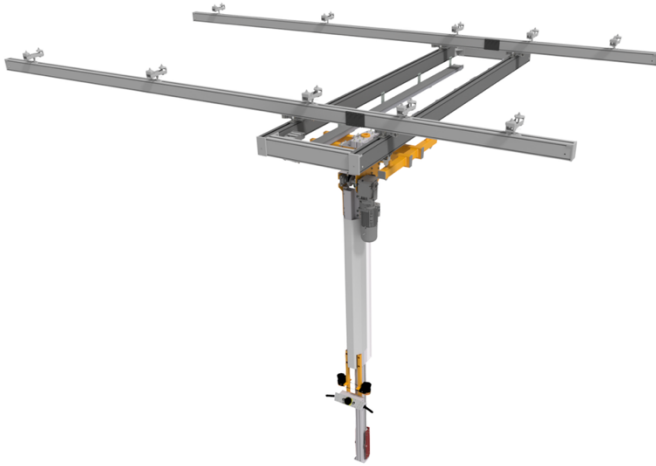


## LIFTIT VLR . THE VERTICAL LIFTING ROBOT WITH BIG RANGE, HIGH STABILITY AND EASY PROGRAMMABILITY.



The basic modular VLR is defined by twin rails (x -direction) that carry a traverse that effects the cross (y) direction.

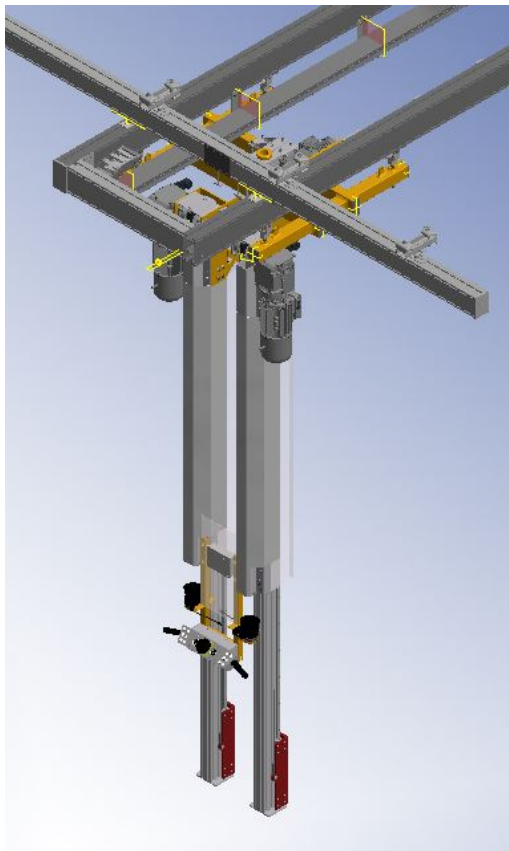
The single Z- mast is suitable for 250 kg Payload.

The modules can be rearranged to accommodate twin Z-masts for a payload of 500 kg:

OR

The modules can be configured for a twin traverse and 3- or 4 Z-masts

This way we can offer a solution for 250 kg up to 1000 kg payload.



## Specifications :

- 250-500-1000 kg payload
- Length (x direction) per requirements
- Width (Y direction) standard up 8m. Longer available on enquiry.
- Height (Z direction) standard up to 6 m of which 2.5 m telescopic.
- Tool rotation up to 350 degrees
- Speed: depending on safety environment 1.2 m/sec and 0.3 m/sec

## USP's

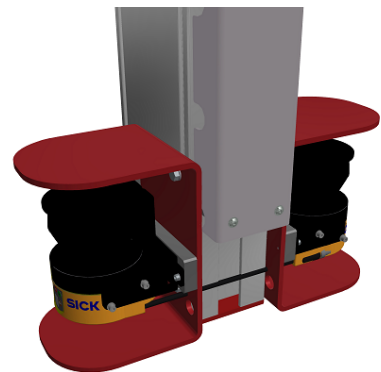
- Standard configuration assembly of proven components.
- Proven library of tooling and applications.
- 3-D active safety scanning option, allowing operator to share space with the robot.
- Teach in mode.
- Proven in 24-7 machine tending application.
- Interactive positioning mode for close-in accuracy.

## Safety:

Safety is a special concern with the VLS as the systems works fully automatically, transferring loads quickly and efficiently in a busy production environment. We have the option of a static shielding, which mechanically encloses the operation area, allowing access through gates that are protected by doors or light gates: once opened the system will go into safe mode.

## 3-D Active safety scanning:

As a replacement for mechanical enclosure, we can equip the system with a dynamic shield that detects any obstacles in its path and shuts down motion in two stages as an object nears: first a warning will sound and the system will go to slow movement, after which in second stage the system will stop all together. The safety of the system is monitored continually and any time a load is in the system, variables such as suction pressure or weight of the load are measured and recorded as prerequisite for a safe movement of product.



## Controls:

The control system for the VLS is as simple as we could make it. It is based on a motion controller, which is programmed to help you define positions and waypoints that must be reached . A teach-in option is available to help you teach positions for stock or machine



tending (loading and unloading) quickly by either a manual control on the tooling or by a teach-in pendant controller.

### Optional Interactive positioning:

Mostly we control the tooling via the drive systems that supply the movements. Using encoders and measuring systems we can position and re-position the robot tooling to within a few mm every time. Sometimes this is not sufficient, such as products on a pallet. In this case the products are not positioned exactly in the same place all the time. For this application, a vision system measures the location of the product. High resolution positioning for machine tending is also achieved using this interactive positioning method.

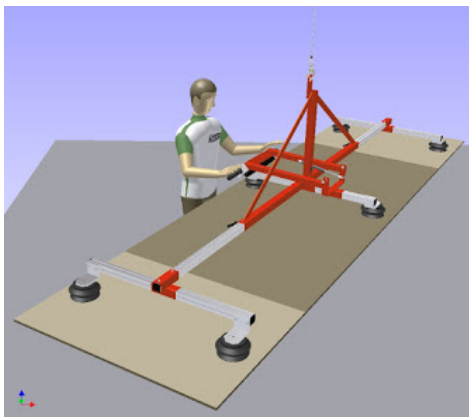
### Online maintenance monitoring and support

We deliver online support and maintenance for the unit with an optional predictive maintenance monitoring system. This depends on the operational environment and application.

### Applications:

- **Machine tending 24/7 automated system**
- **Production stock handling:** night-time loading, daytime unloading to production requirement
- **Handling of long stock storage system :** Wooden beams to Luxaflex or piping
- **Full automatic box storage system with outbound order assembly and order picking**

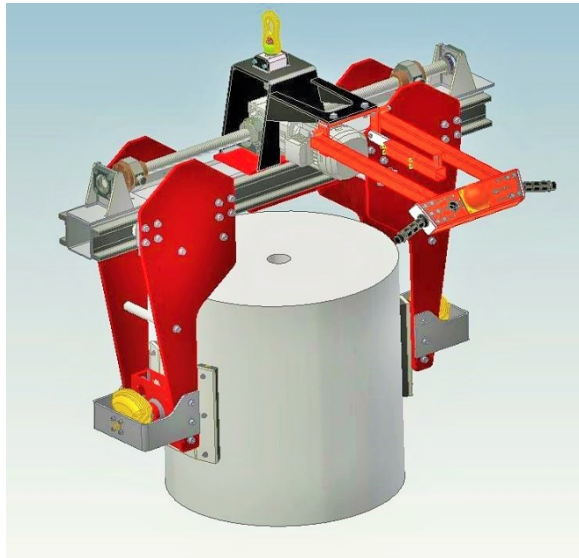
### Tooling:



We have a wide experience with handling tooling that is available to finish our VLR in a wide range of tooling:

Tooling for handling of any flat non porous surface. The tooling can be configured for a range of product sizes.

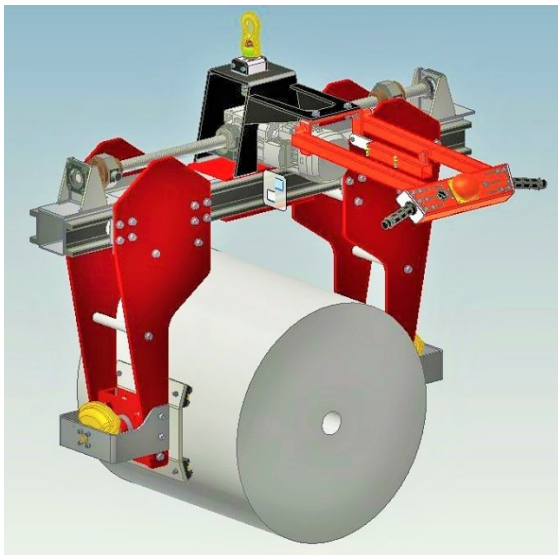
Drum handling tool with rolling action and optional manual control.



Roll tooling with push-off tool to transfer the roll to another shaft

Large roll handling tool up 1000 kg load. Large opening end flexibility in use.

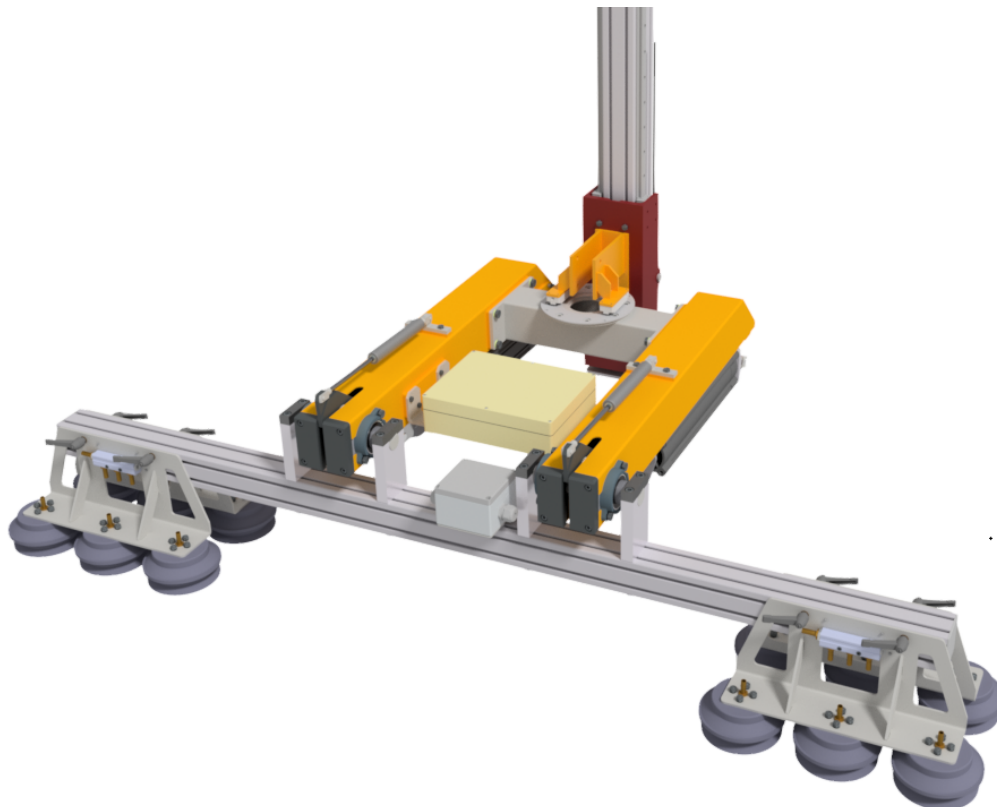
Drum or roll handling gripper. The grips are custom designed to the product.





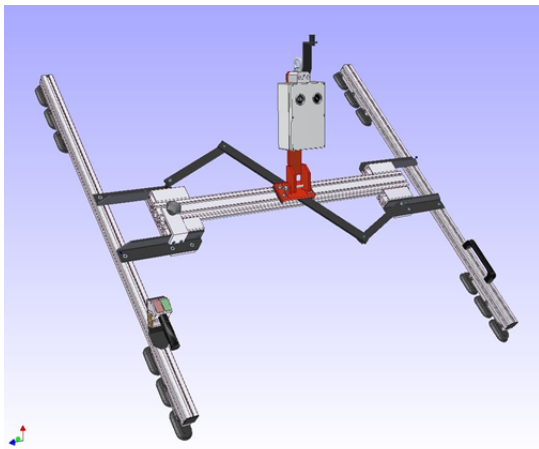
magnetic tooling can be configured with a range of magnets.

vacuum tooling with a 90 degree roll over option





vacuum tooling for horizontal approach. Optional teach in on manual control.



Parallel adjustable suction gripper.



Tooling for stacking bags



### **Project layout: Machine tending and stock warehousing.**

Combination of machine tending and automated warehousing. Various sizes of rolls are stored in a designated area ready to be loaded onto use in a 24/7 production setting. The tooling is equipped with a roll push-off option to ensure that the roll is transferred onto the working shaft of the machine. This machine tending robot will typically be equipped with a vision system for accurate interactive positioning.

