

Optimas®









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PaveJet S24Paver Laying machine

Experience innovation and design – the PaveJet S24 from Optimas!

Get to know the world of advanced technology and innovative design. The 12th generation of the Paver Laying machine combines over 40 years of engineering, design and expertise.

Since 1978, we at Optimas have been setting standards with our Paver Laying machines. Our goal? Continuous further development in the spirit of the original. The PaveJet S24 is a machine with innovative technology, modernized details, and a fresh, contemporary design, developed in close cooperation with our customers.

The PaveJet S24 meets the highest demands on small and large job sites. Thanks to customised production we deliver your machine perfectly tuned and ready for the job site.

Experience innovation, quality, and customer proximity! Optimas: your solution for perfect paving!

What makes the PaveJet S24 unique?

- Technical excellence: through decades of practical experience and state-of-the-art development.
- Ergonomics & Comfort: Enhanced controls and features that fits to your needs.
- It has a contemporary look and is adapted to the latest technology. It can be customized according to your ideas, from the paver clamp options to the paint finish.
- It is made in Germany, where high-quality workmanship is supported by state-of-the-art production facilities and trained experts.





Paver Laying machine



Highlights at a glance



Clear field of view

The larger windshield enables a larger and unobstructed field of vision. This is particularly advantageous when working in underground garages or when picking up from a height of 2.5 m, for example when working with two stacked packs of stones.



Sound System

Equipped with DAB, Bluetooth and a hands-free system. High quality speakers are mounted on the rear wall of the cab at head height.



Chassis and boom

With a height of less than 2 meters, the S24 is suitable for underground garages without the need to remove parts.



Air Conditioning

Air conditioning is available as an option, for a comfortable working environment in the cab.











Control Unit / 7" Display

The central control unit manages all functions, including the rear view camera.

As standard, the operator can choose between three driving modes - Basic, Standard and Special.

The hydraulic pressure of the Paver-clamp functions can be individually adjusted, enabling material-saving and fuel-efficient operation.

In the event of a failure in the hydraulic system, an instant error message is displayed, directly assigning the fault.



Engine

The PaveJet S24 is equipped with a performance-optimized Kubota engine that delivers more torque and therefore more power.

Even at maximum load, e.g. with all-wheel drive and air conditioning on, the power limit is not reached.

In normal driving mode, the engine can be operated at low engine speeds, which contributes to a more fuel-efficient driving style.

Despite the power increase, the S24 remains approved for low emission zones, as the engine output is less than 19 kW.



Paver Laying machine



Cabin & features

The PaveJet S24 paver laying machine is extremely fast and installs pavers easily and accurately in record time. The focus is on the operator's comfortable workplace:

- The simple operation and open design are **impressive**
- the practical cab* with retractable windscreen for fresh air supply and good communication with others workers
- a comfortable the air-sprung driver's seat* with seat heating, infinitely variable heating* and large rear-view mirrors (optionally heated).
- Easy to use and comfortable to work with, ensuring consistent quality even when working 10-hour days.
- Manoeuvrable thanks to proven geometry
- Stable and manoeuvrable even with a high centre of gravity.







* Optional extras









Engineering & performance

Staff shortage is no longer an issue. The S24 PaveJet is your reliable and highly effective worker.

- the optimum manoeuvrability of our paver laying machine whether on small or large job sites and its perfect combination of a 2-axle turntable steering and continuous clamp rotation gear allow simple alignment of the Paver-Clamp at the paver package or the laying edge
- versatile use, whether for operation in an underground car park or for taking stones from a height of 2.60 m
- excellent illumination of the work area whether by day or night

- short-term amortisation of the purchase Long life span of the S24 PaveJet
- great effectiveness for companies
- The S24 PaveJet is quick... with optimal site organization, the operator can lay pavers in 20-second work cycle
- installation of 1.000 m² (10,000 ft²) and more per day

Technical data	
Engine	Diesel engine (Kubota V1505), 4-cylinder, water-cooled with electric ventilation
Output	18.5 kW (25 hp) at 2,300 rpm, soundproofed, oil cooler
Drive	hydrostatic drive with single-pedal control
Hydraulics	Fully hydraulic 2-axle turntable steering, rear axle with independent wheel pendulum suspension, parking brake
Fuel	45 litre diesel tank
Dimensions/weight*	Height: 1,990 mm (78.35"), length: 4,000 mm (157.50"), width: 1,430 mm (56.30"), from 1,600 kg (3,500 lbs)
Other:	Powder-coated steel and aluminium parts. Front panel, side panels and bonnet made of fibreglass-reinforced plastic. Colours: RAL 9005 (deep black), RAL 2004 (pure orange). CE mark.

^{*} Standard equipment, without paver-clamp and special features



Paver Laying machine

Basic Edition		
	Engineering	Customer benefits
Multi6 M paver clamp	See explanation on pages 14 + 15	Easy to use - short set-up times. High flexibility, as any type of concrete block can be installed with the standard paver clamp. High gripping security. Flexible frame and handles allow easy positioning directly to the side wall.
Tap down device	Push-off device for the first row of pavers.	Prevents the stones from tilting when laying the stone layer. Immediately after laying, you have a clean joint pattern.
	Handles for wall laying can be inserted.	Enables easy laying directly against the side wall.
Control unit / 7 ^s display	Central control unit for all functions and selections.	Efficient and flexible operation thanks to the central control unit with its functions, such as the ability to select travel modes.
	Cycle counter continuously counts each working cycle.	Calculation aid
		Calculation aid - the machine operator or contractor has an overview of the work performance at all times.
	Hour counter, resettable with reset button.	Calculation aid - in conjunction with the resettable cycle counter, the hourly performance can be calculated very quickly.
	Tachometer shows engine speed.	Makes it easy for the operator to call up optimum engine performance - reduced fuel consumption and a quieter machine.
	Vacuum control unit to control the vacuum BE.	Possibility to control a vacuum device specially adapted to the S24 (optional).
Joystick - operation		Simple operation via logic arrangement of the operating buttons. Joystick can be adjusted for inclination and longitudinal direction. Comfortable position, produces fatigue-free working.
Semi-automatic	The clamp functions "lateral aligning" and "gripping" are triggered by only one single button press.	
Automatic	The clamp functions lateral aligning, gripping and lifting are performed automatically.	Simple operation, fatigue-proof working and increased laying performance. Exact laying - the driver needs only concentrate on driving.
Adjustable steering column	The steering column can be set for height and incline.	No need to bend down to the steering wheel. Comfortable position during steering makes for fatigue-free working.
Adjustable foot pedal	The foot pedals are conceived as a rocker and can be adapted for the angle of inclination.	An optimal sitting position protects health and makes for fatigue-free working. Feet and legs are relaxed.
Seat	The back rest is adjustable, the seat can be set individually to the weight of the driver, the arm rests can be folded up. Seat suspension with 80 mm (3.15") deflection.	
4-cylinder diesel engine (Kubota V1505)	18.5 (25 hp at 2,300 rpm), engine block moun-	A powerful engine that is rarely run at full load. This means low wear and high power reserves. Long lifetime. Very low vibration and low noise-level.





	Engineering	Customer benefits
The hydrostatic drive can be set with throttle valve		
Storage / on-board tools	Storage space with cover	Waterproof storage room
Rotary motor		Easy access to the pack of stones or to the laying edge from any angle. Tight job sites are no problem (e.g. around trees).
LED headlights package	2-LED working headlights, 1-LED front headlights, 2-LED reversing lights	Significantly better illumination of the driving and working area than with standard headlights.
LED rotating beacon	Warning light, orange, flash frequency changeable	Important for working in traffic and pedestrian areas
2-axle turntable steering system		No thrust force impacts on the freshly-laid paver from steering movements. High manoeuvrability through a low turning radius (inside radius 0.92 m (37"); outside radius 2.42 m (97")). The clamp can be moved 1 m (40") left and right from a stand-still only via steering movements. Narrow, angled construction sites do not pose a problem. (e.g. cycle paths 1.20 m wide).
Front panel, side panels, bonnet	glass fibre reinforced plastic in RAL colour 2004 (pure orange) and RAL 9005 (deep-black)	GFRP-parts: among other things high strength, UV-resistant, weatherproof and not rusting.
Steel components	Powder-coated	Coating is very resistant and durable
Bottle holder	Stable holder for bottles and cans.	To accommodate drinks in a fixed position accessible during driving.
Mobile phone holder	Adjustable for all common smart phones	Safe, visible place for your mobile phone
12 Volt connection + USB charging socket	12 Volt connection at steering column + USB charging socket	e.g. for charging a mobile telephone
Central lubrication system	Axle bearing and steering cylinder are connected to the central lubrication system	Otherwise poorly-accessible lubrication points are easy to access and are lubricated. Long life span.
Rev counter	Indicates engine speed.	For operators very simple to drive with the best engine-performance (optimum torque at 2,200 rpm) - which means less diesel is consumed and the machine is also pleasantly quiet.



Paver Laying machine

Exklusiv Edition	Basic Edition + the following equipment	
	Engineering	Customer benefits
Cabin		Simple fresh air supply, direct contact with co- workers. Optimal protection against outside influ- ences, (rain, sun, wind, dust). 12-Month season, high degree of utilization, protects health, low vi- brations, fatigue-proof working
Foot mat	Washable under high pressure	Pleasant for the driver
Heating (in connection with the cabin)	Controllable temperature with 2-stage fan.	Source of heat - permits working even at low temperatures. Fan - prevents the cabin from steaming up, thereby guaranteeing a free view.
Two-stage boom	 stage - gripping height - 0.25 - 1.05 m (0.82 - 3.45 ft). stage - gripping height up to 2.50 m (8.2 ft). 	Clearance height of 1.99 m (6.5 ft.) enables work in underground car parks. Pickup height of 2.50 m (8.2 ft.) allows picking up of layers from packages stacked on top of each other and picking up from the truck.
Radio with DAB, Bluetooth, Hands-free system	Radio with DAB, Bluetooth, Hands-free system, USB connection, 2 speakers and antenna.	Operator motivation. Pleasant to work. Hands free for phone calls.

Comfort" equipment package	Package only possible in conjunction with Exclusive Edition	
	Engineering	Customer benefits
Comfort seat with air suspension and heating seat	Suspension can be set exactly to every weight, seat heating can be activated.	Very comfortable workstation. Comfortable working even at low temperatures.
Heating outside mirror	Can be activated as necessary.	Outside mirrors do not become obscured giving free rear view.





Special equipment (optional)		
	Engineering	Customer benefits
4-wheel drive	All 4 wheels are driven and braked hydrostatically.	When driving aggressively, there is less displacement in the pavement. When braking, the thrust is distributed over 4 wheels at the laying edge. When reversing, the rear tires pull the machine around the bend.
Anti-slippage can be switched.	Only in connection with 4-wheel drive. Only wheels with grip are driven.	Off-road capable, improved traction.
Joystick steering (Only in combination with comfort seat)	Integrated in the left armrest of the comfort seat.	Considerable assistance to the driver during frequent work cycles, simple and intuitive operation, comfortable and convenient steering, free view of the paving edge (no steering column), relaxed sitting position, work is significantly less tiring on huge jobsites.
Joystick for lift/lower function	Function integrated in the control lever (in addition to the foot pedal).	Operator controls lifting and lowering from the control lever.
Special paint coat	Paintwork in all RAL tones 1 and 2 colour possible.	Advertising with company colours.
Loading lugs	Transport bracket fixed to the boom.	Crane loading possible.
Particulate filter	Complies with TRGS554	Inexpensive solution, simple fitting, long service life (approx 4,000 working hours); simple cleaning with a high-pressure cleaner
Rear view camera	Camera, incl. 7" screen	Operator has a better view of the situation behind the machine.
Reversing signal	Acoustic warning when reversing.	Additional safety when reversing.
Air Conditioning (in combination with rear view camera)	Air conditioning with compressor drive and multi-stage fan control.	For a comfortable working environment in the cabin even when the outside temperature is high

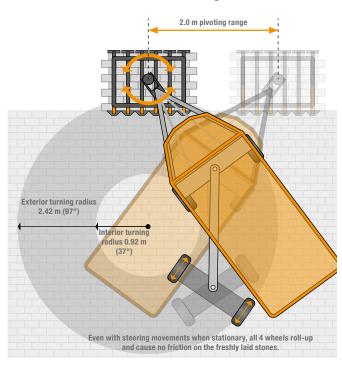
Paver Laying machine

Technical refinements

Protection against displacement of freshly-laid pavers!

Our paver laying machine with 2-axle turntable / articulated steering system, optional with 4-wheel drive and joystick steering.

2-axle turntable / articulated steering



4-wheel drive with switchable anti-slippage



All 4 wheels are driven and braked hydrostatically.

Advantages:

- Steering movement without lateral thrust force to the freshly-laid paver surface.
- High manoeuvrability through low turning radius.
- Large pivoting range of the clamp only via the steering movement.
- Can be deployed on narrow winding jobsites.

Advantages:

- Distribution of the thrust force during acceleration and braking across all 4 wheels.
- Improved off-road traction.





Strong, economical, quiet!

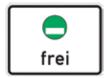
4-cylinder diesel engine

The combination of a powerful engine (18.5 kW) and a high-performance hydraulic pump provides the following advantages:

- economical
- powerful
- without restriction in environmental zones usable (under 19 kW)

The Optimas S24 PaveJet is available with a particulate filter (complies with TRGS554). This permits operation in closed areas (e.g. underground car park).





Environment zone

Free

Innovation!

The Optimas PaveJet S24 paver laying machine with the latest technology such as e.g. control unit with 7" display, air conditioning and rear view camera.

An absolute highlight is our central control unit. It controls all functions, including air conditioning and the rear view camera.

- Central control unit: All functions, including air conditioning and camera, are controlled from a single userfriendly unit.
- Flexibility: Three selectable driving modes (basic, standard, special) allow adaptation to different working conditions.
- Individual pressure adjustment: The hydraulic pressure for the paverclamp functions can be individually adjusted for gentle, fuel-efficient operation.
- Fast fault diagnosis: Faults in the hydraulic system are immediately reported and precisely allocated, which minimises downtime.

Variable operation

Joystick for lift/lower control function

As an option we offer our joystick with the function ,Lift/Lower' in addition to the to the foot pedal.

This allows the driver to control the lifting and lowering with the joystick (control lever) and has all the important functions in one control element.

This user-friendly option is particularly favored by excavator operators because they don't have to get used to it.



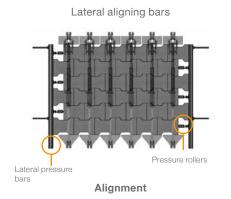
Paver Laying machine



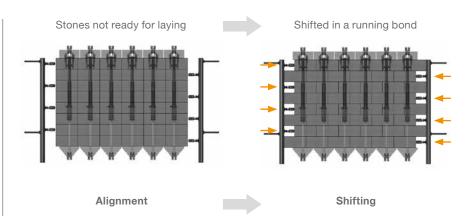
Paver-Clamp Multi6 M

The design and mode of operation of the Multi6 M ensures a unique working process and leads to an outstanding result. Three steps to a perfectly laid paving surface:

1. Alignment

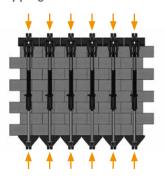


Layer will be aligned and the clamp will be centered (Pavers are in a ready-to-be-laid arrangement).



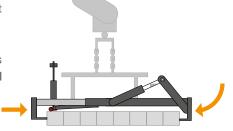
Rectangular paving stones can be shifted in a running bond by screwing pressure-rolls on the aligning bars.

2. Gripping

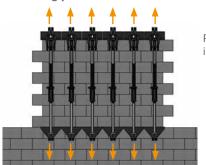


The 6 individual clamp arms are connected by spring steel strips to ensure the right pressure on each point of the layer.

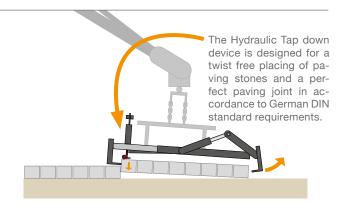
Therefore, a low pressure of **only 60 bar** is used, which **is gentle to the stones and the Paver-Clamp.**



3. Placing pavers

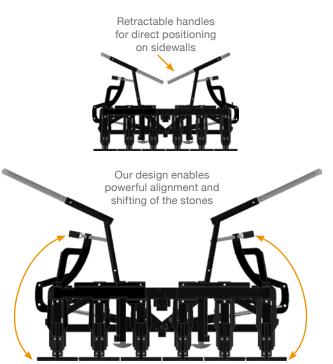


Paving stones are placed in a gentle manner.









One Paver-Clamp for all your needs and applications

There are so many different concrete paver patterns available on the market. This raises the question as to whether a single Paver-Clamp is sufficient for the countless paver types (different dimensions and mould configurations)? Our answer is simple and clear: Yes! While other manufacturers often offer up to five or more different models for worldwide use, we have designed only one mature system to meet all your possible needs. This can be set to all paver formats and sizes, with only a very few actions and without special tools.

Reduce effort to a minimum

...and these are your advantages:

- The Paver-Clamp can be connected to any Optimas paver laying machine or to any other construction machine.
- for laying directly along walls paver layer sizes of 0.6 m²
 (6.5 ft²) to 1.5 m² (16 ft²) can be laid without problem
- The Multi6 M clamps thin (60 mm) or thick (240 mm) pavers and paver layer weights up to 550 kg (1,200 lbs)
- Is able to clamp uneven stone layers.
- Is able to shift paving stones into a running bond pattern even if they have been produced with a shift-protection (big spacers).
- Paver layers in herringbone pattern with or without half stones can be clamped and laid without any problem as well

- Not only concrete paving stones, also clay bricks are clamped with low pressure and a high degree of safety.
- Through the smart 6-arm clamping technology only 60 bar hydraulic pressure is required. Paving stones are placed in a unique gentle manner.

Our successful experience shows: Optimas Paver-Clamps install some 100,000 m² (million ft²) of pavers without any trouble. This is confirmed by the solid processing and the advantages conferred by being "Made in Germany". We recommend making a price-performance comparison: Optimas cannot be beaten in terms of price-performance ratio.

...one machine for all your needs!



Paver Laying machine – Attachments

Paver Joint Filling device

Cleaning the paved surface with a sweeper removes not only the loose sand but also some of the joint material between the pavers. Optimas paver joint fillers are also ideal for subsequent sanding and chipping of the joints. Only a completely filled joint transfers the force from stone to stone, preventing the stones from shifting and keeping the pavement elastic. The paver joint filler is installed on the paver laying machine in two minutes without tools, using plug-in bolts.

The Optimas Paver Joint Filler is ideal for sweeping joint material into the joints of medium and large paved areas.

Due to the extreme maneuverability of the paver laying machine, the jointing material can be swept precisely into the joints, even in curves and on edges.

The jointing material can be swept dry or with an optional water supply.

Depending on the material to be backfilled, the best results are often achieved by slurrying with a water supply, Optimas offers a water cart (1,000 liters/264 gal.) as optional equipment.

The overlapping and rotating brush crosses ensure that the joints are completely filled with jointing material - a requirement for a long service life of the paved surface.

Simple mechanical solution

The mechanical paver joint filler is a cost-effective sweeping system for sweeping in the jointing material on smaller paved areas.

Vacuum-BE

The vacuum device is very fast and simple mounted on the boom of the Optimas and is then ready for use.

Suitable for concrete and natural stone elements (kerbs, slabs, gutter stones) are taken directly from the package and placed weightless. This means not only a labour costs reduction, even as important is to get rid of the heavy physical work.

Suction pads for almost each type of concrete & natural stone element are available or can be produced custommade.

Technical data	
Working width:	1.70 m (5.6 ft.)
Depth:	1.70 m (5.6 ft.)
Height:	0.55 m (1.8 ft.)
Weight:	135 kg (298 lbs)

Option: Water container (1,000 I/264 gal.) & central hose guidance in the sweeping area.

Technical data	
Working width:	1.30 m (4.27 ft.)
Depth:	1.30 m (4.27 ft.)
Height:	0.17 m (0.56 ft.)
Weight:	54 kg (119 lbs)

Technical data		
Vacuum-BE as an attachment for Optimas Paver Laying machines		
Dead weight:	70 kg (154 lbs)	
Dimensions:	540 x 630 x 550 mm	

Load capacity: 600 kg (1,320 lbs) for S24 (Depends on type of Laying machine)







Impressive versatility for any task on paving job-sites.

Clean-Sweeper

The Optimas sweeping machine is a further attachment with a hydraulic drive for the Optimas paver laying machine. The sweeping machine is fitted to the front axle quickly and easily. Simple mechanical inclination 20° to the right and left.

The swept material can also be collected in a collecting container (optional) Ideal for sweeping (cleaning) jobsites.

The Optimas Clean sweeper can also be attached easily to wheel loader with an adapter for forks.

Stone-clamp Multiflex

The Multiflex stone-clamp is very quickly and easily attached to the Optimas paver laying machine or with the suitable quick-change device to a carrier machine (e.g. excavator) and is then ready for use.

The Multiflex stone-clamp is suitable for for setting concrete and granite curbs, gutter stones, block steps and various slabs. By changing the grab jaws (optional) many other applications are possible, such as setting of palisades, L-stones, natural stone, grass pavers, boulders and much more. The applications for the Multiflex stone-clamp are "almost" unlimited.

Weed Brush

The hydraulically powered weed brush allows you to remove weeds effortlessly and without the use of chemicals.

As an attachment to the Optimas paver laying machine, the weed brush is an ideal cleaning system. To ensure removal in the edges, the weed brush is is equipped with a mechanical side shift. The manually adjustable angle of inclination allows you to achieve the highest possible scraping effect. To prevent stones and dirt from flying around uncontrollably, an adjustable anti-skid cloth is standard.

Technical data	
Working width:	1.80 m (5.9 ft.)
Weight:	150 kg (330 lbs)
Drive:	hydraulic
Option: Material collector container	

Technical data	
Dead weight:	110 kg (242 lbs)
Load capacity:	400 kg (882 lbs)
Adjustable range:	0 - 1,400 mm (55") (optional up to 2,000 mm/ 78.7")

Technical data	
Dead weight	240 kg (529 lbs, incl. mounting frame)
Disc brush	Ø 750 mm (29.5") 62 flat wire bundles
Mechanical side shift	450 mm (17.7")
Drive	Hydraulic







Company history







The world's first "Paver Laying machine" was developed in the private car garage of Harald Kleinemas in 1978.

"Made in Germany"

Optimas was established by Harald Kleinemas in Saterland-Ramsloh in 1978.

After laying pavers on his own premises by hand, Harald Kleinemas identified the need for an automated method to save time and energy.

Developing a prototype paver laying machine, he established Optimas to manufacture and market the new machines.

The first self-driving paver laying machine (the T33) was developed in Mr Kleinemas' car garage. It was obvious

from the beginning, that Harald Kleinemas paver laying machine represented a real and revolutionary solution for paving construction sites.

The development process involved long consultation with the manufacturers of concrete paver products, so as to optimize rationalisation effects for mechanical paver installation. The savings of money and time paired with a will to succeed meant that Harald Kleinemas idea soon gained wide acceptance. Supported by his wife Ruth, Mr Kleinemas built up a prosperous business with a product portfolio concentrating on the needs of paving

contractors seeking to rationalize and humanize working practices.

Producing on 13.400 m² premises, the company is the market leader in mechanical installation of paving stones and purely focussed on innovative products for the paving jobsite, in short...

",the Paving Specialist"

























Pioneering technology through visionary engineering since 1978.

Optimas worldwide





Would you like to experience Optimas technology live?

Come and check out our visitor and training center at our headquarters in Saterland or visit our Optimas Demo-Jobsite near Frankfurt airport at the Coreum in Stockstadt am Rhein.

Experience our latest innovations, test work processes and test the system as much as you like.



Optimas Visitor and Training Center Ramsloh



Optimas Demo-Jobsite near Frankfurt airport at the Coreum in Stockstadt am Rhein.

Represented by



Coutact us!



Paving Specialist

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