These user instructions provide a general overview of how to use lifting tables; they do not substitute the device-specific operating instructions! When used correctly, our lifting tables offer the highest level of safety, prevent damage to property and personal injury and have a long service life.

Safety instructions

The lifting tables should only be operated, installed and maintained by: commissioned, qualified personnel (definition of skilled workers in accordance with IEC 364). The devices may only be operated, installed and maintained by qualified personnel, i.e. persons who – as a result of their training, experience, education and knowledge of the relevant standards and regulations, accident prevention regulations and operating conditions – have been authorised by the person responsible for the safety of the system to perform the necessary task and can recognise and prevent any possible dangers while doing so.

Safety components – condition upon delivery:

All our lifting tables are constructed in accordance with the valid standard EN 1570-1. As standard, the condition upon delivery of the safety components includes:

- Safety contact strip

positioned circumferentially beneath the platform. Prevents crushing and shearing hazards.

- Pipe rupture valve

closes as soon as the hydraulics lose pressure, thereby preventing the lifting table from lowering.

- Maintenance supports

Safety supports for maintenance work.

- Dead-man circuit

Raises or lowers only when up/down button is pressed.

- Emergency stop button

Lifting table stops as soon as the emergency stop button is pressed.

Changing the delivery condition

The design of the lifting tables may not be changed, e.g. by installing outside supplied parts, bending, welding, grinding, disconnecting parts, installing bores, removing safety parts or using attachments.

Intended use

The lifting table system is a power-driven lifting platform intended to raise and lower loads and is suitable for installation in an overall machine or lifting facility that is not ready for operation until it has been installed in a building or construction. The manufacturer of the overall machine shall conduct hazard analysis and ensure compliance with EC directives.

Function description:

The hydraulic lifting table is a lifting platform with hydraulic drive. The platform is raised by two hydraulic cylinders using a scissor system. The drive consists of a gear-wheel pump with a three-phase motor. The platform is lowered by opening the 2/2 directional control seat valve. The lowering speed is controlled by an integrated fine throttle valve. Open-circuit guards are installed in the hydraulic cylinders. The hydraulic power unit is fitted with a safety valve. The lifting table is equipped with an electric contactor control and a thermal motor safety switch. Foldable support equipment for maintenance work are attached to the scissors. A circumferential safety contact strip is attached beneath the platform. When activated, the contact strip interrupts the lowering procedure.

Special versions of the lifting table can be supplied with:

- Railing (e.g. to allow operating personnel to travel with the table)
- Protection against access from below
- Overload plate, etc.

Standard lifting tables in accordance with EN 1570-1 may not be used without extensive hazard analysis/type examination as:

- Permanently installed lifting tables that have a cab and travel to defined levels of a building
- Permanently installed lifting tables with a vertical lift of over 2 m that do not have a cab and travel to defined levels of a building
- Power-drive lifting platforms for disabled access
- Lifting tables as ground equipment in aviation
- Lifting tables for use on ships
- Lifting platforms that can be driven
- Vehicle lifting platforms (for vehicle maintenance)
- Lifting tables for fire fighting that can be driven
- Lifting tables that can be driven and used as a forklift, pallet truck or picking elevating truck
- Elevating truck that can be driven at speeds of over 1.6 m/s
- Shelf access equipment

- Lowering and raising equipment on platforms. If the lifting table is used (installed) with a fall height of over 3 m, hazard analysis and/or type examination in accordance with appendix IV of the Machine Guidelines must be performed at the responsibility of the manufacturer of the overall system.

The lifting table is not suitable for the following applications:

- Operation under difficult conditions (e.g. extreme climate, applications in refrigerated areas, strong magnetic fields)
- Operation subject to specific regulations (e.g. explosive atmosphere, mine)
- Handling loads with properties that could cause hazardous situations (e.g. molten metals, acids, radiant materials, particularly brittle loads)
- Hazardous situations that occur during manufacture, transport and installation
- Equipment that is attached to or replaces the load platform
- Installation in systems or machines, control of more than two control stations etc.
- Wireless control

Accident prevention regulations

The regulations applicable in the country of application must be observed. [1)]

EC Directive 2006/42/EC

BGR 500 Ch. 2.10 Lifting platforms

DIN EN 1570-1 Lifting tables

DIN EN 349 Safety of machinery, minimum gaps

DIN EN 294 Safety distances

DIN EN 60204 P1 and P32 Electrical equipment of machines

1) in the respective applicable version

Installation and commissioning
(See also EN 294 and EN 349)

During installation, the applicable regulations for buildings and safe use must be observed. Before installing the lifting table, the requirements must be met at the point of operation. Depending on the lifting table design, the assembly pit must be constructed according to the installation pit plan.

Before installing the lifting table, the requirements must be met at the point of operation. In the case of outdoor installation, it is essential that drainage with an oil separator (according to local construction regulations) takes place in accordance with the installation pit plan.

In the case of installation without an assembly pit, it is essential that safety measure are taken to prevent injury resulting from crushing and shearing points between the base frame and the scissors (e.g. sheet metal covering).

Instructions for use

- To avoid injury, safety shoes must be worn at all times!
- Standing under the lifting device is prohibited.
- Standing on the platform and travelling on the platform of lifting tables that are not set up for this purpose is prohibited.
- During operation, standing within the lifting table‘s range of movement is not permitted.
- Before and during operation, the safety functions (contact strip, limit switch, safety valves, etc.) must be checked at regular intervals.
- Safety devices may not be disabled or used incorrectly.
- Operation must be stopped immediately if defects are found.
- The lifting platform may not be loaded in excess of the permitted load capacity/load distribution.
- The load must be evenly distributed. If the load distribution is uneven, the load must be reduced (see graphic).
- Loads must be placed and secured on the platform in such a way to prevent unintentional position changes.
- The load is not permitted to overlap the platform.
- The lifting table and load must be observed for the duration of the entire lifting process.
- It is not permitted to climb up the lifting device or climb on the load.
- The control station must be arranged in such a way that the operator is unimpeded in using the controls and is not endangered by the load, movement of the lifting platform or parts of the platform and is a no risk of being hit should the load fall off.
- Lifting platforms may only be operated and controlled from the designated control stations intended for this purpose.
- Only persons who have been trained in the operation of the lifting platforms and who have proven their ability to do so to the facility operator may be permitted to independently operate lifting platforms. They must be commissioned with the operation of the lifting platform.
- If several persons are working on the lifting platform at the same time, a supervisor must be appointed.
- The operator must ensure that any movements of the platform do not endanger themselves or other people.
- When leaving the control station, the lifting table must be secured against unauthorised operation.
- For all work on the extended lifting table, the load must be removed from the platform and the supports engaged. Turn off main switch and lock.
- Only capable specialists who are familiar with the operating instructions and BGR 500 Ch. 2.10 as well as EN 1570-1 are to be commissioned with maintenance and repair work.
- Following extensive maintenance/repair work, the lifting table must be tested in accordance with EN 1570-1 Appendix C.

- Following repair work, tests must be carried out to ensure the device is working properly.
- The tracks of the rollers must be kept clean and free from foreign objects at all times.

Safety distances

The lifting table must be set up in such a way that crushing and shearing points between moving parts and between moving and stationary parts are avoided by means of sufficient safety distances.

The distances are as follows:

For fingers
a = 25 mm

For toes
a = 50 mm

For hands
a = 100mm

For arms and clenched fists
a = 120 mm

For feet
a = 120 mm

For the body
a = 500mm

To prevent risk of injury to operating personnel or anyone else, other measures can also be taken as an alternative to these safety distances.

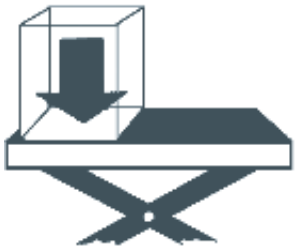
The following alternatives are recommended, although some of the measures on their own are not sufficient in certain cases:

- Covers
- Safety fences
- Deflectors
- Contact-less sensors/contact-reactive disconnecting devices
- Several control units that must be operated simultaneously. In places where the machine is wholly encapsulated by a secure protective cover or in places where it is „secure due to the installation position“, the specified safety distances are not required. If the machine is only partially encapsulated, the safety distances or an equivalent alternative is necessary on the other parts of the machine.

Load distribution

A

Evenly distributed
surface loading 100%



B

One-sided load distributed
on ½ of platform length 50%

C

One-sided load distributed
on ½ of platform length 30%

D

Corner loading distributed
on ½ platform length 30%

E

Rolling, centred load 50%
any load max. 30%

Consulting

To ensure that your new product, your lifting system or your turn-key system is tailored exactly to the planned application, we like to take enough time for consulting. Only if the specification of the tasks is 100% accurate can success be guaranteed for you and for us once the project has been completed. Thinking of the consequences in advance is what we understand a partnership to be. And we call it cost effectiveness. It is impossible to replace personal contact. Our service network guarantees short channels and continuous dialogue. Put us to the test. Make use of uncomplicated meeting scheduling via e-mail with the keyword ‚consulting'.

One call is all it takes: +49 (0) 8233/2121-888 or
e-mail: heben-foerdern@cmco.eu

Maintenance

Regular system checks prevent failure costs arising in the first place. In the areas Service and Safety, Pfaff-silberblau offers maintenance as well as checks in accordance with accident prevention regulations for all types of lifting gear, such as hand stackers, hoists, cable winches, spindle lifting elements, underfloor lifting systems and lifting jacks. These services also offered for systems and products made by different manufacturers. You decide yourself what your maintenance contract includes. Contact us!

One call is all it takes: +49 (0) 8233/2121-8150 or
e-mail: service.kissing@cmco.eu

Repair service

Good advice doesn't have to be expensive. If you have a technical question, simply call our experienced technical advisor. An insider tip is often all it takes to get the system up and running again in no time. It goes without saying that our Service team is available repairs and testing in-house or on-site at the customer's premises. Qualified service technicians solve complex faults directly on-site and ensure that unnecessary delays in your logistics chain are avoided.

One call is all it takes: +49 (0) 8233/2121-8150 or
e-mail: service.kissing@cmco.eu

Replacement part service

We maintain warehouse stock of the most common wear parts for all our product groups. Additionally, we have also put together replacement part sets for you that include the most important components, ensuring that, in normal cases, you have all the most important parts on-site within 48 hours. Contractual partners throughout Germany and our global branches allow for the shortest and fastest possible route for your replacement parts from Pfaff-silberblau.

One call is all it takes: +49 (0) 8233/2121-888 or
e-mail: service.kissing@cmco.eu

Movability is question of creative technology

People in motion

The point at which people's own strength is not sufficient to grip, move, lift and position loads is where the work of COLUMBUS McKINNON Engineered Products with the Pfaff-silberblau brand begins. And has done for 140 years – throughout which numerous generations of our engineers have accompanied the industry development of lifting and handling technology with increasingly sophisticated, complex technical methods. And not just that: they have always been one step ahead. Quality, safety and service are fixed components of our corporate philosophy. And the consequence is just as logical: certification in accordance with DIN EN ISO 9001:2008 by DQS.

A flexible size

Our medium-sized company has many advantages for our customers. We are large – high-capacity but not restricted by bureaucracy. We are small – maintain short routes in and outside the company. That saves time and money. Or to use the customers' terminology: flexibility, proximity and speed. The corporate divisions motion technology, lifting and material handling equipment as well as rail technology are not hermetically separated from one another. Why should they be? Important information affects all aspects and knowledge transfer is valuable capital for industry orientation.

It is our duty

Product quality is important but not everything. We don't forget what this success is based on every day: people with their knowledge and nature that lends us the raw materials. Because we take our responsibility so seriously, we have committed ourselves – as part of a so-called continuous improvement programme (CIP) certified in accordance with ISO 9001 – to do our utmost to preserve regenerative raw materials and energy sources and to reduce the deployment of environmentally unfriendly materials by at least 10% within one year.

Welcome to the world of „lift, turn and move". Follow this signpost through COLUMBUS McKINNON Engineered Products. And we are sure you'll find many ways of making your own activities even more efficient – and more convenient, of course. We take pleasure in inspiring you with new ideas and a new dimension of safety at work.

Look forward to discovering the COLUMBUS McKINNON Engineered Products company and the Pfaff-silberblau brand:

- Lifting and material handling equipment
- Motion technology
- Rail technology

The world of „lift, turn and move" is open around the clock.

Reg.-Nr. 054396 QM08

Just one click to our Internet page at
www.cmco.eu/pfaff-silberblau