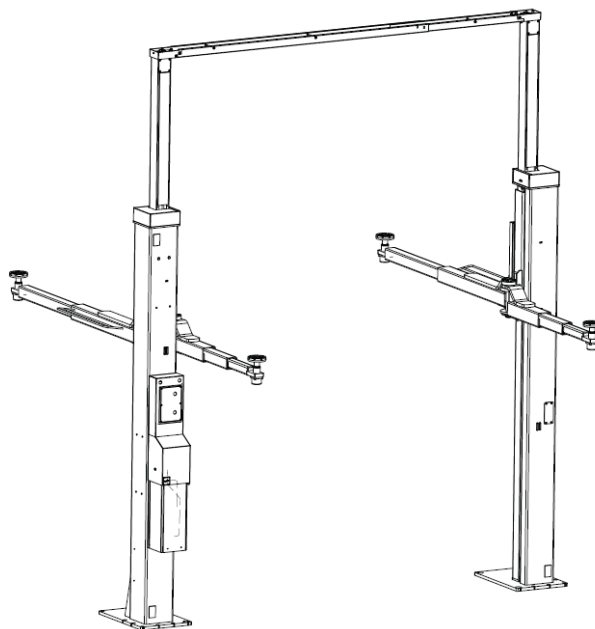


POWER LIFT

POWER LIFT HL 2.40 NT W UNI
POWER LIFT HL 2.40 NT W UNI RH

WASHING HALL



OPERATING MANUAL AND INSPECTION BOOK

Valid from: 04/2022

Serial No.:

■ Made
■ in
■ Germany

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Introduction

Nussbaum products are a result of many years of experience. A high quality standard and superior concept guarantees you reliability, long lifetimes and economical operation. To prevent unnecessary damage and hazards, read this operating manual carefully and always comply with its contents.

Any other use, or use beyond purpose is considered improper.

Nussbaum Automotive Lifts GmbH is not liable for any resulting damage. The operating company alone carries the risk.

Proper use also includes:

- adherence to all instructions in this operating manual and
- compliance with inspection and maintenance work and the inspections stipulated.
- the operating manual is to be followed by all personnel working on the lift. This is notably with regards to Section 4 "Safety conditions".
- in addition to safety information from the operating manual, comply with rules and regulations at the location of use.
- proper system handling.

Operating company obligations:

The operating company is obliged to only permit personnel to work on the system who

- understand the principle regulations about work safety and accident prevention and who have been trained in working with the lift.
- have read the safety section and warning information in this operating manual, have understood it and confirmed learning with a signature.

Hazards in working with the system:

Nussbaum products have been designed and built to state-of-the-art and to recognised safety standards. However, improper use may lead to hazards to life and limb of the user or result in property damage.

The system may only be operated:

- for proper intended use.
- if it is technically in perfect condition.

Organisational measures

- The operating manual is always to be kept ready at the location of use of the system.
- Supplemental to the operating manual, refer to and comply with generally valid legal and other binding regulations for accident prevention and for environmental protection.
- Check occasionally that personnel have an awareness of hazards and safe work in compliance with the operating manual!
- Use personal protective equipment as needed or required by regulations.
- All safety and hazard information on the system is to be kept in a legible condition!
- Replacement parts must meet technical specifications of the manufacturer. This is only guaranteed for original parts.
- Deadlines pre-set or given in the operating manual for repeating tests / inspections must be followed.

Maintenance work, error removal

- Comply with pre-determined setting, maintenance and inspection work and intervals in the operating manual, including details for exchanging parts / part fittings! These activities may only be done by specialists who have participated in a special factory training.

Guarantee and liability

- In principle, our "General sales and supply conditions" apply.
Guarantee and liability claims for personal and property damage are excluded if due to one or more of the following causes:
- Improper use of the system.
- Improper assembly, commissioning, operation and maintenance of the system.
- Operating the system with defective safety devices or improperly attached or non-functional safety and protection devices.
- Non-compliance with information in the operating manual in terms of transport, storage, assembly, commissioning, operation, maintenance and fitting of the system.
- Independent construction changes to the system.
- Independent changes to the system (e.g. drive ratios: power, rotation speed, etc.)
- Improperly done repairs.
- Catastrophic cases due to foreign influences or force majeure.



After successful set up, complete this form fully, sign it, make a copy and send the original to the manufacturer within a week. The copy remains in the inspection book.

Nussbaum Automotive Lifts GmbH
Korker Str. 24
D-77694 Kehl

Assembly protocol

The lift

with serial number..... was set up on

at (company name)..... in.....

checked for function and safety and put into operation.

The set up was done by the operating company / specialist (score out the one that does not apply).

After successful inspection of function and safety by a trained assembler, the lift is transferred without electrical connection (e.g. plug) to on-site power supply. An on-site electrical connection between the lift and the power supply is to be done by a qualified electrician. (see details in the electrical plan)

The operating company confirms proper lift set up, has read and will comply with all information contained in this operating manual and inspection book, and will keep this document accessible to trained operators at all times.

The specialist confirms proper lift set up, has read all information in this operating manual and inspection book, and has transferred the documents to the operating company.

Anchor used (*): _____(type/brand)

Minimum anchoring depth (*) complied with: _____mm ok

Tightening torque (*) complied with: _____NM ok

..... Date Name, operating company & company stamp Operating company signature
---------------	---	---

..... Date Name, specialist Signature of specialist
---------------	---------------------------	----------------------------------

Service partner:(Stamp)

(*) see enclosed anchor manufacturer sheet

Transfer protocol

The lift

with serial number was set up on

at (company name) in

checked for function and safety and put into operation.

The following listed people (operators) were trained to handle and care the lift after it was set up by a trained assembler of the manufacturer or a contract partner (specialist).

(Date, name, signature, empty lines must have a scored out)

..... Date Name Signature
---------------	---------------	--------------------

..... Date Name Signature
---------------	---------------	--------------------

..... Date Name Signature
---------------	---------------	--------------------

..... Date Name Signature
---------------	---------------	--------------------

..... Date Name Signature
---------------	---------------	--------------------

..... Date Name, specialist Signature of specialist
---------------	---------------------------	----------------------------------

Service partner:.....

1. General information

Technical documentation contains important information for safe operation and for retaining functional safety of the lift.

- To verify lift set up, the assembly protocol form is to be completed, signed and sent to the manufacturer.
- Forms are available in this inspection book for use in verifying single, regular and extraordinary safety checks. Use the forms to document inspections and leave the completed forms in the inspection book.
- The lift master forms must record changes to the construction or changes to set up location.

1.1 Set up and test the lift

Safety relevant work on the lift and safety inspections may only be done by personnel specifically trained to carry it out. They are designated in general and in this documentation as technical experts and specialists (competent people).

- Technical experts are people (freelance expert engineers, TÜV specialists) that may inspect and assess due to their education and experience with lifts. They are knowledgeable in the appropriate work safety and accident prevention regulations.
- Specialists (competent people) are people who have sufficient knowledge and experience with lifts and have participated in a special factory training by the lifts manufacturer.

1.2 Hazard information

To become aware of the hazardous points and important information, the following three symbols are used with the descriptive meaning. Pay particular attention to text positions that are labelled by these symbols.



Danger! Identifies a danger to life and limb, if the highlighted process is not done properly there is a mortal danger!



Caution! Identifies a warning of possible lift damage or other operating company property damage if the highlighted process is not done properly!



Note! Labels information about a key function or points to an important remark!

2.Lift master forms

2.1 Manufacturer

Nussbaum Automotive Lifts GmbH
Korker Str. 24
D-77694 Kehl

2.2 Purpose

The lift is a lifting tool for raising vehicles with a total weight of max. 4000 kg in normal workshop operation, for a maximum lift distribution of 3: 2 or 2:3 in the drive-in or against the drive-in direction. A single load from only one or two lifting arms may not happen.

The set up of the standard lift is not permitted in explosion endangered work shops. The lift can be mounted in washing halls.

Lift operation is done directly on the operating column (see Data sheet).

After construction and maintenance changes on load carrying parts the lift must be inspected afterwards by a specialist who approves the changes. If the set up location is changed, the lift must be checked again by a specialist and changed approved.

2.3 Changes to the design / construction

Inspections by a technical expert are required before recommissioning
(Date, type of change, technical expert signature)

.....

.....

.....

Name, address of technical expert

.....
Location, date

.....
Technical expert signature

2.4 Changing the assembly location

Inspections by a technical expert are required before recommissioning (date, type of change, specialist signature)

.....

.....

.....
Name, address of technical expert

.....
Location, date

.....
Technical expert signature

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:

POWER LIFT HL 2.40 NT W
HL 2.40 NT W UNI
HL 2.40 NT W UNI RH

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	2006/42/EG
EMV Richtlinie / EMC Directive	2014/30/EU
Niederspannungsrichtlinie / Low Voltage Directive	2014/35/EU

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	EN 1493: 2010
--------------------------------------	---------------

Beauftragter für die Technische Dokumentation Authorised to compile the technical file	Nussbaum Automotive Lifts GmbH
---	--------------------------------

Baujahr Year of manufacture	20__
--------------------------------	------

Seriennummer Serial number	_____ Seriennummer
-------------------------------	-----------------------

Kehl- Bodersweier, 05.04.2022



Frank Scherer
CEO

3. Technical information

3.1 Technical data

Total weight	700 kg
Load carrying capacity:	4000 kg
Loading a lifting arm:	A single load from only one lifting arm may not happen
Load distribution	max. 3:2 or 2:3 mm or against the drive- in direction
Lift / lowering time:	approx. 26 sec. / approx. 14 sec. with 4 t
RH:	approx. 24 sec. / approx. 13 sec. with 4 t
Standard operating voltage:	3 ~/N+PE, 400 volt, 50 Hz
Motor capacity	3 kW
Motor speed:	2880 rpm
Hydraulic pump	2.7 cm ³
Lifting / lowering pressure	300/190 bar
Pressure relief valve	310 bar
Oil volume	approx. 10 litres (HLP32)
Noise level LpA:	≤ 70 dB
on-site connection:	3~/N+PE, 400 V, 50 hz with 16 A fuses, slow, according to VDE regulations

3.2 Safety devices

1. Over-pressure valve
Hydraulic system fuse against over-pressure
2. Check valve
Secure the vehicle against unauthorised lowering
3. Main switch with curtain lock device
Fuse to prevent unauthorised use
4. Two independent cylinder systems (each with a command, follow system)
Secure against unauthorised lowering of the lift
5. Deadman controls
Lift movement stops when the push button is released
6. Lifting arm block
Secures the lifting arm against horizontal movement in a lifted condition

3.3 Datasheet

HLNT240_001021D-0000

zwischen Oberkante Hebebühne und Decke sind zu halten. Die Mindestabstände für Installation sind: min. 160mm zwischen Lift und der Decke, min. 160mm zwischen Lift und der Decke.

Das Netzkabel wird von oben in die Bediensole geleitet. In der Bediensole muss ein Kabel von oben zur Stromversorgung der Bediensole geleitet werden.

Verlängerung jeweils in 100mm Schritten abschleifbar (A) mit Verlängerung (A) 4109-4909 mit Verlängerung (A) min. 4027 (B) min. Deckenhöhe (B) min. 4027

Öltank oil tank

DKFTB ohne Fliesen und Estrich

Betonqualität quality of concrete min. C20/25 normal bewehrt normal reinforcing

Fundament, angeordnet für Anschlussarmierung foundation charter for connection reinforcing

max. statische Kräfte + Momente je Stütze
Fz = 24000 N
Mx = 52 000 000 Nmm
My = 25 000 000 Nmm

Betonstärke min. 200mm ohne Belag (Fliesen/Estrich)
Concrete thickness min. 200mm without floor pavement/tiles

Bediensole operating column

gegenläufige column

2796

2522

max 2050

115-190

1217-2017

min. 160

3957

2892

600

580

260

140

120

140

250

370

400

570-1160

1130-1940

600

200

400

H

570-1160

3350

200

200

Fundament min. 1600

Bediensole operating column

Einrichtung 570

Drive in direction

Ø22

Ø75

Detail 'H'

Grundplatte/base plate

Die Mindestverankerungstiefe des Dübels beachten. Mit Estrichfliesen sind längere Dübel einzusetzen. Diesbezüglich in den Unterlagen der Dübelhersteller beachten. Die Montageanweisung des Dübelherstellers beachten. Observe the regulation of the dowel manufacturer

Berfestigungsdübel
z.B. HIT-YS B 12x150

Grundplatte Hebebühne
base plate automatic lift

Betonqualität
quality of concrete
min. C20/25

Die Mindestverankerungstiefe des Dübels beachten. Mit Estrichfliesen sind längere Dübel einzusetzen. Diesbezüglich in den Unterlagen der Dübelhersteller beachten. Die Montageanweisung des Dübelherstellers beachten. Observe the regulation of the dowel manufacturer

Wir weisen in unseren Plänen auf die Mindestanforderung des Fundamentes hin, jedoch der Zustand der örtlichen Gegebenheiten (z.B. Untergrund etc.) abliegt nicht unserer Verantwortung. Die Ausbildung der Einbaulösung muss vom planenden Architekten bzw. Statiker im speziellen Fall individuell spezifiziert werden. We point out the minimum requirement of the foundation in our plans. The condition of the local realities (for example ground under the foundations) does not lie our responsibility. If necessary an architect must be consulted.

Optimal: Verlängerung/extension 800mm

+ Hydraulikleitung hydraulic hose

HL 2.40 NT W UNI
Maschinenversion
Tragfähigkeit Capacity: 4000kg
01.08.16/M.G. 7963_NB

subject to alterations
Resonance and construction modifications prohibited
All dimensions in millimeter

Bereits auf der Bediensole bereitstellen:
Netzanschluss: 3PH,N+PE, 400V, 50Hz
Absicherung: 15 Ampere trolge
Kabellänge: ca. 2m, 5x2,5mm
Druckluft für Energieleit: lichte Weite 6mm, 6-10 bar
Prepared by customer at the operating column:
power supply: 3PH,N+PE, 400V, 50Hz
cable: approx. 2m, 5x2,5
air pressure: inner diameter 6mm, 6-10bar

Mir weisen in unseren Plänen auf die Mindestanforderung des Fundamentes hin. Jedoch der Zustand der örtlichen Gegebenheiten (z.B. Untergrund etc.) obliegt nicht unserer Verantwortung. Die Ausarbeitung der Einbausituation muss von planenden Architekten bzw. Statikern in spezialisierten Fällen individuell spezifiziert werden.

We point out the minimum requirement of the foundation in our plans. The condition of the local realities (for example, ground under the foundation) does not lie our responsibility. It is necessary on architect must be consulted.

Das Netzkabel wird von oben in die Bediensäule geföhrt. Das Netzkabel wird von oben in die Bediensäule geföhrt. Das Netzkabel wird von oben in die Bediensäule geföhrt.

The power cable is supplied to the operating column from above.

Einführung
Detail "H"

Grundplatte/base plate

Reinforcement details: $\phi 22$, $\phi 7.5$, R_1 , R_2

Die Mindestverankerungstiefe des Döbels beachten. Mit Estrich/Fliesen sind längere Döbel einzusetzen. Observe the min. anchorage of the dowels. With floor pavements use longer dowels.

Die Montagevorschrift des Döbelherstellers beachten. Observe the regulation of the dowel manufacturer.

Decke ceiling

Verschraubungen fitting

Detail "Y"

Säule column

Quertresse cross beam

Öllenk oil tank

DKFFB ohne Fliesen und Estrich

Betonqualität quality of concrete min. C20/25 normal bearing

Fundament angeschädigt für Anschlussarmierung foundation chariter for connection reinforcing

max. statische Kräfte + Momente je Säule
Fz = 24000 N
Fx = 23 000 000 Nm
Fy = 20 000 000 Nm

Bediensäule operating column

Fundament min. 1600

Reinforcement details: $\phi 22$, $\phi 7.5$, R_1 , R_2

(*) Betonstärke min. 200mm ohne Belag ohne Estrich
Concrete strength min. 200mm without floor pavement/tiles

Basissets an der Bediensäule bereitstellen!
Netzanschluss: 3PH, NPE, 400V, 50Hz
Absicherung: 16 Ampere fudge
Kabellänge: ca. 20m, 3x2,5mm²
Druckluft für Energielieferliche Weite 6m, 6-10 bar
Prepared by customer on the operating column:
Auser: 16 Ampere 1 line 100
cable: approx 20m, 3x 2,5mm²
air pressure: inner diameter 6mm, 6-10bar

2403JNT00012
(nur internen Verwendung)

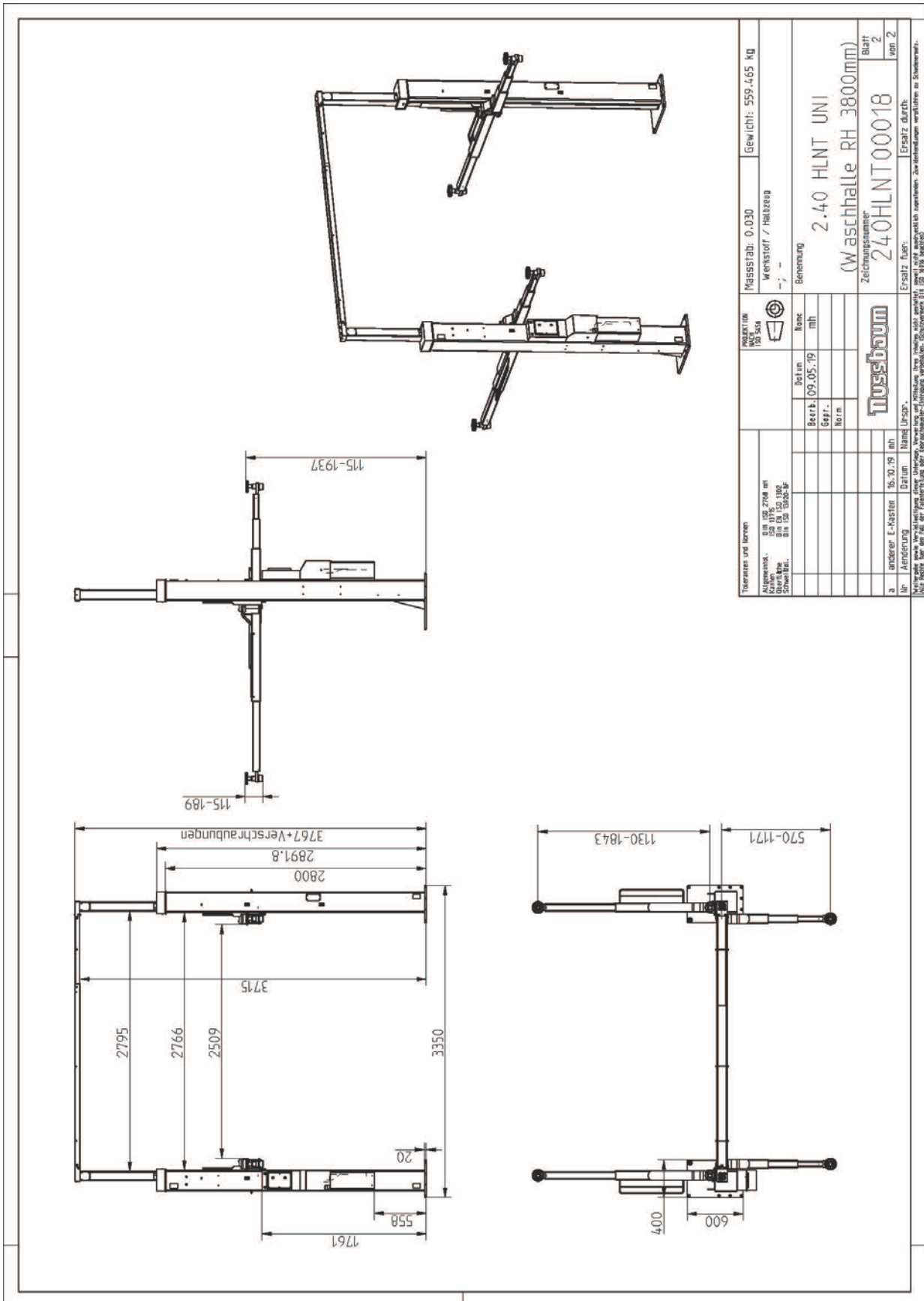
Bezeichnung: HL 2.40 NT
kurze Version, Tragfähigkeit: 4000kg
start Version, capacity: 4000kg

Zeichnungsnummer: 7991_NB

Erstellt durch:

Druckluft für Energielieferliche Weite 6m, 6-10 bar
Prepared by customer on the operating column:
Auser: 16 Ampere 1 line 100
cable: approx 20m, 3x 2,5mm²
air pressure: inner diameter 6mm, 6-10bar

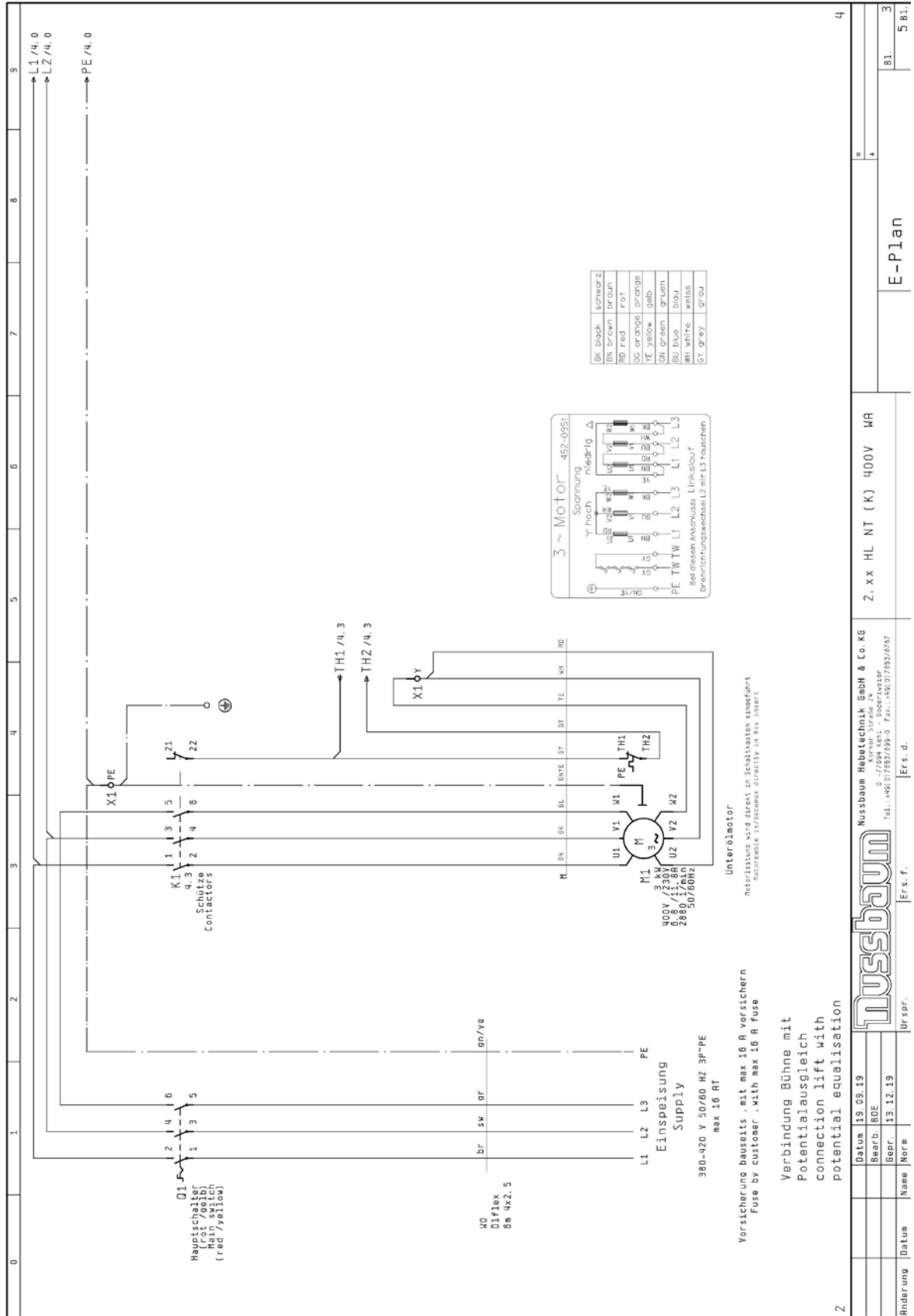
Power Lift HL 2.40 NT W UNI RH



Original hose set _____	230HLNT01090
Hose set extensions for refitting _____	230HLNT01091
Hose set extensions from the factory _____	230HLNT01092

3.5 Electrical circuit diagram

0	1	2	3	4	5	6	7	8	9
<p>Nussbaum Hebetchnik GmbH & Co. KG Korker Straße 24 D-77694 Kehl Bodersweier Tel.: +49(0)7853/899-0</p>									
<h2 style="margin: 0;">SCHALTPLAN</h2>									
<p>OBJEKT : 2. xx HL NT (K) 400V WA ANLAGE : KUNDE : SCHALTPLANNR: 2. xx HL NT(K) 400V WA09/19/010</p>									
<p>Erdung nach örtlichen Vorschriften Vor Inbetriebnahme prüfen, ob Motorstrom mit Motorschutzrelais übereinstimmt. Alle Klemmstellen auf Ordnungsgemäße Verbindung und alle Kontaktschrauben auf festen Sitz prüfen. Vor Inbetriebnahme Verdrahtung und Steuerung auf richtige Funktion überprüfen. Keine Inbetriebnahme von unbefugter Seite vornehmen lassen. Änderungen vorbehalten</p>					<p>3.) Sicherheitsprüfung und Schutzmaßnahmen Der Schaltschrank wurde unter Beachtung der anerkannten Regeln der Technik nach VDE0100/113 sowie der Unfallverhütungsvorschrift V88 (elektrische Anlagen und Potentiale) errichtet und geprüft. 1. Spannungsprüfung und/oder Isolationsprüfung des Schaltschrankes nach VDE0100/5.73. 2. Nach VDE0100/7.33 Par. 2.1 der angegebenen Schutzmaßnahmen bei indirekten Berührungen. 3. Funktionsprüfung und -Sückerprüfung nach VDE560/11.07. 4. Schutzmaßnahmen gegen Überstrom nach VDE0100/5.73, Par. 4. 5. Schutzmaßnahmen gegen Überlast nach VDE0100/5.73, Par. 5. 6. Schutz bei indirektem Berühren nach VDE0100/5.73, Par. 5.</p>				
<p>1.) Schaltpläne und Schaltunterlagen Die Schaltpläne sind nach bestem Gewissen angefertigt. Für bestellte Schaltpläne und Schaltunterlagen wird von uns keine Gewähr für die Richtigkeit dieser Unterlagen übernommen. Dies gilt insbesondere für die Zeichnungen. Die Zeichnungen sind nach dem Stand der Technik zu verstehen. Die Zeichnungen sind zu lesen und die Hersteller's "Bücher" zu lesen. Werden von uns nur nach den von Hersteller überlassenen Unterlagen des Herstellers "Bücher" zu lesen.</p>					<p>2.) Funktionsprüfung der Schaltanlagen Schaltpläne sind keine Serienzeichnungen. Bei der Prüfung des Schaltbrannes am Werk können Felder wie Fühler, Thermostate und Motoren nicht einbezogen werden. Auch bei vorpräliger Ordnung lassen sich diese Funktionen nicht überprüfen. Die Funktionen sind im Rahmen unserer Gewährleistung bei der Inbetriebnahme besetzt. Inbetriebnahme ohne Gewährleistung unserer Service wird deshalb keine Haftung übernommen. Bei Inbetriebnahme ohne Gewährleistung unserer Service wird deshalb keine Haftung übernommen. Die Inbetriebnahme wird durch die Inbetriebnahme der Schaltanlagen durch unsere Service-Bedingungen ausgeführt. Kosten für Nachbesserungen durch Dritte können wir nicht anerkennen.</p>				
<p>Diese Schaltpläne sind unser geistiges Eigentum. Sie dürfen ohne unsere Genehmigung weder vervielfältigt noch Dritten weitergegeben werden!</p>									
<p>Gültig ab SN : ----- / Datum : -----</p>									
<p>2</p>									
<p>TUSSBAUM Nussbaum Hebetchnik GmbH & Co. KG D-77694 Kehl - Bodersweier Tel.: +49(0)7853/899-0 Fax: +49(0)7853/897</p>									
<p>Deckblatt</p>									
<p>5 B1.</p>									



Z		2. xx HL NT (K) 400V WR		E-Plan	
Datum	19.09.19				
Bearb.	80E				
Gepr.	13.12.19				
Name	Norm	Ers. f.		Ers. d.	
Urser.		Ers. f.		Ers. d.	
Nussbaum		Nussbaum Hebe-technik GmbH & Co. KG		Nussbaum	
D 77894 Adel - Bodesheim		D 77894 Adel - Bodesheim		D 77894 Adel - Bodesheim	
Tel.: +49(0)7883/995-0		Tel.: +49(0)7883/995-0		Tel.: +49(0)7883/995-0	
Fax: +49(0)7883/995-1		Fax: +49(0)7883/995-1		Fax: +49(0)7883/995-1	
Bl.		5 811		5 811	

POS	Menge	Bezeichnung 1	Bezeichnung 2	Typennummer	Bestellnummer	Hersteller	Artikel-Nummer
1	2	Ventilstecker C182 9 N21 schwarz	max 240 V	GERÄTESTECKER	KA13200089 PG 9	Seehausen	118620
2	1	Montageplatte in Schaltkasten CT 862	für für Universalplatine TS /TSK	MONTAGEPLATTE IM SCHALTKASTEN	235TS03011	Nussbaum	235TS03011
3	1	GEH.KPL.CT-862 ABS	240x160x120 modifiziert für HLNT WA	SCHALTKASTEN ABS CT 862	CT 862	Bernstein	240HLNT03030
4	1	Universalsteuerplatine V2	400 / 230 V 3P 50/60 Hz	PLATINE FÜR UNIVERSALSTEUERUNG	101436_4	NB_Universalpatine	9000STA03566
5	6 m	Steuerleitung mit num. Adern 4G2,5	Einsatz in industrieller Umgebung (Maschinen,	PVC-STEUERLEITUNG FLEX	ÖPVC-JZ	Kabel Wächter GmbH & Co.KG	990087
6	1	Reihenklemme D 1,5/6-ADO grau schn-schn	6 mm breit für 35 mm Hutschiene	D 1,5/6-ADO	0199051.26	Entrelec	990183
7	1	SchutzleiterkI DR 4/8.P.ADO schn-schraub	8 mm breit für 15 mm Hutschiene	DR 4/8.P.ADO	0299632.05	Entrelec	990592
8	0.020	Blanko Schild	Klemmenzubehör	RC610 6X10	0233000.01	Entrelec	990713
9	1	Leistungsschutz 5,7 kW 24 V DC		11BG12.01 D 24V DC		Lovato electric	990842
10	1	Leistungsschutz 3kW/6,8A/11,6% 50Hz	3800mmH, 1.400/230V	307K2-373	307K2-373	Entrelec GmbH	990958
11	1	Hauptsch. Not-Aus 3p 16A 5,5kW IP65	Als Not-Aus-Schalter verwendbar	A 105/3.0260-EV/SO	521022024	Merz GmbH	994810
12	2	Perfect Kabelverschraubung M20x1,5	mit Zugentlastung	KABELVERSCHRAUBUNG M20X1,5	50620PA7035	Jacob GmbH	9951937
13	2	Perfect Kabelverschraubung M16x1,5	mit Zugentlastung !!ersetzt durch 9951969!!	KABELVERSCHRAUBUNG M16X1,5	50616PA7035	Jacob GmbH	99519371
14	2 m	Steuerleitung mit num. Adern (2 x1,0mm ²)	Einsatz in industrieller Umgebung (Maschinen,	PVC-STEUERLEITUNG FLEX	ÖPVC-OZ	Kabel Wächter GmbH & Co.KG	995577
15	1	Doppeldrucktaste (D22mm) mit Pfeilen	Heben - Senken	LPCB7191	LPCB7191	Lovato electric	996880
16	2	Kontaktlement 10 (22mm)		LPXC01	LPXC01	Lovato electric	996881
17	1	Befestigungsbasis (D22mm)	für die Installation der Kontaktelemente	LPXAU120'	LPXAU120'	Lovato electric	996884
18	2	Kontaktlement 1S (22mm)		LPXC10	LPXC10	Lovato electric	996885

4. Safety regulations

When working with lifts comply with legal accident prevention regulations according to BGG945: Comply with inspection of lifts; BGR500, operation of lifts; (previously VBG14).

Particular attention is drawn to compliance with the following regulations:

- The max. load bearing capacity of 4000 kg may not be exceeded. For this, see details on the model plate.
- Always follow the operating manual when using the lift.
- The lift must be completely lowered before the vehicle is driven on, and it may only be done in intended direction.
- Vehicles with low floor clearance or fitted with custom devices are to be checked to see whether damage could occur before positioning the lifting arm and raising the vehicle.
- Only personnel aged 18 or over may operate the lift independently, they must be trained in lift operation and have their work verified by the company. They must be explicitly tasked with operating the lift (excerpt from BGR500) (see transfer protocol).
- The proper positioning of the carrier plate below the vehicle is to be checked again after the vehicle has been raised slightly.
- After each set down of the vehicle, check the lifting arm positions below the fixture points again and adjust as required.
- When disassembling heavy, consider any possible centre of mass shifts. The vehicle is to be appropriately secured against falling using suitable materials (e.g. tensioning belts, beams, etc.).
- During lifting or lowering, the work area of the lift should be clear of people.
- It is prohibited from moving people with the lift.
- Climbing onto the lift and onto a lifted vehicle is prohibited.
- Climbing onto the lifting arm is prohibited.
- After design and maintenance on load bearing parts the lift must be inspected by a technical expert.
- Vehicles may only be attached at fixture points approved by the vehicle manufacturer.
- The entire lifting and lowering process is to be continuously observed.
- The set up of the standard lift is not permitted in explosion endangered work shops.
- Initial access into the lift may only be done after the main switch is off and locked.

5. Operating manual



When handling the lift, it must absolutely comply with safety regulations. Carefully read the safety regulations in Section 4 before first operation!

5.1 Positioning the vehicle

- Drive the vehicle onto the lift according to the following images, until the lifting arm receives it (figure A and B).

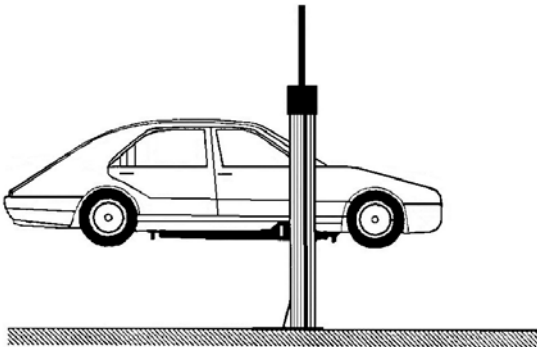


Figure. A) The lift column must be located between the steering wheel and the car doorlift.

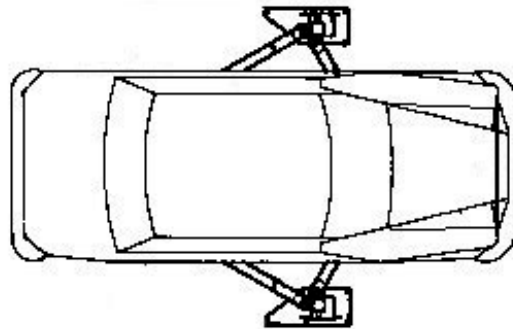


Figure. B) Drive into the centre of the hinges

- Swivel in the lifting arms and extend out to the desired position. The adjustable receiving plates are to be placed at the pointed prescribed by the vehicle manufacturer.
- The lifting arm block must be ratcheted in after the fixture point has been reached.
- After each vehicle is set down, position the lifting arm below the fixture points again to check and if required, to realign.
- Check that there are no people or objects in the hazardous area of the lift.

5.2 Lifting the vehicle

- Lift the vehicle until the wheels are off the ground. Push the "Lift" button (see figure 4).
- If the wheels are not blocked, interrupt the lifting process and check for proper seating of the carrier plate. Similarly check whether the lifting arm blocks are ratcheted in. Otherwise, lower the lift and reposition the vehicle.
- Check that there are no people or objects in the hazardous area of the lift.
- Afterwards, lift the vehicle to the desired working height.



Ensure secure vehicle placement on the carrier plate, otherwise there is a danger of the vehicle dropping.



See to it that the lifting arm blocks are ratcheted in after the vehicle has been accepted.



Figure: Hydraulic unit with operating element

Lift/lower button and main switch

5.3 Lift synchronisation

- Asynchronous running is excluded in proper operation due to two independently constructed hydraulic systems.
- For this, raise the lift to its uppermost end position. Push the button for a further 2 seconds. During this procedure the lift rails are equalised to each other as hydraulic oil flows to the tank as an overflow from the command cylinder via the downstream cylinder to the tank.
- Release the button. The lift rails then lower some millimetres and thereby block the overflow opening of the cylinder.
- Both lift rails are now at the same height.

5.4 Lowering the vehicle

- Check that there are no people or objects in the hazardous area of the lift.
- Lower the vehicle to the desired working height or to its lowest position; push the "Lower" button.
- For heavier vehicles, lift it slightly before lowering to prevent an "sticking" and any corresponding jolt during lowering.
- Once the lift is in the lowest position, push the lifting arms to the start position.

6. Behaviour in cases of error

Defective operational readiness of the lift may be due to a simple error. Check the system for the listed sources of error.

If the error cannot be removed after an inspection to the named causes, then inform customer service or your dealer



Independent repairs to the lift, especially on the safety devices, as well as inspections and repairs to electrical systems are prohibited.
Work on electrical systems may only be done by electricians.

Problem: The lift cannot be raised!	
Possible causes:	Repair:
<i>No power supply present</i>	<i>Check power supply</i>
<i>The main switch is not switched on, or is defective</i>	<i>Check main switch</i>
<i>Push button defective</i>	<i>Check function</i>
<i>Defective fuse</i>	<i>Check fuses</i>
<i>Power line interrupted</i>	<i>Check power lines</i>
<i>Motor has overheated</i>	<i>Let motor cool (cooling time dependent on ambient temperature)</i>
<i>Motor defective</i>	<i>Do an emergency discharge (see Section 6.1)</i>
<i>only 2 phases active</i>	<i>Do an on-site check with a qualified electrician</i>
<i>insufficient hydraulic oil available</i>	<i>Refill new hydraulic oil</i>

Problem: The lift cannot be lowered!	
Possible causes:	Repair:
<i>The lifting arm has moved onto an obstacle</i>	<i>Raise the lift and remove the obstacle.</i>
<i>Push button is defective</i>	<i>Inform customer service If needed, do an emergency discharge.</i>
<i>Valve is defective</i>	<i>Inform customer service</i>

6.1 Emergency discharge

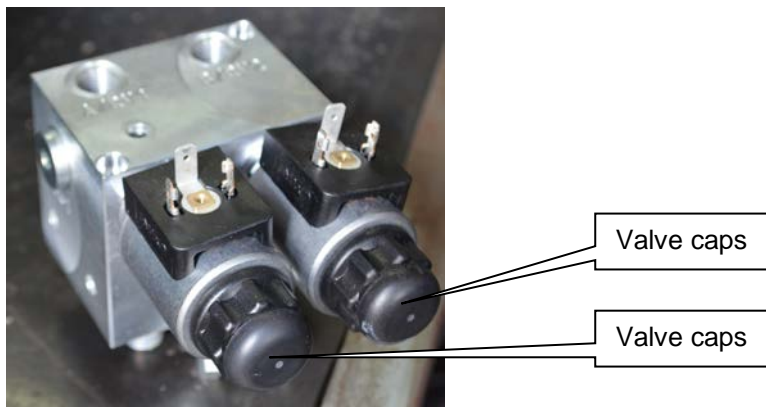
There is the option of placing the lift into the lowest position with a simple operation.



An emergency discharge can only be done by personnel who are trained to operate the lift. Follow the conditions to "Lower".

Emergency discharge procedure

- People may not stand in the hazardous area around the lift.
- Loosen the unit cover and pull it forwards.
- At the same time, give a forceful push on the black caps of both valves. The lowering procedure begins immediately.



- Always observe the lowering process.
- Release the valve caps in case of danger.
- Lower the lift to the lowest position.
- If required, firstly inform customer service.
- The lift may only be operated again after it has been returned to a seamless condition seen from a safety point of view.

6.2 Moving onto an obstacle

If the lifting rails or lifting arms move onto an obstacle due to operator inattention, the lift stops in place. To remove the object, raise the lift to a height where the object can be removed.

7. Maintenance and care



Before maintenance, do all preparation work so there is no danger to life or limb or object damage during maintenance and repair work.



Legal principles: BSV (operating equipment regulation) + BGR500 (Operation of work equipment)

Value is placed on long lifetimes and safety in the development and production of Nussbaum products. To guarantee the safety of the operator, product reliability, low running costs, keep the warranty and also the long-lifetime of the product, proper set up and operation is just as important as regular maintenance and sufficient care.

Our platforms fulfil or exceed all safety standards of the countries we supply to. For example, European regulations require a service by qualified experts every 12 months of work of the platform. To guarantee the largest possible availability and functional capacity of the lift system, ensure the list of any cleaning, care and maintenance work is done.





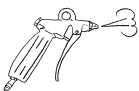


After first commissioning the lift is to be serviced at regular intervals of a maximum of one year by an authorised person according to the following plan. For intensive operation and higher degree of contamination shorten the service interval.


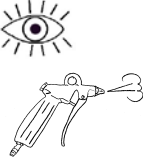






The complete function of the lift is to be observed during daily use. Customer service must be informed of any malfunctions.






7.1 Maintenance plan





Before starting maintenance disconnect from power. The work area around the lift is to be secured against unauthorised use.

						
Visual inspection	Spray	Oil	Lubricate	Clean with compressed air	Clean	Inspect

Type of maintenance	Maintenance plan	Time frame																																																																
	Model and information signs, labels, brief operating instructions, safety stickers and warning information are to be cleaned and exchanged if damaged.	Daily																																																																
	Check the lifting arm block and gear for wear. Exchange if there is visible damage.	At least 1 x per year																																																																
	Lifting arm booms, lifting arm bolts, carrier plate threaded bolts are to be checked for ease of running. If required, lightly grease with multi-purpose grease. Do not over-lubricate.	At least 1 x per year																																																																
	Check the foot bumper for condition and function. Exchange if damaged	Daily																																																																
	The rubber acceptance plate is to be checked for wear and replaced if necessary.	Daily																																																																
	Check the tracks and the lift rail equalisation parts for wear. After cleaning, grease with multi-purpose grease. We exclusively recommend that MO-2 high performance lubricating grease is used. (available for purchase directly from Oest)	Every 3 months																																																																
	The lift cylinder can sweat and small oil droplets can form on the base plate, this is however, not a leak.	Clean as required																																																																
	<p>Check all fastening screws and anchors with a torque wrench.</p> <table border="0"> <tr> <td colspan="4"><i>Fastening class 8.8</i></td> </tr> <tr> <td></td> <td>0.08*</td> <td>0.12**</td> <td>0.14***</td> </tr> <tr> <td>M8</td> <td>17.9</td> <td>23.1</td> <td>25.3</td> </tr> <tr> <td>M10</td> <td>36</td> <td>46</td> <td>51</td> </tr> <tr> <td>M12</td> <td>61</td> <td>80</td> <td>87</td> </tr> <tr> <td>M16</td> <td>147</td> <td>194</td> <td>214</td> </tr> <tr> <td>M20</td> <td>297</td> <td>391</td> <td>430</td> </tr> <tr> <td>M24</td> <td>512</td> <td>675</td> <td>743</td> </tr> <tr> <td colspan="4"><i>Fastening class 10.9</i></td> </tr> <tr> <td></td> <td>0.08*</td> <td>0.12**</td> <td>0.14***</td> </tr> <tr> <td>M8</td> <td>26.2</td> <td>34</td> <td>37.2</td> </tr> <tr> <td>M10</td> <td>53</td> <td>68</td> <td>75</td> </tr> <tr> <td>M12</td> <td>90</td> <td>117</td> <td>128</td> </tr> <tr> <td>M16</td> <td>216</td> <td>285</td> <td>314</td> </tr> <tr> <td>M20</td> <td>423</td> <td>557</td> <td>615</td> </tr> <tr> <td>M24</td> <td>730</td> <td>960</td> <td>1060</td> </tr> </table> <p>* Lubricated slide friction number 0.8 MoS2 ** Lightly oiled slide friction number 0.12 *** Ensured slide friction number 0.14 screw with micro-encapsulated plastic</p>	<i>Fastening class 8.8</i>					0.08*	0.12**	0.14***	M8	17.9	23.1	25.3	M10	36	46	51	M12	61	80	87	M16	147	194	214	M20	297	391	430	M24	512	675	743	<i>Fastening class 10.9</i>					0.08*	0.12**	0.14***	M8	26.2	34	37.2	M10	53	68	75	M12	90	117	128	M16	216	285	314	M20	423	557	615	M24	730	960	1060	At least 1 x per year
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M20	423	557	615																																																															
M24	730	960	1060																																																															

	<p>All weld seams must have a visual inspection. Stop the system and contact the manufacturer if there are cracks or breaks in weld seams of the lift.</p>	<p>At least 1 x per year</p>
	<p>Check electrical components for function and condition.</p> <ul style="list-style-type: none"> - Plug - Press button. Defective or damaged push buttons or main switch can leak. They must be replaced immediately. - During assembly and maintenance always check the condition of electrical lines. All cables and lines must be secured so they cannot be crushed, kinked or contact any moving assembly. 	<p>At least 1 x per year</p> <p>Daily</p>
	<p>Check the condition of the unit cover and at the same time check the cover seal.</p>	<p>At least 1 x per year</p>
 	<p>Hydraulic hose lines</p> <p>Storage and duration of use Excerpt from DIN20066:2002-10</p> <ul style="list-style-type: none"> - For permitted loading, hoses undergo a natural change. This limits the duration of use. - Improper storage, mechanical damage and unpermitted loads are the most frequent cause of breakdowns. - The duration of use of a hose line including any storage time should not exceed six years. <p>Hose lines are to be replaced if/when,</p> <ul style="list-style-type: none"> - Damage to the outer coating up to the insert (chafe marks, cuts, cracks) - The outer coating becomes brittle (crack formation) - Deformation from the natural shape in the depressurised and pressurised conditions. - Leakage - Damage or deformation of the mounting fixture - Meandering of the mounting fixture - The lifetime has been exceeded <p>Repair of the hose line using the implemented hose / mounting fixture is not permitted.</p> <p>Extending the replacement intervals given in the guideline is possible if the inspection for safe-work condition is done in adjusted, shortened time frames, if required and by competent personnel. If there is an extension of the replacement interval, no situation may occur which could result in injury of employees or other personnel.</p>	

	<p>Excerpt from BGR237</p> <p>Specifications for the hydraulic hose lines</p> <p>Normal specification:</p> <p>Increased demands e.g. by</p> <ul style="list-style-type: none"> - Increased usage times e.g. multi-shift, short cycle times and pressure impulses. - Extreme external and internal (from the medium) influences, that severely reduce the lifetime of the hoses. 	<p>Recommended exchange intervals</p> <p>6 years (operation duration including max. 2 years storage time)</p> <p>2 year operation duration</p>
	<p>Check the door stopper rubber for wear. Exchange if damaged.</p>	<p>Daily</p>
	<p>According to manufacturer instructions, the hydraulic oil should be changed every two years in normal operations. Various environmental influences (e.g. location, temperature swings, intensive operation etc, can have an influence on the quality of the hydraulic oil. For this reason, the oil must be checked during annual safety inspections and maintenance. The oil is used if it has a milky colour or if the hydraulic oil smells unpleasantly. To change oil, lower the lift is to its lowest position then suction the oil out of the oil container and replace the contents. The manufacturer recommends high-quality clean hydraulic oil. The required oil volume and type is to be taken from the section 3. After filling, the hydraulic oil must be between the upper and lower marking on the oil dipstick or approx. 2 cm below the filling opening. Dispose of the old oil according to regulations to the intended location (district offices, environmental protection office or commercial regulatory office has the obligation to disclose about disposal points).</p>	<p>Min. every two years</p>

7.2 Cleaning the lift

The platform is suitable for use in a washing hall. Regular and expert care is important and helps retain the value of the lift.

Additionally, it can also be a pre-requisite for retention of guarantee claims for any damages resulting from improper handling.

The best protection for the lift is regular removal of contaminants of any kind.

- This includes above all:

- de-icing salt
- sand, pebbles, earth
- industrial dust of all types
- aggressive liquids, also in connection with other environmental influences
- aggressive deposits of all types
- permanent humidity due to insufficient ventilation

The frequency of lift cleaning depends, among other things on the frequency of use, of lift handling, of workshop cleanliness, and the location of the lift. Furthermore, the degree of contamination depends on the time of year, the weather conditions and workshop ventilation. Under adverse circumstances, weekly lift cleaning might be required, however a monthly cleaning may be sufficient.

Do not use and aggressive and abrasive materials for cleaning, rather use mild cleaners, e.g. a commercially available detergent and luke warm water.

- It can be used for cleaning with a high pressure cleaners (e.g. steam cleaners). However Keep the jet approx. 20 m away from the surface to be cleaned.



The hydraulic unit and electrical box may never be exposed to a direct jet from the high pressure cleaner.

- Carefully remove all contamination with a sponge, or if required with a brush.
- Make sure that there is no residue of the cleaner on the lift.
- Dry the lift with a cloth and spray it with a spray wax or oil.
- Moving parts (bolts, bearing zones) are to be lubricated or oiled according to instructions.
- When cleaning the workshop floor ensure that no aggressive cleaning materials come into contact with lift surfaces. Permanent contact with any aggressive liquid is prohibited.

7.3 Checking the stability of the lift

- Retighten nuts of the approved fastening anchors to the torques specified by the manufacturer using a pre-set torque wrench. (Torque details are found on the data sheet of the corresponding anchor manufacturer)

8. Assembly and commissioning

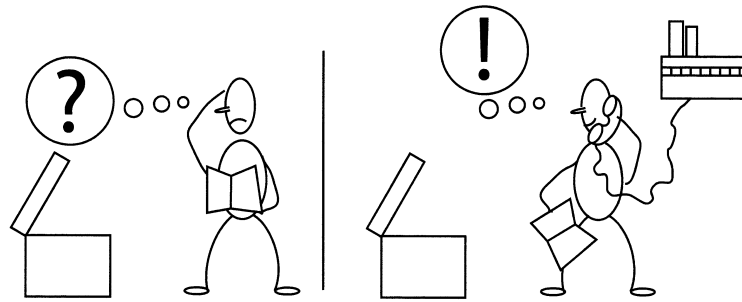


Figure 20:

8.1 Set up guidelines

- Lift set up is done by trained manufacturer personnel or a contract partner. Set up is to be done according to the assembly instructions.
- A standard lift may not be set up in explosion endangered spaces or wash halls.
- Before setting up, ensure or make a sufficient foundation.
- A level set up space is to be done in all cases, where open air and enclosed foundations where frost is expected, must have a frost-depth thickness.
- An on-site standard electrical connection of 3 ~/N + PE, 400 V, 50 Hz is to be provided. The supply is to be secured according to VDE0100 with 16 ampere fuses. The minimum line cross-section is 2.5 mm².
- The lines can be fed through the cross-beams. In all cases, prevent kinks or tensional loads on the lines.
- After successful lift installation and before first commissioning, the operating company must have the lift grounding conductors inspected on-site according to IEC regulation (60364-6-61). An insulation resistance test is also recommended.

8.1.1 Set up and anchoring the lift



On-site provision of suitable auxiliary materials (e.g. forklifts, crane, etc) are to be made available for unloading the lift and for assembly.

Before setting up the lift, the operating company must ensure or make a sufficient foundation. For this, a normal reinforced concrete floor with a value of a min. C20/25 is required. The minimum foundation thickness (without screed and tiles) is to be taken from the foundation plan in this document.

In our plans, we inform of the minimum specifications for the foundation, however local conditions (e.g. underground, floor quality, etc.) are outside of our responsibility. In special cases, the design of the installation location must be individually specified by planning architects and statics experts. Open air foundations must be made to frost depth.

The operating company of the lift is solely responsible for the set up location.

If the lift is to be assembled on an existing concrete floor, cement quality and strength are to be checked beforehand. In case of doubt, make a test bore and insert an anchor. Then, tighten the anchor to the manufacturer recommended torque. After inspection within the anchor zone of influence (200 mm diameter), if there is visible damage (hairline cracks, cracks or similar), or if the required torque cannot be applied then the set up location is unsuitable.

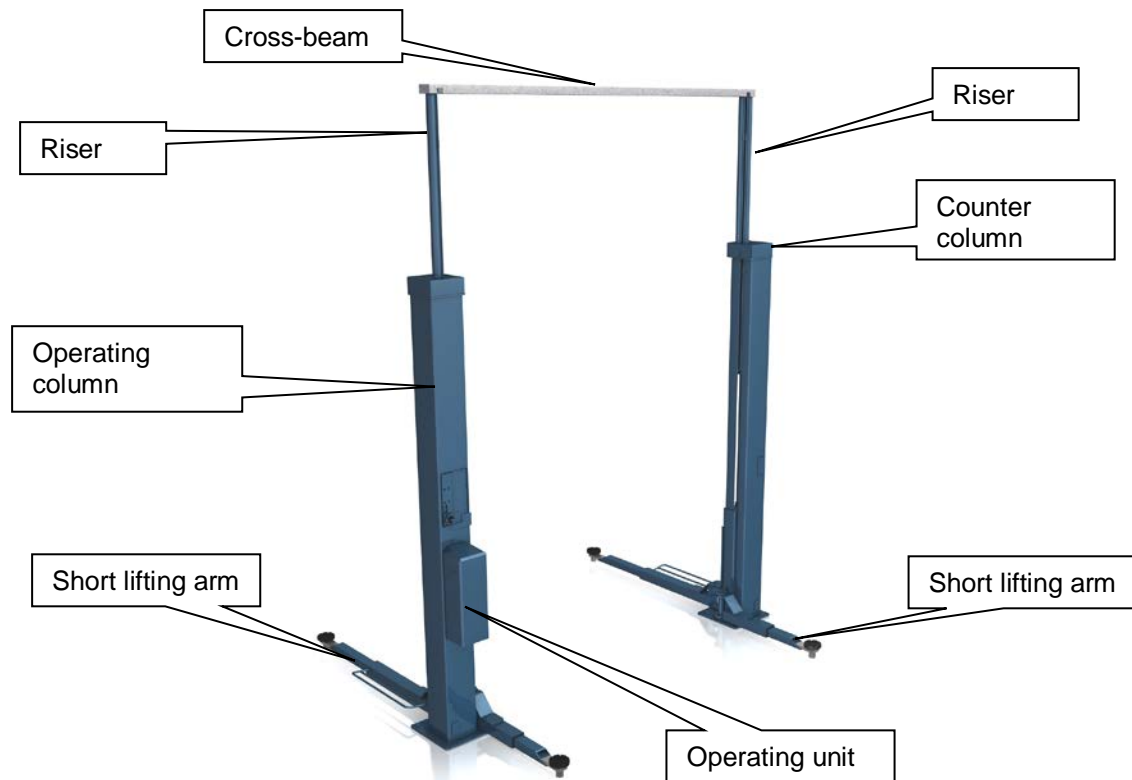


Figure 21: Complete assembly view without riser extension (similar to figure)

A foundation must be made according to the "Foundation plan" sheet regulations. Also a level, set up surface must be ensured for the lift so there is continuous contact between the lift and the concrete floor.

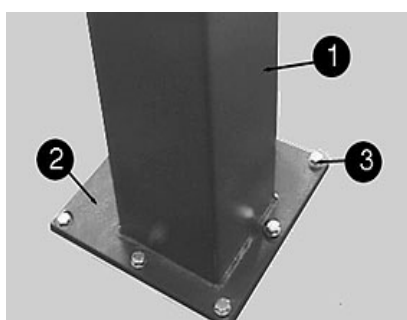


Figure 22: Anchoring

- 1: Column
- 2: Base plate
- 3: Safety anchor

- To reach a higher level of protection against humidity from the workshop floor, a thin PE foil should be put between the workshop floor and column base plate before anchors are placed. Also, the gap between the base plate and workshop floor should be silicone sprayed after anchoring.
- Lift the cross-beam that is fastened to a column and fasten to the opposite side. Hydraulic lines are marked in colours thereby making them easy to connect.
- Holes for floor anchoring are to be placed through the holes in the base plates. Clean the bore holes by blowing them out with air. Insert safety anchors into the holes. The manufacturer recommends e.g. Hilti injection anchors or similar anchors from other manufacturers, with approval and in compliance with their specifications.

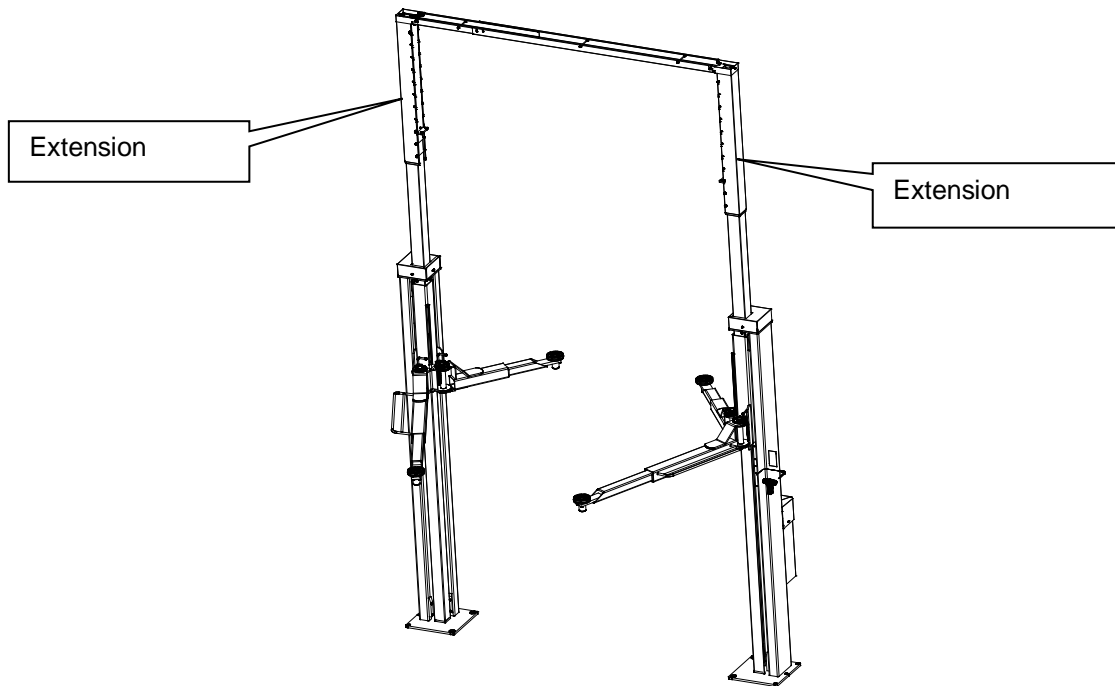
Before anchoring the lift, check whether the concrete is of quality C20/25 up to the finishing level of the completed floor. In this case, determine the anchor length from the "Selection of anchor length without floor covering (in appendix) data sheet. If there is a floor covering (tiles, screed) on the weight bearing concrete, the thickness of this covering must be determined. Afterwards, then determine the anchor length from the "Selection of anchor length without floor covering (in appendix) data sheet.

- Position and align the lift and lift columns using a bubble level.
- The base plates are also to be supported with suitable underlays (thin metal strips) to ensure precise vertical set up and contact between the base plate and the floor.
- Tighten the anchors using a torque wrench.

Each anchor must be able to be tightened to the torque specified by the manufacturer. Safe operation of the lift is not guaranteed with a lower torque.

- If an anchor is tightened to the specified torque, then the domed washer lays flat on the base plate. Secure anchor connection is then guaranteed.

8.1.2 Lift assembly with riser extension



Steigrohrverlängerung auf das vorhandene Steigrohr aufsetzen. Offene Seite zeigt nach innen

Place the riser Pipes on the top of the column.
The opening shows to the inner side.

Placer la rehausse sur le pont, partie ouverte vers l'intérieur.



Auf die gewünschte Höhe einstellen (von 100 mm bis 900 mm in 100 mm schritten) je nach Deckenhöhe

Adjust to the wished height, (from 100mm up to 900 mm) depends to the ceiling height.

Régler en hauteur (de 100mm à 900mm)
Selon le cran utilisé.

Guide the 4 hydraulic lines (fastened to the operating column) upwards out of the riser.



Deckel befestigen

Fix the cover plate.

Fixer la plaque du haut.



- After setting up the lifting columns, lift the cross-connection fastened to the operating column upwards and fasten to the opposite side. The hydraulic lines are placed in the cross-connection.
- Guide the lines from above into the riser of the opposite side and connect to the colour marked positions.

Verlängerung befestigen mittels der langen Schrauben nachdem das Spanblech (A) eingesetzt wurde.

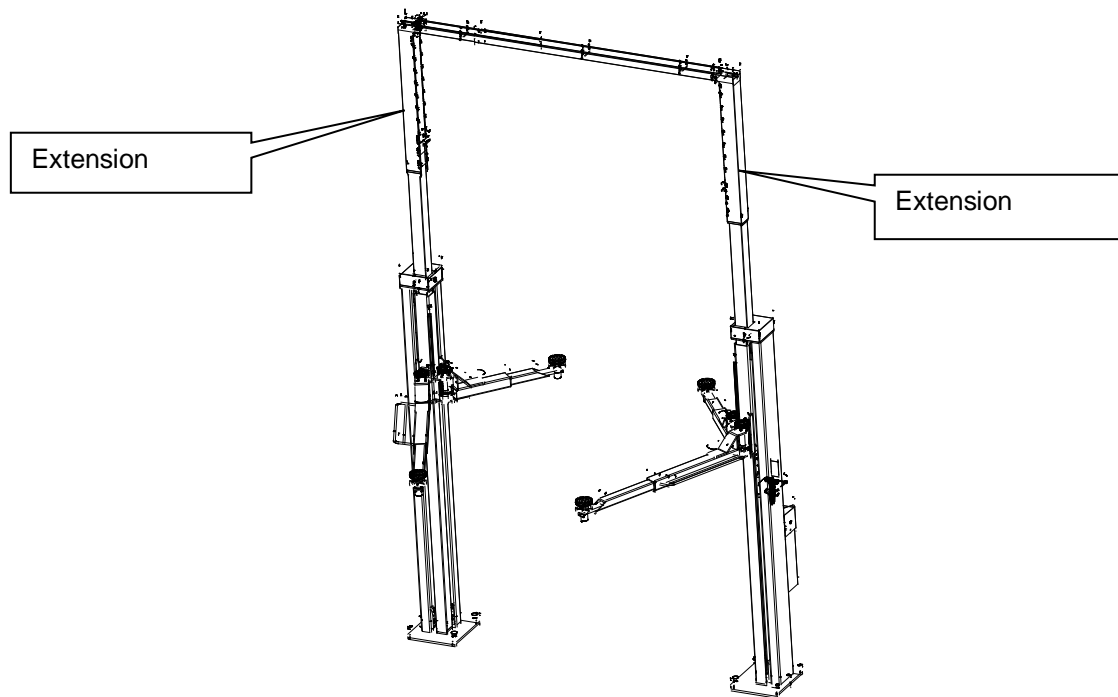
Close the screw after insert the sheet (A) of metal.

Fixer les vis (A) en ayant intégré la bride.

A



8.1.3 Retrofitting the riser extension

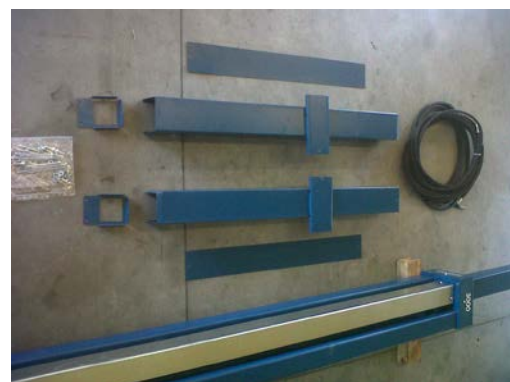


Die optionalen Steigrohrverlängerungen werden
in einem Karton angeliefert.
The Riser pipes where delivered in a box.
Les rehaussees sont livrées en carton.



Mitgelieferte Teile bereitlegen
Prepair the different pieces.
Repérer les différentes Pièces.

Schläuche, Deckel, Platten
Hoses, covers, plates, extensions, press panels,
screws.
Tuyaux, caches, plaque haut, rehausse, bride
Visserie.



Steigrohrverlängerung auf das vorhandene Steigrohr aufsetzen. Offene Seite zeigt nach innen

Place the riser Pipes on the top of the column.
The opening shows to the inner side.

Placer la rehausse sur le pont, partie ouverte vers l'intérieur.



Auf die gewünschte Höhe einstellen (von 100 mm bis 900 mm in 100 mm schritten) je nach Deckenhöhe

Adjust to the wished height, (from 100mm up to 900 mm) depends to the ceiling height.

Régler en hauteur (de 100mm à 900mm)
Selon le cran utilisé.



Verlängerung befestigen mittels der langen Schrauben nachdem das Spannbloch (A) eingesetzt wurde.

Close the screw after insert the sheet (A) of metal.

Fixer les vis (A) en ayant intégré la bride.

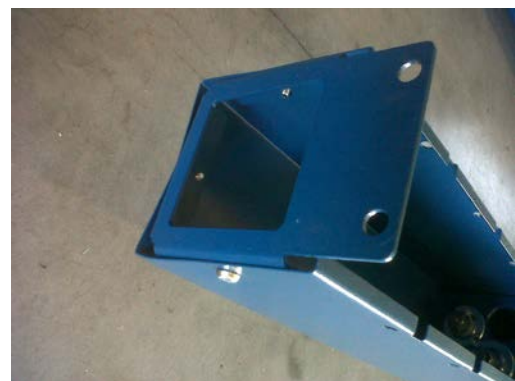
A



Deckel befestigen

Fix the cover plate.

Fixer la plaque du haut.



Vorhandene Hydraulikleitungen entfernen.

Change the position of the Hydraulic pieces.
Do not remove the colour marking.

Modifier la position des raccords hydrauliques.
Ne retirez pas la marque d'encre.



T-Stück und Winkel wie auf Bild sichtbar lösen und drehen.

Loosen and turn the T-piece and angle piece
(see pic)

T piece et de l'angle et rotation.



Mitgelieferte Hydraulikschläuche austauschen
Change the delivered hydraulic pipes.
Changer les tuyaux hydrauliques.

Gelb und weiß oben an der Bediensäule anbringen.

Yellow and white on the master column.

Blanc et jaune coté commande.



Rot direkt am Aggregat anbringen

Install the red directly at the hydraulic aggregate.

Rouge directement au groupe hydraulique.



Blau an K1 an der Bediensäule anschließen

Install the blue on K1 at the master column.

Bleu vérin K1cote commande.



Abdeckblech auf Länge zuschneiden und montieren.

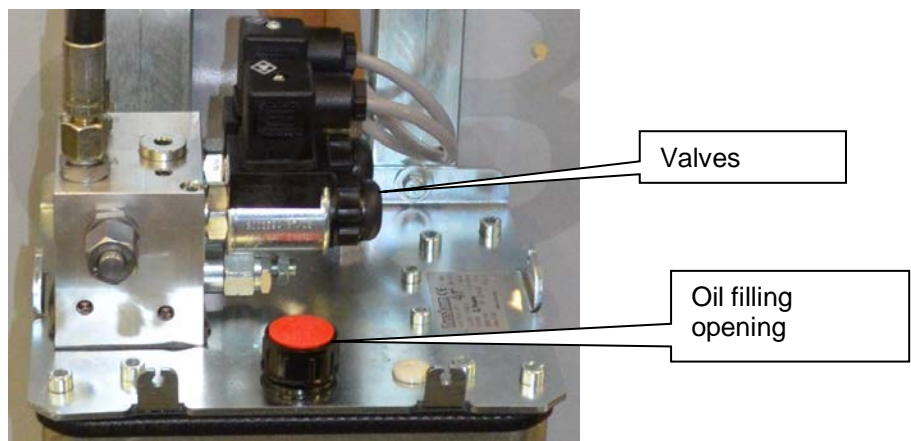
Cut the cover plate and fix it.

Couper le cache à la longueur et le fixer.



8.1.4 First filling

- After the lift has been assembled and has an electrical connection, fill the hydraulic oil as follows:
- Loosen and remove the unit cover.
- Loosen and remove the oil filling opening.



- Fill with 10 litres of hydraulic oil.
- Raise the lift approx. 1000 mm.
- Hang in the lift arms and secure.
- Then push the "Lift" button and raise the lift up to its uppermost end position.
- Push the button for a further 2-3 seconds until the oil flows into the tank again in the overflow procedure.
- Lower the lift to the lowest position. Push and hold the "Lower" button until the lifting arms are lowered.
- Then top up the oil tank again. Oil level to approx. 25 mm below the filling opening.

- Do not fill the oil tank to the upper edge as otherwise during lowering, the oil return flow from the tank can pull resulting in an extremely slow lift speed in the upper area.

8.2 Lifting arm assembly

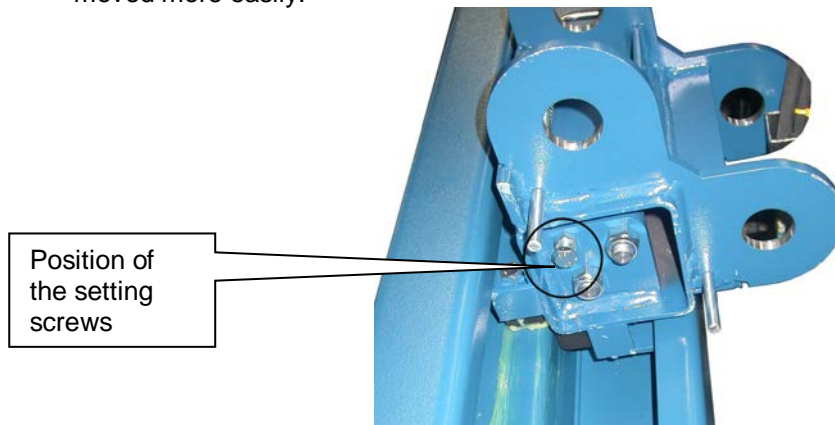
- Hang in the standard lifting arm and then place an acid-free multi-purpose grease into the joint bolts in each case from above into the hole and then insert the enclosed locking ring.



The lifting arm bolts must be secured on both sides as otherwise a reliable connection is not given between the lift rails and lifting arm.

8.3 Lifting arm alignment

- After assembly of the lift, the lifting arm may be placed at the lowest position and become difficult to move. There is the option of setting the set screw so that the lifting arms can be moved more easily.



8.4 Commissioning



Before commissioning, a single safety inspection must be done (use the Single Safety Inspection form)

If the lift set up is done by a specialist (factory trained assembler) then he can also do the safety inspection. If the set up is done by the operating company, then a specialist must be tasked with the safety inspection.

The specialist confirms seamless operation of the lift on the set up protocol for single safety inspection and releases the lift for use.



After commissioning, please complete the assembly protocol and send to the manufacturer immediately.

8.5 Changing the assembly location

To change the assembly location the pre-conditions must be met according to the assembly guidelines. The location change is to be done according to the following sequence:

- Move the lift rails to about half height.
- Remove the lifting arm (remove locking rings on the lifting arm bolts. Pull out the lifting arm bolts and remove the lifting arm).
- Disconnect electrical supply lines to the lift from mains power.
- Remove hydraulic lines above on the opposite side and seal them off with blind stoppers.
- Only loosen cross beams on one side and fold them under along with the hydraulic lines.
- Securely fix the beam to the columns.
- Suction off hydraulic oil.
- Loosen the anchor fastenings.
- Carefully transport the lift column using appropriate auxiliary means (e.g. crane, forklift, etc) to the new assembly location.
- Assemble the lift according to the procedure during assembly and anchoring before first commissioning.



Use new anchors. The old anchors are no longer fit for purpose.

9. Safety Inspection

The safety inspection is required to guarantee operational safety of the lift. It is to be done:

1. Before first commissioning after setting up the lift.
Use the "single safety inspection" form.
2. After first commissioning, at regular intervals of a maximum of one year.
Use the "regular safety inspection" form.
3. After changes to the lift construction.
Use the "extraordinary safety inspection" form.

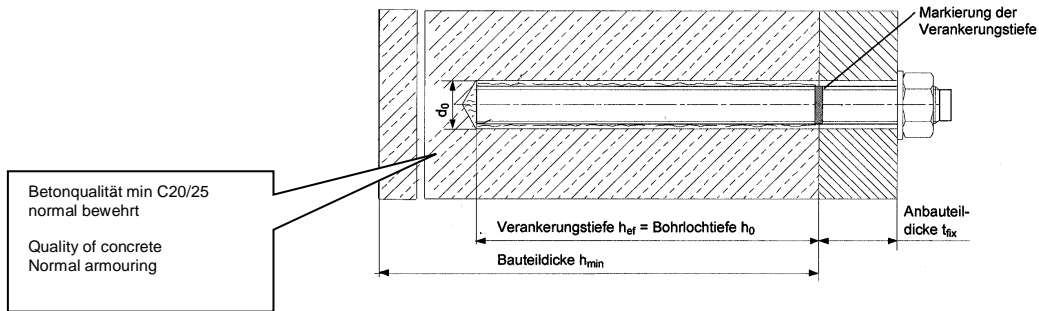


Single and regular safety inspections must be done by a specialist. It is recommended to do maintenance at the same time.



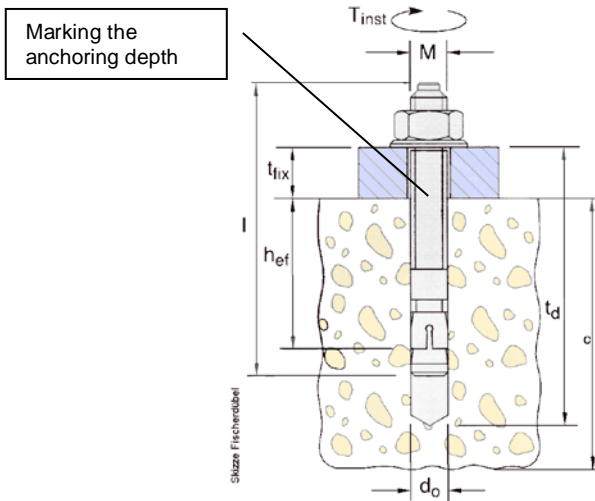
After a change in construction (for example changing the load carrying capacity or changing the lifting height) and after significant maintenance on load carrying parts (e.g. welding work), inspection by a technical expert is required (extraordinary safety inspection).

This inspection book contains forms with a printed inspection plan for safety inspections. Please use the appropriate form, record the condition of the inspected lift and leave the completed form in this inspection book.



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


Hilti injection anchor		HL 2.40 NT ¹		
Betonboden / concrete floor		ohne Bodenbelag / without floor pavement (tiles)		
Dübel type of dowel type de cheville		HIT-V-5.8 M10x130	HIT-V-5.8 M12x150 Item No.:387061	HIT-V-5.8 M16x200 Item No. 956437
Bohrtiefe (mm) drilling depth Profondeur de l'alsage	h₀	90	108	144
Mindestverankerungstiefe (mm) min.anchorage depth Profondeur minimale d'ancrage	h_{ef}	90	108	144
Betonstärke (mm) thickness of concrete Epaisseur du béton	H_{min}	Min. 120	min.138	min.180
Bohrerdurchmesser (mm) diameter of bore Diamètre de l'alsage	d₀	12	14	18
Bauteildicke (mm) thickness of the lift-piece Epaisseur de la pièce	t_{fix}	max.17	Max. 19	23
Anzugsdrehmoment (Nm) turning moment moment d'une force	T_{inst}	20	40	80
Gesamtlänge (mm) total length Longueur totale	l	130	150	200
Gewinde thread fil	M	10	12	16
Stückzahl piece number nombre des pièces	a	4		
	b	8		
	c	10		
	d	12		
	e	14		
	f	16		
	g	28		
Die Montageanweisung des Dübelherstellers ist Folge zu leisten. Bei Bodenbelag (Estrich/Fliesen) sind längere Dübel zu verwenden. Observe necessarily the installation description of the dowel manufacturer. Use longer dowels with version with floor pavement and tiles				
Es können auch gleichwertige Injektionsdübel anderer Hersteller (mit Zulassung) unter Beachtung deren Bestimmungen verwendet werden. It is possible to use equivalent injections 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!

fischer anchor		HL 2.40 NT ¹		
Dübel typ of dowel type de cheville		FH 15/50 B Order No. 970265	FH 18 x 100/100 B Order No.: 972230	FH 24/100 B Order No. 970267
Bohrtiefe drilling depth Profondeur de l'alésage	t _d	145	230	255
Mindestverankerungstiefe min.anchorage depth Profondeur minimale d'ancrage	h _{ef}	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 _o	15	18	24
Bauteildicke thickness of the lift-piece Epaisseur de la pièce	t _{fix}	0-50	0-100	0-100
Anzugsdrehmoment Nm turning moment moment d'une force	M _d	40	80	120
Gesamtlänge total length Longueur totale	l	155	230	272
Gewinde thread fil	M	M10	M12	M16
Stückzahl piece number nombre des pièces	a	4		
	b	8		
	c	10		
	d	12		
	e	14		
	f	16		
	g	20		
Montage				
<p>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.</p>				

Single safety inspection before commissioning

 Complete and leave in the inspection book

Serial number: _____

Test step	OK	Defect missing	Reinspect	Remarks
Model plate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brief operating instructions on the column	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Load capacity details on the lift	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Detailed operating manual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, operating button function	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Label "Lift, Lower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, lockable main switch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Securing the lifting arm bolts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function rubber plate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function foot bumper (optional	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition sliding part lift rails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Paint condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Load bearing construction (deformations, cracks)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fastening screw torque	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fastening anchor torque	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function lifting arm block	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function lifting arm movement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, cross-beam	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cylinder condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition wiper cylinder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of covers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unit cover leak-tightness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Operating box leak-tightness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function riser extension	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of concrete floor (cracks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition electrical lines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, hydraulic lines + screw fittings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, hydraulic unit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Functional test lift with vehicle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Functional test "overflows	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stability of lift	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
General condition of lift	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(place a checkmark in the relevant, if a retest is required then check it again!

Safety inspection done on:.....

Performed by company:.....

Name, address of specialist:.....

- Result of inspection:
- Continued operation questionable, reinspection required
 - Continued operation possible, remove defects
 - No deficiencies, continue to operate

.....
Signature of specialist

.....
Operating company signature


If requested to take care of deficiencies

Deficiency removed on:

.....
Operating company signature

(use a new form for reinspection!)

Regular safety inspection and maintenance

 Complete and leave in the inspection book

Serial number: _____

Test step	OK	Defect missing	Reinspect	Remarks
Model plate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brief operating instructions on the column	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Load capacity details on the lift	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Detailed operating manual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, operating button function	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Label "Lift, Lower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, lockable main switch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Securing the lifting arm bolts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function rubber plate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function foot bumper (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition sliding part lift rails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Paint condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Load bearing construction (deformations, cracks)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fastening screw torque	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fastening anchor torque	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function lifting arm block	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function lifting arm movement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, cross-beam	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cylinder condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition wiper cylinder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of covers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unit cover leak-tightness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Operating box leak-tightness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function riser extension	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of concrete floor (cracks)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition electrical lines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, hydraulic lines + screw fittings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, hydraulic unit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Functional test lift with vehicle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Functional test "overflows"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stability of lift	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
General condition of lift	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(place a checkmark in the relevant, if a retest is required then check it again!)

Safety inspection done on:

Performed by company:

Name, address of specialist:

- Result of inspection:
- Continued operation questionable, reinspection required
 - Continued operation possible, remove defects
 - No deficiencies, continue to operate

.....
Signature of specialist

.....
Operating company signature

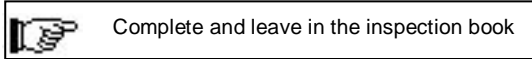
If requested to take care of deficiencies

Deficiency removed on:

.....
Operating company signature

(use a new form for reinspection!)

Regular safety inspection and maintenance



Serial number: _____

Test step	OK	Defect missing	Reinspect	Remarks
Model plate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brief operating instructions on the column	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Load capacity details on the lift	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Detailed operating manual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, operating button function.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Label "Lift, Lower.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, lockable main switch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Securing the lifting arm bolts.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function rubber plate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function foot bumper (optional	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition sliding part lift rails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Paint condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Load bearing construction (deformations, cracks).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fastening screw torque	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fastening anchor torque.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function lifting arm block.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function lifting arm movement.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, cross-beam.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cylinder condition.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition wiper cylinder.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of covers.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unit cover leak-tightness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Condition, function riser extension	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of concrete floor (cracks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition electrical lines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, hydraulic lines + screw fittings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, hydraulic unit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Functional test lift with vehicle.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Functional test "overflows	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stability of lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
General condition of lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Signature of specialist

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Operating company signature

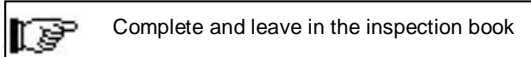
If requested to take care of deficiencies

Deficiency removed on:

.....
Operating company signature

(use a new form for reinspection!)

Regular safety inspection and maintenance



Serial number: _____

Test step	OK	Defect missing	Reinspect	Remarks
Model plate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brief operating instructions on the column	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Load capacity details on the lift	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Detailed operating manual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, operating button function.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Condition, lockable main switch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Condition, function rubber plate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function foot bumper (optional	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Paint condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Load bearing construction (deformations, cracks).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Fastening anchor torque.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function lifting arm block.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function lifting arm movement.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, cross-beam.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cylinder condition.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition wiper cylinder.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of covers.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unit cover leak-tightness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Operating box leak-tightness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function riser extension	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of concrete floor (cracks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition electrical lines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, hydraulic lines + screw fittings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, hydraulic unit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Functional test lift with vehicle.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Functional test "overflows	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stability of lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
General condition of lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(place a checkmark in the relevant, if a retest is required then check it again!)

Safety inspection done on:.....

Performed by company:.....

Name, address of specialist:.....

- Result of inspection:
- Continued operation questionable, reinspection required
 - Continued operation possible, remove defects
 - No deficiencies, continue to operate

.....
Signature of specialist

.....
Operating company signature

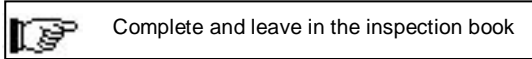
If requested to take care of deficiencies

Deficiency removed on:

.....
Operating company signature

(use a new form for reinspection!)

Regular safety inspection and maintenance



Serial number: _____

Test step	OK	Defect missing	Reinspect	Remarks
Model plate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brief operating instructions on the column	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Load capacity details on the lift	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Detailed operating manual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, operating button function.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Label "Lift, Lower.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, lockable main switch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Securing the lifting arm bolts.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function rubber plate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Load bearing construction (deformations, cracks).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Fastening anchor torque.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function lifting arm block.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function lifting arm movement.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, cross-beam.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cylinder condition.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition wiper cylinder.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of covers.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unit cover leak-tightness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Operating box leak-tightness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function riser extension	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of concrete floor (cracks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition electrical lines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, hydraulic lines + screw fittings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, hydraulic unit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Functional test lift with vehicle.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Functional test "overflows	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stability of lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
General condition of lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(place a checkmark in the relevant, if a retest is required then check it again!

Safety inspection done on:.....

Performed by company:.....

Name, address of specialist:.....

- Result of inspection:
- Continued operation questionable, reinspection required
 - Continued operation possible, remove defects
 - No deficiencies, continue to operate

.....
Signature of specialist

.....
Operating company signature

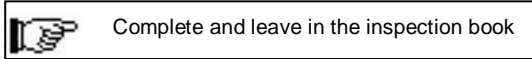
If requested to take care of deficiencies

Deficiency removed on:

.....
Operating company signature

(use a new form for reinspection!)

Regular safety inspection and maintenance



Serial number: _____

Test step	OK	Defect missing	Reinspect	Remarks
Model plate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brief operating instructions on the column	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Load capacity details on the lift	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Detailed operating manual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, operating button function.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Label "Lift, Lower.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, lockable main switch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Securing the lifting arm bolts.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function rubber plate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function foot bumper (optional	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition sliding part lift rails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Paint condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Load bearing construction (deformations, cracks).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fastening screw torque	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fastening anchor torque.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function lifting arm block.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function lifting arm movement.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, cross-beam.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cylinder condition.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition wiper cylinder.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of covers.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unit cover leak-tightness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Operating box leak-tightness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function riser extension	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of concrete floor (cracks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition electrical lines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, hydraulic lines + screw fittings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, hydraulic unit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Functional test lift with vehicle.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Functional test "overflows	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stability of lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
General condition of lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(place a checkmark in the relevant, if a retest is required then check it again!)

Safety inspection done on:.....

Performed by company:.....

Name, address of specialist:.....

- Result of inspection:
- Continued operation questionable, reinspection required
 - Continued operation possible, remove defects
 - No deficiencies, continue to operate

.....
Signature of specialist

.....
Operating company signature

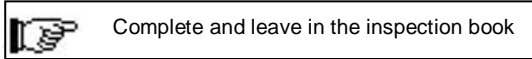
If requested to take care of deficiencies

Deficiency removed on:

.....
Operating company signature

(use a new form for reinspection!)

Regular safety inspection and maintenance



Serial number: _____

Test step	OK	Defect missing	Reinspect	Remarks
Model plate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brief operating instructions on the column	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Load capacity details on the lift	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Detailed operating manual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, operating button function.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Label "Lift, Lower.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, lockable main switch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Securing the lifting arm bolts.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function rubber plate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function foot bumper (optional	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition sliding part lift rails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Paint condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Load bearing construction (deformations, cracks).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fastening screw torque	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fastening anchor torque.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function lifting arm block.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function lifting arm movement.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, cross-beam.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cylinder condition.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition wiper cylinder.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of covers.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unit cover leak-tightness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Operating box leak-tightness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function riser extension	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of concrete floor (cracks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition electrical lines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, hydraulic lines + screw fittings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, hydraulic unit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Functional test lift with vehicle.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Functional test "overflows	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stability of lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
General condition of lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(place a checkmark in the relevant, if a retest is required then check it again!)

Safety inspection done on:.....

Performed by company:.....

Name, address of specialist:.....

- Result of inspection:
- Continued operation questionable, reinspection required
 - Continued operation possible, remove defects
 - No deficiencies, continue to operate

.....
Signature of specialist

.....
Operating company signature

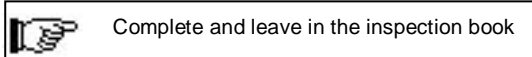
If requested to take care of deficiencies

Deficiency removed on:

.....
Operating company signature

(use a new form for reinspection!)

Exceptional safety inspection



Serial number: _____

Test step	OK	Defect missing	Reinspect	Remarks
Model plate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brief operating instructions on the column	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Load capacity details on the lift	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Detailed operating manual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, operating button function.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Label "Lift, Lower.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, lockable main switch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Securing the lifting arm bolts.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function rubber plate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function foot bumper (optional	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition sliding part lift rails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Paint condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Load bearing construction (deformations, cracks).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fastening screw torque	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fastening anchor torque.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function lifting arm block.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function lifting arm movement.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, cross-beam.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cylinder condition.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition wiper cylinder.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of covers.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unit cover leak-tightness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Operating box leak-tightness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, function riser extension	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of concrete floor (cracks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition electrical lines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, hydraulic lines + screw fittings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition, hydraulic unit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Functional test lift with vehicle.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Functional test "overflows	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stability of lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
General condition of lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(place a checkmark in the relevant, if a retest is required then check it again!)

Safety inspection done on:.....

Performed by company:.....

Name, address of specialist:.....

- Result of inspection:
- Continued operation questionable, reinspection required
 - Continued operation possible, remove defects
 - No deficiencies, continue to operate

.....
Signature of specialist

.....
Operating company signature

If requested to take care of deficiencies

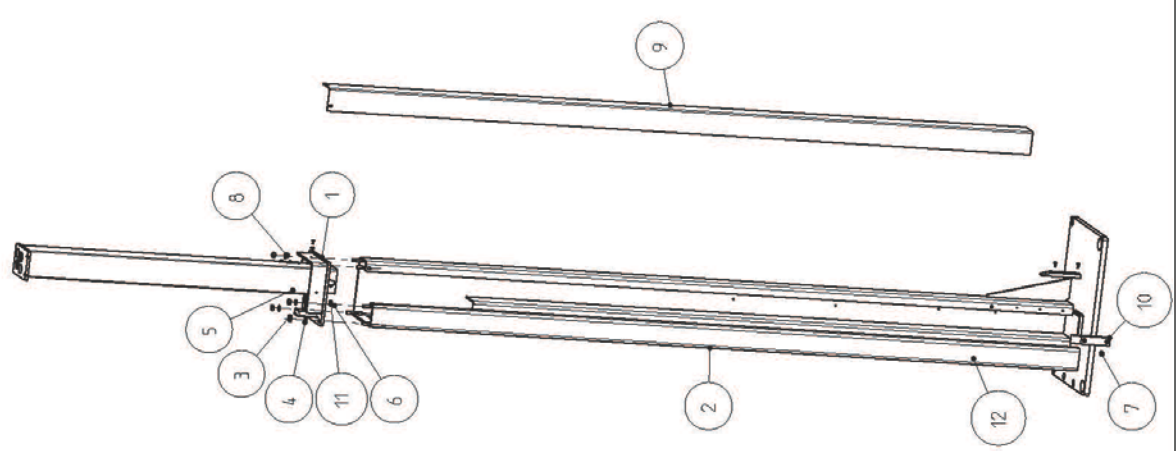
Deficiency removed on:

.....
Operating company signature

(use a new form for reinspection!)

10. Replacement parts list

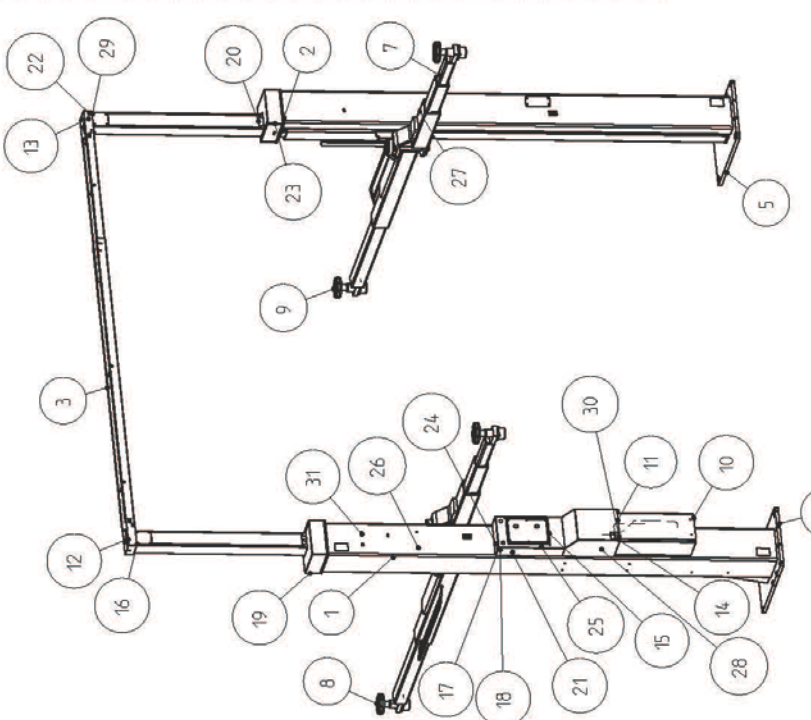
Nachbaum-Scheidteile (ähnlich DIN 67741A) / alte Objekte der obersten (aktuellen) Baugruppe					
1	2	3	4	5	6
Lfd.-Nr.	Menge	Type	Zeichnungs-Nr.:	Benennung	Werkstoff / Halbzeug
1	1	BG	240SLNT05070	Kopflaube bds. Schwf.	- / -
2	1	BG	240HLNT25013	Saeule Bed. Schwf.	- / -
3	5	ET	9934-M10	SECHSKANTMUTTER	ST / DIN934-M10
4	5	ET	9125_1-A10_5	Scheibe	- / DIN 125 - A 10,5
5	2	ET	9125_1-A5_3	Scheibe	- / DIN25-A5,3
6	2	ET	97991-M5X12	SEKSC.HRAUBE	- / DIN 7991 - M 5 X 12
7	4	ET	97991-M5X16	SEKSC.HRAUBE	- / DIN7991-M5x16
8	2	ET	9912-M5X10	Zylinderschraube	St / DIN912-M5x10
9	1	ET	240SL09008	Abschleibblech	DXST D-Z / Bl.1,25x198x2755
10	2	ET	240SLNT05008	Hubschlitzenfuehrung	PA 6 , natur / 30*4*150g.
11	2	ET	970010	Rosette	4136 / M5
12	2	ET	970721	Verschlusstopfen	Kunststoff schwarz / 80x50x4 7518/4




Technische und Normen		ISO 9001		ISO 14001	
Allgemeine Angaben: DIN ISO 2408 mit DIN 13715 DIN 13716 DIN 15015 DIN 15022-2		Werkstoff / Halbzeug - / - Benennung Saeule Bed. kplt.		Massestrab: 0,065 Gewicht: 226,714 kg	
Datum: 21.03.16 Gepr.: Norm:		Zeichnungsnummer 240HLNT25001		Blatt 1 von 2	
Nr. Änderung: - Datum: - Name Urspr.:		Ersatz fuer:		Ersetzt durch:	

Nachbaum-Scheidteile (ähnlich DIN 67741A) / alte Objekte der obersten (aktuellen) Baugruppe
 Nachbaum-Scheidteile (ähnlich DIN 67741A) / alte Objekte der obersten (aktuellen) Baugruppe
 Nachbaum-Scheidteile (ähnlich DIN 67741A) / alte Objekte der obersten (aktuellen) Baugruppe

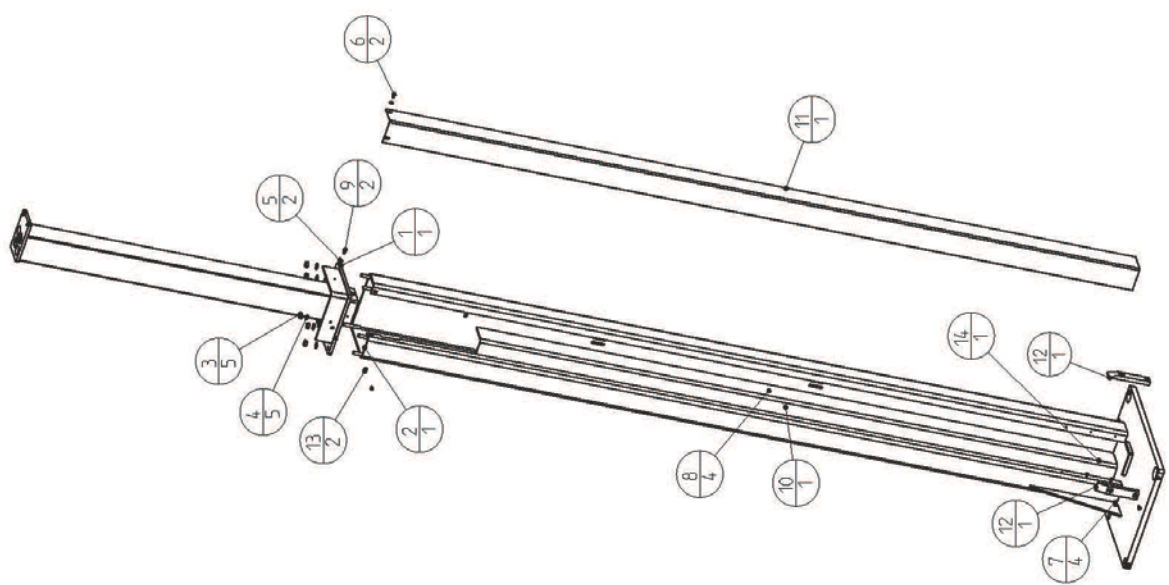
1		2		3		4		5		6	
Lfd. Nr.	Menge	Typ	Zeichnungs-Nr.:	Benennung	Werkstoff / Halbzeug						
1	1	BG	240HLNT26001	Hubsch. Bed. kpl.	- / -						
2	1	BG	240HLNT26051	Hubsch. Gegens. kompl.	- / -						
3	1	BG	230HLNT05770	Quertraverse kpl.	- / -						
4	1	BG	240HLNT25001	Saeule Bed. kpl.	- / -						
5	1	BG	240HLNT25002	Saeule Geg. kpl.	- / -						
6	1	BG	240HLNT03030	Schaltrafen Waschhalle	ET B62 / ABS-Gehaeuse, 20x160x240						
7	2	BG	232NSTL26038	T4-Arm kurz kpl.	570mm-1160mm / Teleskopriegelle						
8	1	BG	240SP108001	Tragarm Lang Bed. kpl.	Universal / 41; 1130mm-1840mm						
9	1	BG	240SP108002	Tragarm Lang Geg. kpl.	Universal / 41; 1130mm-1840mm						
10	1	BG	000STAO1560	Universalaggregat kpl (HLNT Waschhalle)	- / -						
11	1	BG	240HLNT09023	Waschhalle Abdeckung Schw.	- / -						
12	1	BG	230SLNT02802	Zylinder Bediens. kpl.	- / -						
13	1	BG	230SLNT02801	Zylinder Gegens. kpl.	- / -						
14	4	ET	97337-A2-4X4-AL-ST	BLINDNIET	- / DIN 7337-07337-2,4X4-AL-ST						
15	4	ET	9125-1-45-3	Scheibe	- / DIN125-45.3						
16	8	ET	97991-M4X10	SEKSSCHRAUBE	- / DIN 7991 - M 4 X 10						
17	4	ET	9912-M5X10	Zylinder schraube	SI / DIN912-M5x10						
18	2	ET	9912-M5x25	Zylinder schraube	SI / DIN912-M5x25						
19	1	ET	230SLH09045	Abdeckhaube	ELO / Bl. 1x15x334						
20	1	ET	230SLH09047	Abdeckhaube	ELO / Bl. 1x15x334						
21	1	ET	240HLNT09031	Befestigungsplatte	5235 / Bl. 5x175x134						
22	2	ET	230SLNT05580	Deckel	0011 / Bl. 2x110x90						
23	2	ET	230SLH09048	Deckel Haube	Elo / Bl. 1x110x230						
24	1	ET	240HLNT09021	Kantenschutzdichtprofil	EPDM / G12180 Form D / 1637 lang						
25	1	ET	240HLNT03018	Kantenschutzprofil	971027 mit Stahlklemmband / 890mm 1-2mm schwarz						
26	6	ET	978984	Kegelstopfen GPN500	PE-LD / M6						
27	6	ET	9VLSOX10X0_B-2	Lamellenstopfen fuer Rechteckroehre	PE / Walter Berthe GmbH & Co. KG / VL/R 50x10x0,8-2						
28	2	ET	9SEMO5X010ZN	Linienfestschraube	DIN NB 602 / M5x12						
29	8	ET	972270	Rosette	4136 / M4						
30	1	ET	155R0K05989	Typenschild	- / -						
31	2	ET	978983	Verschlussstopfen GPN300	PE-LD / D12						




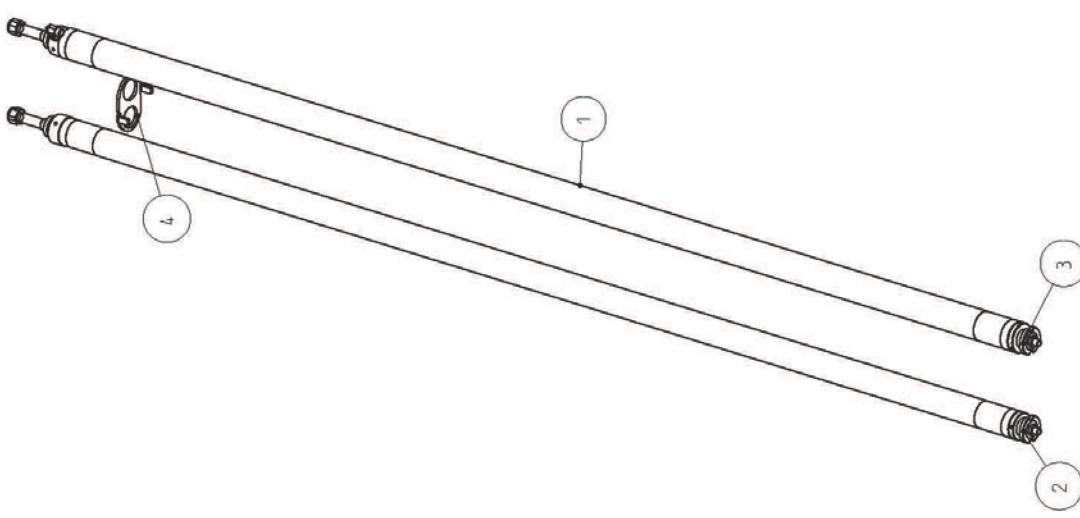
Technische und andere Angaben:			
Allgemeine Angaben: DIN ISO 2100 mit DIN ISO 1562 über alle Schweißnähte. DIN ISO 1562-3F		Material: Werkstoff / Halbzeug - / - Benennung 2.40 HLNT UNI (Waschhalle)	
Zeichnungsnummer 240HLNT00016		Blatt 1 von 2	
Ersatz fuer: - / -		Ersatz durch: - / -	

Nebenanbauelemente (siehe DIN 6777-A1 / alle Objekte der oberen funktionalen Baugruppe

1	2	3	4	5	6
Lfd. Nr.	Menge	Typ	Zeichnungs-Nr.:	Benennung	Werkstoff / Halbzeug
1	1	BG	240SLNT05040	Kopflaite ggs Schwf.	- / -
2	1	BG	240HLNT25023	Saeule Geg. Schwf.	- / -
3	5	ET	9934-M10	SECHSKANTMUTTER	ST / DIN934-M10
4	5	ET	9125-1-A10,5	Scheibe	- / DIN 125 - A 10,5
5	2	ET	9125-1-A5,3	Scheibe	- / DIN25-A5,3
6	2	ET	97991-M5X12	SEKNSCHRAUBE	- / DIN 7991 - M 5 X 12
7	4	ET	97991-M5X16	SEKNSCHRAUBE	- / DIN991-M5x16
8	4	ET	97991-M5X8	SEKNSCHRAUBE	- / DIN991-M5x8
9	2	ET	9912-M5X10	Zylinderschraube	St / DIN912-M5x10
10	1	ET	225SL09021	Abdeckbl.f.E-Set	StWZ2 / Bl.1,5x70x50
11	1	ET	240SL09008	Abdeckbleth	DXS1 D-Z / Bl.1,25x98x2755
12	2	ET	230SLNT05008	Hubschlittenfuehrung	PA 6 , natur / 30x4x150lg.
13	2	ET	970010	Rosette	4136 / MS
14	1	ET	970721	Verschlusstopfen	Kunststoff schwarz / 80x50x4 75lB/4



Technische Zeichnung DIN ISO 2768 mt DIN ISO 2768 ms DIN ISO 2768 sm DIN ISO 2768 sf		MESSSTAB Maßstab 	Massestrab: 0.070 Gewicht: 104,302 kg
Allgemeine Angaben Datum: 21.03.16 Gepr.: Norm:		Werkstoff / Halbzeug - / - Benennung Saeule Geg. kplt.	Zeichnungsnummer 240HLNT25002
Nr. Änderung: - Datum: - Name Urspr.: -		Ersatz durch: 240HLNT25002	Blatt 1 von 2
Hinweis: Diese Zeichnung ist eine technische Zeichnung und enthält keine Angaben über die Ausführung der Einzelteile. Die Ausführung der Einzelteile ist im Rahmen der technischen Zeichnung festzulegen. Die Ausführung der Einzelteile ist im Rahmen der technischen Zeichnung festzulegen.			



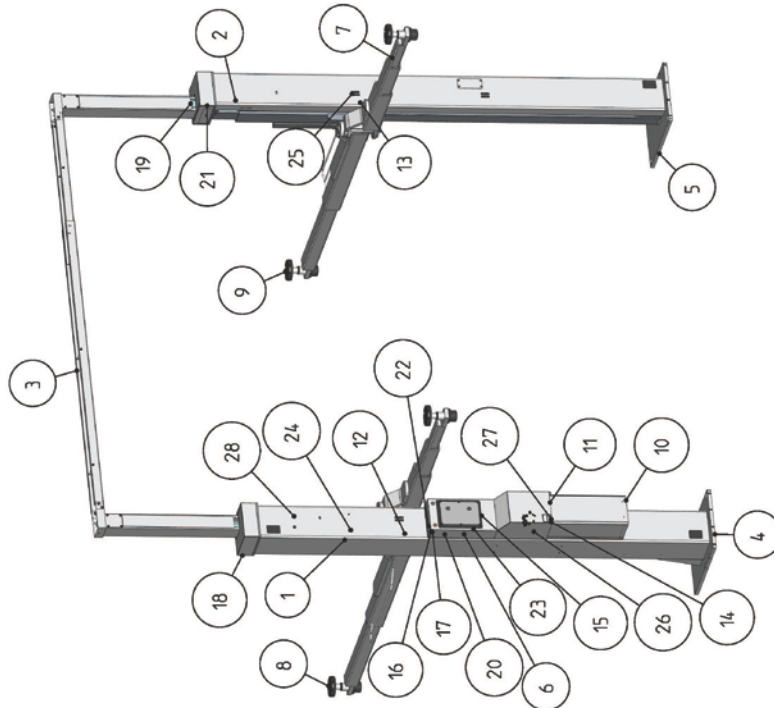
1	2	3	4	5	6
Lfd. Nr.	Menge	Typ	Zeichnungs-Nr.:	Benennung	Werkstoff / Halbzeug
1	1	BG	230SLNT02850	Zylinder Folge kpl.	- / 1865 HUB
2	1	BG	230SLNT02840	Zylinder Komm. kpl.	- / 1865 HUB
3	2	ET	230SLNT02819	Nutmutter	C15 / DIN70852-M30x1,5
4	1	ET	230SLNT22821	Verdrehsicherung	SZ35 / Bl. 509598.3

Masse ohne Verpackung DIN ISO 2168 mm		Masse: 0.150 Gewicht: 27.948 kg	
Bezeichnung Zylinder Bediens. kpl.		Zeichnungsnummer 230SLNT02802	
Blatt 2 von 2		Ersatz fuer:	

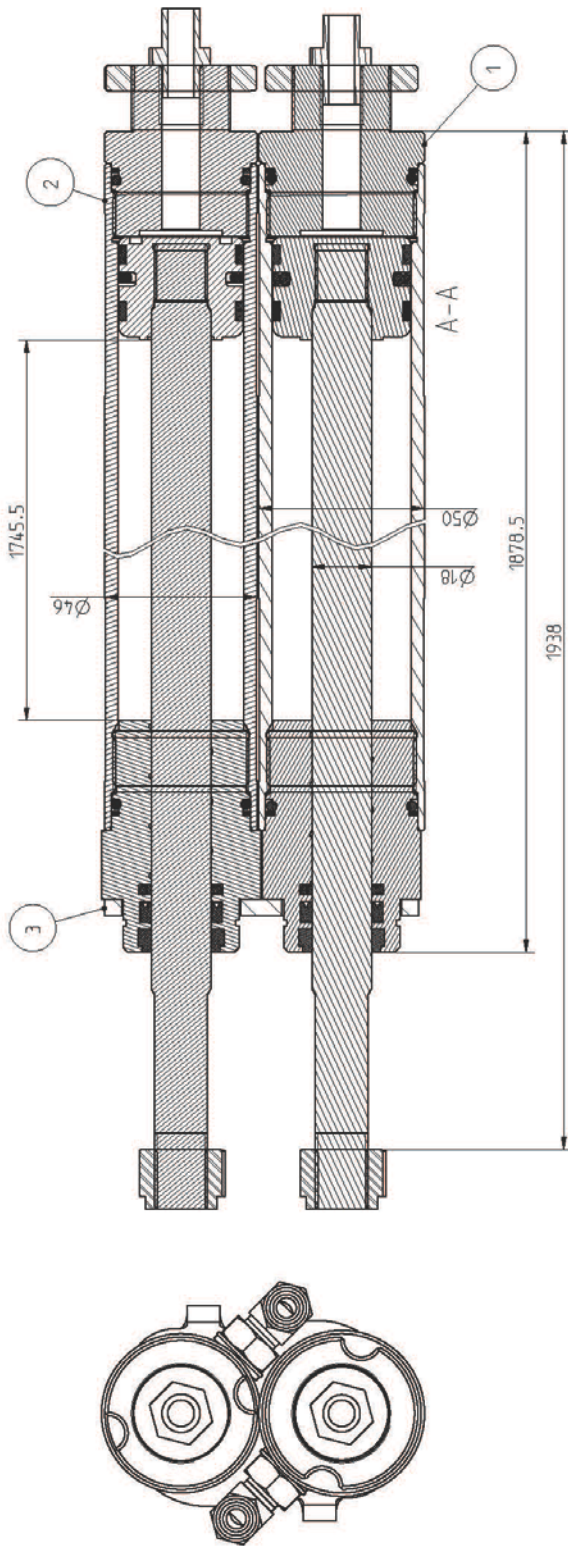
Version RH:

Nussbaum-Stückliste (gemäß DIN 6711-A1) / alle Objekte der obersten (aktuellen) Baugruppe

1	2	3	4	5	6
Id.-Nr.	Menge	Typ	Zeichnungs-Nr.:	Benennung	Werkstoff / Halbzeug
1	1	BG	240HLNT26001	Hubschl.-Bed. Kpl.	- / -
2	1	BG	240HLNT26051	Hubschl.-Gegens.kompl.	- / -
3	1	BG	230HLNT05710	Quertraverse Kpl.	- / -
4	1	BG	240HLNT25301	Saeule Bed. Kpl.	- / -
5	1	BG	240HLNT25302	Saeule Geg. Kpl.	- / -
6	1	BG	240HLNT03030	Schalikasten Waschhalle	CT 862 / ABS-Gehaeuse 120x160x240
7	2	BG	232NSTL28038	T4-Arm kurz Kpl.	570mm-1160mm / Teleskoptragfuehler
8	1	BG	240SPL08001	Tragarm lang Bed. Kpl.	Universal / A1: 1130mm-1840mm
9	1	BG	240SPL08002	Tragarm lang Geg. Kpl.	Universal / A1: 1130mm-1840mm
10	1	BG	0005TA01560	Universalsaggregat Kpl (HLNT Waschhalle)	- / -
11	1	BG	240HLNT09023	Waschhalle Abdeckung Schwl.	- / -
12	1	BG	230HLNT02081	Zylinder Bed. Kpl.	- / (1745 HUB)
13	1	BG	230HLNT02082	Zylinder Geg. Kpl.	- / -
14	4	ET	97337-A2-4X4-AL-ST	BLINDNIET	- / DIN 7337-D7337-2,4X4-AL-ST
15	4	ET	9125-1-A5-3	Scheibe	- / DIN25-A5.3
16	4	ET	9912-M5X10	Zylinder-schraube	S1 / DIN912-M5x10
17	2	ET	9912-M5X25	Zylinder-schraube	S1 / DIN912-M5x25
18	1	ET	230SLH09045	Abdeckhaube	ELO / Bl. 3x415x334
19	1	ET	230SLH09047	Abdeckhaube	ELO / Bl. 3x415x334
20	1	ET	240HLNT09031	Befestigungsplatte	S235 / Bl. 5x175x334
21	2	ET	230SLH09048	Deckel Haube	Elo / Bl. 1x10x230
22	1	ET	240HLNT09021	Kamenschulzdichprofil	EPDM / GN280 Form D / 1637 Lang
23	1	ET	240HLNT03018	Kamenschulzprofil	971027 mit Stahlklebband / 890mm 1-2mm schwarz
24	6	ET	978984	Kegetstopfen GPN500	PE-LD / M6
25	6	ET	9VL50X10X0-B-2	Lamellenstopfen fuer Rechteckroehre	PE / Walter Bethe GmbH & Co. KG / VL/R 50x10x0-B-2
26	2	ET	9SEM05X10ZN	Linsenflanschschrabe	DIN 98 602 / M5x12
27	1	ET	15SRGK05989	Typenschild	- / -
28	2	ET	978983	Verschlussstopfen GPN300	PE-LD / D12



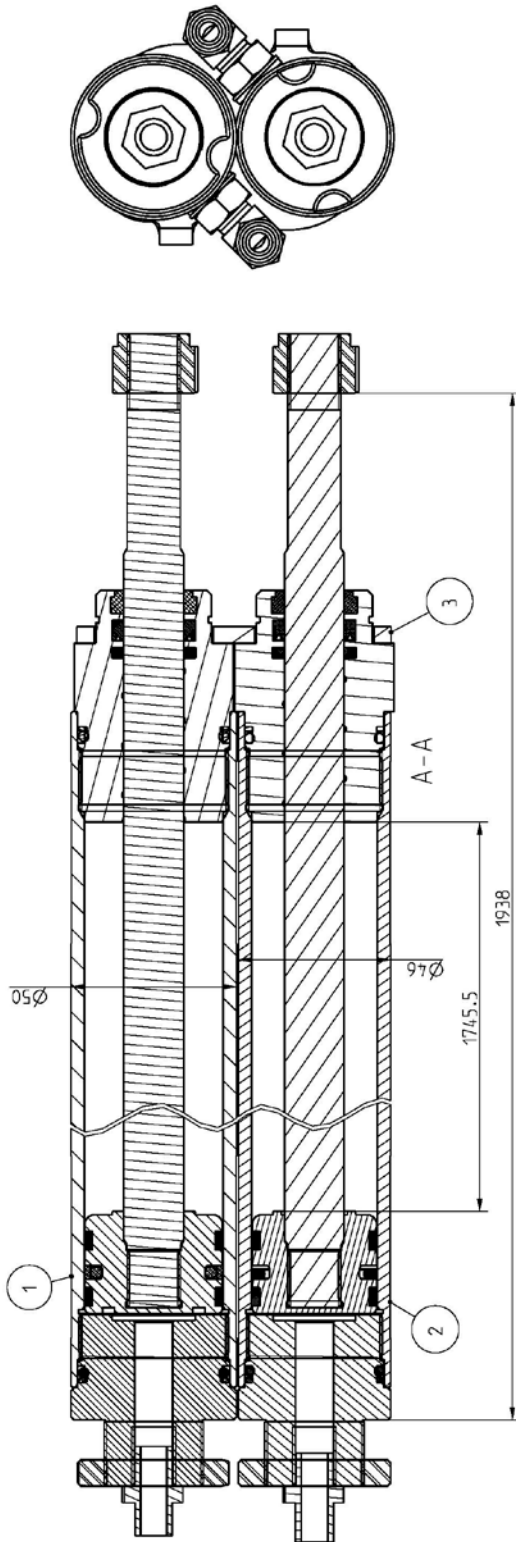
Teilenummer und Normen DIN ISO 2768 mH DIN ISO 2768 sM DIN ISO 2768 sS DIN ISO 2768 sN DIN ISO 2768 sP DIN ISO 2768 sR DIN ISO 2768 sT DIN ISO 2768 sV DIN ISO 2768 sW DIN ISO 2768 sX DIN ISO 2768 sY DIN ISO 2768 sZ DIN ISO 2768 sAA DIN ISO 2768 sAB DIN ISO 2768 sAC DIN ISO 2768 sAD DIN ISO 2768 sAE DIN ISO 2768 sAF DIN ISO 2768 sAG DIN ISO 2768 sAH DIN ISO 2768 sAJ DIN ISO 2768 sAK DIN ISO 2768 sAL DIN ISO 2768 sAM DIN ISO 2768 sAN DIN ISO 2768 sAO DIN ISO 2768 sAP DIN ISO 2768 sAQ DIN ISO 2768 sAR DIN ISO 2768 sAS DIN ISO 2768 sAT DIN ISO 2768 sAU DIN ISO 2768 sAV DIN ISO 2768 sAW DIN ISO 2768 sAX DIN ISO 2768 sAY DIN ISO 2768 sAZ DIN ISO 2768 sBA DIN ISO 2768 sBB DIN ISO 2768 sBC DIN ISO 2768 sBD DIN ISO 2768 sBE DIN ISO 2768 sBF DIN ISO 2768 sBG DIN ISO 2768 sBH DIN ISO 2768 sBI DIN ISO 2768 sBJ DIN ISO 2768 sBK DIN ISO 2768 sBL DIN ISO 2768 sBM DIN ISO 2768 sBN DIN ISO 2768 sBO DIN ISO 2768 sBP DIN ISO 2768 sBQ DIN ISO 2768 sBR DIN ISO 2768 sBS DIN ISO 2768 sBT DIN ISO 2768 sBU DIN ISO 2768 sBV DIN ISO 2768 sBW DIN ISO 2768 sBX DIN ISO 2768 sBY DIN ISO 2768 sBZ DIN ISO 2768 sCA DIN ISO 2768 sCB DIN ISO 2768 sCC DIN ISO 2768 sCD DIN ISO 2768 sCE DIN ISO 2768 sCF DIN ISO 2768 sCG DIN ISO 2768 sCH DIN ISO 2768 sCI DIN ISO 2768 sCJ DIN ISO 2768 sCK DIN ISO 2768 sCL DIN ISO 2768 sCM DIN ISO 2768 sCN DIN ISO 2768 sCO DIN ISO 2768 sCP DIN ISO 2768 sCQ DIN ISO 2768 sCR DIN ISO 2768 sCS DIN ISO 2768 sCT DIN ISO 2768 sCU DIN ISO 2768 sCV DIN ISO 2768 sCW DIN ISO 2768 sCX DIN ISO 2768 sCY DIN ISO 2768 sCZ DIN ISO 2768 sDA DIN ISO 2768 sDB DIN ISO 2768 sDC DIN ISO 2768 sDD DIN ISO 2768 sDE DIN ISO 2768 sDF DIN ISO 2768 sDG DIN ISO 2768 sDH DIN ISO 2768 sDI DIN ISO 2768 sDJ DIN ISO 2768 sDK DIN ISO 2768 sDL DIN ISO 2768 sDM DIN ISO 2768 sDN DIN ISO 2768 sDO DIN ISO 2768 sDP DIN ISO 2768 sDQ DIN ISO 2768 sDR DIN ISO 2768 sDS DIN ISO 2768 sDT DIN ISO 2768 sDU DIN ISO 2768 sDV DIN ISO 2768 sDW DIN ISO 2768 sDX DIN ISO 2768 sDY DIN ISO 2768 sDZ DIN ISO 2768 sEA DIN ISO 2768 sEB DIN ISO 2768 sEC DIN ISO 2768 sED DIN ISO 2768 sEE DIN ISO 2768 sEF DIN ISO 2768 sEG DIN ISO 2768 sEH DIN ISO 2768 sEI DIN ISO 2768 sEJ DIN ISO 2768 sEK DIN ISO 2768 sEL DIN ISO 2768 sEM DIN ISO 2768 sEN DIN ISO 2768 sEO DIN ISO 2768 sEP DIN ISO 2768 sEQ DIN ISO 2768 sER DIN ISO 2768 sES DIN ISO 2768 sET DIN ISO 2768 sEU DIN ISO 2768 sEV DIN ISO 2768 sEW DIN ISO 2768 sEX DIN ISO 2768 sEY DIN ISO 2768 sEZ DIN ISO 2768 sFA DIN ISO 2768 sFB DIN ISO 2768 sFC DIN ISO 2768 sFD DIN ISO 2768 sFE DIN ISO 2768 sFF DIN ISO 2768 sFG DIN ISO 2768 sFH DIN ISO 2768 sFI DIN ISO 2768 sFJ DIN ISO 2768 sFK DIN ISO 2768 sFL DIN ISO 2768 sFM DIN ISO 2768 sFN DIN ISO 2768 sFO DIN ISO 2768 sFP DIN ISO 2768 sFQ DIN ISO 2768 sFR DIN ISO 2768 sFS DIN ISO 2768 sFT DIN ISO 2768 sFU DIN ISO 2768 sFV DIN ISO 2768 sFW DIN ISO 2768 sFX DIN ISO 2768 sFY DIN ISO 2768 sFZ DIN ISO 2768 sGA DIN ISO 2768 sGB DIN ISO 2768 sGC DIN ISO 2768 sGD DIN ISO 2768 sGE DIN ISO 2768 sGF DIN ISO 2768 sGG DIN ISO 2768 sGH DIN ISO 2768 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Nussbaum-Stückliste (ähnlich DIN 6771-A) / alle Objekte der obersten (aktuellen) Baugruppe

1	2	3	4	5	6
Lfd. Nr.	Menge	Typ	Zeichnungs-Nr.:	Benennung	Werkstoff / Halbzeug
1	1	BG	230HLNT02050	Folgezylinder kpl.	- / (1745 HUB)
2	1	BG	230HLNT02030	Kommandozyliner kpl.	- / (1745 HUB)
3	1	ET	230SLNT22821	Verdrehsicherung	S235 / Bl. 5x95x98,3

Toleranzen und Normen Allgemeinteil: DIN ISO 2768 mH Keilwellen: DIN ISO 2875 Keilnuten: DIN ISO 1825 Schweißnähte: DIN ISO 15613-02-BF		PROJEKT Nr. 105		Massstab: 0:800 Werkstoff / Halbzeug -; (1745 HUB)		Gewicht: 26-420 kg	
Zeichnungs-Nr.: 230HLNT02081		Blatt: 1		Benennung: Zylinder Bed. kpl.		Zeichnungs-Nr.: 230HLNT02081	
Blatt: von 1		Datum: 15.01.19		Bereich: Gepr.:		Ersatz durch: -	
Norm: -		Name Urspr.:		Datum:		Ersatz durch:	
Änderung: -		Datum:		Name Urspr.:		Ersatz durch:	
Hinweis: Nach Veröffentlichung dieser Zeichnung, Veränderung und Stilllegung, kann es vorkommen, dass Teile aus wirtschaftlichen oder anderen Gründen nicht mehr lieferbar sind. In diesem Fall sind Ersatzteile zu beschreiben.							
Hinweis: Nach Veröffentlichung dieser Zeichnung, Veränderung und Stilllegung, kann es vorkommen, dass Teile aus wirtschaftlichen oder anderen Gründen nicht mehr lieferbar sind. In diesem Fall sind Ersatzteile zu beschreiben.							

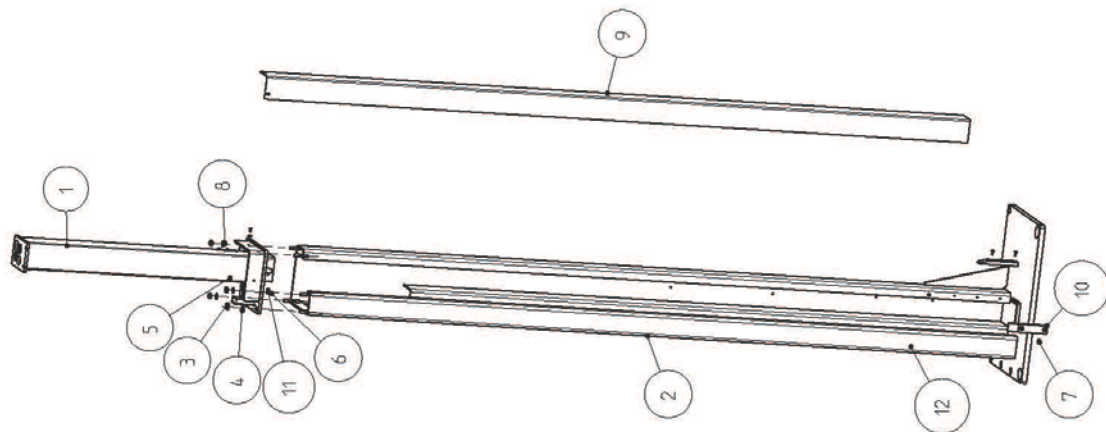



Nussbaum-Stückliste (entsprechend DIN 6771-1) / alle Objekte der obersten definierten Baugruppe

1	2	3	4	5	6
Lfd. Nr.	Menge	Typ	Zeichnungs-Nr.:	Benennung	Werkstoff / Halbzeug
1	1	BG	230HLNT02050	Folgezylinder kpl.	- / (1745 HUB)
2	1	BG	230HLNT02030	Kommandozynder kpl.	- / (1745 HUB)
3	1	ET	230SLNT22618	Verdrehsicherung	S235 / Bl..5x95x98.3

Fertigung und Normen DIN ISO 7168 mH DIN ISO 17715 Kettengröße Schweiß-Bsp. DIN ISO 19023-3		PROJEKTION 1:1 1/2	Maßstab: 0.800 Werkstoff / Halbzeug - / - Benennung Zylinder Geg. kpl.	Gewicht: 26.420 kg
Nr. Änderung Datum Name Urspr.		Bearb. 15.01.19 Gepr. NFB	Zeichnungsnummer 230HLNT02082	Blatt 1 von 1
Ersatz durch:		Nussbaum		
Hinweis: Diese Zeichnung ist eine Kopie der Originalzeichnung. Die Originalzeichnung ist die maßgebende Zeichnung. Änderungen sind durch die Zeichnungsnummer zu verfolgen.				

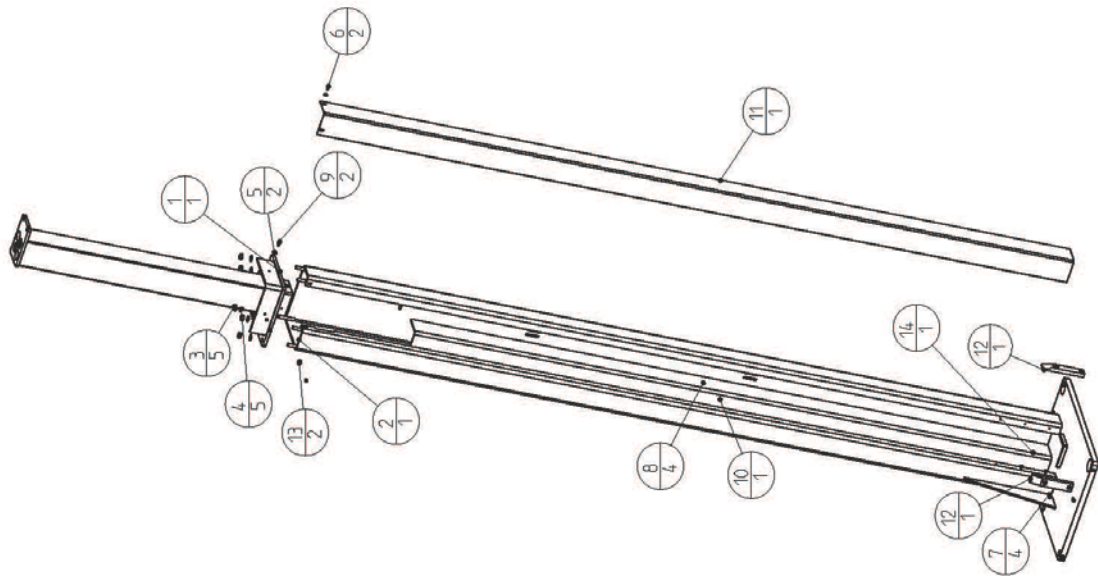
1	2	3	4	5	6
Lfd. Nr.	Menge	Typ	Zeichnungs-Nr.:	Benennung	Werkstoff / Halbzeug
1	1	BG	240SLNT05260	Kopfplatte BDS Kpl.(3800 mm)	- / 3800 mm
2	1	BG	240HLNT25013	Saeule Bed. Schwf.	- / -
3	5	ET	9934-M10	SECHSKANTMUTTER	ST / DIN934-M10
4	5	ET	9125_1-A10_5	Scheibe	- / DIN 125 - A 10.5
5	2	ET	9125_1-A5_3	Scheibe	- / DIN25-A5.3
6	2	ET	97991-M5X12	SEKWSCHRAUBE	- / DIN 7991 - M 5 X 12
7	4	ET	97991-M5X16	SEKWSCHRAUBE	- / DIN7991-M5x16
8	2	ET	9912-M5X10	Zylinderschraube	St / DIN912-M5x10
9	1	ET	240SL09008	Abdeckblech	DXS1 D-Z / Bl.1.25x198x2755
10	2	ET	230SLNT05008	Hubschlitfenuehrung	PA 6 . natur / 30x4x150g.
11	2	ET	970010	Rosette	4136 / M5
12	2	ET	970721	Verschlussstopfen	Kunststoff schwarz / 80x50x4 7518/4



Technische Daten DIN ISO 2108 mit 100 1715 100 1716 100 1717 100 1718 100 1719 100 1720		Werkstoff ISO 5834 		Massestab: 0.065 Gewicht: 228,714 kg
Material 100 1715 100 1716 100 1717 100 1718 100 1719 100 1720		Werkstoff / Halbzeug - / -		
Material 100 1715 100 1716 100 1717 100 1718 100 1719 100 1720		Benennung Saeule Bed. kpl.		
Material 100 1715 100 1716 100 1717 100 1718 100 1719 100 1720		Zeichnungsnummer 240HLNT25301		Blatt 1 von 2
Material 100 1715 100 1716 100 1717 100 1718 100 1719 100 1720		Ersatz fuer: 100 1715 100 1716 100 1717 100 1718 100 1719 100 1720		

Bauteil- und Mengenliste (siehe DIN 6771-1) / alle Objekte der oberen technischen Zeichnung

1	2	3	4	5	6
Lfd. Nr.	Menge	Typ	Zeichnungs-Nr.:	Benennung	Werkstoff / Halbzeug
1	1	BG	240SLNT05230	Kopfplatte G55 Kpl.(3800 mm)	- / 3800 mm
2	1	BG	240HLNT25023	Saeule Geg.-Schwfl.	- / -
3	5	ET	9934-M10	SECHSKANTMUTTER	ST / DIN934-M10
4	5	ET	9125-1-A10-5	Scheibe	- / DIN 125 - A 10.5
5	2	ET	9125-1-A5-3	Scheibe	- / DIN25-A5.3
6	2	ET	97991-M5X12	SENKSCRAUBE	- / DIN 7991 - M 5 X 12
7	4	ET	97991-M5X16	SENKSCRAUBE	- / DIN7991-M5x16
8	4	ET	97991-M5X8	SENKSCRAUBE	- / DIN7991-M5x8
9	2	ET	9912-M5X10	Zwischenschraube	St / DIN912-M5x10
10	1	ET	225SL09021	Abdeckkl.f.F-Set	StW22 / BL.1,5x70x50
11	1	ET	240SL09008	Abdeckblech	DX51 D-Z / BL.1,25x198x275
12	2	ET	230SLNT05008	Hubschiffenuehrung	PA 6 , natur / 30x4x150lg.
13	2	ET	970010	Rosette	4136 / M5
14	1	ET	970721	Verschlussstopfen	Kunststoff schwarz / 80x50x4 7518/4



Material und Normen Aluminium: DIN 178 2008 mit Kupfer: DIN 1775 Stahl: DIN 152 1802-3F Schweißblech: DIN 152 1802-3F		PROZENTUM 100 %		Massestab: 0.070 Werkstoff / Halbzeug	Gewicht: 102.915 kg
Bezeichnung Saeule Geg. kplt.		Bezeichnung Saeule Geg. kplt.			
Zeichnungsnummer 240HLNT25302		Zeichnungsnummer 240HLNT25302		Blatt 1 von 2	
Mr. Änderung Datum Name Urspr.		Ersatz durch:			

Mussbaum-Stückliste (gemäß DIN 8771-A1 / alle Objekte der obersten technischen Baugruppe)					
Lfd. Nr.	Menge	Typ	Zeichnungs-Nr.:	Benennung	Werkstoff / Halbzeug
1	1	BG	000STA01530	Antrieb Kpllt.	- / -
2	1	BG	000STA02428	Hydraulikeinschub HLNT Waschhalle kpllt.	- / -
3	1	BG	000STA02319	Delbehälter Schwf.	- / -

570
687
198

200

0.200

570
687
198

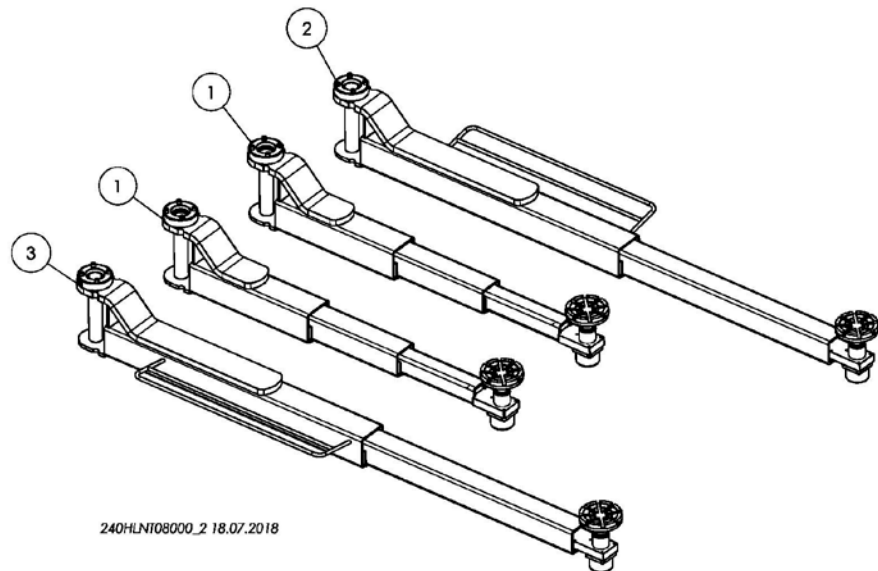
200

0.200

Titelzeilen und Normen		Mussbaum		Massestab: 0.200		Gewicht: 35.930 Kg	
Allgemeine: DIN ISO 2768 mS ISO 13715: 1992 Schweißlsg. Din 150.1920-BF		MPE 6/10 MPE 5/6 ISO 150		Werkstoff / Halbzeug - / -			
Nr. Änderung a		Datum 18.10.19		Benennung Universalaggregat Kpllt (HLNT Waschhalle)			
Zeichnungsnummer 000STA01560		Blatt 1 von 1		Ersatz für:			
Name Urspr.							
Name							
Gepr.							
Bearb.							
Datum 26.04.19							
Menge 1							

Lifting arm:

Tragarmsatz kpl.



240HLNT08000_2 18.07.2018

1	232NSTL28038	T4-ARM KURZ KPL.	3	240SPL08002	TRAGARM LANG GEG. KPL.
2	240SPL08001	TRAGARM LANG BED. KPL.			
1	232NSTL28038	T4-ARM SHORT COMPLETE	3	240SPL08002	LIFTING ARM LONG SLAVE SIDE COMPLETE
2	240SPL08001	LIFTING ARM LONG MASTER SIDE COMPLETE			

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