



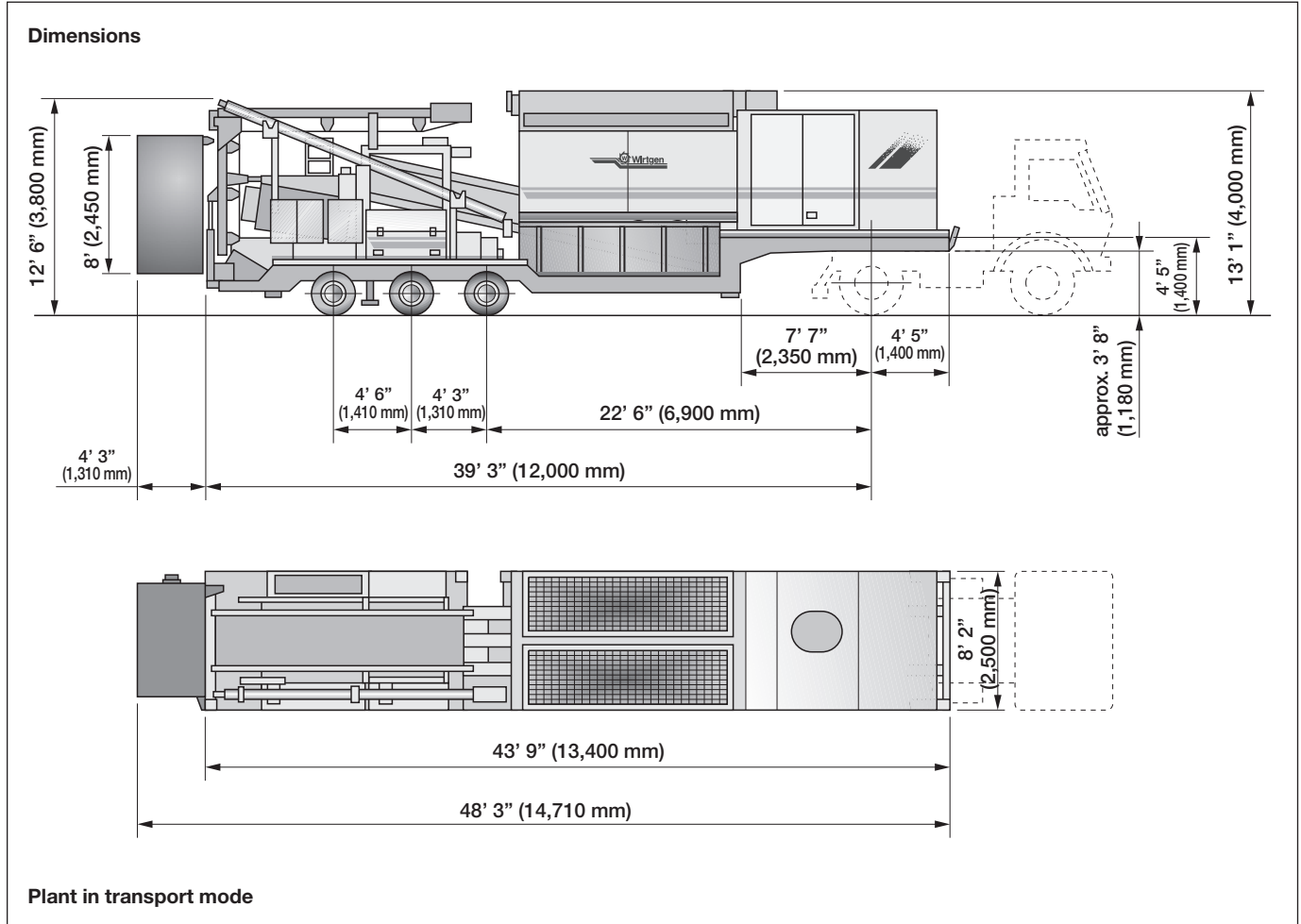
Technical specification

# Mobile cold recycling mixing plant KMA 220



# Technical specification

	<b>Mobile cold recycling mixing plant KMA 220</b>
<b>Plant capacity</b>	
Mixing capacity	220 t/h
Max. particle size	1.77" (45 mm)
<b>Transport dimensions and weights</b>	
Length without cabin / with cabin	43' 9"/48' 3" (13,400 mm / 14,710 mm)
Width	8' 2" (2,500 mm)
Height	13' 1" (4,000 mm)
Total weight	approx. 67,240 lbs (approx. 30,500 daN (kg))
<b>Proportioning of mineral aggregate</b>	
Capacity of proportioning hopper	6' 6" x 19' 6" <sup>3</sup> (2 x 6 m <sup>3</sup> )
Feeding width	12' (3,710 mm)
Feeding height (average)	11' 9" (3,600 mm)
<b>Mixer</b>	
Type	Twin-shaft compulsory mixer
Operating principle	Continuous mixer
Drive power	2 x 30.0 kW
Wear protection	Full wear-resistant lining
<b>Engine</b>	
Manufacturer	Deutz
Type	TCD 2012 L06 2V
Cooling	Water
Number of cylinders	6
Rated power	129.4 kW / 174 HP / 176 PS
Engine speed	2,100 min <sup>-1</sup>
Displacement	369" <sup>3</sup> (6,060 cm <sup>3</sup> )
Fuel consumption, full load	9.5 gal/h (36 l/h)
<b>Filling capacities</b>	
Water tank	1189 gal (4,500 l)
Fuel tank	106 gal (400 l)
Hydraulic fluid tank	106 gal (400 l)
<b>Electrical system</b>	
	24 V
<b>Conveying capacities</b>	
Feeding auger for hydraulic binding agents	42' 5" <sup>3</sup> /h (13 m <sup>3</sup> /h)
Addition of water	53 gal/min (200 l/min)
Addition of bitumen emulsion	47.5 gal/min (180 l/min)
Addition of hot bitumen for foamed bitumen	42 gal/min (160 l/min)
<b>Hot bitumen heating system</b>	
	42 V
<b>Conveying system</b>	
Belt width of feeding conveyor to mixer	3' 3" (1,000 mm)
Belt width of discharge conveyor	2' 6" (800 mm)
Slewing angle of discharge conveyor (right / left)	20° / 35°
<b>Dimensions of cabin (L x W x H)</b>	6' 6" x 4' 3" x 8' (2,000 x 1,310 x 2,450 mm)



### Basic design

The plant is used for the production of cold mixes. It operates independently of external power sources and can simply be transported to any suitable job location. The plant's components are permanently mounted on a low-bed trailer. The plant is set up within an extremely short period of time.

### Low-bed semi-trailer

Chassis frame of high-grade sectional steel, in lightweight design with central pivots to DIN and SAE standards.

Three air suspension axles with raising and lowering functions, as well as automatic, load-dependent all-wheel air brakes in accordance with the relevant EU directive.

The plant is mounted by means of container corner brackets.

Built-on mechanical and hydraulic telescoping supports are available to support the full load of the low-bed semi-trailer.

They can be operated from one side to ensure simple setup and adjustment of the mixing plant.

### Engine

All pumps and hydraulic motors are driven by a water-cooled diesel engine.

The engine complies with the stringent requirements stipulated by the US Environmental Protection Agency (EPA, Tier III) and the EU (Stage III a).

### Proportioning hopper

Generously dimensioned, twin-chamber proportioning hopper with oversize separation by means of vibrating screens on both hopper feed sections.

The screens can be folded up hydraulically to allow easy cleaning. A vertical partition enables two different aggregate fractions to be charged.

# Technical description

The aggregate ratio is controlled via mechanically adjustable gate valves at the hopper's discharge point. Lateral flaps at the hopper frame facilitate building of an approach ramp, while protecting the section of the low-bed trailer behind them against soiling.

## **Belt conveyor for feeding the compulsory mixer**

A generously dimensioned belt conveyor transports the different aggregate fractions from the hopper to the mixer. A conveyor cover and covered transfer point ensure low dust levels during transport.

The belt is kept clean by a scraper bar at the deflection pulley on the discharge side and an internal scraper in front of the return pulley.

Belt scales equipped with a maintenance-free load sensor determine the current conveying rate.

The measured value is used as an input variable for controlling the addition of binding agents.

## **Continuous mixer**

Twin-shaft continuous mixer with wear-resistant mixing arms and adjustable mixing blades made from special hard cast iron. Mixing trough in steel design with an interior lining of wearing plates.

The easy-to-service trough cover accommodates the injection bar for foamed bitumen.

The mixer's filling level is set to the optimum quantity by means of a hydraulically adjustable discharge opening onto the discharge conveyor.

## **Belt conveyor for loading the cold mix**

The discharge conveyor is folded in hydraulically for transport. It can be slewed horizontally when in operating position.

## **Plant control and switching system**

Control of the plant is effected fully automatically via microprocessors.

The plant is operated from a clearly structured operator interface.

Control functions include: batch production, automatic plant start-up, monitoring of the individual drive systems, warning signals in case of material shortage, monitoring of filling levels, temperatures and pressures, pre-selection of tonnage,

automatic plant shut-down, as well as service mode.

Precise adherence of the mix quality to the specified formula is ensured by continuously matching the target values with the actual values of the different drive systems. The plant is operated from a clearly structured main control console, which permits monitoring of the entire mixing process.

The individual modules are equipped with additional control panels for service and maintenance.

The control console can optionally be installed inside a cabin. From the cabin, the plant operator has a good view of the plant and the loading operation.

## **CGC (Cockpit Graphic Center)**

All current settings of the mixing plant are continuously shown on the CGC display.

A printer is available as an option for documenting the relevant job data.

## **Instruments**

A multi-functional display shows the plant's operating hours, oil pressure, engine temperature, charge air temperature, hydraulic fluid temperature, engine speed, filling level of fuel tank, as well as charge control. Additional filter contamination indicator.

## **Electrical system**

24 V system with three-phase alternator and two 12 V batteries, starter, socket and horn, as well as a comprehensive lighting system.

## **Hydraulic system**

Independent hydraulic systems for mixer, belt conveyors and addition of binding agents.

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

## **Water system**

Water is fed to the mixer via a controlled eccentric worm pump either externally from the right or left side of the plant, or from the integrated tank.

The water is injected at the mixer's intake point.

A magneto-inductive flow meter ensures optimum metering of the water quantities. The tank filling level is monitored via a display at the water tank.

### Feeding of hydraulic binding agents

Hydraulic binding agents are fed into the compulsory mixer by means of a slewing feeding auger and a weighing auger. The feeding auger can be positioned on the left or right side of the mixing plant, as required.

For transport of the mixing plant, the feeding auger is simply slewed and secured on top of the mixer frame.

A load cell is used for accurate weighing and metering of the binding agents.

A special transport lock ensuring that the load cell is safely secured during transport is part of the plant's standard equipment.

### Bitumen emulsion system (optional)

Controlled eccentric worm pump for bitumen emulsion with emulsion injection bar at the continuous mixer, flow meter

and accompanying controller for precise metering. Bitumen emulsion can be drawn from either side of the plant.

### Foamed bitumen system (optional)

System with electrically heated gear pump for hot bitumen (maximum temperature (392° F (200° C))), foamed bitumen injection bar with several expansion chambers, water injection into the expansion chambers for the production of foamed bitumen, as well as test nozzle for bitumen sampling, and bitumen filter with temperature indicator. All bitumen hoses are insulated and electrically heated. Metering of the hot bitumen quantities via flow meter, and monitoring of bitumen and water pressure. Complete open-loop and closed-loop controller for the foamed bitumen system. Water for the production of foamed bitumen is drawn from the water tank by means of a piston pump.

Equipment	KMA 220
<b>Plant operation</b>	
Cabin	●
Heating system for cabin	●
Air-conditioning system for cabin	●
Printer for job data	●
<b>Processing of cold mix</b>	
Metering unit for bitumen emulsion	●
Metering unit for hydraulic binding agents	○
Connection for supply of hydraulic binding agents via silo	●
Hopper for manual supply of hydraulic binding agents	●
Metering unit for water	○
Metering unit for foamed bitumen	●
Heated hose for hot bitumen supply	●
<b>Miscellaneous</b>	
Special painting	●
High-pressure water wash down	●
Flaps for building a ramp for wheel loaders	○
Soundproofing	○
Workplace lighting	○
Comprehensive tool kit	○
CE mark	○
Comprehensive safety package with emergency stop buttons	○
Scraping brush at discharge conveyor	●
Additional Xenon lighting	●

○ Standard ● Optional







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