MONTANA
Department of Transportation

MDT-BRG-015 04/23

Montana Department of Transportation
Bridge Bureau
Approved Construction Equipment List

Make:	*Wirtgen*
Model:	*W 100 Fi*
Equipment Type:	*Cold Milling Machine*
Contractor Modifications:	*None*

Interstate Approval Conditions

Approval Type	*Crossing Only*
Speed:	*No Restriction*
Weight:	*41,300 lb or less*
Traffic:	*Approved with regular traffic*
Location Restrictions:	*No Restriction*

Non-Interstate Approval Conditions

Approval Type	*Crossing Only*
Speed:	*No Restriction*
Weight:	*41,300 lb or less*
Traffic:	*Approved with regular traffic*
Location Restrictions:	*No Restrictions*

Comments:

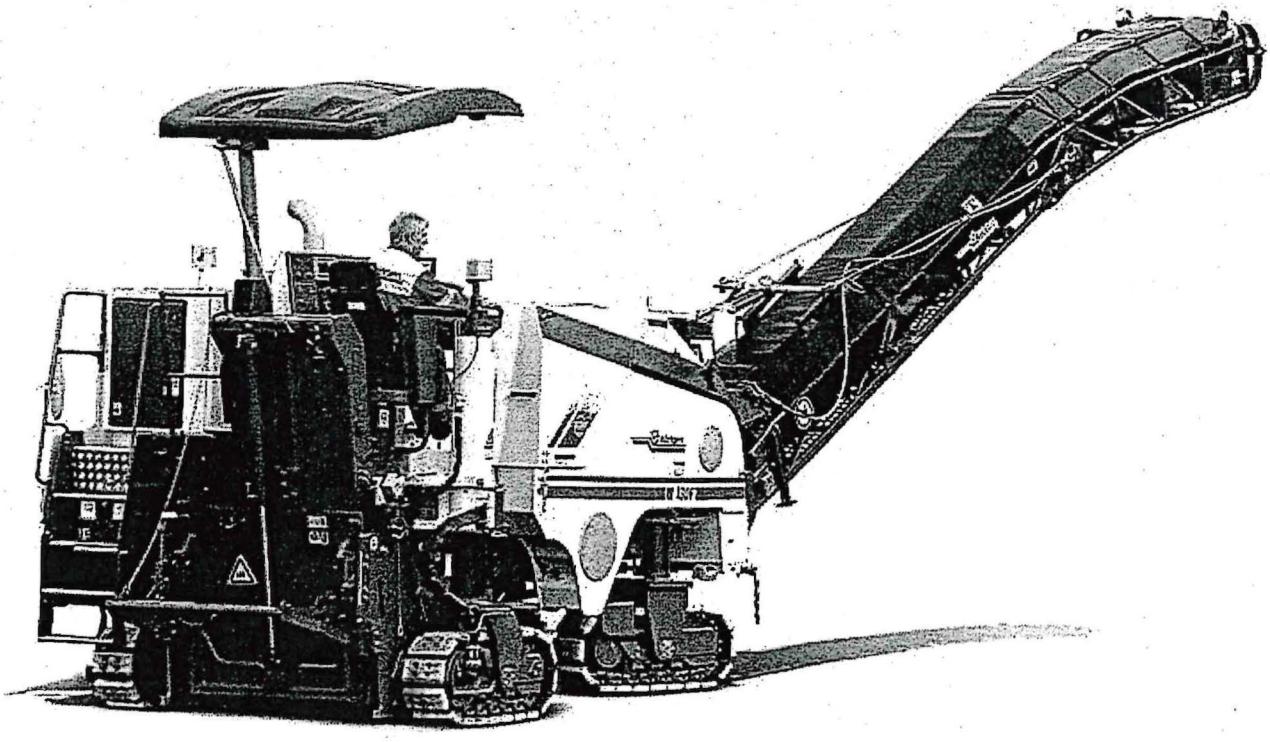
Equipment configuration, weights, and specifications on following pages. Approval does not apply to posted bridges. Other construction equipment is not allowed to operate on or cross bridge at the same time this equipment is on the bridge.

WIRTGEN GROUP

Wirtgen

Technical specification

Cold milling machines
W 100 F - W 120 F - W 130 F
W 100 Fi - W 120 Fi - W 130 Fi



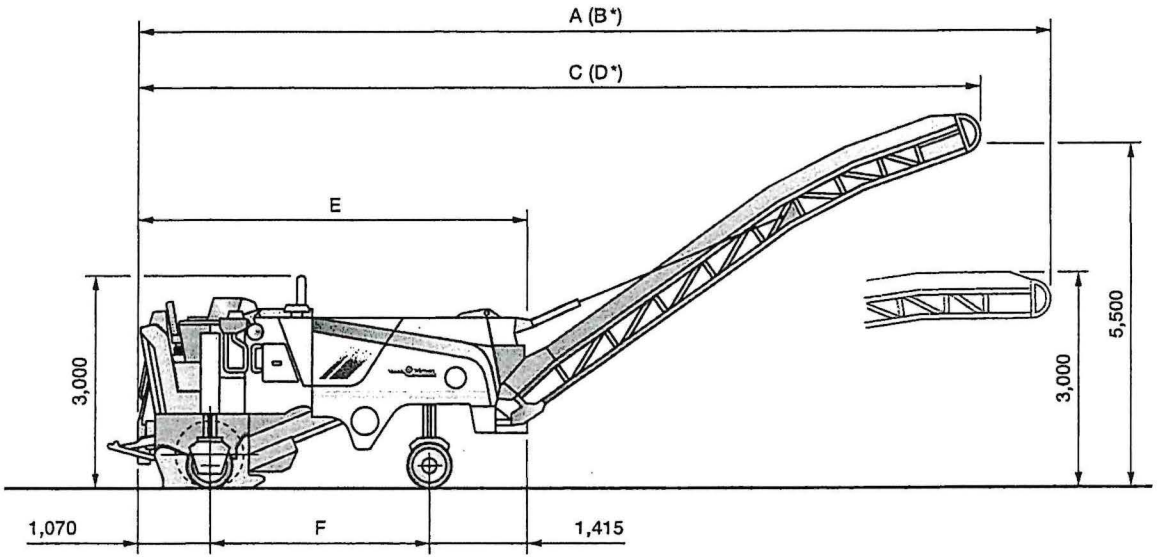
Technical specification

	Cold milling machine W 100 F, W 120 F, W 130 F and W 100 Fi, W 120 Fi, W 130 Fi		
Milling drum	**FB 1,000**	**FB 1,200**	**FB 1,300**
Milling width	1,000 mm	1,200 mm	1,300 mm
Milling depth *1	0–320 mm	0–320 mm	0–320 mm
Tool spacing	15 mm	15 mm	15 mm
Number of tools	99	115	121
Drum diameter with tools	980 mm	980 mm	980 mm
Engine	**W 100 F, W 120 F, W 130 F**		**W 100 Fi, W 120 Fi, W 130 Fi**
Manufacturer	CUMMINS		CUMMINS
Type	QSC 8.3		QSL 9
Cooling	Water		Water
Number of cylinders	6		6
Rated power at 2,100 min^{-1}	209 kW/280 HP/285 PS		224 kW/300 HP/305 PS
Maximum power at 1,900 min^{-1}	227 kW/304 HP/308 PS		239 kW/320 HP/325 PS
Displacement	8.3 l		8.9 l
Fuel consumption at rated power	62 l/h		64 l/h
Fuel consumption in field mix	25 l/h		26 l/h
Emission standards	EU Stage 3a/US Tier 3		EU Stage 3b/US Tier 4i
Electrical system	24 V		24 V
Filling capacities			
Fuel tank	620 l		610 l
Hydraulic fluid tank	130 l		130 l
Water tank	1,400 l		1,340 l
Driving properties			
Travel speed in milling gear, max.	0–32 m/min (1,9 km/h)		
Travel speed in travel gear, max.	0–125 m/min (7,5 km/h)		
Drive unit			
Tyre tracks front and rear (Ø x W)	660 x 280 mm		
Crawler tracks front and rear (L x W x H)	1,330 x 260 x 550 mm		
Loading the milled material			
Belt width of primary conveyor	650 mm		
Belt width of discharge conveyor	600 mm		
Theoretical capacity of discharge conveyor	176 m^3/h		
Shipping dimensions	**W 100 F, W 120 F, W 130 F**		**W 100 Fi, W 120 Fi, W 130 Fi**
Machine, track folded out			
Milling width FB 1,000 (L x W x H)	5,900 x 2,600 x 3,100 mm		6,050 x 2,665 x 3,100 mm
Milling width FB 1,200 (L x W x H)	5,900 x 2,750 x 3,100 mm		6,050 x 2,750 x 3,100 mm
Milling width FB 1,300 (L x W x H)	5,900 x 2,850 x 3,100 mm		6,050 x 2,850 x 3,100 mm
Machine, track folded in			
Milling width FB 1,000 (L x W x H)	5,900 x 2,190 x 3,100 mm		6,050 x 2,255 x 3,100 mm
Milling width FB 1,200 (L x W x H)	5,900 x 2,340 x 3,100 mm		6,050 x 2,340 x 3,100 mm
Milling width FB 1,300 (L x W x H)	5,900 x 2,440 x 3,100 mm		6,050 x 2,440 x 3,100 mm
Conveyor (L x W x H)	8,200 x 1,200 x 1,500 mm		

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

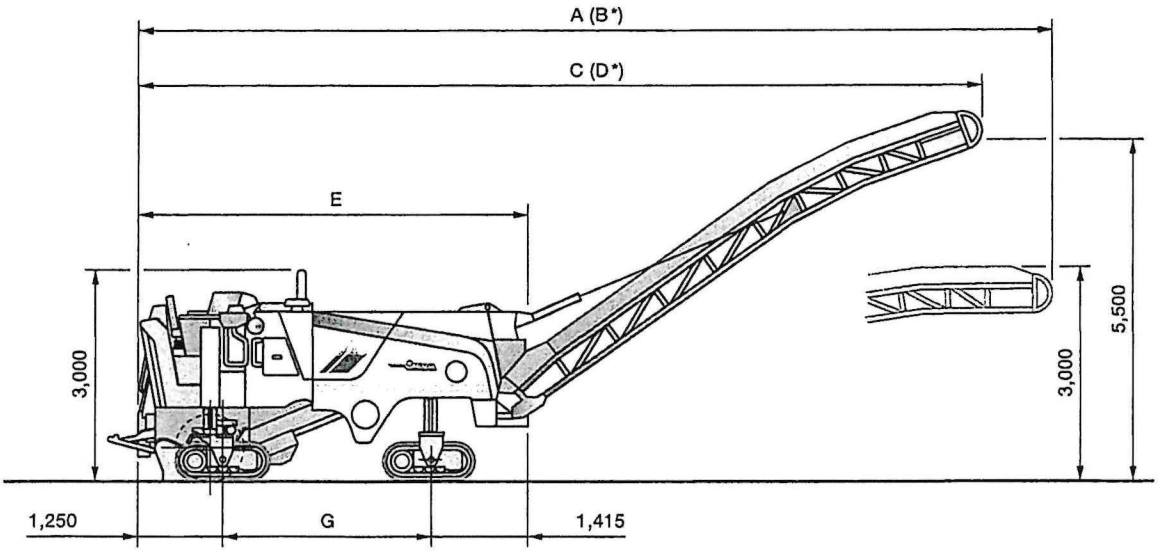
Cold milling machine on wheels

Dimensions in mm



Cold milling machine on crawler tracks

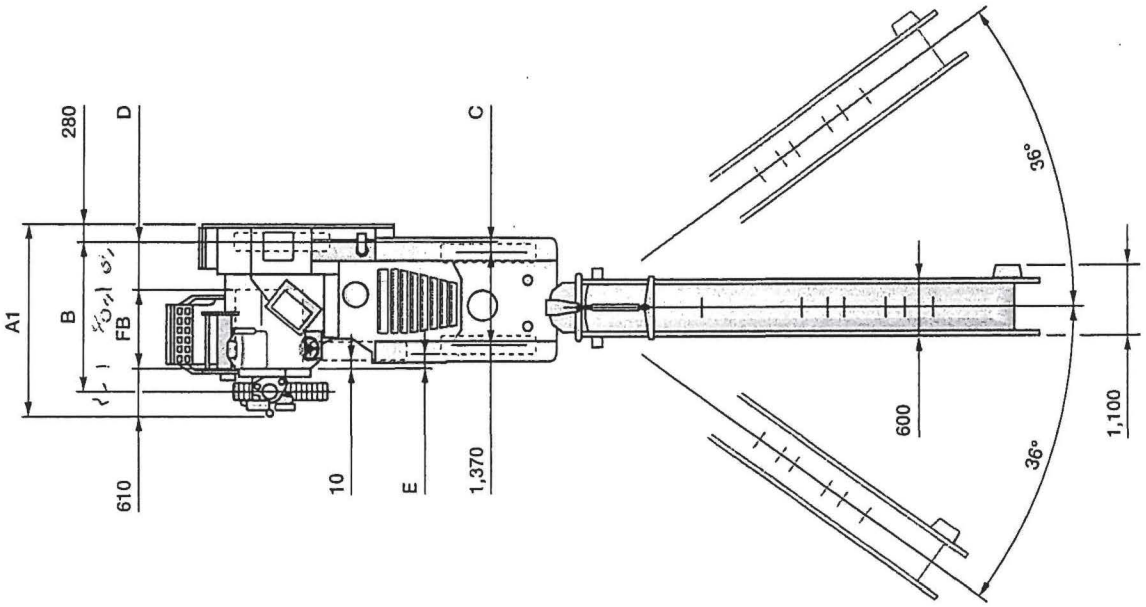
Dimensions in mm



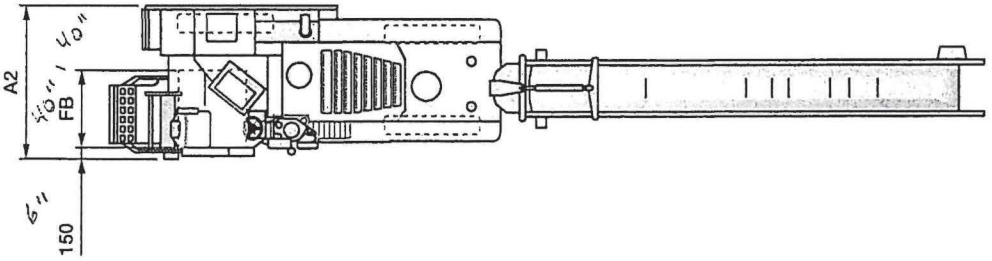
	W 60 F, W 120 F, W 180 F							W 100 F, W 120 F, W 180 F						
	A	B*	C	D*	E	F	G	A	B*	C	D*	E	F	G
* = Folding conveyor, short	13,450	12,550	12,650	11,750	5,700	3,215	3,035	13,600	12,700	12,800	11,900	5,850	3,365	3,185

Cold milling machine on crawler tracks
Dimensions in mm

Track folded out



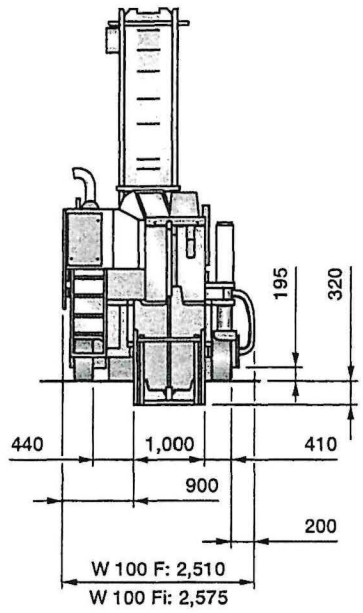
Track folded in



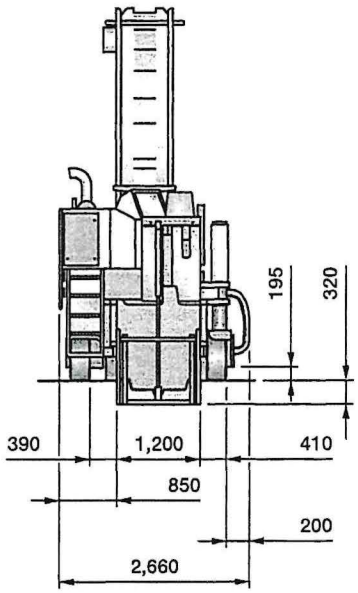
FB	A1	A2	B	C	D	E	FB	A1	A2	B	C	D	E
1,000	2,510	2,100	1,850	0	625	125	1,000	2,575	2,165	1,850	0	625	125
1,200	2,660	2,250	2,000	150	575	125	1,200	2,660	2,250	2,000	150	575	125
1,300	2,760	2,350	2,100	150	575	225	1,300	2,760	2,350	2,100	150	575	225

Rear view of machine with different milling width options, wheeled model

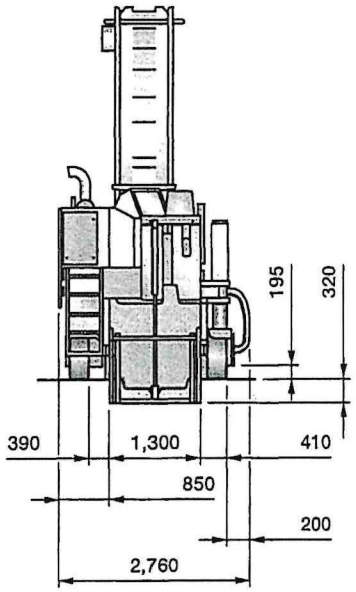
Dimensions in mm



Cold milling machine W 100 F/W 100 Fi



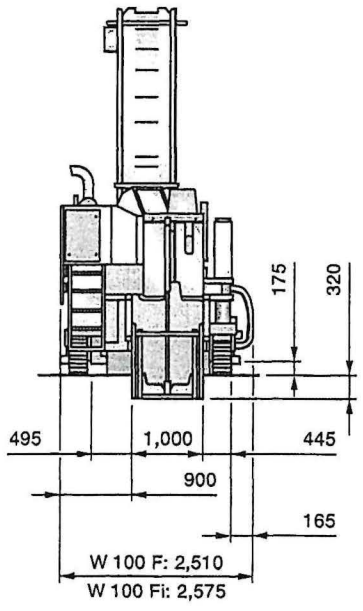
Cold milling machine W 120 F/W 120 Fi



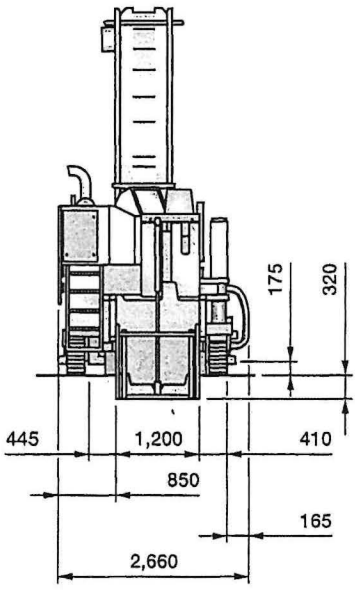
Cold milling machine W 130 F/W 130 Fi

Rear view of machine with different milling width options, tracked model

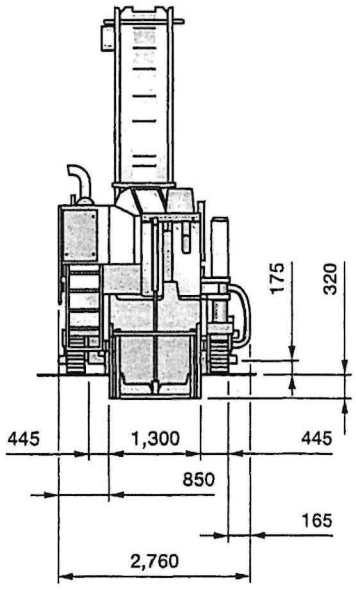
Dimensions in mm



Cold milling machine W 100 F/W 100 Fi



Cold milling machine W 120 F/W 120 Fi



Cold milling machine W 130 F/W 130 Fi

	Machine weights W 100 F	Machine weights W 100 Fi
Empty weight of machine without filling media	17,400 kg	17,750 kg
Operating weight, CE*	18,463 kg	18,733 kg
Operating weight, max. (full tanks, full range of equipment)	22,595 kg	22,835 kg
	Machine weights W 120 F	**Machine weights W 120 Fi**
Empty weight of machine without filling media	18,300 kg	18,600 kg
Operating weight, CE*	19,363 kg	19,633 kg
Operating weight, max. (full tanks, full range of equipment)	23,685 kg	23,925 kg
	Machine weights W 130 F	**Machine weights W 130 Fi**
Empty weight of machine without filling media	18,700 kg	19,000 kg
Operating weight, CE*	19,763 kg	20,033 kg
Operating weight, max. (full tanks, full range of equipment)	24,135 kg	24,375 kg
	Weights of filling media W 100 F, W 120 F, W 130 F	**Weights of filling media W 100 Fi, W 120 Fi, W 130 Fi**
Water tank filling in kg	1,400 kg	1,340 kg
Diesel tank filling in kg (0.83 kg/l)	515 kg	506 kg

	Optional equipment features increasing/ reducing empty weight
Driver and tools	
Driver	75 kg
Weight of 5 cutting tool containers	125 kg
On-board tools	30 kg
Optional milling drum assemblies in lieu of standard	
Milling drum housing, milling width 1,000 mm, FCS-L	280 kg
Milling drum housing, milling width 1,200 mm, FCS-L	330 kg
Milling drum housing, milling width 1,300 mm, FCS-L	370 kg
Tandem scraper	180 kg
Optional milling drums in lieu of standard	
Milling drum, milling width 1,000 mm, tool spacing 15, HT11, FCS-L	60 kg
Milling drum, milling width 1,200 mm, tool spacing 15, HT11, FCS-L	60 kg
Milling drum, milling width 1,300 mm, tool spacing 15, HT11, FCS-L	60 kg
Milling drum, milling width 1,000 mm, tool spacing 8, HT11, FCS-L	400 kg
Milling drum, milling width 1,200 mm, tool spacing 8, HT11, FCS-L	440 kg
Milling drum, milling width 1,300 mm, tool spacing 8, HT11, FCS-L	460 kg
Milling drum, milling width 1,000 mm, tool spacing 6x2, FCS-L	320 kg
Milling drum, milling width 1,200 mm, tool spacing 6x2, FCS-L	350 kg
Milling drum, milling width 1,300 mm, tool spacing 6x2, FCS-L	360 kg
Optional additional equipment	
Crawler tracks in lieu of wheels	1,400 kg
Canopy in lieu of standard	200 kg
Short folding conveyor in lieu of standard	40 kg
Long folding conveyor in lieu of standard	90 kg
VCS – Vacuum Cutting System	150 kg
Supplementary weight for flexible use, milling width 1,000 mm	430 kg
Supplementary weight for flexible use, milling width 1,200 mm or 1,300 mm	540 kg

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

Equipment features of cold milling machine W 100 F, W 120 F, W 130 F / W 100 Fi, W 120 Fi, W 130 Fi

Standard equipment:

Basic machine with engine
- Mechanically opening, soundproof engine cowling
- Water cooler with temperature-related fan speed
- Highly effective soundproofing of entire engine compartment
- Situation-dependent automatic engine speed control
- Elastically mounted engine station to reduce vibrations and noise
- Standard painting in Wirtgen white with orange stripes

Milling drum housing
- Right-hand side plate in hinged design
- Hydraulically opening scraper blade with mechanical locking mechanism

Milling drums
- Milling drum, milling width 1,000 mm, tool spacing 15 mm, HT11 quick-change toolholder system
- Mechanical milling drum drive via multiple V-belts with automatic belt tensioner

Loading of milled material
- Heavy-duty discharge conveyor, 8.2 m long, with 600 mm wide belt system
- Discharge conveyor slewing angle 36 degrees left, 36 degrees right
- Conveyor system with adjustable conveying speed

Machine and levelling control
- Mechanical milling depth indication via dials
- Manually engageable hydraulic traction control (flow divider)
- Manually engageable maximum milling speed control
- Automatically engaging high-pressure water system
- Water spray bar in milling drum assembly
- Water spray system at primary conveyor

Operator's platform
- Individually adjustable driver's seat on the right side of the machine
- Adjustable steering wheel
- Convenient control panel with practical switches
- Right-hand armrest including major operating functions
- Digital multi-functional display for all important operation parameters
- Lockable control panel cover
- Access to operator's platform at the rear left of the machine
- Exterior rear view mirrors left and right, as well as at the left side of the operator's platform
- Reversing horn with clearly audible sound
- Illuminated control panel/night design

Chassis and height adjustment
- Infinitely variable, hydrostatic all-wheel drive
- Differential lock selectable in both forward and reverse gear
- Hydraulically folding wheel/crawler track unit at the rear right
- Hydraulic height adjustment at the front wheel/crawler track units
- Hydraulic height adjustment with two speed settings at the rear wheel/crawler track units
- Low-resistance wheel units for maximum manoeuvrability

Miscellaneous
- Lighting package with 6 halogen working lights
- Comprehensive tool kit
- Towing device
- Generously dimensioned water and fuel tanks
- Comprehensive safety package with several emergency stop switches
- 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 with engine
- Air compressor system
- Special painting in one, two or several colours

Milling drum housing
- Milling drum housing in FCS Light design, milling width 1,000 mm (1,200 mm, 1,300 mm)
- Milling drum housing in full FCS design, milling width 1,000 mm (1,200 mm, 1,300 mm)
- Hydraulically lifting side plates
- Pneumatic cutting tool driver and extractor

Milling drums
- Milling drums with HT11, tool spacing 25 mm, for FCS
- Milling drums with HT11, tool spacing 8 mm, for FCS
- Milling drums with HT5, tool spacing 6x2 mm, for FCS
- Mounting carriage for milling drums

Loading of milled material
- Hydraulically folding discharge conveyor, 8.2 m long
- Hydraulically folding discharge conveyor, 7.3 m long
- VCS – vacuum cutting system

Machine and levelling control
- LEVEL PRO automatic levelling system with 2 wire-rope sensors
- Slope sensor

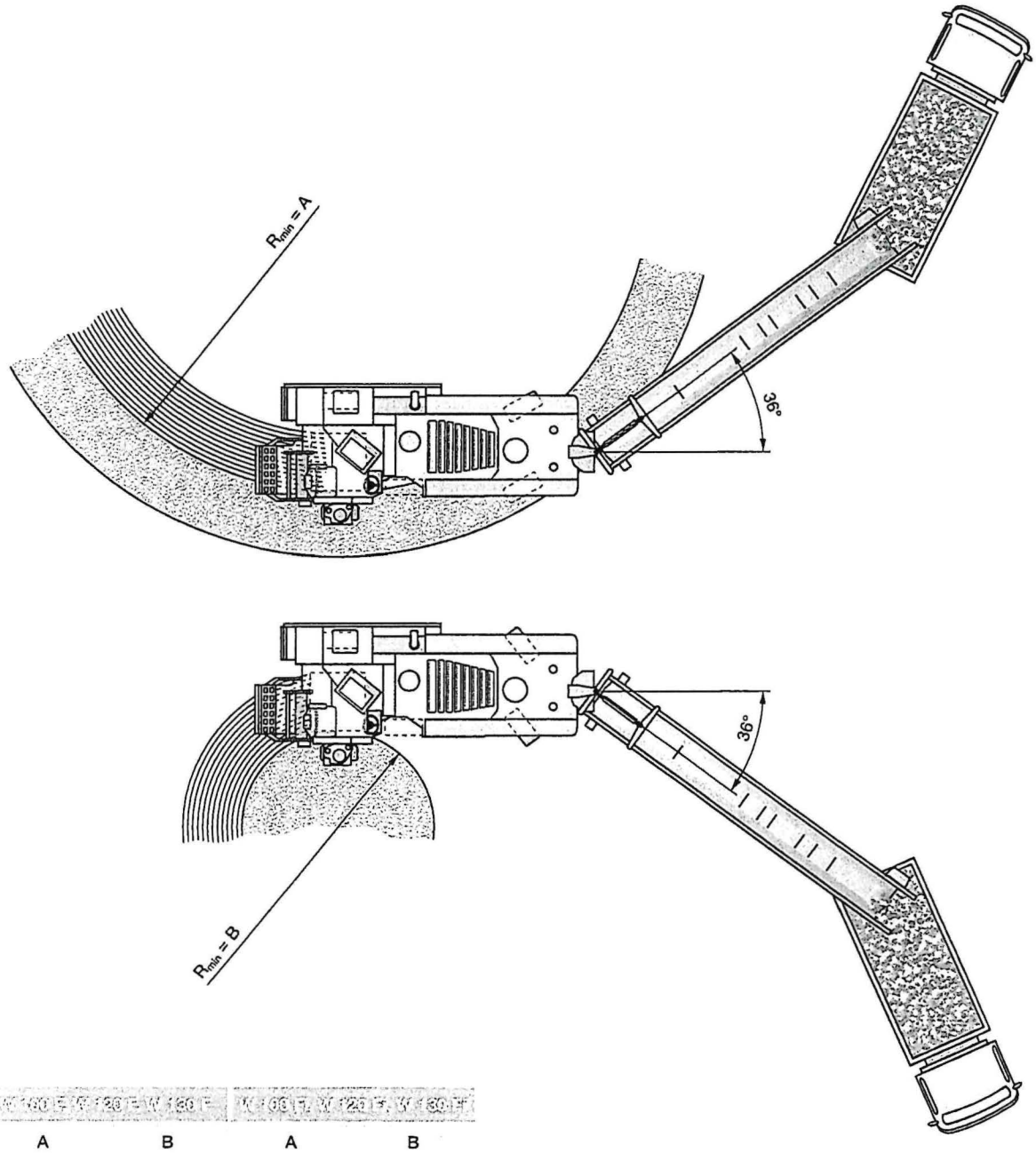
Operator's platform
- Hydraulically retracting, stable protective canopy

Machine and levelling control
- Crawler track units with highly wear-resistant, two-piece polyurethane track pads
- Steering option for rear right wheel/crawler track unit in folded-in position

Miscellaneous
- Lighting system with headlights, rear reflectors and four direction indicators
- Hydraulically operated water filling pump
- Hydraulically operated high-pressure water cleaner (max. 200 bar)
- Bolt-on supplementary weight, 430 kg (540 kg for milling widths 1,200 mm/1,300 mm)

Milling radius, milling depth 150 mm

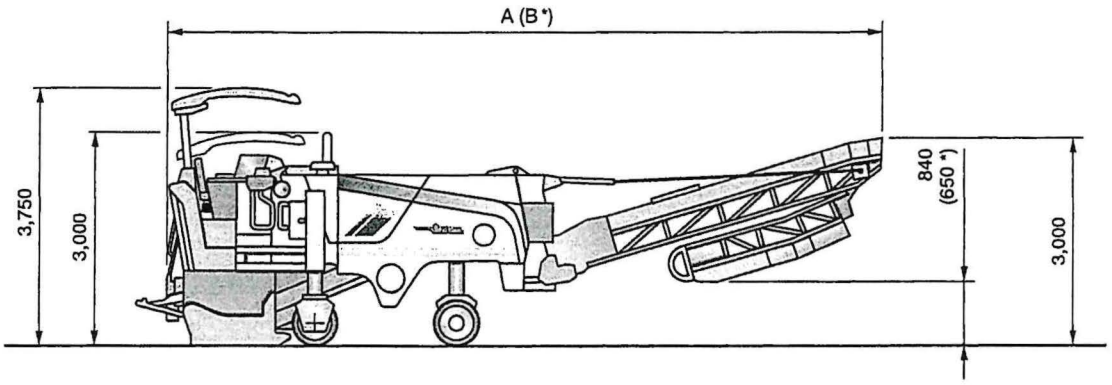
Dimensions in mm



K 140 F, K 120 F, W 160 F		K 160 F, W 120 F, W 160 FF	
A	B	A	B
4,400	1,900	4,500	2,000

Machine transport with optional canopy and folding conveyor

Dimensions in mm

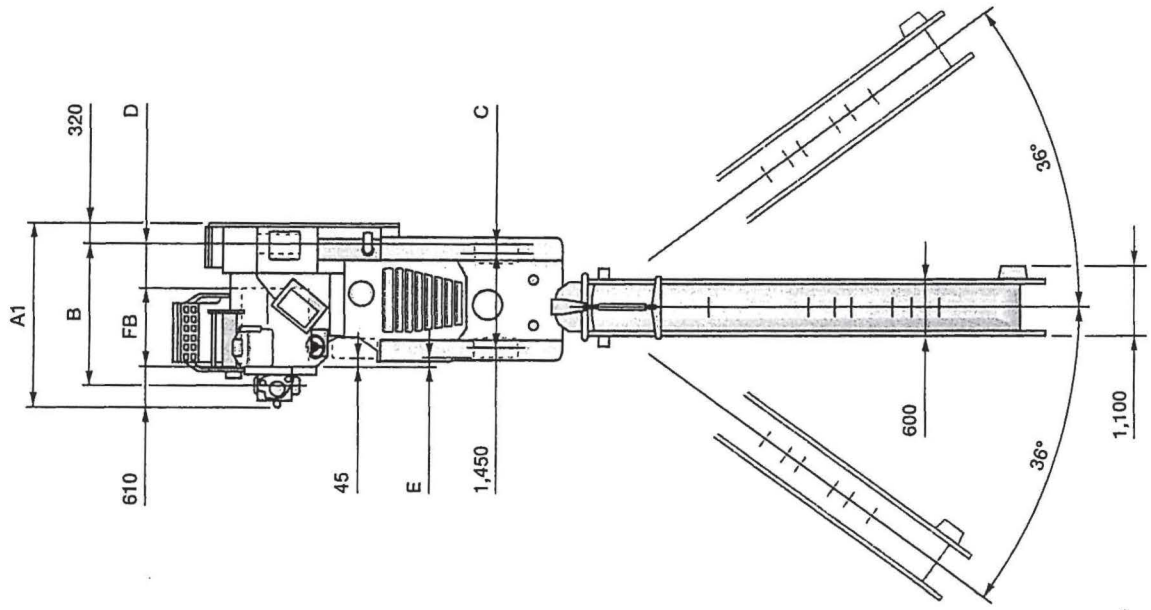


W 100 F, W 120 F, W 130 F		W 100 F, W 120 F, W 130 F	
A	B*	A	B*
10,535	9,585	10,685	9,735

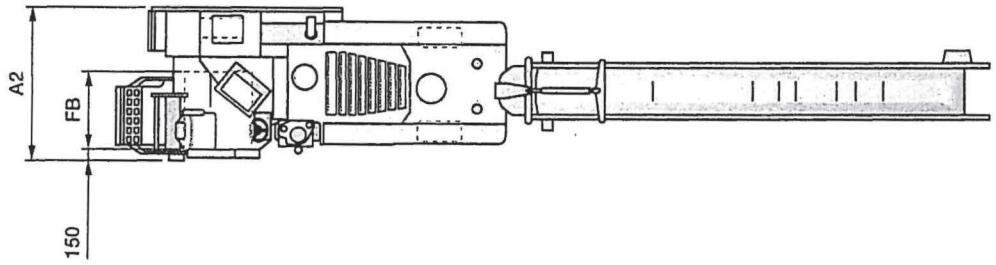
* = Folding conveyor, short

Cold milling machine on wheels
Dimensions in mm

Wheel folded out



Wheel folded in



W 100 F							W 120 F						
FB	A1	A2	B	C	D	E	FB	A1	A2	B	C	D	E
1,000	2,510	2,100	1,850	45	580	35	1,000	2,575	2,165	1,850	45	580	35
1,200	2,660	2,250	2,000	105	530	35	1,200	2,660	2,250	2,000	105	530	35
1,300	2,760	2,350	2,100	105	530	135	1,300	2,760	2,350	2,100	105	530	135