



ABACO MACHINES

OPERATION MANUAL

ABACO SCISSOR CLAMP

(SC400)



ABACO MACHINES (USA)

14508 S. Garfield Ave., Paramount, CA 90723, USA

Tel : 310-532-0366 Fax : 310-532-0499

Email : sales@abacomachines.com

Website : www.abacomachines.com

**APPLICABLE MODEL
of this SCISSOR CLAMP:**

SC400

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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.

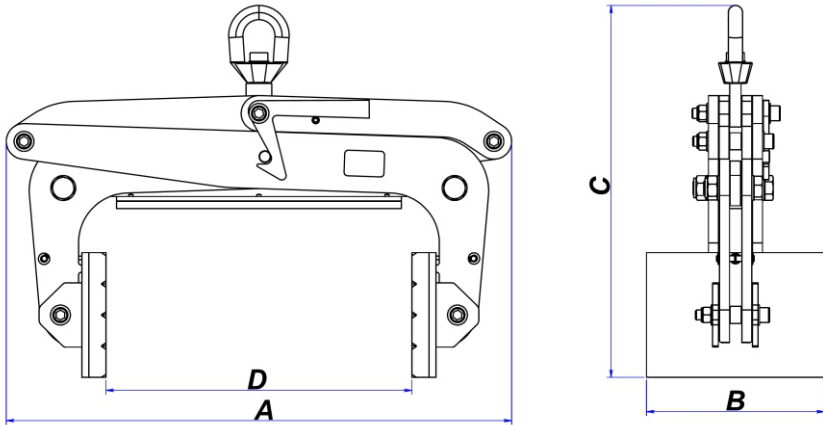
I. EQUIPMENT GENERAL INFORMATION:

- Scissor Clamp (SC400) is designed for clamping and moving the stone slab with thickness from 200mm to 400mm. It is suitable for natural stone and for artificial stone both.
- The stopper has vulcanized plastic layer to protect stone slabs.
- The clamp jaw is covered by vulcanized rubber.
- Protects operators in safe, also increases productivity.

II. TECHNICAL SPECIFICATIONS:

- The Scissor Clamp is made of steel.
- On the surfaces of slab contact there are rubber layers of to protect the slabs and to increase adhesion to the slab while in operation.
- It is designed to work with a hoist or a forklift boom, to clamp, lift and move the stone slabs.

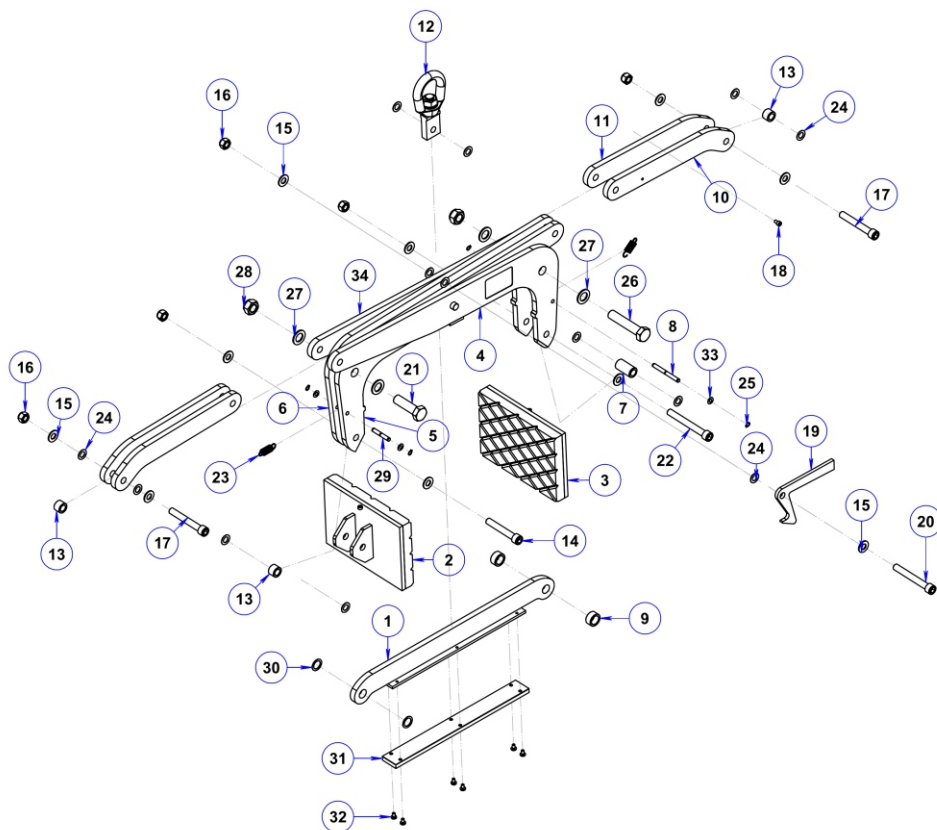
1. Dimensions:



Length (A) inches (mm)	Width (B) inches (mm)	Height (C) inches (mm)	Grip range (D) inches (mm)	W.L.L lbs (kg)
28 1/8 (715)	7 1/16 (180)	18 7/8 (480)	7 7/8 ~ 15 3/4 (200 ~ 400)	2420 (1100)

W.L.L: Work Load Limit

2. Spare part list:



PART NUMBER	DESCRIPTION	QTY.
SC400-01	Stopper	1
SC400-02	Clamp jaw, left	1
SC400-03	Clamp jaw, right	1
SC400-04	Lever arm 1	1
SC400-05	Lever arm 2	1
SC400-06	Lever arm 3	1
SC400-07	Spacer, clamp jaw	1
SC400-08	Pin 1	1

SC400-09	Bushing 1	2
SC400-10	Clamp arm 1	1
SC400-11	Clamp arm 2	3
SC400-12	Hook	1
SC400-13	Bushing 2	3
SC400-14	Hexagon socket head cap screw M14 x 90	1
SC400-15	Washer Ø14	10
SC400-16	Lock nut M14	5
SC400-17	Hexagon socket head cap screw M14 x 100	2
SC400-18	Hexagon socket head cap screw M6 x 10	1
SC400-19	Locking latch	1
SC400-20	Hexagon socket head cap screw M14 x 110	1
SC400-21	Bolt M20 x 70	1
SC400-22	Hexagon socket head cap screw M14 x 120	1
SC400-23	Spring	2
SC400-24	Brass washer Ø14	13
SC400-25	Circlip Ø8	4
SC400-26	Bolt M20 x 100	1
SC400-27	Washer Ø20	4
SC400-28	Lock nut M20	2
SC400-29	Pin 2	1
SC400-30	Brass washer Ø20	2
SC400-31	Plastic pad	1
SC400-32	Hexagon socket countersunk head cap screw M6 x 12	6
SC400-33	Washer Ø8	4
SC400-34	Lever arm 4	1

III. SAFETY INSTRUCTIONS:

1. General Warnings, Cautions and Notes:

WARNING: Before using the Scissor Clamp, confirm the surfaces of the stone slab to be lifted is 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. Safety 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.

Warnings:

- Inspect the Scissor 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 7 $\frac{7}{8}$ " (200mm) to 15 $\frac{3}{4}$ " (400 mm). Determine the weight of the stone slab to be lifted. Do not exceed the WLL (Work Load Limit) shown on the page 1.
- 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 use.

- Check to confirm all the welded joints are free from any defects or damage (e.g the welded joint separates, cracks,...)
- 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 material to be lifted, so that the load is balanced.
- The operators is responsible for the material is inserted to the full depth into the opening of the clamp.

b. General Safety Instructions:

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 the Operation Manual is always available beside the place where the 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 manufacturer for solution consultation.

WARNINGS:

- Never leave your loaded SC400 unsupervised.
- 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

Have a trained and well-qualified person to perform the safety checks on the clamp before each use.

WARNING:

- Make sure that the Scissor Clamp is correctly installed/ hung in the right manner described in this paragraph and to be operated in safe working conditions.

Step 1: Hook the Scissor Clamp to a forklift boom or to a crane hook (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.

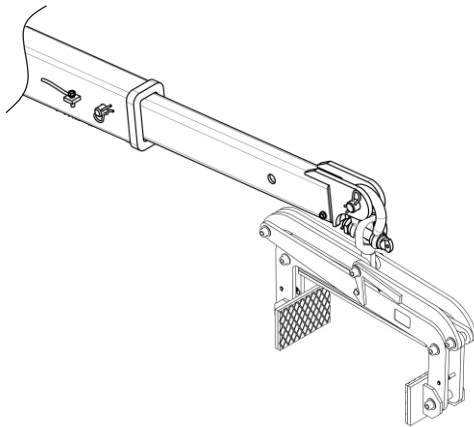


Figure 1.1

Step 2: Grip the stone slab.

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

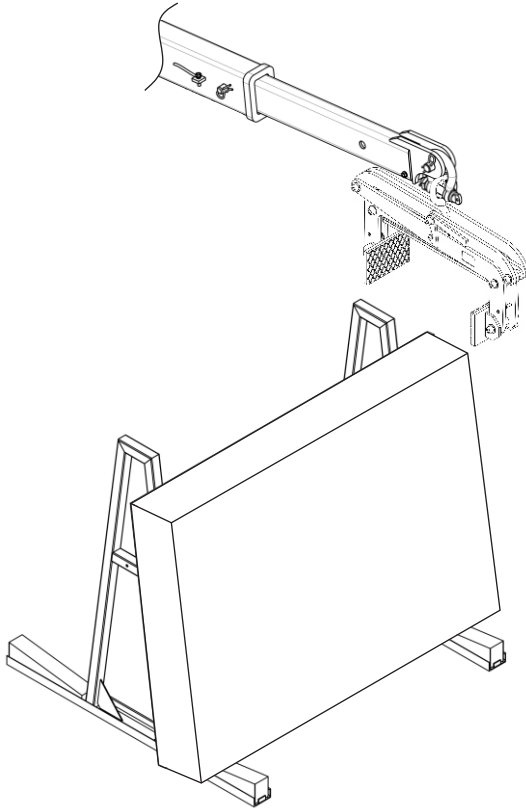


Figure 2.1

- Lower the forklift boom 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 jaws and the top edge of the slab to touch the stopper (Figure 2.3).

Warning: Position the clamp at the center of the slab so that the load is balanced.

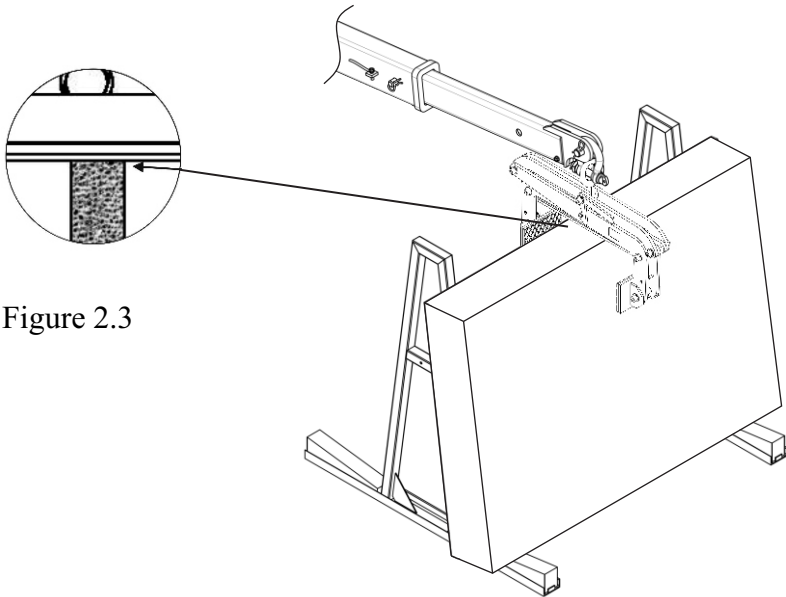


Figure 2.3

Figure 2.2

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

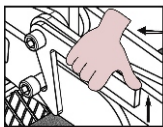


Figure 2.4

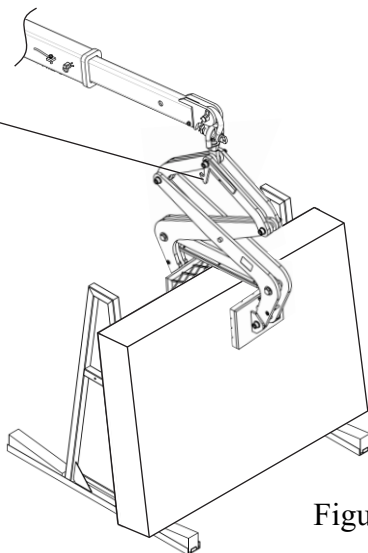


Figure 2.5

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

Cautions: *Before lowering the slab, make sure there are no obstacles to interfere with the material to be lowered.*

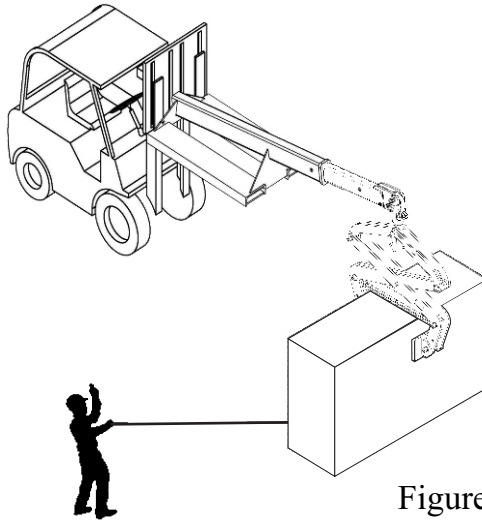


Figure 3.1

- Move the slab to the desired location, lower the clamp slowly until the locking latch lock to keep the clamping jaws open, lift the clamp out of the stone slab (Figure 3.2).

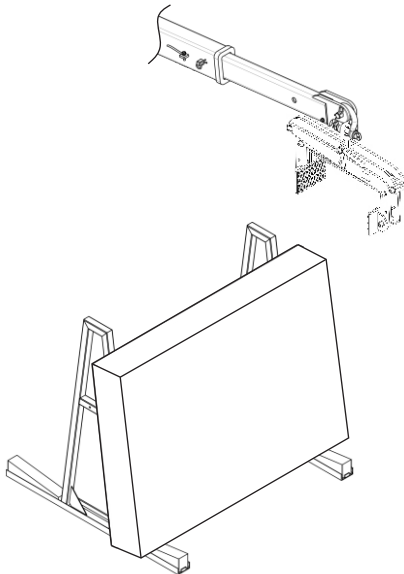
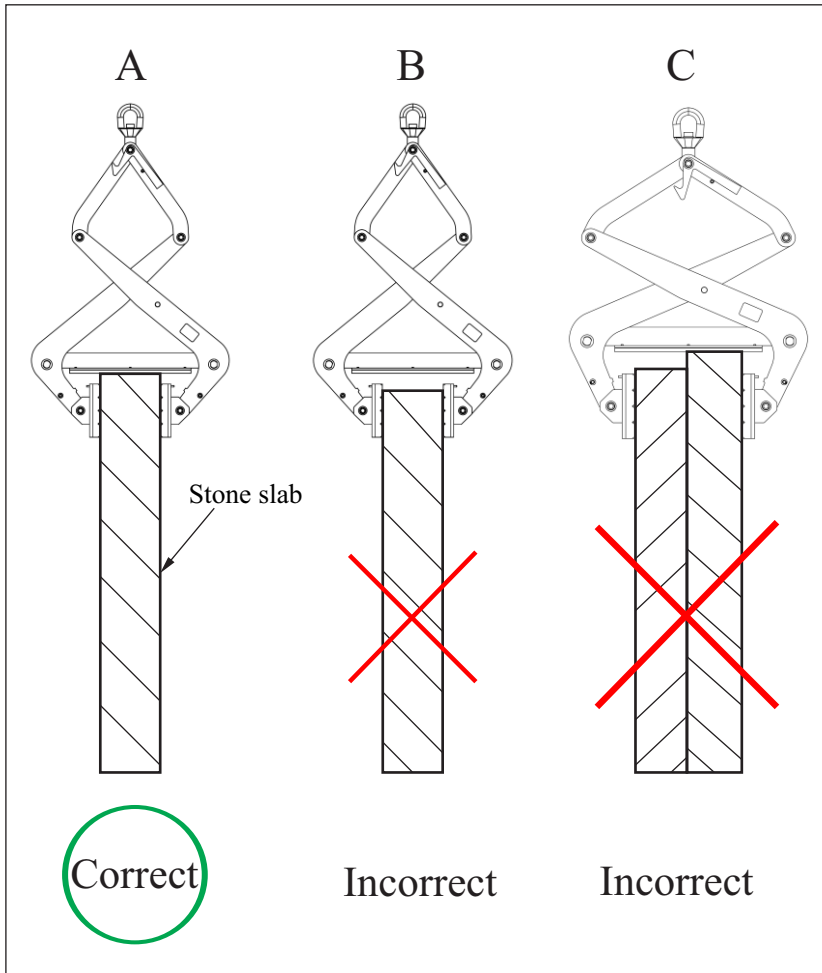


Figure 3.2

IV. APPENDIX:

1. Correct and incorrect methods of gripping slabs:



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

V. TECHNICAL PROBLEMS AND SOLUTIONS:

Technical Problem	Cause	Solution
The rubber layers of clamping jaws are damaged.	The rubber layers are worn-out or deformed.	Replace with new clamping plates.
It is hard to grip the stone slab.	Swivel joints are rust and/ or dust.	Clean the device, lubricate the swivel joints.

VI. INSPECTION & MAINTENANCE:

- Schedule periodical maintenance for the clamp, especially the rubber layers of clamping jaws.
- Always keep necessary spare parts on hand for maintenance or repair.
- Check and tighten the nuts and bolts on regular basis.
- Always keep the clamp clean and away from grease or other substances as they may reduce the effectiveness of the rubber pads and cause them lose their grip.
- Schedule periodic maintenance checking for overall and for welded part, no cracking, or any defects.
- Store in a dry and cool place, avoid places with high heat or humidity.

VII. WARRANTY POLICY:

At the time of delivery, it is necessary to inspect the **Scissor Clamp (SC400)** 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 (SC400)** 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 case of failure using the device, our Customer Support Department will inform you of the appropriate methods of dealing with your claim and advise you of your nearest approved service center.

EXCLUSIONS

Warranty does not apply for damages or failures caused by:

Incorrect use by users for misuse or for error in transportation, in handling or in maintenance.

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

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