

Vacuum Technology

Benefits:

Compared to mechanical grabs, vacuum technology provides substantial and numerous benefits in handling and installation of building materials.

1. Installation without joints.
2. No edge cracks and chipping.
3. Higher laying quality; easy removal and readjustment, such as a slab was placed too deep into the laying course.

Porosity:

Failsafe function of the vacuum devices is decisively influenced and determined by the porosity of the elements. It is easy to imagine: if the incoming air from micro pores exceeds the capacity a vacuum pump or blower is able to exhaust, proper negative pressure between suction plate and construction material cannot be built up.

These kind of products are not suitable to be lifted with vacuum devices. Unlike the surface characteristics and finish, porosity is not apparent or visible to the observer.



Appropriate Device	Vacuum Hand Laying Systems							Vacuum Lifting Devices				Vacuum Hose Lifters			
	VH	FXAH	VPH	VPE	MJ	AIR-LIFT-ALX	SPEEDY VS *	SM	SH	QUICK-JET QJ	POWER JET PJ	MULTIMOBIL MM mit VGE	JUMBO-MOBIL JM	JUMBO-BV VARIO	TRANS-MOBIL TM
Vacuum Generation via Vacuum Pump	●	●	●	●	●			●	●						
Vacuum Generation via Vacuum Blower						●	●			●	●	●	●	●	●
Specification Material/Product:															
Very dense/not porous: - granite - marble - „WET CAST“ (molded wet concrete)															
Dense/up to slightly porous: - miscellaneous natural stones - specific sandstones - limestone - single layer concrete stones, highly compressed, manufactured with a high content of water/cement															
Moderate porous: - smaller concrete slabs w/facing produced on block making machines															
Highly porous: - larger concrete slabs w/facing produced on block making machines - aerated concrete blocks - exposed aggregate surfacesaking machines															

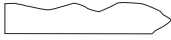
* Vacuum hand laying device can also be used on attachments via lifting eye.

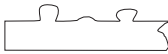
 Marginal conditions, test set-up might be necessary prior to final decision making.


Surface:

What really matters in practical application is not that much the surface finish but rather the porosity of the material.

1. Plane and smooth surfaces are optimal. 
2. Slight, not sharp-edged unevenness up to 5 mm is usually not a problem. 

3. Products with severe, not sharp-edged unevenness of approx. 8 to 10 mm (1/4 to 1/2 in) can be handled with specific vacuum devices and corresponding sealing systems. 

4. Products with deep unevenness, such as exposed aggregate surfaces are easy to handle with vacuum devices operated by a vacuum blower. 

5. Sharp-edged products, with uneven and graded top up to approx. 3 mm (1/4 in) are, if at all, solely be handled with vacuum devices equipped with a vacuum blower. 

6. Other surface characteristics on request. 

In case of different load capacity specifications (lifting hose, suction plate, vacuum generator e.g. UNIMOBIL), the value of the vacuum component with the lowest load capacity always applies.