DAUTEL
SLIDER

DS -48VA
Operation-Maintenance

Edition 6/2008

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1. General

1.1 Introduction

This manual is designed to enable you to quickly familiarise yourself with the operation of the DAUTEL tail-gate lift.
So please read the manual carefully before commissioning the tail-gate lift.

In the event that the tail-gate lift is operated by untrained personnel, great danger can arise for both the operator and nearby persons.
The observance of the current safety regulations and an awareness of safety concerns must therefore also be a basic condition for operators entrusted with its operation.

Modifications to the tail-gate lift supplied by us are generally not permitted. In exceptional cases modifications may be authorised by us in writing and tested by TÜV.

In addition, we refer to the following extracts taken from the German accident prevention guidelines for lifting platforms and the sections in the text identified by ⚠ .

The operator must know how the tail-gate lift is correctly operated and handled.

Faults are often traced back to incorrect maintenance or improper operation.
Therefore the manual must be kept within reach in the vehicle.

For replacement parts orders
- the type of tail-gate lift
- the serial number
- and the year of manufacture

must be indicated.

This information is found on the type plate in the control unit.
The information can also be gathered from the master data list in the test-log book.

Observe the order number and the name of the replacement parts according to the replacement parts manual. The replacement parts manual can also be purchased from us separately.
Repairs may only be made with original replacement parts!

Please understand that we reserve the right to undertake changes at any time in form, equipment and technology.

No claims may be derived from the specifications, drawings and descriptions given in these instructions.

The data given in these instructions are based on the technical status of 2008.

1.2Guarantee and liability

Our "General terms and conditions of sale and supply" are generally applicable.
Guarantee claims and claims of liability for damage to persons and property are excluded where the cause can be traced back to one or more of the following:

- unintended use of the tail-gate lift
- Improper installation, commissioning, operation and maintenance of the tail-gate lift
- Operation of the tail-gate lift with defective safety equipment or improperly attached or non-operational safety and protective equipment
- Failure to observe the instructions given in the operating instructions relating to transportation, storage, installation, commissioning, operation and maintenance of the tail-gate lift
- Unauthorised structural modifications to the tail-gate lift
- Inadequate monitoring of machine parts are subject to wear

- Improperly performed repair work

1.3 Intellectual property

The copyright to this operating manual remains the property of Dautel.

The operating manual is intended for use by the operator and its personnel only.

It contains regulations and instructions which may not, neither in full nor in part, be
- copied
- distributed or
- communicated in any other manner.

Violation of this can lead to prosecution.

1.4Special instructions

Two types of instructions are used in this operating manual in order to emphasise important information.

CAUTION!
contains information that must be observed in order to prevent personal injury.

ATTENTION!
contains information that must be observed in order to prevent damage to the tail-gate lift.

2.Description

2.1Specifications

The tail-gate lift with the ability to run under is connected to the chassis by a hydraulic sliding mechanism.
The hydraulic sliding unit consists of aluminium profiles to which the tail-gate lift is attached by means of large-scale, extremely robust guide elements.

Since the tail-gate lift can be fully loaded in every intermediate position of the intermediate stroke path of travel, it is possible to compensate for the different projections of the interchangeable superstructures.

The hoist gear's light yet robust construction is executed from high-tensile materials. Large-scale bearings and tempered bearing bolts are designed as low-wear and maintenance-free permanent bearings.
The collapsible platform is constructed from steel and aluminium to make it warp resistant and slip-proof.

Possible movements of the tail-gate lift

- Extending/retracting

- Inclination of the platform

- Folding in/out

- Raising/lowering

- Fully automatic tilt on the ground subsequent to the lowering process

- Automatic return to horizontal position when raising

Depending on the available space, the complete drive unit including the control box is permanently installed as a side aggregate on the right guide profile or the drive unit can be housed separately in another place (aggregate relocation).

The lift cylinders are single-action hydraulic cylinders. The tilt cylinders are double-action hydraulic cylinders. The piston rods are chrome-plated.
The lowering speed is controlled independent of the load by a self-actuating control valve.
Persons and goods are not endangered in the case of a line break.

The control of the extending/retracting functions as well as folding in/out and tilting is only possible from the control unit. This is mounted on the side of the guide profile.
The control of the raising and lowering functions takes place through the control unit or the pedal switch on the platform.

A main circuit switch (simultaneously fuse holder) in the battery box separates the tail-gate lift from the vehicle electrical system with repair work.

The drive takes place electro-hydraulically in 24 V operating voltage.

Recommended generators and batteries

A generator with at least 28 V/35 A is customary for the operation of tail-gate lifts.
A three-phase current generator with approximately 28 V/55-80 A is recommended for operation exclusively in towns and cities.
For tractors with trailers or flatbed trailers, two battery sets are to be charged. Therefore it is advantageous to use a generator with approximately 28 V/100 A.
It must be ensured that both battery sets are continuously supplied with sufficient charge current through the appropriate equipment.

If other strong power consumers (heating or cooling units) are installed in the vehicle in addition to the tail-gate lift, their consumption must also be taken into consideration.

The proper layout of the vehicle electrical system is very important. The association of loading platform manufacturers operating in Europe (VEHH) has compiled a guideline for this purpose. With questions or problems, contact your vehicle manufacturer or us directly.

If battery and generator sizes are significantly undercut, operational faults and consequential damages as well as malfunction of the power relay or the electrical motor should be anticipated, especially during winter operation.

In normal cases, the following battery sizes should be present:

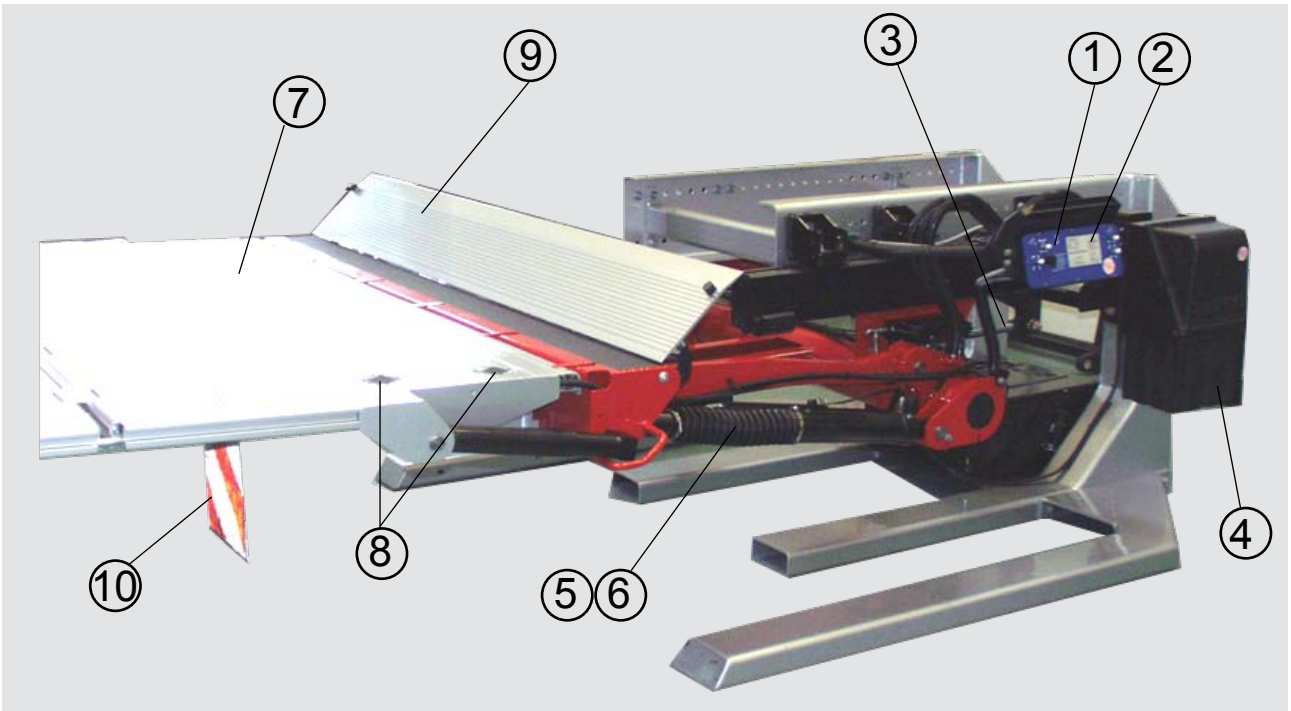
Load-bearing capacity in kg	Battery size	
1,500 to 3,000	Light duty	Heavy duty
	24V: 2x 143 Ah	24V: 2x 170 Ah

2.2Technical data

DS	Load-bearing capacity / with load distance	Operating voltage	Drive capacity
1500	1,500 kg / 1,000 mm	24 V	2 kW/3kW
2000	2,000 kg / 1,000 mm	24 V	2 kW/3kW
2500	2,500kg / 960 mm	24 V	3 kW
3000	3,000 kg / 800 mm	24 V	3 kW

The technical data of the tail-gate lift can be gathered from the type plate in the control unit. Weights and load distances must be observed without fail!

2.3Overview



1 = Control unit
2 = Type plate
3 = Displacement cylinder
4 = Drive unit
5 = Lift cylinder
6 = Tilt cylinder
7 = Platform
8 = Pedal switch
9 = Loading ramp
10 = Warning flags

3. Safety

3.1 Accident prevention

Tail-gate lifts that are operated in the European Union (EU), are subject to the EC Machinery Directive with Appendices, in particular EN 1756-1.
The technical design and testing are regulated in these provisions.
For tail-gate lifts that are operated outside of the EU, Chapter 3.1 is not binding, however the valid national regulations must also be observed here.

When operating the tail-gate lift, the following instructions must be observed.

Generally not permitted:

1. standing under the platform and the load.
2. the use of the tail-gate lift as a working platform.
3. intentional oscillation of the tail-gate lift.
4. throwing objects from or onto the platform.

Moving the platform with ground conveyors is only permitted if the weight does not exceed the load-bearing capacity of the tail-gate platform.

Overload plates or oscillating ramps may not impermissibly load the platform.

The raising and lowering of loads may only take place with the platform positioned horizontally. Loading may not alter the incline of the platform. The automatic incline must be used on the ground (raise or lower command). When unloading on inclined surfaces rollable loads can push or pull with great force.

Requirements on the operating personnel

Only persons that are over 18 years of age may be entrusted with independent operation of tail-gate lifts. They must be instructed in the operation of the tail-gate lift and have exhibited their capability of doing so to the operator.

Supervisor

If multiple persons are working on tail-gate lifts together, a supervisor must be appointed.

Commissioning

Secure vehicle against unintentional movement (parking brake, gear, chock).

The operating range of the tail-gate lift must be well-lighted. We recommend the use of flood lamps.

Tail-gate lifts are to be operated in such a way that no crushing and shear zones arise between the tail-gate lift and nearby parts. With proper operation, activities on the load-carrying equipment or the load must be conducted free of obstructions.
The proper positioning of supports on appropriate surfaces must be checked before commissioning of the tail-gate lift. Power-driven supports must be observed during extension and retraction.

Tail-gate lifts that are operated in or extend into the vicinity of public traffic must be secured against traffic hazards in an appropriate manner in accordance with national road safety regulations (blinking warning lights, warning flags, ...).
The range of movement of the tail-gate lift must be kept clear of persons and objects. Unnecessary presence of persons on or in the range of movement of tail-gate lifts is not permitted.

Open compartment doors must be secured.

Handling and conduct during operation

The operating personnel must ensure that no persons are endangered during all movements of the tail-gate lift.

The tail-gate lift must be constantly observed during extension and retraction, opening and closing as well as raising and lowering. The crush and shear range between the platform and superstructure and between platform and road surface must be observed in particular.

Tail-gate lifts may only be controlled from the intended control positions.

Tail-gate lifts may not be loaded beyond the permissible load-bearing capacity. The load-bearing capacity diagram or type plate must be observed.

The centre of gravity must be placed as close to the vehicle as possible. With one-sided loading, a max. 50% of the respective permissible load-bearing capacity is allowed.
Loads must be applied to the platform so that unintended changes in position are prevented. Secure loads against sliding and rolling off! Tail-gate lifts without installed drop-down protectors may not be used for the transport of rolling containers without brakes.

When equipping the tail-gate lift with one-foot operation or remote control, the feet of the operator may under no circumstances extend beyond the edge of the platform facing the vehicle.
Risk of crushing!
Absolutely adhere to the intended operator's stand (painted footprints)!

Only the operator is permitted to ride along on the platform. The intended operator's stand must be kept clear for this purpose. When riding along, grips for stability must be utilised. Climbing onto the load and platform are not permitted.

Decommissioning

Tail-gate lifts must be secured against unauthorised use after decommissioning. For this purpose, the main switch must be secured by lock or coding.

The tail-gate lift is only decommissioned and in driving position if the control lamp in the cab has gone out.

The vehicle may not be driven if the tail-gate lift is not in driving position!

Faults and repairs

With faults that cannot be rectified according to Chapter 6 of these instructions, the tail-gate platform must be decommissioned and secured against unauthorised use. Customer services must be informed.

3.2 Safety information and unauthorised modes of operation

Secure vehicle against unintentional movement (hand brake, gear, chock).

Secure vehicle (blinking warning lights, warning flags) in accordance with German road traffic licensing regulations (StVZO).

The tail-gate lift must be constantly observed when extending, retracting, raising and lowering.

The range of movement of the tail-gate lift must be kept clear of persons and objects.

The crush and shear range between the platform and superstructure as well as between platform and road surface must be observed in particular.
Open compartment doors must be secured.

Use stability grips.

The extension and retraction of the tail-gate lift may only take place in the unloaded state.

Keep intended operator's stand clear. Only the operator is permitted to ride along on the platform in the operator's position to be kept clear (approx. 40x60 cm).

When equipping the tail-gate lift with one-foot operation or remote control, the feet of the operator may under no circumstances extend beyond the edge of the platform facing the vehicle.
Risk of crushing!
Absolutely adhere to the intended operator's stand (painted footprints)!

Do not exceed permissible load-bearing capacity.
Observe load-bearing capacity diagram.
Place centre of gravity as close to the vehicle as possible.
Max. 50% of the respective load-bearing capacity with one-sided loading.

The loading and unloading of the tail-gate lift, as well as the raising and lowering of the load may only take place with horizontally-positioned platform.

Loading may not alter the incline of the platform.

Use automatic tilting on the ground (operation through raise or lower command).

Raising-lowering only permitted with extended tail-gate lift and unfolded platform.

Secure loads against sliding and rolling off! Tail-gate lift without installed drop-down protectors may not be used for the transport of rolling containers without brakes.

Climbing onto the load and platform are not permitted.
Overload plates or oscillating ramps may not impermissibly load the platform.
The tail-gate lift may not be used as an elevated work platform.

In the case of faults the tail-gate lift must be decommissioned and secured against unauthorised use. Customer services must be informed.
Do not move platform with fork lift.

When unloading on inclined surfaces rollable loads can push or pull with great force.

The retracted tail-gate lift must brace itself on the oscillation safeguarding.

We recommend illuminating the working area of the tail-gate lift with a flood lamp.

CAUTION!
Danger!
If the tail-gate lift is raised and pushed in with outside help in the case of fault, there is the acute danger to life in the swivel range of the tail-gate lift!
The cylinders are not filled with oil through movement with outside help.
In this way, all safety equipment is without braking effect.
When extending or pulling the tail-gate lift out it can abruptly fall back to its original position. Therefore it is mandatory to make sure that the pushed-in tail-gate lift is secured with stable lashings or the like.

The instruction sticker attached as the final page in this manual must be applied so that it is clearly visible. (Reorder!)

ATTENTION!
Tail-gate lift was raised with outside help.
Cylinders are not completely filled with oil.
Safety equipment that prevents sudden movements, therefore, are not functioning.
Movement only permitted with crane or fork lift!

- Risk of accident -

Instruction sticker

Travel may only take place at slow speeds and to the nearest workshop.
Customer service must be expressly notified about these circumstances.
Extension may only take place with outside help such as a crane or fork lift!
It is better to only operate the platform after successful repair work and pressure feed of the lift cylinder and possibly tilt cylinders.

4.Operation

4.1Intended use

The serially manufactured tail-gate lift with the ability to run under is designed for raising and lowering cargo.

4.2 Operating personnel

Upon delivery, the operator will be instructed by the vehicle manufacturer in the operation and maintenance of the Dautel tail-gate lift.
Only persons who have been instructed by the operator may be commissioned with operating the tail-gate lift.
The operating instructions are to be read carefully beforehand.

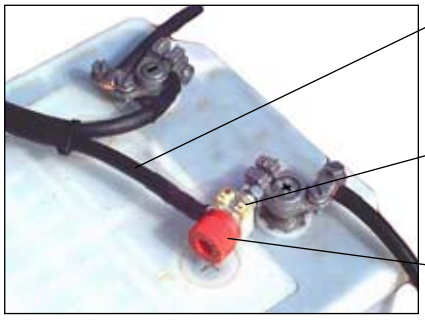
The details relating to accident prevention measures for operating personnel are also to be observed!

4.3Operation of the moveable

tail-gate lift

(Special designs may deviate from the operation described here!)

Normally the tail-gate lift is connected to the vehicle battery through a main current fuse connection. With repair work or in case of emergency the current supply to the tail-gate lift is interrupted by removal of the positive terminal on the battery.



The main current fuse connection is installed at the positive terminal of the battery.

With some vehicles the current tap does not take place directly at the battery terminal. With such vehicles the fuse protection is located in an energy distributor on the chassis.

4.3.1 Commissioning

Switching on in the cab

Actuate switch in the cab. The control lamp shows indicates the switched-on position.

The control lamps also illuminated in switched-off state if the platform is not closed.

Press - Switch on

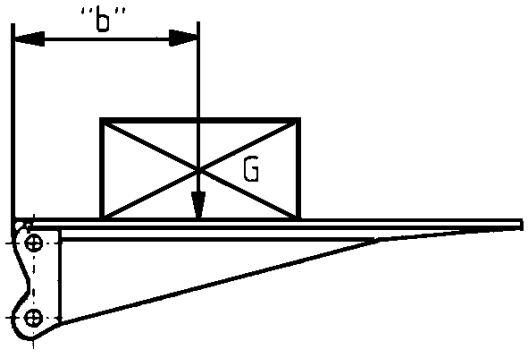
Switching on the control unit

With trailers or flatbed trailers, switching on takes place by means of a decode switch directly at the control unit.

Coding switch

An indicator lamp that monitors platform position of the semitrailer is located in the cab.

Load-bearing capacity diagram DS -48VA

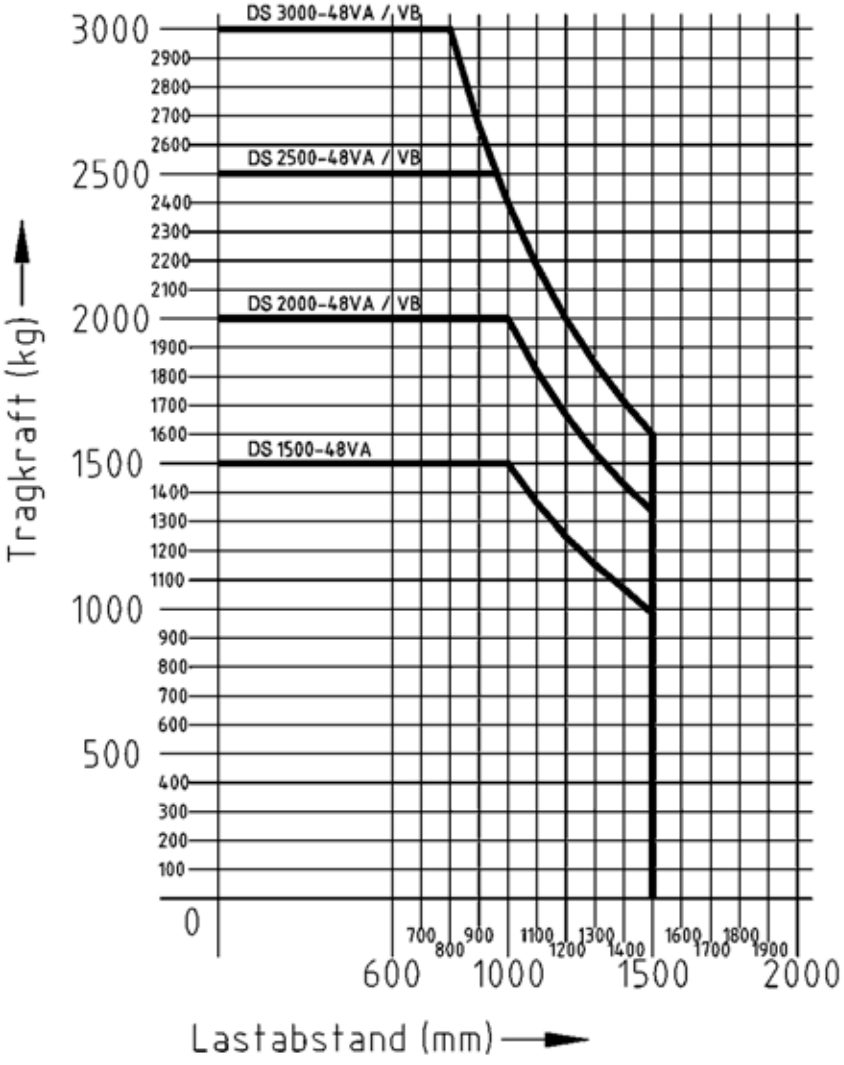


CAUTION!

If the load distance "b" is increased, the load-bearing capacity "G" of the tail-gate lift is reduced.

Information only for load positioned in the middle. With one-sided loading of the platform the load-bearing capacity is reduced up to 50 %.

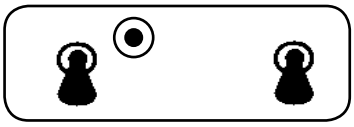
Load-bearing capacity information on the type plate in the control unit and the centre of gravity marking on the platform must be observed without fail!
The diagrams shown here are only a general overview.
Only the load-bearing capacity information on the type plate in the control unit is valid!



4.3.2 Two-handed operation without hydraulic package folding

Bringing tail-gate lift to operating position

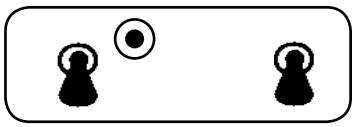
1. **Lower (approx. 5 cm)**



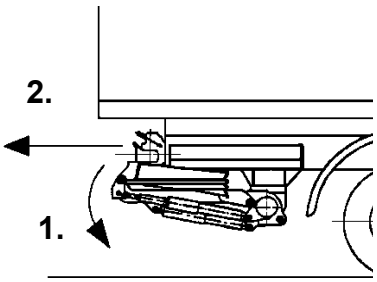
Lower

2. **Extend tail-gate lift completely and lower to road surface.**

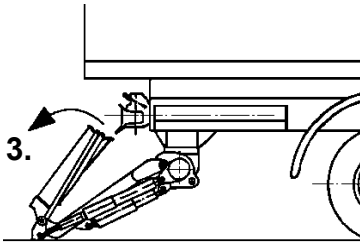
Extend



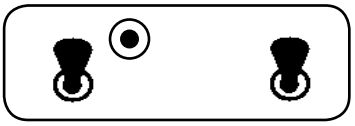
Lower



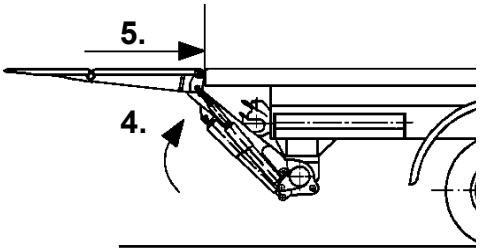
3. **Fold out platform and platform tips to the side by hand**



4. **Run platform to loading surface height**



5. **Run platform to intermediate stop position or to superstructure**



Intermediate stop position

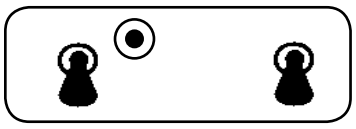
If the completely extended position of the tail-gate lift is not simultaneously the operating position, it must be run to the intermediate stop position. This can be done automatically with platform folded out.

The intermediate stop position is set by the vehicle manufacturer. Multiple positions are also possible if necessary. When retracting, the tail-gate lift runs to the intermediate stop position. If this is reached the retraction is interrupted for one second. The operating switch can be released. If the operating switch is not released, the tail-gate lift runs on to the next intermediate stop position after one second.

4.3.3 Two-handed operation with hydraulic package folding

Bringing tail-gate lift to operating position

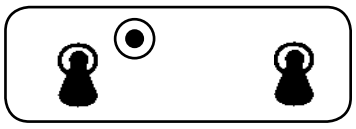
1. **Lower (approx. 5 cm)**



Lower

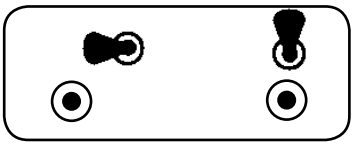
2. **Extend tail-gate lift completely and lower to road surface.**

Extend



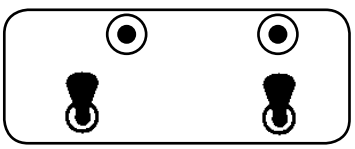
Lower

3. **Fold out platform package hydraulically to 90° then release both switches, then lower the platform.**

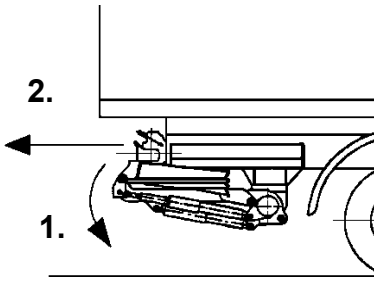


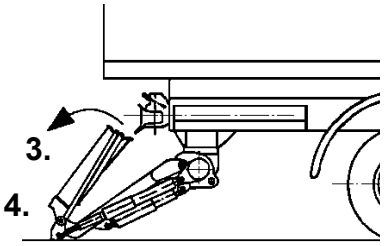
4. **Fold out platform tips to the side by hand**

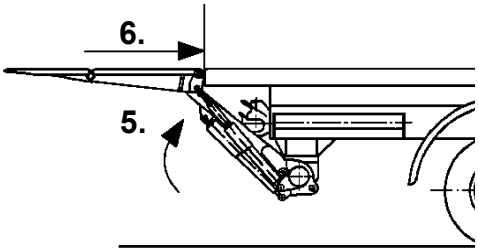
5. **Run platform to loading surface height**



6. **Run platform to intermediate stop position or to superstructure**







Intermediate stop position

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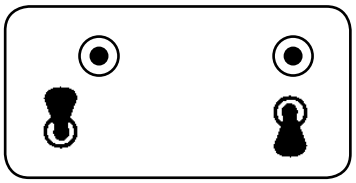
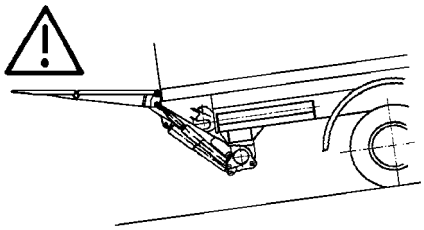
The intermediate stop position is set by the vehicle manufacturer. Multiple positions are also possible if necessary. When retracting, the tail-gate lift runs to the intermediate stop position. If this is reached the retraction is interrupted for one second. The operating switch can be released. If the operating switch is not released, the tail-gate lift runs on to the next intermediate stop position after one second.

Working with the tail-gate lift

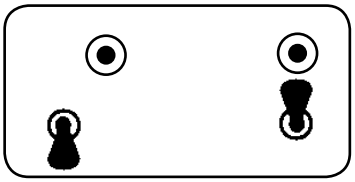
The platform must be approximately horizontal before loading, tilted slightly forward, upward. For this purpose, tilt forward or backward according to the position of the truck. Tilting slightly forward is necessary because of spring compression. Loading and unloading when platform is not horizontally positioned is not permitted!

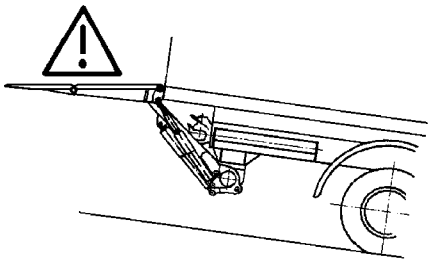
1. **Tilting forward**



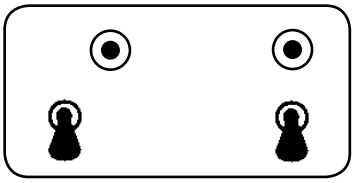


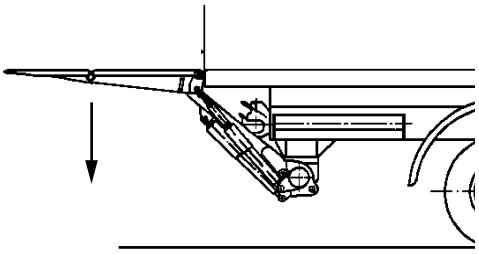
2. **Tilting backward**



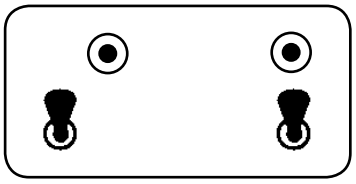


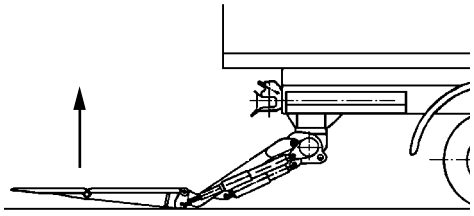
3. **Lowering and automatically tilt backward**





4. **Raising and automatically tilting forward**

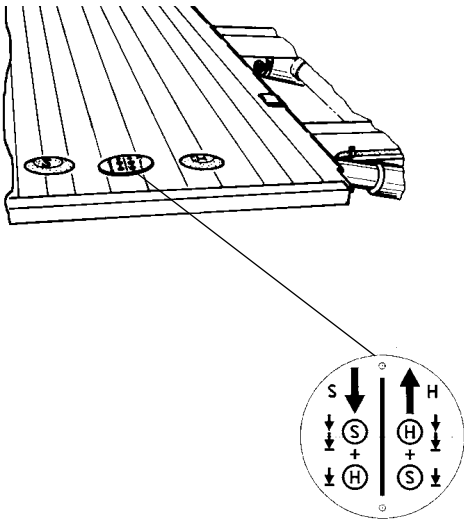




4.3.4Two-foot operation on the platform

The pedal switch can be actuated with the heel or ball of the foot.

Only raising/lowering and automatic tilting up/ down are possible.



Double inching function

Raising and automatically tilting up

Actuate and hold H pedal switch **twice** within 0.5 seconds.

Then actuate S pedal switch.

Lifting process is executed.

Now inching function is possible with H+S pedal switches.

Lowering and automatic backward tilting

Actuate and hold S pedal switch **twice** within 0.5 seconds.

Then actuate H pedal switch.

Lowering process is executed.

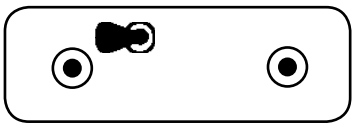
Now inching function is possible with H+S pedal switches.

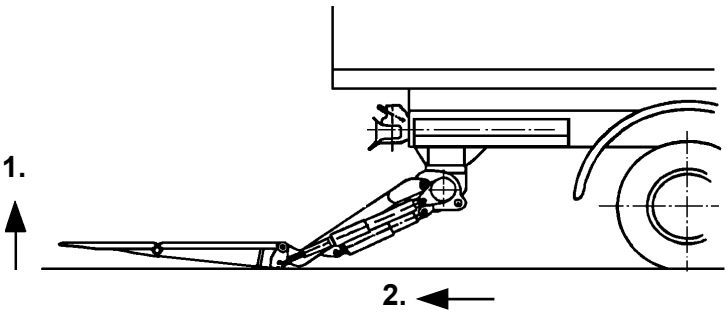
Bring tail-gate lift to driving position and decommission without hydraulic package folding

1. Position platform horizontally

Position platform horizontally on the ground, briefly switch to raise, do not raise.

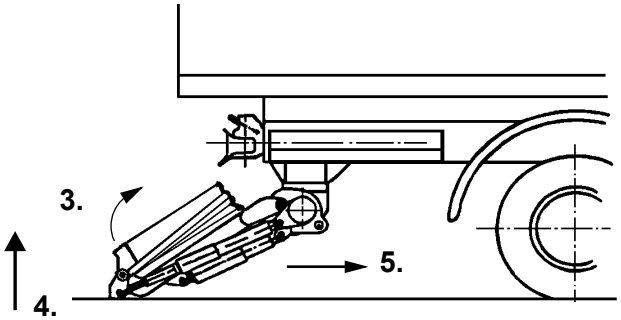
2. Extend tail-gate lift completely



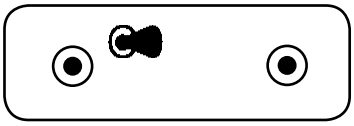


3. Fold platform in by hand
(tail-gate lift must be completely extended for this).

4. Raise the platform until it can be retracted with sufficient space between platform and guide profile.



5. Retracting

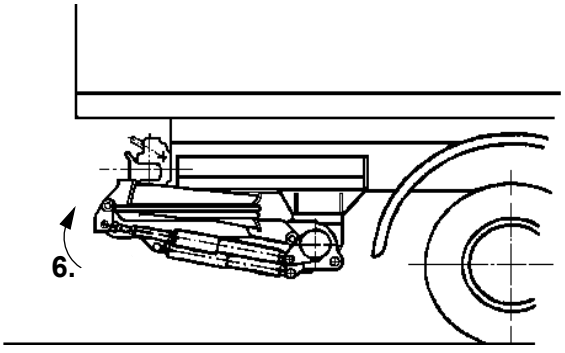


Retract tail-gate lift completely until mechanical stop reached.

6. Raising to driving position

Actuate raise function. Platform raises and presses with pre-tensioning against the rubber buffer.

Switch off switch in cab or coding switch in the control box and remove key. If the tail-gate lift is not in driving position, this is shown by a red control lamp.

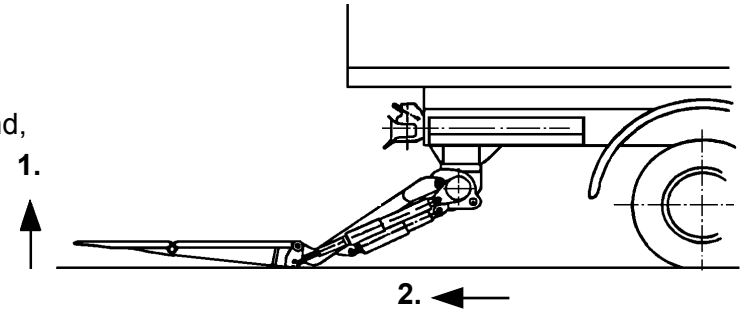


Driving position of the movable tail-gate lift
Rubber buffer and/or oscillation safeguarding must be pre-tensioned.

Bring tail-gate lift to driving position and decommission with hydraulic package folding

1. Position platform horizontally

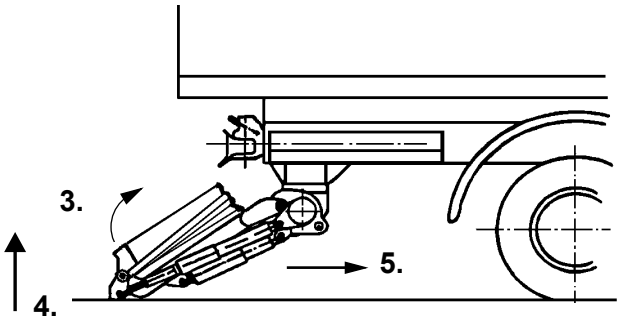
Position platform horizontally on the ground, briefly switch to raise, do not raise.



2. Extend tail-gate lift completely

3. Fold platform in by hand or actuate "Hydraulic folding in"
(tail-gate lift must be completely extended for this).

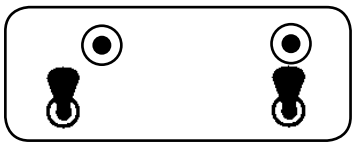
4. Raise platform until it raises slightly from the middle feed roller.



5. Retracting

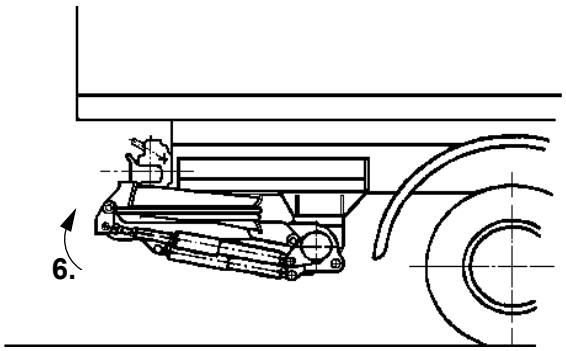
Retract tail-gate lift completely until mechanical stop reached.

6. Raising to driving position



Actuate raise function. Platform raises and presses with pre-tensioning against the rubber buffer.

Switch off switch in cab or coding switch in the control box and remove key.



Driving position of the movable tail-gate lift
Rubber buffer and/or oscillation safeguarding must be pre-tensioned.

4.4 Trailers or flatbed trailers with tail-gate lift

In this case the switching-on of the tail-gate lift only happens outside through a coding switch on the control unit, however the display of the platform position occurs in the cab of the vehicle.

Coding switch

With presence of a charge cable, it must be ensured when connecting and disconnecting the charge cable that the connector of the trailer is live. Contact with metal parts can destroy the fuse protections of the charge cable. Then the batteries are no longer charged.
The charging plug must be fixed in a parking socket.

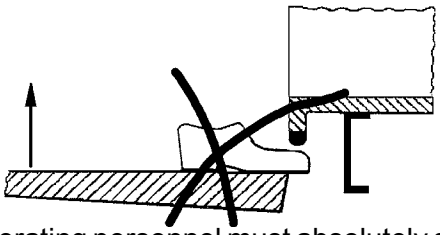
With faults in the charge line the indicator lamp in the dashboard begins to blink (see Ch. 6 Fault clearance).

4.5Working with auxiliary equipment

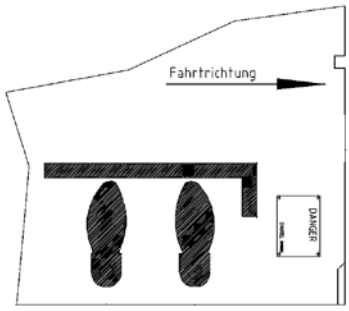
4.5.1 Remote control

Instruction of the operator by the vehicle manufacturer must take place before the initial commissioning.

CAUTION!
Risk of crushing!
Observe the pinch point between platform and superstructure without fail!
Feet may under no circumstances extend over the platform edge.



The operating personnel must absolutely stand in the area of the platform marked with footprints.

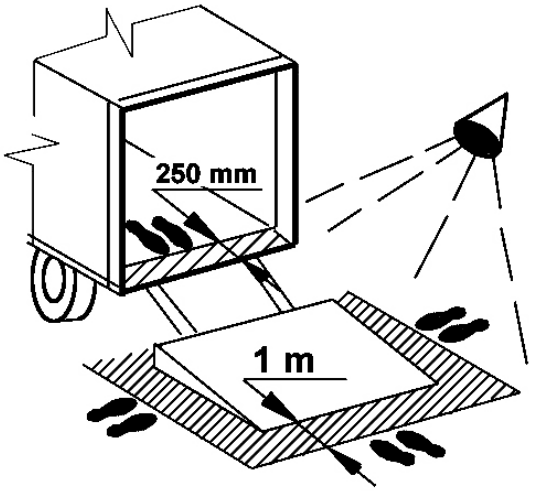


The platform is extended and lowered through the control unit. Then "Raise" and "Lower" can be initiated by remote control.
In combination with the "Safety point" attached on the outside of the superstructure, "Tilt forward", "Tilt backward" can also be initiated with the remote control.

When operating the tail-gate lift from the road surface the operator must maintain a minimum distance of one meter to all edges of the platform in order to avoid subjecting him/herself to risk of crushing.

When operating the tail-gate lift from inside the superstructure the operator must maintain a minimum distance of 250 mm to the sill in order to avoid subjecting him/herself to risk of crushing.
The operation of the tail-gate lift by remote control without observance of the minimum clearances is not permitted.

The danger area (250 mm to the sill) must be clearly labelled by the vehicle manufacturer (e.g. white - red striped), if necessary, a predefined operator's stand can be assigned for the operator by applying a marking (e.g. two footprints).

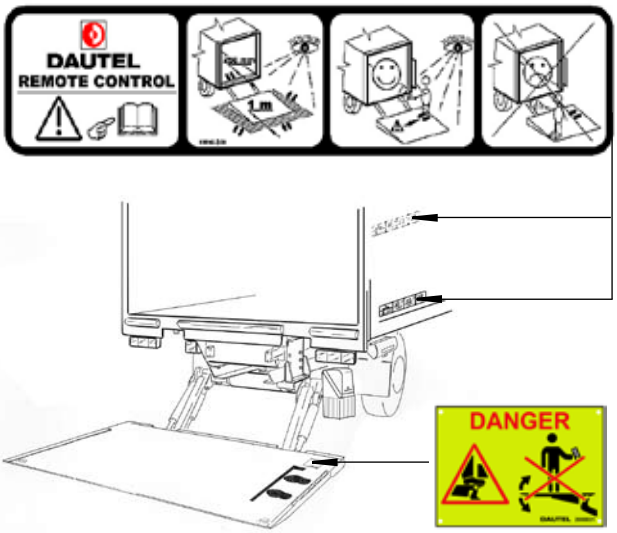


During operation of the tail-gate lift with the remote control, the operator must be able to see the work area well in order to avoid endangering persons in the vicinity of the platform.

Operation of the tail-gate lift with the remote control a clear view of the work area is not permitted.

The sticker must applied on the superstructure (outside/inside) in the line of sight of the operator.

If markings or warning notices are damaged, they must be replaced.



4.5.2Cable remote operation

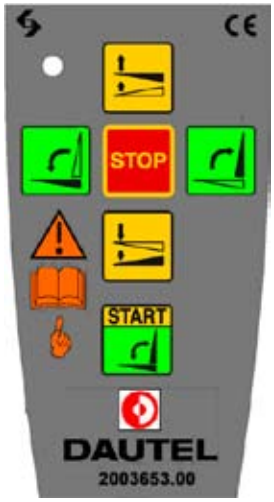
Raising and automatically tilting up

Actuate button

Lowering and automatic backward tilting

Actuate button

4.5.3Remote control



Manual transmitter

With this remote control the raising, lowering, forward tilting and backward tilting functions can be actuated.

Depending on the type of tail-gate lift, the built-in-receiver of the remote control is installed in the handheld transmitter, in the aggregate cover or on the support pipe.

For protection against unintended triggering of the forward and backward tilting functions, they can only be actuated if the handheld transmitter is held with its face side held directly at the safety point and the button "START" on the handheld transmitter is simultaneously actuated.

All functions can only be actuated by remote control with the tail-gate lift switched on.

START button/two-handed operation

The remote control must be switched on with this button. It simultaneously serves the "two-handed operation" function

Now the required functions can be triggered with the respective button.

Raise function (one-handed)

Lower function (one-handed)

Tilt forward function (two-handed)

Tilt backward function (two-handed)

STOP button

With this button the entire remote control is switched off.

For protection against unintended triggering of a function or permanently switched-on remote control, the handheld transmitter has a limited timeframe.

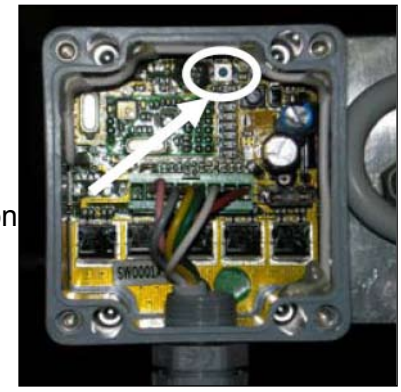
If no function is triggered within a timeframe of 2 minutes or the START button is pressed, the remote control automatically switches off.

In order to be able to continue working with the remote control, the START button must be pressed again.

In order to avoid faults and signal interference, the signal of the handheld transmitter is encoded with a special code.
The code is selected at random and is assigned to the handheld transmitter at the factory.

After replacing batteries in the handheld transmitter or possible faults, the "Teaching" of the receiver to the code of the sender must take place again.

Coding button



Procedure:

1. Cab safety switch/Switch off coding.
2. Unscrew housing cover of the radio receiver
3. Press and hold coding button.
4. Cab safety switch/Switch on coding. (coding button held).
5. Wait 3 - 4 seconds.
6. Release coding button.
7. Press and briefly hold 3 buttons on handheld transmitter within 15 seconds.
8. Check functions (first press start button).
9. Screw on housing cover.

4.5.4 Supports, general

If supports are not adjusted upward during loading, the chassis subframe, the supporting frame or the supports can be overloaded.

If supports are not adjusted downward during unloading, an impermissible tilting to the rear can occur with vehicles with short wheelbase.

The ground must be suitable for bearing the load of the supports.

Hydraulic supports

The control of the hydraulic supports takes place through the toggle switch "Extend/Retract" at the control unit.

A ball cock is located on the right support in the driving direction, which is adjusted with the function "Extend" or "Support".

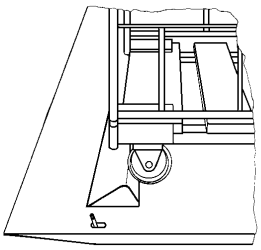
After the tail-gate lift has been brought to operating position, change ball cock to "Support" and extend supports.
In doing so, observe the motion sequence!

After successful loading procedure the supports are completely retracted again. Change ball cock to "Extend/Retract" and bring tail-gate lift to driving position.

CAUTION!
Truck shocks can compress upon release of the supports.

4.5.5Single-action drop-down protector
Type F1

Only prevents rolling containers from rolling off in the direction of the platform tip.



Unloading

CAUTION!
The horizontal position of the platform is particularly important here. With excessive inclines the containers roll back into the superstructure. With excessive declines, rolling containers are no longer held, roll over the folding wing and can fall over.

Slide lock outward with your foot, folding wing straightens out.

Move rolling container against the folding wing and lower platform completely to the ground.

Pull container away from the folding wing so that it can be closed again.

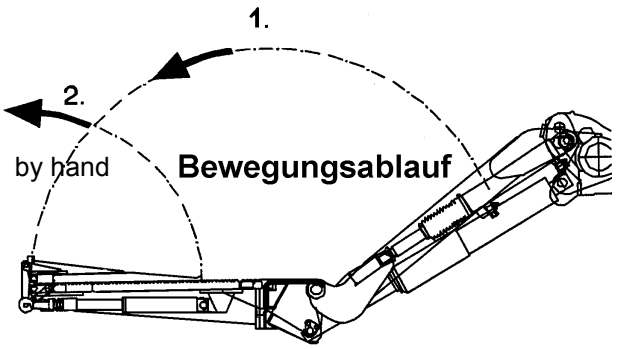
Loading
Position folding wing by actuating the notch. Slide lock outward with your foot, folding wing straightens out.

Slide rolling container over positioned folding wing onto the platform. The folding wings automatically jump back to locked position after being traversed and secure the container without additional actuation.

Raise platform completely and slide container into the superstructure.
Bring folding wing to basic position with your foot. Slide the lock inward with the other foot.

4.5.6Hydraulic folding in and out
Package folding

With this auxiliary equipment the folding in and out procedure can be significantly aided.
In this case the platform package is moved with the aid of a hydraulic cylinder.



If the tail-gate lifting platform is equipped with package folding, the functions "Hydraulic folding" and "Fold out and in" are designed in two-handed operation.
For this, the desired function must be selected with the selector switch "Fold in/out" or "Fold in/out". With the trip switch "In" or "Out", the respective movement is controlled.

Folding out

ATTENTION!
The tail-gate lift must be folded out completely.

- Extend tail-gate lift completely and lower to the ground.

- Actuate operating switch "Fold out platform". Platform package straightens out, pivots away through the vertical position and lowers to the road surface.

- Fold out platform tips by hand.

Folding in

ATTENTION!
The tail-gate lift must be folded out completely.

- Position platform horizontally on the ground.
- Fold in platform tips by hand.
- Actuate "Fold in platform" switch until the platform package is folded in over the vertical position. Do not actuate the switch any longer. The platform package lowers automatically.

Trip switch movement "In" or "Out"

Selector switch function "Extend/Retract" or "Fold out/in"

4.5.7Loading ramp

The foldable loading ramp may be necessary with superstructures for bridging the door gap and with interchangeable structures for compensation the height and length tolerances off the superstructure.

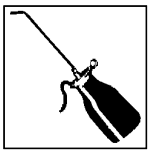
Here the highest position must be approached without direct stroke limit and the loading ramp opened at the desired stroke position.
The loading ramp must lie on the at least 50 mm down on the end profile.

Wheel diameter	min. 80 mm.
Wheel load	max. 500 kg.

The platform may only be raised with loading ramp positioned diagonally upward.
Before folding in the platform tip, fold down drive-over plate.
With loading ramp design with gas springs, 3 positions are resiliently held:

1. Diagonally upright during raising and lowering of the platform.
2. Horizontally folded out when driving over with carted goods. With the subsequent lowering the ramp normally raises again automatically.
3. Diagonally downward as transport position.

The loading platform is folded down by press of pedal switch.



5. Maintenance

Before beginning maintenance work the tail-gate lift must be secured against unintentional movement (e.g. position fixing frames, crane hooks, etc.).

5.1General

The following maintenance tasks are to be carried out punctually.

Maintenance tasks may only be undertaken by qualified specialist personnel.

Ensure that the vehicle and the tail-gate lift are secured against unintentional start-up, before commencing with maintenance tasks. Also, the tail-gate lift must be secured against unintentional movement (e.g. position fixing frames, crane hooks, etc).

Improvised solutions in order to attempt to restore functionality e.g. switching off safety devices, are expressly prohibited.

Attach and secure larger assemblies carefully to lifting gear when exchanging.

CAUTION!
Risk of injury from spouting hydraulic oil.
Before working on the hydraulic systems, ensure they are pressure less.
Only tighten nuts and screws when the hydraulic system is pressure less.
Only undertake maintenance and repair work on cool hydraulic systems.

The pre-set hydraulic pressure may not be changed.

When working on components with shocks or gas springs, they must absolutely be slackened before commencing work.

ATTENTION!
Before undertaking welding tasks, be sure to read the HGV manufacturer's instructions relating to electrical modules (ABS, EPS, EDC, etc.). **Disassemble control module of the tail-gate lift.**
If screw connections are loosened during maintenance work, they must be conclusively retightened and checked for firm seating.
Upon completion of maintenance tasks, test safety devices for functionality.

Replace defective components immediately.

Only use original replacement and wearing parts. It cannot be guaranteed that third-party parts are designed and manufactured to load and safety-relevant requirements.

Significant repairs to the supporting frame or platform must be entered in the test-log book!

5.2 Weekly

5.2.1 Cleaning

The tail-gate lift may not be cleaned with a high-pressure cleaner for the first 6 weeks after painting. After this time the jet nozzle must be held at least 50 cm away. In doing so, make sure that the attached type plate and information signs are not damaged.

Cleaning fluids must be neutral with mild effects. They may not be aggressive and may not have altering effects on rubber and plastic parts (expanding, shrinking, embrittling). This also applies for the especially slip-resistant platform surface. Spraying with cold cleaning solvent or oil is not permitted.

No cleansers that chemically attack the oxide coating may be used on components made from aluminium, such as guide profiles, valve blocks, etc. The cleansers must lie in the chemically neutral range of pH 5-8. This requirement is fulfilled, for example, by the cleanser "Concit Citrusreiniger" from Cowa. No agents such as steel wool, emery paper, etc., which strip anodised coatings may be used either.

If other, e.g. fat-dissolving agents (with the transport of grease, etc.) are used, our authorisation must be obtained.

The two guide profiles of the DS may only be treated with suitable spray lubricants as needed (e.g. INTERFLON "Fin Grease" Dautel No. 0071809).

When cleaning, make sure that no moisture gets into the control unit or drive unit.

Dirt should be removed from the drop-down protector by rinsing.

5.2.2 Lubricating

The Dautel tail-gate lifts DS-48VA are equipped with maintenance-free bearings as a basic rule. Regular lubrication is not necessary.

It is recommended, however, to spray the faces of the bearings and bolt protrusions with lubricant or to apply a few drops of lubricating oil. This also prevents the possible occurrence of noise and protects against corrosion.

Different parts of the tail-gate lift such as the control box cover, drop-down protectors, folding platform joints or other auxiliary equipment must be checked for ease of movement and oiled as necessary.

5.2.3 Battery check

The battery check is very important.
Batteries discharge automatically. Therefore recharging during shutdown (e.g. with truck rental companies or with trailers) is particularly advantageous in the winter.

Measure acid density of all cells with a battery syringe:
Thickness 1.28 kg/dm^3 = battery charged
Thickness 1.23 kg/dm^3 = battery discharged
The acid density may not fall below 1.23kg/dm^3 in any cell!

If this is frequently the case, a stronger generator should be installed.

The fluid level in the battery must be above the plates; refill as necessary.

When replacements are necessary, HD batteries should be used or deep-cycle batteries with use in extremely short hauls.

5.2.4 Function test

Check blinking warning lights on platform for function.

Check warning flags for wear.

Check toggle switch for automatic return and function.

If present, check coding switch for function.

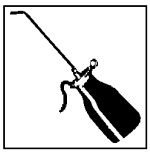
Check pedal switch for automatic return and damages.

Check pedal switch operation (control) for function or fault.

Check cable remote operation for function and damage.

Check traversing unit for proper sequence of motions.

Check fixing frames on the chassis for damage.



5.2.5Trailer charge cable and main current line

Clean plug contacts of the charge cable between motor vehicle and spray with contact spray.

Check charge cable fuse protection for corrosion, clean as necessary.

Check main current fuse protection for corrosion, clean as necessary.

5.3Monthly

5.3.1Hydraulic system

Check hydraulic lines for tightness.

Check hydraulic hoses for chafe and kink points.
Immediately replace damaged hoses with original hoses.

Check the oil level in the hydraulic reservoir.

In doing so, the vehicle must be absolutely horizontally positioned both length and cross-wise.

For this, extend tail-gate lift, lower it to the ground, fold out and automatically tilt backwards.
Read oil level on the oil dipstick.
If it must be refilled, the cause of the oil loss must be found.

After refilling, run through the tail-gate lift operating range, then put dipstick back.

Check oscillation safeguard in driving position for function.

5.3.2 Drive unit

Check cable entry points for tightness. Immediately replace damaged housing or rubber grommets.

5.3.3 Control unit

Check cable connections for tightness and firm seating. Tighten as necessary.

5.3.4 Platform

Check platform folding joints for wear (visual inspection); oil as necessary.

Check rubber buffers, oscillation safeguards for wear.

5.3.5Operator's stand marking (only with remote operation)

Check condition of the footprints painted on the platform as marking for the operator's stand. Repaint as necessary.

5.4Semi-annually

5.4.1Check of the operating speeds

max. stroke and lowering speed
= 15cm/sec

max. extension and retraction speed
= 0.3m/sec

max. speed folding in and out
= 0.7m/sec

max. closing/opening speed
= 10°/sec

max. tilting speed on the ground
= 4°/sec

Adjustments may only be carried out by trained personnel.

Electric motor

ATTENTION!

Since worn carbon brushes lead to heating of the motor, the carbon brushes must be checked for wear and ease of movement. In doing so, the accumulated carbon dust must be blown off with compressed air. Replace the carbon brushes as needed.
If necessary, the collector must also be over-wound and the insulation milled out.

5.5 Annually

5.5.1Annual inspection

Inspection of the tail-gate lift by a technical expert and note in the test-log (only CE models).

5.5.2Oil change in hydraulic tank

CAUTION!

If the the tail-gate is held in the raised position during repairs, e.g. by crane, and the cylinders are not completely filled with oil, the lift function must be actuated after successful repair until the lift cylinders are tensioned and can also hold the weight of the platform.
Only then may it be released from the crane. Otherwise there is the risk of the platform suddenly falling down when the lock is released.

Condensation causes faults in the system!

Dispose of waste oil properly!
The disposal of waste oil is subject to strict guidelines established in the Waste Management Law/ Waste Oil Provision. With questions, turn to your nearby waste disposal company.

The same oil may be used in both summer and winter for fault-free operation.
The following types of oil are permitted. The order does not represent an evaluation and makes no claim to completeness.
Recommended types of oil

AVIA Fluid RSL 10

DAUTEL special hydraulic oil

FUCHS Renolin B 15 HLP 10

Mobil DTE 21

Biodegradable hydraulic oils

FUCHS Plantohyd 15 S

KLEENOIL (Panolin) HLP Synth 15

With normal oil changes the tank fill level is necessary; after repairs to the cylinders the tank and cylinder fill levels are necessary.

Fill levels

Tank fill level = approx. 6 l

Bleeding the cylinders

Tilt cylinders should be bled after oil change as a basic rule.
Only allow trained personnel to perform this function.

Oil change

Extend platform, fold it out, lower to the ground and automatically tilt backwards.
Remove oil drain plug on the underside of the tank.

5.6 At least once every 6 years

Replace all hydraulic hoses and not in the test-log. See VBG14 § 52 (3).

6.Fault clearance

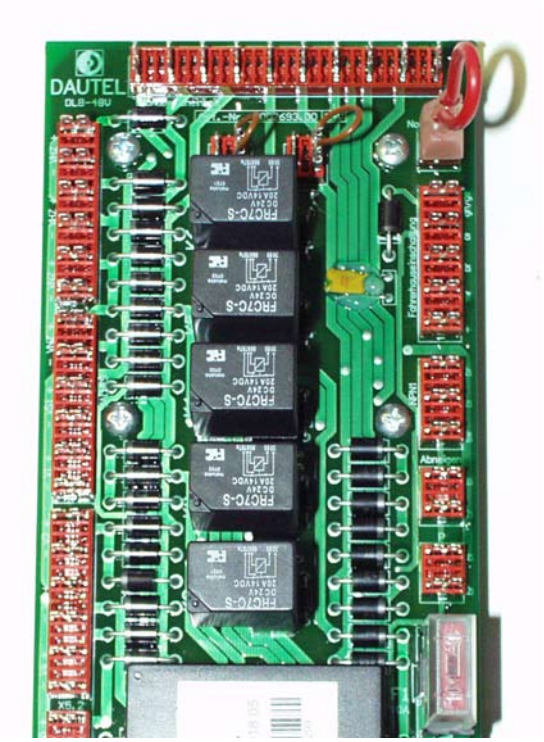
6.1 Emergency measures with malfunction of the tail-gate lift control

With malfunction of the cab safety switch or the manual operation, all basic functions of the tail-gate lift can be operated by an emergency bypass of on the control circuit board.

For this, remove the aggregate cover and click the control circuit board outward.

Remove blade receptacles of the manual operation from the control circuit board.

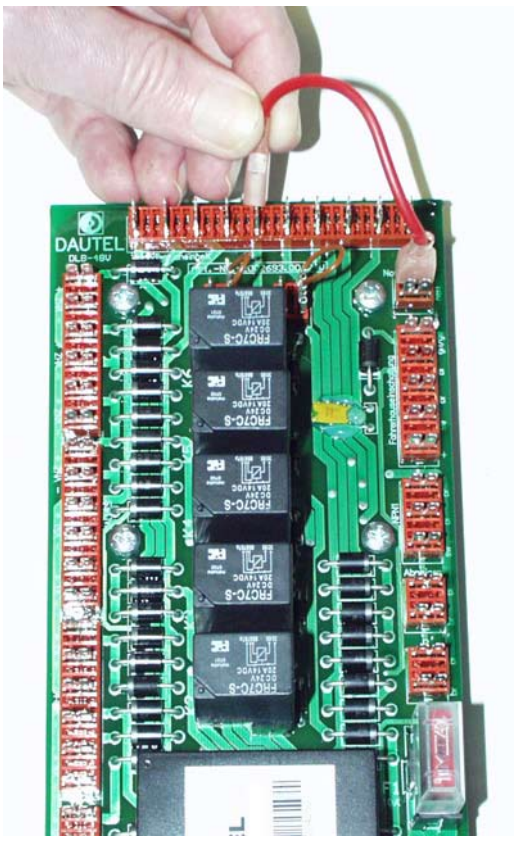
Remove one of the two blade receptacles from the terminal block "Remote control emergency operation" and connect to the respective contact on the control circuit board.



Emergency operation "OFF"

CAUTION!
The function begins immediately when the contact is touched.
Hold bypass on desired function, do not attach.

2 = Raise
3 = Lower
4 = Close
5 = Open
6 = Extend
7 = Retract
8 = Fold out
9 = Fold in



Emergency operation "ON"

The emergency bypass serves exclusively for bringing the vehicle back to driving position.
After successful emergency bypass, a Dautel customer service workshop must be immediately sought and the fault remedied.

6.2 Operating mode of the control

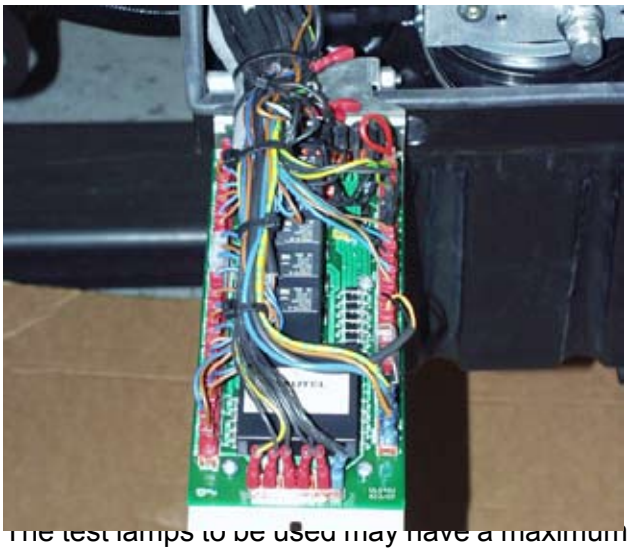
All necessary switches, valves, etc. for the control of the tail-gate lift are consolidated centrally on the control circuit board in the aggregate housing.

A 10 A automotive fuse must be plugged into the control circuit board, which safeguards the control circuit.
A so-called control module is plugged into the control circuit board. The control module assumes all functions of the platform control (pedal switch, blinking lights, signal to the cab), extending, retracting with intermediate stop and locking the manual operation.
All basic functions of the tail-gate lift (raising, lowering, closing, opening) can also be operated without the control module.

6.3 Notes for the workshop

Before repairs to the electrical system, the main current must be switched off without fail.

In principle, searching for electrical faults takes place at the control circuit board in the aggregate housing.



The test lamps to be used may have a maximum 2 W / 0.2 A.

All inputs or outputs of the control can be checked in the circuit diagram.

Faults can also be caused by the positive cable being sound, but the earth connection of the consumer load (e.g. solenoid) not being present.

A coil defect can be determined by checking the coil resistance with an ohmmeter.

Equal coils should be exchanged with one another and can be switched.
If a coil is switched to the pole tube of the valve for the fault-finding, it must likewise be switched on the control circuit board (in order to avoid malfunctions).
When switching the coils, it must be absolutely that the coils with O-rings are sealed on both ends.

The valve "VS1" in the drive unit is designed as a slide valve. The "V1" in the drive unit is designed as a double sealed seat check valve. The valves on the lift and tilt cylinders are single sealed seat check valves.

Remove valve V2 for pressure check. Connect pressure gauge to the test connection. Actuate raise function. Now the pressure set in the hydraulic system can be read.

After repairs to the hydraulics (e.g. cylinder, hose

or valve replacement) we recommend also replacing the hydraulic oil.

CAUTION!
Only perform repairs to the hydraulics in completely lowered and tilted state of the platform.

6.4 Emergency retraction of the tail-gate lift

Sliding the tail-gate lift in is only possible if the hose lines of the displacement cylinders are loosened. Escaping oil must absolutely be gathered.

6.5 Faults and their remedy

Customary test lamps should be used with electrical tests! (Max. 2W)

Fault	Cause	Remedy
Tail-gate lift does not raise or only slowly, pump motor running	too little oil in the tank Pump suctions air	Check oil level
	Valves on the lift cylinders are not open	Check whether there is current at the valve with solenoid valve actuation or whether the solenoid works
	Pump defect	Replace pump
	Pressure limiting valve adjusted too low	Check pressure
	Oil filter dirty	Clean, replace
Tail-gate lift does not raise or only slowly, pump motor runs audibly slower	Batteries charge low	Recharge battery, check individual cells for serviceability, replace battery as necessary Check charge cable, greater cable cross-section needed with trailers Makeshift: Leave vehicle motor running
	Batteries discharged, generator too weak	Install stronger generator
	Main current switch or fuse holder in the battery box oxidised	Replace, only install safeguarded
	Main current cable oxidised at the contact points	Clean connection points
	Insufficient earth return line	Install additional earth return line
	Charge cable corroded at plug connections	Clean, replace
	Fuse protection of the charge cable defective	Replace
	Carbon brushed used up	Repair motor, do not continue aggregate use, otherwise damages for electric motor

Fault	Cause	Remedy
Pump motor does not run	Engagement in the cab or coding switch not actuated or defective	Switch on, replace
	Main current switch defective	Replace
	Main current fuse protection defective	Replace, see circuit diagram for strength
	Control current fuse protection defective	Replace, max. 10A
	Toggle switch or pedal switch defective	Replace
	Control cable interrupted, poor contact	Install
	Earth or main current cable interrupted, battery terminal came off	Install
	Carbon brushed used up	Replace
	Thermal overheating protection has switched off	After a cooling time of approx. 5 minutes the motor is operational again, remove cover
Pump motor does not cut off	Toggle switch or pedal switch defective	Switch off main current switch in the battery box, replace switch
	Power relay stuck	Switch off main current switch in the battery box, replace power relay
Tail-gate lift runs with full pressure against the oscillation safeguard in folded-in state	Incline switch defective	Replace
	Oil pressure switch defective	Replace
Lift lowers too fast or too slow permissible max. 15cm/sec independent of load	Lowering brake valve dirty or defective	Clean or replace

Fault	Cause	Remedy
Lift clearly lowers on its own (e.g. 20-30 mm in approx. 5 minutes)	Electromagnetic check valve on the lift cylinder leaks	Clean valve or Replace
	Defective seal in the lift cylinder (oil escapes)	Replace seal
Lift does not lower	Defective cable to the electro-magnetic check valve on the lift cylinder	Replace cable
	Valve or solenoid defective	Replace valve or solenoid and/ or clean valve
The tail-gate lift can be lowered with the toggle switch, but not with the pedal switch	Control module defective	Replace
	Batteries charge low	Recharge with generator
	Cable interrupted	Replace
Tail-gate lift springs in lift movement, lift cylinder springs	Air in the lift cylinder, pump suctions air and creates an oil-air mixture	Check oil level, Extend and retract multiple times, re-seal or replace suction line of the pump
Tail-gate lift clearly tilts the tip on its own (e.g. 30-50 mm in 5 min.)	Electromagnetic non-return valve on the tilt cylinder leaky	Replace or clean valve
	Defective seal in the tilt cylinder (oil escapes)	Replace seal
Tail-gate lift tip springs when loaded, tilt cylinder springs	Air in the tilt cylinder, pump suctions air and creates an oil-air mixture	Bleed both tilt cylinders simultaneously, re-seal or replace the suction line of the pump
Tail-gate lift does not raise the full load	Load too heavy	Check load, observe load diagram
	Pressure limiting valve DBV adjusted too low	Check pressure, adjust
	Pump defect	Replace
Platform folds in and/or out laboriously	Sluggish joints	Lubricate, oil

Fault	Cause	Remedy
Platform tip points downward without load or too far upward	Tilt cylinder incorrectly adjusted	Adjust
	Tail-gate lift possibly warped by overloading	Seek specialist workshop
	Folding joints deflected	Replace
Tail-gate lift does not extend, motor runs	Valve V3 does not switch	Replace
	Valve VS1 does not switch	Replace
	Sliding mechanism jammed	Align
Tail-gate lift extends but does not retract	Valve VS1 does not switch	Replace
	Valve V4 does not switch	Replace
When raising with platform folded out, tail-gate lift extends	Valve V3 leaky	Replace
Platform cannot be tilted forward, motor runs	Valve V1 defective	Replace
	Valve V5 defective	Replace
Platform cannot be tilted upward	Valve on the tilt cylinder defective	Replace
	Valve V2 defective	Replace
	Valve V5 defective	Replace
Tilting on the ground does not function	Incline switch misaligned at the pinion or defective (Switch must switch on shortly before platform makes contact with ground)	Adjust, replace
	Valve on the tilt cylinder defective	Replace
When tilting on the ground, the platform no longer reaches the previously set position	Valve V1 leaky	Replace
	Leak at the pressure transmitter (oil escapes)	Replace seals, replace pressure transmitter

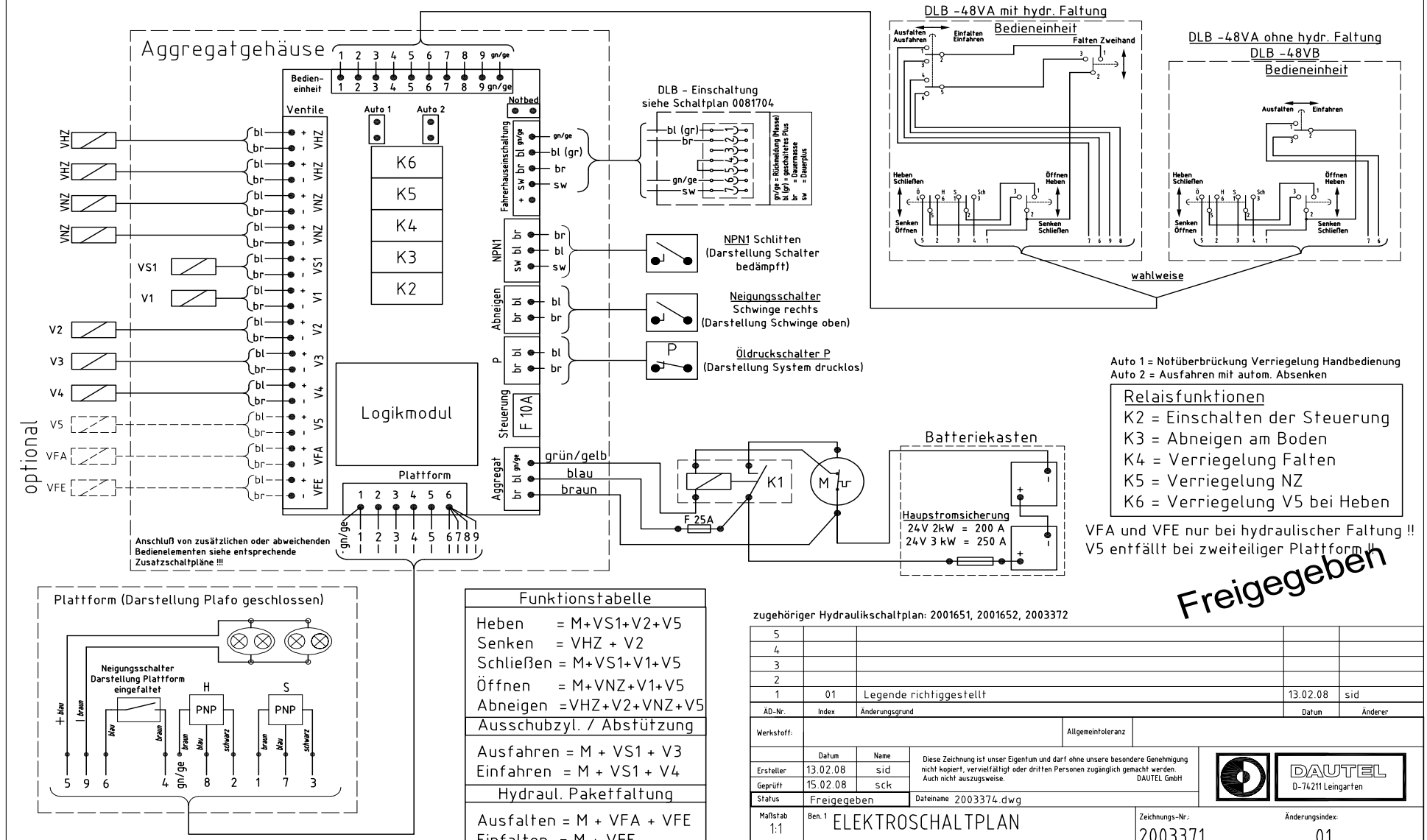
Fault	Cause	Remedy
Hydraulic folding in/out does not function	Valve VS1/VFA or VFE does not switch or is defective	Check supply and valve, replace
Indicator lamp in the dashboard does not go out when switching off or illuminates while driving.	Platform not folded in	Check, fold in
Indicator lamp in the dashboard blinking	Problem with the charge cable	Check plug connections, seek specialist workshop

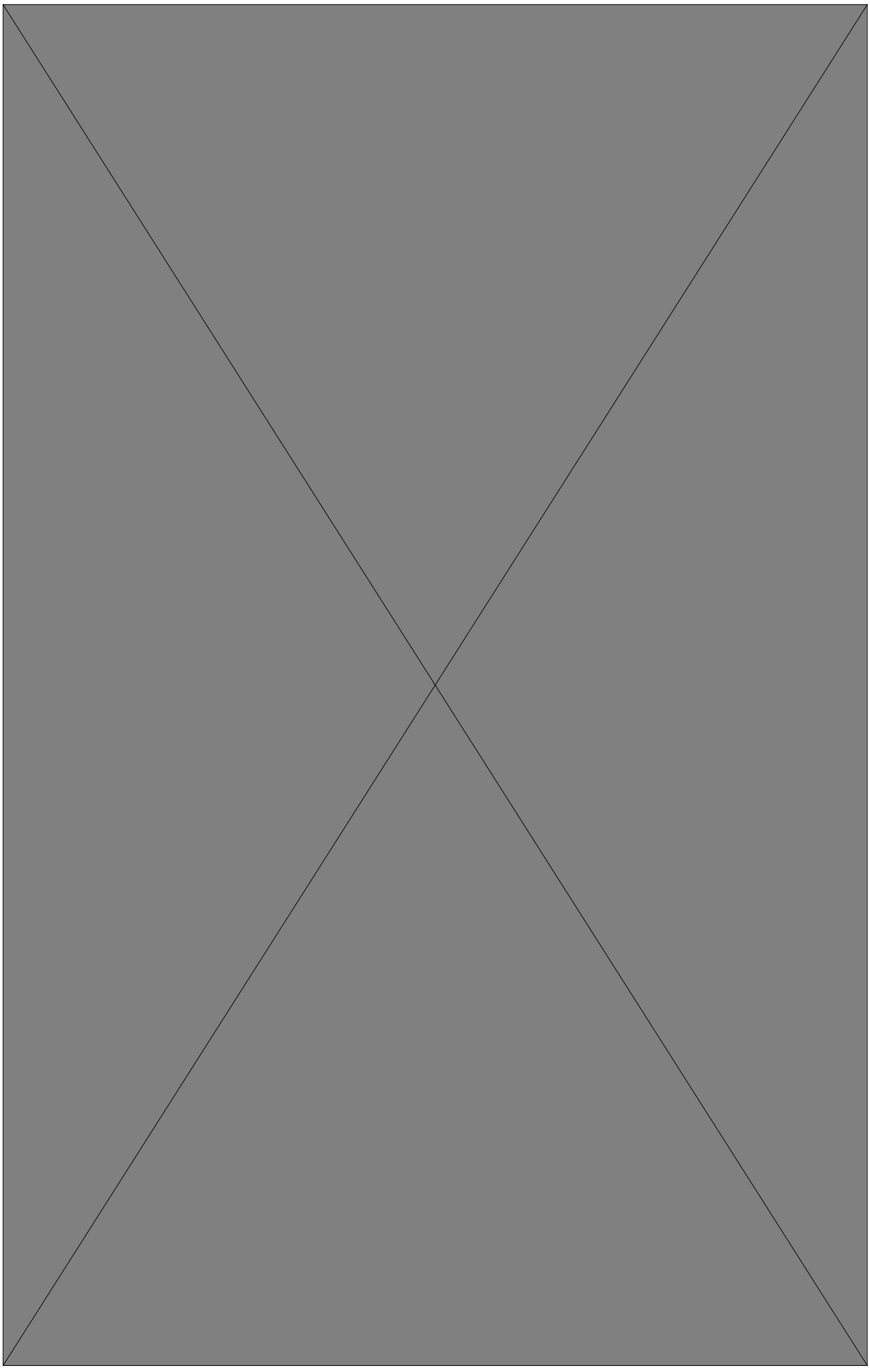
7. Dismantling and disposal

The oil is to be carefully removed from all parts of the hydraulic system such as tank, pump, valves, cylinders, lines and hoses.
Grease and residual oil is to be removed by means of a high-pressure cleaner.
Hydraulic oil is to be disposed of via a specialized dealer.
Remove cable and electronic components.
Remove plastic components.
All components are to be disposed of separately.

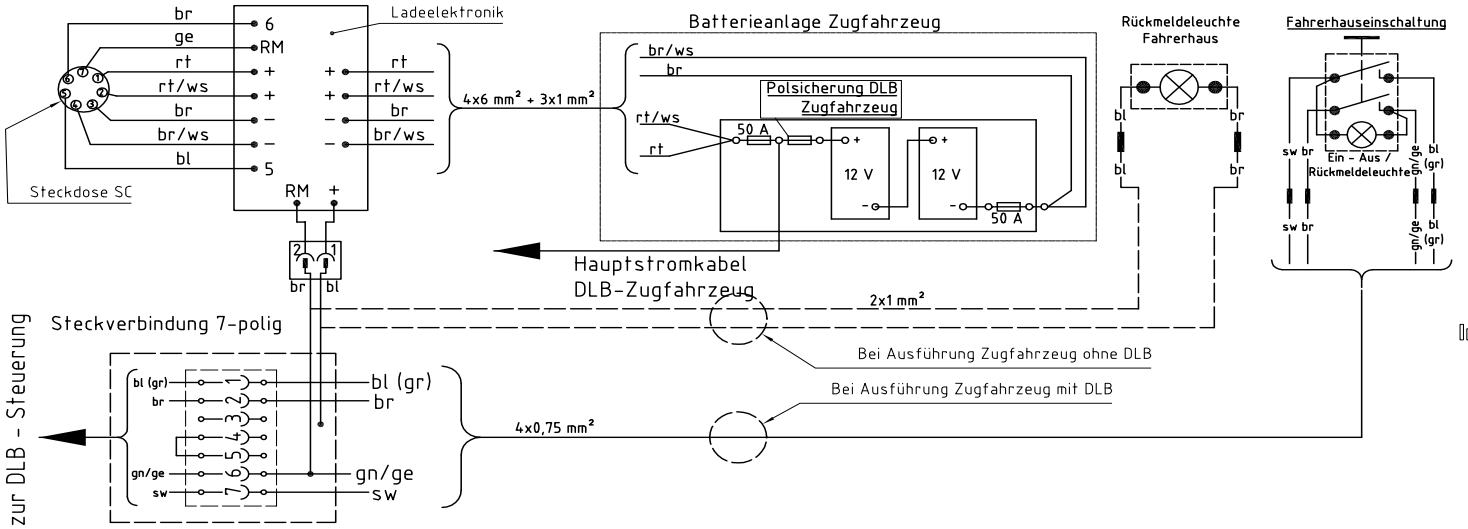
8. Customer service

9. Circuit diagrams


Aggregatgehäuse
Bedien-einheit
Ventile
Auto 1
Auto 2
Notbed
K6
K5
K4
K3
K2
Logikmodul
optional
VHZ
VNZ
VS1
V1
V2
V3
V4
V5
VFA
VFE
Fahrerhauseinschaltung
NPN1
Abneigen
P
Steuerung
F 10A
Aggregat
grün/gelb
blau
braun
Plattform
Anschluß von zusätzlichen oder abweichenden Bedienelementen siehe entsprechende Zusatzschaltpläne !!!
DLB - Einschaltung
siehe Schaltplan 0081704
NPN1 Schlitten
(Darstellung Schalter bedämpft)
Neigungsschalter
Schwinge rechts
(Darstellung Schwinge oben)
Öldruckschalter P
(Darstellung System drucklos)
K1
M
F 25A
Batteriekasten
Haupstromsicherung
24V 2kW = 200 A
24V 3 kW = 250 A
DLB -48VA mit hydr. Faltung
Bedieneinheit
Falten Zweihand
DLB -48VA ohne hydr. Faltung
DLB -48VB
Bedieneinheit
wahlweise
Auto 1 = Notüberbrückung Verriegelung Handbedienung
Auto 2 = Ausfahren mit autom. Absenken
Relaisfunktionen
K2 = Einschalten der Steuerung
K3 = Abneigen am Boden
K4 = Verriegelung Falten
K5 = Verriegelung NZ
K6 = Verriegelung V5 bei Heben
VFA und VFE nur bei hydraulischer Faltung !!
V5 entfällt bei zweiteiliger Plattform !!
Plattform (Darstellung Plafo geschlossen)
Neigungsschalter
Darstellung Plattform
eingefaltet
PNP
PNP
Funktionstabelle
Heben = M+VS1+V2+V5
Senken = VHZ + V2
Schließen = M+VS1+V1+V5
Öffnen = M+VNZ+V1+V5
Abneigen =VHZ+V2+VNZ+V5
Ausschubzyl. / Abstützung
Ausfahren = M + VS1 + V3
Einfahren = M + VS1 + V4
Hydraul. Paketfaltung
Ausfalten = M + VFA + VFE
Einfalten = M + VFE
Freigegeben
zugehöriger Hydraulikschaltplan: 2001651, 2001652, 2003372
5
4
3
2
1 01 Legende richtiggestellt 13.02.08 sid
AD-Nr. Index Änderungsgrund Datum Änderer
Werkstoff:
Allgemeintoleranz
Ersteller 13.02.08 sid
Geprüft 15.02.08 sck
Status Freigegeben
Dateiname 2003374.dwg
Diese Zeichnung ist unser Eigentum und darf ohne unsere besondere Genehmigung nicht kopiert, vervielfältigt oder dritten Personen zugänglich gemacht werden. Auch nicht auszugsweise.
DAUTEL GmbH
DAUTEL
D-74211 Leingarten
Maßstab 1:1
Ben. 1 ELEKTROSCHALTPLAN
Zeichnungs-Nr.: 2003371
Änderungsindex: 01
Gewicht kg
Ben. 2 KLEMMPLAN DLB-48VA / VB
= Funktionsmaße



Anschlußschema Dautel - Ladeleitung, Motorwagen

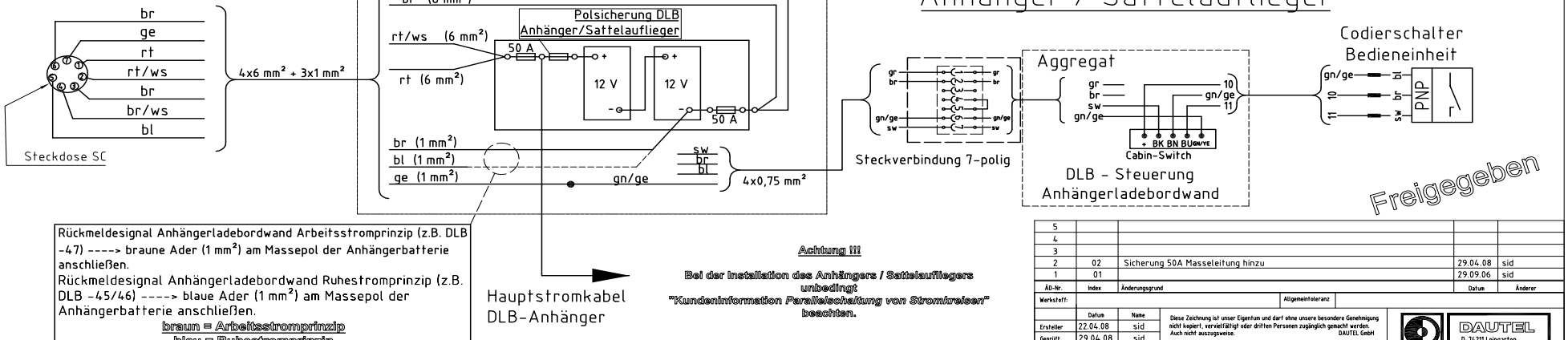


Achtung !!!!

Den Aufbaurichtlinien des LKW-Herstellers ist beim Anschluß der Ladeleitung folge zu leisten.

Dadurch zusätzlich benötigtes Installationsmaterial ist Lieferumfang des Fahrzeugbauers.

Anschlußschema Dautel - Ladeleitung Anhänger / Sattelauflieger



Rückmeldesignal Anhängerladebordwand Arbeitsstromprinzip (z.B. DLB -47) ----> braune Ader (1 mm²) am Massepol der Anhängerbatterie anschließen.
Rückmeldesignal Anhängerladebordwand Ruhestromprinzip (z.B. DLB -45/46) ----> blaue Ader (1 mm²) am Massepol der Anhängerbatterie anschließen.

braun = Arbeitsstromprinzip
blau = Ruhestromprinzip

Achtung !!!

Bei der Installation des Anhängers / Sattelaufliegers unbedingt "Kundeninformation *Parallelschaltung von Stromkreisen*" beachten.

Freigegeben

AÄ-Nr.	Index	Änderungsgrund	Datum	Änderer
5				
4				
3				
2	02	Sicherung 50A Masseleitung hinzu	29.04.08	sid
1	01		29.09.06	sid

Werkstoff: | Allgemeintoleranz:

	Datum	Name
Ersteller	22.04.08	sid
Geprüft	29.04.08	sid
Status	Freigegeben	

Dateiname 008754A.dwg

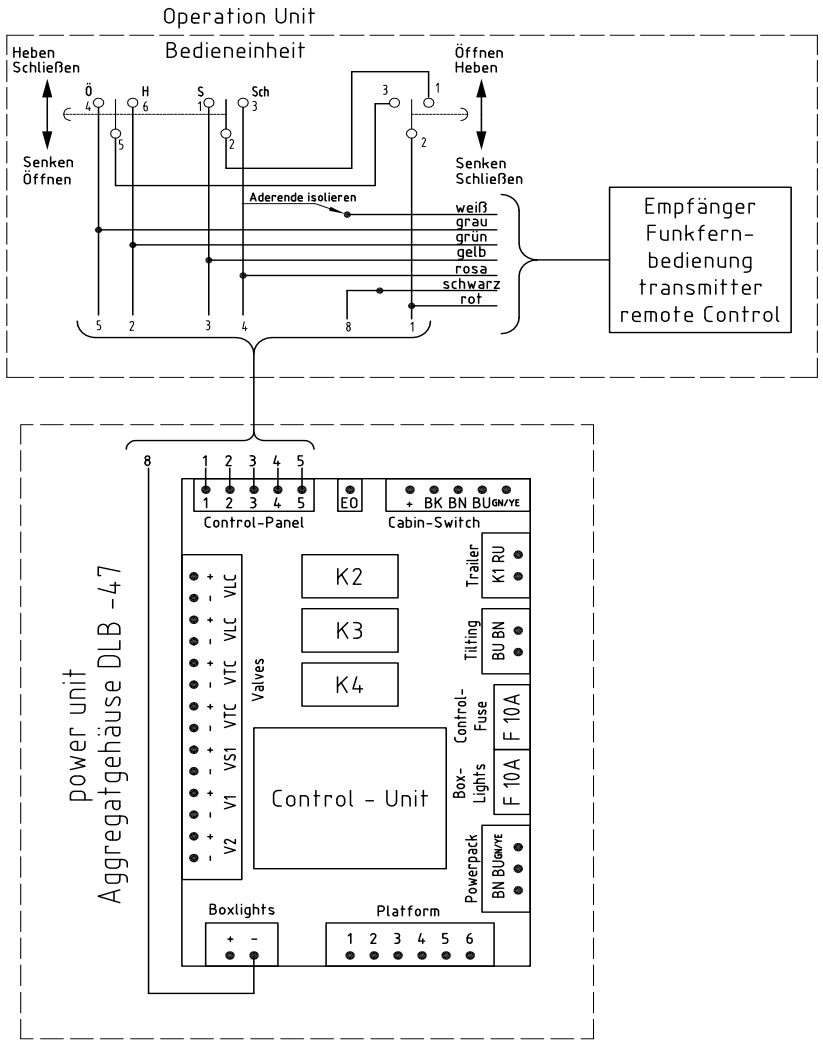
DAUTEL
D-74211 Leingarten

Maßstab | Ben. 1 ELEKTROSCHALTPLAN | Zeichnungs-Nr.: 0087548 | Änderungsindex: 02

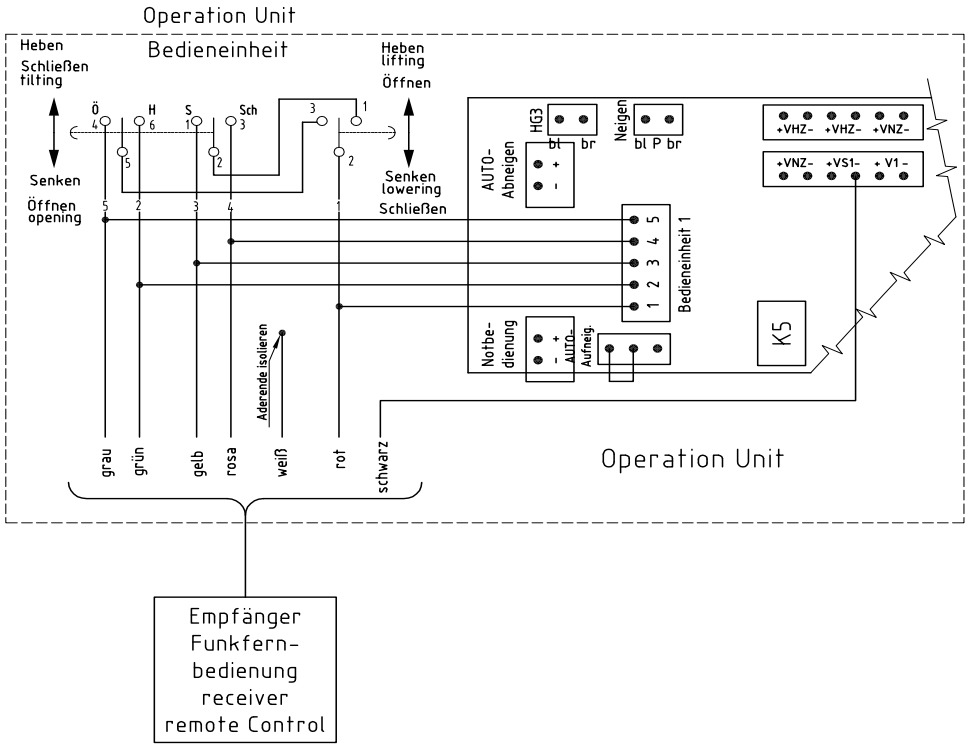
Gewicht kg | Ben. 2 LADELEITUNG SC | = Funktionsmaße

Anschlußschema Funkempfänger 4 Funktionen

DLB -47



DLB 750-47



zugehöriger Hydraulikschaltplan z.B. 0078030

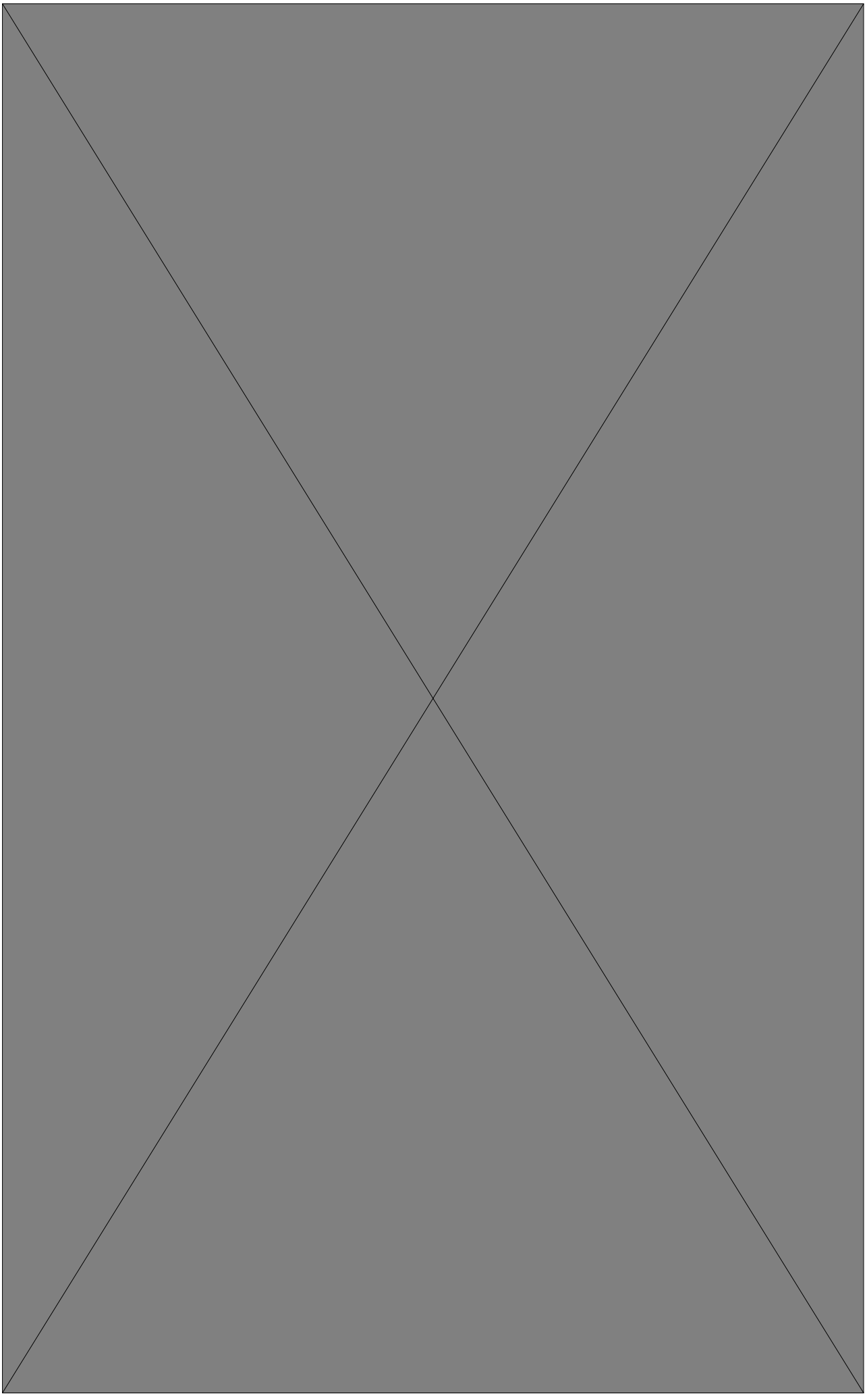
Maß:			
	Datum	Name	Allgemeintoleranz
Gezeichn.	27.07.06	sid	
Geprüft			
Normg.			0088635.dwg
Maßstab 1:1			
Gewicht kg			

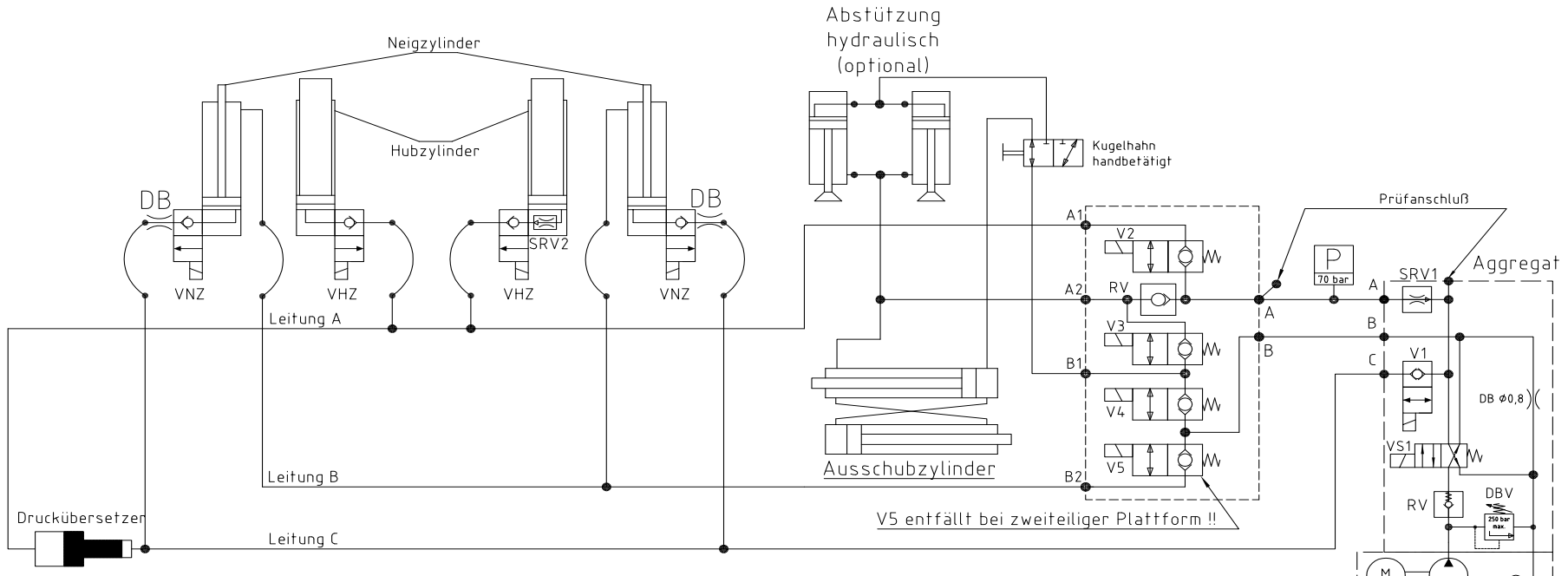
DAUTEL
D-74211 Leingarten

ELEKTROSCHALTPLAN
KLEMMPLAN FUNKFERNBEDIENUNG DLB-47

Zeichnungs-Nr.: 0088635 Änd.Index: 00 Z.F.: 3 FS-Nr.: 50200

Ersatz für | Ersetzt durch





Freigegeben

	Motorø		Armlänge 850 / 950 / 1050			Armlänge 850 / 950 / 1050			Senken	Schlauch-bruch	Öffnen/ Schließen
3000-48VA	125	2,8 ccm/U		250			75		10 l/min	8	ø1,5
2500-48VA	125	2,8 ccm/U		205			75		10 l/min	8	ø1,5
2000-48VA	125	2,8 ccm/U	225	200	220	60	70	70	10 l/min	8	ø1,2
2000-48VA	112	2,1 ccm/U	225	200	220	60	70	70	8 l/min	6	ø1,2
1500-48VA	125	2,8 ccm/U	180	205	230	60	60	60	8 l/min	6	ø1,2
1500-48VA	112	2,1 ccm/U	180	205	230	60	60	60	8 l/min	6	ø1,2
DLB - Typ	mm	Pumpe	* DBV bar -5 bar			ø Hubzylinder mm			SRV1	SRV2 l/ min	DB

Motor ø 112 mm ca. 2,2 kW
Motor ø 125 mm ca. 3,0 kW

zugehöriger Elektroschaltplan 2003371

Funktionstabelle

Heben = M+VS1+V2+V5
Senken = VHZ + V2
Schließen = M+VS1+V1+V5
Öffnen = M+VNZ+V1+V5
Abneigen =VHZ+V2+VNZ+V5

Ausschubzylinder

Ausfahren = M + VS1 + V3
Einfahren = M + VS1 + V4

ÄD-Nr.	Index	Änderungsgrund	Datum	Änderer
5				
4				
3				
2	02	Anschlüsse Ausschubzylinder getauscht	28.03.08	sid
1	01	Tabelle richtiggestellt	14.02.08	sid

Werkstoff: | Allgemeintoleranz

	Datum	Name
Ersteller	28.03.08	sid
Geprüft	28.03.08	sid
Status	Freigegeben	

Dateiname 2001656.dwg

DAUTEL
D-74211 Leingarten

Maßstab 1:1

Ben. 1 HYDRAULIKSCHALTPLAN

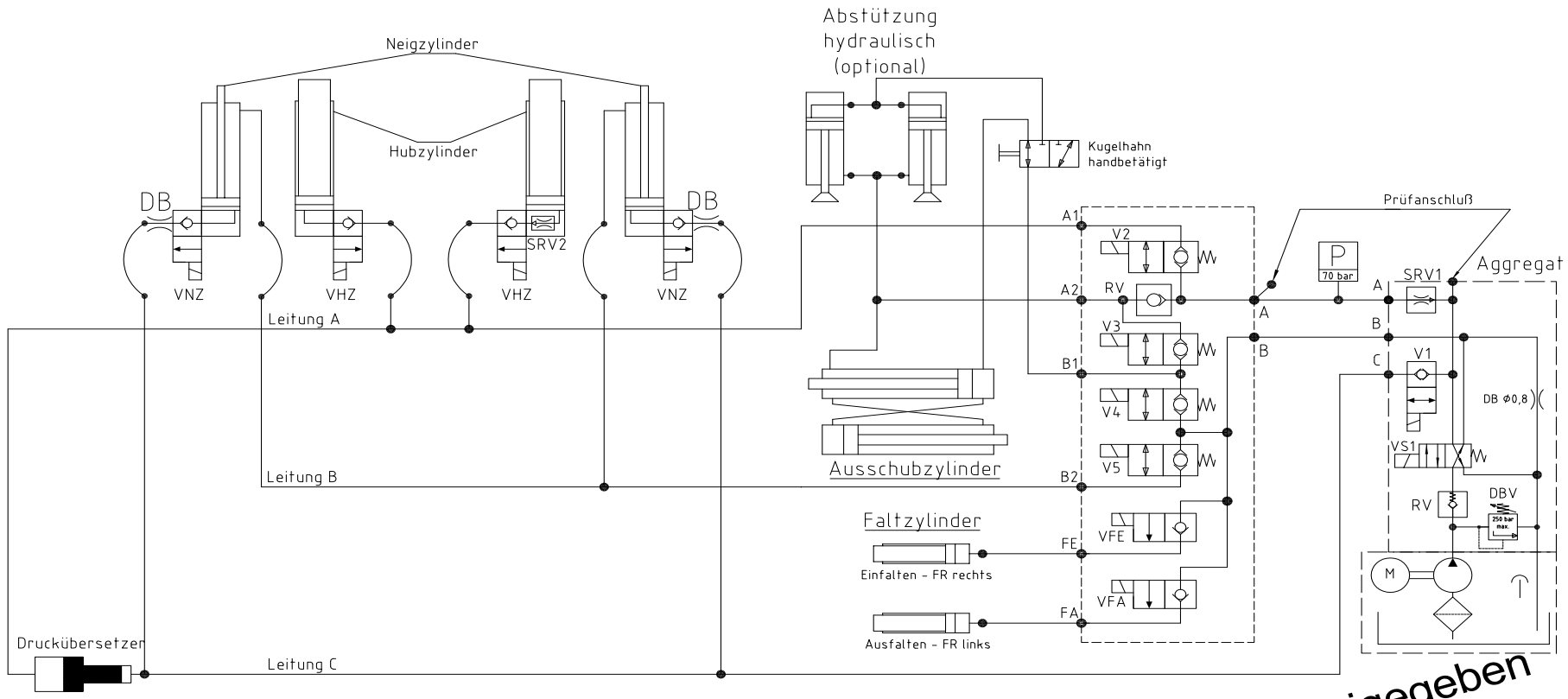
Ben. 2 DLB-48VA

Gewicht kg

Zeichnungs-Nr.: 2001651

Änderungsindex: 02

= Funktionsmaße



Freigegeben

	Motor⌀		Armlänge 950 / 1050		Armlänge 950 / 1050		Senken	Schlauch-bruch	Öffnen/ Schließen
2000-48VA	125	2,8 ccm/U	200	220	70	70	10 l/min	8	⌀1,2
2000-48VA	112	2,1 ccm/U	200	220	70	70	8 l/min	6	⌀1,2
1500-48VA	125	2,8 ccm/U	205	230	60	60	8 l/min	6	⌀1,2
1500-48VA	112	2,1 ccm/U	205	230	60	60	8 l/min	6	⌀1,2
DLB - Typ	mm	Pumpe	* DBV bar -5 bar		⌀ Hubzylinder mm		SRV1	SRV2 l/ min	DB

Motor ⌀ 112 mm ca. 2,2 kW
Motor ⌀ 125 mm ca. 3,0 kW

Funktionstabelle
Heben = M+VS1+V2+V5
Senken = VHZ + V2
Schließen = M+VS1+V1+V5
Öffnen = M+VNZ+V1+V5
Abneigen =VHZ+V2+VNZ+V5
Ausschubzyl. / Abstützung
Ausfahren = M + VS1 + V3
Einfahren = M + VS1 + V4
Hydraul. Paketfaltung
Ausfalten = M + VFA + VFE
Einfalten = M + VFE

zugehöriger Elektroschaltplan 2003371

ÄD-Nr.	Index	Änderungsgrund	Datum	Änderer
5				
4				
3	03	Anschlüsse Ausschubzylinder getauscht	28.03.08	sid
2	02	Tabelle richtiggestellt	14.02.08	sid
1	01		11.02.08	sid

Werkstoff: | Allgemeintoleranz

	Datum	Name
Ersteller	28.03.08	sid
Geprüft	28.03.08	sid
Status	Freigegeben	

Dateiname 2001657.dwg

DAUTEL
D-74211 Leingarten

Maßstab 1:1

Ben. 1 HYDRAULIKSCHALTPLAN

Zeichnungs-Nr.: 2001652

Änderungsindex: 03

Gewicht kg

Ben. 2 DLB-48VA MIT HYDR. PAKETFALTUNG

= Funktionsmaße