

# 4.40 ND

Automotive-Lift date: 01/2010

Manual date: 01.01.2010

Valid since: SN: 307260



## Operating Instruction and Documentation

**Serial-number:.....**

Retailer address / phone

Made in Germany



# Nussbaum

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## Foreword

Nußbaum lifting systems are the result of long years experience in the automotive lifting industry. The high quality and the superior concept ensure reliability, a long lift lifetime and above all and economic business solution.

To avoid unnecessary damage, injury or even death, read the operating instructions with care and observe the contents.

Nußbaum lifts is not responsible for incidents involving the use of Nußbaum lifting systems for applications other than those for which they were designed.

***Otto Nußbaum GmbH & Co. KG is not liable for any resulting damages. The user carries the risk alone.***

## Obligations of the user:

- To observe and adhere to the operating instructions.
- To follow the recommended inspection and maintenance procedures and carry out the prescribed tests.
- The operating instructions must be observed by all persons working with or around the lift.
- Above all chapter 4 "Safety Regulations" is very important and must be closely adhered to.
- In addition to the safety regulations stated in the operating instructions manual, the appropriate safety regulations and the operating procedures of the place of operation must also be considered.

## Obligations of the operator:

The operator is obliged to allow only those persons complying to the following requirements to work with or around the unit.

- Persons being familiar with the basic regulations concerning labour safety and accident prevention and being trained to operate the particular unit.
- Persons having read and understood the chapter concerning safety and warning symbols.
- Persons using the lift are required to confirm that they have read and understood the chapter on safety and warning symbols by signing the appropriate form.

## Dangers when operating the lift:

Nußbaum-Lifts are designed and built according to technical standards and the approved regulations for technical safety. The use of Nußbaum lifts for purposes other than those for which they were designed, may result in injury or even death.

## **The lift must only be operated :**

- For its appropriate use
- In faultless condition concerning technical security.

## **Organisational Requirements**

- The instructions for use are to be kept at the place of operation being easily accessible at any time.
- In addition to the instructions for use, rules pertaining to other regulations i.e. accident prevention and environmental rules are to be observed and adhered to.
- The owner of the Nußbaum lifting system must ensure that operators and persons working with or around the lift occasionally conduct “refresher” courses to ensure that the appropriate operating procedures and safety precautions are known.
- Personal Protective Equipment (PPE) must be used according to the appropriate regulations.
- All safety- and danger signs on and around the lift are to be observed and followed!
- Spare parts must comply with the technical requirements specified by the manufacturer. This is only warranted with original parts.
- Observe and adhere to the specified time intervals between tests and inspections.

## **Maintenance works, repairing faults**

- Adjustments, maintenance, and inspections, are to be followed according to the time intervals specified. Details regarding the exchange of parts and components as mentioned in the operating instructions are to be adhered to.  
These works must only be carried out by expert personal.
- After maintenance- and repair works loose screws, nuts and bolts must always be firmly tightened!

## **Guarantee and liability**

- Our “General conditions of selling and delivering” are in force.  
There will be no guarantee or liability for incidents involving injuries or death or damage to equipment if these incidents are the result of one or more of the following reasons.
- Inappropriate use of the lift
- Inappropriate installation, initiation, operation and maintenance of the lift.
- Use of the lift while one or several security devices do not work, do not work correctly or are not installed correctly.
- Failure to follow the regulations of the operating instructions regarding transport, storage, installation, initiation, operation and maintenance of the lift.
- Unauthorized changes to the structure of the lift without first asking the producer.
- Unauthorized changes of adjustments of important components of the lift (e.g. driving elements, power rating, motor speed, etc)
- Wrong or incorrect maintenance practice.
- Catastrophes, acts of God or external reasons.



**After completely filling out this sheet including signatures, copy and return the original to the manufacturer. The copy must remain in the manual.**

**Otto Nußbaum GmbH & Co. KG**  
**Korker Straße 24**  
**D-77694 Kehl-Bodersweier**

### Record of installation

The automotive lift with the

serial number:..... was installed on:.....

at the firm:..... at:.....

The initial safety check was carried out and the lift was started.

The installation was carried out by the operating authority/competent (please delete as applicable).

The initial safety check was carried out by a competent person before the initial operation.

The operating authority confirms the correct installation of the automotive lift, the competent person confirms the correct initial operation.

Drive on height. Adjusted on 170mm: \_\_\_\_\_  ok

Used Dowels(\*): \_\_\_\_\_ (Type/Name)

Minimum anchorage depth (\*) kept: \_\_\_\_\_ mm  ok

Starting torque (\*) kept: \_\_\_\_\_ NM  ok

.....  
date name of the operating authority signature of the operating authority

.....  
date name of the competent person signature of the competent person

Your customer service:.....(stamp)

(\* see supplement of the dowel manufacturers

Automotive Lift date: 01/2010 / Manual date: 01.01.2010

## Record of handing over

The automotive lift with the

serial number:..... was installed on:.....

at the firm:..... at:.....

the safety was checked and the lift was started.

The persons below were introduced after the installation of the automotive lift. The introduction was carried out by either the erector from the lift-manufacturer or from a franchised dealer (competent person).

..... date	..... name	..... signature
..... date	..... name	..... signature
..... date	..... name	..... signature
..... date	..... name	..... signature
..... date	..... name	..... signature
..... date	..... name	..... signature
..... date	..... name of competent	..... signature of the competent

Your customer service:.....(stamp)

## 1. General Information

The document “**Operating Instructions and Documentation**” contains important information about installation, operation and maintenance of the automotive lift.

- Conformation of **installation of the automotive lift** is recorded on the “Record of Installation” form and must be signed and returned to the manufacturer.
- Conformation of once of, regular and out of the ordinary service checks is recorded in the respective check forms. The forms are used to document the checks. They should not be removed from the manual.

All **Changes to the structure** and any change of **location** of the automotive lift must be registered in the “**Master document**” of the lift

### 1.1 Installation and service checks of the automotive lift

Only specialised staff are allowed to repair and maintain the lift and only these specialised staff are allowed to conduct safety checks on the lift. For the purposes of this document these specialised staff will be called Experts and Competent persons.

**Experts** are persons (for example self-employed engineers, experts) which have received instructions and have the appropriate experience to check and to test the automotive lifts. They are aware of the work involved and know the accident prevention regulations.

**Competent persons** are persons who have acquired adequate knowledge and experience with automotive lifts. They have completed the appropriate training provided by the lift-manufacturer (the servicing technicians of the manufacturer or dealer, are regarded as competent)

### 1.2 Warning Symbols

The three symbols below are used to indicate danger and other important information. Pay attention to areas on and around the lift that are marked with these symbols.



***Danger! This sign indicates danger. Ignoring this warning may result in injury or even death.***



***Caution! This sign cautions against possible damage to the automotive lift or other material objects in the case of improper use.***



***Attention! This sign indicates an important function or other important information regarding the operation of the lift.***

## 2. Master document of the automotive lift

### 2.1 Lift–manufacturer

Otto Nußbaum GmbH & Co. KG  
Korker Straße 24  
D-77694 Kehl-Bodersweier

### 2.2 Application

The automotive lift is a lifting mechanism for lifting motor vehicles with a laden weight of up to 4000 kg . The max. load distribution is 2:1 either in or against the drive-on direction.

The automotive lift has been designed for servicing vehicles only. It has not been designed to carry people. Carrying people either directly on the lift or in vehicles that are on the lift is therefore not allowed.

The installation of the standard lift in hazardous or dangerous locations such as wash bays is dangerous and is therefore not allowed.

***Changes of construction, repairing and changes of place must be registered in this master document.***

### 2.3 Changes at the construction

**Changes at the construction, expert checking, resumption of work** (date, kind of change, signature of the expert)

.....  
.....  
.....

name, address of the expert

.....  
place, date

.....  
signature of the expert

### 2.4 Displacement of the automotive-lift

**Displacement of the automotive-lift, expert checking, resumption of work** (date, kind of change, signature of the competent)

.....  
.....  
.....

name, address of the competent

.....  
place, date

.....  
signature of the competent



## 2.5 Declaration of conformity

### EG- Konformitätserklärung

# Nussbaum

gemäß Maschinenrichtlinie Anhang II 1A

Declaration of Conformity according Machinery Directive 2006/42/EG ANNEX II 1A  
Déclaration de conformité selon directive machines annexe II 1A  
Declaración de conformidad según Directiva Maquinaria 2006/42/EG ANNEX II 1A  
Dichiarazione di conformità in accordo alla direttiva 2006/42/EG ANNEX II 1A

Hiermit erklären wir, daß die Hebebühne, Modell:  
Hereby we declare that the lift model:  
Par la présente nous déclarons que le pont élévateur modèle:  
Por la presente declara, que el elevador modelo:  
Con la presente si dichiara che il sollevatore:

4.40 ND

allen einschlägigen Bestimmungen der folgenden Richtlinien entspricht:  
fulfils all the relevant provisions of the following Directives:  
correspond aux normes suivantes:  
cumple todas las disposiciones pertinentes de las Directivas siguientes:  
adempie a tutte le richieste delle seguenti direttive:

Maschinenrichtlinie / Machinery Directive  
Niederspannungsrichtlinie / Low Voltage Directive  
EMV Richtlinie / EMC Directive

2006/42/EG  
2006/95/EG  
2004/108/EG

in Übereinstimmung mit den folgenden harmonisierten Normen gefertigt wurde  
was manufactured in conformity with the harmonized norms  
fabriqué en conformité selon les normes harmonisées en vigueur.  
producido de acuerdo a las siguientes normas armonizadas.  
è stato fabbricato in conformità con le norme armonizzate

Fahrzeug- Hebebühnen / Vehicle lifts  
Elektrische Ausrüstung von Maschinen / Electrical equipment of machines  
Elektromagnetische Verträglichkeit / Electromagnetic compatibility (EMC)

EN 1493: 1998  
EN 60204 - 1  
EN 61000-6-2 , -6-3

Beauftragter für die Technische Dokumentation  
Authorised to compile the technical file

M. Golutzki (Nussbaum)

Seriennummer  
Serial number

Seriennummer

Kehl- Bodersweier, 22.04.2010

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i.A. Thomas Hassler (CE)

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## 3. Technical Information

### 3.1 Technical ratings

Capacity:	4000 kg
Load distribution:	max. 2:1 in or against the drive on direction
Lifting time:	approx. 43 sec. with 4000 kg Load
Lowering time:	approx. 20 sec. with 4000 kg Load
Lifting height:	max. 1810 mm
Line Volthage:	3 x 400 Volt , 50Hz
Power rating:	1,5 kW (991033)
Motor rotation:	1490 rotation/min
Pump capacity:	4,2 cm <sup>3</sup> /rotation (1BK7D6,7Q)
Hydraulic pressure:	approx. 270 bar
Pressure relief valve:	approx. 285 bar
Oil Tank:	approx. 10 Litre
Hydraulic oil:	recommended 32 cst.
Sound level L <sub>pA</sub> :	≤ 70 dB
Connection by customer	3~/N+PE, 400V, 50 Hz fuse T16A (time-lag fuse) observe your regulations of your country

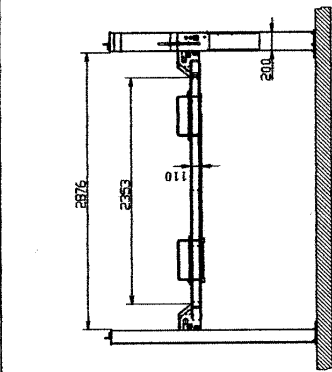
### 3.2 Safety device

1. Safety ratchet  
Safety device against unintentional lowering.
2. Holding valve  
Safety device against unintentional lowering.
3. Pressure relief valve  
Overpressure safety of the hydraulic system
3. Lockable main switch  
Safety device against unauthorised operation
4. Safety device at the end of the platform.  
Safety device against falling down of the vehicle.
5. Safety switch / safety device at the cylinder  
Safety device against unintentional lowering in case a rope is slack or torn.

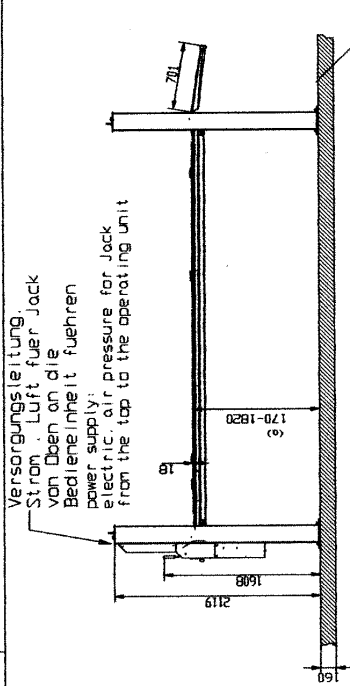
### 3.3 Data sheet

Mir weisen in unseren Plänen und die Mindestanforderung des Fundamentes hin. Jedoch der Zustand der örtlichen Gegebenheiten (z.B. Untergrund) obliegt nicht in unserer Verantwortung. Im Bedarfsfall ist ein Architekt/Statiker zu kontaktieren!

We point out the minimum requirement of the foundation in our plans. The condition of the local realities (for example: the ground under the foundation) does not lie in our responsibility. The execution of the installation situation must be individually specified by the planning architect or by the engineer engaged in statically calculations in the special case.



Betonqualität  
quality of concrete  
C20/25 (B25)  
DIN EN206-1



sliding plates  
Schiebeplatten

Einfahrriichtung  
drive in direction

Bausätze an Bedienelement bereitstellen:  
Netzanschluss: 3PH.N+PE. 400V. 50HZ  
Luftanschluss: 11. Weite 6mm 6-10 bar (optional)  
to provide by customer at the operating column:  
electric supply: 3PH.N+PE. 400V. 50HZ  
air pressure: diameter 6mm. 6-10bar (optional)

Alle Maße in Millimeter  
Mass- und Konstruktionsänderung vorbehalten.  
Der genaue Lieferumfang ist der Preisliste zu entnehmen.  
All measure in millimeter  
subject to alterations!

Nur für internen Zweck Zeichnungsnummer 4.40HN00001		Masse ohne Toleranzen		Material / Holzart		Gewicht: kg	
Datum		Name		Benennung		4.40 ND AMS	
Bearb. 13.02.09		Pl. G.		mit Achsmessset		Blatt	
Sepr.				Zeichnungsnummer		6784_EINBAU	
Name				Ersatz für:		von	
D. von 168 auf 170mm (S. 04.10)		MS		Nussbaum			
Nr. Herstellung		Datum		Name		Urspr.	
						Ersatz durch:	

Schielenlänge 4400mm  
( ) Maße in Klammern sind gültig für Schielenlänge 4800mm  
platform 4400mm  
( ) measure in the bracket for platform 4800mm  
Tragfähigkeit: 4000kg  
capacity

## 4. Safety regulations

If you use the automotive lift, the German following regulations are to be considered:  
BGG945: Examine of automotive-lifts; BGR500 Using automotive-lifts; (VBG14).

### **Especially the following regulations are very important:**

- The laden weight of the lifted vehicle must not exceed 4000 kg for the automotive lift. Load distribution max. 2:1 in or against the drive on direction.
- The automotive lift must be in its lowest position (fully collapsed), before the vehicle can be driving on to the lift. Only then can the vehicle be lifted.
- While working with the lift the operating instructions must be followed.
- Vehicles with low clearance or vehicles that are specially equipped should be pre tested to ensure that they clear the lift ramp to avoid damage.
- Only trained personnel over the age of 18 years old are to operate this lift.
- No one is to stand within the working area (danger area) during lifting and lowering.
- No one is to be raised or lowed either directly or in a vehicle by the automotive lift.
- No one is to climb onto the automotive lift or onto an already raised vehicle.
- The automotive column lift must be checked by an expert after changes in the construction have been made.
- The main switch must be switched off and locked before work on the vehicle can commence. This is a safety precaution to ensure that the lift does not move during work.
- The main switch must be switched off and locked before any maintenance or repair work on the automotive lift itself can be carried out.
- During lifting or lowering the operator must observe the vehicle to ensure that the vehicle and the lift are functioning correctly.
- Installation of the standard-mobile column lift in hazardous or dangerous locations such as washing bays is dangerous and is not allowed.

## 5. Operating Instructions



***The Safety Regulations must be observed and adhered to while working with the automotive lift. Read the safety regulations in chapter 4 carefully before working with the lift!***

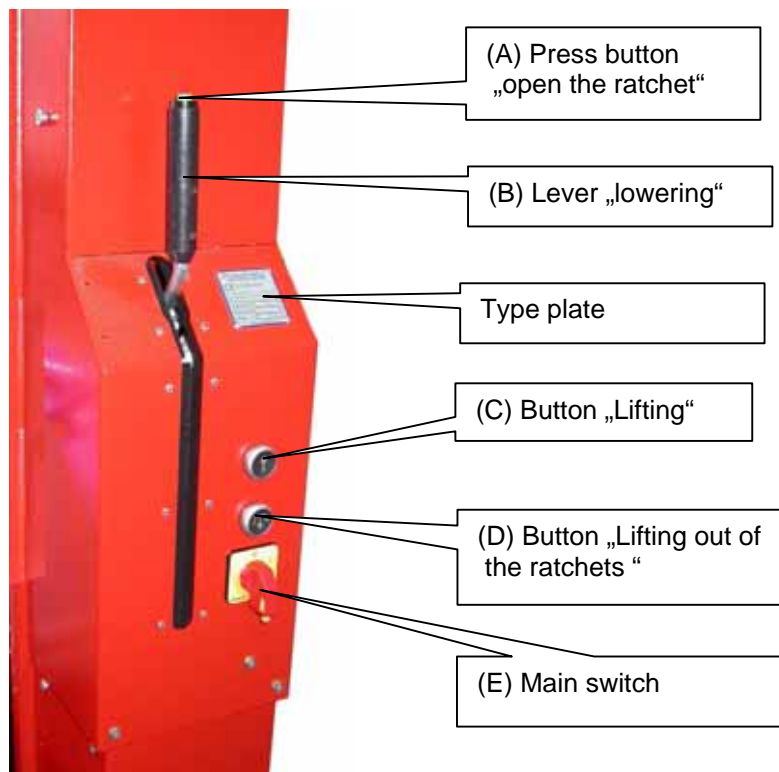
### 5.1 Lifting the vehicle

- The sliding plate and the turn table must be locked if the vehicle is driving on the platform.
- Drive the vehicle onto the middle of the lift.



***The complete wheels must be standing on the platform, otherwise the vehicle can fall down.***

- Secure the vehicle against rolling, put into gear, apply the hand brake.
- Control the dangerous places of the lift and be sure that there are no objects or people in the immediate area of the lift or on the lift.
- Switch on the main switch.
- Raise the vehicle Press the button „Lifting“.
- Raise the vehicle to the required working height. Press the button “lifting“ .
- Observe the complete process.
- Turn off the main switch if you don't use the lift.



## 5.2 Lowering the vehicle

- Check all danger points of the lift and be sure that there are no objects or people in the working area (danger area) around the lift or on the lift.
- Press the button (A). All ratchets will be unlocked.
- Press the lever slowly downwards. The lowering movement can be adjusted with the hand lever.
- The lowering process starts.
- In case the lift is in the safety ratchets, raise the lift a few millimetres. Press the button “C” and “D” simultaneously. Repeat the lowering process, again.
- Lower the lift to the required working height or to its lowest position. Observe the complete lowering process.
- Drive the vehicle off the lift if it is in the lowest position.

## 5.3 Lowering into the ratchet strip

- Do not push the button (A). Press the lever slowly downwards. The lowering movement can be adjusted with the hand lever.
- Raise the lift out of the safety ratchets, press the button „C“ and „“ simultaneously.

## 5.4 Adjusting the platform

- It is possible to adjust the rail of the different wheelbase. That is necessary to reach the different wheelbases of the vehicles. One platform is only movable without load. (See the measure at the data sheet)
- Remove the load and raise the lift on approx.1000 mm height. The platform is movable on the chosen position without high force.

## 6. Troubleshooting

If the lift does not work properly, the reason might be quite simple. Please check the lift for the potential reasons mentioned on the following pages. If the cause of trouble still cannot be found, please call technical service.  
Self-employer repair-working is prohibited.

<b>Problem: Motor does not start!</b>	
Potential causes: <i>No power supply</i> <i>Main switch is not engaged</i> <i>The main switch is defective</i> <i>The main fuse defective</i> <i>The feed line is cut</i> <i>Thermal switch in the motor is active</i> <i>Motor is defective</i> <i>Button "Lifting" defective</i> <i>Rope is torn</i>	solution: <i>examine the power supply</i> <i>examine the main switch</i> <i>examine the main switch</i> <i>examine the Fuse</i> <i>examine the complete cable</i> <i>Let motor cool down</i> <i>Phone the technical service</i> <i>examine the switch</i> <i>Switch off the main switch and</i> <i>phone the technical service</i>

<b>Problem: Motor starts, lift does not lift!</b>	
Potential causes: <i>The vehicle is too heavy</i> <i>Level of the oil is too low</i>  <i>Hydraulic valve is defective</i> <i>Gear pump is defective</i>	solution: <i>unload the vehicle</i> <i>check the oil level, fill with hydraulic</i> <i>oil as required</i> <i>Phone the technical service</i> <i>Phone the technical service</i>

<b>Problem: the lift does not lower!</b>	
Potential causes: <i>An obstacle is restricting the lift from being lowered</i> <i>Fuse is defective</i> <i>The ratchets are locked or defective</i> <i>The ratchets magnetic is defective</i> <i>Button "unlocking the ratchets" is defective</i> <i>Wrong sequence when operation</i> <i>Ball valve is defective</i>	solution: <i>(see chapter 6.1)</i> <i>Check the fuse</i> <i>Phone the technical service</i> <i>Phone the technical service</i> <i>See chapter 5.2</i> <i>Phone the technical service</i> <i>Phone the technical service</i>

## 6.1 Lowering onto an obstacle

- In case the lift is lowering onto an obstacle, only the ropes become flabby (slack) which are in the near area of the obstacle. Under the rail at the hydraulic cylinder is a safety device, which switches the lifting platform off as soon as a rope becomes flabby or tears. During this procedure by spring action a sliding element on the piston rod is pushed onto a limit switch.  
The lift switched off and the lowering procedure stops.
- In case the ropes are slack, press only the button "lifting" (A) and the button (C) simultaneously and raise the lift until the obstacle can be removed.

## 6.2 Emergency lowering



***A emergency lowering is an intervention into the controls of the lift and can be done only by experienced expert.***

***The emergency lowering must be carried in this order. Otherwise a malfunction may lead to damage to equipment, injury or even death.***



***Every kind of external leakage must be removed. This is particularly necessary before an emergency lowering.***

***The emergency lowering may only be done by persons who are trained in using the lift.***

- It is possible to open the hydraulic valve manually to lower the lift into the lowest position.
- In case the lift is locked in the safety ratchets, every ratchet must pull back manually. First, raise the crossbeam with a help of a jack until the tooth of the ratchet is movable. Fasten the ratchet with suitable support (wire), so the ratchet tooth of the ratchet can not engage in ratchet-strip any more.  
Repeat this process at all four ratchets.
- Check all danger points of the lift and be sure that there are no objects or people in the working area (danger area) around the lift or on the lift.
- Press the lever slowly downwards. The lowering movement can be adjusted with the hand lever.
- Observe the complete lowering procedure. With danger let go off the hand lever.
- Lower the lift in the lowest position and remove the vehicle.
- Switch off the main switch and secure it against unauthorised operation until the defective pieces or valves have been replaced.  
Phone your service partner.



***Do not work with the lift until the defective parts are changed.***



***After the emergency-lowering process, remove the wire at the ratchets; otherwise the safety device is out of function.***

## 7. Inspection and Maintenance



**Before conducting maintenance work, preparations must be made to ensure that during maintenance and repair work there is no risk to the safety of people working on or around the lift and also that there is no risk of damage to equipment being used on or around the lift.**

To guarantee the utmost availability and to ensure that the lift remains functional, maintenance work contracts are organised between our clients and their local retailers.

A service must be performed at regular intervals of 3 months through the operator in accordance with following service manual. If the lift is in continuous operation or in a dirty environment, the maintenance rate must be increased.

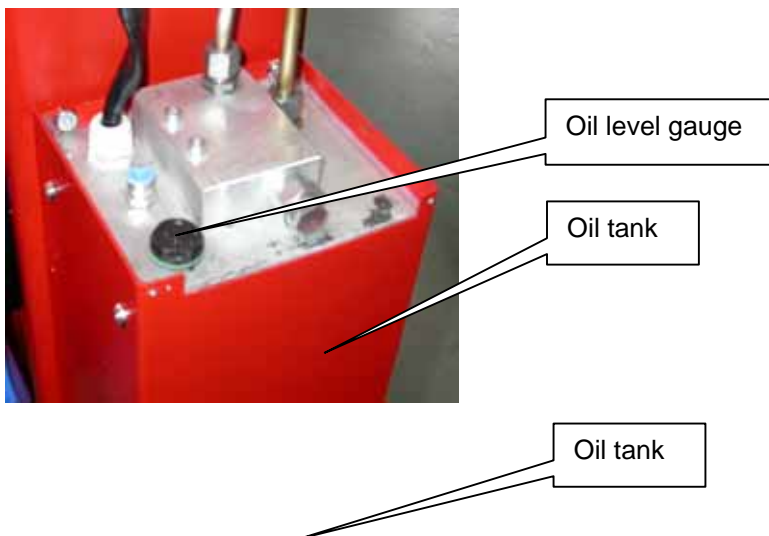
During daily operation the lift must be closely observed to ensure that it is functioning correctly. In the case of malfunction or leakage the technical service must be informed.

### 7.1 Maintenance plan of the lift

- Before beginning any maintenance work isolate the power supply. Secure the main switch (lock it). Secure the danger area around the automotive lift and secure the lift against unintentional lowering.
- Clean and check the stripper of the cylinder.
- Clean the piston-rod using compressed air and examine for damages.
- Examine the energy chain. Clean it and examine the supply lines and the chain for damages.
- Check the condition of ropes. If torn wires are discovered, the complete rope set must be changed.
- Check all pulleys, bolts and bearings for wear.
- Check the condition of the electrical parts. (electrical button, main switch, lighting, cables, plugs, electrical magnet).
- Check the condition of the plastic energy chain at the operating column.
- Clean and lubricate the moving parts and all lubricate nipples of the lift (hinge bolts, sliding pieces, sliding surfaces) grease with a multipurpose liquid (e.g: Auto Top 2000 LTD. Agip).
- Clean and check the function of the ratchet, ratchet strip and the function and condition of the magnetic. Grease the ratchet surface with a multipurpose lipid.
- Check all welded joints for cracks on the automotive-lift.  
If any cracks are found on the lift cease use immediately. Switch-off and secure the main switch (lock) and call the service partner.
- Examine the function and the condition of the ramps and the plastic roles.
- Examine the function and the condition roll over safety.



- Examine the function and the condition off the sliding plates, the turntables and the fixing pin.
- Version with wheel alignment set: Check the condition and function of the turn table and sliding plates. Loosen the spring under the platform before removing the plates. Clean all the parts. Before installing do not lubricate with fat. Because dirt can accumulate below the plates and the movements impair. Use an oil Spray to oil the surface.
- Check all surfaces and repair if necessary.
- Damage to external surfaces, must be immediately repaired.  
If these repairs are not made immediately, permanent damage to the powder-coated surface may result.  
Repair and clean damaged areas with an abrasive paper (grain 120). After this is complete, use a suitable paint (observe the RAL Number).
- Check the zinc surface and repair it with a suitable tool. Use abrasive paper (grain 280). White rust can result from moisture laying in certain areas for long periods of time. Poor aerating can also result in rust formation.  
Rust may result from mechanical damage, wear, aggressive sediments (de-icing salt, liquids) or insufficient cleaning.  
Repair and clean these areas with abrasive paper (grain 280).  
After this is complete, use a suitable paint (observe the RAL Number).
- The hydraulic oil has to be changed at least once a year. To change the oil, lower the lift into its lowest position. Empty the oil tank and fill in clean oil, approx. (see chapter 3.) is needed.  
Use an ATF-Suffix hydraulic-oil (OEST Company ) if the ambient temperature is under 5 degrees centigrade. After filling, the hydraulic oil must be between the upper and lower markings of the oil level gauge or 2 cm under the filler neck.  
Remove the old oil according to the appropriate regulations.





waste oil screw

- Check the hydraulic tubes for leakage.
- Durability of the hydraulic hoses:  
The use duration of the hose lines should not exceed six years, including a storage time of at most two years.
- Check that all screws and bolts are correctly torque (turning moments, see the list)

#### Turning moment for screws

property class 8.8

	0,10*	0,15**	0,20***
M8	20	25	30
M10	40	50	60
M12	69	87	105
M16	170	220	260
M20	340	430	520
M24	590	740	890

property class 10.9

	0,10*	0,15**	0,20***
M8	30	37	44
M10	59	73	87
M12	100	125	151
M16	250	315	380
M20	490	615	740
M24	840	1050	1250

Drehmomentabelle 8.8-10.9 E

- \* sliding friction 0,10 for very good surfaces, lubricated
- \*\* sliding friction 0,15 for good surfaces, lubricated oder dry
- \*\*\* sliding friction 0,20 surface black or phosphatized, dry

## 7.2 How often must the lift be cleaned?

A regular and appropriate maintenance practice will aid the preservation of the lift.

No guarantees can be given when damage (egg rust or fading colour) is the direct result of poor maintenance and cleaning practice.

Regular cleaning of all kinds of dirt is the best protection against wear and the formation of rust and will prolong the life of the lift

- Dirty deposits that can cause rust include:

- de-icing salt
- sand, pebble stone, natural soil
- all types of industrial dust
- water; also in connection with other environmental influences
- all types of aggressive deposits
- constant humidity caused by insufficient ventilation

Obviously this is dependent on the type of work being done with the lift, the degree of cleanliness of the workshop and location of the lift. The degree and amount of dirt is dependent on the season, on the weather conditions and the ventilation of the workshop. During poor conditions it may be necessary to clean the lift once week, but cleaning once a month will suffice.

Clean the lift and the floor with a non-aggressive and non-abrasive detergent. Use a gentle detergent to clean the parts. Use an standard washing-up liquid and lukewarm water.

- Do not use steam jet cleaners.
- Remove all dirt carefully with a sponge or if necessary with a brush.
- Ensure that no washing-up liquid is left on the lift after cleaning.
- Do not use aggressive means for cleaning the workshop floor and the automotive lift.
- A permanent contact with any kind of liquid is not allowed. Do not use high pressure devices for cleaning the lift.
- After cleaning dry the automotive-lift with a suitable type of cloth and inject it with a wax spray or an oil spray.

## 8. Security check

The security check is necessary to guarantee the safety of the lift during use. It has to be performed in the following cases:

1. Before the initial operation, after the first installation.  
**Use the form "First security check before initiation"**
2. In regular intervals after the initial operation, at least annually.  
**Use the form "Regular security check at least annually"**
3. Every time the construction of that particular lift has been changed.  
**Use the form "Extraordinary security check"**



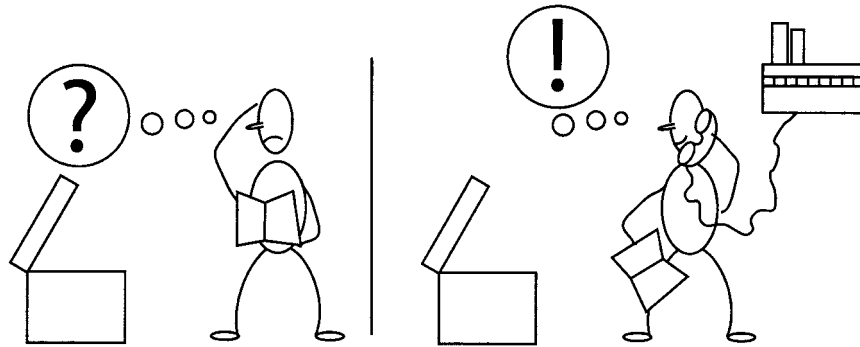
***The first and the regular security check must be performed by a competent person. It is also recommended to carry out a service on the lift at this time.***



***After the construction of the lift has been changed (changing the lifting height or capacity for example) and after serious maintenance works (welding load bearing parts) an extraordinary security check must be performed by an expert.***

This manual contains forms with a schedule for the security checks. Please use the appropriate forms for the security checks. The forms should remain in this manual after they have been filled out. A short description about special safety devices follows.

## 9. Handing over and Initiation



### 9.1 Regulations

- The installation of the lift is performed by trained technicians of the manufacturer or one of its distribution partners. If the operator can provide trained mechanics, he can install the lift by himself. The installation has to be done according to this regulation.
- Installing the standard-automotive lift in a hazardous location or a washing bay is not allowed.
- Before installation a sufficient foundation must be constructed. If the foundation is already constructed then proof that the foundation conforms to the standard is required.  
A level foundation for the installation is required. The foundations must be based in a frost resistance depth, both outdoors and indoors in a position where the installer believes there is no chance of frost.
- An electrical supply 3~/N+PE, 400 V, 50 Hz must be provided.  
The supply line must be protected with a time-lag fuse T16Ampere (VDE0100 German regulation). The minimum diameter amounts to 2.5 mm<sup>2</sup>.
- All cable ducts must be equipped with protective coverings to prevent accidents.
- After assembly of the lift, the protective grounding of the lift must be examined after International Electrotechnical Commission (IEC) guidelines (60364-6-61) before first start-up by operators. Also an insulation resistance examination is recommended.

### 9.2 Erection and doweling of the lift

It is necessary to dowel every columns at 4 points. For this a concrete floor without reinforcement, thickness of min.160 mm and quality C20/25 (B25) and a normal armoring is needed. In case of doubt a test drill is necessary and a dowel is to put in. Afterwards the dowels (anchor) (German Dowel manufacturer) are to fasten with a demand torque moment. If the necessary torque is too low or if there are cracks in the concrete floor, a foundation in accordance with the sheet "foundation plan" is to erected. As well it must be paid attention that the installation place is even to guarantee a horizontal erection of the lift.

### 9.3 Installation

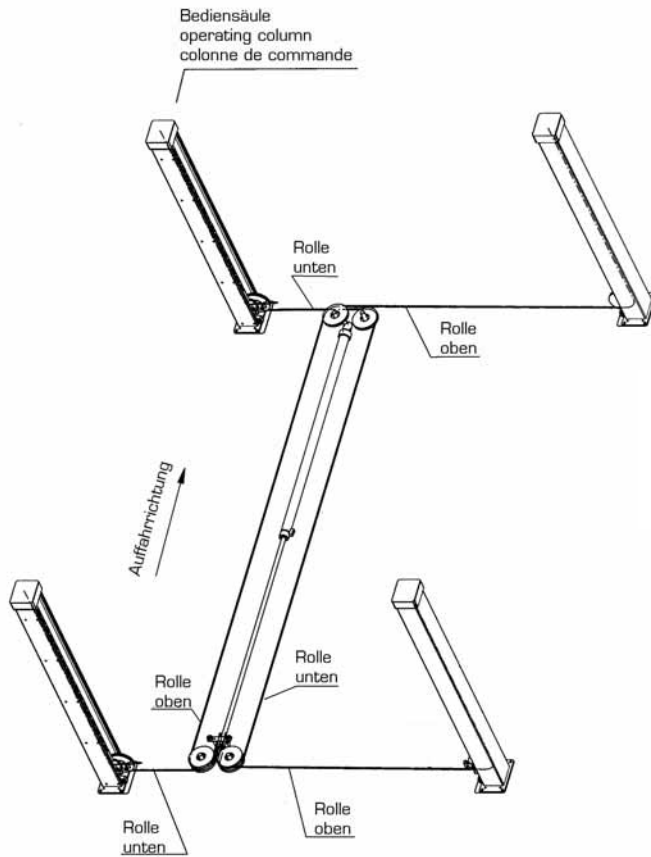
Position the platform (the platform with the cylinder) on a support. (Observe the drive on direction). The operating unit is in drive on direction on the left side. Beside the turn table.



Roll out the ropes. This may not be dirty.  
Position the crossbeam at the platform. In front is the crossbeam with the bore hole (32mm) for the cable of the lighting and the lighting device.



lighting device of the optional lighting in the front crossbeam

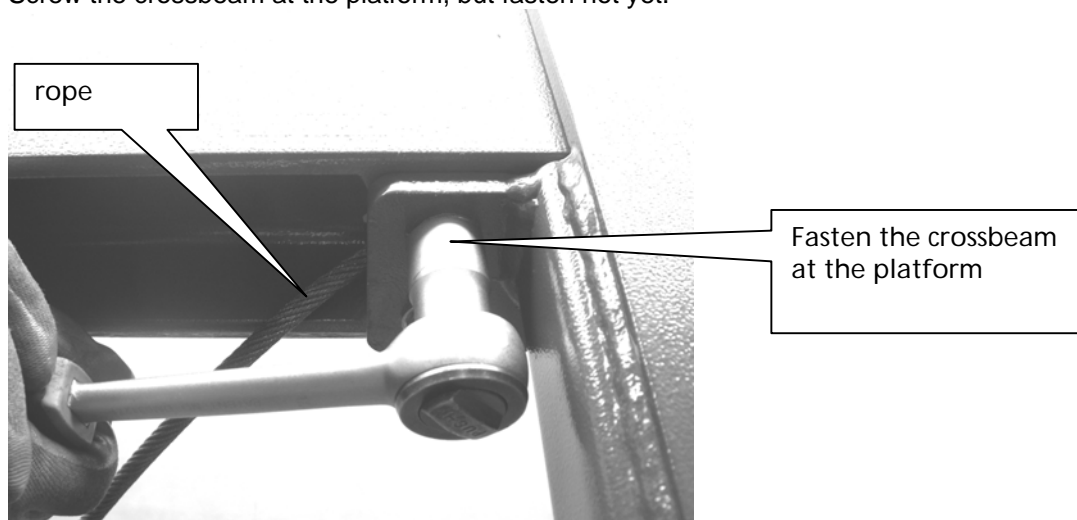


Rolle unten = pulley below  
Rolle oben = pulley above

Auffahrriichtung = drive on direction

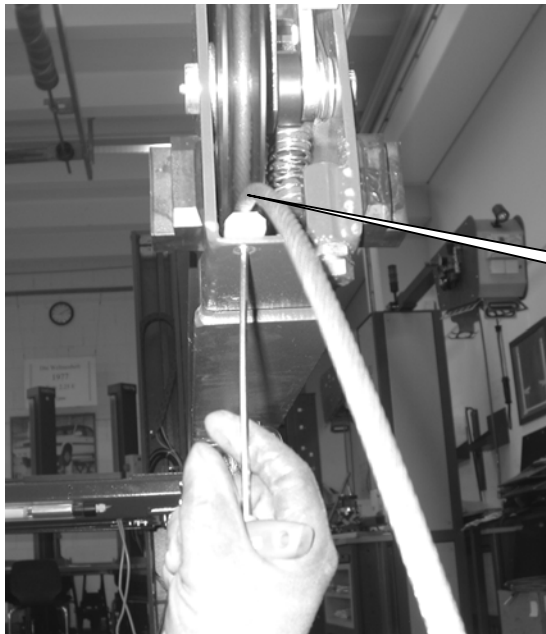
pic: ropes

Lead the ropes through the crossbeam.  
Screw the crossbeam at the platform, but fasten not yet.





Lead the rope through the crossbeam



Loosen the rope safety device (plastic piece) and remove it. Lead the rope under the pulley. Then fasten the plastic again. Carry out at all four rope pulleys.

Rope safety device



Position the columns at the end of the crossbeam (distance approx. 10cm)

Observe the position of the operating column.

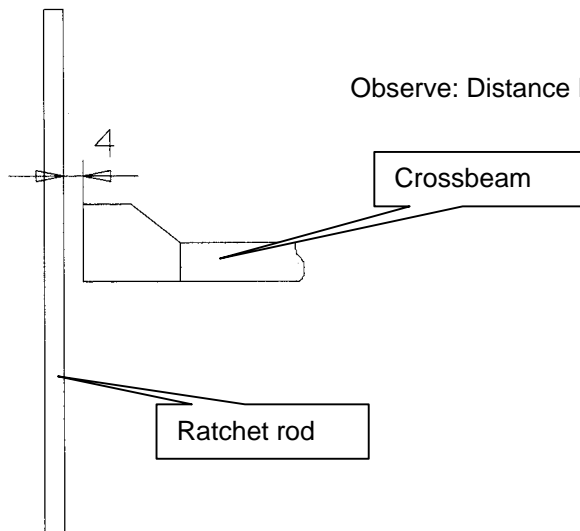


Lead the rope through the head plate and secure it with a nut, but adjust not yet.



Loosen and remove the ratchet rod guiding device. Attention. Hold the ratchet with a suitable tool. Otherwise the ratchet can fall out into the direction of the column

Push the column to the black sliding blocks at the crossbeam. Then push the ratchet rod in direction of the ratchet and fasten the ratchet rod guiding device. Carry out this procedure at all columns.







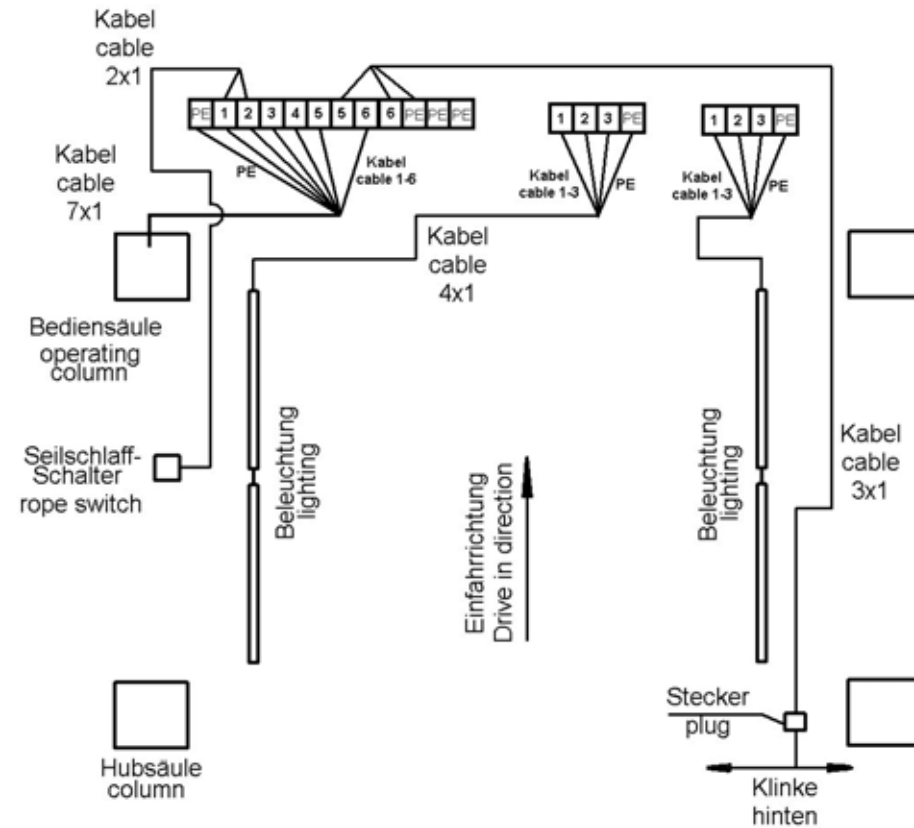
Operating column: Lead the electric cable, hydraulic lines from the energy chain through the holding device at the crossbeam.

Loosen the holding device of the energy chain at the crossbeam and fasten the energy chain. Then fasten the holding device of the energy chain at the crossbeam again.

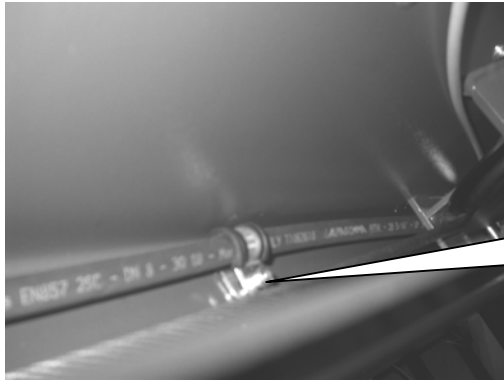
Holding device of the energy chain with screws

Holding device

Fasten the hydraulic lines. Connect the cable for the lighting and the plugs. (see sketch)



Anschluss\_4.40ND.jpg



Fasten the hydraulic lines under the platform.



Adjust the height of the platform at the end terminals of the ropes.

**Distance from the floor to the top edge of the platform = min.170mm ( see data sheet)**

Fasten the second platform. The lighting shows to the inside. Lighting must show inward.  
Fill in the hydraulic oil. Connect the power supply.  
Before the first operation examine the position of the ropes into the pulleys.

Raise and lower the lift two times without load.



Adjust the columns with a help of the spirit level and then fasten it with dowels. (see the data sheet)

Dowel the lift:

Nussbaum Company recommended Liebig, Fischer, Hilti safety dowels (German dowel manufacturer) or equivalent dowels of other manufacturer but: observe their regulations.

Before doweling check the concrete floor (with quality min. C20/25) if the concrete floor goes to the top edge of the floor. For an existing concrete floor the dowels have to be chosen according to pic. 7. If floor tiles are on the concrete floor, the dowels have to be chosen according to pic. 8.

Check the adjustment of the base plates and dowel the lift: Bore the holes to fix the dowels through the borings of the base plates. Clean the holes with pressure air. Put in the safety dowels.

Tighten the dowels with the dynamometric key.



**Each dowel must be tightened with the demanded torque. Otherwise the normal and secure function of the lift can not be guaranteed.**

Raise and lower the lift several times into the end positions.

Lower the lift into the safety ratchet and adjust the lift again.



Install the ramps and secure it and the roll over safety device at the front of the platforms. Fasten the cover of the electrical device of the lighting.

## 9.4 Change of lift location

If the place of installation is to be changed, the new place has to be prepared in according to the regulations of the first installation. The change should be performed in accordance with the following points:

- Remove the spring at the ratchet-strip.
- Lower the lift in the lowest position
- Loosen and remove the ratchet-strip. If necessary, pull back the ratchet manually.
- Raise the lift on a working height. Press the button „lifting“
- Lower the lift until the rails are on the erection trestles.
- Remove the cover of the Oil tank and remove the hydraulic oil.
- Disconnect the power supply.
- Disconnect the hydraulic hoses.
- Loosen the ropes at the columns
- Loosen and remove the dowels and remove the columns
- Loosen and remove the screws of the crossbeam. Keep an eye on the ropes. Lay the ropes not into the dirt.
- Transport the automotive-lift to the new location.
- Install the lift in accordance with chapter 9 “ Installation and Initiation”.



**Use new masonry-bolts, the used bolts can not be used again.**



**A security check must be performed before reinitiating by a competent person. Use form “Regular security check”**

## 9.5 Initiation



***Before the initiation a security check must be carried out. Therefore use the form: First security check.***

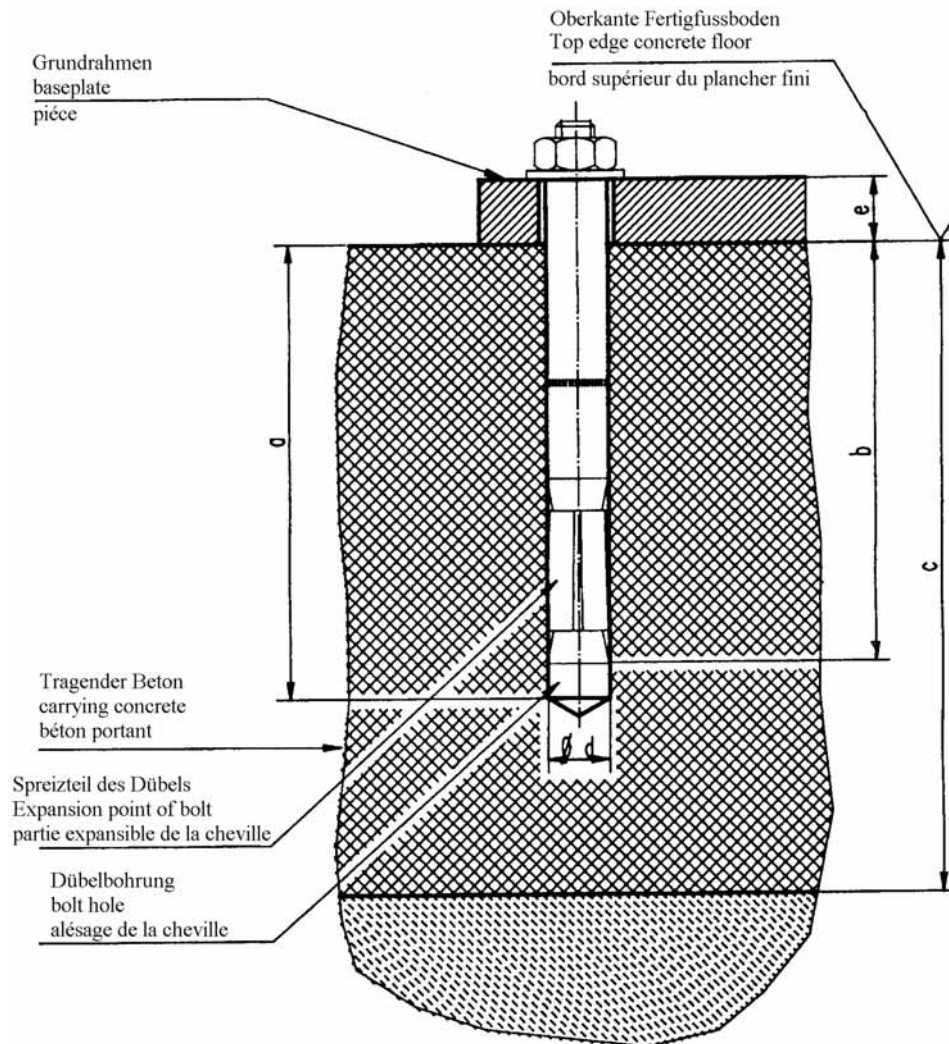
If the lift is installed by a competent person, he or she is to perform the security check. If the operator installs the lift by him or herself, he or she must instruct a competent person to perform the security check.

The competent confirms the faultless function of the lift in the installation record and the form for the security check and authorises the use of the lift.



***Please send the completed installation record to the manufacturer after installation.***

Pic 7: choice of the dowel length without floor pavement or tile surface

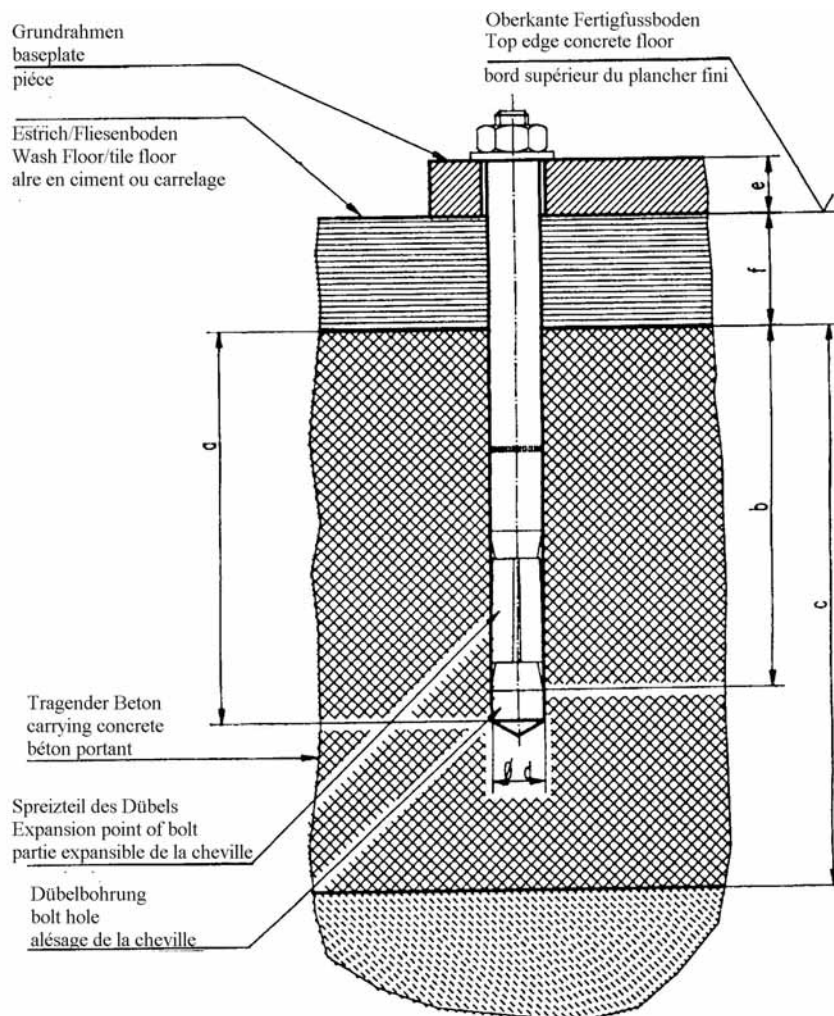


Liebig-dowels	
Dowel type	BM10-/70/40
Drilling depth (mm)	a 85
Min. anchorage depth (mm)	b 70
Thickness of concrete (mm)	c min.140(*)
Diameter of bore (mm)	d 15
Thickness of the lift-pieces (mm)	e 0-40
Number of dowels	16
Starting torque	40

**(\*) minimum thickness of concrete by using the mentioned dowels. Otherwise, observe the regulation of the foundation plan.**

**You can use equivalent dowels from another dowel manufacturer (with license) but observe their regulation.**

**Pic 8: choice of the dowel length with floor pavement or tile surface**

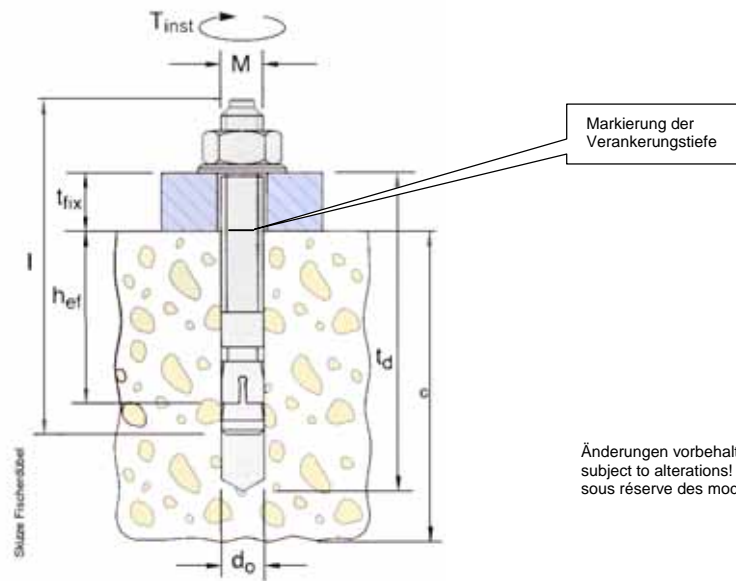


**Liebig-dowels**

Dowel type	BM10-15/70/65	BM10-15/0/100	BM10-15/70/140
Drilling depth (mm)	a 85	85	85
Min. anchorage depth (mm)	b 70	70	70
Thickness of concrete (mm)	c min.140(*)	min.140(*)	min.140(*)
Diameter of bore (mm)	d 15	15	15
Thickness of the lift-pieces (mm)	e 40-65	65-100	100-140
Number of dowels	16	16	16
Starting torque (Nm)	40 Nm	40Nm	40Nm

**(\*) minimum thickness of concrete by using the mentioned dowels. Otherwise, observe the regulation of the foundation plan.**

**You can use equivalent dowels from another dowel manufacturer (with license) but observe their regulation.**

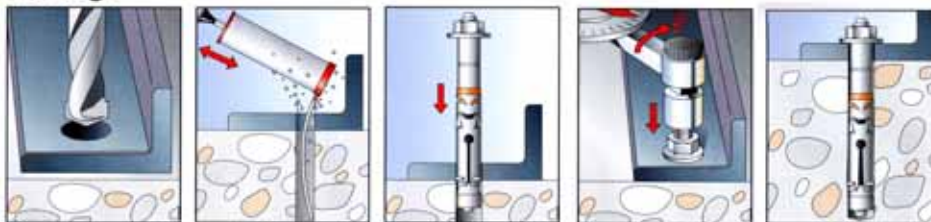


Änderungen vorbehalten!  
subject to alterations!  
sous réserve des modifications!

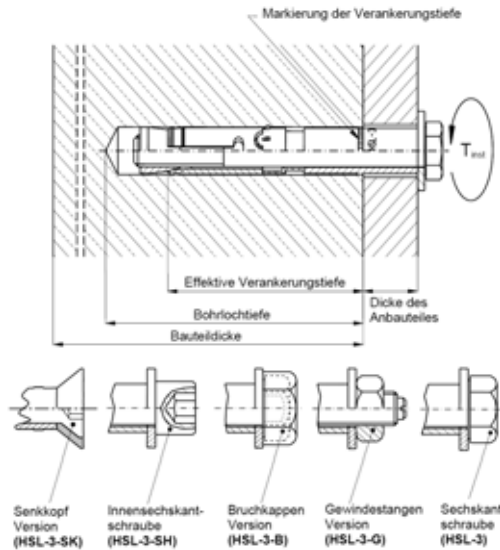
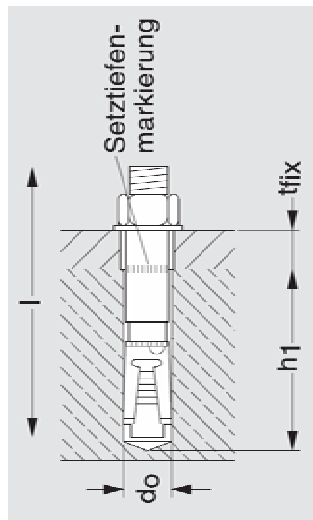
fischer-Dübel		4.40 ND <sup>e</sup>		
Dübel typ of dowel type de cheville		FH 15/50 B	FH 18 x 100/100 B	FH 24/100 B
Bohrtiefe drilling depth Profondeur de l'alésage	t <sub>d</sub>	145	230	255
Mindestverankerungstiefe min.anchorage depth Profondeur minimale d'ancrage	h <sub>ef</sub>	70	100	125
Betonstärke thickness of concrete Epaisseur du béton	c	siehe den aktuellen Fundamentplan see current foundation-diagram drawing vois le plan de fondation actuel		
Bohrerdurchmesser diameter of bore Diamètre de l'alésage	d <sub>0</sub>	15	18	24
Bauteildicke thickness of the lift-piece Epaisseur de la pièce	t <sub>fix</sub>	0-50	0-100	0-100
Anzugsdrehmoment Nm turning moment moment d'une force	M <sub>d</sub>	40	80	120

Stückzahl piece number nombre des pièces	a	4
	b	8
	c	10
	d	12
	e	16
	f	20

### Montage

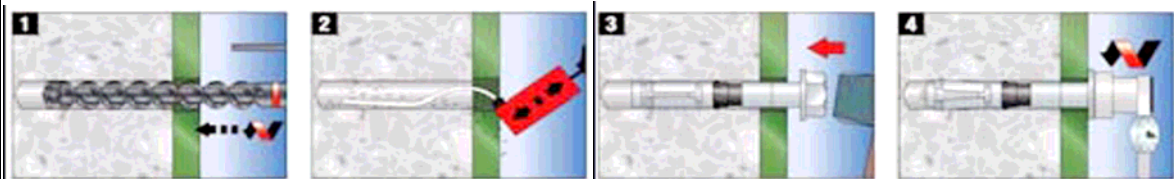


Es können auch gleichwertige Sicherheitsdübel anderer Hersteller (mit Zulassung) unter Beachtung deren Bestimmungen verwendet werden.  
It is possible to use equivalent safety-dowels (with license) of other manufacturer but observe their regulations.  
Des chevilles des autres marques (autorisées) peuvent aussi être choisies en respectant les directives du fabricant.



Änderungen vorbehalten!  
subject to alterations!  
sous réserve des modifications!

Hilti-Dübel		4.40 ND <sup>†</sup>		4.40 ND <sup>†</sup>		
		ohne Bodenbelag	ohne Bodenbelag	mit Bodenbelag	ohne Bodenbelag	mit Bodenbelag
Bodenbelag (Estrich, Fliesen)						
Dübel typ of dowel type de cheville		HSL-3-G M10/40 Art.Nr.371797	HSL-3-G M12/50 Art.Nr.371800	HSL-3-G M12/100 Art.Nr.371831	HSL-3-G M16/50 Art.Nr.371803	HSL-3-G M16/100 Art.Nr.371832
Bohrtiefe drilling depth Profondeur de l'alésage	h <sub>1</sub>	90	105	105	125	125
Mindestverankerungstiefe min.anchorage depth Profondeur minimale d'ancrage	h <sub>ef</sub>	70	80	80	100	100
Betonstärke thickness of concrete Épaisseur du béton	c	siehe den aktuellen Fundamentplan see current foundation-diagram drawing vois le plan de fondation actuel				
Bohrerdurchmesser diameter of bore Diamètre de l'alésage	do	15	18	18	24	24
Bauteildicke thickness of the lift-piece Épaisseur de la pièce	t <sub>fix</sub>	0-40	0-50	0-100	0-50	0-100
Anzugsdrehmoment Nm turning moment moment d'une force	T <sub>inst</sub>	35	60	60	80	80
Gesamtlänge Total length Longueur totale	l	135	164	214	188	238
Gewinde Thread fil	M	10	12	12	16	16
Stückzahl piece number nombre des pièces	a	4				
	b	8				
	c	10				
	d	12				
	e	14				
	f	16				
	g	28				



Es können auch gleichwertige Sicherheitsdübel anderer Hersteller (mit Zulassung) unter Beachtung deren Bestimmungen verwendet werden.  
It is possible to use equivalent safety-dowels (with license) of other manufacturer but observe their regulations.  
Des chevilles des autres marques (autorisées) peuvent aussi être choisies en respectant les directives du fabricant.



## First security check before installation



Fill out and leave in this manual

Serial-number: \_\_\_\_\_

kind of check	all right	defect missing	veri- fication	remark
Type plate.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition automotive-lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Short operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Sticker max. capacity.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Designation lifting/lowering.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Detailed operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Lockable main switch.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition, Function Button „Lifting“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition, Function hand lever „Lowering“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function Button „unlocking ratchet“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function „Lowering into the ratchet“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition „roll over safety device“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function, Condition „ramps and plastic roles“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition Cover.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition ratchet and ratchet strip.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function, Condition sliding plate and turntable.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition bolts and bearings.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Construction (deformation, cracking).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function movable rail.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition welding.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Torque moment of screws and dowels.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Check the drive on height 170mm.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition hydraulic unit.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition colour.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition ropes and fastening.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition piston rod.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Closeness of the hydraulic system.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Level of hydraulic oil.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition hydraulic hoses.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition electrical cables and plugs.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition concrete.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function test with vehicle.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function lighting (optional).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....

**( mark here applicable, in case of verification mark in addition to the first mark!)**

Security check carried out:.....

Carried out the company:.....

Name, address of the competent:.....

Result of the Check:

Initiation not permitted, verification necessary

Initiation possible, repair failures

until.....

No failings, Initiation possible

.....  
signature of the expert

.....  
signature of the operator

If failures must be repaired:

Failures repaired at: .....

.....  
signature of the operator

(Use another form for verification!)

## Regular security check and Maintenance



Fill out and leave in this manual

Serial-number: \_\_\_\_\_

kind of check	all right	defect missing	veri- fication	remark
Type plate.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition automotive-lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Short operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Sticker max. capacity.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Designation lifting/lowering.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Detailed operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Lockable main switch.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition, Function Button „Lifting“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition, Function hand lever „Lowering „.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function Button „unlocking ratchet“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function „Lowering into the ratchet“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition „roll over safety device“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function, Condition „ramps and plastic roles“	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition Cover.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition ratchet and ratchet strip.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function, Condition sliding plate and turntable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition bolts and bearings .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Construction (deformation, cracking) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function movable rail.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition welding.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Torque moment of screws and dowels.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Check the drive on height 170mm .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition hydraulic unit.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition colour.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition ropes and fastening.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition piston rod.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Closeness of the hydraulic system.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Level of hydraulic oil.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition hydraulic hoses.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition electrical cables and plugs.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition concrete .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function test with vehicle.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function lighting (optional).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....

**( mark here applicable, in case of verification mark in addition to the first mark!)**

Security check carried out:.....

Carried out the company:.....

Name, address of the competent:.....

Result of the Check:

Initiation not permitted, verification necessary

Initiation possible, repair failures

until.....

No failings, Initiation possible

.....  
signature of the expert

.....  
signature of the operator

If failures must be repaired:

Failures repaired at: .....

.....  
signature of the operator

(Use another form for verification!)

## Regular security check and maintenance



Fill out and leave in this manual

Serial-number: \_\_\_\_\_

kind of check	all right	defect missing	veri- fication	remark
Type plate.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition automotive-lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Short operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Sticker max. capacity.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Designation lifting/lowering.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Detailed operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Lockable main switch.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition, Function Button „Lifting“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition, Function hand lever „Lowering „.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function Button „unlocking ratchet“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function „Lowering into the ratchet“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition „roll over safety device“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function, Condition „ramps and plastic roles“	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition Cover.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition ratchet and ratchet strip.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function, Condition sliding plate and turntable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition bolts and bearings .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Construction (deformation, cracking) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function movable rail.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition welding.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Torque moment of screws and dowels.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Check the drive on height 170mm .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition hydraulic unit.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition colour.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition ropes and fastening.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition piston rod.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Closeness of the hydraulic system.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Level of hydraulic oil.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition hydraulic hoses.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition electrical cables and plugs.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition concrete .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function test with vehicle.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function lighting (optional).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....

**( mark here applicable, in case of verification mark in addition to the first mark!)**

Security check carried out:.....

Carried out the company:.....

Name, address of the competent:.....

Result of the Check:

Initiation not permitted, verification necessary

Initiation possible, repair failures

until.....

No failings, Initiation possible

.....  
signature of the expert

.....  
signature of the operator

If failures must be repaired:

Failures repaired at: .....

.....  
signature of the operator

(Use another form for verification!)

## Regular security check and maintenance



Fill out and leave in this manual

Serial-number: \_\_\_\_\_

kind of check	all right	defect missing	verification	remark
Type plate.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition automotive-lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Short operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Sticker max. capacity.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Designation lifting/lowering.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Detailed operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Lockable main switch.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition, Function Button „Lifting“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition, Function hand lever „Lowering „.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function Button „unlocking ratchet“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function „Lowering into the ratchet“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition „roll over safety device“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function, Condition „ramps and plastic roles“	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition Cover.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition ratchet and ratchet strip.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function, Condition sliding plate and turntable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition bolts and bearings .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Construction (deformation, cracking) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function movable rail.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition welding.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Torque moment of screws and dowels.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Check the drive on height 170mm .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition hydraulic unit.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition colour.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition ropes and fastening.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition piston rod.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Closeness of the hydraulic system.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Level of hydraulic oil.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition hydraulic hoses.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition electrical cables and plugs.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition concrete .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function test with vehicle.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function lighting (optional).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....

**( mark here applicable, in case of verification mark in addition to the first mark!)**

Security check carried out:.....

Carried out the company:.....

Name, address of the competent:.....

Result of the Check:

Initiation not permitted, verification necessary

Initiation possible, repair failures

until.....

No failings, Initiation possible

.....  
signature of the expert

.....  
signature of the operator

If failures must be repaired:

Failures repaired at: .....

.....  
signature of the operator

(Use another form for verification!)

## Regular security check and maintenance



Fill out and leave in this manual

Serial-number: \_\_\_\_\_

kind of check	all right	defect missing	verification	remark
Type plate.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition automotive-lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Short operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Sticker max. capacity.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Designation lifting/lowering.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Detailed operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Lockable main switch.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition, Function Button „Lifting“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition, Function hand lever „Lowering „.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function Button „unlocking ratchet“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function „Lowering into the ratchet“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition „roll over safety device“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function, Condition „ramps and plastic roles“	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition Cover.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition ratchet and ratchet strip.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function, Condition sliding plate and turntable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition bolts and bearings .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Construction (deformation, cracking) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function movable rail.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition welding.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Torque moment of screws and dowels.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Check the drive on height 170mm .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition hydraulic unit.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition colour.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition ropes and fastening.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition piston rod.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Closeness of the hydraulic system.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Level of hydraulic oil.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition hydraulic hoses.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition electrical cables and plugs.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition concrete .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function test with vehicle.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function lighting (optional).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....

**( mark here applicable, in case of verification mark in addition to the first mark!)**

Security check carried out:.....

Carried out the company:.....

Name, address of the competent:.....

Result of the Check:

Initiation not permitted, verification necessary

Initiation possible, repair failures

until.....

No failings, Initiation possible

.....  
signature of the expert

.....  
signature of the operator

If failures must be repaired:

Failures repaired at: .....

.....  
signature of the operator

(Use another form for verification!)

## Regular security check and maintenance



Fill out and leave in this manual

Serial-number: \_\_\_\_\_

kind of check	all right	defect missing	veri- fication	remark
Type plate.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition automotive-lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Short operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Sticker max. capacity.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Designation lifting/lowering.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Detailed operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Lockable main switch.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition, Function Button „Lifting“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition, Function hand lever „Lowering „.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function Button „unlocking ratchet“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function „Lowering into the ratchet“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition „roll over safety device“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function, Condition „ramps and plastic roles“	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition Cover.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition ratchet and ratchet strip.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function, Condition sliding plate and turntable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition bolts and bearings .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Construction (deformation, cracking) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function movable rail.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition welding.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Torque moment of screws and dowels.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Check the drive on height 170mm .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition hydraulic unit.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition colour.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition ropes and fastening.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition piston rod.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Closeness of the hydraulic system.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Level of hydraulic oil.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition hydraulic hoses.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition electrical cables and plugs.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition concrete .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function test with vehicle.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function lighting (optional).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....

**( mark here applicable, in case of verification mark in addition to the first mark!)**

Security check carried out:.....

Carried out the company:.....

Name, address of the competent:.....

Result of the Check:

Initiation not permitted, verification necessary

Initiation possible, repair failures

until.....

No failings, Initiation possible

.....  
signature of the expert

.....  
signature of the operator

If failures must be repaired:

Failures repaired at: .....

.....  
signature of the operator

(Use another form for verification!)

## Regular security check and maintenance



Fill out and leave in this manual

Serial-number: \_\_\_\_\_

kind of check	all right	defect missing	verification	remark
Type plate.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition automotive-lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Short operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Sticker max. capacity.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Designation lifting/lowering.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Detailed operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Lockable main switch.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition, Function Button „Lifting“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition, Function hand lever „Lowering „.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function Button „unlocking ratchet“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function „Lowering into the ratchet“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition „roll over safety device“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function, Condition „ramps and plastic roles“	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition Cover.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition ratchet and ratchet strip.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function, Condition sliding plate and turntable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition bolts and bearings .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Construction (deformation, cracking) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function movable rail.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition welding.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Torque moment of screws and dowels.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Check the drive on height 170mm .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition hydraulic unit.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition colour.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition ropes and fastening.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition piston rod.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Closeness of the hydraulic system.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Level of hydraulic oil.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition hydraulic hoses.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition electrical cables and plugs.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition concrete .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function test with vehicle.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function lighting (optional).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....

**( mark here applicable, in case of verification mark in addition to the first mark!)**

Security check carried out:.....

Carried out the company:.....

Name, address of the competent:.....

Result of the Check:

Initiation not permitted, verification necessary

Initiation possible, repair failures

until.....

No failings, Initiation possible

.....  
signature of the expert

.....  
signature of the operator

If failures must be repaired:

Failures repaired at: .....

.....  
signature of the operator

(Use another form for verification!)

## Regular security check and maintenance



Fill out and leave in this manual

Serial-number: \_\_\_\_\_

kind of check	all right	defect missing	veri- fication	remark
Type plate.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition automotive-lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Short operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Sticker max. capacity.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Designation lifting/lowering.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Detailed operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Lockable main switch.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition, Function Button „Lifting“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition, Function hand lever „Lowering „.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function Button „unlocking ratchet“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function „Lowering into the ratchet“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition „roll over safety device“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function, Condition „ramps and plastic roles“	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition Cover.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition ratchet and ratchet strip.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function, Condition sliding plate and turntable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition bolts and bearings .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Construction (deformation, cracking) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function movable rail.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition welding.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Torque moment of screws and dowels.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Check the drive on height 170mm .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition hydraulic unit.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition colour.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition ropes and fastening.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition piston rod.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Closeness of the hydraulic system.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Level of hydraulic oil.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition hydraulic hoses.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition electrical cables and plugs.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition concrete .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function test with vehicle.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function lighting (optional).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....

**( mark here applicable, in case of verification mark in addition to the first mark!)**

Security check carried out:.....

Carried out the company:.....

Name, address of the competent:.....

Result of the Check:

Initiation not permitted, verification necessary

Initiation possible, repair failures

until.....

No failings, Initiation possible

.....  
signature of the expert

.....  
signature of the operator

If failures must be repaired:

Failures repaired at: .....

.....  
signature of the operator

(Use another form for verification!)



## Extraordinary security check



Fill out and leave in this manual

Serial-number: \_\_\_\_\_

kind of check	all right	defect missing	verification	remark
Type plate.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition automotive-lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Short operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Sticker max. capacity.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Designation lifting/lowering.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Detailed operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Lockable main switch.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition, Function Button „Lifting“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition, Function hand lever „Lowering „.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function Button „unlocking ratchet“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function „Lowering into the ratchet“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition „roll over safety device“.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function, Condition „ramps and plastic roles“	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition Cover.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition ratchet and ratchet strip.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function, Condition sliding plate and turntable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition bolts and bearings .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Construction (deformation, cracking) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function movable rail.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition welding.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Torque moment of screws and dowels.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Check the drive on height 170mm .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition hydraulic unit.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition colour.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition ropes and fastening.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition piston rod.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Closeness of the hydraulic system.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Level of hydraulic oil.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition hydraulic hoses.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition electrical cables and plugs.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Condition concrete .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function test with vehicle.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
Function lighting (optional).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....

**( mark here applicable, in case of verification mark in addition to the first mark!)**

Security check carried out:.....

Carried out the company:.....

Name, address of the competent:.....

Result of the Check:

- Initiation not permitted, verification necessary
- Initiation possible, repair failures

until.....

- No failings, Initiation possible

.....  
signature of the expert

.....  
signature of the operator

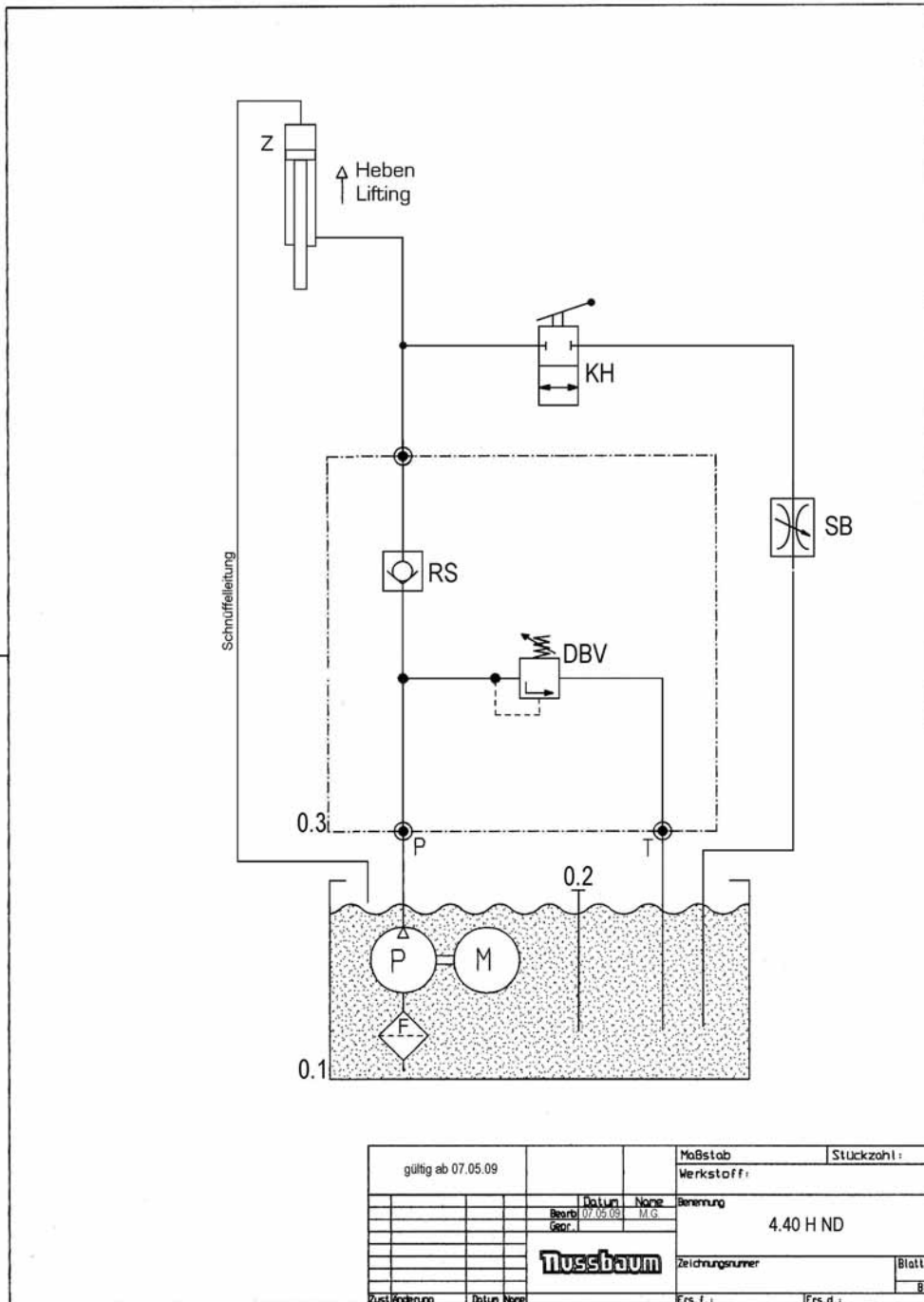
If failures must be repaired:

Failures repaired at: .....

.....  
signature of the operator

(Use another form for verification!)

## Hydraulic diagram drawing



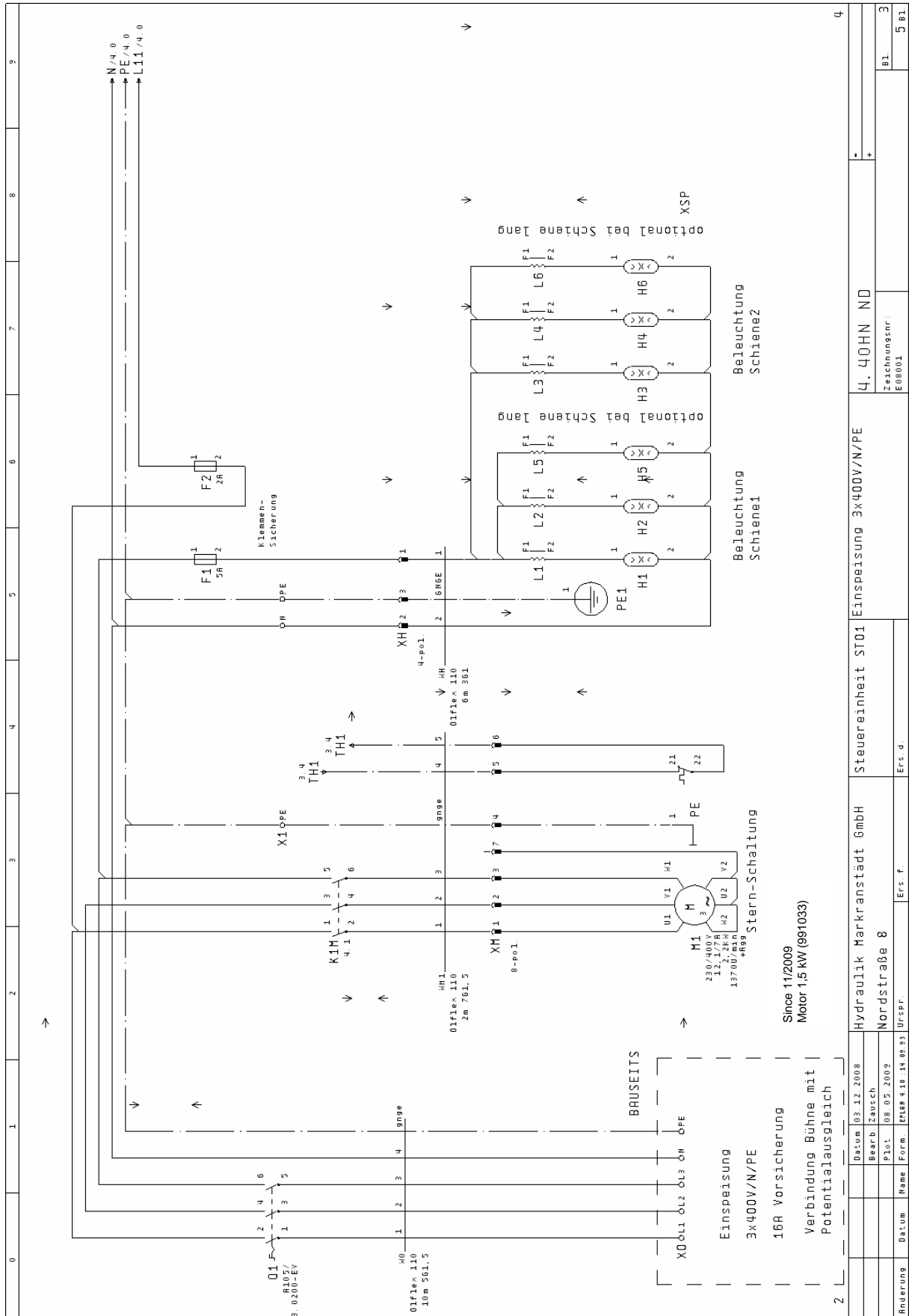
## Hydraulic parts list

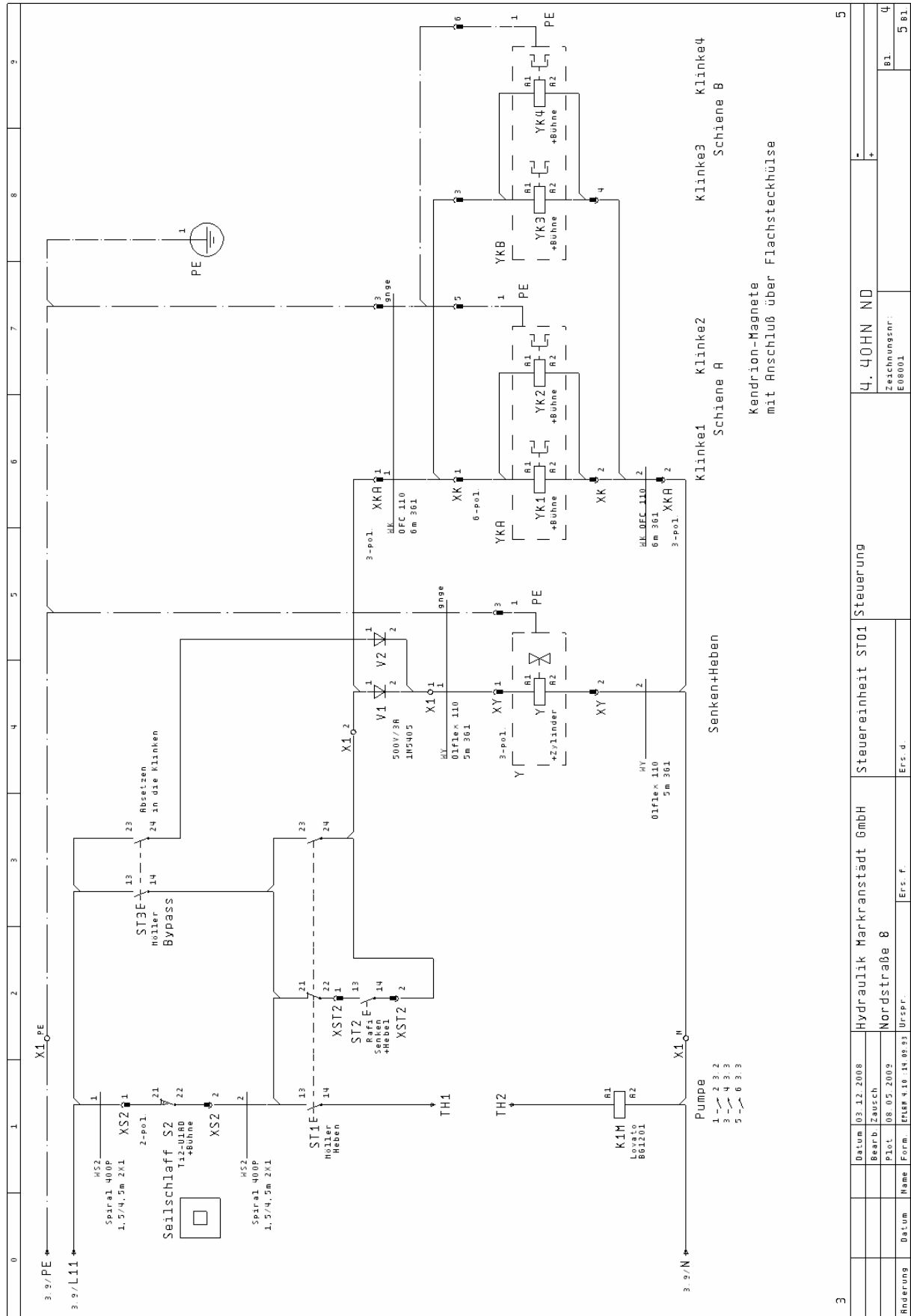
0.1	Oil tank	240SPL01121
0.2	Oil level gauge	980011
0.3	Hydraulic block	440HN02037
M	sub oil motor 1,5 kW	991033
P	gear pump 4,2 cm <sup>3</sup>	980332 (1BK7D6,7)
F	Oil filter	980012
DBV	pressure relief valve	232NSTL02082
KH	ball valve	980513
SB	lowering valve	981063
Z	Cylinder complete	440HN02000

## Electrical diagram drawing (Standard Version)

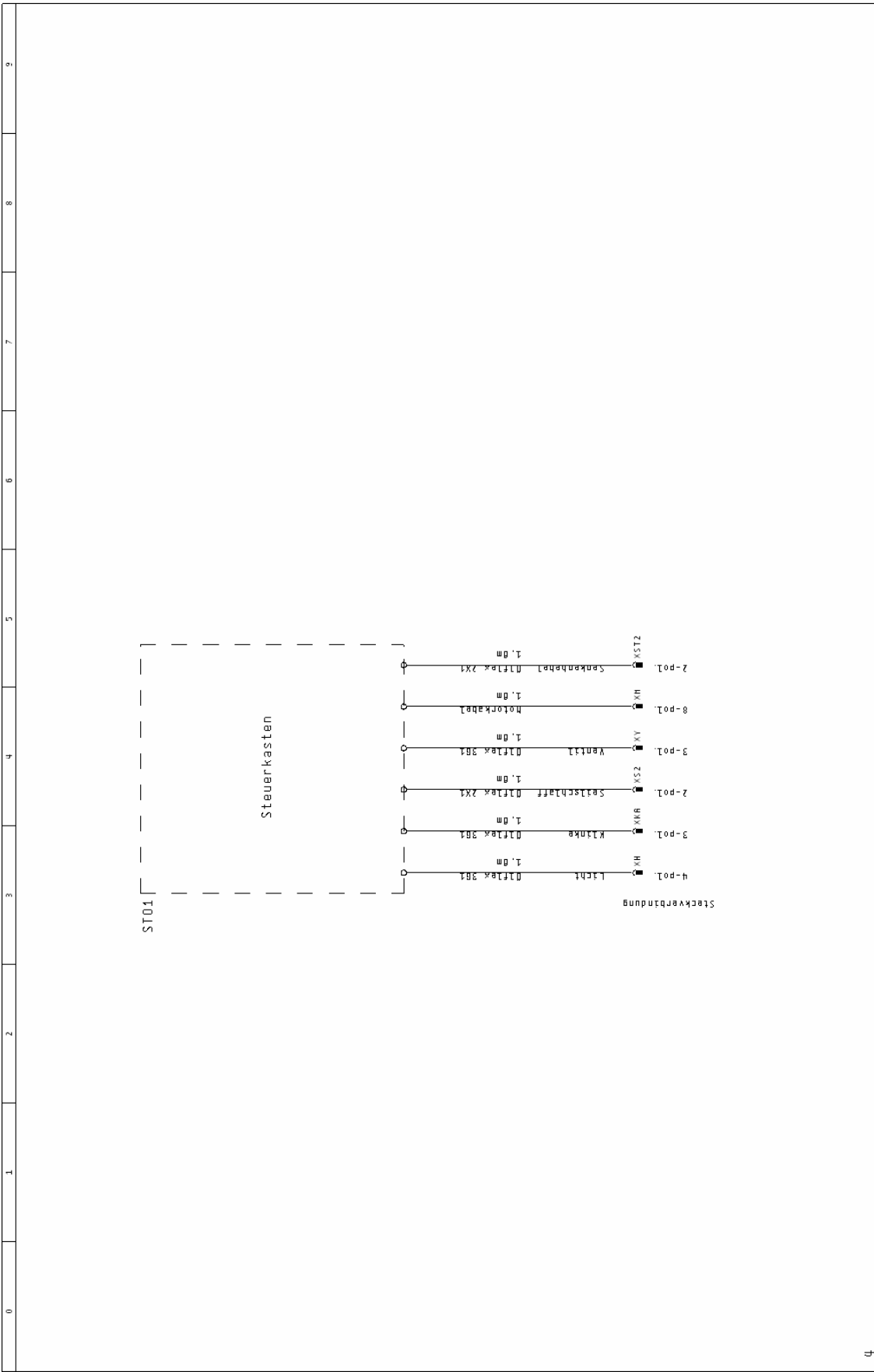
0		1		2		3		4		5		6		7		8		9	
4. 40HN ND																			
										2									
										-									
										+									
										4. 40HN ND									
										Steuereinheit ST01 Deckblatt									
										Hydraulik Markranstädt GmbH									
										Nordstraße 8									
										Ers. f.									
										Ers. d.									
										Datum 26.11.2008									
										Bearb. Zausch									
										Plat. 08.05.2009									
										Erspr. 10.11.09.93									
										Name Form									
										Bl. 1									
										Zeichnungsnr.: E08001									
										5 Bl.									
										Rnderung									







3	5	6	7	8	9
<p>Klinke1 Klinke2 Klinke3 Klinke4 Schiene A Schiene B Schiene C Schiene D</p> <p>Kendrion-Magnete mit Anschluß über Flachsteckhülse</p>					
Steuereinheit ST01 Steuerung				4.40HN ND	
Hydraulik Markranstadt GmbH				Nordstraße 8	
Datum 03.12.2008				Ers. d.	
Bearb. Zausch				Ers. F.	
Plot 08.05.2009				Ers. F.	
Name Form. [Datei 4.10.14 09:33] Urspr.				Ers. F.	
Zeichnungs-nr. E08001				81	
				5 B1	



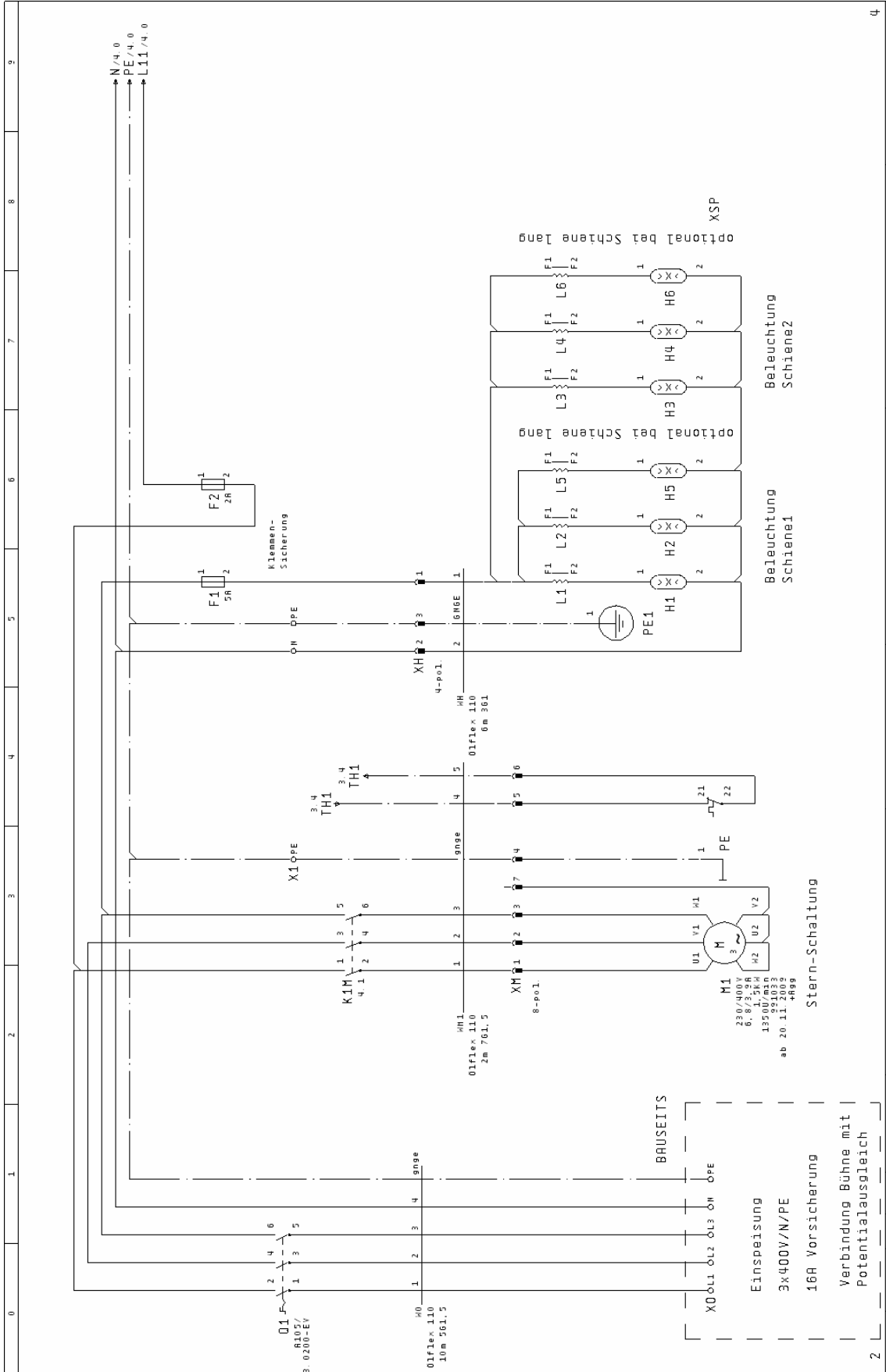
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Datum 03.12.2008		Hydraulik Markranstädt GmbH		Steereinheit ST01 Steuerung		4. 40HN ND	
Bearb. Zaurch		Nordstraße 8		Zeichnungsnr. E08001		81 5	
Plot 08.05.2009		Ers. F.		Ers. d.		5 B1	
Ers. F.		Ers. d.		Ers. d.		Ers. d.	

**Electrical diagram drawing (Version India)**

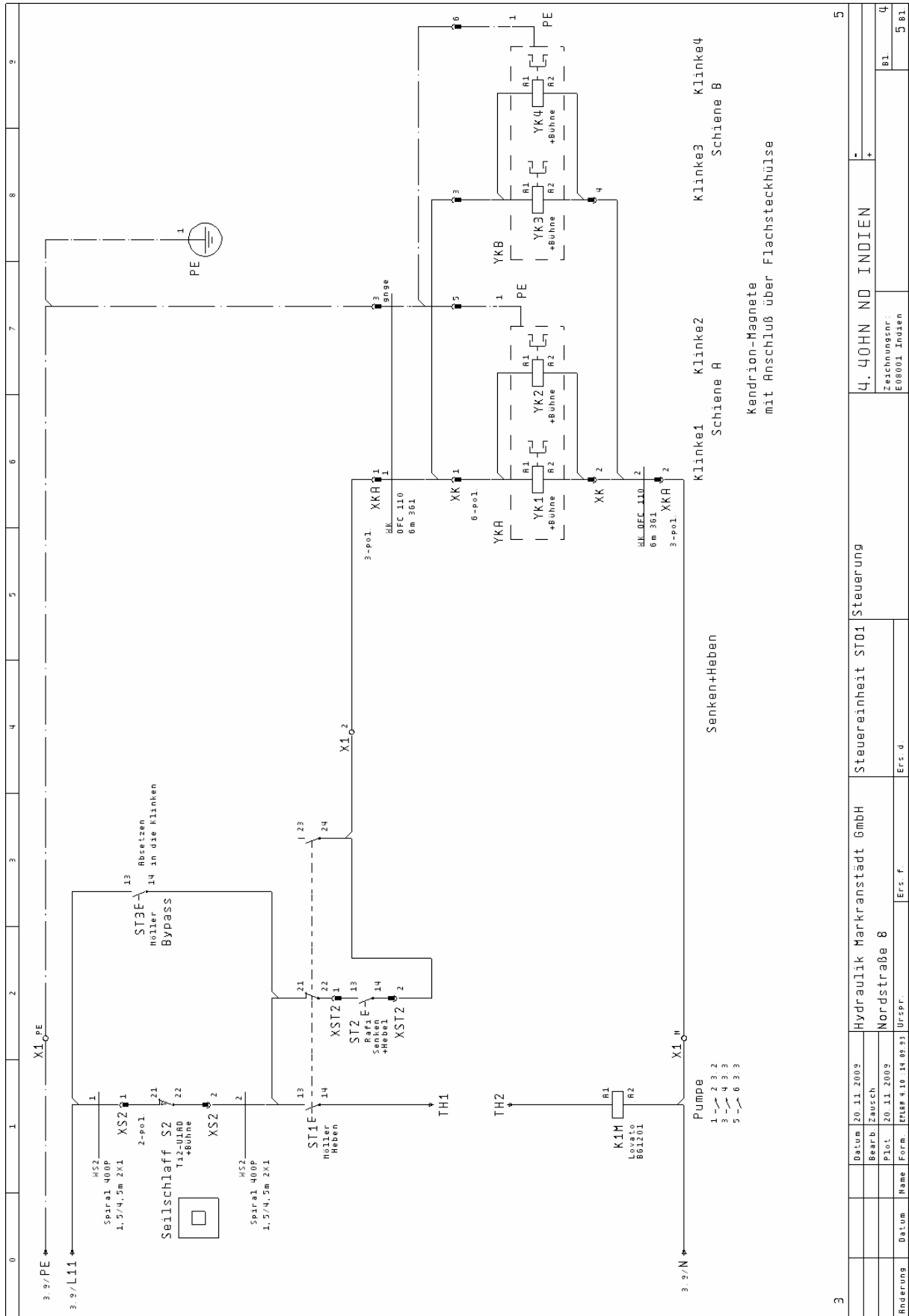
0	1	2	3	4	5	6	7	8	9																																																																																
<p style="font-size: 24px; margin: 0;">4. 40HN ND INDIEN</p>																																																																																									
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">Ränderung</td> <td style="width: 10%;">Datum</td> <td style="width: 10%;">Name</td> <td style="width: 10%;">Form.</td> <td style="width: 10%;">Ers. F.</td> <td style="width: 10%;">Ers. d.</td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="4"></td> <td colspan="2">Hydraulik Markranstadt GmbH</td> <td colspan="2">Steuereinheit ST01 Deckblatt</td> <td colspan="2">4. 40HN ND INDIEN</td> </tr> <tr> <td colspan="4"></td> <td colspan="2">Nordstraße 8</td> <td colspan="2">Zeichnungsnr.:</td> <td colspan="2">Bl. 1</td> </tr> <tr> <td colspan="4"></td> <td colspan="2">Erspr. 10.11.2009</td> <td colspan="2">E08001_Indien</td> <td colspan="2">5 Bl.</td> </tr> <tr> <td colspan="4"></td> <td colspan="2">Datum 20.11.2009</td> <td colspan="2"></td> <td colspan="2">2</td> </tr> <tr> <td colspan="4"></td> <td colspan="2">Bearb. Zwsch</td> <td colspan="2"></td> <td colspan="2"></td> </tr> <tr> <td colspan="4"></td> <td colspan="2">Plot. 20.11.2009</td> <td colspan="2"></td> <td colspan="2"></td> </tr> </table>										Ränderung	Datum	Name	Form.	Ers. F.	Ers. d.																			Hydraulik Markranstadt GmbH		Steuereinheit ST01 Deckblatt		4. 40HN ND INDIEN						Nordstraße 8		Zeichnungsnr.:		Bl. 1						Erspr. 10.11.2009		E08001_Indien		5 Bl.						Datum 20.11.2009				2						Bearb. Zwsch										Plot. 20.11.2009					
Ränderung	Datum	Name	Form.	Ers. F.	Ers. d.																																																																																				
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				Bearb. Zwsch																																																																																					
				Plot. 20.11.2009																																																																																					





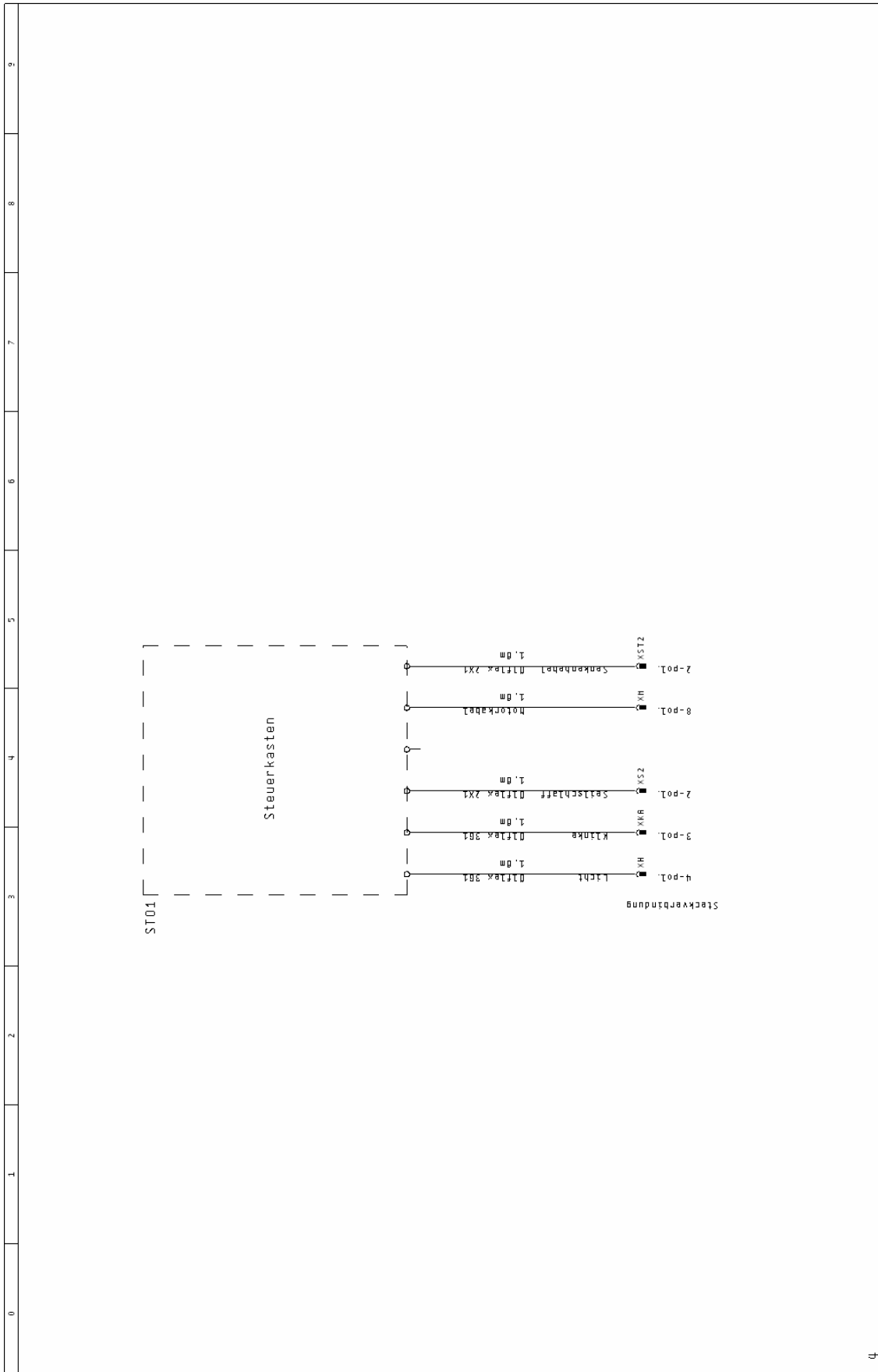


2		Einspeisung 3x400V/N/PE 16A Vorsicherung		Stern-Schaltung		Steuerinheit ST01		Einspeisung 3x400V/N/PE		4.40HN ND INDIEN	
BRAUSEITS		Verbindung Bühne mit Potentialausgleich		M1 300/400V 6,8/7,5kVA 1,1/1,5kA 13500/125A ab 20.11.2002 4899		M U1 V1 H1 U2 V2		Hydraulik Markranstädt GmbH		Zeichnungsnr. E08001_Indien	
01 R110Z/ 3.02001-EV		KIM 1 2 3 4 5 6 4.1 2 3 4 5 6		TH1 3 4 2 4		XH 4-pol.		Nordstraße 8		Bl. 3	
X0 1 2 3 4 01 10m 561.5		XM 8-pol.		M1 1 2 3 4 5 6 7 4		XM 1 2 3 4 5 6 7 4		Ers. d.		81	
MH1 01flea x 110 2m 761.5		MH 01flea x 110 6m 361		MH 01flea x 110 6m 361		MH 01flea x 110 6m 361		Ers. F.		5 Bl.	
Date		Date		Date		Date		Date		Date	
20.11.2002		20.11.2002		20.11.2002		20.11.2002		20.11.2002		20.11.2002	
Zaurech		Zaurech		Zaurech		Zaurech		Zaurech		Zaurech	
20.11.2002		20.11.2002		20.11.2002		20.11.2002		20.11.2002		20.11.2002	
Name		Name		Name		Name		Name		Name	
Ers. d.		Ers. F.		Ers. d.		Ers. F.		Ers. d.		Ers. F.	
Date		Date		Date		Date		Date		Date	
20.11.2002		20.11.2002		20.11.2002		20.11.2002		20.11.2002		20.11.2002	



3		5	
4.40HN ND INDIEN		-	
Steereinheit ST01 Steuerung		+	
Hydraulik Markranstädt GmbH		Nordstraße 8	
Datum 20.11.2009		Ers. d.	
Bearb. Zaurech		Ers. F.	
Plot 20.11.2009		Urspr.	
Name Form. [Date: 14.09.03]		Urspr.	
Zeichnungsnr. E08001-Indien		81	
		5 B1	

Kendrión-Magnete  
mit Anschluß über Flachsteckhülse



4

Hydraulik Markranstädt GmbH	Steereinheit ST01 Steuerung	4.40HN ND INDIEN	-	+
Nordstraße 8		Zeichnungsnr. E08001 Indien	81	5
Urspr.	Ers. f.	Ers. d.		5 B1
Datum	Name			
Bearb. Zürich				
Plot 20.11.2009				
Datum 20.11.2009				