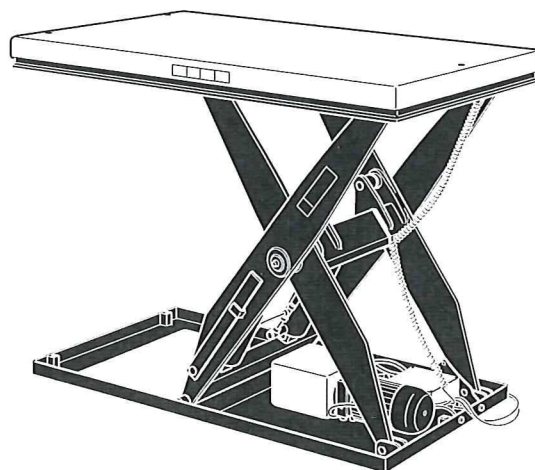


# HIW

## Operating Instructions



# Foreword

The present operating instructions are designed to provide sufficient instruction for the safe operation of the material handling equipment. The information is presented in a precise and clear manner. The chapters are arranged by letter. Each chapter starts with page 1. The page reference consists of a chapter letter and a page number.

Example: Page B2 is the second page of chapter B.

The operating instructions contain information about different vehicle models. When operating and servicing the equipment, make sure that the text applies to your vehicle model.

Safety instructions and important explanations are indicated by the following icons:



Used before safety instructions which must be observed to avoid danger to personnel.



Used before notices which must be observed to avoid material damage.



Used before notices and explanations.



Used to indicate standard equipment.



Used to indicate optional equipment.

In the interest of ongoing development, the manufacturer reserves the right to incorporate modifications (without changing the basic characteristics of the equipment model) without necessarily updating the present operating instructions at the same time.

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# A Correct Use and Application

The lifting table described in the present operating instructions is designed to lift load units.

It must be used, operated and serviced in accordance with the present instructions. All other types of use lie beyond the scope of application and can result in damage to personnel, the vehicle or property. In particular, avoid overloading with items that are too heavy or placed on one side. Make sure the maximum weight is not exceeded (the safety valve can only prevent overload during a lift cycle, it does not work if an excessive weight is placed on the table. The lifting table could become damaged and fail to work correctly). The maximum permissible load is stated on the data plate. The lifting table vehicle must not be used in areas at risk of fire or explosion, or which are threatened by corrosion or excessive dust.

The proprietor must ensure that the lifting table is used only for the purpose for which it is intended and that danger to life and limb of the user and third parties are excluded. The proprietor must ensure that all users have read and understood these operating instructions.

Failure to comply with the operating instructions shall invalidate the warranty. The same applies if improper work is carried out on the equipment by the customer or third parties without the permission of the manufacturer.

The attachment or installation of additional equipment affecting the lifting table's functionality requires the written approval of the manufacturer.

The lifting table may only be used by suitably trained personnel, who have demonstrated to the proprietor or his representative their competence in handling loads. The table must only be installed and operated on level, secure surfaces.

The operator is responsible for the lifting table during the time it is in use. Do not use it to lift other people. The supervisor must be immediately informed of any damage or faults to the lifting table.

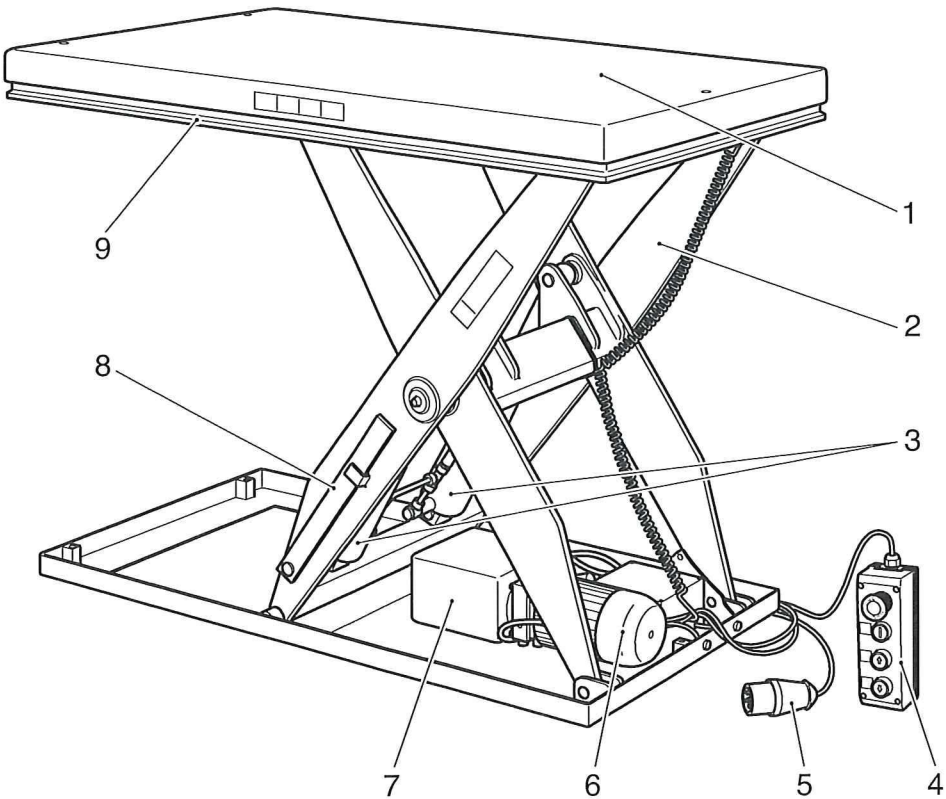
The operator must ensure that the load is in a satisfactory condition. Loads must always be raised safely and carefully. Use suitable protection measure to prevent parts of the load from tipping or falling down.

# B Lifting Table

## 1 Application

The lifting table is designed to lift goods on level surfaces. The capacity is shown on the data plate and on the data capacity plate at the side.

## 2 Assemblies



| Item |   | Component                      |
|------|---|--------------------------------|
| 1    | ● | Load retaining plate           |
| 2    | ● | Lift mechanism                 |
| 3    | ● | Hydraulic cylinder             |
| 4    | ● | Control unit                   |
| 5    | ● | Mains connector                |
| 6    | ● | Motor                          |
| 7    | ● | Oil reservoir                  |
| 8    | ● | Mechanical lowering protection |
| 9    | ● | Safety protective frame        |

● = Standard equipment

○ = Optional equipment

### 3 Application Condition

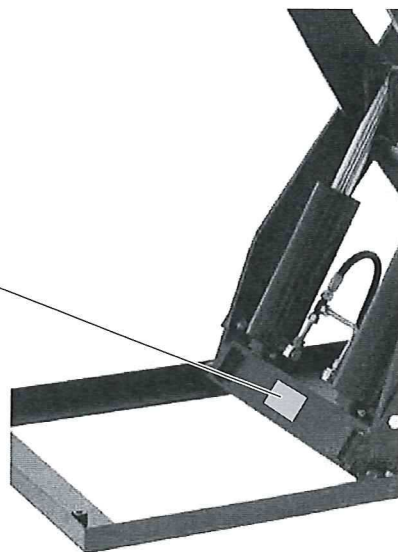
Operating temperature: from 5°C to +40°C

Ambient lighting: min. 50 Lux

### 4 Data Plate/Identification

→ The data plate contains information specific to the device and is located at the position indicated.

|   |                      |   |        |
|---|----------------------|---|--------|
|  <b>Jungheinrich PROFISHOP AG &amp; Co. KG</b><br>Kieler Straße 105, 22769 Hamburg, GERMANY<br>Hersteller / Manufacturer |                      |   |        |
| Produktbezeichnung<br>Product Type  | Hubtsch / Lift Table | Artikelnummer<br>Item Number  | xxxxxx |
| Typ<br>Type   | HIW x x EU           | Nenntragfähigkeit<br>Rated Capacity   | xxx kg |
| Seriennummer<br>Serial Number   | xxxx                 | Baujahr<br>Year of Manufacture  | xxxx   |
| Betriebsspannung<br>System Voltage  | 380 V                | Leergewicht<br>Weight   | xxx kg |
| Max. Betriebsdruck<br>Max. Op. Pressure   | xx MPa               | Schutzklasse<br>IP-Code   | IP55   |
| Hubmoleistung<br>Nominal Power  | x,xx KW              |   |        |
|  Made in China   |                      |  |        |

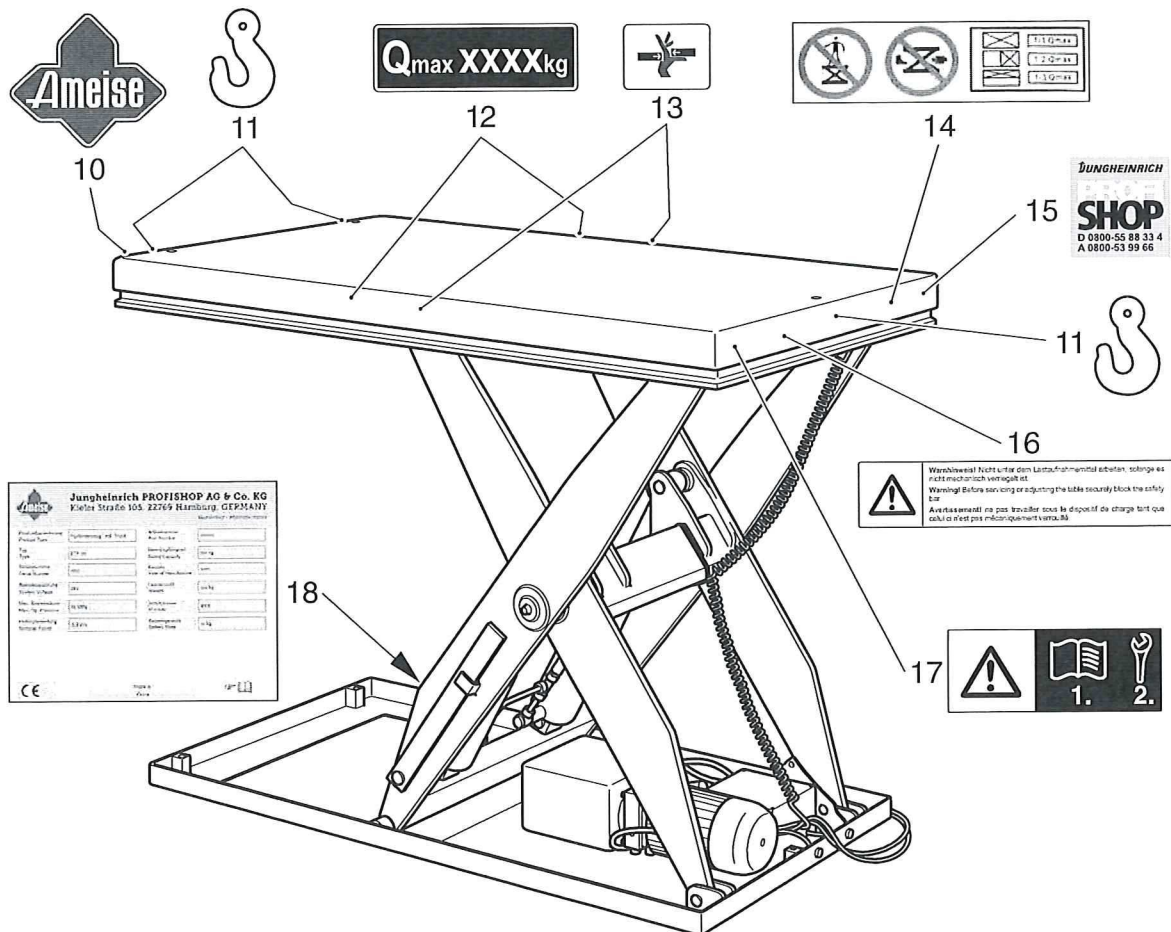


### 5 Technical Specifications

|                          |      | HIW 1.0              | HIW 2.0              | HIW 3.0               |
|--------------------------|------|----------------------|----------------------|-----------------------|
| Capacity                 | kg   | 500                  | 1000                 | 3000                  |
| Lift height              | mm   | 1010                 | 1010                 | 1020                  |
| Lowered height           | mm   | 190                  | 190                  | 220                   |
| Lifting table dimensions | mm   | 1300 x 800           | 1300 x 800           | 1300 x 800            |
| Lift time                | s    | 15                   | 26                   | 26                    |
| Lower time               | s    | 13                   | 20                   | 22                    |
| Pump delivery            | l/mm | 3                    | 3                    | 5                     |
| Oil reservoir capacity   | l    | 2                    | 2                    | 3                     |
| Motor                    |      | AC3 x 380 V<br>750 W | AC3 x 380 V<br>750 W | AC3 x 380 V<br>1500 W |
| Net. weight              | kg   | 160                  | 220                  | 320                   |

## 6 Indication Points

→ The following indication points are located on the lifting table:



| Item | Component   |
|------|---|
| 11   | Strap point for crane lifting   |
| 14   | Warning: "Do not sit on the load handler"<br>Notice: "Secure load handler when raised"<br>Warning: "Do not place feet/hands under the load handler"<br>Notice: "Load chart" |
| 12   | Max. capacity $Q_{max}$   |
| 17   | Read operating instructions   |
| 16   | Warning   |
| 18   | Lifting table data plate  |
| 13   | "Trapping hazard" warning   |

# C Operation

## 1 Safety Regulations for the Operation of the Lifting Table

**Operator's rights, obligations and responsibilities:** The operator must be informed of his duties and responsibilities and be instructed in the operation of the device and shall be familiar with the operating instructions. The driver shall be afforded all due rights.

**Unauthorised use of equipment:** The operator is responsible for the vehicle during the time it is in use. The operator must prevent unauthorised persons from using the lifting table. Do not use it to lift other people.

**Damage and Faults:** The supervisor must be immediately informed of any damage or faults to the lifting table or attachment. Lifting tables which are unsafe for operation (e.g. bent components are faulty electrical / hydraulic systems) must not be used until they have been repaired.

**Repairs:** The operator must not carry out any repairs or alterations to the device without the necessary training and authorisation to do so. The driver must never disable or adjust safety mechanisms or switches.

**Hazardous area:** The hazardous area is defined as the area in which people are at risk from the lifting table rising or from the load itself. This also includes areas which can be reached by falling loads or lowering operating equipment.



Unauthorised persons must be kept away from the hazardous area. Where there is danger to personnel, a warning must be sounded with sufficient notice. If unauthorised personnel are still within the hazardous area the lifting table must be brought to a halt immediately.

**Safety devices and warning signs:** Safety devices, warning signs and warning instructions shall be strictly observed.

## 2 Using the Equipment for the First Time



Make sure you know which model you are using! To prepare the lifting table after delivery or transport the following tasks must be carried out:

- Ensure the equipment is complete and in a satisfactory condition.
- Start up the equipment as indicated.

Check the entire lifting table (in particular load handler, hydraulic cylinder and lift mechanism) for damage before using it for the first time.

## 3 Starting up the Lifting Table



Before commissioning or operating the lifting table, and before raising a load unit, the operator must ensure that the lifting table is in good working order and is complete. The operator must also ensure that there is nobody in the hazardous area and that people are kept away from the lifting/lowering lifting table vehicle.

## 4 Operation



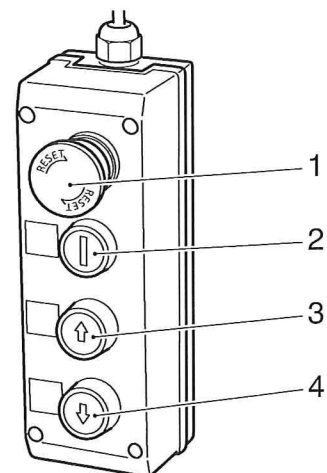
The vehicle must only be operated on level, secure surfaces in a stationary condition. The load must be stored in a straight line, distributed evenly across the entire table. The lifting table must not move when loads are being raised. Place the loads carefully on the raised lifting table and avoid exceeding the maximum weight.

When lowering, control the bleed valve so that lowering is performed slowly. If you lower the load suddenly, even just a few centimetres, the impact is several times more than the actual load, which could result in damage and malfunctions. Failure to comply with this notice could result in injury and damage to the lifting table.

- Set the lifting table to the desired position.
- If necessary turn the Emergency Disconnect (1) clockwise until it springs out slightly.
- Put the key in the key switch (2) and turn it clockwise.

### Lifting

- Press the Lift button (3) on the control unit to raise the table to the desired height.



## Lowering

- Press the Lower button (4) on the control unit to lower the table to the desired height.

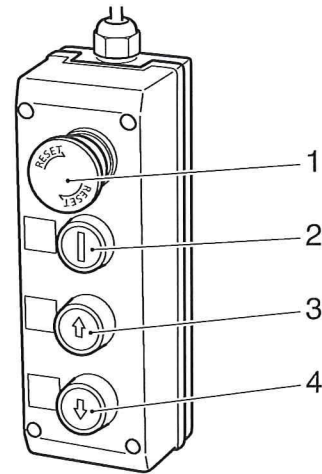


If the safety protection frame (6) is activated by contact the lifting table cannot be lowered any further. Deactivate this protection in two stages before lowering the lifting table.

- Press the lift button (3) and raise the platform slightly.
- Press the “Lower” button (4).

## Emergency Disconnect

- Pressing the Emergency Disconnect (1) interrupts the power supply.
- Turn the Emergency Disconnect (1) clockwise to restore the power supply.

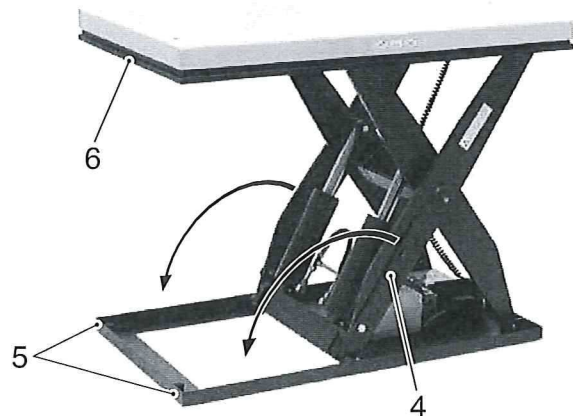


## 5 Protection against Accidental Lowering



The protection against accidental lowering must be activated for service / repair work. It prevents the lifting table vehicle from lowering as a result of an operating error. It must be deactivated again before the table can lower.

- Raise the lifting table.
- Move the mechanical lowering lock (4) down.
- Lower the lifting table until the mechanical lowering locks (on both sides) are propped up against the frame (5).



## 6 Parking the Lifting Table Securely and Transport



Always lower the lifting table fully.

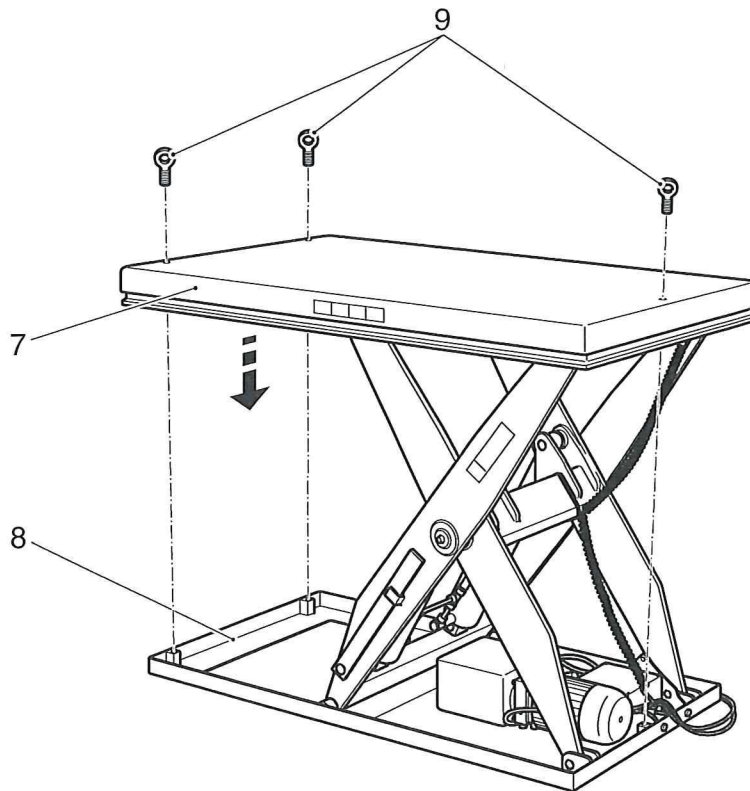
The lifting table must be loaded and clamped correctly when being transported on a lorry or a trailer.



Always use lifting gear with sufficient capacity when loading by crane.

Strap points on the load handling board (7) are provided for loading the lifting table with crane lifting gear.

- Fully lower the lifting table, turn the key anti-clockwise and pull it out of the key switch.
- Insert bolts through the load handling board (7) into the frame (8) to ensure that the lifting table is secured together with the frame.
- Place the control unit on the lifting table and secure it.
- Strap the crane lifting gear to the strap points (9).



## 7 Troubleshooting

This chapter allows the user to identify and rectify basic faults or the effects of incorrect operation. When trying to locate a fault, proceed in the order shown in the table.

| Fault   | Possible Cause  | Remedy  |
|---|---|---|
| Lifting table does not work or does not reach maximum height. | <ul style="list-style-type: none"> <li>– Steel ball of check valve does not hold.</li> <li>– Insufficient oil level.</li> <li>– Electromagnetic valve does not work.</li> </ul>               | <ul style="list-style-type: none"> <li>– Clean valve bore, insert steel ball again.</li> <li>– Add hydraulic oil up to the correct level.</li> <li>– Replace electromagnetic valve</li> </ul>   |
| Work table lowers again after lifting.                        | <ul style="list-style-type: none"> <li>– Steel balls of check valve do not hold.</li> <li>– Striker pin pressing too firmly on the steel balls.</li> </ul>                                    | <ul style="list-style-type: none"> <li>– Clean the valve bore and insert the steel bores.</li> <li>– Set the length of the tie rod (or lowering rod) so that the striker pin moves into the correct position and lubricate the shaft at the same time.</li> </ul> |
| Motor does not work   | <ul style="list-style-type: none"> <li>– Emergency Disconnect switch applied.</li> <li>– Electric wire connections have come loose.</li> <li>– Motor contactor has been damaged.</li> </ul>   | <ul style="list-style-type: none"> <li>– Turn Emergency Disconnect clockwise</li> <li>– Check connections and rectify error</li> <li>– Replace damaged contactor</li> </ul>   |
| Work table does not lower.                                    | <ul style="list-style-type: none"> <li>– The striker pin is not long enough to push the steel balls out of the valve bore.</li> <li>– The mechanical lowering lock has moved down.</li> </ul> | <ul style="list-style-type: none"> <li>– Set the length of the tie rod (or lowering rod) so that the striker pin reaches the correct position.</li> <li>– Lift up the lowering lock on both sides.</li> </ul>   |
| Leakage around pump piston and piston rod.                    | <ul style="list-style-type: none"> <li>– Seals faulty.</li> </ul>   | <ul style="list-style-type: none"> <li>– Replace seals.</li> </ul>  |



If the fault cannot be rectified after carrying out the remedial procedure, notify the manufacturer's service organisation, as any further troubleshooting can only be performed by specially trained and qualified service personnel.

# D Repairs and Maintenance

## 1 Operational Safety and Environmental Protection



All modifications to the lifting table, in particular the safety mechanisms, are prohibited. The operational speeds of the device must not be changed under any circumstances.



Only original spare parts have been certified by our quality assurance department. To ensure safe and reliable operation, use only the manufacturer's spare parts. Used parts, oils and fuels must be disposed of in accordance with the relevant environmental protection regulations. For oil changes, contact the manufacturer's specialist department.

## 2 Repair and Maintenance Work



Repair and maintenance work must be carried out and are essential for a long useful life and the safety of the lifting table. Engage specialist personnel if necessary.

The following checks must always be performed before starting work:

- The lifting table components must not be damaged or distorted.
- Check the hydraulic system for leaks.
- Rectify any defects found before continuing to use the lifting table.
- Replace any faulty or missing decals.

### Consumables

Consumables must always be handled correctly. Follow the manufacturer's instructions.



Improper handling is hazardous to health, life and the environment. Consumables must only be stored in appropriate containers. They may be flammable and must therefore not come into contact with hot components or naked flames.

Only use clean containers when filling up with consumables. Do not mix consumables of different grades. The only exception to this is when mixing is expressly stipulated in the Operating Instructions.

- Avoid spillage. Spilled liquids must be removed immediately with suitable bonding agents and the bonding agent / consumable mixture must be disposed of in accordance with regulations.

The hydraulic oil must be checked every 6 months. Add hydraulic oil with a viscosity to match the ambient temperature.

- ISO VG 32 (GB11118-89), viscosity: 32cSt at 40°C

The lubricants for grease lubricating points are designed for ambient temperatures of 5°C to +40°C.

– DIN 51825 T1 -K 2 K



However, any brand lubricant with the same specifications can be used.

Upon completion of checks and servicing, the instructions contained in the “Restoring the Equipment to Service” section must be followed.

### 3 Maintenance Safety Regulations

**Maintenance personnel:** The lifting table must only be serviced and maintained by the manufacturer’s trained personnel. The manufacturer’s service department has field technicians specially trained for these tasks.

**Lifting and jacking up:** When the lifting table is to be lifted, the lifting gear must only be secured to the points specially provided for this purpose. When jacking up the equipment, take appropriate measures to prevent it from slipping or tipping over (e.g. wedges, wooden blocks). You may only work underneath a raised load handler if it is supported by the mechanical lowering lock.

### 4 Servicing and Inspection

Thorough and expert servicing is one of the most important requirements for the safe operation of the lifting table. Failure to perform regular servicing can lead to failure of the lifting table and poses a potential hazard to personnel and equipment.



The pump delivery flow can be interrupted if the lifting table is set aside for repairs or maintenance work. Before using the table again, carry out a full lift cycle without load.

### 5 Cleaning

Do not use flammable liquids to clean the lifting table. When using a power cleaner or degreasing agents always proceed with caution as the grease is diluted on permanently lubricated bearings and can damage them. Subsequent lubrication is not possible.

## **5.1 Restoring the Equipment to Service**

The equipment must only be restored to service after cleaning or repair work, once the following operations have been performed:

- Lubricate the contact surfaces.
- Bleed the hydraulic system by pumping up the lifting table fully without load.

## **6 Safety Tests to be Performed at Intervals and after Unusual Events**



Perform a safety check in accordance with national regulations. Jungheinrich recommends the equipment be checked to FEM guideline 4.004. Jungheinrich has a safety department with trained personnel, able to carry out inspections.

The lifting table must be inspected at least annually (note the national regulations) or after any unusual event by a qualified inspector (be sure to comply with national regulations). The inspector shall assess the condition of the system from purely a safety viewpoint, without regard to operational or economic circumstances. The inspector shall be sufficiently instructed and experienced to be able to assess the condition of the lifting table and the effectiveness of the safety mechanisms based on the technical regulations and principles governing the inspection of lifting tables.

A thorough test of the lifting table must be undertaken with regard to its technical condition from a safety aspect. The lifting table must also be examined for damage caused by possible improper use. A test report shall be provided. The test results must be kept for at least the next 2 inspections.

The proprietor is responsible for ensuring that faults are immediately rectified.



A test plate is attached to the lifting table as proof that it has passed the safety inspection. This plate indicates the due date for the next inspection.

## **7 Final De-Commissioning, Disposal**



Final, proper de-commissioning or disposal of the lifting table must be performed in accordance with the regulations of the country of use. In particular, regulations governing the disposal of consumables and electronic and electrical systems must be observed.