

Perfect Texture and Protection of Concrete Surfaces **TEXTURE CURING MACHINE**

TCM 95(i) | TCM 180(i)



PERFECT TEXTURE AND PROTECTION OF CONCRETE SURFACES

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The modular machine design allows it to be adapted to working widths between 4.0 m and 9.5 m (TCM 95(i)) or 4.0 m and 18.0 m (TCM 180(i)).

The self-propelled texture curing machine produces the desired surface textures on the freshly paved concrete surface.

The automated spraying system with a high-capacity storage tank efficiently distributes the dispersion and protects the concrete surface from premature drying.

The various texture and spray modes as well as other texture alternatives offer a wide range of functions.

An extensive array of options that can be combined without additional installation work make a wide variety of applications possible while guaranteeing maximum machine utilization rates.

30-4

WIRTGEN SLIPFORM PAVERS

OFFSET SLIPFORM PAVERS

- > Offset paving height up to 3.0 m¹⁾

PLACER / SPREADERS

> Inset paving width up to 12.0 m¹⁾ > Inset layer thickness up to 500 mm¹⁾

INSET SLIPFORM PAVERS

> Inset paving width up to 16.0 m¹⁾ > Inset paving height up to 450 mm¹⁾

TEXTURE CURING MACHINES

> Working width up to 18.0 m > Working height up to 500 mm

¹⁾ Special paving widths, paving thicknesses, paving heights, and other options available on request



OVERVIEW OF HIGHLIGHTS

Perfectly Equipped



01 Highlights in Operation

- > High level of operator comfort on the operator's platform
- > Standardized operating concept in line with the current SP model ranges
- > Ergonomically designed controls for intuitive operation
- > State-of-the-art, clearly structured main control panel
- > Separate control consoles for longitudinal texturing features, transverse texturing features, service and diagnostic features, and telescoping feature
- > All adjustment features offer electrohydraulic control
- > Automatic adjustment of all components for central crown applications



02 Highlights in Driving and Leveling

- > High-precision traction drive featuring proportional control
- > Two different speed ranges
- > Wheel-mounted or track-mounted design
- > High precision and manoeuvrability
- > High-precision height adjustment featuring proportional control
- Scanning by means of stringline or slab tracer (reference surface)
- > Optional scanning of the concrete surface by means of an ultrasonic sensor in 3D applications
- > Turning on the spot at the mere push of a button

03 Highlights in Concrete Curing

- > Functional film unwinder
- > Mounting rail for burlap or artificial turf
- > Effective lateral broom-cleaning unit
- > Optimized transverse broom finish and spraying feature
- > Selection feature for longitudinal or transverse broom finish
- > Selection feature for longitudinal or transverse spraying
- > Diagonal broom finish and spraying feature
- > Meander spraying feature
- Minor modification requirements when switching applications
- > Spray heads with three spray nozzles each for reliable longitudinal spraying

04 Highlights in Performance and Productivity

- > Engine models complying with EU Stage 3a / US EPA Tier 3 or the stringent EU Stage 5 / US EPA Tier 4f emission standards
- > Fuel-efficient ECO mode and temperature-controlled fan speed (EU Stage 5 / US EPA Tier 4f)
- Engine with optional diesel particulate filter (EU Stage 5 / US EPA Tier 4f only)
- > Numerous automated features
- > Lightweight working platform of high-quality aluminium
- > Hot-water heating system for easy cleaning of the spraying system
- > Quick maintenance
- > Separate supports
- > Compact transport dimensions
- > Minimum modification requirements

HIGHLIGHTS IN OPERATION

A Stress-Free Workplace

Comfortable, ergonomically-designed operator's platform

Familiar with the Machine in Seconds Standardized operating concept



High Level of Operator Comfort on the Operator's Platform

Optional features such as canopy, stand-up seat or hoisting crane for the curing compound tanks enhance work efficiency.

Ergonomic Design and Ease of Operation

Ease of operation and ergonomically designed controls improve operator performance and therefore increase the machine's overall productivity.

Automatic Adjustment of Central Crown

When altering the central crown, the components involved are adjusted automatically, allowing the operation to continue quickly and precisely without requiring additional operator intervention.

Additional Control Consoles

The process is optimized by separate, individually positionable control consoles for controlling the longitudinal or transverse texturing features and for hydraulic telescoping of the machine frame. The control console for service and diagnostic features enables specific diagnostic procedures to be performed.

Electrohydraulic Adjustment Features

All adjustment features offer electrohydraulic control and can be operated quickly and easily via the different control consoles.

State-Of-The-Art Main Control Panel

The main control panel with state-of-the-art control system and central PCB is positioned next to the engine station and features language-independent labelling and controls arranged in line with functional groups.

Standardized Operating Concept

The standardized operating concept in line with the current SP model ranges offers additional synergistic effects.



Fully automatic adjustment of the machine to the pavement's cross-section.



- 01 High Level of Operator Comfort on the Operator's Platform
- 02 Ergonomic Design and Ease of Operation
 - Automatic Adjustment of Central Crown
- 04 Additional Control Consoles
- 05 Electrohydraulic Adjustment Features

06

07

- State-Of-The-Art Main Control Panel
- **Standardized Operating Concept**

HIGHLIGHTS IN DRIVING AND LEVELING



Reliable Scanning Methods

Transducers on the stringline or slab tracers on the previously paved concrete slab are tried-and-tested leveling methods.

Scanning via Ultrasonic Sensors

Stringless concrete paving using, for example, 3D control allows the previously paved concrete slab to be scanned by ultrasonic sensors during the curing process.

Height Adjustment Featuring Proportional Control

Height adjustment featuring proportional control guarantees full compliance with the specified machine height.

Precision and Maneuverability

The innovative skid steering system ensures highest steering precision in operation, whilst the patented transport steering system ensures optimum maneuverability during transport.

Wheel-Mounted or Track-Mounted Design

The texture curing machine can be supplied in either wheel-mounted or track-mounted design in accordance with customer requirements.

Rotating Feature

The rotating feature allows the machine to be turned on the spot at the mere push of a button.

Two Speed Ranges

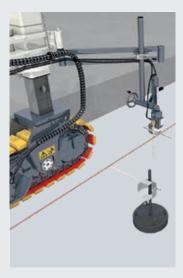
State-of-the-art drive gearboxes and drive motors enable different advance speeds in operating and transport mode.

Traction Drive Featuring Proportional Control

The machine's traction drive featuring proportional control guarantees continuously adjustable, highly precise operating and transport speeds.



The TCM 95(i) is fitted with four wheels, the TCM 180(i) with four track units.

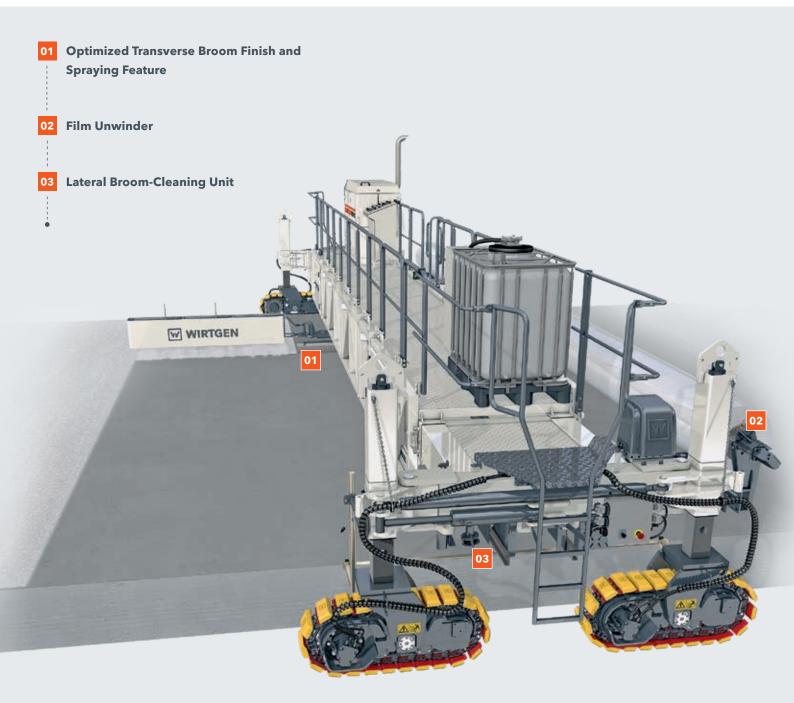


Reliable scanning methods





HIGHLIGHTS IN CONCRETE CURING



Protection against Rain and Moisture Film unwinder (Polyroll) Optimal Transverse Brushing Brush cleaning system

Optimized Transverse Broom Finish and Spraying Feature

The transverse carriage guide has been improved to achieve more accurate broom finish and spraying results.

Mounting Rail for Burlap or Artificial Turf

A mounting rail for burlap or artificial turf permits the creation of a surface texture offering excellent skid resistance.

Film Unwinder

A mounting fixture for unwinding a full-width film enables the freshly paved concrete surface to be protected against damage caused by heavy rain.

Lateral Broom-Cleaning Unit

During the change in direction, the broom-cleaning unit removes the slurry sticking to the broom when applying a transverse broom finish. The inclination of the broom can be adjusted to requirements prior to being placed on the concrete surface.



Film unwinder for effective protection of the concrete in case of rain.





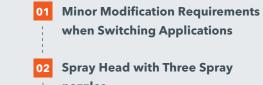


Mounting rail for burlap or artificial turf

HIGHLIGHTS IN CONCRETE CURING

Wide Variety of Functions

High Machine Utilization Rates Fast reconfiguration when switching applications



nozzles

when Switching Applications



Selection Feature for Longitudinal or Transverse Spraying



04 Selection Feature for Longitudinal or Transverse Broom Finish





Diagonal broom finish and spraying feature

Diagonal Broom Finish and Spraying Feature

The texture curing machine is capable of applying a diagonal broom finish and spraying diagonally across the concrete slab in a single operation.

Meander Spraying Feature

The texture curing machine is capable of spraying across the full width of the concrete slab evenly in transverse direction during continuous forward travel. The meander spraying feature additionally permits exposed aggregate concrete construction which is used quite frequently in Europe.

Minor Modification Requirements when Switching Applications

When switching between the different spraying and broom finish features, modification is completed quickly by well-trained staff.

Spray Head with Three Spray Nozzles

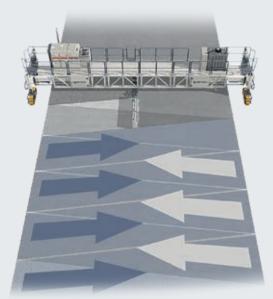
All spray heads are fitted with three separate spray nozzles each in order to minimize breaks in operation during longitudinal spraying in case of a nozzle failure.

Selection Feature for Longitudinal or Transverse Spraying

The texture curing machine is capable of spraying in longitudinal or transverse direction of the concrete slab in accordance with site requirements. Both modes of operation include spraying of the lateral concrete edges.

Selection Feature for Longitudinal or Transverse Broom Finish

The texture curing machine is capable of applying a broom finish in longitudinal or transverse direction of the concrete slab in accordance with site requirements.



Meander spraying feature



Applying a broom finish and spraying in longitudinal direction broadens the range of options to produce different surface textures.

HIGHLIGHTS IN PERFORMANCE AND PRODUCTIVITY

02

WIRTGEN

Ease of Transport

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All components required for operation can be adjusted so as to be within the maximum permissible transport dimensions.

Minimum Modification Requirements

Modification is completed quickly and easily even if the texture curing machine is fitted with the full range of equipment. All components of the broom finish and spraying equipment for both longitudinal and transverse texturing applications need not be removed from the machine but are simply folded in as needed.

Efficient Cleaning of Spraying System Hot-water heater Fast Relocation to Next Job Easy transportation

08

Automated Features

The machine control system relieves the operator of a part of his workload by automatically controlling, for example, traction drive, steering and height adjustment, as well as the broom finish and spraying operation.

Diesel Particulate Filter (TCM 95i / TCM 180i)

The optional diesel particulate filter ensures compliance with even stricter exhaust emission requirements.

Hot-Water Heating

The integrated heating system produces hot water which is stored in a 90-litre tank. The wax-based curing compound adhering to the pipelines can then be removed and the spray system cleaned economically with water heated to up to 60°C by simply pressing a button and turning two ball valves.

ECO Mode and Engine Cooling (TCM 95i / TCM 180i)

The effective ECO mode engine control system teams up with the temperature-controlled fan speed to ensure quiet, fuelefficient operation.

Two Engine Models

The diesel engine installed in the TCM 95 / TCM 180 complies with exhaust emission standards EU Stage 3a / US EPA Tier 3; the diesel engine installed in the TCM 95i / TCM 180i complies with the strict requirements of the currently highest exhaust emission standards EU Stage 5 / US EPA Tier 4f.

Ease of Maintenance

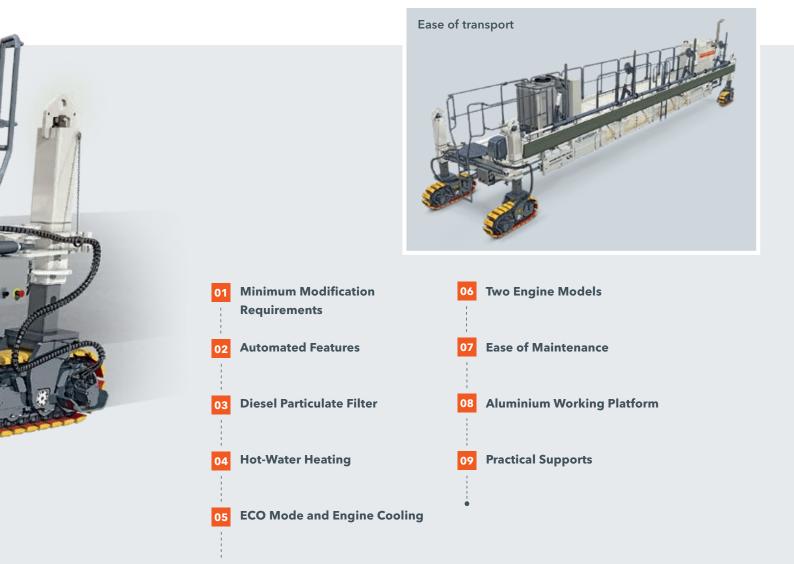
Ready access to all maintenance and monitoring points minimizes maintenance requirements.

Aluminum Working Platform

The working platform of high-quality aluminum impresses with low weight and good slip resistance. The platform is available in wide or narrow design.

Practical Supports

Two separate supports facilitate modification of the machine on site.



The modular machine design allows it to be adapted to working widths between 4.0 m and 9.5 m (TCM 95(i)) or 4.0 m and 18.0 m (TCM 180(i)). The self-propelled texture curing machine produces the desired surface textures on the freshly paved concrete surface. The automated spraying system with a highcapacity storage tank efficiently distributes the dispersion and protects the concrete surface from premature drying.



TECHNICAL SPECIFICATIONS	ТСМ 95	TCM 180	тсм 95 і	TCM 180i		
Working width max.	9,500 mm	18,000 mm	9,500 mm	18,000 mm		
Working height	0 to 500 mm					
Engine						
Engine manufacturer	Deutz Deutz					
Туре	TD 2.	9 L4	TCD 2.9 L4			
Cooling	Wat	er	Water			
Number of cylinders	4		4			
Rated power at 2,300 rpm	50 kW / 67	HP / 68 PS	45 kW / 60 HP / 61 PS			
Displacement	2,925	2,925 cm ³ 2,925 cm ³				
Fuel consumption, full load in field mix ¹⁾	16.5 l/h 4.1 l/h 15.7 l/h 3.9 l/h			3.9 l/h		
Sound power level in accordance with DIN EN 500-2 engine operator's platform	$\leq 97 \text{ dB}(A) \mid \geq 77 \text{ dB}(A) \leq 98 \text{ dB}(A) \mid \geq 80 \text{ dB}(A)$			≥ 80 dB(A)		
Exhaust emission standards	EU Stage 3a EU Stage 5 / US EPA Tier 4			US EPA Tier 4f		
Electrical system						
Voltage supply		2	4 V			
Filling capacities						
Fuel	130					
Hydraulic oil	120					
Curing compound	800 1					
Spraying system						
Spraying pump max.	23 l/min					
Filling pump max.	114 l/min					
Driving performance						
Travel gear	0 - 45 m/min	0 - 33 m/min	0 - 45 m/min	0 – 33 m/min		

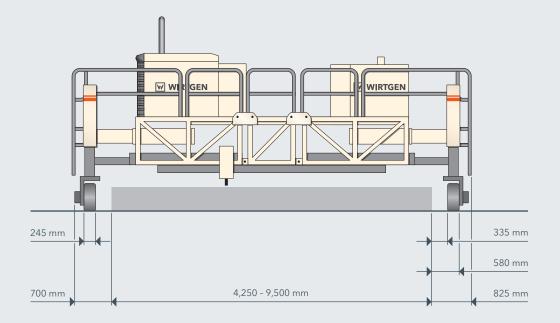
TECHNICAL SPECIFICATIONS	TCM 95	TCM 180	TCM 95 i	TCM 180i			
Tyres							
Type of tyres	Solid rubber	-	Solid rubber	-			
Tyre size	23/10.1 R 12	-	23/10.1 R 12	-			
Number of wheels	4	-	4	-			
Track units							
Dimensions (L x W x H)	-	1,340 x 268 x 560 mm	_	1,340 x 268 x 560 mm			
Number of track units	-	4	-	4			
Height adjustment							
Height adjustment (hydraulic)		620	mm				
Transport dimensions							
Min. machine dimensions (L x W x H)	6,150 x 2,500 x 2,700 mm	6,650 x 2,500 x 2,700 mm	6,150 x 2,500 x 2,700 mm	6,650 x 2,500 x 2,700 mm			
Max. machine dimensions (L x W x H)	10,150 x 2,500 x 2,950 mm	18,650 x 2,500 x 2,950 mm	10,150 x 2,500 x 2,950 mm	18,650 x 2,500 x 2,950 mm			
Machine weights							
Operating weight, CE ²⁾	7,500 kg - 15,000 kg	9,000 kg - 19,500 kg	7,500 kg - 15,000 kg	9,000 kg - 19,500 kg			

¹⁾ The reference value is based on statistically weighted values from experience gathered by WIRTGEN GmbH in the course of projects on construction sites around the world. The underlying fuel consumption figures originate from the engine manufacturers' engine control units. The actual, individual fuel consumption on a construction site depends on numerous different factors, for example, but not exclusively, machine usage (operator input, engine loading, etc.), the machine configuration (mold type, machine set-up width, dowel bar inserter, etc.), and the conditions on the construction site (paved material quantity, material properties, logistics, etc.).

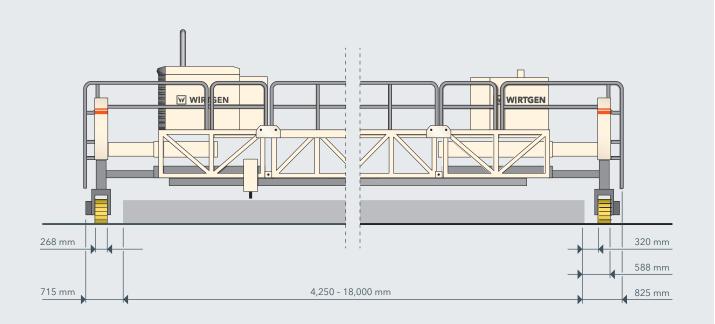
²⁾ Machine weight, half weight of all consumables, machine operator (75 kg), tools, no optional equipment; weights depend on the actual equipment installed and the working width

TEXTURE CURING MACHINE TCM 95(i) | TCM 180(i) | **TECHNICAL DRAWINGS**

REAR VIEW TCM 95(i)



REAR VIEW TCM 180(i)



TOP VIEW TCM 95(i) / TCM 180(i)

TCM 95 / TCM 95i

5,150 - 10,400 mm

2,960 mm

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3,430 mm

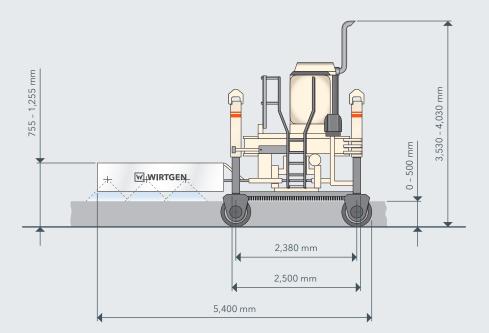
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TCM 180 / TCM 180i

Direction of operation

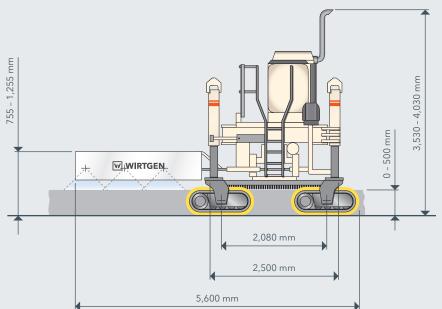
SIDE VIEW TCM 95(i) / TCM 180(i)

TCM 95 / TCM 95i



Direction of operation





STANDARD EQUIPMENT	тсм 95	TCM 180	TCM 95 i	TCM 180i
Basic Machine				
> Engine station complying with emission standards EU Stage 3a			—	—
 > Engine station with exhaust after-treatment by diesel oxidation catalyst DOC (US EPA Tier 4f) 	_	-		-
 Engine station with exhaust after-treatment by diesel oxidation catalyst DOC and diesel particulate filter DPF (EU Stage 5) 	_	-		
> Separate hydraulic oil cooler			—	—
> Fuel tank, 130 l				
> Hydraulic oil tank, 120 l				
> Electrical system (24 V)				
> Pressure-and-flow-controlled hydraulic pump in the open circuit for traction drive, agitator drive and spraying and broom unit drives		•		-
> Pressure-controlled pump, open circuit, for all cylinder functions				
Main Frame and Height Adjustment				
> Heavy-duty framework design for working widths from 4.00 m to 6.00 m by telescoping the frame by 1.00 m each, left and right				
> Working widths of up to 9.50 m are possible using extension elements		-		—
> Working widths of up to 18.00 m are possible using extension elements	—		—	
Crawler Units and Chassis Linkage				
 Side parts left and right for connecting 4 wheels, including transport steering feature (longitudinal or transverse transport possible) 	-	-		_
> Side parts left and right for connecting 4 track units, including transport steering feature (longitudinal or transverse transport possible)	_		_	
> Four hydraulically driven wheels, diameter 0.58 m, width 0.23 m, gear ratio 1:40		-		—
> Four track units fitted with triple-grouser steel track pads				
> Working speed: 0 - 22 m/min; Transport speed: 0 - 45 m/min		-		—
> Working speed: 0 - 15 m/min; Transport speed: 0 - 33 m/min	—		—	

STANDARD EQUIPMENT	тсм 95	тсм 180	TCM 95 i	тсм 180і
Machine Control, Leveling and Steering				
> Machine control via central control panel with manual or automatic mode				
> Four hydraulic leveling cylinders with a stroke of 0.62 m				
Equipment for Transverse / Longitudinal Texturing				
> Transverse drive and carriage for broom and spraying unit				
> Transverse broom, plastic, 2.50 m long				
> Transverse spraying unit, 2.50 m long, with tank and pump				
Miscellaneous				
> Pre-fitting for installing the WITOS FleetView control unit				
> Standard painting in RAL 9001 (cream)				
> WITOS - professional telematics solution for machine operation and service optimization				
> Lighting system including 4 halogen working lights, 24 V				

= Standard equipment
 = Standard equipment, can be replaced with optional equipment if desired
 = Optional equipment

OPTIONAL EQUIPMENT	тсм 95	тсм 180	TCM 95 i	тсм 180і
Main Frame and Height Adjustment				
> 2 m frame extension element including aluminum walkway with windows				
> 1 m frame extension element including aluminum walkway with windows				
> Two hydraulic cylinders for crown adjustment of the main frame				
> Automatic crown adjustment				
> Handrail - extension element for front and rear, 2.00 m				
> Handrail and ladder - extension element, 2.00 m				
> Handrail - extension element for front and rear, 1.00 m				
> Handrail and ladder - extension element, 1.00 m				
> Two supports for machine modification on site				
> Dual hydraulic telescoping device for the main frame, left and right				
Crawler Units and Chassis Linkage				
> Four track units with polyurethane track pads	_		_	
Machine Control, Leveling and Steering				
> Leveling unit for automatic operation of the machine				
> Two slab tracers				
> Four slab tracers				
> Two ultrasonic sensors including mounting brackets				
> Four ultrasonic sensors including mounting brackets				
> Six ultrasonic sensors including mounting brackets				
> Pre-fitting for 3D levelling for TCM 95(i) and TCM 180(i)				
Equipment for Transverse / Longitudinal Texturing				
> Transverse broom, flat wire, 3.00 m long			—	-
> Transverse spraying unit, 3.00 m long, with tank and pump			—	-
> Pre-fitting for longitudinal spraying with tank and pump				
> Pre-fitting for attaching artificial turf and jute cloth for working width 4.00 m - 6.00 m				
> Extension element for artificial turf / burlap mounting rail, 2.00 m				
> Extension element for artificial turf / burlap mounting rail, 1.00 m				
> Device for winding or unwinding a protective film on the front of the machine				
> Pre-fitting for mounting a longitudinal broom				
> Extension element for longitudinal broom mount, 2.00 m				
> Extension element for longitudinal broom mount, 1.00 m				
> Longitudinal spraying unit for working width 4.00 - 6.00 m behind the machine				
> Extension for longitudinal spraying unit, 2.00 m				
> Extension for longitudinal spraying unit, 1.00 m				
> Control panel for longitudinal texturing, longitudinal spraying and film unwinder				

OPTIONAL EQUIPMENT	ТСМ 95	тсм 180	TCM 95 i	тсм 180і
Additional Options for Brushing And Spraying				
> Agitator in the curing compound tank				
> Hydraulically driven filling pump for curing compound tank				
> Water heating system for cleaning the spraying system				
> Extended machine functionality for automatic diagonal broom finish and diagonal spraying				
> Extended machine functionality for automatic meander spraying				
> Broom scraper and inclination unit for the transverse broom				
> Mounting bracket for holding up to two additional curing compound tanks (800 l or 1,000 l)				
> Mounting bracket for holding one additional curing compound tank, 800 l				
Operator's Platform				
> Weather umbrella for operator's platform				
> Weather canopy for operator's platform				
> Operator's platform including stand-up seat				
> Rigid working platform, walkway width 0.50 m, basic width 4.00 m - 6.00 m				
> Working platform extension element 2.00 m, matching walkway width 0.50 m				
> Working platform extension element 1.00 m, matching walkway width 0.50 m				
> Hydraulically folding working platform, walkway width 1.20 m, basic width 4.00 m - 6.00 m				
> Working platform extension element 2.00 m, matching walkway width 1.20 m				
> Working platform extension element 1.00 m, matching walkway width 1.20 m				
Miscellaneous				
> Painting in one special color (RAL)				
> Painting in two special colors (RAL)				
> Model without WITOS				
> High-performance lighting system including 4 LED working lights, 24 V				
> Two LED floodlights including power generator (230 V)				
> Two LED floodlights including power generator (110 V)				
> 230 volt power generator, hydraulically driven, rated power of 4 kW				
> 110 volt power generator, hydraulically driven, rated power of 4 kW				
> Hydraulically driven crane system				
> Machine commissioning (day rate)				
> Export packaging				

= Standard equipment
 = Standard equipment, can be replaced with optional equipment if desired
 = Optional equipment





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