



Vacuum lifters

Ergonomic, practical, safe

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The individual device series are optimally tailored to a wide variety of applications and ensure effective and process-reliable processes. With the help of vacuum technology, workpieces can not only be picked up safely and quickly, but also handled gently and without damage. Therefore, the devices are used in many industry and hand-craft application.

Overview	Application	Handling	Max. workpiece dimensions	Max. loads	Page
Overview					35
VacuboyMini	vacuum-tight sheet material	Horizontal	2,500x1,500	500 kg	43
VacuboyVario	vacuum-tight sheet material	horizontal, vertical, variable	4,000x2,000	500 kg	45
VacuboyForker	Attachment for pallet trucks or forklifts	horizontal, tilting, vertical	4,000x2,000	1,000 kg	47
Vacuboy	vacuum-tight sheet material	Horizontal, tilting, reversing	4,000x2,000	2,000 kg	49
VacuboySystem	vacuum-tight sheet material	horizontal, tilting	12,000x3,000	6,000 kg	61
VacuGiant	vacuum-tight sheet material	Horizontal, tilting, reversing	24,000x4,000	40,000 kg	65
VacuCoil	Strip steel and paper rolls	horizontal, tilting	2,500x5000	7,500 kg	73
VacuPoro	porous sheet material	horizontal, tilting	6,000x2,500	1,000 kg	81
VacuWood	Timbers and laminated trusses	Horizontal	24,000x1,000	1,000 kg	85

Vacuum lifter

Standard equipment

Safety standard

Even the standard version of Fezer's vacuum lifters has extensive safety features. Because only safe devices guarantee efficient work. The safety technology from Fezer goes far beyond the standard specifications.



Vacuum pump

Robust and powerful vacuum pumps in dry-running or oil-lubricated design. Integrated low-vibration via rubber buffers.



Reserve tank

Integrated in the longitudinal beam of the vacuum lifter. It prevents the load from dropping in the event of a power failure and ensures short suction times.



Check valve

The check valve prevents the vacuum system from being vented backwards in the event of a power failure.



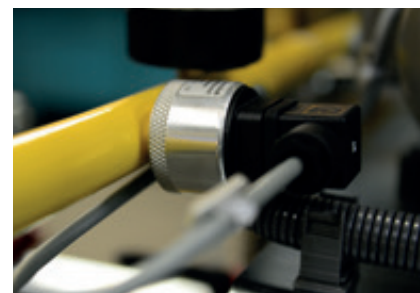
Warning device EW0

The acoustic warning device warns operators in the event of a vacuum failure and power failure.



Vacuum filter

The vacuum filters protect the vacuum pump from unnecessary contamination and ensure a long service life.



Main switch monitoring

Unique protective device, which uses a vacuum switch in the distribution system to warn operators of suction when the device is not activated.



Control vacuum gage

The visual vacuum controls show operators the exact status of the vacuum and have a clear red/green area.



Manual slide valve with lock

Secures the release by two-hand operation against unintentional operation.

Equipment versions

Standard equipment

Setup

For quick and easy operation, Fezer vacuum lifters come standard with many features that allow the vacuum lifters to be adapted to a wide variety of needs.



Basic design

All devices are based on a robust and weight-optimized steel construction that ensures safe and long-lasting use.



Attachment

The devices are attached using a large-sized suspension eye that fits into all common crane hooks – including special sizes and designs.



Control handle

The different operating handle lengths ensure that the operator is always outside the danger zone.



Adjustability of suction pads

The suction pads can be quickly and easily adjusted to different workpiece dimensions using cross clamps on the longitudinal and cross beams.



Spring-loaded suspension

As standard, all our suction cups are spring-mounted on both sides and ensure gentle lowering and optimal load adjustment.



Shutoff cocks

By moving individual suction pads in and out, extremely small workpieces can be picked up or existing openings can be removed.



Serviceability

All maintenance-intensive units such as vacuum filters, pumps and suction pads are directly accessible and do not have to be exposed by removing covers.



Compact control cabinet

All vacuum lifters have a compact control cabinet that is freely accessible for maintenance work at all times.

Vacuum lifter

Additional equipment

Safety options

In addition to the safety devices installed as standard, a large number of options are available which further simplify and increase the operation and safety of the devices.



Electrical vacuum control

Simply suck and release at the touch of a button. Powerful electromagnetic valves ensure proper flow and short suction and release times.



Automatic switching

Automatic switching between suction and release when placing the vacuum lifter on the workpiece.



Warning device EWIII

In addition to the acoustic warning siren, a green and red signal lamp indicates whether the vacuum is fault-free or there is an error.



Parking feet

Guarantee stable parking of the vacuum lifter while at the same time protecting the suction cups.



Water separator

When used on water jet systems, the water separator protects the vacuum pump from emulsions and the resulting damage.



Blower with outlet mass

When handling porous workpieces, such as chipboard or MDF, a blower with run-out mass provides the necessary safety, e.g. in the event of a power failure.



Mechanical lower gripper

The vacuum lifters can be equipped with mechanical bottom grippers that protect people during assembly work.



Electric bottom gripper

Move in and out at the push of a button (for higher cycle rates and more complicated assembly processes).

Equipment variants

Additional equipment

Operating options

In order to make handling even more ergonomic and user-friendly, the vacuum lifters can be equipped with various options and control options.



Tiltable operating handles

For an ergonomic operating position, the operating handle can be tilted using a hand lever.



Individual operating handles

The most individual special design with tilting, turning and extending functions ensure perfect handling of the devices.



Holder for pendant control

The universal holders for crane controls ensure order and easy operation of the vacuum lifter.



Control box

Control of all existing functions at the push of a button. The most convenient equipment variant when the highest cycle times are required.



Integrated crane control

The integrated crane control in the vacuum lifter ensures particularly convenient operation. At the push of a button, the crane moves in all directions.



Operation via pendant control

If operation directly on the device is not possible, pendant controls with a spiral cable connection are available for control.



Operation by wireless

Remote control for easier handling with very large vacuum lifters or extremely long transport distances.

Vacuum lifter

Additional equipment

Modules and facilities

In addition to the large number of comfort features, there are process-related options that become necessary when certain requirements have to be met or are desired.



ACCU module

Mains-independent exchangeable battery (up to 80 cycles), with simultaneous recharging of a second battery via a separate charger during operation.



BATT module

By using battery cells with an integrated charger, it is possible to work independently of the mains for up to 300 cycles. Charging time about 8-10 hours.



ECO module

Increases the service life of the vacuum pumps and ensures quieter work, because the vacuum pump only runs when required.



Multiple circuit system

If different workpiece dimensions have to be transported over a long period of time, bistable impulse valves ensure process-reliable adjustment of the suction circuits.



AIR module

The AIR module works exclusively with compressed air on an ejector basis and has a pneumatic warning device with a whistle.



Multi-chamber system

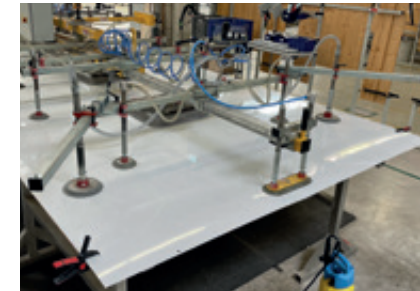
Multi-chamber systems for adapting different diameter ranges are available for the VacuCoil device series.

Equipment variants

Additional equipment

Individual adjustments

In many cases, a standard adjustment of the adjustable suction cups is not enough. For example, when driving into containers of different sizes or when loading stretching machines, the dimensions of the traverse must be adjustable. There are several ways to do this.



V-shaped crossbeams

Very simple, inexpensive and efficient extensions are V-shaped crossbeams. The length of the vacuum lifter is automatically changed by moving it in and out.



Removable extensions

For transport reasons or to adapt to different workpiece lengths, crossbeams can be manufactured in removable versions.



Manual telescoping

Extension beams that can be extended and retracted on both sides guarantee a simple and cost-effective length adjustment of the vacuum lifter.



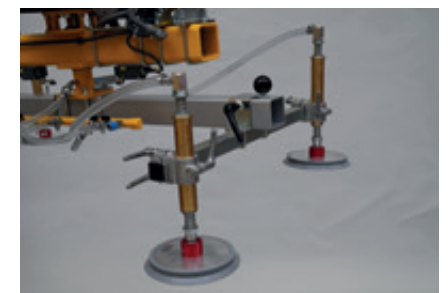
Electrical telescoping

With heavy loads or when loading heavy processing machines, the side members can be adjusted electrically.



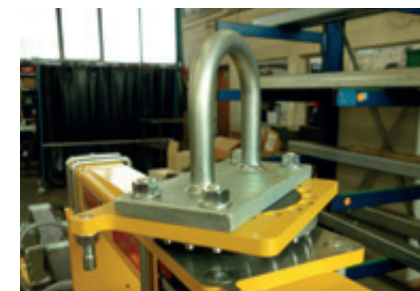
Telescopic crossbeams

To adapt to different workpiece widths, the crossbeams can also be supplied in a telescoping configuration.



Variable-height suction cups

In order to adapt to different workpiece heights (molds), the holders of the suction pads can be adjusted in height and fixed.



Rotatable suspension eye

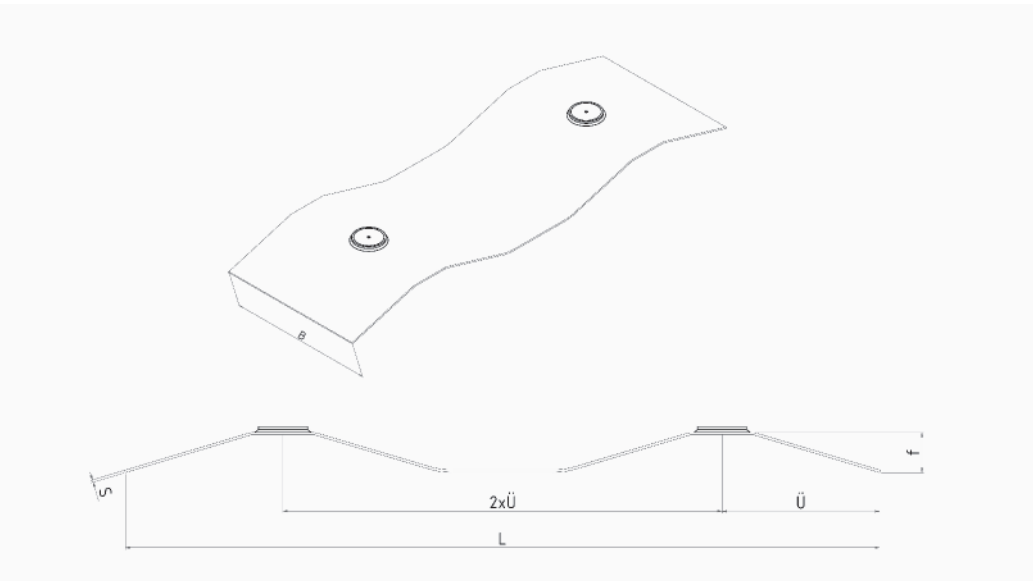
With non-rotatable crane hooks for endless rotation of loads or the vacuum lifter.

Board handling

Technical design

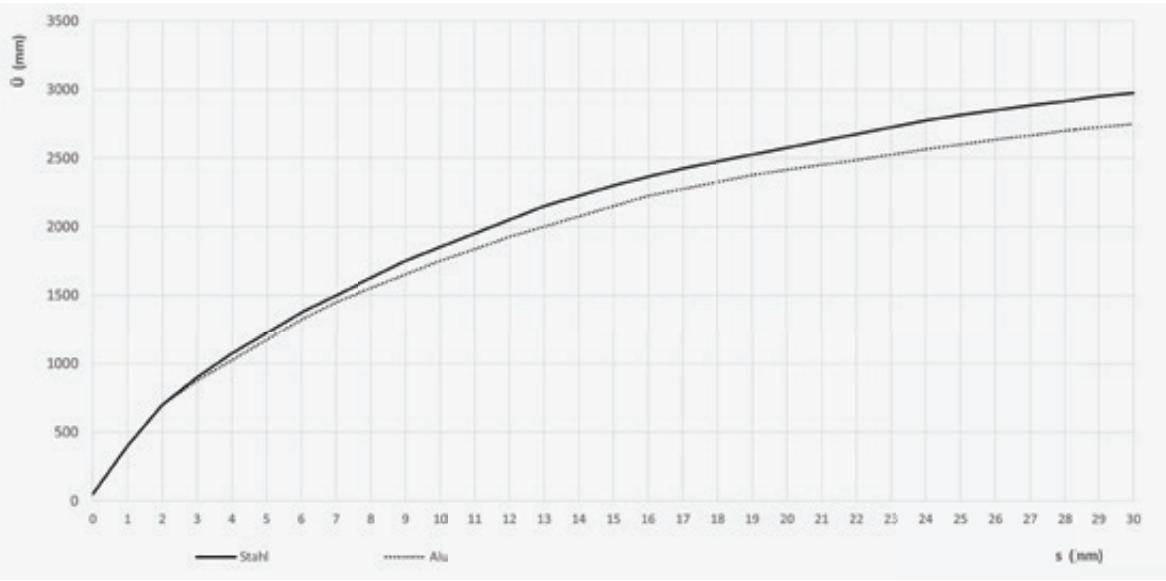
Board projection

The correct design of a vacuum lifter is crucial and ensures sufficient safety. First and foremost, the permissible overhang, especially for thin-walled workpieces, must be taken into account. If this is too large, the material will sag undesirably, which in turn can put too much strain on individual suction pads.



Overhang and deflection of plate material during suction

- 1 L = board length
- 2 B = board width
- 3 Ü = permitted overhang
- 4 f = sag deflection
- 5 S = board thickness



Schnellauswahltabelle für zulässige Überhänge

Board handling

Technical design

Overhang table

In some cases, the deflection of the plate material must be known exactly, e.g. to get past interfering edges or machine parts. The following table is used for this purpose, which gives approximate deflection values for steel, aluminum, wood and glass panels depending on the panel thickness and the overhang.

Deflection f as a function of plate thickness and plate overhang

Overhang (mm) / Sheet thickness (mm)	100	200	300	400	500	600	800	1.000	1.250	1.500	2.000	2.500	3.000
0,5	5	25	75	250	500								
1			5	10	20	50	200	500					
2					5	10	50	150	400				
3						5	20	75	200	500			
4							10	40	100	250			
6							5	20	45	125	500		
8								10	30	75	300		
10								5	20	50	200	500	
12									10	30	125	400	
15									7,5	20	75	250	
20									5	10	50	150	350
25										5	30	75	250
30										2,5	20	40	150

Number of suction cups

From the overhang values, the number of required suction pads can be roughly determined as follows:

Number in length $n_l = L / (2 \times Ü)$

Number in width $n_b = B / (2 \times Ü)$

Total number $n_G = n_l \times n_b$

VacuPoro VP

Horizontal handling of porous panels up to 1.000 kg

Setup and application

A special vacuum lifter for air-permeable, porous materials such as chipboard, MDF or OSB boards. Thanks to a powerful fan with flywheel, these materials can be suctioned absolutely safely and held for a sufficiently long time even in the event of a power failure. The vacuum lifters are equipped with electrical vacuum control as standard and are operated using an ergonomically shaped operating handle with a sufficient safety distance. An acoustic warning device warns of insufficient vacuum or power failure.

- Power supply via cable with CEE plug
- Powerful vacuum blower with flywheel
- Acoustic warning device with power failure message
- Electrical vacuum control integrated in the operating handle
- Horizontal transport of porous materials
- Stacking, transferring and picking of sheet material
- Loading and unloading of CNC processing machines



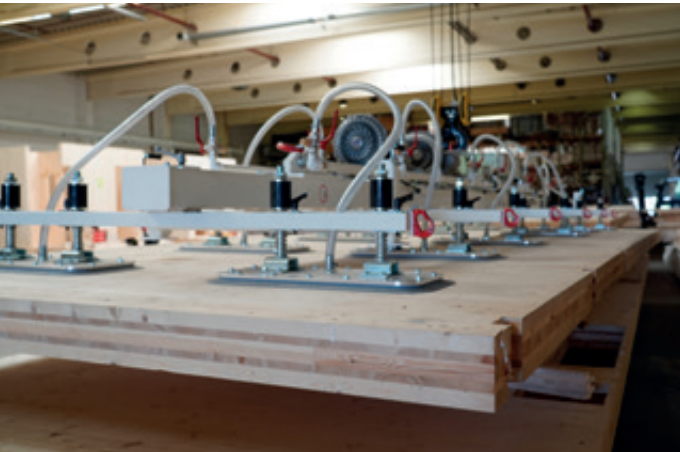
VacuPoro VP-250KG
For handling raw and coated chipboard



VacuPoro VP-500KG
With separately installed blower for OSB panels



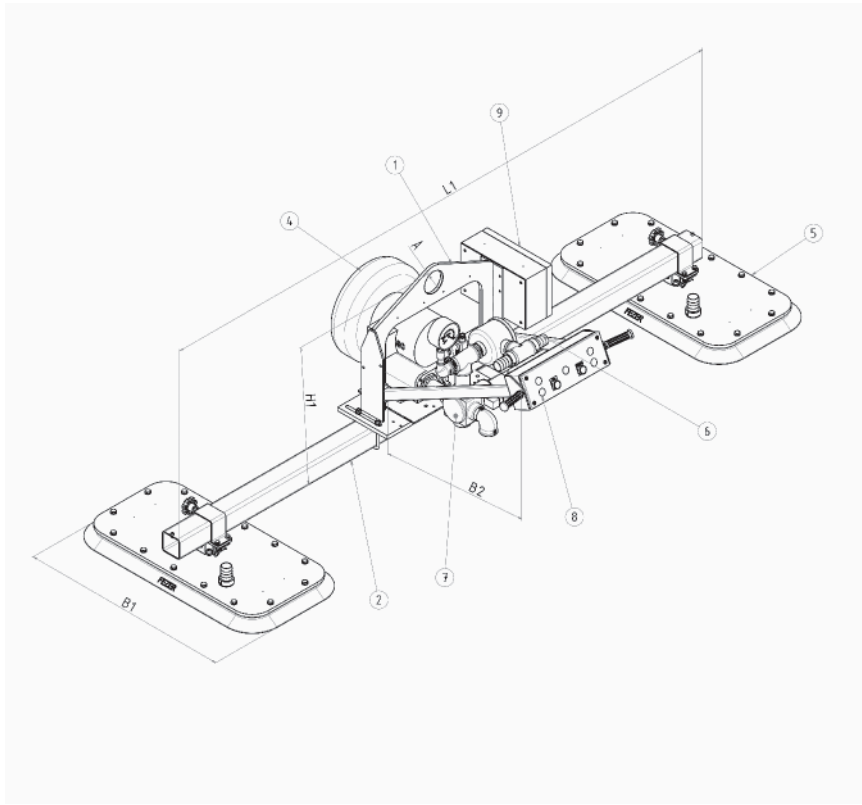
VacuPoro VP-500KG
With integrated crane control for moving MDF and OSB boards



VacuPoro VP-1000KG
In a special version with 2 vacuum fans for the transport of multi-layer panels up to 10,000 mm in length

VacuPoro VP

Technical specifications



- 1 Suspension frame with suspension eye
- 2 Stringer
- 3 Crossbeams, adjustable and clampable
- 4 Vacuum blower with flywheel
- 5 Suction pads, adjustable and clampable
- 6 Distribution line with vacuum filter and visual control vacuum gage
- 7 Vacuum valve for suction/release
- 8 Ergonomic manipulating handle
- 9 Electronic warning device EW-O

Load (kg)	Type	Workpiece dimensions		Vacuum blower (m³/h)	Number Suction cups	L1 (mm)	B1 (mm)	B2 (mm)	H1 (mm)	A (mm)	Own weight (kg)
		min (mm)	max (mm)								
250	VP-250	1,000 x 500	4,100 x 2,100	168	1	850	500	750	840	80	160
		1,000 x 1,000	5,600 x 2,600	168	4	2,400	1,200	1,200	840	80	180
500	VP-500	1,000 x 500	4,100 x 2,100	168	2	2,400	850	750	840	80	190
		1,000 x 1,000	5,600 x 2,600	168	4	2,400	1,200	1,200	840	80	190
750	VP-750	1,000 x 500	4,100 x 2,100	276	3	2,400	850	1,200	840	100	220
		1,000 x 1,000	5,600 x 2,600	276	6	3,600	1,200	1,200	840	100	210
1,000	VP-1000	1,000 x 500	4,100 x 2,100	276	4	2,400	850	1,200	840	100	250
		1,000 x 1,000	5,600 x 2,600	276	8	3,600	1,200	1,200	840	100	240