



Achieving maximum productivity with the smallest large milling machine  
Cold Milling Machine W 150/W 150i



# Effective milling has never been easier with Wirtgen high-tech



## Small large milling machine – big performance

Wirtgen's smallest large milling machine, the W 150/W 150i, has its own way of answering the question as to what it is really good at. Effective productivity, combined with superior ergonomic design, is one of its most outstanding performance features. These are grounded in powerful loading, intelligent engine control, intuitive

handling and generously dimensioned fuel and water tanks for extended production times. FCS, PTS (Parallel to Surface), LEVEL PRO automatic levelling system, outstanding manoeuvrability and slender wasp waist design for perfect visibility are all tried and tested benefits which make the design of W 150/W 150i an all-round success.



◀ The W 150/W 150i is a role model of productivity, ergonomic design and manoeuvrability

Maximum profitability and performance

▼ Wide conveyor slewing angles ensure a highly efficient milling process



- ▶ **One-man operation** thanks to the machine's clearly laid-out operating concept.
- ▶ **Broad range of applications** thanks to milling drum units offering working widths of 1.2 m and 1.5 m.
- ▶ **Intelligent WIDRIVE machine management system** for highest productivity rates.

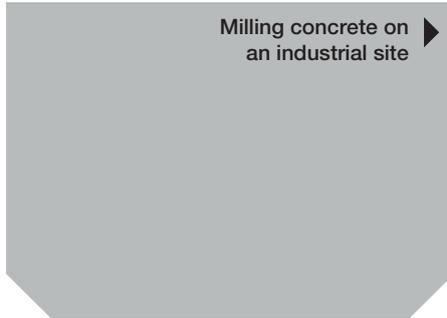
- ▶ **Compact cold milling machine** for ease of transport.
- ▶ **Active environmental protection** thanks to vacuum cutting system and exhaust emissions technology complying with EC Stage 3b / US Tier 4i.

# Optimal productivity and high daily production rates



▲ Removing the pavement of an arterial road at full depth

High milling performance even at large milling depths ►



Milling concrete on an industrial site ►

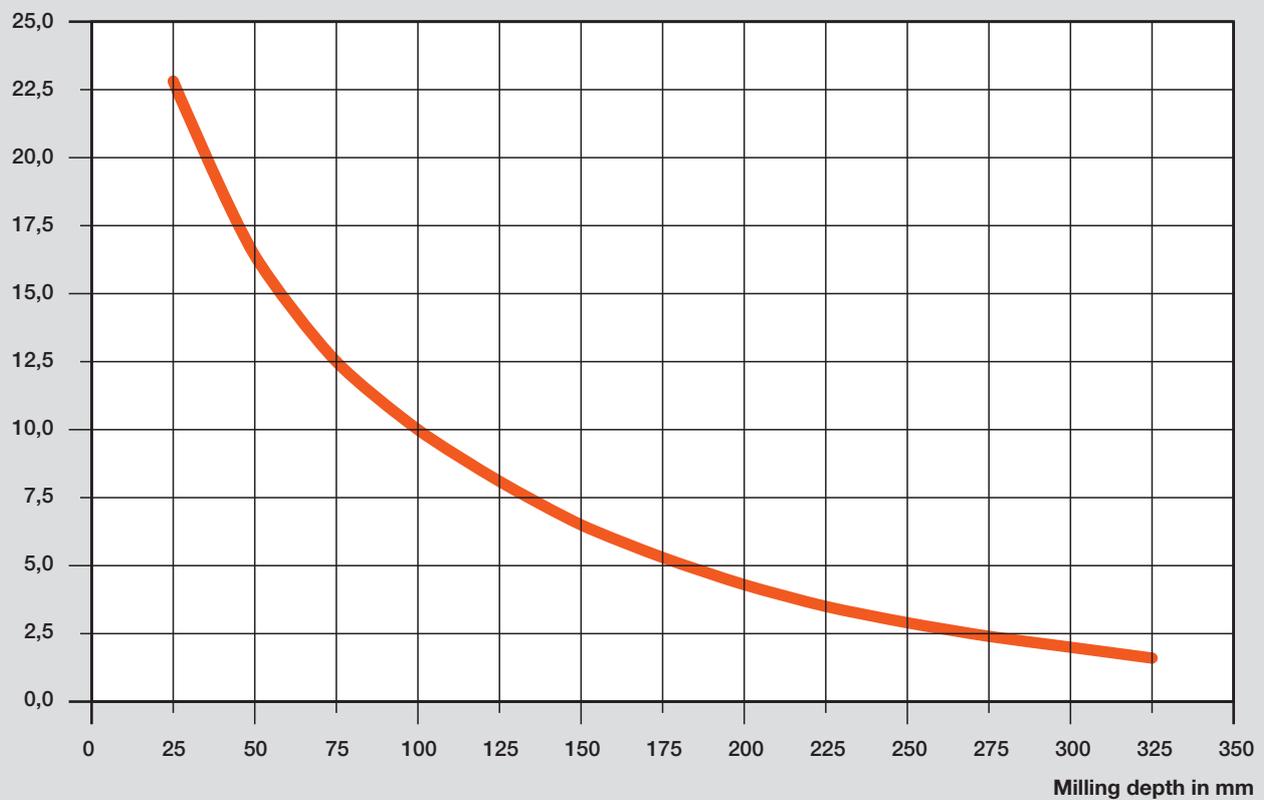


## The all-rounder in the lower large milling machine performance segment

High engine power and large milling depth are the distinctive features of the W 150/W 150i large milling machine. Two milling drum units offering working widths of 1.2 m and 1.5 m enable the machine to be used for a broad variety of applications: milling surfaces on a large

scale, removing layers at full depth or levelling surfaces, to name just a few. The machine's maximum milling depth of 320 mm enables complete pavement packages to be removed in a single pass.

Advance rate  
(m/min)



- ▶ The machine's design is that of a large milling machine which, due to the narrow milling width of 1.2 m to 1.5 m, is capable of also milling smaller surfaces with economic efficiency.
- ▶ The powerful engine and intelligent engine management system ensure high productivity for milling depths of up to 320 mm.
- ▶ The machine's large milling depth enables complete pavement packages to be removed in a single pass.
- ▶ The W 150/W 150i is easily capable of achieving high daily production rates even in very harsh working conditions.

# Work at ease and have everything under control



## Non-tiring work boosts overall performance

/// It's the machine that has to be adapted to man, not the other way round! That's why ergonomic design plays a key role in the W 150/W 150i: The small number of clearly structured controls is arranged within direct, comfortable reach of the machine operator. Controls and displays face towards the operator, supporting him in his

highly responsible job. This is facilitated further by a number of frequently used functions integrated into the right-hand armrest, which are operated easily and intuitively. Relaxed and comfortable working will ultimately pay off in improved performance and happy employees.

Ergonomic design – a key performance factor

... or upright position ▼

▲ Perfect visibility and clearly structured controls located within easy reach

Perfect working conditions – whether in seated ... ▶



Simple, ergonomically optimized handling enables the machine to be operated by one person only.

Lockable covers protect the control panels and the machine from damage.

The steering wheel can be adjusted to meet the operator's personal needs, allowing him to work in upright or seated position.

The individually adjustable driver's seat allows the machine operator to always find his own preferred seating position.

# Operator's platform with panoramic design



## In perfect shape for a full view of the milling edge

**//** The so-called “wasp waist” – the slender central part of the machine frame – of the W 150/W 150i enables high levels of operator convenience. This well-engineered feature offers the machine operator a full view of the front suspension unit, the milling edge and any obstacles in the way while allowing him to remain seated in his comfortable driver's seat or work in upright position. The panorama

design greatly improves operator comfort, producing better milling results without the need for time-consuming manual reworking. The spacious operator's platform additionally offers an excellent overall view and ample legroom in both sitting and standing position. The platform can be accessed via ladders from the left or right, which is of particular advantage in cramped job site conditions.

The walk-through operator's platform offers ample room and maximum visibility

Protection from wind and rain: the front screen and roof can be moved to the left and right



A workplace to feel comfortable in



... via stable, fold-down ladders

The operator's platform can be accessed from the left or from the right...

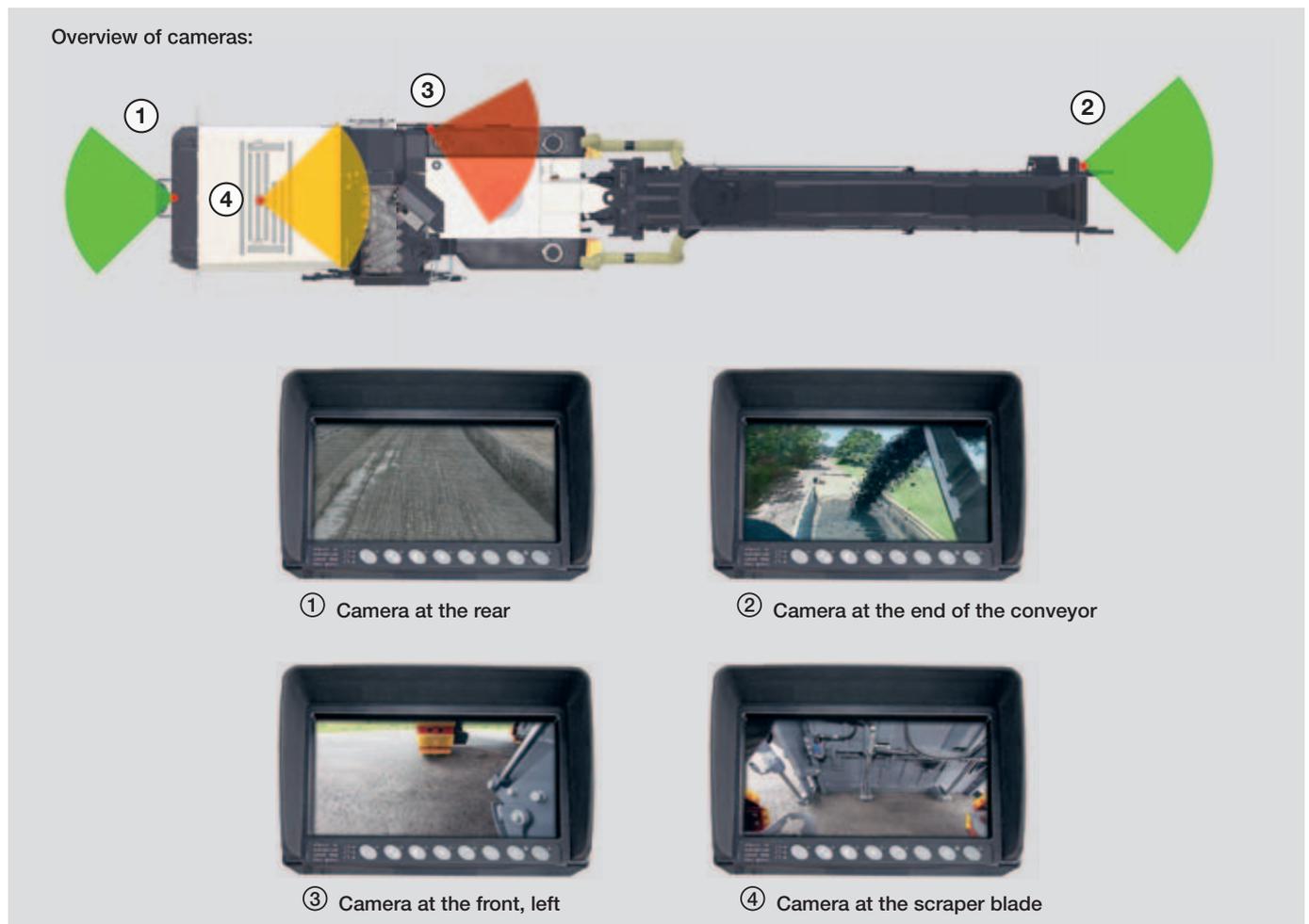
➤ The machine's "wasp waist" ensures a better overall view and permits fast, precise milling.

➤ The hydraulically retractable canopy protects the operator from rain and sun exposure.

➤ The fold-down ladder enables the machine to be driven to obstacles like, for instance, a wall.

➤ Operator comfort in the operator's platform is enhanced by an footwell heating system.

# In full control of the milling process



## Up to four cameras on offer

From his working platform, the machine operator is always up to date on what is happening around the W 150/W 150i. For he can view camera settings of different work areas on the camera screen and additionally has an overview of major parameters related to the current milling job. Two or four high-resolution colour cameras can

be installed in accordance with customer specifications. Installation of an intelligent data converter enables defined machine parameters, coded in accordance with the standardized WIFMS norm, to be read out from the machine's control system.

# WIDRIVE – technology designed with people in mind



WIDRIVE ensures maximum power and area performance, for WIDRIVE enables the machine's control system to manage numerous commands and functions that would ordinarily have to be carried out by the machine operator. Depending on the job to be carried out, WIDRIVE is responsible for automatically controlling the engine speed, turning the water spray system on or off,

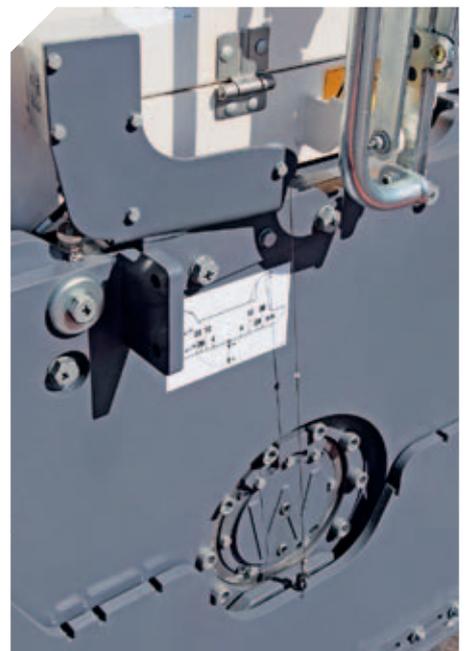
monitoring and controlling the conveyor belt speed, or assisting the machine driver in operating the levelling system. WIDRIVE also automatically controls switching of the milling drum. The W 150/W 150i demonstrates its technical superiority, made possible by ingeniously linking all machine functions in the WIDRIVE system, in tremendous daily production rates.

# LEVEL PRO – for top-quality milling results



◀ Controlling the milling depth and inclination is an easy job with LEVEL PRO

Wire-rope sensor (left and right) for precise milling depth measurements at the side plates ▼



## Machine control and levelling systems are combined into one unit

Needless to say that the W 150/W 150i is equipped with the tried and tested LEVEL PRO automatic levelling system. Convenient and simple operation featuring, for instance, the simultaneous display of parameters for both machine sides or the automatic adjustment of milling depth and slope, is the hallmark of this proprietary levelling system for road milling machines. The clearly structured

control panel has large, self-explanatory function keys which enable convenient, one-hand operation. Target and actual values for the milling depths left and right, and for the cross slope are displayed continuously. Target values are easily pre-programmed, saved via the system's memory function and retrieved as required.

The electronic slope sensor supplies highly precise slope values

Scanning in front of the milling drum using a wire-rope sensor



As precise as a clockwork



Automatic ON / OFF

Switchover button

Set value

Actual value

Controller output

Memory 1

Settings

Set value UP / DOWN

Calibration

Cylinder UP / DOWN

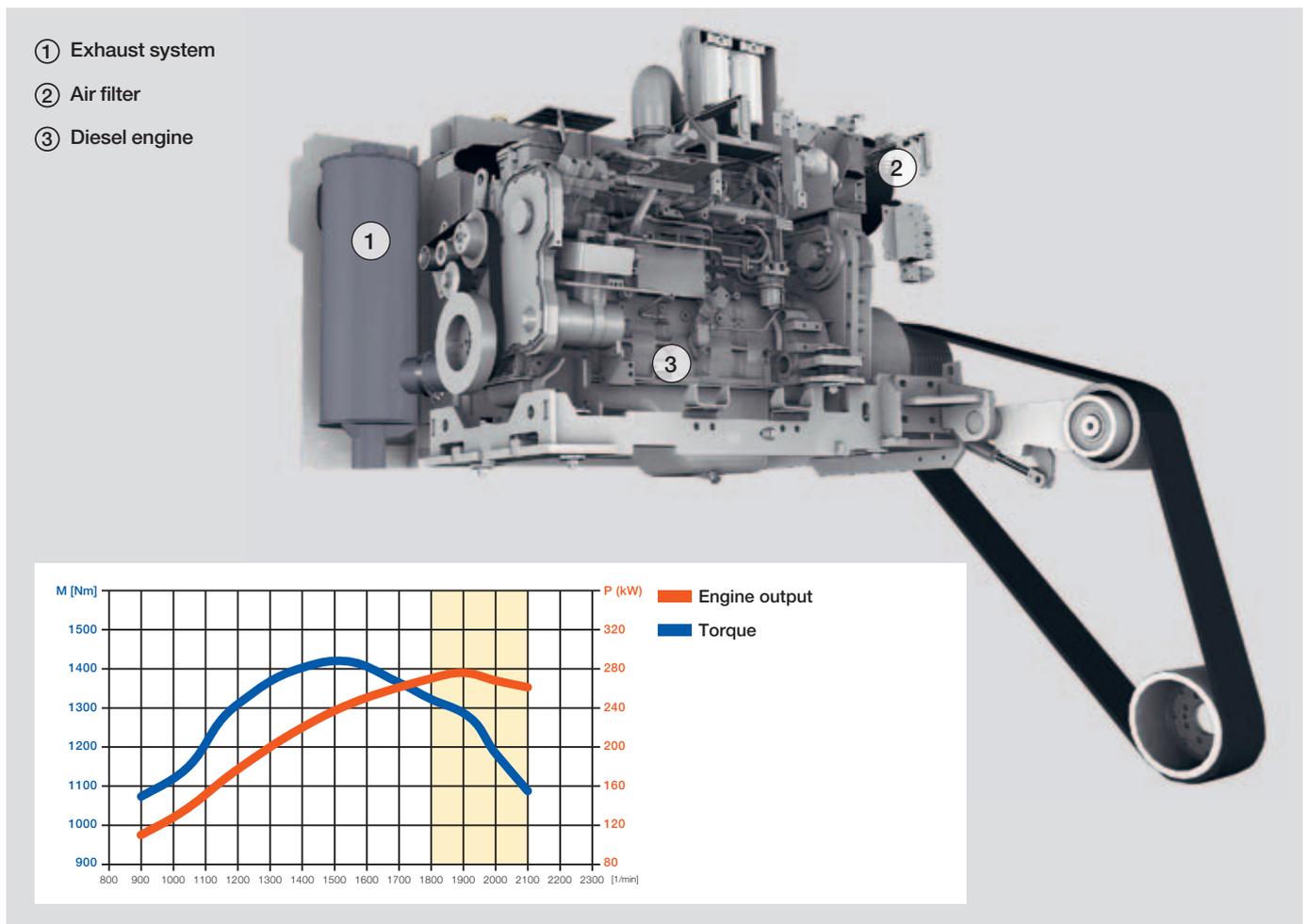
Memory 2



- Wire-rope sensors capture the milling depth at the edge protectors on both sides of the machine.
- A great variety of sensors can be integrated into the automatic levelling system, such as wire-rope, cross slope or ultrasonic sensors.

- LEVEL PRO can be easily extended, for instance, by the multiplex system, laser levelling, or 3D levelling which uses the interface included in the system.
- The multiplex system analyses the output of three sensors on each side of the machine, which is very useful to ensure perfectly level surfaces.

# W 150 – high-performance engine technology

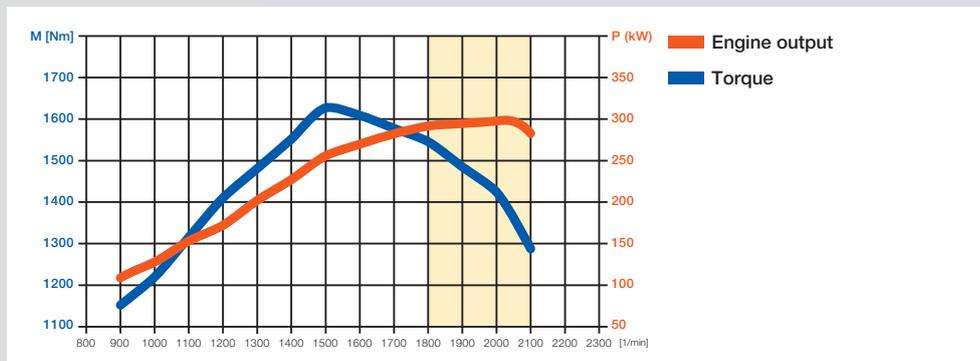
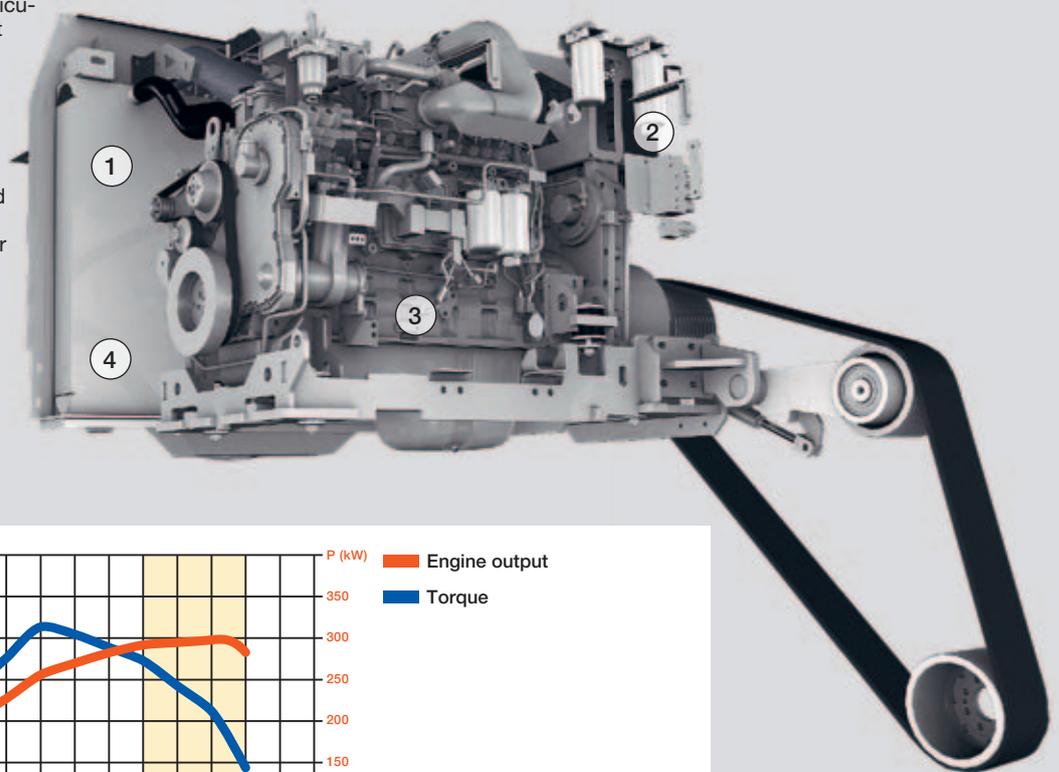


## Maximum drive power – low emission levels

- ▶ The engine technology used in the W 150 cold milling machine complies with the emission standards of EC Stage 3a / US Tier 3.
- ▶ The W 150 is equipped with a powerful, economical ECO diesel engine.
- ▶ The fully electronic WIDRIVE machine management system enables both of the W 150's engines to always work in the optimal performance and torque ranges, at extremely low fuel consumption rates and low operating costs.

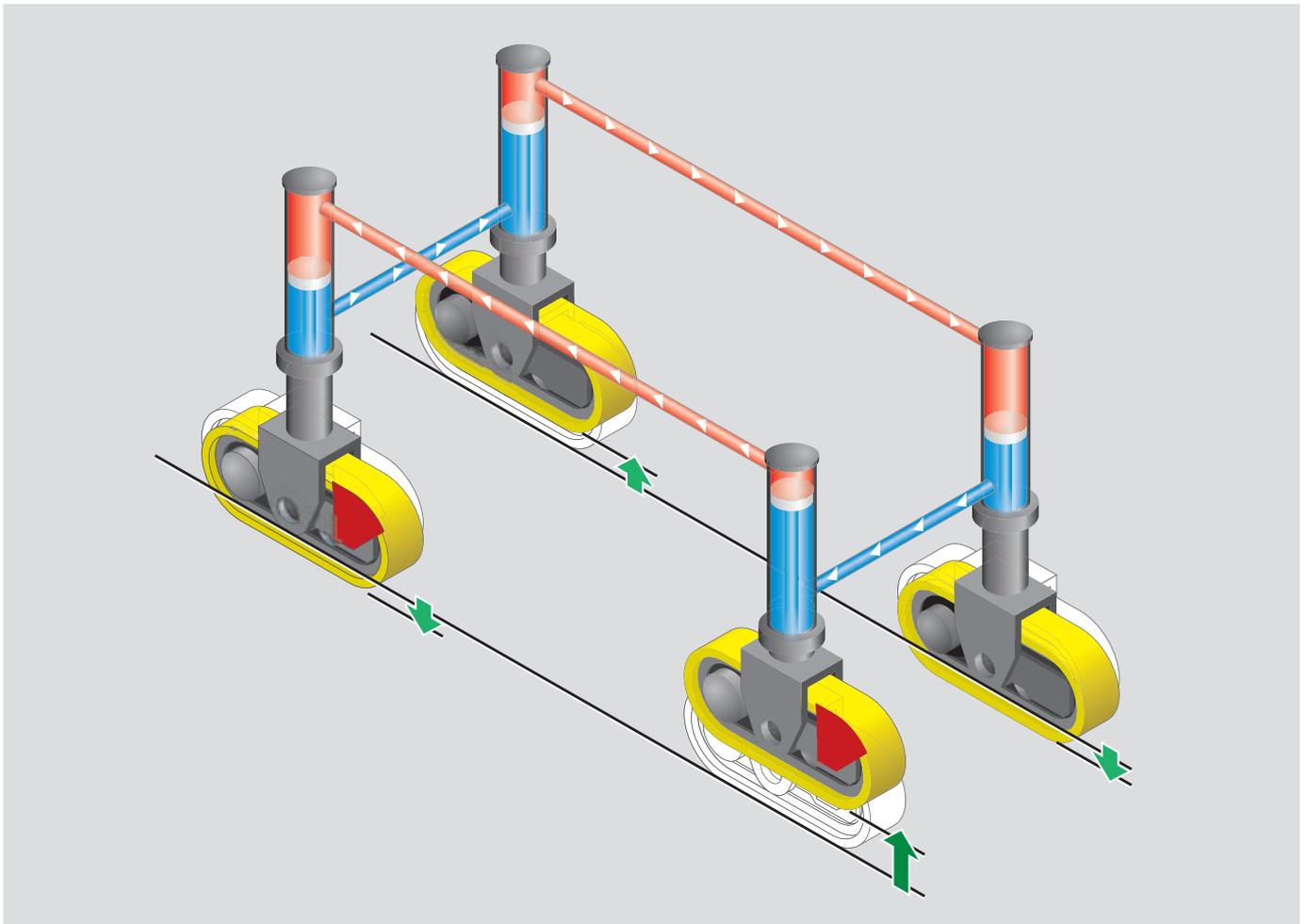
# W 150i – optimizing environmental protection

- ① Combined two-way catalytic converter and diesel particulate filter for low pollutant emissions
- ② Special “direct-flow” air filters for extended uptimes
- ③ Diesel engine with cooled exhaust gas recirculation and variable turbocharger geometry for high torque at low engine speeds
- ④ Pollutants are minimized by 90%



- ▶ The W 150i features state-of-the-art engine technology for lowest environmental emission levels, complying with the stringent specifications of exhaust emission standards EC Stage 3b / US Tier 4i.
- ▶ To ensure effective exhaust gas purification, the engine installed in the W 150i is equipped with a combined two-way catalytic converter and diesel particulate filter.
- ▶ The WIDRIVE machine management system enables high performance levels regardless of working conditions.
- ▶ Operating costs of the W 150i are reduced further by the machine’s intelligent diesel engine control.

# Automatic alignment parallel to the road surface



## Automatic chassis alignment parallel to the pavement

/// The proprietary PTS system not only guarantees that the working depth is maintained with maximum accuracy but also makes work as easy as possible for the operator. PTS is short for “Parallel To Surface”, meaning that the system automatically aligns the machine parallel to the road surface in a dynamic process: the front and rear crawler

track units are lowered evenly and in parallel to each other. In addition, the 4-fold full-floating axle that forms part of the PTS system quickly balances out any unevenness on the left or right-hand side. Overall, the operator is relieved from a significant part of his workload previously generated by the need for manual adjustments.

# Superior manoeuvrability for restricted job site conditions



Fast and easy manoeuvring



▲ Crab steering permits fast manoeuvring on site, being gentle on the crawler tracks at the same time

The machine's height-independent, parallel sliding block guide ensures precise steering angles ▶



Automatic tracking of the rear suspension units guarantees highly precise milling even in narrow radii ▲

- Turning manoeuvres are no problem at all even in space-restricted areas thanks to the machine's compact dimensions and large steering angles.
- Manoeuvring is child's play with the machine's smooth, field-proven all-track steering system.

- Both the front and rear suspension units can be adjusted in height hydraulically.
- Automatic tracking of the rear track units guarantees highly precise milling results even in bends.

# The “small” large milling machine with a comprehensive range of applications

Different working widths



◀ High daily production rates are one of the W 150/W 150i's standard features

Removing asphalt layers at depths of up to 320 mm ▼



## Fully equipped for a limitless variety of milling jobs

/// Purchasing the high-performance W 150/W 150i, machine users round out their fleet with an extremely versatile construction machine for flexible applications. Our all-rounder benefits from compact overall dimensions and excellent manoeuvrability when working on space-restricted job sites. The W 150/W 150i is at home in both trench construction and in everyday road construction where high daily production rates are a must, enabling it

to fully play its numerous cost advantages. Applications like milling large surfaces, removing asphalt layers at full depth, or levelling pavement irregularities are carried out profitably and, if desired, at different working widths: Changing the milling drum assembly enables the machine to be operated at a milling width of 1.2 m or 1.5 m respectively.



- ▶ Optimized toolholder arrangement on the milling drum ensures an excellent milling pattern even in the peripheral areas.
- ▶ The proven tool arrangement on the milling drum guarantees low wear and tear, as well as excellent running smoothness.
- ▶ The W 150/W 150i is capable of accommodating drum assemblies of 1.20 m and 1.50 m milling width.
- ▶ Ejectors can be turned by 180° and thus be used twice as wear and tear occurs exclusively in the upper area.

# Replacement of spare parts and wearing parts made easy

Working in comfortable posture



▲ Changing the milling drum is easy thanks to wide-opening edge protectors

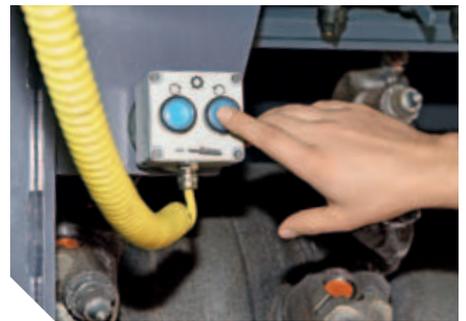
Good access to the milling drum after opening the drum door ▶



## Replacing tools effortlessly

/// Cutting tools, toolholders or complete milling drums are replaced quickly and easily, adding yet another mark in favour of the W 150/W 150i's economic efficiency. Once the drum door on the right machine side has been opened, the milling drum can be unbolted in a comfortable body posture and is then easily pulled from its support.

This feature permits fine milling drums to be mounted quickly and easily. Replacing toolholders is quite as simple with the field-proven quick-change toolholder system HT 11. It not only impresses with easy handling and high durability in harsh everyday operation on the job site, but also cuts operating costs at the same time.



The switch actuating the drum turning device is attached magnetically within easy reach of the operator ▲

Replacing cutting tools hydraulically with only little effort ▼



- The milling drum provides good access for the replacement of cutting tools once the scraper blade has been raised.
- Cutting tool replacement is completed in no time at all using pneumatic or hydraulic tool extractors.
- A convenient, automatic drum turning device facilitates work on the milling drum.
- The patented quick-change toolholder system HT 11 banishes welding from the job site.

# Milling drum assembly of 1.2 m working width – and full FCS as an option

Dimensions in mm

Drum Type	Milling width	Milling depth	Tool spacing
FCS milling drum	600 mm	0–280 mm	12 mm
FCS milling drum	900 mm	0–280 mm	15 mm
FCS milling drum	1,200 mm	0–320 mm	15 mm
FCS fine milling drum	1,200 mm	0–100 mm	8 mm
FCS micro fine milling drum	1,200 mm	0–30 mm	6 x 2 mm

W 150/W 150i with 1.2 m drum assembly

## Flexibility in the field

/// The 1.2 m drum assembly can be fitted with the full Wirtgen Flexible Cutter System (FCS) for use with milling drums of different working widths. The system offers a number of advantages, as it broadens the machine's range of applications, ensures effective loading of the milled material at full depth, requires little time and

space for mounting and enables large steering angles of the rear crawler tracks. Different types of highly precise fine milling drums can also be used: Typical applications are fine milling of the surface prior to applying a new, thin pavement layer, levelling irregularities in the surface course or improving the skid resistance of a road pavement.

# Milling drum assembly of 1.5 m working width – and FCS Light as an option

Dimensions in mm

**FCS milling drum**  
 Milling width: 1,500 mm  
 Milling depth: 0–320 mm  
 Tool spacing: 15 mm

**FCS fine milling drum**  
 Milling width: 1,500 mm  
 Milling depth: 0–100 mm  
 Tool spacing: 8 mm

**FCS micro fine milling drum**  
 Milling width: 1,500 mm  
 Milling depth: 0–30 mm  
 Tool spacing: 6 x 2 mm

W 150/W 150i with 1.5 m drum assembly

▶ The 1.5 m drum assembly can be equipped with the Wirtgen Flexible Cutter System Light (FCS Light).

▶ The 1.5-metre wide drum assembly enables the use of milling drums with different tool spacings.

# 1.2-metre FCS drum assembly with three-part scraper blade



## Broader range of applications

/// One machine for many applications – the W 150/W 150i epitomizes this guiding principle when equipped with the 1.2-metre wide FCS milling drum assembly and three-part scraper blade. In addition to the typical jobs of a large milling machine, the W 150/W 150i excels in trench cutting and pavement widening at milling widths of 600 mm, 900 mm and 1,200 mm. The scraper

blade can simply be adjusted to the specific milling width, thus allowing optimal loading of the granulated material. The large milling machine offers additional advantages in trench cutting: its track units allow the W 150/W 150i to travel on road shoulders of poorer bearing capacity, and its front loading feature enables trucks to travel forward while picking up the granulated material.



## Flexible adjustment of scraper blade

When working at a width of 1,200 mm, all three parts of the scraper blade are in floating position to allow full loading of the milled material ▼

▲ To enable full loading of the reclaimed material at milling widths of 600 mm and 900 mm, ...

... the individual parts of the scraper blade can be set to floating position separately or locked at the required height ▶



- ▶ Milling widths of 600 mm, 900 mm and 1,200 mm are frequently used to mill out road shoulders for pavement widening.
- ▶ The primary conveyor is positioned in front of the milling drum so as to ensure optimal loading of the reclaimed material regardless of the milling width.

- ▶ Efficient milling at high advance speeds is possible also at working widths of 600 mm and 900 mm.
- ▶ A skilled worker can change the milling drum and adjust the scraper blade within a short period of time using standard tools.

# Top-class milling drum assembly with mature functions



▲ In raised position, the side plate prevents jamming, for instance, when “climbing” out of a milled track

▼ With the scraper blade in “locked” position, the material is either loaded partially or left in the milled track

▲ The hydraulically lifting side plates on both sides of the machine move over the surface

▶ Full loading of the milled material with the scraper blade in lowered position

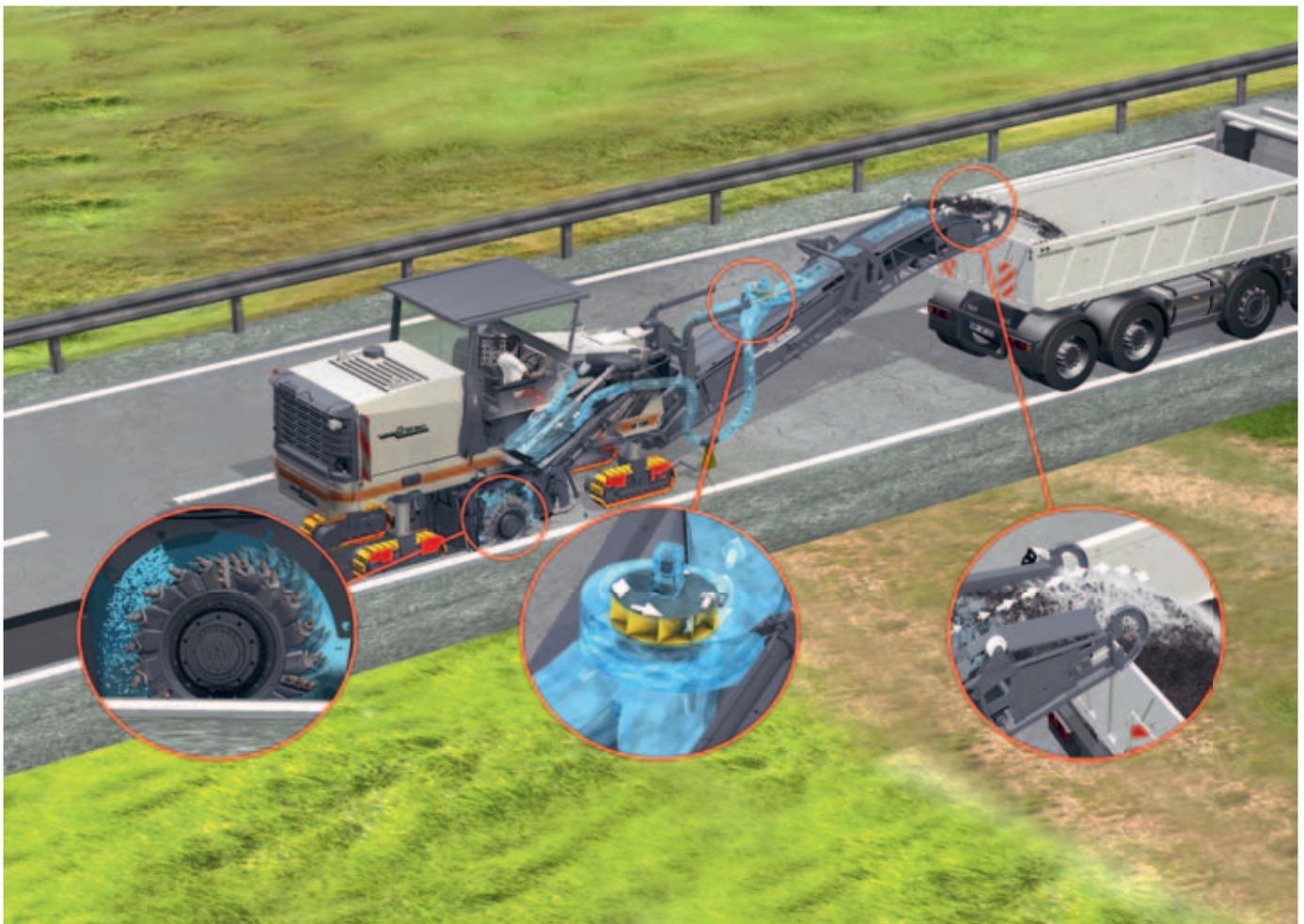


## Field-proven engineering

/// The intelligently designed milling drum assembly of the W 150/W 150i perfectly closes the milling chamber to all sides, leaving behind a cleanly levelled milled cut. The hydraulically adjustable scraper blade plays a key role: It ensures full loading of the milled material when in lowered position, and permits the material to be either partially loaded or to remain in the milled cut when raised

and locked at the required height. The side plates on the left and right can be raised or pressed down on the surface hydraulically, which also prevents the milled material from escaping to the sides. Last but certainly not least, the scraper blade can be raised hydraulically, permitting cutting tools and toolholders on the drum to be replaced quickly and easily.

# Vacuum Cutting System VCS



- ▶ The innovative vacuum cutting system ensures a free view of the milling edge and much better visibility when working in darkness.
- ▶ Improved air quality and visibility increase both comfort and performance of the machine operator.
- ▶ Soiling of the engine, engine filter and entire machine is reduced significantly.
- ▶ Additional marks in favour of this innovative dust extraction system are reduced water consumption, adjustable suction power and easy access for servicing.

# Loading material smoothly with variable conveyor belt speed



## Economically efficient removal of milled material

Efficient loading of the milled asphalt material has top priority when it comes to ensuring the fast and economically efficient completion of a milling job site. This responsibility is far from new for our large milling machine W 150/W 150i. With its powerful conveyor system and va-

riable belt speed, the front-loader removes large quantities of granulated material from the milling site. The discharge parabola can be adjusted to any given situation by varying the belt speed, enabling even large trucks to be filled right to the top – and saving expensive truck capacities.



Loading like clockwork

... and by 45° to the right to ensure effective, flexible loading ▼

▲ The hydraulically folding discharge conveyor simplifies transport

The powerful conveyor can be slewed by 60° to the left ... ▶



▮ The gradation control beam prevents the pavement from breaking into large slabs and protects the conveyor belt against premature wear and tear.

▮ The long hydraulic folding conveyor shortens the W 150/W 150i's transport length by approx. 3 m.

▮ Continuously adjustable automatic belt speed control ensures consistently high belt speed even at full load.

# Top marks for ease of maintenance

Filters arranged behind the engine cowling are replaced quickly and easily ▶

▼ The engine cowling opens and closes electrohydraulically at the push of a button



## Keeping the W 150/W 150i happy with simple maintenance

/// The W 150/W 150i scores top marks also when it comes to maintenance. The large engine cowling opens electrohydraulically and that alone is an impressive sight. The engine compartment permits direct access to the small number of grouped maintenance points either from the side or from the operator's platform. The ingen-

ious maintenance concept also extends to a comprehensive tool kit which is kept within easy reach in spacious, lockable compartments. To put it briefly: The W 150/W 150i is easy to service, giving you time to focus on what's really important – the fast completion of your construction project.

## Maximum machine availability



▲ Opening the engine cowling provides free access to all points of maintenance and inspection

Readily accessible and clearly labelled hydraulic connections at the valve block ▶



Easy access to the water system ▲

- ▶ Opening the engine cowling offers fast access to filters, engine, hydraulic system and other points of maintenance.
- ▶ Lubrication and service points have been grouped together, facilitating maintenance even further.
- ▶ Visual inspections are carried out quickly from the ground or from the operator's platform.
- ▶ Extended servicing intervals of up to 500 operating hours minimize maintenance costs.

# Nothing escapes the eye of the W 150/W 150i operator



The rear view mirror ▲  
can be used as an  
additional manoeuvring aid

... illuminating ▼  
all critical areas

▲ Working lights positioned around  
the machine perfectly illuminate the  
milled cut and milling edge

Freely adjustable spotlights  
can be attached to the machine  
in a few swift moves, ... ►



## In full control of the work process

/// The W 150/W 150i's generous lighting and mirror equipment makes sure that nothing will escape the alert eye of the machine operator. Spotlights can be attached in any position around the machine, illuminating the milling edge and the milled track, while two working lights at the front end of the loading conveyor light up the discharge area. Exterior mirrors on both sides, as well as

an additional rear view mirror offer a better view of the machine's surroundings. These features allow the machine operator to be right close to all events on the job site. And what's more: In addition to excellent visibility on the job site, the generous lighting system ensures full control of the work process at any time of day or night.

# No time lost in transport



▲ Easy transport on a low-bed trailer

The canopy is folded down into transport position conveniently at the push of a button ▶



- ▶ Owing to its compact dimensions and low weight, the cold milling machine fits onto all customary low-bed trailers.
- ▶ Transporting the W 150/W 150i does not normally require time-consuming special permits.
- ▶ The machine can be securely lashed onto a trailer or loaded by crane with the aid of sturdy lashing lugs.
- ▶ Simple transport contributes to the machine's maximum capacity utilization.

# Cutting-edge technology geared to protecting the environment



## The W 150/W 150i combines economic efficiency and green thinking

/// As with all cold milling machines from Wirtgen, environmental considerations have played a vital role in the design of the W 150/W 150i. The small large milling machine is an epitome of low fuel consumption and lowest environmental emission levels. The fully electronic WIDRIVE machine management system is the key to this

positive ecobalance – it causes the engine to always work in the optimal performance and torque ranges. Fuel consumption rates are thus reduced significantly, resulting in significantly lower levels of pollutants, noise and vibrations affecting the environment.



◀ The W 150 / W 150i benefits the environment and saves resources

▼ High productivity at low environmental impact

Avoiding unnecessary emissions



- ▮ The engine of the W 150 complies with the specifications stipulated by exhaust emission standards EC Stage 3a / US Tier 3; the engine of the W 150i complies with those stipulated by EC Stage 3b / US Tier 4i.
- ▮ Consumption-optimized engine speed ranges, engine speed adjustment to the machine's advance rate and temperature-controlled fan speeds protect the environment.
- ▮ The effective VCS extraction system used to evacuate fine material particles reduces dust emissions in the area of the milling drum housing.
- ▮ The efficient soundproofing of the engine compartment and anti-vibration engine support contribute to reducing noise levels.



Wirtgen GmbH  
Reinhard-Wirtgen-Str. 2 · 53578 Windhagen · Germany  
Phone: +49 (0) 26 45 / 131-0 · Fax: +49 (0) 26 45 / 131-242  
Internet: [www.wirtgen.com](http://www.wirtgen.com) · E-Mail: [info@wirtgen.com](mailto:info@wirtgen.com)