

# **LUKAS**

Germany's finest hydraulics.

# FAST & SAFELY ON TRACK.

**Leading rerailing systems from Germany.**



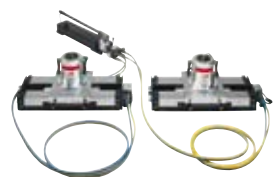
Powering



Controlling



Lifting



Traversing

# DON'T LOSE A SECOND.

Choose the leading system now.

The well-conceived rerailing system from **LUKAS** has been the solution of choice throughout the world for decades. Choose genuine quality and a product that enables you to rerail quickly, precisely and safely. This ensures that rail lines are available for traffic again as fast as possible and that your downtime costs are minimised.

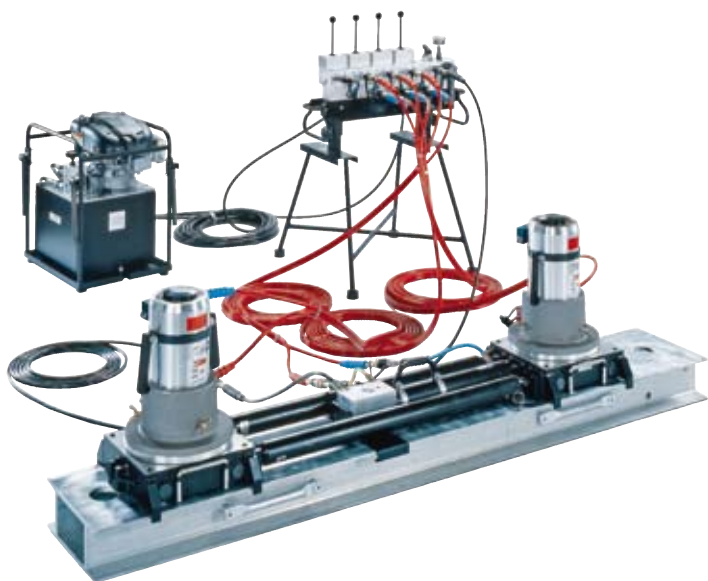
Powering & Controlling	p. 4
Lifting	p. 10
Traversing	p. 14
Uprighting	p. 18
Pulling device	p. 19
Compact traversing unit	p. 20
Emergency pneumatics	p. 21
Rescue tools	p. 22
Examples of application	p. 26

## Intelligent DUO traversing system

Only from **LUKAS**: Thanks to the double-acting DUO traversing system you can move the load in both directions along the entire length of a bridge with absolute precision at a safe distance from the control desk without any manual intervention.

## A wide choice means the right solution is guaranteed

As a specialist in rerailing technology, **LUKAS** can offer you the greatest variety of products in this area. The wide range of choices ensures that you use precisely those systems that suit your requirements best. Our special customer-oriented sales team offers you expert, solutions-based advice. In addition, **LUKAS** supplies you with devices for uprighting vehicles, as well as superior hydraulic and pneumatic rescue tools.



## The system includes:

- + Motor pump
- + Control desk
- + Telescopic ram
- + DUO traversing unit
- + Mechanical accessories, such as rerailing bridge, roller carriage and distance bars
- + Pulling device
- + Long stroke jack and accessories for uprighting overturned rail vehicles

## Lightweight components

All the components of the rerailing system are kept as small and light as possible to enable fast transport, efficient setup and easy handling. This enables you to start rerailing sooner, saving you valuable time.

## Made in Germany - developed in cooperation with Deutsche Bahn

We produce **LUKAS** rerailing equipment in Germany, meeting the highest quality standards. This equipment was developed in 1961 in close cooperation with Deutsche Bahn. Since then it has been further developed and improved in cooperation with well-known international railway companies.

## The main advantages at a glance:

- + DUO traversing unit:
  - Non-intermittent traversing over the entire length of the bridge
- + Compact design and lightweight components for efficient setup
- + Practical quick-lock couplings for easier operation
- + More power thanks to 530 bar operating pressure
- + Customer-oriented consulting with decades of experience

**LUKAS** rerailing systems operate with hydraulic power, enabling even the heaviest rail vehicles to be lifted and traversed with ease. The necessary oil pressure is generated by a top-quality motor pump, while high-precision valves control the extension and retraction of the hydraulic cylinders.



## Control huge forces with precision from a safe distance.



GC-6



PC-6

### Series 6 Motor Pumps

Use our powerful Series 6 motor pumps to generate the hydraulic pressure for the devices from the **LUKAS** rerailing system. You can choose between pumps powered by gasoline, electricity or diesel. Because of their compact design, these pumps are lightweight and made for easy handling. An additional advantage are the quick connect couplers, simplifying the connection of the pump.

Type	GC-6	PC-6	DC-6
<b>Oil output rate: low pressure/high pressure</b>	5.9 / 2.5 l/min	5.3 / 2.3 l/min	5.3 / 2.3 l/min
<b>Usable oil quantity</b>	35 l	35 l	35 l
<b>Engine</b>	4-stroke gasoline engine	220 V / 400 V - 50 Hz	Diesel
<b>Power</b>	3.5 kW	2.2 kW	5 kW
<b>Dimensions l x w x h</b>	560 x 540 x 665 mm	560 x 540 x 695 mm	550 x 480 x 750 mm
<b>Weight (without oil)</b>	55 kg	61 kg	81 kg





## Compact power units: for lifting and traversing.



PC6-2DV



PC6-4DV



### Compact power unit

Use the compact power unit for traversing with a DUO traversing unit. This also unites power and control in a single device. It is available with a gasoline or electric motor and can operate two or four jacks from a safe distance.



### Advantages

- + Valves can be fitted for every system on a modular basis.
- + **Two working speeds:** rapid extension without load and controlled, slower lifting with load.
- + **Less weight** thanks to variable capacity of oil reservoir up to max. 24 l.
- + **Compact design** for convenient transport.

#### Units with gasoline engine

	GC6-2DV	GC6-4DV
Lifting with	2 jacks	4 jacks
Traversing with	1 DUO traversing unit	1 DUO traversing unit
Oil output rate LP / HP	4.7 / 1.45 l/min	4.7 / 1.45 l/min
Dimensions l x w x h	560 x 470 x 990 mm	560 x 565 x 990 mm
Weight (without oil)	52.5 kg	58.5 kg

#### Units with electric motor

	PC6-2DV	PC6-4DV
Lifting with	2 jacks	4 jacks
Traversing with	1 DUO traversing unit	1 DUO traversing unit
Oil output rate LP / HP	4.4 / 1.4 l/min	4.4 / 1.4 l/min
Dimensions l x w x h	560 x 470 x 990 mm	560 x 565 x 990 mm
Weight (without oil)	55.5 kg	61.5 kg

## ► Compact power units for lifting.



PC6-2D



PC6-4D

## ► Motor pumps with gasoline or electric motor

When lifting with telescopic jacks, the best solution is to use motor pumps GC6-2D/PC6-2D. They combine the hydraulic pump and control valves in one unit easy to operate and instantly ready for use. With the intuitive controller, the lifting and lowering speed of each jack can be regulated with precision. **Important:** A hand pump must be used for horizontal traversing with the compact traversing unit.

## ► Advantages

- + **Two working speeds:** rapid extension without load and controlled, slower lifting with load.
- + **Less weight** thanks to variable capacity of oil reservoir up to max. 24 l.
- + **Compact design** for convenient transport.

### Units with gasoline engine

	GC6-2D	GC6-4D
Lifting with	2 jacks	4 jacks
Oil output rate: low pressure/high pressure	4.7 / 1.45 l/min	4.7 / 1.45 l/min
Dimensions l x w x h	560 x 440 x 860 mm	560 x 440 x 860 mm
Weight (without oil)	49.5 kg	55.5 kg

### Units with electric motor

	PC6-2D	PC6-4D
Lifting with	2 jacks	4 jacks
Oil output rate: low pressure/high pressure	4.4 / 1.4 l/min	4.4 / 1.4 l/min
Dimensions l x w x h	560 x 440 x 860 mm	560 x 440 x 860 mm
Weight (without oil)	52.5 kg	58.5 kg

## High-performance hand pumps.

The robust, two-stage hand pumps are ready at any time in case of an emergency. They offer the option to use the telescopic jacks in environments with a risk of explosion. These high-performance hand pumps can be used to lift or traverse the load with one or two compact traversing units. With these hand pumps you can work quickly and precisely at all times.

**ZPH 3/8-1D**



**ZPH 3/4-1D / ZPH 3/8-1D**

for **one** double-acting jack

**ZPH 3/4-2D / ZPH 3/8-2D**

for **two** double-acting jacks



**ZPH 3/8-2D**

### Advantages

- + Rapid traversing possible thanks to the high output rate of the pump
- + Suitable for use in environments with a risk of explosion, such as tunnels or underground shafts
- + Effortless work thanks to low leverage forces

	ZPH 3/8-1D	ZPH 3/8-2D
Oil output rate: low pressure	10.8 cm <sup>3</sup>	10.8 cm <sup>3</sup>
Oil output rate: high pressure	4.2 cm <sup>3</sup>	4.2 cm <sup>3</sup>
Capacity of oil reservoir	10.5 l	10.5 l
Usable quantity	8 l	8 l
Dimensions: l x w x h	915 x 230 x 182 mm	940 x 260 x 182 mm
Weight	18.2 kg	21 kg

**ZPH 3/4-1D**



**ZPH 3/4-2D**

	ZPH 3/4-1D	ZPH 3/4-2D
Oil output rate: low pressure	10.8 cm <sup>3</sup>	10.8 cm <sup>3</sup>
Oil output rate: high pressure	4.2 cm <sup>3</sup>	4.2 cm <sup>3</sup>
Capacity of oil reservoir	5.25 l	5.25 l
Usable quantity	4 l	4 l
Dimensions l x w x h	915 x 130 x 182 mm	940 x 260 x 182 mm
Weight	15 kg	16 kg



CT7-6/3DV



CT7-6/4DVV

## Safe operation: The control desk

The intelligent control desk enables you to control all work with a high degree of precision. The control valves enable you to lift, lower, traverse and position the vehicle from a safe distance. For your safety, the valves are clearly arranged and have an automatic spring reset (deadman safety system). **Important:** The modular design means that we can adapt the valve combination precisely to your specific needs.

You can choose between two variants:

	CT7-6/3DV	CT7-6/4DVV
Lifting/lowering valves	3	4
Traversing with	1 DUO traversing unit	2 DUO traversing unit
Dimensions: l x w x h	805 x 700 x 1,100 mm	1,025 x 700 x 1,070 mm
Weight	36.5 kg	60 kg



## Hydraulic hoses: fast and safely connected

	Series 6 Motor Pumps	Series 6 Compact Power Units
Connection:	2x hose 10 m black	-
Control desk – motor pump	Weight 4.4 kg	-
Connection:	Hose pair 10 m red/red	Hose pair 10 m red/red
Control desk – lifting jacks	Weight 7 kg	Weight 7 kg
Connection:	Hose pair 10 m red/red	Hose pair 10 m yellow/yellow
Control desk – DUO traverse jack	Weight 7 kg	Weight 7 kg
Anchor jack	Hose 10 m black	Hose 10 m black
-	Weight 4.4 kg	Weight 2.75 kg



## ➤ Truck mounted system – the faster solution.

### ➤ The vario set for rail-road vehicles

Two-track vehicles for road and rail use enable you to respond to various scenarios fast and flexibly. We have developed the perfect rerailing solution for these vehicles: the vario set. The pump is mounted on the vehicle's frontal power take-off with a swivelling control desk on the vehicle front.

### ➤ Advantages

- + Complete system with all the necessary components
- + Much lighter and more compact because power and control units are located outside on the vehicle
- + Faster setup
- + Safe operation with unrestricted view of the accident site
- + Simplified connection thanks to hoses with quick-lock couplings
- + Can be retrofitted on all vehicles with frontal power take-off

### ➤ Areas of application

- + Lifting with up to 3 double-acting telescopic rams
- + Traversing with the DUO traversing unit
- + Uprighting overturned rail vehicles with the uprighting equipment
- + Releasing wedged rail vehicles with pulling equipment

#### Two-stage pump with:

low pressure circuit and high pressure circuit

#### Output rate:

LP 0.75 l/min per 100 min<sup>-1</sup>

HP 0.4 l/min per 100 min<sup>-1</sup>

#### Max. permissible speed:

1,500 min<sup>-1</sup>

#### Output rate at max. permissible speed:

LP 11 l/min, HP 5.6 l/min

#### Oil tank usable volume:

Min. 30 l

#### Weight (without oil):

86 kg

### ➤ On the job



## ► Your strongest assistants.



## ► Telescopic rams

Beside their enormous strength, our telescopic rams also feature thought-out design. High-strength, light alloy aluminum makes them resistant to corrosion and easy to maintain. Thanks to the telescopic design, they combine long piston strokes with a very small retracted height.

### Optimised surfaces

The surfaces of the piston rods are hard-anodised to protect against damage; the piston guard plates are corrugated and are made from high-strength steel. Best quality for a long service life – at your side.

### Integrated hose-break safety valve

The **LUKAS** hose pairs have an integrated quick stop feature that prevents the uncontrolled lowering of the load, for example if the hose has been damaged.

### Perfect coordination

The piston strokes and forces of the various cylinders are coordinated down to the last detail. This means that you remain in control even in difficult situations - fast and safe.



	HP 10   T 280 R	HP 25   T 185 R	HP 25   T 450 R
<b>Piston lifting force 1 / 2 / 3</b>	650 / 301 / 104 kN	650 / 301 kN	650 / 301 kN
<b>Piston stroke 1 / 2 / 3</b>	94 / 95 / 90 mm	95 / 90 mm	228 / 223 mm
<b>Total stroke</b>	279 mm	185 mm	451 mm
<b>Height</b>	220 mm	220 mm	385 mm
<b>Oil volume</b>	1.4 l	1.3 l	2.8 l
<b>Weight</b>	14.8 kg	14.8 kg	23.8 kg

	HP 30   T 500 R	HP 50   T 185 R	HP 50   T 400 R
<b>Piston lifting force 1 / 2</b>	650 / 301 kN	1,066 / 504 kN	1,066 / 504 kN
<b>Piston stroke 1 / 2</b>	250 / 250 mm	89 / 96 mm	195 / 204 mm
<b>Total stroke</b>	500 mm	185 mm	399 mm
<b>Height</b>	470 mm	234 mm	400 mm
<b>Oil volume</b>	3.25 l	2 l	4.3 l
<b>Weight</b>	26.0 kg	24 kg	41 kg

	HP 60   45	HP 65   T 500 R	HP 130   115 R
<b>Piston lifting force 1 / 2</b>	600 kN	1,665 / 703 kN	1,348 kN
<b>Piston stroke 1 / 2</b>	45 mm	250 / 251 mm	115 mm
<b>Total stroke</b>	45 mm	501 mm	115 mm
<b>Height</b>	130 mm	452 mm	272 mm
<b>Oil volume</b>	0.51 l	8.8 l	2.9 l
<b>Weight</b>	25 kg	69 kg	53 kg

## ► The right response to every situation.



### ► Stacking sets

If you are faced with the need of an extraordinary long stroke, the stacking sets can be used to increase the maximum lifting height by up to 495 mm. Depending on the number and height of piston and stacking rings, you can respond in a flexible way with these accessories.

Stacking set for	HP 10/T, HP 25/T	HP 50/T 185 R	HP 50/T 400 R
Stacking ring, number / height	4 / 65 mm	4 / 65 mm	2 / 150 mm
Piston ring, number / height	3/65 mm + 1/45 mm	3/65 mm + 1/45 mm	1/20 mm + 1/123 mm + 1/150 mm
Fork levers, quantity	1	1	1
Max. stroke extension	260 mm	260 mm	360 mm
Total weight	14.5 kg	21 kg	22.2 kg

Stacking set for	HP 60/45	HP 65/T	HP 130/115 R
Stacking ring, number / height	2/31 mm	3/133.4 mm	1/110 mm + 4/95 mm
Piston ring, number / height	1/42 + 2/30 mm	1/20 mm + 2/135 mm + 1/100 mm	5 / 95 mm
Fork levers, quantity	1	1	1
Max. stroke extension	107 mm	400 mm	495 mm
Total weight	3.3 kg	42 kg	47 kg

### ► Base plates

Safety first. The base plates increase the jack's ground area and improve its stability many times over. Essential for all lifting tasks!

Base plate for	HP 10 / T...	HP 25 / T...	HP 30 / T...
Weight	7.2 kg	7.2 kg	7.2 kg

Base plate for	HP 50 / T...	HP 65 / T...
Weight	9 kg	24.5 kg





## ► Special jack for low-floor vehicles.

### ► Internal jacks

Some vehicles have to be lifted from the inside because of low ground clearance. These vehicles are equipped with adapters in the floor for internal jacks. In this case you insert the **LUKAS** internal jacks into the floor of the vehicle with the pistons facing downwards and extend them slowly. This enables you to lift the vehicle safely at several points.

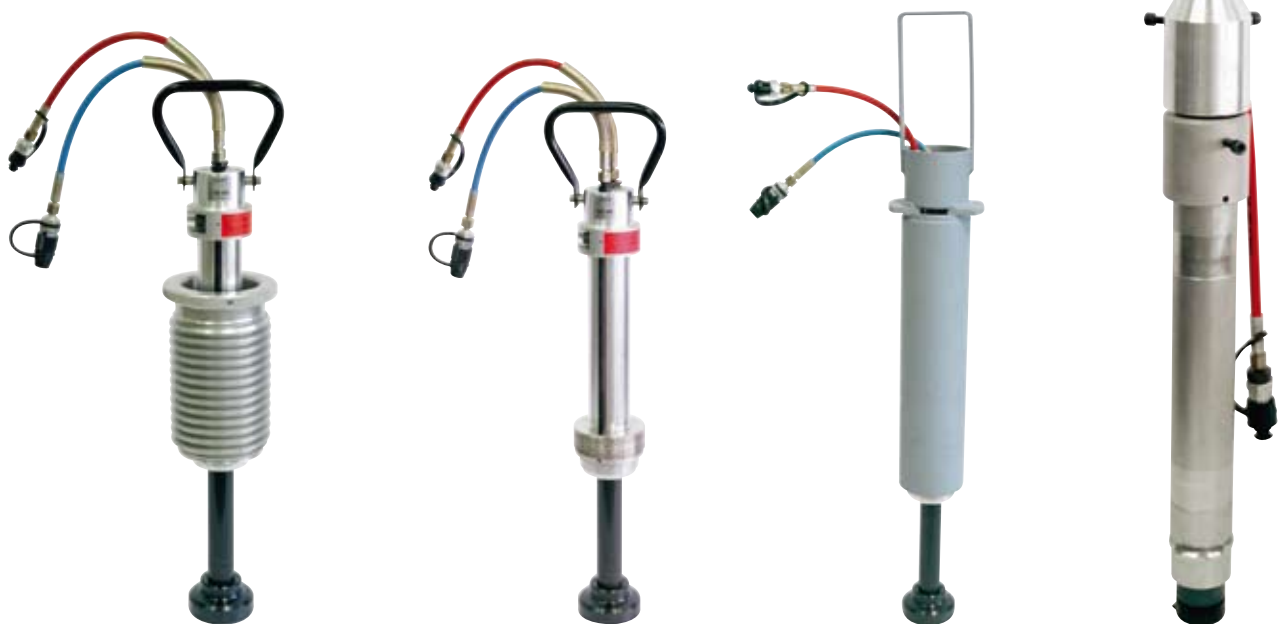
As the adapters in vehicle floors can vary, the adapter sleeves and the jacks can be modified according to the special needs.

### ► Types

The **HP 10/250 R** is available with two standard adapters as an option:

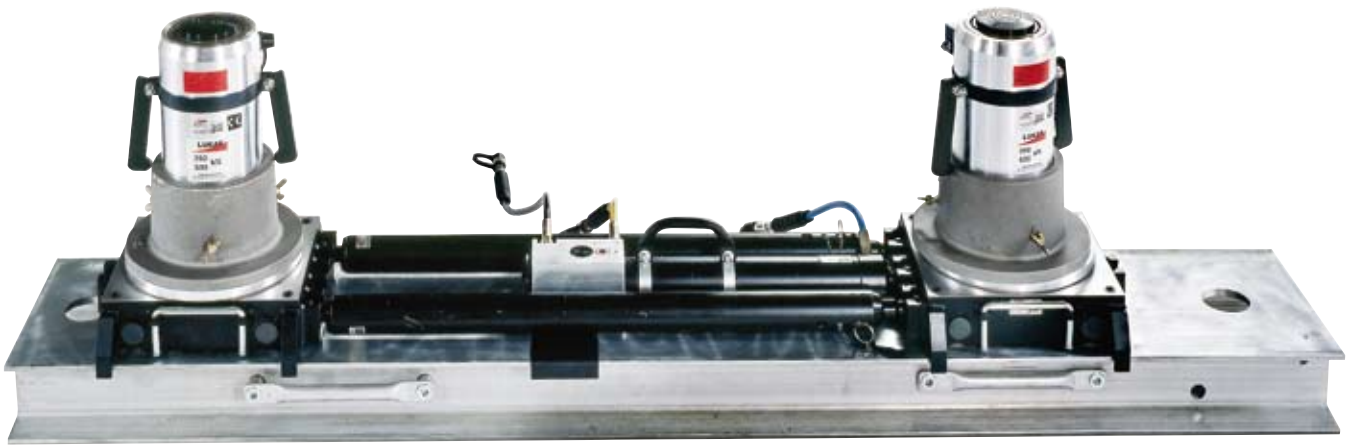
- + with bayonet fitting
- + with trapezoidal thread

The **HP 7/360 R** is the patented, tailor-made solution for TWM type ADtranz vehicles



Both jacks are double-acting and are retracted hydraulically.

## ➤ The safest way of traversing.



### ➤ DUO traversing unit

The DUO traversing unit is the only system on the market that allows you to perform the complete task from a safe distance without manual conversion.

### ➤ Advantages

- + Movement in two directions over the entire length of the bridge
- + Control from the control desk – at a safe distance
- + Integrated sliding plates compensate for the bowing of the vehicle
- + Adjustable distance bars connect the roller carriages and enable safe traversing on the bridge

### ➤ On the job





① DUO traversing unit

Push/ pull force	170 / 90 kN
Stroke	320 mm
Dimensions*: l x w x h	668 x 360 x 174 mm
Weight	23 kg

① DUO traversing unit, heavy load

Push/ pull force	337 / 207 kN
Stroke	320 mm
Dimensions*	653 x 320 x 186 mm
Weight	42 kg

② Roller carriage for bridges

Permissible load	750 kN
Height	112 mm
Weight	42 kg

② Heavy load roller carriage for bridges

Permissible load	1,000 kN
Height	140 mm
Weight	63 kg

③ Adjustable distance bars (set)

	Short	Long
Length max./min.	1,830 / 1,030 mm	2,800 / 1,500 mm
Weight	40 kg	59 kg

\*with guide plates

## ➤ A secure base for traversing.



## ➤ Rerailing bridges

The rerailing bridge is used as soon as you have raised the derailed vehicle. You can then move the vehicle sideways with one or two roller carriages and the DUO traverse unit. When the vehicle is in the right position, lower it onto the rails. **Connecting rerailing bridges:** You can extend the bridges with connecting elements, enabling you to respond to various track widths. Important: The connection points must be supported securely.

### Height 85 mm (low-floor vehicles)

Length m	1.1	2.2	3.3
Width mm	350	350	350
Weight kg	33	66	98

### Height 184 mm

Length m	1.1	2.2	3.3	4.4
Width mm	350	350	350	350
Weight kg	70	140	210	280



### Height 140 mm

Length m	1.1	2.2	3.3	4.4
Width mm	350	350	350	350
Weight kg	40	81	117.5	163

### Connection elements for bridges

Height mm	85	140	184
Weight kg	9.6	18	21

### Maximum bridge capacity

	Height 85 mm	Height 140 mm	Height 184 mm
 <b>Full support</b>	350 kN	1,000 kN	1,200 kN
 <b>with 1 m distance between supports</b>	60 kN	500 kN	900 kN
 <b>with 1.43 m distance between supports</b>	50 kN	400 kN	650 kN

## ➤ On the job



Two bridges can be connected. The connection points must be supported.

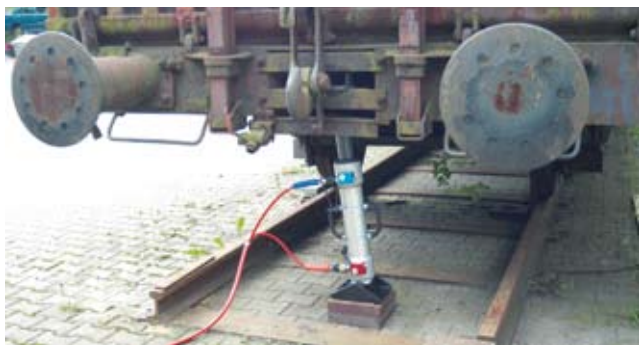


## ➤ Rerailing accessories.

### ➤ Tilting jack

Depending on the model, you can rerail some vehicles with a HP 25 / K 400 R jack, radius plate and wheel stop with minimal effort. The diagonal stroke movement lifts and traverses the rail vehicle at the same time. The wheel stop stops the traverse movement as soon as the wheels are positioned over the rails. Additionally, the tilting jack is used for uprighting rail vehicles with the lifting belt. For further information see the next chapter, "Uprighting".

### ➤ On the job



#### Required components

- ① Tilting jack HP 25 / K 400R
- ② Radius plate
- ③ Wheel stop

<b>Weight</b>	18.6 kg
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### ➤ Axle pusher

If you accidentally lowered the load with the wheel flange on the rails, the axle pusher will handle the last step and push the vehicle into the track. Important: To operate this system you also need cylinder LZM 10/160 and the appropriate piston guard plate. Both components are not included in the scope of delivery of the axle pusher.

### ➤ On the job



LZM 10/160

	LZM 10/160	Axle pusher
<b>Stroke</b>	160 mm	-
<b>Lifting force</b>	100 kN	-
<b>Weight</b>	3.8 kg	11 kg

# ➤ Ready for action when a crane is not an option.

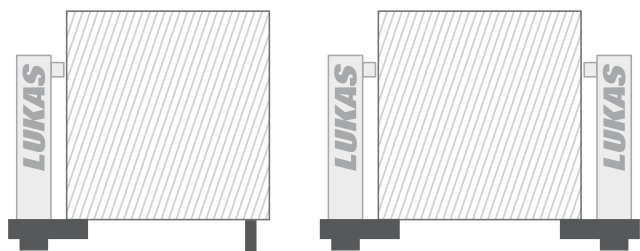
## ➤ Uprighting system

Our uprighting system is the perfect answer in case of an accident with an overturned rail vehicle that cannot be rescued with a crane. This enables you to upright overturned rail vehicles with ease, so that you can subsequently rerail them.

### Mode of operation:

You place the lifting belt ④ around the overturned rail vehicle and fasten it to the frame with a holding rope ⑤ and shackle ⑥. A jack (HP 25 / K 400 R) and a radius plate ③ are used to start lifting the vehicle gently and securely. Using the tilting jack ② and then the claw jack ① lift the vehicle onto the sling before using a second claw jack when the first is fully extended, continuing the uprighting work.

## ➤ On the job



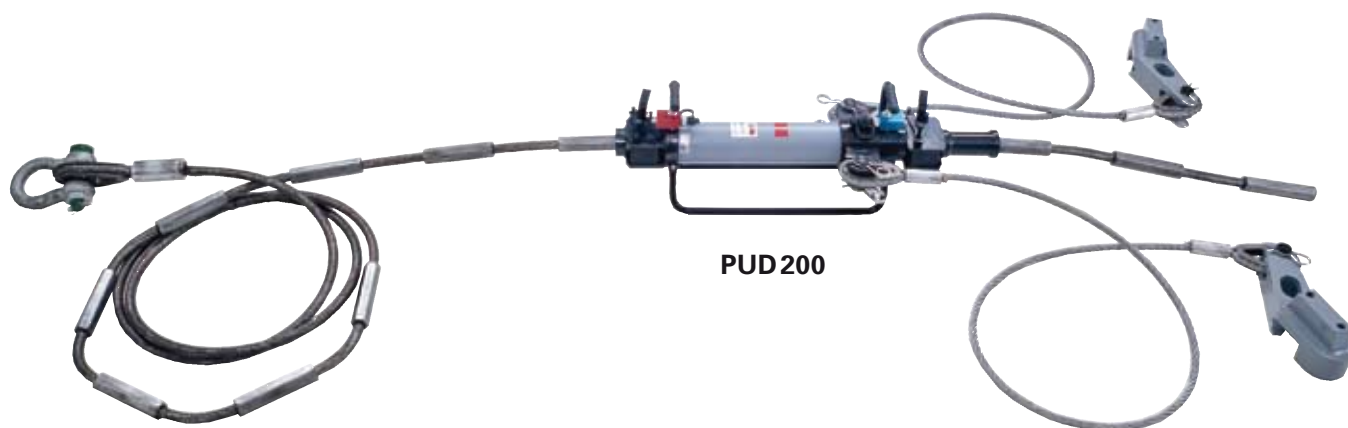
### Lifting with the claw jack

The claw jack is supplied with a base plate so that it can be used to lift loads, such as iron slab trucks.



	① Claw jack HP 50 / P 850R	② Tilting jack HP 25 / K 400R	③ Radius plate	④ Sling	⑤ Holding rope	⑥ Shackle
Permissible load	-	-	-	400 kN	500 kN	250 kN
Pressure	520 kN	266 kN	-	-	-	-
Stroke	850 mm	400 mm	-	-	-	-
Height (retracted)	1,150 mm	599 mm	-	-	-	-
Oil volume	8 l	1.55 l	-	-	-	-
Weight	52 kg	22 kg	7 kg	51 kg	15 kg	12.8 kg

## ► Pulling device.



PUD 200

## ► Separating wedged vehicles with the pulling equipment

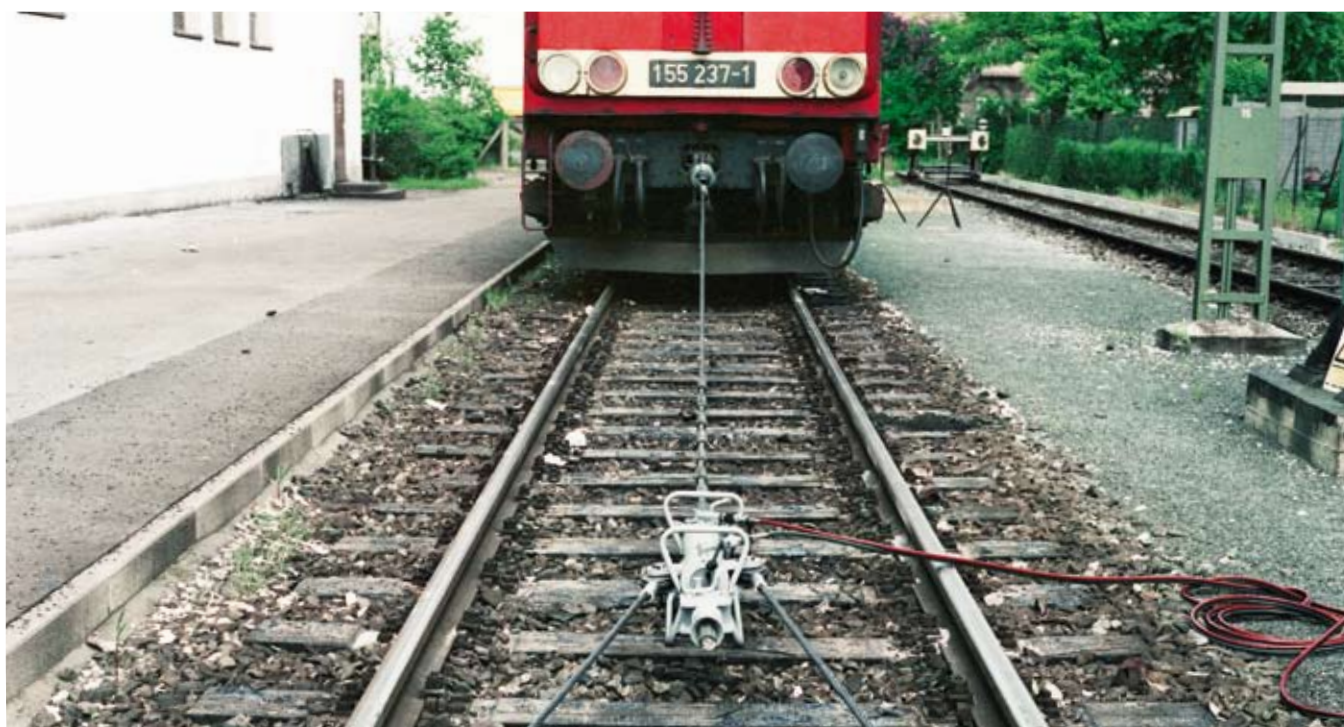
The powerful pulling device is used whenever vehicles are wedged together due to an accident. This simple but powerful product can also be used as a fast and safe way to unblock the way when a train is jammed between the walls of a tunnel or bridge or when an obstacle blocks the track.

Huge benefit: The device can be fastened to the rails or a ground anchor, independent from the track width. The pulling device consists of a 9.5 m pulling rope and a pulling jack with holding ropes and rail attachments.

Please specify the relevant rail profile  
for your project.

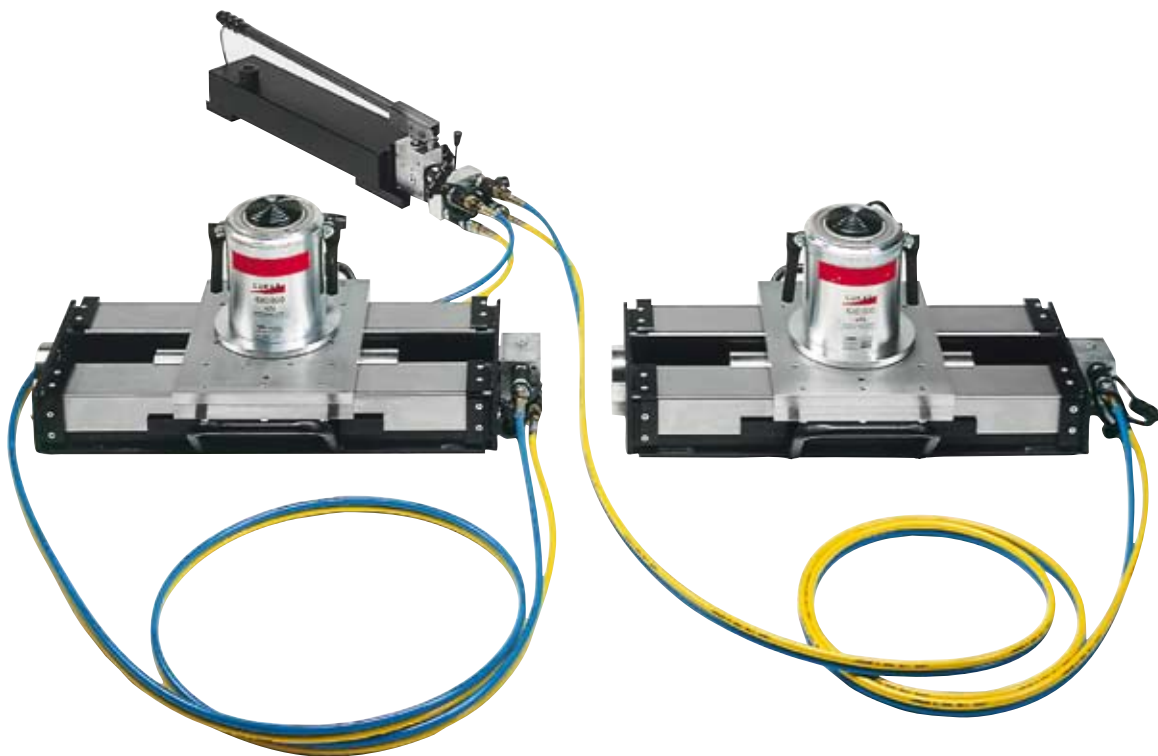
Pulling device	PUD 200
Pulling force	220 kN
Oil volume	1 l
Weight	194 kg

## ► On the job





## ➤ For fast and precise rerailing.



### ➤ Compact traversing unit for light rail vehicles

The best solution for traversing light rail vehicles is the compact traversing unit, which allows you to rerail with absolute precision. This is thought through in detail to ensure that your rescue mission runs smoothly and safely. Use one or two units, depending on the weight of the accident vehicle.

### ➤ Advantages

- + Easy transport thanks to low weight and compact dimensions
- + Fast change of direction directly on the hand pump
- + Moving light alloy sliding plates compensate the bowing of the vehicle
- + Minimal friction resistance thanks to stainless steel sliding surfaces

Transverse movement to	300 mm
Dimensions l x w x h	865 x 375 x 153 mm
Weight	73 kg

#### Permissible loads:

Single-point lifting: 200 kN (20 t)  
i.e. rail vehicles weighing up to 400 kN (40 t)

Two-point lifting 2 x 150 kN (15 t)  
i.e. rail vehicles weighing up to 600 kN (60 t)

### ➤ On the job



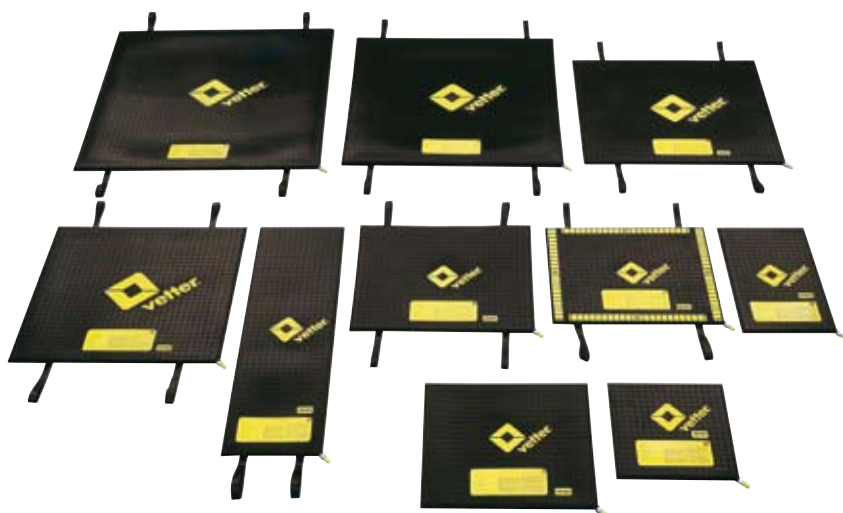


# ▶ Leading emergency pneumatics for initial lifting.

## ▶ VETTER - Emergency Pneumatics

Our sister company, Vetter, offers worldwide leading emergency pneumatics. Vetter lifting bags are very useful accessories for rail road accidents. With their low insertion height of just 25 mm in certain cases, they are perfectly suited for first lifts. The aramide-reinforced bags are enormously powerful and are capable to lift even large loads: their lifting force ranges from 31 to 68 tonnes per bag. The low weight enables you to respond quickly and flexibly in an emergency.

## ▶ On the job



You will find more rescue products in the general catalogue "Vetter Rescue Products" and at [www.vetter.de](http://www.vetter.de)

Mini lifting bags	V31	V40	V54	V68
Max. lifting force	31,400 kg	39,600 kg	54,400 kg	67,700 kg
Max. extension height	37.0 cm	40.2 cm	47.8 cm	52.0 cm
Dimensions	65 x 69 cm	78 x 69 cm	86 x 86 cm	95 x 95 cm
Insertion height	2.5 cm	2.5 cm	2.5 cm	2.5 cm
Nominal content	57.5 l	75.0 l	124.2 l	161.9 l
Air requirement at 8 bar	517.5 l	675.0 l	1,117.8 l	1,457.1 l
Max. working pressure	8 bar	8 bar	8 bar	8 bar
Test pressure	12 bar	12 bar	12 bar	12 bar
Burst pressure	38.0 bar	38.0 bar	36.0 bar	32.5 bar
Weight	9.5 kg	11.8 kg	17.2 kg	21.9 kg

### Double controller 8 bar

Plastic housing, deadman safety system

Inflation hose, 5 m, yellow

Inflation hose, 10 m, red

Inflation hose, 10 m, yellow

Pressure reducer 200/300 bar with manual connection



High-pressure compressors can be delivered with gasoline or electric motors.

# **LUKAS** because you never get a second chance.

## **LUKAS** rescue tools

The world's leading rescue tools from **LUKAS** are very easy to use and deliver very high performance. Their superior performance makes all the difference when you really need it. On the job. Choosing the right tool is vital when accidents occur with rail vehicles, so that you can create rescue openings and open jammed doors, safely and reliably.



### **For optimal cutting: Cutters**

#### **S 700 - ALPHA CUTTER, S510, S311**

This innovative and superior cutter gives you maximum power reserves. Also S 510 and its lightweight counterpart, the S 311, are characterised by a well-balanced set of features that are specially tailored to metal constructions.

### **On the job**



Cutter	S700	S510	S311
<b>Cutting class acc. EN 13204</b>	BC 182H-21	BC 180H-19	BC 150G-14
<b>Blade opening</b>	185 mm	182 mm	150 mm
<b>Oil volume</b>	325 cm <sup>3</sup>	150 cm <sup>3</sup>	98 cm <sup>3</sup>
<b>Dimensions: l x w x h</b>	778 x 300 x 258 mm	772 x 245 x 165 mm	705 x 201 x 163 mm
<b>Weight</b>	20.8 kg	19.1 kg	13.9 kg

## For spreading, squeezing and peeling.

### SP 510 - POWERFUL, WIDE-OPENING SPREADER

The great power, enormous spreading distance and intuitive handling of this tool enable you to perform fast and secure rescue work on heavy rail vehicles.

### SP 310 - THE VERSATILE TOP SPREADER

It offers a perfect mix of power, weight, opening width and handling. Its flexibility has impressed rescue organisations and railway companies throughout the world.



Spreader	SP310	SP510
Spreading force	46 to 256 kN	62 to 230 kN
Spreading distance	720 mm	800 mm
Squeezing force	122 kN	70.4 kN
Pulling distance up to	604 mm	665 mm
Pulling force up to	51 kN	55 kN
Oil volume	243 cm <sup>3</sup>	425 cm <sup>3</sup>
Dimensions: l x w x h	790 x 400 x 190 mm	900 x 380 x 215 mm
Weight	19.9 kg	25 kg



## Covering large distances: Rescue rams

The two-stage telescopic rams R 420 and R 424 are used to push material blocking your path out of the way. For example to widen rescue openings or to support lifting work.

Telescopic rescue ram	R 420	R 424
Total stroke	575 mm	875 mm
Stroke/lifting force, piston 1	295 mm / 266 kN	445 mm / 266 kN
Stroke/lifting force, piston 2	280 mm / 133 kN	430 mm / 133 kN
Extended length	1,055 mm	1,500 mm
Oil volume	1,410 cm <sup>3</sup>	2,139 cm <sup>3</sup>
Dimensions: l x w x h	480 x 112 x 211 mm	625 x 112 x 211 mm
Weight	16.8 kg	21.0 kg

## High performance power units

### P 650 - RESCUE WITH TURBO FUNCTION

Rescue at twice the speed! Every second counts in rescues, which is why **LUKAS** has provided its P 650 series with a turbo function. With a one hand movement you can double the oil flow to one tool in order to work twice as fast. Available with gasoline or electric motors, for simultaneous use of two rescue tools.



#### SIMO Power (2 tools)

Motor:	4-stroke gasoline motor or electric motor 230 V/50 Hz,
Oil output rate: low pressure/high pressure	Gasoline: 2 x 2.8 l/min - 2 x 0.8 l/min / Electric: 2 x 2.2 l/min - 2 x 0.7 l/min
Turbo oil output rate: low pressure/high pressure	Gasoline: 1 x 5.6 l/min - 1 x 1.6 l/min / Electric: 1 x 4.4 l/min - 1 x 1.3 l/min
Usable oil quantity	4.5 – 5.0 l
Dimensions: l x w x h	P650 SG 525 x 440 x 452 mm / P650 SE 525 x 440 x 452 mm
Weight:	P650 SG 54 kg / P650 SE 49 kg

### P 620 OG - FOR MOBILE USE

This lightweight power units prove their advantages in rough terrain. The low weight allows you to respond flexibly and to switch locations quickly.

#### P 620 OG

4-stroke gasoline motor	1.3 kW
Oil output rate: low pressure:	2.45 l/min
Oil output rate: high pressure:	0.5 l/min
Capacity of oil reservoir:	2 l
Usable oil quantity:	1.6 l
Dimensions: l x w x h	360 x 300 x 390 mm
Weight:	15 kg







## ➤ Discover the liberty with eDRAULIC!

With the help of advanced electrohydraulics, **LUKAS** engineers have managed to progress from a large and heavy complete set to a compact and powerful one. With no loss of performance! They work with any 230V/115V power plug or powerful lithium-Ion batteries for maximum flexibility.

### Cutter 700 E

Blade opening	185 mm
Dimensions: l x w x h	918 x 300 x 290 mm
Weight	24 kg

### Spreader SP 300 E

Spreading force	34-112 kN
Spreading distance	605 mm
Pulling force up to	23 kN
Pulling distance	495 mm
Dimensions: l x w x h	895 x 355 x 290 mm
Weight	20.9 kg

### Rescue ram R 411 E

Piston stroke	360 mm
Lifting force	103 kN
Retracted length	545 mm
Extended length	905 mm
Extended length with extension	1,205 mm
Dimensions: l x w x h	545 x 150 x 265 mm
Weight	17.7 kg

## ➤ Advantages

- + Liberty of performing optimal rescues
- + Liberty of working without power units and hoses
- + Liberty of operating independently in battery mode



You will find more rescue products in the general catalogue "**LUKAS Rescue Tools**" and at [www.lukas.com](http://www.lukas.com)

## ► Examples of application.





## Your strong partner and hydraulics expert



### **Long-lasting at your side.**

Our products are characterised by a long service life and require little maintenance. You can rely on **LUKAS** products to provide strong support in all situations.

### **Our experience - your benefit.**

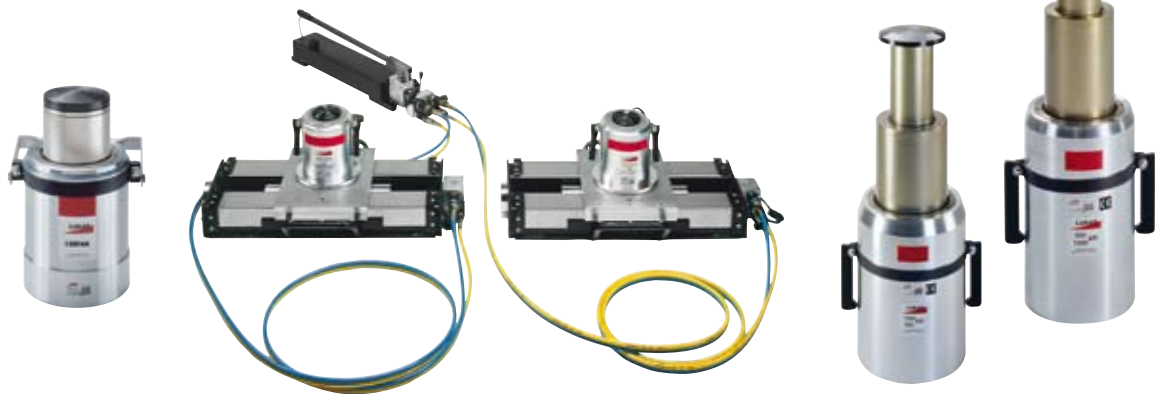
Since 1948, **LUKAS** has been manufacturing hydraulic products for a wide range of applications. You benefit from this experience to the present day – thanks to sophisticated products and regular innovations that make your work easier.

### **Optimum support worldwide.**

Our worldwide dealer and service network means that there is always a **LUKAS** partner near you. The **LUKAS** team assists our partners at any time, guaranteeing you the best possible advice and support.

### **Our commitment – Made in Germany.**

**LUKAS** produces its equipment in Germany. That does not just mean final assembly, it means full manufacture. A highly motivated team in Erlangen, is passionate about producing tools for those who face challenges in the field of rerailing and rescue.



## Part of the international IDEX Corporation

LUKAS Hydraulik GmbH is part of the international IDEX Corporation which invests in successful medium-sized companies in highly specialised markets worldwide. All companies which belong to the group have two things in common: strong technical orientation and innovative strength.

As our customer, you will benefit from our international practical knowledge and the intensive transfer of skills and know-how within the corporate group which contributes to the development of sophisticated and high-performing products. Make them your first choice – because you never get a second chance!



Experience the technology that keeps railways running smoothly.

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**Arrange an appointment for consultation.**

**LUKAS Hydraulik GmbH**

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