



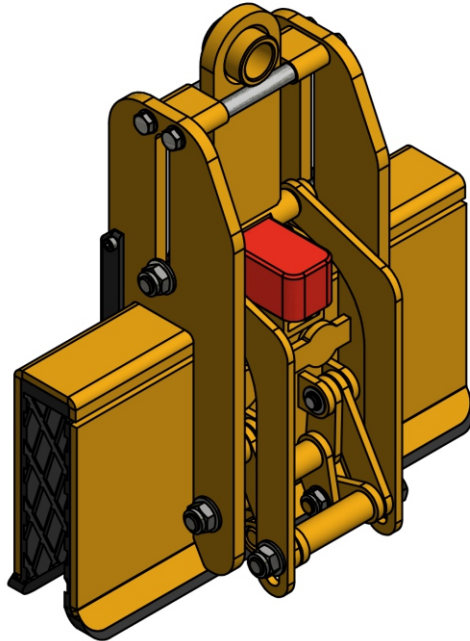
**ABACO MACHINES**

**OPERATION MANUAL**

**ABACO SUPER MULTI MATERIAL**

**LIFTER AUTOMATIC**

**(ASVL30A-M2)**



**ABACO MACHINES (USA)**

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**APPLICABLE MODEL  
of this SUPER MULTI MATERIAL LIFTER  
AUTOMATIC:**

**ASVL30A-M2**

## INDEX

Item	Pages
I Equipment General Information.....	1
II Technical Specifications.....	1
1. Dimensions.....	2
2. Spare Part List .....	3
III Safety Instructions.....	6
1. General Warnings, Cautions and Notes.....	6
2. Device usage.....	8
IV Appendix.....	12
V Technical problems & Solutions.....	16
VI Inspection & Maintenance.....	16
VII Warranty Policy.....	17
Warranty Certificate.....	18

### ***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.*

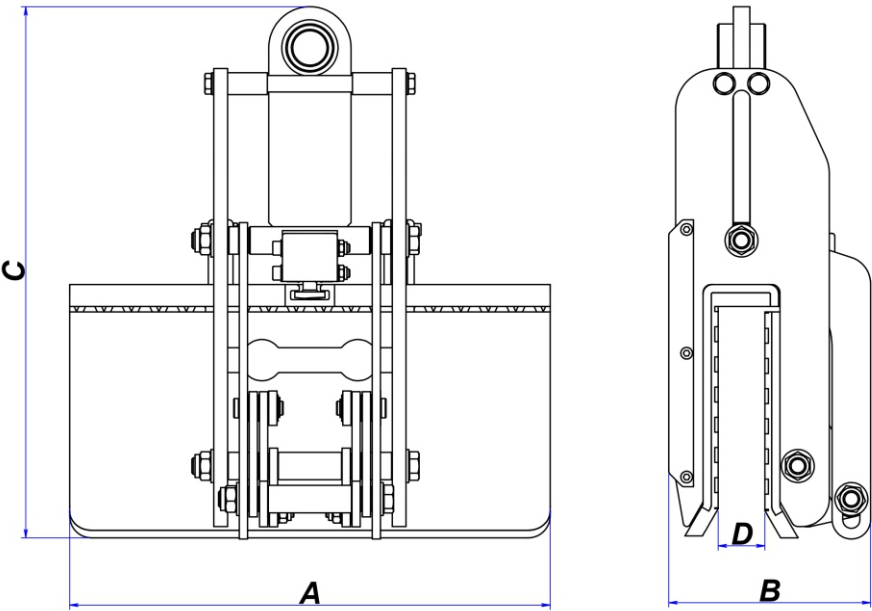
## **I. EQUIPMENT GENERAL INFORMATION:**

- Super Multi Material Lifter Automatic (ASVL30A-M2) is designed to clamp and move the material in warehouses, work sites, etc.
- Opening and Closing mechanism of clamp plates is fully automatic.
- It is suitable for both natural and artificial materials in various thicknesses ranging from 0 to 30 mm.
- Rubber pads covered on clamp plates not only increase its friction to grip the slab/sheet securely but also protect the slab/sheet surface from damage.
- The lifter shall ensure safety for users and increase productivity.

## **II. TECHNICAL SPECIFICATIONS:**

- ASVL30A-M2 is mainly made out of steel for ensuring durability.
- The lifter is combined with a crane hoist, forklift boom (or with a forklift truck) to clamp, lift, and transport slabs.
- The lifter comes with a specialized swivel shackle, which makes the lifter and the slabs to rotate 360<sup>0</sup> easily.

**1. Dimensions:**

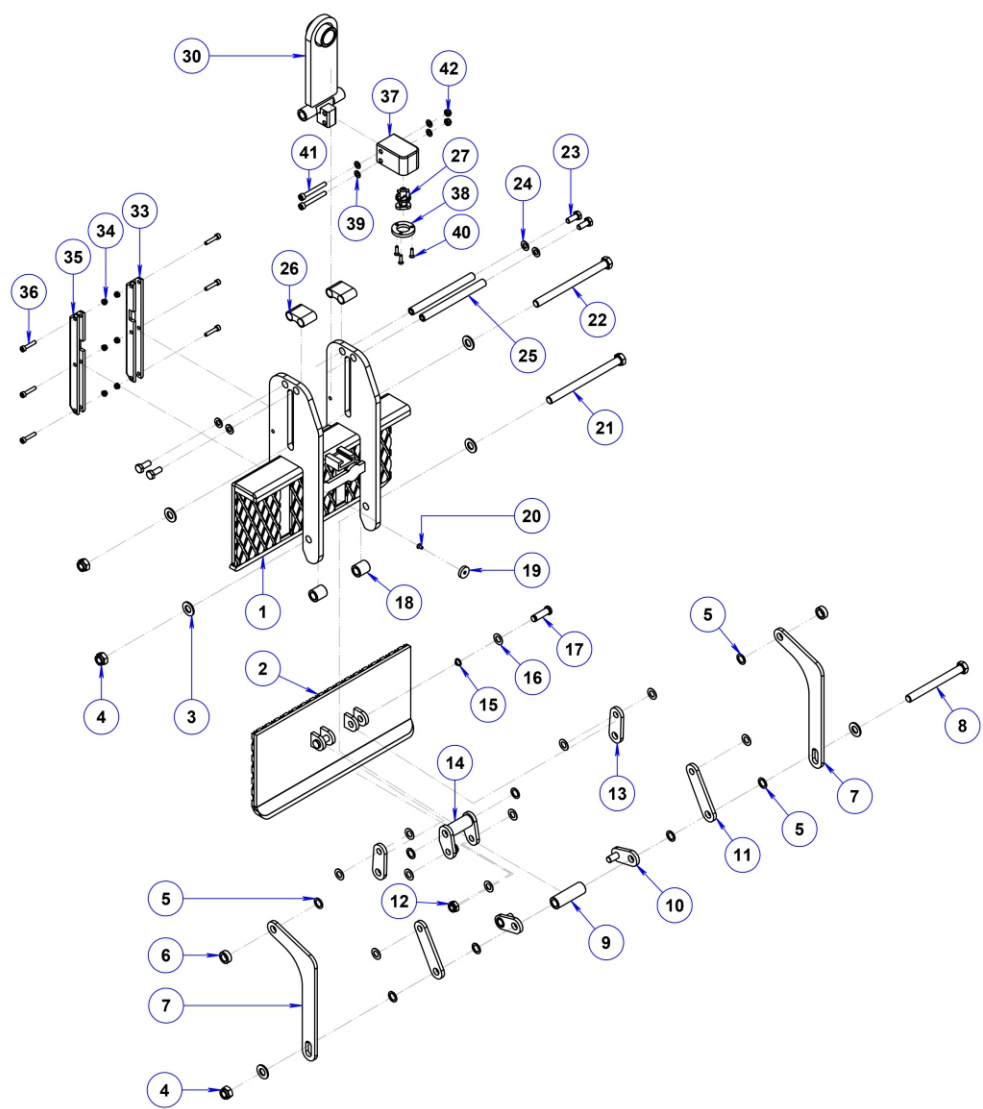


<b>Length (A)</b> <b>inches (mm)</b>	<b>Width (B)</b> <b>inches (mm)</b>	<b>Height (C)</b> <b>inches (mm)</b>
13 <sup>3</sup> / <sub>4</sub> (350)	5 <sup>13</sup> / <sub>16</sub> (147)	15 <sup>3</sup> / <sub>16</sub> (386)

<b>Grip Range (D)</b> <b>inches (mm)</b>	<b>*W.L.L</b> <b>lbs (kg)</b>
0 ~ 1 <sup>3</sup> / <sub>16</sub> (0 ~ 30)	1100 (500)

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

**2. Spare part list:**



## SPARE PART LIST

PART NUMBER	DESCRIPTION	QTY.
ASVL30A-M2-01	Fixed clamp plate	1
ASVL30A-M2-02	Movable clamp plate	1
ASVL30A-M2-03	Washer Ø12	6
ASVL30A-M2-04	Lock nut M12	3
ASVL30A-M2-05	Brass washer Ø12	8
ASVL30A-M2-06	Spacer 1	2
ASVL30A-M2-07	Arm	2
ASVL30A-M2-08	Bolt M12 x 120	1
ASVL30A-M2-09	Piping spacer	1
ASVL30A-M2-10	Bracket 1	2
ASVL30A-M2-11	Bracket 2	2
ASVL30A-M2-12	Lock nut M10	2
ASVL30A-M2-13	Bracket 3	2
ASVL30A-M2-14	Bracket 4	1
ASVL30A-M2-15	Circlip Ø10	2
ASVL30A-M2-16	Washer Ø10	12
ASVL30A-M2-17	Pin	2
ASVL30A-M2-18	Spacer 2	2
ASVL30A-M2-19	Magnet	2
ASVL30A-M2-20	Hexagon socket countersunk head cap screw M4 x 8	2
ASVL30A-M2-21	Bolt M12 x 158	1
ASVL30A-M2-22	Top extension bolt	1
ASVL30A-M2-23	Bolt M8 x 20	4
ASVL30A-M2-24	Washer Ø8	4

<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>QTY.</b>
ASVL30A-M2-25	Shaft	2
ASVL30A-M2-26	Hanger stopper	2
ASVL30A-M2-27	Automatic locking latc	1
ASVL30A-M2-30	Hanger	1
ASVL30A-M2-33	Rubber bar 2	1
ASVL30A-M2-34	Lock nut M5	6
ASVL30A-M2-35	Rubber bar 1	1
ASVL30A-M2-36	Hexagon socket head cap screw M5 x 25	6
ASVL30A-M2-37	Base	1
ASVL30A-M2-38	Bushing	1
ASVL30A-M2-39	Washer Ø6	4
ASVL30A-M2-40	Hexagon socket countersunk head cap screw M4 x 15	3
ASVL30A-M2-41	Hexagon socket head cap screw M6 x 50	2
ASVL30A-M2-42	Lock nut M6	2



### **III. SAFETY INSTRUCTIONS:**

#### **1. General Warnings, Cautions and Notes:**

**Warning:** Before using the Super Multi Material Lifter Automatic, confirm the surface of the slab to be lifted is evenly flat, smooth, and free from dust, oil, or any kind of such harmful substances which can cause slipping when lifting.

##### **a. For Super Multi Material Lifter Automatic:**

##### **Cautions:**

- Carefully consider and follow all the safety regulations and applicable laws in your country for the operations.
- It is strongly recommended that only employees who are highly trained, experienced are allowed to operate this device. Safety rules and regulations must be strictly followed.
- Lifting the slab up slowly. If the slab is not balanced, lower the lifter to make appropriate position adjustment before lift it up again.
- Before lifting the materials, operator is responsible to carefully inspect the swivel shackle for its wear and tears, damage, cotter/snap pins loosening/lost, or nut loosening. If it damage, it should not be used until repaired or replaced.

##### **Warnings:**

- Inspect the Super Multi Material Lifter Automatic carefully and thoroughly. If the rubber pads of plates are worn-out or damaged, do not use.
- This equipment is designed with grip range from 0 mm to 30 mm. Determine the weight of the slab to be lifted. Do not exceed the WLL (Work Load Limit) shown on the page 2.
- During operation, all workers in the work environment must be cautious and ensuring they are standing and moving safely around the work area to avoid unexpected accident injury.
- Check to ensure the rubber pads are free from damage, dirt, grease and other substances that may effect the effectiveness of it designed purposes. Clean it by water, and then wait till dry before using.

- Do not lift wet slab/sheet. The grip depends on friction. Lifting wet slab/sheet may cause the rubber pads to lose their grips.
- No more than one piece should be lifted at any time.
- Position the lifter at the center of the slab/sheet to be lifted, so that the load is balanced.
- The operators is responsible for ensuring the slab/sheet is inserted to the full depth into the opening of the clamp plates (See appendix at page 11).
- Light colored materials are not recommended to be clamped by black rubber clamp plate (due to mark the dirt on surfaces).

## **b. General safety instructions for Operations:**

### **Cautions:**

- In order to protect people from any accident, it is important to follow safety rules and regulations.
- Read and comprehend this Operation Manual carefully before using.
- Ensure that this Operation Manual is always available beside the place where the lifter is used.
- Operate the device should only be performed by well-qualified persons.
- Use appropriate PPE (Personal Protective Equipment) such as helmet, gloves, and safety boots, etc.
- To ensure the equipment functioning properly and safely, do a visual inspection and make sure there are no signs of damage.
- Inspections and repairs should only be done by qualified personnel.
- If any parts are worn-out or damage, replace or contact the manufacture for solution consultation.
- Before operating this equipment, check the swivel shackle that nuts are not loosened and cotter/ snap pins are all in order. Be aware that swivel shackles can be worn-out time to time. If worn-out, replace with a new one.

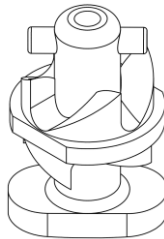
- Clean the device thoroughly after each use.
- Store the equipment in a well-ventilated place, avoid places with high heat and/or humidity.

**Warnings:**

- Never leave your loaded Super Multi Material Lifter Automatic unsupervised.
- Never allow yourself or anybody to go under a lifting the slabs.
- Be sure to check the lifter and its accessories duly periodically. There should be no damage or loosening of fasteners. Double check before using.

**c. Automatic locking latch system:**

- Automatic locking latch system consists of a cam wheel which could be rotated when the device was lifted up to clamp the slab/sheet. Make sure that no dust is inside the automatic locking latch, regularly check and lubricate oil to ensure the proper operation.



Automatic locking latch

**2. Device usage:**

**Preliminary Safety Checks**

“The operator” should check the following steps before each use of the device.

**Warnings:**

- The Super Multi Material Lifter Automatic should be installed and attached appropriately as sketched below to ensure safe operation.
- The swivel shackle should installed, secured and tightened correctly.

**Step 1:** Hook the Super Multi Material Lifter Automatic to a forklift boom (Figure 1.1).

**Warning:** Put the lifter at a safe place, then hook the crane or the forklift boom into the lifter for installation. Do not lift the lifter by hands in order to avoid dropping the lifter.

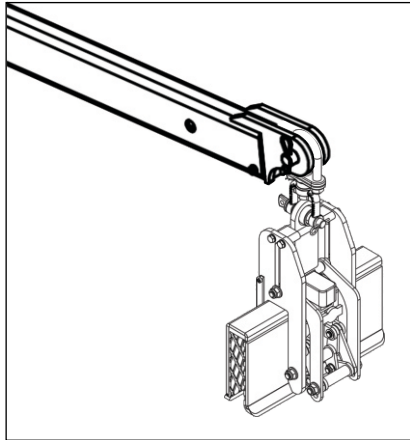


Figure 1.1

**Step 2:** Use slab wedge\* to make a gap between the outer slab and the inner slab (Figure 2.1).

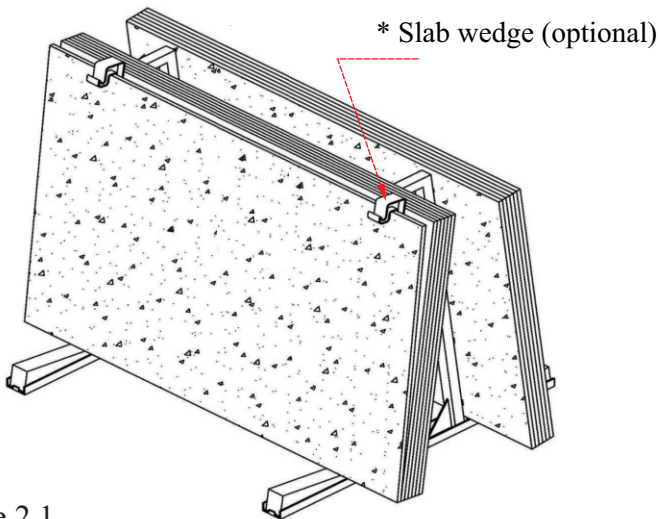


Figure 2.1

**Step 3: Clamp the slab.**

- Lowering the lifter to be perpendicular and place at the center of the slab (Figure 3.1).

***Note:** Position the lifter securely at the center of the slab so that the load is balanced. Ensure that the slab is inserted in full depth to the opening of the lifter (Refer the Appendix, page 12). Lower the device until the shackle is disengaged.*

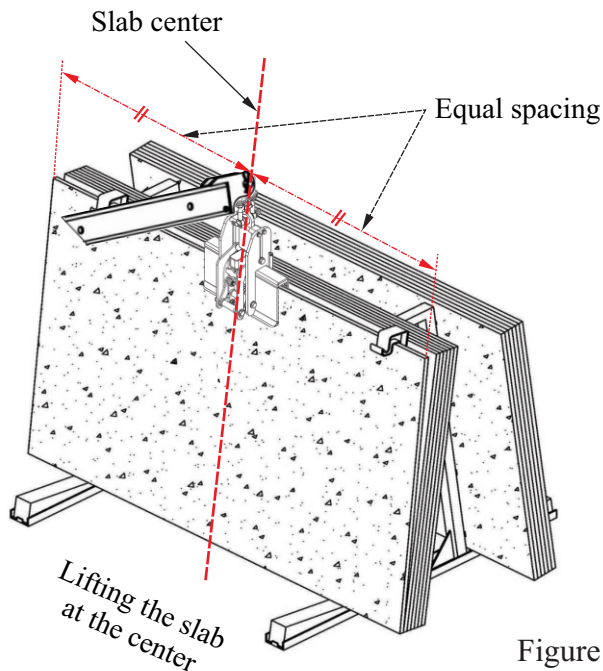


Figure 3.1

- Lift the slab slowly to ensure the weight balance. During lifting, the automatic locking latch system will allow the clamping plates to grip the slab tightly. At the moment, the slab is ready to move out of rack.

***Note:** If the clamp plates do not grip the slab firmly and securely, lowering the lifter and lift it up again.*

**Step 4:** Move the slab to the desired location (Figure 4.1).

**Caution:** *All the people who are not obligated must stand within safety area while slab is being lifted or moved. Do not allow yourself or anybody to go under the lifted slab.*

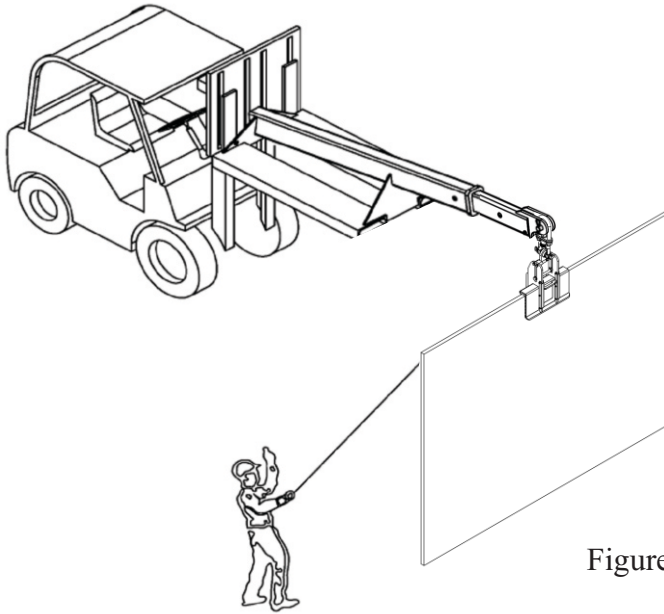


Figure 4.1

**Step 5:** Remove the lifter from the slab.

Lower the lifter slowly until the lifter and swivel shackle are disengaged; the locking latch will be locked automatically, and then the clamp plates are remained open. Lift the forklift boom back, and the lifter is easily away from the slab.

**Note:**

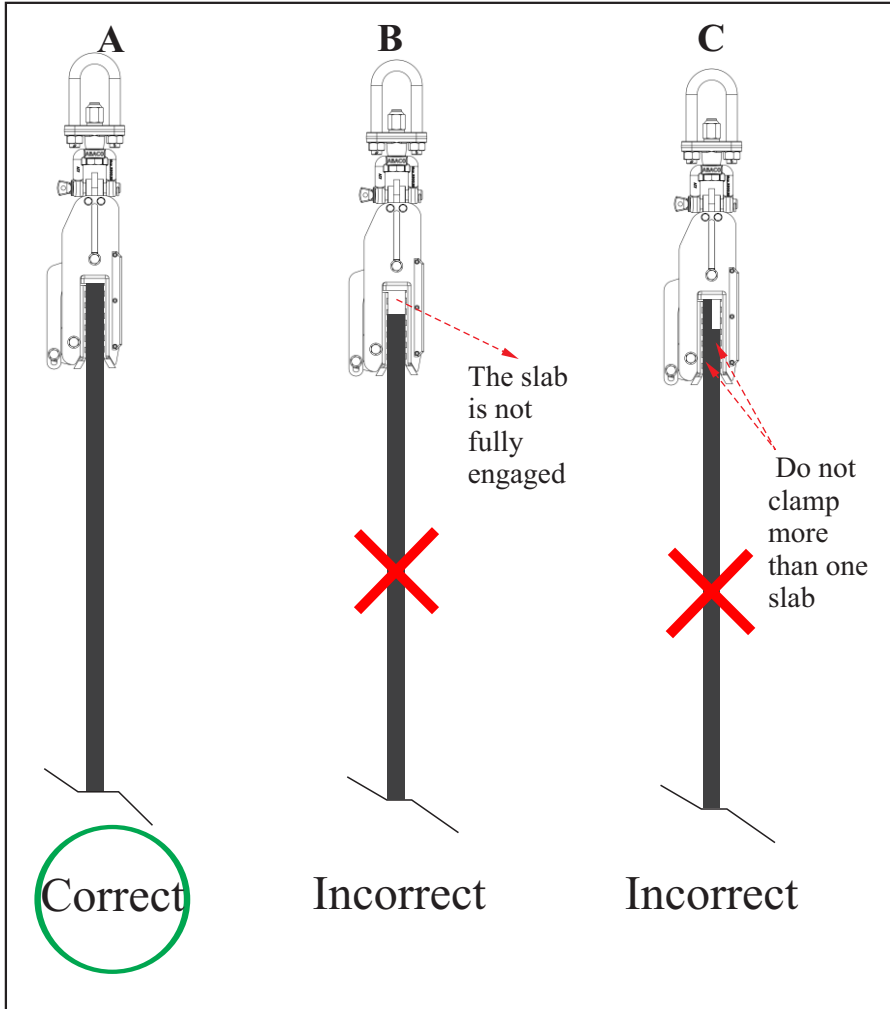
- *Before lowering the slab to the stand or rack, make sure that there are no obstacles to interfere.*
- *If the lifter still grips the slab, perform the lifting operation again by moving up and down to unlock the locking latch.*

## **IV. APPENDIX:**

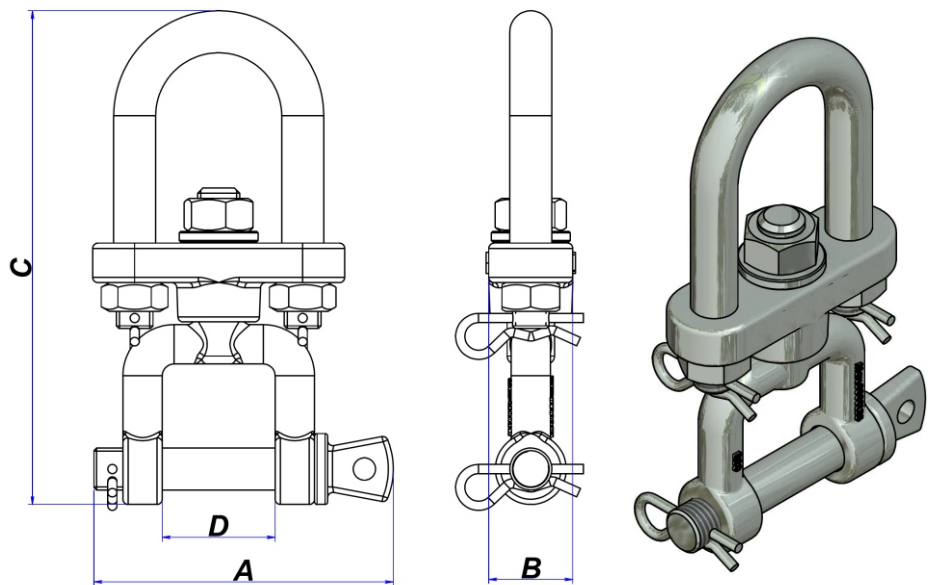
### **1. Correct and incorrect methods of gripping slab:**

#### **WARNING**

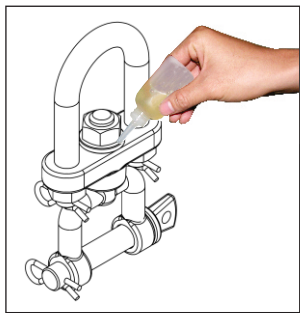
- Do not exceed W.L.L (Work Load Limit)
- Slab thickness must be within G.R. (Grip Range)
- Inspect and replace the Swivel shackle as needed



**2. Swivel shackle:**



Length (A) inch (mm)	Width (B) inch (mm)	Height (C) inch (mm)	Grip range (D) inch (mm)
4 ½ (115)	1 ¼ (32)	7 ¾ (188)	1 11/16 (43)



- Step 1: Check the wear of friction part.

- Step 2: Lubricate Oil into friction surface once a week.

**Note:** - Lubricate oil once a week.  
- Lubricate around the lining.



### **3. Instructions for clamping multiple slabs:**

- Using the Multi Slab Safeguard Sling to clamp multiple slabs at the same time (Figure 5.1).



Figure 5.1

- After the lifter lift the stone slabs out of the frame (Figure 5.2), install the Multi Slab Safeguard Sling to the lifter (Figure 5.3).

**Note:** Pull down the strap and rotate the turn-knob clockwise to fix the ratchet strap clamping tightly to the slabs.

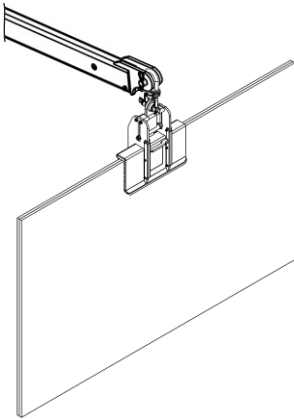


Figure 5.2

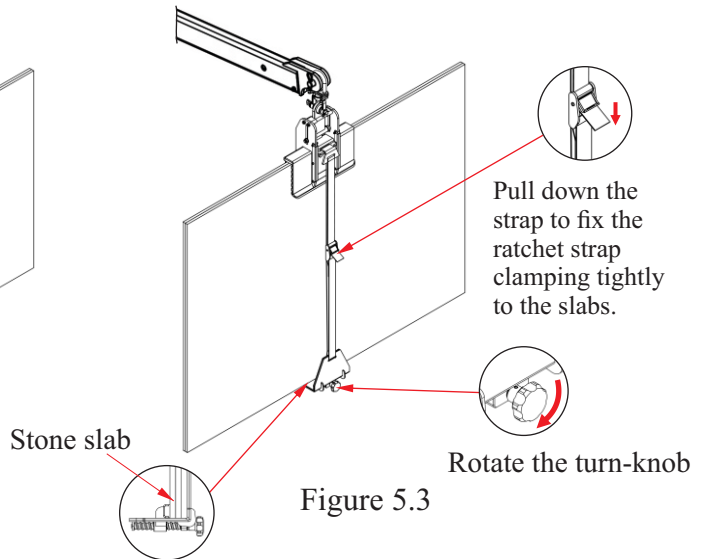
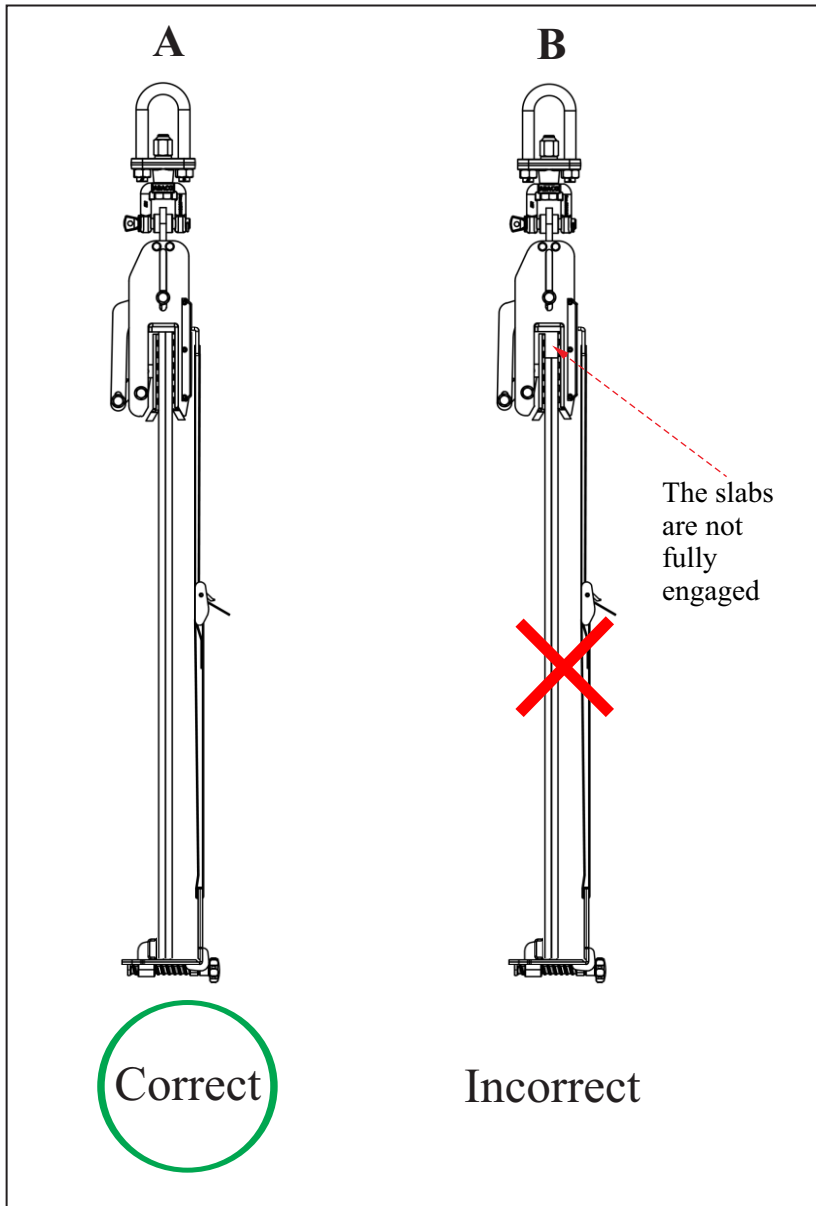


Figure 5.3

**Correct and incorrect methods of clamping multiple slabs:**



## **V. TECHNICAL PROBLEM & SOLUTION:**

<b>Technical problems</b>	<b>Causes</b>	<b>Solutions</b>
Automatic locking latch does not work properly	Dust and/or rust	Lubricate, clean the locking latch
Clam plates cannot clamp the slab tightly	Deformation of spring	Replace with a new spring

## **VI. INSPECTION & MAINTENANCE:**

- Schedule check the equipment regularly, not limited to check the rubber pad of clamp plates, springs, and automatic locking latch.
- Keep necessary spare parts on hand always for immediate maintenance or repair purposes.
- Check the tightening conditions of all nuts and bolts periodically.
- Always keep the lifter clean and away from grease or other substances as they may reduce the effectiveness of the rubber pads and cause them lose their grip.
- Store this equipment in a well-ventilated place (dry and cool); avoid places with high heat and/or humidity.

## **VII. WARRANTY POLICY:**

At the time of delivery, it is necessary to inspect the **Super Multi Material Lifter Automatic (ASVL30A-M2)** to make sure that it has not been damaged during shipment. The product at the time of dispatch is warranted to be free from 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 **Super Multi Material Lifter Automatic (ASVL30A-M2)** 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 were not followed.
- Damage was due to inadequate maintenance and inspections.
- Damage was 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 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 of equipment failure to operate the machine and/or requiring technical support, operator/user is requested to contact with our Customer Support Department. Our member will inform you (operator/user) of the appropriate procedures accordingly and 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 specifications.



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