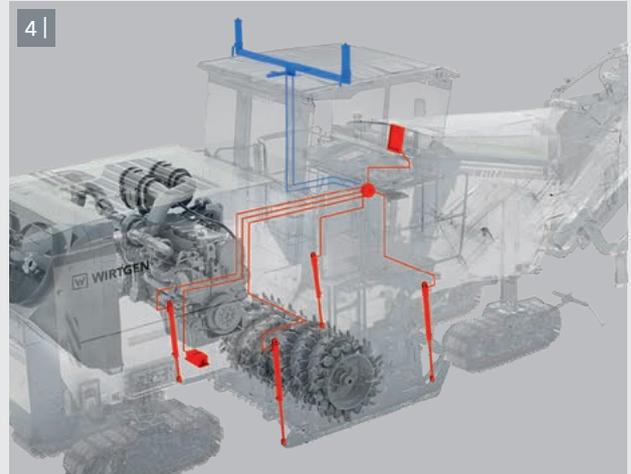
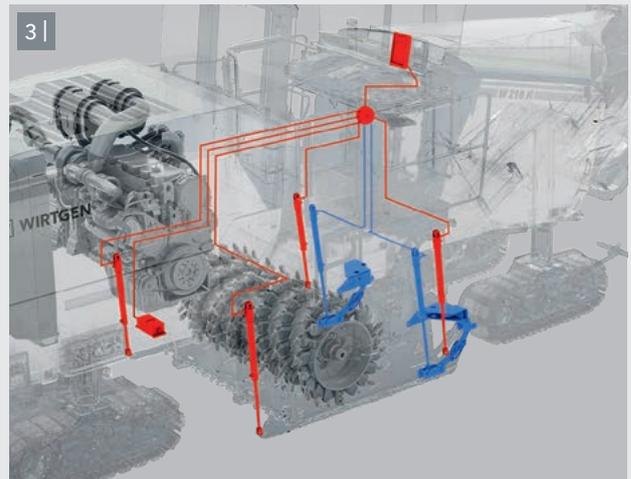
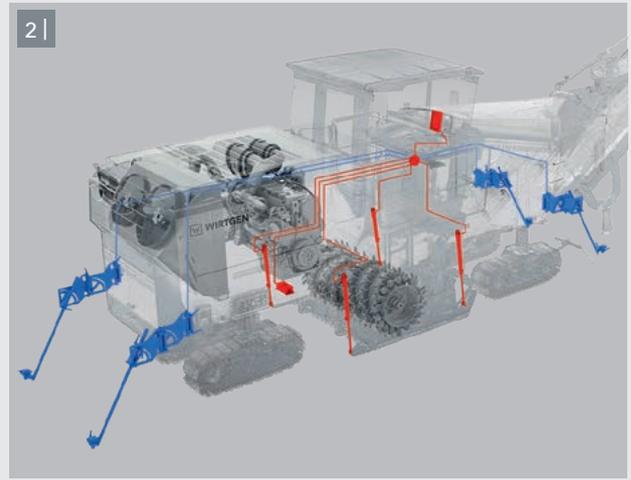
Cross-slope sensor

Hydraulic side plate cylinder with built-in displacement sensor

during milling operation; a mechanical adjustment offers an additional 880 mm of telescopic travel.

### OPTIMIZED MULTIPLEX SYSTEM

The multiplex system consists of two ultrasonic sensors attached to flexibly adjustable swing legs on each side of the machine. Benefits of the system include the large adjustment range for a wide variety of leveling applications and the low weight of the individual units. The swing legs can be easily folded together onto the machine for machine transport.



1 | W 210 F/  
W 210 Fi with  
standard leveling  
sensors.

2 | Multiplex system  
with up to four  
ultrasonic sensors.

3 | Scanning in front  
of the milling drum.

4 | 3D leveling /  
laser leveling.

5 | Telescoping  
leveling boom on  
the right or left.

# Quality Exceptional Reliability

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## GROUNDBREAKING DIAGNOSTIC CONCEPT

The new diagnostic concept guides the operator easily and intuitively through the troubleshooting process. Any potential malfunction is clearly indicated to the operator on the display, including a description of the fault. The operator can then locate the malfunction using optimized, easy-to-understand color graphics. Finally, detailed assistance in writing ensures that the operator can begin to correct the error.

## REDUNDANT MACHINE CONTROL

Three control computers built into the machine can be interchanged variably in order to ensure that the machine is always operational in the event that one of the three computers fails. In addition, the two 7"

control panels on the operator's platform and outside for ground crews can be interchanged variably while maintaining all of the machine's functions.

## DUAL CAN NETWORK

A backup CAN bus has been installed in critical areas that can be activated, if necessary. The main control elements are equipped with two-channel signal transmission, meaning that they can still be used if one signal fails. Information about a signal failure is also displayed to the operator.

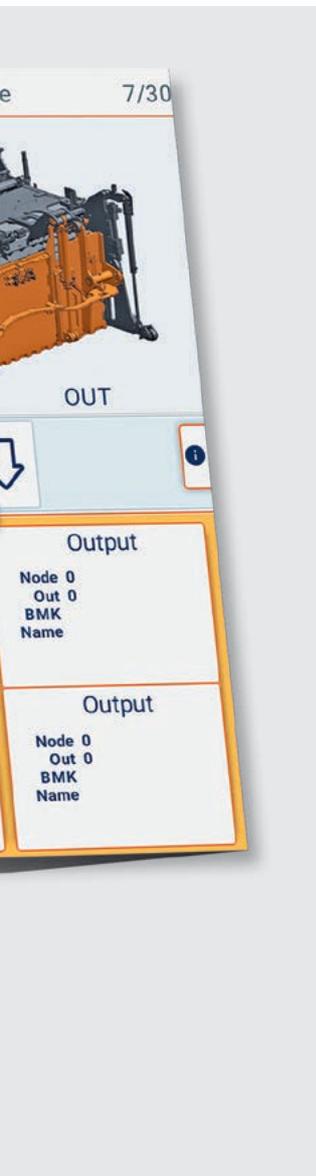
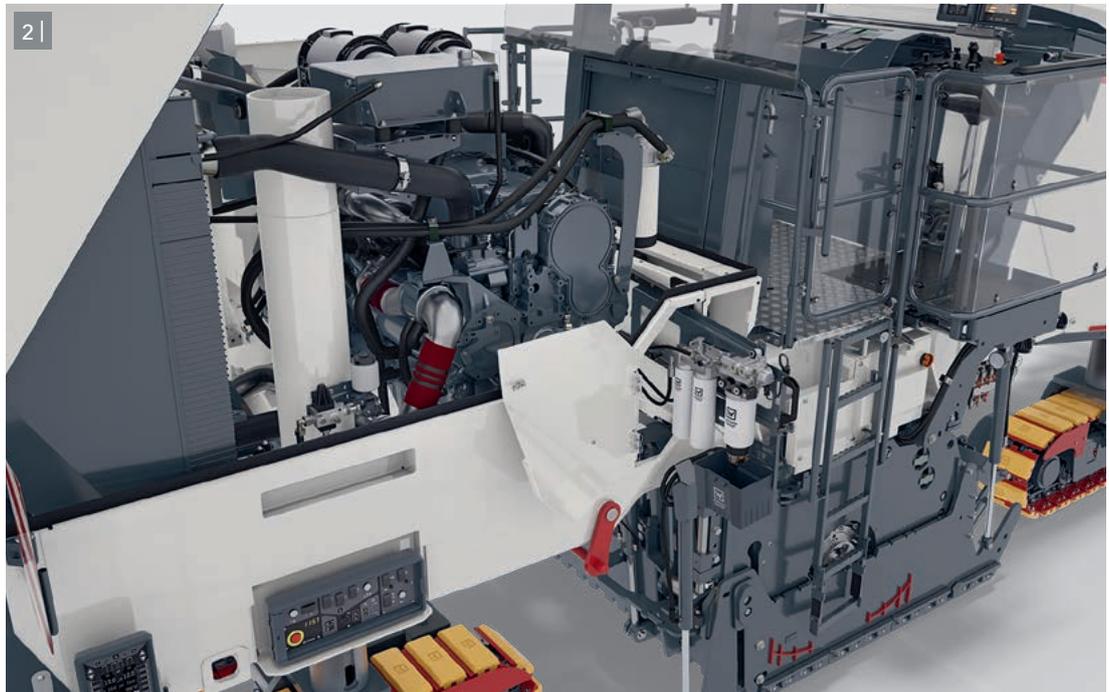
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1 | Images directly guide the operator from the error message through diagnostics while displaying the precise location.

2 | Easily accessible service points.

3 | Control panels can be protected quickly and securely.



#### RELIABLE VANDALISM PROTECTION

The innovative vandalism protection system protects the control panels against the use of force or theft. This means that the control panels on the left and right side of the operator's platform can simply be pushed into the main control panel and locked. The linearly arranged control panels on the operator's platform can be folded in and secured by means of a special mechanism above the centrally positioned control panel. All in all, this simple method of securing the control panels also makes it possible to quickly prepare the machine for transport.

#### TIME-SAVING SERVICE AND MAINTENANCE CONCEPT

Die W 210 F / W 210 Fi stands out thanks to significantly simplified access to the service points. As such, the air, hydraulic oil, and engine oil filters are all easily accessible from the operator's platform when the engine cover is open, for example. The diesel particulate filters are easily accessible from the ground for maintenance via a pull-out console. In addition, all relevant machine components are quickly and easily accessible.

# Milling

## One-Of-A-Kind Cutting Technology

### EASY MILLING DRUM CHANGES IN RECORD TIME

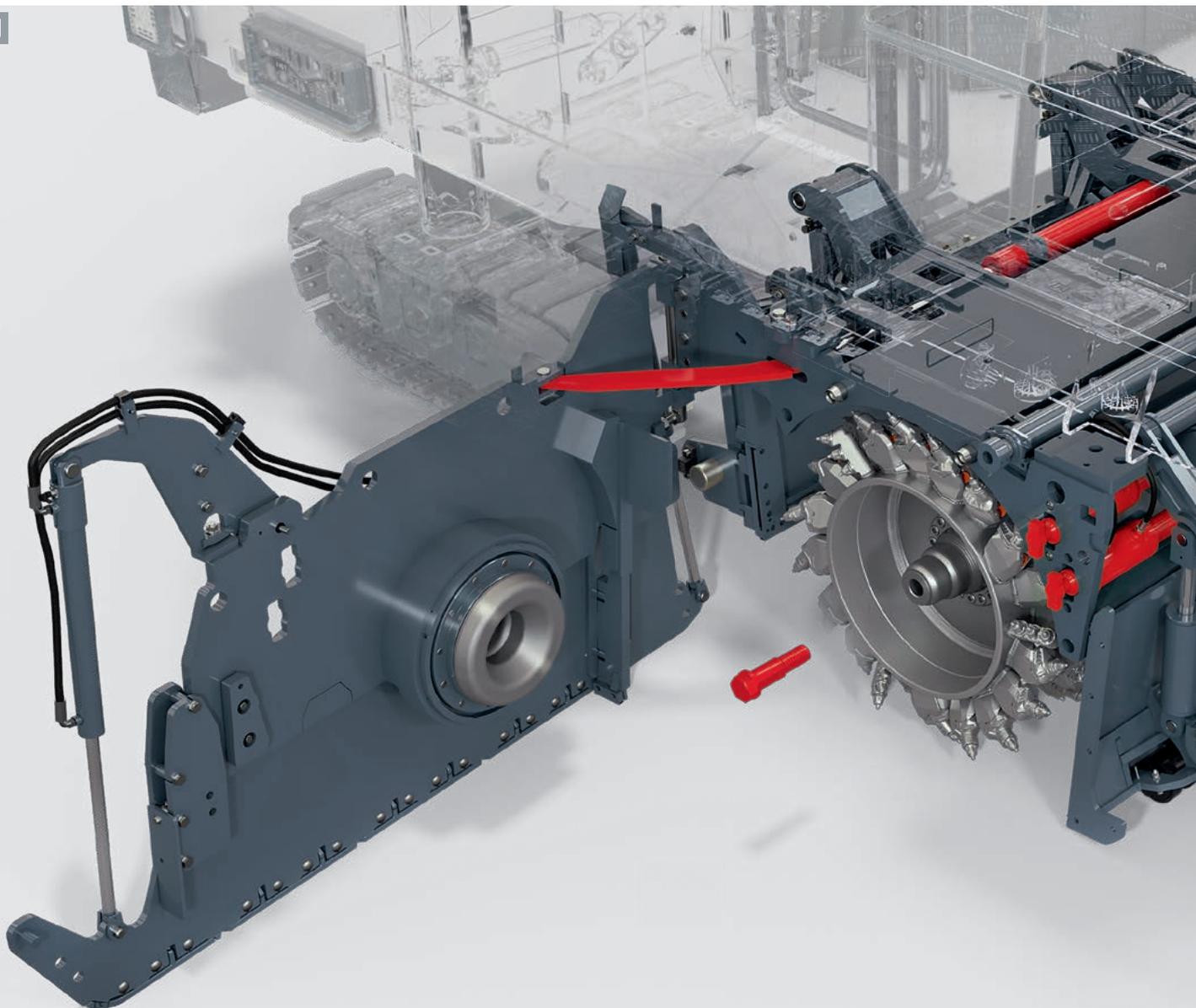
Milling drums can now be changed even faster thanks to the new generation of MCS milling drums. The milling drum rotation device can be used to release a single central screw at the push of a button. The only thing the operator has to do afterwards is simply pull out the milling drum. The MCS side panel can be opened quickly and effortlessly using the hydraulic cylinder drive.

1 | Milling drum changes are now even faster with the new MCS **BASIC** milling drum system.

2 | Large selection of different MCS milling drums available.

This simplified process has many advantages - rapidly changing milling drums with different tool spacings to meet specific application requirements increases machine productivity. Changing the milling drum at short notice and using the ideal drum for the job reduces wear costs. In addition, this system guarantees maximum flexibility for ever-changing requirements during day-to-day operations.

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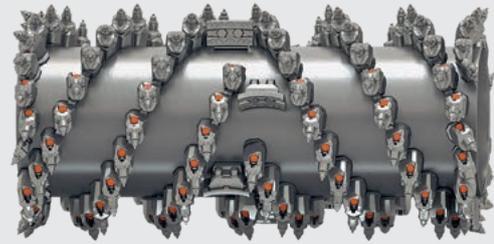


## SIMPLE MILLING DRUM ASSEMBLY CHANGES

The new quick-change milling drum assembly allows different milling widths of 2.0 m, 2.2 m, or 2.5 m to be selected. With the help of the simplified quick-change system, milling drum assemblies of different working widths can be changed in less than an hour. The significantly increased stroke of the machine height adjustment makes this job much easier. In addition, only one electrical plug connection, two hydraulic quick couplings, and one water hose need to be connected.



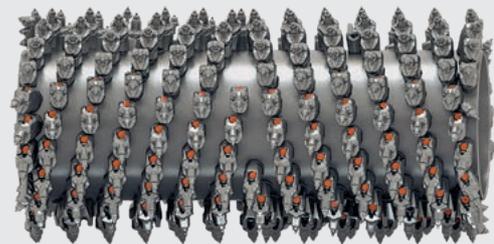
**ECO Cutter**  
 Milling width: 2,000 mm  
 Milling depth: 0 - 330 mm  
 Tool spacing: 25 mm



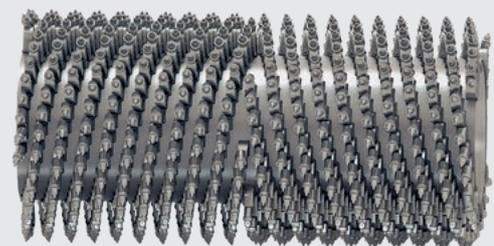
**Standard Milling Drum**  
 Milling width: 2,000 mm  
 Milling depth: 0 - 330 mm  
 Tool spacing: 18 mm



**Standard Milling Drum**  
 Milling width: 2,000 mm  
 Milling depth: 0 - 330 mm  
 Tool spacing: 15 mm



**Fine Milling Drum**  
 Milling width: 2,000 mm  
 Milling depth: 0 - 100 mm  
 Tool spacing: 8 mm



**Micro-Fine Milling Drum**  
 Milling width: 2,000 mm  
 Milling depth: 0 - 30 mm  
 Tool spacing: 6 x 2 mm

# Milling

## One-Of-A-Kind Cutting Technology

### OPTIMIZED PROTECTION AGAINST MILLING DRUM ASSEMBLY WEAR

Detachable wear segments mounted to the side plates can be rotated by 180° and can therefore be used on both sides to double the service life. Additional optional rollers attached to the side plates prevent scratches on the asphalt. In addition, the material depressor on rollers gently glides over the surface.

### EXTREMELY WEAR-RESISTANT HT22 QUICK-CHANGE TOOLHOLDER SYSTEM

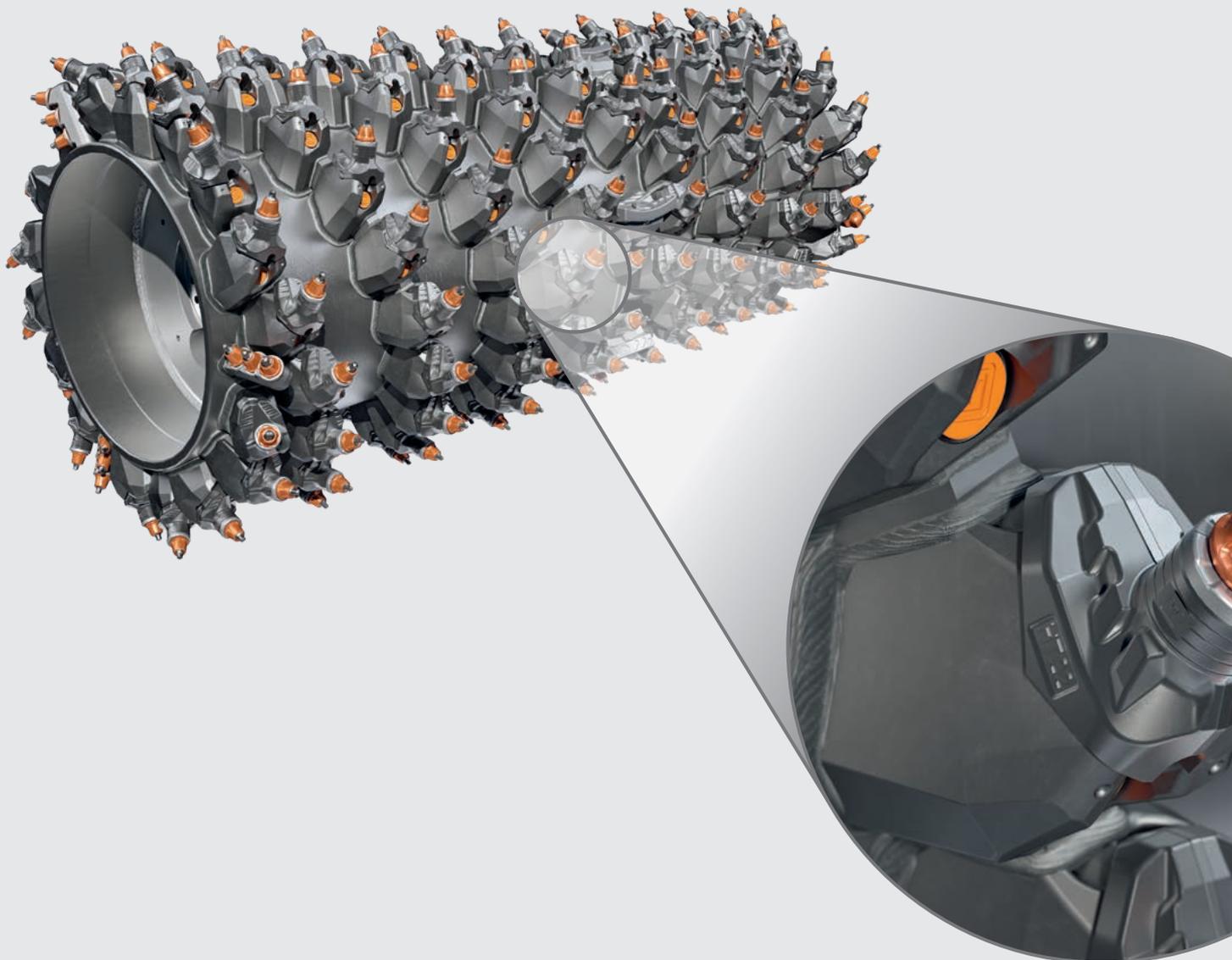
The milling drums of the W 210 F / W 210 Fi are equipped with the **HT22** quick-change toolholder sys-

tem, making them perfect for highly demanding milling tasks. In addition, the heavy-duty milling drum design enables the upper parts of the quick-change toolholders to be changed quickly on site, if required.

### NEW HT22 PLUS TOOLHOLDER UPPER PART WITH INCREASED SERVICE LIFE

The new **HT22 PLUS** quick-change toolholder upper part features innovative centering marks on the pick contact surface. In combination with the new X<sup>2</sup> generation of picks, this reduces toolholder wear by up to 25% and also optimizes the rotation behavior of the picks. The new upper part offers considerable benefits such

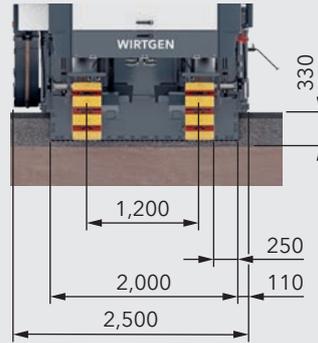
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as higher milled surface quality and longer intervals between changes.

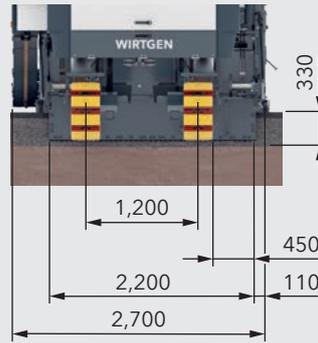
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W 210 F / W 210 Fi with 2.0 m Milling Drum Assembly



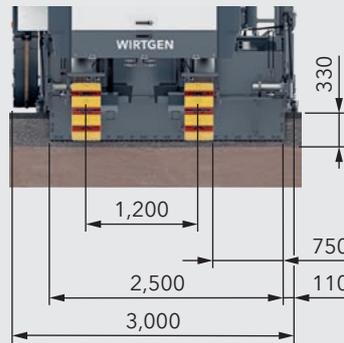
**Standard Milling Drum**  
 Milling width: 2,000 mm  
 Milling depth: 0 - 330 mm  
 Tool spacing: 15 mm

W 210 F / W 210 Fi with 2.2 m Milling Drum Assembly



**Standard Milling Drum**  
 Milling width: 2,200 mm  
 Milling depth: 0 - 330 mm  
 Tool spacing: 15 mm

W 210 F / W 210 Fi with 2.5 m Milling Drum Assembly



**Standard Milling Drum**  
 Milling width: 2,500 mm  
 Milling depth: 0 - 330 mm  
 Tool spacing: 15 mm

1 | Extremely wear-resistant HT22 quick-change toolholder system.

2 | 2.0 m, 2.2 m, and 2.5 m milling drum assemblies.

3 |



3 | The centering marks on the new toolholder together with the new round shaft pick optimizes the rotation behavior for reduced wear.

## Innovative MILL ASSIST

### MILL ASSIST AUTOMATIC MODE

In automatic mode, the innovative **MILL ASSIST** machine control system always selects the operating strategy with the best balance between performance and costs. In doing so, the process optimization automatically adjusts the speed of the diesel engine and milling drum, the travel drive, the water system, and the machine's advance speed. This significantly reduces the operator's workload while improving machine performance and considerably reducing diesel consumption, CO<sub>2</sub> emissions, and noise.

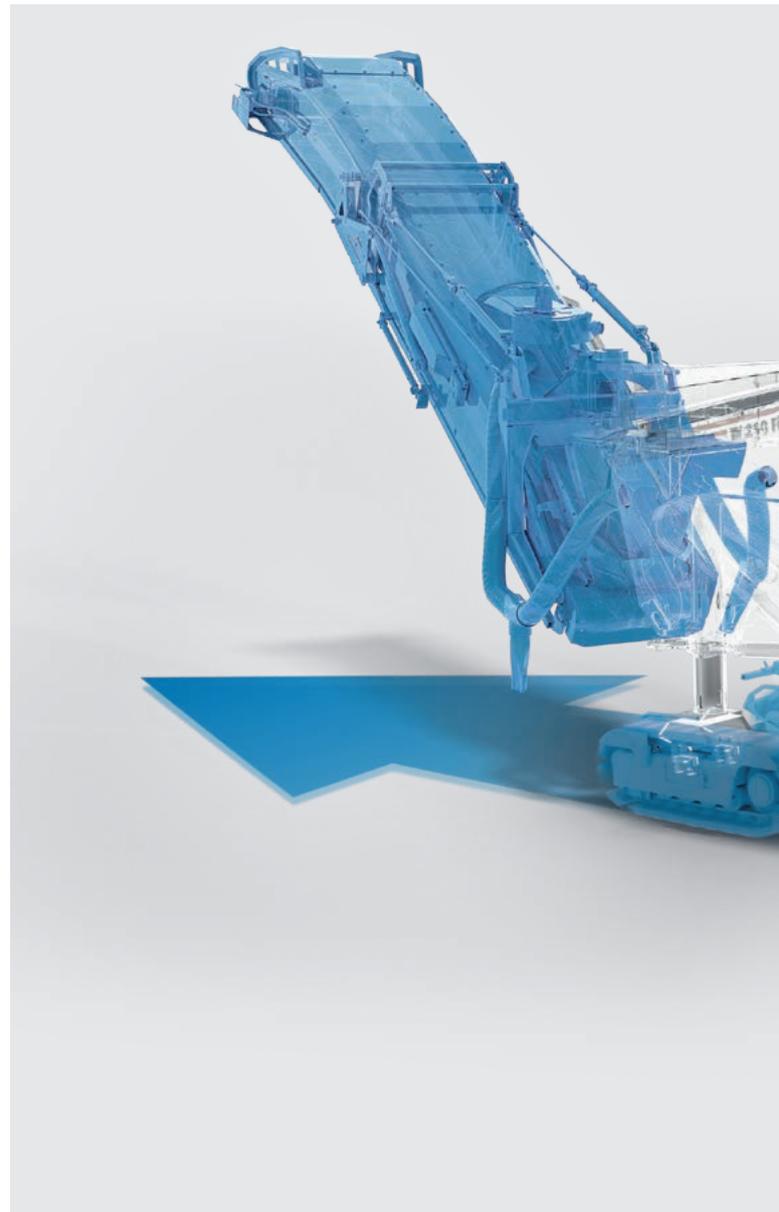
### NEW DUAL SHIFT POWERSHIFT TRANSMISSION

The new two-speed **DUAL SHIFT** selector gearbox controlled via **MILL ASSIST** can also be shifted under load. **DUAL SHIFT** offers an extremely wide range of milling

drum speeds and makes the machine perfect for a wide variety of cost-effective milling applications. Low milling drum speeds reduce diesel consumption. High milling drum speeds make it possible to achieve maximum milling speeds during fine milling, for example.

### ADDITIONAL PRE-SELECTION OF AN OPERATING STRATEGY IN AUTOMATIC MODE

The operator can also pre-select one of three operating strategies for the next application: "cost-optimized," "performance-optimized," or "milling pattern quality." The machine then automatically adjusts the main parameters based on the selected operating strategy.

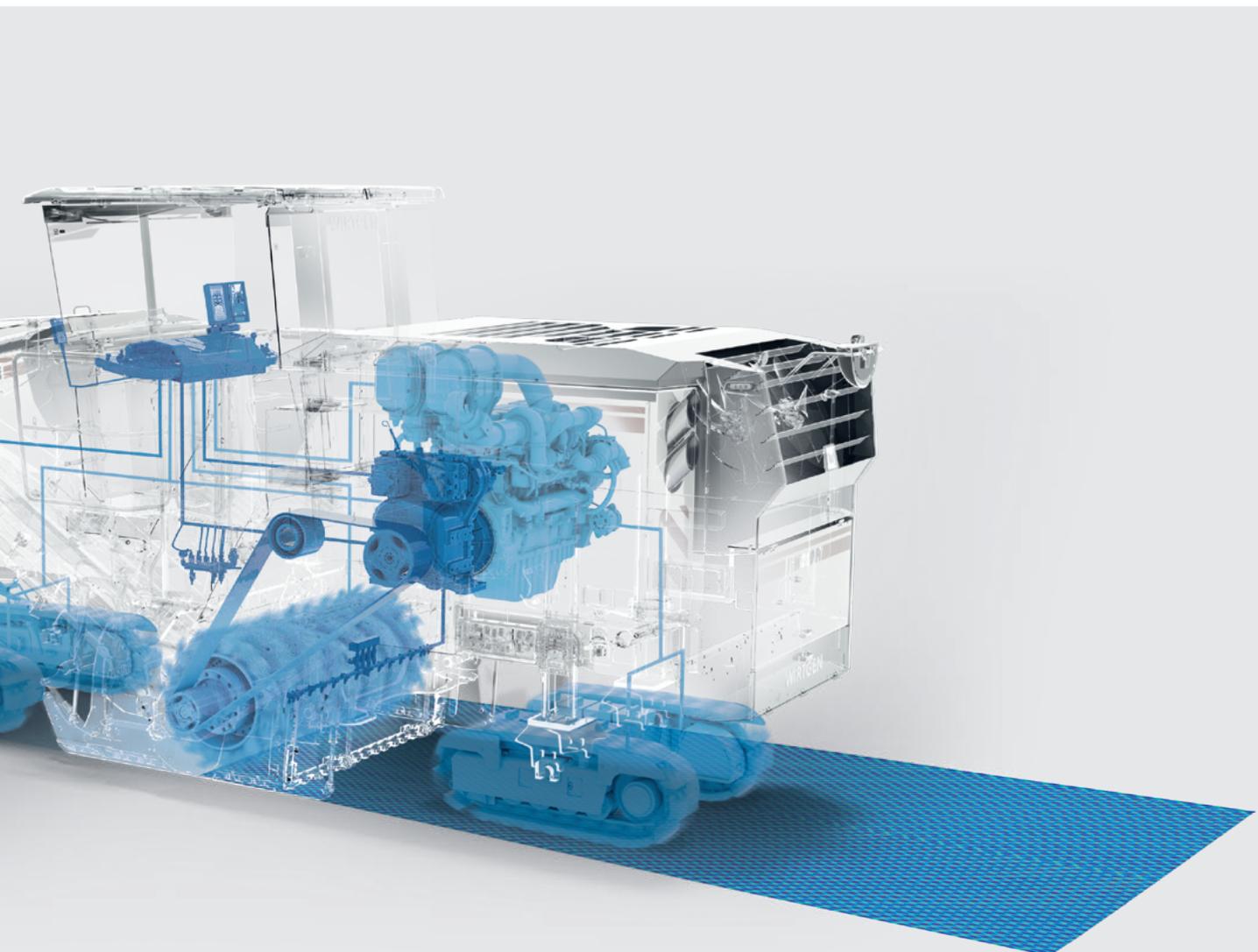


### **CLEAR PRE-SELECTION OF CONSTANT MILLING PATTERN QUALITY**

The operator can preset the required quality of the milled surface by simply pre-selecting from a scale ranging from 1 to 10. This then automatically sets the milling drum speed and the milling speed, taking the milling drum type into account.

### **INNOVATIVE EFFICIENCY INDICATOR**

The machine operator can constantly monitor the machine's status via an efficiency indicator. Changes to the milling parameters that could potentially improve efficiency are also displayed on the control panel.



# Performance

## Maximum Milling Performance

### POWERFUL DIESEL ENGINE

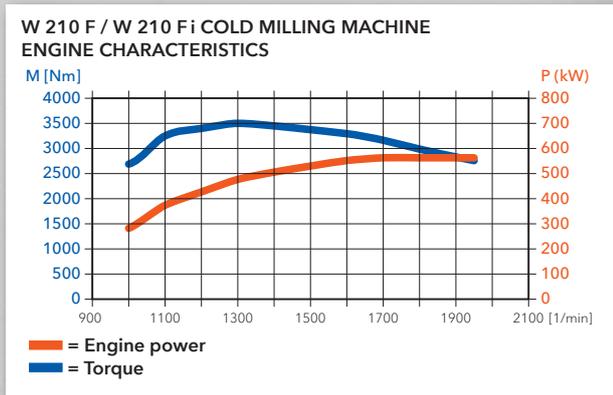
Engine output has been increased by around 5% compared to its predecessor, the W 210i, in combination with significantly increased maximum torque, making the machine even more powerful and versatile in operation.

### INCREASED BALLASTING FLEXIBILITY

The additional weights weighing 1,600 kg can be quickly and easily installed or removed from the rear of the machine in two increments. This allows the desired machine transport weight to be adjusted even more precisely.

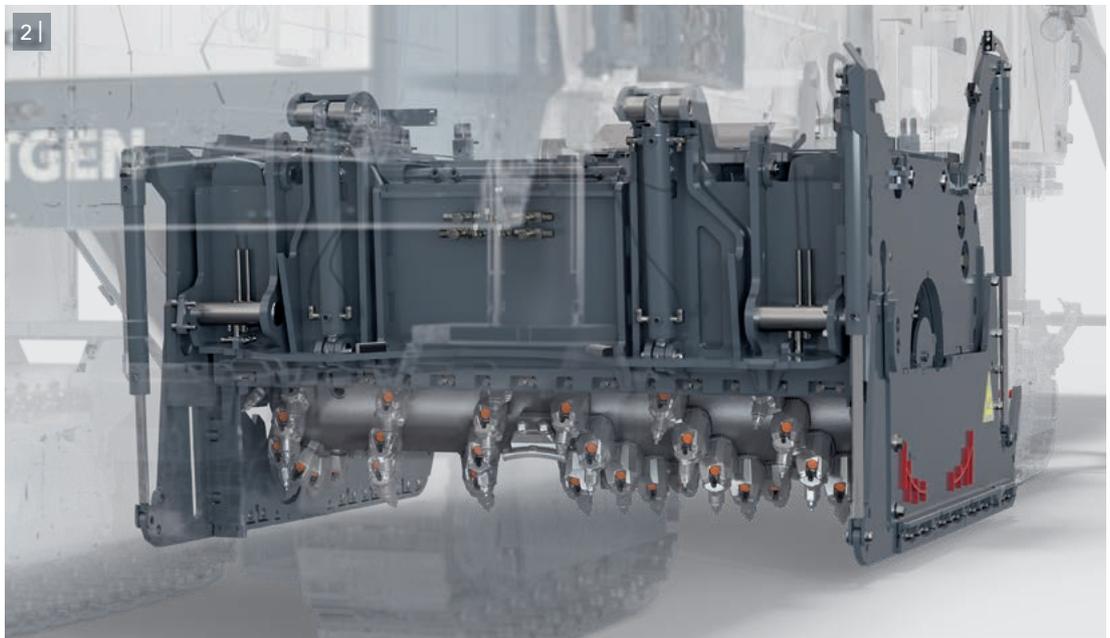
### LARGE SCRAPER LIFT

The increased scraper lift makes greater milling depths possible and thus expands the machine's range of applications when milling without material loading. At the same time, reduced material accumulation minimizes wear on the milling drum housing and the milling drum. Different scraper contact pressure levels can also be selected quickly and conveniently at the touch of a button via the 7" control panel, depending on the requirements and application.



1 | The discharge conveyor has a large swing range.

2 | Increased scraper lift for a wider range of milling applications and reduced wear.



#### FLEXIBLE AND POWERFUL LOADING OF MILLED MATERIAL

Extremely wide conveyor swing angles of 65° to both sides make it possible to load material even in difficult situations, e.g. in intersections or turning areas. Two swing speeds make it possible to precisely move to the desired angular position. The conveyor speed of the discharge conveyor can be adjusted to the respective job site and loading situation at the touch of a button. Furthermore, the hydraulically folding discharge conveyor guarantees quick folding on the job site and easy transport.

#### “BOOSTER” FUNCTION FOR INCREASED DISCHARGE PARABOLA

Pressing the “Booster” button on one of the two main control panels temporarily increases the belt speed by 20% and the loading capacity of the discharge conveyor by 20% in order to temporarily transport milled material particularly high or far onto a truck bed.

## Performance

# WPT - The Informative WIRTGEN PERFORMANCE TRACKER

### FIELD-TESTED WITOS FLEETVIEW TELEMATICS SYSTEM WITH WPT AS OPTIONAL ADDITIONAL EQUIPMENT

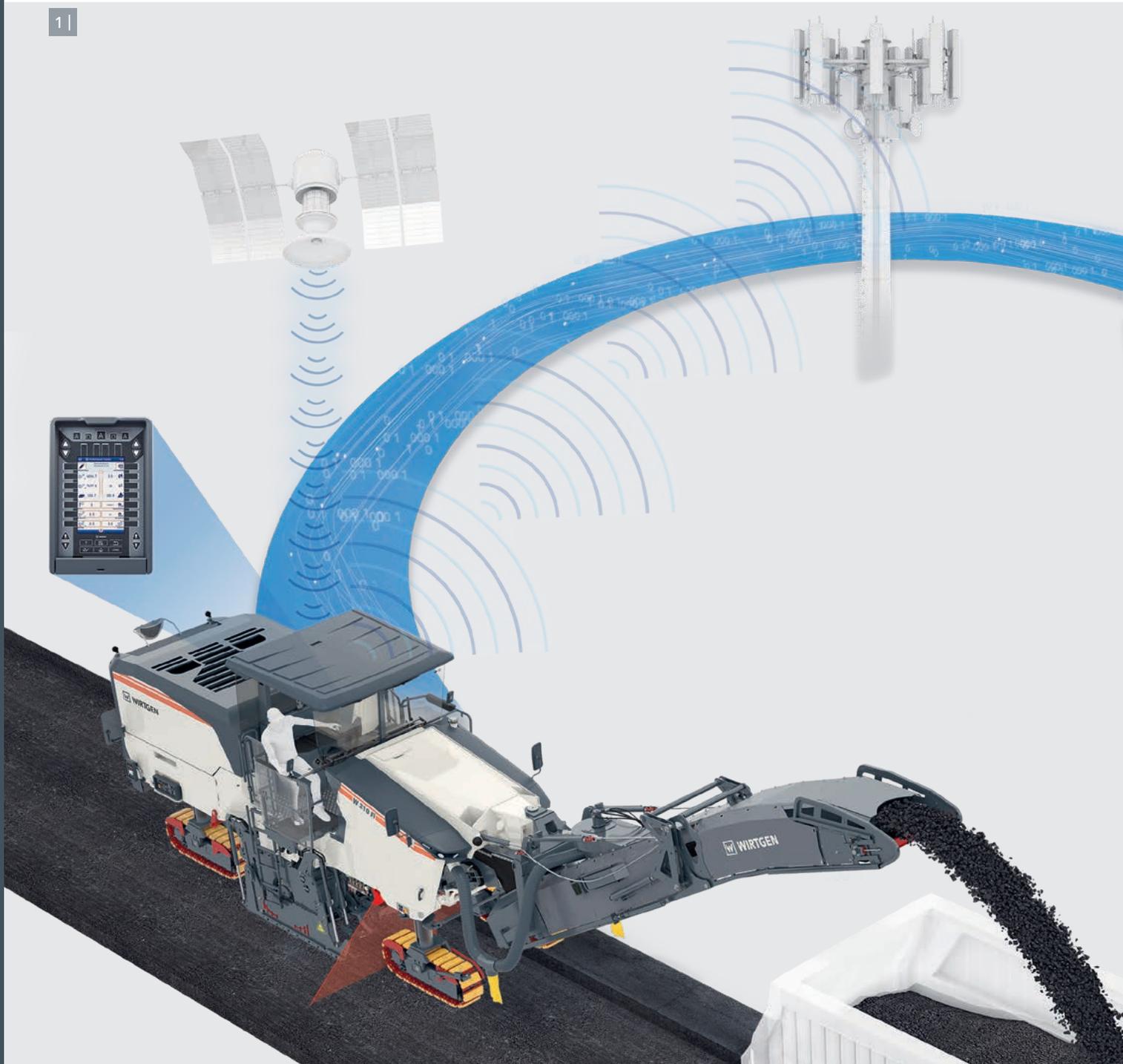
The WITOS FleetView telematics system consists of the control unit (TCU) with a GPS receiver and a license to use the WITOS FleetView web application. The web interface provides a compact overview of the machine's status with consumption data, operating hours, position data, error messages, and service intervals. When additionally equipped with the **WPT**, the machine's actual milling performance and consumption and position

data are tracked in an easy-to-read, automatically generated report.

### TRANSPARENT MILLING PERFORMANCE DOCUMENTATION

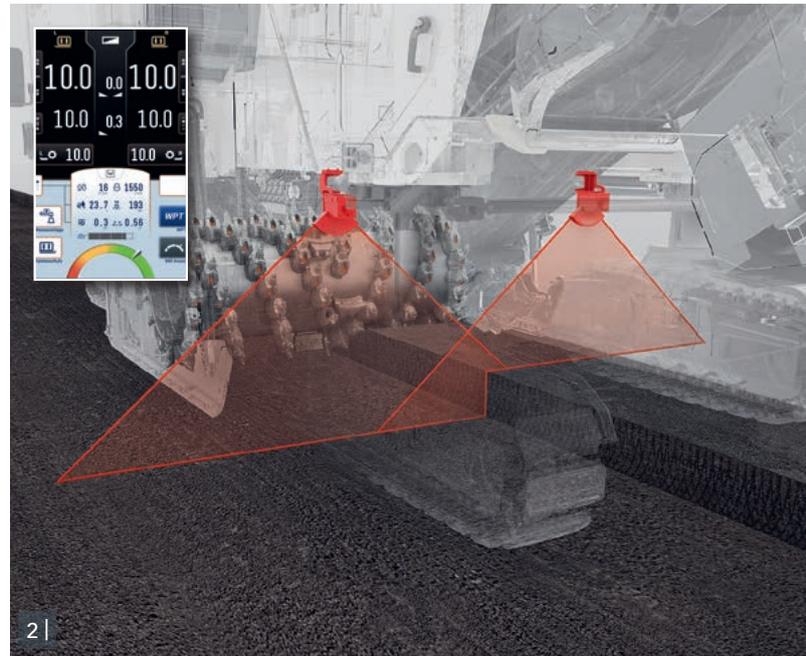
Milling cross-sections measured by a laser scanner are converted for the purpose of calculating the milling volume. The current milling volume and truck tonnage are constantly displayed to the operator on the 7" control panel during the milling process.

11



## AUTOMATICALLY GENERATED SITE SURVEY REPORTS

Milling performance data is continuously transmitted to a data server via a cellular connection. After completing a milling job, a site survey report is automatically generated in both Excel and PDF formats and sent by e-mail to the machine operator's job management office, for example. The site survey report contains precise information on the milling volume, milled area, and milling depth with the corresponding GPS position. Consumables such as diesel, water, and picks are also listed. The



report also includes valuable information such as the number of loaded trucks, if confirmed by the machine operator.

## JOB SITE TRACKING VIA SATELLITE MAP DISPLAY

The site survey reports contain easy-to-read satellite map images detailing the completed milling work. In this context, the milled areas are shown in different colors based on the various milling depth classes.

## DIRECT DISPLAY OF THE ACTUAL MILLING WIDTH

The actual, currently active milling width is directly displayed on the control panel. Thanks to this information, the operator can divide up the milling width without having to mark the road surface beforehand.

1 | *The operator is always aware of the current machine and application parameters - at the end of the workday, the data is transmitted to the machine owner.*

2 | *The actual, currently active milling width is scanned by a laser scanner and clearly displayed on the control panel.*



Cost-Effectiveness

# Reduced Diesel Consumption

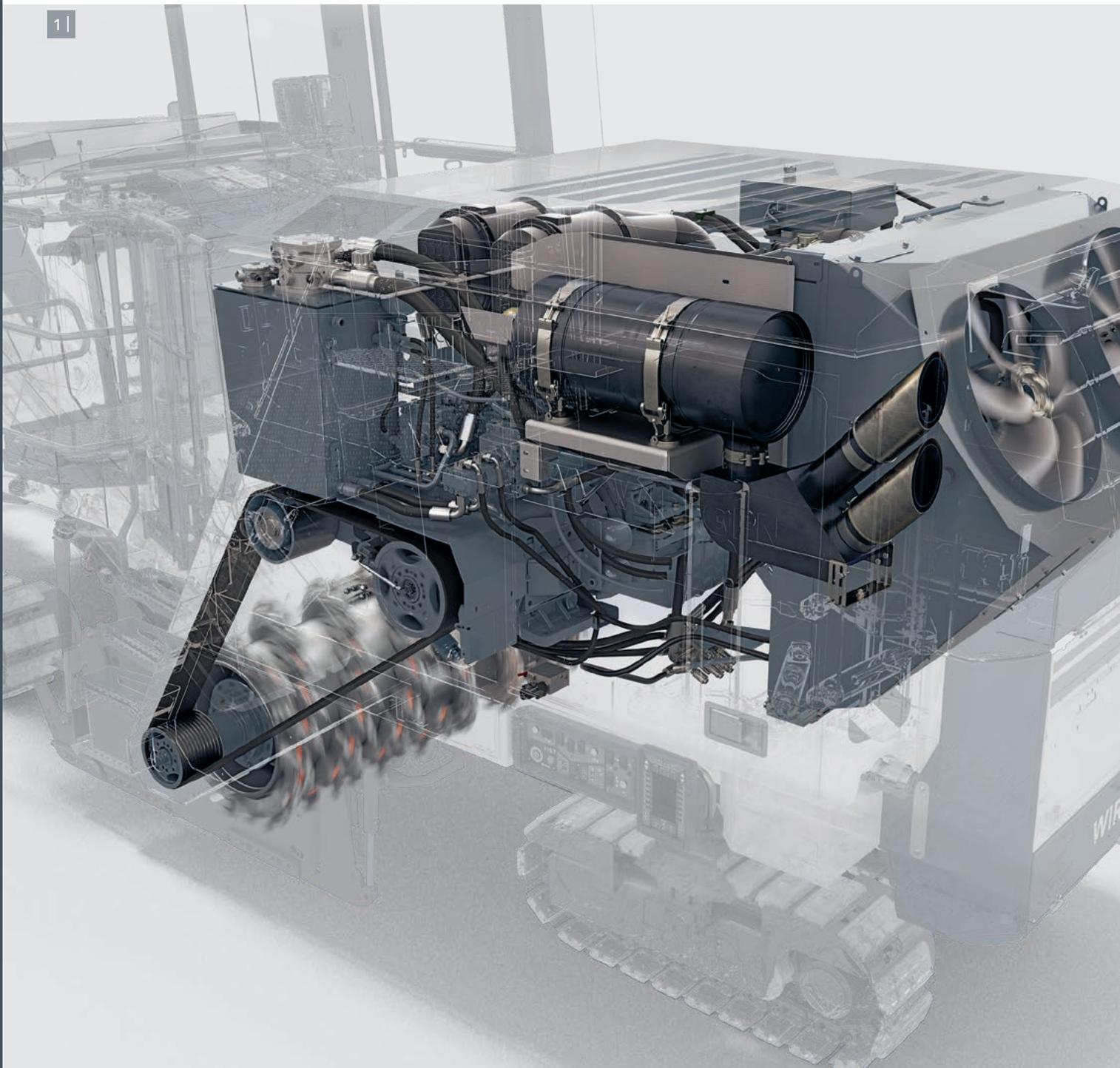
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29

## TWO-SPEED POWERSHIFT TRANSMISSION FOR A WIDE RANGE OF USABLE MILLING DRUM SPEEDS

The new two-speed **DUAL SHIFT** powershift transmission makes it possible to operate the machine at efficient engine speeds while maintaining powerful milling drum speeds. **DUAL SHIFT** offers the unbeatable advantages of low diesel consumption, reduced noise emissions, and unmatched milling performance.

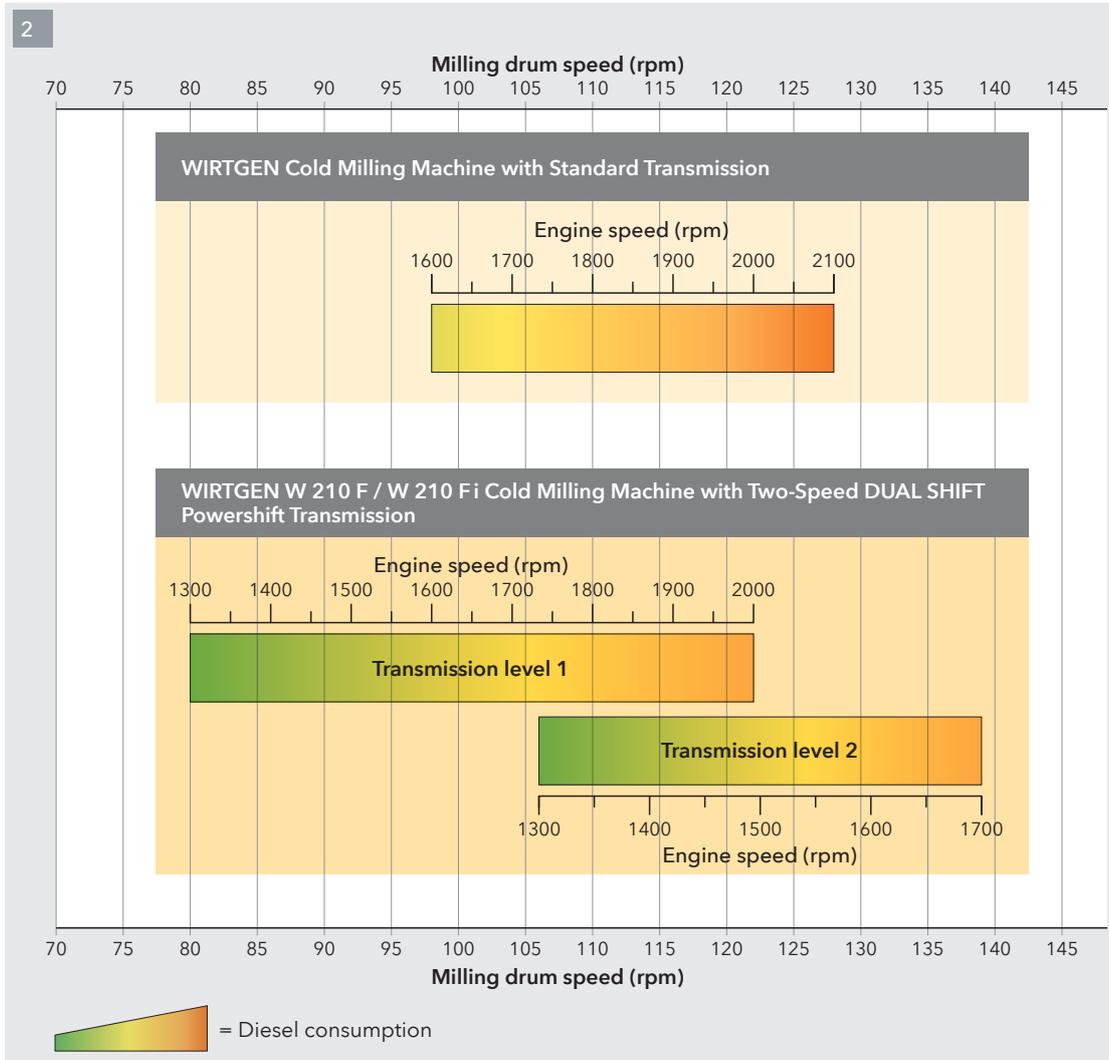
## DIESEL ENGINE WITH AUTOMATIC STOP FEATURE

The diesel engine is automatically switched off in idle mode after an appropriate cooling time. The engine shut-off time is displayed on the control panels during the cooling phase.



1 | Compact engine drive station, in this image of the W 210 Fi with EU Stage 5 / US EPA Tier 4f exhaust emission standard.

2 | Significantly expanded range of milling drum speeds for reduced diesel consumption and pick wear.



### MAXIMUM PERFORMANCE IN THE LOW SPEED RANGE

The built-in **MILL ASSIST** machine control system ensures that the diesel engine of the W 210 F / W 210 Fi primarily runs at lower speeds while simultaneously delivering high performance and low diesel consumption.

### MILLING DRUM WITH AUTOMATIC START-STOP FEATURE

The start-stop feature temporarily switches off the milling drum after a few seconds when the milling operation has stopped, like when waiting for a truck, which further reduces diesel consumption. The milling drum is then automatically switched on again when milling is resumed.

### INTELLIGENT DUAL FAN CONCEPT

Two separate speed-controlled and intelligently positioned fans cool the diesel engine and hydraulic system as required. As a result, the cooling system also helps efficiently reduce diesel consumption.

# Cost-Effectiveness

# Environmentally Friendly

# Machine Technology

Minimizing exhaust fumes, noise, and dust on road construction sites while maintaining maximum performance and productivity is more important than ever. Innovative WIRTGEN technologies play an extremely active role in protecting the environment and conserving natural resources.

Speed ranges that optimize consumption during milling operation, engine speeds that adapt to the advance rate, and engine temperature-controlled fan speeds all help protect the environment and conserve resources. In addition, the milled material is a valuable recyclable construction material and is completely reused in the production of asphalt mixes.

## EXTREMELY POWERFUL AND ECONOMICAL DIESEL ENGINE

The W 210 F / W 210 Fi is equipped with a state-of-the-art, fuel-efficient diesel engine that offers maximum engine power with exceptionally high torque. In this context, the engine technology in the W 210 Fi meets the strict requirements of the highest EU Stage 5 / US EPA Tier 4f emissions standard for minimal exhaust emissions.

## REDUCED NOISE EMISSIONS DURING RELOCATION

The cold milling machine has a travel speed of up to 100 m / min. At the same time, only low engine speeds are required - with reduced diesel consumption and lower noise emissions.





#### **OPTIMIZED VCS EXTRACTION SYSTEM**

VCS improves air quality and visibility in the machine operator's and ground crew's working area. In addition, the optimized design of the more easily accessible VCS suction channel reduces the amount of cleaning required.

#### **START-STOP ENGINE FUNCTION VIA EXTERNAL CONTROL PANEL**

The diesel engine can also be switched on and off effortlessly by ground crews via the external control panel, which makes it possible to further reduce diesel consumption and noise emissions.

#### **EFFICIENT WATER MANAGEMENT**

Four separate water spray bar segments that can be activated electrically from the operator's platform allow the optimum amount of water to be added to the milling process, such as when milling only half the width of a lane. Automatic activation and deactivation of the water system as well as water injection on the basis of milling performance considerably reduce water consumption.

# Technical Specifications

## W 210 F | W 210 Fi

	W 210 F	W 210 Fi
<b>Milling Drum</b>		
Standard milling width	2,000 mm	
Optional milling width 1	2,200 mm	
Optional milling width 2	2,500 mm	
Milling depth *1	0 - 330 mm	
Cutting diameter	1,020 mm	
<b>Engine</b>		
Manufacturer	Caterpillar	Caterpillar
Type	C18 ATAAC	C18 ATAAC
Cooling	Water	Water
Number of cylinders	6	6
Rated power	at 2,100 rpm: 571 kW / 766 hp / 777 PS	at 1,950 rpm: 563 kW / 755 hp / 766 PS
Maximum power	at 1,800 rpm: 571 kW / 766 hp / 777 PS	at 1,700 rpm: 563 kW / 755 hp / 766 PS
Displacement	18.1 l	18.1 l
Fuel consumption at rated power   during a mixture of job site operations	142 l / h   57 l / h	147 l / h   59 l / h
Sound power level in accordance with EN 500-2, engine   operator's platform	≤ 113 dB(A)   ≥ 81 dB(A)	≤ 112 dB(A)   ≥ 80 dB(A)
Emissions standards	EU not rated / US EPA Tier 2	EU Stage 5 / US EPA Tier 4f
<b>Electrical System</b>		
Power supply	24 V	
<b>Tank Capacities</b>		
Fuel	1,200 l	
Hydraulic oil	100 l	
Water	3,270 l	
<b>Driving Performance</b>		
Max. travel and milling speed	0 - 100 m / min (6 km / h)	
<b>Track Units</b>		
Crawler units front / back (L x W x H)	1,730 x 300 x 610 mm	
<b>Loading of Milled Material</b>		
Belt width of primary conveyor	850 mm	
Belt width of discharge conveyor	850 mm	
Theoretical capacity of discharge conveyor	375 m <sup>3</sup> /h	

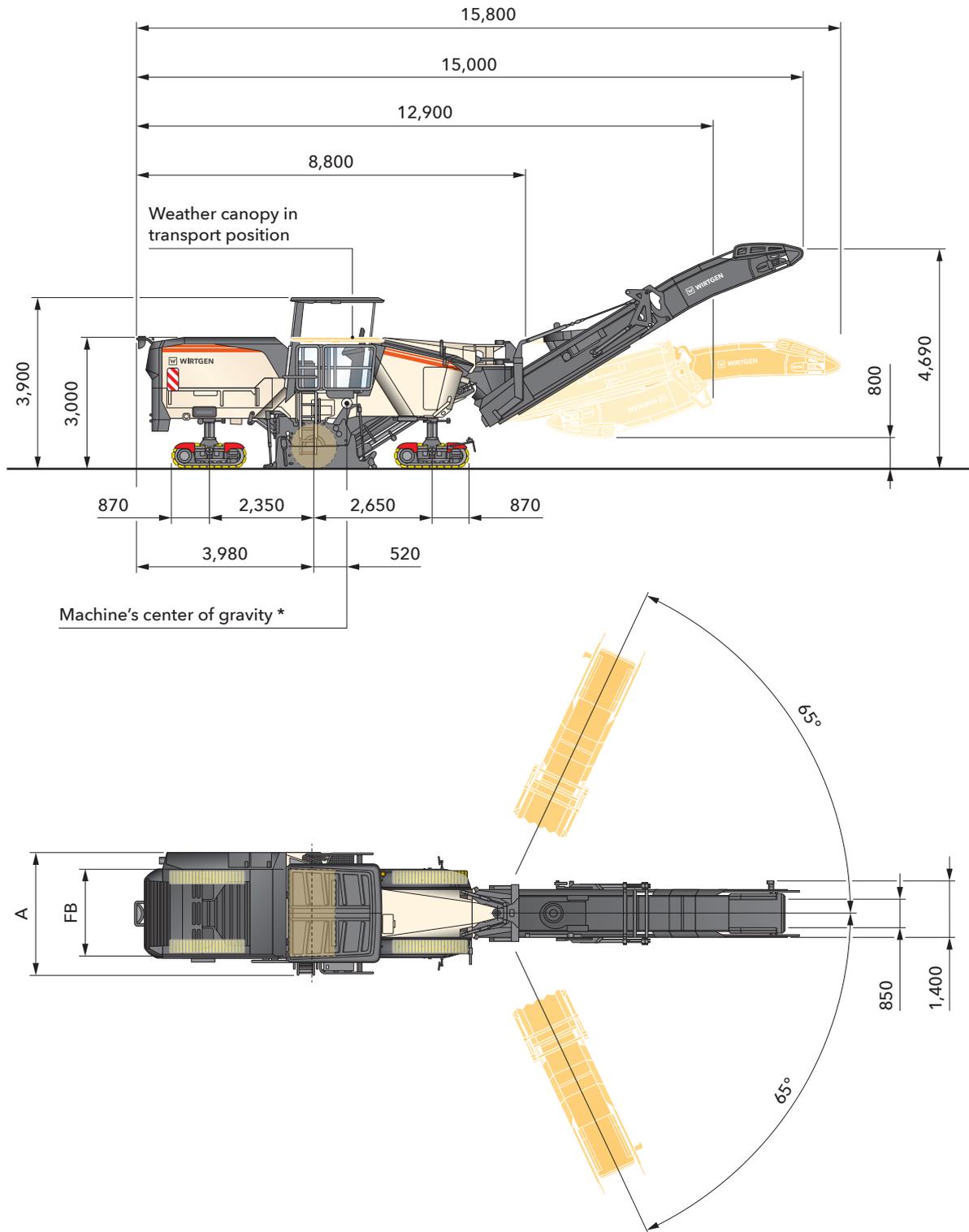
\*1 = The maximum milling depth may deviate from the value indicated due to tolerances and wear.

	W 210 F	W 210 Fi
<b>Basic Machine Weight</b>		
Net weight of machine without fluids		27,000 kg
Operating weight, CE *2		29,300 kg
Maximum operating weight (full tanks, full range of equipment) in FB2500		36,500 kg
<b>Weight of tank contents</b>		
Water		3,270 kg
Fuel (0.83 kg / l)		1,000 kg
<b>Additional Weight</b>		
<b>Operator and Tools</b>		
Machine operator		75 kg
5 pick containers		125 kg
Vehicle tool kit		30 kg
<b>Optional Milling Drum Units Instead of Standard</b>		
Quick-change milling drum unit FB2200		220 kg
Quick-change milling drum assembly FB2000 <b>MCS BASIC</b>		670 kg
Quick-change milling drum assembly FB2200 <b>MCS BASIC</b>		920 kg
Quick-change milling drum assembly FB2500 <b>MCS BASIC</b>		1,240 kg
<b>Optional Milling Drums Instead of Standard</b>		
Milling drum FB2000 <b>HT22</b> LA18 with 146 picks		-70 kg
Milling drum FB2200 <b>HT22</b> LA15 with 176 picks		150 kg
Milling drum FB2200 <b>HT22</b> LA18 with 155 picks		20 kg
<b>Optional MCS Milling Drums Instead of Standard</b>		
Milling drum <b>MCS BASIC</b> FB2000 <b>HT22</b> LA15 with 162 picks		250 kg
Milling drum <b>MCS BASIC</b> FB2000 <b>HT22</b> LA18 with 146 picks		225 kg
Milling drum <b>MCS BASIC</b> FB2000 <b>HT22</b> LA15 with 18 standard picks and 144 PCD cutting tools		330 kg
Milling drum <b>MCS BASIC</b> FB2200 <b>HT22</b> LA15 with 176 picks		470 kg
Milling drum <b>MCS BASIC</b> FB2200 <b>HT22</b> LA18 with 155 picks		340 kg
Milling drum <b>MCS BASIC</b> FB2200 <b>HT22</b> LA15 with 18 standard picks and 158 PCD cutting tools		550 kg
Milling drum <b>MCS BASIC</b> FB2500 <b>HT22</b> LA18 with 171 picks		570 kg
Milling drum <b>MCS BASIC</b> FB2500 <b>HT22</b> LA18 with 18 standard picks and 153 PCD cutting tools		645 kg
<b>Optional Additional Equipment</b>		
Operator's platform with simple standing seat and large storage compartment		80 kg
Operator's platform with simple standing seat, large storage compartment, and weather canopy		600 kg
Operator's platform with high-quality comfort cabin		850 kg
Two additional weights with a total weight of 1,600 kg (3,307 lbs)		1,600 kg
Large storage compartment at the rear of the machine for 69 pick containers		150 kg
Extension of <b>MCS BASIC</b> with one hydraulically opening side panel		140 kg
VCS extraction system		140 kg
Extension of <b>LEVEL PRO ACTIVE</b> with levelling booms and one Sonic Ski sensor		75 kg
Extension of <b>LEVEL PRO ACTIVE</b> with one hydraulic sensor mounted on the right		65 kg
Extension of <b>LEVEL PRO ACTIVE</b> with one hydraulic sensor mounted on the right and left		110 kg

\*2 = Machine weight, half-full tanks, vehicle tool kits, machine operator, excluding optional equipment

# Dimensions

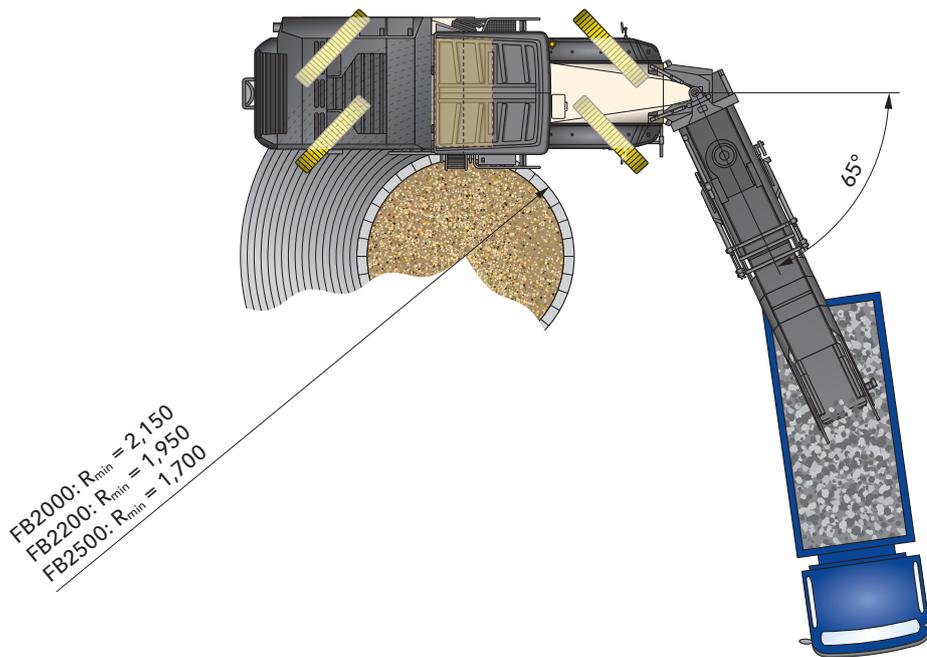
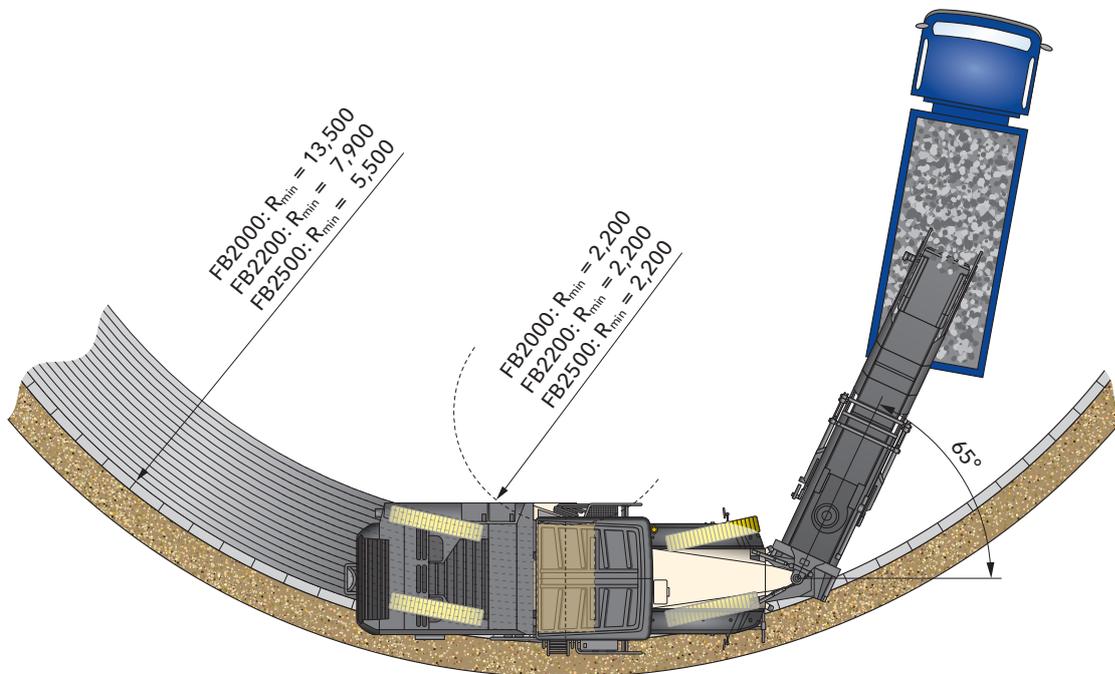
W 210 F | W 210 Fi



FB	A
2,000	2,500
2,200	2,700
2,500	3,000

Dimensions in mm

\* Based on operating weight, CE with conveyor folded out



Milling radius at milling depth of 150 mm, dimensions in mm

# Standard Equipment

W 210 F | W 210 Fi

36  
37

Basic Machine	
Base machine with engine	■
Machine frame featuring a single wasp waist at the rear right and a dual wasp waist at the front	■
<b>DUAL SHIFT</b> two-speed powershift transmission for efficient engine speeds combined with powerful milling drum speeds	■
Automatic pressure adjustment of the hydraulic pump for cylinder functions in accordance with performance requirements for reduced diesel consumption	■
Hydraulically opening, soundproof engine cover	■
Air compressor system	■
Battery-operated hydraulic unit for auxiliary drive	■
Two cooling fans to minimize power consumption of the cooling system	■
Milling Drum Unit	
Adjustment of material depressor contact pressure via the control panel or automatically via the <b>MILL ASSIST</b> feature to reduce chunk formation	■
Electrical adjustment of scraper contact pressure via the control panel	■
Automatically controlled locking feature of scraper	■
Milling drum rotation device with electro-hydraulic milling drum drive for slowly turning the milling drum during pick replacement	■
Single-piece water spray bar in the milling drum unit for reliable pick cooling and to prevent dust development	■
Automatic control of the water quantity via the <b>MILL ASSIST</b> feature	■
Height adjustment stroke increased by 150 mm to facilitate pick replacement and the exchange of milling drum units	■
Pre-fitting to allow the quick exchange of milling drum units	■
Hydraulically lifting side plates, clearance right 450 mm, clearance left 330 mm	■
Quick-change milling drum unit FB2000	□
Milling Drums	
Milling drum FB2000 HT22 LA15 with 162 picks	□
Loading of the Milled Material	
Discharge conveyor, 7,900 mm long, 850 mm wide, with hydraulic folding device	■
Increased conveyor swing angles of 65° each to the left and right	■
Discharge conveyor with adjustable conveying speed and two slewing speeds for precise loading	■
Boost feature for a temporary increase of the belt speed and conveying performance of the discharge conveyor by 20%	■
Water spray system in the primary conveyor	■
Larger conveyor pump for a constant belt speed even at a low engine speed of 1,300 rpm	■
Machine Control and Leveling System	
User-friendly control panel including 7" color screen	■
<b>LEVEL PRO ACTIVE</b> leveling system with numerous automated and complementary operator relieving features	■
<b>LEVEL PRO ACTIVE</b> - automatic height control in transport mode	■
<b>LEVEL PRO ACTIVE</b> - ramp milling and auto-start feature for the second milling cut	■
RAPID SLOPE cross-slope sensor for <b>LEVEL PRO ACTIVE</b> leveling system	■

- = Standard equipment
- = Standard equipment, can be replaced with optional equipment if desired
- = Optional equipment

Machine Control and Leveling System	
MILL ASSIST assistance system for automatic adjustment of the milling drum speed in accordance with the main area of application and the parameters selected in terms of engine load, advance rate, milling volume and quality of the milling pattern	■
Automatic start-stop feature of the milling drum to reduce diesel consumption	■
Comprehensive machine diagnostics on the control panel including, for example, a diagnostic system for the CAN bus	■
Voltmeter integrated into the control panel for voltage measurement in the event of a malfunction	■
Two control panels for operating functions performed by ground crew	■
Operator's Platform	
Convenient access to the operator's platform, left and right	■
Anti-vibration mounted operator's platform across the full width of the machine including fold-out railing, right	■
Electrical control cabinet on the operator's platform for optimum accessibility and fast troubleshooting	■
Electrical level indicator for the water tank on the external control panels	■
Time display on the main control panel and on the exterior control panels	■
Two mirrors at the front, one mirror at the rear of the machine	■
Operator's platform with functional stand-up seat	□
Track Unit and Height Adjustment	
PTS - automatic alignment of the machine parallel to the pavement surface	■
ISC - intelligent track speed control including hydraulic four-track drive	■
Fourfold full-floating axle for high machine stability	■
High travel speed of up to 100 m / min at low engine speeds (1,350 rpm), reduced diesel consumption and low noise emissions	■
Lifting speed of the height adjustment feature increased by 60%	■
Miscellaneous	
"Welcome" and "Go home" lights feature in the area of the operator's platform and access	■
Large storage compartment on the machine for pick containers	■
High-pressure water system with automatic on / off function, 18 bar, 67 l / min	■
Good accessibility to all maintenance points on the engine station	■
Pneumatic hammer with pick extractor / inserter	■
Large tool kit in lockable tool box	■
A total of six EMERGENCY STOP switches in appropriate positions on the machine	■
Pre-fitting for installing the WITOS FleetView control unit	■
European type certification, EuroTest mark and CE conformity	■
Water tank filling from rear of machine	□
Standard painting in RAL 9001 (cream)	□
WITOS FleetView - professional telematics solution for machine operation and service optimization	□
Standard LED lighting system with 20,600 lumens	□

■ = Standard equipment

□ = Standard equipment, can be replaced with optional equipment if desired

□ = Optional equipment

# Optional Equipment

W 210 F | W 210 Fi

Milling Drum Unit	
Quick-change milling drum unit FB2200	<input type="checkbox"/>
Quick-change milling drum unit FB2000 <b>MCS BASIC</b>	<input type="checkbox"/>
Quick-change milling drum unit FB2200 <b>MCS BASIC</b>	<input type="checkbox"/>
Quick-change milling drum unit FB2500 <b>MCS BASIC</b>	<input type="checkbox"/>
Extension of <b>MCS BASIC</b> with a hydraulically opening side door for FB2000	<input type="checkbox"/>
Extension of <b>MCS BASIC</b> with a hydraulically opening side door for FB2200	<input type="checkbox"/>
Extension of <b>MCS BASIC</b> with a hydraulically opening side door for FB2500	<input type="checkbox"/>
Electrically switchable sectional water spray bar for FB2000	<input type="checkbox"/>
Electrically switchable sectional water spray bar for FB2200	<input type="checkbox"/>
Electrically switchable sectional water spray bar for FB2500	<input type="checkbox"/>
Quick-change milling drum unit FB2000 MCS and milling drum <b>MCS BASIC</b> FB2000 LA15	<input type="checkbox"/>
Quick-change milling drum unit FB2200 MCS and milling drum <b>MCS BASIC</b> FB2200 LA15	<input type="checkbox"/>
Quick-change milling drum unit FB2500 MCS and milling drum <b>MCS BASIC</b> FB2500 LA18	<input type="checkbox"/>
Milling Drums	
Milling drum FB2000 <b>HT22</b> LA18 with 146 picks	<input type="checkbox"/>
Milling drum <b>MCS BASIC</b> FB2000 <b>HT22</b> LA15 with 162 picks	<input type="checkbox"/>
Milling drum <b>MCS BASIC</b> FB2000 <b>HT22</b> LA18 with 146 picks	<input type="checkbox"/>
Milling drum FB2200 <b>HT22</b> LA15 with 176 picks	<input type="checkbox"/>
Milling drum FB2200 <b>HT22</b> LA18 with 155 picks	<input type="checkbox"/>
Milling drum <b>MCS BASIC</b> FB2200 <b>HT22</b> LA15 with 176 picks	<input type="checkbox"/>
Milling drum <b>MCS BASIC</b> FB2200 <b>HT22</b> LA18 with 155 picks	<input type="checkbox"/>
Milling drum <b>MCS BASIC</b> FB2500 <b>HT22</b> LA15 with 193 picks	<input type="checkbox"/>
Milling drum <b>MCS BASIC</b> FB2500 <b>HT22</b> LA18 with 171 picks	<input type="checkbox"/>
Milling drum FB2000 <b>HT22</b> LA8 with 272 picks	<input type="checkbox"/>
Milling drum FB2000 <b>HT22</b> LA25 with 126 picks	<input type="checkbox"/>
Milling drum FB2000 <b>HT5</b> LA6X2 with 672 picks	<input type="checkbox"/>
Milling drum FB2200 <b>HT22</b> LA8 with 297 picks	<input type="checkbox"/>
Milling drum FB2200 <b>HT22</b> LA25 with 134 picks	<input type="checkbox"/>
Milling drum FB2200 <b>HT5</b> LA6X2 with 740 picks	<input type="checkbox"/>
Milling drum <b>MCS BASIC</b> FB2000 <b>HT22</b> LA8 with 272 picks	<input type="checkbox"/>
Milling drum <b>MCS BASIC</b> FB2000 <b>HT22</b> LA25 with 126 picks	<input type="checkbox"/>
Milling drum <b>MCS BASIC</b> FB2000 <b>HT5</b> LA6X2 with 672 picks	<input type="checkbox"/>
Milling drum <b>MCS BASIC</b> FB2000 <b>HT22</b> LA15 with 18 standard picks and 144 PCD tools	<input type="checkbox"/>
Milling drum <b>MCS BASIC</b> FB2200 <b>HT22</b> LA8 with 297 picks	<input type="checkbox"/>
Milling drum <b>MCS BASIC</b> FB2200 <b>HT22</b> LA25 with 134 picks	<input type="checkbox"/>
Milling drum <b>MCS BASIC</b> FB2200 <b>HT5</b> LA6X2 with 740 picks	<input type="checkbox"/>
Milling drum <b>MCS BASIC</b> FB2200 <b>HT22</b> LA15 with 18 standard picks and 158 PCD tools	<input type="checkbox"/>
Milling drum <b>MCS BASIC</b> FB2500 <b>HT22</b> LA8 with 335 picks	<input type="checkbox"/>
Milling drum <b>MCS BASIC</b> FB2500 <b>HT22</b> LA25 with 141 picks	<input type="checkbox"/>
Milling drum <b>MCS BASIC</b> FB2500 <b>HT22</b> LA18 with 18 standard picks and 153 PCD tools	<input type="checkbox"/>
Loading of the Milled Material	
VCS extraction system	<input type="checkbox"/>
Support device for discharge conveyor	<input type="checkbox"/>
ACTIVE CONVEYOR swing angle control for discharge conveyor	<input type="checkbox"/>

- = Standard equipment
- = Standard equipment, can be replaced with optional equipment if desired
- = Optional equipment

Loading of the Milled Material	
Actual milling depth measurement and display on the <b>LEVEL PRO ACTIVE</b> panel	<input type="checkbox"/>
Overload sensors installed on the scraper	<input type="checkbox"/>
Active floating position for the side plates, left and right	<input type="checkbox"/>
Wear protection rollers for side plates, left or right	<input type="checkbox"/>
Mounting aid for lifting out the primary conveyor when changing the milling drum unit	<input type="checkbox"/>
Milling drum mounting and transport cart FB1500 to FB2500	<input type="checkbox"/>
Transport roller set for simplified milling drum unit change (FB1500 - FB3800)	<input type="checkbox"/>
5" control panel for controlling the leveling system	<input type="checkbox"/>
7" control panel for displaying the machine control system and for controlling the leveling system	<input type="checkbox"/>
Qty. 1 - 2" control panel including favorites buttons	<input type="checkbox"/>
Qty. 2 - 2" control panels including favorites buttons	<input type="checkbox"/>
User-specific saving of machine settings via SMART KEY key fob	<input type="checkbox"/>
Extension of <b>LEVEL PRO ACTIVE</b> with leveling booms and one Sonic Ski sensor	<input type="checkbox"/>
Extension of <b>LEVEL PRO ACTIVE</b> with one hydraulic sensor mounted on the right	<input type="checkbox"/>
Extension of <b>LEVEL PRO ACTIVE</b> with two hydraulic sensors mounted on the left and the right	<input type="checkbox"/>
Extension of <b>LEVEL PRO ACTIVE</b> with two ultrasonic sensors for multiplex scanning	<input type="checkbox"/>
Extension of <b>LEVEL PRO ACTIVE</b> with four ultrasonic sensors for multiplex scanning	<input type="checkbox"/>
Extension of <b>LEVEL PRO ACTIVE</b> with pre-fitting for 3D leveling for machines without canopy	<input type="checkbox"/>
Extension of <b>LEVEL PRO ACTIVE</b> with pre-fitting for 3D leveling for machines with canopy	<input type="checkbox"/>
Extension of <b>LEVEL PRO ACTIVE</b> with two laser receivers	<input type="checkbox"/>
Operator's Platform	
Operator's platform with functional stand-up seat, large storage compartment	<input type="checkbox"/>
Operator's platform with functional stand-up seat, large storage compartment, and weather protection canopy	<input type="checkbox"/>
Operator's platform with a high-quality comfort cabin	<input type="checkbox"/>
Additional stand-up seat for operator's platform	<input type="checkbox"/>
Miscellaneous	
Hydraulically operated filling pump for water refilling	<input type="checkbox"/>
Standard film coating in RAL 9001 (cream)	<input type="checkbox"/>
Film coating according to the customer's wishes	<input type="checkbox"/>
Model without WITOS FleetView	<input type="checkbox"/>
Extended LED lighting system with 37,600 lumens	<input type="checkbox"/>
High-performance LED lighting system with 50,000 lumens, including LED lighting balloon	<input type="checkbox"/>
Two additional weights with a total weight of 1,600 kg	<input type="checkbox"/>
Large storage compartment at the rear of the machine for 69 pick containers	<input type="checkbox"/>
Storage compartment close to the rear track units for 8 pick containers	<input type="checkbox"/>
Warm air heating close to the operator's hands and feet	<input type="checkbox"/>
Signal lights for visual "stop" and "go" instructions for the truck driver	<input type="checkbox"/>
Powerful high-pressure water cleaner, 150 bar, 15 l / min	<input type="checkbox"/>
Hydraulic pick ejector	<input type="checkbox"/>
2-fold camera system	<input type="checkbox"/>
4-fold camera system with 10" control panel	<input type="checkbox"/>
8-fold camera system with 10" control panel	<input type="checkbox"/>
Dual starter system	<input type="checkbox"/>
Electrical diesel suction and pressure pump including 7.50 m suction hose	<input type="checkbox"/>
License plate holder with LED lighting	<input type="checkbox"/>
Hydraulically powered sweeping unit	<input type="checkbox"/>

■ = Standard equipment

■ = Standard equipment, can be replaced with optional equipment if desired

□ = Optional equipment



WIRTGEN GmbH

Reinhard-Wirtgen-Str. 2 · 53578 Windhagen · Germany

Phone: +49-264-5131-0 · Fax: +49-264-5131-392

Internet: [www.wirtgen.de](http://www.wirtgen.de) · E-mail: [info@wirtgen.de](mailto:info@wirtgen.de)

