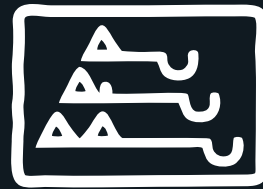


LION 5

Remote Controlled
Mine Clearing
Machine



ELZ GMBH
INFRASTRUCTURE



Reliable, Effective, Safe

The centre-piece of the LION is the clearing device with the milling rotor and multi graduated crushing chamber. The milling rotor is equipped with a multitude of carbide-tipped milling chisels and crushing tools. As a result a particle size of 0 – 30 mm is obtained.

Tests showed clearing success of 99.9 %

LION 5

Net Power (DIN)	510 HP (380 kW)
Drive	Hydrostatic
Operating Weight	37,000 kg
Length	7,500 mm
Width	max. 3,000 mm
Height	3,100 mm
Track	2,410 mm
max. Hill climbing	45°
max. Side incline	15°



Versatility

No matter whether the mines are hidden in the sand of a desert, in pathless hills or under pebbly forest roads or even underneath dense bushes, due to its power, its high end technology and its innovative concept, the LION 5 can manage all these conditions and delivers an excellent clearing result. If the mine is hidden under a rock, the LION crushes both, the rock and the mine. Smaller trees and bushes are no obstacle and in the dust of the desert the rotating clearing device penetrates deep into the ground. But the most advantageous point about the LION is, that danger for human beings is minimised at all times of operation.





LION 5

According to estimates, between 85 millions and 200 millions mines have been placed all over the world – and their number is still growing. The manual clearing of mines is as time-consuming as dangerous. The mine clearing device LION opens up new possibilities to mechanically clear terrain and roads from anti person mines in a safe and efficient way.

The LION 5 is an armoured, tracked vehicle equipped with a clearing device at its front.

The mine clearing machine is equipped with specific shock resistant electronics. All functions of the LION 5 are userfriendly controlled on a single control desk. Optionally, control commands can be transmitted via a 70-cm-band secure frequency. The operating range is 1.000 m, which guarantees a sufficient safety distance for the operator.

Depending on the customer's requirements, the clearing device can be assembled as part of a tank, such as a Leopard or a Tiger.



MERCEDES BENZ OM 502 LA

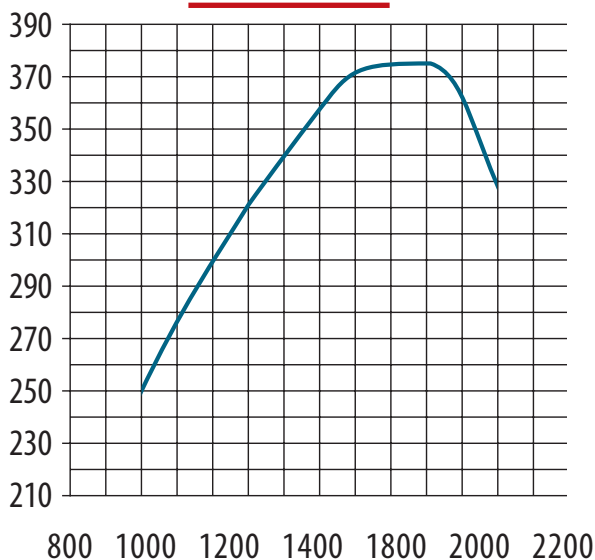
Cylinders	V8
Engine Displacement	15,930 ccm
Max. Engine Torque	2400 Nm
Average diesel consumption	35 l/h

V8 TURBOCHARGER WITH INTERCOOLER

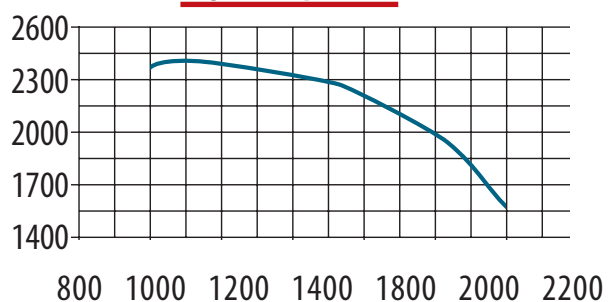
The V configuration of the OM 502 reduces the overall engine length, height and weight compared to an equivalent inline configuration. The Mercedes-Benz blue-tec® technology guarantees optimum energy allocation at paltry fuel consumption.

The filter system, lubrication and hydraulic fluids are optimized in order to meet the needs of hot, dusty and humid environmental conditions. Owing to its lower density hot air leads to lower engine performance. The turbocharger with intercooler improves the volumetric efficiency by increasing intake air charge density through isochoric cooling. The result is an ideal performance even in hot climates.

Performance (kW)



Engine Torque (Nm)



Revolutions per Minute (RPM)

LION 5

Engine

Mercedes Benz	OM 502 LA
Capacity according DIN	380 kW / 510 HP
Diesel-fuel tank	900 litres

Hydraulic-system

Working-hydraulic	Gear-pump – 57 cm ³ /U, 210 bar
Drive for ventilation	Gear-pump – 22 cm ³ /U, 210 bar
Pump-distributor-gear	Gear-pump – 6 cm ³ /U, 210 bar
Oil-cooler	Gear-pump – 11 cm ³ /U, 9 kW
Hydraulic-oil-tank	700 litres
Man. Pressure-release	(in case of tow off)

Clearing-aggregate

Diameter of Rotor	approx. 750 mm
Clearing Width	max. 3000 mm
Armament of Rotor	Carbide-tipped milling chisels and crushing tools
Crushing-chamber	Multi-setting crushing-edges, changeable
Drive	Hydrostatic
Revolutions of the Rotor	Progressively adjustable from 400 up to 700 RpM
Clearing depth	max. 400 mm, automatic depth-control
Clearing Speed	approx. 3 km/h

Steering system

Deliverable in both systems	Steered by manpower Remote-controlled
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Remote control

Transmitter	Integrated in the portable control desk
Action-radius	1000 m
Frequency	70 cm band secured frequency
Dimensions	265 x 200 x 150 mm
Weight	2 kg incl. accumulator
Accumulator	approx. 8 hrs operation



Mode of Operation

The centre-piece of the LION is the clearing device with the milling rotor and multi graduated crushing chamber. The material used for the clearing unit resists the primary and secondary effects of explosions of anti-persons mines or light anti-tank mines. The milling rotor is equipped with a multitude of carbide-tipped milling chisels and crushing tools. With a weight of 3 tons it crushes everything into pieces that gets beneath its teeth. It doesn't make any difference whether this is solid rock of any hardness, shrublike plants, demolition material, anti person mines or scrap munitions. As a result a particle size of 0 – 30 mm is obtained. TV cameras broadcast in real-time on a TF-LCD monitor the events taking place in front of or behind the machine. A separate radio link cares for the video transmission. Mines, hand grenades etc. either detonate when touched by the rotor or are taken up and are broken within the crushing chamber. The clearing dept goes up to 48 cm and is controlled automatically. After the use of the LION the treated surface is exempt of mines and larger stones and can be used for agricultural purposes right away. Equally cleared roads can be compacted and are readily usable.



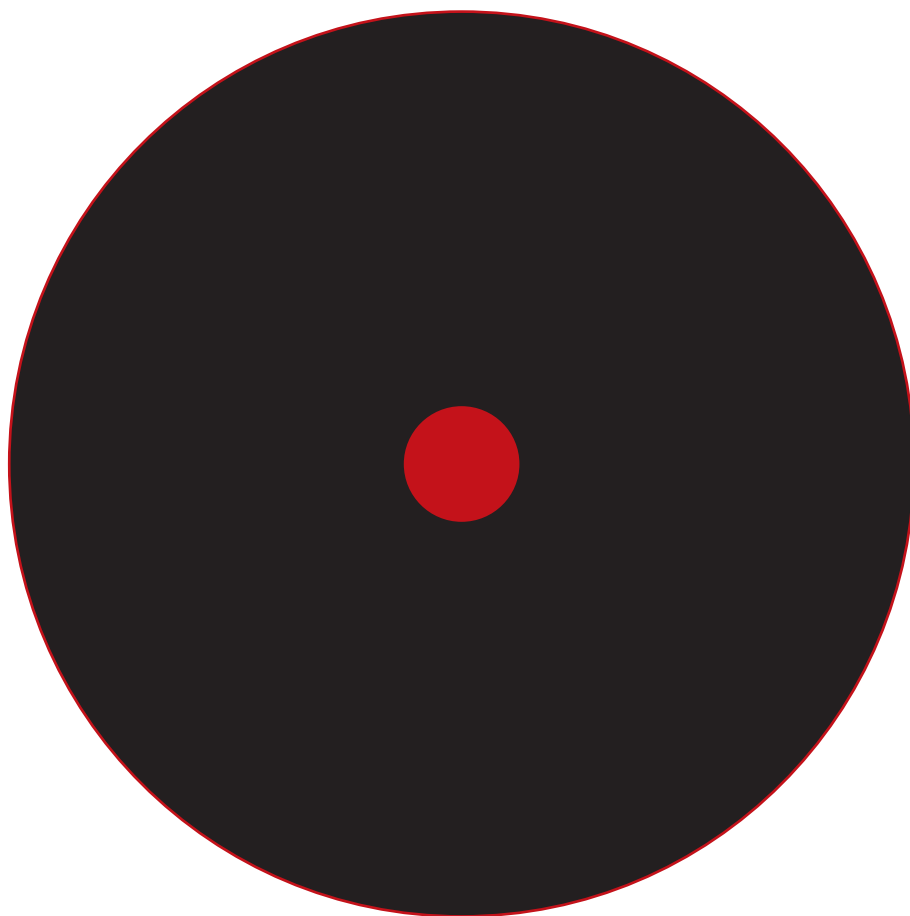
Transport

The LION 5 can be loaded on a standard flat-bed trailer. This makes transport easy and comfortable.

Optional Equipment

The ideal method of mine clearing always depends on the conditions under which the demining has to be done. It is one of the most valid arguments in favour of the LION 5 that training for the operators is not as sophisticated as for example for manual clearing. Still, under certain circumstances, it might be necessary to combine mechanical clearing with electronic detecting systems. In these cases, detection arrays can be mounted on the tracked vehicle, preserving the advantage, that no human life is endangered during detection. Equally a GPS mapping might be needed. These options will be designed in close cooperation with the customer.

Multimedia CD



Content:

LION_A4.pdf
LION.avi
oelz.vcf
Pictures-Folder

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