

Tracked Paver

SUPER 1680-3 Li



PERFECT IN ALL CLASSES

The right paver for every job

VÖGELE’s seamless product range is considered unique in the industry. Whether a service road or a motorway, an airfield or a race track, a new construction or a rehabilitation job, thick or thin, hot or cold – customers will find the right machine in our paver range for every paving task.



VÖGELE PRODUCT RANGE

MINI CLASS

- > Maximum pave width 3.5 m
- > Maximum laydown rate 300 t/h

COMPACT CLASS

- > Maximum pave width 5 m
- > Maximum laydown rate 350 t/h

UNIVERSAL CLASS

- > Maximum pave width 10 m
- > Maximum laydown rate 1000 t/h

HIGHWAY CLASS

- > Maximum pave width 18 m
- > Maximum laydown rate 1800 t/h

SPECIAL CLASS

- > SprayJet
- > InLine Pave

POWERFEEDER

- > MT 3000-3(i) Standard
- > MT 3000-3(i) Offset

HIGHLIGHTS

Perfectly equipped



DRIVE

01 Drive concept

> Powerful and economical drive concept, even when operating at full load in any climate zone.

02 VÖGELE EcoPlus

> The VÖGELE EcoPlus low-emissions package significantly reduces fuel consumption and noise levels.

03 Efficient transmission of tractive power

> Even difficult terrain is no problem for the SUPER 1680-3 Li thanks to its powerful crawler tracks and accurate steering.

MATERIAL MANAGEMENT

04 Optimal mix feed

> Optimal mix feed thanks to the large 15 tonne capacity material hopper.
> Perfect paving quality thanks to perfect material management.

05 Large push-rollers

> Very large oscillating push-rollers ensure convenient and shock-free docking of feed vehicles even on bends

OPERATION

06 ErgoPlus 3 operating system

> ErgoPlus 3 operating system with numerous convenient and automatic functions.

07 Niveltronic Plus - the System for Automated Grade and Slope Control

> The Niveltronic Plus automated grade and slope control system is characterised by easy operation, precision and reliability, to execute all levelling tasks perfectly.

VERSATILITY

08 Wide range of applications

> Tracked Universal Class paver with a wide range of applications and pave widths up to 8 m.



01



02



03



04



05



06

- 01 Universal Class tracked paver with wide-ranging applications.
- 02 The VÖGELE EcoPlus low-emissions package significantly reduces fuel consumption and noise levels.
- 03 ErgoPlus 3 operating system with numerous convenient and automatic functions.

- 04 All functions are easily comprehensible and all controls are clearly arranged.
- 05 The paver operator's platform ensures maximum visibility.
- 06 Powerful diesel engine with efficient exhaust emissions after-treatment.

SUPER 1680-3 Li

Innovative tracked paver

A compact powerhouse, more manoeuvrable and versatile than its predecessor, the new SUPER 1680-3 Li is simply unbeatable.

This typical member of the Universal Class handles pave widths up to 8 m with ease. It owes its excellent manoeuvrability to its high-quality drive components as well as its extremely compact design. This paver is powerful, reliable and efficient, even when operating under extremely cramped and complicated job site conditions.

Naturally, the SUPER 1680-3 Li benefits from the "Dash 3" features. The VÖGELE EcoPlus package for a low carbon footprint, for instance, significantly reduces fuel consumption and noise levels. In addition, VÖGELE's ErgoPlus operating system has been supplemented with many ergonomic and functional features: ErgoPlus 3 is now equipped with an extra-large colour display in the paver operator's console, ensuring brilliant readability even in poor lighting conditions.



STATE-OF-THE-ART DRIVE TECHNOLOGY

High output with low consumption

Three main components define the power unit of a SUPER 1680-3 Li: its state-of-the-art, liquid-cooled diesel engine, a splitter gearbox flanged directly onto the engine, and a large cooler assembly.

The driving force in this power pack from VÖGELE is its diesel engine. The four-cylinder engine delivers 123 kW at 2,000 rpm. The fuel-saving ECO mode is sufficient for many applications though. And even then, the SUPER 1680-3 Li still has a full 119 kW at its disposal. Moreover, the machine generates even less noise when running at just 1,700 rpm.

Perfect cooling

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.

Large cooler assembly

All hydraulic consumers are directly supplied with hydraulic oil via the splitter gearbox. Hydraulic pumps and valves are centrally located, making them optimally accessible for servicing. The powerful generator for screed heating is likewise flanged directly onto the splitter gearbox.

Powerful engine

developing 123 kW / 119 kW

ECO mode at 1,700 rpm

cuts operating costs

Large cooler assembly

for perfect cooling at low noise levels



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.

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 climate zones the world over.



VÖGELE > GOOD TO KNOW

Exhaust emission standard and exhaust emissions after-treatment

The machine features state-of-the-art engine technology, including exhaust emissions after-treatment. This engine conforms to China's NR IV exhaust emission standard. Exhaust emissions after-treatment is provided by the diesel oxidation catalyst (DOC), a diesel particulate filter (DPF) and a selective catalytic reduction (SCR) catalytic converter.

The SUPER 1680-3 Li complies with the "National Environment Protection Standards of the People's Republic of China HJ 1014-2020".

VÖGELE ECOPLUS

Less is more

It goes without saying that our road pavers conform to the applicable emissions standards, but we like to go much further. That's why the machine concept of the "Dash 3" generation uses environmentally friendly innovations in machine technology, resulting in lower consumption, lower emissions and lower costs.

One of these innovations is the VÖGELE EcoPlus low-emissions package. Fuel savings of up to 25% can be achieved with VÖGELE EcoPlus, depending on the application and capacity utilization of the paver. That doesn't just result in considerable savings for the contractor - it's good news for the environment too. That's because every litre of fuel saved reduces carbon dioxide (CO₂) emissions.



25% fuel saving



25% less CO₂ emitted



Less noise



VÖGELE > GOOD TO KNOW



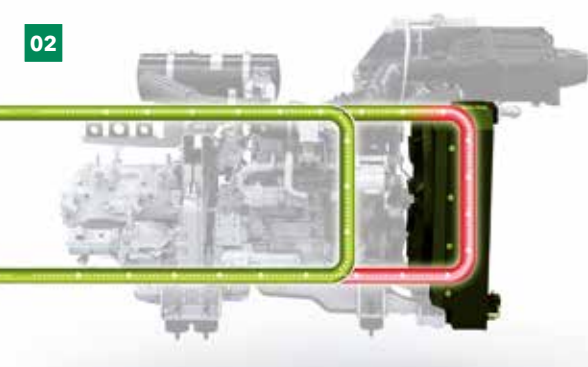
The technical innovations

01



Splitter gearbox with ability to disengage hydraulic pumps
When the paver is stationary, all the hydraulic pumps needed for traction, the conveyors and augers and for compaction are automatically disengaged. The result: lower fuel consumption.

02



Controlled hydraulic oil temperature circuit
A bypass circuit gets the hydraulic oil to its optimum operating temperature very quickly, enabling rapid, fuel-saving operation of the paver.

03



Variable-speed fan
The variable-speed fan automatically adapts to the engine load and the ambient temperature. This type of drive saves energy and reduces noise.

EFFICIENT TRANSMISSION OF TRACTIVE POWER

Even difficult terrain is no problem for the SUPER 1680-3 Li thanks to its powerful crawler tracks and accurate steering.

In terms of traction, too, the VÖGELE drive concept leaves nothing to be desired.

Thanks to powerful separate drives fitted into the sprockets for crawler tracks, engine output is translated into pave speed with no loss of power.

The paver combines optimal traction with maximum manoeuvrability, which allows it to progress well at a constant speed even when operating on difficult terrain.

Positive tracking when moving straight-ahead and accurate cornering thanks to separate drive and electronic control for each crawler track.

Powerful separate drives
fitted into the sprockets

Positive tracking when moving straight-ahead
thanks to electronic control for each crawler track



PERFECT PAVING QUALITY THANKS TO PERFECT 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. All our development efforts focus on simple operation and the best possible overview for the paving team.

The material hopper and chassis of the SUPER 1680-3 Li are specially designed to match the feed vehicles used as standard in China. Any mix truck can dock onto the SUPER 1680-3 Li without difficulty, thanks to its length and low feed height. What’s more, the wide, oscillating push-rollers can be moved 150 mm and 75 mm forward to ensure smooth and easy material supply to the paver from any kind of feed vehicle. The large material hopper holds up to 15 tonnes. This not only permits rapid unloading of the feed trucks, but also ensures that there is an ample buffer of material when changing trucks.

Any standard mix lorry can dock onto the SUPER 1680-3 Li thanks to its length of 2.42 m and low feed height of just 615 mm.

Easy mix feed thanks to low material hopper, wide hopper sides and sturdy rubber baffles fitted to the hopper front.



Large material hopper holding 15 tonnes
specially adapted to the feed vehicles used as standard in China

Oscillating push-rollers
can be moved 150 mm and 75 mm forward



01

- 01 Proportional control and continuous monitoring of conveyors and augers guarantees a constant head of mix in front of the screed in line with requirements.
- 02 Large diameter of auger blades (400 mm) for excellent mix spreading when paving in large widths.
- 03 Very wide oscillating push-rollers ensure convenient and shock-free docking of feed vehicles, even on bends.



02



03

Thanks to its perfect mix spreading, the SUPER 1680-3 Li provides for an optimal head of material in front of the screed in every paving situation.

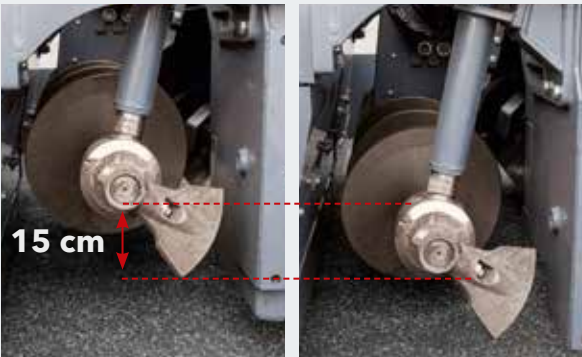
Powerful, separate hydraulic drives for conveyors and augers are installed, achieving high laydown rates up to 800 t/h*.

* Calculation based on the maximum conveying capacity.

VÖGELE > GOOD TO KNOW

Adjustable auger height

The height of the auger, complete with bearing boxes and limiting plates for the auger tunnel, is hydraulically and infinitely variable by up to 15 cm 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.



15 cm

ERGOPLUS 3 OPERATING CONCEPT

Full control for the machine operator

Even the very best machine with the most advanced technology can only really show its strengths if it can be operated easily and as intuitively as possible. At the same time, it should offer an ergonomic and safe working environment for the operating team. That's why the ErgoPlus 3 operating concept is focussed on the operator. So VÖGELE paver operators retain full control over the machine and the paving job.

On the following pages you will find detailed information on the extensive functions of the ErgoPlus 3 operating concept. ErgoPlus 3 encompasses the operator's stand, the paver operator's console and screed console and Niveltronic Plus, the system for automated grade and slope control.



ERGOPLUS 3 PAVER OPERATOR'S CONSOLE

Full control for the operator

The ErgoPlus 3 paver operator's console is designed to meet practical needs. All controls are clearly arranged. Paver functions are clustered in logical groups, so operators find their controls just where they would expect them to be.

On the ErgoPlus 3 console, all push-buttons are easy to operate even when wearing work gloves. All it takes is the push of a button. It's known as the "Touch and Work" principle. This means that a function is executed directly, with no need to confirm it.



- 01 Conveyors and augers, traction**
All controls for the conveyor and auger are located here. The traction main switch, the operating mode selector and the setpoint adjuster for the pave speed are also included in this function group.
- 02 Material hopper and steering**
This function group includes the controls for the material hopper, the steering and the diesel engine. Various options are also operated from here.
- 03 Screed functions**
All controls for the screed are grouped at the centre of the paver operator's console.
- 04 Paver operator's console display**
The high-contrast colour display provides for brilliant readability even in poor lighting conditions. Essential information is shown on menu level 1. More paving settings, as well as information about the machine, can be found at the secondary levels.
- 05 Safe operation at night**
Glare-free backlighting comes on automatically as darkness sets in so that the paver operator can also work safely on night-time jobs.



CONVEYORS AND AUGERS, TRACTION

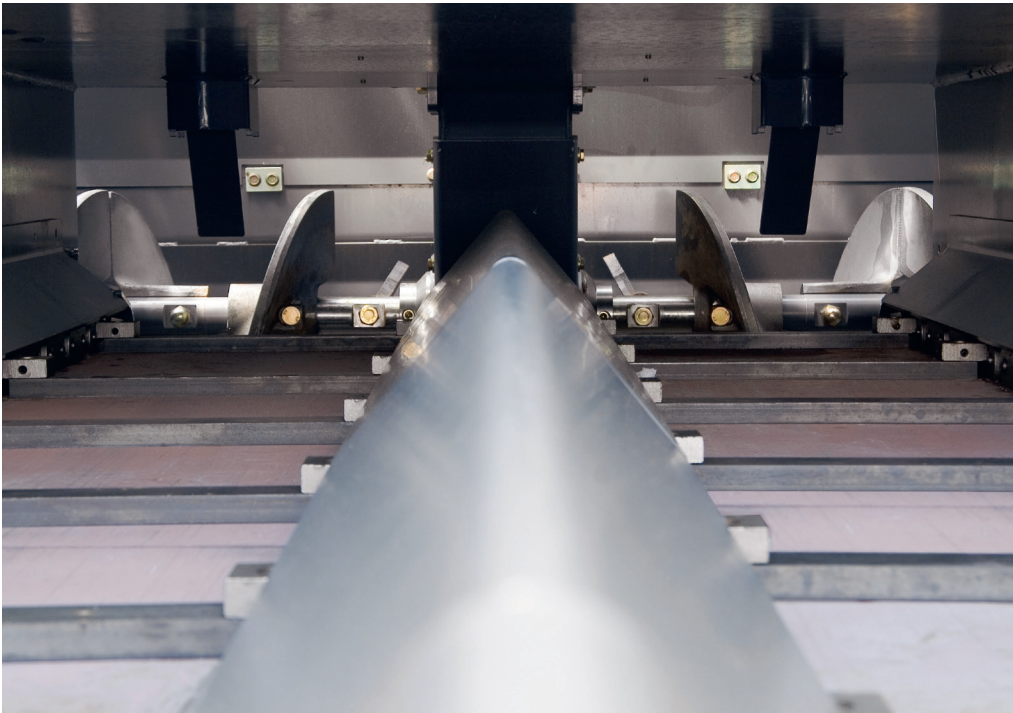
Module 1

01 Conveyor reversing

To prevent mix dropping off the conveyors when moving the paver on the job site, the conveyor can be reversed at the push of a button. Reversing - transfer of mix from the rear of the conveyor tunnel back inside - takes place for a short time only, and stops automatically.

02 Automatic functions

Operators can easily select Manual mode or Automatic mode for conveyors and augers. When selecting Automatic mode for the augers, sensors installed to monitor the material level in the auger tunnel ensure that exactly the desired amount of mix is spread in front of the screed.



The conveyor can be reversed at the push of a button. The return transport of the mix is automatically stopped. The conveyor can be switched to the no-load function just as quickly.



- 01 Conveyor reversing
- 02 Automatic functions
- 03 No-load function
- 04 Choice of paver operating modes

03 No-load function

The no-load function is provided for warming-up or cleaning of the conveyors, augers and tamper bar.

04 Choice of paver operating modes

All the main paving and machine functions can be controlled directly by individual push-buttons on the ErgoPlus 3 paver operator's console. By pressing the up or down arrow buttons, the operator changes modes in the following order: "Neutral", "Job Site Mode", "Positioning Mode" and "Pave Mode". An LED indicates the mode selected. On exiting "Pave Mode", a smart memory feature stores the last settings for paver functions so they are automatically restored on resuming work after moving the paver on site.

MATERIAL HOPPER AND STEERING

Module 2

01 Choice of engine speed ranges

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

02 Material hopper

The large material hopper with separately folding sides is designed so that the machine can always be supplied with paving material in the best, most cost-effective way. The two hopper sides can be folded separately or both together at the push of a button.



01 Choice of engine speed ranges
02 The two hopper sides can be folded separately or both together at the push of a button.

03 Steering

For turning a large radius, fine steering allows pre-setting of a track position which is maintained automatically with no need for manual intervention by the operator.

01 Choice of engine speed ranges

02 Material hopper

03 Steering at a pre-selected steering angle



SCREED

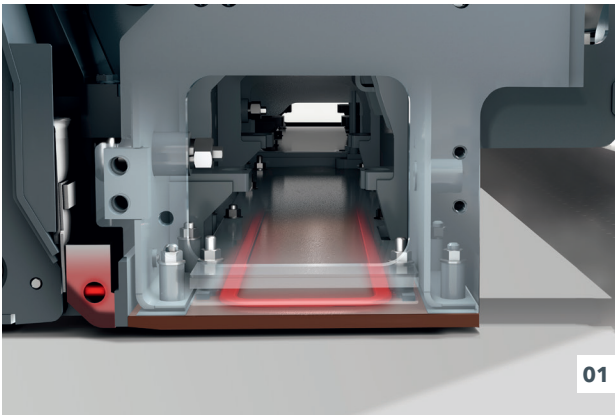
Module 3

01 Screed heating system

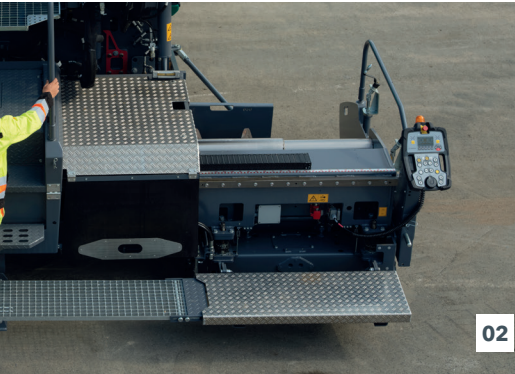
In order to optimise compaction and produce a smooth surface texture, all compacting elements are heated across the full screed width. A simple push of a button is all it takes to switch the screed heating on or off. To ensure the screed heating system is working properly, an automatic function check is carried out when it is switched on.

02 Pave width

The pave width can also be adjusted from the paver operator's console by extending or retracting the two sides of the screed. More settings, including the pitch or height of the screed, can be adjusted in this module. This means the paver operator also has access to the screed at all times.



01

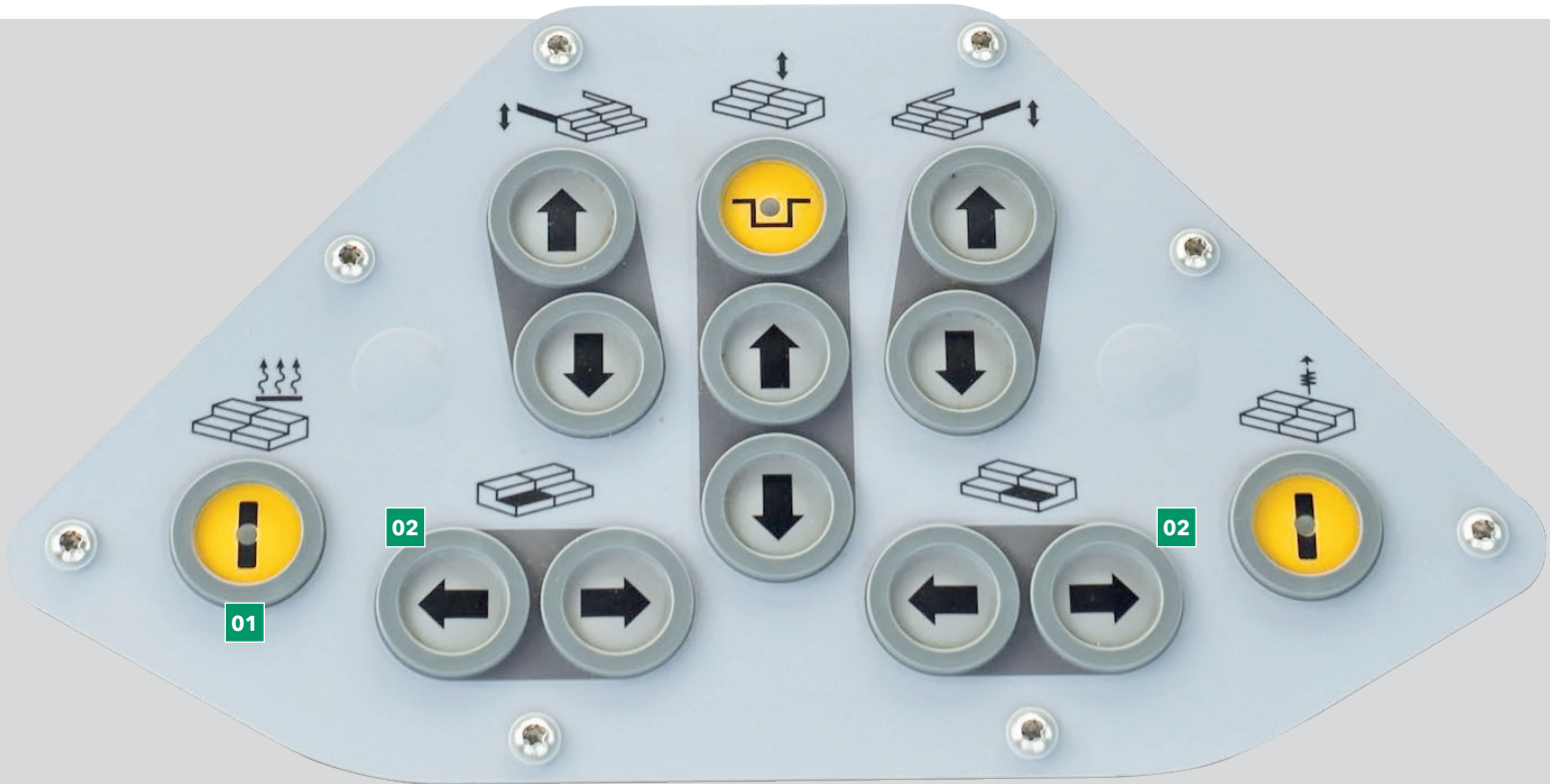


02

- 01** Constant and uniform heating output across the whole surface area is crucial for high paving quality.
- 02** Even with the screed set to its maximum width, the telescoping tubes are extended by no more than half, ensuring superb screed rigidity with zero flexing.

01 Screed heating system

02 Adjusting pave width



ERGOPLUS 3 SCREED CONSOLE

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

With ErgoPlus 3, screed operators have the paving process at their fingertips. All functions are easily comprehensible, and all controls are clearly arranged.

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 blindfold simply by touch even when wearing work gloves. Important paver and screed data can also be called up and adjusted from the screed console.



- 01 The high-contrast colour display provides for brilliant readability even in poor lighting conditions. What's more, the downward-angled high-power LED lighting gives the operator a perfect view of all processes associated with the side plate, even in the dark.
- 02 The screed width can be adjusted by means of the SmartWheel.



- 01 The screed console display
- 02 Ergonomic screed width control in two speeds
- 03 Crown adjustment at the push of a button

- 01 The screed console display**
The display of the screed console allows the screed operator to control and monitor both the left and the right sides of the screed. Machine-related parameters such as the tamper bar or conveyor speed can be conveniently adjusted on the screed console display panel. The clear menu structure, combined with easily understandable, self-explanatory symbols neutral in language, makes operating the display panel both simple and safe.
- 02 Ergonomic screed width control at two speeds**
The screed width can be effortlessly adjusted by means of the SmartWheel. This is done at two speeds: slow, for precision control, such as along an edge; or fast, for quick extension or retraction of the screed.
- 03 Crown adjustment at the push of a button**
The crown can be conveniently adjusted at the push of a button on the screed operator's console. When the "plus" or "minus" button is pressed, the set crown value is shown on the display.

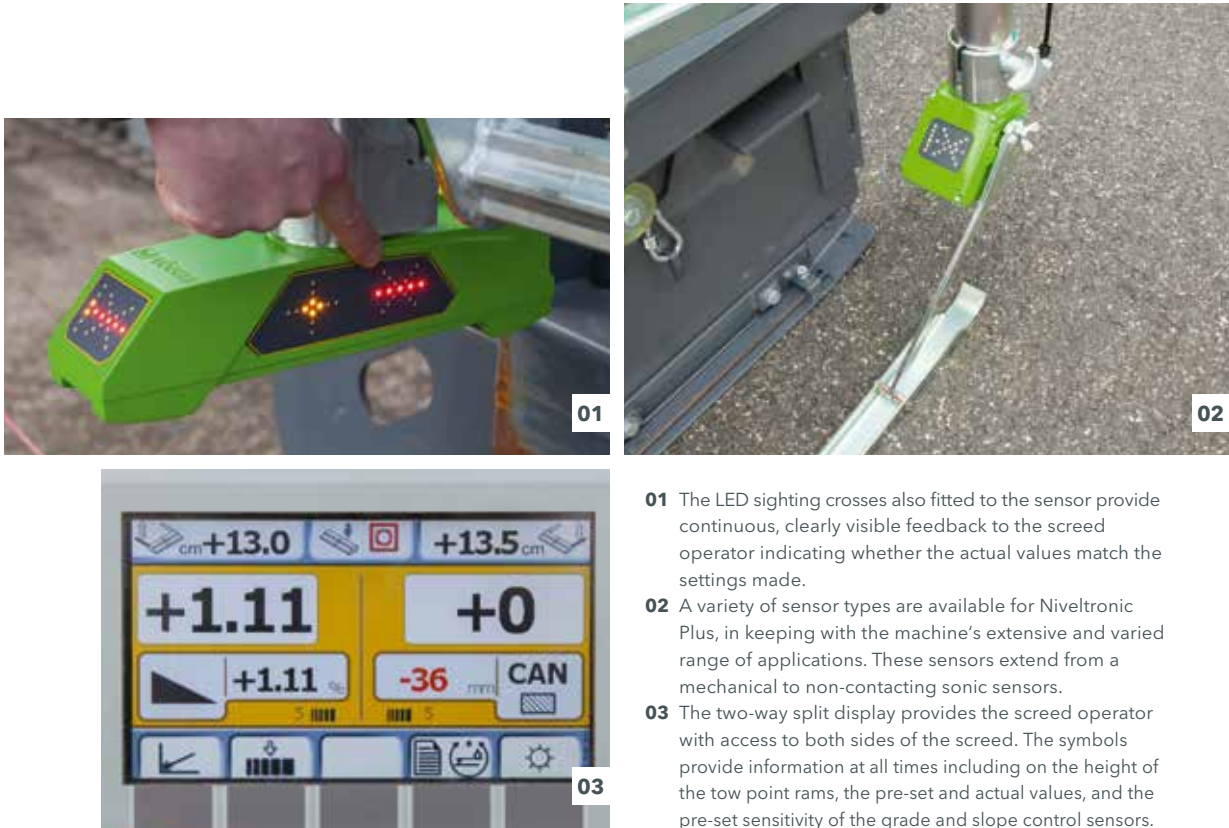
NIVELTRONIC PLUS

The Niveltronic Plus, system for automated grade and slope control is an in-house development by JOSEPH VÖGELE AG 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.

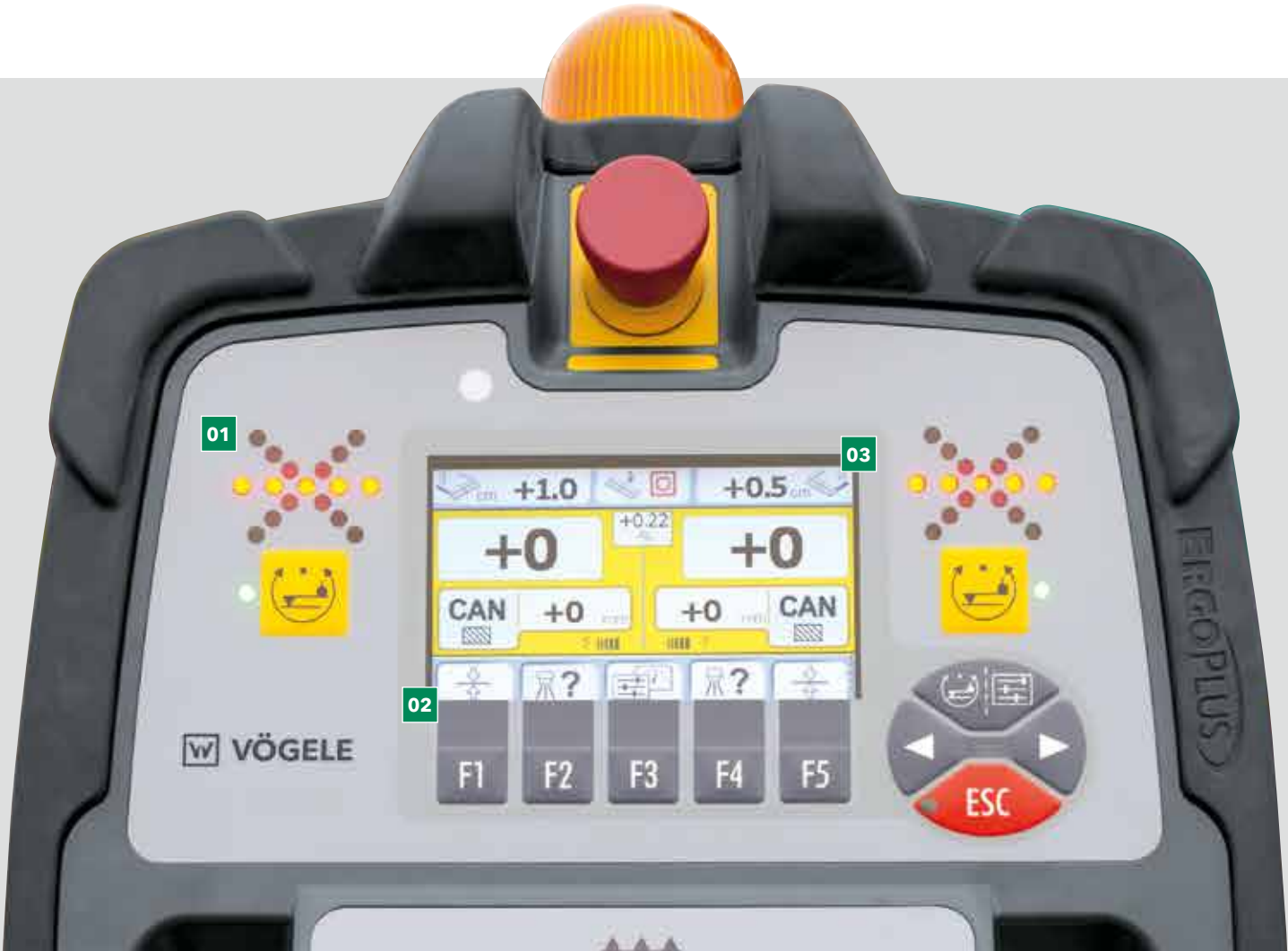
This fully integrated system is perfectly adapted to the machine technology of the VÖGELE pavers with the ErgoPlus 3 operating concept. For example, all wiring and connections are integrated in the tractor unit and screed, effectively eliminating any risk of damage to those components.

VÖGELE of course offers a very wide and practical selection of sensors, permitting versatile use of the Niveltronic Plus system. Whether building or rehabilitating car parks, roundabouts or motorways, VÖGELE offers the right sensor for every job site situation.

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



- 01 The LED sighting crosses also fitted to the sensor provide continuous, clearly visible feedback to the screed operator indicating whether the actual values match the settings made.
- 02 A variety of sensor types are available for Niveltronic Plus, in keeping with the machine's extensive and varied range of applications. These sensors extend from a mechanical to non-contacting sonic sensors.
- 03 The two-way split display provides the screed operator with access to both sides of the screed. The symbols provide information at all times including on the height of the tow point rams, the pre-set and actual values, and the pre-set sensitivity of the grade and slope control sensors.



VÖGELE > GOOD TO KNOW

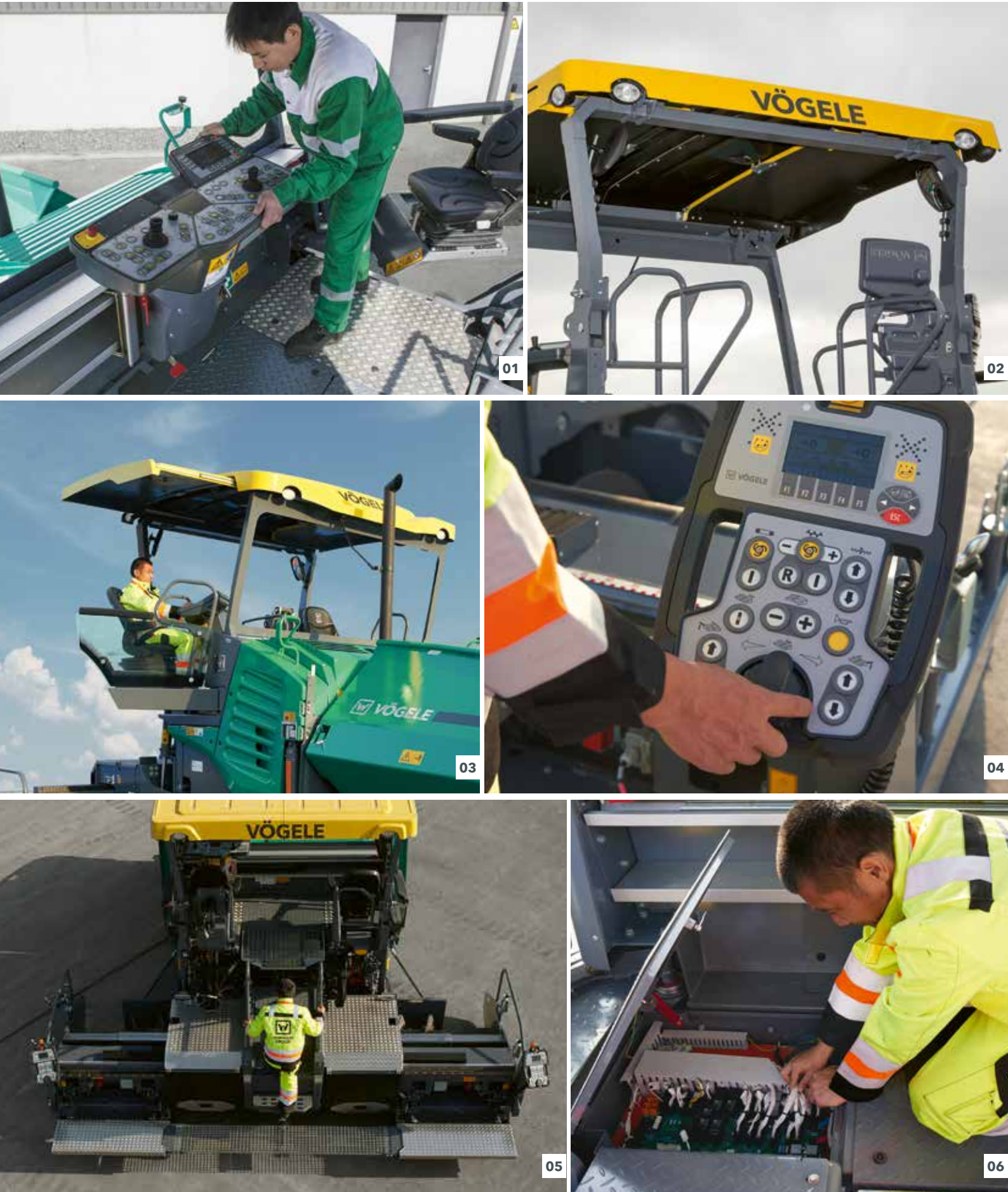
Available sensors

Slope sensor
The slope sensor allows the transverse profile to be determined exactly and then paved accurately. The measuring range is +/- 10 %.

Variable mechanical grade sensor
The variable mechanical grade sensor can be equipped with skis for referencing from the ground in 30 cm, 1 m and 2 m lengths.

Multi-cell sonic sensor
The multi-cell sonic sensor, with its four sensors, is highly versatile. By calculating an average, it can compensate for short irregularities in a reference.

Big MultiPlex Ski
The Big MultiPlex Ski compensates for extended undulations. Its 5 to 13 metre beam can be fitted with three multi-cell sonic sensors as standard – or with up to five if required.



ERGOPLUS 3 OPERATOR'S STAND

Improved efficiency, reliability and convenience

The user-friendly ErgoPlus 3 operator's stand gives an unobstructed view of all key areas on the paver, such as material hopper, steering guide or screed. The seats, which swing out to the sides, and the streamlined design of the paver operator's platform likewise provide 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. The paver operator's platform is streamlined and well organized, offering the paver operator a professional workplace. The operator's console can be protected by a shatter-proof cover.

- 01 Working comfort**
 - > The paver operator's seat and console, as well as the screed consoles can now be adjusted even more easily to personal needs.
- 02 Hardtop gives excellent protection**
 - > The state-of-the-art hardtop made of glass fibre reinforced polymer material shelters the operator, whatever the weather.
- 03 A place for everything and everything in its place**
 - > The paver 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.

- 04 Ergonomic screed console**
 - > The height and position of the console are easily adjusted. The high-contrast colour display can be read clearly from all angles.
- 05 Safe and comfortable ascent**
 - > The walkway and comfortable central step access on the screed ensure safe and convenient access to the operator's platform.
- 06 Consistent service concept**
 - > All "Dash 3" pavers have a consistent maintenance concept with identical service intervals.

EXTENDING SCREEDS

AB 500 AND AB 600

The SUPER 1680-3 Li can be combined with the VÖGELE AB 500 and AB 600 Extending Screeds. The AB 500 has a basic width of 2.55 m and the AB 600 one of 3 m. Through the addition of bolt-on extensions, the screeds build up to a maximum width of 8 m. Quick-fitting aids allow easy and fast mounting of bolt-on extensions.

The extending screeds come with a sturdy single-tube telescoping system. Working with the highest precision, it offers quick screed width control accurate to the millimetre.

The special tamper geometry of the extending screeds creates a flatter screed planing angle. This makes for a long service life of the screed plates and excellent results in terms of compaction and evenness.

The electric heating warms the screed up to its operating temperature much more quickly, even with the engine running at minimum rpm, thanks to intelligent generator management.

In automatic operation, the screed is heated in Alternating mode, which means that only one half is heated at any one time, thus sparing the engine and saving fuel.



Uniform screed heating
of screed plates and tamper bar for uniform surface courses

Much shorter preheating time
thanks to intelligent generator management of the electric heating system even when the engine is idling

Alternating mode for screed heating
alternately powering one half of the screed heating system

AB 500

Pave widths

- > Infinitely variable range from 2.55 m to 5 m
- > Larger widths through the addition of bolt-on extensions up to a maximum of 8 m

Compacting systems

- > AB 500 TV with tamper and vibrators

AB 600

Pave widths

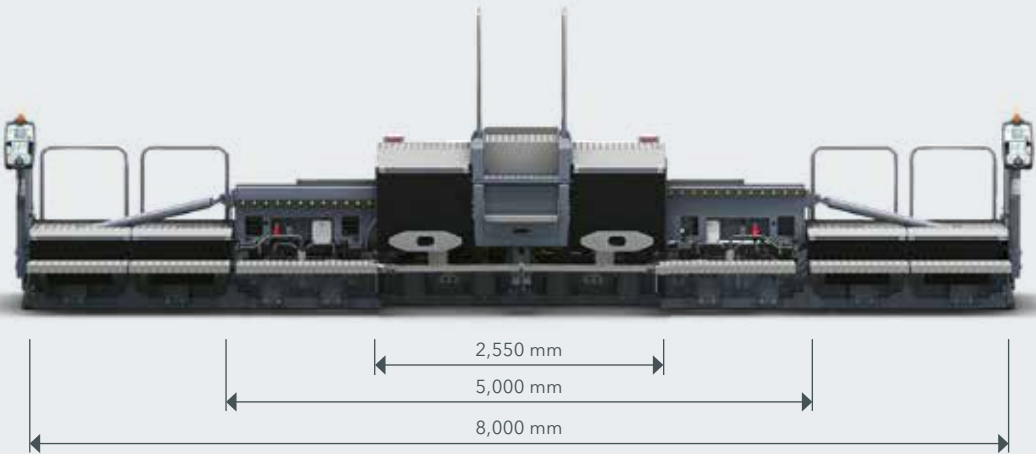
- > Infinitely variable range from 3 m to 6 m
- > Larger widths through the addition of bolt-on extensions up to a maximum of 8 m

Compacting systems

- > AB 600 TV with tamper and vibrators

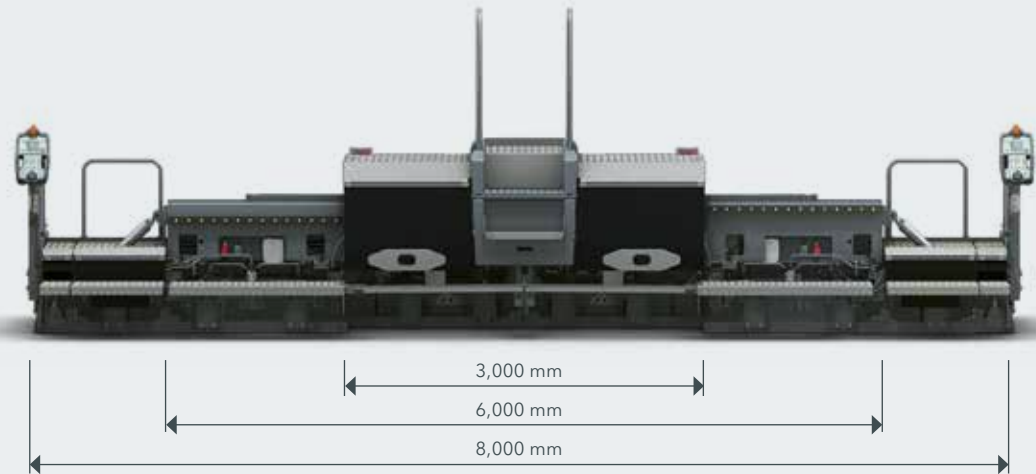
AB 500 TV

Built up to maximum pave width



AB 600 TV

Built up to maximum pave width



WIRTGEN GROUP CUSTOMER SUPPORT

Service you can rely on.

You can have confidence in reliable, swift support from us during the entire life cycle of your machine. Our wide range of services is ready with the right solution to every challenge you face.



Service

We keep our service promise with swift, straightforward assistance - on the job site or at our professional workshops. Our service team is trained to a professional standard and dedicated tools ensure that repair, care and maintenance tasks are completed quickly. We can support you with customised service agreements on request.

> www.wirtgen-group.com/service



Spare Parts

WIRTGEN GROUP original parts and accessories assure the long-term reliability and availability of your machines. Our experts will also be pleased to advise you about optimised wear part solutions to suit your application. Our parts are available all over the world at all times and are easy to order.

> parts.wirtgen-group.com



Training

The WIRTGEN GROUP brands are specialists in their field with decades of experience in applications; our customers benefit from this expertise. In our WIRTGEN GROUP training courses, we are delighted to pass our knowledge on to you, customised to suit both operators and servicing staff.

> www.wirtgen-group.com/training



Telematics solutions

At the WIRTGEN GROUP, construction machinery involving leading-edge technology goes hand in hand with sophisticated telematics solutions. Intelligent monitoring systems such as WITOS or JD Link* not only make it easier for you to plan the maintenance of your machines, they also increase productivity and efficiency.

> www.wirtgen-group.com/telematics

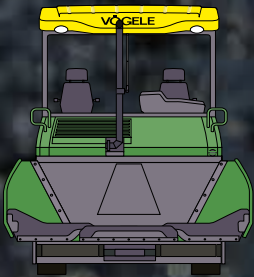
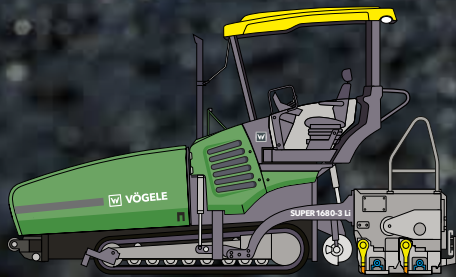
* Neither WITOS nor JD Link are currently available in all countries.
Please contact the subsidiary or dealer responsible for you for more information about this.

ALL THE FACTS AT A GLANCE

SUPER 1680-3 Li Tracked Paver



TECHNICAL DATA



SUPER 1680-3 Li

- > Maximum pave width: 8 m
- > Maximum laydown rate: 800 t/h*
- > Layer thickness: max. 30 cm
- > Transport width: 2.55 m

* Calculation based on the maximum conveying capacity.



JOSEPH VÖGELE AG

Joseph-Vögele-Str. 1
67075 Ludwigshafen
Germany

T: +49 621 8105-0

F: +49 621 8105-461

M: marketing@voegele.info

 www.voegele.info



For more information scan the code.