

## VACUUM LIFTERS

For years RIGHETTI is specialised in manufacturing and supplying lifting and handling systems, such as jib cranes, vacuum lifters and below-the-hook equipment.

The vacuum lifter is a lifting device that by means of vacuum created by a vacuum generator, allows quick and easy-to-manage grip and lifting of material.

Maximum working times are optimised thanks to the use of the vacuum lifter. A sole operator is able to lift, handle, tilt or rotate the load quickly and safely.

RIGHETTI vacuum lifters are designed and built offering greater safety to the operator and to the load. The use of improved materials and a series of components guarantee maximum grip safety.

The vacuum lifters can be used in various industrial sectors.

A wide range of hand-held or below-the-hook vacuum lifters are available for different uses, materials and surfaces with various power systems, dimensions and movement type.

Thanks to our experience in the construction of customised lifters we are capable of realising lifters according to specific customer requirements.



## ■ OPERATING SYSTEMS

The vacuum lifters are available with **various power systems**:

- **COMPRESSED AIR** lifter with built in vacuum pump (Venturi) and it just needs to connect the compressed air hose.
  - operating pressure necessary is 6-7 bar
  - models with one or more suction pads with various dimensions and lifting capacity
  - available with fixed frame, with manual or pneumatic tilt, with rotation



*E.g. compressed air vacuum lifter*

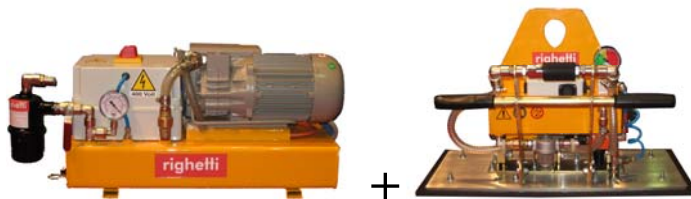
- **ELECTRIC VACUUM PUMP**

AC 110v/220v/400v (or other voltages on request)

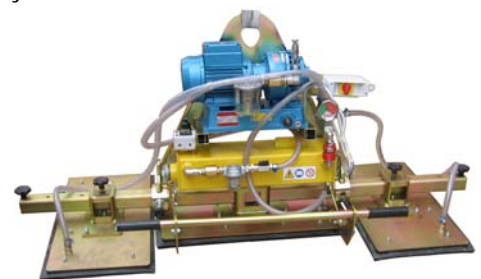
DC 12v or 24v to be used for example on self-propelled vehicles

- with **on board or independent** electric vacuum pump
- models with one or more suction pads with various dimensions and lifting capacity
- available with fixed frame, with manual or pneumatic tilt, with rotation

electric vacuum pumps with various capacities and voltages



*E.g. vacuum lifter with independent vacuum pump*



*E.g. vacuum lifter with on board vacuum pump*

- **BATTERY POWERED** for use in full autonomy without the need of a continuous power system

- complete with electric pump 12 or 24 Volt
- models with one or more suction pads with various dimensions and lifting capacity
- available with fixed frame, with manual or pneumatic tilt, with rotation



*E.g. battery vacuum lifter*

- **HAND PUSHED PUMP** and air or electric power  
the vacuum is created by means of a double action hand pushed pump that functions even without any external power system

- lifter has additional air or electric connection
- tilt 0°-90° ,all safety guaranteed as for a traditional lifter
- model available with various pad lifting capacity and dimensions



*E.g. vacuum lifter with hand pushed pump*

- **MECHANICAL PISTON** and air or electric power

Double acting piston creates enough vacuum for lifting the material even without any external power system

- lifter has additional air or electric connection
- model available with various pad lifting capacity and dimensions



*E.g. mechanical vacuum lifter*

## **ECONOMISER**

available on request for all our lifters.

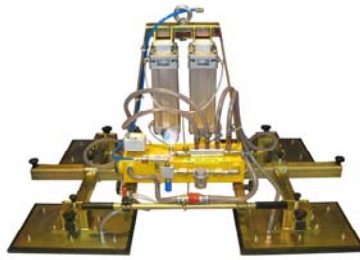
The economiser controls the level of vacuum present in the vacuum circuit and withdraws energy only when necessary - in air compressed models it automatically opens or closes the flow of compressed air, in electric models it switches on and off the electric pump with notable saving of energy, maintenance and machine consumption in general.

## ■ FRAME

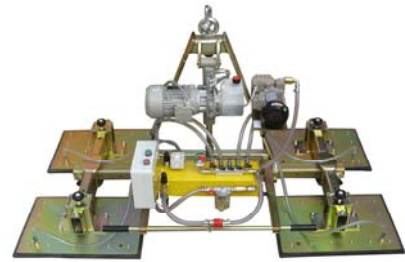
The vacuum frame can be fixed **vertically, horizontally, with manual tilt or tilt with piston/s (pneumatic or hydraulic/electric) or rotating.**



E.g. structure with manual tilt



E.g. structure with pneumatic tilt



E.g. structure with electric tilt



E.g. fixed structure



E.g. structure with rotation

## ■ LIFTING CAPACITY

Standard vacuum lifters ranging from 80 to 2000 kg. On request lifters are available lifters with inferior or superior lifting capacities.

**Our lifters with tilt are projected so that the lifting capacities declared, if not indicated differently, are equal for horizontal and vertical tilting.**

## ■ SUCTION PADS AND VACUUM GASKET

In relation to the dimensions and consistency of the material to be handled, the lifters are made up of one, two, three, four or more suction pads.



**The suction pads can be rotated and adjusted** both longitudinally and transversally with a practical handwheels. This way the lifter adapts better to the various dimensions of the material to be lifted.

**The pads have individual shutoffs and can be used singularly.** Each pad has a vacuum entry cock positioned near to the operator controls with which is possible to close the flow of air and excluded the pad.

The dimensions of the pad vary based on the weight and dimensions of the material to be lifted.

**RIGHETTI lifters are available with various types of suction pads and with rubber gasket seals for various uses.**

## ■ SAFETY

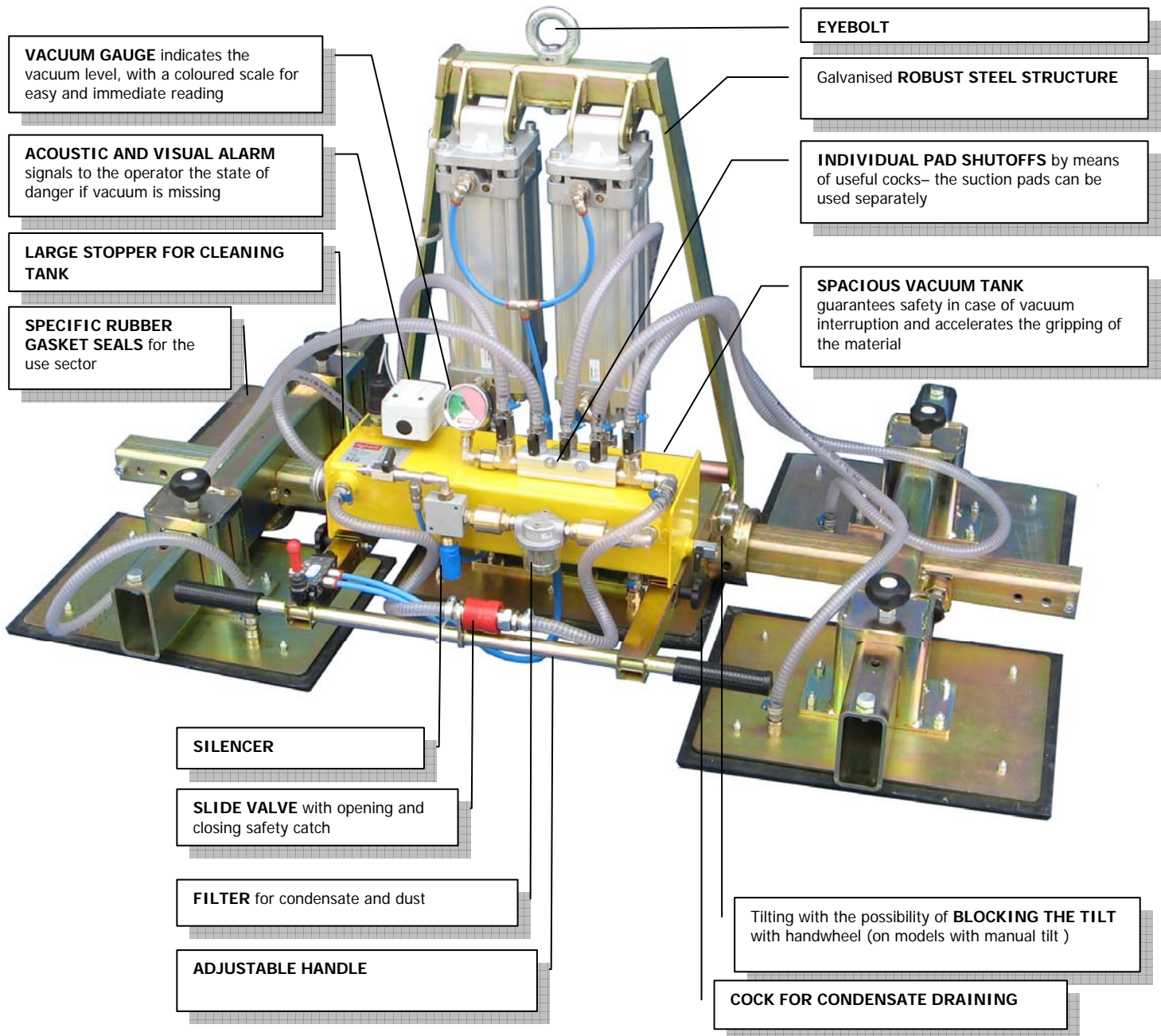
A series of components guarantee maximum grip safety.

The pads grip and release is carried out by activating a **double action slide valve** with safety against involuntary start.

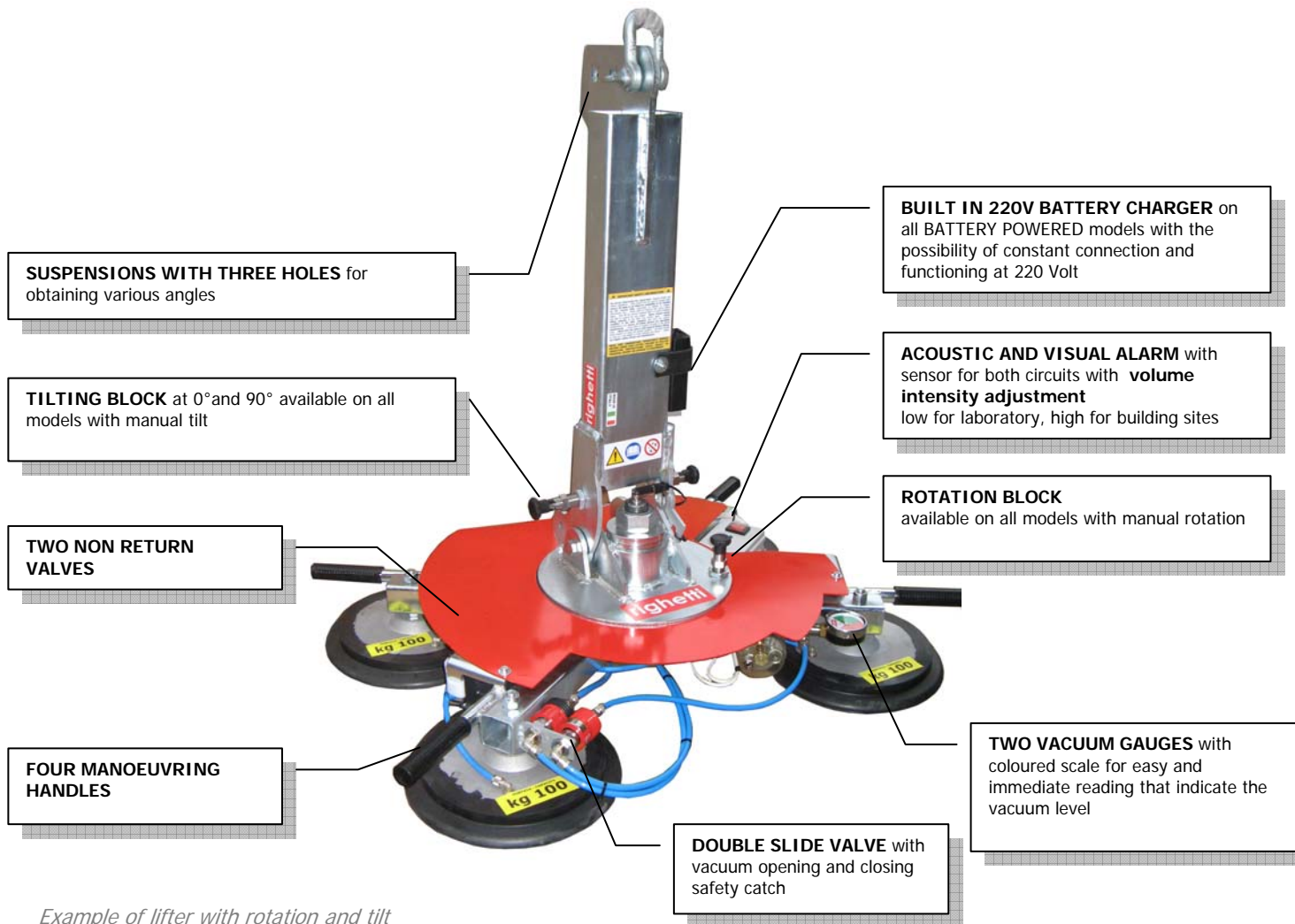
The pressure reached can be constantly controlled through a **vacuum gauge with coloured scale** installed on the vacuum circuit. The intervention of the safety device is adjusted by a **vacuum switch** mounted on the vacuum tank.

**Spacious vacuum tank**, as well as speeding up the grip, coupled with the **non-return valve**, guarantees that the load is not released immediately when a sudden interruption of the power supply is verified, guaranteeing the safety of the operator and of the moving material. The inside of the vacuum tank is treated against corrosion.

The suction cap is also provided with a self powered visual and acoustic alarm system which signals danger situations to the operator.



*Example of lifter with pneumatic tilt*



*Example of lifter with rotation and tilt*

All components used are from the best brand and of excellent quality, mostly available world-wide.



Our products are projected and realised in full respect of the Machine Directive and safety rules.

They are supplied with CE marking, Certificate of compliance and Use and Maintenance Book.



RIGHETTI vacuum lifters are entirely projected and manufactured in Italy. A further guarantee of the components quality and the availability of the spare parts.

## ■ INSTALLATION

The vacuum lifter is supplied assembled and ready for use.  
For all types of power supply, the connection and installation is very simple and fast.

### ■ compressed air models

it is enough to connect vacuum lifter to the compressor using the pneumatic hose

### ■ independent electric pump models

the pump has to be fixed where needed (ex. on bridge crane or near the jib crane), carry out the electric connection to the pump and the pump-vacuum lifter connection using the vacuum hose

### ■ models with on board (incorporated) electric pump

directly connect to the vacuum lifter with the electric cable

Lifter is supplied with Use and Maintenance Manual, where all necessary operations to start using the lifter are explained in detail.

## ■ HOW TO CHOOSE THE LIFTER?

When choosing a lifter adequate to ones requirements, certain criteria must be taken into account

- ✓ type of material to be lifted, its consistency, surface and porosity
- ✓ minimum and maximum weight and size of the material to be lifted
- ✓ type of power supply available
- ✓ use of lifter

## ■ THE PRESENT CATALOGUE

When going to print, contains the majority of the standard models we produce.

However, apart from the listed models, available are vacuum lifters with

- ✓ different lifting capacity
- ✓ different or made to measure pad sizes
- ✓ customised structure sizes
- ✓ various personalisations

We reserve the right to make constructive amendments.

**If you have not found the article that fully satisfies your requirements, please contact us.**

## ■ INFORMATION/QUOTATION REQUEST

### VACUUM LIFTER

Send by fax to nr. +39 045 67.532.67

#### ■ TYPE OF POWER SYSTEM REQUESTED

- COMPRESSED AIR
- ELECTRIC VACUUM PUMP Voltage to be specified\_\_\_\_\_
- with on board vacuum pump
- with independent vacuum pump      Vacuum pump also required?  yes  no
- BATTERY POWERED
- HAND PUSHED PUMP
- MECHANICAL

#### ■ TYPE OF STRUCTURE/MOUMENT

- HORIZONTAL – HORIZONTAL / fixed frame     VERTICAL – VERTICAL / fixed frame
- TILT 0°-90°       MANUAL       AUTOMATED
- ROTATION       MANUAL       AUTOMATED
- ROTATION AND TILT

#### ■ TYPE OF MATERIAL TO LIFT

Description of the material\_\_\_\_\_

Dimensions of the material MIN cm\_\_\_\_\_ x cm\_\_\_\_\_ thickness \_\_\_\_\_

MAX cm\_\_\_\_\_ x cm\_\_\_\_\_ thickness \_\_\_\_\_

Weight of the material MIN kg \_\_\_\_\_ MAX kg \_\_\_\_\_

Surface and porosity of the material\_\_\_\_\_

##### WATER PRESENCE

- none       low       medium       high

Other useful indications:

---

#### ■ YOUR DATA

Company name\_\_\_\_\_

Person to contact\_\_\_\_\_

Address (Postal code, Country)\_\_\_\_\_

Tel \_\_\_\_\_ Fax \_\_\_\_\_

E-mail\_\_\_\_\_