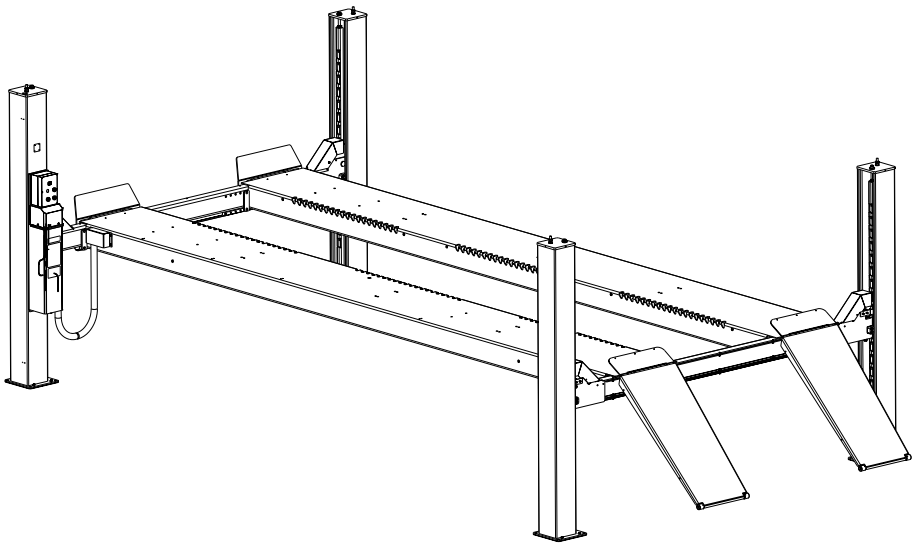
Nussbaum

ORIGINAL INSTRUCTIONS

COMBI LIFT

COMBI LIFT 4.80 H



OPERATING INSTRUCTION AND DOCUMENTATION

Valid from: 04/2022

Serial No.:

Made in Germany

a member of the Stertil Group

Content

Foreword

Nußbaum lifting systems are the result of over 25 years experience in the automotive lifting industry.
The high quality and the superior concept ensure reliability, a long lift lifetime and above all and economic business solution.
To avoid unnecessary damage, injury or even death, read the operating instructions with care and observe the contents.
Nußbaum lifts is not responsible for incidents involving the use of Nußbaum lifting systems for applications other than those for which they were designed.

Nussbaum Automotive Lifts GmbH is not liable for any resulting damages. The user carries the risk alone.

Obligations of the user:

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

Obligations of the operator:

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

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

Dangers when operating the lift:

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

The lift must only be operated :

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

Organisational Requirements

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

Maintenance works, repairing faults

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

Guarantee and liability

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

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

Nussbaum Automotive Lifts GmbH
Korker str. 24
D-77694 Kehl-Bodersweier

Record of installation

The automotive lift 4.80 H with the

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

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

The initial safety check was carried out and the lift was started.
The installation was carried out by the operating authority/competent (please delete as applicable).
The initial safety check was carried out by a competent person before the initial operation.
The operating authority confirms the correct installation of the automotive lift, the competent person confirms the correct initial operation.

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

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

Record of handing over

The automotive lift 4.80 H with the

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

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

the safety was checked and the lift was started.

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

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

Your customer service:.....

(stamp)

1 General Information

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

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

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

1.1 Installation and service checks of the automotive lift

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

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

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

1.2 Warning Symbols

The three symbols below are used to indicate danger and other important information.

Pay attention to areas on and around the lift that are marked with these symbols.

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

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

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

2 Master document of the automotive lift

2.1 Lift–manufacturer

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

2.2 Application

The automotive lift 4.80 H is a lifting mechanism for lifting motor vehicles with a laden weight of up to 8000 kg . The max. load distribution is 2:1 either in or against the drive-on direction.
The automotive lift has been designed for servicing vehicles only. It has not been designed to carry people. Carrying people either directly on the lift or in vehicles that are on the lift is therefore not allowed.
The installation of the standard lift in hazardous or dangerous locations such as wash bays is dangerous and is therefore not allowed.

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

2.3 Changes at the construction

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

.....

.....

.....

.....

Name, address of the expert

....
place, date signature of the expert

2.4 Displacement of the automotive-lift

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

.....

.....

name, address of the competent

....
place, date signature of the competent

2.5 Declaration of Conformity

EG- Konformitätserklärung

Nussbaum

gemäß Maschinenrichtlinie Anhang II 1A

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

Hiermit erklären wir, daß die Hebebühne, Modell: **COMBI LIFT 4.80 H**
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:

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
Niederspannungsrchtlinie / 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 vigueurs.
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

DoC-NUS_COMBI-LIFT_480H_2022-04

3 Technical Information

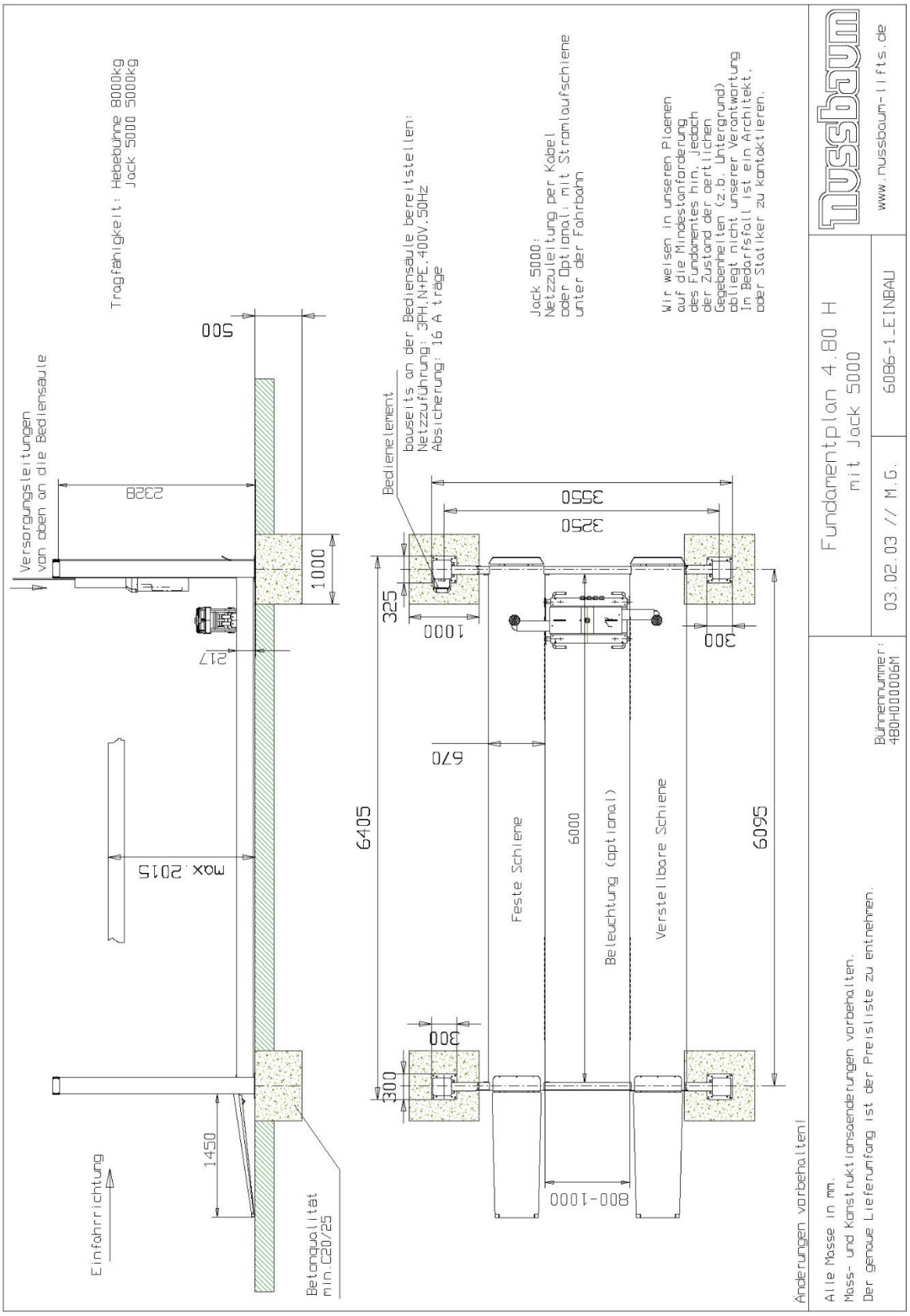
3.1 Technical ratings

Capacity :	8000 kg
Load distribution	max. 2:1 in or against the drive on direction
Lifting time:	approx. 49 sec.
Lowering time	approx. 47 sec.
Lifting height:	max. 1800 mm
Line voltage	3 x 400 Volt , 50Hz
Power rating	3,0 kW
Motor speed:	2800 rotation/min
Pump capacity	4,2 cm^3/rotation
Hydraulic pressure	approx.210 bar
Pressure control valve	approx.240 bar
Oil Tank	approx. 14 Litre
Sound level L_{pA}	≤ 70 dB
Connection by customer	3~/N+PE, 400V, 50 Hz fuse T16A (time-lag fuse) observe your state regulations

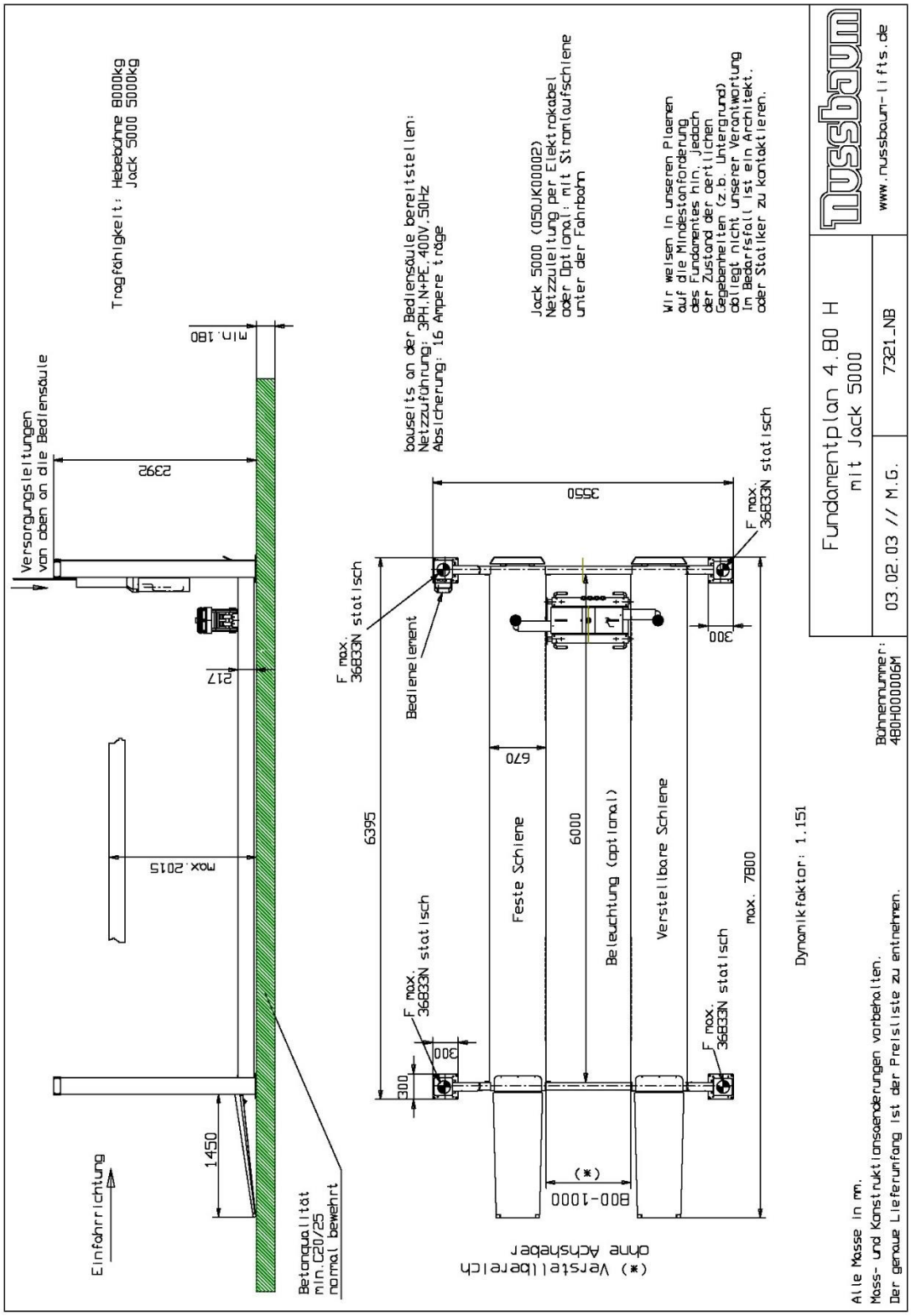
3.2 Safety device

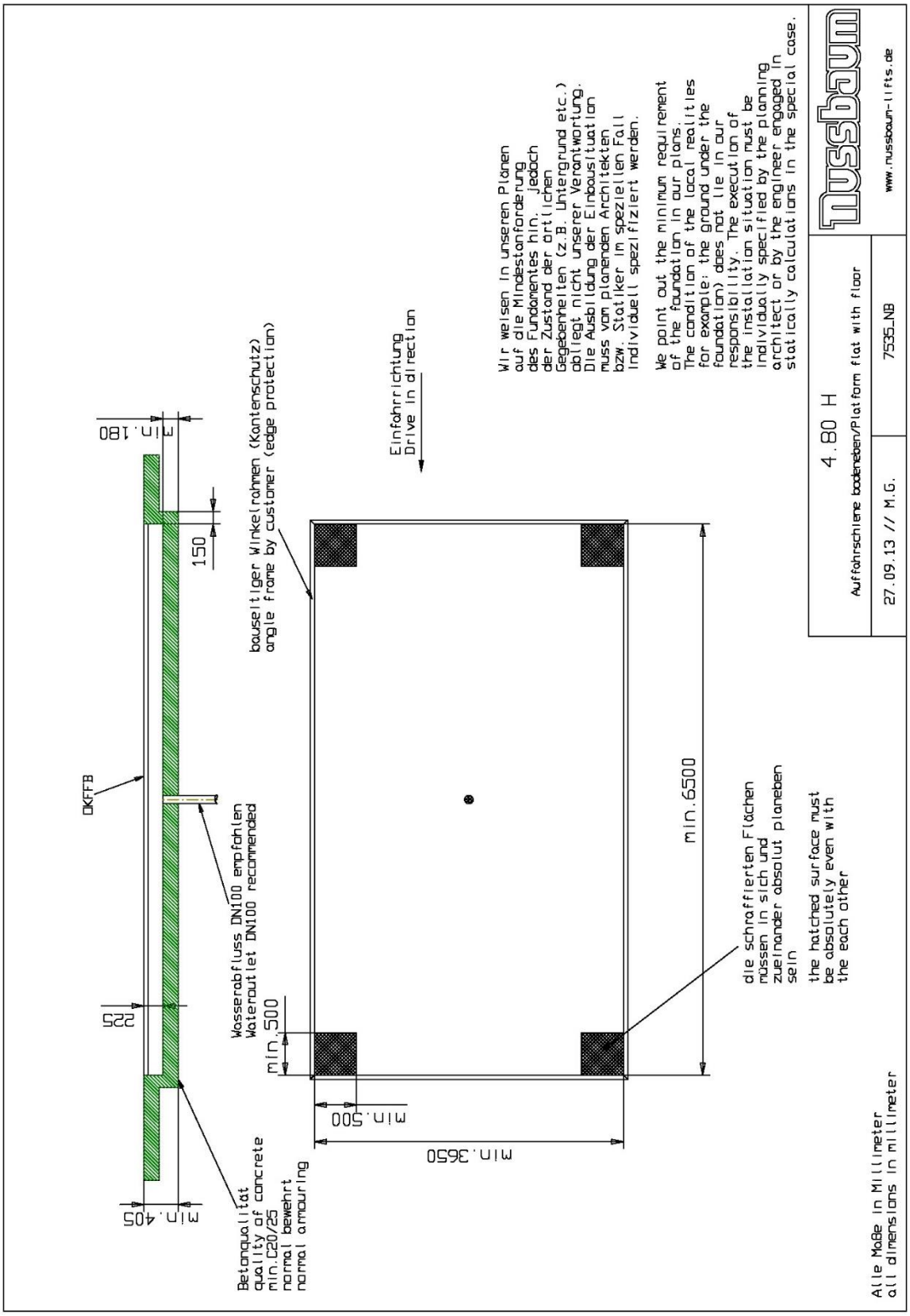
1. Safety ratchet
   Safety device against unintentional lowering.
2. Holding valve
   Safety device against unintentional lowering.
3. Pressure relief valve
   Overpressure safety of the hydraulic system
3. Lockable main switch
   Safety device against unauthorised operation
4. Safety device at the platform against rolling.
   Safety device against falling down, in case the hand brake is not fasten.
5. CE-Stop
   Safety device against squeeze.

3.3 Data sheet

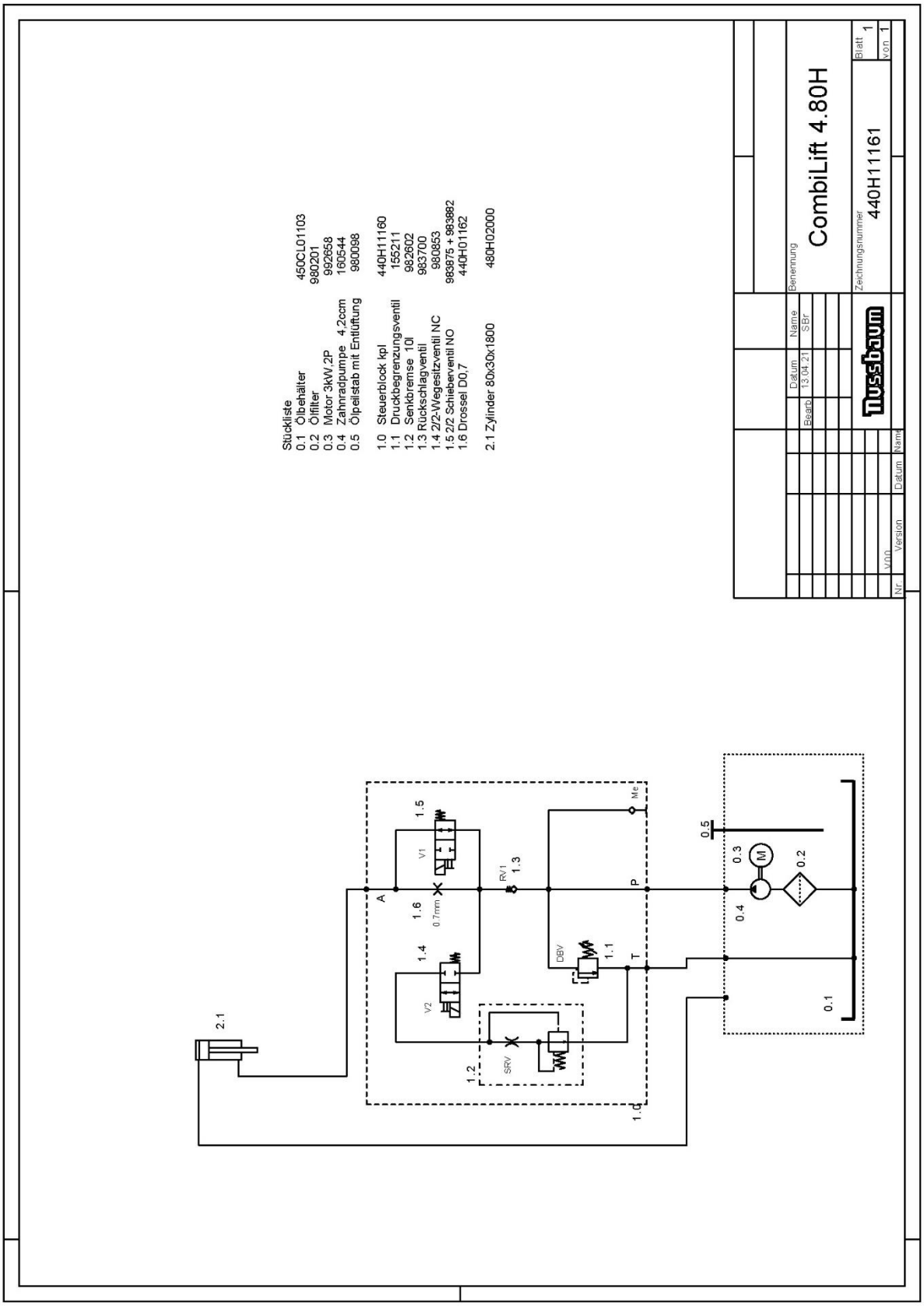


3.4 Foundation diagram drawing

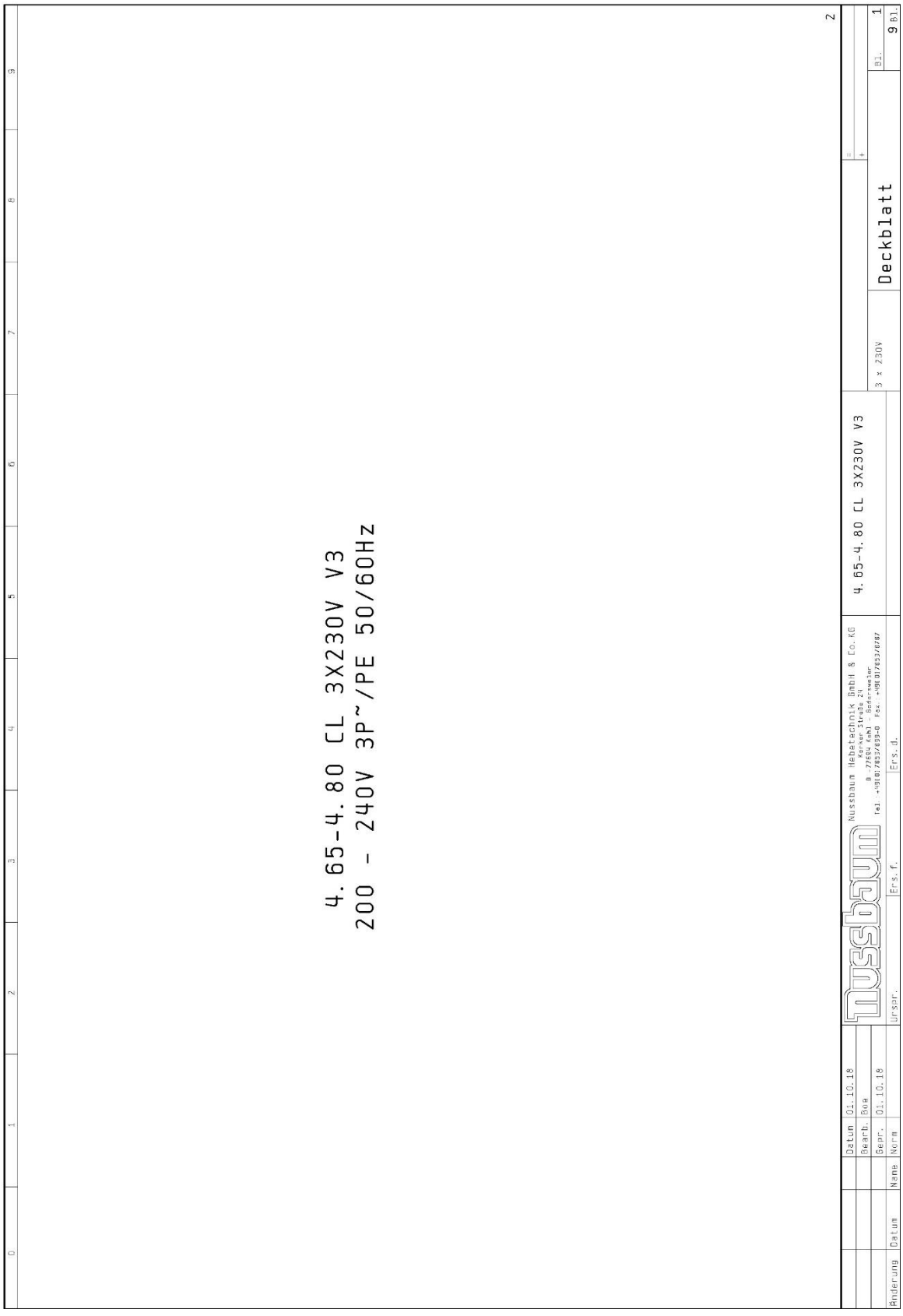



4.80 H
Auffahrschiene bodeneben/Platform flat with floor
27.09.13 // M.G.
7535_NB
Nussbaum
www.nussbaum-lifts.de
Wir weisen in unseren Planen auf die Mindestanforderung des Fundamentes hin. Jedoch der Zustand der örtlichen Gegebenheiten (z.B. Untergrund etc.) obliegt nicht unserer Verantwortung. Die Ausbildung der Einbausituation 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: the ground under the foundation) does not lie in our responsibility. The execution of the installation situation must be individually specified by the planning architect or by the engineer engaged in statically calculations in the special case.
Einfahrrichtung
Drive in direction
bauseitiger Winkelrahmen (Kantenschutz)
angle frame by customer (edge protection)
Wasserabfluss DN100 empfohlen
Wateroutlet DN100 recommended
DKFB
Betonqualität
quality of concrete
min.C20/25
normal bewehrt
normal armouring
die schraffierten Flächen müssen in sich und zueinander absolut planeben sein
the hatched surface must be absolutely even with the each other
min.6500
min.3650
min.500
min.500
225
150
min.180
min.405
Alle Maße in Millimeter
all dimensions in millimeter

3.5 Hydraulik diagram drawing



3.6 Electrical diagram 3x230 V



Inhaltsverzeichnis

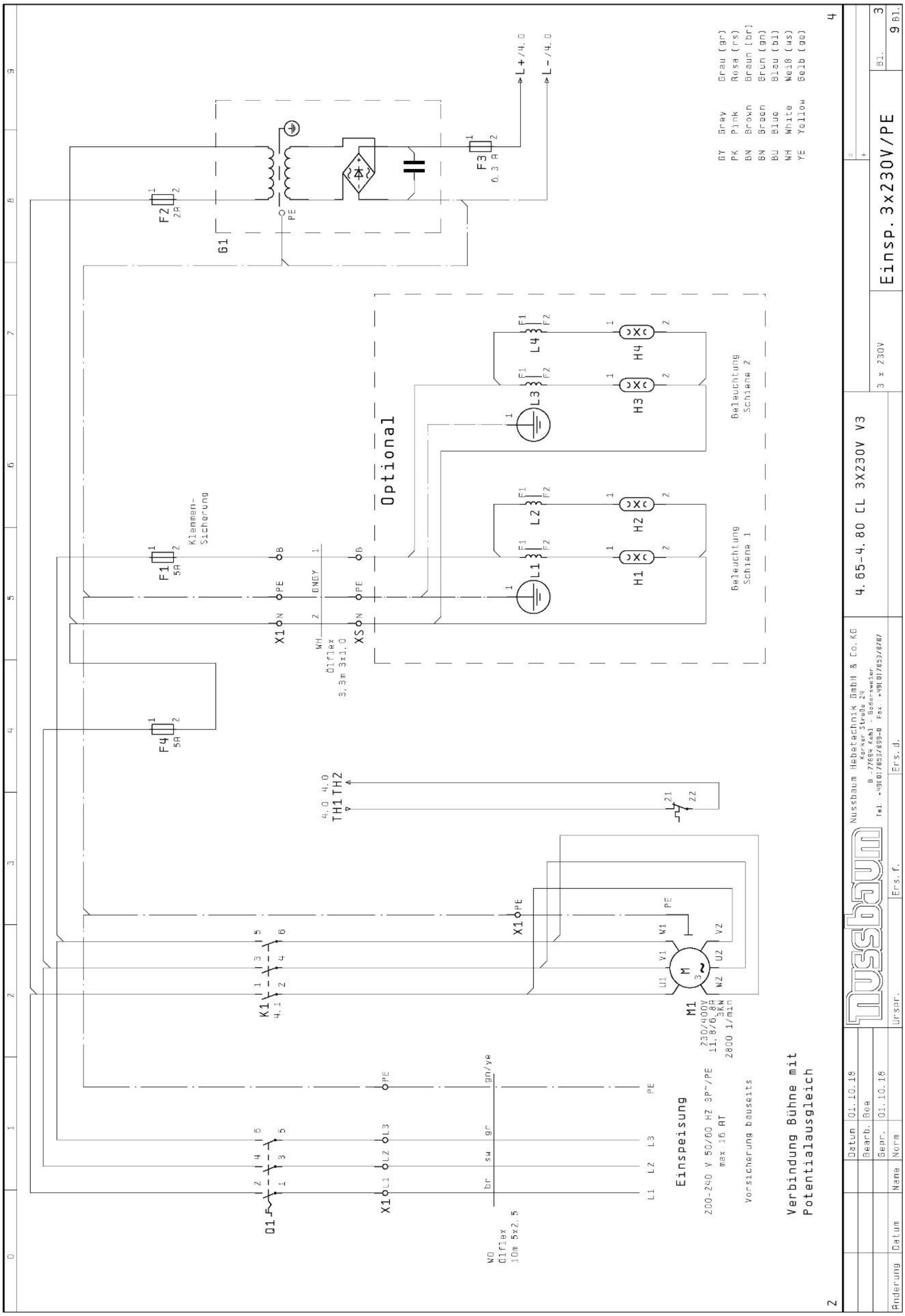
Spalte X: eine automatisch erzeugte Seite wurde manuell nachbearbeitet

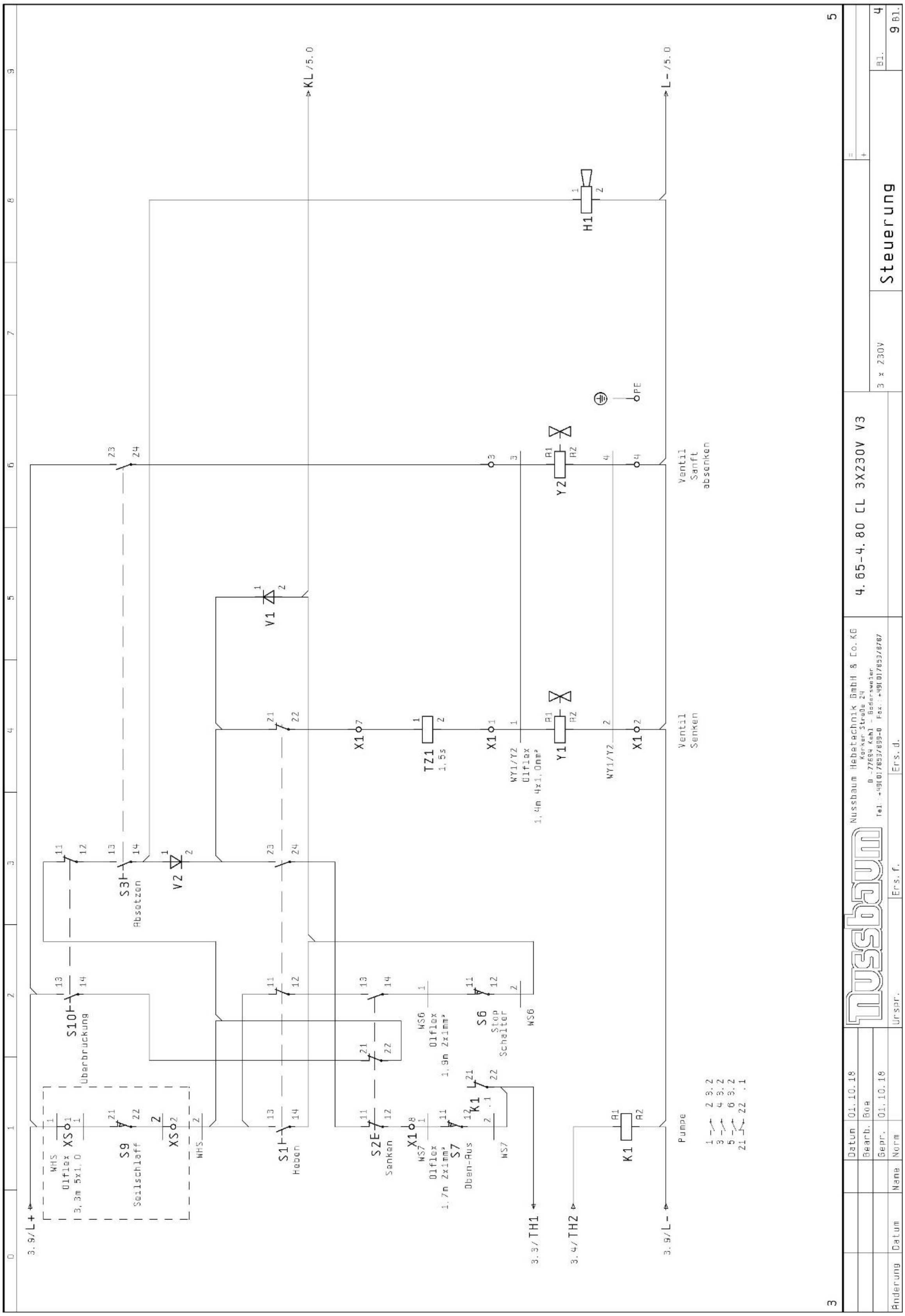
ESSJ0100

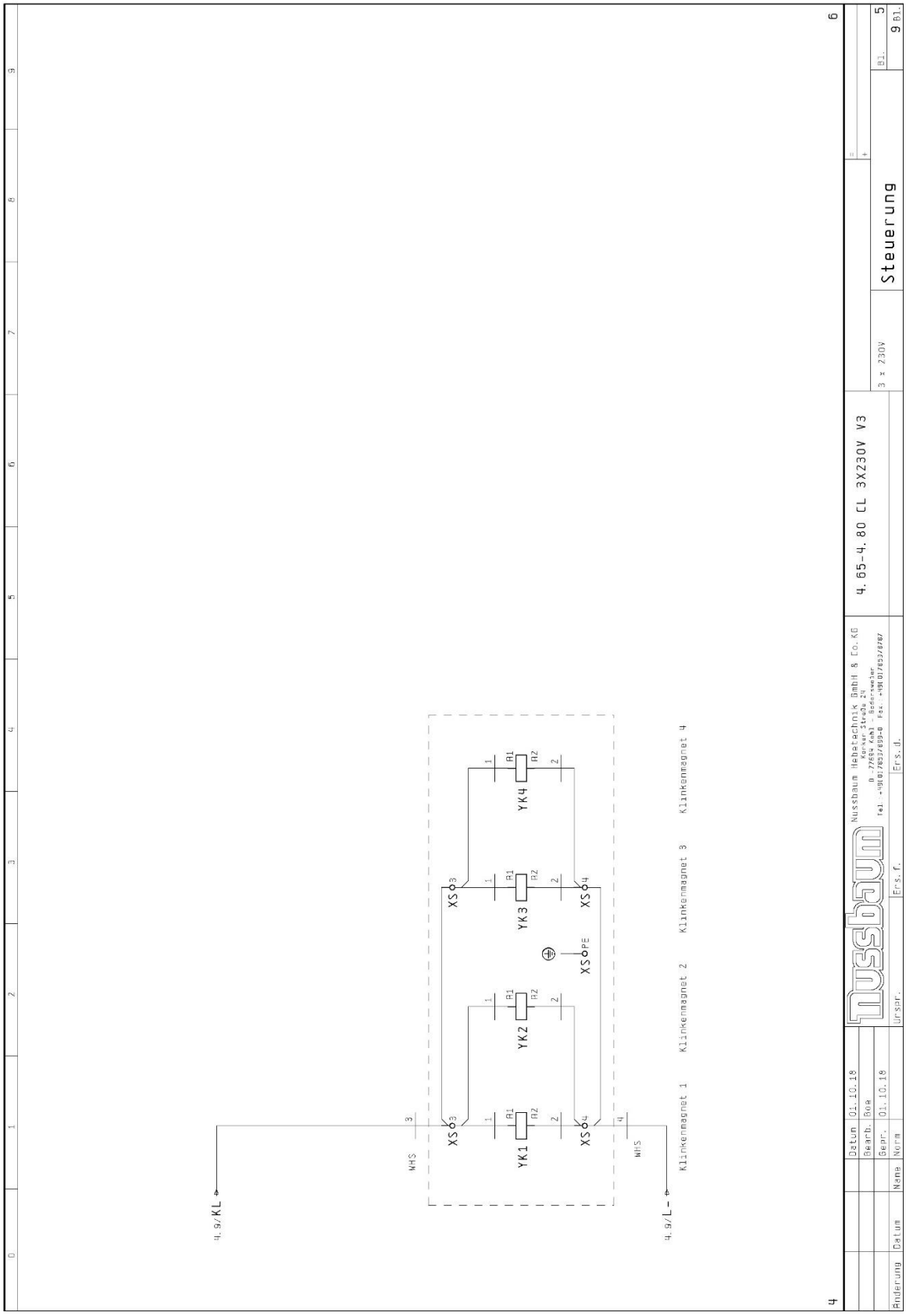
Seite	Seitenbenennung	Seitenzusatzfeld	Datum	Bearbeiter	X
1	Deckblatt		01.10.18	Boe	
2	Inhaltsverzeichnis		01.10.18	Boe	x
3	Einsp. 3x230V/PE		01.10.18	Boe	
4	Steuerung		01.10.18	Boe	
5	Steuerung		01.10.18	Boe	
6	X1		01.10.18	Boe	x
7	XS		01.10.18	Boe	x
8	Stückliste		01.10.18	Boe	x
9	Stückliste		01.10.18	Boe	x

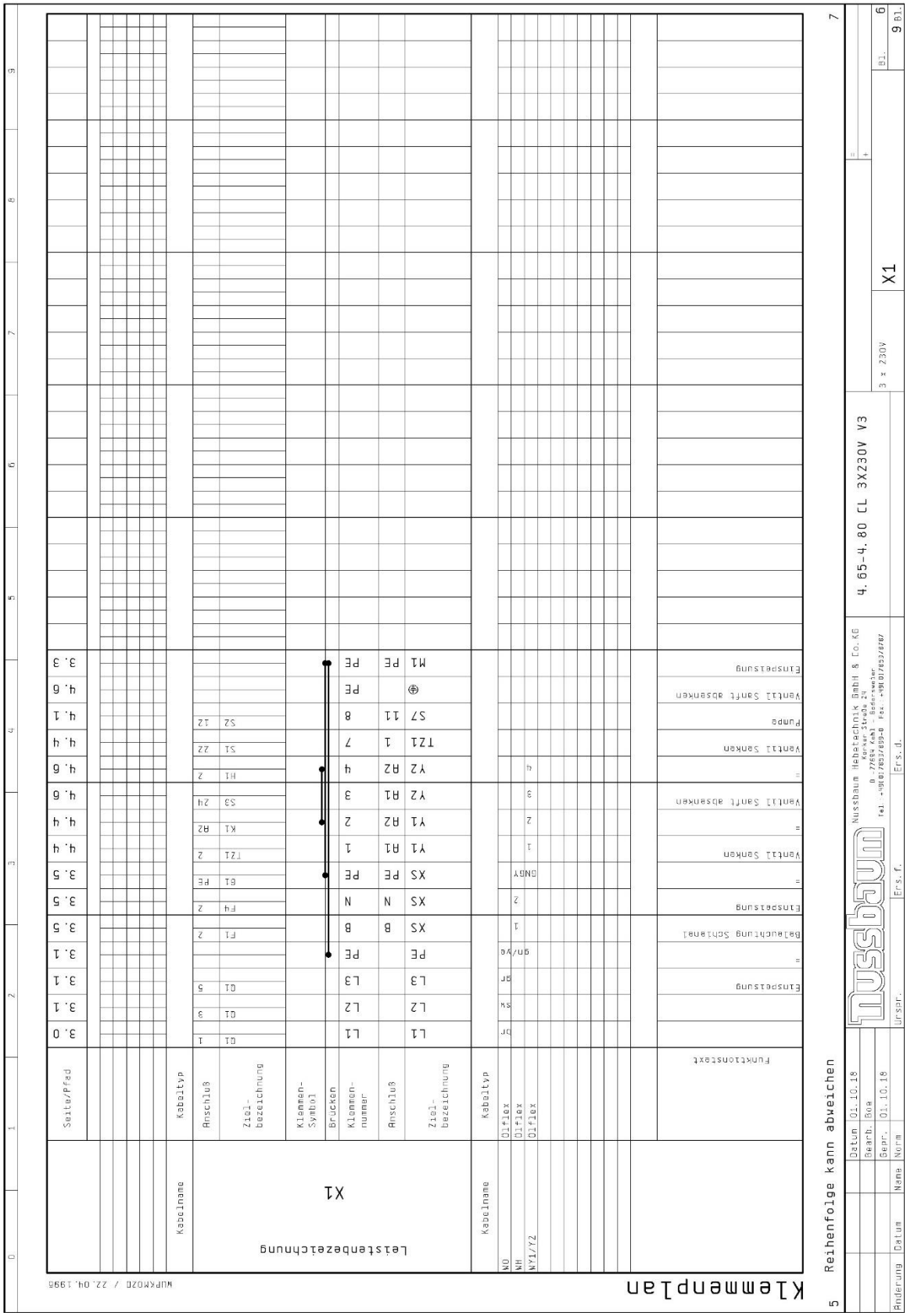
			Datum	01.10.18	Nussbaum Hebetechnik GmbH & Co. KG Korker Straße 24 D -77694 Kehl - Bodersweier Tel. +49(0)7853/699-0 Fax. +49(0)7853/8787	4.65-4.80 CL 3X230V V3		
			Bearb.	Boe			3 x 230V	Inhaltsverzeichnis
			Gepr.	01.10.18				
Änderung	Datum	Name	Norm		Urspr.	Ers. f.	Ers. d.	

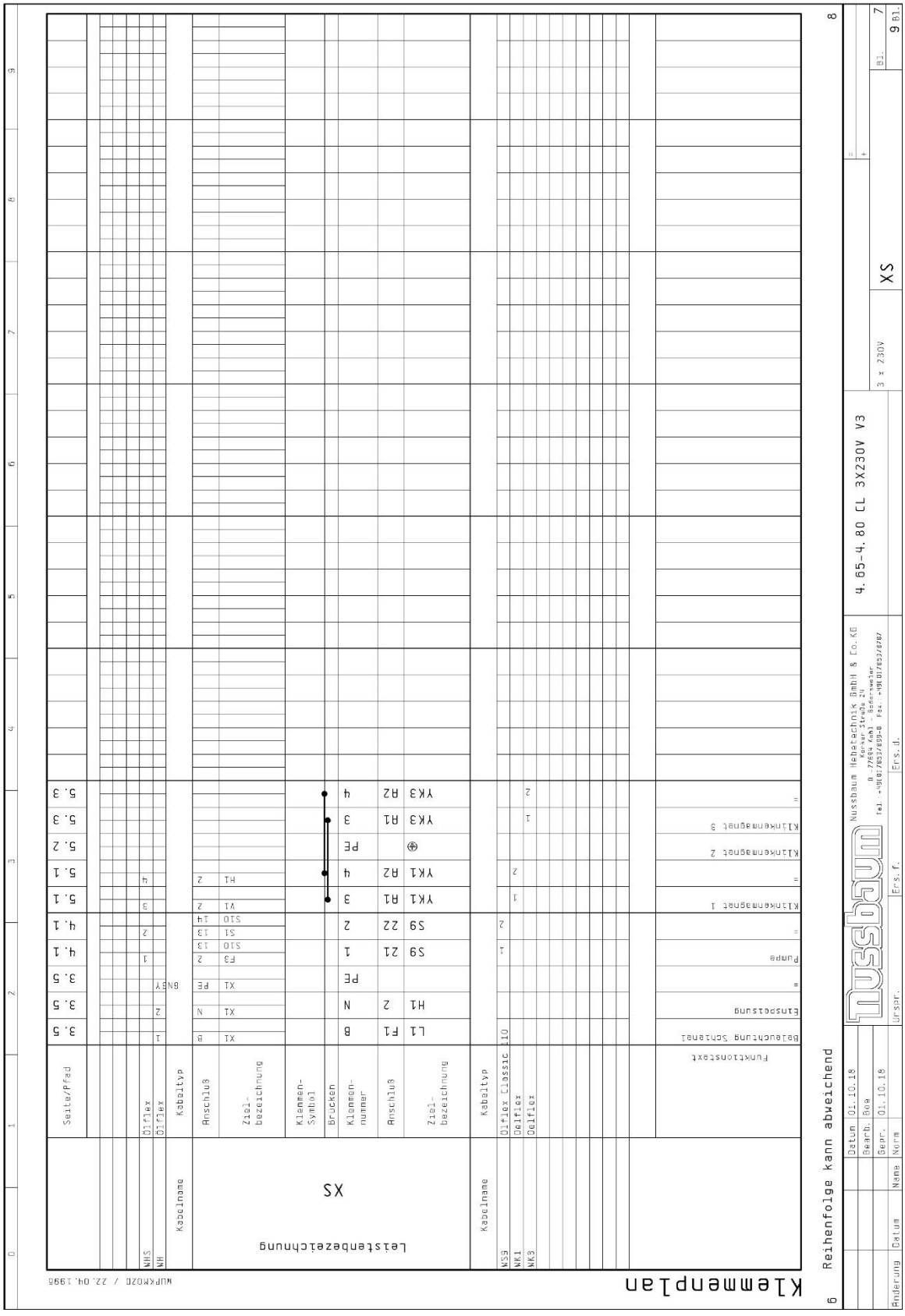
Bl. 2
9 Bl.


Optional
Einspeisung
200-240 V 50/60 HZ 3P~/PE
max 16 AT
Vorsicherung bauseits
Verbindung Bühne mit
Potentialausgleich
Beleuchtung
Schiene 1
Beleuchtung
Schiene 2
Klemmen-
Sicherung
M1
230/400V
2800 1/min
GY Gray Grau (gr)
PK Pink Rosa (rs)
BN Brown Braun (br)
GN Green Grün (gn)
BU Blue Blau (bl)
WH White Weiß (ws)
YE Yellow Gelb (ge)
Nussbaum Hebetechnik GmbH & Co.KG
4.65-4.80 CL 3X230V V3
Einsp. 3x230V/PE
3 x 230V


Steuerung
4.65-4.80 CL 3X230V V3
3 x 230V
Nussbaum Hebetechnik GmbH & Co.KG
Ventil Senken
Ventil Sanft absenken
Pumpe


4.65-4.80 CL 3X230V V3
3 x 230V
Steuerung
Nussbaum Hebetechnik GmbH & Co.KG
Klinkenmagnet 1
Klinkenmagnet 2
Klinkenmagnet 3
Klinkenmagnet 4
YK1
YK2
YK3
YK4
XS03
XS04
XSOPE
WHS
4.9/KL
4.9/L-


Klemmenplan
4.65-4.80 CL 3X230V V3
3 x 230V
X1
Nussbaum Hebetechnik GmbH & Co.KG
Reihenfolge kann abweichen
Leistenbezeichnung
X1
Funktionstext
Einspeisung
Ventil Senken
Ventil Sanft absenken
Pumpe
Ventil Sanft absenken
Einspeisung


Klemmenplan
4.65-4.80 CL 3X230V V3
3 x 230V
XS
Nussbaum Hebetechnik GmbH & Co.KG
Reihenfolge kann abweichend
Leistenbezeichnung
Funktionstext
Beleuchtung Schienal
Einspeisung
Pumpe
Klemmenmagnet 1
Klemmenmagnet 2
Klemmenmagnet 3
Kabelname
Kabeltyp
Anschluß
Ziel-bezeichnung
Klemmen-Symbol
Brücken
Klemmen-nummer
Seite/Pfad

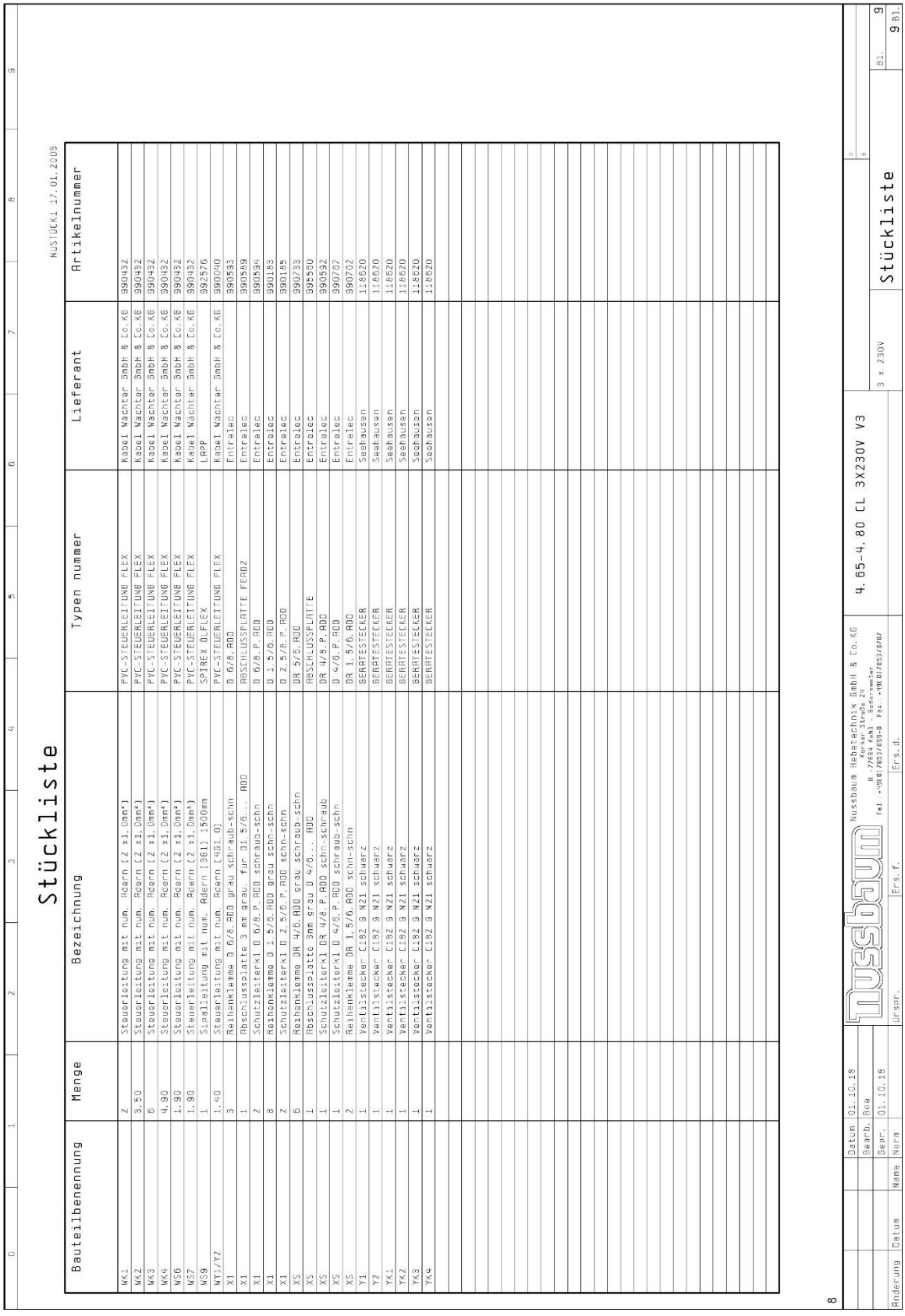
Stückliste

NUSTÜCK1 17.01.2003

Bauteilbenennung	Menge	Bezeichnung	Typen nummer	Lieferant	Artikelnummer
	1	GEH.KPL.CT-882 ABS	SCHALTKASTEN ABS CT 882	Bernstein	440CL03204
	2	Perfect Kabelverschraubung M20x1,5	KABELVERSCHRAUBUNG M20X1,5	Jacob GmbH	9951937
	4	Perfect Kabelverschraubung M16x1,5	KABELVERSCHRAUBUNG M16X1,5	Jacob GmbH	99519371
	1	GEH.KPL.CT-682 ABS	SCHALTKASTEN ABS CT 682	Bernstein	440CL03206
	2	Perfect Kabelverschraubung M16x1,5	KABELVERSCHRAUBUNG M16X1,5	Jacob GmbH	99519371
	5	Perfect Kabelverschraubung M12x1,5	KABELVERSCHRAUBUNG M12X1,5	Jacob GmbH	9951968
F1	1	Sicherungsklemme Trenner 5x20 mm	M4/8.SF	Entrelec	990661
F1	1	Feinsicherung	FEINSICHERUNG	GIF	990307
F2	1	Sicherungsklemme Trenner 5x20 mm	M4/8.SF	Entrelec	990661
F2	1	Feinsicherung	FEINSICHERUNG	GIF	990302
F3	1	Sicherungsklemme Trenner 5x20 mm	M4/8.SF	Entrelec	990661
F3	1	Feinsicherung	FEINSICHERUNG	GIF	990286
F4	1	Sicherungsklemme Trenner 5x20 mm	M4/8.SF	Entrelec	990661
F4	1	Feinsicherung	FEINSICHERUNG	GIF	990307
G1	1	Trafo + Gleichrichter + Kondensator	TRAFO 1-PH	Schmelzer	990835
H1	1	Digisond akustischer Signalgeber	B/P 228	Deltron Components	990331
K1	1	Leistungschutz 5,7 kW 24 V DC	11BG12.01 D 24V DC	Lovato electric	990842
L1	2	Perfect Kabelverschraubung M12x1,5	KABELVERSCHRAUBUNG M12X1,5	Jacob GmbH	9951968
M1	1	Unterölmotor 3kW/ 6,8/11,8A 50Hz	U07K2-371	Hanning GmbH	992658
Q1	1	Hauptsch. Not-Aus 3p 16A 5,5kW	A 105/3.0200-EV/SD	Merz GmbH	990403
S1	1	Drucktaste flach o.Tast.Platte (M22)	M22-D-X	Moeller	990130
S1	1	Tastenplatte Pfeil (M22)	M22-XD-S-X7	Moeller	990131
S1	1	Kontaktblock 1S 1Ö (M22)	M22-AK11	Moeller	990132
S1	1	Kontaktelement 1S (M22)	M22-K10	Moeller	990133
S1	1	Kontaktelement 1Ö (M22)	M22-K01	Moeller	990181
S2	1	Drucktaste flach o.Tast.Platte (M22)	M22-D-X	Moeller	990130
S2	1	Tastenplatte Pfeil (M22)	M22-XD-S-X7	Moeller	990131
S2	1	Kontaktblock 1S 1Ö (M22)	M22-AK11	Moeller	990132
S2	1	Kontaktelement 1Ö (M22)	M22-K01	Moeller	990181
S3	1	Drucktaste flach o.Tast.Platte (M22)	M22-D-X	Moeller	990130
S3	1	Tastenplatte Pfeil (M22)	M22-XD-S-X7	Moeller	990131
S3	1	Kontaktblock 1S (M22)	M22-AK10	Moeller	1987399C78
S3	1	Kontaktelement 1S (M22)	M22-K10	Moeller	990133
S6	1	TI-U1 AD 90	GRENZTASTER 1Ö 1S KLEIN STANGE	Bernstein	990003
S6	1	Perfect Kabelverschraubung M16x1,5	KABELVERSCHRAUBUNG M16X1,5	Jacob GmbH	99519371
S7	1	TI-U1 AD 90	GRENZTASTER 1Ö 1S KLEIN STANGE	Bernstein	990003
S7	1	Perfect Kabelverschraubung M16x1,5	KABELVERSCHRAUBUNG M16X1,5	Jacob GmbH	99519371
S9	1	TI-U1 AD 90	GRENZTASTER 1Ö 1S KLEIN STANGE	Bernstein	990003
S9	1	Perfect Kabelverschraubung M16x1,5	KABELVERSCHRAUBUNG M16X1,5	Jacob GmbH	99519371
S10	1	Drucktaste flach o.Tast.Platte (M22)	M22-D-X	Moeller	990130
S10	1	Start (I)(M22)	M22-XD-G-X1	Moeller	991045
S10	1	Kontaktblock 1S (M22)	M22-AK10	Moeller	1987399C78
S10	1	Blindverschluss (M22)	M22S-B	Moeller	990499
S10	1	Kontaktelement 1Ö (M22)	M22-K01	Moeller	990181
TZ1	1	Ansprechverzögert 1,5 s	ZWEIDRAHT ZEITRELAIS	BTR	990212
V1	1	Sperrdiode BYV 28 -100 1000V;3A	BYV 28 -100	Conrad Elektronik	940042
V2	1	Sperrdiode BYV 28 -100 1000V;3A	BYV 28 -100	Conrad Elektronik	940042
WO	10	Steuerleitung mit farb. Adern (5G2,5)	PVC-STEUERLEITUNG FLEX	Kabel Wachter GmbH & Co.KG	991435
WH	3,30	Steuerleitung mit num. Adern (3G1,0)	PVC-STEUERLEITUNG FLEX	Kabel Wachter GmbH & Co.KG	990034
WHS	3,30	Steuerleitung mit num. Adern (5x1,0mm²)	PVC-STEUERLEITUNG FLEX	Kabel Wachter GmbH & Co.KG	990115

7 9

Datum	01.10.18	Nussbaum Hebetechnik GmbH & Co.KG, Korker Straße 24, D-77694 Kehl - Bodersweier, Tel: +49(0)7853/899-0 Fax: +49(0)7853/8787	4.65-4.80 CL 3X230V V3	= / +	
Bearb.	Boe			3 x 230V	
Gepr.	01.10.18			Stückliste	Bl. 8
Änderung / Datum / Name / Norm		Urspr. / Ers. f. / Ers. d.			9 Bl.



Stückliste

NUSTÜCK1 17.01.2003

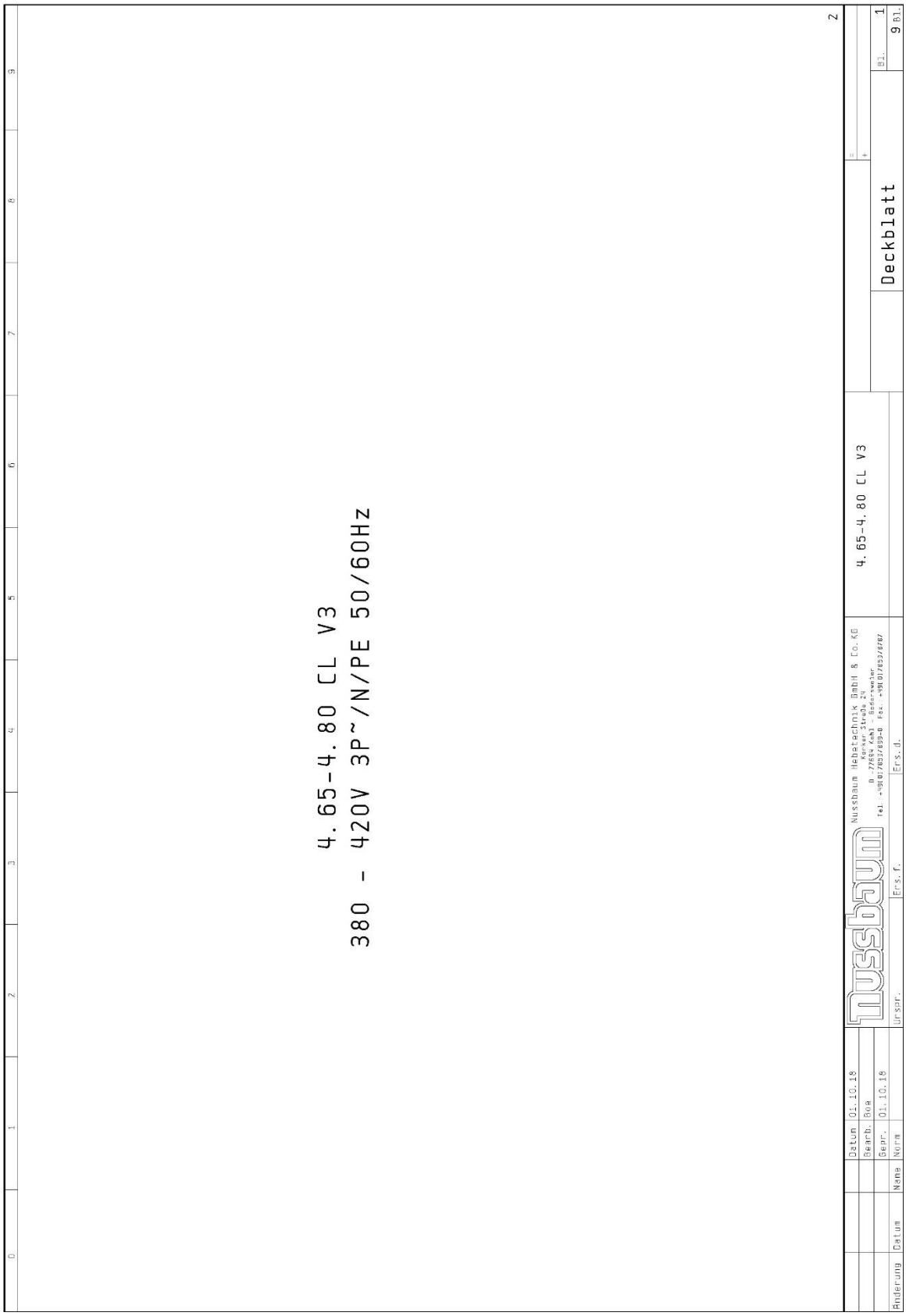
Bauteilbenennung	Menge	Bezeichnung	Typen nummer	Lieferant	Artikelnummer
WK1	2	Steuerleitung mit num. Adern (2 x1.0mm²)	PVC-STEUERLEITUNG FLEX	Kabel Wächter GmbH & Co.KG	990432
WK2	3.60	Steuerleitung mit num. Adern (2 x1.0mm²)	PVC-STEUERLEITUNG FLEX	Kabel Wächter GmbH & Co.KG	990432
WK3	6	Steuerleitung mit num. Adern (2 x1.0mm²)	PVC-STEUERLEITUNG FLEX	Kabel Wächter GmbH & Co.KG	990432
WK4	4.90	Steuerleitung mit num. Adern (2 x1.0mm²)	PVC-STEUERLEITUNG FLEX	Kabel Wächter GmbH & Co.KG	990432
WK6	1.90	Steuerleitung mit num. Adern (2 x1.0mm²)	PVC-STEUERLEITUNG FLEX	Kabel Wächter GmbH & Co.KG	990432
WK7	1.90	Steuerleitung mit num. Adern (2 x1.0mm²)	PVC-STEUERLEITUNG FLEX	Kabel Wächter GmbH & Co.KG	990432
WK9	1	Signalleitung mit num. Adern (36i) 1500mm	SPIREX OLFLEX	LAPP	992576
WT1/Y2	1.40	Steuerleitung mit num. Adern (4gi 0)	PVC-STEUERLEITUNG FLEX	Kabel Wächter GmbH & Co.KG	990040
X1	3	Reihenklemme D 6/8 ADO grau schraub-schn	D 6/8 ADO	Entrelec	990533
X1	1	Abschlussplatte 3 mm grau. für D1 5/6... ADO	ABSCHLUSSPLATTE FEADO	Entrelec	990569
X1	2	Schutzleiterkl D 6/8 P. ADO schraub-schn	D 6/8 P. ADO	Entrelec	990594
X1	8	Reihenklemme D 1 5/8. ADO grau schn-schn	D 1 5/8. ADO	Entrelec	990183
X1	2	Schutzleiterkl D 2 5/8. P. ADO schn-schn	D 2 5/8. P. ADO	Entrelec	990185
XS	6	Reihenklemme DR 4/8. ADO grau schraub schn	DR 5/8. ADO	Entrelec	990733
XS	1	Abschlussplatte 3mm grau D 4/8... ADO	ABSCHLUSSPLATTE	Entrelec	935590
XS	1	Schutzleiterkl DR 4/8 P. ADO schn-schraub	DR 4/8 P. ADO	Entrelec	990532
XS	1	Schutzleiterkl D 4/8. P. ADO schraub-schn	D 4/8. P. ADO	Entrelec	990737
XS	2	Reihenklemme DR 1 5/8. ADO schn-schn	DR 1 5/8. ADO	Entrelec	990702
Y1	1	Ventilstecker C102 3 NZ1 schwarz	GERÄTESTECKER	Seahausen	118620
Y2	1	Ventilstecker C102 3 NZ1 schwarz	GERÄTESTECKER	Seahausen	118620
YK1	1	Ventilstecker C102 3 NZ1 schwarz	GERÄTESTECKER	Seahausen	118620
YK2	1	Ventilstecker C102 3 NZ1 schwarz	GERÄTESTECKER	Seahausen	118620
YK3	1	Ventilstecker C102 3 NZ1 schwarz	GERÄTESTECKER	Seahausen	118620
YK4	1	Ventilstecker C102 3 NZ1 schwarz	GERÄTESTECKER	Seahausen	118620

		Datum	01.10.18	Nussbaum Hebetechnik GmbH & Co.KG	4.65-4.80 CL 3X230V V3
		Bearb.	Boa	Kerner Straße 24	
		Gepr.	01.10.18	D-70327 Stuttgart-Feuerbach	3 x 230V
Änderung	Datum	Name	Norm	Tel. +49(0)7032/899-0 Fax. +49(0)7032/8987	Stückliste
		Urspr.		Ers. f.	Ers. d.

Bl. 9

9 Bl.

3.7 Electrical diagram 3x400 V



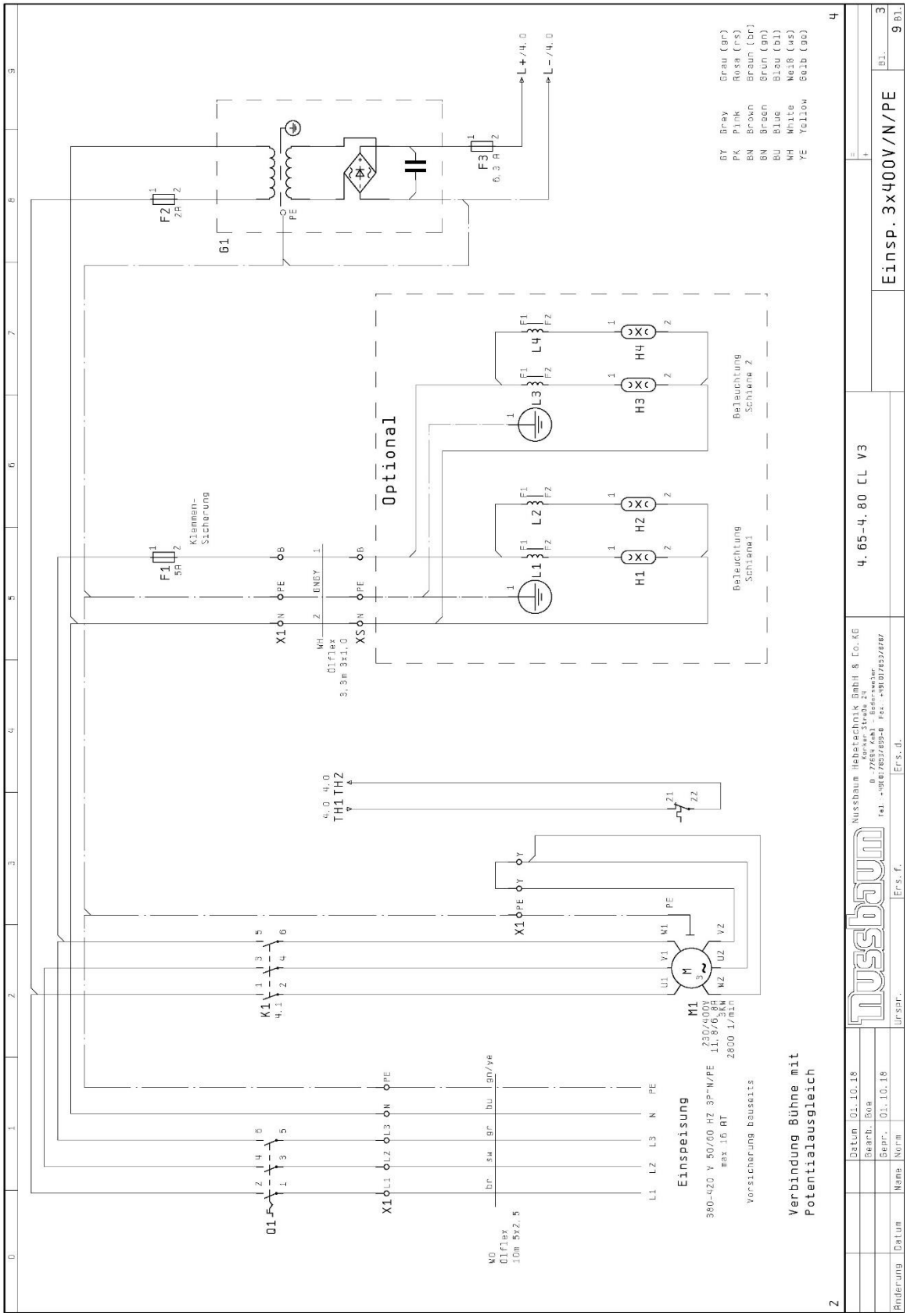
Inhaltsverzeichnis

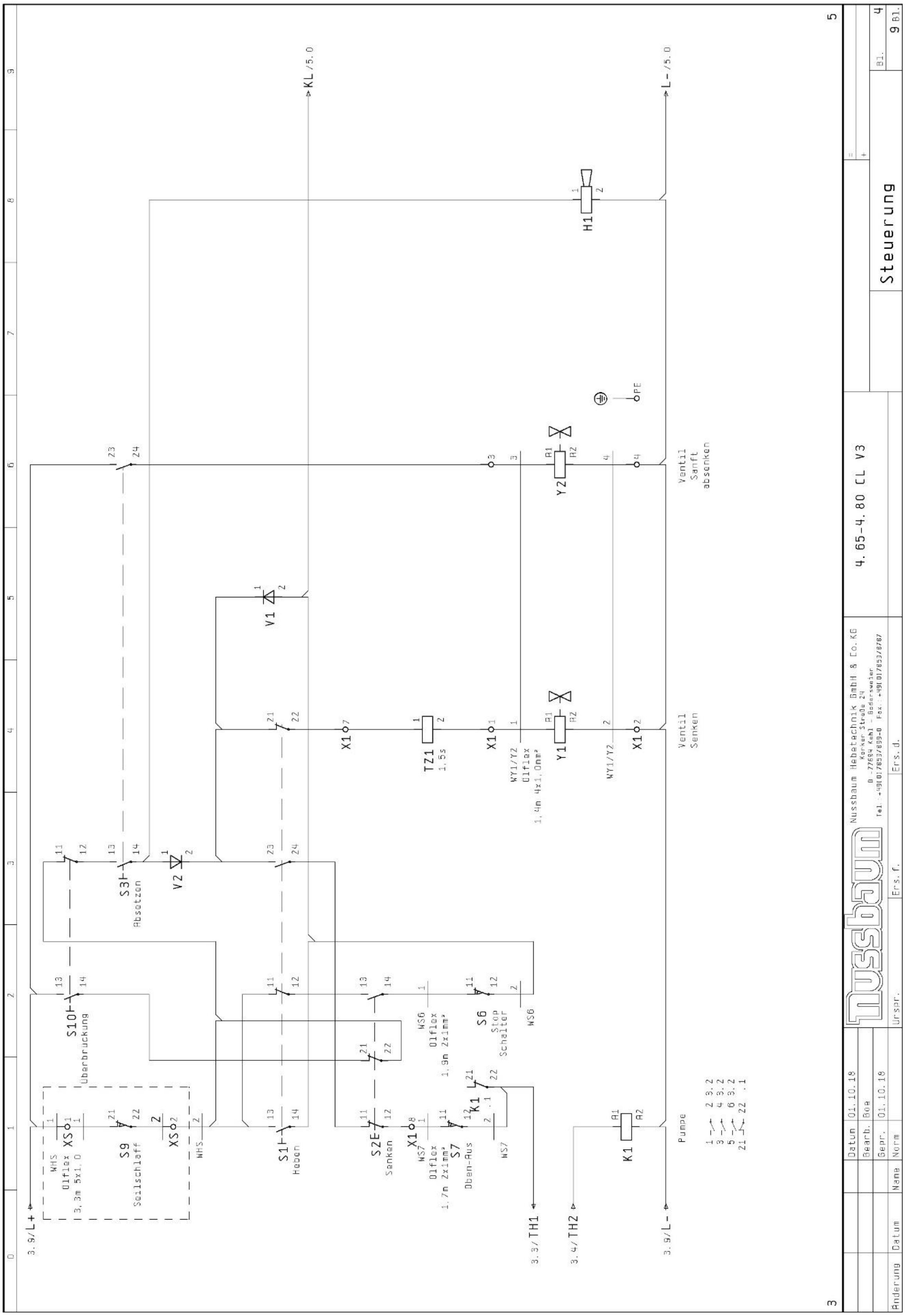
Spalte X: eine automatisch erzeugte Seite wurde manuell nachbearbeitet

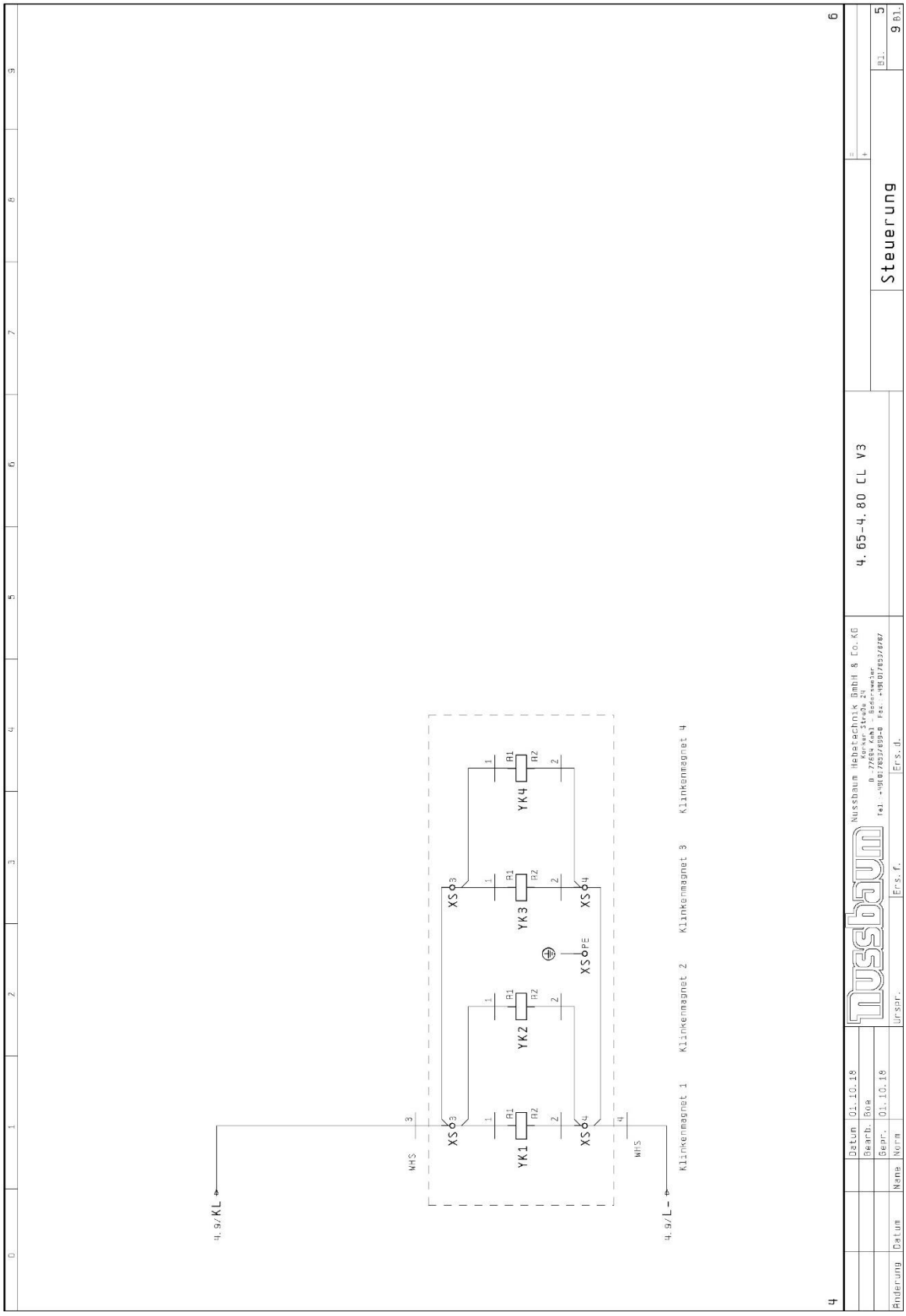
ESSJ0100

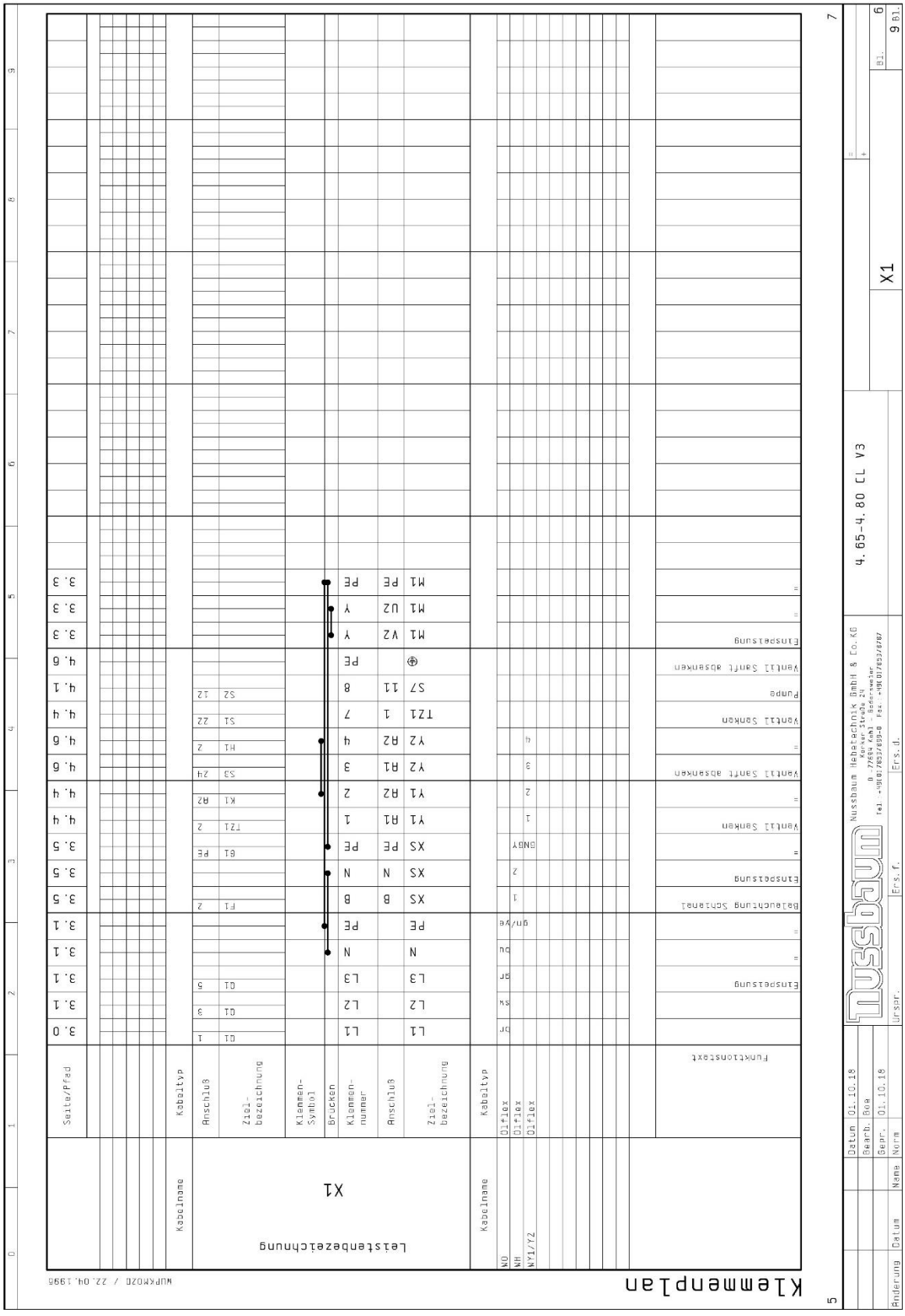
Seite	Seitenbenennung	Seitenzusatzfeld	Datum	Bearbeiter	X
1	Deckblatt		01.10.18	Boe	
2	Inhaltsverzeichnis		01.10.18	Boe	x
3	Einsp. 3x400V/N/PE		01.10.18	Boe	
4	Steuerung		01.10.18	Boe	
5	Steuerung		01.10.18	Boe	
6	X1		01.10.18	Boe	x
7	XS		01.10.18	Boe	x
8	Stückliste		01.10.18	Boe	x
9	Stückliste		01.10.18	Boe	x

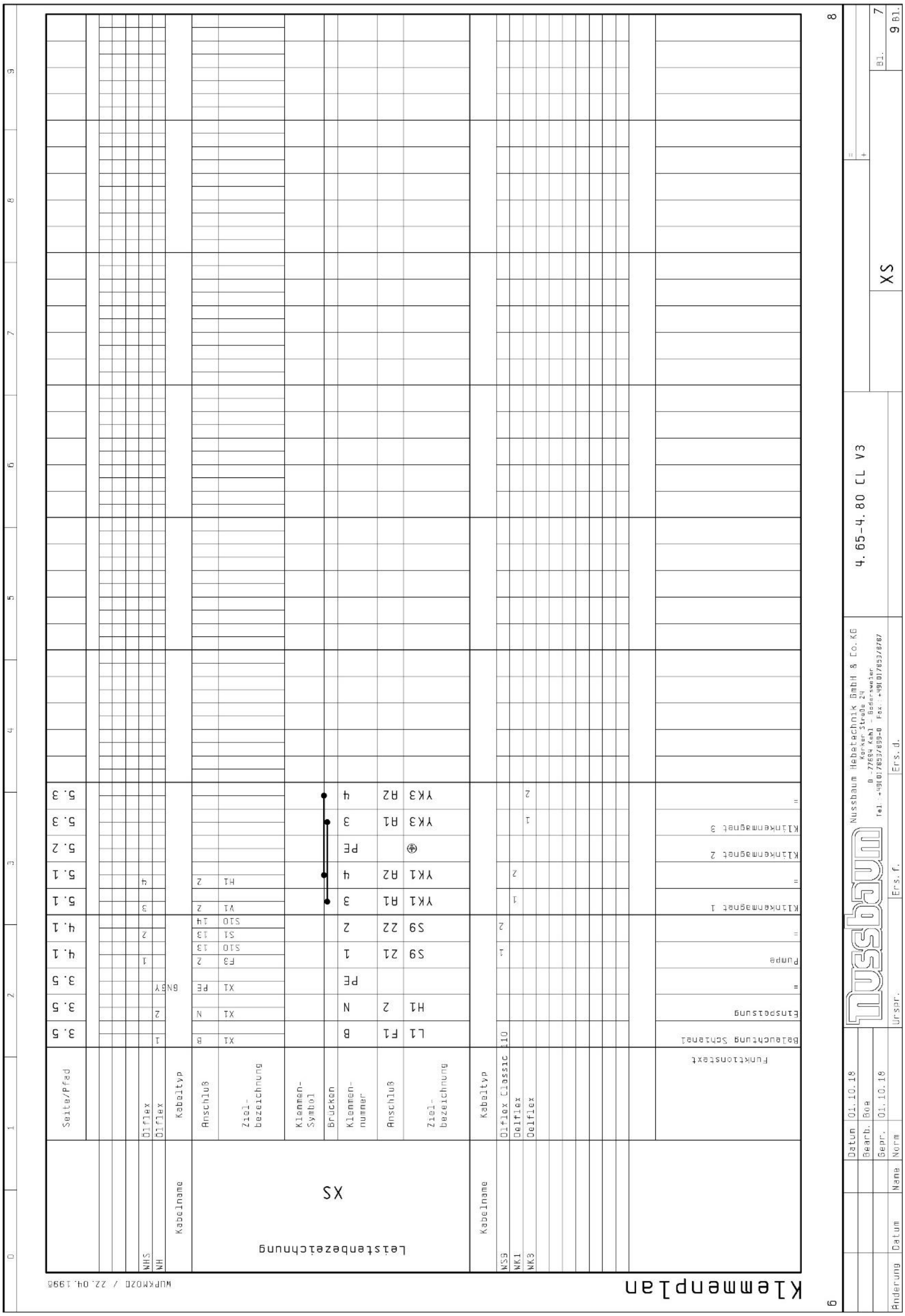
			Datum	01.10.18	Nussbaum Hebetechnik GmbH & Co. KG Korker Straße 24 D -77694 Kehl - Bodersweier Tel. +49(0)7853/699-0 Fax. +49(0)7853/8787	4.65-4.80 CL V3		
			Bearb.	Boe				
			Gepr.	01.10.18			Inhaltsverzeichnis	Bl. 2 / 9 Bl.
Änderung	Datum	Name	Norm		Urspr.	Ers. f.	Ers. d.	


Einsp. 3x400V/N/PE
4.65-4.80 CL V3
Nussbaum Hebetechnik GmbH & Co.KG
Optional
Einspeisung
Verbindung Bühne mit Potentialausgleich
Beleuchtung Schiene 1
Beleuchtung Schiene 2
Klemmen-Sicherung
Vorsicherung bauseits
GY Grau (gr)
PK Rosa (rs)
BN Braun (br)
GN Grün (gn)
BU Blau (bl)
WH Weiß (ws)
YE Gelb (ge)


Steuerung
4.65-4.80 CL V3
Nussbaum Hebetechnik GmbH & Co.KG
nussbaum
Datum 01.10.18
Bearb. Bos
Gepr. 01.10.18
Norm
Änderung Datum Name
Urspr.
Ers. f.
Ers. d.
Bl. 4
9 Bl.
3.9/L+
3.9/L-
3.3/TH1
3.4/TH2
KL/5.0
L-/5.0
S9
Seilschlaff
S10
Überbrückung
S3
Absetzen
S1
Heben
S2E
Senken
S7
Oben-Aus
S6
Stop
Schalter
K1
Pumpe
V1
V2
TZ1
1,5s
Y1
Ventil
Senken
Y2
Ventil
Sanft
absenken
H1
PE
Ölflex
3,3m 5x1,0
Ölflex
1,7m 2x1mm²
Ölflex
1,9m 2x1mm²
Ölflex
1,4m 4x1,0mm²


4.65-4.80 CL V3
Steuerung
Nussbaum Hebetechnik GmbH & Co.KG
Klinkenmagnet 1
Klinkenmagnet 2
Klinkenmagnet 3
Klinkenmagnet 4
YK1
YK2
YK3
YK4
XS03
XS04
XS0PE
WHS
4.9/KL
4.9/L-


Klemmenplan
Leistenbezeichnung
X1
4.65-4.80 CL V3
Nussbaum Hebetechnik GmbH & Co.KG
Funktionstext
Einspeisung
Beleuchtung Schianal
Ventil Senken
Ventil Senken abgesenkt
Pumpe
Ventil Senkgeschwindigkeit
Ventil Senkgeschwindigkeit abgesenkt
Kabeltyp
Kabelname
Anschluß
Zielbezeichnung
Klemmensymbol
Brücken
Klemmennummer
Seite/Pfad


Klemmenplan
XS
Leistenbezeichnung
Kabelname
Seite/Pfad
Kabeltyp
Anschluß
Ziel-bezeichnung
Klemmen-Symbol
Brücken
Klemmen-nummer
Funktionstext
Beleuchtung Schienen
Einspeisung
Pumpe
Klinkenmagnet 1
Klinkenmagnet 2
Klinkenmagnet 3
Nussbaum Hebetechnik GmbH & Co. KG
4.65-4.80 CL V3
Datum
Bearb.
Gepr.
Norm
Änderung
Name
Urspr.
Ers. f.
Ers. d.
Bl.
7
9 Bl.

Stückliste

NUSTÜCK1 17.01.2003

Bauteilbenennung	Menge	Bezeichnung	Typen nummer	Lieferant	Artikelnummer
	1	GEH.KPL.CT-862 ABS	SCHALTKASTEN ABS CT 862	Bernstein	440CL03204
	2	Perfect Kabelverschraubung M20x1,5	KABELVERSCHRAUBUNG M20X1,5	Jacob GmbH	9951937
	4	Perfect Kabelverschraubung M16x1,5	KABELVERSCHRAUBUNG M16X1,5	Jacob GmbH	99519371
	1	GEH.KPL.CT-682 ABS	SCHALTKASTEN ABS CT 682	Bernstein	440CL03206
	2	Perfect Kabelverschraubung M16x1,5	KABELVERSCHRAUBUNG M16X1,5	Jacob GmbH	99519371
	5	Perfect Kabelverschraubung M12x1,5	KABELVERSCHRAUBUNG M12X1,5	Jacob GmbH	9951968
F1	1	Sicherungsklemme Trenner 5x20 mm	M4/8.SF	Entrelec	990661
F1	1	Feinsicherung	FEINSICHERUNG	GIF	990307
F2	1	Sicherungsklemme Trenner 5x20 mm	M4/8.SF	Entrelec	990661
F2	1	Feinsicherung	FEINSICHERUNG	GIF	990302
F3	1	Sicherungsklemme Trenner 5x20 mm	M4/8.SF	Entrelec	990661
F3	1	Feinsicherung	FEINSICHERUNG	GIF	990286
G1	1	Trafo + Gleichrichter + Kondensator	TRAFO 1-PH	Schmelzer	990835
H1	1	Digisond akustischer Signalgeber	B/P 228	Deltron Components	990331
K1	1	Leistungschutz 5,7 kW 24 V DC	11BG12.01 D 24V DC	Lovato electric	990842
L1	2	Perfect Kabelverschraubung M12x1,5	KABELVERSCHRAUBUNG M12X1,5	Jacob GmbH	9951968
M1	1	Unterolmotor 3kW/ 6,8/11,8A 50Hz	U07K2-371	Hanning GmbH	992658
Q1	1	Hauptsch. Not-Aus 3p 16A 5,5kW	A 105/3.0200-EV/SO	Merz GmbH	990403
S1	1	Drucktaste flach o.Tast.Platte (M22)	M22-D-X	Moeller	990130
S1	1	Tastenplatte Pfeil (M22)	M22-XD-S-X7	Moeller	990131
S1	1	Kontaktblock 1S 1Ö (M22)	M22-AK11	Moeller	990132
S1	1	Kontaktelement 1S (M22)	M22-K10	Moeller	990133
S1	1	Kontaktelement 1Ö (M22)	M22-K01	Moeller	990181
S2	1	Drucktaste flach o.Tast.Platte (M22)	M22-D-X	Moeller	990130
S2	1	Tastenplatte Pfeil (M22)	M22-XD-S-X7	Moeller	990131
S2	1	Kontaktblock 1S 1Ö (M22)	M22-AK11	Moeller	990132
S2	1	Kontaktelement 1Ö (M22)	M22-K01	Moeller	990181
S3	1	Drucktaste flach o.Tast.Platte (M22)	M22-D-X	Moeller	990130
S3	1	Tastenplatte Pfeil (M22)	M22-XD-S-X7	Moeller	990131
S3	1	Kontaktblock 1S (M22)	M22-AK10	Moeller	1987999C78
S3	1	Kontaktelement 1S (M22)	M22-K10	Moeller	990133
S6	1	TI-U1 AD 90	GRENZTASTER 1Ö 1S KLEIN STANGE	Bernstein	990003
S6	1	Perfect Kabelverschraubung M16x1,5	KABELVERSCHRAUBUNG M16X1,5	Jacob GmbH	99519371
S7	1	TI-U1 AD 90	GRENZTASTER 1Ö 1S KLEIN STANGE	Bernstein	990003
S7	1	Perfect Kabelverschraubung M16x1,5	KABELVERSCHRAUBUNG M16X1,5	Jacob GmbH	99519371
S9	1	TI-U1 AD 90	GRENZTASTER 1Ö 1S KLEIN STANGE	Bernstein	990003
S9	1	Perfect Kabelverschraubung M16x1,5	KABELVERSCHRAUBUNG M16X1,5	Jacob GmbH	99519371
S10	1	Drucktaste flach o.Tast.Platte (M22)	M22-D-X	Moeller	990130
S10	1	Start (I)(M22)	M22-XD-G-X1	Moeller	991045
S10	1	Kontaktblock 1S (M22)	M22-AK10	Moeller	1987999C78
S10	1	Blindverschluss (M22)	M22S-B	Moeller	990499
S10	1	Kontaktelement 1Ö (M22)	M22-K01	Moeller	990181
TZ1	1	Ansprechverzögert 1,5 s	ZWEIDRAHT ZEITRELAIS	BTR	990212
V1	1	Sperrdiode BYV 28 -100 1000V;3A	BYV 28 -100	Conrad Elektronik	940042
V2	1	Sperrdiode BYV 28 -100 1000V;3A	BYV 28 -100	Conrad Elektronik	940042
W0	10	Steuerleitung mit farb. Adern (5G2,5)	PVC-STEUERLEITUNG FLEX	Kabel Wächter GmbH & Co.KG	991435
WH	3.30	Steuerleitung mit num. Adern (3G1,0)	PVC-STEUERLEITUNG FLEX	Kabel Wächter GmbH & Co.KG	990034
WHS	3.30	Steuerleitung mit num. Adern (5x1,0mm²)	PVC-STEUERLEITUNG FLEX	Kabel Wächter GmbH & Co.KG	990115
WK1	2	Steuerleitung mit num. Adern (2 x1,0mm²)	PVC-STEUERLEITUNG FLEX	Kabel Wächter GmbH & Co.KG	990432
WK2	3.50	Steuerleitung mit num. Adern (2 x1,0mm²)	PVC-STEUERLEITUNG FLEX	Kabel Wächter GmbH & Co.KG	990432

Änderung	Datum	Name		
			Datum	01.10.18
			Bearb.	Boe
			Gepr.	01.10.18
			Norm	

Nussbaum Hebetechnik GmbH & Co.KG

4.65-4.80 CL V3

Urspr. | Ers.f. | Ers.d.

Stückliste

Bl. 8
9 Bl.

Stückliste

NUSTÜCK1 17.01.2003

Bauteilbenennung	Menge	Bezeichnung	Typen nummer	Lieferant	Artikelnummer
WK3	6	Steuerleitung mit num. Adern (2 x1,0mm²)	PVC-STEUERLEITUNG FLEX	Kabel Wachter GmbH & Co.KG	990432
WK4	4,90	Steuerleitung mit num. Adern (2 x1,0mm²)	PVC-STEUERLEITUNG FLEX	Kabel Wachter GmbH & Co.KG	990432
WS6	1,90	Steuerleitung mit num. Adern (2 x1,0mm²)	PVC-STEUERLEITUNG FLEX	Kabel Wachter GmbH & Co.KG	990432
WS7	1,90	Steuerleitung mit num. Adern (2 x1,0mm²)	PVC-STEUERLEITUNG FLEX	Kabel Wachter GmbH & Co.KG	990432
WS9	1	Sipalleitung mit num. Adern (361) 1500mm	SPIREX OLFLEX	LAPP	992576
WS9	0	Sipalleitung mit num. Adern (2x1)	SPIREX OLFLEX	LAPP	994804
WY1/YZ	1,40	Steuerleitung mit num. Adern (461,0)	PVC-STEUERLEITUNG FLEX	Kabel Wächter GmbH & Co.KG	990040
X1	6	Reihenklemme D 6/8.ADD grau schraub-schn	D 6/8.ADD	Entrelec	990593
X1	2	Abschlussplatte 3 mm grau. für D1,5/6... ADD	ABSCHLUSSPLATTE FEAD2	Entrelec	990589
X1	2	Schutzleiterkl D 6/8.P.ADD schraub-schn	D 6/8.P.ADD	Entrelec	990594
X1	8	Reihenklemme D 1,5/6.ADD grau schn-schn	D 1,5/6.ADD	Entrelec	990183
X1	2	Schutzleiterkl D 2,5/8.P.ADD schn-schn	D 2,5/8.P.ADD	Entrelec	990185
XS	6	Reihenklemme DR 4/6.ADD grau schraub-schn	DR 5/6.ADD	Entrelec	990733
XS	1	Abschlussplatte 3mm grau D 4/6... ADD	ABSCHLUSSPLATTE	Entrelec	995560
XS	1	Schutzleiterkl DR 4/8.P.ADD schn-schraub	DR 4/8.P.ADD	Entrelec	990592
XS	1	Schutzleiterkl D 4/6.P.ADD schraub-schn	D 4/6.P.ADD	Entrelec	990767
XS	2	Reihenklemme DR 1,5/6.ADD schn-schn	DR 1,5/6.ADD	Entrelec	990702
Y1	1	Ventilstecker C182 9 N21 schwarz	GERÄTESTECKER	Seehausen	118620
Y2	1	Ventilstecker C182 9 N21 schwarz	GERÄTESTECKER	Seehausen	118620
YK1	1	Ventilstecker C182 9 N21 schwarz	GERÄTESTECKER	Seehausen	118620
YK2	1	Ventilstecker C182 9 NZ1 schwarz	GERÄTESTECKER	Seehausen	118620
YK3	1	Ventilstecker C182 9 N21 schwarz	GERÄTESTECKER	Seehausen	118620
YK4	1	Ventilstecker C182 9 N21 schwarz	GERÄTESTECKER	Seehausen	118620

8

		Datum	01.10.18	Nussbaum Hebetechnik GmbH & Co.KG, Korker Straße 24, D-77694 Kehl - Bodersweier, Tel. +49(0)7853/699-0 Fax. +49(0)7853/8787
		Bearb.	Boe	
		Gepr.	01.10.18	
Änderung	Datum	Name	Norm	Urspr. / Ers. f. / Ers. d.

4.65-4.80 CL V3

Stückliste

Bl. 9 / 9 Bl.

4 Safety regulations

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

Especially the following regulations are very important:

- The laden weight of the lifted vehicle must not exceed 8000 kg for the automotive lift. Load distribution max. 2:1 in or against the drive on direction.
- The automotive lift must be in its lowest position (fully collapsed), before the vehicle can be driving on to the lift. Only then can the vehicle be lifted.
- While working with the lift the operating instructions must be followed.
- Vehicles with low clearance or vehicles that are specially equipped should be pre tested to ensure that they clear the lift ramp to avoid damage.
- Only trained personnel over the age of 18 years old are to operate this lift.
- No one is to stand within the working area (danger area) during lifting and lowering
- No one is to be raised or lowed either directly or in a vehicle by the automotive lift.
- No one is to climb onto the automotive lift or onto an already raised vehicle.
- The automotive column lift must be checked by an expert after changes in the construction have been made.
- The main switch must be switched off and locked before work on the vehicle can commence. This is a safety precaution to ensure that the lift does not move during work.
- The main switch must be switched off and locked before any maintenance or repair work on the automotive lift itself can be carried out.
- During lifting or lowering the operator must observe the vehicle to ensure that the vehicle and the lift are functioning correctly.
- Installation of the standard-mobile column lift in hazardous or dangerous locations such as washing bays is dangerous and is not allowed.

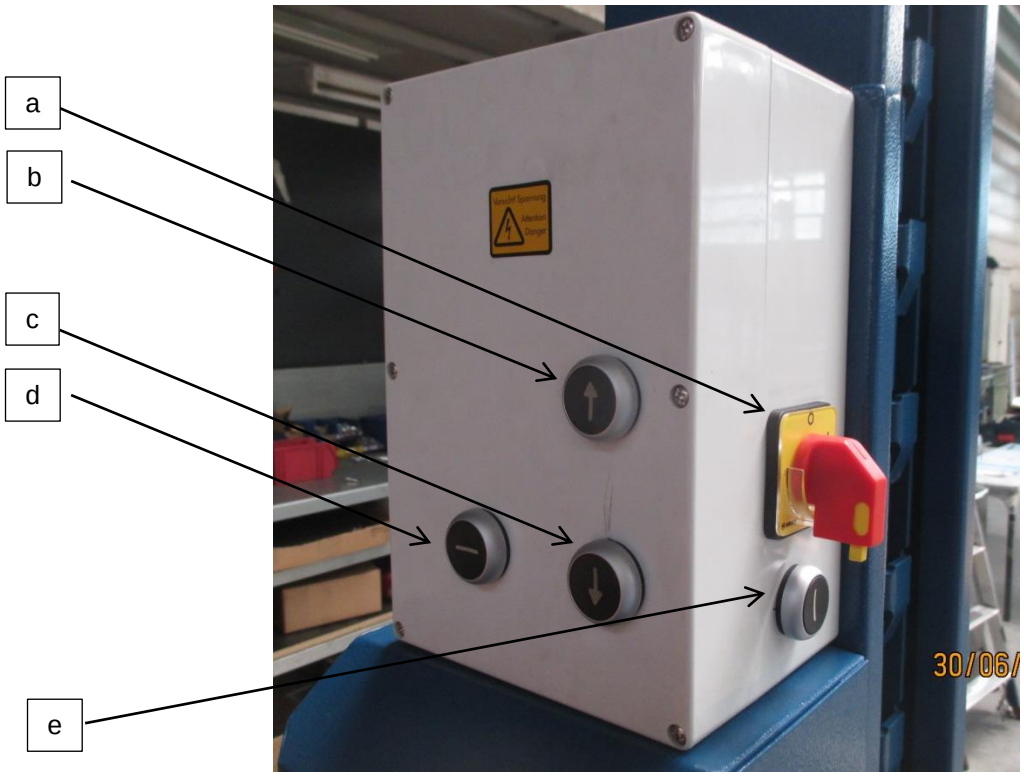
5 Operating Instructions

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

To prevent operation by unauthorized people, secure the main switch (a).

5.1 Operating element

- Main operating elements



a) Main switch
b) ↑ LIFT
c) ↓ LOWER
d) Lower into catches
e) Bridging button

5.2 Positioning the vehicle

- The lift must be completely lowered before the vehicle is driven on, and it may only be done in the intended direction.
- Drive the vehicle over the drive rails lengthwise and cross-wise in the centre.
- For vehicles with low floor clearance or custom equipment, check whether it could be damaged before driving onto the lift.
- Secure the vehicle against rolling, pull the hand brake, engage the gears.

The entire contact area of each wheel must be completely on the drive-in rails, otherwise there is a danger of falling!

5.3 Platform illumination (optional)

There are four lamps integrated on the interior side of the drive rails to give equal illumination of the work area.
The illumination is switched on via the main switch (11) of the platform.

5.4 Lifting the vehicle

During the entire lifting or lowering process, the work area of the lift should be clear of people and objects.
Afterwards, lift the vehicle to the desired working height.

Absolutely ensure secure vehicle placement on the drive-in rails, otherwise there is a danger of the vehicle falling.

Switch on controls at the main switch (a).
Lift the vehicle. Push the ↑ “LIFT” button (b).
Raise the vehicle to the desired working height.
The entire lifting process must be continuously observed.

5.5 Set down into the safety ratchets

- Pushing the “Lower into catches” button (d) sets the lift down into the next possible catches.
- Keep the “Lower into catches” button (d) until all four safety ratchets are latched in and the lift can no longer move downwards.

Before working on the vehicle always lower the lift into the safety ratchets.

5.6 Lift out of the safety ratchets

Check the hazardous area around the platform and ensure that there are no people or objects in the immediate vicinity of, or on, the platform.

Push the ↑ “LIFT” (b) button until the catches are released.

5.7 Lowering the vehicle

⚠ ***Check that there are no people or objects in the hazardous area of the lift.***

- Push the ↓ "LOWER" button (c) to start the lowering process.
- The lift moves approx. 10 cm upwards to release the 4 safety ratchets which are then electrically retracted.
- Lower the lift to the desired position.
- The entire lowering process must be continuously observed.
- Shortly before reaching the lowest position the lift automatically switches off to prevent crushing in the foot area (CE stop).
- Thereafter the ↓ "LOWER" button (c) must be pushed again. An acoustic warning signal sounds during lowering until the floor is reached.
- Once the vehicle is at the lowest position it can be driven off the lift.

5.8 Safety switch below the drive rail

The lift has a safety switch (4) fitted below the drive-in rails used to monitor the cables.This triggers if,

- a cable breaks
- the lift moves onto an obstacle and the cable loosens
- only one safety ratchet has a catch latched in and the cable is loose.

⚠ ***The lift then remains in place with no functionality.***

5.9 Adjusting the platform

- It is possible to adjust the rail of the different wheelbase. That is necessary to reach the different wheelbases of the vehicles. One platform is only movable without load. The measure 850-1150 mm between the platform can be reached.
- Remove the load and raise the lift on approx.1000 mm height. The platform is movable into the chosen position without high force.

6 Troubleshooting

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

Problem: Motor does not start!	
Potential causes:	solution:
No power supply	*Check the power supply*
Main switch is not engaged	*Check the main switch*
The main switch is defective	*Check the main switch*
The main fuse defective	*Check Fuse*
The feed line is cut	*Check the complete cable*
Thermal switch in the motor is active	*Let motor cool down*
Motor is defective	*Call technical service*

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

Problem: the lift does not lower!	
Potential causes:	solution:
An obstacle is restricting the lift from being lowered	*(see chapter 6.1)*
The ball valve is defective	*Call technical service*
Fuse is defective	*Check the fuse*
The ratchets are locked of defective	*Call technical service*
Wrong sequence when operation	*See chapter 5*
No feedback from the ratchet switch	*Call technical service*

6.1 Lowering onto an obstacle

If the lift moves onto an obstacle during lowering, or remains stuck with the safety catches in the catch bar, a cable loosens. A safety switch (5) located below the drive-in rail is activated and the lift switches off. In this case, move the lift upwards by pushing the “Bridge”

(16) and the o “LIFT” (12) buttons on the operating panel until the obstacle can be removed or the cable is tensioned again.
Afterwards the lift is in a normal work condition and can continue to be operated as described in the operating manual.

6.2 Emergency lowering

⚠ ***An emergency lowering is an engagement into the system controls and may only be done by experienced specialists.***
The emergency lowering must be done in the following described sequence, otherwise it can lead to damage and hazard to life and limb.

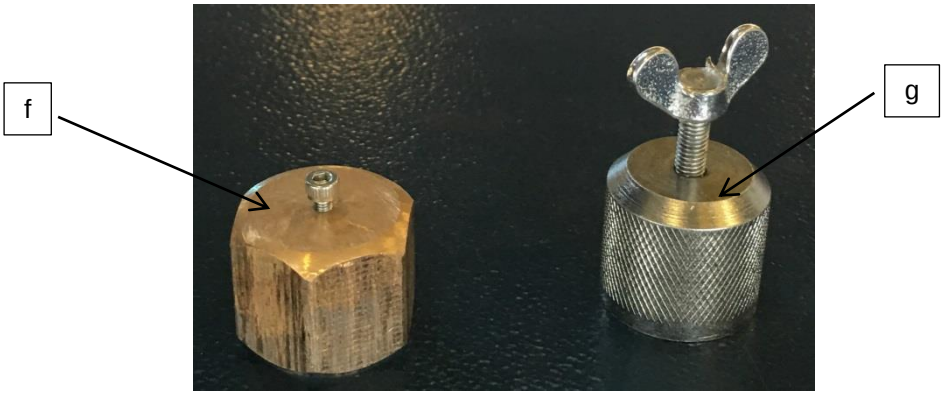
⚠ ***Any kind of external leakage is not permitted and must immediately taken care of. This is absolutely necessary especially before an emergency lowering.***

i If there is a power failure an emergency lowering can only be done if the safety ratchets are not engaged. For this reason wait until the power failure is over. If there is a defective valve, a latched in lift can be slightly lifted by pushing the ↑ “LIFT” button (b) so the catches (j) can be manually retracted.

- People may not stand in the hazardous area around the lift.
- The safety ratchets must be capable of being manually retracted in order to fasten them using a suitable object (e.g. wire) against latching in.

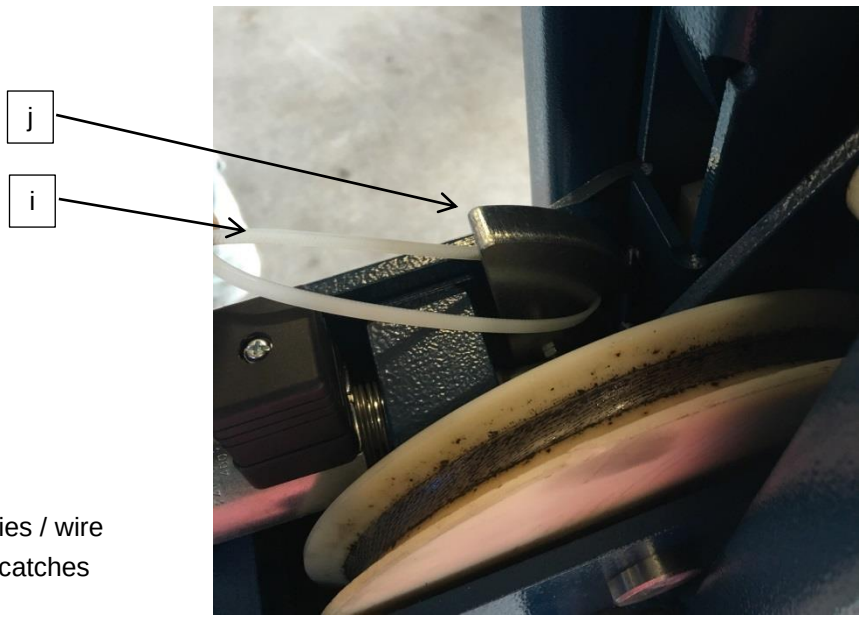
In order to execute the emergency lowering the following tools are required:

- 1 x screw-on cap with Allen screw (f)
- 2 x screw-on cap with wing bolt (g)
- 1 x 3 Allen key (h)
- 4 x cable ties / wire (i)



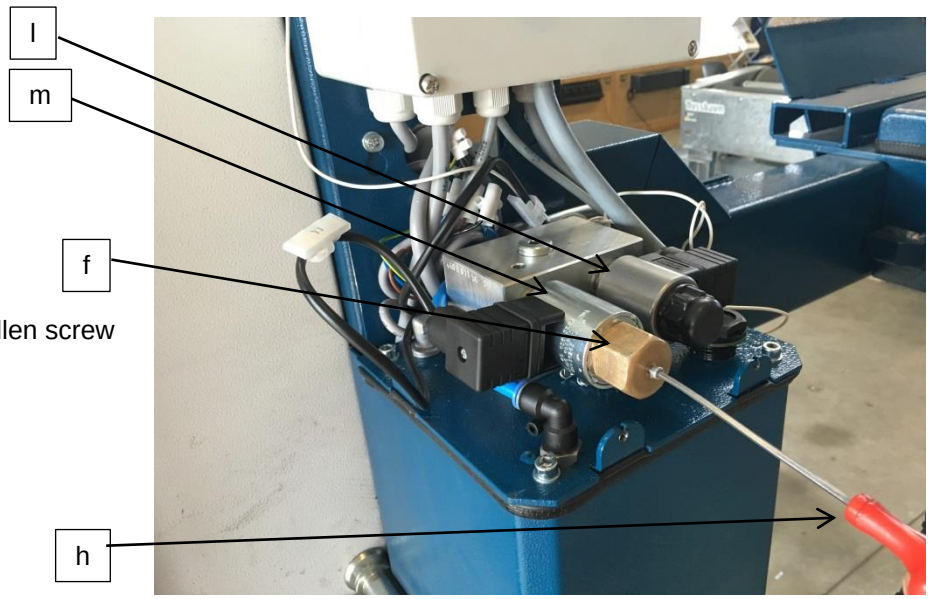
f) screw-on cap with Allen screw g) screw-on cap with wing bolt

Before the emergency lowering can be done, the safety catches (j) must be manually retracted. When the safety latches are snapped, the lift must be moved out of the latches or lifted with a suitable device to release the latches. Then the safety ratchet can be tied back via a cable tie or a wire (i). This has to be done on all four columns of the lift.



i) cable ties / wire
j) safety catches

⚠ ***During the emergency discharge ensure there are no people under the lift!***



f) screw-on cap with Allen screw
h) Allen key
l) valve MV1
m) valve MV2

To lower the lift the control valve MV2 (m) on the aggregate has to be opened.
Therefore the unit cover has to be removed. The control valve MV2 is the left one of the two valves. Again, first the black cap has to be removed and then the screw-on cap with the Allen screw (f) is fastened.
By tightening the Allen screw the valve MV2 is opening and the lift begins to lower. The lowering speed can be controlled by adjusting the Allen screw.
In case of danger stop the lowering operation by closing the valve MV2.

7 Inspection and Maintenance

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

To guarantee the utmost availability and to ensure that the lift remains functional, maintenance work contracts are organised between our clients and their local retailers.
A service must be performed at regular intervals of 3 months through the operator in accordance with following service manual. If the lift is in continuous operation or in a dirty environment, the maintenance rate must be increased.
During daily operation the lift must be closely observed to ensure that it is functioning correctly. In the case of malfunction or leakage the technical service must be informed.

7.1 Maintenance plan of the lift

- Before beginning any maintenance work isolate the power supply. Secure the main switch (lock it). Secure the danger area around the automotive lift and secure the lift against unintentional lowering.
- Clean and check the stripper of the cylinder.
- Clean the piston-rod using compressed air..
- Clean the protection hose at the operating column. Grease it with a multipurpose liquid, otherwise the hose sticks to the column.
- Check the condition of ropes. If torn wires are discovered, the complete rope-set must be changed.
- Check the condition of the electrical parts.
- Clean and lubricate the moving parts of the lift (hinge bolts, sliding pieces, sliding surfaces) grease with a multipurpose liquid (example: Auto Top 2000 LTD. Agip).
- Grease the lubricate nipples with a multipurpose lipid. (example: Auto Top 2000 LTD. Agip).
- Clean and check the function of the ratchet. Grease the surface with a multipurpose lipid.
- Check all welded joints for cracks on the automotive-lift.
  If any cracks are found on the lift cease use immediately. Switch-off and secure the main switch (lock) and call the service partner.
- Check all surfaces and repair if necessary.
- Damage to external surfaces, must be immediately repaired.
  If theses repairs are not made immediately, permanent damage to the powder-coated surface may result.
  Repair and clean damaged areas with an abrasive paper (grain 120). After this is complete, use a suitable paint (observe the RAL Number).

- Check the zinc surface and repair it with a suitable tool. Use abrasive paper (grain 280).
  White rust can result from moisture laying in certain areas for long periods of time. Poor aerating can also result in rust formation.
  Rust may result from mechanical damage, wear, aggressive sediments (de-icing salt, liquids) or insufficient cleaning.
  Repair and clean these areas with abrasive paper (grain 280).
  After this is complete, use a suitable paint (observe the RAL Number).
- The hydraulic oil has to be changed at least once a year. To change the oil, lower the lift into its lowest position. Empty all tanks and refill with clean oil, approx. (see chapter 3.) per hydraulic unit are needed.
  Use an ATF-Suffix hydraulic-oil (OEST Company) if the ambient temperature is under 5 degrees centigrade. After filling, the hydraulic oil must be between the upper and lower markings of the oil level gauge.
  Remove the old oil according to the appropriate regulations.
- Check the hydraulic tubes for leakage.
- It is prescribed (VBG 14, § 52-3 German regulation) to exchange the hydraulic hose if its necessary, but latest after 6 years.
- Check that all screws and bolts are correctly torque (turning moments, see the list)

Turning moment for screws

property class 8.8

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

property class 10.9

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

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

Drehmomenttabelle 8.8-10.9 E

7.2 How often must the lift be cleaned?

A regular and appropriate maintenance practice will aid the preservation of the lift.
No guarantees can be given when damage (egg rust or fading colour) is the direct result of poor maintenance and cleaning practice.
Regular cleaning of all kinds of dirt is the best protection against wear and the formation of rust and will prolong the life of the lift

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

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

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

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

8 Security check

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

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

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

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

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

9 Handing over and Initiation

9.1 Regulations

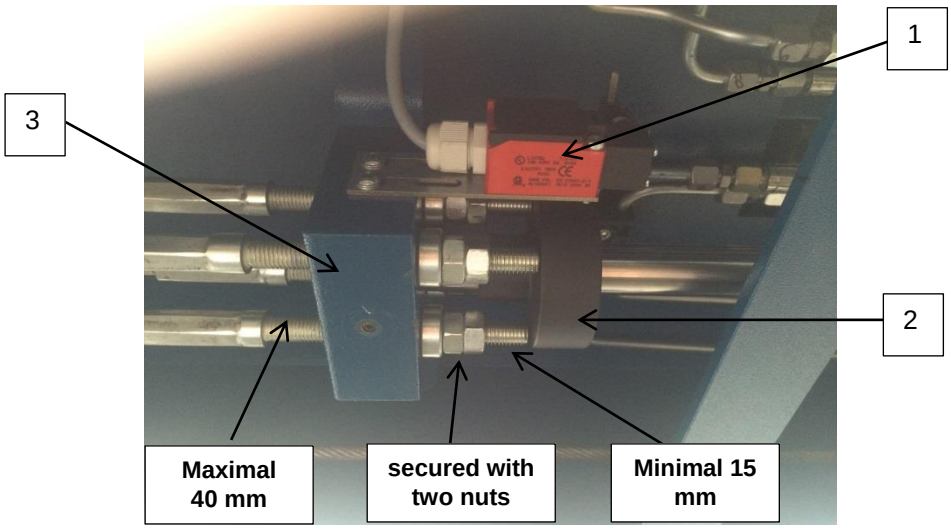
- The installation of the lift is performed by trained technicians of the manufacturer or one of its distribution partners. If the operator can provide trained mechanics, he or she can install the lift by him or herself. The installation has to be done according to this regulation.
- Installing the standard-automotive lift in a hazardous location or a washing bay is not allowed..
- Before installation a sufficient foundation must be constructed. If the foundation is already constructed then proof that the foundation conforms to the standard is required.
  A level foundation for the installation is required. The foundations must be based in a frost resistance depth, both outdoors and indoors in a position where the installer believes there is no chance of frost.
- An electrical supply 3~/N+PE, 400 V, 50 Hz must be provided.
  The supply line must be protected with a time-lag fuse T16A (VDE0100 German regulation). The minimum diameter amounts to 2.5 mm².
- All cable ducts must be equipped with protective coverings to prevent accidents.

9.2 Erection and bolting down the lift

It is necessary to dowel the columns at 4 points. For this a concrete floor without reinforcement, thickness of 140 mm and quality C20/25 is needed. In case of doubt a test drill is necessary and a dowel is to put in. Afterwards the Liebig-dowel (German Dowel manufacturer) is to fasten with a torque of 40 Nm. If the necessary torque is too low or if there are cracks in the concrete floor, a foundation in accordance with the sheet ”foundation plan” is to erected. As well it must be paid attention that the installation place is even to guarantee a horizontal erection of the lift.

- Put runways on two erection trestles at installation place, pay attention of exactly difference between the runways (refer to data sheet)
- Position the Traverses on the face of the runways, and put the plugs together.
- Lay out Ropes into right position (see pic)
- Fasten the crossbeam at the rail. Connect the plugs (optional: lighting, CE-Stop switch).
- Pull the ropes through the crossbeam.
- Pull cables (power supply, air etc.) through the crossbeam and connect..
- Position the columns at the end of the crossbeam.
- Adjust the columns with a water bubble.
- Bore holes to fix the dowels through the borings of the base plates. Clean holes with pressure air. Put in safety dowels with washers in borings. The manufacturer demands LIEBIG safety dowels type B 10 or equal dowels of another manufacturer (with allowance) but observe their regulations! Before doweling check concrete floor with quality C20/25 if the concrete floor goes to the top edge of the floor. In this case the dowels have to be chosen according to picture 9. If the ground is covered with floor tiles, the dowels have to be chosen according to picture 10.
- Tighten the dowels a little bit.
- Fasten the ropes at the top of the column.
- Check the position of the columns again.
- Connect the electrical power supply.

The loose / broken cable switch (5) is only pre-mounted at the factory! After threading in and fastening the cable, the switch must be set according to picture below.
This is required again after each cable change or after the platform has been moved.



1) Loose / broken cable switch 2) Cable support 3)Moving trigger element

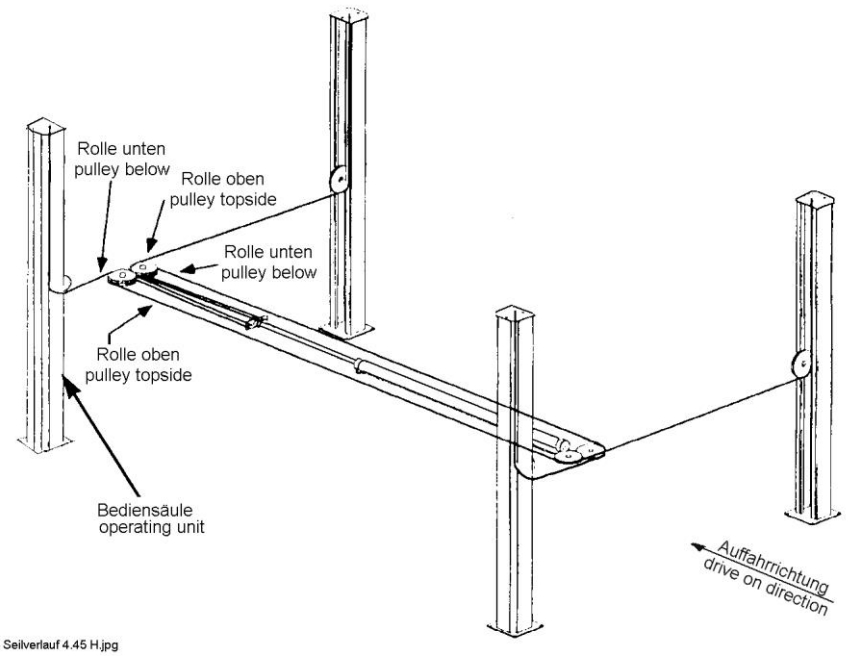
- Fasten the crossbeam at the rail one more time.
- Fill in the hydraulic oil. (Litre ? see chapter 3.)

In case of operation the automotive-lift, the chapter " Safety regulations" and "Operating instruction" must be observed.

- Raise the lift until the supports can be removed. Press the button "lifting"
- Remove the supports.
- Lower the lift into the lowest position. (See chapter 5.2). Fasten the ratchet-strip.
- Raise the lift and hang the spring into ratchet strip.

pic 6: Hang the spring into the ratchet-strip

- Lower the lift into the ratchet. (press the button „lowering“ and pull the lever downwards).
- Adjust the columns again with a water bubble.
- Fasten the dowels with a torque key.
- Fasten the ramps and the safety device at the end of the rail.
- Adjust the sliding guidance at the crossbeam (approx. 4-5 mm movement between the sliding guidance and the column).
- Adjust regular height of the rails at all of the four columns by moving the nuts, which fix the carrying ropes in the head plate. For demanded measuring accuracy of all important vehicle manufacturer it is necessary to install the lift very exactly and to line it up. For this to the following points should be paid attention.
- Lift the automotive lift to eye level and lower it down in the ratchet (refer to operating instructions).



Seilverlauf 4.45 H.jpg

#

9.3 Change of lift location

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

- Remove the spring at the ratchet-strip.
- Lower the lift in the lowest position
- Loosen and remove the ratchet-strip. If necessary, pull back the ratchet manually.
- Remove the cover of the Oil tank and remove the oil.
- Raise the lift on a working height. Press the button „lifting“
- Lower the lift until the rails are lay on the erection trestles.
- Disconnect the power supply.
- Disconnect the hydraulic hoses.
- Loosen and remove the dowels.
- Loosen and remove the screws of the crossbeam.
- Transport the automotive-lift to the its new location
- Install the lift in accordance with chapter 9 “ Installation and Initiation”.

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

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

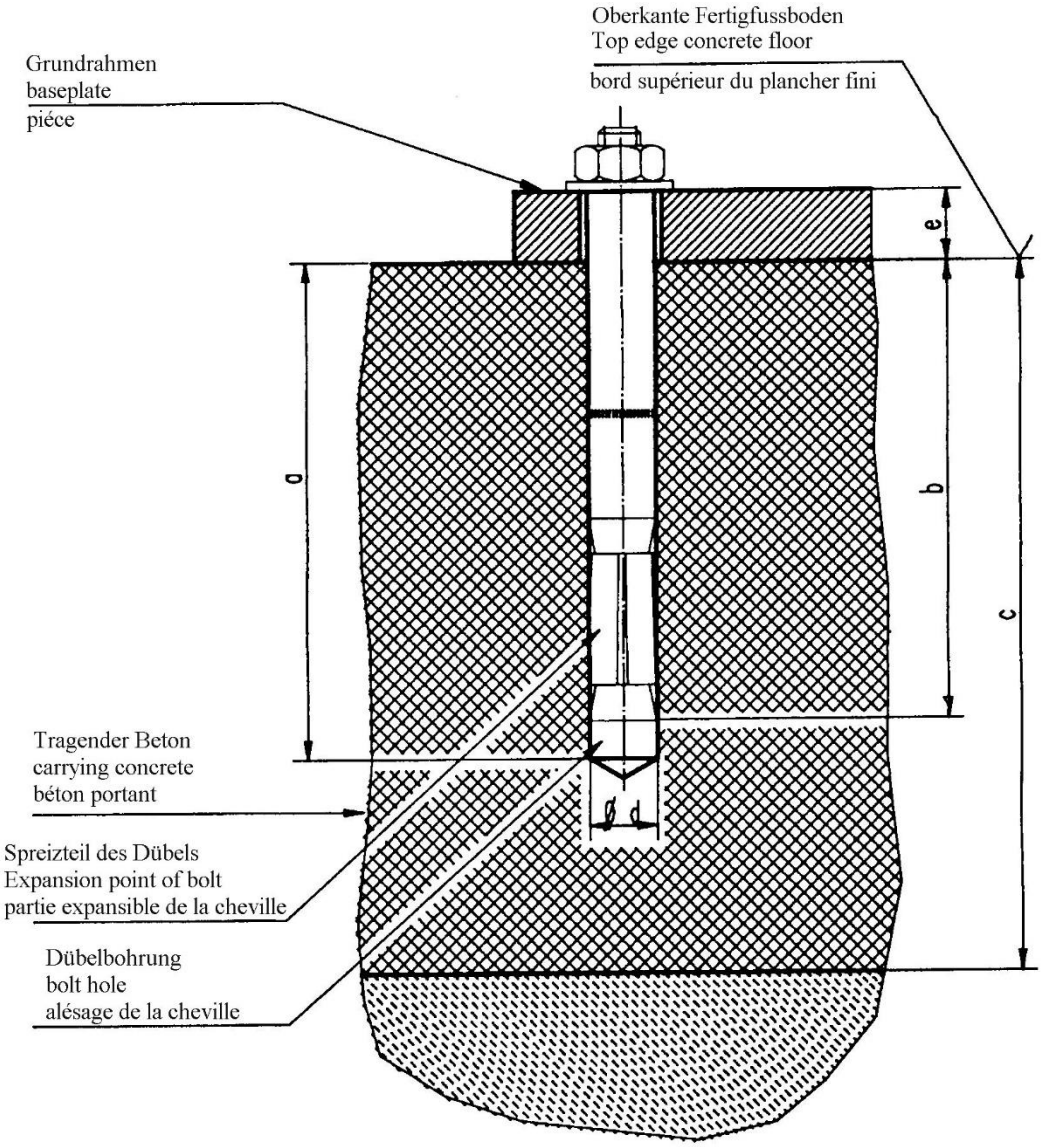
9.4 Initiation

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

If the lift is installed by a competent person, he or she is to perform the security check. If the operator installs the lift by him or herself, he or she must instruct a competent person to perform the security check.
The competent confirms the faultless function of the lift in the installation record and the form for the security check and authorises the use of the lift.

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

Pic 9: choice of the dowel length without floor pavement or tile surface
BM10-15

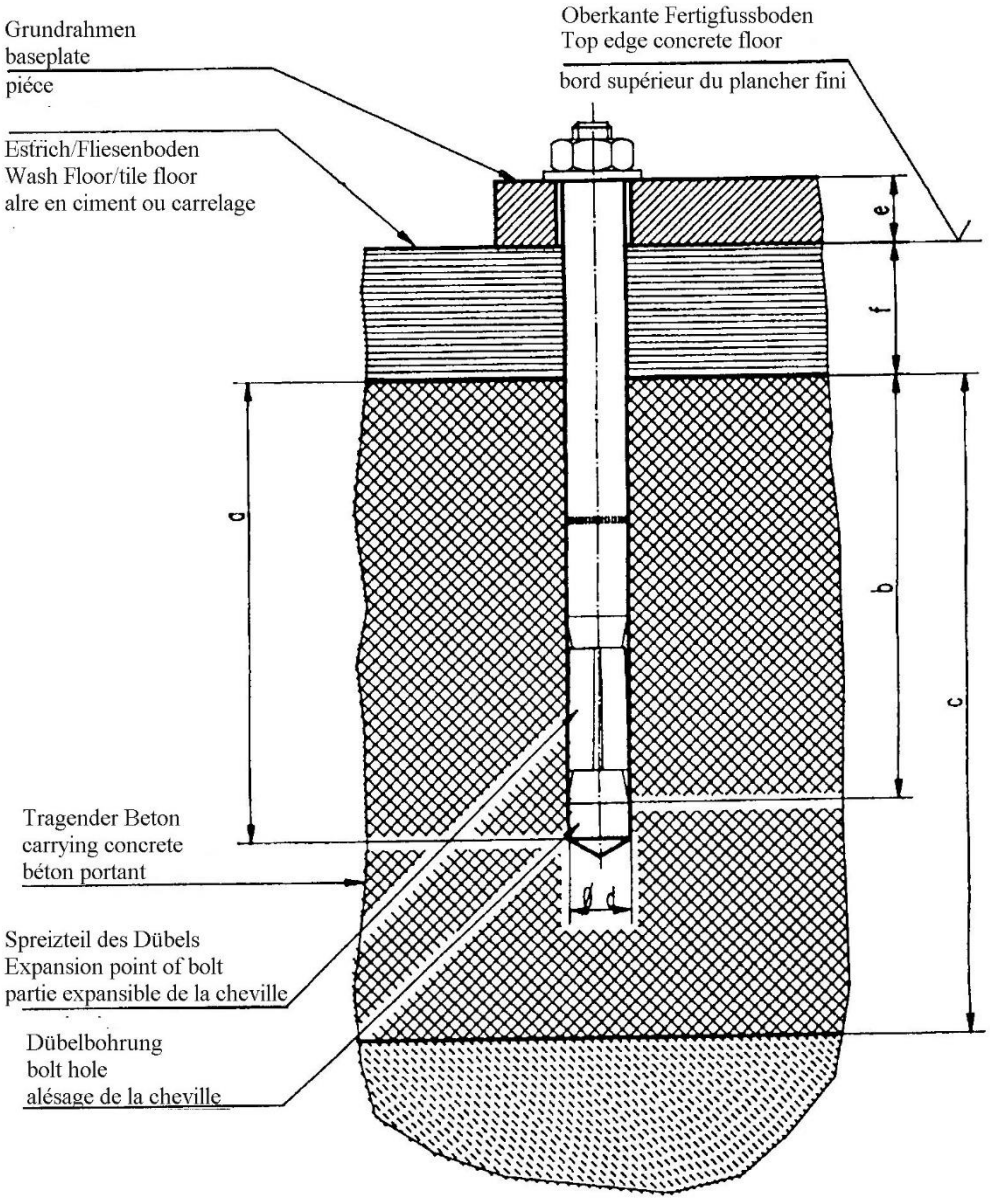


Liebig-dowels		
Dowel type		BM10-/70/40
Drilling depth	a	85
Min. anchorage depth	b	70
Thickness of concrete	c	min.140(*)
Diameter of bore	d	15
Thickness of the lift-pieces	e	0-40
Number of dowels		X
Starting torque		40

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

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

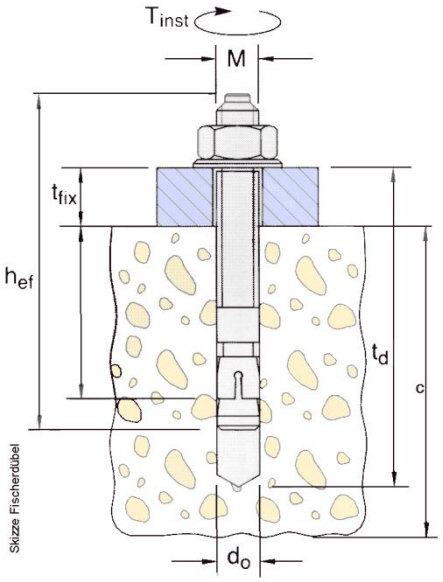
Pic 10: choice of the dowel length with floor pavement or tile surface



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

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

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

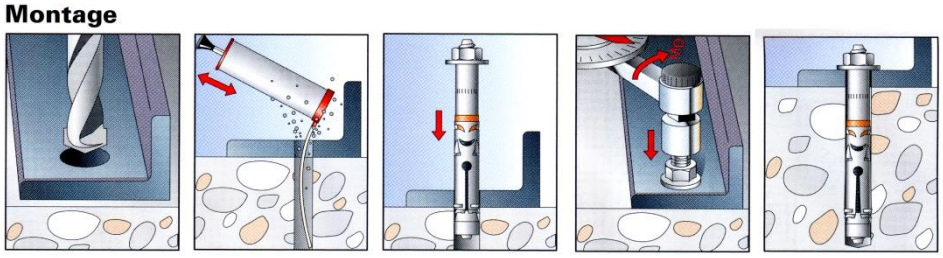


Änderungen vorbehalten!
subject to alterations!
sous réserve des modifications!

fischer-Dübel		Jumbo [b], Sprinter [b], 4.32H [e] -4.300H [e], 1.25 SH-1.35SH [a], 2.30 TLS [a], 2.35 TS/TSA/TSK [a], 2.32TSAP [a], 2.35TSAPH [a],	2.25SL[3], 2.32SL[o]-2.35 SL[o], SPL [b] [1]/Power-Lift [b], 1.20 SE [b] UNI-LIFT 3500 NT/CLT [d], 2.32TTL [a]	HDL5000 [c], HDL6500 [c], 250SE[f],
Dübel typ of dowel type de cheville		FH 15/50 B	FH 18 x 100/100 B	FH 24/100 B
Bohrteife drilling depth Profondeur de l'alésage	t_d	145	230	255
Mindestverankerungstiefe min.anchorage depth Profondeur minimale dáncrage	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 turníng moment moment d´une force	M_D	40	80	120

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

Montage



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

First security check before installation

Serial-no.:_____ ☞ Filling out and leave in this manual

kind of check	all right	defect missing	veri-fication	remark
Type plate	☐	☐	☐	.....
Short operating instruction	☐	☐	☐	.....
Warning designation	☐	☐	☐	.....
Sticker max. capacity	☐	☐	☐	.....
Designation lifting/lowering	☐	☐	☐	.....
Detailed operating instruction	☐	☐	☐	.....
Lockable main switch	☐	☐	☐	.....
Condition, Function Button „Lifting“	☐	☐	☐	.....
Condition, Function Lever „Lowering„	☐	☐	☐	.....
Function Button „Bridging button“	☐	☐	☐	.....
Function „Lowering into the ratchet“	☐	☐	☐	.....
Condition „roll over safety device“	☐	☐	☐	.....
Condition Cover	☐	☐	☐	.....
Condition ratchet and ratchet strip	☐	☐	☐	.....
Condition automotive-lift	☐	☐	☐	.....
Condition bolts and bearings	☐	☐	☐	.....
Construction (deformation, cracking)	☐	☐	☐	.....
Function movable rail	☐	☐	☐	.....
Condition welding	☐	☐	☐	.....
Torque moment of screws and dowels	☐	☐	☐	.....
Condition hydraulic unit	☐	☐	☐	.....
Condition colour	☐	☐	☐	.....
Condition ropes and fastening	☐	☐	☐	.....
Condition piston rod	☐	☐	☐	.....
Closeness of the hydraulic system	☐	☐	☐	.....
Level of hydraulic oil	☐	☐	☐	.....
Condition hydraulic hoses	☐	☐	☐	.....
Condition electrical cable	☐	☐	☐	.....
Condition concrete	☐	☐	☐	.....
Function test with vehicle	☐	☐	☐	.....
Function lighting (optional)	☐	☐	☐	.....

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

Security check carried out:.....

Carried out the company:.....

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

Result of the Check:

☐ Initiation not permitted, verification necessary
☐ Initiation possible, repair failures until.....
☐ No failings, Initiation possible

....
signature of the expert signature of the operator

If failures must be repaired:

Failures repaired at: ....
signature of the operator

(Use another form for verification!)

Regular security check and Maintenance

Serial-no.:_____ ☞ Filling out and leave in this manual

kind of check	all right	defect missing	veri-fication	remark
Type plate	☐	☐	☐	.....
Short operating instruction	☐	☐	☐	.....
Warning designation	☐	☐	☐	.....
Sticker max. capacity	☐	☐	☐	.....
Designation lifting/lowering	☐	☐	☐	.....
Detailed operating instruction	☐	☐	☐	.....
Lockable main switch	☐	☐	☐	.....
Condition, Function Button „Lifting“	☐	☐	☐	.....
Condition, Function Lever „Lowering„	☐	☐	☐	.....
Function Button „Bridging button“	☐	☐	☐	.....
Function „Lowering into the ratchet“	☐	☐	☐	.....
Condition „roll over safety device“	☐	☐	☐	.....
Condition Cover	☐	☐	☐	.....
Condition ratchet and ratchet strip	☐	☐	☐	.....
Condition automotive-lift	☐	☐	☐	.....
Condition bolts and bearings	☐	☐	☐	.....
Construction (deformation, cracking)	☐	☐	☐	.....
Function movable rail	☐	☐	☐	.....
Condition welding	☐	☐	☐	.....
Torque moment of screws and dowels	☐	☐	☐	.....
Condition hydraulic unit	☐	☐	☐	.....
Condition colour	☐	☐	☐	.....
Condition ropes and fastening	☐	☐	☐	.....
Condition piston rod	☐	☐	☐	.....
Closeness of the hydraulic system	☐	☐	☐	.....
Level of hydraulic oil	☐	☐	☐	.....
Condition hydraulic hoses	☐	☐	☐	.....
Condition electrical cable	☐	☐	☐	.....
Condition concrete	☐	☐	☐	.....
Function test with vehicle	☐	☐	☐	.....
Function lighting (optional)	☐	☐	☐	.....

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

Security check carried out:.....

Carried out the company:.....

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

Result of the Check:

☐ Initiation not permitted, verification necessary
☐ Initiation possible, repair failures until.....
☐ No failings, Initiation possible

....
signature of the expert signature of the operator

If failures must be repaired:

Failures repaired at: ....
signature of the operator

(Use another form for verification!)

Regular security check and Maintenance

Serial-no.:_____ ☞ Filling out and leave in this manual

kind of check	all right	defect missing	veri-fication	remark
Type plate	☐	☐	☐	.....
Short operating instruction	☐	☐	☐	.....
Warning designation	☐	☐	☐	.....
Sticker max. capacity	☐	☐	☐	.....
Designation lifting/lowering	☐	☐	☐	.....
Detailed operating instruction	☐	☐	☐	.....
Lockable main switch	☐	☐	☐	.....
Condition, Function Button „Lifting“	☐	☐	☐	.....
Condition, Function Lever „Lowering„	☐	☐	☐	.....
Function Button „Bridging button“	☐	☐	☐	.....
Function „Lowering into the ratchet“	☐	☐	☐	.....
Condition „roll over safety device“	☐	☐	☐	.....
Condition Cover	☐	☐	☐	.....
Condition ratchet and ratchet strip	☐	☐	☐	.....
Condition automotive-lift	☐	☐	☐	.....
Condition bolts and bearings	☐	☐	☐	.....
Construction (deformation, cracking)	☐	☐	☐	.....
Function movable rail	☐	☐	☐	.....
Condition welding	☐	☐	☐	.....
Torque moment of screws and dowels	☐	☐	☐	.....
Condition hydraulic unit	☐	☐	☐	.....
Condition colour	☐	☐	☐	.....
Condition ropes and fastening	☐	☐	☐	.....
Condition piston rod	☐	☐	☐	.....
Closeness of the hydraulic system	☐	☐	☐	.....
Level of hydraulic oil	☐	☐	☐	.....
Condition hydraulic hoses	☐	☐	☐	.....
Condition electrical cable	☐	☐	☐	.....
Condition concrete	☐	☐	☐	.....
Function test with vehicle	☐	☐	☐	.....
Function lighting (optional)	☐	☐	☐	.....

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

Security check carried out:.....

Carried out the company:.....

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

Result of the Check:

☐ Initiation not permitted, verification necessary
☐ Initiation possible, repair failures until.....
☐ No failings, Initiation possible

....
signature of the expert signature of the operator

If failures must be repaired:

Failures repaired at: ....
signature of the operator

(Use another form for verification!)

Regular security check and Maintenance

Serial-no.:_____ ☞ Filling out and leave in this manual

kind of check	all right	defect missing	veri-fication	remark
Type plate	☐	☐	☐	.....
Short operating instruction	☐	☐	☐	.....
Warning designation	☐	☐	☐	.....
Sticker max. capacity	☐	☐	☐	.....
Designation lifting/lowering	☐	☐	☐	.....
Detailed operating instruction	☐	☐	☐	.....
Lockable main switch	☐	☐	☐	.....
Condition, Function Button „Lifting“	☐	☐	☐	.....
Condition, Function Lever „Lowering„	☐	☐	☐	.....
Function Button „Bridging button“	☐	☐	☐	.....
Function „Lowering into the ratchet“	☐	☐	☐	.....
Condition „roll over safety device“	☐	☐	☐	.....
Condition Cover	☐	☐	☐	.....
Condition ratchet and ratchet strip	☐	☐	☐	.....
Condition automotive-lift	☐	☐	☐	.....
Condition bolts and bearings	☐	☐	☐	.....
Construction (deformation, cracking)	☐	☐	☐	.....
Function movable rail	☐	☐	☐	.....
Condition welding	☐	☐	☐	.....
Torque moment of screws and dowels	☐	☐	☐	.....
Condition hydraulic unit	☐	☐	☐	.....
Condition colour	☐	☐	☐	.....
Condition ropes and fastening	☐	☐	☐	.....
Condition piston rod	☐	☐	☐	.....
Closeness of the hydraulic system	☐	☐	☐	.....
Level of hydraulic oil	☐	☐	☐	.....
Condition hydraulic hoses	☐	☐	☐	.....
Condition electrical cable	☐	☐	☐	.....
Condition concrete	☐	☐	☐	.....
Function test with vehicle	☐	☐	☐	.....
Function lighting (optional)	☐	☐	☐	.....

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

Security check carried out:.....

Carried out the company:.....

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

Result of the Check:

☐ Initiation not permitted, verification necessary
☐ Initiation possible, repair failures until.....
☐ No failings, Initiation possible

....
signature of the expert signature of the operator

If failures must be repaired:

Failures repaired at: ....
signature of the operator

(Use another form for verification!)

Regular security check and Maintenance

Serial-no.:_____ ☞ Filling out and leave in this manual

kind of check	all right	defect missing	veri-fication	remark
Type plate	☐	☐	☐	.....
Short operating instruction	☐	☐	☐	.....
Warning designation	☐	☐	☐	.....
Sticker max. capacity	☐	☐	☐	.....
Designation lifting/lowering	☐	☐	☐	.....
Detailed operating instruction	☐	☐	☐	.....
Lockable main switch	☐	☐	☐	.....
Condition, Function Button „Lifting“	☐	☐	☐	.....
Condition, Function Lever „Lowering„	☐	☐	☐	.....
Function Button „Bridging button“	☐	☐	☐	.....
Function „Lowering into the ratchet“	☐	☐	☐	.....
Condition „roll over safety device“	☐	☐	☐	.....
Condition Cover	☐	☐	☐	.....
Condition ratchet and ratchet strip	☐	☐	☐	.....
Condition automotive-lift	☐	☐	☐	.....
Condition bolts and bearings	☐	☐	☐	.....
Construction (deformation, cracking)	☐	☐	☐	.....
Function movable rail	☐	☐	☐	.....
Condition welding	☐	☐	☐	.....
Torque moment of screws and dowels	☐	☐	☐	.....
Condition hydraulic unit	☐	☐	☐	.....
Condition colour	☐	☐	☐	.....
Condition ropes and fastening	☐	☐	☐	.....
Condition piston rod	☐	☐	☐	.....
Closeness of the hydraulic system	☐	☐	☐	.....
Level of hydraulic oil	☐	☐	☐	.....
Condition hydraulic hoses	☐	☐	☐	.....
Condition electrical cable	☐	☐	☐	.....
Condition concrete	☐	☐	☐	.....
Function test with vehicle	☐	☐	☐	.....
Function lighting (optional)	☐	☐	☐	.....

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

Security check carried out:.....

Carried out the company:.....

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

Result of the Check:

☐ Initiation not permitted, verification necessary
☐ Initiation possible, repair failures until.....
☐ No failings, Initiation possible

....
signature of the expert signature of the operator

If failures must be repaired:

Failures repaired at: ....
signature of the operator

(Use another form for verification!)

Regular security check and Maintenance

Serial-no.:_____ ☞ Filling out and leave in this manual

kind of check	all right	defect missing	veri-fication	remark
Type plate	☐	☐	☐	.....
Short operating instruction	☐	☐	☐	.....
Warning designation	☐	☐	☐	.....
Sticker max. capacity	☐	☐	☐	.....
Designation lifting/lowering	☐	☐	☐	.....
Detailed operating instruction	☐	☐	☐	.....
Lockable main switch	☐	☐	☐	.....
Condition, Function Button „Lifting“	☐	☐	☐	.....
Condition, Function Lever „Lowering„	☐	☐	☐	.....
Function Button „Bridging button“	☐	☐	☐	.....
Function „Lowering into the ratchet“	☐	☐	☐	.....
Condition „roll over safety device“	☐	☐	☐	.....
Condition Cover	☐	☐	☐	.....
Condition ratchet and ratchet strip	☐	☐	☐	.....
Condition automotive-lift	☐	☐	☐	.....
Condition bolts and bearings	☐	☐	☐	.....
Construction (deformation, cracking)	☐	☐	☐	.....
Function movable rail	☐	☐	☐	.....
Condition welding	☐	☐	☐	.....
Torque moment of screws and dowels	☐	☐	☐	.....
Condition hydraulic unit	☐	☐	☐	.....
Condition colour	☐	☐	☐	.....
Condition ropes and fastening	☐	☐	☐	.....
Condition piston rod	☐	☐	☐	.....
Closeness of the hydraulic system	☐	☐	☐	.....
Level of hydraulic oil	☐	☐	☐	.....
Condition hydraulic hoses	☐	☐	☐	.....
Condition electrical cable	☐	☐	☐	.....
Condition concrete	☐	☐	☐	.....
Function test with vehicle	☐	☐	☐	.....
Function lighting (optional)	☐	☐	☐	.....

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

Security check carried out:.....

Carried out the company:.....

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

Result of the Check:

☐ Initiation not permitted, verification necessary
☐ Initiation possible, repair failures until.....
☐ No failings, Initiation possible

....
signature of the expert signature of the operator

If failures must be repaired:

Failures repaired at: ....
signature of the operator

(Use another form for verification!)

Regular security check and Maintenance

Serial-no.:_____ ☞ Filling out and leave in this manual

kind of check	all right	defect missing	veri-fication	remark
Type plate	☐	☐	☐	.....
Short operating instruction	☐	☐	☐	.....
Warning designation	☐	☐	☐	.....
Sticker max. capacity	☐	☐	☐	.....
Designation lifting/lowering	☐	☐	☐	.....
Detailed operating instruction	☐	☐	☐	.....
Lockable main switch	☐	☐	☐	.....
Condition, Function Button „Lifting“	☐	☐	☐	.....
Condition, Function Lever „Lowering„	☐	☐	☐	.....
Function Button „Bridging button“	☐	☐	☐	.....
Function „Lowering into the ratchet“	☐	☐	☐	.....
Condition „roll over safety device“	☐	☐	☐	.....
Condition Cover	☐	☐	☐	.....
Condition ratchet and ratchet strip	☐	☐	☐	.....
Condition automotive-lift	☐	☐	☐	.....
Condition bolts and bearings	☐	☐	☐	.....
Construction (deformation, cracking)	☐	☐	☐	.....
Function movable rail	☐	☐	☐	.....
Condition welding	☐	☐	☐	.....
Torque moment of screws and dowels	☐	☐	☐	.....
Condition hydraulic unit	☐	☐	☐	.....
Condition colour	☐	☐	☐	.....
Condition ropes and fastening	☐	☐	☐	.....
Condition piston rod	☐	☐	☐	.....
Closeness of the hydraulic system	☐	☐	☐	.....
Level of hydraulic oil	☐	☐	☐	.....
Condition hydraulic hoses	☐	☐	☐	.....
Condition electrical cable	☐	☐	☐	.....
Condition concrete	☐	☐	☐	.....
Function test with vehicle	☐	☐	☐	.....
Function lighting (optional)	☐	☐	☐	.....

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

Security check carried out:.....

Carried out the company:.....

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

Result of the Check:

☐ Initiation not permitted, verification necessary
☐ Initiation possible, repair failures until.....
☐ No failings, Initiation possible

....
signature of the expert signature of the operator

If failures must be repaired:

Failures repaired at: ....
signature of the operator

(Use another form for verification!)

Regular security check and Maintenance

Serial-no.:_____ ☞ Filling out and leave in this manual

kind of check	all right	defect missing	veri-fication	remark
Type plate	☐	☐	☐	.....
Short operating instruction	☐	☐	☐	.....
Warning designation	☐	☐	☐	.....
Sticker max. capacity	☐	☐	☐	.....
Designation lifting/lowering	☐	☐	☐	.....
Detailed operating instruction	☐	☐	☐	.....
Lockable main switch	☐	☐	☐	.....
Condition, Function Button „Lifting“	☐	☐	☐	.....
Condition, Function Lever „Lowering„	☐	☐	☐	.....
Function Button „Bridging button“	☐	☐	☐	.....
Function „Lowering into the ratchet“	☐	☐	☐	.....
Condition „roll over safety device“	☐	☐	☐	.....
Condition Cover	☐	☐	☐	.....
Condition ratchet and ratchet strip	☐	☐	☐	.....
Condition automotive-lift	☐	☐	☐	.....
Condition bolts and bearings	☐	☐	☐	.....
Construction (deformation, cracking)	☐	☐	☐	.....
Function movable rail	☐	☐	☐	.....
Condition welding	☐	☐	☐	.....
Torque moment of screws and dowels	☐	☐	☐	.....
Condition hydraulic unit	☐	☐	☐	.....
Condition colour	☐	☐	☐	.....
Condition ropes and fastening	☐	☐	☐	.....
Condition piston rod	☐	☐	☐	.....
Closeness of the hydraulic system	☐	☐	☐	.....
Level of hydraulic oil	☐	☐	☐	.....
Condition hydraulic hoses	☐	☐	☐	.....
Condition electrical cable	☐	☐	☐	.....
Condition concrete	☐	☐	☐	.....
Function test with vehicle	☐	☐	☐	.....
Function lighting (optional)	☐	☐	☐	.....

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

Security check carried out:.....

Carried out the company:.....

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

Result of the Check:

☐ Initiation not permitted, verification necessary
☐ Initiation possible, repair failures until.....
☐ No failings, Initiation possible

....
signature of the expert signature of the operator

If failures must be repaired:

Failures repaired at: ....
signature of the operator

(Use another form for verification!)

Regular security check and Maintenance

Serial-no.:_____ ☞ Filling out and leave in this manual

kind of check	all right	defect missing	veri-fication	remark
Type plate	☐	☐	☐	.....
Short operating instruction	☐	☐	☐	.....
Warning designation	☐	☐	☐	.....
Sticker max. capacity	☐	☐	☐	.....
Designation lifting/lowering	☐	☐	☐	.....
Detailed operating instruction	☐	☐	☐	.....
Lockable main switch	☐	☐	☐	.....
Condition, Function Button „Lifting“	☐	☐	☐	.....
Condition, Function Lever „Lowering„	☐	☐	☐	.....
Function Button „Bridging button“	☐	☐	☐	.....
Function „Lowering into the ratchet“	☐	☐	☐	.....
Condition „roll over safety device“	☐	☐	☐	.....
Condition Cover	☐	☐	☐	.....
Condition ratchet and ratchet strip	☐	☐	☐	.....
Condition automotive-lift	☐	☐	☐	.....
Condition bolts and bearings	☐	☐	☐	.....
Construction (deformation, cracking)	☐	☐	☐	.....
Function movable rail	☐	☐	☐	.....
Condition welding	☐	☐	☐	.....
Torque moment of screws and dowels	☐	☐	☐	.....
Condition hydraulic unit	☐	☐	☐	.....
Condition colour	☐	☐	☐	.....
Condition ropes and fastening	☐	☐	☐	.....
Condition piston rod	☐	☐	☐	.....
Closeness of the hydraulic system	☐	☐	☐	.....
Level of hydraulic oil	☐	☐	☐	.....
Condition hydraulic hoses	☐	☐	☐	.....
Condition electrical cable	☐	☐	☐	.....
Condition concrete	☐	☐	☐	.....
Function test with vehicle	☐	☐	☐	.....
Function lighting (optional)	☐	☐	☐	.....

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

Security check carried out:.....

Carried out the company:.....

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

Result of the Check:

☐ Initiation not permitted, verification necessary
☐ Initiation possible, repair failures until.....
☐ No failings, Initiation possible

....
signature of the expert signature of the operator

If failures must be repaired:

Failures repaired at: ....
signature of the operator

(Use another form for verification!)

Extraordinary security check

Serial-no.:_____ ☞ Filling out and leave in this manual

kind of check	all right	defect missing	veri-fication	remark
Type plate.....	☐	☐	☐	.....
Short operating instruction.....	☐	☐	☐	.....
Warning designation.....	☐	☐	☐	.....
Sticker max. capacity.....	☐	☐	☐	.....
Designation lifting/lowering	☐	☐	☐	.....
Detailed operating instruction	☐	☐	☐	.....
Lockable main switch.....	☐	☐	☐	.....
Condition, Function Button „Lifting“	☐	☐	☐	.....
Condition, Function Lever „Lowering „.....	☐	☐	☐	.....
Function Button „ Bridging button “.....	☐	☐	☐	.....
Function „Lowering into the ratchet“	☐	☐	☐	.....
Condition „roll over safety device“ ……	☐	☐	☐	.....
Condition Cover	☐	☐	☐	.....
Condition ratchet and ratchet strip.....	☐	☐	☐	.....
Condition automotive-lift	☐	☐	☐	.....
Condition bolts and bearings .....……..	☐	☐	☐	.....
Construction (deformation, cracking)	☐	☐	☐	.....
Function movable rail.....	☐	☐	☐	.....
Condition welding	☐	☐	☐	.....
Torque moment of screws and dowels.....	☐	☐	☐	.....
Condition hydraulic unit	☐	☐	☐	.....
Condition colour	☐	☐	☐	.....
Condition ropes and fastening	☐	☐	☐	.....
Condition piston rod.....	☐	☐	☐	.....
Closeness of the hydraulic system.....	☐	☐	☐	.....
Level of hydraulic oil..……	☐	☐	☐	.....
Condition hydraulic hoses.....	☐	☐	☐	.....
Condition electrical cable.....	☐	☐	☐	.....
Condition concrete	☐	☐	☐	.....
Function test with vehicle.....	☐	☐	☐	.....
Function lighting (optional)	☐	☐	☐	.....

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

Security check carried out:.....

Carried out the company:.....

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

Result of the Check:

☐ Initiation not permitted, verification necessary
☐ Initiation possible, repair failures until.....
☐ No failings, Initiation possible

....
signature of the expert signature of the operator

If failures must be repaired:

Failures repaired at: ....
signature of the operator

(Use another form for verification!)

Nussbaum Automotive Lifts GmbH | Korker Str. 24 | D 77694 Kehl-Bodersweier
www.nussbaumlifts.com | e-Mail: info@nussbaumlifts.com

Service Hotline Germany: 0800 5 288 911
Service Hotline International: +49 180 15 288 911
PB_NCL_COMBI-LIFT_4.80-H_EN_V4.0| EN | Version 4.0