A WIRTGEN GROUP COMPANY

VÖGELE

Special Class

MT 3000-2i Standard
POWERFEEDER

Material feeder:
Maximum conveying capacity 1,200t/h
Large receiving hopper with a capacity of 16.4t
ErgoPlus operating system

www.voegele.info

MT 3000-2i Standard

High-tech for greater quality and cost efficiency

Extremely level and durable pavements are not a matter of chance, but are the result of clearly defined quality factors. Every interruption, e.g. because the supply of material has run out, every jolt due to the lorry docking on to the paver and any segregation of the mix is immediately evident in the quality of the built road.

Using a material feeder prevents all these problems that impair quality. As the link between mix lorry and road paver, it continuously supplies the paver with material – without any physical contact. So it is hardly surprising to find that material feeders are increasingly being stipulated as mandatory equipment in invitations to tender.

The PowerFeeder MT 3000-2i Standard from VÖGELE is a machine that ticks all the boxes in terms of quality and cost-efficiency.

The highlights of the MT 3000-2i Standard

High-performance feeder concept in combination with the large 16.4t receiving hopper allows even large mix lorries to be emptied in just 60 seconds

Homogenized material in the receiving hopper of the material feeder due to conical augers

Maximum paving quality thanks to uninterrupted and non-contacting supply of material to pavers

Reliable material transfer based on automatic distance control and anti-collision protection

Optimum overview and safety thanks to the convenient fit-for-purpose ErgoPlus operating system

Enormous power alongside low consumption from the powerful Deutz diesel engine delivering 160kW at 2,000rpm

Outstanding mobility on any terrain and precision steering provided by crawler tracks with powerful separate drives

Cost-effective transport on a standard trailer thanks to the low transport height and ideal weight

Classic feeding of large material quantities

The VÖGELE PowerFeeder MT 3000-2i Standard is the machine of choice on large road building projects, such as the construction or rehabilitation of highways and when pavements are required in particularly thick layers or in large jointless widths. Only a material feeder can guarantee an uninterrupted supply of mix and non-stop paving on construction projects like these.

But quality is not the only aspect to benefit. Non-stop paving is also essential for achieving high daily laydown rates of 4,000t and more and for completing large projects quickly and more cost-efficiently.

The use of the PowerFeeder MT 3000-2i Standard is not confined to bituminous mixes alone. The feeder concept has been designed so that other materials can be conveyed in addition to asphalt, such as topsoil, water-bound base course materials or recycled materials.

Maximum conveying capacity for non-stop paving

The powerful conveying concept of the VÖGELE PowerFeeder MT 3000-2i Standard is capable of conveying up to 1,200t of material per hour. In this way, a 25t feed lorry can be emptied completely in just 60 seconds.

This allows the paving team to work continuously at all times, without interruptions and with maximum surface accuracy.

However, because paving results also depend to a large extent on the quality of the mix, VÖGELE's modern material conveying technology also includes many features which ensure that the material is supplied in optimum condition for paving.

All of these technical measures are designed to work together, their objective being gentle handling of the material.

» **Large receiving hopper** holding 16.4t.

» **Powerful augers with large auger blades** (400mm) in the feeder's receiving hopper ensure conveyance of the mix without residues.

» **As an alternative** to the standard augers, conical augers are available for the receiving hopper of the material feeder to ensure effective thermal homogenization of the paving material.

» **The trough-shaped conveyor belt** centres the material during transfer and provides for a clean flow of mix without spills.

» **1.1m-wide conveyor** capable of transferring up to 1,200t of mix per hour.

» **Tensioning rams guiding the rubber belt** ensure centre alignment of the belt. A smart automatic system accurately adjusts the belt tension as required.

» **Innovative diesel heating** keeps the conveyor at a good temperature to prevent the material from sticking.

The VÖGELE material conveying concept

Receiving hopper

The infrared image shows how the transverse conical augers homogenize all the material in the feeder's receiving hopper by mixing the potentially cooler asphalt from the sides with the warmer material from the middle of the hopper.

Conveyor belt

The homogenized material is conveyed gently on the trough-shaped conveyor belt to the extra material hopper in the road paver.

Extra material hopper

The specially designed extra material hopper in the paver effectively prevents any material from sticking.

The result

The technical measures ideally complement one another, so that the paving material is in an optimal condition when being laid. VÖGELE technology not only counteracts thermal segregation, but also mechanical segregation.

Conical augers

The conical shape prevents the formation of "tunnels" in the material and ensures that it is withdrawn evenly from all areas of the receiving hopper. And because fresh hot mix is constantly being fed in from the outside, it is thermally homogenized.

Trough-shaped conveyor belt

The trough-shaped conveyor belt provides for stable material transfer and thus counteracts mechanical segregation. This in turn ensures that the mix quality is maintained in every phase of conveying, up to the point of paving – without mix being lost.

Innovative diesel heating

In order to ensure optimum material management, a specially developed diesel heating system with non-contacting infra-red panels maintains the correct temperature of the conveyor belt. The path of the material is pre-heated before the transfer of material begins.

Extra material hopper in the paver

In order to optimize the flow of material, the extra hopper for the paver was also designed without superfluous corners and edges. Smooth transitions and steep walls prevent the material from accumulating and blocking the flow of mix. The entire quantity of mix is thus continuously fed into the paving process with no possibility of any cooling.

Non-contacting material feed process

The non-contacting transfer of material is one of the key criteria for high paving quality. Decoupling the feeding from the paving process prevents the transmission of jolts from the feed vehicle to the paver when docking.

A robust mechanical distance control system ensures that the correct space is always maintained between road paver and material feeder. It is based on an inductive angle sensor operating practically wear-free.

A collision protection system in the form of a contact bar on the paver's extra material hopper rounds off the system. If the MT 3000-2i Standard stops for any reason whatsoever, the switch on the contact bar brings the paver to an immediate halt, thus eliminating all risk of a collision.

The operator can concentrate entirely on the transfer of mix.

As soon as pressure is applied to the contact bar, the collision protection system ensures that the paver following the material feeder comes to an immediate halt.

The **ErgoPlus** operating concept

The ErgoPlus operating system comprises a well organized operator platform, the feeder operator's console with its modular design and ergonomic driver seats. This design puts the machine operator at the heart of things, guaranteeing comfort, safety and a good overview of the job site at all times.

The centrepiece is the feeder operator's console. All the controls required for main and frequent functions are arranged in logical groups. Operation is intuitive and hence easy to learn. In fact, for the majority of applications only one person is needed to operate the material feeder.

The operator’s ErgoPlus console

“Full control for the machine operator”

The operator's ErgoPlus console

Clear and logical arrangement of controls

The feeder operator's console has been designed with user convenience and a clear overview in mind, with all functions arranged in logical groups for rapid access. Once a button is pressed, a function starts directly. This is due to the "Touch and Work" principle.

As darkness falls, the feeder operator's console is back-lit automatically, which makes night-time work easy and relaxed. On the ErgoPlus console, all push-buttons are clearly identifiable by touch even when wearing work gloves.

- **Module 1:** Traction
- **Module 2:** Material conveyance
- **Module 3:** Receiving hopper and steering
- **Module 4:** Display for monitoring and adjustment of basic settings

Examples of feeder functions

Repositioning at the press of a button

The simple press of a button is all that's needed for the machine to turn almost on the spot, requiring just a minimum of space. Mounted on tracks, the VÖGELE PowerFeeders boast an extremely small turning circle. This is a great advantage in confined spaces in particular, and allows quick and safe repositioning of the machine from one work section of the job site to another.

Automatic distance control (option)

Automatic distance control adapts the material feeder's speed automatically to the paver's speed. As a result, a constant distance between the paver and the feeder is maintained at all times. The feeder operator can concentrate exclusively on the transfer of material.

Choice of operating modes

On the ErgoPlus console, four different feeder operating modes can be selected from. By pressing the arrow buttons, up or down, the operator changes modes in the following order: "Neutral", "Job Site", "Positioning" and "Material Transfer". A LED indicates the mode selected.

Display panel of the feeder operator's console

The large, easy-to-read display panel shows vital information on menu level 1 such as the current operating speed and the level of mix in the paver's material hopper. Further parameters such as the feed rate and the distance from the paver can be easily set on the display panel. And the display gives access to machine-related information such as fuel consumption or service hours.

Steering with preselected steering angle

For long curves with a constant radius, the desired track position can be preselected using arrow keys. As long as the function is not deactivated, the material feeder automatically follows the curve with no need for operator intervention.

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 applications. Operating in ECO mode reduces noise emission and fuel consumption considerably.

Automatic conveyance of mix

When pushing the "Material Transfer" button, all conveying systems are activated in Automatic mode. The speeds of the transverse augers and the conveyor belts are optimally matched to one another. A sonic sensor monitors the quantity of material conveyed and automatically adapts the feed rate as required.

The ErgoPlus operator's stand

Excellent all-round visibility

The comfortable operator's stand gives an unobstructed view of all crucial areas on the feeder such as receiving hopper, steering guide or discharge point from the conveyor. This way, the material feeder can easily be operated by one person.

Two operator seats

The arrangement of the pivot-mounted seats provides for maximum all-round visibility. It allows the operators to conveniently monitor the mix supply from the feed lorries on the one hand and the discharge point from the conveyor on the other.

Working comfort

A few adjustments are all it takes for the feeder operator to position his console exactly to meet his personal needs. It can be displaced across the full width of the operator's stand, swivelled out to the sides and tilted. This allows an ergonomically optimized workplace to be set up in no time at all.

Weatherproof hardtop

The modern hardtop made of glass fibre-reinforced polymer material shelters the operator come rain or shine. It can be lowered effortlessly to the transport position by means of a manually operated hydraulic pump. Wide, easily extendable sunshades give the operator optimal protection even when his seat is moved out.

Clear structure

The operator's stand, with its streamlined design, is well organized, offering the feeder operator 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.

Easy access to all maintenance points

Large panels give convenient access to all maintenance points.

All hydraulic pumps are located on the transfer gearbox and provide maximum service-friendliness thanks to their clear arrangement and easy accessibility.

Service indicators and readily accessible measuring ports facilitate diagnosis and service.

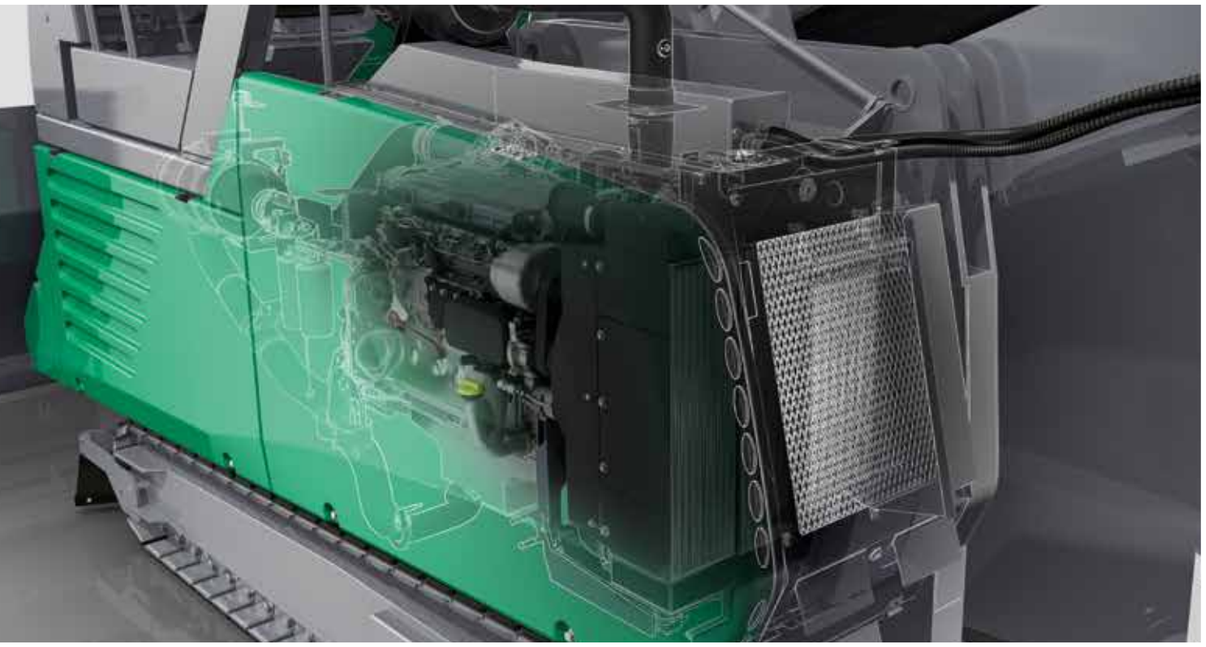
Powerful drive technology

Three main components define the power unit of an MT 3000-2i Standard: its modern, liquid-cooled diesel engine, a splitter gearbox flanged directly to the engine and a large cooler assembly.

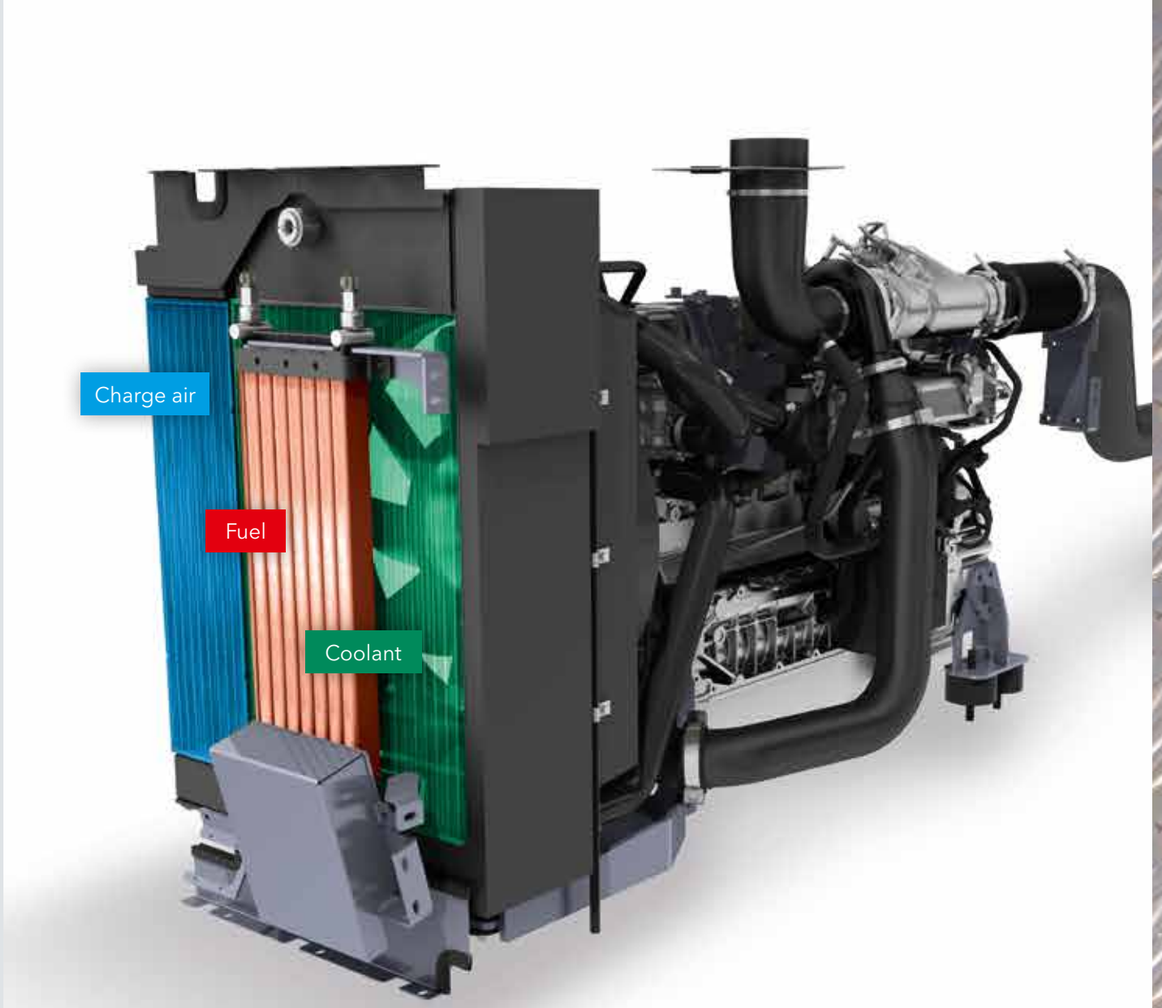
The driving force in this power pack from VÖGELE is its Deutz diesel engine of type TCD 6.1 L6. This six-cylinder engine delivers 160kW at 2,000rpm. Yet the fuel-saving ECO mode is sufficient for many applications. And even then, the MT 3000-2i Standard still has a full 150kW at its disposal. Moreover, the machine generates even less noise when running at just 1,800rpm.

A large cooler assembly ensures that the power unit always delivers its full output. The temperatures of the diesel engine, charge air, fuel and hydraulic oil are constantly maintained within the optimum range, a factor which contributes significantly to the durability of the diesel engine and the hydraulic oil. A further advantage is that the machine can operate without difficulty in all climate regions worldwide.

The machine can be equipped with an electrical package for the supply of power. This contains a 230V socket, heating rods for the conveyor scraper and two connections for light balloons. A powerful three-phase A.C. generator supplies the electrical energy required.



The power unit on the MT 3000-2i Standard with a diesel oxidation catalytic converter (DOC), diesel particulate filter (DPF) and selective catalytic reduction (SCR) system for exhaust gas after-treatment, fulfils the strict requirements of European emissions standard Stage 4 and US EPA standard Tier 4f.



An optimally designed cooling system comprising a large cooler assembly and a separately mounted hydraulic oil cooler provides excellent cooling, even during full-load operation.

» **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. Depending on the exhaust gas after-treatment version concerned, these engines comply with the strict requirements of European emissions standards Stage 3b or 4 as well as US EPA standards Tier 4i or 4f.

» **Powerful Deutz diesel engine** with an output of 160kW at 2,000rpm.

» **The large fuel tank** holds 450 litres for more than a day's work without a need for refuelling.

» **Low average fuel consumption** of 11 litres/h*.

» **An ECO mode** (150kW at 1,800rpm) cuts operating costs and allows particularly quiet operation.

* The indicated consumption is based on an average daily laydown rate of 2,400t and may vary according to job site conditions.

Mobile in every way

The VÖGELE MT 3000-2i Standard features high mobility and superb manœuvrability on the job site.

Its long crawler tracks deliver maximum traction thanks to their large footprint. The powerful, electronically controlled separate drives integrated right into the sprockets of the crawler tracks translate engine output into tractive effort with no loss of power.

The material feeder pushes large feed lorries with ease even on difficult terrain. Precise steering, stable tracking when moving straight and exact cornering are not a problem for the PowerFeeder.

The MT 3000-2i Standard owes its manœuvrability to the tracked undercarriage, a great advantage on every job site. The machine is capable of turning on the spot and gets on well even on terrain with slopes and inclines. This is particularly helpful on sites where structures such as bridges etc. need to be by-passed.

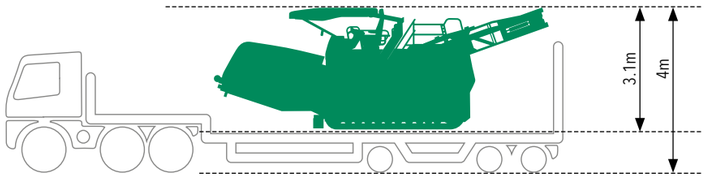
Thanks to the accurate steering of its crawler tracks, even difficult terrain is no problem for the MT 3000-2i Standard. In terms of traction, too, the VÖGELE drive concept leaves nothing to be desired.

Easy transport

Transporting a material feeder is a cost factor that should not be underestimated. The VÖGELE MT 3000-2i Standard was designed for optimum transport right from the outset.

The transport height of 3.1m, transport width of 3m and an outer track width of 2.66m are dimensioned to allow the MT 3000-2i Standard to be transported on a conventional low-bed trailer.

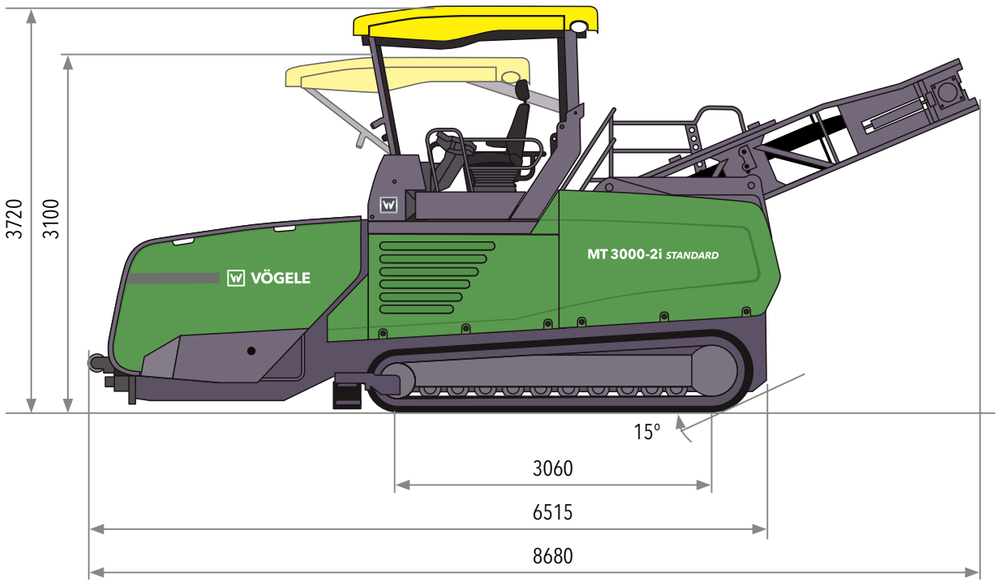
Since the machine weighs less than 20t, lorry and material feeder together also weigh less than 40t. As a result, there is no need for special permits or time-consuming detours when transporting the MT 3000-2i Standard.

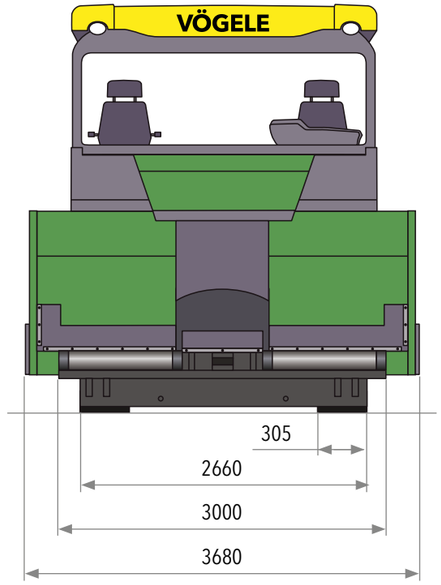


Thanks to its low transport height of 3.1m, the VÖGELE PowerFeeder can be transported on a normal low-bed trailer.

All the facts at a glance

Dimensions in mm





Power unit	
Engine	6-cylinder diesel engine, liquid-cooled
Manufacturer	Deutz
Type	TCD 6.1 L6
Output	
Nominal	160kW at 2,000rpm (according to DIN)
ECO mode	150kW at 1,800rpm
Exhaust emissions standard	EU Stage 3b, US EPA Tier 4i
Exhaust gas after-treatment	DOC, DPF
Exhaust emissions standard	EU Stage 4, US EPA Tier 4f
Exhaust gas after-treatment	DOC, DPF, SCR
Emission data	
Sound power level	≤108 dB(A)
Daily noise exposure level	>80 dB(A)
Fuel tank	450 litres

Undercarriage	
Crawler tracks	provided with rubber pads
Ground contact	3,060 x 305mm
Traction drive	separate hydraulic drive and electronic control provided for each crawler track
Speeds	
Operating	up to 25m/min., infinitely variable
Travel	up to 4.5km/h, infinitely variable
Steering	by alteration of track running speeds
Brake	multiple-disk brake locked on automatically without oil pressure

Material conveying systems	
Transverse augers	2, installed in the receiving hopper
Standard	cylindrical augers
Diameter	400mm
Optional	conical augers for homogenization of the material
Drive	separate hydraulic drive
Speed	79rpm
Belt conveyor	1, with hydraulic drive
Belt width	1,100mm
Conveying capacity (max)	1,200t/h*

Receiving hopper	
Holding capacity	16.4t
Width	3,680mm (hopper sides extended)
Feed height	600mm (bottom of receiving hopper)
Push-rollers	oscillating

Extra material hopper	
Holding capacity	20 – 24t (to be placed into the material hopper of the paver)

Dimensions (transport) and weight	
Length	8,950mm
Width	3,000mm
Height	3,100mm
Weight	19.2t

Key: **DOC =** Diesel Oxidation Catalyst **DPF =** Diesel Particulate Filter **SCR =** Selective Catalytic Reduction

*dependent on type of mix

Subject to technical modification.

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Your VÖGELE QR Code will take you directly to the "MT 3000-2i Standard" on our website.

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