

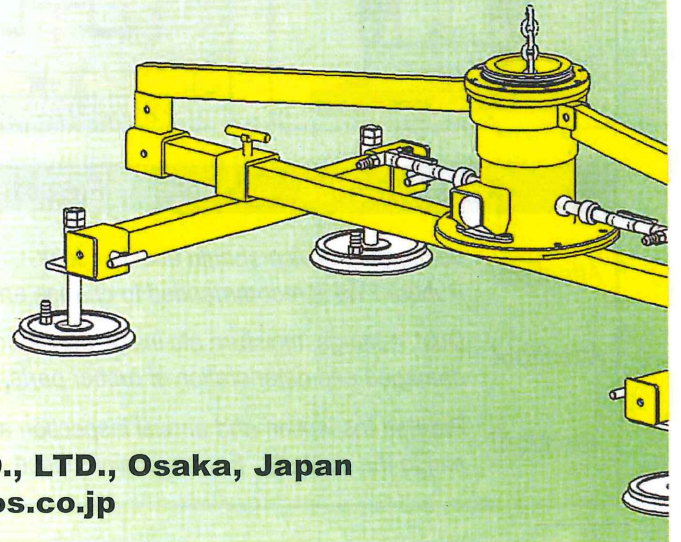


Frot'z
フロッツ株式会社

Non-powered Vacuum Suction Lift

By Frot'z Co., Ltd.

*Used in conveying steel plates.
Proof of convenience and labor savings*



Export Agent: RHINOS CO., LTD., Osaka, Japan
<https://rhinos.co.jp>

Non-Powered Vacuum Suction Lift

1 Non-Powered

Electricity, Pumps and air supplies are not necessary. Simply use cranes to lift up/down the Suction Lift. Troublesome wiring and piping are not necessary.

Convenient

2 Easy Handling & Efficient

Our original switching valve makes material lifting and releasing automatically. Just up-and-down process by a lifting crane is necessary

Easy

3 Safety

Safe material lifting by strong suction process by our own mechanism. Impact resistance and safety is our importance.

Safe

4 Versatile Use

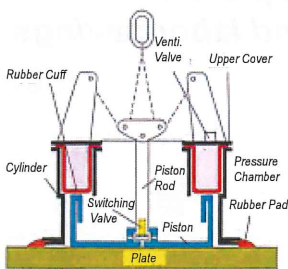
As opposed to magnetic lifting, this vacuum lift is versatile. It can be used to ferrous and nonferrous materials even stone plates with airtight flat surface without damaging material surface.

High Capability

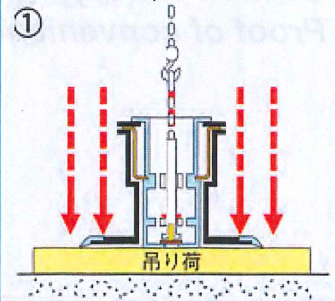
Mechanism

duplex structure with vacuum and pressure chambers

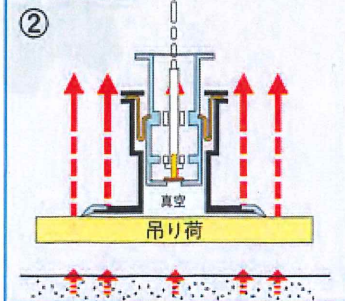
when pressurised



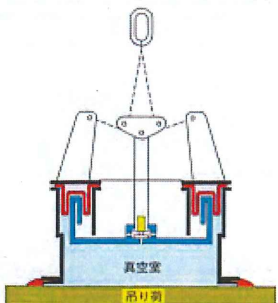
Step 1 Hook the lift chain with a crane and slowly lift down onto the plate



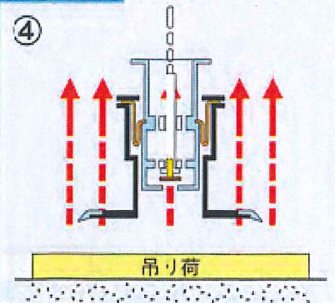
Step 2 Lift up the chain and the plate is automatically suctioned



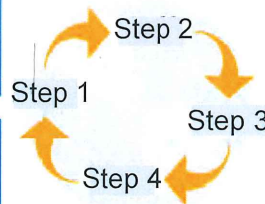
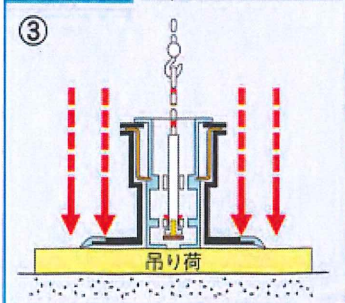
When vacuum is made



Step 4 Process is finished. Just lift up the crane hook.



Step 3 Lift down the chain and the air influx releases the plate



Maintenance

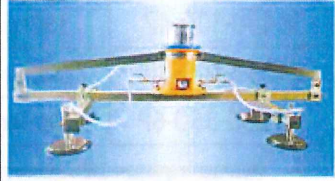
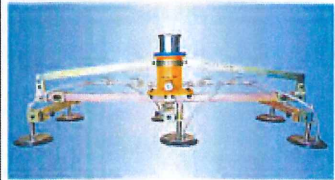


Pre-use and half-year inspection and maintenance is recommended

- Attention! Vacuuming device should avoid air leak. Rubber Pad is recommended to change annually. The lifting chain should be changed when 10% is worn out.
- Attention! Dust, cuttings, moisture etc inside the lift body interfere the normal operation, and furthermore it leads to damages and deterioration of rubber parts, which makes airleak.
- Attention! Pre-use Inspection and annual inspection are highly recommended to avoid serious accidents to operators and to the property. For any maintenance assistance, please don't hesitate to contact us.









Standard Models

Please choose the required model according to your usage situation

Standard Size Plate Models, Type M, Multi-Arms with 4-6 rubber pads

Model No.	Max. Lifting Weight	Pad Dia. x Nos. of Pad	Plate Size mm	Plate Thickness mm	Lift Size mm	Weight	
M-4 M300-210-4P	220kg	φ 210 × 4 Pads	900 x 1800 1200 x 2400	t = 16mm t = 9.0mm	H = 850 L = 1,800 W = 900	79kg	
M-5 M300-210-6P	220kg	φ 210 × 6 Pads	900 x 1800 1200 x 2400 1500 x 3000	t = 16mm t = 9.0mm t = 6.0mm	H = 850 L = 1,800 W = 900	89kg	
M-6 M450-210-6P	350kg	φ 210 × 6 Pads	900 x 1800 1200 x 2400 1500 x 3000	t = 25mm t = 12mm t = 9.0mm	H = 1,000 L = 1,800 W = 900	125kg	
M-7 M750-300-6P	600kg	φ 300 × 6 Pads	900 x 1800 1200 x 2400 1500 x 3000	t = 45mm t = 25mm t = 16mm	H = 1,100 L = 1,800 W = 900	164kg	

Type S, Single Type with 1 rubber pad

Model No.	Max. Lifting Weight	Pad Dia	Lift Size mm	Weight		Model No.	Max. Lifting Weight	Pad Dia	Lift Size mm	Weight	
S80	80kg	φ 210	H = 565 W = 210	12kg		S750	750kg	φ 480	H = 745 W = 480	75kg	
S200	200kg	φ 300	H = 595 W = 300	23kg		S1250	1,250kg	φ 630	H = 870 W = 630	137kg	
S300	300kg	φ 350	H = 600 W = 350	26kg		S2500	2,500kg	φ 880	H = 1,110 W = 880	296kg	
S450	450kg	φ 400	H = 約650 W = 400	52kg		SM300	150kg	□ 130 × 400	H = 625 W = 400	31kg	

By-Order Models				Long Plate Models (Adjustable Base Frame)			
Model No.	Max. Lifting Weight	Pad Dia x Nos.		Model No.	Max. Lifting Weight	Pad Dia x Nos.	
M200 (M300-350-2P)	200kg	φ 350×2	1,800mm	M300L-210-8P	220kg	φ 210×8	
M400 (M450-350-2P)	400kg	φ 350×2	1,800mm	M450L-210-8P	350kg	φ 210×8	
SM450-130×400-2P	300kg	□130×400×2	750mm	M750L-300-6P	600kg	φ 300×6	
M450-300-4P	350kg	φ 300×4	1,800mm	M750L-300-8P	600kg	φ 300×8	
M750-300-4P	600kg	φ 300×4	1,800mm	M1250L-300-8P	1,000kg	φ 300×8	
M1250-350-6P	1,000kg	φ 350×6		M2500L-350-8P	2,000kg	φ 350×8	3,000mm



特型 : M2500L-350-8P



長尺鋼板型 : M750-300-3P



特型 : M1250-300-10P (アルミフランジ)



長尺鋼板型 : M750-300-5P

For choosing appropriate Lift

Please check the size, thickness and weight of the materials you want to convey and choose the appropriate model. You can simply contact us giving those information, so that we recommend the lift.

For thin and long materials, numbers of pads are recommended to have more than our standard models according to usage situation.

Q & A

Feel free to contact us for maintenance etc.



Is it possible to use with Steell plates with oxide surface and stainless steel with surface protective films?
If the surface is flat and airtight, those materials are also conveyable. However, please avoid the lift to use with materials with hand lapped sheet and cardboard which easily makes air gap.



Is it possible to convey variable materials with various thickness and sizes?
We have various models and you can select suitable model for your job. Or simply please contact us with necessary information about the materials so that we can recommend appropriate model.



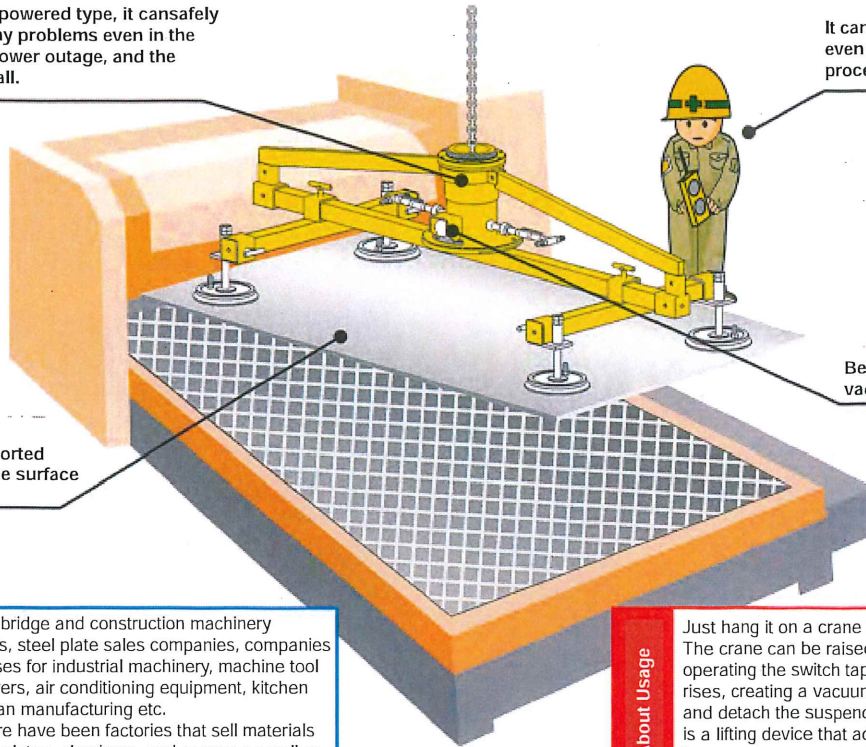
According to the conditions, is it possible to do parallel convey, 90-degree inversion convey?
We can also recommend powered vacuum lift for your need. Please contact us with detailed inquiry.



Precautions for use

Because it is a non-powered type, it can safely lift plates without any problems even in the event of a sudden power outage, and the workpiece will not fall.

It can also be done by one operator even from a distance during the laser processing.



Plates can be transported without damaging the surface of the plates.

Be sure of firm suction by a vacuum gauge.

Examples of use

Shipbuilding, bridge and construction machinery manufacturers, steel plate sales companies, companies dealing in cases for industrial machinery, machine tool parts and covers, air conditioning equipment, kitchen equipment, can manufacturing etc. Recently, there have been factories that sell materials such as steel plates, aluminum, and copper, as well as precision sheet metal factories that use laser cutting machines, turret punches and shearing machines.

About Usage

Just hang it on a crane hook. The crane can be raised and lowered by simply operating the switch tappet. The piston automatically rises, creating a vacuum inside the cylinder and attach and detach the suspended load. (Since the vacuum lift is a lifting device that adheres to the top surface of the load, extreme caution is required to prevent air leaks, etc.)

Examples

For factories and sellers of steel plates, stainless plates, aluminum, copper etc



Precision plates factories using laser cutting, shearing, turret punching machines



Non-ferrous materials like aluminum plates can be safely lifted up without damaging the surface.



The photo shows a model that is ideal for transporting fixed-length steel plates to a laser processing machine or shearing machine. M-7 type (Max 600kgs)



Factories that handle large steel plates such as shipyards and steel mills. In recent years, laser processing machines have become capable of processing plates that are 20mm or thicker, and these heavy steel plates also can be transported safely.

