

Leading through passion.

Cold Milling Machines

W 35 Ri



At a glance: the highlights of the new W 35 Ri

02
03





Highlights in operation

- > Variable operator's platform
- > Ergonomic multifunctional armrest
- > Simple, intuitive operating concept
- > Full view of the right-hand side plate and important work areas
- > Display screen for machine parameters
- > New, precise LEVEL PRO PLUS leveling system
- > Fast-responding electronic slope sensor
- > Leveling by means of laser technology

Highlights in driving and steering

- > Excellent maneuverability and extremely small milling radius
- > Extremely compact machine design
- > Precise steering
- > Hydraulic all-wheel drive
- > Electronically controlled traction drive
- > Precise height adjustment
- > Memory function for height adjustment

Highlights in milling and loading

- > New, wear-resistant HT08 toolholder system
- > Milling power control for maximum advance speeds
- > Three different milling drum speed options
- > Milling drum housing for milling widths of up to 1 ft. 2 in. or 1 ft. 8 in. (350 mm or 500 mm)
- > Quick exchange of milling drums
- > Powerful, load-dependent water spray system at the milling drum
- > Two different conveyor lengths

Highlights in performance and productivity

- > Powerful engine complying with emission standards EU Stage 3b/US Tier 4 Final
- > Optional diesel particulate filter
- > Many new automated functions
- > Quick and easy maintenance
- > Supplementary weights
- > State-of-the-art WITOS telematics system
- > Perfectly arranged LED working lights

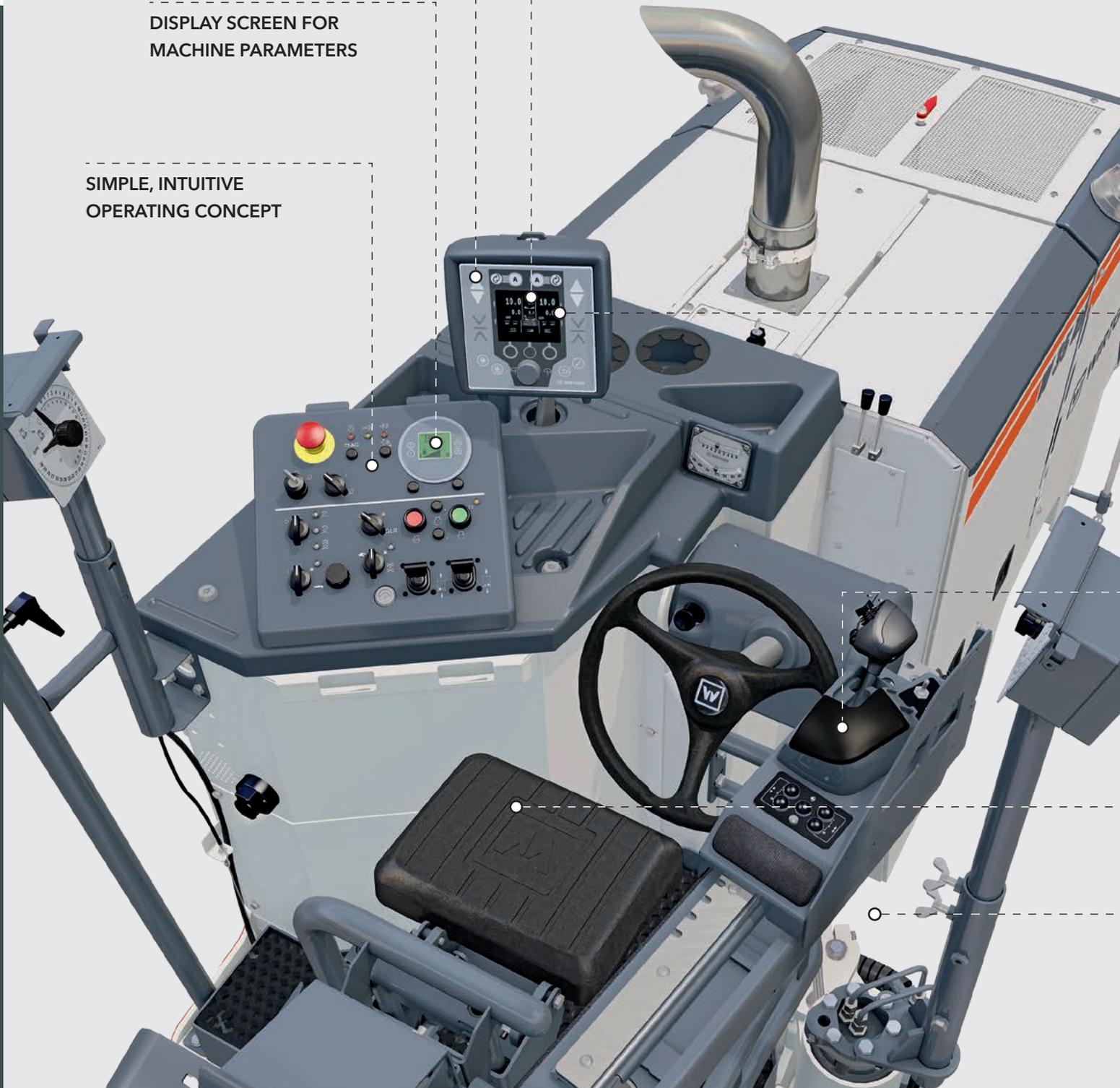
Highlights in operation

NEW, PRECISE LEVEL PRO PLUS
LEVELING SYSTEM

LEVELING BY MEANS OF
LASER TECHNOLOGY

DISPLAY SCREEN FOR
MACHINE PARAMETERS

SIMPLE, INTUITIVE
OPERATING CONCEPT



SIMPLE, INTUITIVE OPERATING CONCEPT

The simple operating concept not only improves operator performance but also increases the productivity of the small milling machine.

DISPLAY SCREEN FOR MACHINE PARAMETERS

Important machine parameters are shown clearly on the screen mounted in the operator's field of view.

LEVELING BY MEANS OF LASER TECHNOLOGY

Highly precise leveling by means of laser sensors is suitable, for example, for indoor milling.

NEW, PRECISE LEVEL PRO PLUS LEVELING SYSTEM

The LEVEL PRO PLUS leveling system is fully integrated into the machine's control system and offers simple and intuitive operation, guaranteeing precise milling results.

FAST-RESPONDING ELECTRONIC SLOPE SENSOR

The "Rapid Slope" electronic slope control sensor enables surfaces to be produced with a predefined cross slope.

ERGONOMIC MULTIFUNCTIONAL ARMREST

The individually adjustable armrest with multifunctional joystick permits quick, ergonomic operation.

VARIABLE OPERATOR'S PLATFORM

To allow flexible, ergonomic operation, the small milling machine can be operated either from the operator's platform on the machine or from the operator's platform at the rear of the machine. Switching from one position to the other is completed quickly and easily right on site.

FULL VIEW OF THE RIGHT-HAND SIDE PLATE AND IMPORTANT WORK AREAS

A free view towards the front and the milling edge, to the right-hand side plate and towards the rear enables operation in line with application requirements.

**FAST-RESPONDING
ELECTRONIC SLOPE
SENSOR**

**ERGONOMIC
MULTIFUNCTIONAL ARMREST**

VARIABLE OPERATOR'S PLATFORM

**FULL VIEW OF THE RIGHT-
HAND SIDE PLATE AND
IMPORTANT WORK AREAS**



Fully equipped operator's platform at the rear of the machine.

Highlights in driving and steering

PRECISE STEERING

MEMORY FUNCTION FOR HEIGHT ADJUSTMENT

PRECISE HEIGHT ADJUSTMENT

HYDRAULIC ALL-WHEEL DRIVE

ELECTRONICALLY CONTROLLED TRACTION DRIVE



**EXTREMELY COMPACT
MACHINE DESIGN**



**EXCELLENT MANEUVERABILITY AND
EXTREMELY SMALL MILLING RADIUS**

ELECTRONICALLY CONTROLLED TRACTION DRIVE

The electronically controlled traction drive with one transport and two milling speeds allows precise maneuvering for highly precise milling results.

HYDRAULIC ALL-WHEEL DRIVE

The hydraulic all-wheel drive system offers high traction both in challenging site conditions and during loading.

PRECISE HEIGHT ADJUSTMENT

The electrohydraulic two-stage height adjustment feature enables precise adjustment of the milling depth.

MEMORY FUNCTION FOR HEIGHT ADJUSTMENT

To allow quick, convenient height adjustment, three different height positions per machine side can be saved on memory buttons in the multifunctional armrest.

PRECISE STEERING

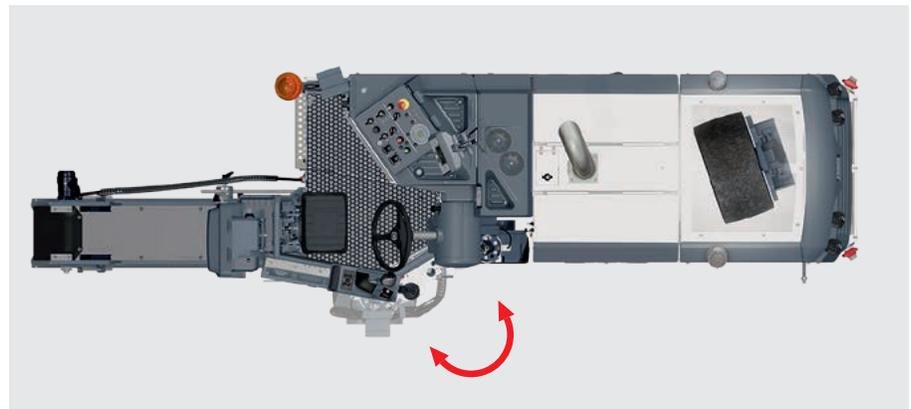
The machine's hydraulic steering system ensures fast, yet precise steering maneuvers. When operating the machine from the platform at the rear, steering can be conveniently effected electronically via the steering function integrated in the multifunctional joystick.

EXTREMELY COMPACT MACHINE DESIGN

Its compact design not only enables the small milling machine to work in extremely restricted space conditions and pass through narrow workshop doors but also ensures easy transport.

EXCELLENT MANEUVERABILITY AND EXTREMELY SMALL MILLING RADIUS

Large steering angles to both sides permit fast maneuvering and turning on the construction site. They additionally ensure the smallest inner milling radius in this machine class.



Large steering angles and compact design.

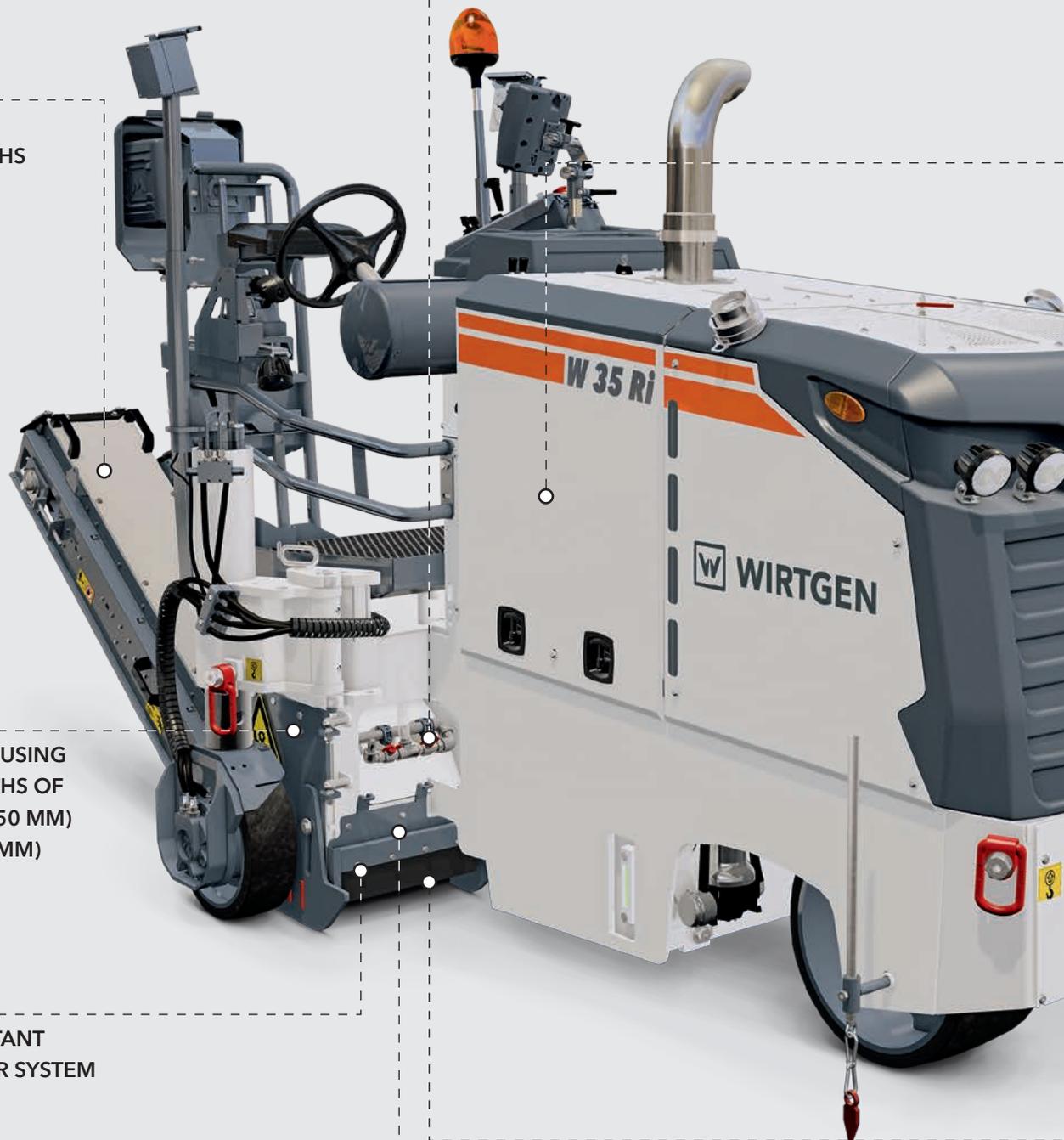
Highlights in milling and loading

TWO DIFFERENT
CONVEYOR LENGTHS

MILLING DRUM HOUSING
FOR MILLING WIDTHS OF
UP TO 1 FT. 2 IN. (350 MM)
OR 1 FT. 8 IN. (500 MM)

NEW, WEAR-RESISTANT
HT08 TOOLHOLDER SYSTEM

THREE DIFFERENT MILLING DRUM
SPEED OPTIONS



POWERFUL
WATER SPRAY SYSTEM
AT THE MILLING DRUM

MILLING POWER CONTROL FOR
MAXIMUM ADVANCE SPEEDS



QUICK EXCHANGE
OF MILLING DRUMS

THREE DIFFERENT MILLING DRUM SPEED OPTIONS

Three different milling drum speed options enable high milling performance in a wide range of applications.

NEW, WEAR-RESISTANT HT08 TOOLHOLDER SYSTEM

The newly developed HT08 toolholder system impresses with high wear resistance and an extended lifespan.

MILLING DRUM HOUSING FOR MILLING WIDTHS OF UP TO 1 FT. 2 IN. (350 MM) & 1 FT. 8 IN. (500 MM)

In standard design, the milling drum housing accommodates milling drums offering a working width of up to 1 ft. 2 in. (350 mm). Milling drums offering working a width of up to 1 ft. 8 in. (500 mm) can be fitted in accordance with customer requirements. A wide variety of original WIRTGEN standard and special milling drums are on offer.

TWO DIFFERENT CONVEYOR LENGTHS

Conveyor lengths of 4 ft. 3 in. (1,300 mm) or 6 ft. 5 in. (1,900 mm) respectively round out the machine's wide range of applications.

POWERFUL WATER SPRAY SYSTEM AT THE MILLING DRUM

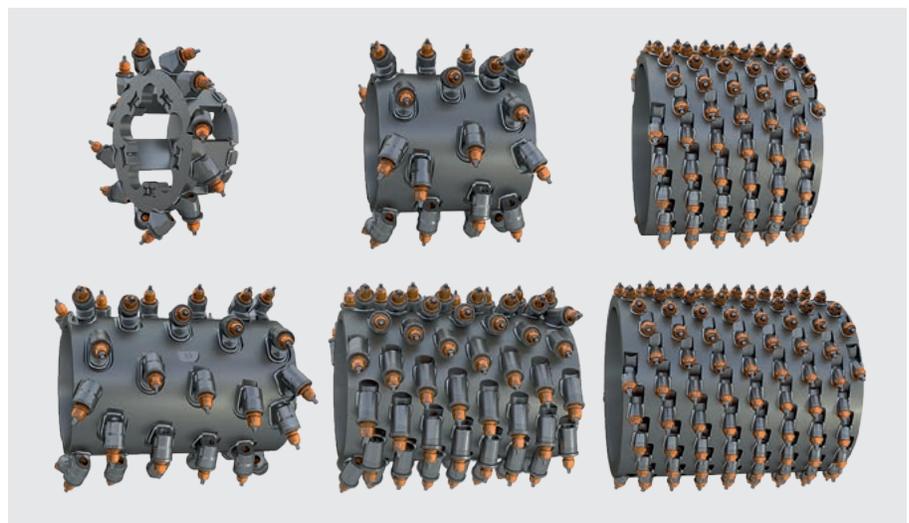
In combination with the water spray bar, the powerful load-controlled water pump not only ensures reliable tool cooling and long uptimes but also prevents the development of dust. In addition, it provides consistently high water pressure for easy cleaning of the machine on site.

MILLING POWER CONTROL FOR MAXIMUM ADVANCE SPEEDS

The engageable electronic load limit controller governs the advance speed in accordance with the engine load, thus enabling the small milling machine to always work at the ideal milling speed.

QUICK EXCHANGE OF MILLING DRUMS

Milling drums are exchanged quickly thanks to the wide-opening door on the right-hand side and intelligent mounting aids.



A wide variety of different milling drums for a wide range of applications.

Highlights in performance and productivity

QUICK AND EASY
MAINTENANCE

STATE-OF-THE-ART WITOS
TELEMATICS SYSTEM

PERFECTLY ARRANGED
LED WORKING LIGHTS

SUPPLEMENTARY
WEIGHT

MANY NEW
AUTOMATED FUNCTIONS





**OPTIONAL DIESEL
PARTICULATE FILTER**

**POWERFUL ENGINE COMPLYING
WITH EMISSION STANDARDS
EU STAGE 3B/US TIER 4 FINAL**

SUPPLEMENTARY WEIGHTS

The wide ballasting range comprising separately removable weight slabs of up to 3,087 lbs. (1,400 kg) altogether increases the machine's range of applications.

PERFECTLY ARRANGED LED WORKING LIGHTS

Perfectly arranged LED working lights ensure full illumination of the entire surroundings of the machine.

STATE-OF-THE-ART WITOS TELEMATICS SYSTEM

The new WITOS telematics system assists with fleet management as well as with the planning, administration and execution of construction processes, improving efficiency in day-to-day operation.

QUICK AND EASY MAINTENANCE

Excellent accessibility to all check points and points of maintenance minimizes maintenance requirements.

OPTIONAL DIESEL PARTICULATE FILTER

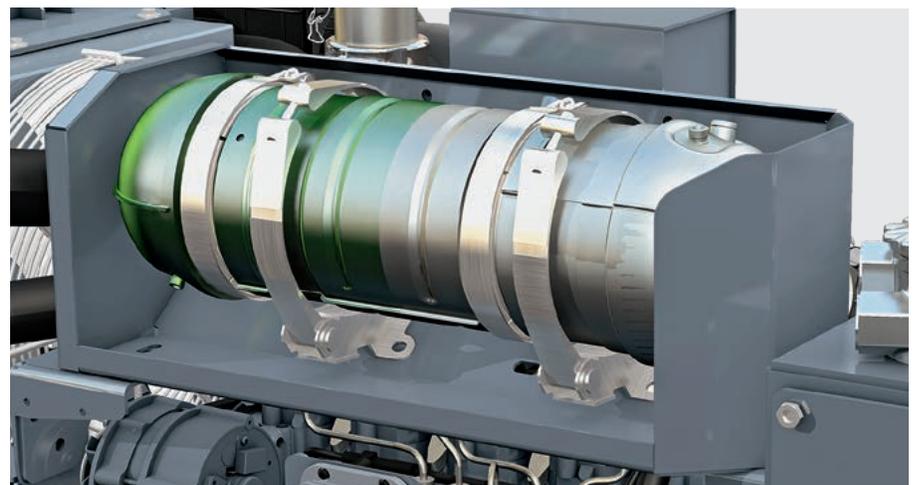
The diesel particulate filter optionally available as original equipment meets even stricter emission requirements, for example, during indoor milling operations.

POWERFUL ENGINE COMPLYING WITH EMISSION STANDARDS EU STAGE 3B/US TIER 4 FINAL

The powerful diesel engine with temperature-related fan speed ensures quiet, economical operation and high reserve capacities for fast milling regardless of the milling depth. The engine additionally complies with the currently strictest emission standards EU Stage 3b/US Tier 4 Final.

MANY NEW AUTOMATED FUNCTIONS

The WIDRIVE machine management system greatly improves operator comfort and increases performance by controlling the engine speed and travel speed or switching the water spray system on and off.



A diesel particulate filter ensures compliance with strict emission standards.

Technical specification

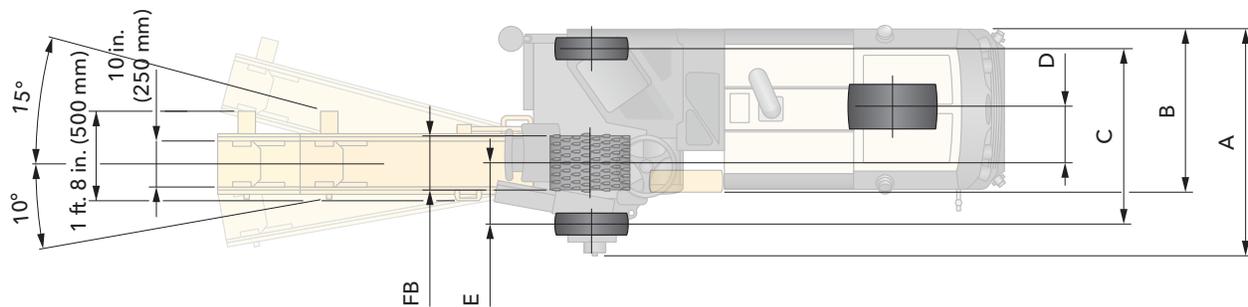
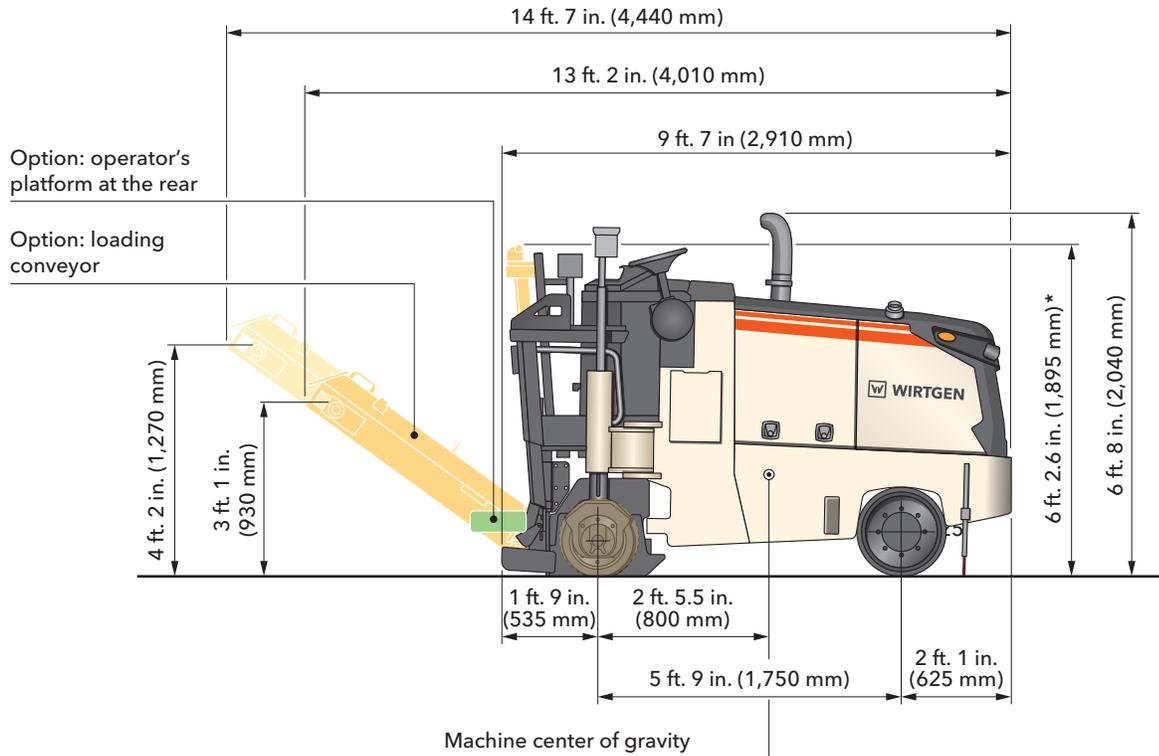
	Standard FB350	Optional FB500
Milling drum		
Milling width	1 ft. 1 in. (350 mm)	1 ft. 7 in. (500 mm)
Milling depth*1	0-4.3 in. (0-110 mm)	
Drum diameter with tools	1 ft. 6 in. (460 mm)	
Engine		
Engine manufacturer	Deutz AG	
Type	TCD 2.9 L4	
Cooling	water	
Number of cylinders	4	
Rated power at 2,300 min ⁻¹	45 kW/60 HP/61 PS	
Maximum power at 2,300 min ⁻¹	45 kW/60 HP/61 PS	
Displacement	2.9 L (2,925 cm ³)	
Fuel consumption at rated power	3.5 US gph (13.2 l/h)	
Fuel consumption in field mix	2.3 US gph (8.8 l/h)	
Emission standards	EU Stage 3b/US Tier 4f	
Electrical system		
Electrical power supply	24 V	
Tank capacities		
Fuel tank	18.5 gallons (70 l)	
Hydraulic oil tank	8.5 gallons (32 l)	
Water tank	72.6 gallons (275 l)	
Driving properties		
Max. milling speed	0-82 ft./min (0-25 m/min) 93 mph (0-1.5 km/h)	
Max. travel speed	0-325 ft./min (0-100 m/min) 3.7 mph (0-6 km/h)	
Tyres		
Tyre size, front (Ø x W)	19 in. x 10 in. (500 x 250 mm)	
Tyre size, rear (Ø x W)	15 in. x 5 in. (405 x 130 mm)	
Loading of the milled material		
Belt width of discharge conveyor	10 in. (250 mm)	
Theoretical capacity of discharge conveyor	43 tons/h (33 m ³ /h)	

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

Weight of base machine		
Empty weight of machine without tank contents	6,458 lbs. (2,970 kg)	
Operating weight, CE* ²	10,295 lbs. (4,670 kg)	
Operating weight, max. (full tanks, full range of equipment)	11,288 lbs. (5,120 kg)	
Weights of tank contents		
Water tank filling	606 lbs. (275 kg)	
Diesel tank filling (0.83 kg/l)	128 lbs. (58 kg)	
Additional add-on weights		
Driver and tools		
Driver	165 lbs. (75 kg)	
Weight of 2 cutting tool containers	110 lbs. (50 kg)	
On-board tools	66 lbs. (30 kg)	
Optional milling drum assemblies in lieu of standard		
	Absolute weight	Added/reduced weight
Ancillary parts milling drum housing FB350, for machine with discharge conveyor	112 lbs. (51 kg)	64 lbs. (29 kg)
Ancillary parts milling drum housing FB500, for machine with discharge conveyor	220 lbs. (100 kg)	172 lbs. (78 kg)
Ancillary parts milling drum housing with extension to FB500, for machine without discharge conveyor	355 lbs. (161 kg)	284 lbs. (139 kg)
Optional milling drums in lieu of standard		
Fine Milling drum FB350 HT05 LA6 with 57 picks	238 lbs. (108 kg)	40 lbs. (18 kg)
Micro-fine milling drum FB350 HT04 LA3 with 117 picks	227 lbs. (103 kg)	29 lbs. (13 kg)
Milling drum FB500 HT08 LA15 with 39 picks	271 lbs. (123 kg)	73 lbs. (33 kg)
Fine Milling drum FB500 HT05 LA6 with 82 picks	353 lbs. (160 kg)	154 lbs. (70 kg)
Micro-fine milling drum groove profile, FB150+2x25 (side outlet) HT04 LA3 with 67 picks	214 lbs. (97 kg)	15 lbs. (7 kg)
Milling drum FB200+2x25 HT04 LA3 with 83 picks	216 lbs. (98 kg)	17 lbs. (8 kg)
Milling drum FB250+2x25 HT04 LA3 with 99 picks	220 lbs. (100 kg)	22 lbs. (10 kg)
Milling drum FB300+2x25 HT04 LA3 with 117 picks	220 lbs. (100 kg)	22 lbs. (10 kg)
Milling drum FB450+2x25 HT04 LA3 with 166 picks	315 lbs. (143 kg)	117 lbs. (53 kg)
Saw blade FB14 rail milling	22 lbs. (10 kg)	-176 lbs. (- 80 kg)
Saw blade FB19 rail milling	29 lbs. (13 kg)	-169 lbs. (- 77 kg)
Ancillary parts rail milling Ri59N	126 lbs. (57 kg)	126 lbs. (57 kg)
Milling drum FB25 with 24 picks rail milling	37 lbs. (17 kg)	-161 lbs. (- 73 kg)
Milling drum FB45 with 24 picks rail milling	61 lbs. (28 kg)	-137 lbs. (- 62 kg)
Milling drum FB80 HT02 MD110 with 12 picks	57 lbs. (26 kg)	141 lbs. (- 64 kg)
Optional supplementary weights		
Supplementary weights for flexible use	3,086 lbs. (1,400 kg)	3,086 lbs. (1,400 kg)
Optional additional equipment		
Shortened discharge conveyor, 1,300 mm long, conveyor belt width 250 mm	220 lbs. (100 kg)	220 lbs. (100 kg)
Discharge conveyor, 1,870 mm long, conveyor belt width 250 mm	276 lbs. (125 kg)	276 lbs. (125 kg)
Step device for FB350 with conveyor	40 lbs. (18 kg)	0 lbs. (0 kg)
Step device for FB500 with conveyor	49 lbs. (22 kg)	0 lbs. (0 kg)
Lowered operator's stand behind the machine	112 lbs. (51 kg)	112 lbs. (51 kg)
Mounting side milling wheel FB80 (3"), FT180 compl.	432 lbs. (196 kg)	185 lbs. (84 kg)
Hydraulic hammer with 10 m connection hose	82 lbs. (37 kg)	82 lbs. (37 kg)

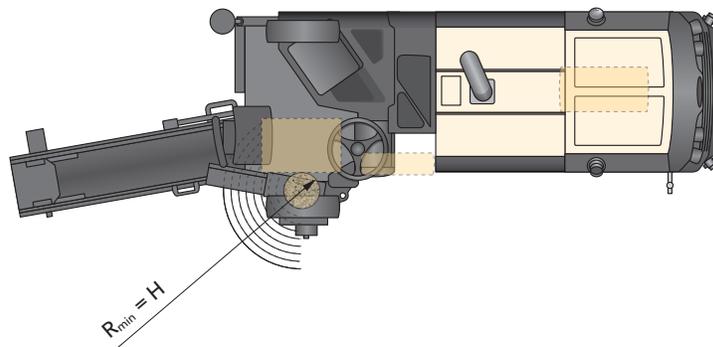
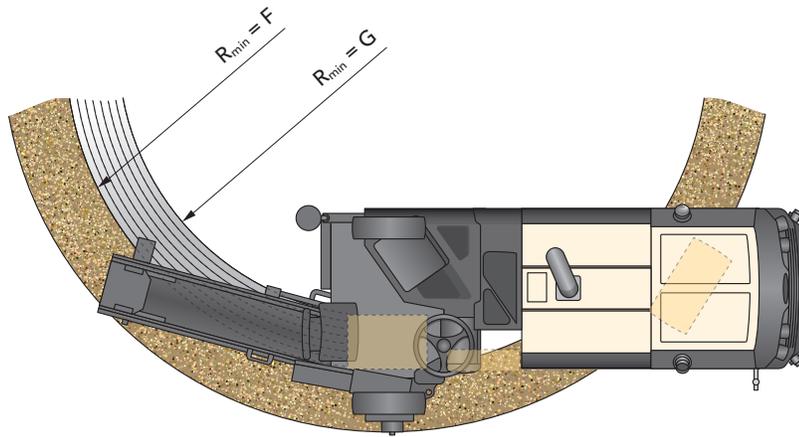
*² = Weight of machine with half-full water tank, half-full fuel tank, driver (75 kg) and on-board tools, excluding optional equipment

Dimensions



	A	B	C	D	E	FB
Standard FB350	3 ft 11 in. (1,200 mm)	2 ft 11.5 in. (900 mm)	3 ft. 1 in. (945 mm)	1 ft. (310 mm)	11.6 in. (295 mm)	1 ft. 2 in. (350 mm)
Optional FB500	4 ft. 5 in. (1,350 mm)	2 ft 11.5 in. (900 mm)	3 ft. 5 in. (1,095 mm)	1 ft. 3 in. (385 mm)	1 ft. 2.6 in (370 mm)	1 ft. 8 in. (500 mm)

Dimensions in American standard and mm
 * = Maximum machine height with exhaust pipe removed



	F	G	H
Standard FB350	9 ft. 10 in. (2,990 mm)	8 ft. 8 in. (2,640 mm)	3.1 in. (80 mm)
Optional FB500	10 ft. 4 in. (3,140 mm)	8 ft. 8 in. (2,640 mm)	0

Milling radius, 2 in. (50 mm) milling depth, Dimensions in American standard and mm

Standard equipment

Base machine	
Basic machine with engine	■
Robust machine chassis	■
Wide opening engine covers, with gas spring support and highly effective noise insulation	■
Radiator with temperature-dependent fan speed	■
Integrated 72.6 gallon (275 litre) water tank	■
Integrated 18.5 gallon (70 litre) diesel tank	■
Loading and tie-down points integrated in the chassis	■
Water injection strip with on/off function for pick cooling with water pump with load-dependent control	■
Wide opening milling drum door with automatic electrical safety shut-down	■
Right side plate in hinged configuration in conjunction with centring pin system on the milling drum holder for quick and easy change of milling drums	■
Milling drum unit	
Ancillary parts milling drum housing FB350, for machine without discharge conveyor	□
Milling drums	
Milling drum FB350 HT08 LA15 with 31 picks	□
Machine control and leveling system	
WIDRIVE machine controller to reduce operator workload and increase performance	■
Mechanical milling depth display via gauge right and left	■
Operator's stand	
Flexibly mounted operator's stand on the top of the machine	■
Multi-function armrest on right with up/down and front/back adjustment with joystick and various controls ergonomically arranged	■
Display for important machine parameters on the left control panel	■
Convenient operating console with practical switches	■
Convenient footstep to the operator's stand	■
Operator's stand with vibration damping	■
Steering bracket with slope adjustment function	■
Covers for operating panels with lock	■

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

Under-carriage and height adjustment	
Hydraulic 3-wheel all-wheel drive with hydraulic flow distributor	■
Two manually engageable milling speeds as well as one travelling gear	■
Hydraulic, easy front wheel steering	■
Hydraulic spring-loaded multi-disc brake	■
Hydraulic height adjustment with two speeds at the rear crawler units	■
Manually folding-in rear right wheel	■
Others	
Lockable tool box with set of tools for maintenance and servicing	■
Additional mount for a pick bucket	■
Device for towing away for releasing the spring-loaded multi-disc brake	■
Reversing horn	■
Extensive safety package with EMERGENCY STOP switch	■
European type test certificate and CE conformity	■
Exhaust post-treatment diesel oxidation catalyst DOC	□
Exhaust post-treatment diesel oxidation catalyst DOC with diesel particulate filter DPF	□
Machine without additional hydraulic drive	□
Paint standard cream RAL 9001	□
Halogen lighting package including rotating beacon	□

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

Optional equipment

Milling drum unit	
Ancillary parts milling drum housing FB350, for machine with discharge conveyor	<input type="checkbox"/>
Ancillary parts milling drum housing FB500, for machine with discharge conveyor	<input type="checkbox"/>
Ancillary parts milling drum housing with extension to FB500, for machine without discharge conveyor	<input type="checkbox"/>
Milling drums	
Fine Milling drum FB350 HT05 LA6 with 57 picks	<input type="checkbox"/>
Micro-fine milling drum FB350 HT04 LA3 with 117 picks	<input type="checkbox"/>
Milling drum FB500 HT08 LA15 with 39 picks	<input type="checkbox"/>
Fine Milling drum FB500 HT05 LA6 with 82 picks	<input type="checkbox"/>
Micro-fine milling drum groove profile, FB150+2x25 (side outlet) HT04 LA3 with 67 picks	<input type="checkbox"/>
Milling drum FB200+2x25 HT04 LA3 with 83 picks	<input type="checkbox"/>
Milling drum FB250+2x25 HT04 LA3 with 99 picks	<input type="checkbox"/>
Milling drum FB300+2x25 HT04 LA3 with 117 picks	<input type="checkbox"/>
Milling drum FB450+2X25 HT04 LA3 with 166 picks	<input type="checkbox"/>
Saw blade FB14 rail milling	<input type="checkbox"/>
Saw blade FB19 rail milling	<input type="checkbox"/>
Ancillary parts rail milling Ri59N	<input type="checkbox"/>
Milling drum FB25 with 24 picks rail milling	<input type="checkbox"/>
Milling drum FB45 with 24 picks rail milling	<input type="checkbox"/>
Milling drum FB80 HT02 MD110 with 12 picks	<input type="checkbox"/>
Milled-out material loading	
Shortened discharge conveyor, 4 ft. 3 in. (1,300 mm) long, conveyor belt width 10 in. (250 mm)	<input type="checkbox"/>
Discharge conveyor, 6 ft. 1 in. (1,870 mm) long, conveyor belt width 10 in. (250 mm)	<input type="checkbox"/>
Connection pipe Ø 4.7 in (120 mm) for dust extraction	<input type="checkbox"/>
Machine control and leveling system	
LEVEL PRO PLUS leveling system right and left	<input type="checkbox"/>
Basic equipment for laser leveling - without laser transmitter	<input type="checkbox"/>
RAPID SLOPE lateral tilt sensor for LEVEL PRO PLUS leveling system	<input type="checkbox"/>
Pre-programmable height positions with automatic positioning	<input type="checkbox"/>

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

Operator's stand	
Equipment of the operator's stand with a standing seat	<input type="checkbox"/>
Step device for FB350 with conveyor	<input type="checkbox"/>
Step device for FB500 with conveyor	<input type="checkbox"/>
Lowered operator's stand behind the machine	<input type="checkbox"/>
Under-carriage and height adjustment	
Mounting side milling wheel FB80 (3"), FT180 compl.	<input type="checkbox"/>
Others	
Hydraulic drive for discharge conveyor or hydraulic jack hammer	<input type="checkbox"/>
Paint in one special color (RAL)	<input type="checkbox"/>
Paint in two special colors (RAL)	<input type="checkbox"/>
Paint in maximum two special colors with substructure in special color (RAL)	<input type="checkbox"/>
High-power lighting package LED including rotating beacon	<input type="checkbox"/>
Modular additional weight 1,400 kg	<input type="checkbox"/>
Adapter with saw blade FB14, MD100	<input type="checkbox"/>
Adapter with saw blade FB19, MD100	<input type="checkbox"/>
Hydraulic hammer with 32 ft. 9 in. (10 m) connection hose	<input type="checkbox"/>
WITOS FleetView telematics system incl. 3-year operating period	<input type="checkbox"/>
WITOS FleetView telematics system incl. 3-year operating period - PROMOTION	<input type="checkbox"/>

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



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