



**ABACO MACHINES**

# **OPERATION MANUAL**

## **ABACO SCISSOR CLAMP**

### **(SC350)**



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**APPLICABLE MODEL**  
**of this SCISSOR CLAMP**

**SC350**

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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.*

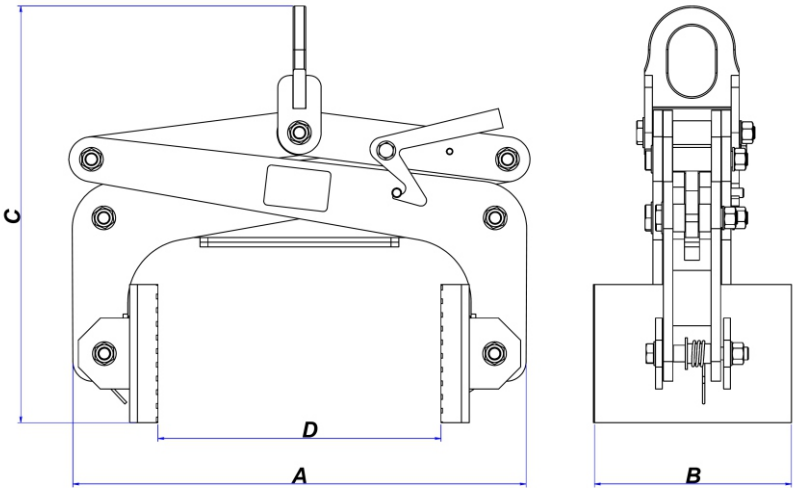
## **I. EQUIPMENT GENERAL INFORMATION:**

- Scissor Clamp (SC350) is designed to clamp and move a piece of stone block or slab with various thickness ranging from 150 mm to 350 mm. It is suitable for both natural and artificial stones, or other flat materials.
- The stopper has a plastic layer to protect the piece of stone slab.
- The rubber pads covered the clamp plates are designed to prevent scratches or damage to the piece of stone 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:**

- SC350 is mainly made out of steel for sturdiness and high durability purposes.
- The scissor clamp shall be used with a crane, forklift boom, or with a forklift truck to clamp, lift, and transport the material.
- The scissor clamp comes with a specialized swivel shackle, which makes the lifter and material to rotate 360<sup>0</sup> easily.

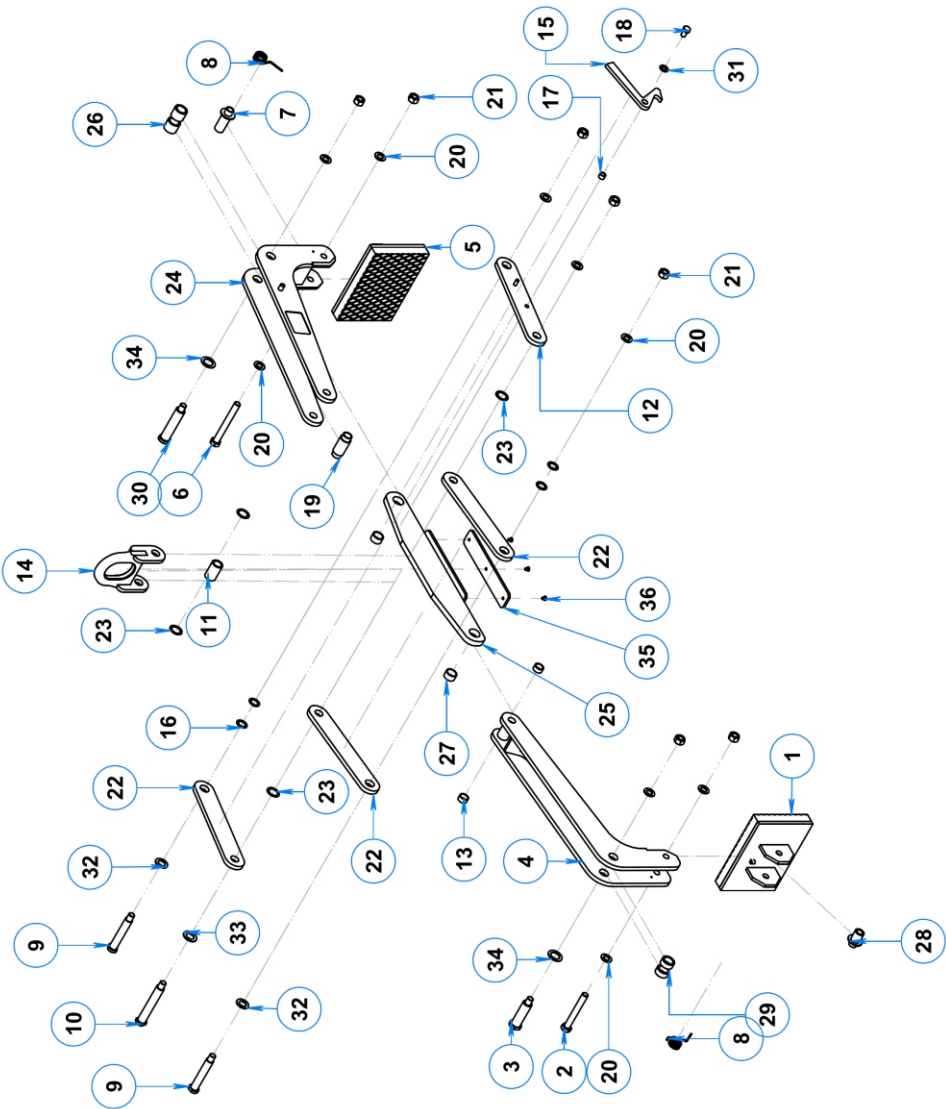
**1. Dimensions:**



Length (A) inches (mm)	Width (B) inches (mm)	Height (C) inches (mm)	Grip Range (D) inches (mm)	*W.L.L lbs (kg)
22 5⁄8 (575)	9 13⁄16 (250)	20 13⁄16 (528)	5 7⁄8 ~ 13 3⁄4 (150 ~ 350)	3520 (1600)

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

**2. Spare part list:**



## SPARE PART LIST

DESCRIPTION	PART NUMBER	QTY.
Clamp plate, right	SC350-01	1
Bolt M16 x 120	SC350-02	1
Pin 1	SC350-03	1
Lever arm 2	SC350-04	1
Clamp plate, left	SC350-05	1
Bolt M16 x 140	SC350-06	1
Bushing 1, clamp plate	SC350-07	1
Spring, clamp plate	SC350-08	2
Pin 2	SC350-09	2
Pin 3	SC350-10	1
Spacer 1	SC350-11	1
Clamp arm 2B	SC350-12	1
Spacer 2	SC350-13	2
Hook	SC350-14	1
Locking latch	SC350-15	1
Brass washer ø20	SC350-16	4
Bushing, latch	SC350-17	1
Bolt M12 x 20	SC350-18	1



<b>DESCRIPTION</b>	<b>PART NUMBER</b>	<b>QTY.</b>
Spacer 3	SC350-19	1
Washer ø16	SC350-20	9
Nut M16	SC350-21	7
Clamp arm 2A	SC350-22	3
Brass washer ø25	SC350-23	4
Lever arm 1	SC350-24	1
Stopper	SC350-25	1
Spacer 4	SC350-26	2
Spacer 5	SC350-27	2
Bushing 2, clamp plate	SC350-28	1
Spacer 6	SC350-29	2
Pin 4	SC350-30	1
Washer ø12	SC350-31	1
Washer ø20	SC350-32	2
Washer ø22	SC350-33	1
Washer ø25	SC350-34	2
Plastic plate, stopper	SC350-35	1
Hexagon socket countersunk head cap screw M6 x 12	SC350-36	3

### **III. SAFETY INSTRUCTIONS**

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

**WARNING:** Before using the Scissor Clamp, confirm the surface of the stone or slab to be lifted is evenly flat, smooth and free from dust, oil or any kind of such harmful substances. Following this advise to prevent slipping the goods during operation.

##### **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. Safe rules and regulations must be strictly followed.
- Lifting the piece of stone or slab up slowly and in a careful manners. If the piece of stone or slab is not balanced, lower the clamp to make appropriate position adjustment before lift it up again.
- Before perform lifting procedure, 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 Scissor Clamp carefully and thoroughly. If the rubber pads of clamp plates are worn-out or damaged, do not use.
- Determine that the weight of the stone slab should not exceed the WLL (Work Load Limit) shown on the equipment. According to the manufacturer's regulations, the grip range must be within the specified clamping range (page 2).
- During operation, all workers in the work environment must be cautions and ensuring they are standing and moving safety 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 use.

- Do not lift wet stone or slab. The grip depends on friction. Lifting wet stone or slab 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 material to be lifted, so that the load is balanced.
- Ensure that the stone slab is inserted to the full depth into the opening of the clamp (see appendix, page 12).
- The Scissor Clamp model comes with Black rubber or White rubber. Use black rubber for dark slabs and white rubber for light and white colored slabs. Do not use black rubber for clamping the light slabs because it leaves rubber marks on the slab's surface.

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

### **Caution:**

- In order to protect 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 Scissor Clamp is used.
- Give permissions to operate Scissor Clamp only to the persons who are well-trained and competent to work.
- 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, repair or 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. Periodical lubrication can reduce wear. If worn-out, replace with a new one.
- Clean this equipment thoroughly after use.

- Store the device in a well-ventilated place, avoid plates with high heat and/or humidity.

**Warnings:**

- Never leave your loaded Scissor Clamp unattended.
- Never allow yourself or anybody to go under a lifting material.
- Be sure to check the clamp and its accessories duly and periodically. There should be no damage or loosening of fasteners or any irregular unfunctional sound. Always revisit this safety operation manuals and be cautious with all the warnings throughout this manual before operate the equipment.

**2. Device usage:**

**Preliminary Safety Checks**

Safety inspection must be conducted by a trained and well-qualified individual prior operating the equipment.

**WARNING:**

- SC350 should installed and attached appropriately and safely as sketched below to ensure safe operation.
- The swivel shackle should installed and secured correctly and tightened accordingly.

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

**Warning:** Place the Scissor Clamp in a safe place, then move the forklift boom or crane to hook into the Clamp. Do not lift the Clamp by hand to avoid dropping it.

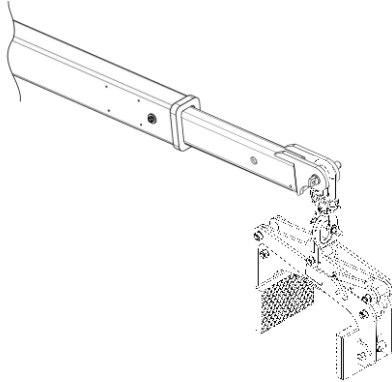


Figure 1.1

**Step 2:** Clamp the slab

- Move the Clamp close to the slab to be lifted (Figure 2.1).

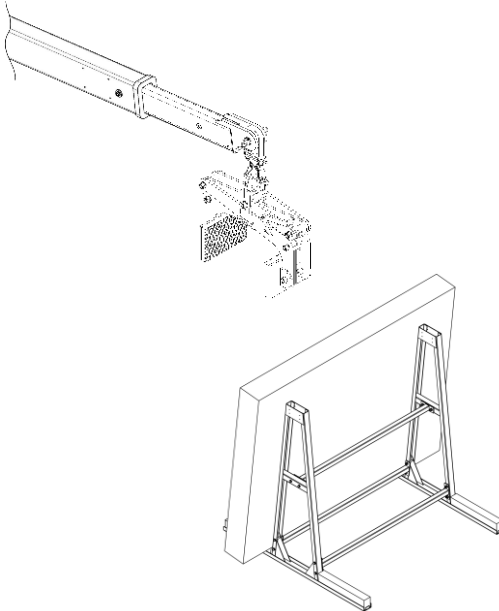


Figure 2.1

- Lowering the Clamp to allow the slab fully inserted into the opening of the Clamp (Figure 2.2), and the slab shall be in between the two clamp plates and the top edge of the slab to touch the stopper (Figure 2.3).

**Note:** Position the clamp securely at the center of the slab so that the load is balanced.

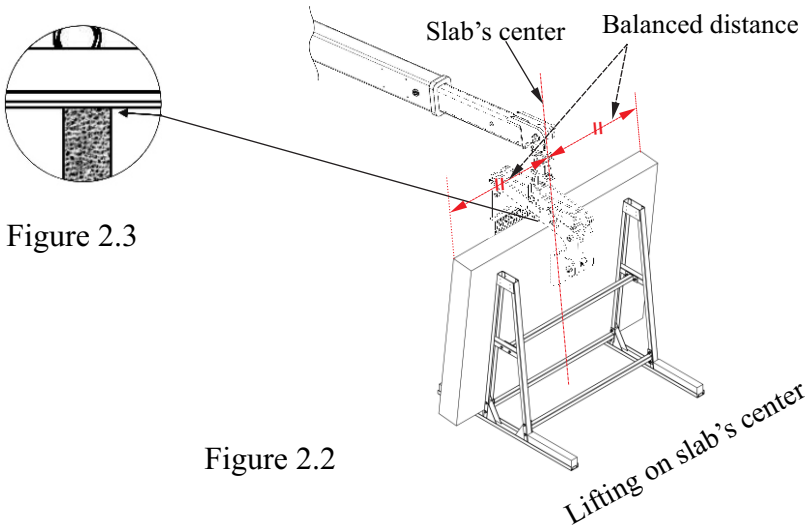


Figure 2.3

Figure 2.2

- Pull up the locking latch to disengage the clamp plates for lifting slabs up (Figure 2.4). Lift the Clamp slowly with confirming the stone slab is firmly gripped (Figure 2.5).

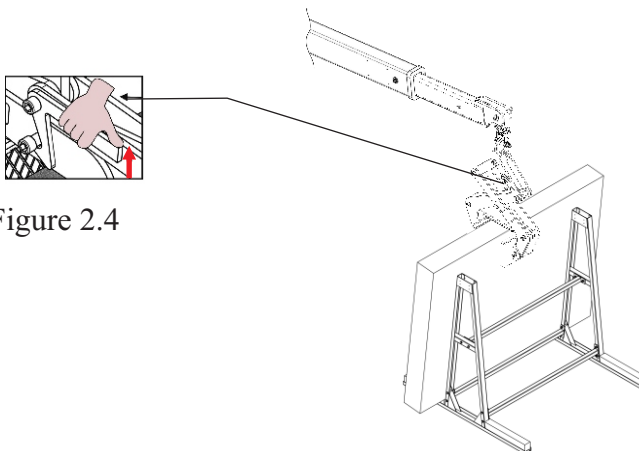


Figure 2.4

Figure 2.5

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

**Note:** *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.*

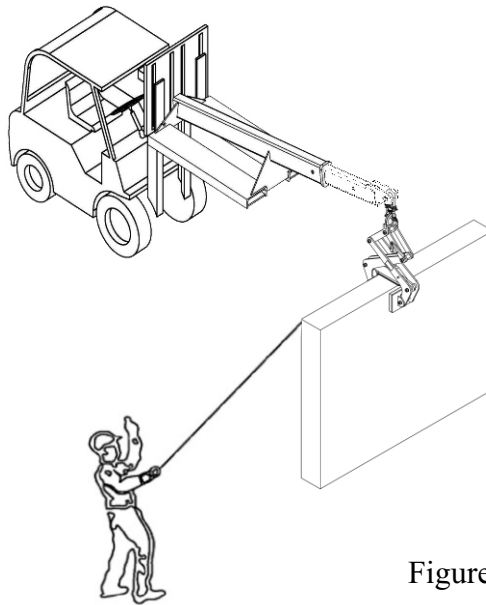


Figure 3.1

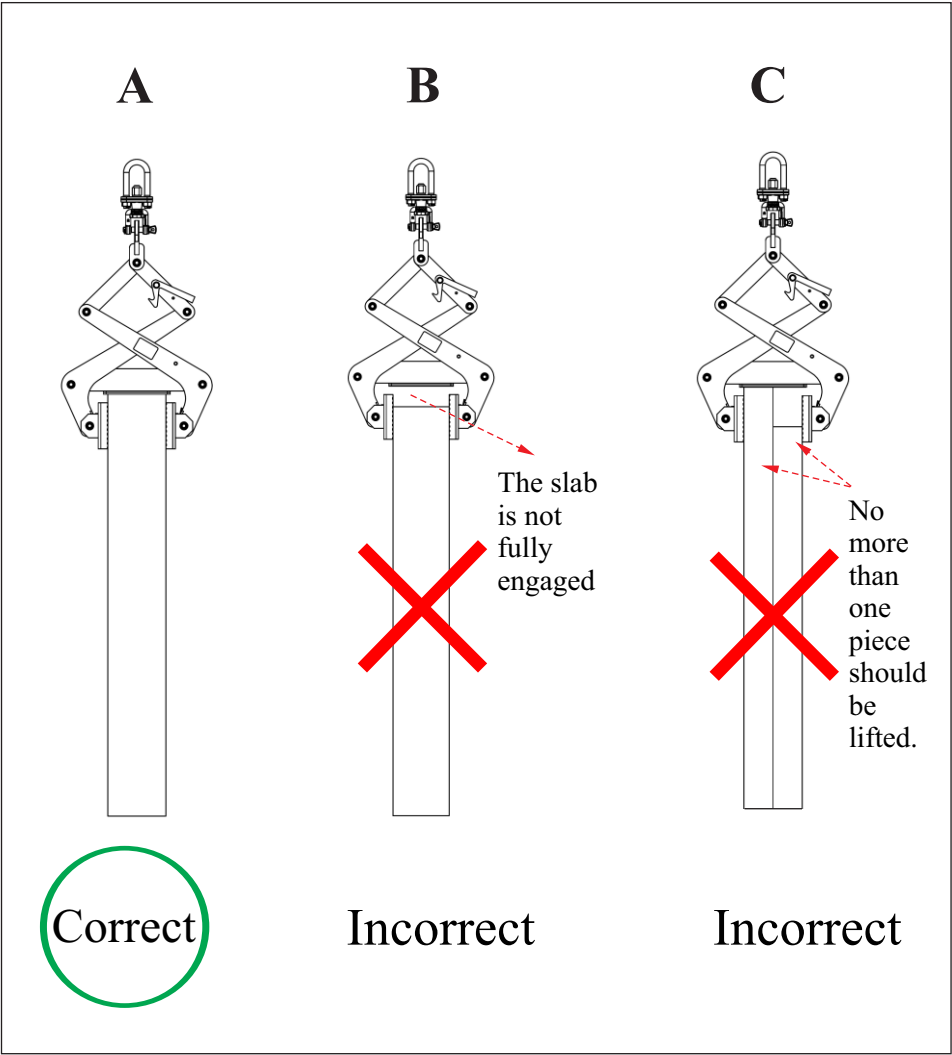
**Step 4:** Remove the clamp from the stone slab

- Move the slab to the desired location, lower the clamp slowly until the locking latch locks to keep the clamping jaws open, then lift the Clamp out of the stone slab.

**Note:** *Before lowering the slab, ensure that there are no obstructions preventing the stone from being lowered.*

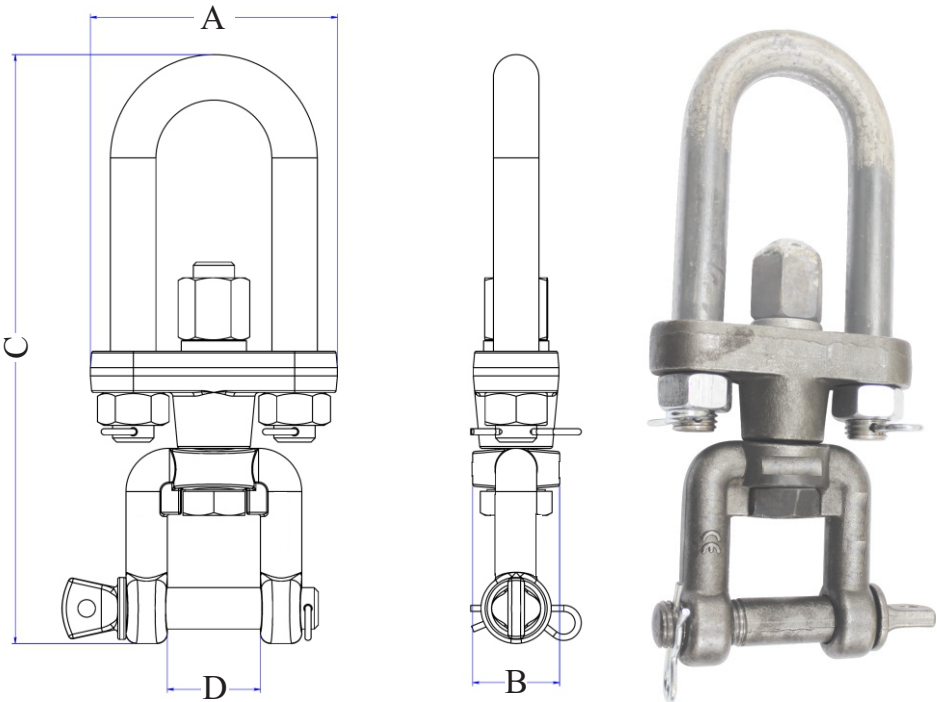
**IV. APPENDIX:**

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

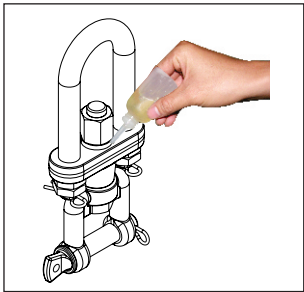




**2. Swivel shackle:**



<b>Lenght (A)</b> <b>inch (mm)</b>	<b>Width (B)</b> <b>inch (mm)</b>	<b>Height (C)</b> <b>inch (mm)</b>	<b>Distance (D)</b> <b>inch (mm)</b>
5 ¼ (133)	1 ⅝ (42)	11 ¼ (286)	1 ¾ (45)



- Step 1: Check the Swivel shackle’s lubricants, and the wear of friction parts.
- Step 2: Lubricate the Hydraulic oil to the surface once a week.

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

<b>Technical Problems</b>	<b>Causes</b>	<b>Solutions</b>
It's hard to manipulate the stone slab	Swivel joints are rusty or dusty.	Clean and lubricate into the swivel joints.
The rubber pads of clamping plates are damaged.	The rubber pads are worn or deformed.	Replace with new clamping plates.

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

- Schedule periodic maintenance.
- Always keep necessary spare parts on hand for maintenance or repair.
- Check and tighten nuts and bolts on regular basis.
- Always keep the carry clamps clean and away from grease or other substances as they may reduce the effectiveness of the rubber pads and cause them to lose their grip.
- Store 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 (SC350)** 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 **Scissor Clamp (SC350)** 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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