A WIRTGEN GROUP COMPANY



Leading through passion. Cold Milling Machines W 100 R | W 100 Ri | W 120 R | W 120 Ri



At a glance: outstanding features of the new cold milling machines

Highlights in operation (pages 4/5)

1 INTUITIVE, PRECISE LEVELLING WITH LEVEL PRO PLUS

- > Easy and intuitive operation
- > Many newly added complementary and automated features
- > Fully integrated into the machine management system> Milling depth measurement via displacement sensors in the
- hydraulic cylinders of the side plates
- > Hydraulically telescoping levelling arm

MULTIFUNCTIONAL ARMREST BOOSTS EFFICIENCY

- > Ergonomically designed multifunctional armrest with colour control screen
- > User-programmable "Favourites" keys
- > Job data are recorded and displayed on the control screen

OPTIMIZED VISIBILITY FOR PRECISE OPERATION

- > Unobstructed view of the right-hand side plate
- > Good rear visibility
- > High-quality camera system

4 | OPERATOR COMFORT

- > Rotating, heated driver's seat
- > Electrical water tank filling level indicator
- > Convenient machine access including "Welcome" and "Go home" lights
- > Wind and weather protection elements on the operator's platform

Highlights in driving and steering (pages 6/7)

5 DYNAMIC AND QUICK MANOEUVRING

- > Travel speed of up to 7,5 km/h
- > Reversing with the milling drum switched on
- > Quick, precise height adjustment
- > Memory function for height adjustment
- > Electronically controlled traction drive

Highlights in performance and productivity (pages 10/11)

91 HIGH EFFICIENCY FOR TREMENDOUS PRODUCTIVITY

- > Variable supplementary weights of up to 400 kg
- > Many new automated functions
- > Automated process of lowering the milling drum into working position including relief sensors
- > Hydraulically engaging power belt tensioner
- > State-of-the-art WITOS Telematics System
- > Optimized ease of servicing

10 LOW EMISSION LEVELS

- > Engine models complying with EC Stage 3a/US Tier 3 emission standards or the stringent EC Stage 4/US Tier 4f emission standards
- > Standard diesel particulate filter for model complying with EC Stage 4/US Tier 4f
- > Three different milling drum speed options
- > Optimized soundproofing and heat insulation
- > Speed-governed fan drive

6 MAXIMUM MANOEUVRABILITY

- > Highly precise steering via the fingertip steering feature integrated in the armrest
- > Swift steering using the steering wheel

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- > Extremely large locking angle of the front wheels
- > Compact machine dimensions

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Highlights in milling and loading (pages 8/9)

71 SUPERIOR CUTTING TECHNOLOGY BOOSTS PERFORMANCE

- > Extremely hard-wearing HT22 quick-change toolholder system as a standard feature
- > Hydraulic tool extractor for the quick replacement of cutting tools
- > Overload sensor at the scraper blade and proactive floating position at the side plates, left and right
- > Water spray volume adjustable electrically from the operator's platform

81 HIGH LOADING CAPACITY FOR MAXIMUM PERFORMANCE

- > Hydraulic folding conveyor can be folded up quickly during operation on site
- > Wide conveyor slewing angles
- > Quick-release coupling for easy mounting and removal of the discharge conveyor

Highlights in operation

INTUITIVE LEVELLING

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

6

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.

"FAVOURITES" KEYS

Four "Favourites" keys can be programmed with 20 different functions.

REAR VISIBILITY

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

VIEW OF THE AREA AHEAD OF THE MILLED SURFACE

The geometry of the operator's platform has been optimized to ensure an unobstructed view of the right-hand side plate.

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.

LEVELLING ARM

The telescoping levelling arm allows sensing along reference surfaces at a distance of up to 2.0 m to the side of the machine, ensuring perfect milling results even in complex levelling situations.

ELECTRICAL WATER FILLING LEVEL INDICATOR

The water tank filling level can be checked conveniently via the control screen.

ERGONOMIC DRIVER'S SEAT

The driver's seat with integrated seat heating can be rotated to the left and right to offer a good view to the side and to the rear.

"WELCOME" AND "GO HOME" LIGHTS FEATURE

The access ladder and operator's platform are fully illuminated when approaching or walking away from the machine.

WEATHER PROTECTION

Additional wind and weather protection elements on the operator's platform offer protection from exposure to rain and wind.



Pertinent job details are provided automatically to allow the display of daily performance rates.

MULTIFUNCTIONAL ARMREST

The multifunctional, individually adjustable armrest combines innovative design and perfect user-friendliness. Important information is displayed on the colour control screen.



View of the area ahead of the milled surface.



LEVEL PRO PLUS levelling system.

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.

CAMERA SYSTEM

The high-quality camera system provides the operator with a high-resolution image of the milling edge or point of material discharge.

Highlights in driving and steering



SWIFT STEERING

The steering wheel is used for

REVERSING

Reversing with the milling drum switched on permits fast and easy manoeuvring on the job site.

> LARGE STEERING ANGLE Large steering angles to the left and right guarantee small turning radii.

ELECTRONIC TRACTION DRIVE CONTROL

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

COMPACT MACHINE DESIGN

Its compact design enables the small milling machine to work in narrow passages and ensures ease of transport.

MAXIMUM SPEED OF 7.5 KM/H

The machine's travel speed of up to 7.5 km/h ensures the quick completion of construction projects.

QUICK HEIGHT ADJUSTMENT

Electro-hydraulic height adjustment 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.





Large steering angle at the front.

Highlights in milling and loading

QUICK-ACTING HYDRAULIC FOLDING CONVEYOR

The hydraulically folding discharge conveyor is folded up quickly regardless of the job situation and for transport purposes.

LARGE SLEWING ANGLE

Large conveyor slewing angles of 25° each to the left and right enable the milled material to be loaded even in difficult situations.

ALTERNATIVE MILLING WIDTHS Milling widths FB600 and FB1000 are available for the W 100 R/W 100 Ri. Milling width FB1200 is available for the W 120 R/W 120 Ri.

OVERLOAD SENSORS AND ACTIVE FLOATING POSITION

These smart, automated functions prompt the scraper blade or side plates to be raised briefly, for example, to prevent sinking in on soft ground.

HT22 HEAVY-DUTY QUICK-CHANGE TOOLHOLDER SYSTEM

The extremely hard-wearing HT22 quick-change toolholder system (standard) minimizes breaks in operation and increases the lifespan of the entire milling drum.

HYDRAULIC TOOL EXTRACTOR

The hydraulically operated tool extractor assists the machine operator in replacing the cutting tools.

ELECTRICALLY ADJUSTABLE WATER SPRAY VOLUME

The water spray volume can be adjusted from the operator's platform to ensure reliable tool cooling, prevent dust development and enable extended uptimes.

QUICK-RELEASE COUPLING

The innovative quick-release coupling ensures easy plugging and unplugging of the hydraulic connections when mounting or removing the discharge conveyor.



VARIOUS MILLING DRUMS A vast array of original WIRTGEN standard and special milling drums is on offer to cater to a wide range of applications.



The highly effective WIRTGEN milling drums deliver excellent milling performance.



Highlights in performance and productivity

EXHAUST GAS AFTER-TREATMENT FOR W 100 Ri, W 120 Ri

For effective exhaust gas purification, the diesel engine is equipped with a two-way catalytic converter, diesel particulate filter and SCR catalytic converter, thus complying with the strict requirements of the currently highest emission standards EC Stage 4/US Tier 4f.

ENGINE COOLING

Cooling system with temperature-controlled fan speed for low noise emission levels.

ADBLUE®/DEF TANK FOR W 100 Ri, W 120 Ri Storage container for urea solution with easily accessible filling port.

SCR CATALYTIC CONVERTER

The integrated SCR catalytic converter and added, special urea solution reduce nitrogen oxides.

COMBINATION OF TWO-WAY CATALYTIC CONVERTER/DIESEL PARTICULATE FILTER

Catalytic converter oxidizing hydrocarbons and carbon monoxides. Standard diesel particulate filter ensuring compliance with even stricter exhaust emission specifications.

SUPPLEMENTARY WEIGHTS

Supplementary weights of up to 400 kg altogether provide for high operating weight, optimum traction and effortless transport.

DIFFERENT MILLING DRUM SPEEDS

Three different milling drum speeds enable tremendous milling outputs in a wide range of applications.

SOUNDPROOFING AND HEAT INSULATION

Effectively optimized soundproofing and heat insulation significantly reduce noise emission levels.

HYDRAULIC POWER BELT TENSIONER

The automatically engaging, hydraulically operated power belt tensioner enables efficient and reliable transmission of power.

STATE-OF-THE-ART WITOS TELEMATICS SYSTEM

The efficient WIRTGEN WITOS FleetView telematics system supports fleet management, machine position and status monitoring, as well as maintenance and diagnostic procedures.

AUTOMATED LOWERING OF THE DRUM INTO WORKING POSITION

The integrated, automated feature of lowering the milling drum into working position uses relief sensors to significantly facilitate machine operation.

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.



ANTI-VIBRATION MOUNTED ENGINE STATION

The anti-vibration mounted engine station ensures low vibration and noise levels, thus offering high driving comfort.

LARGE DIESEL TANK The large diesel tank enables extended machine uptimes.



W 100 R, W 120 R for EC Stage 3a/US Tier 3: high-performance, fuel-efficient engine technology.

OPTIMIZED EASE OF SERVICING

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

Technical specification

	W 100 R	W 120 R	W 100 Ri	W 120 Ri	
Milling drum					
Milling width standard	1,000 mm	1,200 mm	1,000 mm	1,200 mm	
Milling width optional	-	-	600 mm	-	
Milling depth*1		0 to 30	00 mm		
Drum diameter with tools		930	mm		
Engine					
Engine manufacturer		De	utz		
Туре	TCD 201	2 L06 2V	TCD	6.1 L6	
Cooling		wa	ter		
Number of cylinders		(6		
Rated power at 2,300 min ⁻¹	155 kW/208	3 HP/211 PS	160 kW/21	5 HP/218 PS	
Maximum power at 2,300 min ⁻¹	155 kW/208	3 HP/211 PS	160 kW/21	5 HP/218 PS	
Displacement	6,100 cm³				
Fuel consumption at rated power	42 l/h		44 l/h		
Fuel consumption in field mix	17 l/h		18 l/h		
Emission standards	EC Stage 3a/US Tier 3		EC Stage 4/US Tier 4f		
Electrical system					
Electrical power supply		24	١V		
Tank capacities					
Fuel tank		48	01		
AdBlue®/DEF tank	-		3	32	
Hydraulic oil tank		80	5 I		
Water tank	825				
Driving properties					
Max. milling speed		0 to 33 m/min	n (0to2 km/h)		
Max. travel speed	0 to 126 m/min (0 to 7.5 km/h)				
Tyres					
Tyre size front (Ø x W)	620 x 230 mm				
Tyre size rear (Ø x W)	620 x 255 mm				
Loading of the milled material					
Belt width of discharge conveyor	500 mm				
	125 m³/h				

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

	W 100 R	W 120 R	W 100 Ri	W 120 Ri	
Weight of base machine					
Empty weight of machine without tank contents	14,000 kg	14,650 kg	14,100 kg	14,750 kg	
Operating weight, CE*	14,650 kg	15,300 kg	14,750 kg	15,400 kg	
Operating weight, max, (full tanks, full range of equipment)	15,600 kg	17,650 kg	15,700 kg	17,750 kg	
Weights of tank contents					
Water tank filling		825	5 kg		
Diesel tank filling (0.83 kg/l)		400) kg		
AdBlue®/DEF tank filling (1.1 kg/l)	-	-	35.2	2 kg	
Additional add-on weights					
Driver and tools					
Driver		75	kg		
Weight of 2 cutting tool containers		50	kg		
On-board tools		30	kg		
Optional milling drum assemblies in lieu of standard					
Milling drum housing FB600 FCS	-	-	-30 kg	-	
Milling drum housing FB1000 FCS-L	200 kg	-	200 kg	-	
Milling drum housing FB1200 FCS-L	-	300 kg	-	300 kg	
Optional milling drums in lieu of standard					
Milling drum FB600 HT22 LA15 with 75 picks	-	-	-180 kg	-	
FCS-Milling drum FB1000 HT22 LA15 with 100 picks	20 kg	-	20 kg	-	
FCS-Milling drum FB1000 HT22 LA18 with 90 picks	-40 kg	-	-40 kg	-	
FCS-Milling drum FB1200 HT22 LA15 with 100 picks	-	-90 kg	-	-90 kg	
FCS-Milling drum FB1000 HT22 LA8 with 148 picks	360 kg	-	360 kg	-	
FCS-Milling drum FB1200 HT22 LA8 with 173 picks	-	400 kg	-	400 kg	
FCS-Milling drum FB1000 HT5 LA5 with 340 picks	300 kg	-	300 kg	-	
FCS-Milling drum FB1200 HT5 LA6x2 with 406 picks	-	360 kg	-	360 kg	
Optional supplementary weights					
Supplementary weight for flexible use	400 kg				
Optional additional equipment					
Discharge conveyor 7,350 mm long, 500 mm wide, with hydraulic folding device		170 kg			
Discharge conveyor 6,500 mm long, 500 mm wide, with hydraulic folding device	100 kg				
Сапору	150 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



Dimensions in mm

* = Folding conveyor, short
** = Based on operating weight, CE with conveyor folded out



Milling radius, 150 mm milling depth, dimensions in mm

Standard equipment

	W 100 R	W 120 R	W 100 Ri	W 120 Ri
Base machine				
Engine cover with noise insulation and flexibly decoupled engine mounting for especially quiet running and low noise emissions	•	•	•	•
Milling drum unit				
Automatically activating, hydraulic drive belt tensioner for reliable power transmission to the milling drum	•			•
Hydraulically lifting side plate right and left				
The right side of the milling drum housing can easily be folded down for maintenance or milling drum change	•	•	•	•
With automatic electrical safety shut-off for the milling drum				
Milling drum housing FB1000		-		-
Milling drum housing FB1200	-		-	
Manually adjustable front milling drum unit seal FB1000		-		-
Manually adjustable front milling drum unit seal FB1200	-		-	
Milling drums				
Milling drum FB1000 HT22 LA15 with 100 picks		-		-
Milling drum FB1200 HT22 LA15 with 115 picks	-		-	
Milled-out material loading				
Machine prepared for optional material loading by discharge conveyor				
Conveyor speed continuously variable				
Conveyor slewing angle right/left 25 degrees each for significantly improved loading procedures	•	•	•	•
Machine with hydraulic preliminary equipment for a discharge conveyor - screw coupling				
Discharge conveyor, 7,350 mm long, 500 mm wide				
Operator's stand				
Operator's stand with ergonomically arranged operator's seat, control panel arranged on the right and digital milling depth indicator in the control display	•	•	•	•
Steering console with adjustable rake and reach for ideal adaptation of the operator's stand to the operator				•
3 rear-view mirrors				
Slender machine design permits unobstructed view of the milled edge as well as the working area in front of the milling drum on the right			•	-
Conveniently accessible ladder/footstep to the operator's stand with night-time lighting and especially low, folding bottom edge of the latter/footstep				
= Standard equipment				

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

	W 100 R	W 120 R	W 100 Ri	W 120 Ri
Operator's stand				
Robust anti-vandalism protection for the controls				
Standard operator's seat				
Operator's stand without roof				
Under-carriage and height adjustment				
Precise machine height adjustment in 1 or 5 mm steps from the machine control panel		•	•	
Infinitely variable, hydraulic all-wheel drive with three speed ranges				
Digital load control, manual engageable, hydraulic differential lock (by flow distributor)		•	•	
Particularly wide solid rubber tyres for the lowest ground pressures and optimum traction				
For milling along kerb edges, the rear right support wheel can be swivelled hydraulically from the operator's stand in front of the milling drum	•	•	•	•
Hydraulic spring-loaded brake				
Proportional height adjustment at rear				•
Digital milling depth indicator in the control display				
Others				
Flexible weight concept by optional additional weights				•
Particularly low machine centre of gravity for high stability of the machine				•
Robust and easily maintained machine chassis with optimum ground clearance and short overhangs		•	•	
Device for towing away				
Reversing horn				
Large tool package with lockable tool box and additional storage space for two pick buckets		•		
European type test certificate, Euro Test-mark and CE conformity				
Paint standard cream white RAL 9001				
Halogen/LED lighting package including rotating beacon.				

Optional equipment

Milling drum unit Milling drum housing FB600 FCS Milling drum housing FB1000 FCS-L Milling drum housing FB1200 FCS-L	- - -	-		-
Milling drum housing FB1000 FCS-L	- - -	-	_	-
	- -	-		
Milling drum housing FB1200 FCS-I	-			-
	-		-	
Manually adjustable front milling drum unit seal FB600		-		-
Hydraulically adjustable front milling drum unit seal FB600, incl. overload sensor	-	-		-
Hydraulically adjustable front milling drum unit seal FB1000, incl. overload sensor		-		-
Hydraulically adjustable front milling drum unit seal FB1200, incl. overload sensor	-		-	
Overload sensor on the scraper FB600	-	-		-
Overload sensor on the scraper FB1000/1200				
Active floating position for the right and left side plates				
Milling drums				
FCS-Milling drum FB1000 HT22 LA15 with 100 picks		-		-
FCS-Milling drum FB1000 HT22 LA18 with 90 picks		-		-
FCS-Milling drum FB1200 HT22 LA15 with 100 picks	-		-	
FCS-Milling drum FB1000 HT22 LA8 with 148 picks		-		-
FCS-Milling drum FB1200 HT22 LA8 with 173 picks	-		-	
FCS-Milling drum FB1000 HT5 LA5 with 340 picks		-		-
FCS-Milling drum FB1200 HT5 LA6x2 with 406 picks	-		-	
Milling drum FB80 HT02 MD250 with 30 picks		-		-
Milling drum FB600 HT22 LA15 with 75 picks	-	-		-
FCS milling unit FB400 HT22	-	-		-
FCS milling unit FB500 HT22	-	-		-
Milled-out material loading				
Machine with hydraulic preliminary equipment for a discharge conveyor - quick-change coupling				
Machine with belt device without discharge conveyor (FB600)	_	-		-
Machine with belt device without discharge conveyor (FB1000/1200)				
Discharge conveyor 7,350 mm long, 500 mm wide, with hydraulic folding device				
Discharge conveyor 6,500 mm long, 500 mm wide, with hydraulic folding device				
Hydraulic connection adapter screw coupling for additional discharge conveyor				
Hydraulic connection adapter quick-change coupling for additional discharge conveyor				

Standard equipment

Standard equipment, replaceable with optional equipment
Optional equipment

	W 100 R	W 120 R	W 100 Ri	W 120 Ri
Machine control and levelling system				
Increased travelling speed (up to 7.5 km/h)				
Precision steering by pushbuttons				
Job data acquisition in the control display	-	-		
Operator's stand				
Comfort operator's seat including seat heating				
Operator's stand with weather canopy and lateral weather protection elements				
Under-carriage and height adjustment				
LEVEL PRO PLUS levelling system right and left				
RAPID SLOPE sensor for LEVEL PRO PLUS levelling system				
Levelling boom including sensor for LEVEL PRO PLUS levelling system				
Others				
Paint in one special colour (RAL)				
Paint in two special colours (RAL)				
Paint in maximum two special colours with substructure in special colour (RAL)				
High-performance LED lighting package including rotating beacon.				
Additional weight 400 kg for four-wheel machine, removable				
Milling drum assembly trolley to FB1300				
Assembly aid for the milling drum change				
Electric preheating of the fuel filter	-	-		
Hydraulically driven water filler pump				
Hydraulic pick ejector drift				
Monitor system with 2 cameras and screen				
WITOS FleetView telematics system incl. 3-year operating period (EU)	-	-		
WITOS FleetView telematics system incl. 3-year operating period (USA)	-	-		



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