



Leadership through passion

Cold milling machines W 50 Ri and W 60 Ri



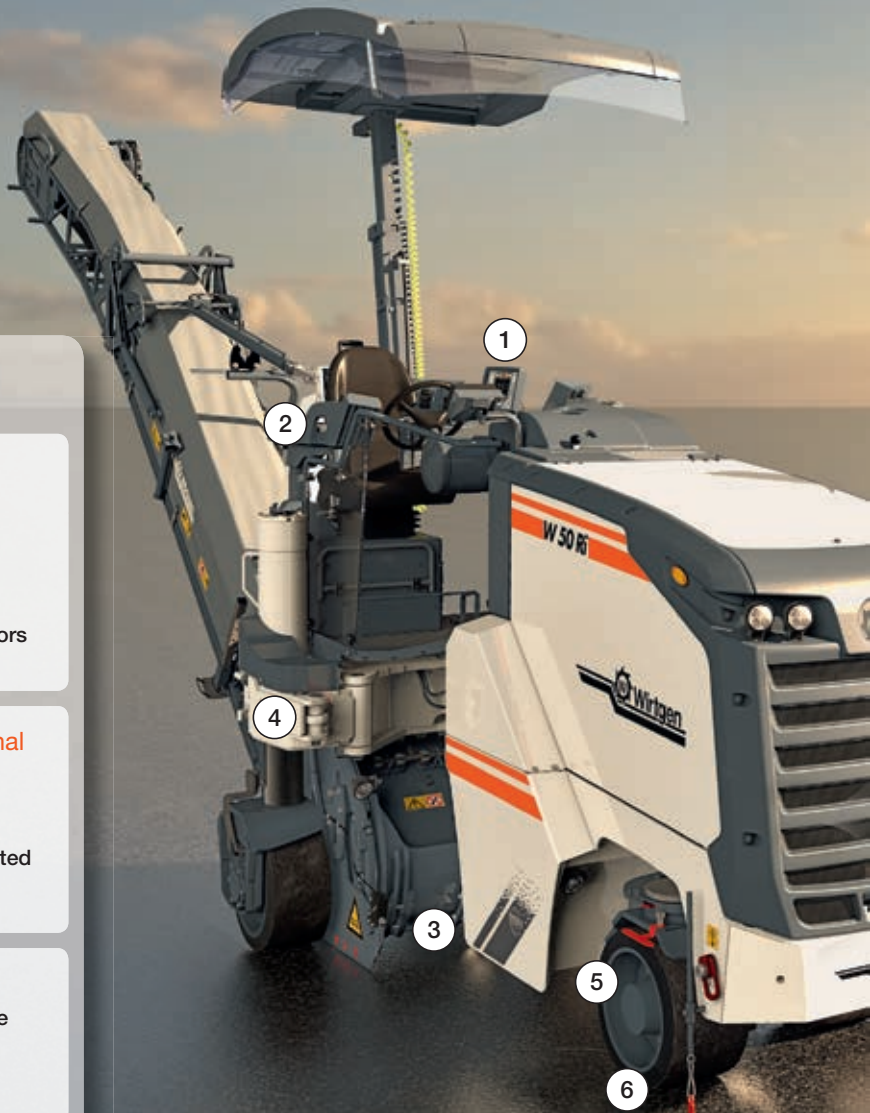
Key innovations of the new W 50 Ri and W 60 Ri at a glance

Innovations in operation

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- ① **Intuitive, accurate levelling using the LEVEL PRO PLUS system**
 - Easy and intuitive operation
 - Many newly added complementary and automated features
 - Fully integrated with the machine control system
 - Milling depth measurement using displacement sensors in the hydraulic cylinders mounted on the side plates
- ② **Efficient operation enabled by the multi-functional armrest**
 - Ergonomically designed armrest with colour control screen
 - Additional machine height adjustment feature integrated in the armrest
 - Many newly added automated features
- ③ **Second-to-none visibility**
 - Unobstructed view of the left and right protective side plates
 - Optimized front view towards the milling edge
 - Good rear visibility

Innovations in driving and steering



- ④ **Time-saving wheel pivoting mechanism**
 - Exceedingly quick, automatic pivoting of the right rear wheel
 - Safe and firm locking in end position
 - Robust swivel joint using a large slide bearing

- ⑤ **Innovative, effective steering features**
 - Offset front wheels
 - Particularly wide front wheels
 - Extremely large locking angle of the front wheels
 - New, automatic tracking of the right rear wheel

Innovations in performance and productivity pages 10/11

9 High traction ensured by perfect weight distribution

- Variable supplementary weights of up to 1,000 kg
- Particularly low machine centre
- Neutral, centrally arranged water and diesel tanks
- High machine stability in both 3-wheeled and 4-wheeled design

10 Best-in-class productivity

- Enormous engine power at maximum torque
- Three different milling drum speeds
- State-of-the-art engine control to minimize diesel consumption
- Hydraulically engaging power belt tensioner



Innovations in milling and loading

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7 New milling drum assembly ensures maximum performance

- Overload sensors mounted on the scraper blade and gradation control beam, as well as active floating position for side plates left and right
- Partial loading also possible at maximum milling depth
- Extremely small distance of outer machine edge to milling edge
- 600 mm milling width can be retrofitted as an alternative option

8 Unrivalled flexibility of the discharge conveyor

- Hydraulically operated folding conveyor
- Wide slewing angles
- Quick-change coupling for easy discharge conveyor assembly and disassembly

6 Swift, dynamic manoeuvring

- Travel speed of up to 12 km/h
- Swift steering using the wheel
- Ultra-precise steering using the fingertip steering feature integrated in the armrest
- Reversing with milling drum switched on

Innovations in operation

INTUITIVE LEVELLING

The new LEVEL PRO PLUS levelling system is easy and intuitive to use, and thus guarantees exceedingly accurate milling results.

FULLY INTEGRATED LEVELLING SYSTEM

A high degree of automation is enabled by the full integration of the LEVEL PRO PLUS levelling system with the machine control system.



Perfect operation pays off

The ingenious operating, visibility and levelling concept of the W 50 Ri/W 60 Ri makes you work fast. Yet it does not just speed up processes and improves results: even more importantly, operators derive greater satisfaction from their work. At the end of the day, this translates to greater productivity and profitability – whatever the job.

HEIGHT MEASUREMENT SENSORS

Heavy-duty displacement sensors located in the hydraulic cylinders mounted on the protective side plates accurately measure the milling depth and transfer this information onto the high-resolution LEVEL PRO PLUS control screen.



Machine height adjustment integrated in the multi-functional armrest

FRONT VISIBILITY

The chassis has been designed as slender as possible to provide an unobstructed view of the right milling edge.

AUTOMATED FEATURES

Many newly added automated features make life much more convenient for the operator whilst improving daily performance.

MULTI-FUNCTIONAL ARMREST

The multi-functional, individually adjustable armrest combines an innovative design approach with perfect ease of use. Important operating parameters are displayed on the colour control screen.

INCREMENTAL HEIGHT ADJUSTMENT

This new feature integrated in the control panel on the left-hand side enables accurate milling width adjustments in 1 mm or 5 mm increments.

REAR VISIBILITY

The compact loading conveyor suspension system permits good visibility of the milled surface at the rear of the machine.

VISIBILITY OF THE AREA IN FRONT OF THE MILLED SURFACE

Both the right and the left protective side plates are perfectly visible as a result of the optimized geometry of the operator's platform.

ADDITIONAL LEVELLING FEATURES

The LEVEL PRO PLUS levelling system provides many automated and supplementary features, including the automatic lowering of the milling drum to the set milling depth.



Visibility of the area in front of the milled surface



LEVEL PRO PLUS levelling system

Innovations in driving and steering

SWIFT STEERING

The steering wheel is used for particularly quick steering.

FINGERTIP STEERING

The exceedingly sensitive hydraulic steering system also enables swift and effortless steering via the armrest on the right-hand side.

REVERSING

The reversing option with the milling drum switched on permits fast and easy manoeuvring on the job site.

AUTOMATIC TRACKING FEATURE

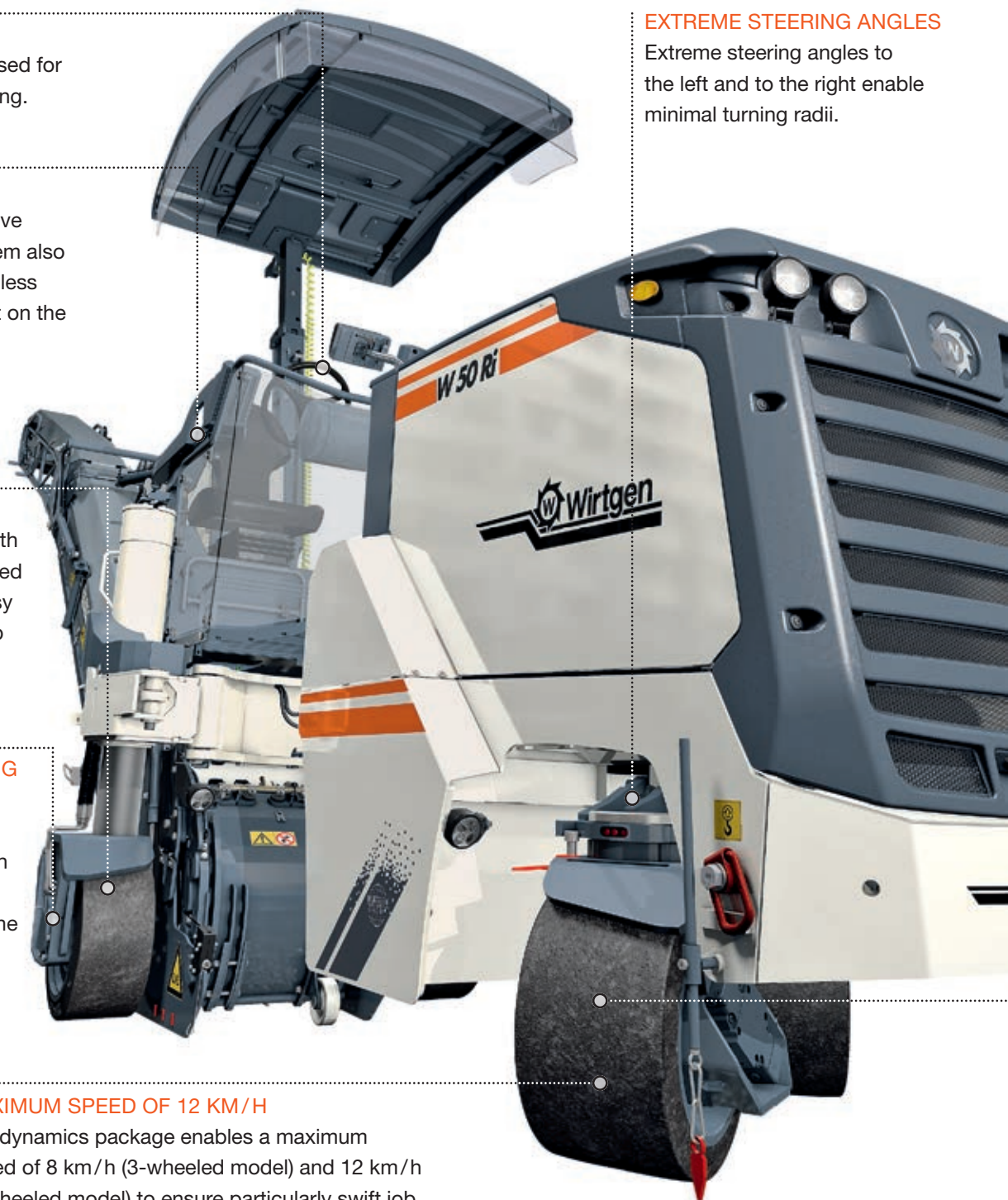
The automatic tracking of the right rear wheel in pivoted position makes the small milling machine extremely versatile.

EXTREME STEERING ANGLES

Extreme steering angles to the left and to the right enable minimal turning radii.

MAXIMUM SPEED OF 12 KM/H

The dynamics package enables a maximum speed of 8 km/h (3-wheeled model) and 12 km/h (4-wheeled model) to ensure particularly swift job completion.



Cold milling machine with best-in-class versatility and operating speed

Versatile and fast-working cold milling machines save both time and money. The W 50 Ri/W 60 Ri maximizes time savings in any situation: when milling extremely small radii, turning in narrow passages, pivoting the right rear wheel, negotiating obstacles or quickly travelling to the next job site on its own.

AUTOMATIC PIVOTING

The automatic pivoting of the right rear wheel happens extremely quickly without having to move the milling drum into position.

SAFE LOCKING

The safe and firm locking of the right rear wheel to the chassis in its end position minimizes wear and enhances accuracy.

ROBUST SWIVEL JOINT

The massive slide bearing ensures minimum internal clearance and thus uniformly accurate milling results.



3 OR 4 WHEELS

Depending on customer specifications, the small milling machine is available with three or four wheels.



Swift pivoting of the right rear wheel

OFFSET FRONT WHEELS

The front wheels are offset by 15 centimetres (in the 4-wheeled version) to travel “fully in line” when the steering wheel is turned to the right. Furthermore, the machine enables an optimized approach to obstacles and terrain edges.

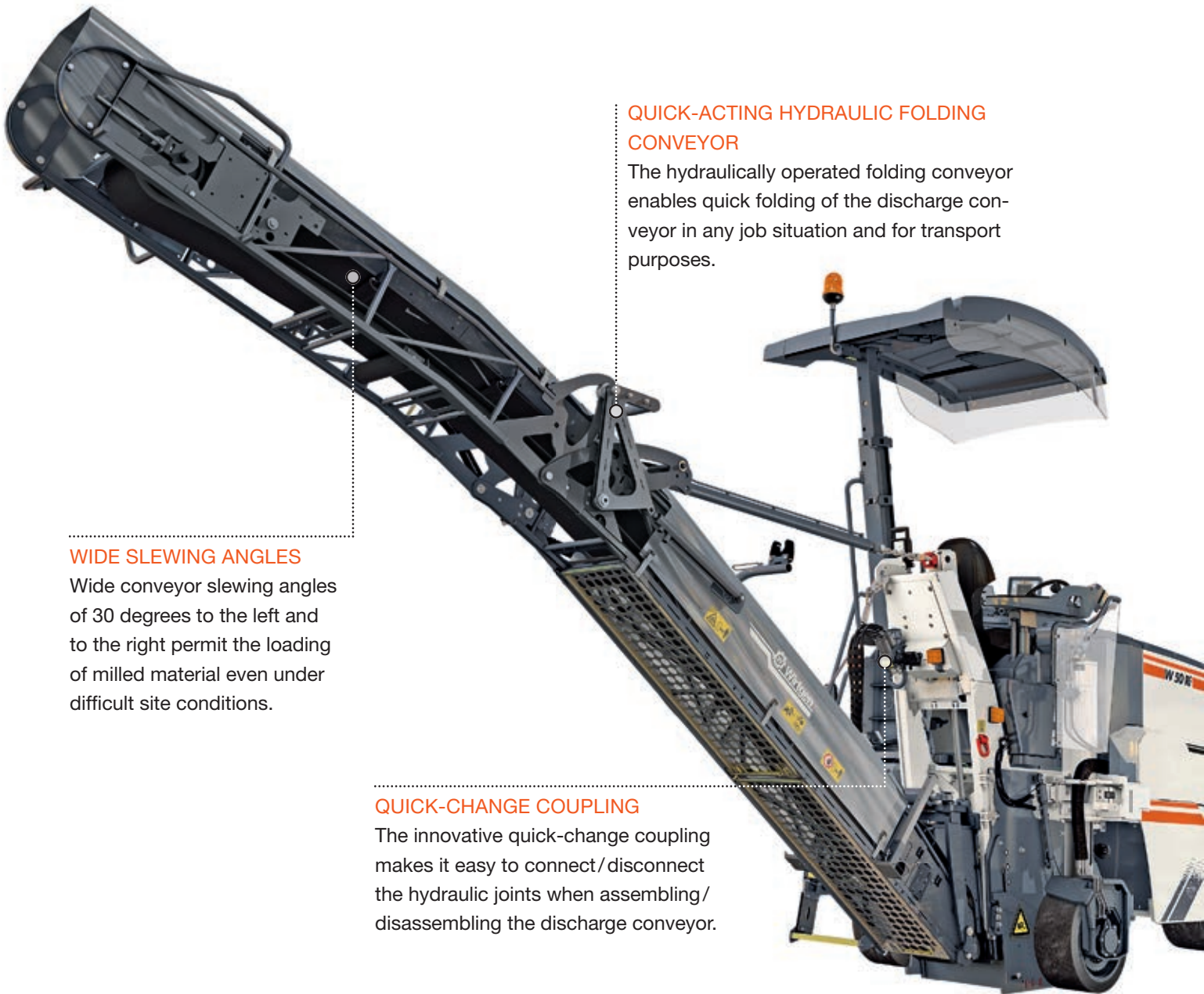


Detailed view of the 4-wheel front axle

WIDE WHEELS

The extra-wide front wheels ensure low area loads and reduce wear.

Innovations in milling and loading



QUICK-ACTING HYDRAULIC FOLDING CONVEYOR

The hydraulically operated folding conveyor enables quick folding of the discharge conveyor in any job situation and for transport purposes.

WIDE SLEWING ANGLES

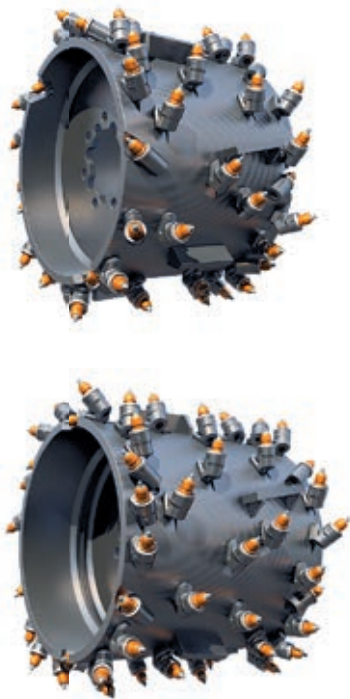
Wide conveyor slewing angles of 30 degrees to the left and to the right permit the loading of milled material even under difficult site conditions.

QUICK-CHANGE COUPLING

The innovative quick-change coupling makes it easy to connect/disconnect the hydraulic joints when assembling/disassembling the discharge conveyor.

VARIOUS MILLING DRUMS

A vast array of original Wirtgen milling drums and special milling drums is available to cater to a wide range of uses. The distinctive feature of these drums is their Wirtgen ornamental flange.



Maximum functionality

The W 50 Ri/W 60 Ri has been designed to ensure maximum performance when loading milled material. And the innovative, completely round milling drum assembly is a joy to work with for any milling machine operator. Overall, the host of smart solutions developed for the milling drum, edge protectors, scraper blade and gradation control beam make the milling process faster and easier whilst ensuring a higher quality standard.

OVERLOAD SENSORS AND ACTIVE FLOATING POSITION

These clever features trigger a short automatic raising of scraper blade, gradation control beam or edge protectors, for instance to prevent tilting, blocking or yielding of the machine to soft ground.

DECOUPLED SCRAPER BLADE

The scraper blade has been decoupled from the loading conveyor, which permits partial loading even when milling at the maximum possible depth.

ALTERNATIVE MILLING WIDTHS

The basic machine is available with milling widths of 500 and 600 mm.

EXTREMELY SMALL DISTANCE OF OUTER MACHINE EDGE TO MILLING EDGE

The extremely small distance of the right milling edge to the outer edge of the machine ensures that only a minimum amount of residual material remains on the milled surface.



Milling drum assembly with smart features

Innovations in performance and productivity

HIGH ENGINE POWER

The exceedingly powerful, high-torque engine ensures highly productive work and swift progress even at the maximum milling depth.

STATE-OF-THE-ART ENGINE CONTROL

The engine speed is always set according to the specific requirements, which ensures low-noise operation and minimizes diesel consumption.

HIGH MACHINE STABILITY

The new 4-wheel axle ensures perfect manoeuvrability under any site conditions.



Top performance in any job

Complete your jobs up to 20% faster whilst maximizing cost savings! The W 50 Ri/W 60 Ri provides utmost flexibility and thus ensures perfect job outcomes whatever the conditions.

VARIOUS MILLING DRUM SPEEDS

Three different milling drum speeds cater to a wide range of uses to enable maximum milling performance under any job conditions.

CENTRALLY ARRANGED TANKS

Water and diesel tanks arranged in the machine centre ensure neutral axle load distribution and perfect traction irrespective of their filling levels.

SUPPLEMENTARY WEIGHTS

Combined with variable supplementary weights of up to 1,000 kg, the low own weight of the small milling machine permits a high operating weight, optimal traction and effortless transport.

HYDRAULIC POWER BELT TENSIONER

The automatically engaging hydraulic power belt tensioner enables safe and efficient power transmission.

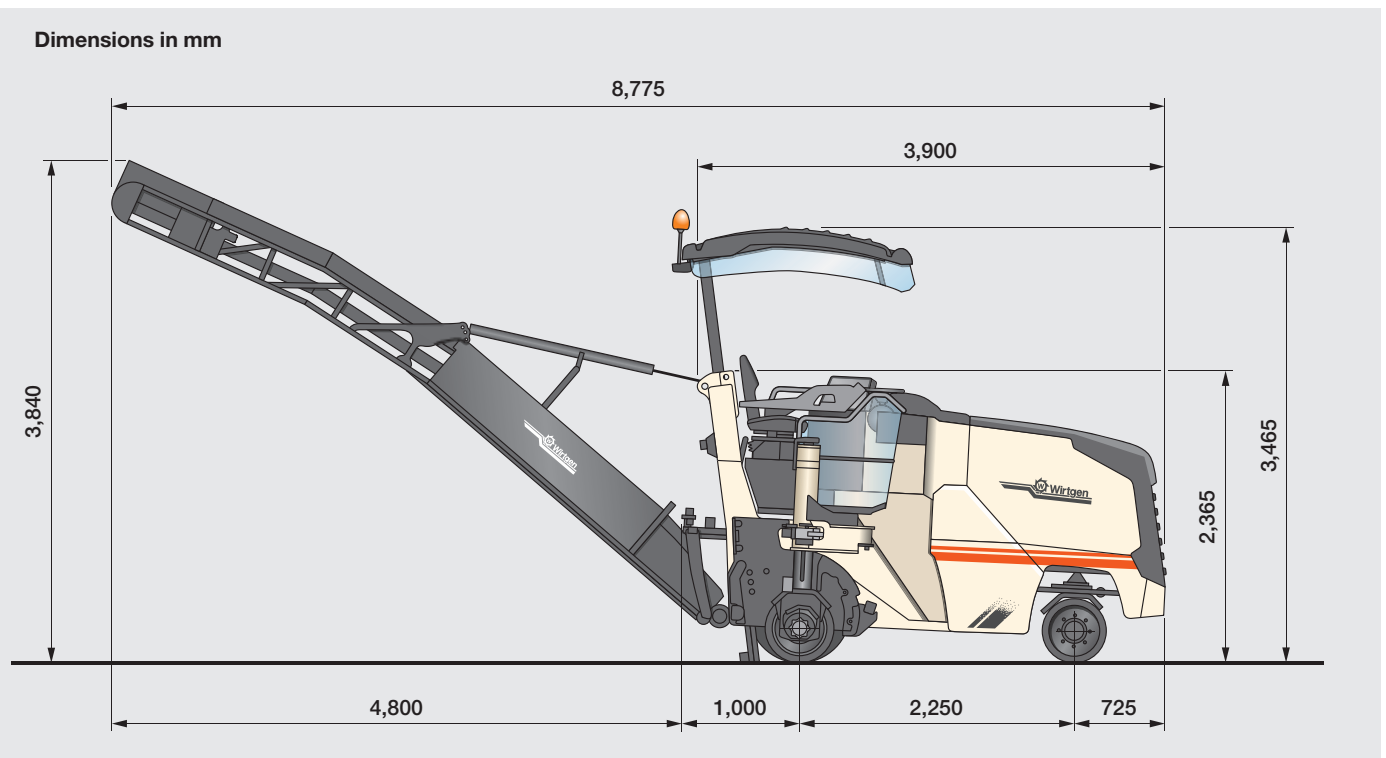


Up to 20% quicker job completion with the W 50 Ri/W 60 Ri

LOW MACHINE CENTRE

Perfect traction is ensured by the particularly low centre and optimal weight distribution of the machine.

Technical specification W 50 Ri/W 60 Ri



Machine weights	W 50 Ri	W 60 Ri
Empty weight of machine without conveyor and tank contents	6,620 kg	7,000 kg
Operating weight, CE*, 3-wheeled model without conveyor	7,120 kg	7,500 kg
Operating weight, max. (full tanks, full range of equipment)	9,480 kg	9,480 kg
Weights of tank contents		
Water tank filling in kg	600 kg	
Diesel tank filling in kg (0.83 kg/l)	190 kg	
Optional equipment features increasing/reducing empty weight		
Driver and tools		
Driver	75 kg	
Weight of 2 cutting tool containers	50 kg	
On-board tools	30 kg	
Optional supplementary weights		
Supplementary weight for flexible use 1	380 kg	Standard
Supplementary weight for flexible use 2	620 kg	620 kg

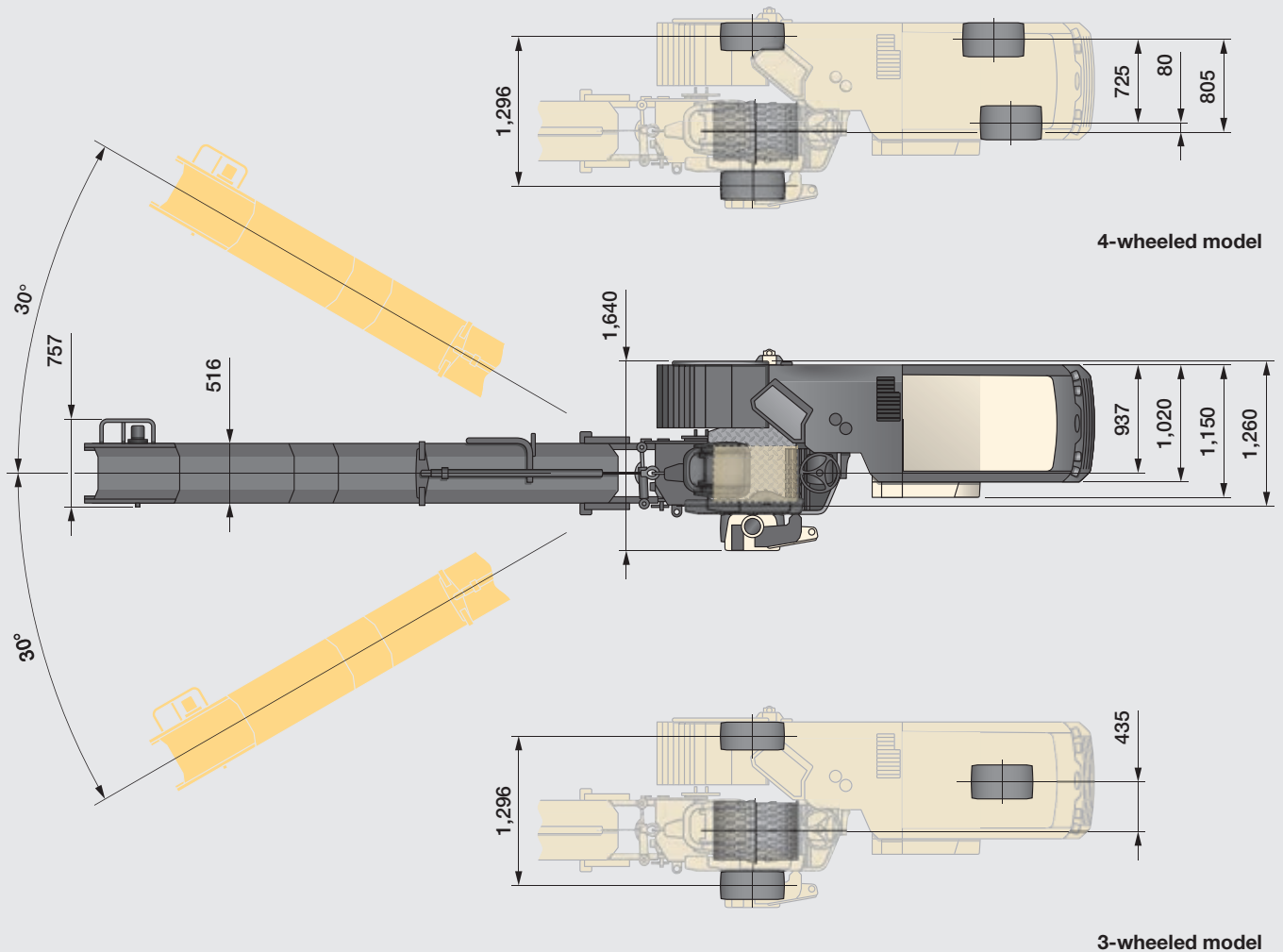
* = Weight of machine with half-full water tank, half-full fuel tank, driver (75 kg) and on-board tools

Optional equipment features increasing /reducing empty weight

Optional additional equipment

Discharge conveyor, long design, 5,600 mm	650 kg
Hydraulically folding discharge conveyor, long design, 5,600 mm	710 kg
Discharge conveyor, short design, 1,100 mm	450 kg
4-wheeled model in lieu of 3-wheeled model	130 kg
Canopy	150 kg

Dimensions in mm



Equipment features of W 50 Ri/W 60 Ri

Standard equipment

Basic machine

- › Water-cooled engine
- › Elastically mounted engine station to reduce vibrations and noise
- › Situation-dependent automatic engine speed control
- › Water cooler with temperature-related fan speed
- › Automatically engaging hydraulic power belt tensioner for reliable transmission of power
- › Engine cowling with highly effective soundproofing opened by means of gas-assisted shock absorbers
- › Standard painting in Wirtgen white with orange stripes

Milling drum assembly

- › Hard-wearing, round milling drum housing
- › Hydraulically lifting side plates, left and right
- › Right-hand side plate in hinged design for easy milling drum replacement
- › Water spray bar in milling drum assembly

Milling drums

- › Milling drum, milling width 500 mm or 600 mm respectively, HT08 toolholder system, tool spacing 15 mm
- › Full set of point-attack cutting tools
- › Optimized for quick milling drum replacement using a centring spigot

Loading of milled material

- › Milling drum housing sealing panels in lieu of discharge conveyor system

Machine and levelling control

- › Colour control screen displaying the milling depth and all major operating parameters
- › Milling depth measurement via measuring sensors integrated in the hydraulic cylinders of the wheels' height adjustment system
- › Digital milling depth display on the control screen including memory capacity for three different milling depths per machine side
- › Digital load control with engageable differential lock in forward and reverse gear

Operator's platform

- › Convenient access to operator's platform with night lighting
- › Right-hand armrest in functional design including all major operating functions and colour control screen
- › Individually adjustable steering console
- › Individually adjustable driver's seat on the right side of the machine
- › Vandal-proof control covers
- › Illuminated control panel/night design
- › Fully anti-vibration mounted operator's platform
- › Reversing horn with clearly audible sound
- › Rear view mirror, left

Chassis and height adjustment

- › 3-wheeled model for swift and easy manoeuvring on site
- › Continuously adjustable, hydraulic all-wheel drive with three speed ranges
- › Automatic system for pivoting and locking the right-hand rear wheel in front of the milling drum
- › Hydraulic proportional height adjustment with two speed settings at the rear wheel units
- › Smooth, hydraulic front-wheel steering
- › Hydraulically disengaging spring-loaded multiple-disk brake

Miscellaneous

- › Lighting package comprising 9 halogen spotlights and one rotating beacon
- › Heated water tank
- › Towing device
- › Safety package with emergency stop button
- › Comprehensive toolkit in lockable toolbox
- › Large, lockable storage compartments for additional tools and up to 4 cutting tool containers
- › European design type certification, GS mark (Geprüfte Sicherheit = Tested Safety) and CE conformity
- › Standard warranty of 12 months or 1,000 engine operating hours
- › Machine commissioning by qualified personnel

Optional equipment

Basic machine

- › Special painting in one or several colours

Milling drum assembly

- › Hydraulically adjustable front sealing of milling drum assembly
- › Hydraulic pre-installation for discharge conveyor with standard couplings
- › Hydraulic pre-installation for discharge conveyor with quick-change coupling for hydraulic connections
- › Performance package for machine without scraper blade:
 - active floating position for side plates left and right
 - fully automatic lowering of milling drum to the pre-selected milling depth
- › Performance package for machine with scraper blade:
 - active floating position for side plates left and right
 - fully automatic lowering of milling drum to the pre-selected milling depth
 - overload sensor at the scraper blade to initiate automatic raising when encountering an obstacle
 - scraper cylinder with measuring sensor to indicate scraper height on control screen
 - reversing of machine with milling drum switched on

Milling drums

- › Milling drum, milling width 400 mm, HT08 toolholder system, tool spacing 12 mm
- › Milling drum, milling width 300 mm, HT08 toolholder system, tool spacing 12 mm
- › Fine milling drum, milling width 500 mm, HT5 toolholder system, tool spacing 6 mm
- › Fine milling drum, milling width 600 mm, HT5 toolholder system, tool spacing 6 mm
- › Side cutting ring with protective cover and attachment parts, milling width 80 mm, milling depth 300 mm, HT02 toolholder system
- › Mounting carriage for milling drums
- › Hydraulically operated tool extractor, complete with holder and associated electrical and hydraulic connections

Loading of milled material

- › Heavy-duty discharge conveyor, 5,600 mm long, with 350 mm wide belt system
- › Heavy-duty, hydraulically folding discharge conveyor, 5,600 mm long, with 350 mm wide belt system
- › Heavy-duty discharge conveyor, 1,100 mm long, with 350 mm wide belt system
- › Hydraulically adjustable scraper system
- › Discharge conveyor system with adjustable conveying speed
- › Discharge conveyor slewing angle 30 degrees left, 30 degrees right
- › Hydraulic pre-installation for discharge conveyor with quick-change coupling for hydraulic connections

Machine and levelling control

- › LEVEL PRO PLUS levelling system including control screen and two measuring sensors integrated in the hydraulic cylinders of the side plates
- › Enhancement of the LEVEL PRO PLUS levelling system by incorporating a RAPID SLOPE (cross slope) sensor
- › Enhancement of the LEVEL PRO PLUS levelling system by incorporating a levelling arm including ultrasonic sensor and connecting cable

Operator's platform

- › Heated, individually adjustable comfort driver's seat
- › Canopy with electro-hydraulic height adjustment and mechanical adjustment to either side
- › Screen system 1 including one camera at the discharge conveyor and one display
- › Screen system 2 including one camera at the discharge conveyor, one camera mounted on a magnetic base and one display

Chassis and height adjustment

- › 4-wheeled model for swift and easy manoeuvring on site
- › Dynamics package, 3-wheeled model:
 - increased maximum travel speed of up to 8 km/h
 - automatic tracking of the right-hand rear wheel when pivoted in front of the milling drum
 - fingertip steering in the right-hand armrest
- › Dynamics package, 4-wheeled model:
 - increased maximum travel speed of up to 12 km/h
 - automatic tracking of the right-hand rear wheel when pivoted in front of the milling drum
 - fingertip steering in the right-hand armrest

Miscellaneous

- › High-performance lighting package comprising 9 LED spotlights and one LED rotating beacon
- › Supplementary weight 1, 380 kg
- › Supplementary weight 2, 620 kg
- › Pre-installation of hydraulic control valves and hydraulic power take-off at the rear of machine for hydraulically driven ancillary equipment
- › Powerful hydraulic hammer with 10-m hose
- › Hydraulically driven water filling pump (72 l/min at max. 6 bar)

Technical specification

W 50 Ri/W 60 Ri

Milling drum	W 50 Ri	W 60 Ri
Milling width	500 mm	600 mm
Milling depth* ¹	0–210 mm	0–210 mm
Tool spacing	15 mm	15 mm
Number of tools	60	70
Drum diameter with tools	750 mm	750 mm
Engine		
Manufacturer	Deutz	
Type	TCD 4,1 L4	
Cooling	water	
Number of cylinders	4	
Rated power at 2,100 min ⁻¹	105 kW/141 HP/143 PS	
Displacement	4,100 cm ³	
Theoretical maximum fuel consumption	28.2 l/h	
Actual fuel consumption in field mix	11.3 l/h	
Emission standards	EC Stage 3b/US Tier 4i	
Electrical system	24 V	
Tank capacities		
Fuel tank	230 l	
Hydraulic oil tank	63 l	
Water tank	600 l	
Driving properties		
Milling speed	0–48 m/min (0–2.9 km/h)	
Travel speed, standard	0–100 m/min (0–6 km/h)	
Travel speed, optional 4-wheeled model	0–200 m/min (0–12 km/h)	
Tyres		
Type	Solid rubber	
Tyre size front, 3-wheeled model (Ø x W)	530 x 300 mm	
Tyre size front, 4-wheeled model (Ø x W)	530 x 300 mm	
Tyre size rear (Ø x W)	559 x 254 mm	
Conveyor system		
Belt width of discharge conveyor	350 mm	
Theoretical capacity of discharge conveyor	80 m ³ /h	
Shipping dimensions		
Machine (L x W x H)	3,960 x 1,620 x 2,400 mm	
Discharge conveyor, long design (L x W x H)	6,100 x 817 x 1,300 mm	

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





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