



LUFTM

FIRE-FIGHTER

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RECHNER'S GES.M.B.H
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LUF 60[®]

Mobile-Firefighting-supporting-Machine

Range of applications

- Road- and Railtunnels
- Mass- Transit Rail System
- Railway Stations
- Parking Houses
- Production Plants
- Petrol Stations
- Airports
- Pedestrian Tunnels
- Closed Compartments -
or Buildings



robust 2-Stage Waterpump Bronze

capacity 100 HP,
pressure increase 145 psi (10 bar)
at a flow-rate of 635 gallon (2.400 lt.)



Additional connection in the centre of the conical fan tube for:

Medium foam tube:

- foam range appr. 35 m
- flow rate up to 800 lt./min.

Heavy foam tube:

- foam range appr. 70 m
- flow rate up to 3000 lt./min.

Monitor nozzle:

- flow rate continuous adjustable from 400—3000 lt./min
- jet and spray streaml
- range appr. 80 m



3-Point Hydraulic

Mounted at the frontside
of the LUF 60[®]

Lifting force 600 kg



Carrier box mounted onto the 3-Point-Hydraulic

lift, lower and tipp → with remote control
or manual

Workload appr. 400 kg

... compact - flexible - most powerfull at the inside attack

Additional Fan

- 47 HP (35 kW)
- 60.000 m³/h effective
- Parallel operation with the LUF 60[®]
150.000 m³/h effective
- Position independence
 - suction fan
 - positive pressure fan



Cable Winch

Tractive force 3.000 kg
Cable length 30 mtr.



HW-Pump Adapter (PTO)

with the HW-Pump Adapter up to 6 HW-Pump units are driven and oberatet simultaneously a total performance up to 18.000 lt/min. is possible

LUF 60[®]

The Mobile Firefighting Supporting Machine LUF 60[®] does provide optimum performance and economy at the same time through operating efficiency and application of Rechner's own high technology engineering and modular concept.

The LUF60, a wireless remote controlled mobile firefighting support unit, clears the path for advancement of up to a distance of 300 m by incorporating a high capacity positive pressure ventilator and a "water beam" fog. This combination clears away smoke, heat, toxic gases and reduces the intensity of the fire, allowing fire-fighters and rescue teams to follow safely. Using state of the art control elements ensure easy handling and high precision operation.

As a high performance machine it is highly flexible and easy to service. The very short time it takes for the LUF 60[®] to control a tunnel fire reflects in the minimal damage to the tunnel structure itself and its associated infrastructure.

The diesel powered LUF 60[®] is a rugged machine that can withstand the rigors of severe operating conditions and confines spaces.

The radio controlled unit has additional back-up manual controls in the event of a power supply failure. High mobility as well as flexibility is guaranteed by a crawler track system, which enable it to go up and down stairways as steep as 30° and is easy capable of "bulldozing" a normal family car out of the way.

Applications in a variety of situations, include, but are not limited to: road, rail and subway tunnels, aircraft hangers, chemical, industrial and power plants, warehouses and commercial buildings.

The Mobile Firefighting Supporting Machine LUF 60[®] - state of art firefighting apparatus - offers safe working conditions for fire-fighters and rescue-teams.



| Technical Data LUF 60® | |
|--------------------------------------|---|
| Length: | 2.330 (mm) |
| Width: | 1.350 (mm) |
| Height (Headpiece in park position) | 2.000 (mm) |
| Height (Headpiece in upper position) | 2.500 (mm) |
| Self weight: | 2.200 (kg) |
| Diesel-Engine: | John Deere 140 PS (104 kW) 4-cylinder, inline, water-cooled |
| Diesel fuel tank: | 60 Liter |
| Hydraulic-oil tank: | 80 Liter |
| Travelling speed: | 0—6 km/h |
| Water pump: | 2-stage, 2.400 lt/min. at 10 bar or 1000 lt/min at 15 bar, Capacity 100 HP |
| Water Canon: | 360 nozzles, 15—20 bar, 0—40° hydr. operate elevation adjustment |
| Power Ventilation: | 35 kW, 90.000 m ³ /h, 165 km/h |
| Water Inlet: | 3 x B-Storz with non return valve and prefilter 6 mm |
| Filter system: | 100 mic, stainless filter |
| High pressure inductor: | PN 40 |
| Working light: | 2 x 300 W, Xenon HD, |
| Stairway and ramp climbing: | up to 30° |
| Remote Control: | ≤ 300 m |



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Hydraulic mini crane

Hydraulic forklift



LUF 60[®]

MOBILE FIREFIGHTING SUPPORT UNIT



Technical Data— manual hydraulic operated mini crane

- Slewing angle: 370°
- Min. radius: 54 cm [1'77"]
- Max. outreach: 2,47 m [8'1"]
above quay at minimum radius 3,40 m [11'15"]
below quay 1,50 m [4'92"]
- Lifting capacity: 500 kg [1102 lbs] at 0,98 m [3'22"]
300 kg [661 lbs] at 1,70 m [5'58"]
200 kg [440 lbs] at 2,47 m [8'1"]
- Selfweight: 98 kg [216 lbs] easy to mount on or take off the LUF 60 for 2 Persons

Technical Data— hydraulic operated forklift

- Mountet onto the 3-point hydraulic of the LUF 60
- Lift, lower and tipp → maual or with remote conrol
- Lifting capacity: 400 kg [1320 lbs]

LUF 60[®] TRANSPORT TRAILER



LUF 60[®] SPECIALS ▶ Additional Ventilator ▶ Rail-Kit ▶ Floodwater pump-package ▶ Transport trailer ▶ Transport carriers

| Technical Data LUF 60® - Trailer | |
|----------------------------------|------------|
| Platform Length | 2.500 mm |
| OAL | 4.050 mm |
| Platform Width | 1.500 mm |
| OAW | 2.040 mm |
| Platform Height | 450 mm |
| Total Height | 1.120 mm |
| Selfweight | 550 kg |
| Gross Weight total | 3.000 kg |
| Payload capacity | 2.450 kg |
| Load Support | 150 kg |
| Tire Size | 195/50 B10 |
| Axle Quantity | 2 |
| Axle load | 1.500 kg |
| Wheel load | 750 kg |

The LUF 60® - Trailer is a most popular LUF 60® and equipment transport trailer. A combination of load carrying ability, specification and performance that is hard to fault has ensured continued success. The key to the immediate appeal of the LUF 60® - Trailer is the easy loading operations, its low center of gravity and every aspect of unique design and execution creates a trailer of reliable quality.

| Brief Description of Trailer/Content of delivery | |
|--|---|
| Chassis | Steel welded and maintenance free chassis, complete hot dip-galvanised, the entire chassis is upgraded for increased durability and strength. |
| Trailer Tongue | Overrun brake, single person height adjustment facility, smooth horizontal hand brake lever action (parking brake), grab handle to aid manoeuvring of the trailer when hitching or unhitching to or from the towing vehicle, HD jockey wheel fully height adjustable and locking mechanism, permitted total weight of trailer tongue C+S 2.500 kg up to 3.000 kg. |
| Trailer Coupling | HD straight tongue coupler (ball type) with safety latch or alternatively HD EEC towing eye coupling (see foto). |
| Loading platform | ramp free loading operation featuring full width access, complete hot dip-galvanised, four integrated multiple strapping points, six additional ring-eyed strapping points on the platform chassis, locking bolt and two locking clamps for loading platform. |
| Axles | 2 pc. swing axles with brakes, load capacity each axle = 1.500 kg. |
| Tyres | 4 pc. 195/50 B10, 1 pc. spare wheel / tyre 195/50 B10 mounted on bracket underneath loading platform. |
| Brakes | four wheel, automatic reverse, EEC type approved mechanical braking system, 2 pc. wheel chocks. |
| Lighting system | well protected, comprehensive EEC compliant lighting system, front sides and rear. |
| Identification plate | single-line, 2 pc. ID-plate lights. |

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LUF 60[®] News



LUF 60[®] Rail-drive-system

With the Rail-drive-system the LUF 60[®] is also a high value and powerful rail vehicle, it makes the LUF 60[®] flexible on ground and rails.

Its range of applications and customer benefit are therefore once again increased.



On and off tracking

..... is quick and ease, a rail crossing is required to on-rail the LUF 60[®].

The two axes are mounted — off-tracks — directly to the LUF 60, with 3 bolts on the front side (3-point-hydraulic system) and 4 bolts on the back side of the machine. At this stadium the axes are lifted up and the LUF 60[®] drives with its rubber-crawlers up to the track and gets into driving-position. Then the axes are lowered onto the track and the LUF 60 is ready to drive on the railway-system. It is operated with radio remote control. A trailer, for transporting people or equipment, can also be coupled to the machine.

Technical data Rail-drive-system (Optional device)

| | |
|--------------------------|---|
| Ground clearance: | 5,5" |
| Weight: | 264 lbs / axle |
| Speed: | 25 MPH (max.) |
| Power: | with LUF 60 operation - hydraulic drive (quick connecting couplings for connection to the LUF 60 [®]) |
| Brakes: | drum brakes on each axle for parking driving brake with hydraulic motor (1 Axle) |
| Wheel profile (standard) | UIC-ORE (or local standard) |
| Axes: | lift and lower with LUF 60 [®] hydraulic-system |

LUF 60® RAIL-KIT OPERATION



LUF 60® with Rail-Kit

The **Rail-Kit™** is a modular system which can be assembled on site within minutes and driven on a railway-system as required. The **Rail-Kit™** in combination with the mobile firefighting supporting machine LUF 60® is an ideal package for operational crews in railway- or subway tunnel systems. The **Rail-Kit™** can be driven either by remote control or manual control devices installed directly on the LUF 60® unit. The maximum designed speed under full load is up to 40 km/h. The **Rail-Kit™** can be used as a main carrier of the LUF 60®, transportation unit for fire-fighting- and rescue materials or as shuttle unit to rescue people.

LUF 60® SPECIALS ▶ Additional Ventilator ▶ Rail-Kit ▶ Floodwater pump-package ▶ Transport trailer ▶ Transport carriers

| Technical data Rail-Kit (Optional device) for drive and control direct with LUF 60® operation | | | | |
|---|--|------------|-------------|-------------------|
| | Length (mm) | Width (mm) | Height (mm) | track width (mm)* |
| Frame forward | | 1.960 | 1.430 | 1.435 |
| Frame backward | | 1.960 | 1.430 | 1.435 |
| Side frame right side | 3.500 | | 760 | |
| Side frame left side | 3.500 | | 760 | |
| Carrier platform | 3.500 | 1.500 | | |
| Wheel profile (standard) | UIC-ORE | | | |
| Selfweight | 390 kg | | | |
| Payload capacity | 2.450 kg | | | |
| Max. speed | 40 km/h | | | |
| Height adjustment | carrier platform height adjustment 0 - 1,20 m | | | |
| Control | remote control or manual control devices as required | | | |
| * ...as built, dimensions and weight vary according required track width and wheel profile. | | | | |
| Drive with additional Power Pack (Optional device) | | | | |
| Manufacturer | Hatz-Diesel | | | |
| Type | 1B-30 | | | |
| Drive system | diesel-hydraulic drive | | | |
| Output power | 5,5 KW (7,5 HP) | | | |
| Diesel-fuel tank | 7,0 Liter | | | |
| Hydraulic-Oil tank | 12 Liter | | | |
| Controls | manual control devices | | | |
| Weight | 55 kg | | | |
| Transport Trailer for Rail-Kit (Optional device)* | | | | |
| Type | Rechner's Railkit Trailer | | | |
| Length total | 3.686 mm | | | |
| Width total | 1.888 mm | | | |
| Height total | 1.342 mm | | | |
| Selfweight appr. | appr. 100 kg | | | |
| Payload capacity | 750 kg | | | |
| Frame | complete hot dip-galvanised | | | |
| Axle | 1 pc. swing axle with brakes, load capacity 750 kg | | | |
| Tyres | 2 pc. 195/50 B10, 1 pc. spare wheel mounted on bracket | | | |
| Brake | two wheel mechanical brake, automatic reverse | | | |
| Trailer coupling | HD straight tongue coupler (ball type) with safety latch or alternatively HD EEC towing eye coupling | | | |
| Lighting system | well protected, comprehensive EEC compliant lighting system, front sides and rear. | | | |
| Jockey wheel | HD jockey wheel fully height adjustment | | | |
| Identification plate | single-line, 2 pc. ID-plate lights. | | | |
| * ...dimensions and weight vary according required track width and wheel profile of Rail-Kit | | | | |

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LUF 60® INTEGRAL PART OF THE SAFETY-CONCEPT IN TAUERN TUNNEL



LUF 60® SPECIALS ▶ Additional Ventilator ▶ Rail-Kit ▶ Floodwater pump-package ▶ Transport trailer ▶ Transport carriers

FIRST NEW GENERATION ÖBB FIREFIGHTING AND RESCUE-TRAIN STATIONED IN BÖCKSTEIN NEAR BAD GASTEIN/SALZBURG ON 8. APRIL 2005



The first out of total five ÖBB Firefighting and Rescue-train was handed over by **Dräger Safety Austria** to the Authorities of the **Austrian Railway ÖBB**. On a daily basis 150 trains are running through the 8 km long Tauern-tunnel, during each year approx. 175.000 passenger cars and trucks are transported inbetween county Salzburg and Corintia, each months 30.000 goods wagon and 1,4 Million tons goods are carried through the Tauern-tunnel. „People still remembering the sad pictures of the last catastrophe in Tauern-tunnel are aware, that this

technical wonder does mean a quantum transition with respect to safety, which will open up to firefighters new possibilities and means maximum protection to body and life“ – spoken by the lady referee for catastrophe and rescue organization.

In an emergency the complete Firefighting and rescue-train unit will be driven to the scenery. Inside the tunnel the rescue vehicle can be uncoupled from the firefighting vehicle and will act as a shuttle unit inbetween tunnel portal and place of incident as required to rescue people into a safe area. Meanwhile firefighters will continue firefighting operations, the firefighting vehicle does also provide a safe protected container either to give them a rest or to collect back-up equipment and other materials as required.

The complete investment for the High-tech container equipment is approx. 1,7 Million Euro, whereas for all five ÖBB Firefighting and Rescue-trains together costs were about 8,4 Million Euro. The other four train units will be taken into operation shortly at the following railway stations:

- ▶ Mallnitz-Obervellach / Corintia
- ▶ Spittal am Millstättersee / Corintia
- ▶ Bludenz / Vorarlberg
- ▶ Villach-Süd / Corintia

As part of the tunnel safety concept, and in case of an emergency firefighting will always start from both tunnel portals. A fix installed communication system in the tunnel does guaranty communication inbetween the forces (ÖBB specialists, Firefighters and Red-cross members) at both ends of the tunnel. In case of a power supply failure both Firefighting and rescue-train units are fully operational at least up to six hours. Additional helicopter landing places have been installed on each side of the Tauern-tunnel.

MOBILE FIREFIGHTING SUPPORTING MACHINE LUF 60®

As integral part of the safety concept of Tauern-tunnel and right at the tip of each Firefighting and rescue-train unit the **Mobile Firefighting Supporting Machine LUF 60®** is located.

The LUF 60® unit has been developed and manufactured by the Austrian based company **RECHNER'S Ges.m.b.H.** and can be driven onto or off the train unit via a special designed ramp system. The LUF 60® is remote controlled and for support to combat fires in the tunnel. This unique piece of equipment is mainly used to redirect smoke and burning gases respectively for cooling the environment and structural parts of the tunnel to allow firefighters to approach safely the source of fire.

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