A WIRTGEN GROUP COMPANY

VÖGELE

Universal Class

SUPER 1703-3i

WHEELED PAVER

8 ft. CLASS
WHEELED PAVER

Maximum Paving Width 19 ft. 6 in. (5.95 m)
Maximum Laydown Rate 770 tons/h (700 tonnes/h)
Transport Width 8 ft. 6 in. (2.59 m)

> www.voegele.info

The Most Innovative Paver Technology

The wheeled VÖGELE SUPER 1703-3i is a cutting-edge 8-foot-class paver suitable for a wide variety of applications. Typical jobs are secondary roads and highways. Due to its compact design, the wheeled paver is also ideal for commercial and municipal applications.

With drive options (6x4 and 6x6), the SUPER 1703-3i is a versatile machine. The wheeled paver features plenty of power and high mobility to handle the most varied paving jobs, even in confined spaces.

The SUPER 1703-3i also comes with the latest version of our operating system, the popular ErgoPlus 3, which has been enhanced with a number of new ergonomic and functional features. With its new mounting system, the paver operator's console can be shifted conveniently and easily between the right and left sides of the operator's stand during operation. In addition, it now has a large color display that ensures good readability even in poor lighting conditions. The screed consoles have been completely redesigned, making operation of this new "Dash 3" machine even easier for the entire paving crew.

With its new Universal Class paver, VÖGELE also offers the right screed for every application. The SUPER 1703-3i can be combined with the VF 500, a screed with front-mounted extensions. The VF 500 Extending Screed is equipped with a vibration system.

All of these features make this Universal Class machine a truly SUPER paver!

The Highlights of the SUPER 1703-3i

8-foot wheeled Universal Class paver with a large range of applications and paving widths up to 19 ft. 6 in. (5.95 m)

Powerful Cummins engine complying with US EPA standard Tier 4f

Innovative and reliable drive concept for excellent traction behavior

Perfect paving quality due to perfect material management

ErgoPlus 3 with numerous additional ergonomic and functional advantages

The right screed for every application. The paver can be combined with the VF 500 Extending Screed

Efficiency, Performance and Low Fuel Consumption

The driving force behind this Universal Class paver is its powerful, four-cylinder diesel engine rated at 173 hp (129 kW).

Both low fuel consumption and low-noise operation are made possible by intelligent engine management with an ECO mode.

Minimum input – maximum output: All drive components, including the three-phase generator, are supplied from the central splitter gearbox and operate at maximum efficiency.

With its high tractive power, the wheeled SUPER 1703-3i perfectly combines high paving performance with maximum mobility.

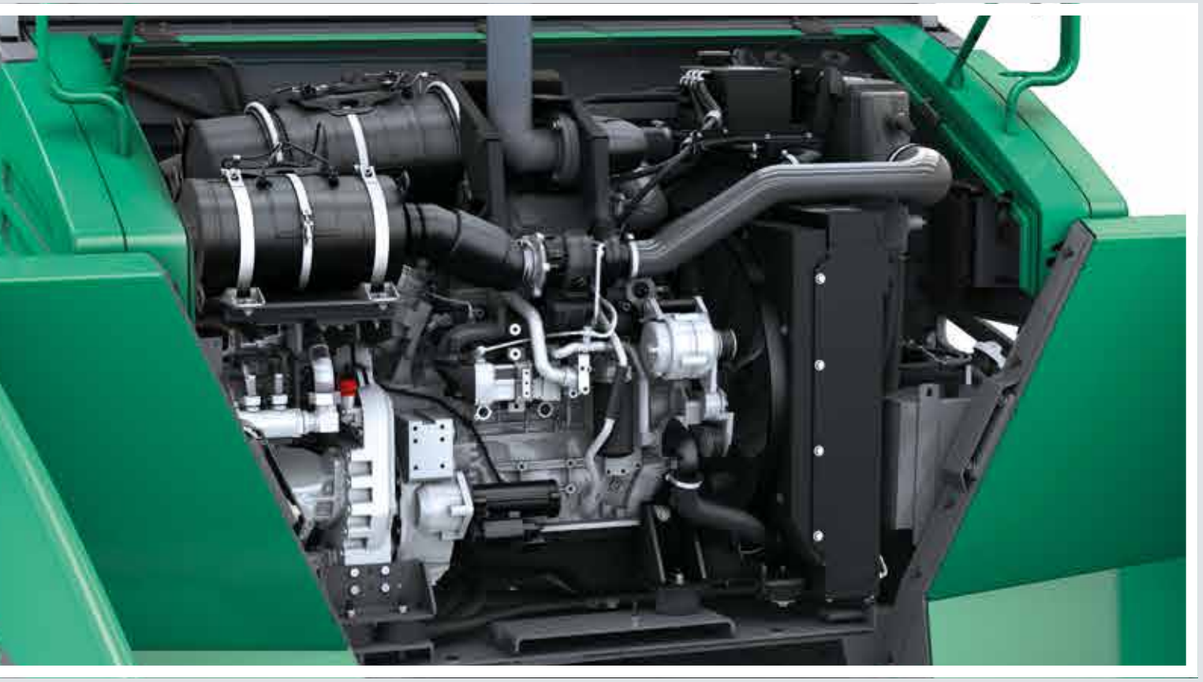
State of the Art Drive Technology

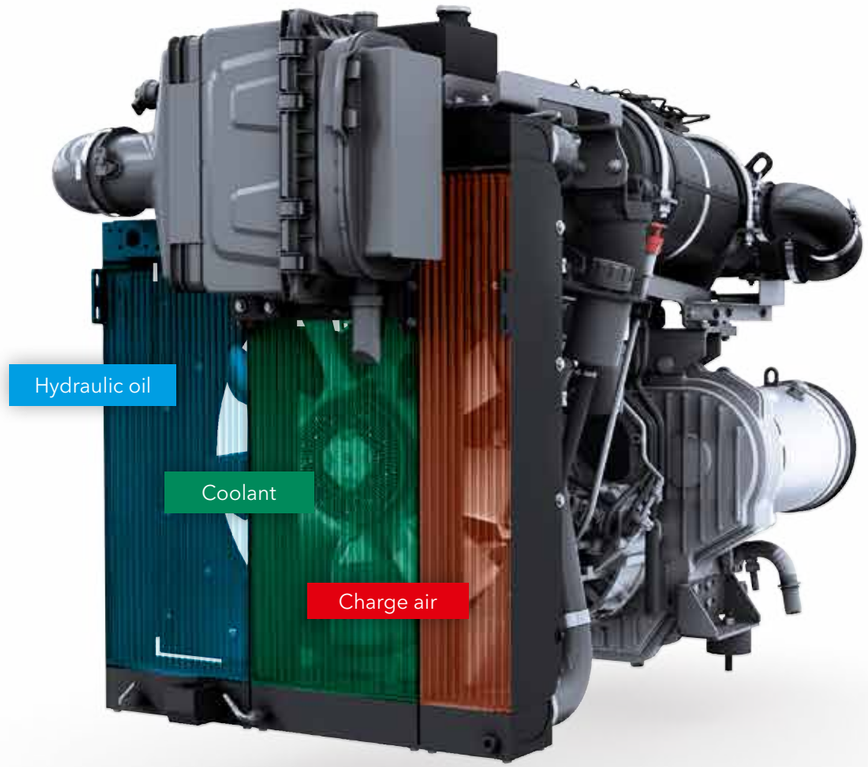
Three main components define the power unit of a SUPER 1703-3i: its modern, liquid-cooled diesel engine, a splitter gearbox flanged directly to the engine and a large cooler assembly.

The driving force in this power pack from VÖGELE is its Cummins diesel engine of type QSB4.5-C173. This four-cylinder engine delivers 173 hp (129 kW) at 2,000 rpm. Yet the fuel-saving ECO mode is sufficient for many applications. And even then, the SUPER 1703-3i still has a full 160 hp (119 kW) at its disposal. Moreover, the machine generates even less noise when running at just 1,700 rpm.

A large cooler assembly ensures that the power unit always delivers its full output. With innovative air routing and a variable-speed fan, temperatures are continually maintained within the optimum range, significantly extending the service life of both the diesel engine and the hydraulic oil. A further advantage is that the machine can operate without difficulty in all climate regions worldwide.

All hydraulic elements are supplied with hydraulic oil directly from the splitter gearbox, the advantage being that all pumps and valves are combined in one spot that is easily accessible for maintenance work. Even the powerful and completely maintenance-free generator for screed heating is flanged directly onto the splitter gearbox.





The large cooler assembly is made up of three parts. It ensures that engine coolant, charge air and hydraulic oil are maintained at the optimum temperature.

» **Machines with the suffix "i"** in their product designation are not only economical, but also extremely clean.

The "i" stands for "intelligent emission control" and is found in the type names of all machines from the WIRTGEN GROUP equipped with the latest engine technology. Thanks to their sophisticated exhaust gas after-treatment, these engines comply with the strict EPA and CARB standards Tier 4f.

» **Powerful 4-cylinder Cummins engine** delivers 173 hp (129 kW) at 2,000 rpm.

» **ECO mode** at 1,700 rpm provides low noise levels and low fuel consumption. ECO mode is sufficient for most paving applications.

» **Self-diagnostics** and sensors for almost all engine vitals simplify daily checks.

» **The fuel tank** holds 57 gallons (215 liters), more than enough for a day's work. The SUPER 1703-3i additionally has a DEF tank with sufficient capacity.

» **A powerful,** air-cooled generator with direct drive ensures rapid, uniform heating of the screed. The generator is directly driven by the splitter gearbox and therefore maintenance-free.

Mobility on Wheels

With its high tractive power, the wheeled paver SUPER 1703-3i perfectly combines high paving performance with maximum mobility. This is assured by powerful separate hydraulic drives in the powered wheels. They ensure maximum traction when paving and allows the paver to maneuver quickly on the job site at speeds of up to 12 mph (20 km/h).

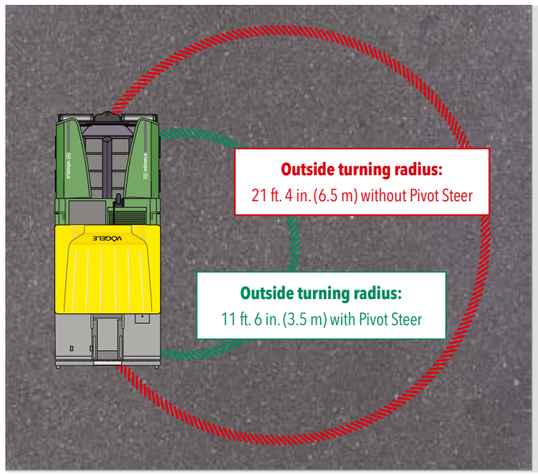
Extreme maneuverability thanks to Pivot Steer.

» **Rapid transport** under its own power at up to 12 mph (20 km/h) – a feat the SUPER 1703-3i is optimally equipped for. All paving functions are automatically deactivated when "Maneuvering" mode is selected.

» **Maximum power transmission** thanks to separate, hydraulic drives provided for both rear wheels and two front wheels (6x4). Optionally, an additional four front wheels (all-wheel drive 6x6) can be driven.

» **Optimum traction** is assured, even on difficult terrain, by electronic traction management and an electronic differential lock acting on the drives of the rear wheels.

» **Continuous ground contact** is assured by the front wheels mounted on bogies. They provide for a permanent ground contact of the wheels also when working on an uneven base.



Whenever maximum manoeuvrability is required the paver operator can activate Pivot Steer. The rear inside wheel is then automatically slowed down hydraulically. This minimizes the outside turning radius to not more than 11 ft. 6 in. (3.5 m) for positioning maneuvers.

Precision Paving with Material Management

A continuous flow of mix is key to ensuring uninterrupted and high-quality paving. That is why we attach such importance to professional material management when designing our pavers.

Thanks to its large material hopper and conveyor tunnel, the SUPER 1703-3i can be supplied with mix easily and quickly.

The high-performance and precision systems that convey and spread the material support high laydown rates and consistent quality even at high paving speeds.

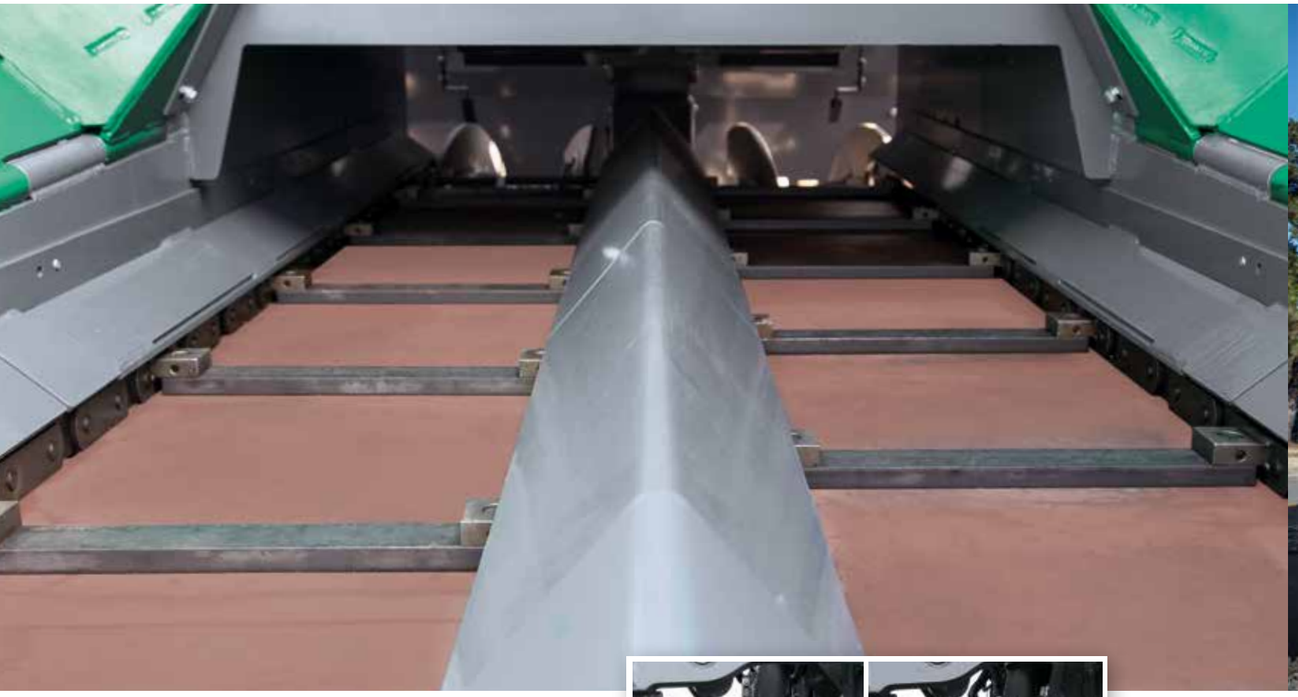
Extra Large Material Hopper and Easy Material Feed

The hydraulically operated hopper apron prevents material spills during truck exchanges. It directs the material inside the hopper directly onto the conveyors, so no hand work is required. All of the mix is properly conveyed to the screed.

- **The large material hopper** holds 14.3 tons (13 tonnes) and is dimensioned so that plenty of mix is stored at all times.
- **Sloped inner design** of the hopper for an optimal flow of material to prevent segregation.
- **Easy feeding with mix** thanks to only 24 in. (615 mm) dump height, wide hopper wings and sturdy rubber flashing fitted to the hopper apron.

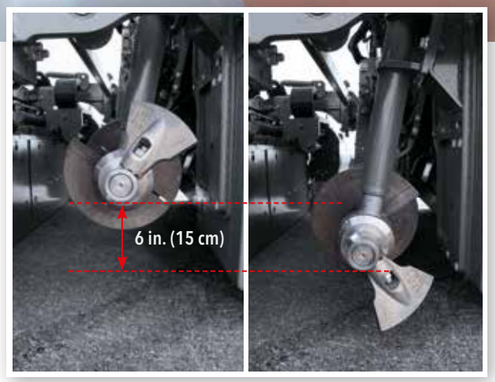
- **Large oscillating push-rollers** can be set to 2 different positions for convenient and shock-free docking of feed vehicles even in curves.
- **A truck hitch** is available as an option.

Precision Material Delivery Prevents Segregation



Thanks to effective spreading of the material, the SUPER 1703-3i always has an optimal head of mix in front of the screed to meet the demands of every paving situation.

The wide conveyor tunnel and powerful, hydraulic separate drives on the conveyors and augers support high laydown rates of up to 770 tons/h (700 tonnes/h).



Hydraulically adjustable augers are infinitely variable in height within a range of 6 in. (15 cm). Hydraulic auger height adjustment (including bearing boxes and limiting plates for the auger tunnel) provides optimal spreading of the material even when paving thin layers or on sections where thickness varies.

- **Proportional control** and continuous monitoring of conveyors and augers guarantee a constant head of material in front of the screed.
- **Inclined conveyors** from the front to the rear of the machine provide ideal delivery of the material to the augers.
- **Large, 16 in. (40 cm) diameter auger flights** with precision pitch ensure excellent spreading of the material when paving in large widths or at lower engine rpm. VÖGELE's unique flight design provides prolonged service life versus standard flight designs.
- **Narrow conveyor guard** in the material hopper guarantees uniform material flow.

The optional Power Tunnel is perfect for changing paving widths. The hydraulically adjusted limiting plates adapt to the screed width automatically, ensuring an optimal head of mix in front of the screed all the way to the end gates, even when the screed extensions are fully moved out.

The ErgoPlus 3 Operating System

Even the very best machine with the most advanced technology can only really show its strengths if it can be operated easily and as intuitive as possible. At the same time, it should offer an ergonomic and safe working environment for the operating team. Therefore, the ErgoPlus 3 operating system focuses on the operator. With VÖGELE pavers, the operator consequently retains full control over the machine and construction project.

On the following pages you will find detailed information on the extensive functions of the ErgoPlus 3 operating system. ErgoPlus 3 encompasses the operator's stand, the paver operator's console, the screed console and Niveltronic Plus, the System for Automatic Grade and Slope Control.

The Paver Operator's ErgoPlus 3 Console

"Full Control for the Machine Operator"

The Paver Operator's ErgoPlus 3 Console

The paver operator's ErgoPlus 3 console has been designed according to practice-related principles. All controls are clearly arranged. Paver functions are clustered in logical groups so that operators find their controls just where they would expect them to be.

On the ErgoPlus 3 console, all push-buttons are easily identifiable by touch even when wearing work gloves. Once a button is pressed, off you go. The benefit of the "Touch and Work" principle. This means that a function is executed directly – without the need to confirm.

- **Module 1:** Conveyors and Augers, Traction
- **Module 2:** Screed
- **Module 3:** Material Hopper and Steering
- **Module 4:** Display for monitoring and adjustment of basic settings

"Pivot Steer" steering brake

The "Pivot Steer" steering brake can be switched on with a simple push of a button in the "Positioning" and "Paving" Modes. When activated, the speed of the rear inside wheel is automatically slowed down hydraulically when a steering movement is carried out. This reduces the turning radius to a minimum.

Choice of operating modes for the paver

On the ErgoPlus 3 console, four different paver operating modes are available for selection. By pressing the arrow buttons, up or down, the operator changes modes in the following order: "Neutral", "Maneuvering Mode", "Positioning Mode" and "Paving Mode". An LED indicates the mode selected. When leaving "Paving Mode", a smart Memory feature stores the last settings for paver functions so that, when resuming work after a move of the paver on site, these settings are restored automatically.

Automatic functions

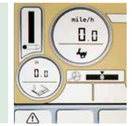
For conveyors and augers, operators can easily select "Manual Mode" or "Automatic Mode". When selecting "Automatic Mode" for the augers, sensors installed for the material level in the auger tunnel provide exactly the desired amount of mix for spreading in front of the screed.

Safe operation during the night

Glarefree backlighting comes on automatically as darkness sets in so that the paver operator can also work safely on night-time jobs.

Display of the paver operator's console

The redesigned color display has a high-contrast user interface ensuring brilliant readability even in poor lighting conditions. Vital information is shown on menu level 1, such as the positions of the screed tow point cylinders or the material level in the conveyor tunnel. Further paver functions such as speed for vibration or feed rates for the conveyors can easily be set up via the display, too. And the display gives access to machine-related information such as fuel consumption or service hours.



Choice of engine speed ranges

For the engine, there is a choice of three modes to select from: MIN, ECO and MAX. To switch modes for engine rpm, all the operator needs to do is press the arrow buttons, up or down. In ECO Mode, the engine delivers sufficient power for a great number of paving applications. Operating in ECO Mode reduces noise emission and fuel consumption considerably.

Hopper wings and hydraulic hopper apron

The hydraulically operated hopper apron prevents spills of material when changing feed trucks. The two hopper wings can be folded separately or both together at the push of a button.

Screed Assist (option)

This button switches Screed Assist on (LED lights up) or off. The screed Assist pressure and balance can be set via the display. Screed Assist is active only when the screed is floating.

The ErgoPlus 3 Screed Console

The screed is crucial for pavement quality. Therefore, easy and positive handling of all screed functions is of utmost importance for high-quality road construction.

With ErgoPlus 3, the screed operator has the process of paving at his fingertips. All functions are easily comprehensible and all controls are clearly arranged.

The screed console

The screed console is designed in keeping with the conditions prevailing on the job site. Push-buttons are provided for the frequently used functions operated from the screed console. These are watertight and enclosed in palpably raised rings, so that they are identifiable blindfolded simply by touch even when wearing work gloves. Important paver and screed data can be called up and adjusted from the screed console, too.

The display of the screed console

The screed console display allows the screed operator to control and monitor both the left and the right side of the screed. Machine-related parameters such as vibration speed or conveyor speed can be adjusted conveniently via the display panel of the screed console. The clear menu structure, combined with easily understandable, self-explanatory symbols neutral in language, makes operating the display panel both simple and safe.

Crown adjustment at the press of a button

The crown can be conveniently adjusted at the press of a button on the screed operator's console. When pressing the "plus" or "minus" keys, the set crown value is shown on a pop-up window. The conveyors and augers are adjusted accordingly.

Ergonomic screed width control in two speeds

The screed width can be effortlessly adjusted by means of the "SmartWheel". This is done in two speeds: slow, for precise control e.g. along an edge, or fast, for rapid extension or retraction of the screed.

Optimum visibility even in darkness

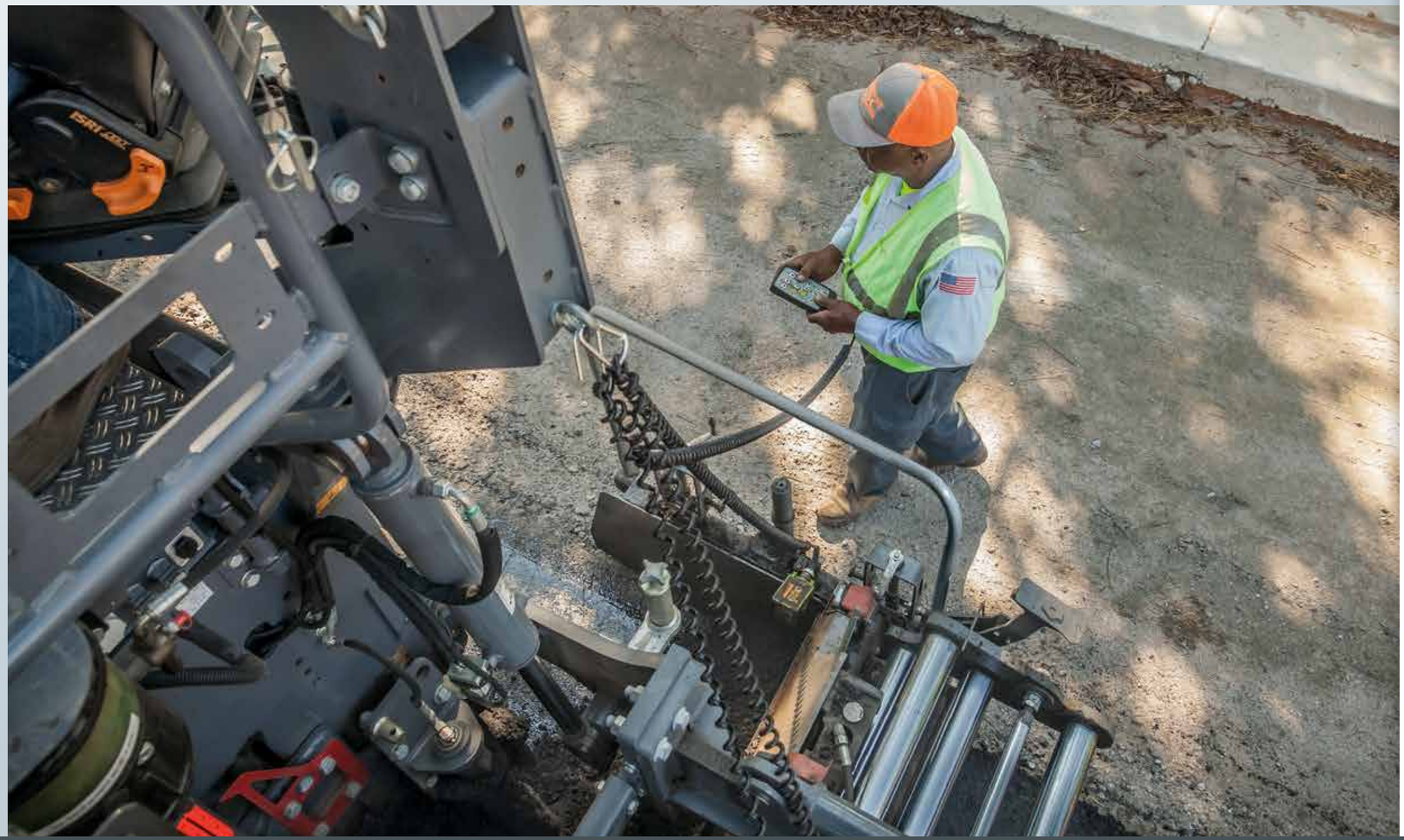
The screed console is specially designed for night-time operation. To prevent operator errors, the buttons are backlit as soon as dusk falls or in darkness. What's more, the downward-angled high-power LED lighting gives the operator a perfect view of all processes associated with the end gate.

The ErgoPlus 3 Remote Control

In addition to the screed operating consoles, a compact and very durable remote control is available for each side of the VF 500 screed.

The remote controls can be securely stowed in the holders on the main screed, or on the ends of the screed extensions.

The holders are magnetic, meaning that the remote controls are easy to grab at any time, giving the operator a large radius of movement so that he can always find the most effective working position in any paving situation.



All the main paving functions of the screed can be controlled using one of the two handy screed remote controls. Intuitive operation is possible thanks to self-explanatory and language-neutral symbols.

1 // Setting: Conveyor, automatic / manual
2 // Setting: Auger, automatic / manual
3 // Setting: Screed, tow point cylinder
4 // Control: Screed width
5 // Setting: Power Tunnel, automatic / manual
6 // Setting: Berm
7 // Setting: Slope
8 // Setting: Screed extension, height
9 // Lock: Screed extension

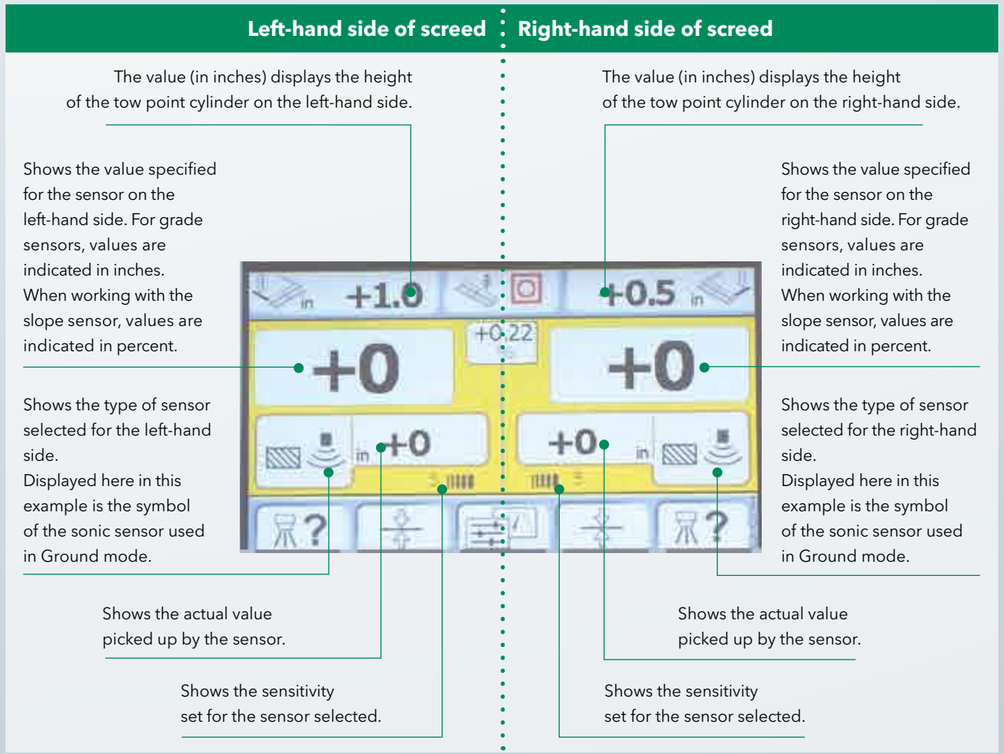
VÖGELE Niveltronic Plus

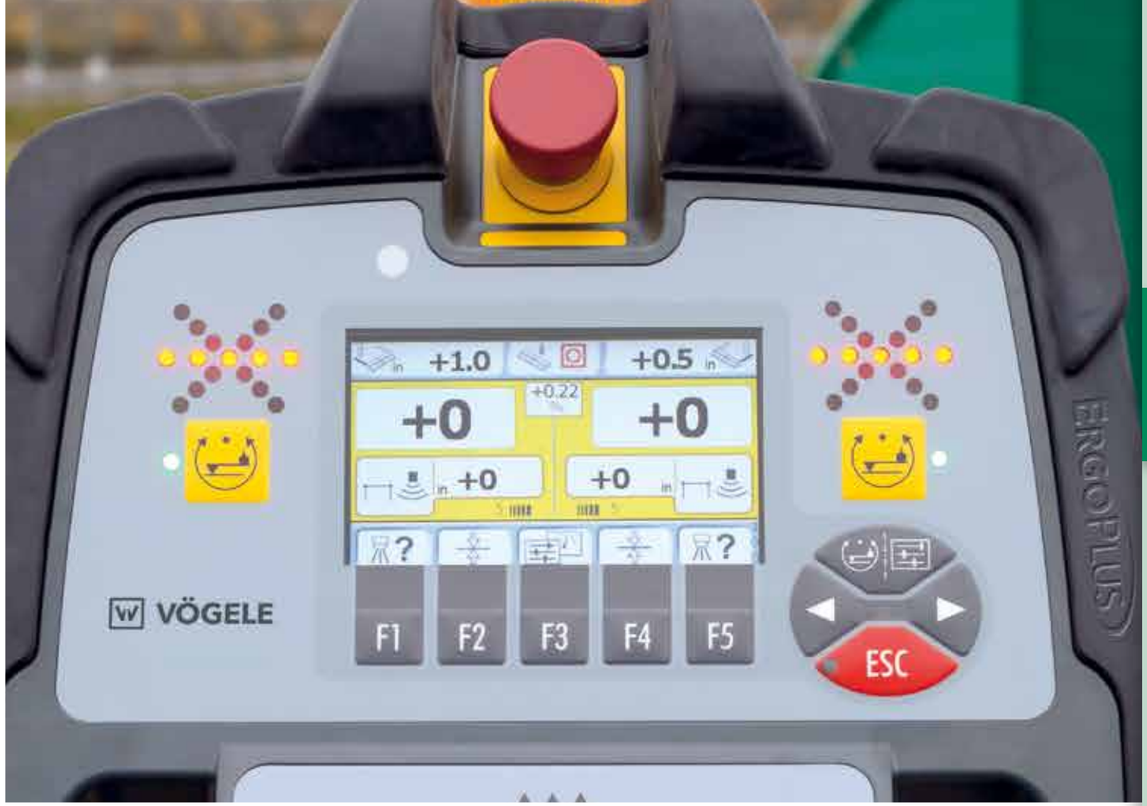
Niveltronic Plus, the System for Automatic Grade and Slope Control, is an in-house development by VÖGELE based on many years of experience in grade and slope control technology. Easy operation, precision and reliability are its hallmarks, ensuring perfect mastery of all grade and slope control jobs.

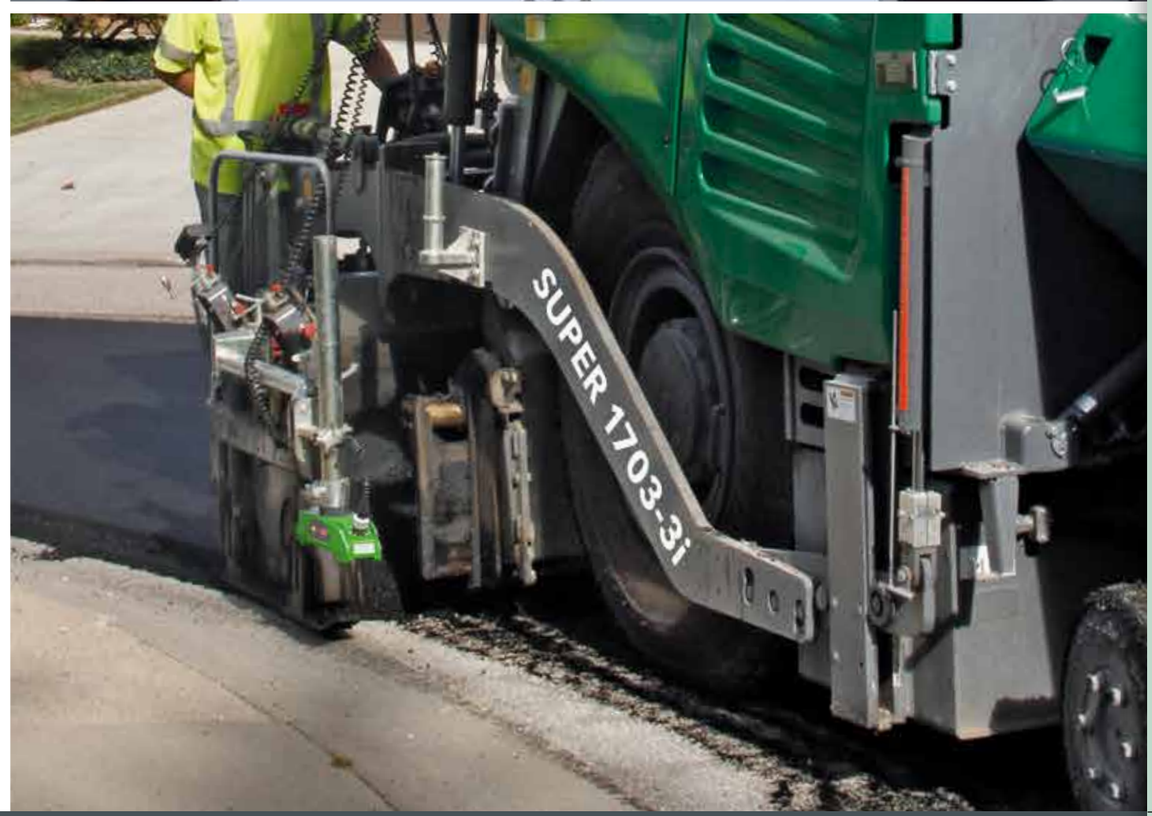
This fully integrated system is optimally adapted to the machine technology of the SUPER pavers. All wiring and connections, for instance, are integrated into the tractor, effectively eliminating all risk of damage to these components.

VÖGELE naturally offer a particularly large and practical selection of sensors permitting versatile use of the Niveltronic Plus system. Whether for instance car parks, roundabouts or highways need to be built or rehabilitated, VÖGELE offer the right sensor for every job site situation.

Sensors can be changed quickly and easily, for Niveltronic Plus automatically detects which sensor is connected, thus simplifying the configuration process for the user.







The **ErgoPlus 3** Operator's Stand

1. The comfortable operator's stand gives an unobstructed view of all crucial areas on the paver such as material hopper, steering guide or screed. It allows the paver operator to closely monitor the paver's feed with mix and the process of paving.

2. The seats swing out to the sides and a streamlined operator's stand provides maximum visibility of the auger tunnel, permitting the paver operator to keep an eye on the head of mix in front of the screed at all times.

3. Working comfort
On the "Dash 3" machines, the paver operator's seat and console, as well as the screed consoles can now be adjusted even more easily to personal requirements.

4. A place for everything and everything in its place
The operator's stand, with its streamlined design, is well organized, offering the paver operator a professional workplace. The operator's console can be protected by a shatter-proof cover to prevent willful damage.

5. Hardtop gives excellent protection
The modern hardtop made of glass fiber reinforced polymer material shelters the operator whether rain or shine.

6. Consistent service concept
All "Dash 3" pavers have a consistent maintenance concept with identical service intervals.

7. Ergonomic screed console
The height and position of the console are easily adjusted. The high-contrast color display can be read clearly from all angles.

8. Easy transport
The machine can be prepared quickly and easily for transport on a low-bed trailer. Even the hardtop can be folded down to transport position using a manual hydraulic pump.

VF 500 Extending Screed

Stability and variability are not mutually exclusive, as the front-mounted VF 500 Extending Screed from VÖGELE proves. With a basic width from 8 ft. to 15 ft. 6 in. (2.45 m to 4.75 m) and a maximum paving width of 19 ft. 6 in. (5.95 m) with bolt-on extensions it is the ideal tool for multivariable width applications and mainline paving. The unique VÖGELE telescoping system allows screed width control, accurate to the millimeter. The variability is also evidenced in the range of possible profiles: crowns, transverse slopes and berms are set once and then built perfectly from the start to the end of paving process. The compacting system provides great mat texture and excellent compaction. So for the SUPER 1703-3i, the VF 500 Extending Screed is the perfect match.

Electric screed heating

A consistent surface texture is achieved by uniform heating of the screed plates. With the engine running at minimum rpm, the time required for the screed to reach operating temperature is reduced substantially due to an intelligent generator management system. With paver functions set to automatic, the generator management system activates Alternating mode for screed heating (heats the screed alternately on the left and right), a feature which reduces engine wear and fuel consumption.

The Screed for the SUPER 1703-3i

VF 500 V

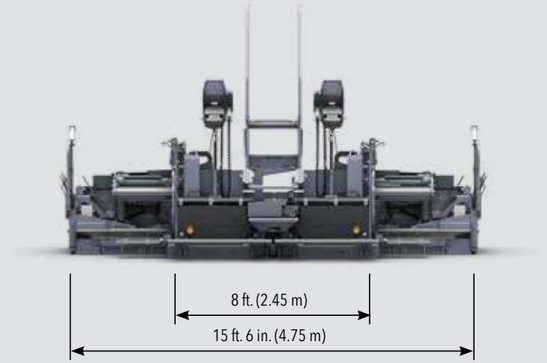
Paving widths

- Infinitely variable range from 8 ft. to 15 ft. 6 in. (2.45 m to 4.75 m).
- Maximum paving width through bolt-on extensions:
  - 17 ft. 6 in. (2 x 12 in.) / 5.35 m (2 x 30 cm).
  - 19 ft. 6 in. (2 x 24 in.) / 5.95 m (2 x 60 cm).

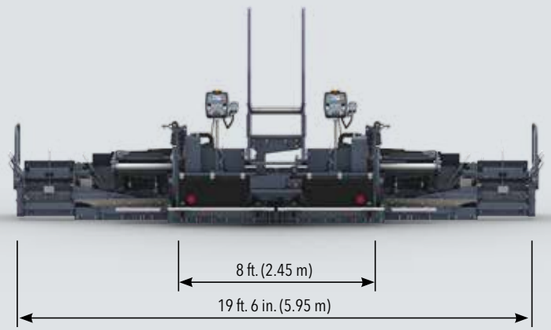
Compacting system

- VF 500 V with vibration

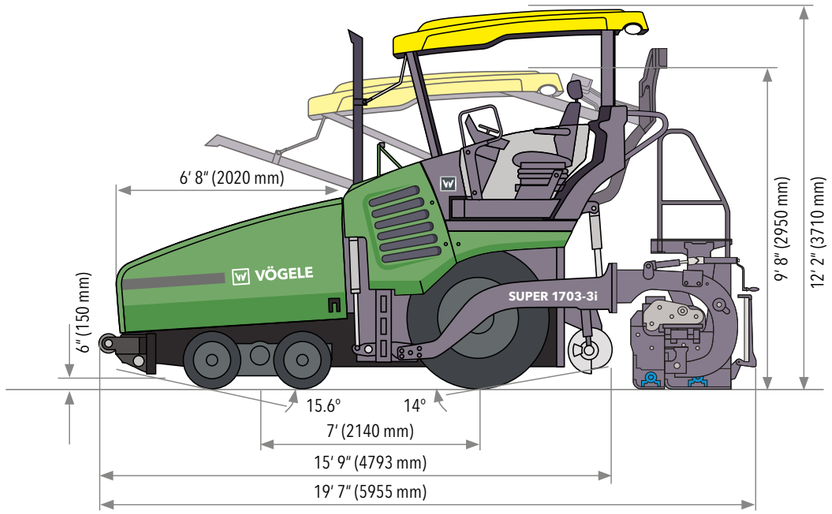
VF 500 V without bolt-on extensions

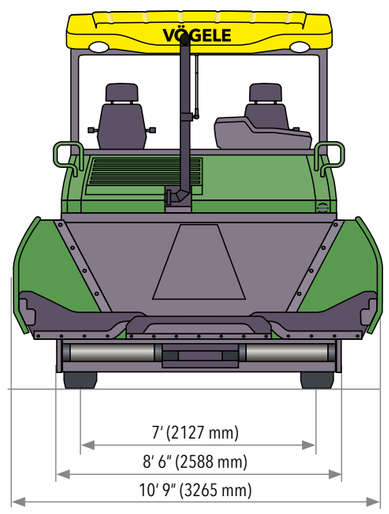


VF 500 V with 24 in. (60 cm) bolt-on extensions



All the Facts at a Glance





Power Unit	
Engine	4-cylinder diesel engine, liquid-cooled
Manufacturer	Cummins
Type	QSB4.5 - C173
Output	
Nominal	173 hp (129 kW) at 2,000 rpm (according to DIN)
ECO mode	160 hp (119 kW) at 1,700 rpm
Exhaust Emissions	
Standard	EU Stage 4, US EPA Tier 4f
Exhaust after-treatment	DOC, SCR
Fuel tank	57 gallons (US) (215 liters)

Undercarriage	
Front Wheels	4, mounted on bogies (oscillating axle)
Tire Equipment	solid tires
Tire Size	540/300 - 390
Rear Wheels	2, pneumatic tires, tubeless
Tyre Size	14.00 R25
Traction Drive	separate hydraulic drive provided for each wheel
Standard	2 rear wheels and 2 front wheels powered (6x4)
Option	2 rear wheels and 4 front wheels powered (6x6)

Undercarriage	
Speeds	
Paving	up to 250 fpm (76 m/min.)
Travel	up to 12 mph (20 km/h)
Outside Turning Radius	minimum of 11 ft. 6 in. (3.5 m) with Pivot Steer

Material Hopper	
Hopper Capacity	14.3 tons (13 tonnes)
Width	10 ft. 9 in. (3,265 mm)
Feed Height	24 in. (615 mm)
Push-Rollers	
Standard	oscillating
Positions	can be displaced forwards by 3 in. (75 mm) or 6 in. (150 mm)
Option	truck hitch

Conveyors and Augers	
Conveyors	2, with replaceable feeder bars, conveyor movement reversible for a short time
Drive	separate hydraulic drive provided for each conveyor
Speed	up to 130 fpm (40 m/min.), infinitely variable (manual or automatic)

Conveyors and Augers	
Augers	2, with exchangeable auger blades, auger rotation reversible
Diameter	16 in. (400 mm)
Drive	separate hydraulic drive provided for each auger
Speed	up to 120 rpm, infinitely variable (manual or automatic)
Height	infinitely variable by 6 in. (15 cm), hydraulic
Lubrication	automatic centralized lubrication system with electrically driven grease pump

Screed Option		
VF 500	infinitely variable range	8 ft. to 15 ft. 6 in. (2.45 m to 4.75 m)
	maximum width	19 ft. 6 in. (5.95 m)
Screed Version	V	
Layer Thickness	up to 12 in. (30 cm)	
Screed Heating	electrically by heating rods	
Power Supply	three-phase A.C. generator	

Dimensions (Transport) and Weights	
Width	8 ft. 6 in. (2.59 m)
Length	tractor and screed
VF 500 V	19 ft. 7 in. (5.96 m)
Weights	tractor, hardtop and screed
VF 500 V	38,140 lbs. (17.3 t)

Key: **DOC =** Diesel Oxidation Catalyst **SCR =** Selective Catalytic Reduction **VF =** Screed with Front-Mounted Extensions **V =** with vibration

A WIRTGEN GROUP COMPANY

VÖGELE

The VÖGELE QR Code leads you directly to the "SUPER 1703-3i" on our website.

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