



**ABACO MACHINES**

# **OPERATION MANUAL**

## **ABACO SCISSOR CLAMP (SC100)**



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**APPLICABLE MODEL  
of this SCISSOR CLAMP:**

**SC100**

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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.*

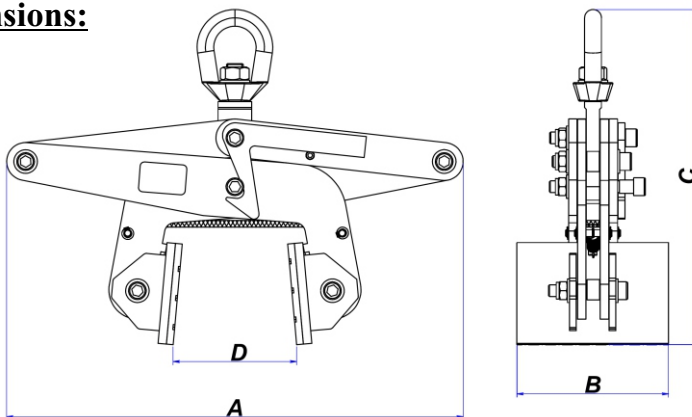
## **I. EQUIPMENT GENERAL INFORMATION:**

- Scissor Clamp (SC100) is designed for clamping and moving the piece of stone or slab with various thickness ranging from  $\frac{3}{8}$ " (10mm) to  $3 \frac{15}{16}$ " (100 mm). It is suitable for both natural and artificial stones.
- The stopper has vulcanized rubber layers to protect stone slabs.
- The rubber pads covered the clamp jaws are designed to prevent scratches or damages to the piece of stone or slab being carried during operation.
- The equipment is designed with all the protection features to increase safety level for the operator and productivity.

## **II. TECHNICAL SPECIFICATIONS:**

- SC100 is mainly made out of steel.
- The fully vulcanized rubber pads provide an added grip and prevent damage to the slab.
- SC100 shall be used with a hoist or with a forklift boom, to clamp, lift and transport a piece of stone or slab.

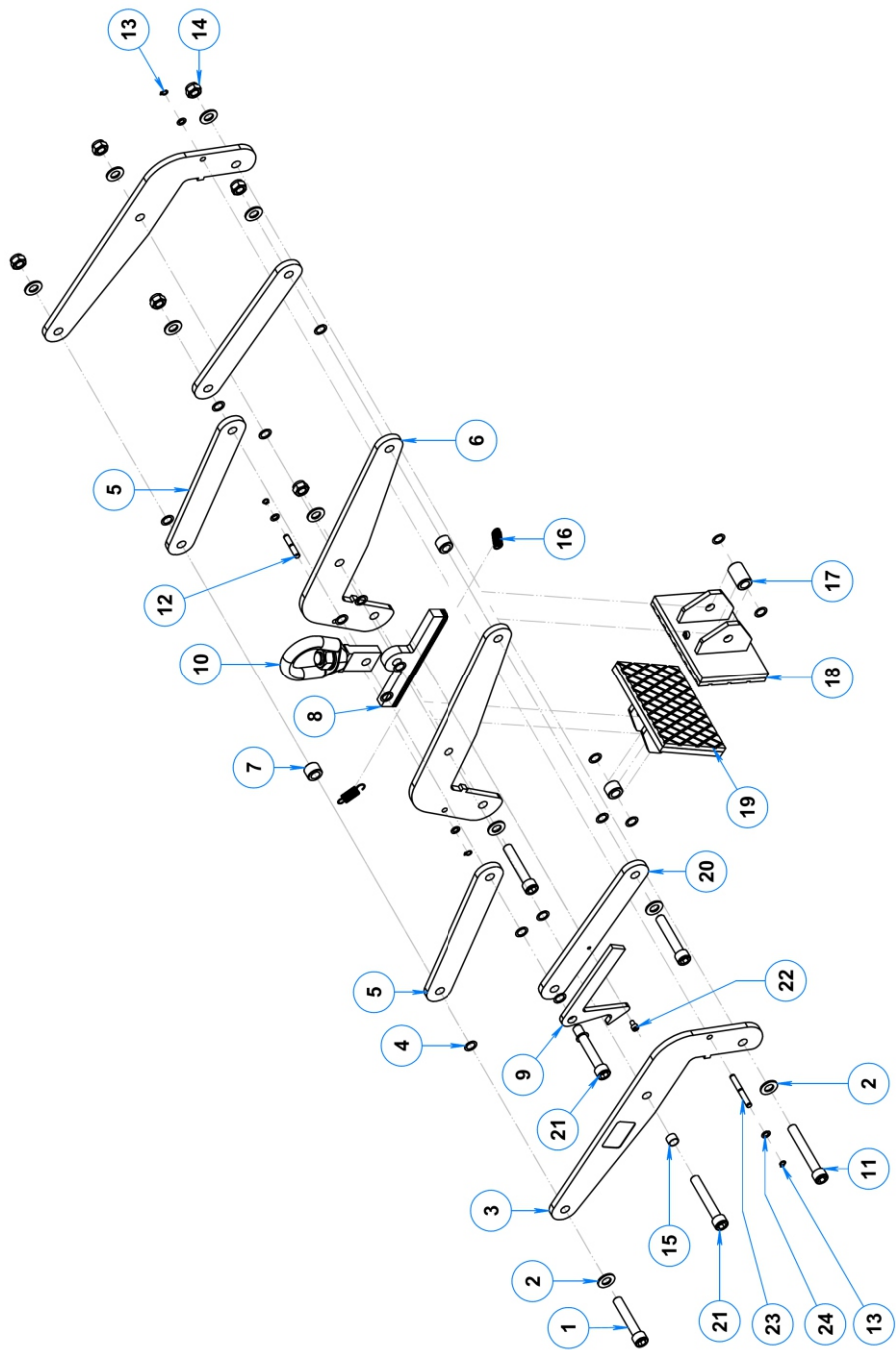
### **1. Dimensions:**



Length (A) inches (mm)	Width (B) inches (mm)	Height (C) inches (mm)	Grip Range (D) inches (mm)	W.L.L* lbs (kg)
21 $\frac{5}{16}$ (542)	7 $\frac{1}{16}$ (180)	15 $\frac{3}{4}$ (400)	$\frac{3}{8} \sim 3 \frac{15}{16}$ (10 ~ 100)	2860 (1300)

\* W.L.L: Work Load Limit

**2. Spare part list:**



## SPARE PART LIST

PART NUMBER	DESCRIPTION	QTY.
SC100-01	Hexagon socket head cap screw M14 x 80	3
SC100-02	Washer Ø14 x Ø30 x 1.5	10
SC100-03	Lever arm 1	1
SC100-04	Washer Ø14 x Ø20 x 0.8	18
SC100-05	Clamp arm 1	3
SC100-06	Lever arm 2	3
SC100-07	Spacer 1	3
SC100-08	Stopper	1
SC100-09	Locking latch	1
SC100-10	Swivel hook	1
SC100-11	Hexagon socket head cap screw M14 x 100	1
SC100-12	Pin 1	1
SC100-13	Circlip Ø8	4
SC100-14	Lock nut M14	6
SC100-15	Spacer 2	1
SC100-16	Spring, clamp jaw	2
SC100-17	Spacer 3	1
SC100-18	Clamp jaw, left	1
SC100-19	Clamp jaw, right	1
SC100-20	Clamp arm 2	1
SC100-21	Hexagon socket head cap screw M14 x 90	2
SC100-22	Hexagon socket head cap screw M6 x 10	1
SC100-23	Pin 2	1
SC100-24	Washer, aluminum Ø8	4

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

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

**WARNING:** Before using your clamp, please confirm the surfaces of the slab to be lifted are flat, smooth, and free from dust, oil, or any kind of such harmful substances which can cause slipping.

##### **a. For Scissor Clamp:**

##### **Caution:**

- 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 piece of slab or sheet up slowly and in a careful manners. If the piece of slab or sheet is not balanced, lower the clamp to make appropriate position adjustment before lift it up again.

##### **Warnings:**

- Inspect the clamp carefully and thoroughly. If the rubber pads of clamp jaws are worn-out or damaged, do not use.
- This equipment is designed with grip range from  $\frac{3}{8}$ " (10mm) to  $3\frac{15}{16}$ " (100 mm). Determine the weight of the stone slab to be lifted. Do not exceed the WLL (Work Load Limit) shown on the page 1.
- All employees must stand within a safe area while slabs are being lifted or moved.
- Make sure to check the rubber pads are free from dirt, grease and other substances may reduce their effectiveness. Clean the rubber pad surfaces with water. Then wait till dry and use the device after.
- Do not lift wet slabs. The grip depends on friction. Lifting wet slabs may cause the rubber pads to lose their grips.



- No more than one piece should be lifted at any time.
- Position the clamp at the center of the slab to be lifted, so that the load is balanced.
- Make sure that the slab is inserted to the full depth into the opening of the clamp.
- Light-colored slabs are not recommended to be clamped by a black rubber clamp plate (due to marking the dirt on surfaces).

#### **b. General Safety Instructions:**

##### **Cautions:**

- In order to protect from any accident, it is important to follow safety rules and regulations.
- Read the operation manual carefully before using it.
- Make sure that the operation manual is always available beside the place where the lifter is used.
- Give permissions to operate the Scissor Clamp only to persons who are well-trained and competent to work.
- Use appropriate PPE (Personal Protective Equipment) such as helmets, gloves, safety boots, etc.
- Make sure the equipment has no damaged and that all functions are correct and in safe working condition.
- Repairs and checks are to be made only by qualified persons.
- If any part is worn-out, replace it with a new one or contact the manufacturer.
- Clean the device thoroughly after each use.
- Store the lifter in a well-ventilated place, avoid places with high heat or humidity.

**Warnings:**

- Never leave a lifted load unsupervised.
- Never allow yourself or anybody to go under the lifted slab.
- Be sure to check the clamp and its accessories duly and periodically, that there should be no damage or loosening of fasteners or any irregular unfunctional sound, also before using reconfirm those points once again, then use the lifter for your safe operations.

**2. Device usage:**

Preliminary Safety Checks:

“Competent Person” shall check the following before each use.

**WARNING:**

Check the following before and after operations:

- The Scissor Clamp is correctly installed/hung in the right way and is to be operated in safe working conditions.

**Step 1:** Hook the Scissor Clamp to a forklift boom (Figure 1.1)

**Warning:** Place the device at a safe place, then crane hook or Forklift boom has to approach the device for installation. Avoid lifting the device by hands in order to avoid dropping the device unintentionally.

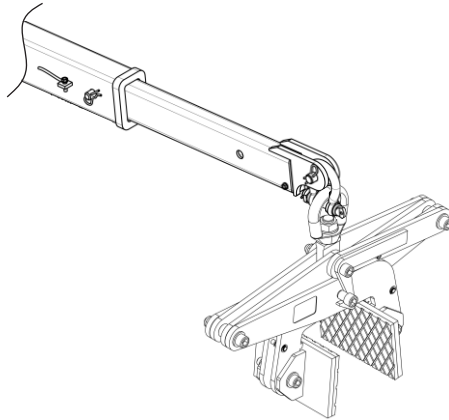


Figure 1.1

**Step 2:** Clamp the slab

Move the clamp over the slab to be lifted (Figure 2.1).

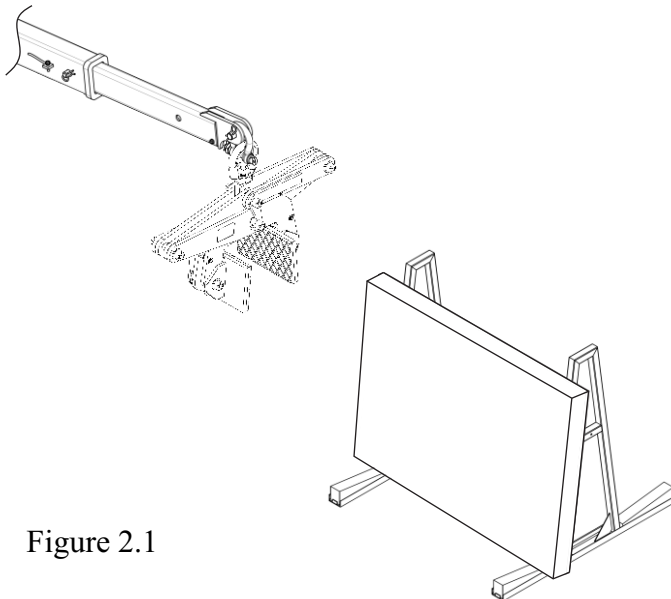


Figure 2.1

- Lowering the device to allow the slab fully inserted into the opening of the clamp (Figure 2.2), place at the center of the material and the top edge of the slab to touch the stopper (Figure 2.3).

**Note:** *Position the device securely at the center of the material so that the load is balanced.*

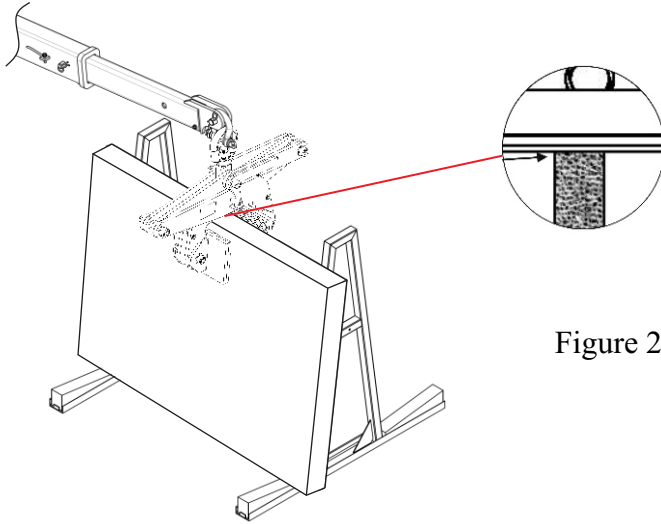


Figure 2.3

- Unlock the locking latch for lifting slabs up (Figure 2.4). Lift the scissor clamp with confirming the stone slab is gripped firmly (Figure 2.5).

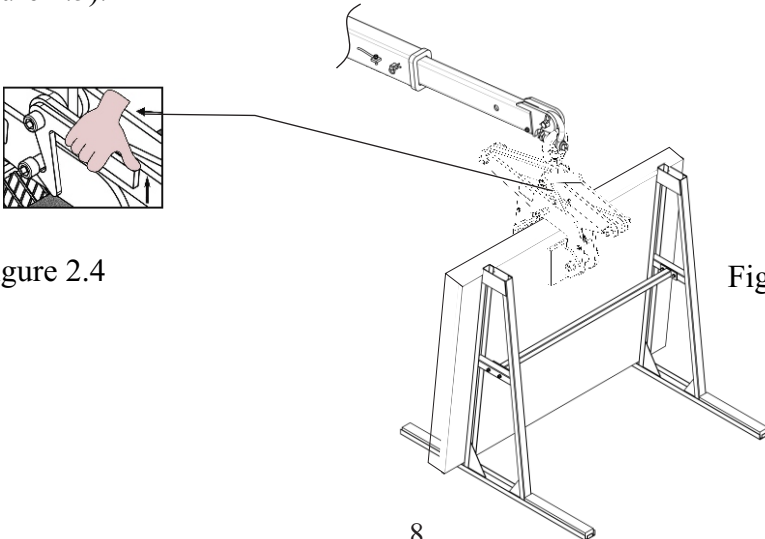


Figure 2.4

Figure 2.5

**Step 3: Move the stone slab (Figure 3.1)**

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

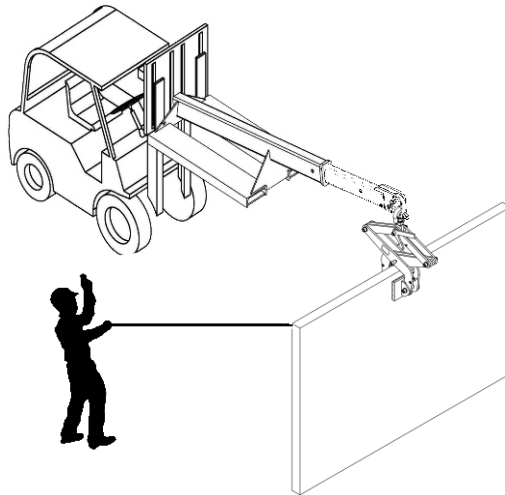


Figure 3.1

- Move the stone slab to the desired position. After that, lower the stone slab gently until the locking latch lock the lifting. Try to keep the clamp always in the open situation. Then move the lifter away from the slab (Figure 3.2).

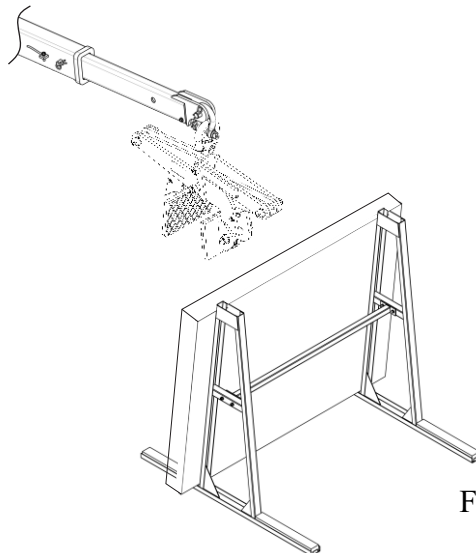


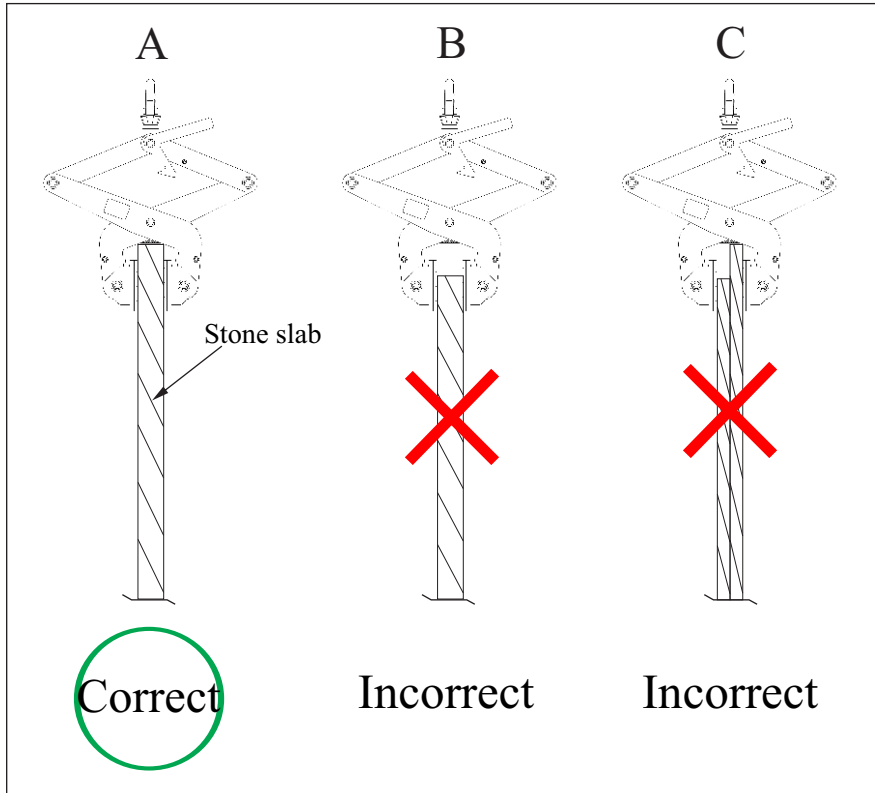
Figure 3.2

## **IV. APPENDIX:**

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

#### **WARNING**

- Do not exceed W.L.L (Work Load Limit, page 1).
- Material thickness must be within G.R. (Grip Range, page 1)



### **2. How to lubricate oil to the friction**



- Step 1: Check the lubricating oil of friction part.
- Step 2: Lubricate Oil into friction surface of the spacer once a week.

## **V. TECHNICAL PROBLEMS AND SPECIFICATIONS:**

<b>Technical problems</b>	<b>Cause</b>	<b>Solution</b>
Rubber pads of clamping jaws are damaged	Rubber pads are worn out or deformed	Replace with a new clamp jaw
It's hard to grip the stone slab	The swivel joints are rusted and/or dusted	Clean equipment, lubricate oil into the swivel joints

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

- Schedule periodic maintenance for the lifter, especially for the rubber pads of clamp plates, and locking latch.
- Operator is recommended to keep necessary spare parts on hand always for immediate maintenance or repair purposes.
- Regularly check the tightening conditions of all bolts and nuts.
- 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 the lifter in a well-ventilated place, avoid places with high heat or humidity.

## **VII. WARRANTY POLICY:**

At the time of delivery, it is necessary to inspect the **Scissor Clamp (SC100)** 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 **Scissor Clamp (SC100)** 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 are not followed.
- 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 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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