Wheeled Paver

SUPER 1603-2

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Maximum Pave Width 7m
Maximum Laydown Rate 600 tonnes/h
Transport Width 2.55m

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Compact-Sized Wheeled Paver

Innovative paver technology is not a matter of size. Take the wheeled VÖGELE SUPER 1603-2 as an excellent example. As a member of the "dash 2" generation of pavers, this wheeled machine completely redefines the state of the art in its class. The SUPER 1603-2 is capable of handling pave widhs up to 7m and achieves laydown rates up to 600 tonnes/h.

Thanks to its compact size, the SUPER 1603-2 features excellent manœuvrability, making it suitable for a wide variety of paving applications.

In combination with VÖGELE High Compaction Technology, the paver achieves outstanding precompaction results.

One of the machine's highlights is ErgoPlus®, the VÖGELE operating concept. Thanks to ErgoPlus®, handling VÖGELE pavers has never been so easy. Operators enjoy a modern workplace of ergonomic design leaving nothing to be desired.

SUPER 1603-2

At a Glance

- Maximum pave width 7m
- Laydown rate up to 600 tonnes/h
- Maximum layer thickness 30cm
- Transport width 2.55m
- Pave speed
  up to 18m/min.
- Travel speed
  up to 20km/h
- Powerful PERKINS engine
  rated at 100kW
- Comes with ErgoPlus®,
  the concept for easy paver handling
- Hardtop with wide sunshades

Wheeled Paver SUPER 1603-2


VÖGELE

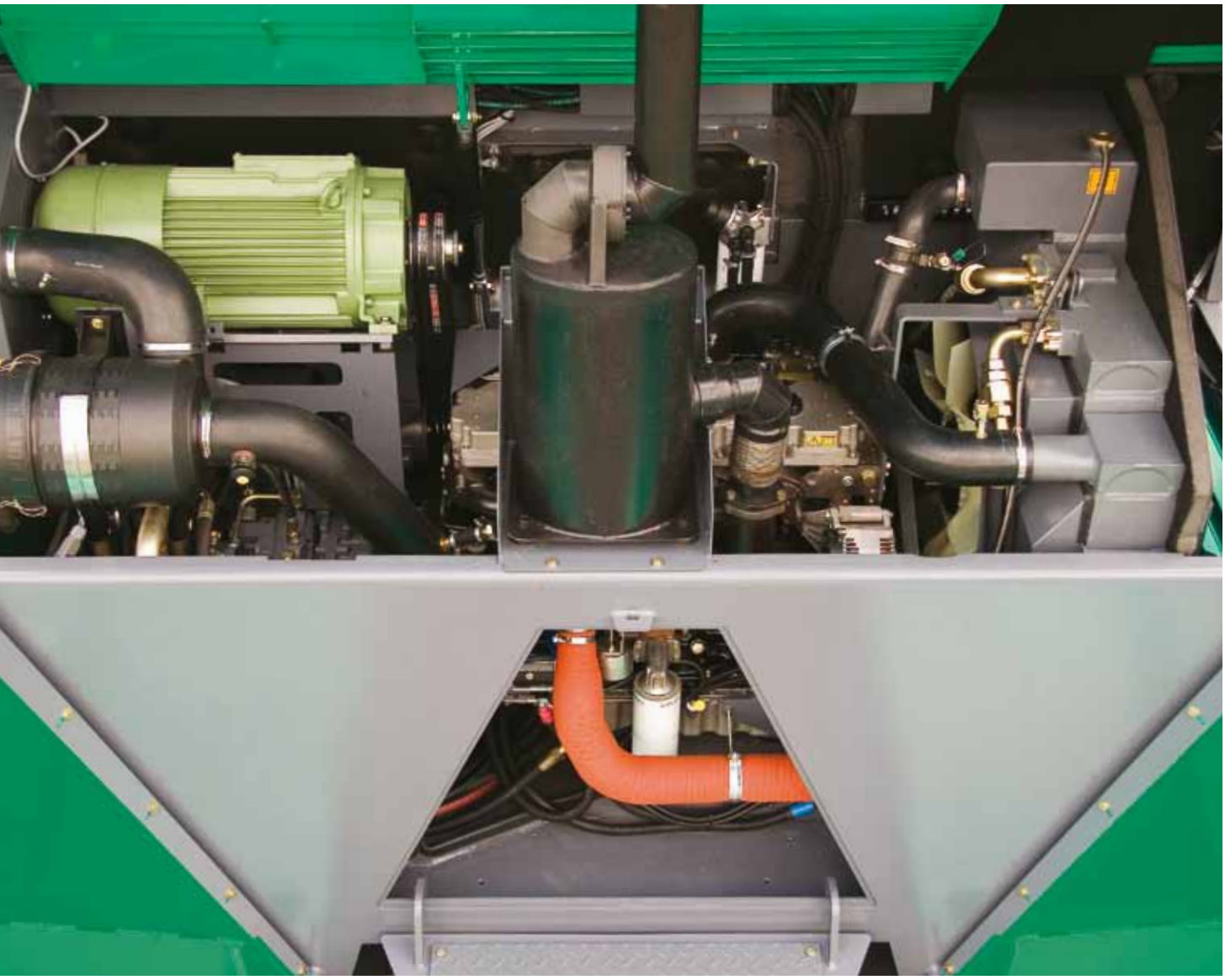
Economical Drive System

The powerful PERKINS engine installed in the SUPER 1603-2 is highly efficient. Three speed ranges - MIN, ECO and MAX - allow the engine output to be regulated economically and in an eco-friendly manner. ECO Mode (95kW at 1,800 rpm) is sufficient for a host of jobs. It further reduces the noise emissions of the already quiet engine and also decreases fuel consumption and wear.

A crucial factor in achieving good paving quality is a constant operating speed. To this end, an intelligent Engine Management System ensures that sufficient engine power is available in every paving situation, while simultaneously conserving fuel.

To ensure that the SUPER 1603-2 can always deliver 100% of its performance even at high ambient temperatures and when operating at full load, it is equipped with an amply dimensioned cooler assembly. Together with innovative air routing, the cooling system guarantees that the paver can be used without restrictions in every climate zone the world over.

The SUPER 1603-2 can thus always make maximum use of its strong points, while it's efficient drive system guarantees eco-friendly and economical operation.



- Powerful PERKINS engine developing 100kW at just 2,000 rpm. The quiet engine complies with the strict European exhaust emissions standards Stage 3a and the US standards.
- Different speed ranges are available which select conveniently at the push of a button (MIN, ECO, MAX).
- The economical ECO Mode (95kW at 1,800 rpm) is sufficient for a large number of paving jobs.
- An Electronic Engine Management System provides for a constant pave speed and, as a result, optimum paving quality.
- Engine throttle control helps save fuel as it automatically revs down the engine during a break in paving. When resuming work, engine rpm is reset automatically to the preset range (ECO or MAX).
- Powerful three-phase A.C. generator with Generator Management controlling generator output in compliance with the pave width. Heating the screed's compacting systems to operating temperature takes a short time only.
- Thanks to a large cooler assembly with innovative air routing, perfect cooling of engine cooling liquid, hydraulic oil and charge air. Noise emission is very low.
- A constantly high cooling capacity provides for ideal temperatures inside the hydraulic system and top performance of all drive units even when working under full load, in all climatic zones the world over.
- For hydraulic functions, powerful separate drives are installed operating in closed circuits, thus delivering highest outputs. This way, the transfer gearbox translates engine power into hydraulic paver performance with excellent efficiency.

Excellent Mobility and Manœuvrability

The small turning radius and short overall length of the SUPER 1603-2 save manœuvring back and forth even in tight corners. Thanks to its high tractive effort, the paver not only paves quickly, but can also be transferred quickly under its own power. This increases both productivity and efficiency.

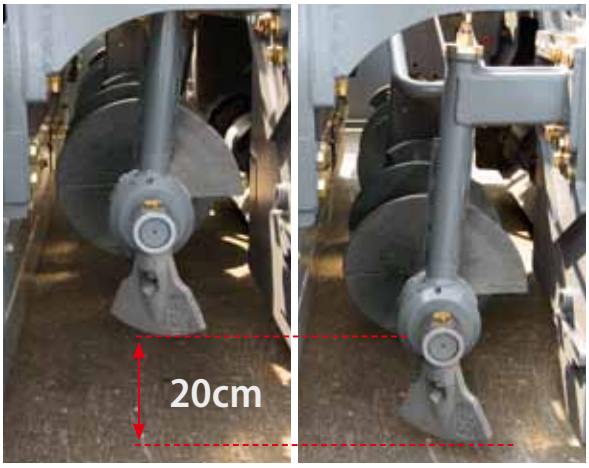
- Small turning radius (outside) of just 6.5m allows easy and quick manœuvring even in tight corners.
- Maximum power transmission thanks to separate, hydraulic drives provided for the rear wheels. Two powered front wheels available as an option.
- Electronic Traction Management guarantees optimum tractive effort and protects the engine against overload.
- Permanent ground contact due to front wheels with proven, statically defined three-point support.
- Travels rapidly on public roads (up to 20km/h) and moves quickly on the job site.
- Thanks to its compact design, trucking is easy. Little space required for transport cuts haulage cost.

Perfect Mix Supply

Like all VÖGELE pavers, supply of the SUPER 1603-2 with mix is a clean and safe process passing off swiftly. Thanks to a hydraulically operated hopper front (option), the mix inside the material hopper is directed right onto the conveyors and the entirety of mix properly conveyed in front of the screed.

- Large oscillating push-rollers for convenient and shock-free docking of feed vehicles, even in curves.
- Easy feed with mix thanks to low material hopper, wide hopper sides and sturdy rubber baffles fitted to the hopper front.
- The large material hopper holding 13 tonnes is amply dimensioned so that a sufficient quantity of mix is stored at all times. No problem to tide over difficult situations such as paving under bridges, for instance.

Optimal Flow of Mix in Front of the Screed



The material handling system of the SUPER 1603-2 saves time and money. Thanks to augers adjustable in height, there is no need for conversion or demounting prior to moving the paver on the job site.

- Powerful, separate hydraulic drives for conveyors and augers installed for high laydown rates up to 600 tonnes/h.
- Proportional control and continuous monitoring provided for conveyors and augers guarantee a constant head of mix in front of the screed in conformity with the requirement.
- The height of the auger, complete with bearing boxes and limiting plates for the auger tunnel, is infinitely variable by up to 20cm across the entire pave width. This results in optimal spreading of mix in front of the screed, even when paving thin layers or when the layer thickness varies.
- Large diameter of auger blades (400mm) for excellent spreading of mix when paving in large widths.

Maintenance Made Easy

The well-thought-out maintenance and service concept is perfectly geared to the requirements of the workshop and service staff.

- A wide engine hood and large hinged panels give convenient access to service points on the machine.
- All hydraulic pumps attached to the transfer gearbox. Their clear arrangement and easy access provides for service-friendliness at the highest level.
- Centralized lubrication system installed to automatically supply required amounts of grease to bearings of conveyors and augers.
- Sturdy components of highly wear-resistant materials for long service lives minimize downtime.
- A standardized service concept for all VÖGELE pavers simplifies maintenance and cuts expenditure on training.

VÖGELE ErgoPlus®

The User-Friendly Operating System

Even the best machine with the most advanced technology can only really show its strengths if it can be operated easily and as intuitively as possible, and offers to the operator a maximum of ergonomic comfort and workplace safety. Therefore, the ErgoPlus® operating concept focuses on the operator.

The example diagrams on the following pages will provide you with additional information on the extensive functions of the ErgoPlus® operating concept. ErgoPlus® encompasses the operator's stand, the paver operator's and screed consoles and NIVELTRONIC Plus®, the System for Automated Grade and Slope Control.

The operating consoles are designed for optimum clarity, presenting all paver functions in logical groups. There's a place for everything and everything in its place on the operator's stand, and the paver operator has an excellent overview of all the key points of the paver.

All told, the ErgoPlus® operating concept enables the operator to respond to job site working processes and situations more quickly and accurately, giving him total control over the machine and the project.

ErgoPlus® Paver Operator's Console

ErgoPlus® Screed Console

The Strong Points of ErgoPlus®

- Operator platform of streamlined design and well organized for a high level of safety at work.
- The paver operator's seats and the operating console adjust conveniently and easily in keeping with his personal needs. This provides a maximum of ergonomic comfort.
- All vital paver functions are clustered in logical groups on the paver operator's console. Their operation is easy to learn.
- Easy operation of VÖGELE NIVELTRONIC Plus®, the System for Automated Grade and Slope Control, to achieve perfect paving results.
- The ErgoPlus® paver operator's console is of modular design. This smart concept is not only ideal in practice, but also saves costs. In case of need, it offers the great advantage of easy replacement of single modules without having to replace the entire unit.

ErgoPlus® Operator Stand


VÖGELE

THE ErgoPlus® PAVER OPERATOR'S CONSOLE

Full Control for the Machine Operator

THE ErgoPlus® PAVER OPERATOR'S CONSOLE

Clear and Logical Arrangement of Controls

Examples of Paver Functions

Reversing Conveyor Movement
In order to avoid mix dropping from the conveyors during a move of the paver on the job site, conveyor movement can be reversed at the push of a button. Reverse movement, transferring mix from the rear of the conveyor tunnel back inside, takes place for a short time only and stops automatically.

No-Load Function
The No-Load function is provided for warm up or cleaning of conveyors, augers and tamper.

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 mix level in the auger tunnel provide that exactly the desired amount of mix is spread in front of the screed.

Choice of Operating Modes for the Paver
On the ErgoPlus® console, 5 different operating modes for the paver are available to select from. By pressing the arrow buttons, up or down, the operator changes modes in the order as follows: "Road Travel", "Neutral", "Job Site Mode", "Positioning Mode" and "Pave Mode". A LED indicates the mode selected. When leaving "Pave Mode", a smart Memory feature stores last settings for paver functions so that, when resuming work after a move of the paver on site, these settings are restored automatically.

The ErgoPlus® paver operator's console has been designed according to practice-related principles. All controls are clearly arranged. Paver functions are clustered in logical goups so that operators find their controls where they suppose these should be.

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

As darkness falls, the paver operator's console is back-lit automatically, as you have it in your car. This makes night-time work easy and relaxed.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F1
F2
F3
F4
F5
F6
F7
F8
ESC
M2
M3
M4
ERGOPLUS
MAX
ECO
MIN

Module 1:
Conveyors and Augers, Traction

Module 2:
Screed

Module 3:
Material Hopper and Steering

Module 4:
Display for set-up of vital paver functions on menu level 1.
Secondary functions on menu level 2.

Display of the Paver Operator's Console
The large, easy-to-read display shows vital information on menu level 1 – such as the positions of the screed tow point rams or the pave speed. Set-up of further paver functions such as speeds for tamper and vibrators or feed rate for the conveyors can easily be made via the display, too. And the display gives access to machine-related information such as fuel consumption or service hours.

Hopper Sides and Hydraulic Hopper Front (Option)
The hydraulically operated hopper front prevents spills of mix when feed lorries change. The two hopper sides can be folded separately or both together at the push of a button.

Choice of Engine Speed Ranges
For the engine, 3 modes exist to select from: MIN, ECO and MAX. To swap 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.

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


+33.0cm
+33.5cm
+0mm
-0.63%
+0mm
-0.60%
F1
F2
F3
F4
F5
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ERGOPLUS
R

THE ErgoPlus® SCREED CONSOLE

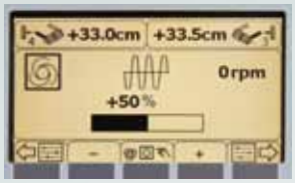
Easy Operation Guaranteed

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

With ErgoPlus®, 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. For the frequently used functions operated from the screed console, push-buttons are provided. These are watertight and enclosed in a perceptibly raised ring, so that they are identifiable blindfold 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 display of his console allows the screed operator to control and monitor both the left and the right side of the screed. Machine-related parameters such as tamper 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.

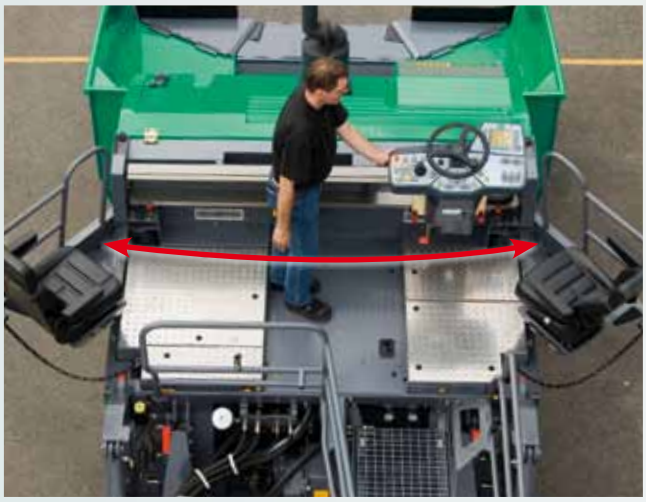


NIVELTRONIC Plus® (Option)
NIVELTRONIC Plus®, the cutting-edge VÖGELE System for Automated Grade and Slope Control, is very easy to learn and achieves outstanding paving results. All important functions of NIVELTRONIC Plus® can be accessed directly on menu level 1. The operator is provided with a variety of information, such as the sensor currently selected or the specified and actual values for layer thickness.

An electronic system installed in the screed tow point rams picks up the tow points' positions. Display of the current tow point positions and of the transverse slope on the screed console greatly facilitates set-up of the screed. All sensors connected are recognized automatically by NIVELTRONIC Plus® and can be monitored and controlled from either screed console. An open interface is provided for connection of a GPS system, thus permitting 3D paving.

Automatic Mode for Augers, Reversing Auger Rotation
Just like the paver operator, the screed operator, too, can select Manual Mode or Automatic Mode for conveyors and augers. Very useful and comfortable in practice is the function of "Reversing Auger Rotation".

THE ErgoPlus® OPERATOR STAND



Excellent All-Round Visibility

- The comfortable operator stand gives 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.
- The seats swinging out to the sides and an operator stand of streamlined design provide for maximum visibility of the auger tunnel, thus permitting the paver operator to keep an eye on the head of mix in front of the screed at all times.

Working Comfort

- A few adjustments are all it takes for the paver operator to position his console exactly in keeping with his personal needs. It can be displaced across the full width of the operator's stand, swivelled out to the sides and tilted.
- When working with the seat swung out, the paver operator's console can be swivelled out together with the operator's seat. In this way, an ergonomically optimized workplace is set up in no time at all. A legroom kept warm adds to operator comfort during the cold season.

A Place for Everything and Everything in its Place

- The operator's stand of streamlined design is well organized, so that the paver operator enjoys a professional workplace.
- The operator's console can be protected by a shatter-proof cover to prevent wilful damage.
- Plenty of stowage space makes it easy to keep the machine tidy. Access to all vital service points on the machine has been designed to be extremely clear and ergonomic.

Hardtop Gives Excellent Protection

- The modern hardtop made of glass fibre reinforced polymer material shelters the operator whether rain or shine. The hardtop, including exhaust pipe, raises up or lowers down quickly and with effortless ease by a manually operated hydraulic pump. Wide sunshades, extending easily, give the operator optimal protection when his seat is moved out.
- Six bright working lights are integrated into the hardtop. Raising the lights in this way floods the job site with light (Xenon lamps available as an option).

High Compaction Screed

The SUPER 1603-2 combines with the VÖGELE AB 500 Extending Screed. AB 500 has a basic width of 2.55m and extends hydraulically to 5m. By addition of bolt-on extensions, the screed builds up to a maximum width of 7m.

- Please note a feature truly out of the ordinary for a compact, wheeled, mid-range paver: the SUPER 1603-2 can be configured with an AB 500 Extending Screed in TP1 version for high compaction, an essential to pavements perfectly built up in layers, true to line and level.
- A quick-fitting system developed by VÖGELE allows easy and fast mounting of bolt-on extensions.

- The AB 500 Extending Screed comes with a sturdy single-tube telescoping system. Working with highest precision, it offers quick screed width control accurate to the millimetre.

- **Transverse Pavement Profiles**
  - Screed paves positive and negative crown.
  - The screed's extending units adjustable in height and spindles provided on either side of each extending unit allow the AB 500 to be set up to a variety of additional special profiles.

- **Electric Screed Heating**
  - Homogeneous surface texture thanks to uniform heating of screed plates, tamper bars and pressure bar.
  - Even with the paver's engine running at minimum rpm, the time required for the screed to reach its operating temperature is reduced substantially thanks to an intelligent Generator Management.
  - With paver functions set to automatic, the Generator Management activates Alternating Mode for screed heating (heats the screed alternately to left and right), a feature which is easy on the engine and reduces fuel consumption considerably.

The Screed for SUPER 1603-2

AB 500

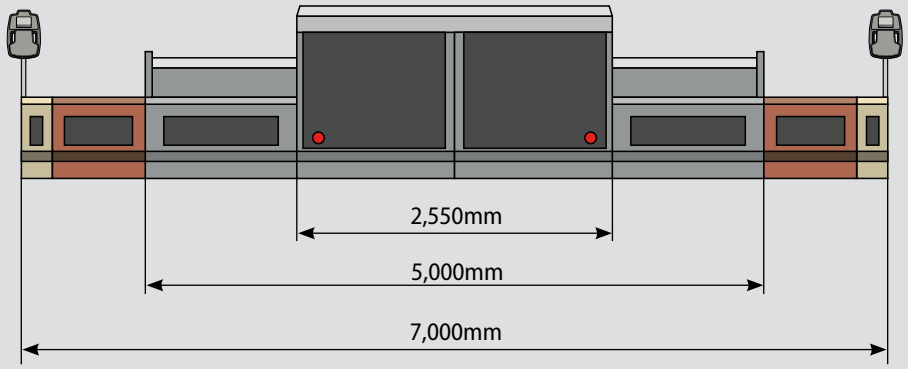
Pave Widths

- Infinitely variable range from 2.55m to 5m.
- Larger widths by addition of bolt-on extensions up to a maximum of 7m.

Compacting Systems

- AB 500 TV with tamper and vibrators
- AB 500 TP1 with tamper and 1 pressure bar

AB 500 TV built up to maximum pave width



Sturdy single-tube telescoping system.

Sliding restraint system for jerk-free screed width control.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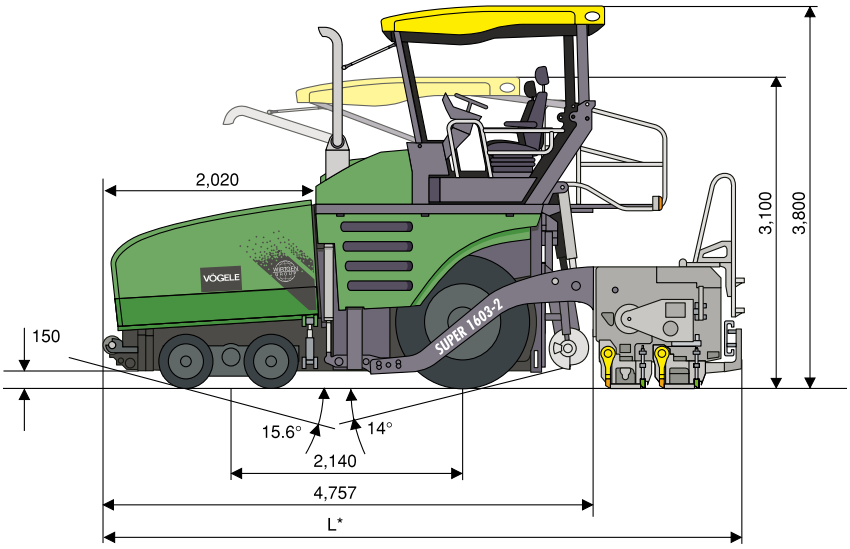

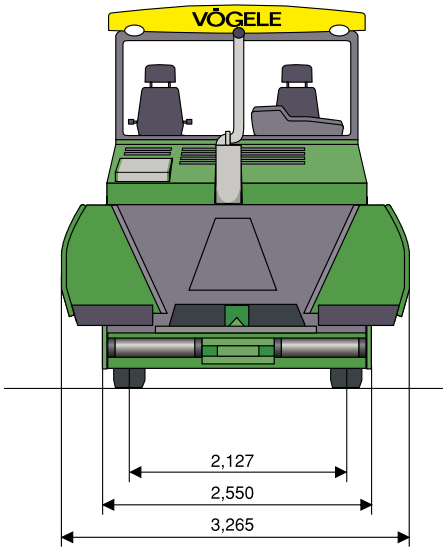

Dimensions in mm
L* = Dependent on Screed Type (see Specification)

Power Unit	
Engine:	4-cylinder PERKINS diesel engine, liquid-cooled
Type:	1104D-E44TA
Output:	Nominal: 100kW at 2,000 rpm (according to DIN)
	ECO Mode: 95kW at 1,800 rpm
Fuel Tank:	220 litres
Electrical System:	24 V
Undercarriage	
Front Wheels:	4, mounted on bogies (oscillating axle)
Tyre Equipment:	solid tyres
Tyre Size:	540/300-390mm
Rear Wheels:	2, pneumatic tyres, tubeless
Tyre Size:	14.00 R 25
Drive:	separate hydraulic drive provided for each wheel
	- Standard: 2 powered rear wheels
	- Option: 2 rear wheels and 2 front wheels powered
Speeds:	- Paving: up to 18m/min., infinitely variable
	- Travel: up to 20km/h, infinitely variable
Turning Radius:	6.5m (outside)
Power Steering:	hydraulic
Service Brake:	amply-dimensioned multiple-disk brake operated by foot pedal
Auxiliary Brake:	hydrostatic
Parking Brake:	spring-loaded multiple-disk brake, maintenance-free
Material Hopper	
Hopper Capacity:	13 tonnes
Width:	3,265mm
Feed Height:	594mm (bottom of material hopper)
Push-Rollers:	oscillating, displaceable forwards by 100mm
Conveyors and Augers	
Conveyors:	2, with replaceable feeder bars, conveyor movement reversible
	for a short time
	Drive: hydraulic, separate drive provided for each conveyor
	Speed: up to 25m/min., infinitely variable (manual or automatic)

Augers:	2, with replaceable auger blades, auger rotation reversible
	Diameter: 400mm
	Drive: hydraulic, separate drive provided for each auger
	Speed: up to 83 revs/min., infinitely variable
	(manual or automatic)
	Auger Height:
	- Standard: infinitely variable by 14cm, mechanical
	- Option: infinitely variable by 20cm, hydraulic
	(lowest position 5cm above the ground)
Lubrication:	Centralized Lubrication System with electrically driven
	grease pump for conveyor and auger bearings
Screed	
AB 500:	Basic Width 2.55m, Infinitely Variable Range 2.55m to 5m
	Maximum Width (TV/TP1) 7m
Screed Versions:	TV, TP1
Layer Thickness:	up to 30cm
Screed Heating:	electric by heating rods
Power Supply:	three-phase A.C. generator
Dimensions and Weights	
Length:	Tractor Unit and Screed in Transport Position:
	- AB 500 TV: 6m
	- AB 500 TP1: 6.1m
Weights:	Tractor Unit with AB 500 Screed in TV Version:
	- Pave Widths up to 5m: 17 tonnes
	- Pave Widths up to 7m: 18.8 tonnes
Optional Equipment	Hydraulic hopper front. Hardtop of glass fibre reinforced
	polymer material. Front-wheel drive (6x4). NIVELTRONIC Plus®
	for Automated Grade and Slope Control (various grade sensors
	available). Sonic sensors to monitor head of mix in front of the
	screed. Washdown system. Xenon lamps for working lights.
	Operator's seat, ergonomic design and heated.
	For more optional extras please contact your VÖGELE partner.

Key: **T** = equipped with Tamper **P1** = equipped with 1 Pressure Bar **AB** = Extending Screed
V = equipped with Vibrators

Technical alterations reserved.

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Your VÖGELE QR Code leading you directly to the SUPER 1603-2 on our website.

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