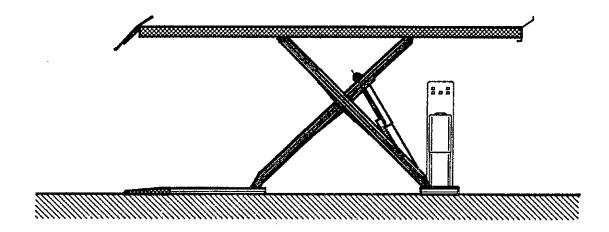


# UNI-LIFT 3000 UNI-LIFT 3000 w. wheel free lift

valid: August 1994



# Operating Instruction and documentation

serial-	-number:	 



lable of contents	
Record of Installation	4
Record of Handing over	5
1. Introduction	6
2. Master document of the automotive lift	7
CE-certificate/attestation of conformity	8
3. Technical Information	10
Data sheet over floor (UL 3000)	
Data sheet ground level (UL 3000)	
Data sheet over floor (UL 3000 w. wheel free lift)	
Data sheet ground level (UL 3000 w. whell free lift)	
Position of bearings (all versions)	
Foundation plan over floor (all versions)	
Foundation plan over floor, cable channels under floor	17
Foundation plan assembly ground level (UL 3000)	
Foundation plan assembly ground level (UL 3000 w. wheel free lift)	19
Electrical diagram drawing (UL 3000)	20
Parts list of Electrical diagram (UL 3000)	21
Clamped connections (UL 3000)	22
Clamped connections lift - command unit (UL 3000)	23
Hydraulic diagram drawing (UL 3000)	24
Parts list of hydraulic diagram (UL 3000)	25
Electrical diagram drawing (UL 3000 w. wheel free lift)	26
Parts list of electrical diagram (UL 3000 w. wheel free lift)	
Clamped connections (UL 3000 w. wheel free lift)	28
Page for notices	29
Hydraulic diagram drawing (UL 3000 w. wheel free lift)	30
Parts list of hydraulic diagram (UL 3000 w. wheel free lift)	
Pneumatic diagram drawing (all versions)	32
Parts list of pneumatic diagram (all versions)	32
4. Safety regulations	33
5.1 UL 3000	
5.2 UL 3000 w. wheel free lift	
6. Troubleshooting (emergency lowering in case of power failure Emergency lowering in case of power failure or defective valve	-



#### UNI-LIFT 3000

7. Maintenance	
8. Security check	45
9. Installation and initiation	45
Installation of the lift	45
Erection and doweling of the lift	46
Initiation	47
Change of installation place	47

## **Appendix**

Document "First security check before Installation"

Document "Regular security check"

Document "Extraordinary security check"

GS-certificate



#### UNI-LIFT 3000



Send this record, filled in and undersigned, to the automotive manufacturer after the installation

Otto Nußbaum GmbH & Co.KG

Korker Straße 24

777694 Kehl-Bodersweier

Germany

## Record of installation

The automotive lift Uni-Lift 3000 / Uni-Lift 3000 w. WFL			
serial number.:		was installed of	on
at the firm		at	
the safety was checke	ed and the lift was starte	et.	
The inetallation was a	ffected from the operat	ing outhority /	competent (please delete as applicable)
The instanation was e	nected from the operat	ing authority / (	competent (please defete as applicable)
The safety of the automotive lift was checked from the competent before the initial operation			
The operating authority attest the installation of the automotive lift, the competent attest the correct initial operation.			
date	name of the operating	autnority	signature of the operating authority
date	name of the competer	nt	signature of the competent



UNI-LIFT 3000

## Record of handing over

The automotive lift UNI-LIFT 3000 / UNI-LIFT 3000 with wheel free lift (WFL) with the			
serial number.:		was installed on	
at the firm		at	
the safety was checked	ed and the lift was started	et.	
The persons below were introduced after the installation of the automotive lift. The introduction was carried out from an erector of the lift-manufacturer or from a franchised dealer (competent).			
date	name		signature
date	name		signature
date	name		signature
			•
date	name		signature
date	name		signature
date	name of the competer	nt	signature of the competent



UNI-LIFT 3000

#### Introduction 1.

The document "Operating Instructions and Documentation" contains important infomation about installation, running and preserving of the automotive lift Uni-Lift 3000 / Uni-Lift 3000 w. WFL.

To furnish proof of installation of the automotive lift the form "Record of Installation" must be sent undersigned to the manufacturer.

To furnish proof of the single, regular and special security checks this documentation contains forms. The forms should be used to document the checks. They should also be left in this documentation.

Every Changes in the construction and changing place of the automotive lift must be registered in the "Master document" of the lift.

#### Installation and check of the automotive lift

Only specialist staff is allowed to do the works concerning safety and to hold the safety checks of the lift. They are called experts and competents in this document.

Experts are persons (for example self-employed engineers, TÜV-experts) which have got an instruction and experience to check and to test automotive lifts in an expert's report. They know the signified regulations for protection of labour and prevention of accidents.

Competents are persons which have got enough knowledge and experience with automotive lifts. They took part in a training from the lift-manufacturer (servicing erectors of the manufacturer and the franchised dealer are Competents)

#### Information of danger

To show danger and to show important information the three symbols below with the special meanings are used. Pay attention of those passages, which are marked with these symbols



Danger!

This sign marks a danger to life. Inexpert handling of the marked series of event ist dangerous to life



Caution!

This sign marks a caution against possible damage of the automotive lift or other material defects in case of inexpert handling.

Indication!



This sign marks an indication for an important function or for another important note.



UNI-LIFT 3000

#### 2. Master document of the automotive lift

Lift designation

UNI-LIFT 3000 / with wheel free lift

Lift-manufacturer

Otto Nußbaum GmbH & Co.KG

Korker Straße 24

77694 Kehl-Bodersweier

Germany

#### **Application**

The automotive lift **UNI-LIFT 3000** is a lifting stage for lifting motor vehicles with a total weight of 3000 kg and a load sharing of 3:2 in or against drive-on direction. The lift is equipped for working under load. The lift is not equipped for entering the ramp or for carrying persons with it.

The wheel free lift (WFL) is an additional lifting device to lift the vehicles free at the points prescribed form vehicle-manufacturer.

#### Test of the lift

in this master document

name, address of the competent

place, date

For this lift a test of type and design with GS-certificate exists. This lift is in accordance with the testet lift. In case of changes in construction the GS-certificate is not valid any more. The lift must be tested a second time from an expert.

Changes of construction, repairings and changes of place must be registered

Changes of the construction, expert check change, signature of the expert)	king, resumption of work (date, kind of
***************************************	
name, address of the expert	
place, date	signature of the expert
Change of automotive-lift-place, expert che and signature of the competent)	cking, resumption of work (date, address

signature of the competent



UNI-LIFT 3000

## **CE-certificate/attestation of conformity**

The automotive lift Uni-Lift 3000 with the serial number		
is in accordance with the tested lift (number 04205-1391/95)		
place, date	company stamp, signature	

# ZERTIFIKAT

CERTIFICATE

ANLAGENTECHNIK GMBH

Registrier-Nr. Registered No.: 04 205-1391/95

EG-Baumusterprüfbescheinigung gemäß Anhang VI der EG-Richtlinie 89/392/EWG EC-type approval according to appendix VI of the EC-directive 89/392/EEC

Müller

30.03.95

7.2-1461/95

2953/95

22.09.1995

22.09.2000

Hiermit wird bestätigt, daß das nachfolgend genannte Produkt den grundlegenden Anforderungen der Richtlinie des Rates vom 14.06.89 zur Angleichung der Rechtsvorschriften der Mitgliedstaaten über Maschinen, sowie den Änderungen 91/368/EWG und 93/44/EWG, entspricht.

We hereby certify that the product mentioned below meets the basic requirements of the council directive dated 14.06.89 on the approximation of the laws of the member states relating to machinery, as well as the amendments 91/368/EEC and 93/44 EEC

0044

Antragsteller Applicant:

Otto Nußbaum GmbH, Korker Str. 24

77694 Kehl

Fertigungsstätte:

Manufacturing plant:

S.O.

Produktbeschreibung: Fahrzeughebebühne Typ: Unilift 3000

Product description:

TÜV CERT - Zertifizierungssteile der RWTÜV Anlagentechnik im Institut für Produkterprobung und Werkstofftechnik, notifiziert bei der EG-Kommission unter Nr. 0044

RWTÜV Anlagentechnik GrabH Institut für Produkterprobung und Werkstoffechnik Langernarckstr. 20 45141 Essen



UNI-LIFT 3000

CE-certificate/attestation of conformity		
The automotive lift Uni-Lift 3000 plus with the serial number		
place, date	company stamp, signature	

# ZERTIFIKAT

## CERTIFICATE RWTIN

ANLAGENTECHNIK GMBH

Registrier-Nr.J.Registered No.: 04 207-1391/95

Anlage 1, Blatt 1 von 2 Annex 1, page 1 of 2

Zeichen des Auftraggebers Reference of applicant Müller Autoragedatum Date of application 30.03,95 Aktenzeichen File reference 7.2-1462/95 Prüfbericht Nr. Teet report No. 2955/95

Ausslekungsdatur Dain of isaun 22.09.1995 Revision revision: 22.09.2000

Produktbeschreibung: Product description: Fahrzeughebebühne Typ: Unilift 3000 plus

YÜV CERT - Zertifizierungsstelle der RWTÜV Anlagentechnik im Institut für Produkterprobung und Werkstofftschnik, notifiziert bei der EG-Kommission unter Nr. 0044

RWTÜV Anlagentechnik GrnbH Institut für Produkterprobung und Wertestoffnschnik Langemarckstr. 20 45141 Essen Tel.: +201-825-3216 Fax:+201-825-3209

#### UNI-LIFT 3000

#### 3. Technical information

#### **Technical ratings**

Lifting capacity of automotive lift:

3000 kg

Lifting capacity of wheel free lift:

3000 kg

Load sharing:

max. 3:2 in or against

drive-on direction

Lifting time of automotive lift:

ca. 35 sec

Lowering time of automotive lift:

ca. 20 sec

Max. height of lifting (automotive lift):

1600 mm

Max. height of lifting (wheel free lift):

450 mm

Line voltage:

380 Volt three phase current

driving voltage:

24 Volt

diffing voltage

2 (2.22.2)

Power rating:

3,0 KW

Motor speed:

2800 rev./min

Output oil pump:

3 ccm/rev.

Hydraulic pressure:

210 bar

Responsing pressure of pressure relief valve:

240 bar

Hold-up oil tank:

ca. 10 litre

sound level

 $\leq 75 \text{ dBA}$ 

#### Safety devices

1.Click and pawl arrangement

safety device of the load against unintentional lowering

2.Pipe-break safety

Crash-safety of the lift if the pipe breaks

3. Overprint valve

Overprint-safety of the hydraulic system

4. Switching-off strip

Squash-safety if the lift is lowerd

5. Roll-off safety at the rails

Safety device of the vehicle against falling

6. Lockable main switch

Safety device against unauthorized using

7. Stop valves at the hydraulic cylinders

Safety device against lowering and pipe-breaking

8. Holding vlave (only UL 3000 w. WFL)

safety device of the load against unintentional lowering of WFL

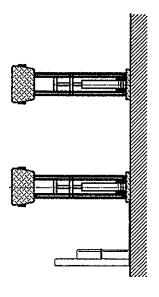
9. Photoelectric barrier between the rails

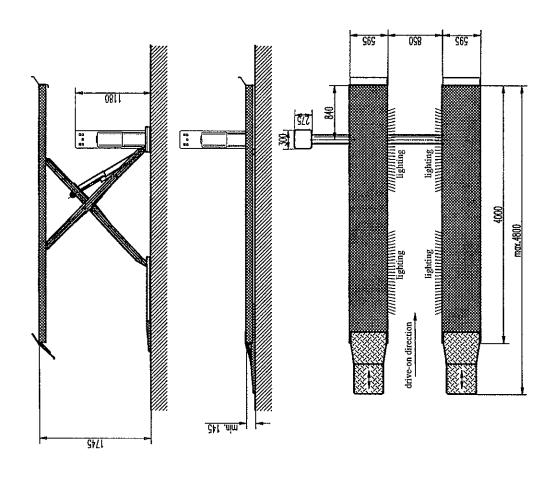
Safety device against differences between the rails



#### UNI-LIFT 3000

## Data sheet over floor (UNI-Lift 3000)

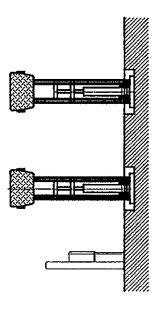


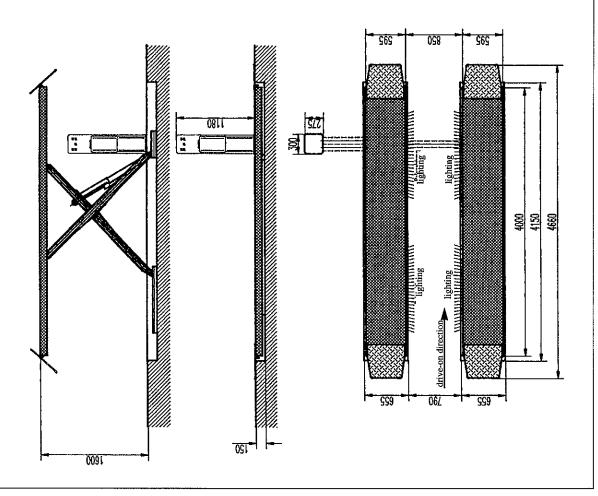




UNI-LIFT 3000

## Data sheet ground level (UNI-Lift 3000)

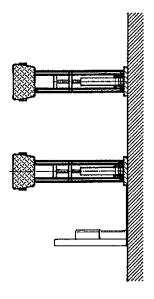


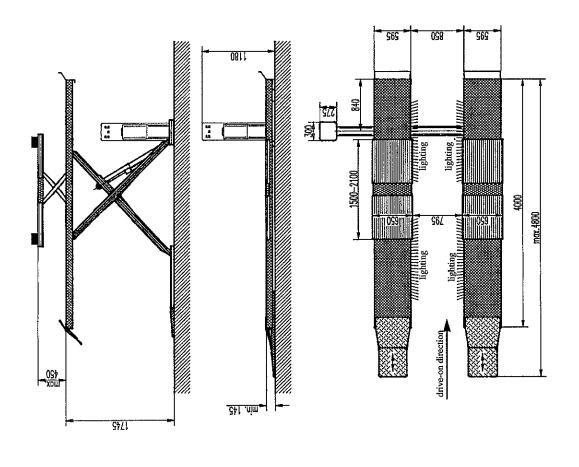




UNI-LIFT 3000

## Data sheet over floor (UNI-Lift 3000 w. WFL)

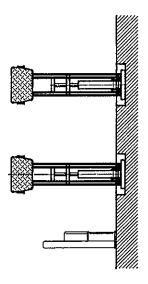


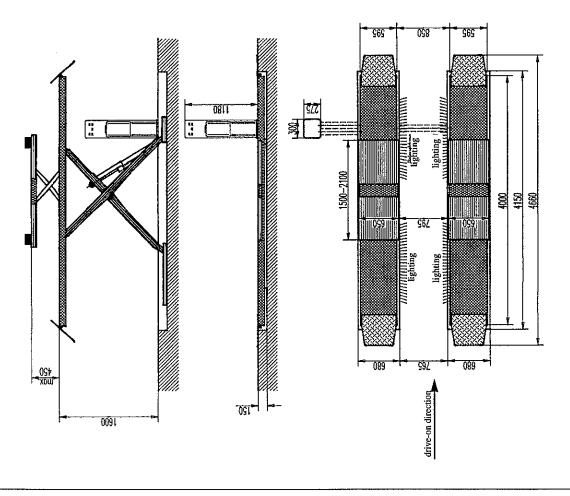




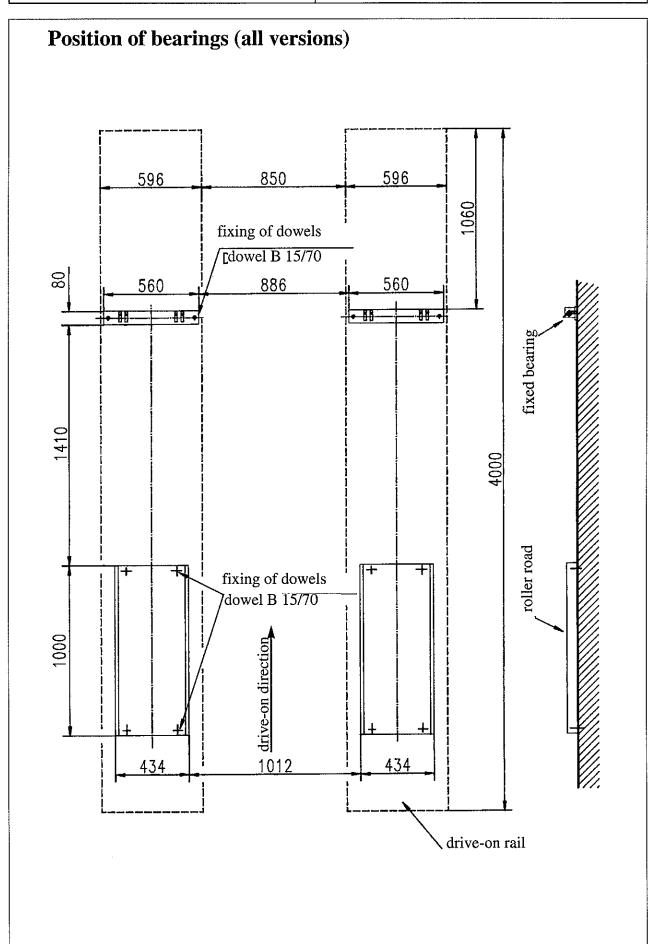
UNI-LIFT 3000

## Data sheet built-in: ground level (UNI-Lift 3000 w. WFL)



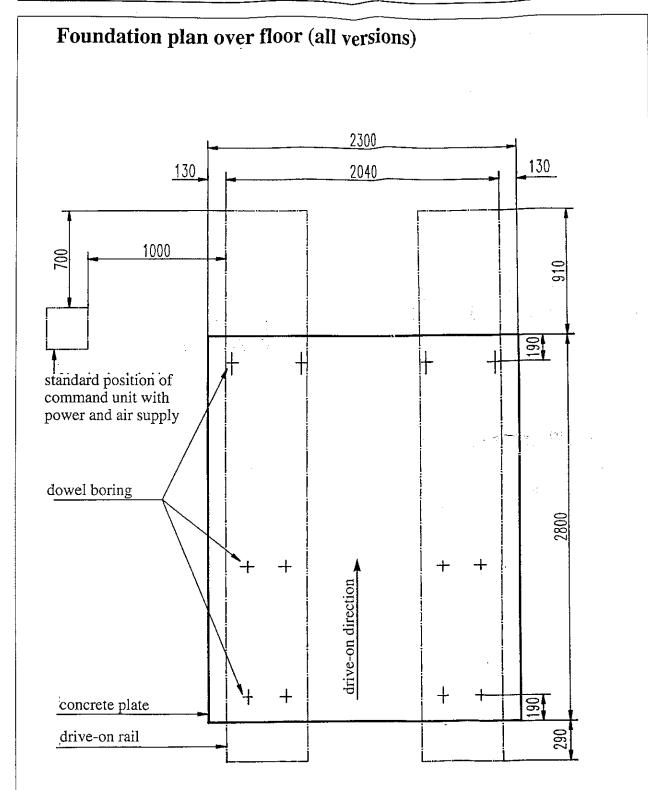








UNI-LIFT 3000



raft foundation: quality of concrete:

at least B 15

length of concrete-plate: at least 2800 mm

breadth of concrete-plate: at least 2300 mm

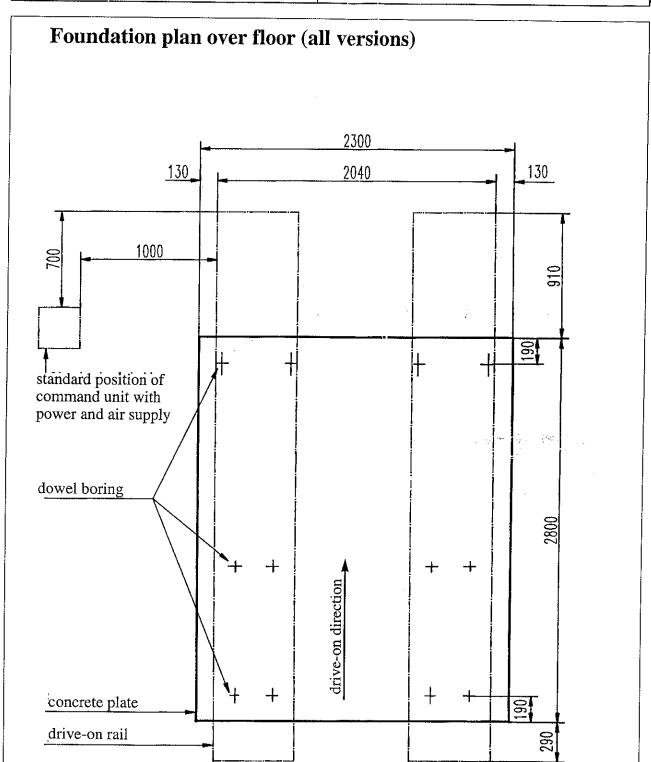
thickness of plate:

at least 160 mm

With an existing concrete floor the thickness of the plate must be at least 160 mm, the quality of concrete must be at least B 15



UNI-LIFT 3000



raft foundation: quality of concrete:

at least B 15

length of concrete-plate: at least 2800 mm

breadth of concrete-plate: at least 2300 mm thickness of plate:

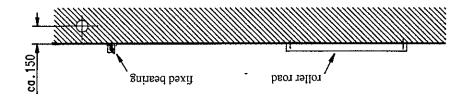
at least 160 mm

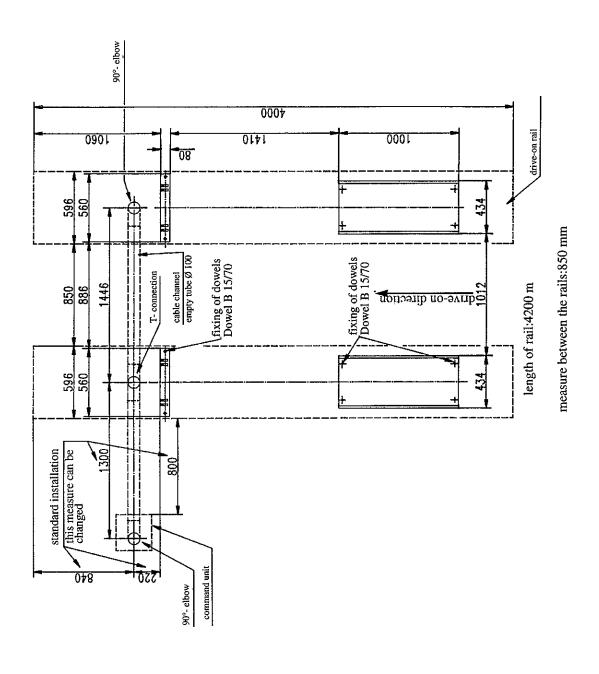
With an existing concrete floor the thickness of the plate must be at least 160 mm, the quality of concrete must be at least B 15



#### UNI-LIFT 3000

# Foundation plan over floor, cable channel under floor (all versions)

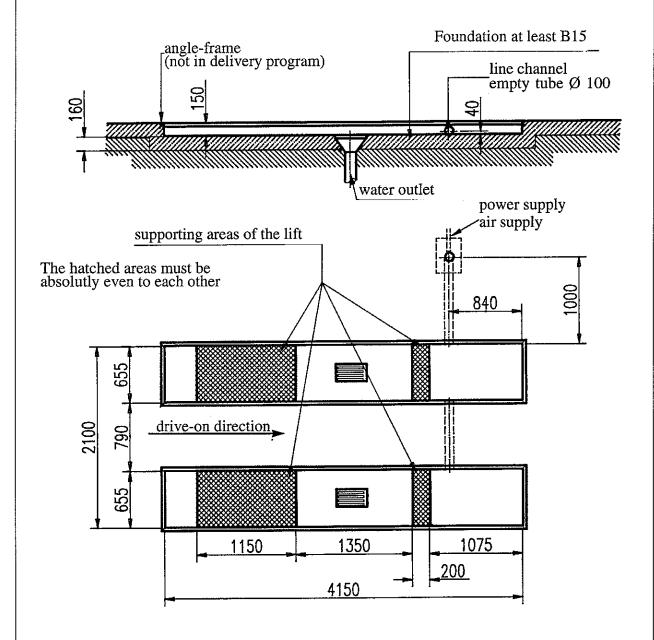






UNI-LIFT 3000

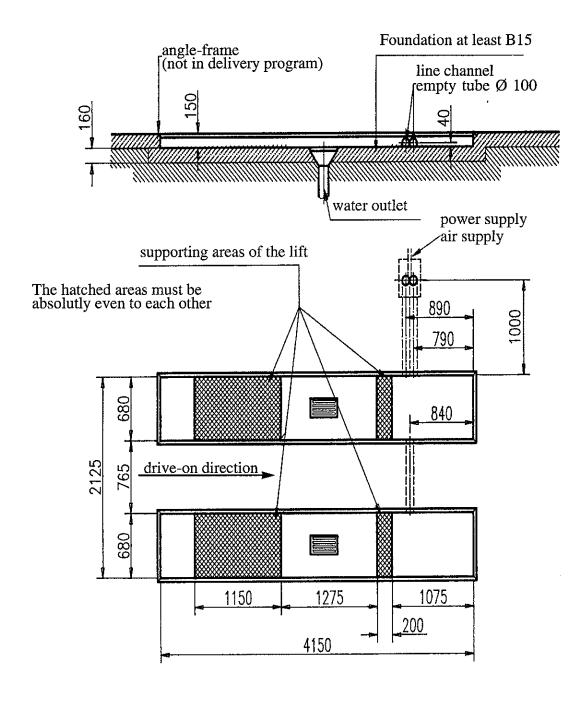
## Foundation plan; built-in: ground level (UNI-Lift 3000)



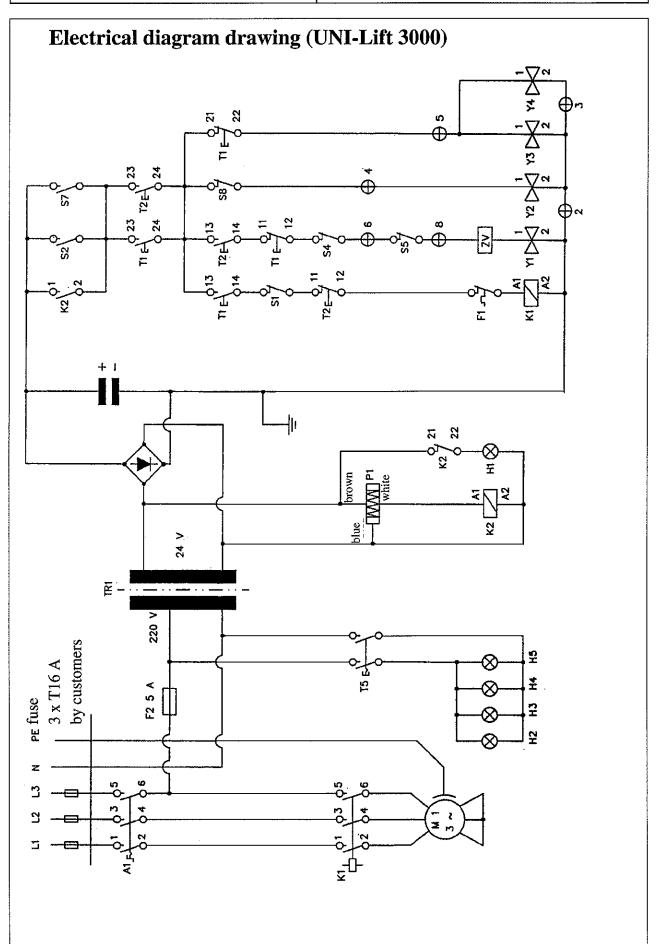


UNI-LIFT 3000

## Foundation plan; built-in: ground level (UNI-Lift 3000 w. WFL)









#### **UNI-LIFT 3000**

## Parts list of Electrical diagram drawing (UNI-Lift 3000)

A1: main switch 3-phases

M1: motor 3~, 380 V, 2,2 kW

K1: motor contactor 4 kW, 24 V =

P1: photoelectric barrier

ZV: time relay

EK: electrolyte capacitor 4700μF, 40 V

T1: button "up" of the lift

T2: button "down" of the lift

T5: light switch

S1: height limit switch

S2: bypass switch

S4: safety switch at switch off strip

S5: safety switch at switch off strip

S7: bypass switch of photoelectric barrier

S8: without air pressure

TR1: transformer 220 V~ / 24 V~

GL: rectifier

LS: light switch

F1: thermofuse in motor

F2: fuse of control system

Y1: hydraulic valve of the lift

Y2: pneumatic valve (ratchet)

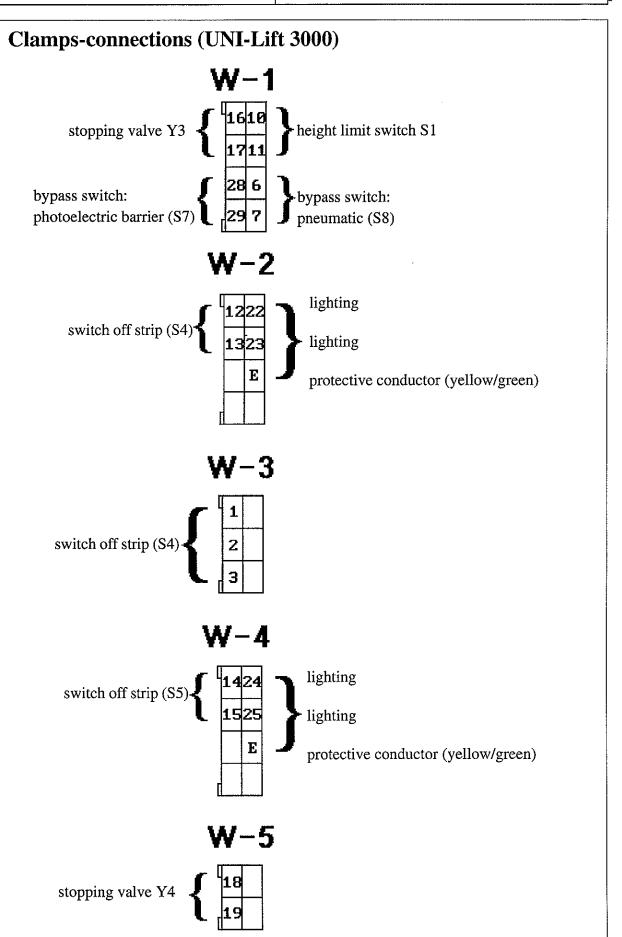
Y3: stopping valve of master side

Y4: stopping valve of slave side

H1: display: photoelectric barrier interrupted

H2-H5: lighting

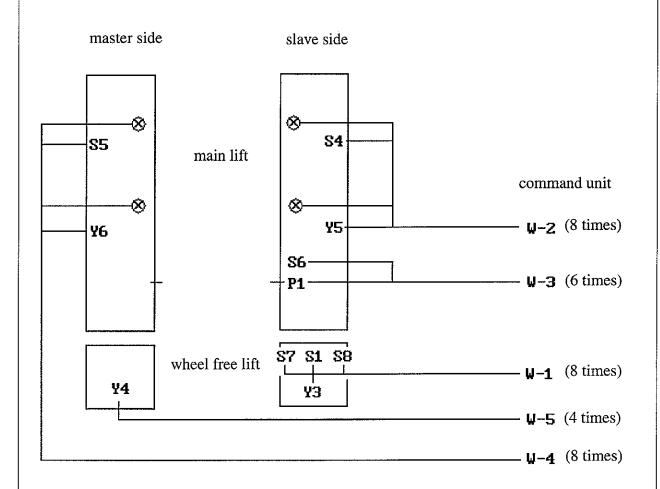




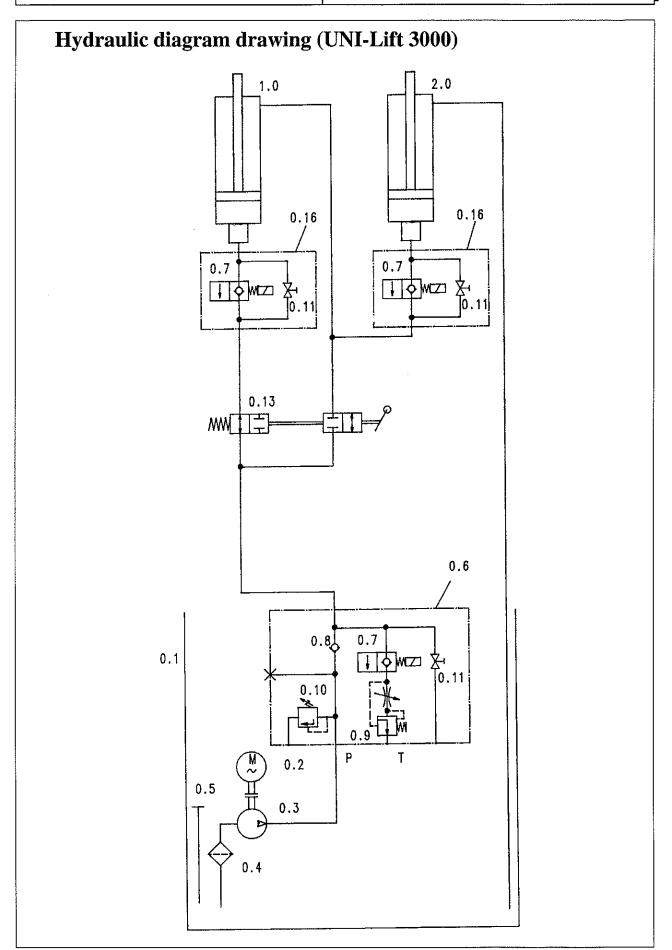


UNI-LIFT 3000

## Clamps-Connections command unit - lift (UNI-Lift 3000)







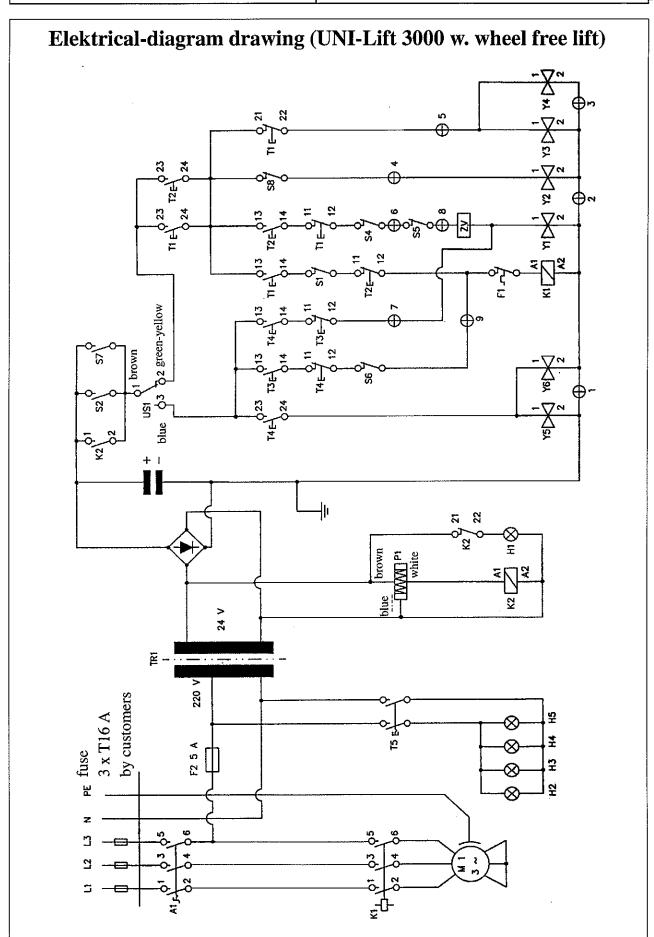


#### UNI-LIFT 3000

## Parts list of hydraulic diagram (UNI-Lift 3000)

0.1	oil tank
0.2	motor 380 V; 50 Hz
0.3	gear pump 3ccm/revolution
0.4	oil filter
0.5	oil level gage
0.6	hydraulic bloc of the lift (complete)
0.7	electrical controlled holding valve
0.8	holding valve
0.9	2-way-flow-control valve
0.10	pressure relief valve
0.11	emergency lowering
0.13	2/2-way-valve double (ball valve) - equalisation of the two rails manually
	• • •
0.16	stopping bloc complete
1.0	master cylinder
2.0	slave cylinder







#### UNI-LIFT 3000

## Parts list of electrical diagram (UNI-Lift 3000 w. wheel free lift)

A1: main switch 3-phase

M1: motor 3~, 380 V, 2,2 kW

P1: photoelectric barrier

K1: motor contactor 4 kW, 24 V =

K2: up contactor of photoelectric barrier

ZV: time relay

electrolyte capacitor 4700µF, 40 V EK:

T1: button "up" of the lift

T2: button "down" of the lift

T3: button "up" of wheel free lift

T4: button "down" of wheel free lift

T5: light switch

S1: height limit switch

S2: bypass switch

S4: safety switch at switching off strip

S5: safety switch at switching off strip

S6: Height limit switch of wheel free lift

S7: bypass switch of photoelectric barrier

S8: without air

transformer 220 V~ / 24 V~ TR1:

GL: rectifier

F1: thermofuse in motor

F2. fuse of control system

hydraulic valve of the lift Y1:

Y2: pneumatic valve (ratchet)

Y3: hydraulic valve of wheel free lift

Y4: hydraulic valve of wheel free lift

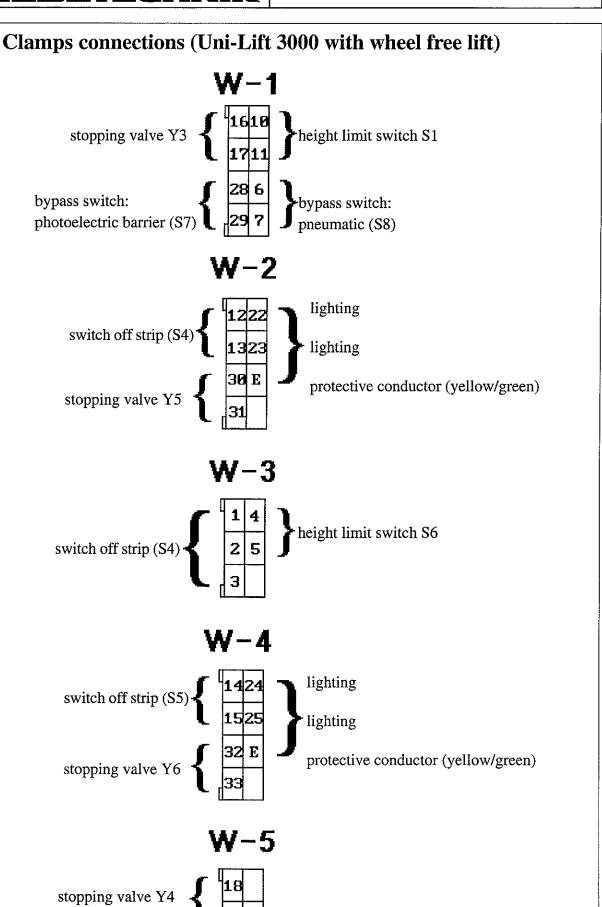
Y5: stopping valve of main lift

Y6: stopping valve of main lift

H1: display: photoelectric barrier interrupted

H2-H5: lighting

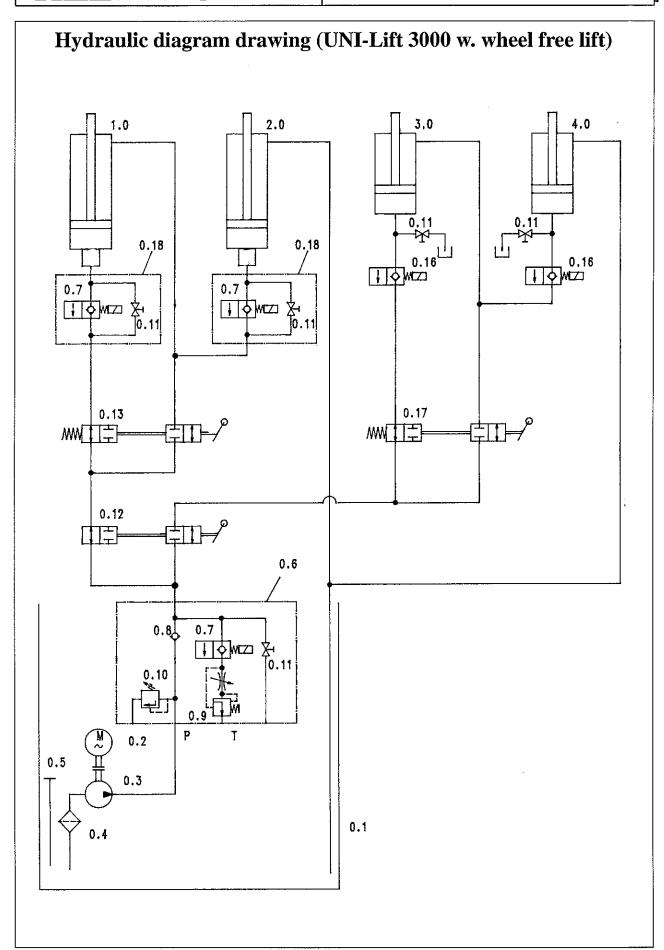
US1: change between main lift and wheel free lift





Page for notices	







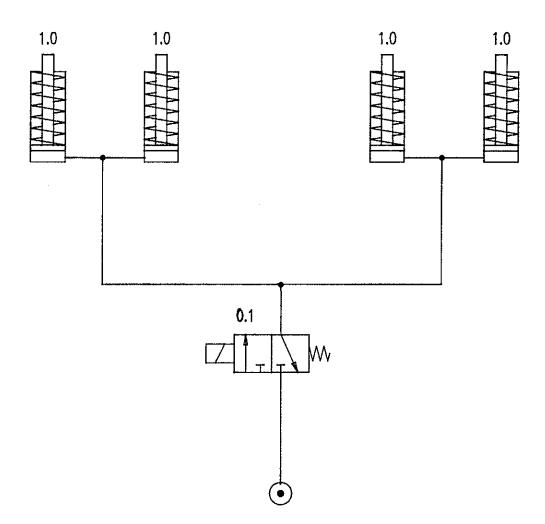
#### UNI-LIFT 3000

## Parts list for hydraulic diagram (UNI-Lift 3000 w. wheel free lift)

0.1	oil tank
0.2	motor 380 V; 50 Hz
0.3	gear pump 3ccm/revolution
0.4	oil filter
0.5	oil level gage
0.6	hydraulic bloc of the lift (complete)
0.7	electrical controlled holding valve
0.8	holding valve
0.9	2-way-flow-control valve
0.10	pressure relief valve
0.11	emergency lowering
0.12	2/2-way-valve double (ball valve) - changing lever main lift - wheel free lift
0.13	2/2-way-valve double (ball valve) - equalisation of the two rails manually
0.16	stopping bloc complete
0.17	2/2-way-valve double (ball valve) - equalisation of the two drive-on plates manually (wheel free lift)
0.18	stopping valve complete
1.0	master cylinder (main lift)
2.0	slave cylinder (main lift)
3.0	master cylinder (wheel free lift)
4.0	slave cylinder (wheel free lift)



## Pneumatic diagram drawing (all versions)



air supply: width Ø 6 air pressure: 6 bar

## Parts list of pneumatic diagram (all versions)

- 0.1 3/2-way valve
- 1.0 pneumatic cylinder for unlocking the ratchet



UNI-LIFT 3000

## 4. Safety regulations

Using automotive lifts for working the Regulations of Accident Prevention (VBG1: General Regulations, VBG14: Automotive lifts) must be observed.

#### Especially the following regulations are very important

#### Operating with the Uni-Lift 3000

- The total weight of the lifted vehicle mustn't be more than 3000 kg
- While the automotive lift is working the operating instructions must be followed
- Only trained personnel over the age of 18 years od are to operate this lift
- While the vehicle is lifted or lowered it must be observed from the operator
- It's not allowed to stay under the lifted or lowered vehicle (except for the operator)
- It's not allowed to transport passengers on the lift or in the vehicle
- It's not allowed to climb onto the lift during lifting or lowering or onto a lifted vehicle
- The Automotive Lift must be checked from an expert after changes in construction or after repairing carrying pads
- It's not allowed to start with operations at the lift before the main switch is switched off
- It's not allowed to install the standard-automotive lift in hazardous location

#### Operating with the Uni-Lift 3000 with wheel free lift (WFL)

- To the points above have to be paid attention as well
- The total weight of the lifted vehicle mustn't be more than 3000 kg with the WFL

UNI-LIFT 3000

## 5. Operating Instruction

#### 5.1 UNI-LIFT 3000



The Safety Regulations must be observed during working with the automotive lift. Read the safety regulations in capter 4 carefully before working with the lift!

The operating elements are shown in **picture 1**.

#### Lifting the vehicle with the automotive lift

• Drive vehicle on the lift, longitudinal directon and transverse direction in centre



Each wheel must stand completely on the rail otherwise the vehicle might fall down

- Safe the vehicle against rolling away, switch into gear
- Control the dangerous places of the lift and be sure that there are no objects or people in the immediate area of the lift or on the lift
- Switch on the control system; main switch on position "1"
- Lift the vehicle on the height for working; push lifting button of the lift

#### Lowering the vehicle with the automotive lift

- Control the dangerous places of the lift and be sure that there are no objects or people in the immediate area of the lift or on the lift
- Lower the vehicle at the height for working or until the rails reach the lowest point

#### **Equalisation** of the two rails

The automotive lift Uni-Lift 3000 is equipped with a photoelectric barier that supervises the ganging of the lift. Continuous duty of the lift without reaching the lowest position there might be an unequalisation of the two rails functionally. The photoelectric barrier is cut and the lift stops. It can neither be lifted nor lowered.

Normally equalisation of the lift returns after a few minutes (cooling time of hydraulic oil).

In case the unequalisation of the two rails remains you should perform as follows to regain the lift's function:



Equalisation must be performed without vehicle, otherwise the vehicle might fall down.



#### **UNI-LIFT 3000**

• Push bypass switch, located behind the cover at the right side of the command unit (see pic. 1 and pic. 2)

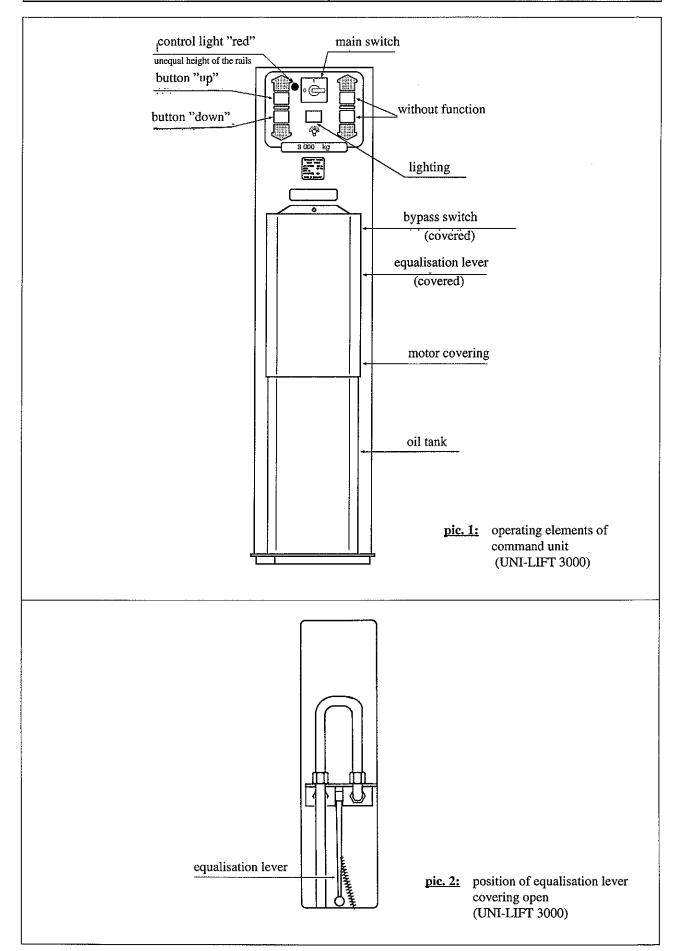
The bypass switch must only be used for restoring the normal operating state.

Using the bypass switch for normal operating of the automotive lift the vehicle might fall down.

- lower the lift to lowest position, drive off vehicle from the lift
- Lift automotive lift approximatly 400 mm.
- Turn equalisation lever 90° upside and hold it in this position.

  The equalisation lever is located at the right side in the command unit (behind a slewable covering, see pic. 1 and pic. 2)
- Push bypass switch, located behind the cover at the right side of the command unit (see pic. 1) simultaneously
- Push button "Up" or button "Down" simultaneously until the height of the two rails is equal.
- Let go off equalisation lever (it goes to start position without help) and close covering







UNI-LIFT 3000

## 5.2 UNI-Lift 3000 with wheel free lift



The Safety Regulations must be observed during working with the automotive lift. Read the safety regulations in capter 4 carefully before working with the lift!

The operating elements are shown in picture 3 and picture 4.

## Lifting the vehicle with the main lift

• Drive vehicle on the lift, longitudinal directon and transverse direction in centre



Each wheel must stand completely on the rail otherwise the vehicle might fall down

- · Safe the vehicle against rolling away, switch into gear
- Control the dangerous places of the lift and be sure that there are no objects or people in the immediate area of the lift or on the lift
- Switch on the control system; main switch on position "1"
- Choice operational mode "automtive lift"; Changing lever on position "automotive lift"
- Lift the vehicle on the height for working; push lifting button of the lift

## Lowering the vehicle with the main lift

- Control the dangerous places of the lift and be sure that there are no objects or people in the immediate area of the lift or on the lift
- Choice operational mode "automtive lift"; Changing lever on position "automotive lift"
- Lower the vehicle at the height for working or until the rails reach the lowest point;

## Lifting the vehicle with the wheel free lift

- Position vehicle over the wheel free lift in this way where the carrying points of the vehicle prescribed from the vehicle-manufacturer are located above the carrying plate of the wheel free lift (if necessary adjust push-plates)
- Safe the vehicle against rolling away, switch into gear, activate parking brake
- Control the dangerous places of the lift and be sure that there are no objects or people in the immediate area of the lift or on the lift
- Position elastomer-supports under the special points of the vehicle which are prescribed from the vehicle-manufacturer.



The elastomer supports mustn't be layed on edge! To avoid overturning of the elastomer supports they have to be located in this way that the supports have got the lowest height..



#### UNI-LIFT 3000

- Switch on control system; main switch on position "1"
- Choice operational mode "wheel free lift"; Changing lever on position "wheel free lift"
- lift the wheel free lift until the white elastomer supports come into contact with the vehicle. Check right position of elastomer supports a second time and go on with lifting
- Lift vehicle until the wheels of it are free, push lifting button of wheel free lift. Control safe seat of vehicle on the lift.



The vehicle must be positioned on the elastomer supports in a safe vay, otherwise there's a danger that the vehicle might fall down.

· Lift vehicle on the height for working; push lifting button of the wheel free lift

## Lowering the vehicle with the wheel free lift

- Control the dangerous places of the lift and be sure that there are no objects or people in the immediate area of the lift or on the lift
- Choice operational mode "wheel free lift"; Changing lever on position "wheel free lift"
- Lower the vehicle at the height for working or until the rails reach the lowest point; push lowering button of the wheel lift
- Remove elastomer supports from carrying plates of the wheel free lift.

# **Equalisation of the two rails**

The automotive lift Uni-Lift 3000 is equipped with a photoelectric barier that supervises the ganging of the lift. Continuous duty of the lift without reaching the lowest position there might be an unequalisation of the two rails functionally. The photoelectric barrier is cut and the lift stops. It can neither be lifted nor lowered.

Normally equalisation of the lift returns after a few minutes (cooling time of hydraulic oil).

In case the unequalisation of the two rails remains you should perform as follows to regain the lift's function:

# **Equalisation of the drive-on rails (main lift)**



Equalisation must be performed without vehicle, otherwise the vehicle might fall down.

• Push bypass switch, located behind the cover at the right side of the command unit (see pic. 3 and pic. 4)



#### UNI-LIFT 3000



The bypass switch must only be used for restoring the normal operating state. Using the bypass switch for normal operating of the automotive lift the vehicle might fall down.

- lower the lift to lowest position, drive off vehicle from the lift
- Lift automotive lift approximatly 400 mm.
- Turn equalisation lever 90° upside and hold it in this position.

  The equalisation lever is located at the right side in the command unit (behind a slewable covering, see pic. 3 and pic. 4)
- Push bypass switch, located behind the cover at the right side of the command unit (see pic. 3) simultaneously
- Push button "Up" or button "Down" of the main lift simultaneously until the height of the two rails is equal.
- Let go off equalisation lever (it goes to start position without help) and close covering

## equalisation of the drive-on plates ( wheel free lift)



Equalisation must be performed without vehicle, otherwise the vehicle might fall down.

• Push bypass switch, located behind the cover at the right side of the command unit (see pic. 3 and pic. 4)



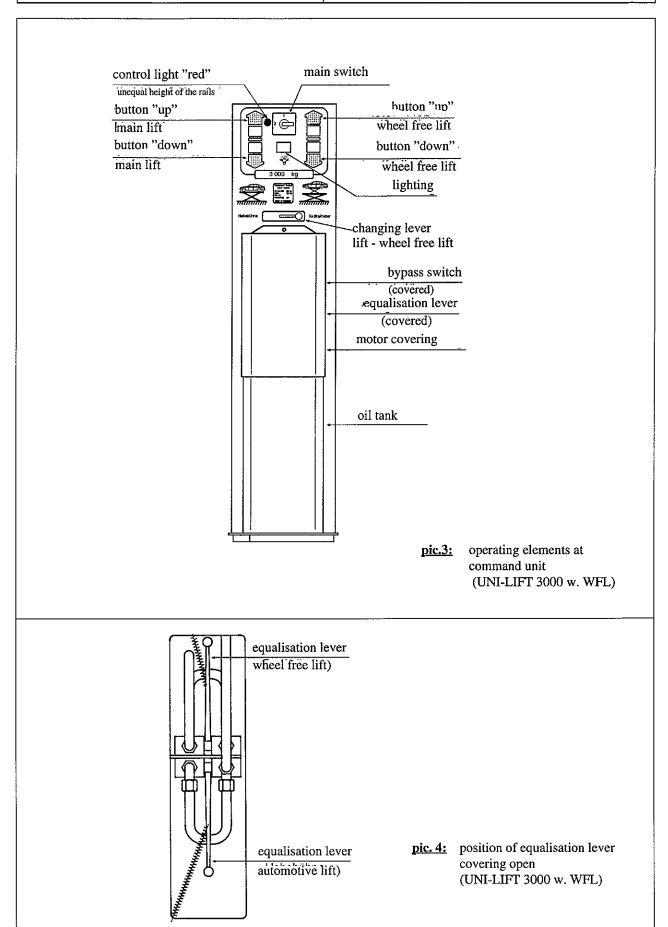
The bypass switch must only be used for restoring the normal operating state.

Using the bypass switch for normal operating of the automotive lift the vehicle might fall down.

- Choice operational mode "wheel free lift"; Changing lever on position "wheel free lift"
- lower the wheel free lift to lowest position, drive off vehicle from the wheel free lift
- Lift wheel free lift approximatly 400 mm.
- Turn equalisation lever 90° downside and hold it in this position.

  The equalisation lever is located at the right side in the command unit (behind a slewable covering, see pic. 3 and pic. 4)
- Push bypass switch, located behind the cover at the right side of the command unit (see pic. 3) simultaneously
- Push button "Up" or button "Down" of the wheel free lift simultaneously until the height of the two drive-on plates is equal.
- Let go off equalisation lever (it goes to start position without help) and close covering







#### UNI-LIFT 3000

# 6. Troubleshooting

If the lift does not work properly, the reason for this might be quite simple. Please check the lift for the potential reasons mentioned on the following pages. If the cause of trouble cannot be found, please call the technical service.



Repairs at the lift's security devices as well as repairs and examinations of the electrical fittings may only be performed by specialists.

#### Problem: Motor does not start!

Potential causes of trouble:

- Main switch is not engaged
- Position of changing lever is wrong
- Fuse is defective: replace fuse
- Feed line is cut
- Motor is overheated: let it cool down for app. 10 min.
- Reflector or photoelectric cell is dirty (red signal lamp is lighting); clean reflector and photoelectric cell.
- Photoelectric barrier is cut by an obstacle (red signal lamp is lighting): remove obstacle.
- Photoelectric barrier is cut because of an unequal height of the two rails: refer to "equalisation of the rails", "driving onto an obstacle", "emergency lowering").

## Problem: Motor starts, lift is not lifting!

Potential causes

- Level of hydraulic oil is too low.
- of trouble:
- vehicle is too heavy
- Screw for emergency lowering is not closed.
- hydraulic lines are blocked
- · cylinders are catched

#### **Problem:** Lift cannot be lowered!

Potential causes of trouble:

- Lift is driven onto an obstacle (ref. to driving on an obstacle)
- Ratchets are engaged: move the lift up before lowering
- Hydraulic main-Valve at command unit is defective (refer to emergency lowering)
- Valve at lower side of hydraulic cylinder is defective (refer to emergency lowering)
- · switch off strip has been activated
- Position of changing lever is wrong (only Ul 3000 w. WFL)



UNI-LIFT 3000

## Emergency lowering in case of power failure or defective valves

In case of power failure or defective valves the hydraulic valve for lowering of the lift, the stop valves at lower side of the hydraulic cylinders and the pneumatic valve to unlock the ratchet can not be opened. Therefore the lift cannot be lowered. In this case there is the possibility to lower the lift by opening the hydraulic valve manually, so the car can be driven off.



If the vehicle is lifted with an axle-lift the axle-lift must be lowered first, because the emergency lowering screw of the axle-lift can not be activated if the lift has been lowered.



The emergency lowering can only be performed when the ratchets are not engaged (they can be lifted manually).



The emergency lowering must only be performed by persons instructed to use the lift. Please refer to the regulation "Lowering".



If the hydraulic hoses are damaged restore them and go on as described in the operating instructions.

# **Emergency lowering of the lift UNI-Lift 3000**

- Choice operational mode "wheel free lift" or "wheel free lift", depending on wher e emergency lowering must be performed
- Loosen security nut (marked with red colour) at the valve located at the bottom of each cylinder. This nut secures the set screw. Turn in the set screw for about one turn. This has to be done at both cylinders.



#### Be careful!

In case the hydraulic hoses are broken the lift lowers in ratchets, the ratchet engage and the lift can not be lowered any more, the defective hydraulic hoses must be replaced to use the lift again.

- In case the hydraulic hoses are not defect, lift ratchets at hydraulic cylinders manually and support them with an appropriate means (for example wedge between cylinder and upper part) so they cannot engage (see pic. 5). This measure must be performed at both hydraulic cylinders.
- Remove motor-covering from command unit (see pic. 1 or pic. 3)
- Loosen security nut of emergency lowering screw at comand unit (marked with red colour, see pic. 6)
- Loosen emergency lowering screw (thread pin) for about one turn (unscrew ist) to start with lowering.
- Fasten set screw when the upper parts of the ratchets have passed the last ratchet tooth and the ratchets cannot engage anymore (see pic. 7)

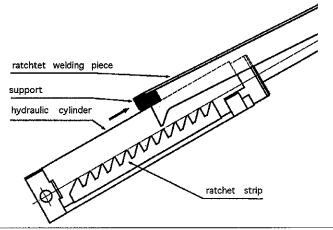


#### UNI-LIFT 3000

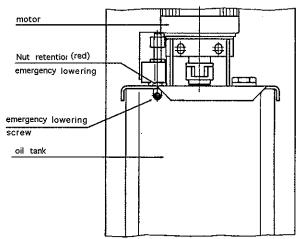
• Remove supports from ratchets at both cylinders



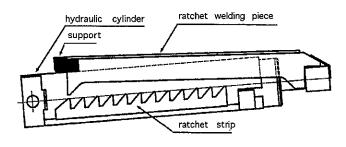
The supports must be removed before lowering the lift to the ground. Otherwise the lift can be seriously damaged.



pic. 5: Supporting ratchet



pic. 6: Position of emergency lowering screw



pic. 7: Removing support

• Continue lowering the lift (loosen set screw again) until the lift has reached its lowest position.



#### UNI-LIFT 3000

- · Fasten set screw and secure it by fastening the security screw.
- Turn out thread pins at both stop valves at cylinder bottom of hydraulic cylinders. Secure them with the red security nuts.

After finishing the emergency lowering, all of the set screws must be brought into the position they have had before. Otherwise a malfunction of the lift can occur.

- Reinstall covering plates of both stop valves in the drive-on areas of the drive-on rails.
- · Drive off vehicle from the lift
- Shut down the lift until the defective pieces or valves have been replaced

## 7. Maintenance

A regular service has to be performed every three months by the lift's operator according to the following schedule. If the lift is in continuous operation or dirty environment, the maintenance rate has to be increased.

During daily operation the lift has to be watched carefully for its correct function. In case of any malfunction or leakage the technical service has to be informed.

#### Maintenance schedule for the lift

- Clean cylinders and pistons carefully.
- Clean and grease all moving parts such as bolts, sliding blocs and sliding areas.
- grease lubricating nipples
- Clean photoelectric barrier and reflector
- Check ratchets on easy going and grease the sliding surfaces
- Check level of hydraulic oil.

## Maintenance schedule for the wheel free lift (only UL 3000 w. WFL)

- Clean cylinders and pistons carefully.
- Clean and grease all moving parts such as bolts, sliding blocs and sliding areas.
- grease lubricating nipples
- check white elastomer supports and replace them if necessary.

The hydraulic oil has to be changed at least once a year. To change the oil lower the lift into its lowest position. Empty the tank and replace the oil, approximately 10 litres are needed. A high quality hydraulic oil is recommended, its viscosity should be 32 cst.



#### UNI-LIFT 3000

# 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".

2. In regular intervals after the initial operation, at least annually.

Use the form "Regular security check".

3. Every time the construction of that particular lift has been changed.

Use the form "Extraordinary security check".

The first and regular security check must be performed by a competent. It is recom-mended to service the lift at this occasion.

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

This manual contains form with a schedule for the security checks. Please use the adequate form for the security checks. The form should remain in this manual after they have been filled out.

## 9. Installation and Initiation

#### Installation of the lift

At the standard installation the command unit should be installed at the left front side of the lift (refer to data sheet). If necessary, any other position of the command unit is possible, but therefore special hydraulic hoses are needed.

## Regulations for the installation

- The installation of the lift is performed by trained technicians of the manufacturer or its distribution partner. If the operator can provide trained mechanics, he can install the lift by himself. The installation has to be done according to this regulation.
- The standard lift must not be installed in hazardous locations or washing areas.
- For the installation a concreat floor with a thickness of at least 160 mm and a quality of at least B25 has to be provided. If these requirements cannot be fulfilled a foundation according to the foundation plan has to be made. The area must be completely even. Foundations located outside or in rooms with the danger of frost have to be made considering this fact.
- An electric supply 3~/N + PE, 380 V, 50 Hz has to be provided by customers. The connection is located in the command unit.
- A compressed air supply with an inside width of 6 mm has to be provided at the



#### UNI-LIFT 3000

command unit. The pressure must be 6 bar (max. 10 bar).

• All cable ducts have to be equipped with protective coverings to prevent accidents.

## Erection and doweling of the lift

- Install the lift according to the data sheet and the foundation plan and line it up.
- Install command unit at its designed place and connect it with air und power supply.
- Fill in hydraulic oil, approximately 10 litres. A high quality hydraulic oil is recommended, its viscosity should be 32 cst.
- Connect hydraulic-, pneumatic hoses and electrical wires between command unit and lift in accordance with plan:

**UNI-LIFT 3000** 

-->(see pic. 8+9)

UNI-LIFT 3000 w. WFL

-->(see pic. 10 + 11)

- Push button "up" of the lift until the vent screw at the top of master cylinder is accessible. If the lift does not work activate bypass switch (see **pic. 1** and **pic. 3**) in addition until the lift is at the relevant height.
- Open vent screw (cylinder screw with copper ring), located at upper side in guide bush of master cylinder. (Do not turn vent screw out completely) until oil comes out of the bore-hole for deaerating.
- shut vent screw immediately and fasten it.
- If the ratchets of the lift engage before oil comes out of the vent screw, shut the vent screw and lift the lift with button "up" until the ratchet is not engaged any more.
- Afterwards repeat deaerating as described until oil comes out of the ventilating screw.
- Carry out equalisation of the rails as described in chapter "operating instructions"
- Lift the UNI-Lift 3000 to a height of 1500 mm
- Before the lift is doweled to the ground, the quality of the ground has to be checked. For an existing concreat floor the dowels have to be chosen according to **pic. 12**, if the ground is covered with floor tiles, the dowels have to be chosen according to **pic. 13**.
- Check adjustment of the ground plates again. Drill the holes into the ground through the corresponding holes in the ground plates. Clean the holes and insert dowels.
- Adjust lift according to separate instruction. The manufacturer demands Liebig-safety-dowels type B 15 or equal dowels from another manufacturer.
- Adjust the ratchet between the scissors
- Adjust the lift with adjusting of the adjusting screws at the loosen bearing and the fixed bearing; first one rail single, afterwards adjust the second rail at the same level.
- Tighten the dowels with a dynamometric key (M = 50 Nm)



#### UNI-LIFT 3000



Each dowel must be tightened with a torque of 50 Nm. Otherwise the normal function of the lift cannnot be guaranteed

• Lift and lower the automotive lift repeatedly. Tighten dowels with dynamometric key again (M = 50 Nm) and check hydraulic lines of closeness.

### Initiation



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

If the lift is installed by a competent, he will perform this security check. If the operator installs the lift by himself, he has to instruct a competent 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 allows the lift to be used.



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

## Changing of the installation place

If the place of installation shall be changed, the new place has to be prepared according to these regulations. The changing of the location must be performed according to the following schedule:

- Loosen dowels
- Lift the lift without any load to a height of 500 mm
- Put a wooden bar with a sufficient length (longer than rail's width) under the central axe of the each scissors.
- Lower the lift until the central axe rests on the wooden bar and the ground plates begin to lift.



Secure the lift against swinging and overturning by appropriate means in order to eliminate the danger of accident.

- Tie the ground plates to the rails.
- Disconnect electrical wires, hydraulic hoses and air hoses.
- Transport the lift to its new location.
- Install the lift according to these regulations.

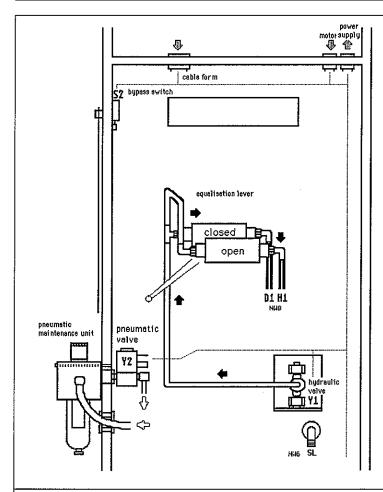


Use new dowels, The used dowels cannot be used any more.

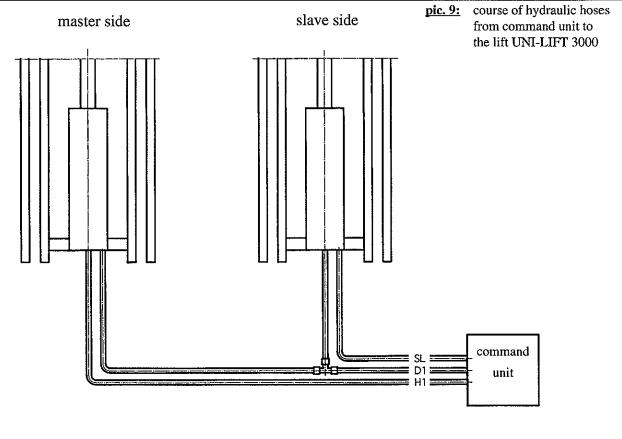


A security check must be performed before reinitiation by a competent. Use form "Regular security check".



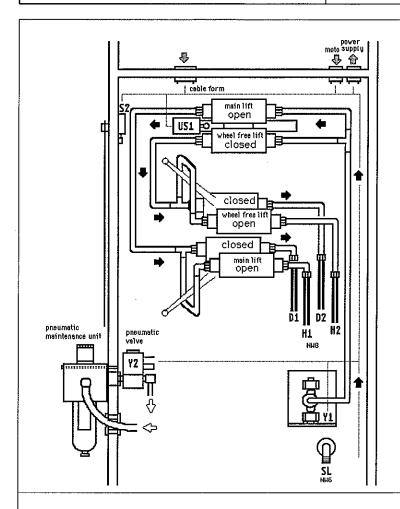


pic. 8: Connection of hydraulic hoses in command unit (UL 3000)

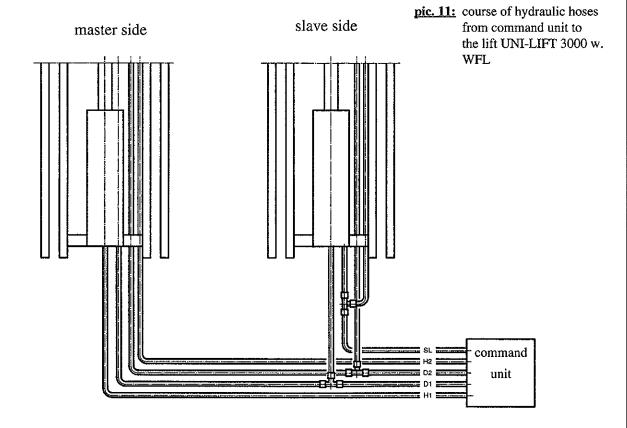




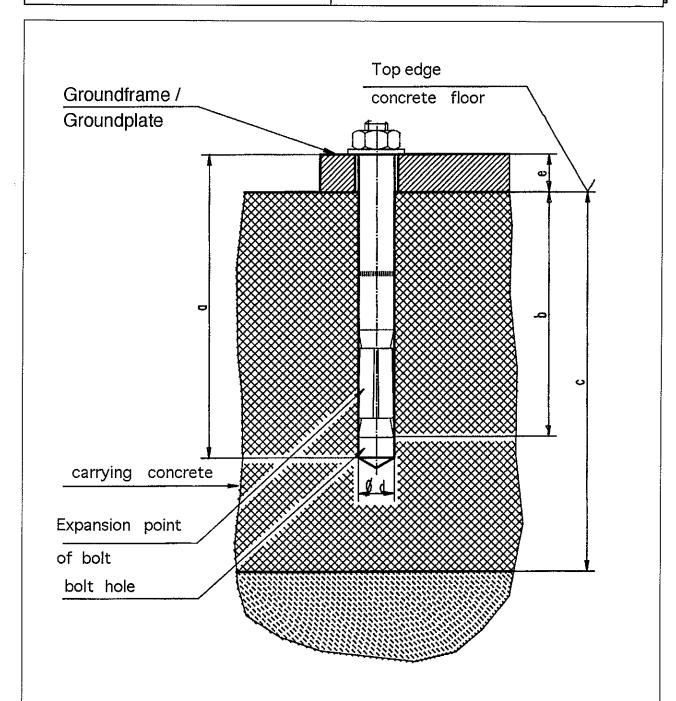
### **UNI-LIFT 3000**



pic.10: Connection of hydraulic hoses in command unit (UL 3000 with WFL)



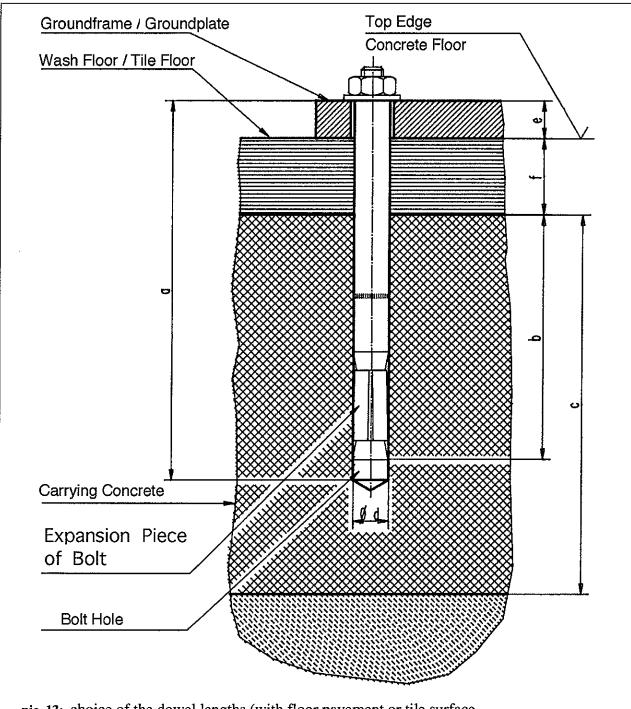




pic. 12: choice of the dowel lengths (without floor pavement or tile surface)

Table to pic. 10:			
type of dowel		B15/70	B15/95
drilling depth	a	112	137
min. anchorage depth	b	72	72
thickness of concrete	c	160	160
diameter of bor	d	15	15
thickness of the lift-piece	e	0-40	40-65





pic. 13: choice of the dowel lengths (with floor pavement or tile surface

type of dowel		B15/70	B15/95	B15/120	B15/145
• •		D13/10	D13/33	D13/120	בדיו וכו ע
drilling depth	a	112	137	162	187
min. anchorage depth	b	72	72	72	72
thickness of concrete	c	160	160	160	160
diameter of bor	d	15	15	15	15
thickness of the lift-piece	e+f	0-40	40-65	65-90	90-115



#### UNI-LIFT 3000

## First security check before installation to fill in and to leave in this document defect verikind of check lacking Remark fication Type plate ..... Short operating instructions ..... Warning designation ..... Designation Lifting/Lowering ..... Main switch lockable Function, smooth running of limit switch... Funct., smooth running of switch off strip.. Function pressure switch ...... Function ratchet ..... Roll-over safety..... Safety hinge bolt ...... Construction (deformation, cracking) ...... Starting torque of the dowels ..... Fixed seat of the carrying screws ...... Coupling in the command unit..... Surface piston rod ..... Condition coverings ..... Impermeability of the hydraulic system.... Level of the hydraulic oil ..... Condition hydraulic conduction..... Condition pneumatic conduction ..... Conditionelectrical wiring ..... Function test automotive lift with vehicle... Test photoelectric barrier (reflector) ........ ( mark where applicable, in case of verification mark in addition to the first mark! ) security check carried out: Name, address of the competent.... Result of the Check: ☐ Initation not permitted, verification necessary ☐ Initation possible, repair failures until ...... ☐ No failings, Initation 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! )



First security check before installation				to fill in and to leave in this document	
kind of check	all right	defect lacking	veri- fication	Remark	
For UNI-LIFT 3000 with wheel free lift (WF	L) mu:	st be ch	ecked a	dditional:	
Condition elastomer supports WFL			the firs	t mark!)	
Remarks of Competent:					
•					
security check carried out:					
Name, address of the competent	••••••	•••••	••••••		
Result of the Check:		_			
☐ Initation not permitted, verification necessary					
☐ Initation possible, repair ☐ No failings, Initation po		es until			
Signature of the expert:		Signati	ure of tl	ne operator:	
If failures must be repaired		-		*	
Failures repaired at:		Signati	ure of tl	ne operator:	



Regular security check				to fill in and to leave in this document	
kind of check	all right	defect lacking	veri- fication	Remark	
Type plate					
( mark where applicable, in case of verification mark in addition to the first mark! )					
security check carried out:  Name, address of the competent					
Signature of the expert:		Signatu	are of th	e operator:	
If failures must be repaired		<b>~</b> :			
Failures repaired at:		Signatu	are of th	e operator:	



Regular security check				to fill in and to leave in this document	
kind of check	all right	defect lacking	veri- fication	Remark	
For UNI-LIFT 3000 with wheel free lift (WF	FL) mu	st be ch	ecked a	dditional:	
Condition elastomer supports WFL  Test WFL with vehicle					
( mark where applicable, in case of verification mark in addition to the first mark! )					
Remarks of Competent:					
security check carried out					
Name, address of the competent					
Result of the Check:					
Initation not permitted, verification necessary					
☐ Initation possible, repair failures until					
☐ No failings, Initation po					
Signature of the expert:		Signat	are of th	ne operator:	
If failures must be repaired					
Failures repaired at:		Signati	ure of th	ne operator:	



Extraordinary security check				to fill in and to leave in this document	
kind of check	all right	defect lacking	veri- fication	Remark	
Type plate					
Function test automotive lift with vehicle  Test photoelectric barrier (reflector)					
( mark where applicable, in case of verification mark in addition to the first mark! )  ecurity check carried out:					
Name, address of the competent					
Signature of the expert:  If failures must be repaired		Signat	ure of the	he operator:	
Failures repaired at:	•	Signat	ure of t	he operator:	



Extraordinary security check				to fill in and to leave in this document	
kind of check	all right	defect lacking	veri- fication	Remark	
For UNI-LIFT 3000 with wheel free lift (WF	L) mus	st be ch	ecked a	dditional:	
Condition elastomer supports WFL  Test WFL with vehicle					
( mark where applicable, in case of verification ma	rk in ad	ldition to	the first	t mark! )	
Remarks of Competent:					
security check carried out:					
Name, address of the competent					
Result of the Check:					
Initation not permitted, verification necessary					
☐ Initation possible, repai☐ No failings, Initation po		es until			
Signature of the expert:		Signati	ure of th	ne operator:	
If failures must be repaired				1	
Failures repaired at:		Signati	ure of th	ne operator:	



#### UNI-LIFT 3000

## **GS-Zeichen**

Zeichengenehmigungs-Ausweis Nr.

391/91

Rheinisch-Westfällischer

Blatt 1

RHEINISCH-WESTFÄLISCHER TECHNISCHER ÜBERWACHUNGS-VEREIN E.V.

Steubenstraße 53, D-4300 Essen 1

Nur gültig mit umseitigen Vertragsbedingungen

Genehmigungsinhaber: Otto Nußbaum GmbH & Co KG

Korker Str. 24

Fertigungsstätte:

7640 Kehl-Bodersweier

Geschäfts-Zeichen des Antragstellers

Antragsdatum

Aktenzeichen 69 76 65/00 Ausstellungsdatum

H. Nußbaum

18.06.90

7.2.-285/91 Fo/Ba

11.03.91

Prüfzeichen:





Geräteart

"Hebebühne"

Typbezeichnung

Uni-Lift 3000 (029 UL)

Nutzlast:

3000 kg im Lastverhältnis 3:2

**Hubhöhe:** 

H = 1,620 m

Antriebsart:

elektro-hydraulisch

Nennspannung:

380 V, 3 ~ , 50 Hz

Schutzklasse:

Netzanschluß:

fester Anschluß

Prüfunterlagen:

Bericht über die Prüfung von Berechnungsund Zeichnungsunterlagen sowie Bericht über die Bau- und Abnahmeprüfung vom 11.03.91

Geprüft nach

UVV "Hebebühnen" (VBG 14/4.77)

ZH1/490/1.78 "Prüfung von Hebebühnen"

#### Weitere Angaben vergleiche Anlage 1 (Aufbau-Übersicht)

Die Prüfstelle für Gerätesicherheit, als vom Bundesminister für Arbeit und Sozialordnung anerkannte Prüfstelle für technische Arbeitsmittel, bestätigt:

Die im Gesetz über technische Arbeitsmittel - in der ab 01.01.1980 geltenden Fassung - gestellten Anforderungen werden von dem(n) oben aufgeführten Gerät(en) erfüllt. Die Genehmigung, das GS-Zeichen gem. den umseitig abgedruckten Vertragsbedingungen zu verwenden, wird hiermit erteilt.

Rheinisch-Westfälischer Technischer Überwachungs-Verein e. V.

Prüfstelle für Gerätesicherheit

