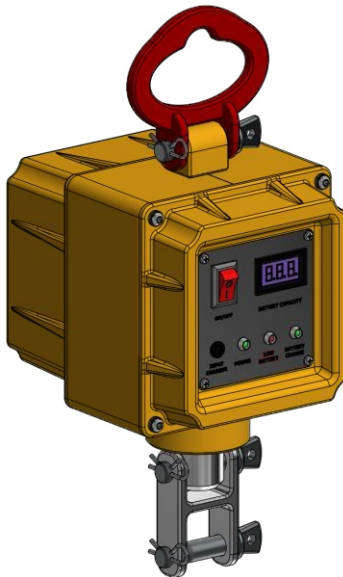




ABACO MACHINES

OPERATION MANUAL
ABACO ROTATING SLAB
LIFTER
(ARSL1200)



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**APPLICABLE MODEL
of this ROTATING SLAB LIFTER:**

ARSL1200

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General Safety Operation Manual Instructions Summary:

It is essential to review carefully and understand this Operation Manual before operating the equipment. Failing to read and understand this entire manual may cause injury or death to personnel, or damage to the equipment and the products that are being handled by this equipment if not properly followed. This safety summary includes general safety precautions and instructions that must be understood and applied before, during, and after operations, as well as maintenance to ensure personnel safety and protection of this equipment. Prior to performing any task, the contents included in this manual should be reviewed and fully understood.

This manual explains some essential operating or maintenance procedures, practices, conditions, statements, etc. that if those are not strictly followed, it could result in injury, or death by chance in the worst case. And there might be some chances of damaging or destructing materials or machine component itself. In order to avoid or eradicate such worst coincidences and happenings, it is essential to read through this manual and follow accordingly. It is also important to comprehend the functions of this equipment thoroughly for your safe and efficient operations.

For any question, please contact your local dealer or distributor.

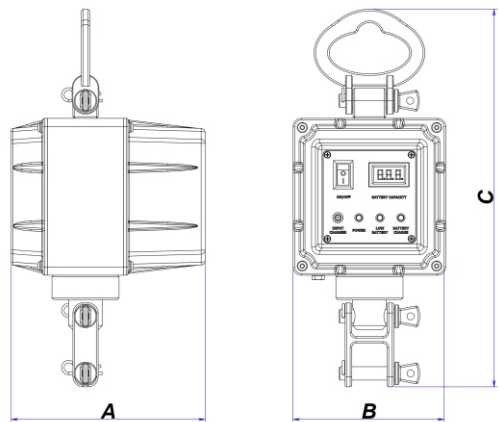
I. EQUIPMENT GENERAL INFORMATION:

- Rotating Slab Lifter (ARSL1200) is capable of 360-degree rotation and allows for arbitrary angle adjustment of the suspended material slab while elevated.
- The device can be hooked and suspended by using various types of cranes, hoists, etc. It is also compatible with lifter for handling material slabs or cargo cranes.
- The device also features a braking system that facilitates easy adjustment to the required angle. It automatically stops if it detects an obstacle, preventing overload and protecting the equipment.
- This machine can be separated into components, which is convenient for packing and transporting.

II. TECHNICAL SPECIFICATIONS:

- ARSL1200 features a compact design with appropriately arranged components.
- Detachable assembly parts allow for easy disassembly and maintenance.
- The device is powered by a rechargeable battery, providing up to 12 hours of continuous operation.

1. Dimensions:

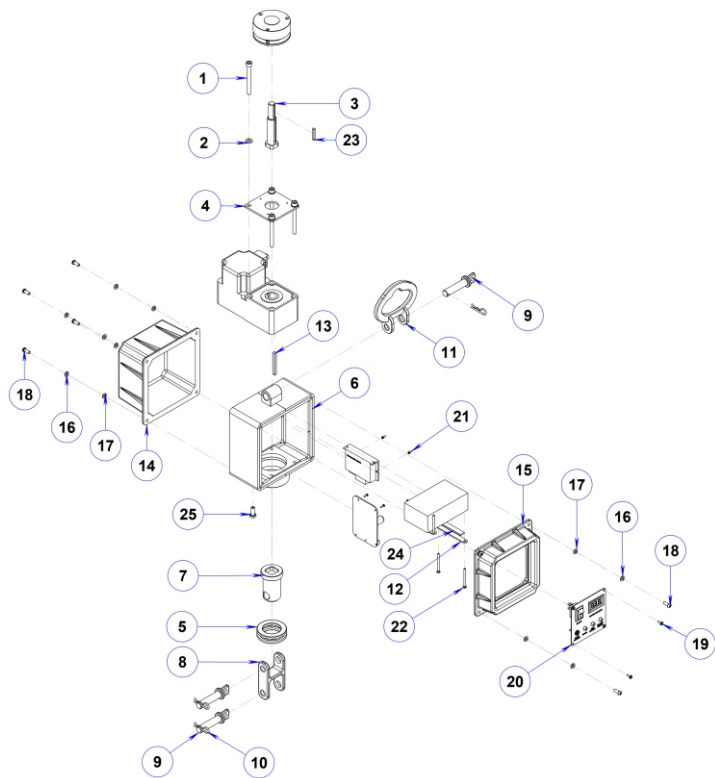


Length (A) inch (mm)	Width (B) inch (mm)	Height (C) inch (mm)	Rotary angle (°)
9 1/16 (231)	7 1/16 (180)	17 3/4 (450)	360

W.L.L* lbs (kg)	Battery
2640 (1200)	24V, 10Ah

** W.L.L.: Work Load Limit*

2. Spare Part List:
2.1. Spare part list - Overall:
























SPARE PART LIST

DESCRIPTION	PART NUMBER	QTY.
Hexagon socket head cap screw M8x80	ARSL1200-01	4
Washer F8xF16x1.5	ARSL1200-02	4
Rotary shaft 1	ARSL1200-03	1
Motor brake base plate	ARSL1200-04	1
Bearing	ARSL1200-05	1

DESCRIPTION	PART NUMBER	QTY.
Main frame	ARSL1200-06	1
Rotary shaft 2	ARSL1200-07	1
H pad	ARSL1200-08	1
Rotary pin	ARSL1200-09	3
Locking pin	ARSL1200-10	3
Rotary hook	ARSL1200-11	1
Battery holding pad	ARSL1200-12	2
Lavet 6x6x63	ARSL1200-13	1
Rear housing	ARSL1200-14	1
Front housing	ARSL1200-15	1
Spring washer F6	ARSL1200-16	8
Washer F6xF12x1	ARSL1200-17	8
Hexagon socket button head cap screw M6x16	ARSL1200-18	8
Phillips pan head screw M4x10	ARSL1200-19	4
Electrical panel	ARSL1200-20	1
Phillips pan head screw M3x8	ARSL1200-21	4
Phillips pan head screw M4x50	ARSL1200-22	4
Lavet 5x5x32	ARSL1200-23	1
Rubber strip	ARSL1200-24	2
Plastic bolt M8x20	ARSL1200-25	1

ELECTRICAL COMPONENTS

CODE	DESCRIPTION	IMAGE
DT_734	Brushless motor	
DT_476	4 Buttons remote control	
DT_735	Battery pack	
DT_631	Male and female connectors	
DT_736	DC power jack	
DT_737	Power switch	
DT_738	Battery indicator	
DT_739	LED display circuit board	
DT_446_L_D	Single core wire (red)	
DT_446_L_X	Single core wire (blue)	
DT_301_L_X	Single core wire (blue)	
DT_301_L_D	Single core wire (red)	

CODE	DESCRIPTION	IMAGE
DD020_1	Numbered Cable Marker – 1	
DD020_2	Numbered Cable Marker – 2	
DD020_3	Numbered Cable Marker – 3	
DD020_4	Numbered Cable Marker – 4	
DT_127_D	Fork terminal cosse (red)	
DT_127_X	Fork terminal cosse (blue)	
DT_740	Insulated female spade connector	
DG002	Cable tie	
DT_522	AAA battery	
DT_497	Cosse	
DT_743	Battery charger	
DD020_8	3 Pin plug	
DT_744	Electromagnetic brake	

III. SAFETY INSTRUCTIONS:

1. General Warnings, Cautions and Notes:

a. Before Operations:

- Ensure the battery is fully charged before using.
- Check all the buttons and power indicator to ensure there is no sign of damage and they are in proper function.
- Ensure all bolts and nuts are tightened securely.
- Verify that all the welded joints are free from any defect or damage (e.g. welded joints separates, cracks, etc.).
- Use appropriate PPE (Personal Protective Equipment) to against injury.

b. During Operations:

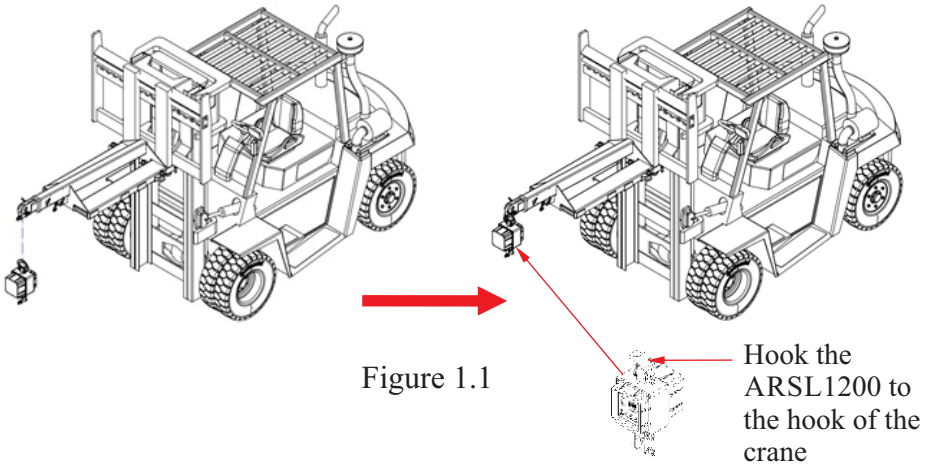
- Always pay attention to warning signals during operation, such as the low battery warning, full battery signal, battery indicator.
- Ensure that the weight of the slab to be placed is within the allowance specified Work Load Limit (refer to page 2).
- Follow the steps and instructions in this Operation Manual.
- For safety purposes, you (the operator) must comply strictly with all applicable laws and regulations in your region.

c. After Operations:

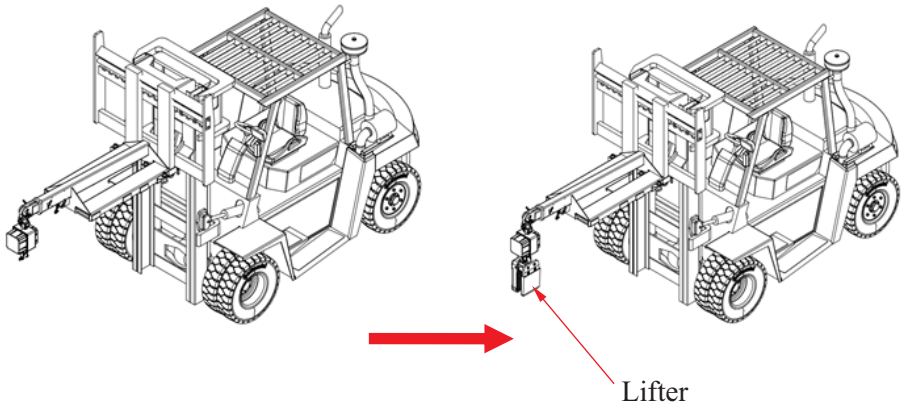
- Clean thoroughly and store neatly when not in use.
- Store in a well-ventilated place, avoid high heat and/or humidity.

2. Device usage:

Step 1: Install the Rotating Slab Lifter to the hook of the crane (Figure 1.1).



Step 2: Install the lifter to the bottom of the Rotating Slab Lifter (Figure 1.2).



Step 3. Turn on the power switch and move to the location where the material slab needs to be handled (Figure 1.3).

Caution: Check whether the battery is fully charged by observing the indicator lights on the control box. When the battery is full, the POWER indicator light will turn on. When the battery is low, the LOW BATTERY indicator light will turn on.

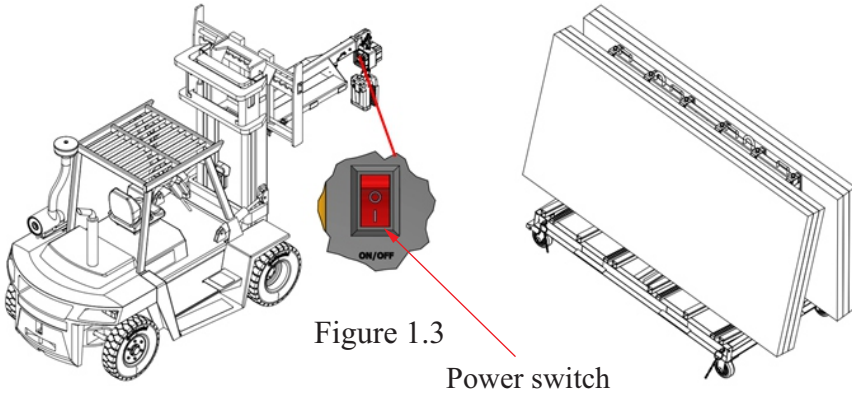


Figure 1.3

Power switch

Step 4: Use the remote control to adjust to the proper angle and grip the material slab. You can rotate the slab in any desired direction to avoid collisions during movement (Figure 1.4)

- Use the remote control. Press and hold the “START” button to activate the controller. Then, press and hold the button shown in Figure 1.5 to rotate from 0 to 360° and in reverse.

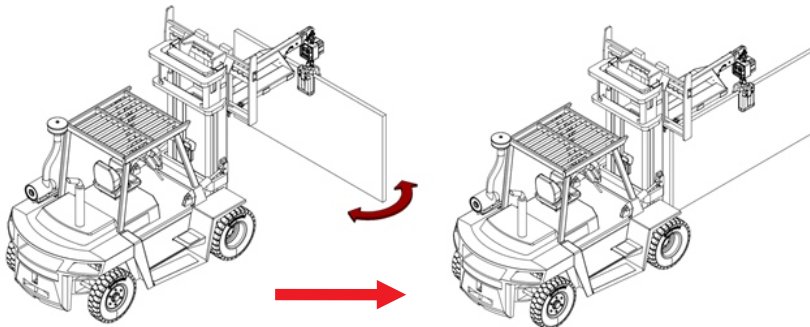


Figure 1.4



Figure 1.5

Warning: When rotating the stone slabs on the crane hook, ensure that no one stands close to the stone slab (Figure 1.7). Operators are only permitted to stand at a safe distance from the material slab (Figure 1.6).

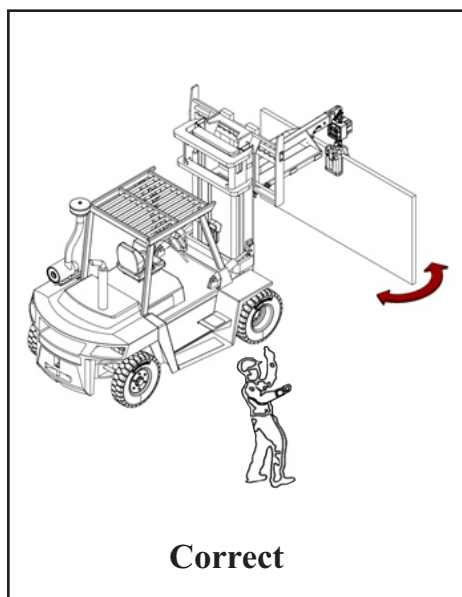


Figure 1.6

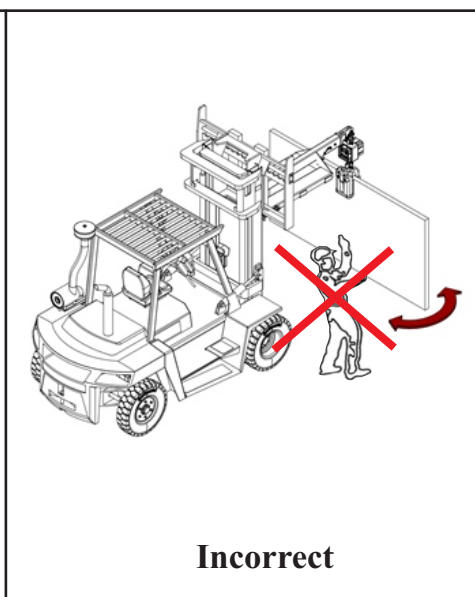
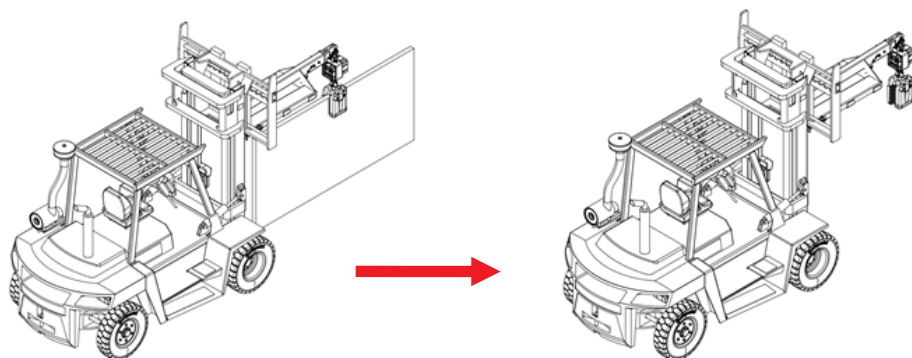


Figure 1.7

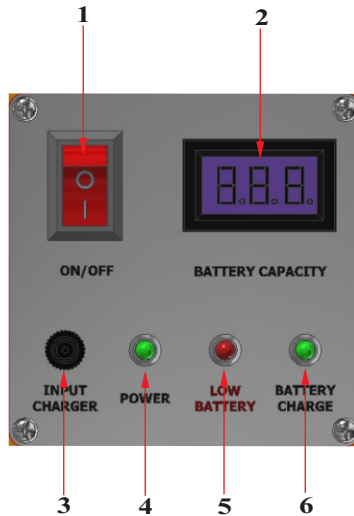
Step 5: Move the material slab to the designated location and remove the stone slab from the device.



Step 6: Detach the device from the lifting crane to complete the task.

IV. APPENDIX:

Battery charging process:



Led light indicates the charging mode:

- Buttton (1): Power on/off switch
- Board (2): Shows battery level (% battery)
- Port (3): Charging power port.
- Led light (4) is on: Full battery charge.
- Led light (5) is on: Low battery charge.
- Board (6): Indicates the battery is charging.

Cautions:

- *Switch off the power after fully charged.*
- *Do not allow the battery run down, recharge it as soon as the LED indicator light turns on.*
- *Continuous usage time can be up to 12 hours.*

V. TECHNICAL PROBLEMS AND SOLUTIONS:

Technical problem	Cause	Solution
The POWER button on the electrical panel is not lighting up	The battery is damaged or has worn out	Replace with a new battery

VI. INSPECTIONS & MAINTENANCE:

- Schedule periodic maintenance to ensure the device and welded joint are free from any defects or damage, such as separation, crack, and so forth.
- Keep necessary spare parts on hand always for immediate maintenance or repair purposes.
- Checking the tightening condition of all bolts and nuts periodically.
- Store in a well-ventilated place (cool and dry); avoid high heat and/or humidity.

VII. WARRANTY POLICY:

At the time of delivery, it is necessary to inspect the **Rotating Slab Lifter (ARSL1200)** to make sure that it has not been damaged during shipment. The product at the time of dispatch is warranted to be free of defects in material or workmanship.

Claims for errors, shortages, defects, or nonconformities ascertainable upon inspection must be made in writing within eight business days from the date of product delivery. Claims not made as provided above and within the applicable time period will be barred and no other claims will be considered.

We provide a one (1) year warranty on the **Rotating Slab Lifter (ARSL1200)** from the date of purchase.

During warranty period, we will provide the replacement parts at no charge (*Please note:* shipping and handling fees may apply).

Warranty coverage is void if:

- The operator failed to comply with the instructions in the manual.
- The specifications in this Manual were not applied properly to the device during operation.
- Damage is due to inadequate maintenance and inspections.
- Damage is due to improper storage and/or usage.
- Modification and repairs made to the equipment were performed by the user/operator without the manufacture's knowledge and agreement.
- Aftermarket or none genuine spare parts were used for repair and installation.
- Modification and repair installations were conducted by uncertified individual.

WARRANTY CERTIFICATE

You are kindly requested to read the following carefully.

PERIOD

The warranty starts from the date of purchase (date on distributors invoice).

Warranty is valid for a period of twelve (12) months.

WARRANTY

This warranty is limited only to provide replacements of the parts recognized by the Company as defective (excluding worn-outs and consumables.)

The Company is not responsible for any misuse or abuse of the product after purchase and/or caused by negligence from the content of this manual.

In an event the equipment failed to operate and/or required technical support, operator/user is responsible for reaching out to our Customer Support Department. One of our team member will inform you (operator/user) of the appropriate procedures on how to file warranty claim and advise you to your nearest approved service center.

EXCLUSIONS

Warranty does not apply for damages or failures caused by: Misuses, errors in transportation, incorrect handling or failing to maintain the equipment appropriately.

Use of non-genuine parts/accessories, or of incorrect specs.

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