



Technical specification  
Recycler WR 2000



# Technical specification

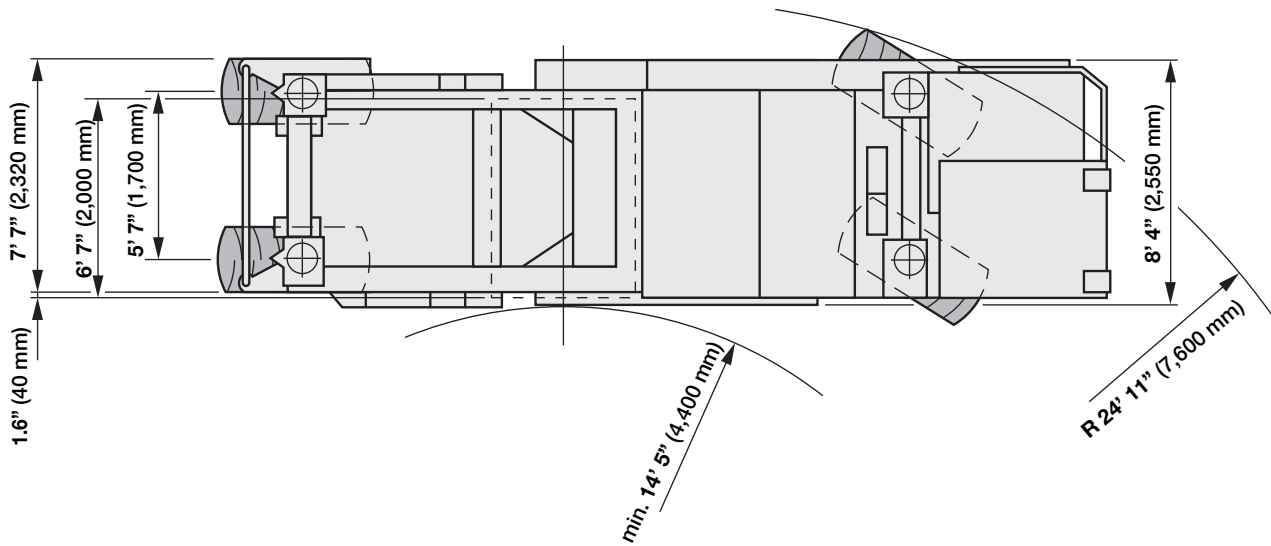
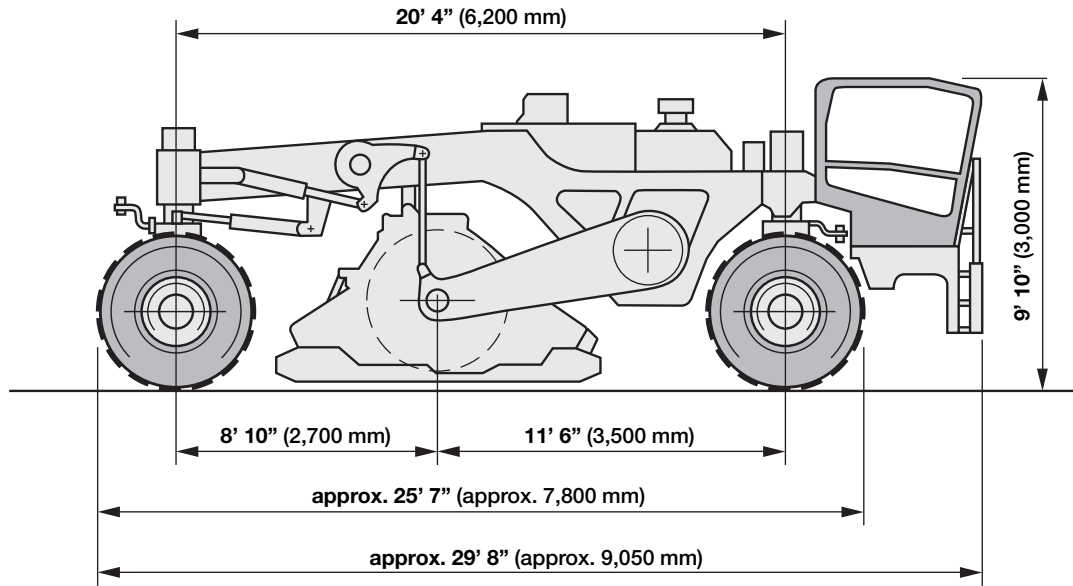
	<b>Recycler WR 2000</b>
<b>Working width max.</b>	6' 7" (2,000 mm) / 7' 10" (2,400 mm)
<b>Working depth*<sup>1</sup></b>	0 – 20" (0 – 500 mm)
<b>Milling and mixing rotor</b>	
Tool spacing	<sup>13</sup> / <sub>16</sub> " (20 mm)
Number of tools	166
Drum diameter with tools	4' 10" (1,480 mm)
<b>Engine</b>	
Manufacturer	Mercedes-Benz
Type	OM 460 LA AG3
Cooling	Water
Number of cylinders	6 in series
Output	315 kW/422 HP/428 PS
Engine speed	2,000 min <sup>-1</sup>
Displacement	730.8 in <sup>3</sup> (12,800 cm <sup>3</sup> )
Fuel consumption, full load	21.1 gal/h (80 l/h)
Fuel consumption, <sup>2</sup> / <sub>3</sub> load	14.3 gal/h (54 l/h)
<b>Speeds/Gradeability</b>	
1 <sup>st</sup> advance speed	0 – 66 ft/min (0 – 20 m/min)
2 <sup>nd</sup> advance speed	0 – 131 ft/min (0 – 40 m/min)
3 <sup>rd</sup> advance speed	0 – 295 ft/min (0 – 90 m/min)
4 <sup>th</sup> advance speed	0 – 656 ft/min (0 – 200 m/min)
Theoretical gradeability, max.	57 %
Transversal inclination, max.	8°
Ground clearance	approx. 16" (approx. 400 mm)
<b>Weights</b>	
Front axle load, full tanks, max.	32,298 lbs (14,650 daN (kg))
Rear axle load, full tanks, max.	23,259 lbs (10,550 daN (kg))
Own weight * <sup>2</sup>	49,163 lbs (22,300 daN (kg))
Operating weight, CE * <sup>3</sup> * <sup>2</sup>	50,486 lbs (22,900 daN (kg))
Operating weight, full tanks	55,556 lbs (25,200 daN (kg))
<b>Tires</b>	
Type of tires	Radial
Tyre size, front/rear	620/75 R26
<b>Tank capacities</b>	
Fuel tank	237.75 gal (900 l)
Hydraulic fluid tank	85 gal (320 l)
Water tank	105.67 gal (400 l)
<b>Electrical system</b>	24 V
<b>Shipping dimensions</b>	
Truck transport dimensions (L x W x H)	29' 8" x 8' 4" x 9' 10" (9,050 x 2,550 x 3,000 mm)

\*<sup>1</sup> = The maximum working depth may deviate from the value indicated, due to tolerances and wear.

\*<sup>2</sup> = The weights refer to basic machine including operator's cabin with air conditioning, but without any other additional equipment.

\*<sup>3</sup> = Weight of machine with half-full water tank, half-full fuel tank, driver (1,645.4 lbs / 75 kg) and tools.

**Dimensions**



# Technical specification

## Basic design

Cold recycler with mechanically driven milling and mixing rotor and two working directions.

## Chassis

Rigid welded construction with mounts for the individual units and attachments, as well as an integrated water tank. All components are easily accessible for maintenance and servicing.

## Soundproofing

Noise levels are reduced by the standard soundproofing package, which protects both the operating personnel and the environment from noise pollution.

## Operator's platform

The operator's platform with seat and control panel is located at the front of the machine. The steering wheel is adjustable in height and tilt. The ergonomic seating position of the driver, low machine design and good visibility enable ease of operation. The modern control and operating elements are located within easy reach and within the operator's field of vision. The entire operator's platform can be moved to either side. In addition, the seat console (driver's seat and control panels) can be continuously rotated about 90° to ensure an optimum view of the construction site at all times.

## Operator's cabin

The recycler is equipped with a fully enclosed, elastically mounted operator's cabin.

It offers optimum protection from inclement weather and can be equipped with air-conditioning upon request.

Heated front and rear screens are a standard feature.

The cabin is equipped with an additional seat.

The entire cabin can be shifted to the right beyond the edge of the machine.

## Machine control CGC (Cockpit Graphic Center)

All machine functions are controlled via microcontrollers.

All control modules are arranged in an easily accessible electrical cabinet.

The CGC display in the operator's platform keeps the operator informed of machine parameters, such as operat-

ing hours, oil pressure, engine temperature, engine speed, hydraulic fluid temperature, filling level of the diesel tank, wheel position or travel speed.

The integrated Wirtgen information and diagnostic system generates visual and audible alarms as and when required.

All parameters and messages, for example, contamination of the hydraulic oil filters or air filters, are indicated on the CGC display in the operator's platform.

All parameters for the operation of the recycler are entered via the CGC, printed by means of an optional printer.

## Power unit

The machine is driven by a state-of-the-art, powerful 6-cylinder engine which complies with the stringent requirements stipulated by the US Environmental Protection Agency (EPA, Tier III) and the EC (Stage III).

The engine is equipped with a fully electronic engine management system, which offers maximum torque stability even at extremely high engine loads. This prevents breaks in operation.

An extremely large cooling surface effectively cools the engine and other machine components, thus permitting safe operation of the machine even at high outside temperatures.

The cooling system is additionally equipped with a fan controller.

The fan speed is reduced at low ambient temperatures or low loads, which results in reduced noise emission levels and fuel consumption. Servicing of the engine can be carried out entirely from the ground.

## Power control

The machine is equipped with an automatic power control system which governs the advance speed in accordance with the load of the diesel engine. The power control can be deactivated to allow manual adjustment of the machine's advance speed.

## Milling and mixing rotor drive

The milling and mixing rotor is driven mechanically from the diesel engine via a clutch and multiple V-belts to the planetary gearbox. The multiple V-belts are tensioned automatically via a hydraulic cylinder. Four adjustable milling and mixing rotor speeds can be selected to ensure optimum work results.

### **Milling and mixing rotor**

Depending on the machine's working direction, the milling and mixing rotor rotates either against or in the direction of travel. Quick-change toolholders type HT11, which accommodate the point-attack cutting tools, are welded onto the drum body. Special, individually replaceable edge segments are additionally mounted onto the outer edges of the drum. Hydraulically adjustable scraper blades in front of and behind the drum ensure good mixing results.

The preset angle of the crusher bar and/or the scraper blade is indicated on the CGC display.

### **Cutting tool replacement**

The hydraulically swivelling scraper blade provides good access to the milling and mixing rotor for the replacement of tools. The quick-change toolholder system minimizes the time required for maintenance work.

Turning of the milling and mixing rotor for the replacement of tools is facilitated considerably by means of a hydraulically operated drum turning device (equipment option).

### **Milling depth control**

The machine is moved into transport or working position via the four lifting columns.

The working depth is set by lowering the milling and mixing rotor.

The current working depth is indicated on the CGC display in the operator's platform.

### **Drive unit**

The wheels of the recycler WR 2000 are connected to the machine frame via four hydraulically height-adjustable cylindrical columns.

The machine's current height position is indicated on the display and can be saved for subsequent operations.

A special feature ensures that all four wheel brackets are fully balanced in height, allowing convenient off-road driving, as well as precise working during recycling and stabilizing operations.

### **Travel drive**

Each wheel is driven by an independent hydraulic motor. The hydraulic motors are fed by a hydraulic variable displacement pump. The four travel speeds can be infinitely

varied from zero to maximum working speed in both milling and travel gear. An engageable differential lock ensures uniform traction. The machine's advance speed is set from the operator's platform.

### **Brake system**

Braking is achieved by the self-locking hydrostatic transmission. In addition, the wheels can be locked from the operator's platform by means of a multiple-disk parking brake.

### **Steering**

The WR 2000 has a finger-light hydraulic four-wheel steering system. By means of a selector switch, the operator can choose between three different steering modes ("normal", "crab steering" and "coordinated steering").

The front wheels are steered via the steering wheel, while sensors automatically maintain the rear wheels in straight-ahead position.

They can, however, also be operated independently of the front wheels via a joystick.

### **Hydraulic system**

Independent hydraulic systems for travel drive, setting functions and cooling system.

The hydraulic pumps are driven by the diesel engine via a splitter gearbox.

### **Electrical system**

24 V electrical system with starter, three-phase alternator and two 12 V batteries, as well as complete working lights, including two freely positionable lamps with magnetic pedestals.

### **Cold recycling system:**

**Injection system for water or binding agents with one injection bar (211.34 gal/min (800 l/min))**

The injection system consists of a microprocessor-controlled metering unit, an eccentric pump and an injection bar with 12 nozzles and feeding device.

The pump delivers the liquid agent (e.g. water or bitumen emulsion) from a tanker truck to the injection bar.

The eccentric worm pump has a maximum delivery rate of 211.34 gal/min (800 l/min).

A flow meter monitors the delivered quantities and transfers

the data to the microprocessor control, which in turn regulates the addition of binding agent or water in accordance with the pre-selected parameters.

An automatic shut-off device enables the individual nozzles to be opened and closed by means of hydraulic cylinders, thus allowing the addition of binding agents to be effectively adapted to the working width.

The nozzles are cleaned automatically.

## **Second pump**

A second pump can be integrated to facilitate the simultaneous addition of water and bitumen emulsion into the mixing chamber via two separate injection bars.

The addition is also governed by means of a microprocessor-controlled metering unit.

## **Injection system for water with one injection bar (475.5 gal/min (1,800 l/min))**

The injection system consists of a microprocessor-controlled metering unit, a pump, a manual injection bar with 12 nozzles and a pushing device for tanker trucks.

The pump delivers water from a tanker truck to the injection bar. The pump has a maximum delivery rate of 475.5 gal/min (1,800 l/min).

A flow meter monitors the delivered quantities and passes the data to the control system, which regulates the addition of water in accordance with the pre-selected parameters.

The addition of binding agents can be adapted to the working width manually.

## **Filling**

Water and diesel fuel are filled via large filling ports.

## **Safety during transport**

The machine can be securely lashed down on a low-bed trailer or loaded by crane by means of sturdy lashing lugs.

Equipment	Recycler WR 2000
<b>Frame/Operator's platform</b>	
Driver's seat with control consoles, can be infinitely turned by 90°	○
Operator's cabin	○
Air-conditioning system	●
Special painting	●
<b>Machine control and levelling system</b>	
Machine control by means of microcontrollers	○
CGC (Cockpit Graphic Center)	○
Printer for job data	●
Slope control sensor for slope adjustment	●
<b>Milling drum assembly</b>	
Quick-change toolholder system HT11 with 22 mm shaft diameter	○
Quick-change toolholder system HT11 with 20 mm shaft diameter	●
Crusher bar	●
Pneumatic knock-out tool	●
Hydraulic drum turning device (for cutting tool replacement)	●
<b>Cold recycling system</b>	
Injection system with 1 pump and 1 automatic injection bar (211.34 gal/min (800 l/min))	●
Injection system with 2 pumps and 2 automatic injection bars (211.34 gal/min (800 l/min))	●
Injection system for foamed bitumen and water (i.e. 2 pumps and 2 injection bars)	●
Injection system with 1 pump and 1 manual injection bar (475.51 gal/min (1,800 l/min))	●
Hose connections to bitumen tanker truck, various lengths, types	●
Additional water tank for foamed bitumen	●
Additional push rod	●
<b>Miscellaneous</b>	
Soundproofing	○
Cyclonic air filter	○
Working lights (detachable)	○
Warning lights	○
Horn, reversing horn and exterior rear view mirrors	○
Towing device	○
4-wheel steering	○
Loading and lashing lugs	○
Comprehensive tool kit	○
CE label	○
Safety certificate by the Employer's Liability Insurance Association	○
Comprehensive safety package with emergency stop buttons	○
Compressed air system	○
High-pressure water wash down	●

○ Standard ● Option



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