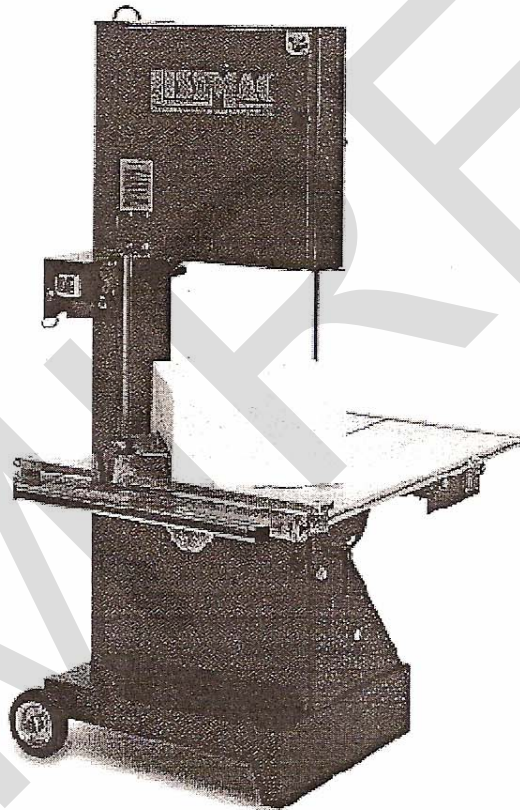


# User's Manual

## MBS-502

### Cellular Concrete Band Saw

This manual should be made available to your service personnel at all times to ensure correct and careful handling of the machine



# LISSMAC

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# OPERATING INSTRUCTIONS

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### 1. Safety at work

- a. The cellular concrete band saw is exclusively intended for cutting aerated cellular concrete. The cutting of brick-type material is possible only on limited conditions, as the structure of brick differs according to the manufacturer. Hard brick stones cause high wear of the saw blade and are therefore not recommended.  
The manufacturer/supplier is ***not*** responsible for any damage due to wrong use.
- b. Only use original saw blades as prescribed by the manufacturer.
- c. Prior to starting any cutting operation, the following routine checks must be carried out daily:
  - good working order of saw blade (never use cracked blades, ask for expert opinion, if required).
- d. The cellular concrete band saw is to be operated only with its protective gear provided in due form:
  - vertically adjustable saw blade protection
  - doors / saw blade wheel guard closed
  - residual current operated device fitted in distributor/feed line
- e. Make a point of avoiding any jamming of the saw blade.

***The manufacturer is not accountable for any individual changes which have been made to the machine without his knowledge and written consent!***

## 2. Handling and Operation

### a. Installation and transport

Ensure good footing of the machine at all ends and that all feet have firm contact to the ground. Level up any unevenness of the foundation by wedge until a firm position of the saw is achieved.

For displacement by crane, use jack ring provided. For relocation on a blanket, the saw is tilted on the two transportation wheels provided for this purpose.

The saw table is locked with a spring bolt (provided at right-hand side below saw table). Therefore, be careful to disengage the spring bolt prior to starting the saw to allow the saw table to move.

### b. Initial operation

Loosen the table locking screw and fold down the saw table to a horizontal position. Be sure to fasten the table locking screw tightly.

The saw works with either 230 V AC or 400 V three-phase current. Please read the rating plate for power requirements.

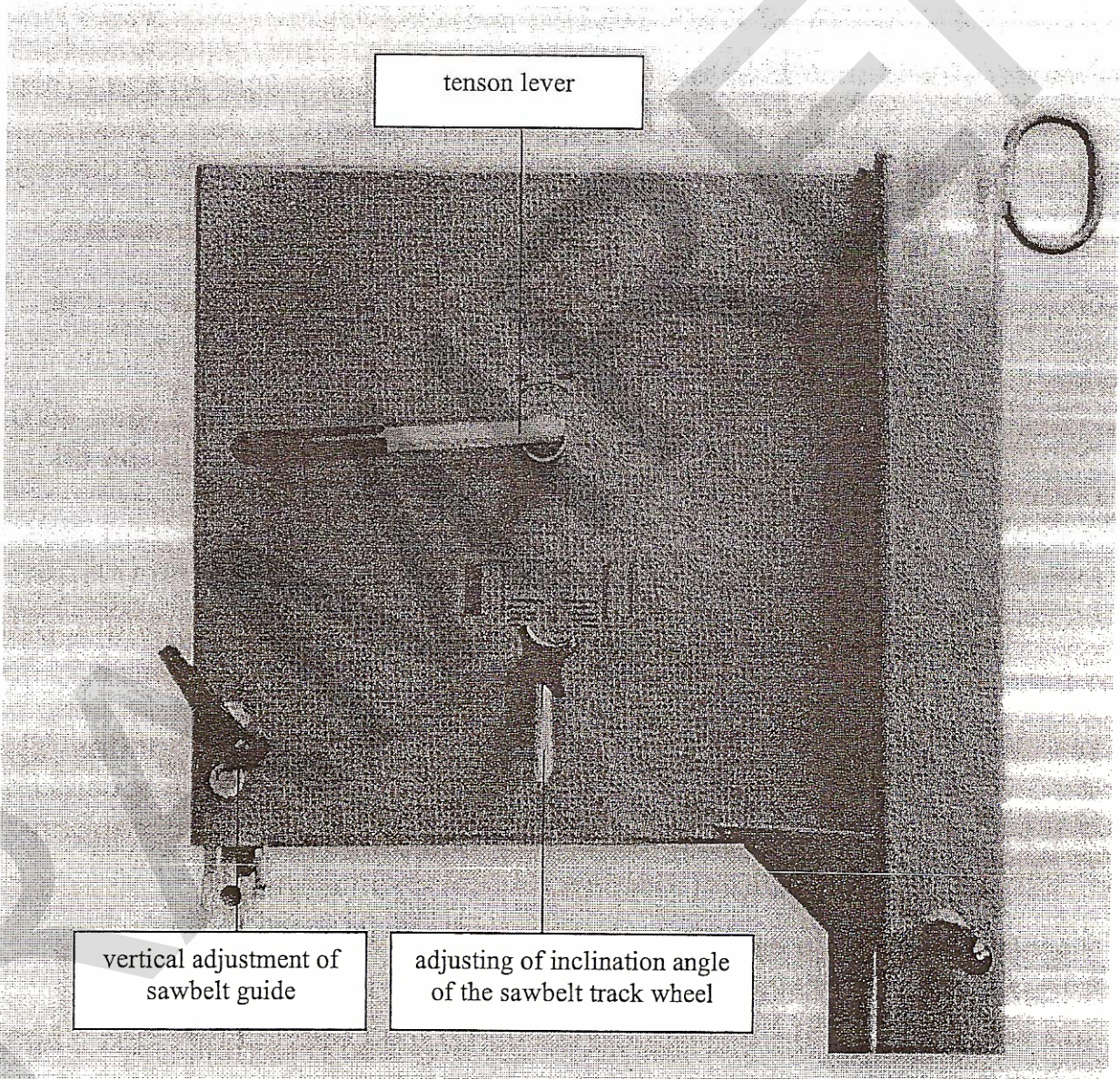
The saw model equipped with a 400 V motor is susceptible to a wrong sense of rotation of the saw belt. **Observe the right moving sense of the belt!** Change poles in plug of "ON/OFF" switch (phase inverter) with a screw driver.

Tension saw belt with tension lever. Release tension of saw belt when the machine is not in use (at night and during week-ends). You increase the service life of the saw belt!

***Make it a rule to use the vertically adjustable saw belt protection hood and adjust it to the brick height required!***

Make a point of equipping the distributor for the power supply feed lines with a residual current operated device.

For correct adjustment of the inclination angle of the upper pulley, use the star grip provided at the back of the upper saw-roll box. If the saw-belt, when at no load, runs into the saw-belt guide at 1 mm spacing to the counter-pressure rolls, you can be sure to have the correct inclination angle.



### c. Service life of the saw belt

Some decisive factors for the service life of a saw belt:

- the pressure which is put on the saw belt by the operating staff. Excessive pressure on the saw arm is the cause for untrue cutting and distortion of the belt and increases the risk of hair cracks or even breaking of the saw belt.
- the type of stone / brick being processed
- resharpening of the belt in good time
- unnecessary idle running of the saw; **any running at no load is more harmful to the belt than actual sawing**. The machine shuts down automatically after every cutting process.
- if the saw belt is running too tightly against the guide rolls, the belt is exposed to unnecessary wear and tear. This also applies to the saw-belt guide rolls which then suffer from early wear.

### d. Saw-belt change

Open the doors covering the saw-belt rolls and unlock the hinged pattern handle provided at the saw table by pulling out one of the two pins. Shift the clamping lever (OPEN) to lay bare the saw belt and take it out.

To fix the new belt, proceed in inverted order.

Please bestow great care on inserting the saw belt properly into the guides. Also, do not forget to check the sense of the saw teeth (**saw teeth must point downward!**).

After a short run-in of the machine, check whether the saw belt is pressing too much against the guide rolls. It should have only light contact with the counter-pressure rolls or run at approx. 1 mm spacing.

The play of the saw belt may be corrected by adjusting the inclination angle of the upper pulley. - See point 2.b. - Initial operation.

## e. Swiveling saw-bench - operation

### Pos. 1 Horizontal position

for cutting aerated concrete and similar stones (full brick).

Release bench brake (24 wrench) until any braking effect is eliminated.

### Pos. 2 Slight inclination

for cutting aerated stone (porous brick and similar material).

The saw bench can be lifted by loosening the fixing screw (below bench) and locked in the position desired.

When in this position, the bench brake is required to keep the saw bench from slipping away.

### Pos. 3 Extremely inclined position (for transportation)

For transportation in general and through door openings.

Handling as described under 2. For this purpose, lift bench up to upper tap hole.

***ATTENTION Prior to lifting the saw bench, the latter must be locked using the spring bolt provided!***

## 3. Noise emitted

	aerated concrete
sound level measured at working place (load)	84 dB(A)
sound level measured at source (machine)	98 dB

#### 4. MBS-502 - Technical Specifications

	230 V AC	400 V three-phase c.	110 V
Motor output	1.5 kW	0.75 kW	1.5 kW
Motor speed	1.330 r.p.m.	1.530 r.p.m.	1596 r.p.m.
Gear speed	230 r.p.m.	230 r.p.m.	276 r.p.m.
Power consumption	10 A	2.1 A	15 A
Type of protection	IP 54/55	IP 54/55	IP 54/55

Cutting height	400 mm
Cutting length	700 mm
Cutting width / beam	490 mm
Saw-roll diameter	500 mm
Saw table feed	manual
Saw belt running length	3.520 mm/ -0/ +5
Transport	wheels / jack ring

Width	1.000 mm
Length	800 mm
Height	1.720 mm
Total weight	160 kg

## 5. Service and Maintenance

	daily	weekly.	monthly	as required
Check saw belt	X			
Sharpen saw belt				X
Release saw-belt tension	X after use			
Remove sawdust from saw-roll box	X			
① Saw -table guide / lubrication nipple		X		
① Automatic saw-belt tension device / lubrication nipple		X		
② Automatic saw-belt tension device / oil-hole provided at tension lever			X	

Tighten all screws after approx. 20 working hours!

- ① Multipurpose grease
- ② Machine oil



## 6. Malfunctions and trouble-shooting

Malfunction	Possible cause	Remedial action
motor not running	defective feed cable defective fuse	new feed cable replace fuse
motor failure during sawing process	machine overloaded blunt saw belt excessive feed	resharpen saw- belt saw at reduced rate of feed
Saw belt slips off the running wheel	inclination angle maladjusted	correct adjustment of inclination angle
Saw belt rotates in wrong sense		change poles of motor (provided at plug to "ON/OFF" switch (phase inverter)
Untrue cut / saw belt	blunt saw belt faulty saw belt	sharpen saw belt, check whether stone is too hard

## 10. Guarantee

The guarantee time is 12 months. The following wearing parts you will get only in guarantee, when the wearing is not due to working conditions.

Wearing parts are parts, which will be worn out in working conditions due to intended use of a machine. The time of wearing is not defineable in an uniform way, it depends on their application intensity. The wearing parts for each specific machine has to be attended, adjusted and if necessary exchanged in accordance to the user's manual of the producer.

For wearing due to working conditions there is no guarantee.

- Advance- and driving elements as toothed racks, toothed wheels, pinions, spindles, spindle nuts, spindle bearings, ropes, chains, chain wheels, belts
- Washers, cables, hoses, collars, plugs, clutches and switches for pneumatic, hydraulic, water, electricity, fuel
- guidance elements as guiding joints, guiding bushes, guiding rails, rolls, bearing, antislipping devices
- flushing head seal
- sliding- and rolling bearing, which are not running in an oil-bath
- rotary shaft seal and sealing elements
- friction- and overload clutches, brake gears
- graphite brush, collectors
- potentiometer control and manual control elements
- fuses and lamps
- process materials
- fixing materials as plugs, anchor and screws
- bowden wires
- lamellars
- membranes
- spark plugs, glow plugs
- parts of reversing starter as start by rope, start by handle, start by roll, start by spring
- sealing brush, packing rubber, splash guard rags
- filter all types
- driving-, deflection roller and roller lining
- protection elements for rope lays
- running- and driving wheels
- water pumps
- transport roller for cutting material
- drilling-, parting-off- and cutting tools
- conveyor belt
- rubber stripes
- needled felt protection
- energy accumulation

## EC DECLARATION OF CONFORMITY

### MBS 502/2 (3) Cellular Concrete Band Saw

**Manufacturer** LISSMAC Maschinenbau u. Diamantwerkzeuge GmbH  
Lanzstraße 4  
D-88410 Bad Wurzach

**Machine Specification** MBS 502/2 equipped with 230 V / 1.5 kW motor  
MBS 502/3 equipped with 400 V / 0.75 kW motor

**Relevant EC-directives** The saw is in conformity with the EC Machine Directive 98/37/EEC for machines and the Low Voltage Directive (LVD) (Council Directive 73/23 EEC), EC Electromagnetic Compatibility Directive 89/336/EEC, (Council Directives EN 292, EN 294, EN 349, prEN 12418, EN 50081-1, EN 50065-1, EN 55014, EN 50082-1, EN 55104, EN 60204 and Noise Directives 2000/14/EEC

**Testing Authority** Technical Committee for stone and earth work  
German Authority for technical testing and certification  
Walderseestraße 5-6  
30057 Hannover

**Authorized person  
legally responsible:**



Josef Weiland

Technical Director