

Ergonomic Lifting Solutions

Vaculex[®] vacuum lifting equipment



Get a firm grip on your business





Our gripping and moving solutions help thousands of customers in a wide range of industries globally, to improve energy-efficiency, productivity and working environments. Ergonomic, safe and adaptable, our user-friendly solution promises to increase productivity while reducing the risk of injury to your team.

Our solutions can be optimized for different customer requirements and environments. Using a range of suction cups and feet, Vaculex® can grip, lift and hold almost anything, including: parcels, baggage, sacks/bags, boards, glass, kegs/barrels, bottles, food, stone, windows etc.

End-user happiness

When you purchase Vaculex®, or any of our solutions, you'll also benefit from our superior aftercare. We promise to work together with you to help ensure you get the most out of our solutions.

Flexible solutions for almost every situation...

In recent years, the Vaculex® ergonomic system has been utilized by clients across many different industries. During this time we have noted most industries are placing more attention on employee health and safety. Our solutions have helped transform many workplaces. As a result they can be found in almost every location where manual lifting takes place. For example, the Vaculex® can be found lifting luggage and freight at some of the world's busiest airports and ports.

Nowadays people are doing more and more shopping online. These purchases need to be packaged and delivered on time. As a result, logistics, distribution, and order fulfillment centers are a growing market for our Vaculex® lifters.

There is a clear need for ergonomic solutions in the manufacturing and food industries. The demand to lift and move doors, windows, sacks, furniture, white goods, heavy cheeses, kegs, barrels etc is growing.

The benefits for employers and employees can't be underestimated. Independent studies* show that manual lifting can result in repetitive strain injuries and damage to the spine. This can lead to absence or, in serious cases, to supplementary disability pension.

Vaculex® minimizes the risk of such work-related injuries. While productivity is maintained, or increased, the load on the body can be reduced by more than 80 percent.



Logistic distribution & order fulfillment centers



As the Vaculex® ergonomic lifting systems are versatile they are highly appreciated, well-used and suitable for almost any industry.



Parcel carrier terminals



Rolls of labels



Windows



Bags



... or any material



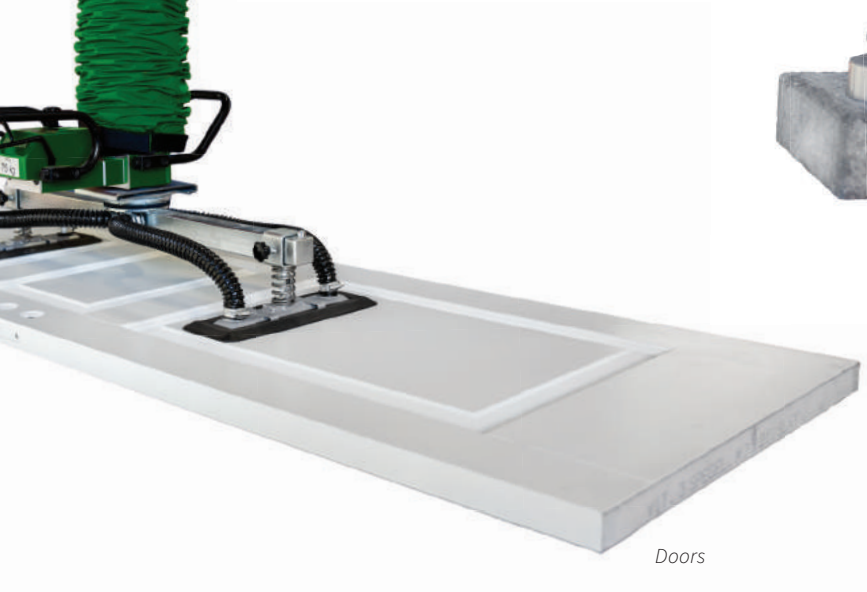
Sacks



Stones and bricks



Kegs

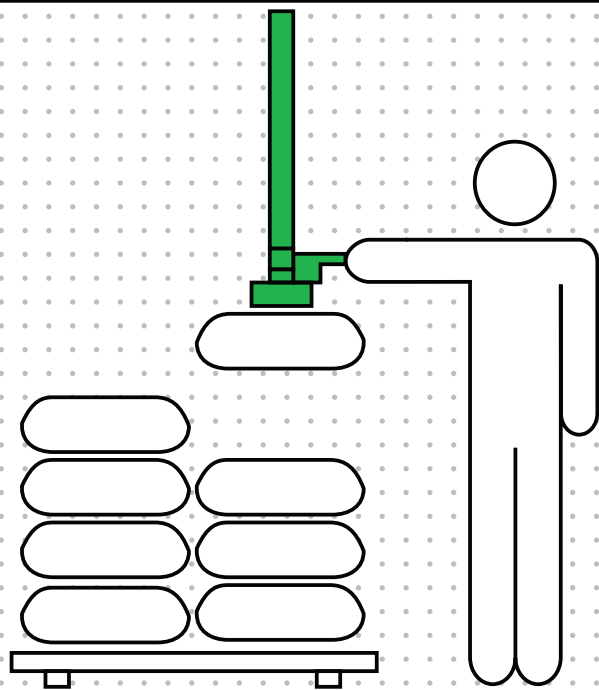


Doors

Almost everything can be lifted

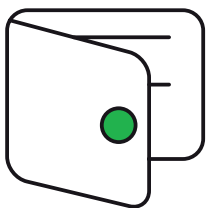
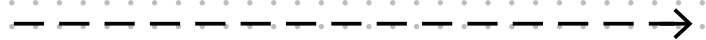
With custom-made tools we can solve your specific needs.
Please contact us for more information.

Ergonomic solutions that are good for business and great for people



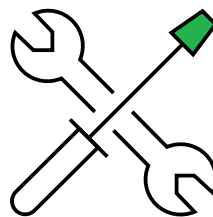
User friendly

A vacuum tube uses suction to both grip and lift the load in a single movement. The control handle is easy for the operator to use and feels almost weightless. With a bottom swivel, or an angle adaptor, the user can rotate or turn the lifted object as required.



Good ergonomics means good economics

Long lasting and safe, our solutions provide many benefits including reduced sick leave, lower staff turnover and better staff utilization — usually combined with higher productivity.



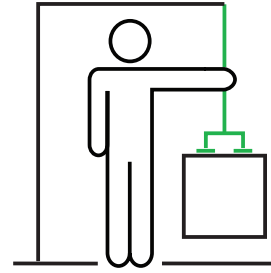
Easy installation and maintenance

The power source can either be an electric pump or pneumatic vacuum pump. The system is normally installed on a jib or a lightweight bridge crane. The installation is simple and is adapted to your specific lifting needs. Our lifters are made of extremely hard-wearing parts which seldom require service and repair.



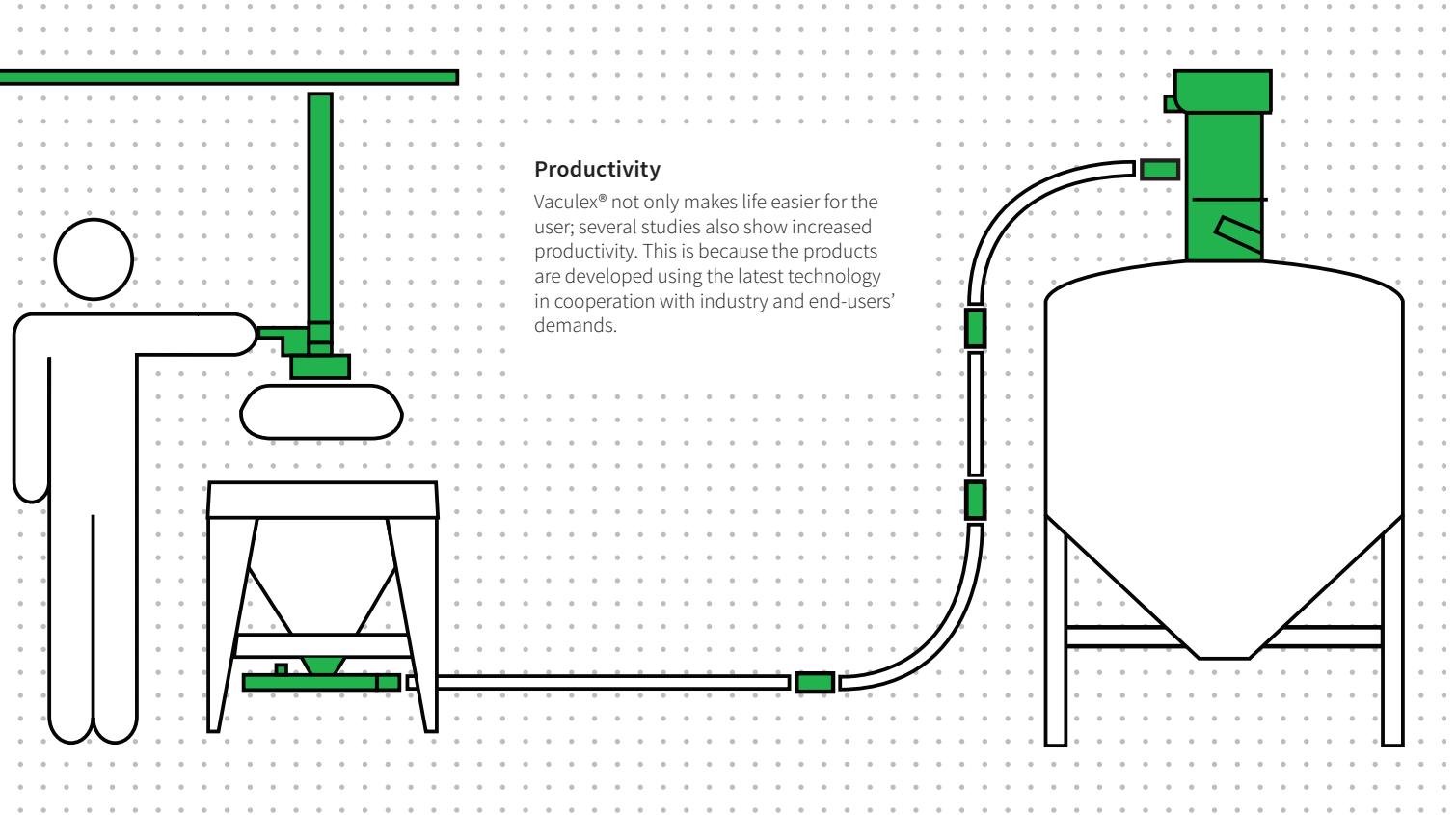
Unique personal safety

Vaculex® is designed with several built-in safety features. For example, our non-return valve – a standard on all units – ensures that the load is not dropped if the vacuum suddenly stopped running. Instead, the load will be lowered to the ground in a controlled manner. Vaculex® is designed in a way so you don't risk dropping objects that are too heavy. If the weight is too great, the tube will simply not lift. This reduces the risk of personal injury and damage to goods. If you are lifting with a hook, Vaculex® can also be fitted with our patented protection valve which ensures optimal safety if the lifting strap or handle should fail.



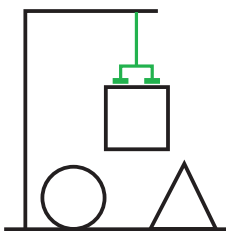
Ergonomics

Vaculex® reduces the risk of injury associated with manual handling significantly. The load on the operator can be reduced by more than 80 percent using Vaculex®.



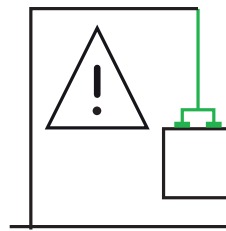
Productivity

Vaculex® not only makes life easier for the user; several studies also show increased productivity. This is because the products are developed using the latest technology in cooperation with industry and end-users' demands.



Application specific solutions

For maximum flexibility the tube lifters are based on a modular system. For instance, the lift tube can be changed depending on the lifting capacity required. It is also possible to have an extended handle fitted to the Vaculex® for applications where extra reach is required.



Thriving in tough environments

Our solution is optimized to function in a variety of extremely demanding environments. They are available in acidproof versions in class A4 for chemical, food or pharmaceutical industries. For work in explosive environments, we have specially-adapted ATEX vacuum pumps or as an alternative, we also offer a pneumatic vacuum pump.

TNT minimized sick leave costs and made it easier to attract and keep qualified staff

The rapid increase in global e-commerce puts the order fulfillment process under pressure. Increased productivity and improving the work environment are other challenges this industry faces. Manual handling without a lifting aid often causes work-related strain injuries due to bad posture and repetitive manual lifting.

In a logistic and distribution center, there are typically many areas where intense levels of manual handling occur, such as the inbound and outbound docks, as well as storage and picking areas.

At the receiving dock, a common challenge is unloading loose

loaded containers and trailers. This is one of the most physically demanding jobs, due to heavy lifting and bad posture.

Vaculex® products can be adapted to different environments from retrofitting existing solutions to installing at a new build facility. Our goal is always to minimize the load on the body, increase productivity and enhance user happiness.





Background:

TNT had problems with injuries due to manual lifting which resulted in sick leave and rehabilitation costs. As a part of a worldwide health and safety program, the challenge was to find a lifting aid that maintained or increased speed and productivity during lifts.

Solution

Vaculex® TP lifters were installed at TNT. Employees used it during their daily work.

Result

The injuries were reduced to a minimum. The Vaculex® TP maintained or increased productivity as parcels became weightless and easier to handle, no matter what size or shape. Vaculex®TP proved to handle 99 percent of the parcels with ease. Using the Vaculex® TP ergonomic handling solution, TNT was able to increase productivity by 16% while reducing employee health problems by 41%.



TNT is a world leader in global express and logistics services. With a presence in more than 200 countries, TNT is a division of the Dutch TNT Post Group (TPG), which is quoted on the New York, London, Amsterdam and Frankfurt stock exchanges.



“The economic benefits of Vaculex® also involve economic benefits due to reduced sick leave and lower rehabilitation costs, which in turn made it easier to attract and keep qualified staff”

Thomas Engman Operations Manager at TNT, Sweden.

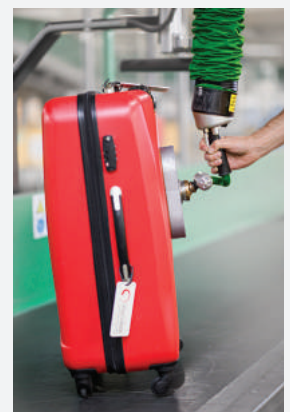
Baggage handling: Success story Heathrow airport

Heathrow airport maximized productivity while boosting passenger satisfaction

Baggage at airports and ports is typically handled using a combination of automated and manual handling. The manual handling results in repetitive strain injuries resulting in decreasing work tempo and high sick absences. In baggage handling areas, space is often a critical factor, especially headroom height.

Vaculex® exists in different configurations. Many of the solutions from our range are specifically designed for use in airports and ports. In fact, we have already deployed our solutions at over 60 airports and ports worldwide.

Vaculex® can be installed in any terminal and can be used in narrow spaces with low headroom without limitations to the function of the system.





Background:

During a normal day a baggage handler at Heathrow Airport will lift an average of 6 tons of baggage. Poor lifting technique and the lack of a lifting aid, would eventually lead to strained backs, shoulders and necks.

Solution

Vaculex® BaggageLifters were installed at Heathrow Airport and measured the amount of pressure and strain that their body goes through during a normal working day. An independent study* was commissioned by Heathrow, using sensor readings synchronized with video footage which compared 100% manual handling to manual handling using Vaculex® TP BaggageLift.

Result

The study shows that the Vaculex® system reduced demand on shoulder and back muscles by up to 67% and 88% respectively when compared with manual handling practices.

About Heathrow Airport

Heathrow Airport is a major international airport in west London, England, UK. Heathrow is the busiest airport in the United Kingdom, busiest airport in Europe by passenger traffic, and sixth busiest airport in the world by total passenger traffic. In 2017, it handled a record 78 million passengers.

“Before Vaculex® Lifting solutions, we had a lot of problems with heavy liftings here at Heathrow. Thanks to the Vaculex® solutions, the work is much more efficient, and my staff does not suffer anymore from back problems. Vaculex® is fantastic equipment”

Martin Bell, Training Officer, Menzies.



*Visafe Final report: Comparison study. Vaculex® vs 100% Manual loading, Baggage Handlers T2, March 2016.

Product range

A Vaculex® ergonomic lifter combined with a range of accessories can enable you to lift almost anything you can think of that weighs 5-250 kg [10-550 lbs]. It is user-friendly and requires minimal training to operate. Working speed and productivity are in most cases increased.

Vaculex® TP series

5 - 65 kg [10 - 143 lbs]

Express
handling



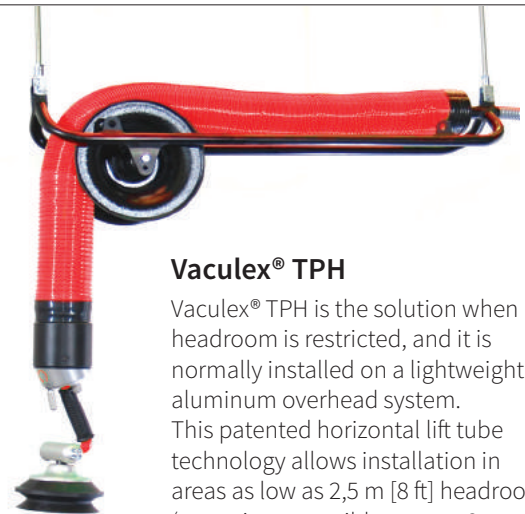
Vaculex® TP

Vaculex® TP is extremely versatile and can handle a great variety of goods of different size, shape and weight. It grips the goods from any side and you can easily rotate and angle to place where required. Standard capacity is 40 kg [88 lbs] which can be increased to 65 kg [143 lbs].

Vaculex® TPZ

The TPZ offers identical features to the standard TP, but with the addition of the ability to interchange suction feet from our standard range - giving optimal flexibility.

Low
headroom
version



Vaculex® TPH

Vaculex® TPH is the solution when headroom is restricted, and it is normally installed on a lightweight aluminum overhead system. This patented horizontal lift tube technology allows installation in areas as low as 2,5 m [8 ft] headroom (sometimes possible even at 2 m [6.5 ft]), allowing maximum lift height to be achieved.



Ultimate flexibility

Vaculex® TP Combi

TP Combi is equipped with two lifting modes, suction foot and hook mode. With a single touch the Vaculex® TP Combi shifts safely from lifting e.g. a box with its suction foot to lifting unusual items with straps using its integrated hook. Suitable for lifting objects with straps; such as backpacks or buckets with handles - when flexibility of two lifting modes is key.



Lifts and weighs in a single motion

Vaculex® TP Scale

Vaculex® TP Scale is a unique vacuum lift that weighs and lifts in a single motion. A built-in scale allows each parcel/ product to be weighed while being lifted. If required, the operator is able to set a weight limit. If the load exceeds a certain weight, a signal will be indicated.



Ergonomic baggage handling

Vaculex® TP BaggageLift

With Vaculex® BaggageLift you lift and move luggage at ports and airports, without causing any physical strain. The control handle is easily operated with one finger via a single pointer control of the trigger. Works with almost any bag.

Vaculex® TS

For high stacking applications



The TS is a version of the TP that is specifically designed for high stacking applications. The ergonomically designed control handle offers the operator a comfortable and easy to use lifter when stacking at high levels.

Vaculex® TL

The TL is a simple and easy to use lifter for the handling of laundry and mail sacks. With only compressed air needed the solution reduces the risk of injury in this labor intensive application, also offering protection from possible injury from sharp objects.



Handling of laundry and mail sacks



Easy
change over
of accessoires

Vaculex® ML

5 - 55 kg [11 - 121 lbs]

Vaculex® ML is a one hand operated vacuum lifter which is easily customized to adapt to most handling situations with loads weighing between 5 and 55 kg [11 and 121 lbs]. This serie offers large possibilities to choose between a range of different control handles, suction feet and other options to optimize the lifting system for your specific handling situation.



For
heavier
loads

Vaculex® VL

5 - 250 kg [11 - 550 lbs]

Vaculex® VL is a user-friendly and powerful lifter, operated with two hands, mostly used in general industry where the need for specialized heavy-duty tools are common. Vaculex® VL can lift boxes, sacks, drums, metal sheets, doors, computers, crates, barrels, TVs, white goods, furniture and much more - anything up to 250 kg [550 lbs].

With the right combination of accessories Vaculex® VL can lift multiple objects at once, tilt and rotate goods. Vaculex® VL will also balance at an adjustable resting height when the handle is released – with and without the lifting object. Powerful lifting of almost anything.



Vaculex® ParcelLift

5 - 40 kg [11 - 88 lbs]

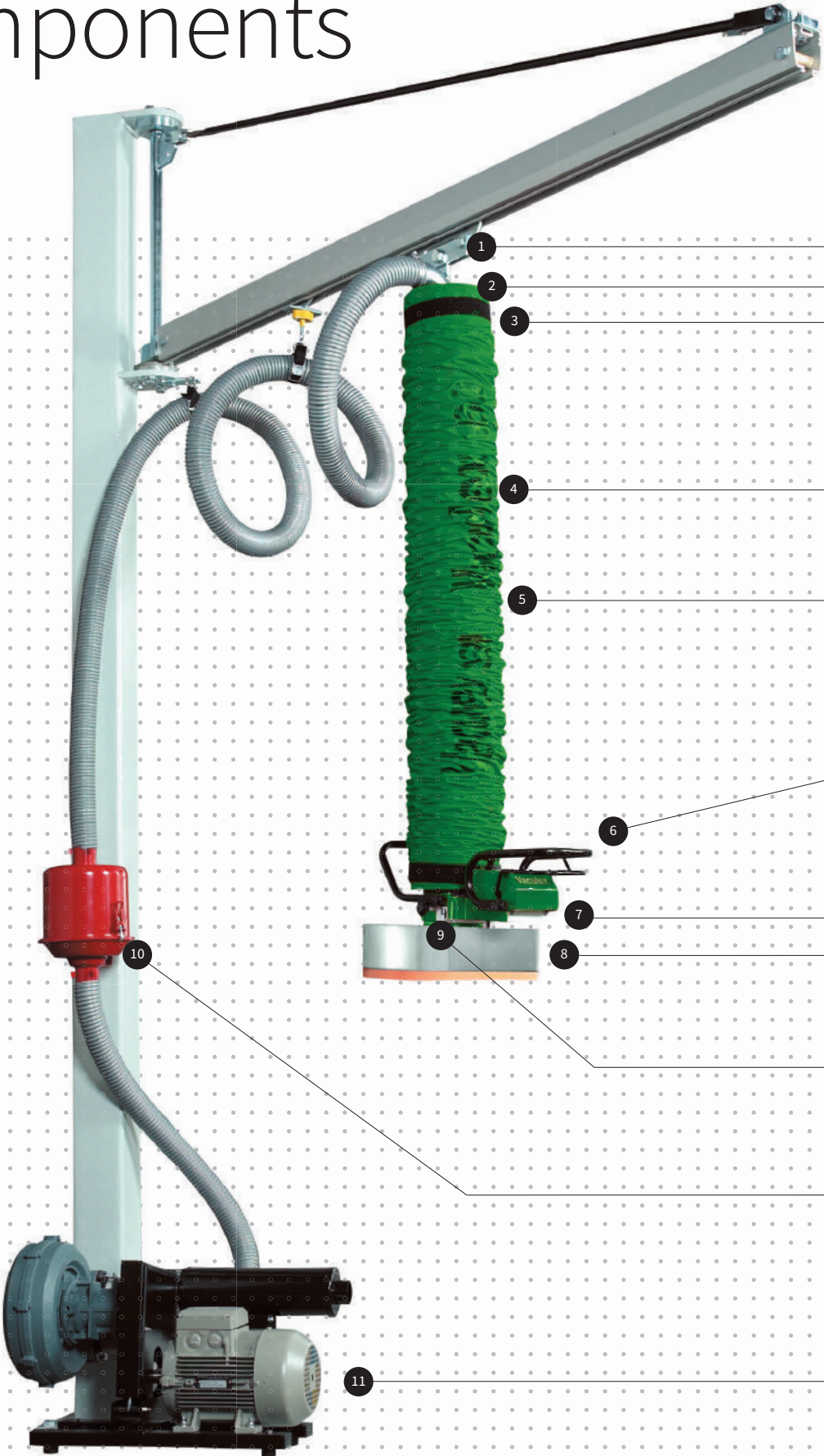
Vaculex® ParcelLift increases productivity when loading and unloading loose loaded cargo into or out of trucks and containers. It is assembled onto the telescopic conveyor which can be both factory-fitted or retro-fitted at your premises.

It can handle a great variety of products and/or parcels in terms of size, shape and weight, up to 40 kg [88 lbs].

Furthermore, it maximizes working height by sensing the headroom available and adjusting itself automatically, making it the ideal solution for working in confined spaces with limited headroom.

When it comes to operating, the Vaculex® ParcelLift has been designed to create the optimal working experience. It allows the user to grip an item from any side, turn it 360° and release as required. In addition, it has been created for easy, intuitive operation and requires minimal training.

Components



1. Suspension eye

Available in various models, to suit most of the jib or bridge cranes on the market.

3. Top and bottom screw connection of the lift tube

Our solution for an optimal suspension of the lift tube to the handle and top swivel, respectively.

5. Effective protective cover sock

Our standard protective stocking is excellent protection against external abrasion of the lift tube.

7. Spring-balanced valve control system

The load always returns to the set height level, irrespective of where the operator leaves the control unit or in case of the control unit being accidentally handled.

9. Bottom protection valve for optimal safety

In case a load should break, the valve in the bottom of the vacuum head minimizes the risk of injury or damage, by opening instantaneously and thus decreasing the lifting force to a minimum.

11. Vacuum pump - electric or pneumatic

Various sizes of electric or pneumatic vacuum pumps are available. Vaculex® ML is equipped with a top swivel integrated ejector pump. The electric vacuum pumps are available equipped with a sound reduction hood

2. Non-return top valve to avoid injuries

The Non-return valve ensures that in the event of a power failure such as a pump breakdown, the lift unit will slowly descend to the floor, which minimizes personal injury and material damage.

4. Highest quality lift tube

Our lift tubes, designed and manufactured to our own specifications, are of the highest quality. Long lasting and therefore supplied with a one year warranty.

6. Control unit with sound insulation and ergonomic handles

Vaculex® ML and TP is one-hand operated and Vaculex® VL is two-hand operated

8. Suction foot with optimal safety

The tube lifters do not drop a load that they can lift and the lift tube will not lift if the load is too heavy. All standard suction feet are size-adapted to the lift tube that is being used, with a safety factor of at least 2.5. This means that the goods are attached to the foot with a suction force 2.5 times greater than the lifting capacity of the lift tube.

10. Efficient air filter

Our standard filter canister increases the lifetime of the vacuum pump. As an option, an extra large air filter is available for dusty environments.

Build the optimum system for your infrastructure

Overhead and crane solutions

Vaculex® product lines are all available in various overhead or crane systems which means that we can overcome many of the physical constraints that occur in your facilities. Whether retrofitting into an existing facility or planning for a new building there are solutions that will adapt to required

infrastructure. Below are examples of some of our most commonly used overhead and crane systems. The options vary depending on the infrastructure, physical constraints, weight of the lifting object, type of lifter, size of operation area needed to be covered and much more.



Traversing Articulated Jib Cranes

- Advantageous in odd shaped working areas.
- Available for low headroom height.
- Suits everything from slow up to very rapid handling.



Bridge Cranes

- Can cover large working areas.
- Available for low headroom height.
- Suits everything from slow up to very rapid handling.



Slewing Jib Cranes

- Can be supported from floors or from walls.
- Suits slow and medium rapid handling.
- Low investment
- Several standard sizes available.



Articulated Jib Cranes

- An ultra-light carbon fiber articulated jib arm.
- Suits rapid and very rapid handling.

A selection of accessories



Lift tube

Available in many sizes depending on the lifting object's weight and dimension.



Quick connector

Enables fast and simple change of suction feet.



Release valve

Drops the load when pressed.



Bottom swivel

Rotate the goods 360° without moving the control unit.



Flexible extended control unit

Useful when stacking goods. Available in various lengths.



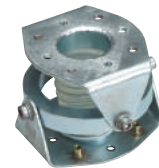
Rigid extended control unit

Useful when handling wide goods. Available in various lengths



Angle adaptor

For shifting between horizontal and vertical position.



Universal joint

Keeps the lift tube in a vertical position if load is unbalanced.



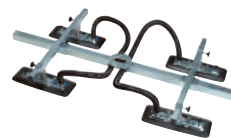
Yoke foot

Suitable for cardboard boxes with a divided lid, materials in sheet form, boards etc.



Yoke foot

Suitable for long, thin materials like ex. steel sheets.



Cross yoke foot

Suitable for large sheets, boards etc.



Fixed yoke foot

With bellows cups, useful for rough surfaces



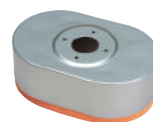
Rectangular suction foot

For handling sealed surfaces.



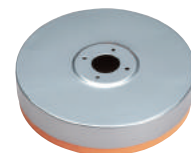
Curved suction foot

For lifting tubular frames, axles, drums etc.



Oval suction foot

For handling suitcases, sacks and shrink-wrapped goods etc.



Round suction foot

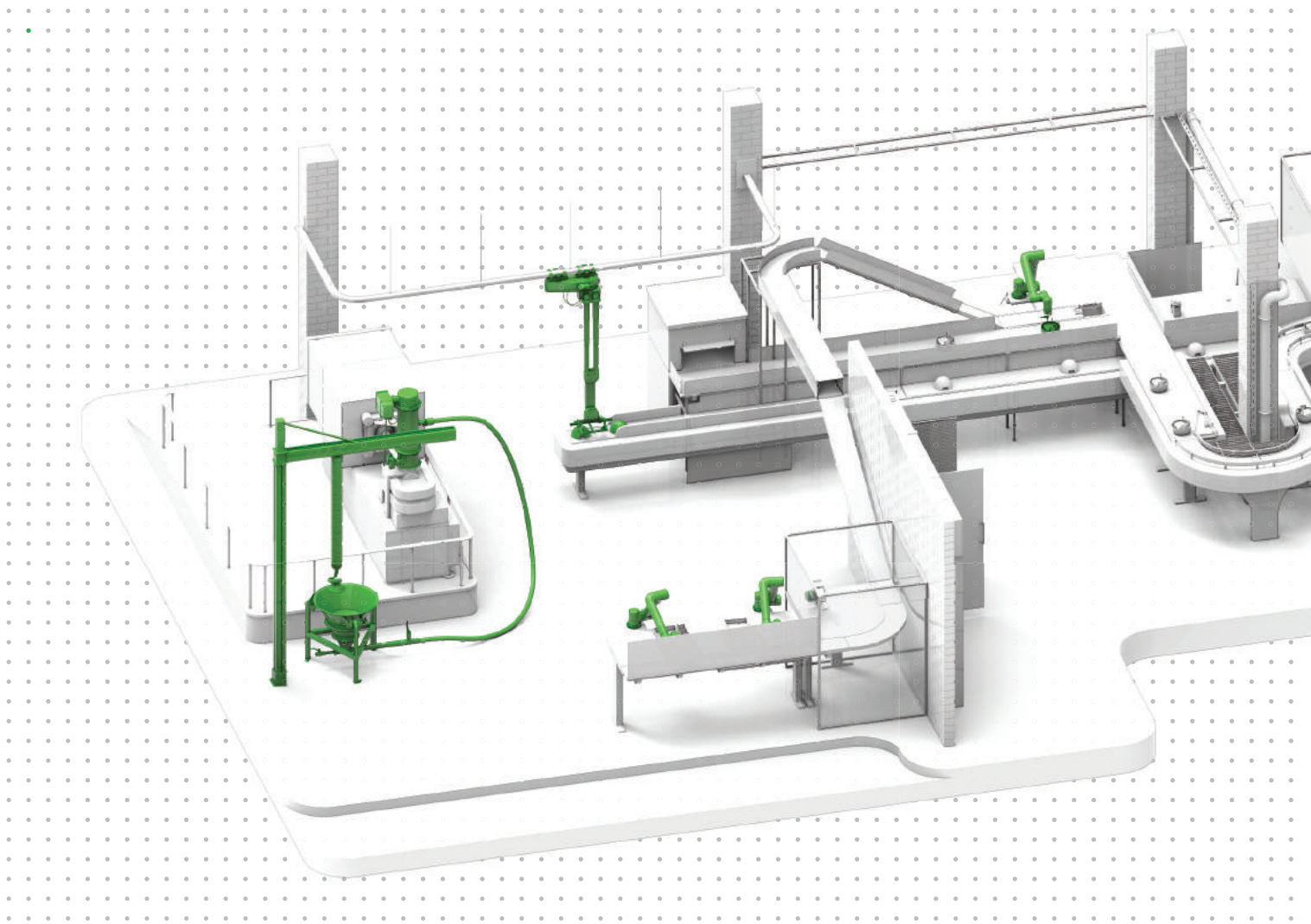
Suitable for handling cans, drums, stones, bricks etc.

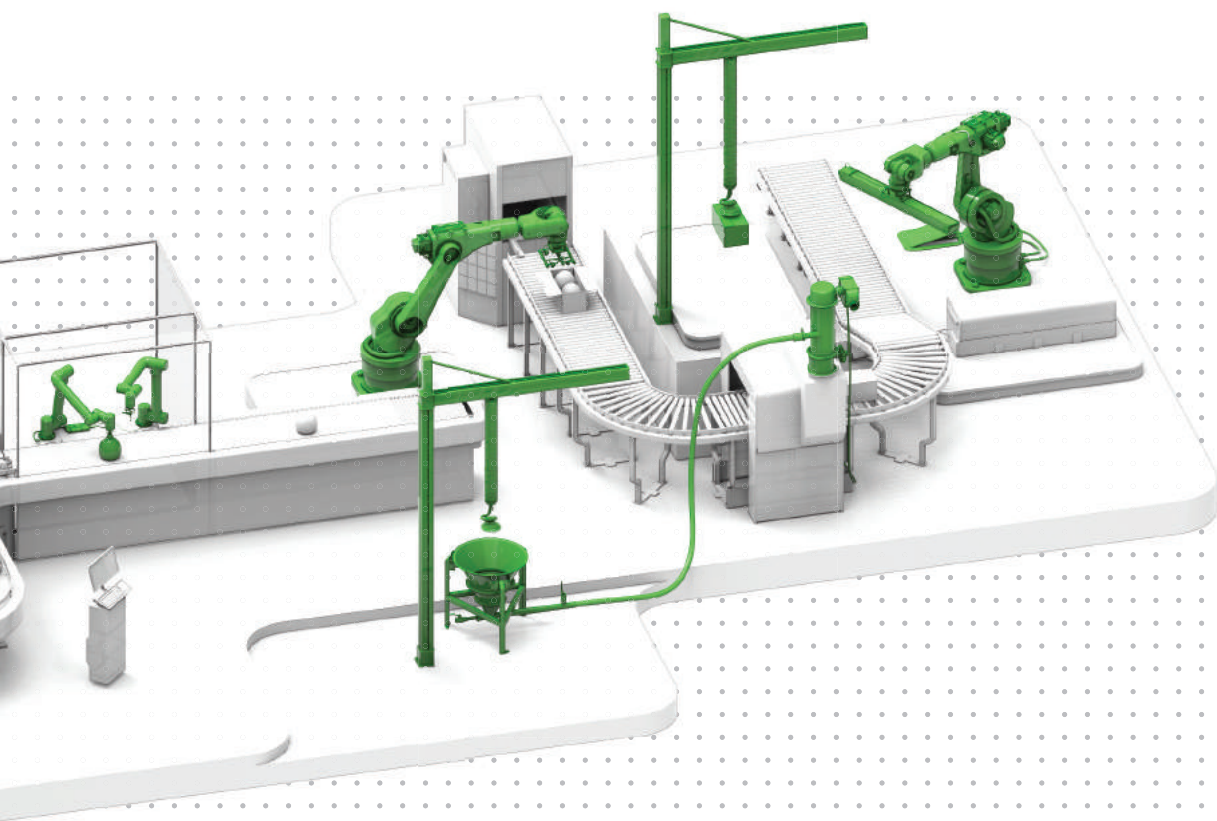
We make your work easier

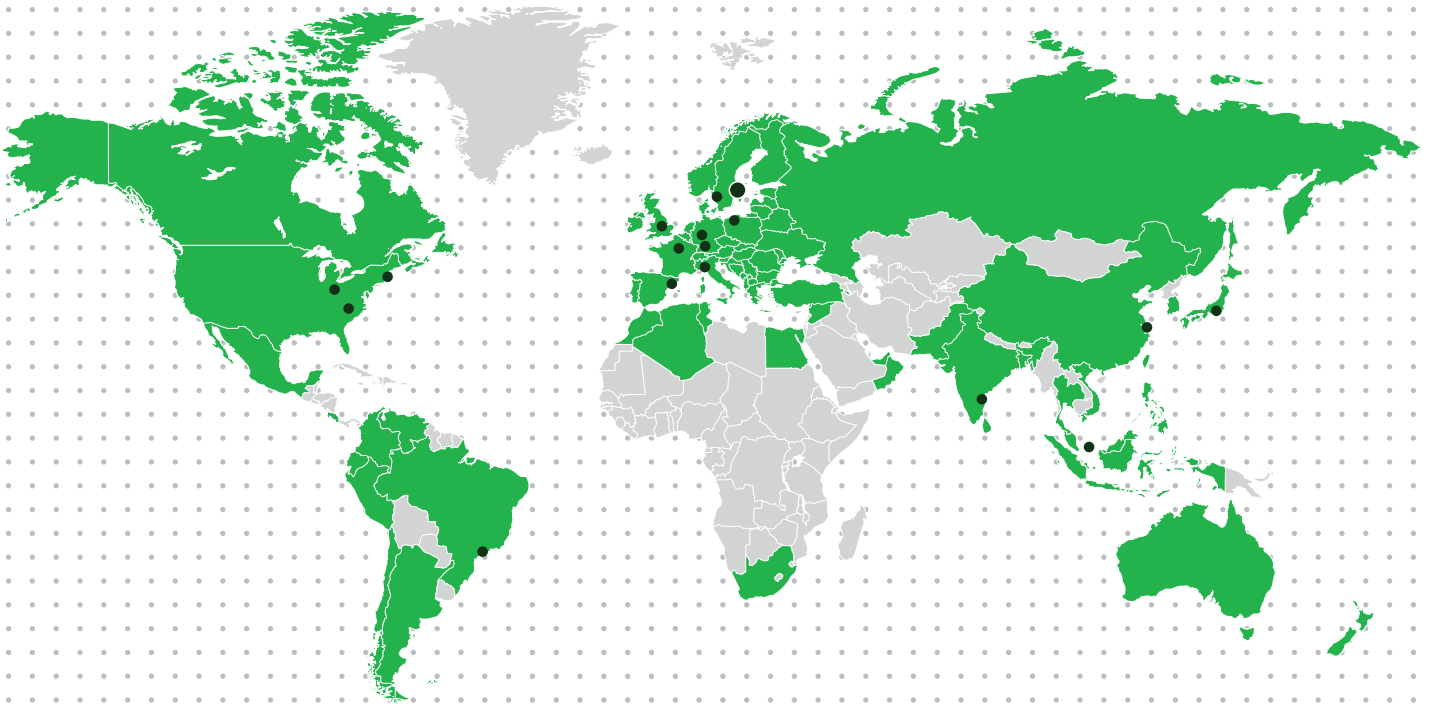
Piab provides smart solutions for the automated world. Our gripping and moving solutions help thousands of customers in a wide range of industries globally to improve energy-efficiency, productivity and working environments.

Driven by the need for efficient production and improved quality, automation is transforming production processes. The technological breakthrough in robotics and connectivity brings multiple opportunities, opening for new and fast-growing segments and business models, requiring Piab's smart and mission-critical solutions.

We value our longstanding customer relationships by bringing innovative solutions for every gripping and moving challenge. Through our global distribution network of 700 distributors and 170 inhouse sellers, we stay close to our customers, solve their problems and help them realize their full potential.







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