

Operating Instructions for rerailing equipment



Control tables CU 2DV and CU 4DVV



CU 2DV






CU 4DVV

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Content	Page
1. Danger classifications	4
2. Product safety	5
3. Intended use	8
4. Components and functions	9
4.1 <i>Description</i>	9
4.2 <i>Hydraulic supply</i>	9
4.3 <i>Installation of the control table</i>	10
4.4 <i>Functions and controls available at the control desk</i>	11
5. Erection and start-up	12
5.1 <i>Folding out the support frame</i>	13
5.2 <i>Connection of the working equipment</i>	14
5.3 <i>Coupling the quick-disconnect couplings</i>	14
5.4 <i>Controlling the valves</i>	15
6. Dismantling the equipment / deactivation following operation	18
7. Maintenance and service	19
7.1 <i>General information</i>	19
7.2 <i>Repairs</i>	20
8. Troubleshooting	21
9. Technical data	23
9.1 <i>Control unit CU 2DV</i>	23
9.2 <i>Control unit CU 4 DVV</i>	24
9.3 <i>Operating and storage temperature ranges</i>	24
10. EC Declaration of Conformity	25
11. Notes	27

1. Danger classifications

We differentiate between various different categories of safety instructions. The table shown below provides an overview of the assignment of symbols (pictograms) and signal words to the specific danger and the possible consequences.

Pictogram	Damage/ injury to	Key word	Definition	Consequences
	Persons	DANGER!	Immediate danger	Death or severe injury
		WARNING!	Potentially dangerous situation	Potential death or serious injury
		CAUTION!	Less dangerous situation	Minor or slight injury
	Property	ATTENTION!	Risk of damage to property/ environment	Damage to the equipment, damage to the environment, damage to surroundings
	-	NOTE	Handling tips and other important/ useful information and advice	No injury/ damage to persons/ environment/ device



Wear a helmet with a face guard



Wear protective gloves



Wear safety shoes



Proper recycling



Protect the environment



Read and follow the operating instructions

2. Product safety

LUKAS products are developed and manufactured to ensure the best performance and quality when used as intended.

The safety of the operator is the most important consideration in product design. Furthermore, the operating instructions are intended to help in using LUKAS products safely.

In addition to the operating instructions, all generally applicable, statutory and other binding rules for accident prevention and for environmental protection must be complied with and instructed.

The equipment must only be operated by persons with appropriate training in the safety aspects of such equipment – otherwise, there is a danger of injury.

We would like to point out to all users that they should read carefully the operating instructions and the instructions contained therein before they use the equipment, and that they should be carefully followed.

We also recommend that you have a qualified trainer show you how to use the product.



WARNING / CAUTION!

The operating instructions for the hoses, the accessories and the connected devices must also be heeded!






















Even if you have already received instruction on how to use the equipment, you should still read through the following safety instructions again.










WARNING / CAUTION!

Ensure that the accessories and connected equipment are suitable for the maximum operating pressure!

	<p>Please ensure that no body parts or clothing get stuck between the visibly moving parts.</p>	<p>Working under suspended loads is not permitted where such loads are being lifted only using hydraulic devices. If working under suspended loads is unavoidable, suitable mechanical props are also required.</p>	
	<p>Wear protective clothing, safety helmet with visor, safety shoes and protective gloves</p>	<p>Check the equipment for visible flaws or damage before and after use.</p>	
 	<p>Immediately report any changes that occur (including changes in operating behaviour) to the appropriate persons/departments! If necessary, the equipment is to be shut down immediately and secured!</p>	<p>Inspect all lines, hoses, and screwed connections for leaks and externally visible damage. If necessary, repair immediately! Escaping hydraulic fluid can cause injuries and fires.</p>	

 	<p>In the event of malfunctions, immediately deactivate the equipment and secure it. Repair the fault immediately.</p>	<p>Do not carry out any changes (additions or conversions) to the equipment without obtaining the approval of LUKAS beforehand.</p>	
 	<p>Observe all safety and danger information on the device and in the operating instructions.</p>	<p>All safety and danger information on the device must always be complete and in a legible condition.</p>	 
 	<p>Any mode of operation which compromises the safety and/or stability of the device is forbidden!</p>	<p>Observe all intervals for recurring tests and/or inspections that are prescribed or stated in the operating instructions.</p>	
 	<p>Safety devices must never be disabled!</p>	<p>The maximum permitted operating pressure noted on the equipment must not be exceeded.</p>	 
	<p>Make sure before switching on/starting up the device and during its operation that this will put no one in danger.</p>	<p>Only genuine LUKAS accessories and spare parts are to be used for repairs.</p>	
		<p>Please ensure that, when working with this equipment or during transportation of such, you don't get caught up in the looped hoses and trip.</p>	 
 	<p>When working close to live components and cables, suitable measures must be taken to avoid current transfers or high-voltage transfers to the equipment.</p>	<p>The build-up of static charge and therefore possible sparking must be avoided when handling the device.</p>	

	<p>The equipment is filled with hydraulic fluid. This hydraulic fluid can be detrimental to health if it is swallowed or its vapour is inhaled. Direct contact with the skin must be avoided for the same reason. Also, when handling hydraulic fluid, note that it can negatively affect biological systems.</p>	<p>When working with or storing the equipment, ensure that the function and the safety of the equipment are not impaired by the effects of severe external temperatures or that the equipment is damaged in any way. Please note that the equipment can also heat up over a long period of use.</p>	
	<p>Make sure there is adequate lighting while working.</p>	<p>Before transporting the equipment, always ensure that the accessories are positioned in such a way that they cannot cause an accident.</p>	
	<p>Always keep these operating instructions easily accessible at the place of operation.</p>	<p>Dispose properly of all disassembled parts, oil and left-over fluid, as well as packaging materials.</p>	 

The generally applicable, legal and other binding national and international regulations pertaining to the prevention of accidents and protection of the environment apply and are to be implemented in addition to the operating instructions!

WARNING / CAUTION / ATTENTION!

The equipment is to be used **exclusively** for the **purpose stated in the operating instructions (see chapter “Intended Use”)**. Any form of use beyond this is **not intended**. The manufacturer/supplier is not liable for any damage resulting from improper use. The user bears sole responsibility for such use. Intended use includes observance of the operating instructions and compliance with the inspection and maintenance conditions.




Never work in a fatigued or intoxicated state!



WARNING / CAUTION / ATTENTION!

However, if you do injure yourself on the hydraulic unit, clean the wound immediately and consult a doctor to have it attended to!

 If you get hydraulic fluid in your eye, rinse it immediately several times with clear, clean water and consult a doctor!

Also, if you swallow hydraulic fluid you should consult a doctor!

3. Intended use

LUKAS control tables are especially designed for rerailing technology. They serve to control the deployed hydraulic lifting and traversing equipment for rerailing, erection and maintenance work on rail-bound vehicles.

When carrying out any work, use the control tables described here and the connected hoses and equipment to ensure that you yourself, the involved and uninvolved persons in the proximity of the work and objects in closer proximity during the lifting and traversing process are not endangered.

You can obtain accessories and replacement parts for the control tables from your authorised LUKAS dealer!

System overview



Erecting the rail-bound vehicle

Lifting and rerailing with
lifting cylinders and the
LUKAS traversing system

Control table

Unit



WARNING / CAUTION / ATTENTION!

The safety instructions in this operating instruction manual concerning the site of erection and type of erection must **always** be observed!



The Type CU LUKAS control tables are not explosion-protected!



ATTENTION!

Watch out vigilantly for any leaks in order to avoid threats to the environment.

4. Components and functions

4.1 Description

The CU range of control tables consist of a control desk with support frame and a large number of valves. The valves are actuated by control levers. The control levers automatically return to the neutral or middle position when released (dead man's handle – the lever for the preselection valve does not have a dead man's handle).

The control table has been developed for connection of double-acting cylinders, but single-acting cylinders can also be connected and controlled to a limited extent. If necessary you may need to consult LUKAS or one of their authorised dealers.

The control tables are rigidly mounted on a support frame that can be folded flat for space-saving storage.

Pressure gauges are mounted on the control tables as standard. Each pressure gauge shows the pressure generated by each individual pump circuit and which is present at the control table via the power unit.

The hydraulic power packs developed for the single control table are 2POWER packs with two circuits, and the power packs developed for the double control table are 4POWER packs with four circuits.

4.2 Hydraulic supply

Only LUKAS hydraulic power packs may be used to drive the equipment.

If the pump unit supplying the pressure is from a different manufacturer you need to make sure that it is made in accordance with the stipulations laid down by LUKAS. If this is not the case, dangers can arise that cannot be attributed to LUKAS.

Ensure in particular that the maximum permissible operating pressure for the connected LUKAS equipment is not exceeded.



NOTE:

Before using pumps and power packs from a different manufacturer, you must always contact LUKAS or an authorised dealer.

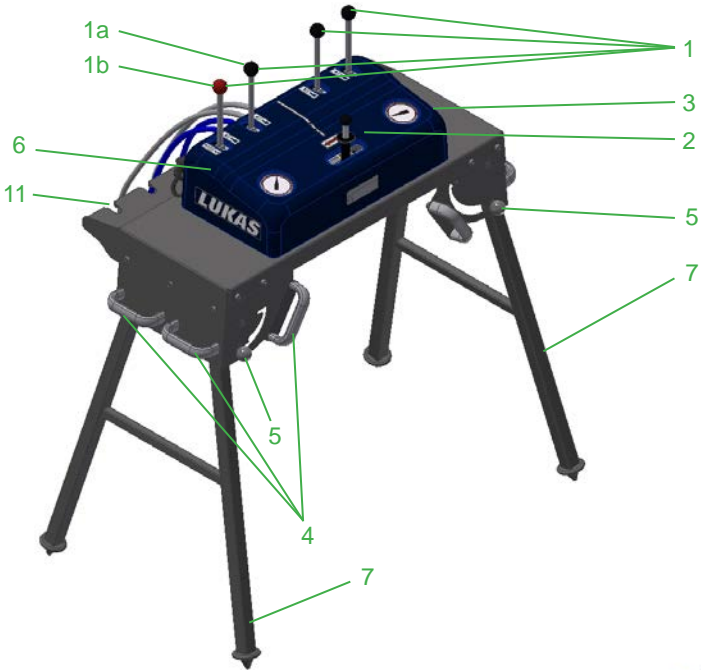
The connection to the hydraulic pump providing the supply and to the hydraulic working equipment is by hoses that are connected by couplings.



ATTENTION!

Because of the back-pressure in the hoses, the maximum overall length of the hoses from the power pack via the control table to the working equipment must be 20 m (66 ft.). If necessary, it is, however, possible to use longer hoses. However, each individual case must be agreed with LUKAS or with an authorised dealer, in order to take account of the local conditions if necessary.

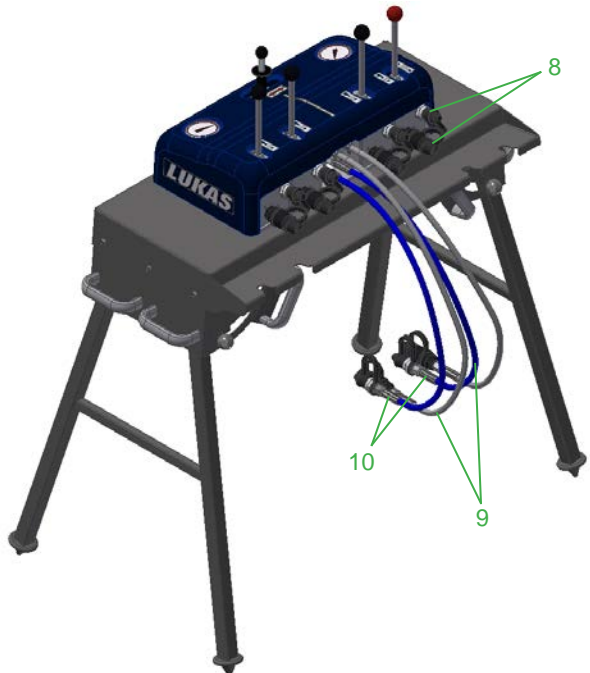
4.3 Installation of the control table



Operating side:

Working side:

- 1 Control lever - lifting/lowering
- 1a Control lever black - traversing cylinder
- 1b Control lever red - locking pin
- 2 Lever - preselection valve
- 3 Pressure gauge
- 4 Transporting handle
- 5 Stop knob for swivel foot
- 6 Operating desk
- 7 Swivel foot left/right
- 8 Connection for double-acting hydraulic equipment (4x)
- 9 Connection hose with sleeve for unit
- 10 Connection hose with nipple for unit
- 11 Cut-out for hanging up the hose ends



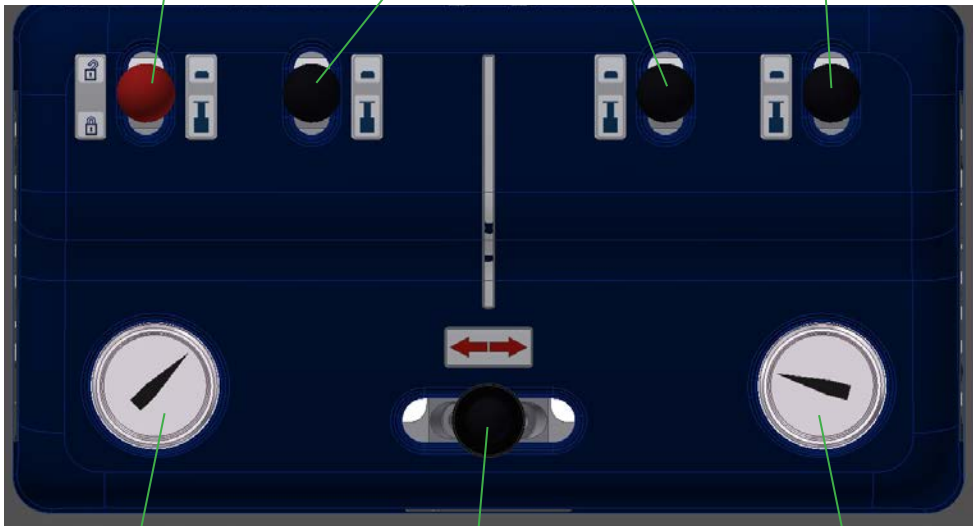
4.4 Functions and controls available at the control desk

Red switching lever for anchoring cylinder (holds the traversing unit), alternatively LIFTING/LOWERING if there is a lifting cylinder connected

Switching lever for lateral movement/ sliding with connected traversing cylinder, alternatively LIFTING/LOWERING with connected lifting cylinder

LIFTING/
LOWERING
Lifting cylinder

LIFTING/
LOWERING
Lifting cylinder



Pressure gauge

Pressure gauge

The lever (preselection valve) for pressurisation of the left or right side of the desk (after changing over the selection lever to one side the right pressure gauge shows the current pressure in the right-hand circuit, and the left pressure gauge shows the pressure in the left-hand circuit)

5. Erection and start-up

The control tables must be set up at a sufficiently safe distance from the loads to be lifted or moved.

Both the load and the operating equipment must be easily observed from the control table. Make sure that the control table is standing securely. If necessary, pack it up with suitable materials.



NOTE:

Make sure that you set up all other components being used in accordance with the separate operating instructions for these components.



ATTENTION!

When commissioning you must observe the instructions and regulations in the separate operating instructions of the additional components that are used in your rerailing system!

Work to be carried out before commissioning:

Before commissioning you must carry out a visual check for damage and leaks on all components being used. Damaged components must not be used and must be replaced! The hydraulic components must be bled to remove air before commissioning!

Commissioning:



CAUTION / ATTENTION!

Secure the vehicle to be rerailed in accordance with the regulations to prevent its rolling away, slipping and tipping over!



Procedure:

1. Set up all the components being used in accordance with the corresponding operating instructions. When setting up you must comply with all the applicable standards, guidelines, regulations and statutes! Then connect all the hydraulic components as described in the Chapter "Connecting the hydraulic equipment".

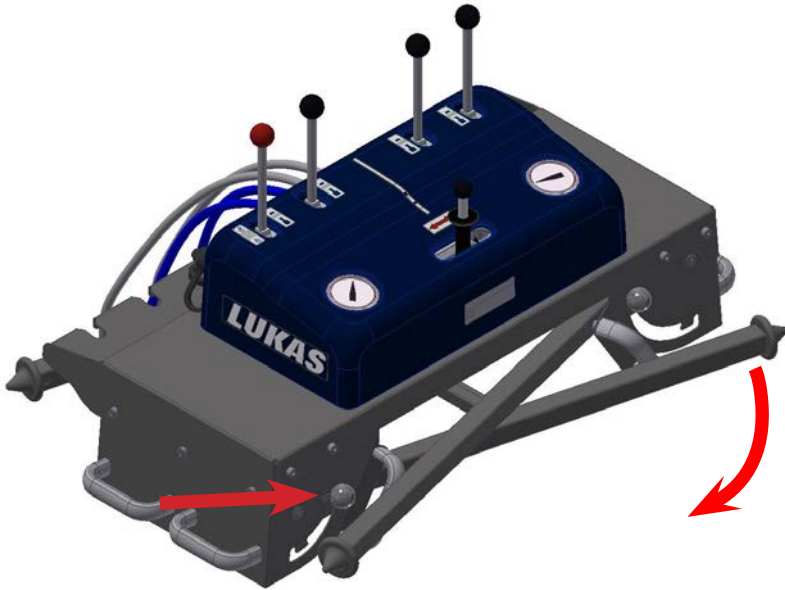


CAUTION / ATTENTION!

Make sure that there are no persons remaining in the danger area!



5.1 Folding out the support frame



The support frame ensures secure mounting of the control unit and allows the operator to work standing upright.

The control unit is delivered in the folded transport position.
Proceed as follows to erect the system (two people required):

1. Lift the control table with the handles at the side. Place your hands in the handles on the left and right, that are located opposite the locking knob, in each case, in order first to fold out the lower support frame.
2. Release the support frame lock by pushing on both sides of the locking knob with your thumb (see illustration). The support frame swings down to the first stop.



ATTENTION!

Make sure that the support frame does not hit your knee when it swings down if you have bent your legs in order to balance the load on your lower arms with your thighs.

3. Push the locking knob again with your thumb to fold out the foot into its end position.
4. Pull the support frame back until the locking knob engages and the system is secure.
5. Proceed in the same way on the second folded support frame.
6. Folding the two support frames is carried out in reverse sequence.

5.2 Connection of the working equipment

On the **double-acting**, hydraulically-actuated **working equipment**, there is, on the pressure supply side (with cylinders: the cylinder base side) a quick-disconnect nipple, and, on the return side (piston rod side) a quick-disconnect sleeve; and these are connected to the control table using a pair of extension hoses. On the hose ends we connect, in each case, a nipple on the sleeve on the end equipment and a sleeve on the nipple on the end equipment to prevent mix-ups.

You can also place coloured clip rings (supplied with the equipment) on the kink-preventer to make it visually easier to make connections to several end equipment items.

A quick-disconnect nipple is provided on the **single-acting**, hydraulically-actuated **working equipment** to provide a pressure supply. They are connected to the control table via an extension hose. If you are using earlier versions of single-acting cylinders, LUKAS recommends that you contact LUKAS or an authorised dealer.

The connection between the **control table** and the **hydraulic power pack** is either via the fixed short connection hoses, in order to place the power pack under the control table, or via hose extensions in order to allow the power pack to remain on the vehicle, for example, and only the control table needs then to be transported to the site of deployment. The hose extension pairs are supplied in various lengths. The individual hoses can, if required, also be marked with coloured snap rings to make it easier to allocate the hoses. *(For specific details, please consult the LUKAS range of accessories or contact your LUKAS dealer.)*



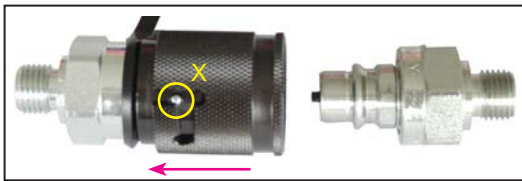
WARNING / CAUTION / ATTENTION!



Prior to connecting the devices, ensure that **all the components being used** are suitable for the **maximum operating pressure of the unit**. In case of doubt you **must consult LUKAS directly!**

5.3 Coupling the quick-disconnect couplings

The device is connected to the hydraulic pump without risk of misconnection using quick-disconnect coupling (female and male coupling).



Before coupling, remove dust caps and then pull back and hold the locking sleeve of the female coupling half (position X). Connect the male and female couplings and release the locking sleeve. Then turn the locking sleeve to position Y. The connection has been made and locked. Uncoupling is done in the reverse order. Coupling of the devices is only possible, when the hoses are **depressurised**. For dust protection, the supplied dust caps must be refitted.



ATTENTION!

Always connect the return hose first and then the supply hose!

**NOTE:**

Coupling of the devices is only possible, when the hoses are **depressurised**.

For dust protection, the supplied dust caps must be refitted.

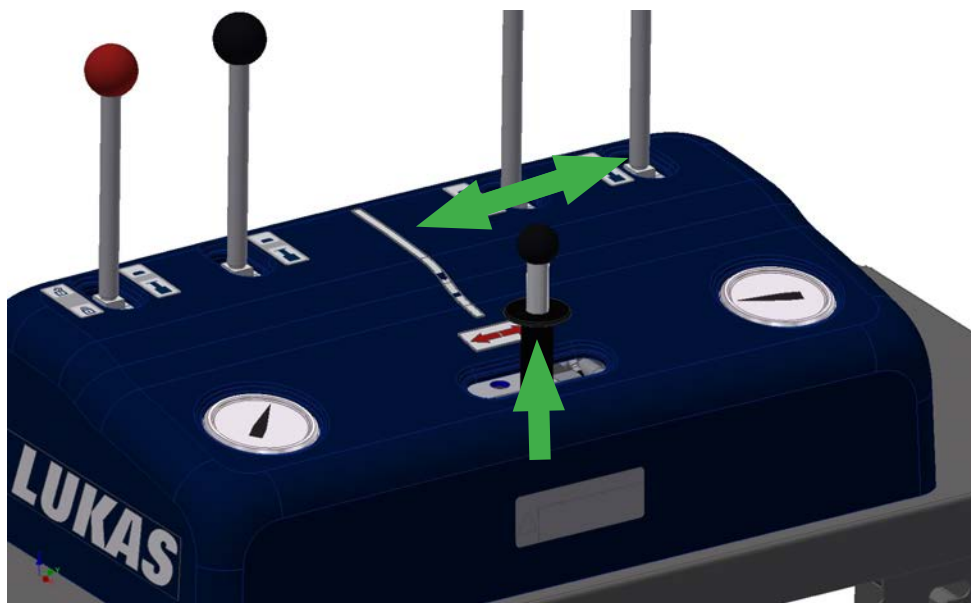
**WARNING / CAUTION / ATTENTION!**

The quick-disconnect-couplings partly have special functions. Therefore it is not allowed to **screw them off** from the hoses or to **exchange them!**



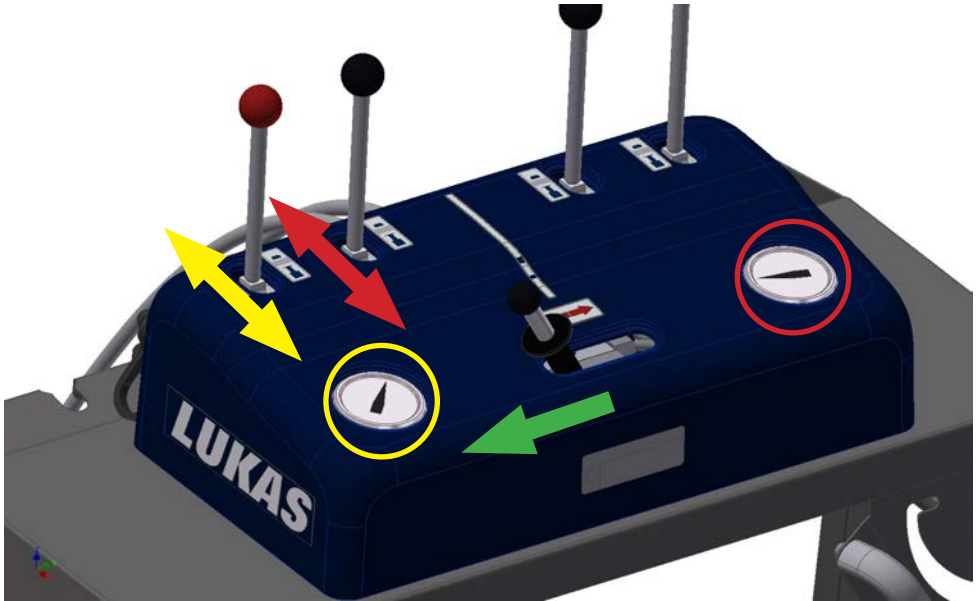
5.4 Controlling the valves

5.4.1 Preselection valve



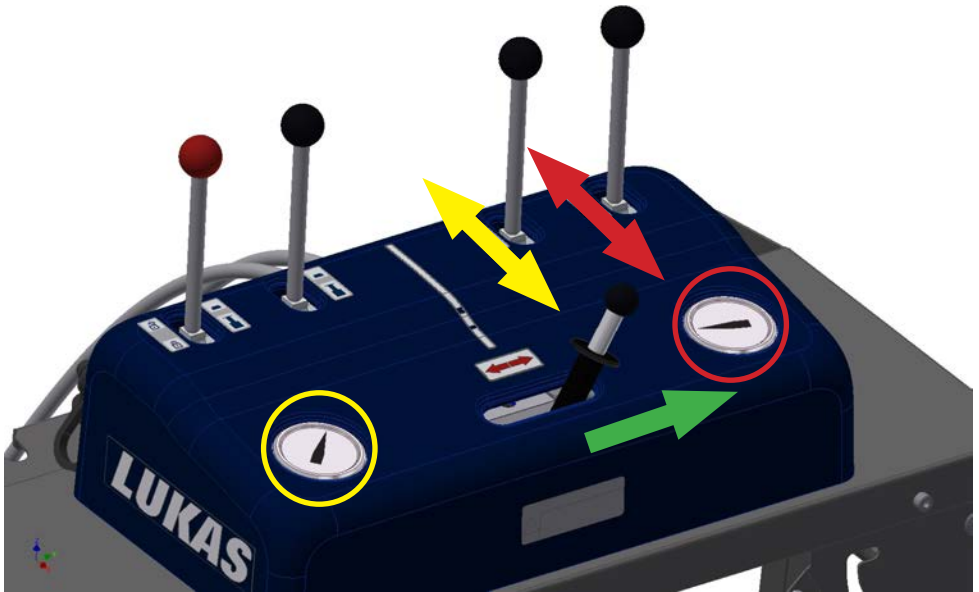
The preselection valve has three switching positions. In the central position, the motor pump unit is switched to depressured circulation, while the other valves are hydraulically blocked. No movements can be performed. No pressure is shown on the manometers. To activate the right or left side of the control table, the black unlocking ring must be pulled upwards and the preselection valve switched to the respective side. The manometers now show the pump pressure for the two activated valves. These valves are now available for use. The other two valves are hydraulically blocked and no movements can be performed. To switch to the other side of the control table, the black locking ring must be held and the valve switched to the other side. If the valve is moved across the centre without holding the black ring, the ring will lock in the central position.

5.4.2 Left side of the control table



After activating the left side of the control table with the preselection valve, the two left-hand valves are active and the manometers show the current pump pressure. If both valves are in the central position, the pump pressure rises to the maximum pressure. If the valves are not required, the preselection valve should ideally be switched back to the central position.

5.4.3 Right side of the control table



After activating the right side of the control table with the preselection valve, the two right-hand valves are active and the manometers show the current pump pressure. If both valves are in the central position, the pump pressure rises to the maximum pressure. If the valves are not required, the preselection valve should ideally be switched back to the central position.

6. Dismantling the equipment / deactivation following operation



WARNING / CAUTION / ATTENTION!

Before dismantling the rerailing equipment, please ensure that the moved load is in a stable and firm position!



Procedure:

1. When the work is complete, fully retract all the hydraulic cylinders and traversing cylinders and then extend them again to approx. 5 mm (base position). This relieves the hydraulic and mechanical stress on the equipment.
2. Depressurise the hydraulic unit and then switch it off.
3. Switch the preselection valve to one side of the control table and actuate both valves in both directions multiple times. Now switch the preselection valve to the other side of the control table and once again actuate both valves in both directions multiple times. Operating pressure at the pressure gauge 0 bar/psi.
4. You can then dismantle the system in accordance with the instructions in Chapter "Connecting the hydraulic equipment" and the separate instructions for the rerailing equipment involved.



ATTENTION!

The operating pressure in the system must be dissipated before uncoupling the hoses. When the rerailing work is complete you must release the operating pressure in the installation/system.

A visual inspection must be carried out after every use, but at least once a year. Every three years or if there is any doubt regarding the safety or reliability of the equipment, a functional test must also be performed. (Please also observe the relevant valid national and international regulations pertaining to service intervals of hydraulic equipment).



ATTENTION!

Clean off any dirt before checking the device!



WARNING / CAUTION / ATTENTION!

To perform maintenance and repairs, personal protection equipment appropriate for the work is an absolute requirement.



Inspections to be carried out:

Visual inspection

- Control table free from damage and deformation
- General tightness (leaks),
- Handle present and secure,
- All screwed connections tight
- Type plate, warning signs and other markings present and legible,
- Couplings must be easy to couple,
- Dust protection caps must be available,
- All accessories used not damaged

Operational check

- Perfect ease of movement of the control levers
- No unusual noises

7. Maintenance and service

7.1 General information

Servicing may only be carried out by the manufacturer or personnel trained by the manufacturer and by authorised LUKAS dealers.

Use only genuine LUKAS spare parts as listed in the spare parts list, because it is essential to use the appropriate special tools and comply with the applicable instructions for assembly, safety and testing.

During the assembly work, pay particular attention to the cleanliness of all components because dirt can damage the equipment!



WARNING / CAUTION / ATTENTION!

Protective clothes must be worn when repairs are being carried out, as the devices may also be pressurised when not in operation.



NOTE:

You should always contact LUKAS or an authorised dealer before using couplings from another manufacturer.



ATTENTION!

Because LUKAS devices are designed for the highest performance, only components may be replaced that are listed in the spare parts lists of the corresponding device.

Other components in the device may only be replaced if:

- You have participated in an appropriate LUKAS service training course.
- You have the explicit permission of LUKAS Customer Service (on request, verification that permission may be granted. To be checked in each individual case!).

7.1.1 Care instructions

The exterior of the equipment is to be cleaned from time to time in order to protect it from external corrosion. Oil is to be applied to the metallic surfaces.

7.1.2 Function and load test

If there is any doubt regarding the safety or reliability of the equipment, a function and load test must also be performed.

7.1.3 Replacing the hydraulic fluid

After approx. 200 deployments, but after three years at the latest, replace the hydraulic fluid in the entire rerailing installation.

Because of the **small quantity of hydraulic fluid in the control table**, separate fluid replacement on the control table is not required. It is adequate to flush the entire installation with the new hydraulic fluid during fluid replacement. However, all the valves need to be actuated (if necessary connect the supply and return lines of each valve in order to flush).



ATTENTION!

Always perform the exchange of the hydraulic fluid over a collection tank and dispose of the collected fluid in a proper manner!



ATTENTION!

The hydraulic fluid must be completely replaced if the application conditions (ambient temperatures) change substantially. When selecting a suitable hydraulic fluid, please refer to Chapter "Hydraulic fluid recommendations" for the relevant rerailing equipment.

7.2 Repairs

7.2.1 Coupling replacement

The couplings must be replaced if:

- there is external damage,
- the locking does not function,
- hydraulic fluid continues to leak in the coupled and/or uncoupled state.



WARNING / CAUTION / ATTENTION!

Never repair couplings: they must be replaced by genuine LUKAS parts!



During assembly tighten the coupling to a torque of $M_A = 40 \text{ Nm}$.

Procedure:

1. Remove the coupling.
2. Place a new coupling in position and tighten to a torque of $M_A = 40 \text{ Nm}$.

7.2.2 Decals

All damaged and/or illegible labels (safety notices, type plate, etc.) must be replaced.

Procedure:

1. Remove damaged and/or illegible decals.
2. Clean surfaces with acetone or industrial alcohol.
3. Affix new decals.

Take care to affix the labels in the correct positions. If this is no longer known, you should ask your authorised LUKAS dealer or contact LUKAS directly.

8. Troubleshooting

Fault	Check	Cause	Solution
Connected working equipment moves slowly or jerkily when activated.	Are the hoses connected properly?	Air in the hydraulic system.	Vent the hydraulic system.
	Does the pump unit work?		
		Working unit defective.	Consult the separate operating instructions for the working equipment.
The connected working equipment does not move when actuated and no pressure indication on the control table pressure gauge.	Are the hoses connected properly?	Hose connection to hydraulic power pack not made, or made incorrectly.	Connecting hose assemblies properly.
	Does the pump unit work?	Pump unit not switched on or defective.	Consult the separate operating instructions for the pump unit.
The connected working equipment does not move when actuated but pressure indication on the control table pressure gauge.		Control table defective.	Have it repaired by an authorised dealer or directly by LUKAS.
		Problem with the working equipment.	Consult the separate operating instructions for the working equipment.
Connected working equipment does not apply the specified force.	Hydraulic fluid level in the supplying pump?	Insufficient hydraulic fluid in the pump.	Top up hydraulic fluid and bleed the air.
	Check the operating pressure on the control table pressure gauge.	Pressure supply has too low pressure.	If possible, increase the max. operating pressure on the hydraulic unit to max. operating pressure of the cylinder or use another hydraulic unit with a sufficient max. operating pressure.
	Check working equipment.	Working equipment defective.	Consult the operating instructions for the working equipment.

Fault	Check	Cause	Solution
Hoses cannot be coupled.		Lines are under pressure because there is pressure in the system.	Remove the pressure or residual pressure (see section 6. Dismantling the device).
		Coupling defective.	Coupling must be replaced immediately.
Leak on the couplings.	Is the coupling damaged?	Coupling defective.	Coupling must be replaced immediately.
Cylinders retract automatically under load.		Control table defective.	Have it repaired by an authorised dealer or directly by Lukas.

Contact an authorised LUKAS dealer or the LUKAS Customer Service Department directly if the malfunctions cannot be rectified!

The address for the LUKAS Customer Service department is:

<p>LUKAS Hydraulik GmbH</p> <p>Weinstrasse 39, D-91058 Erlangen PO Box 2560 D-91013 Erlangen</p> <p>Tel.: (+49) 09131 / 698 - 348 Fax.: (+49) 09131 / 698 - 353</p>
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9. Technical data

Because all values are subject to tolerances, there may be minor differences between the data for your device and the data in the following tables!

9.1 Control unit CU 2DV

Device type Item number	CU 2DV 70-20-50	Value	Units	Remarks
Dimensions	l x w x h	999 x 618 x 1153 39.3 x 24.3 x 45.4	mm in.	set up
Dimensions	l x w x h	932 x 618 x 495 36.7 x 24.3 x 19.5	mm in.	folded
Operating pressure	max.	53 7700	MPa psi	
Control valve	Lifting	2	Number	
Control valve	Traversing/lifting	1	Number	
Control valve	Locking/lifting	1	Number	
Hydraulic connections		NW 06		quick-disconnect-coupling
Ambient temperature		-20 ... +55 -4 ... 131	°C °F	
Weight		47.5 104.8	kg lbs.	
Specification of hydraulic fluid		HM 10 ISO 6743-4		

9.2 Control unit CU 4 DVV

Device type Item number	CU 4DVV 70-20-60	Value	Units	Remarks
Dimensions	l x w x h	1282 x 618 x 1153 50.5 x 24.3 x 45.4	mm in.	set up
Dimensions	l x w x h	1215 x 618 x 495 47.8 x 24.3 x 19.5	mm in.	folded
Operating pressure	max.	53 7700	MPa psi	
Control valve	Lifting	4	Number	
Control valve	Traversing/lifting	2	Number	
Control valve	Locking/lifting	2	Number	
Hydraulic connections		NW 06		quick-disconnect-coupling
Ambient temperature		-20 ... +55 -4 ... 131	°C °F	
Weight		74.5 164.3	kg lbs.	
Specification of hydraulic fluid		HM 10 ISO 6743-4		

9.3 Operating and storage temperature ranges

Operating temperature	[°C] / [°F]	-20 ... +55	<i>-4 ... +131</i>
Ambient temperature (device in operation)	[°C] / [°F]	-25 ... +45	<i>-13 ... +113</i>
Storage temperature (device not in operation)	[°C] / [°F]	-30 ... +60	<i>-22 ... +140</i>

10. EC Declaration of Conformity

LUKAS

LUKAS Hydraulik GmbH
Weinstraße 39,
91058 Erlangen
Deutschland

IDEX
RESCUE

Dinglee, LUKAS, Hurst, Vetter

IDEX Europe GmbH
Weinstraße 39
91 058 Erlangen
Germany

EG-Konformitätserklärung / EC Declaration of Conformity / Déclaration CE de conformité / Declaración de conformidad CE

Im Sinne der EG-Maschinenrichtlinie 2006/42/EG, Anhang II A
In accordance with the EC Machinery Directive 2006/42/EC, Appendix II A
Selon la directive Machines 2006/42/CE, annexe II A
A los efectos de la Directiva comunitaria de máquinas 2006/42/CE, anexo II A

Hiermit erklären wir, dass die nachfolgend bezeichneten Geräte
We hereby declare that the following tools
Par la présente déclaration CE de conformité, nous attestons que le ci-dessous outils
Con la presente declaramos que los nombrados indicados a continuación dispositivos

Artikelnr. / Item no. / N° d'article / Número del artículo	Modell / Type / Modèle / Modelo y tipo
70-20-50	CU 2DV
70-20-60	CU 4DVV

- in der von uns gelieferten Ausführung den Bestimmungen der Maschinenrichtlinie 2006/42/EG und den sie umsetzenden nationalen Rechtsvorschriften entsprechen.
Berücksichtigt wurden insbesondere die Normen:
 - DIN EN ISO 12100:2010, Ausgabe: 2011-03 - Sicherheit von Maschinen – Allgemeine Gestaltungsleitsätze – Risikobeurteilung und Risikominderung
- *in the versions supplied by us conform to the EC Machinery Directive 2006/42/EC and the national statutory provisions that implement them.*
The following standards have particularly been taken into consideration:
 - *DIN EN ISO 12100:2010, publication date: 2011-03 – Safety of machinery – General principles for design – Risk assessment and risk reduction*
- *satisfait, dans la version que nous avons livrée, aux dispositions de la directive Machines 2006/42/CE et des législations nationales destinées à assurer son application.*
Les normes suivantes ont notamment été prises en compte :
 - *DIN EN ISO 12100, édition : 2011-03 - Sécurité des machines – Principes généraux de conception – Appréciation du risque et réduction du risque.*

LUKAS

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Deutschland



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- *cumplen, en la versión suministrada por nosotros, las disposiciones de la Directiva de máquinas 2006/42/CE y la legislación nacional en vigor.*
Se han tomado en consideración, en particular, las normas:
 - *DIN EN ISO 12100, edición: 2011-03 - Seguridad de las máquinas. Principios generales para el diseño. Evaluación del riesgo y reducción del riesgo.*

Bei einer nicht mit uns abgestimmten Änderung oder Verwendung der Maschine/Ausrüstung verliert diese Erklärung ihre Gültigkeit.

This declaration loses its validity in the case of alterations or usage of the machinery/equipment not approved by LUKAS.

Cette déclaration perd sa validité en cas de modification ou d'utilisation de la machine/de l'équipement sans concertation préalable avec nous.

La presente declaración quedará invalidada en caso de efectuarse cambios o modificaciones en la máquina/el equipamiento no acordados con nosotros.

Erlangen, 17.07.2019

ppA



Carsten Sauerbier
Bevollmächtigter / Authorized Representative
Director of Technical Innovation and Development
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i. A.



Johannes Krug
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11. Notes



Please dispose of all packaging materials and removed items properly.

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