

LUKAS

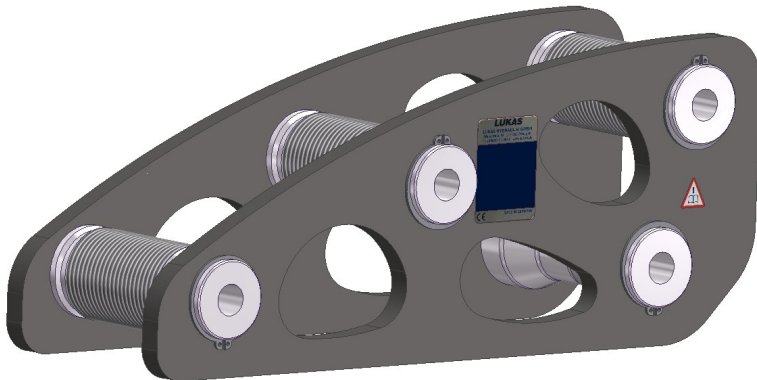
Because you never get a second chance

Operating Instructions - Rescue Equipment

CE



RAM Support LRS-T



174190085 EN
Edition 08.2017

(translation of the original operating instructions)




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1. Hazard classes

We distinguish between various categories of safety instructions. The table below gives you an overview of the assignment of symbols (pictograms) and key words to the specific hazard and possible consequences.

Pictogram	Damage / injury to	Key word	Definition	Consequences
	human	DANGER!	Immediate danger	Death or major injury
		WARNING!	Potentially dangerous situation	Potential death or major injury
		CAUTION!	Less dangerous situation	Minor or slight injury
	device	CAUTION!	Danger of damage to device / environment	Damage to the equipment, damage to the environment, damage to surrounding materials
	-	NOTE	Advice for application and other important / useful information and advice	No injury / damage to persons / environment / equipment



Wear helmet with face protection



Wear safety gloves



Wear safety shoes



Proper recycling



Observe principles of environmental protection



Read and observe operating instructions

2. Product safety

LUKAS products are developed and manufactured in order to guarantee the best performance and quality when used properly.

Operator safety is the most important aspect of the product design. Moreover, the operating instructions are intended to ensure LUKAS products are used safely.

The generally applicable legal and other binding regulations pertaining to the prevention of accidents and protection of the environment apply and are to be complied with in addition to the operating instructions.

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

We would like to point out to all users that they should read the operating instructions carefully before using the equipment and comply with the instructions there without restriction.

We further recommend that a qualified instructor train you in the use of the product.



WARNING / CAUTION!

The operating instructions for the additional equipment and accessories must also be observed!
























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



WARNING / CAUTION!

Ensure that the equipment and accessories used are suitable for the maximum load of the RAM Support!

	<p>Please ensure that no body parts or clothing become trapped between the visibly moving parts or between the working implement and RAM Support.</p>	<p>It is prohibited to work under load if this load is lifted exclusively by hydraulic equipment. If this work is absolutely imperative, additional mechanical supports must be used.</p>	
	<p>Wear protective clothing, safety helmet with visor, safety shoes and protective gloves</p>	<p>Inspect the equipment before and after use for visible defects or damage.</p>	

 	<p>The department responsible is to be informed immediately of any changes (including to the operating behaviour). If necessary, the equipment is to be shut down immediately and secured.</p>	<p>Do not carry out any changes (additions or conversions) to the equipment without obtaining the prior approval of LUKAS.</p>	
 	<p>Comply with all the instructions regarding safety and danger on the equipment and in the operating instructions.</p>	<p>All the instructions regarding safety and danger on the equipment are to be kept complete and in a legible condition.</p>	 
 	<p>Any method of operation which impairs safety and/or stability of the equipment is prohibited.</p>	<p>Comply with all specified dates or dates specified in the operating instructions pertaining to regular checks / inspections of the equipment.</p>	
 	<p>Safety devices may never be deactivated.</p>	<p>The maximum operating load marked on the RAM Support must not be exceeded.</p>	 
	<p>Before and during operation of the device, make sure that no persons are placed at risk by operation of the equipment.</p>	<p>Only genuine LUKAS accessories and spare parts may be used for repairs.</p>	
		<p>During all work and transport operations involving the equipment, take care not to trip and become caught in hose loops.</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 with the potential consequence of spark formation is to be avoided when handling the equipment.</p>	
	<p>Ensure adequate lighting when you are working.</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 extreme external temperatures and that the equipment is not damaged in any way. Please note that the equipment can also heat up over a long period of use.</p>	



Always keep these operating instructions within reach where the equipment is used.

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 / DANGER / CAUTION!

The equipment **is to be used exclusively** for the **purpose stated in the operating instructions (see chapter "Proper use")**. Any form of use beyond this is **not considered proper use**. The manufacturer / supplier is not liable for any damages resulting from improper use. The user bears sole responsibility for such use.

Observance of the operating instructions and compliance with the inspection and maintenance conditions are covered by the definition of proper use.



Never work when you are overtired or intoxicated.

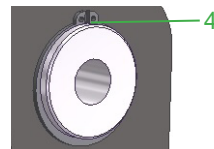
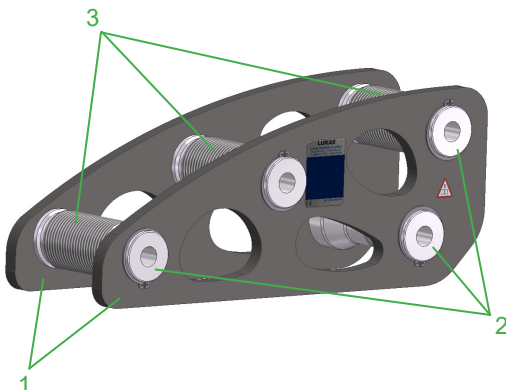


3. Intended use

The RAM Support is designed for the purpose of supporting LUKAS rescue rams. They are designed to provide a more stable and secure support surface on vehicle bodies while rescuing persons from a vehicle that has been involved in an accident. The primary prerequisite is that the RAM Support with the support pins rests on the sturdy and secure parts of the vehicle body. The side sections only serve as a guide.

The use of the RAM Support can additionally shorten the idle space for the pressing operation and therefore the required piston stroke. The rescue ram is then supported on the LRS-T instead of directly against a suitable part of the vehicle body.

4. RAM Support components



- 1 Side section
- 2 Support pin (vehicle body)
- 3 Support pin (rescue ram)
- 4 Retaining rings

5. Operation

The LRS-T RAM Support requires 2 solid support surfaces on the body of the accident vehicle that are perpendicular to each other, e.g. sill/B-pillar.



Particular care must be taken when installing the bracket to ensure that the support pins (vehicle body) rest directly on the support surfaces. The side sections are designed only to prevent the bracket slipping sideways and should not rest on the support surfaces otherwise they may be damaged when the RAM Support is subjected to maximum load.

The double taper design of the support pins (vehicle body) facilitates stable centring of the RAM Support.

Fit the rescue ram together with its foot claw centred on the support pin (rescue ram). To prevent slipping, make sure that the support pin is always located between two claw tips.



CAUTION!

The tips of the claw should never press directly against the support pin as this would otherwise make the support system (rescue ram - RAM Support - vehicle body) unstable or damage the support pin!

The foot claw must always rest fully against the support pin (rescue ram) to prevent the RAM Support being pressed in axial direction of the support pin.



WARNING / DANGER / CAUTION!

The RAM Support being pushed sideways poses a high risk of injury not only to the operator of the rescue ram but also to other persons involved.



The claw that extends with the piston of the rescue ram must engage in the part of the vehicle body opposite the bracket. Also here make sure that the claw cannot slip or the RAM Support cannot be pressed away sideways.



The following figures show the various installation positions of the RAM Support LRS-T in a vehicle. Both positioning and travel of the rescue rams used can be optimally adapted to the situation.





WARNING / DANGER / CAUTION!



Therefore make sure the RAM Support is seated correctly¹⁾ not only before positioning the rescue ram but also while forcing the body apart with the ram. Always make sure that parts of your body or items of clothing are never trapped between the RAM Support and vehicle body or RAM Support and rescue ram as this will always result in serious injuries.

¹⁾ **"seated correctly" means:**

- At least 2 support pins must rest against a stable and sound part of the vehicle body.
- The side sections only serve as a guide.
- The foot claw of the rescue ram must rest fully on the support pin.
- The RAM Support must not be pushed sideways.

6. Maintenance and service

In view of the high load to which the RAM Support is subjected, a visual inspection must be carried out after each use or at least once per year.



CAUTION!

Clean off any dirt before checking the equipment.
Do not use cleaning agents with a pH-value outside the range from 5 to 8 to clean the equipment!



WARNING / DANGER / CAUTION!

In order to carry out maintenance and repair work, tools appropriate for the job and personal protection equipment obligatory



Visual inspection:

- The side sections must not be twisted with respect to each other.
- The side sections must not be bent, cracked or dented.
- The pins must not be bent or damaged (notches less than 1 mm deep do not impair operation and safety).
- The retaining rings of RAM Support must be seated properly in its housing groove.
- The RAM Support and the retaining rings must show no signs of major corrosion.
- All signs on the RAM Support must be in place and legible.



CAUTION!

Use of the RAM Support is no longer permitted if it does not meet all criteria of the visual inspection!



NOTE ON CARE:

The exterior of the device should be cleaned from time to time to protect it from corrosion. An anti-corrosion agent is to be applied to the metal surfaces.

Should you have any questions regarding the care and maintenance of the RAM Support please contact your authorised LUKAS dealer or LUKAS Customer Service directly. The address for the LUKAS Customer Service department is:

LUKAS Hydraulik GmbH

Weinstraße 39, D-91058 Erlangen

Tel.: (+49) 09131 / 698 - 348

Fax.: (+49) 09131 / 698 - 353

7. Technical data

As all the values are subject to tolerances, there can be minor differences between the data of your devices and the data in the following tables!

Device designation		LRS-T
Article number		81-68-44
Dimensions L x W x H	[mm]	470 x 167 x 191
	[in.]	18.5 x 6.6 x 7.5
Nominal load	[kN]	269
	[lbf.]	60,474
Weight	[kg]	7,7
	[lbs.]	17.0



NOTE:

Please contact LUKAS directly if you require further data on your device.

8. Notes



Please dispose all packaging materials and dismantled parts properly.

LUKAS Hydraulik GmbH

A Unit of IDEX Corporation

Weinstraße 39, D-91058 Erlangen

Tel.: (+49) 0 91 31 / 698 - 0

Fax.: (+49) 0 91 31 / 698 - 394

e-mail: lukas.info@idexcorp.com

www.lukas.com

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