Universal Class

SUPER 1603
WHEELED PAVER

Maximum pave width 6.3m
Maximum laydown rate 600 tonnes/h
Transport width 2.55m

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As a paver in the new VÖGELE Classic Line, the SUPER 1603 comes with a very solid range of basic equipment. The most striking feature of this machine is its ErgoBasic operating concept. This system was developed on the basis of the tried-and-tested ErgoPlus 3 operating system and specially tailored to the needs of Classic Line machine users. As with ErgoPlus 3, the design of the paver operator’s ErgoBasic console is so clear that all functions can be grasped quickly and operated securely. This is also true of Niveltronic Basic, the System for Automated Grade and Slope Control associated with ErgoBasic. It supports simple and secure operation, contributing to excellent paving results.

All the other components of this wheeled paver, such as its drive, undercarriage, conveyors and augers, are identical to those used in Premium Line machines.

The SUPER 1603 is thus also driven by a powerful diesel engine and can reliably tackle all medium to larger paving jobs, delivering top VÖGELE quality across the board.

The AB 480 Extending Screed with tamper and vibrators delivers a high degree of precompaction. With its robust telescoping system, it can be extended hydraulically from 2.55 to 4.8m in a quick and easy operation. With fixed bolt-on extensions, the screed used with the SUPER 1603 can be extended to a maximum pave width of 6.3m.

The VÖGELE Classic Line focuses on the key functions and can hence offer outstanding value for money. This machine is the ideal candidate when classic paving tasks need to be delivered in top quality using tried-and-tested technology.
The highlights of the SUPER 1603

Powerful and economic drive concept with a modern diesel engine

Perfect paving quality due to perfect material management

Significantly smaller turning radius due to Pivot Steer steering brake

Simple operation with the innovative and easy-to-grasp ErgoBasic operating system

New and easy-to-use Niveltronic Basic System for Automated Grade and Slope Control

Easy service concept, perfectly geared to the requirements of the workshop and service staff

Combines with the AB 480 Extending Screed in the TV version
VÖGELE’s modern drive concept is perfectly adapted to the large range of different uses of the multifunctional SUPER 1603.

Delivering a powerful drive when maximum performance is called for, this Universal Class paver is exceedingly flexible in everyday operation.

Low input, maximum output – all drive components operate with maximum efficiency, from the diesel engine through to the hydraulic system.
Modern drive technology

Three main components define the power unit of a SUPER 1603: 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 diesel engine. The four-cylinder engine delivers 116kW at 2,000rpm. Yet the fuel-saving ECO mode is sufficient for many applications. And even then, the SUPER 1603 still has a full 106kW at its disposal. Moreover, the machine generates even less noise when running at just 1,700rpm.

A large cooler assembly ensures that the power unit always delivers its full output. With innovative air routing, 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 consumers are directly supplied with hydraulic oil via the splitter gearbox. Hydraulic pumps and valves are centrally located, making them optimally accessible for servicing. Even the powerful generator for screed heating is flanged directly onto the splitter gearbox, making it completely maintenance-free.

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.

Powerful diesel engine develops 116kW at just 2,000rpm.
ECO mode for paver operation with 106kW at 1,700rpm is perfectly adequate for numerous applications. It cuts operating costs and allows superquiet operation.
A powerful, air-cooled generator with direct drive ensures rapid, uniform heating of the screed.
Mobility on wheels

With its high tractive power, the wheeled SUPER 1603 perfectly combines outstanding paving performance with maximum mobility when travelling. This is assured by powerful separate hydraulic drives directly integrated into the powered wheels. They ensure maximum traction.

» Rapid transfer under its own power at up to 20km/h – a feat the SUPER 1603 is optimally equipped for. All paving functions are automatically deactivated when "Road Travel" mode is selected.

» Maximum power transmission thanks to separate, hydraulic drives provided for the rear wheels (rear wheels and one set of front wheels as an option).

» Optimum traction even on difficult terrain by activating Traction Assist.

» A small turning radius (outside) of just 3.5m allows easy and swift manoeuvring in confined spaces. And the paver’s short overall length minimizes the need for manoeuvring even on cramped job sites.

» Front wheels mounted on bogies. They provide for a continuous ground contact of the wheels also when working on an uneven base.

Outside turning radius:
- 3.5m with Pivot Steer
- 6.7m without Pivot Steer

Extreme manoeuvrability thanks to Pivot Steer: the rear inside wheel is automatically slowed down hydraulically when Pivot Steer is activated. This minimizes the outside turning radius to not more than 3.5m for positioning manoeuvres and paving.
Perfect paving quality due 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.

The paver comes with a high-performance hydraulic system. The hydraulics provide an accurate drive for the material handling systems, thus ensuring an optimal head of mix in front of the screed at all times.

The large and sturdy material hopper holds 13t. Thanks to the low and wide hopper sides, feeding the paver with mix is a fast and easy process.

Especially large oscillating push-rollers ensure convenient and shock-free docking of feed vehicles even on bends.
Large material hopper, easy feed with mix

As with all VÖGELE pavers, supplying the SUPER 1603 with mix is a clean, safe and swift process.

The large material hopper holding 13t is amply dimensioned so that a sufficient quantity of mix is stored at all times. There is no problem tiding over difficult situations such as paving under bridges, for instance.

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

Especially large oscillating push-rollers for convenient and shock-free docking of feed vehicles even on bends.

Premium paving quality thanks to perfect material handling

Thanks to the perfect spreading of mix, the SUPER 1603 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 600t/h.

Proportional control and continuous monitoring provided for conveyors and augers guarantee a constant head of mix in front of the screed in line with requirements.

Large diameter of auger blades (400mm) for excellent spreading of mix when paving in large widths.

An auger tunnel, easily variable in depth, provides for an optimal flow of mix when large quantities are being laid.

The augers of the SUPER 1603 are mechanically infinitely height-adjustable by up to 15cm. This enables them to be adapted to the desired layer thickness across the full pave width.
The new ErgoBasic operating concept was developed on the basis of the proven ErgoPlus operating system, but it was tailored specifically to the needs and requirements of the users of the VÖGELE Classic Line pavers.

The aim was to develop an operating system that is just as quick, precise and intuitive to operate as the ErgoPlus 3 system for the “Dash 3” machines.

That makes VÖGELE the only manufacturer to offer a standardized operating concept for all paver classes.
The paver operator’s **ErgoBasic** console

“Full control for the machine operator!”
Everything at a glance: the functions are arranged in a clear, logical and practical layout that was heavily inspired by the ErgoPlus operating console. The type of controls and the symbols used are all close with those of an ErgoPlus console.

Given the limited number of functions, there is now need for a display. The status of all settings is indicated as a percentage on LED strips immediately next to the relevant functions. LEDs also indicate the set speeds for the augers and the compacting systems as well as the fill level of the fuel tank.

**Speed of the augers**
When the paver is operating in automatic mode and no sonic sensors are connected, the maximum speed of the augers can be adapted to the pavement width separately for the left and right using the plus and minus keys. The set value is displayed as a percentage on the LED strip.

**Choice of operating modes for the paver**
All the main paving and machine functions can be controlled directly by individual push-buttons on the paver operator’s ErgoBasic console. The paver changes between operating modes at the push of a button in the following order: “Pave”, “Positioning”, “Job Site”, “Neutral” and “Road Travel”. An LED indicates which mode is selected. On leaving “Pave” mode, the memory function stores all the last settings, which means that the paving parameters last used are retrieved immediately after repositioning the machine on the job site, for instance.

**Safe operation during the night**
The paver operator’s ErgoBasic console features glarefree backlighting so that the paver operator can also work safely on night-time jobs.

**No-load function**
The no-load function is provided for the warm-up or cleaning of conveyors, augers and tamper.

**Super 1603 lighting for travelling on public roads**
As a standard feature, all VÖGELE wheeled pavers are equipped with a lighting system approved throughout Europe for travelling on public roads. The push-buttons for indicating direction, warning lights, dipped lights and full beam are clearly arranged side by side on the paver operator’s console.

**Compacting effort**
The speeds of the compacting systems can be set directly on the paver operator’s ErgoBasic console. The LED strips from 0 to 100% indicate the set speeds for the tamper and vibrators, allowing them to be adjusted immediately when required.

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The **ErgoBasic** remote control unit for the screed

The safe and easy handling of all screed functions is a key factor in high-quality pavement construction. That is why a remote control unit for the screed was developed specifically for the ErgoBasic operating system of the new Classic Line pavers.

The remote control’s keypad is laid out logically according to the functional processes. Designed for robustness, it is well able to withstand tough job-site conditions.

Operation is easy to understand and can be learned intuitively in a very short space of time, not least because the symbols used in the proven ErgoPlus operating system are found here, too.

The ErgoBasic remote control unit for the screed allows all paving-related functions to be set quickly and easily. That includes direct access to the material handling systems and the sonic sensor for the auger.

All the main paving functions can be controlled via the two handy screed remote control units. Simple, language-neutral symbols allow the machine to be operated intuitively.

1 // Setting: Conveyor (automatic/manual)
2 // Horn
3 // Setting: Auger (automatic/manual)
4 // Screed floating on/off
5 // Screed width control, one side
6 // Adjustment of screed tow point ram
Remote control unit for Niveltronic Basic

VÖGELE have also developed a System for Automated Grade and Slope Control to match the ErgoBasic operating system: the Niveltronic Basic. It is completely integrated into the machine control system and therefore perfectly adapted to the paver model concerned. Another outstanding aspect of Niveltronic Basic is its particularly simple and intuitive handling, a feature which makes it easy even for less experienced operators to learn their way around the system. This creates ideal conditions for the Classic Line pavers to work true to line and level on any base.

Each side of the screed is operated by a separate compact and exceedingly robust Niveltronic Basic remote control unit.

A variety of sensor types is available for Niveltronic Basic, in keeping with the machine’s large and varied range of uses. These sensors extend from a mechanical to non-contacting sonic sensors. The System for Automated Grade and Slope Control can simultaneously be connected to two grade sensors and a slope sensor. The type of sensor used is detected automatically.

The kind of reference – ground, tensioned wire or transverse slope – can be easily set on the remote control unit.

The remote control unit comes with all the functions required for high-precision grade and slope control. Clear symbols allow the machine to be operated intuitively.

1 // Deviation from specified values
2 // Niveltronic Basic on/off
3 // Setting: Sensor sensitivity
4 // Selection: Kind of reference (ground, tensioned wire, transverse slope)
5 // Quick set-up
6 // Setting: Specified value
7 // Sensor calibration
The paver operator’s **ErgoBasic** platform

1. **The comfortable paver operator’s platform**
   The comfortable paver operator’s platform 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 easily monitor the paver’s feed with mix, for instance, from his seat.

2. **Working comfort**
   Easy displacement of the paver operator’s console across the full width of the platform for convenient working in an ergonomic position on either side of the machine.

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

4. **Hardtop gives excellent protection**
   The modern hardtop made of glass fibre reinforced polymer material shelters the operator. The hardtop folds down with effortless ease, thus getting the paver quickly ready for transport.

5. **Economical and service-friendly design**
   The paver operator has convenient access to all service points on the machine. All hydraulic pumps attached to the splitter gearbox, their clear arrangement and easy access provide for service-friendliness at the highest level. Sturdy components of highly wear-resistant materials for long service lives minimize downtime.

6. **Safe and comfortable ascent**
   The walkway and comfortable middle ascent on the screed ensure safe and convenient access to the paver operator’s platform.

7. **Safe and easy handling of all screed functions**
   The ErgoBasic remote control unit for the screed allows all paving-related functions to be set quickly and easily.

8. **Easy to use Grade and Slope Control**
   Each side of the screed is operated by a separate compact and exceedingly robust Niveltronic Basic remote control unit.
VÖGELE AB 480 Extending Screed is the preferred choice on all those jobs where pave width varies and prime pavement quality counts. The pave width can be hydraulically adjusted between 2.55m and 4.8m in a fast and simple operation, using the highly stable single-tube telescoping system.

The screed used with the SUPER 1603 can be extended to a maximum pave width of 6.3m by means of fixed bolt-on extensions.

Electric screed heating is provided for all compacting and smoothing screed elements. The electric heating warms the screed up to its operating temperature in next to no time.
The screed for the SUPER 1603

**AB 480 TV**

**Pave widths**
- Infinitely variable range from 2.55m to 4.8m
- Maximum pave width through bolt-on extensions: 6.3m (2 x 75cm)

**Compacting systems**
- AB 480 TV with tamper and vibrators

**Built up to maximum pave width**

![Image of machine](image)

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All the facts at a glance

Dimensions in mm

<table>
<thead>
<tr>
<th>Power unit</th>
<th>Engine</th>
<th>Manufacturer Type</th>
<th>4-cylinder diesel engine, liquid-cooled</th>
<th>Cummins QSB4.5-C155</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>Nominal</td>
<td>156kW at 2,000 rpm (according to DIN)</td>
<td>104.9kW at 1,700 rpm</td>
<td></td>
</tr>
<tr>
<td>Exhaust emissions standard</td>
<td>EU Stage 3a, US EPA Tier 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Furnace tank</td>
<td>215 liters</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Undercarriage</th>
<th>Front wheels</th>
<th>Tyre equipment</th>
<th>4, mounted on bogies (oscillating axle)</th>
<th>Elastic solid rubber tyres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rear wheels</td>
<td>Type size</td>
<td>2, pneumatic, tubeless</td>
<td>14” X 2.5</td>
<td></td>
</tr>
<tr>
<td>Drive</td>
<td>Type</td>
<td>separate hydraulic drive provided for each wheel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard</td>
<td>Option</td>
<td>2 rear wheels and 2 front wheels (4x4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speeds</td>
<td>Paving</td>
<td>up to 18 m/min., infinitely variable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Travel</td>
<td>up to 20 km/h, infinitely variable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outside turning radius</td>
<td>Minimum 3.5 m (with Pivot Steer)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Material hopper</th>
<th>Hopper capacity</th>
<th>13 t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>3.25 mm</td>
<td></td>
</tr>
<tr>
<td>Feed height</td>
<td>1540 mm (bottom of material hopper)</td>
<td></td>
</tr>
<tr>
<td>Push rollers Position</td>
<td>Oscillating can be displaced forwards by 75 mm or 150 mm</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Conveyors and augers</th>
<th>Conveyors</th>
<th>2, with replaceable feeder bars, conveyor movement reversible for a short time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive</td>
<td>separate hydraulic drive provided for each conveyor</td>
<td></td>
</tr>
<tr>
<td>Speed</td>
<td>up to 34 m/min., infinitely variable (manual or automatic)</td>
<td></td>
</tr>
<tr>
<td>Augers</td>
<td>2, with replaceable auger blades, auger rotation reversible</td>
<td></td>
</tr>
<tr>
<td>Diameter</td>
<td>400 mm</td>
<td></td>
</tr>
<tr>
<td>Drive</td>
<td>separate hydraulic drive provided for each auger</td>
<td></td>
</tr>
<tr>
<td>Speed</td>
<td>up to 84 rpm, infinitely variable (manual or automatic)</td>
<td></td>
</tr>
<tr>
<td>Height</td>
<td>infinitely variable by 15 cm, mechanical, lowest position 10 cm above the ground</td>
<td></td>
</tr>
<tr>
<td>Lubrication</td>
<td>Automatic centralized lubrication system with electrically driven greas pump</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Screed</th>
<th>All 480</th>
<th>basic width</th>
<th>2.55 m</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>infinitely variable range</td>
<td>2.55 m to 4.8 m</td>
<td></td>
</tr>
<tr>
<td></td>
<td>maximum width</td>
<td>6.3 m</td>
<td></td>
</tr>
<tr>
<td>Screed version</td>
<td>TV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Layer Thickness</td>
<td>up to 30 cm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Screed heating</td>
<td>Electric by heating rods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power supply</td>
<td>Three-phase A.C. generator</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dimensions (transport and weight)</th>
<th>Length</th>
<th>tractor unit with screed</th>
</tr>
</thead>
<tbody>
<tr>
<td>AB-480 TV</td>
<td>4.6 m</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>tractor unit with screed pave widths up to 4.8 m</td>
<td>17,000 kg</td>
</tr>
</tbody>
</table>

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