

# User Manual



**LSC-200**

**Slat Cleaner**

---



LISEN TECHNOLOGY LIMITED

<http://www.slatcleaner.com>



## Table of contents

<b>1</b>	<b>Safety</b>	<b>2</b>
1.1	General safety information	2
1.2	Specific safety information	2
<b>2</b>	<b>Description</b>	<b>3</b>
2.1	Intended use	3
2.2	Technical data	3
<b>3</b>	<b>Initial installing</b>	<b>4</b>
3.1	Installing the handle	4
3.2	Installing the cutting tool	5
3.3	Installing the removable wheel	5
3.4	Placing the power cable	6
<b>4</b>	<b>Operation</b>	<b>7</b>
<b>5</b>	<b>Maintenance</b>	<b>9</b>
5.1	Placed properly	9
5.2	Replacing the cutting tool	9
5.3	Adding lubricating grease	10
5.4	Replacing carbon brushes	10
5.5	Other maintenance	11
<b>6</b>	<b>Warranty</b>	<b>12</b>



## 1. Safety

### 1.1 General safety information

! Read all safety instructions carefully. Failure to follow these instructions may result in electric shock, fire, and/or serious injury.

! Electrical voltage! Risk of fetal injury due to electric shock

! Remove the plug from the plug socket before undertaking any maintenance work on the machine

! Check the plug, power cable and machine for damage each time before using the machine.

! Keep the machine dry and do not operate it in damp condition.

! Please hold the handle and U-shaped handle when lifting the machine. Do not carry the machine by the motor, cable and other parts; there is a danger of falling.

! Operators are required to protect themselves, such as eye protection, ear protection, gloves, and work shoes.

### 1.2 Specific safety information

! Always keep the cable in the cable duct of the handle bar when working to prevent it from being scratched by the slats and sharp objects.

! Hold the handle with both hands when working, and do not extend your hand into the working area of the machine, especially between the machine and the flatbed slats.

! After finish cleaning one slat, switch to the next slat on the flatbed to prevent falling.



## 2. Description

### 2.1 Intended use

LISEN slat cleaner is an electrically powered hand-held machine designed for applications:

- Removing the slag that accumulates on the slats of laser flatbed machines while laser cutting.
- Cleaning of installed slats in an upright position.
- Can be used on steel, stainless steel, Copper or hybrid steel/copper slats.

When not in use, you should place it in the upright position.

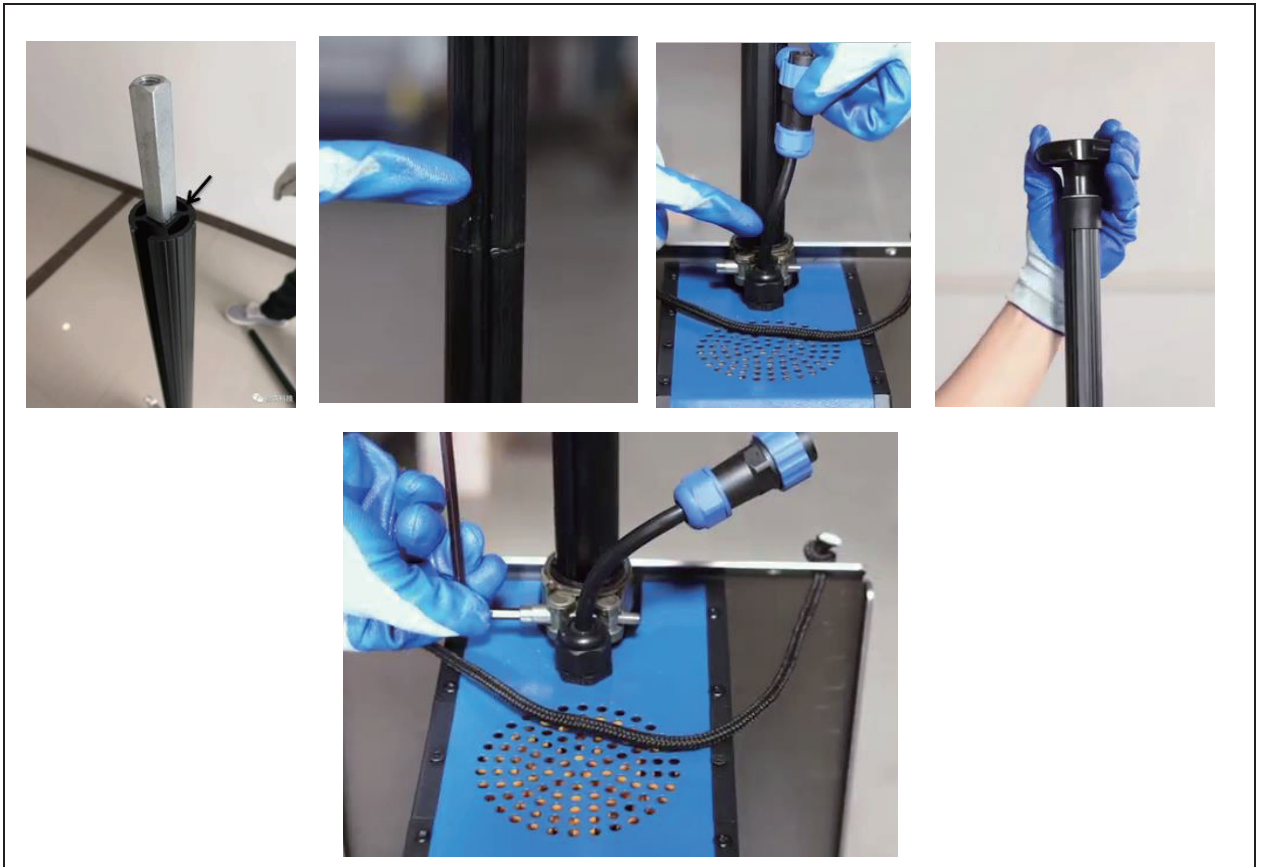
### 2.2 Technical Data

<b>Voltage</b>	220 - 240V	110 - 120V
<b>Frequency</b>	50/60Hz	50/60Hz
<b>Rated power</b>	2300 W	2000 W
<b>Idle speed</b>	1400 r/min	1600 r/min
<b>Slat thickness</b>	2 - 6 mm	0.08 – 0.24 in
<b>Max. slag thickness</b>	25 mm	0.98 in
<b>Min. distance between slats</b>	33 mm	1.30 in
<b>Weight</b>	23 KG	50.7 lbs



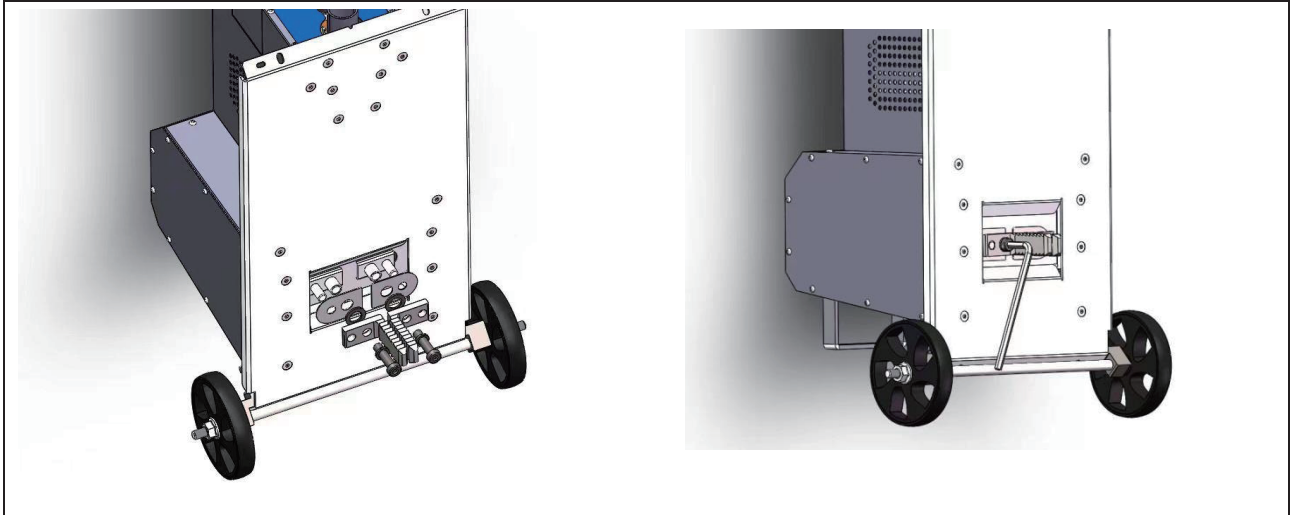
### 3. Initial Installing

#### 3.1 Installing the handle



1. Screw in the color-coded screw rod until the color-coded position is flush with the end of the tube (Handle bar 1). Insert the handle 1
2. Insert the handle 2 and keep the wire slots on handle 1 and handle 2 in a straight line.
3. Turn the handle 1 & 2 to align the wire slots with the cable on the main machine
4. Insert the threaded rod with the pulley and tighten to connect handle 1 to handle 2
5. Tighten the clamp screw tightly.

### 3.2 Installing the cutting tool



1. Put the stainless steel gasket, rubber washer and the cutting tool in sequence.
  2. Fasten them tightly with springs & screws.
- Attention: The screws that hold the cutting tool need to be fully tightened.

### 3.3 Installing the removable wheel





## Slat Cleaner

The slat cleaner is supplied with a set of removable wheel (an axle with 2 wheels) to simplify transportation. The slat cleaner can be easily moved to the laser cutting machine on this device. Install the device in the front end of the slide plate under the U-shaped handle bar.

1. Pull the both locking pins on the removable wheel and rotate them by 90° to secure them in an open status.
2. Place the removable wheel in front on the slide plate of the slat cleaner (locking pins get through the waist-shaped hole in the slide plate & point to the housing).
3. Rotate locking pins by 90° and lock them in.

NOTE: Check carefully to make sure that the locking pins are tight in place, otherwise, there is a risk of falling off.

### 3.4 Placing the power cable



1. Connect the power cable to the power unit (main machine) with the water proof connector.
2. Press the cable into the wire slots on the handle.
3. Finally, remove the safety rope

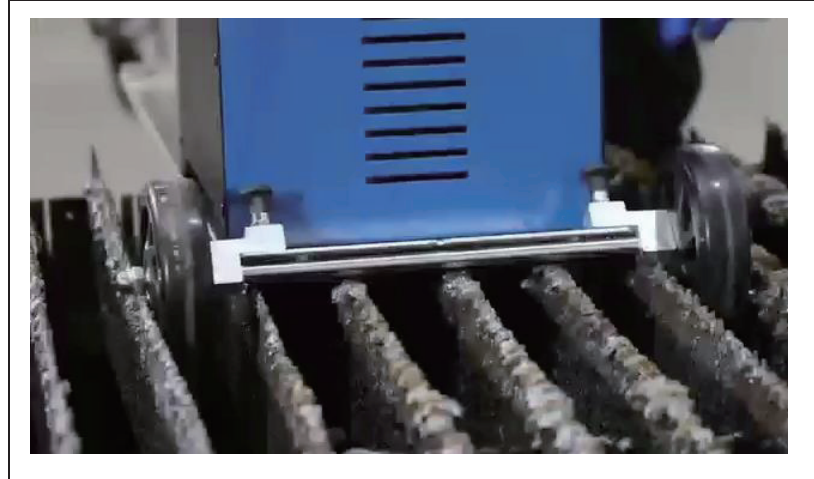
#### Tip

To see the video for the practical Initial Installing, go to Youtube and search for LISEN. You will find:

<https://youtu.be/XLQsYEmzRgw>



## 4. Operation



1. Place the machine on the slats. Let the cutting tool into the slats space first.
2. Remove the removable wheel.



Off/On Switch on the machine



Off/On Switch on the Power Cable

3. Turn the both off/on switches OFF.
4. Connect the plug to the power supply.
5. Turn the off/On switch on the machine ON.
6. Lift the handle slightly until you can see the cutting tool, switch the off/on switch on the power cable ON and the machine starts. After visually aligning the cutting tool with the slat to be cleaned, gently lay the handle flat to let the machine be completely on the flat table, and then start working.
7. Push or pull the machine with the handle to move it back and forth parallel to the slat direction for cleaning. Move the machine from one side of the slat to the other side.

**NOTE:** You can hold the handle to move up and down if necessary, such as the cutting tool need to avoid obstacles. But, **DO NOT** swing the machine left and right when the machine is working. Damage to the cutting tool and machine may happen.



8. Placing the machine on the next slat: Raise the machine by the handle until the cutting tool is above the slats. Swing the cleaner to the next slat, pull or push it over and lower it so that the slat is between the tool.
9. Switch off the machine: Once finish cleaning, turn the off/on switch off the power. Both off/on switches can control the machine OFF. Choose either off/on switch nearby you for convenient and easy operation.

**TIPS:**

1. Frequent cleaning with low slag application goes easy on the machine and reduces the force to be applied by the operator.
2. When the machine work for 1 hour, take a break of 10-20 minutes to help maintain the life of the machine.
3. To see the machine in operation, please go to Youtube and see the practical videos: <https://youtu.be/J9fgx23xSvk>



## 5 Maintenance

! Remove the plug from the plug socket before undertaking any maintenance work on the machine.

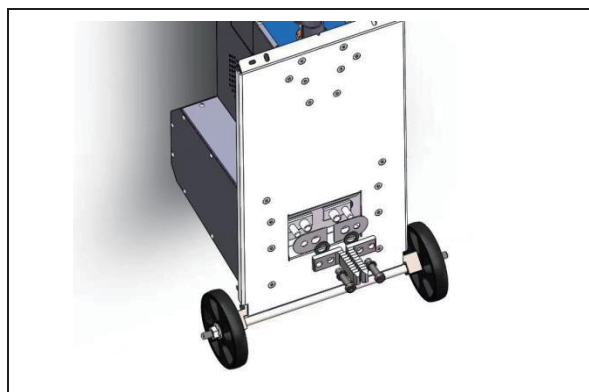
### 5.1 Placed properly

When not in use, the correct placement is upright as shown in the figure below. Improper placements may cause drop damage.



### 5.2 Replacing the cutting tool

The cutting tool will dull over time. To get the best cleaning performance, need replace the cutting tool..



1. Remove both screws.
2. Remove the cutting tool.
3. Insert the new cutting tool.
4. Tighten the screws.

### 5.3 Adding lubricating grease

To decrease the wear of the gear box, the manufacturer recommends adding lubricant grease every 3 month with about 50 Gram.

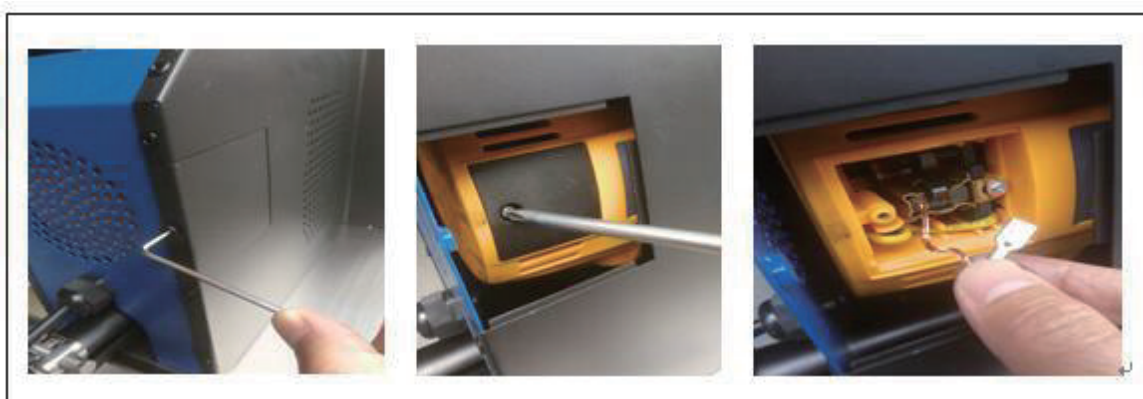
Grease type: Compound Extreme Pressure Aluminum Grease, resistant to 300 °C high temperature. Ref. to WATTS Petrochemical EP-2.



1. Remove the nameplate screws.
2. Fill the upper and lower ports with grease separately.

### 5.4 Replacing carbon brushes

If the motor doesn't rotate under power without load, it is likely that the motor brushes need replacement.





1. Remove the screw and open the metal cover.
2. Unscrew the plastic cap.
3. Take out the worn-out brushes and replace the brush.
4. Repeat 1-3 on the other side for the other brush.

### **5.5 Other maintenance**

All other repairs require trained specialist technicians to perform. In this case, please contact the distributors or manufacturer for further instructions.





## WARRANTY

Subject to the exclusions described below, all LISEN products are warranted to be free from defects in materials and workmanship under normal use and service for 12 months after the ship date to the purchaser. Unless otherwise set forth in a quotation or agreed to by LISEN in writing, Product warranty only applies to the first using purchaser. Warranty is not transferable beyond the first using purchaser and is limited to new products sold by LISEN or through authorized representatives and channel partners.

**EXCLUSIVE REMEDY** In the event that LISEN determines that a Product contains a defect in materials or workmanship, then LISEN, in its sole discretion, will (a) repair the Product, (b) replace the Product with new , (c) refund the purchase price of the Product. This limited warranty is exclusive and is in lieu of all other express and implied warranties, including but not limited to the implied warranties of Merchantability and fitness for a particular purpose. The remedy of repair, replacement or refund is buyer's sole and exclusive remedy under this warranty. In no event shall LISEN's liability under this warranty exceed the purchase price of the product giving rise to the warranty claim. All products which are repaired or replaced shall be warranted only for the unexpired portion of the original warranty period.

**EXCLUSIONS** This warranty does not cover (a) any failures which are not attributable to defects in materials or workmanship, including without limitation, failures caused by accidents, inadequate maintenance, misuse, unauthorized modifications or repairs, improper storage, and normal wear and tear, (b) any consumable parts or accessories, such as the cutting tool, are designed to wear over time or through use of the product, (c) Excessive use which is contributed from overuse, recommended use is for 1 slat cleaner to service 1-3 laser cutting machines under normal use conditions. Recommended cleaning interval of once per week if production levels equal 2 shifts.

**WARRANTY RETURNS** No products shall be returned without prior authorization from LISEN. Buyer shall prepay all shipping charges for the return of Products to LISEN designated service location.

**LIMITATION OF LIABILITY** In no event shall LISEN be liable for any incidental damages, consequential damages, special damages, indirect damages, loss of profits, loss of revenues, or loss of use, even if informed of the possibility of such damages. LISEN liability for damages arising out of or related to any order is limited to the order price for the specific product that gives rise to the claim. To the extent permitted by applicable law, these limitations and exclusions shall apply regardless of whether liability arises from breach of contract, warranty, tort (including but not limited to negligence), by operation or law, or otherwise.