



**Binar  
Handling**

Part of the **SCHMALZ** Group

Lifting  
beyond  
gravity

# Made in

MAYBE IT'S THE AIR THAT WE BREATHE, the vast open lands, or the freedom to roam. Maybe it's the harsh climate, the pitch-black nights of winter or the endless days of summer.

Maybe it's our Scandinavian roots, maybe not. But we do have a different way of doing things up here. You see, here in the north, we don't let the force of nature keep us grounded. Instead we thrive from it. Using it as a spring board to elevate our innovation and challenge the law of gravity itself.

That's why we are able to create lifting technology that effortlessly floats through the air. And why our dream of creating the most ergonomic and efficient device on the market never stayed just a dream.

Maybe it's a matter of attitude. Maybe we are truly beyond the laws of nature.

Beyond gravity.

1979



Kahlman Innovation is founded with the focus on development and innovation

1988



First delivery of a fully developed Quick-Lift

2004



Kahlman Produkter, (former Kahlman Innovation) is incorporated in to the Binar family

2006



Subsidiary established in Nantes, France

2010



Kahlman Produkter moves to new adapted facilities in Trollhättan

2011



Kahlman Produkter is renamed to Binar Quick-Lift Systems

2012



Subsidiary established in Kassel, Germany

2013



Binar Quick-Lift Systems is ISO 9001 and 14001 certified



# Sweden

*Helping people stay healthy  
at work since 1979*



It all started with a sailor on board a ship. When the chief engineer saw the sailors skills he encouraged him to pursuit a career in technical innovation. Kahlman Innovation was born with the aim of developing and perfecting production processes. And the idea of the Quick-Lift was developed a few years later. There, manufacturing grew significantly and Quick-Lift saw a demand on a global market. Design and development continued with Binar Handling with head office in Trollhättan.

The company is at the forefront when it comes to material and technological innovation. Today, there are five locations around the world, that in the spirit of the original idea, help people avoid workplace injuries due to heavy lifting.

2014



Release of module built control handle, providing extended functionality

2015



Release of new designed manipulator arm made of Ultra High Strength Steel (UHSS)

2017



New digital platform: We help people stay healthy at work

2019



Subsidiary established in Shanghai, China  
Release of NEO 30  
BQLS is renamed to Binar Handling

2020



Subsidiary established in Istanbul, Turkey  
Release of Quick-Lift Rail 600i

2021



Global release of Ergo Glass end effector

2022



Binar Handling becomes part of Schmalz Group



2024



Binar Handling QLA 100i FOOD is launched

# Elevating facts of Quick-Lift

## The intelligent extension of the human arm

Our goal has always been to create an extension of the human arm. With immediate response, the Quick-Lift effortlessly lifts up to 600 kg while maintaining precision and control.

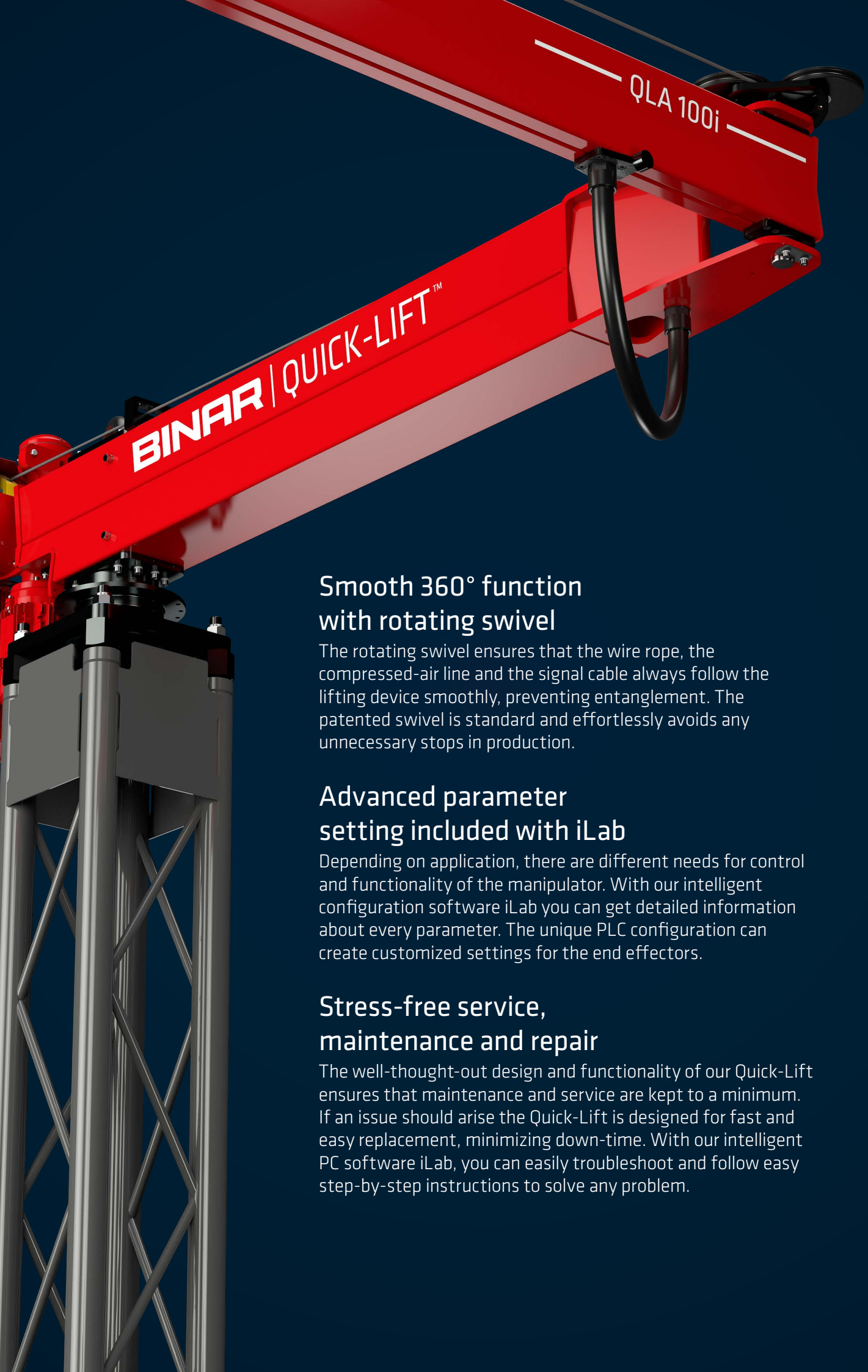
## Precision manoeuvring by the touch of your hand

Our ergonomic control handle converts the movement of your hand into electronic signals. You only need to move the handle up or down a few millimeters to raise or lower the goods. The lifting device is literally an extension of the human arm.

## Hands-on control with auto balance (float mode)

Auto balance (float mode) allows the operator to control the up and down movement by moving the lifting object up and down instead of using the operator control handle. The auto balance is used for exact positioning and precise placing (landing) by the touch of the operator hand providing control beyond gravity.





## Smooth 360° function with rotating swivel

The rotating swivel ensures that the wire rope, the compressed-air line and the signal cable always follow the lifting device smoothly, preventing entanglement. The patented swivel is standard and effortlessly avoids any unnecessary stops in production.

## Advanced parameter setting included with iLab

Depending on application, there are different needs for control and functionality of the manipulator. With our intelligent configuration software iLab you can get detailed information about every parameter. The unique PLC configuration can create customized settings for the end effectors.

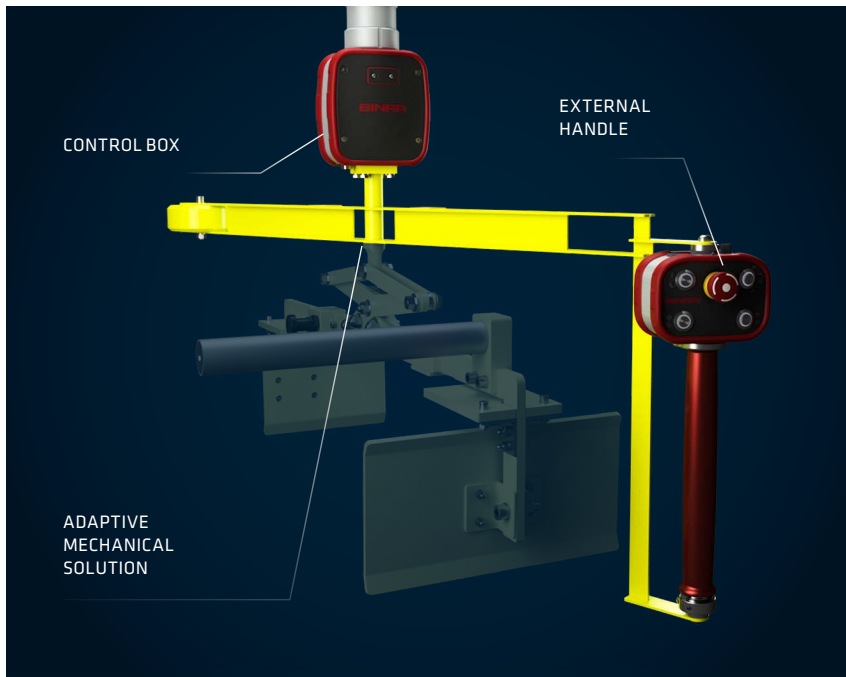
## Stress-free service, maintenance and repair

The well-thought-out design and functionality of our Quick-Lift ensures that maintenance and service are kept to a minimum. If an issue should arise the Quick-Lift is designed for fast and easy replacement, minimizing down-time. With our intelligent PC software iLab, you can easily troubleshoot and follow easy step-by-step instructions to solve any problem.



# Smart way to handle things

Our grip-friendly control handle converts your hand's movement into electronic signals. Only one millimeter displacement of the grip is needed up or down, to raise or lower the material. The lifting device is literally an extension of the hand and arm and requires minimal movement to lift up to 600 kilos with compliance and highest precision.



**THE CONTROL BOX** in combination with any external handle effortlessly handles large and heavy objects. The external handle comes in three lengths and gives full ergonomic flexibility. The adaptive mechanical solution controls any type of mechanical end effector.



**PLUG AND PLAY SOLUTION** for controlling cylinder end effectors.



**ADAPTIVE MECHANICAL** solution to control any type of mechanical end effectors.



**PLUG AND PLAY PNEUMATIC** solution for controlling clamping end effectors.



**PLUG AND PLAY VACUUM** solution for controlling various suction cups.

## Quick-Lift Control Unit

Our ergonomic control handle converts the movement of your hand into electronic signals.

You only need to move the handle up or down a few millimetres to raise or lower the goods. The lifting device is literally an extension of your hand and arm, and minimal hand strength is required to lift up to 600 kg smoothly and with the highest degree of precision.

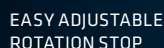
The control handle is available in several different configurations, and there is also a configuration where it can be split into two parts so that the operator's work posture is more ergonomic even when using large end effectors.

|                            |                                                                                            |
|----------------------------|--------------------------------------------------------------------------------------------|
| Instant precision          | Great low speed functionality                                                              |
| Intuitiv interface         | Error reporting on handle                                                                  |
| Non drop                   | Supervises the weight of the end effector, ensuring that the operator never drops the load |
| Stop up                    | Supervises that the lifted object is gripped properly and limits lifting movement          |
| Programmable speed         | Monitor load and adjust speeds depending on load case                                      |
| Auto balance (float mode)  | Allows operator to move load directly on lifting object, no push button activation needed  |
| Programable positions      | iLab3 provides possibility to define top and bottom position                               |
| Dead mans grip             | Quick-Lift stops once operator let go of control handle                                    |
| Input / Outputs            | Open inut and outputs for easy customization                                               |
| Adaptiv load handling      | Quick-Lift automatically, without any settings, adapt to any load in the hook              |
| iLab3                      | Quick-Lift always delivered with intuitive and self explanation parameter setting program  |
| Double command             | Function for increase safety                                                               |
| Overload protection        | Quick-Lift does not lift above rated capacity                                              |
| Power loss protection      | Fail safe bracking system in case of power failure                                         |
| Quick-Start (installation) | Setup on handle                                                                            |



# Strong arms in a light way

The Quick-Lift arm model line includes electronic lifting capacity up to 300 kg. Our arms made of ultra high strength steel give you the lightest and strongest solution, combining productivity and ergonomic smartness. By mounting the Quick-Lift Arm in the ceiling, on a pillar or on the wall you also create a flexible, safe and ergonomic work environment when there is limited floor space.

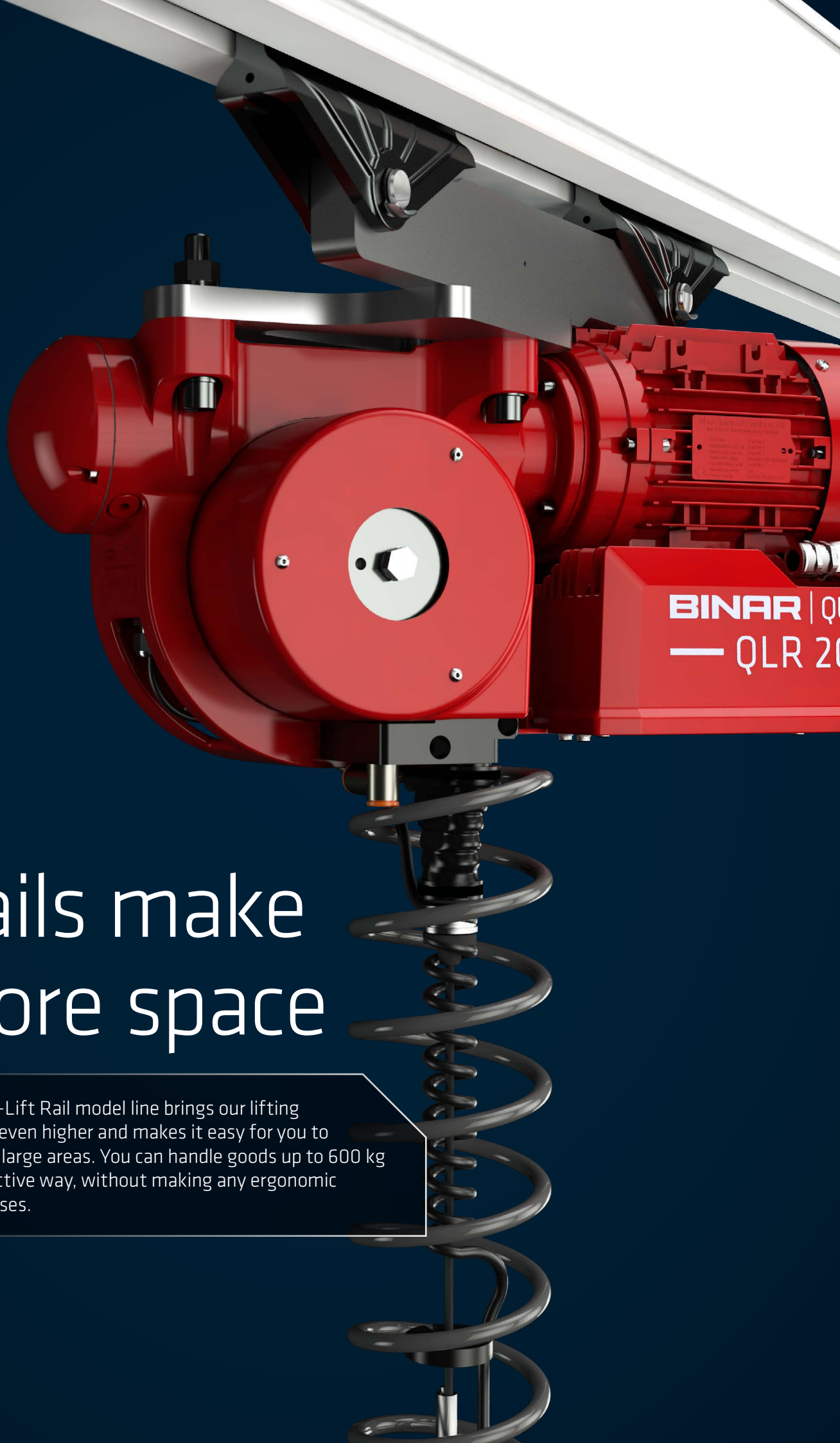


## OVERHEAD MOUNTING SAVES WORKSPACE

**STRONG, TALL  
AND FLEXIBLE  
RIGHT OUT OF  
THE BOX**

POSITIONAL AND  
BUTTON CONTROLLED  
BRAKES ARE  
OPTIONAL

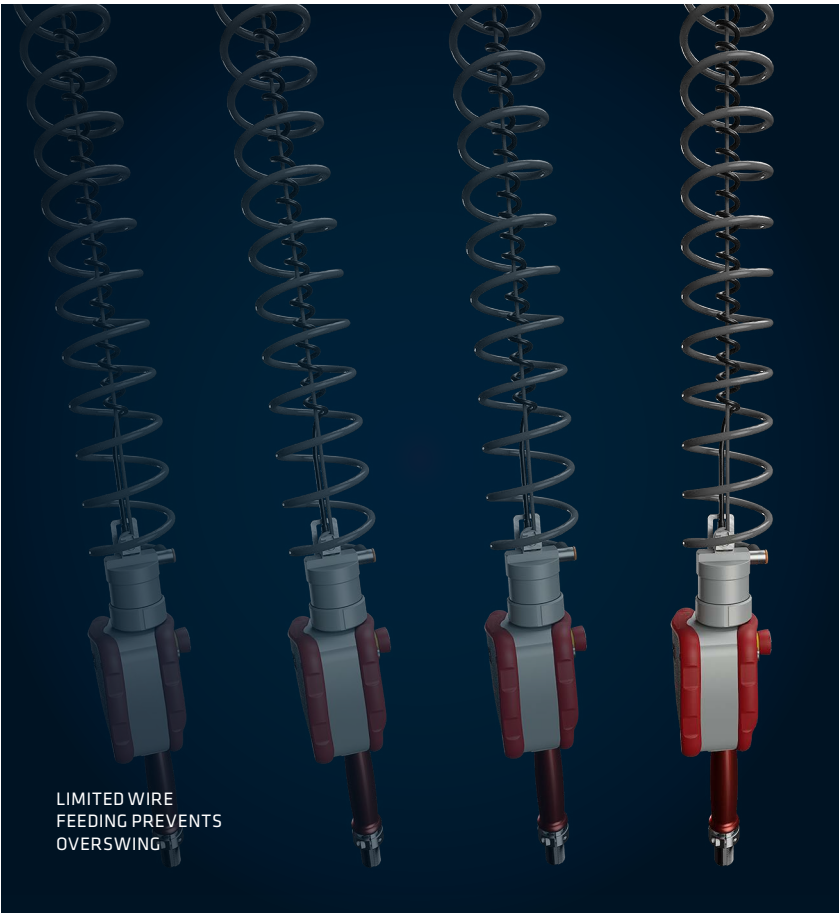
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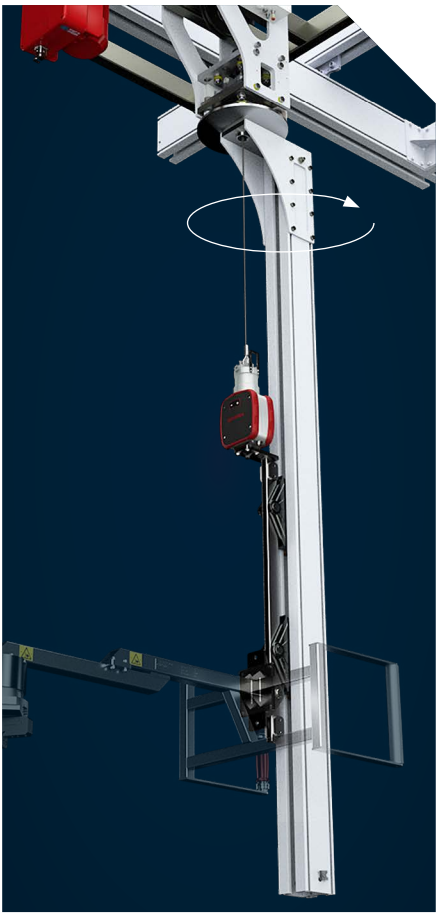
**BINAR** | QLR 20

# Rails make more space

Our Quick-Lift Rail model line brings our lifting expertise even higher and makes it easy for you to work over large areas. You can handle goods up to 600 kg in an effective way, without making any ergonomic compromises.



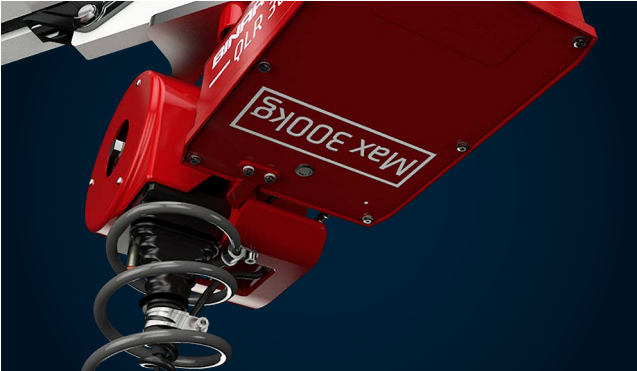
TO ENSURE OPTIMAL ERGONOMICS, the wire rope feeding is limited during movement of rail system.



WHEN NEEDED, a torque application is available.



OPTICAL SENSORS adjust the movement with exact precision.



HEAVY LOADS (up to 300 kg) are effortlessly lifted by the slightest movement from the operator.

## Quick-Lift Rail

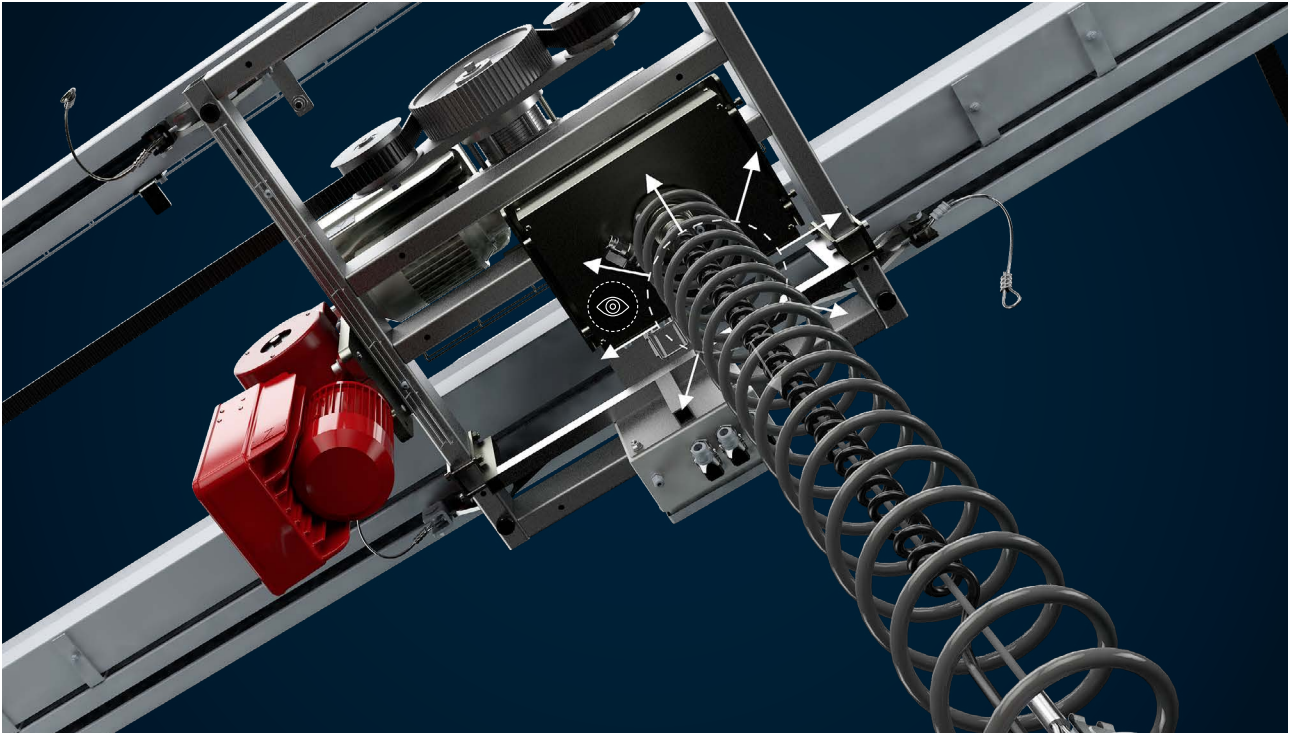
Our rail solutions are available in Quick-Lift Rail (QLR) and Quick-Lift Driven (QLD). Quick-Lift Rail is a rail-mounted equipment, freeing up floor space. Manual movement in the X and Y axes makes it easy to work over large areas. Vertical lifting is very smooth when using our precision control handle. Few moving parts keep service to a minimum.

| Technical Specification       | QLR 50i                  | QLR 125i    | QLR 200i    | QLR 300i    | QLR 600i     | QLRT        |
|-------------------------------|--------------------------|-------------|-------------|-------------|--------------|-------------|
| Lifting capacity              | 50 kg                    | 125 kg      | 200 kg      | 300 kg      | 600 kg       | 350 Nm      |
| Weight                        | 25 kg                    | 25 kg       | 41 kg       | 41 kg       | 65 kg        | 140 kg      |
| Stroke length                 | 2,7 m                    | 2,7 m       | 2,7 m       | 2,7 m       | 1,4 m / 2,4m | 2,7 m       |
| Overload protection           | Standard (for all units) |             |             |             |              |             |
| Auto balance                  | Standard                 |             |             |             | No           | Standard    |
| Stop and go - pneumatic brake | Optional (for all units) |             |             |             |              |             |
| Power supply                  | 230V +/-10%              | 230V +/-10% | 230V +/-10% | 230V +/-10% | 230V +/-10%  | 230V +/-10% |

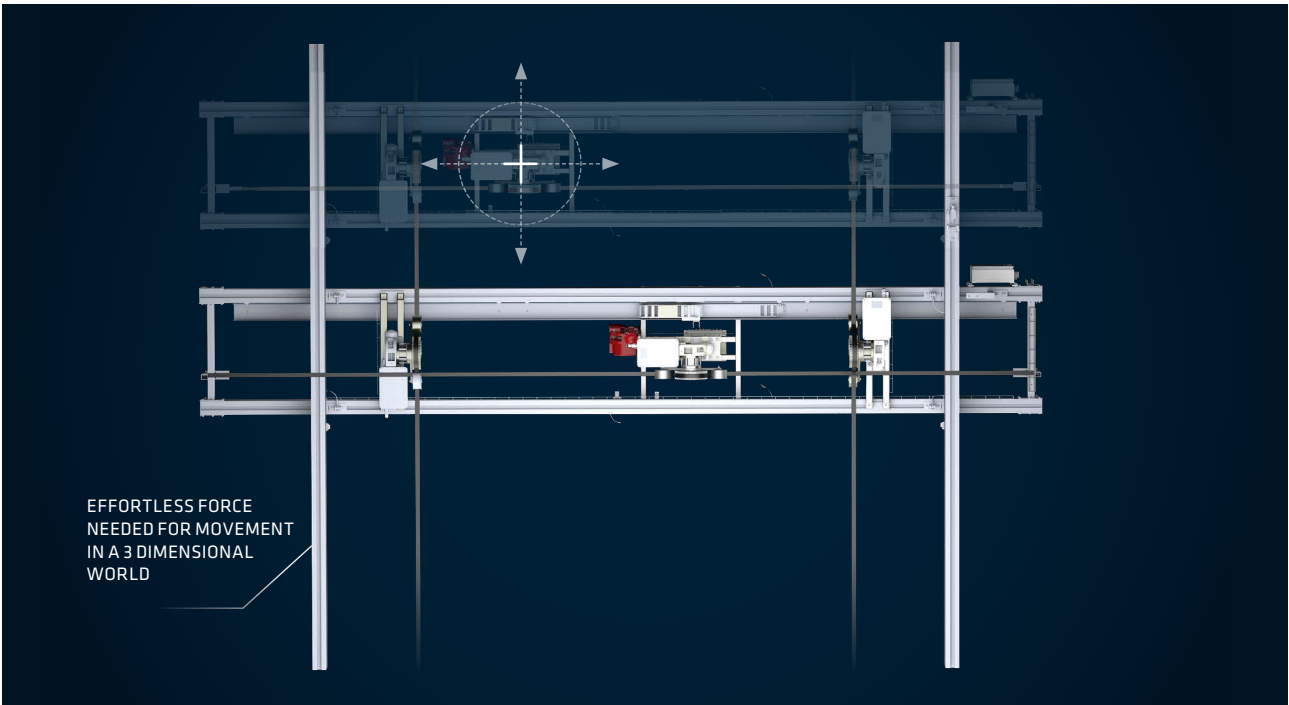


# Let the motor do the work

The rail system Quick-Lift Driven is a unique, motorized lifting device that easily covers large areas horizontally, with a lifting load up to 300 kg. It is an excellent versatile system for production lines, as well as for working at various stations simultaneously.



OPTICAL SENSORS for wire angle detects slightest movement from the operator. Instant supervision of movement compensates and prevents any overswing.



THE DOUBLE RAILS ENSURE SEAMLESS MOVEMENT between the X and Y axes, following even the most minor movements of the operator.

| Technical Specification | QLD 125i                             | QLD 300i |
|-------------------------|--------------------------------------|----------|
| Lifting capacity        | 125 kg                               | 300 kg   |
| Weight                  | <470 kg                              | <580 kg  |
| Stroke length           | 2,7 m                                |          |
| Working area            | Customized, Y<9m, X Project specific |          |
| Speed X and Y           | 1000 mm/s                            |          |
| Drive                   | Tooth belt                           |          |
| Power supply            | 400V +/-10%                          |          |

## Quick-Lift Driven

The smallest touch of the hand from the operator to the control handle is transformed to a smooth and well defined movement to the requested position. It offers a unique motor assisted operation in X, Y and Z direction. It supports the operator to maintain an efficient high speed over long distances without strain. Tooth belt drives assures accurate positioning and supervised movement. The QLD is mounted in a rail system installed directly to the ceiling or to a floor standing steel structure. The QLD is designed with a light weight frame and can easily be installed in both new and existing rail systems. The QLD is a optimal solution when working over large areas.

A Binar robotic end effector is shown against a dark blue background. The device features a red handle with a black grip, a red and black control box with the 'BINAR' logo, and a blue suction cup at the bottom. The control box has a red emergency stop button and several indicator lights. The handle is connected to a metal arm that holds the suction cup. The suction cup is currently attached to a blue circular base.

# A most intelligent touch

The end effector completes the ergonomic lifting solution and ensures that the lift is safe, precise and efficient. We have manufactured over 5,000 different pneumatic, magnetic, mechanical or vacuum powered end effectors that can easily be combined with tilting and rotation functions.



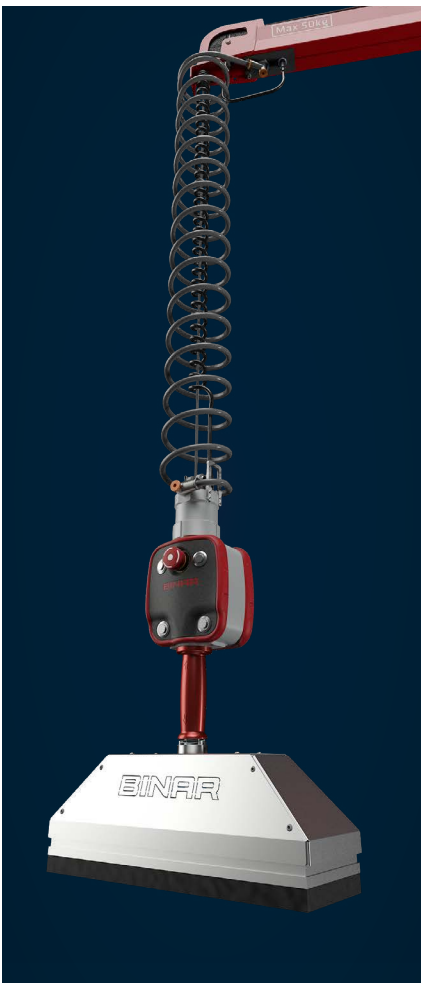
**THE QUICK-COUPLING** mounts directly to the control handle. Hooks and other mechanical devices can only be released when unloaded.



**THE PARALLEL GRIP**, which switches between grip and release automatically every time placed down can easily be adjusted for several applications.



**THE ADJUSTABLE SCISSOR GRIPPER** can be used for many different lifting objects. Preferable with the Quick-coupling.



**THE VERSATILE END EFFECTOR** is a multipurpose vacuum for flexible or irregular surfaces.



**THE FIXED MAGNET** can handle loads up to 110 kg. Equipped with sensor for StopUp to secure load.



**THE TILTABLE MAGNET** end effector can handle loads up to 275 kg. Designed with 2-way rotation to always secure parallel lifting force.



**THE AXEL GRIP** handles shafts or other round bar material. Equipped with sensor for StopUp to secure the grip.



**THE 2-CUP VACUUM** is designed for handling glass or other flat surfaces. Equipped with a manual tilt.

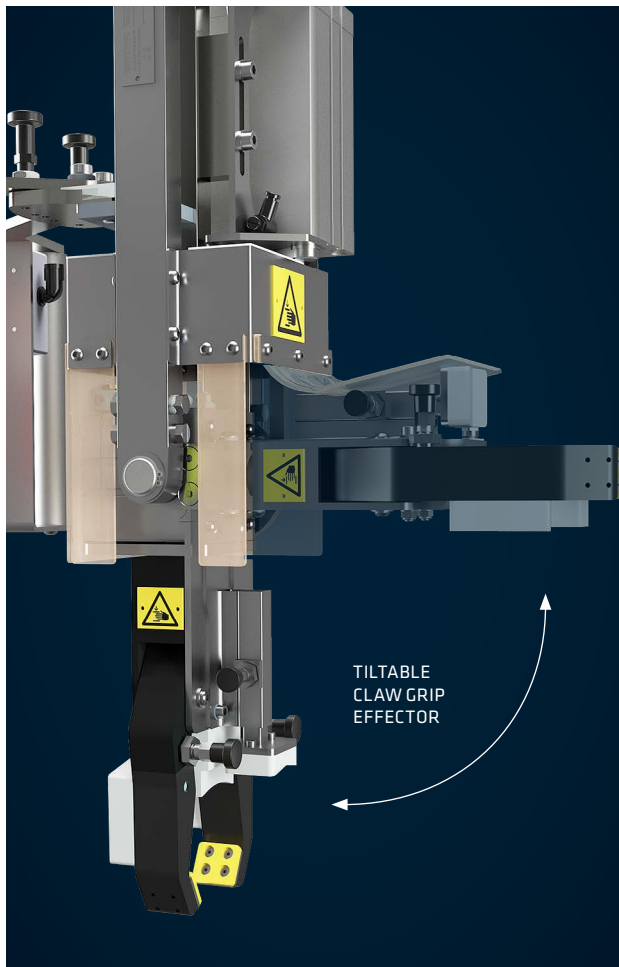
## Quick-Lift End Effectors

In addition to our standard end effectors, we design special solutions entirely adapted to each item being lifted. The end effector completes the ergonomic lifting solution and ensures that the lift is safe, precise and efficient. Even when making our initial sketches, the end effector is a central part of the solution and can easily be combined with tilting and rotation functions.

A custom-built industrial machine, possibly a specialized press or cutting tool. It features a prominent red handle on the left, a white control box with 'AX2' written on it, and a complex assembly of metal plates, bolts, and a curved metal piece. The machine is set against a dark blue background.

# Customized is standard with us

Every problem has its solution. We are intrigued by the opportunity to come up with yet another intelligent customized solution for our clients. The way we go about it is optimizing the correlation of ergonomics and productivity in every step in the lifting moment.



THE DEMAND FOR A TILT ELEMENT of large shafts with various dimensions lead to the innovation of a tiltable claw grip effector.

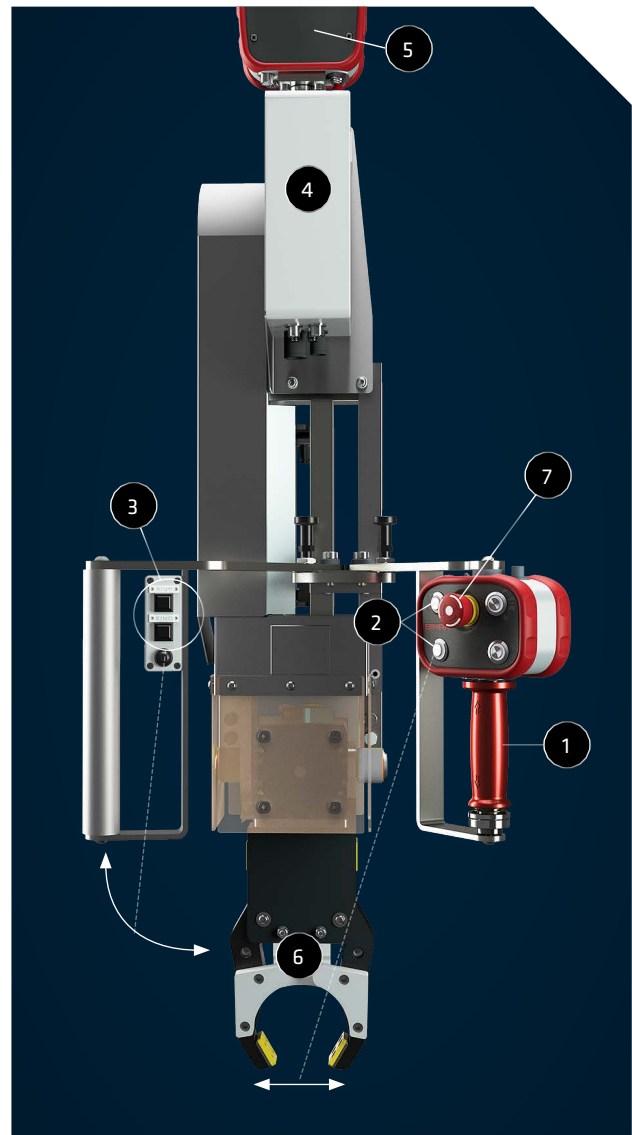
## CUSTOMIZED SOLUTIONS

# Shaft End effector for shaft handling

THERE IS A WEALTH OF ALTERNATIVES to customize your Quick-Lift. In this example, we customized the lift system to work for our customer that needed shafts to be placed vertically in a crate. We adapted the claws of the end effector to work with shafts of different diameters. The grip of the shaft is activated using a pneumatic cylinder controlled by the push button on the red handle.

THE SHAFTS HAD TO BE PICKED UP laying horizontal on a pallet and then placed standing in a rack. The forward tilt is performed using a pneumatic cylinder controlled by push buttons located to the left of the red handle.

WITH THE CONTROL HANDLE, operators move the end effector up and down and control grip and release of the lifting object. For safety reasons, release is only available when the shaft is put down.



## Operator interface

1. Red control handle for up and down movement of the end effector. Up and down movement is created with the Quick-Lift mounted in the rail system above.
2. Push button (2a) on lower left side controls pneumatic cylinder that provides movement (2b) of the claws gripping the shaft.
3. Push buttons (3a) on left side controls pneumatic cylinder that provides tilt (3b) from horizontal to vertical position of shaft.
4. Electrical box including 1x5/2 valve for grip and release and 1x 5/3 valve for tilt. Tilt movement is only possible once push button is pushed.
5. Control box with pneumatic and electrical swivel.
6. Inductive sensor securing that shaft is in correct position before Quick-Lift is allowed to lift.
7. Emergency stop push button.

A custom lift solution featuring a red hand control with a yellow emergency stop button and the 'SINARA' brand name. The control is connected to a silver telescopic boom with multiple joints and control boxes. The boom is mounted on a base with hydraulic cylinders. The entire system is set against a dark blue background.

# Leading by example

Sometimes a good example itself proves the point. In this case, we highlight our development process that includes analysing the customer's needs and creating a custom lift solution.

## CASE STUDY

# Precise positioning of fly wheels with the Quick-Lift Arm 100i

**WE WERE CONTACTED** by a Swedish manufacturer of car engines. Due to a new order, they required a new work station to be installed. The work station had to interface with other pre-existing work stations and meet the high safety and ergonomic demands that the manufacturer already had in place.

**THE WORK STATION WAS PLANNED** to mount fly wheels. These operations are very difficult and only the most precise IAD (Intelligent Aided Lifting) can handle such operations. Additionally, fly wheels are very heavy and handling of these involves crushing hazard. Because of this, placing the end effector on the fly wheel required the security function of double hand command to activate grip.

**THE QUICK-LIFT WAS MOUNTED** on a Quick-Lift Arm 100i with a 5 meter arm, to cover a larger work station and allow the operator to retrieve fly wheels from several different pallets.

**ONCE PICKED UP, THE OPERATOR TILTS** the fly wheel using the pneumatic tilt on the end effector. The operator then has to define if the fly wheel is for diesels or petrol, pushing the activated buttons P or D. Depending on which button is pushed, the bottom position of the Quick-Lift is defined, resulting in an automatic stop at the precise, desired position.

**THE FLY WHEEL IS THEN POSITIONED** and entered upon a round guide flange where it is secured with multiple screws and tightened with a torque wrench. Once the torque wrench is okay, a signal is given from the PLC to the Quick-Lift to release the lock and allow removal of the end effector. The operator then moves back and restarts the application.

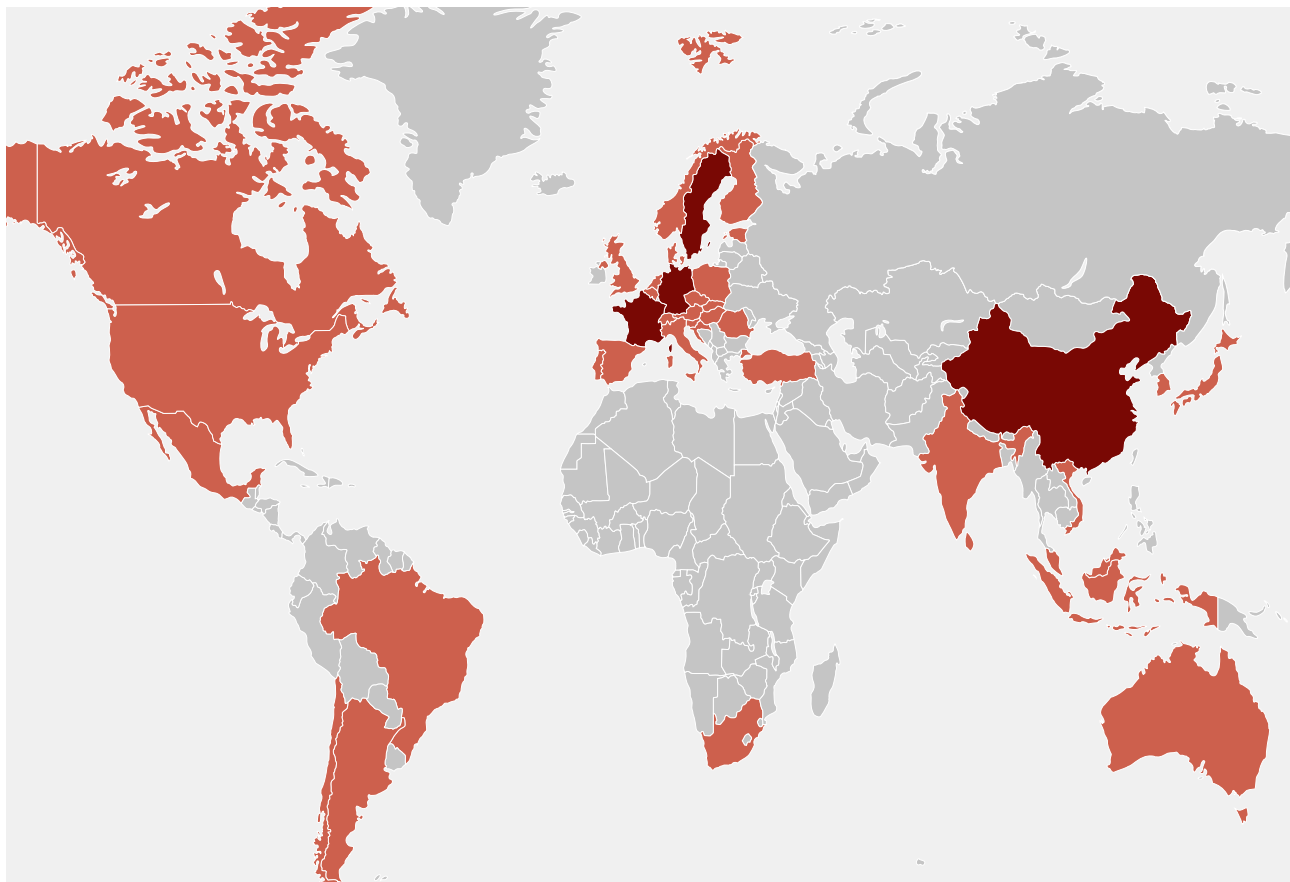


## iLab included

All Quick-Lifts are easily configured with our intelligent PC software iLab which comes as standard. With iLab, every parameter is easily adjusted, meaning every application can be customized to fit any need. iLab 3 comes with an event log which logs all actions in the system, providing a great base for maintenance and troubleshooting. The program is intuitive and offers helping instructions and explanations as well as proposed measures in the event of a halt. In addition, the program offers a tab that can create functionality in end effectors based on different conditions. These functionalities are restricted and only allowed when certain conditions are met.

# Talk to you soon.

We have representation all over the world. Please, call us or send us an e-mail.  
We are happy to give you an offer, beyond gravity.



Offices



Distributors

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## Sweden – Head office

Binar Handling AB  
Hedekullevägen 24  
Se- 461 38 Trollhättan  
Sweden  
☎ +46 (0) 520 - 47 40 00  
✉ [info@binarhandling.se](mailto:info@binarhandling.se)  
🏠 [www.binarhandling.com](http://www.binarhandling.com)

## Germany

Binar Handling GmbH  
In Den Wieden 3  
De- 34355 Staufenberg  
Germany  
☎ +49 5543 30379-0  
✉ [handling@binarhandling.de](mailto:handling@binarhandling.de)  
🏠 [www.binarhandling.com](http://www.binarhandling.com)

## China

BINAR HANDLING (SHANGHAI) CO., LTD.  
ROOM 101, 1 BUILDING, NO.20, LANE 455,  
MIAO QIAO ROAD,  
PUDONG, SHANGHAI, CHINA  
☎ +86 137 64311973  
✉ [info@binarhandling.com.cn](mailto:info@binarhandling.com.cn)  
🏠 [www.binarhandling-cn.com](http://www.binarhandling-cn.com)

## France

Binar Handling S.A.S  
8 Route De L'espace  
Fr- 44690 La Haie-Fouassière  
France  
☎ +33 (0)228 - 23 17 97  
✉ [info@binarhandling.fr](mailto:info@binarhandling.fr)  
🏠 [www.binarhandling.com](http://www.binarhandling.com)

## Germany

Binar Handling GmbH –  
Betriebsstätte Untergruppenbach  
Im Neugreut 8  
De-74199 Untergruppenbach  
Germany  
☎ +49 7131 64575-0  
✉ [handling@binarhandling.de](mailto:handling@binarhandling.de)  
🏠 [www.binarhandling.com](http://www.binarhandling.com)

## Contact worldwide

Find your local contact person:  
🏠 [www.schmalz.com/  
contact-locations](http://www.schmalz.com/contact-locations)

J. Schmalz GmbH  
Johannes-Schmalz-Str. 1  
72293 Glatten, Germany  
T: +49 7443 2403-0  
[schmalz@schmalz.de](mailto:schmalz@schmalz.de)  
[WWW.SCHMALZ.COM](http://WWW.SCHMALZ.COM)

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