WIRTGEN GROUP

Wirtgen

Surface Miner 2500 SM

Technical specification

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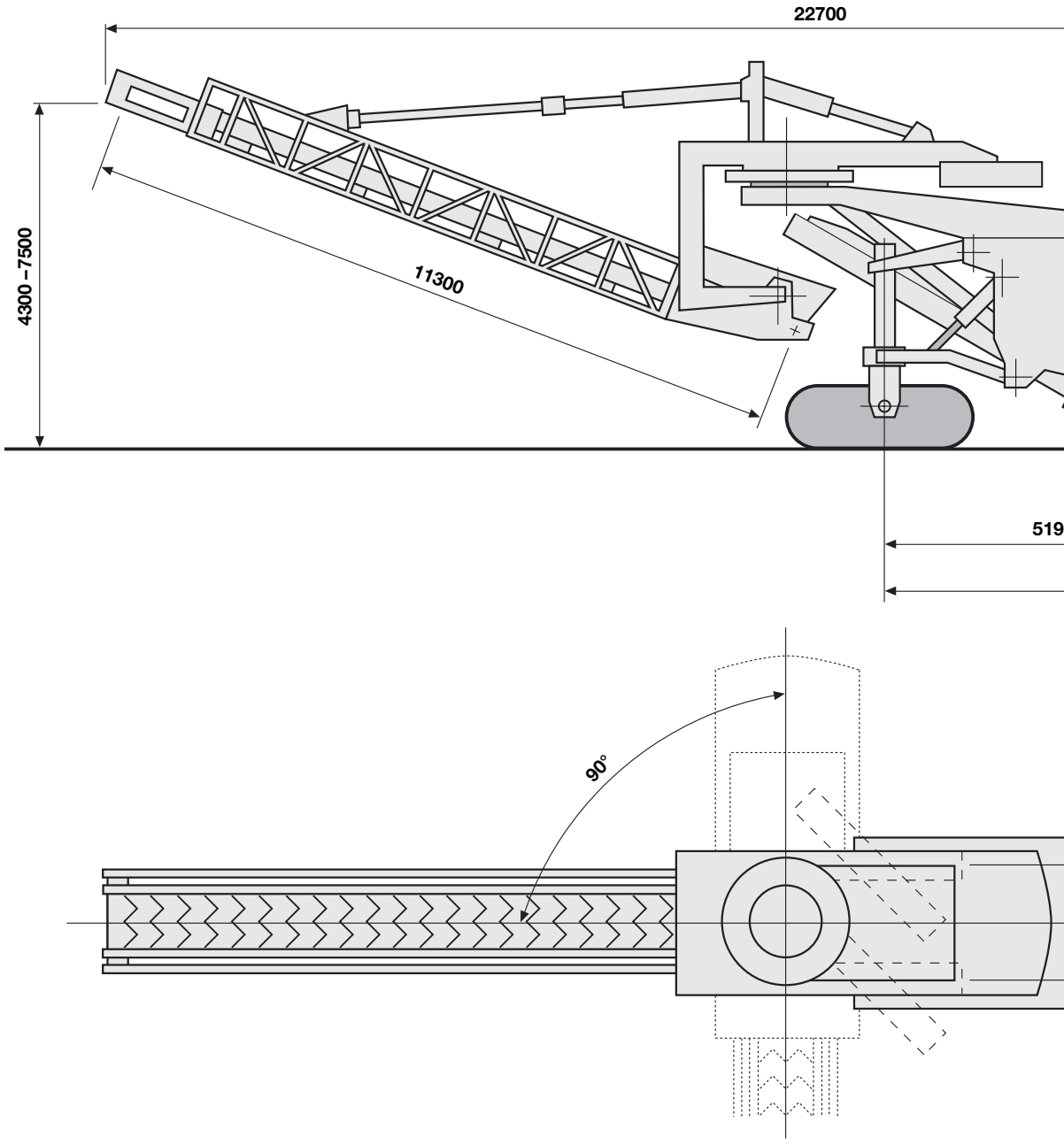
		Surface Miner 2500 SM	
Cutting width, max.	mm	2,500	
Cutting depth *1	mm	0–600	
Cutting drum			
Number of cutting tools on drum		Depends on application	
Cutting drum diameter with tools	mm	1,400	
Drum inclination max.	°	4	
Engine			
Manufacturer		Cummins	
Type		QST 30	
Cooling		Water	
Number of cylinders		12	
Output	kW/HP/PS	783/1,050/1,065	
Engine speed	min^{-1}	2,100	
Displacement	cm^3	30,500	
Fuel consumption, 1/1 load	l/h	191.5	
Fuel consumption, 2/3 load	l/h	127.6	
Speed/gradeability			
Operating speed	m/min	0 – 25	
Travel speed	km/h	0 – 3.9	
Theor. gradeability	%	20	
Max. transverse gradient	%	8	
Weights *2			
Front axle load, full tanks	daN (kg)	39,200	
Rear axle load, full tanks	daN (kg)	63,800	
Own weight	daN (kg)	98,000	
Operating weight, CE *3	daN (kg)	100,500	
Operating weight, full tanks	daN (kg)	103,000	
Crawler tracks			
Front crawlers (L x W x H)	mm	2,920 x 400 x 970	
Rear crawlers (L x W x H)	mm	2,920 x 400 x 970	
Tank capacities			
Fuel tank	l	2,400	
Hydraulic fluid tank	l	500	
Water tank	l	2,800	
Electrical system			
Control	V	24	
Lighting	V	24	
Conveyor system			
Width of primary belt (Loading belt)	mm	1,400	
Width of secondary belt (Discharge belt)	mm	1,400	
Theoretical discharge belt capacity	m^3/h	1,100	
Shipping weights/Weights *2			
1st module (L x W x H)	mm	12,800 x 3,470 x 3,300	
2nd module (L x W x H)	mm	15,700 x 2,750 x 3,400	
Weight 1st module	daN (kg)	76,600	
Weight 2nd module	daN (kg)	21,400	

*1 = The maximum cutting depth may deviate from the value indicated, due to tolerances and wear.
*2 = All weights refer to basic machine without additional equipment.
*3 = Weight of machine with half-full water tank, half-full fuel tank, driver (75 kg) and tools.

Technical description



Basic design

Surface Miner for cutting rock with mechanically driven cutting drum and a two-part conveyor system.

Frame

Rigid welded design with integrated tanks for fuel and water.

Crawler unit suspension

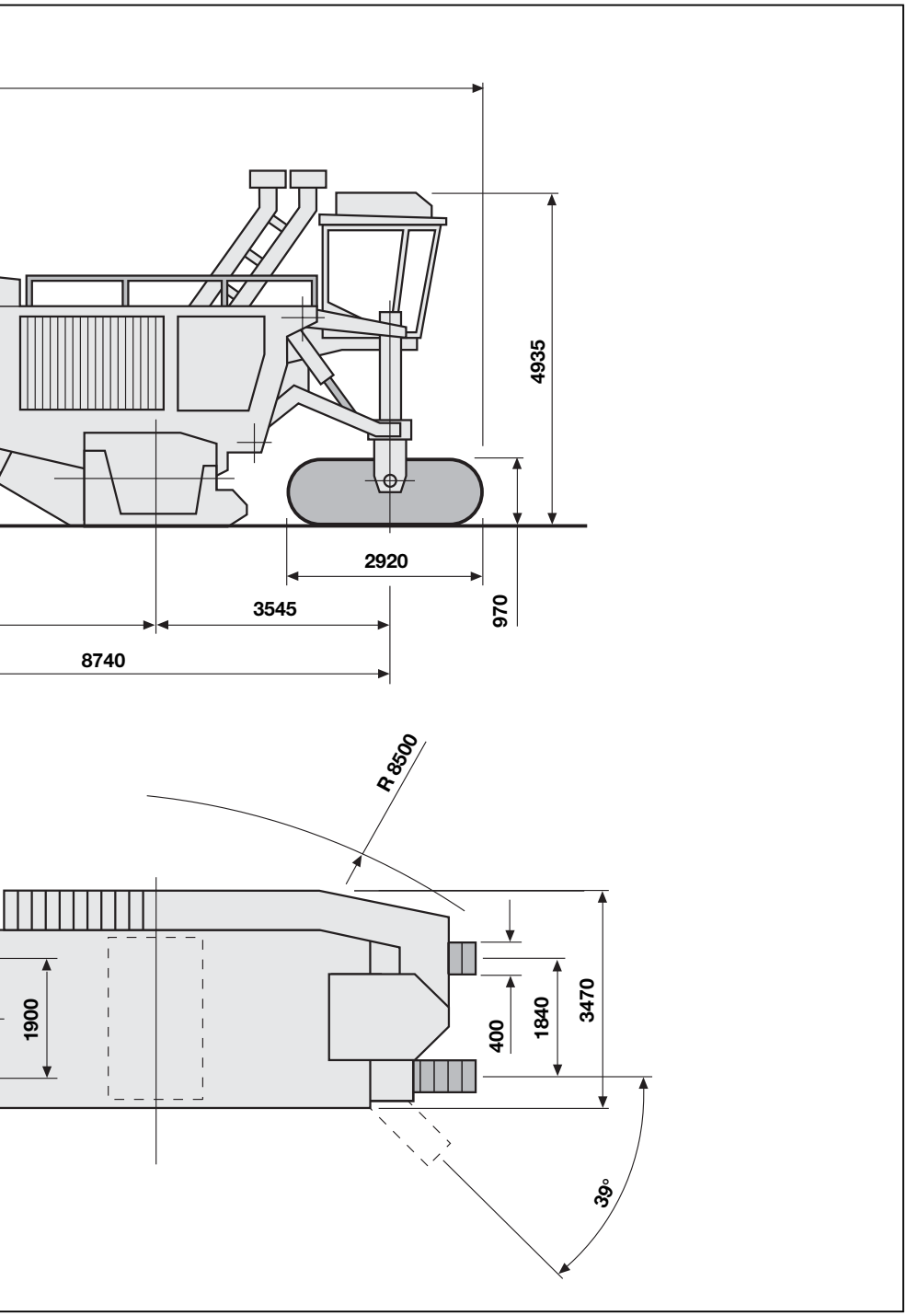
The four crawler tracks are mounted free-floating on parallelogram-type suspensions. The tracks are fitted with double grouser track shoes.

Cutting depth control

The height is adjusted via hydraulic cylinders. The rear crawler suspensions are controlled via an automatic cutting control unit.

Travel drive

Each crawler unit is driven by a planetary gearing with hydraulic motor. Both the front and rear travel drive motors



are fed by a hydraulic variable displacement pump each. The advance speed can be infinitely adjusted from zero to maximum in both travel gear and operating gear.

Brake system

Operating brake via a closed-loop hydrostatic system. Parking brake for each crawler unit with spring-loaded multiple disc brakes.

Scraper blade

The drum chamber is sealed by a hydraulically actuated scraper blade behind the cutting drum, thus ensuring a clean cutting surface.

Cutting drum

The cutting drum rotates in an up-cutting direction. The cutting tools are mounted in toolholders welded onto the body of the drum. The tools used, i.e. number, arrangement and type of tools, depend on the machine's momentary use and on the properties of the material being cut.

Cutting drum drive

The cutting drum is driven via a mechanical clutch on the flywheel side of the diesel engine, transmission belts and a planetary gearing installed in the cutting drum. The cutting speed can be adjusted in line with the momentary application by replacing the pulleys for the transmission belts.

Steering

The Surface Miner is steered via an all-crawler steering.

Water spraying system

The water spraying system largely prevents the generation of dust while cutting material and reduces the degree of wear on the cutting tools due to the cooling effect. The spray nozzles can easily be removed for cleaning. Spray nozzles are additionally installed for the loading conveyors, thus preventing the generation of dust while loading the material.

Soundproofing

The engine, cooling unit and hydraulic system are soundproofed to reduce the noise level and protect both the operating crew and the environment.

Operator's cab

The Surface Miner is equipped with a closed, sealed and soundproofed cab. The driver's seat is rotatable and is equipped with armrests into which all the most important controls have been integrated. Air-conditioning and heating are standard

features of the cab. For the machine's transport the operator's cab can be folded by 180°.

Conveyor system

The conveyor system comprises a wide primary conveyor which picks up the cut and comminuted material at the cutting drum, as well as a discharge conveyor to discharge the material onto trucks. The discharge conveyor can be adjusted in height and slewed to both sides. The conveying speed can be infinitely varied.

Safety

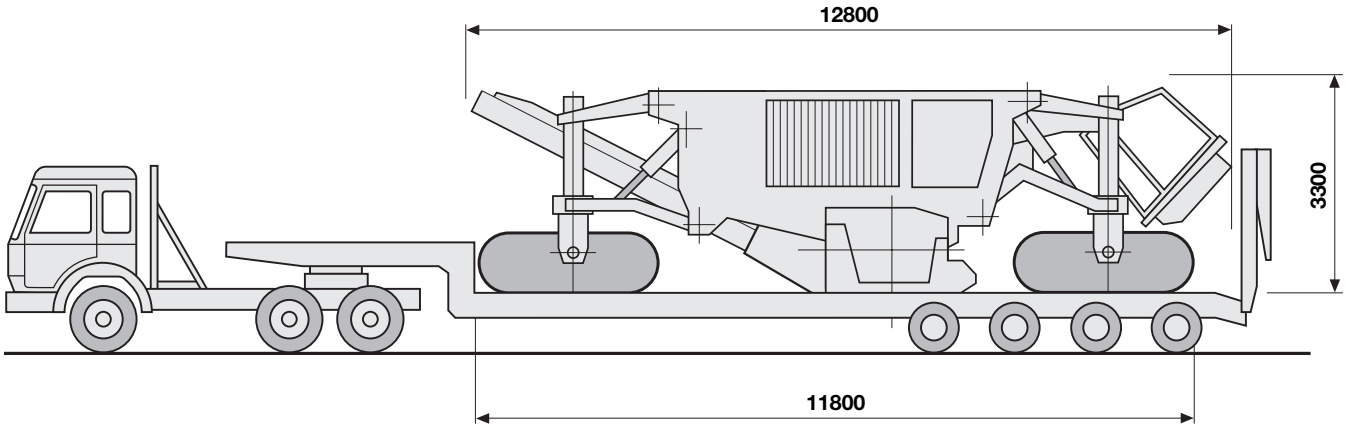
Comprehensive safety equipment with five Emergency OFF switches.

Transport

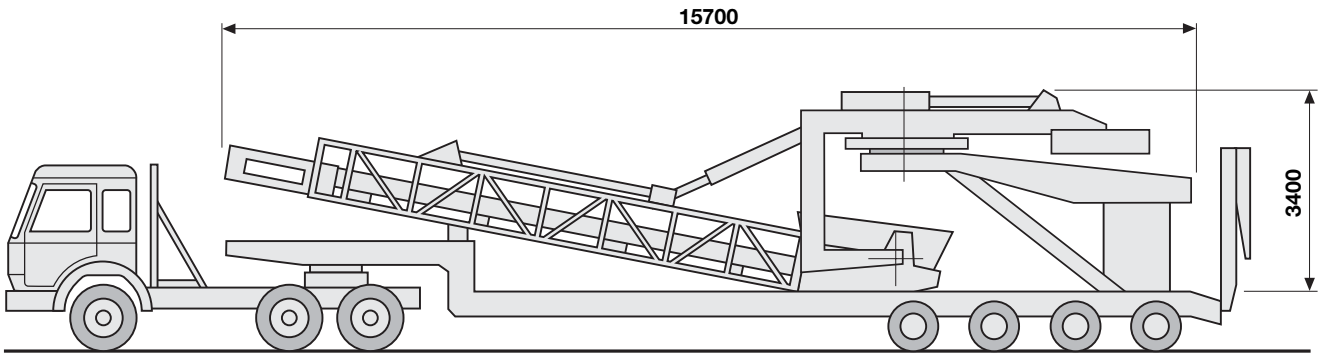
The Surface Miner can be disassembled into two modules for transport. The first module comprises the frame, operator's cab, power station, primary conveyor and crawler tracks. The second module comprises the belt suspensions, the turntable and the discharge conveyor.

Transport modules of the Surface Miner 2500 SM

Dimensions in mm



1st module: frame, crawler tracks, power station, primary conveyor and operator's cab



2nd module: turntable, belt suspensions, discharge conveyor

Plus an additional crate containing various parts.

○ Standard ● Option

Equipment	Surface Miner 2500 SM
Maintenance	
Tool kit	○
Extended tool kit	●
Machine control and level control	
Automatic levelling system	○
Cutting depth control via laser sensor	●
Cutting depth control via scanning a grade line	●
Cutting depth control with triple sensor for surfaces that have not been finely graded	●
Slope sensor	○
Tracks	
All-crawler drive	○
Crawler tracks with double grouser track shoes	○
Frame/Operator's cab	
Special painting	●
Operator's cab closed and sealed	○
Operator's cab with air conditioning and heating	○
Cutting unit	
Water spraying system for cutting drum	○
Conveying system	
Adjustable belt speed	○
Loading conveyor adjustable in height and slewable	○
Water spraying system for conveying system	○
Miscellaneous	
Cold starting facility	●
Water filling pump, hydraulically driven	●
Central lubrication system	●
Service package (Filters etc.)	●
220 V-lighting system	●
High pressure water wash down	●
Comprehensive safety package with 5 Emergency OFF switches	○
Soundproofing	○
Reversing horn	○

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