



# JEMA LIFT USER GUIDE

## LIFTING TABLES



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## Introduction

### **IMPORTANT!**

Before use of the product this manual must be thoroughly read. A complete reading of this manual is necessary to ensure the user against accidents and also to make the user aware of the full potential of the product.

Our products have been designed to be safe and reliable working tools. Accidents can be prevented by following the safety regulations for the product. An accident should never happen due to lack of knowledge about safe use of the product!

If nothing else is indicated all JEMA LIFT lifting tables are CE are produced in accordance with applicable CE directives and meet the demands in the European legislation, namely The Danish Machinery Directive, EN 1570 standard for lifting tables, EN 1495 standard for fixed placed lifting platforms, EN280 for transportable working platforms and EN12158-1 standard for building hoists for goods.

The standards specify safety demands for lifting tables used for lifting/lowering goods alone or goods and people. These demands must be met to ensure a safe transport up to a vertical movement up to 3.0 m.

### **IMPORTANT!**

If nothing else is indicated our products are produced for lifting/lowering goods and not people.

## General instruction for owners and users

It is the responsibility of the owner of the product to ensure that the user is properly instructed in the use of the product according to the individual task at hand.

JEMA LIFT products are only to be operated by instructed personnel with the necessary knowledge about the maintenance of the product. The use, inspection and maintenance of the lifting table are vital to safety regarding the table.

### **IMPORTANT!**

Avoid dangerous situations.

- Prior to usage all safety functions must be checked.
- Check the surrounding area for potential danger.
- Only use the lifting table for the indicated tasks.
- Is the lifting table tested and CE marked?
- Is the condition of the lifting table ok?
- Check the load and placement of it.
- Handling of dangerous goods.
- Objects above the lifting table.
- Is the floor below the lifting table proof against the load?

**IMPORTANT!**

If installed in a public area – especially where children can get close to the product, the operator must ensure that it is not possible to access the safety zone. This could be ensured with safety shields.

**Usage of lifting tables**

Usage of JEMA LIFT products outside the conditions specified as normal use will be considered misuse and can cause a decrease of the lifting capacity. The warranty may no longer apply to products with defects resulting from misuse.

If nothing else is specified by JEMA LIFT the product should only be used indoors and in a dry and temperate environment.

An increase of the platform of the lifting table, an unbalanced load, point load or horizontal impact is considered misuse and must be approved by JEMA LIFT. If it is not approved the warranty will no longer apply.

We recommend that every working area is analysed and a risk evaluation is prepared according to the Danish Machinery Directive.

This user guide must always be accessible near the product.

The use of JEMA LIFT lifting tables covers a wide range of applications. They are mainly produced for lifting and lowering loads evenly distributed on the platform. Typical use of the lifting table could be palletizing objects in machines, shifting of level in internal transport systems, assembly tasks, maintenance of machinery etc.

Lifting tables are built to be placed on a stable and even foundation. They can be placed directly on the floor or lowered into a pit. They also come equipped with a mobile sub frame and can thereby be transported on wheels.

We always recommend that the lifting table is fixed to the floor during installation. All lifting tables have a minimum of 4 holes in the sub frame meant to be used for fixing to the foundation.

For further information regarding usage and safety functions of the lifting table refer to the EN 1570 standard.

## Safety regulations

The maximum lifting and lowering speed is 0.15 m/sec.

Employer and employee must make sure that risk of trapping does not exist during the installation of the lifting equipment. The employer must secure that lifting equipment and machines are operated by instructed staff, as well as inspection and maintenance of the equipment must be done regularly.

Following safety regulations must as minimum observed:

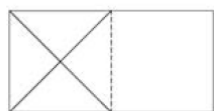
- The maximum lifting capacity of the equipment must not be exceeded.
- The lifted objects must be securely fixed during the movement.
- The safety frame must work properly. It must be tested regularly.
- Warning signs must be visible.
- If any mechanical deformations are on the lifting equipment, the equipment concerned must be inactivated immediately.
- The main switch of the voltage must be placed in an accessible place.
- Lifting equipment for outdoor usage must be provided with a non-slip platform.
- For lift of persons working platforms must always be provided with hand rail, non-slip platform, etc.
- Risk of trapping! No admittance under the platform during usage of the equipment.
- Never let moving parts get close to surrounding objects. The EN 294, 349 and 811 standards indicates safety distances.
- JEMA LIFT products are never to be placed in potentially explosive areas.

## Load

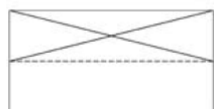
The maximum load implies an evenly distributed load. According to the EN 1570 standard the distribution of the load has the following effect on the maximum load:



100 % of the maximum load evenly distributed on the total platform.



50 % of the maximum load distributed over half of the length of the platform.



33 % of the maximum load distributed over half of the width of the platform.

If another distribution of load is agreed up-on this is evident from the order documentation. Technical data regarding each lifting table is also evident from the order documentation.

## Type specification

Using the TM-S-1300800T2 as the base model the following example shows what the type specification contains and how it is constructed:

S-1300800T2	JEMA LIFT lifting table Standard model Single scissor Platform dimension: 1300 x 800 mm. Capacity: 2000 kg. evenly distributed
S-DVS1300800T2	JEMA LIFT lifting table Standard model Vertical double scissor Platform dimension: 1300 x 800 mm. Capacity: 2000 kg. evenly distributed
S-DHS2600800T2	JEMA LIFT lifting table Standard model Horizontal double scissor Platform dimension: 2600 x 800 mm. Capacity: 2000 kg. evenly distributed

The type specification for specially designed lifting table can be made from the same system. Instead of the "S" indication a "SP" indication is used e.g. SP-60001500T4.

For custom built lifting tables meant for intensive use we employ an "X-" model indication e.g. X-1200900S3T3.

For our Low-cost product range is we use an "L" indication.

The "S3" indication states that it is a 3-scissor lifting table.

### NOTE!

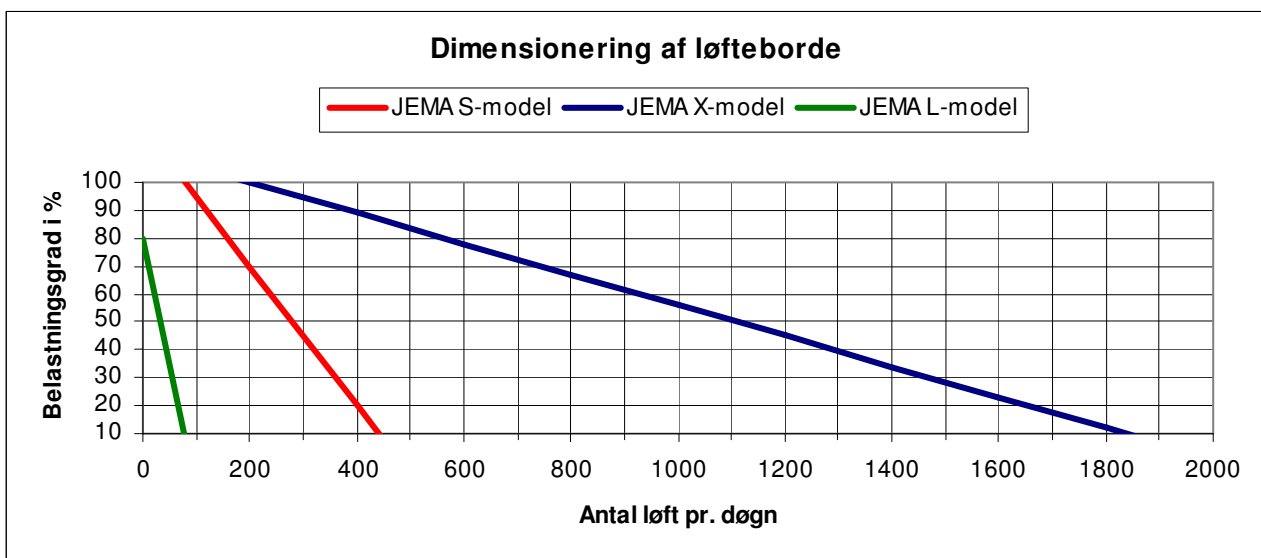
The platform dimension states the size of the platform with reference to the underlying scissor. The size of the platform can be increased according to the wishes and needs of each customer. The exact specifications are evident from the order confirmation.

## Choice of lifting table

When choosing a lifting table it is very important to consider all imaginable situations. Lifting tables are useful for many different purposes, and in different environments. It would be impossible to manufacture a standard model which takes all these situations into account. Therefore it is very important to work out a thorough requirement specification before ordering to ensure that the acquired lifting table is constructed correctly for its purpose.

JEMA LIFT standard lifting tables are constructed with the purpose of working long and reliable under "normal" usage. If the lift table is meant for intensive use with heavy loads in several shifts with high lifting and lowering speed or under other difficult conditions, the solution should instead be a specially designed lifting table constructed for the purpose. JEMA LIFT lifting tables for intensive usages are named the X-model.

The following diagram indicates the recommended load at a certain number of circles pr. day for the JEMA LIFT standard S-model, the X-model for intensive usage and the Low-cost L-model.



## Important questions when choosing model and specifications!

Function?	Lowest height - Lift movement - Maximum height - Platform length - Platform width - Power unit integral or remote - Electrical distributions.
Capacity?	Maximum load - Weight distribution - Shock loads - Unbalanced loads - Point load - Driving with truck or pallet van.
Intensity?	Speed - Frequency - Number of cycles per day - Incorporation in automatic systems.
Accuracy?	Limit switch upper/lower - Interval stop - Should the height of the table remain the exact same for a long time?
Environment?	Outdoor usage - Pit installation - Damps - Heat - Chemicals - Special demands.
Safety?	Risk of explosion - Slip protection - Risk of tipping - Control box - Safety frames - Risk of trapping - Private or public installation.
Ergonomics?	Are there any extra accessories which can improve the working conditions furthermore e.g. a platform being able to turn or wheel supporting of the structure?

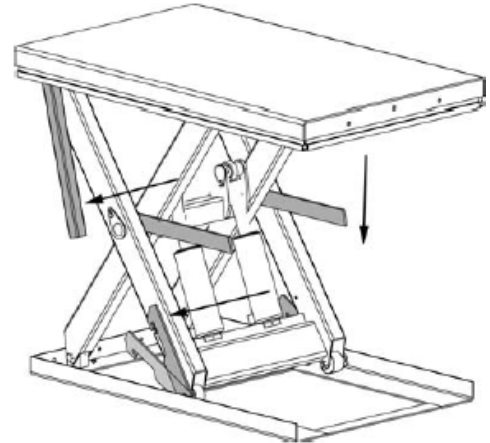


## Unpacking and installation

Electrical installation of the lifting table must always be done by an authorized person. The main current must be provided with a lockable main switch.

### **IMPORTANT!**

*During installation, repairs and maintenance, the lifting tables must always be locked in the top position with the mechanical service locks. The lifting table must always be unloaded in these situations.*



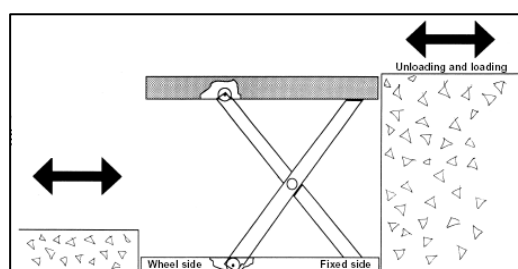
- 1) On receipt of the goods check the packing and the lifting table for damage during the transport.
- 2) If the lifting table is going to be moved, this must happen under the sub frame with the forks of the truck. The lifting table must not be lifted under the safety frame.
- 3) Connect the lifting table and make a test run. If the motor is working and the lifting table does not lift, two of the three phases leads needs to be switched.
- 4) Lifting tables with more than one vertical scissor and low profile lifting tables must always be fixed to a stable and even surface with expansion bolts or similar.

### Placement and fixing on the floor or in a pit

The sub frame of the lifting table is as basis not self-carrying. Therefore it is important that the foundation is even and stable.

Lift the lifting table to its top position. After this, fix the arms of the scissors to both the sub frame and the top frame.

Lift and move the lifting table to the place where it is to be installed. The fixed end of the lifting table must always be at the top level. See the sketch below.



Electrical installation must be done by an electrician. The lower speed can be regulated by adjusting the counter nut on the pump. Check the functions of the lifting table including the safety frame on every side.

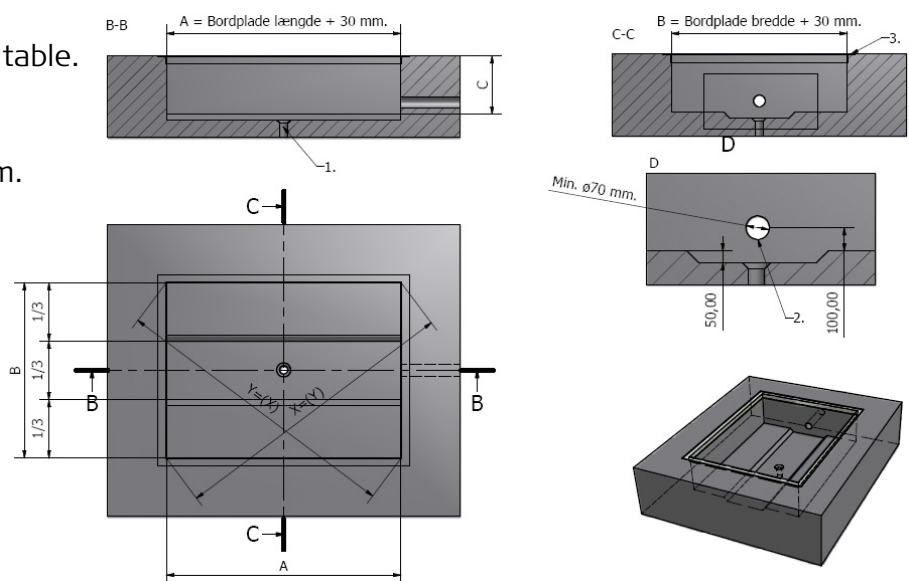
The control unit must be placed in a place from where it is possible to observe the movement of the lifting table.

After having tested the lifting table, it must be fixed to the floor or the pit with expansion bolts or the like.

**Pit dimensioning**

- A. The length of the pit = a + 30 mm.
- B. The breath of the pit = b + 30 mm.
- H. the depth of the pit = the lowest height of the lifting table + 10 mm.

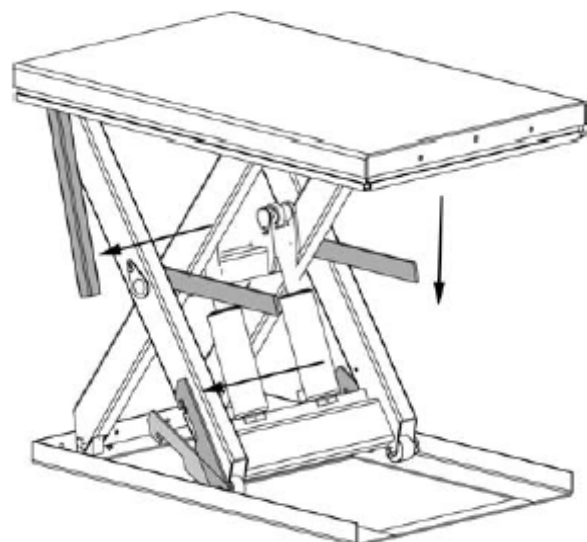
- a. The length of the lifting table.
- b. The width of the table.
- c. Drain (if necessary).
- d. Conduit pipe, dia. 70 mm.



**Maintenance**

**IMPORTANT!**

*During installation, repairs and maintenance, the lifting tables must always be locked in the top position with the mechanical service locks. The lifting table must always be unloaded in these situations.*



In addition to the annually statutory service and maintenance inspection the lifting tables must also go through continuously systematic maintenance. Under normal usage the lifting table must be inspected once a month and under intensive usage once a week. The inspection can be done according to the following check list:

**1) Lubrication**

All the lubricator nipples of the lifting table must be lubricated at least once every 1000 cycles.

**2) Oil control**

Check the oil level of the oil tank with the lifting table in its lowest position. Fill up the tank with oil. The cylinders and the hoses of the lifting table must be checked for leaks. Oil for indoor usage: hydraulic oil HD32.

**3) Security functions**

The safety frame must be checked along all the sides. The placement of the table in proportion to machines and other objects must be estimated in accordance with the Machinery Directive in preparation for risk of trapping.

**4) Overloading**

The parts of the lifting table must be checked for obliquities and deformations.

**5) Cables and plugs**

All cables and plugs must be checked for breakage and loose installations.

**6) Cleaning**

Dirt and loose objects may not disturb the tracks along which the rollers are moving. Clean all signs and stickers.

## Power unit and controls

The sound level of all power units of JEMA LIFT is below 70 dB (A). If a specially designed lifting table is delivered with another power unit, it will appear from item list of the unit.

The maximum lifting and lowering speed is 0.15 m/sec.

The pressure control valve of the pump is behind the red plastic cover on the pump.

Assembly drawing, item list, diagrams of connections, diagrams of hydraulic and supplementary work instructions for the particular lifting table are evident from the order documentation.

## Usage of working platforms

If the lifting table is built for lifting and lowering of persons it will be evident distinctly in the order documentation.

General security rules concerning work on working platforms:

- May only be used if minimum 2 persons are present.
- Firmly placed working platforms must be fixed to a stable foundation.
- May only be operated by instructed staff over 18 years of age.
- No use of the working platform at wind forces above 10 m/sec.
- Must not be used for work over high-voltages.
- The hand rail must always be put up under usage likewise the lock also must be closed.

All working platforms are made on the basis of the rules of the annually statutory inspection.

## Operation instructions for working platforms

Operation of the working platform is done by keys on a control unit (up/down). The keys must stay activated during the whole movement if they are deactivated the movement will stop. If the working platform is provided with telescopic top rail, this function is operated with keys according to the same principle.

Working platforms which are delivered with battery operation and self-propelled under-carriage with wheels, are controlled with joystick. Movement of the working platform is only possible if the working platform is placed in the lowest position. To start the operating motor the motor button beside the joystick must also stay activated.

When the platform reaches its highest and lowest position respectively the movement stops automatically.

In case of power failure the working platform can be lowered manually with the emergency lower function.

Emergency stop device is placed on the control unit.

Working platforms must always be equipped with a non-slip platform.

## Lifting tables with battery power

Lifting tables with battery power are inspected and maintained as follows:

### **1) Refilling of battery acid**

Both battery and acid must be at room temperature before refilling of the battery. Deactivate the poles of the battery and fill up the battery cells to 10 mm. above the lead plates. Let the battery rest for minimum 20 min. after the refill – during this time it is NOT to be use. Reactivate the poles of the battery and it is once again ready to use.

### **2) Maintenance of the battery**

Check the placement of the battery – it has to be stable. Keep the battery free of moisture and dirt. Make sure that the poles and the switches of the battery are free from corrosion. Bad wire connections cause a drop in voltage. Check the acid level of the battery.

### **3) Recharging of the battery**

The battery charger is suited for 220/240 V AC. Always recharge the battery completely. The battery charger automatically switches of when the charging is completed.

## Trouble-shooting

If the lifting table does not LIFT properly, check the following possibilities:

<i>Check</i>	<i>Action</i>
1. Voltage of the motor and fuses	Replace the fuse if it is blown.
2. The direction of the rotation of the motor	If the rotation of the motor is wrong - shift two of the phase cords. If the rotation is not shifted immediately, it will destroy the pump.
3. The table cannot lift max. capacity	Adjust the pressure control valve according to the indicated maximum load. Check the pressure with a monometer.
4. The table cannot lift to the max. height and the pump take in air	Make sure that the table is in the lowest position. Check the oil level in the oil tank. Fill up the tank if necessary.
5. Oil leakages	Tighten the hose connections of the cylinder. Change the cylinder or the cylinder seals.

If the lifting table does not LOWER properly, check the following possibilities:

<i>Check</i>	<i>Action</i>
1. Is the safety valve activated?	With great caution – find out why.
2. Power and fuses	Replace the fuses if they are blown.
3. Is the safety frame activated?	Clean and check all safety frame switches. If the safety frame has been activated the table must lift before it can be lowered again.
4. Adjustment of the lowering speed	The lower speed of the lift table can be regulated by adjusting the counter nut on the pump.
5. The table slowly collapses	Clean or replace the lowering valve.

If the problem is not solved, please contact JEMA LIFT at tel.: +45 8668 8877.

## Spare parts

All repair works on JEMA LIFT products must happen when the lifting table is unloaded. Only use original JEMA LIFT spare parts.

JEMA LIFT stocks all types of spare parts for standard lifting tables. Customers with lifting tables for intensive use (the X-model) are advised to stock certain spare parts themselves. If requested JEMA LIFT can suggest a list of component for the customers own stock of spare parts.

Returns are only accepted according to prior agreement with JEMA LIFT. If the returns are covered by the warranty JEMA LIFT will provide new parts with no charges for the customer.

On ordering spare parts please state the following information from the manufacturer's plate:

1. Type/model.
2. Type number.
3. Year of manufacture.
4. Pos. number and indication from the list of spare parts.
5. Desired number of spare parts.

