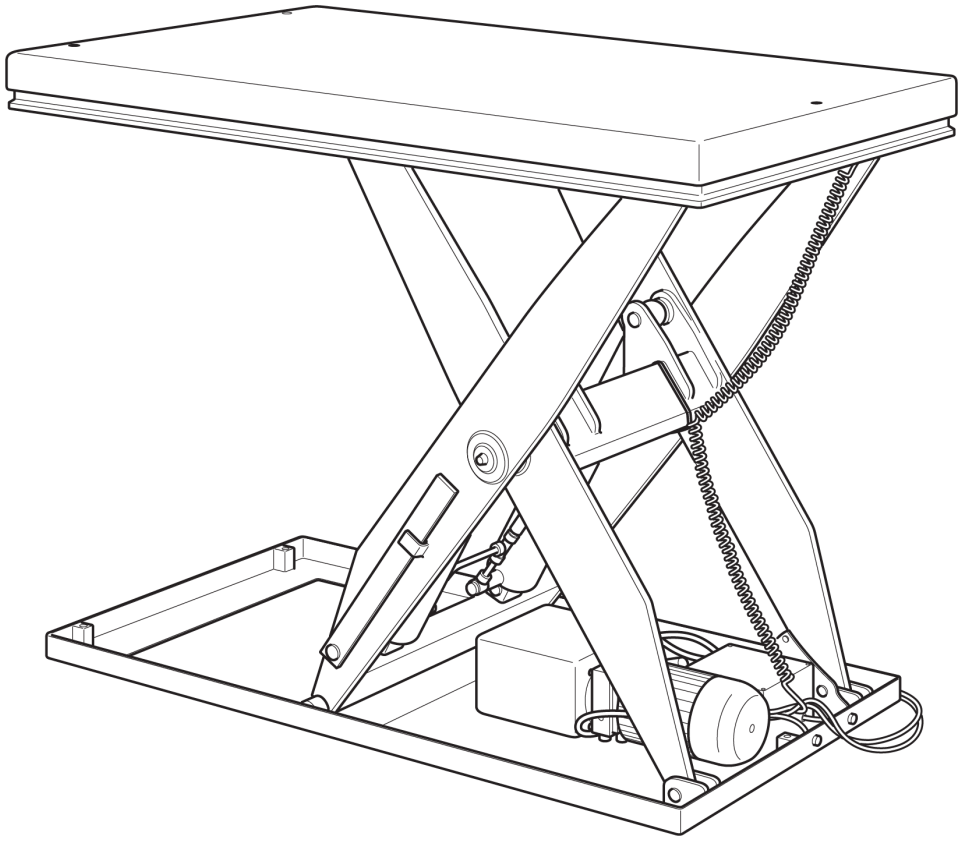
SLT 0.5, SLT 1.0, SLT 3.0

08.2020

Operating instructions

en-GB



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Contents

A About this manual

These operating instructions describe the correct use of the products listed in the "Scope" chapter – see page 6. All Jungheinrich products are developed and produced according to the current state of the art. However, risks can arise in the case of incorrect use. Please observe the corresponding information and read through the operating instructions carefully. The operating instructions form part of the device and are valid for all specified device versions. The operating instructions describe the safe and correct use of the device in all operating phases.

➔ Any technical questions should be directed to your authorised service partner.

The device described in these operating instructions is a stationary lift table that is designed for lifting load units.

1 Scope and target group

Scope

This document applies to the following devices:

– Lift table SLT 0.5
– Lift table SLT 1.0
– Lift table SLT 3.0

Target groups

For the purposes of these operating instructions the "owner" or "operator" is defined as any natural or legal person who either uses the described device himself or on whose behalf it is used. In special cases (e.g. rental), the owner is considered to be the person who is charged with the specified operational duties in accordance with existing contractual agreements between the owner and operator of the device.

Target group	Tasks
Owner	– Keep these operating instructions accessible at the usage location of the device, including for later reference. – Ensure that the device is used correctly and only by trained and authorised personnel. – Instruct employees to read and observe these operating instructions and other applicable documentation, particularly the safety instructions and warnings – see page 8. – Observe additional device-specific provisions and regulations.
Operator	– Read and observe these operating instructions and other applicable documentation, particularly the safety instructions and warnings see page 8. – Ensure that the device is used correctly and in accordance with the safety regulations.

Tab. 1: Owner and operator duties

2 Information and instructions

Structure of warnings

Warnings are used in this document to highlight potential causes of personal injury or material damage.

- Always read and observe these warnings.
- Follow all measures highlighted by the warning symbol and signal word.

The following warning levels are used to reflect the severity and probability of the relevant hazard:

⚠ DANGER!

Indicates an extremely dangerous situation. Failure to observe this warning can lead to serious, irreversible injuries or death.

⚠ WARNING!

Indicates an extremely dangerous situation. Failure to observe this warning can lead to serious, irreversible injuries or death.

⚠ CAUTION!

Indicates a dangerous situation. Failure to observe this warning can lead to minor or moderate injuries.

NOTICE

Indicates a risk of material damage. Failure to observe this warning can lead to material damage.

General information

Indicates additional information and explanations.

Structure of instructions

Instructions in this document are structured as follows:

Aim of the described activity

Requirements

– Prerequisites for activity

Tools and Material Required

– Tools and materials required for an activity (optional specification)

- Step
- Step
  - Sub-step

Result of action

B Security

The safety chapter provides important information on how to work safely with the described product. Failure to observe the specified measures can result in material damage and injuries, and potentially even death.

- Before commissioning and operating the device: Read the safety chapter thoroughly.
- Use the described device only as specified in this document.

1 Correct Use and Application

The device described in these operating instructions is designed for safe lifting of heavy loads and is intended for private and commercial use. Any damage resulting from incorrect operation or improper use shall render all guarantee and warranty claims null and void.

Correct environmental conditions

The device will be permanently damaged if exposed to extreme environmental conditions.

– Only use the device under the permitted conditions – see page 19.
– Do not use the device in areas or environments with high levels of humidity.
– Do not use the device in areas or environments at risk of explosion or fire.
– Do not use the device in very dusty areas or environments.
– Do not use the device in outdoor areas.
– Do not use the device in corrosive areas or environments.
– Do not use the device in temperatures outside the permissible temperature range – see page 19.

Attaching accessories to the device

Obtain written authorisation from the manufacturer and the responsible authority before attaching accessories to the device.

The authority's approval does not replace the manufacturer's permission.

2 Duties of individuals

Duties of the owner

Incorrect preparation of the device can result in serious damage or injuries. The owner must:

– Ensure that the device is used as intended.
– Ensure that the device is in perfect technical condition.
– Ensure that all warnings and information signs are present on the device and in a language that the operator understands.
– Replace any damaged or missing warnings and information signs on the device.
– Ensure compliance with all regulations concerning accident prevention, safety and disposal as well as those regarding operation, maintenance and repairs.
– Provide suitable protective equipment for the operator.
– Make the operating instructions available at the usage location.
– Retain test reports for at least 2 years.

Duties of the operator

Irresponsible operation of the device can result in serious damage or injuries. The operator must:

– Provide evidence of his or her ability to use the device.
– Provide evidence of his or her commissioning by the owner or their legal representative.
– Prevent unauthorised use of the device.
– Wear safety shoes or safety equipment in accordance with statutory and operational regulations when operating the device.
– Assume responsibility for the correct use of the device during operation.
– Independently take the device out of service and inform the relevant supervisor(s) in the case of damage to the device during operation.
– Ensure that the load to be picked up is packaged correctly and does not exceed the permitted weight.

3 Safety information for specific operating phases

3.1 Transport

Transporting the device safely

Incorrectly secured transports can result in material damage and personal injury.

– Remove any load before transporting the device.
– Use lifting gear with sufficient capacity.
– Secure the HGV or trailer against rolling away before loading the device.
– Attach lifting accessories only to the designated attachment points.
– Correctly secure the device to the lashing rings on the HGV or trailer.
– When jacking up, prevent slipping or tipping by means of wedges or wooden blocks.

3.2 Operation

⚠ WARNING!

Unevenly distributed loads!

Risk of personal injury and material damage due to sudden tipping of the load.

▶ Ensure that the load is in correct condition.
▶ Do not exceed the max. load capacity.
▶ The load must not protrude beyond the load handler.
▶ Take suitable precautions if there is a risk of the load tipping or falling down (e.g. load backrest).

Operating the device safely

- Never lift or carry persons with the load handler.
- Distribute the load evenly across the entire surface of the device and in a straight line.
- Do not move the device when lifting the load.
- Do not exceed the permitted load capacity.
- Lower the load slowly and carefully.

Observing work area requirements

- Always use the device on solid, level ground and only when stationary.
- Always set down and store the load at the designated locations.
- Never deposit the load on traffic, escape or rescue routes or in front of passageways, roller shutter gates and doors for extended periods.

Preventing injuries to third parties

- Instruct unauthorised people to leave the hazardous area.
- In the case of risks to unauthorised persons, issue a warning signal in a timely manner.
- If unauthorised persons fail to leave the hazardous area, stop the device immediately.

➔ The hazardous area is classed as the area in which persons are exposed to a direct risk by the movements of the device or are endangered indirectly, e.g. due to a falling load.

Observing capacity reductions

➔ The specified maximum capacity applies only to loads distributed evenly across the entire surface area of the load handler. In the case of one-sided or unevenly distributed loads, the capacity is reduced (offset centre of gravity).

100% of max. capacity, i.e.	50% of max. capacity, i.e.	33% of max. capacity, i.e.
		
SLT 0.5 = 500 kg	SLT 0.5 = 250 kg	SLT 0.5 = 166 kg
SLT 1.0 = 1000 kg	SLT 1.0 = 500 kg	SLT 1.0 = 333 kg
SLT 3.0 = 3000 kg	SLT 3.0 = 1500 kg	SLT 3.0 = 1000 kg

3.3 Maintenance

Conducting maintenance work safely

Thorough and expert servicing is one of the most important prerequisites for safe operation of the device. Failure to perform regular maintenance can result in a malfunction of the device and poses a potential hazard to personnel and equipment.

– Perform maintenance and repair work in line with the specified maintenance intervals – see page 29.
– Maintenance and repair work must only be completed by specialist personnel with the requisite training.
– In the case of uncertainty, contact the manufacturer's customer service department.
– Use only original spare parts from the manufacturer.
– When repairing or replacing components, observe the device-specific settings.
– Immediately after any maintenance work, complete all steps for returning the device to service – see page 31.

4 Conversions and modifications

Modifying the design and function of the device

Any conversions or changes to the design of the device which have not been approved by the manufacture can result in severe personal injury and significant material damage. All warranty and liability claims will be void.

If modifications are to be made, they require written permission from the manufacturer, an authorised representative or a legal successor. This includes, but is not limited to, the following actions:

– Changes affecting the capacity
– Changes affecting the stability
– Changes affecting the control function
– Changes affecting the visibility
– Addition of attachments.

Under no circumstances must the operating speed of the device be changed, not even with the manufacturer's approval.

5 Residual risks

Using consumables

Improper handling of consumables is hazardous to health, life and the environment.

– Use consumables in the correct manner and in accordance with the manufacturer's specifications.
– Work with consumables must only be performed by qualified specialist personnel.

C Structure and function

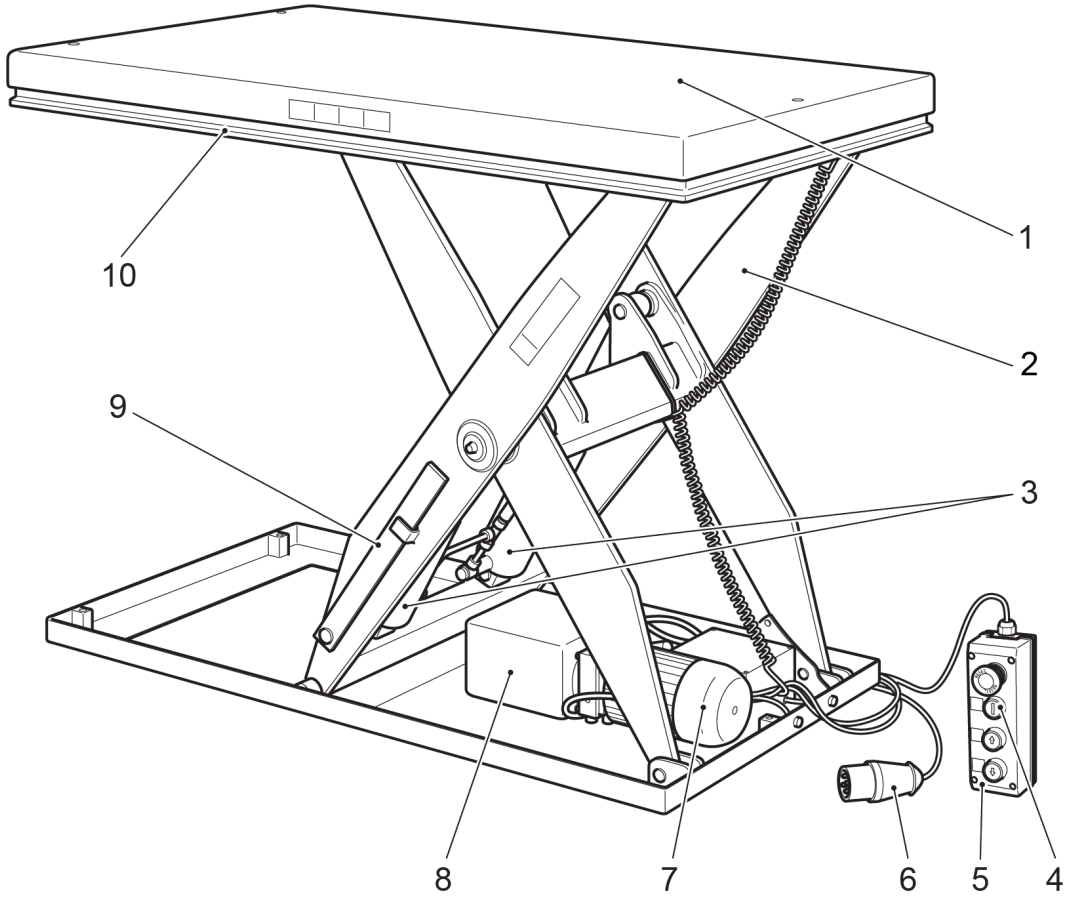

Fig. 1: Assemblies and functional description

Item	Description	Function
1	Load handler	Carries the load.
2	Lifting mechanism	Raises the load.
3	Hydraulic cylinder	Moves the lift mechanism.
4	Key switch	Switches the device on and off.
5	Control unit	Raises/lowers the load handler.
6	Mains connector	Establishes the power supply.
7	Motor	Generates the kinetic energy.
8	Oil reservoir	Stores the oil.
9	Mechanical lowering protection	Prevents lowering.
10	Protective frame	Protects against injury.

1 Controls

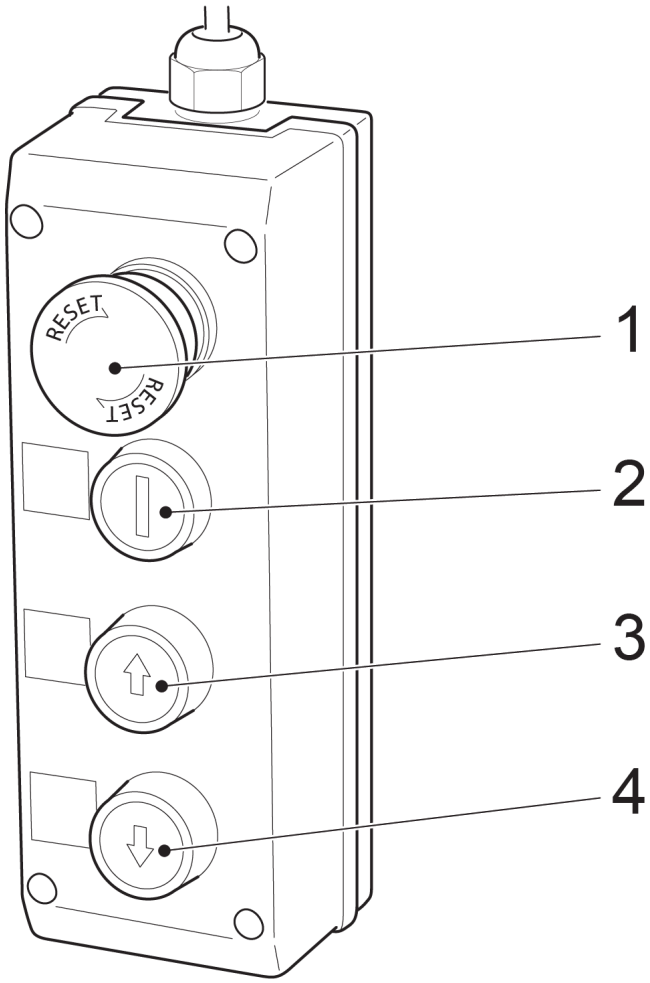

Fig. 2: Control elements

Item	Control	Function
1	Emergency disconnect switch	Switches off the device in an emergency.
2	Key switch	Switches the device on and off.
3	"Lift" button	Raises the load.
4	"Lower" button	Lowers the load.

2 Marking and labelling

2.1 Warning and information signs

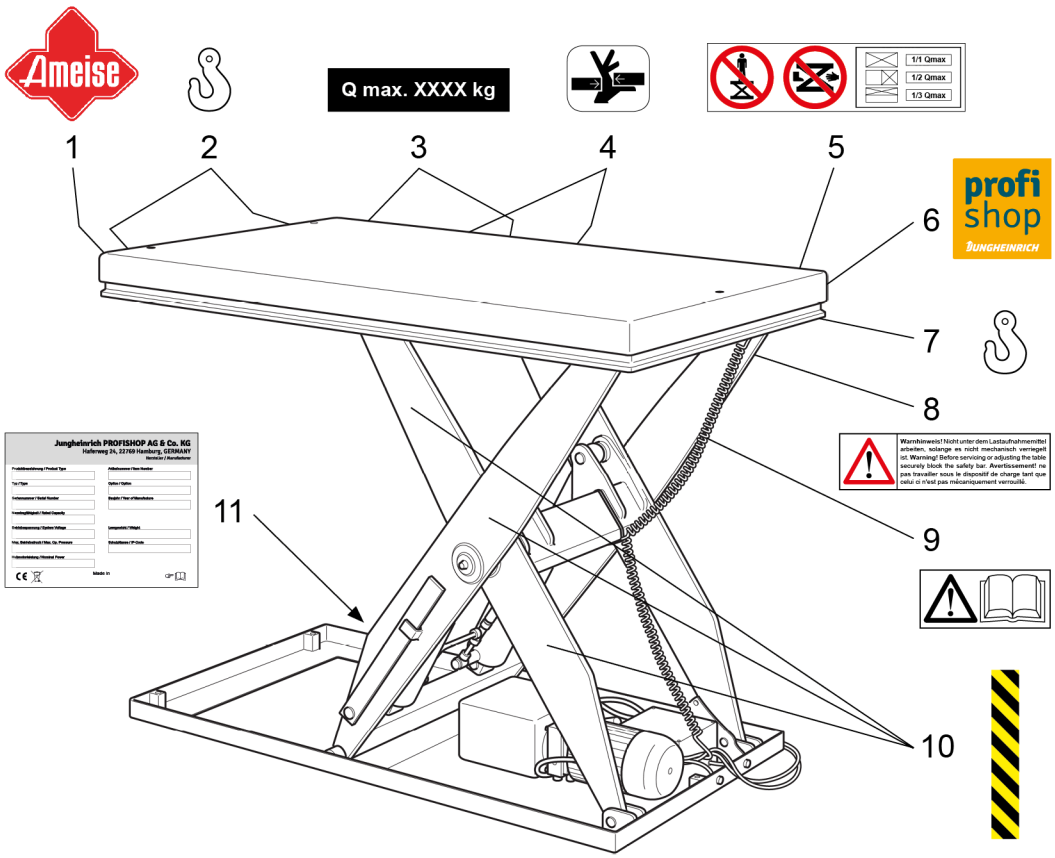

Fig. 3: Warning and information signs on the device

Item	Description
1	Brand logo
2	Attachment points for loading by crane
3	Q_{max} XXXX kg
4	Risk of crushing
5	– Do not stand on the load handler – Do not place feet/hands under the load handler – Load chart / load distribution
6	Jungheinrich PROFISHOP
7	Attachment points for loading by crane
8	Warning information regarding maintenance work
9	Read operating instructions
10	Black/yellow scissor marking
11	Data plate

2.2 Data plate

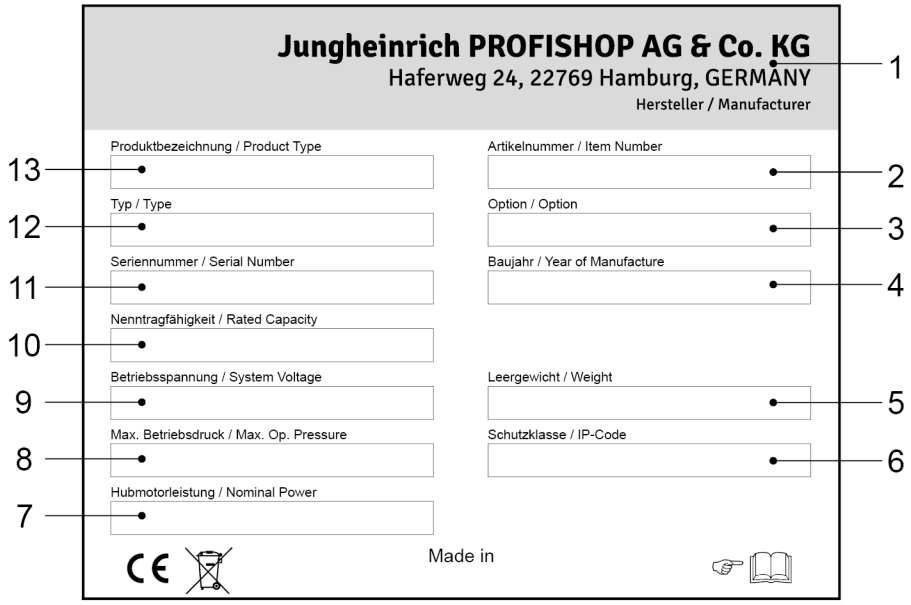

Fig. 4: Data plate (schematic)

Item	Information
1	Name and address of manufacturer
2	Article number
3	Option
4	Year of manufacture
5	Net weight
6	Protection rating
7	Lift motor output
8	Max. operating pressure
9	Operating voltage
10	Rated capacity
11	Serial number
12	Type
13	Product designation

D Technical Specifications

1 Dimensions

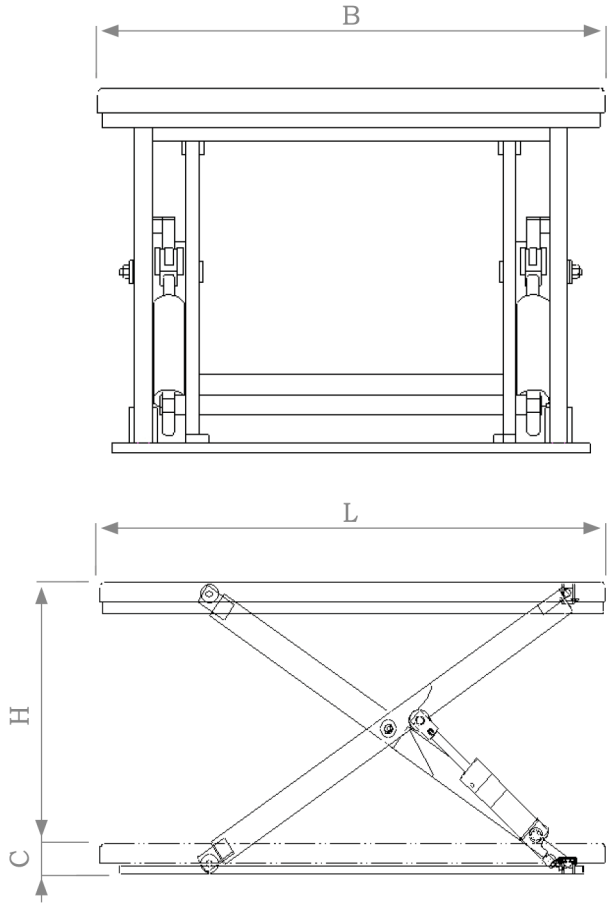

Fig. 5: Dimensions (side views, schematic)

2 Performance data

Technical data SLT 0.5, SLT 1.0, SLT 3.0

➔ The specified capacity applies only to an evenly distributed load.

Description	Item	Value			Unit
Identification					
Manufacturer's type designation	-	SLT 0.5	SLT 1.0	SLT 3.0	-
Drive type	-	Hydraulic			-
Operation	-	Electric			-
Capacity	Q	0,5	1,0	3,0	t
Basic dimensions					
Total weight	-	160	220	330	kg
Lift height	H	1010	1010	1020	mm
Lowered height	C	190	190	220	mm
Overall length	L	1300			mm
Overall width	B	800			mm
Performance data					
Mains connector	-	16			A
Nominal voltage	-	380			V
Motor power	-	0,75	0,75	1,5	kW
Oil reservoir					
Oil reservoir capacity	-	2	2	3	l

Correct environmental conditions

Condition	Value
Application area	Indoor application
Permitted ambient temperature	+5°C to +40°C
Minimum illumination	50 Lx

E Commissioning and transport

1 Using the Truck for the First Time

Delivery specification

The delivery specification of the device includes the following:
– 2 keys for control unit
– 3 eyebolts for lifting the pallet
– 1 set of operating instructions

Preparing for commissioning

- Remove the packaging material and transport restraints.
- Convert the attachment points – see page 21
- Position the device on solid, level ground.
- Verify that the warning and information signs are present and undamaged. Replace any damaged or missing signs.
- Check all supplied components for transport damage.
- Immediately notify the carrier of any transport damage or missing components.

Connecting the device

- Ensure that the socket generates a clockwise rotating field.
- Insert the connector plug into the designated socket.
  A clockwise rotating field is established.

If the table does not rise up, an anti-clockwise rotating field exists in the socket – see page 26.

Attaching the device to the ground (optional)

Requirements
– The ground is suitable for device anchoring.

- Anchor the device to the ground using 4 M10 fixing bolts.

Attaching the device to the ground secures it in position and does not increase its load capacity.

2 Transport

⚠ CAUTION!

Inadequately secured transport!

Risk of material damage and personal injury due to unsecured loads.

▶ The device must be sufficiently secured when transported on an HGV or trailer.

▶ Use the lashing rings on the HGV or trailer.

▶ The device must only be loaded by specially trained personnel while observing the applicable regulations.

⚠ WARNING!

Inadequately secured load!

Risk of material damage and personal injury due to falling loads.

▶ Always use cranes and lifting gear with sufficient capacity.

▶ Attach lifting gear only to the designated attachment points.

▶ Do not stand under suspended loads.

▶ Do not stand in the hazardous area when the device is being lifted by crane.

2.1 Attaching the device

- Remove all loads from the device.
- Fully lower the load handler.
- Turn the key anti-clockwise and remove it from the key switch.
- Screw the bolts (1) through the load handler (3) into the support frame (2).

  The device is connected to the support frame.
- Place the control unit on the load handler and secure it.
- Attach the crane lifting gear to the bolts (1).

The device is attached and ready for transport.

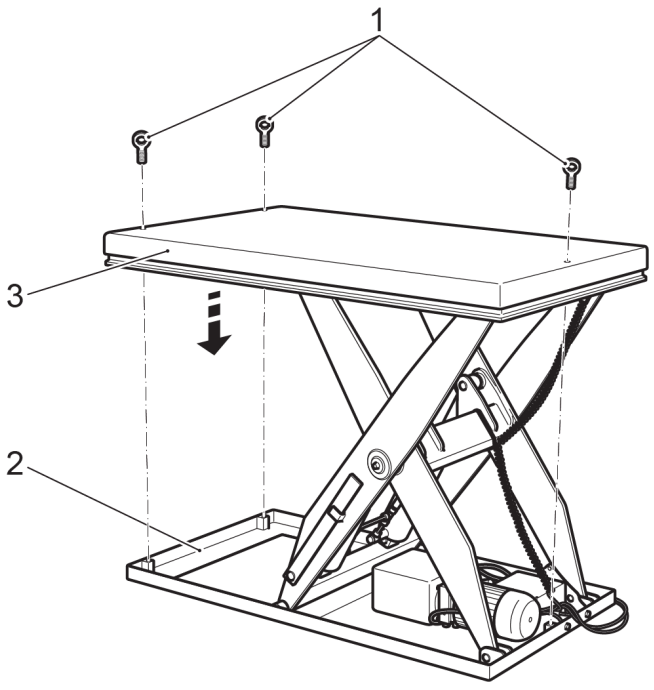

Fig. 6: Attachment points on device (example depiction)

F Operation

⚠ CAUTION!

Collisions with persons in the vicinity!

Risk of personal injury.

- ▶ Before moving the device, raising or lowering the load, instruct persons to leave the hazardous area.
- ▶ In the case of a potential risk to persons, issue a warning signal in a timely manner.
- ▶ If endangered persons fail to leave the hazardous area, stop the device immediately.

1 Daily checks before operation

Regular inspection allows faults or malfunctions to be recognised at an early stage and rectified promptly. This increases the service life of the product and helps to ensure safe operation.

- Remove any loads from the device and move the load handler to its lowest position.
- Visually inspect all assemblies for deformation or cracks.
- Check the lift mechanism for correct function and ease of movement. Look out for any unusual noises and blockages.
- Check the load handler and carriage for wear and damage.
- Check the hydraulic system for leaks.
- Check the hydraulic oil level and top up if necessary.
- Check the vertical elongation of the lift mechanism.
- Verify that all screws and nuts are securely fastened.
- Lubricate joints and contact surfaces.
- Check that safety devices are functioning correctly.
- Verify that all signs and warnings are present and legible.
- Immediately notify the relevant supervisor(s) of any damage or defects on the device or attachments.
- Take any devices with damaged or defective safety-relevant components out of service and repair them before next use.

2 Raising the load

⚠ WARNING!

Falls from great heights!

Risk of fractures and head injuries due to falling.

▶ Never lift or carry persons with the load handler.

⚠ WARNING!

Inadequately secured load!

Risk of material damage and personal injury due to falling loads.

▶ Only lift adequately secured loads.

▶ Position the load's centre of gravity centrally on the device.

▶ If there is a risk of parts of the load tipping or falling, take suitable safety measures (e.g. load backrest).

NOTICE

Exceeding the permitted load capacity!

Risk of damage to the device due to excessive loads.

▶ Never exceed the permitted maximum capacity.

Requirements

– The device is at the required position.
– The load is correctly palletised and secured against tipping.
– The device is fully lowered.

- Switch on the device via the key switch (2).
- Press the "lift" button (3) on the control unit until the desired height has been reached.

The load has been raised.

3 Lowering the load

⚠ CAUTION!

Lowering heavy loads!

Risk of personal injury due to crushing.

▶Always lower the load slowly and carefully.

▶Do not place any part of your body between the raised load and the ground.

▶Wear safety shoes.

NOTICE

Protection against accidental lowering!

The device cannot be lowered when the protective frame is active.

▶Deactivating the safety mechanism:

▶Press the "lift" button to raise the platform up slightly.

▶Press the "lower" button.

NOTICE

Increased impact load!

Risk of device damage and malfunction due to excessively fast lowering of the load.

▶Always lower the load slowly and carefully.

- Press the "lower" button on the control unit until the desired height has been reached.

The load has been lowered.

Securing the device against accidental lowering

- Raise the load handler (1).
- Move the mechanical lowering protection (2) downward.
- Lower the load handler (1) until the mechanical lowering protection (2) is propped up by the support frame (3) on both sides.

The device has been secured against accidental lowering.

Fig. 7: Protection against accidental lowering

4 Emergency disconnect switch

Switching off the device in an emergency

- Press the emergency disconnect switch.
  The power supply is interrupted.

Restoring the device to service after an emergency disconnect

- Turn the emergency disconnect switch in clockwise direction.
  The power supply is restored.

5 Switching off the device

- Fully lower the device.
- Turn the key anti-clockwise and remove it from the key switch.
- Place the control unit on the device and secure it.

The device is switched off.

G Maintenance and repair

1 Faults and troubleshooting

- In the case of a device fault, carry out the following troubleshooting measures.
- If you encounter problems when carrying out the measures or if they fail to rectify the problem, contact the manufacturer's customer service department.

⚠ CAUTION!

Incorrect maintenance!

Risk of material damage and personal injury due to failure of important components.

▶ Use only original spare parts from the manufacturer.

▶ Maintenance and repair work must only be completed by specialist personnel with the requisite training.

▶ Always observe the device-specific settings when carrying out repairs or replacing components.

1.1 Fault table

Fault	Possible cause	Fault rectification
Device not working.	Power cable not connected to mains.	Connect the device to the mains.
	Emergency disconnect switch actuated.	Turn the emergency disconnect switch in clockwise direction.
	Key switch in OFF position.	Turn the key switch to ON position.
	Safety rail (foot guard) activated.	Establish the reason for actuation of the safety rail (foot protection).
	Fuse faulty.	Check the fuse (below the load handler) and replace if necessary.
	Loose electrical connections or broken wires.	Check the connections and rectify any faults.
	Electromagnetic valve not working.	Replace the electromagnetic valve.
	Motor contactor damaged.	Replace the damaged contactor.
Motor working but load handler not lifting.	Anti-clockwise rotating field in socket on new device.	Check the socket for a clockwise rotating field and, if necessary, have the connection rectified by a specialist.
Load handler does not reach maximum height.	Oil level in oil reservoir too low.	Add hydraulic oil up to the correct level.
	Steel ball of check valve not sealing correctly.	Clean the valve bore and re-insert the steel ball.
Load handler lowers again after lifting.	Steel balls of check valve not sealing correctly.	Clean the valve bore and replace the steel balls.
	Seals faulty.	Replace any faulty seals.

Fault	Possible cause	Fault rectification
Load handler cannot be lowered.	The seals on a new device are very tight and the cylinders are sometimes dry.	On a new device, perform multiple lifting and lowering operations with a load.
	Electromagnetic valve not working.	Replace the electromagnetic valve.
	Mechanical lowering protection is moved down.	Swing the mechanical lowering protection up on both sides.
	Stroke length of striker pin is insufficient to push the steel ball out of the valve bore.	Adjust the length of the tie rod (or lowering rod) such that the striker pin reaches the correct position.
Oil has escaped below the load handler or around the device.	Too much oil in the hydraulic circuit (bore on cylinder conveying oil).	Drain off oil in a controlled manner to correct the fill level.
	Cylinder or piston rod leaking.	Replace seals or, if necessary, replace the cylinder.
	Connections leaking.	Check the connections and rectify any faults.

2 Maintenance

⚠ CAUTION!

Uncontrolled movement of the device!

Risk of personal injury and material damage due to sudden movements of the device.

▶ If possible, switch off the device.

⚠ CAUTION!

Safety equipment rendered ineffective!

Risk of personal injury and material damage due to ineffective safety equipment.

▶ Under no circumstances must safety equipment (e.g. emergency disconnect switch) be rendered ineffective.

▶ Repairs must only be carried out by qualified specialists.

2.1 Maintenance intervals

Requirements

– The device is used in single-shift operation.
– The device is used under normal operating conditions – see page 8.

- Maintain the device at the specified intervals.
- If the device is operated in very dusty conditions, subjected to extreme temperature fluctuations or used in multi-shift operation, the intervals must be reduced accordingly.

Maintenance interval	Maintenance
Daily.	Check the device before use – see page 22.
After all cleaning and repair work.	– Lubricate the device at the designated points. – Bleed the hydraulic system.
Every 6 months.	Check the hydraulic oil and replace if necessary (more frequently if the oil is very dark, contaminated or flocculating).
Every 2000 operating hours, or at least annually.	– Perform safety checks at regular intervals and after unusual incidents – see page 30. – Check all parts of the device for wear and replace faulty parts. – Replace the hydraulic oil (more frequently if the oil is very dark, contaminated or flocculating).
Every 6 years.	Replace hydraulic components and hydraulic hoses.

2.2 Consumables

Lubricants

Lubricants		Value			Unit
Hydraulic oil	Oil type	ISO VG 32 or similar			-
	Viscosity	32			cSt at 40 °C
	Top-up quantity	SLT 0.5	SLT 1.0	SLT 3.0	Litres
		2	2	3	
Multi-purpose grease		DIN 51825 T1 -K 2 K			-

3 Repairs

3.1 Safety tests to be performed at intervals and after unusual incidents

Always perform safety checks in accordance with national regulations. These may deviate from the steps listed below.

Requirements

– The inspecting person is qualified to conduct the following check.
– The inspecting person is independent and unbiased (from an operational and business perspective) and assesses the device purely in terms of its safety.
– The inspecting person possesses sufficient knowledge and experience to assess the condition of the device and the effectiveness of the safety equipment based on the rules of technology and the principles for testing the described device.

- Inspect the technical condition of the device with regard to accident safety.
- Carefully inspect the device for damage that may be attributable to incorrect use.
- Produce a written test report and retain it for at least 2 years. Responsibility for the test report rests with the owner.
- Rectify any identified defects before next using the device.
- Following a successful inspection, attach an inspection plaque to the device in a visible location.

H Shutdown, storage, decommissioning and disposal

1 Shutdown and storage

1.1 Preparing for shutdown

- Thoroughly clean the device.
- Check the hydraulic oil level and top up if necessary.
- Apply a thin layer of oil or grease to any non-painted mechanical components.
- Lubricate the device.

1.2 Shutting down and storing the device

NOTICE

Incorrect storage!

Risk of property damage.

▶Always store the device in a dry and frost-free environment.

Requirements

– Device has been prepared for shutdown as described – see page 31.

- Store the device securely in a dry and frost-free room.
- Protect the device against dust and corrosion, e.g. using a tarpaulin.
- Before storing the device for longer than 6 months, discuss necessary additional measures with the manufacturer's customer service department.

1.3 Recommissioning the device after shutdown

- Thoroughly clean the device.
- Lubricate the device.
- Check the hydraulic oil for condensation water and replace the oil if necessary.
- Start up the device.
- Perform a complete function check immediately after start-up.

2 Decommissioning

2.1 Decommissioning the device

- Observe the applicable regulations in the country of use when decommissioning the device.

3 Disposal

3.1 Disposing of the device

- Observe the country-specific regulations regarding disposal of the device and consumables.