

Additional Information:

INTERNET
news online
www.probst-gmbh.de

CD available on request!
Lots of examples for
different applications



... versatile use – also for laying of slabs and kerb stones



Slab laying with vacuum technology

▶ In combination with the hydraulic vacuum laying unit HVE, the VM becomes a perfect slab laying machine. Even very large slabs with rough or porous surface are handled carefully and securely by the HVE.



Easy kerb stone laying

▶ With the variably adjustable hydraulic kerb stone clamp heavy kerb stones (granite and concrete) can be transported and installed safely and efficiently. Fully automatic gripping width 460 - 1,460 mm.



Easy handling

▶ All clamping movements are controlled by the operator of the machine from the seat (without the help of an additional worker).

Sand Sweeping Transport



▶ Sandfilling of joints with the ideally constructed sweeping broom EB – Adjustable working width: 2,40 m or 1,20 m.



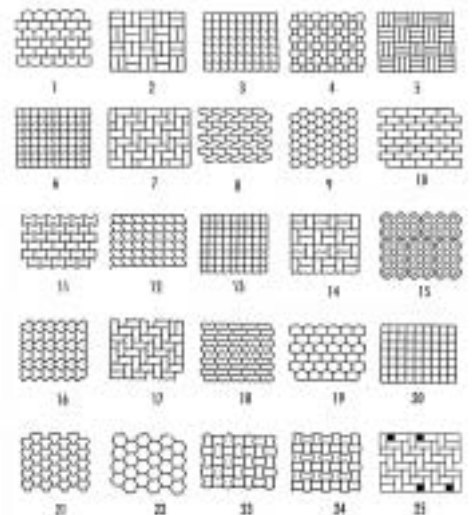
▶ With the attachment device Paver Cat PC-VM-uni paving blocks can be gripped and transported to the laying face.

Short setup time

▶ Without tools, only by inserted bolts the HVZ-uni can be adjusted to different kinds of stones and laying patterns.

Exemplary:

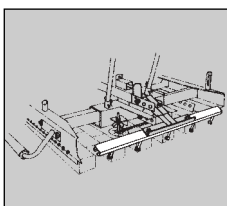
The shown stone formations 1-20 are suitable for the mechanical installation. But also other formations can be laid.



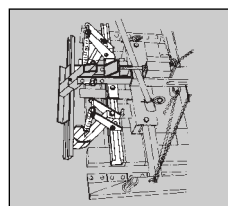
The stone formations 21-24 are suitable for mechanical installation by the special adapter. Other formations: please indicate!

Accessories of high efficiency

A special adapter for the HVZ-uni is used when formations are not suitable for mechanical installation. The positioning adapter PA shifts the pavers into the running bond.



The herring-bone adapter makes the inserting of lateral half stones (for the secure gripping of all pavers in the cluster) unnecessary with stone formations in herring-bone pattern.



strong gripping force

multi functional

Compatibility: Everything suits!

tough

quick amortization

Checking exactly, is worthwhile!



► **Costs, production capacity, dates – no headache with the calculation!**
The VM of Probst is cost effective after installing a volume of 5,000 square meter per year.

► The Probst paver installation machine VM 203 and VM 204 »ROBOTEC« has gained a high reputation, worldwide. On large building sites like the new airport in Hong Kong, in the port of Tampa (Florida) or the strandpromenade in Mallorca, everywhere!, the VM fleet of Probst is used. Also on small sites, as on the mountain Pilatus in Switzerland, a VM 203 installed pavers accurately. Tight tolerances for the joints were kept, as was the short completion time.

Everything which has been well-proven in hard permanent use on large sites – partially under extreme conditions – has also been proved for smaller and medium sites, such as reliability, mobility, speed and easy handling.

Probst paver laying machines are again and again the reason for business successes of paver layers in the home country and abroad.



Please ask for our Reference List!

Content customers are our best references

If you want to know more about Probst laying machines or you are interested in a test run, please don't hesitate to call us.



PAVER INSTALLATION MACHINE VM 204 ›ROBOTEC‹ and VM 203 **Top-Technology for progressive paver installation**

Cost-saving increase in productivity and high quality work, these are qualifications you can claim with the no compromise laying machines.

Besides you can expect more performance, because for over four decades Probst developed rational and facilitating devices particularly for paver and slab layers. The VM 203/204 shows a comprehensive know-how in versatile functions and compatibility.

The easy handling and utmost reliability are important criteria of the VM, which are appreciated by installation professionals on construction sites all over the world.

▶ The patented VM 204 ROBOTEC is the Probst "Top of the range" model, in which satisfactory technique, top-comfort, innovative electronics and modern cabin-design are all incorporated.



▶ Open sided cabin, is the feature of the classic laying machine VM 203. It has proved its performance strength and mobility on building sites in many countries and climate zones around the world. All advantages of the VM 203 are offered also in the VM 204 ROBOTEC. Both types give convincing first-class working results.



Mobility sets forces free

Two Strong Fellows

The 21st Century Design of the VM 204 ›ROBOTEC‹

With functional cabin-design and most modern control engineering the VM 204 ›ROBOTEC‹ creates a new evaluation scale.

Ergonomical seat

► The control desk is fixed firmly to the comfortable height-adjustable driver's seat. So drivers with different body size have always the ergonomically correct, relaxed working position.

Installation work – made easy

► The operator controls the durable electronic SPS control system with a futuristic joystick. All movements of the installation clamp can be preselected with the Joystick for different sequences. Switching to manual operation is possible at any time.



High working comfort

First Class High Technology

Modern, sturdy electronic SPS-control system can select the following processes:

Manual operation

All movements of the installation clamp can be controlled via joystick and pedals.

Semi-Automatic

All movements of the pushing-off device are controlled automatically.

Automatic

All movements of the clamp are controlled in their correct sequence. With the joystick the operator can control any individual movement of the clamp at any time.

Shifting automatic

Changed working process e.g. for shifting rectangular pavers from cross joint bond into stretcher bond.



Easy to operate

Short training period

Safety without ifs and buts

► The scratch-resistant safety glass with all-round visibility enables the operator to have an excellent view to the laying edge in front of him as well as behind him. After all an installation machine spends about a 1/3 of its working time travelling backwards!

Always in top form

► Whether on an uneven building site, or when turning sharply – the optimal chassis guarantees the VM just as good stability for the 204 ›ROBOTEC‹ as the VM 203.

► Favourable on small and awkward building sites: In the standing position the installation clamp can be swivelled from the right to the left within 1,6 m.

Day and night in operation.

Bright working lights (at front and rear) make exact working possible also in darkness or in underground parkings.

The driver does the work alone

Without additional worker

EFFICIENT

and the worldwide proven VM 203 ... equipped with



High working speed

Same engine package
for both types VM 204 /VM 203

3-cylinder-Diesel-engine	The economical Kubota diesel engine operates noiselessly and has high capacity reserves for the VM 203/VM 204. Maximum speed 20 km/h Speed: hydrostatically regulated. Performance: 18,7kW/25 hp. Tank for 20 litres of Diesel.
design	total height: 1.980 mm total width: 1.220 mm length : 3.610 mm (without clamp) weight: (incl. clamp): 1.340 kg ground clearance: 180 mm
turning radius	front inside wheel: 700 mm front outside wheel: 1.900 mm over all: 2.450 mm
lifting off height	max. 1.600 mm
carrying capacity	max. weight of stone formation: 300 kg



Speed of a weasel and a small turning circle.

▶ High time saving by fast maneuvering around corners, obstacles and with narrow building sites. The outside edges of the machines are adapted to steering geometry, so when there are obstacles, no vehicle parts are protruding.

Quick paver installation also for underground car parks.

▶ Due to the low overall height, the VM operates exactly and quickly even on sites with low head room.

VM 204 ›ROBOTEC‹ and VM 203 - same efficiency but fine differences

▶ Both Probst installation machines have identical working characteristics: rapid manoeuvrability and absolute stability, double-articulated steering, engine performance, and hydraulic installation clamp HVZ with pushing-off device ADV.

▶ The VM 203 is an everlasting machine for the business class. Its clamps are controlled through a cross-lever valve. The VM 204 ›ROBOTEC‹ enables an absolutely eased operation, since the automatic takes over the controlling of the moving sequences. Furthermore, this model is convincing by its modern, comfortable all-weather operator's cabin, heating, radio and firstclass configuration.

Both types convince on large and small building sites as well!



High lifting and safe standing position

Also able to lift a layer of pavers from one pack stacked on top of another.

Laying machine on velvet paws

The chassis of the VM co-ordinated accurately with highest laying quality has separate track width for each axle. Steering movements do not cause tracks or paver shifting.

Wide-diameter tyres give best stability even in uneven areas.

Double articulated steering

enormous manoeuvrability

Large security

sturdy chassis

Convincing technology

the innovative installation clamp HVZ-uni

Hydraulic hoses for two hydraulic circuits to control separately the main and side clamping.

NEW * Adjustment of clamp even more comfortable *

Hydraulic rotator for an exact adjustment of the installation clamp from the driver's seat. No additional person needed.

Elastic chain-suspension for wear minimization and for easier positioning of the clamp.

Adjustment of the gripping depth to allow gripping of paverthickness up to maximum 160 mm.

Adjustment of the clamp more comfortable. Handles to guide the clamp. In tide spaces the handles can be easily taken off without screws.

Large, height-adjustable rollers to set the clamp onto the already laid pavers. Free swivelling rollers for easy positioning of the clamp.

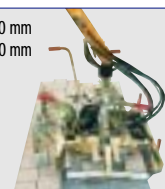
Main and side gripping: simple and quick adjustment (to the stone pattern to be installed) by the help of scales.

Main and side clamps are separately controllable through a cross lever valve.

Setting of the main and side grippers easily adjustable, using scale pointers. The side clamping arms swing up completely in order to allow laying close to wall side-ways without any gap.

Still available within our product range: Type HVZ

Main gripping width : 570 - 1.180 mm
 Side gripping width : 990 - 1.300 mm
 Gripping depth 110 mm
 Carrying capacity 400 kg
 Dead weight 190 kg
 HVZ - Basic version
 Additional information refer to catalog page 1.3



Individually cushioned steel teeth as gripping elements, guarantee large paver clusters a strong and safe gripping of all individual stones of a layer.

Main gripping width universally adjustable for securely gripping of the stone-rows.

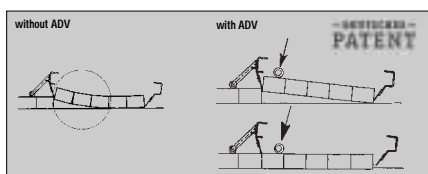
Easy jointless positioning of the stones by the automatic ADV to the already laid stones.

Planned in detail Universally applicable also for excavators, loaders...

▶ The universal installation clamp HVZ-uni fits optimally to the laying machines VM 204 ›ROBOTEC‹ and VM 203. However it can also be combined with other load-bearing devices (hydraulic excavator, wheel-loader, backhoe, forklifter etc..)

So a paver surface of excellent quality is achieved with all stone-configurations used on the market.

Innovative pushing off technology for unsurpassable laying quality



▶ The numerous different laying configurations and kinds of stones require a high flexibility of the laying clamp.

The HVZ-uni fulfills highest requirements



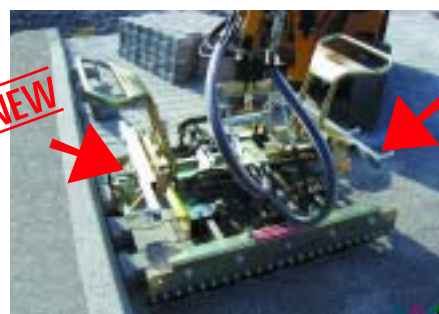
New ! Excavator attachment clamp HVZ-uni ROBOGRIP with computer control system.



Ask for leaflet !

▶ The Probst laying clamps are equipped with the special automatic pushing off device called ADV. This feature eliminates cocking of the pavers when the clamp is opened, no additional labor for readjustment is necessary any more.

During the laying process, the individual pavers creep appart by approx. 0,5 to 1 mm by settling down to the bedding sand. This joint distance must not be eliminated by hammering! In conjunction with 2,5 mm thick spacer bars standards regarding joint width of 3 - 5 mm are met. The result is: Saving of time and labor and also fascinating regular joints.



NEW
 Main clamping width: 600 - 1.240 mm
 Side clamping width: 990 - 1.480 mm
 Inside height: 85 mm Carrying capacity: 300kg

Quick setting

for many types
of stone

accurate joint pattern

no hammering
to repositon

Working Quality

Nobody Paves Easier and Better Than Your Excavator Operator

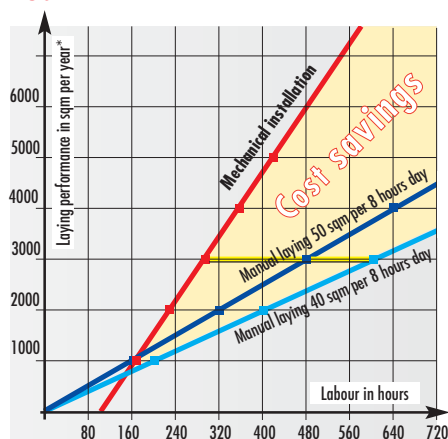
The Calculation is Simple, Convincing and Verifiable

▶ In order to manually lay 80 sqm for 8 hours per day you need two hard-working paving installers. If you already have an excavator with the conventional two hydraulic circuits you just attach the Probst hydraulic installation clamp HVZ-uni ROBOGRIP. Therewith your excavator operator effortlessly lays 400 sqm of pavers per 8 hour day. This is 5 times more compared to the job the two workmen can deliver. The few steps for mounting the installation clamp to the excavator and the setting of the clamp according to the size of the layer considering tabular defaults do not carry any weight. The excavator operator paves from his driver's seat automatically and in optimum laying quality. This overstrains neither the excavator driver nor the excavator nor the HVZ-uni ROBOGRIP.

Enormously Economic

▶ Paving 2000 sqm per year a contractor can save up to EUR 5,000 compared to manual laying*.

Rationalisation Benefit Laying Performance in sqm per Year



*Brochure: Ask for comparison of the operating costs!

HVZ-uni for Highest Demands

▶ The multitude of various pavement layouts and paver types request high requirements concerning the flexibility of an installation clamp. The HVZ-uni ROBOGRIP is optimally armed for them.



Without Ifs and Buts

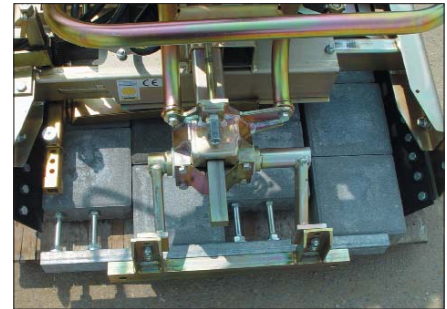
▶ Heavy excavator on uncompacted pavement? Don't worry! A standing excavator disperses its weight so evenly on the pavement, that the pressure on the surface is barely higher compared to the pressure of a man's feet. If the excavator drives slowly and straight ahead, the pressure is due to the evenly spread load. Therefore there is no danger for the newly-laid pavement. In case of a rotation of the excavator it is recommended to lay plywood sheets below the wheels of the crawler.

Quality Pays Off

▶ As all machines and equipment from Probst the HVZ-uni ROBOGRIP features excellent long-term capacity and reliability. A practical and perfected design, using best materials and modern production techniques band together to an overall result of the highest possible benefit for the user.

Minimum Maintenance

▶ The robust hydraulic system does not need any additional oil filter. A time-consuming and cost-intensive filter maintenance can be omitted!

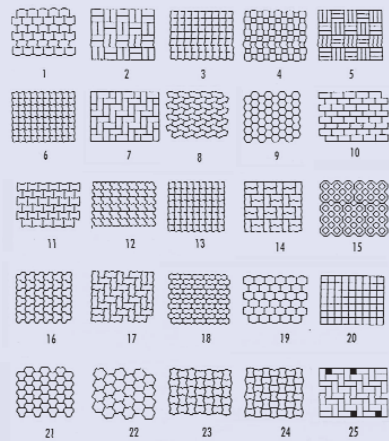


Brief Start-Up Time

▶ With a few knacks the HVZ-uni ROBOGRIP can be quickly adjusted to various paver types and laying layouts. The only required tool – a socket wrench – is attached to every clamp. For special stone formations and to shift the pavers into running bond we hold adjustable adapters.

Exemplary

The stone formations 1 - 20 as shown below are dedicated for mechanical installation. However other stone formations are also easily laid with the HVZ-uni ROBOGRIP. Special formations can be served with the purpose-built Probst special adapters.



Further information and brochures can be obtained from your competent construction machinery dealer or directly from us.



PAVER LAYING SYSTEMS

HYDRAULIC INSTALLATION CLAMP HVZ-uni › ROBOGRIP‹ Innovative Synthesis of Intelligence and Power

The HVZ-uni ROBOGRIP is a hydraulically operated paver laying clamp to be used together with an excavator. It is equipped with a programmable logic controller (PLC) for all movements of the grab and a hydraulic rotator with continuous rotation of 360°. The gripping of the paver layer including the possibly required shifting into running bond is automatically done. The operator of the excavator has only to start the gripping and releasing movements via the lever grip. Everything else is controlled by the programmable logic controller (PLC). Equal joint widths of highest precision which meet the regulations are ensured by the patented pushing off device ADV. This future-proof technology eases the operator's work even if he is not very experienced. The grab can be simply adjusted with scale-pointers and fixed to the excavator without retrofitting.



Unbeatable Advantages

Highest achievable increase in productivity up to 400 sqm per 8-hour day.

- ▶ Flush laying without any gap along kerbs and walls even with small layers!
- ▶ The excavator operator can pave alone.
- ▶ First-class laying quality.



"Trend-setting technology"

Future-Proof, Profitable Technology

Hydraulic Installation Clamp HVZ-uni ROBOGRIP with Programmable Logic Controller (PLC) for Automised Paving with Excavators

Cost pressure is increasing. Reducing costs is essential for construction companies who are looking to survive.

With the installation clamp HVZ-uni ROBOGRIP Probst gives its users a tool for permanent effective cost reduction at hand. At the present time Probst is the only producer who provides an installation clamp equipped with a programmable logic controller (PLC) to be used together with an excavator. Paving installers are optimally armed for the present and the future if they use the HVZ-uni ROBOGRIP. One of the advantages of the programmable logic controller is its absolutely simple handling. Every operator of an excavator can immediately and productively work with it having had no training or long practice. The flexibility of the programmable logic controller in changed requirements is simple. New software can be installed anytime. The user immediately profits from further developments and is always up-to-date. Any retrofitting of the excavator is therefore a thing of the past!



Pushing Off Device (ADV) – No Realignment – Joints Always Comply with the Regulations

Powerful Solutions for Easy Paving

Clamping without Jamming

▶ The firm grip of the innovative clamping technology perfectly aligns the paver layer before it is laid.

Running Bond without Additional Work

▶ On demand the clamp is shifting any paver layer of rectangular, quadratic or T-pavers from cross into running bond. The programmable logic controller can automatically do this and any additional work of the excavator operator is needless.



▶ By the way the electronics used in the HVZ-uni ROBOGRIP have proved their robustness and reliability in the Probst paver installation machine VM 204 for many years.

Easy Operation

▶ In contrary to a hydraulic control the operator does not have to pay attention to any specialties in operation when using the Probst installation clamp. It is therefore fool-proof!



Joints Conforming to the Requirements

▶ During the laying process the pavers slightly creep apart from each other. This bears the advantage that the joints are increased by 1 to 1.5 mm in addition to the spacer bars which results in joints complying to the requirements. A second person for realignment by hammering the pavers is needless. It would be even counterproductive to hammer the pavers since this reduces not only the approved joints in between the pavers but furthermore decreases the rationalisation and cost saving effect achieved by mechanical laying.

Fully Automatic

The programmable logic controller (PLC) automatically runs all specified movements of the clamp. Even special actions such as the shifting of T-stones into running bond are programmable. Anytime the operator has the possibility to cut a course or to reset or continue it.

Clamp Adjustment

Without special instruction every person can do the presetting of the clamp through scales according to tables and to respectively position the bolts.

Quality

The design: Modern development and production techniques optimised with FEM/CAD ensure highest capacity and lowest weights – the clamp weighs only 340 kg. First-class workmanship, high-quality components and a robust construction guarantee operational reliability and longevity.

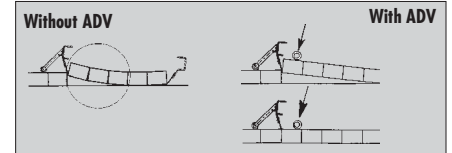
Corrosion Protection

Durable galvanised surfaces.

One Person Operates — The PLC Controls and the HVZ-uni Works Instead of Five!



Innovative Pushing Off Technology (ADV) for Unbeatable Laying Performance



▶ The HVZ-uni ROBOGRIP is serially equipped with the patented and automatic Probst pushing off device ADV. Therewith speed and quality of paver laying are unmatched. Seamlessly and easily paver layer by paver layer is applied to the already installed pavement. Almost simultaneously by opening the clamp the ADV automatically pushes at cyberspeed the pavers in the laying course. This avoids cocking and drifting of single pavers. Manual reworking is spared. This results in savings of labour time as well as manpower and produces a consistent joint appearance.

High Laying Performance without Bustling

▶ The HVZ-uni ROBOGRIP not only works automatically, it is also quickly adjustable. E.g. the main grippers can be exchanged in a few steps in order to lay smaller paver layers of 1 x 1 m in flush. High laying performance in quality and amount is thus granted.

Control of Success

▶ The programmable logic control (PLC) includes a cycle counter which records every working operation. In this way a permanent survey of the productivity regarding the time-performance ratio is kept.

Easy Adjustment of Clamp

Continuous Rotation

▶ On top of the programmable logic control (PLC) of the ROBOGRIP is the rotator with a continuous rotation of 360°. It is driven by the second hydraulic circuit of the excavator and contributes to the nearly unlimited PLC-controlled flexibility of this clamp. This rotator ranks among the best of his kind as concerns quality.

No Retrofitting of the Excavator

▶ Retrofitting of the hydraulic system or even an installation of new components can be saved with the HVZ-uni ROBOGRIP.

Hydraulic hoses for two control circuits (one circuit for the PLC controlled movements of the clamps and one for the rotator).

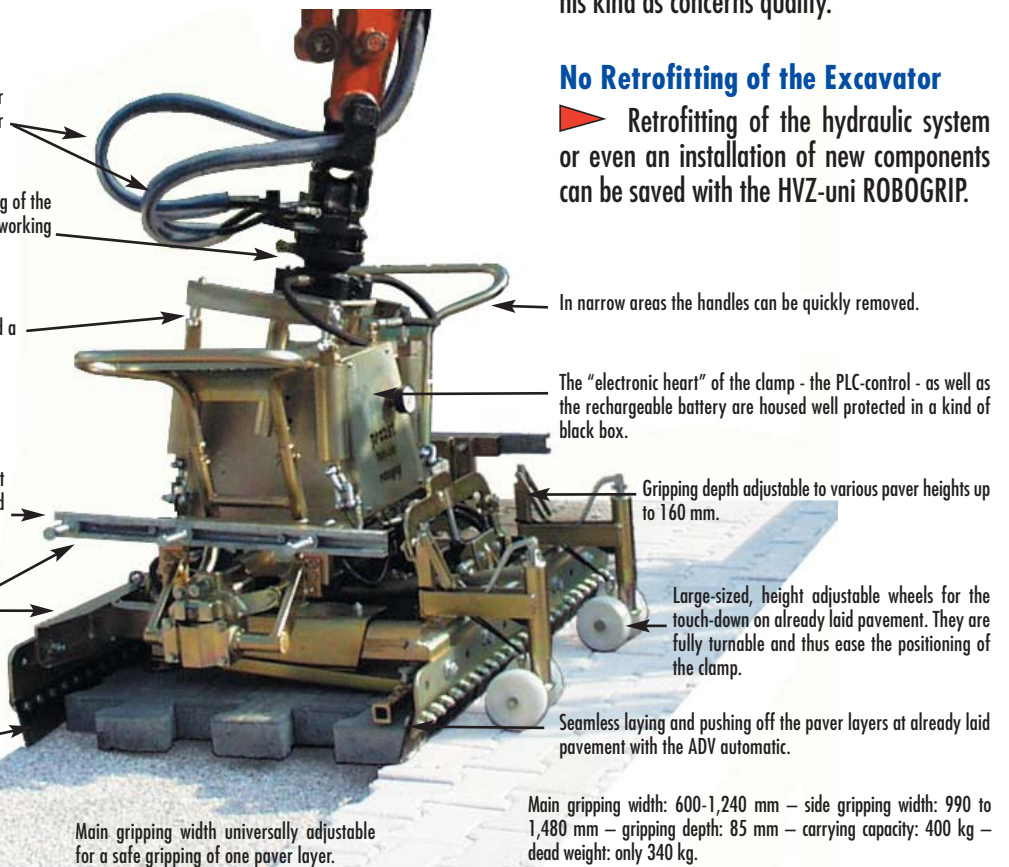
Rotator with continuous rotation for a perfect positioning of the clamp. The operator can turn the clamp to the exact working position. Additional manpower is needless!

Shock absorbing chain suspension for reduced wear and a gentle touch-down of the clamp.

The side grippers can be hydraulically swung up so that the pavers can be laid closely to any kind of rigid and high pavement tie-ins such as walls and kerbs.

Main and side gripping width can be easily and quickly adjusted through scales to the paver layers to be installed.

Individually beared spring steel plates for gripping guarantee strong and safe gripping of one paver level even if the layer is big.



In narrow areas the handles can be quickly removed.

The "electronic heart" of the clamp - the PLC-control - as well as the rechargeable battery are housed well protected in a kind of black box.

Gripping depth adjustable to various paver heights up to 160 mm.

Large-sized, height adjustable wheels for the touch-down on already laid pavement. They are fully turnable and thus ease the positioning of the clamp.

Seamless laying and pushing off the paver layers at already laid pavement with the ADV automatic.

Main gripping width universally adjustable for a safe gripping of one paver layer.

Main gripping width: 600-1,240 mm — side gripping width: 990 to 1,480 mm — gripping depth: 85 mm — carrying capacity: 400 kg — dead weight: only 340 kg.