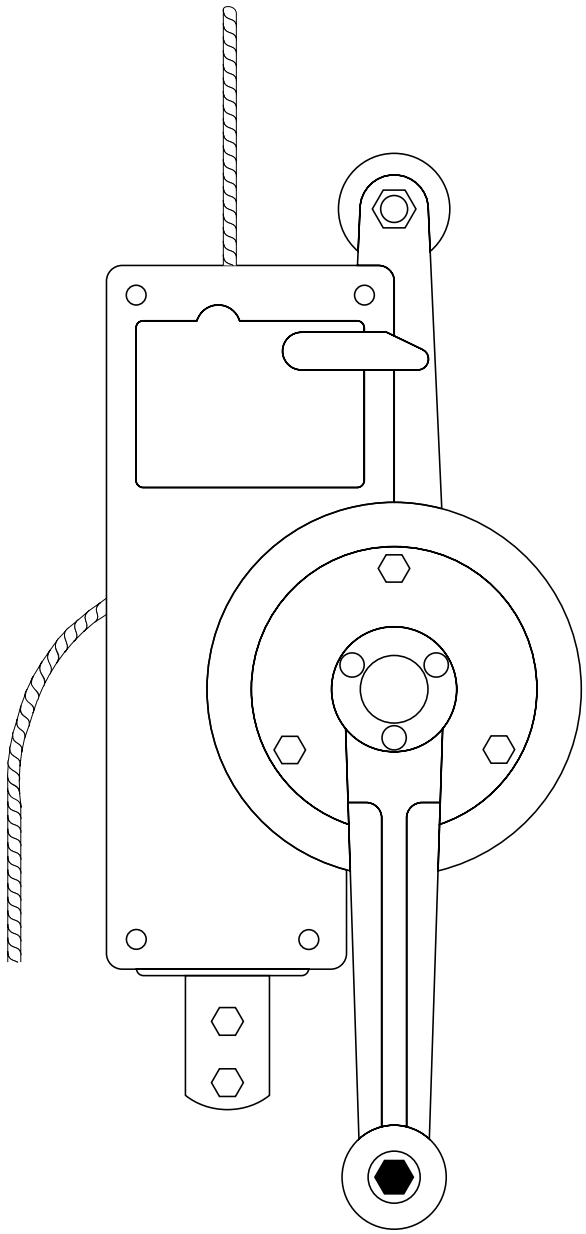
scafor®

hand operated machine for suspended access

séries 406C & 408C



Operating and maintenance instructions

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Tractel Group®

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This operating and maintenance manual applies to SCAFOR hoists from the following serial numbers:

406C series : N° 60059B
408C series : N° 80038C

For machines prior to these numbers, please consult the manufacturer, particularly regarding spare parts.

1. INTRODUCTION

The SCAFOR is a lightweight manual hoist which has been especially designed for light suspended platforms fitted with two hoists or for bosun's chairs or one-man cradles fitted with a single hoist.

The wire ropes (lifting and safety) are not stored within the unit; therefore the working height is only limited by the rope's length.

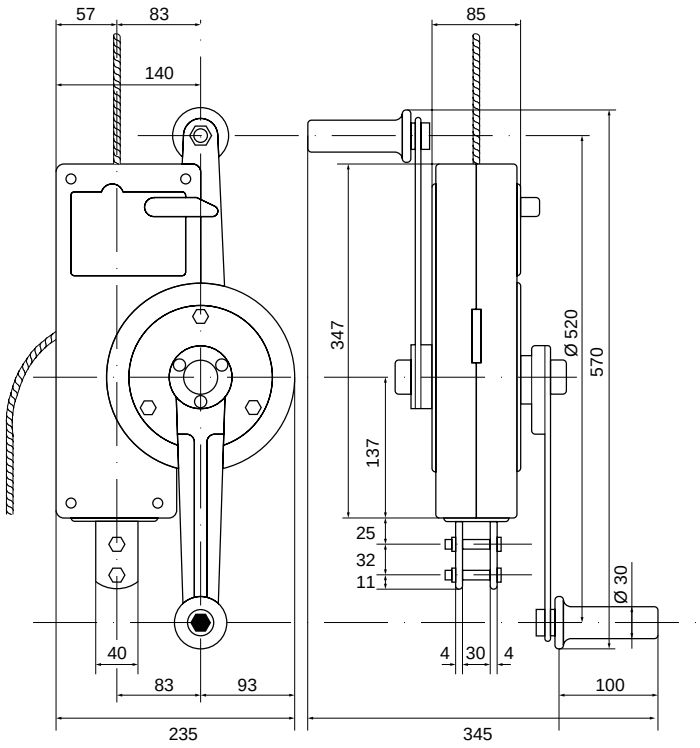
SCAFOR is in standard version with centrifugal brake (models 406C and 408C) for mounting on any stirrup (fixed or articulated) as well as for **bosun's chairs or one-man cradles.**

The two versions have different integrated safety devices (see chap. 4).

The SCAFOR is manufactured according the current safety regulations (in France: art. 13 of the decree dated 8.1.1965).

2. TECHNICAL SPECIFICATIONS

Fig. 1



Model		406C*	408C*
Lifting capacity	kg	400	400
Effort on each handle for load of 250 kg	kg	7	7
Weight of unit without rope	kg	11	11
Rope travel for one complete cycle	cm	7.5	7.5
Diameter of lifting rope / safty rope	mm	6.5	8.4
Breaking strain of rope	kg	3000	4800
No-load safety system		yes	yes
Centrifugal brake system		yes	yes

*For articulated or fixed stirrups, or bosun's chairs and one-man cradles.

3. OPERATING INSTRUCTIONS

3.1. General remarks

Anchoring, operating and maintenance of the SCAFOR must be carried out with due regard for the current safety regulations.
Before using the hoist, check that it operates correctly.
Make sure that the lifting and safety wire ropes are long enough for the application.

3.2. Regular inspection

Safety devices must be examined daily:

a) **anti-tilt device** (on fixed stirrups, ALTA platforms): tilt the platform until the safety device of the lower hoist locks. Take the load up on this hoist and then reopen the jaws by lifting the yellow operating lever (17).

b) **no-load device:** the safety jaws should lock when the platform touches the ground. Slightly raise the platform and then reopen the jaws by lifting the yellow operating lever (17).

c) **centrifugal brake** feed the lifting wire rope (A) into the unit until it stops and then quickly pull it back. The weights of the inertia block of the centrifugal brake should click, showing that they are free to turn.

3.3. Anchoring

Position the SCAFOR on the stirrup with the rounded side of the casing facing the operator, as in fig. 3. Fix it with the two anchor pins (65) and tighten the nuts (66).

3.4. Feeding in the wire ropes

The lifting (A) and safety (B) ropes have the same diameter:
6.5 mm for model 406C
8.4 mm for model 408C.
Make sure that the diameter of the rope corresponds to that indicated on the hoist's label. Lightly lubricate the ropes with an oil-soaked rag. The wire ropes should always be in good condition with their tips rounded as in fig. 2.

Fig. 2

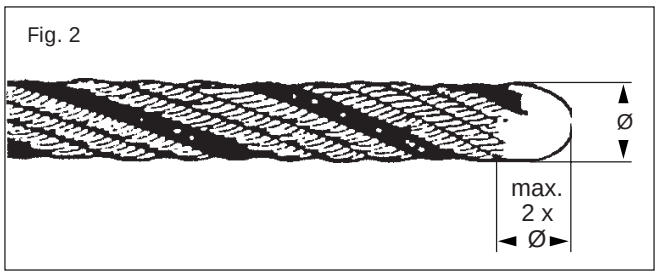
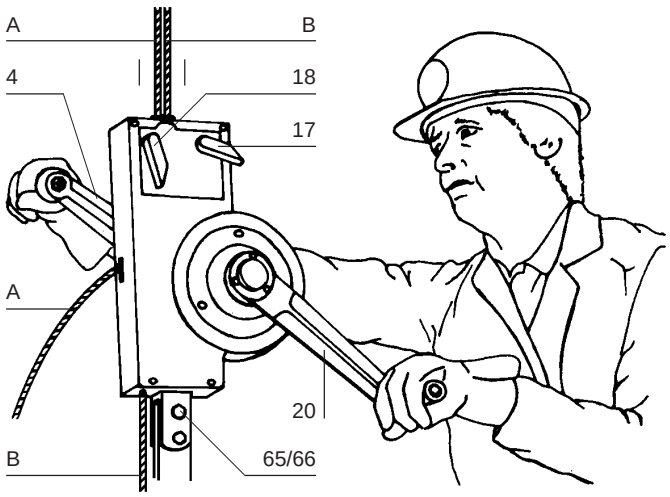


Fig. 3



4. Right hand handle
20. Left hand handle
17. Yellow operating lever:
for opening jaws on safety rope
18. Red emergency lever:
for closing jaws on safety rope
65/66. Anchor pins:
(2 bolts HM 10x50-22 and 2 lock nuts)
A. Lifting wire rope
B. Safety wire rope

3.4.1. Lifting wire rope

Through the top of the casing (Fig. 3), insert the tip of the lifting rope into the rope guide which is furthest from the operator.
Turn the right hand handle (4) in the lifting direction, while pushing the rope down until it comes out of the unit.
Continue to turn the handle until the rope is under load with around 20 kg to overcome the no-load spring.
To remove the rope, turn the right hand handle in the lowering direction. If necessary, pull the rope by hand at the same time.

3.4.2. Safety wire rope

Lift the yellow operating lever (17) to open the jaws and lock it into position. Feed in the safety rope (B) in the other rope guide. Pull the rope through.
Put the wire rope under tension using a counterweight of around 8 kg.
To remove the safety rope, hold the yellow operating lever (17) in the open position and remove the rope by hand.

3.5. Lifting

Put the right hand handle (4) in the low position.
Turn the left hand handle (20) in the lifting direction. When it reaches the vertical position, it should lock.
Operate the two handles **simultaneously.** If released, the left hand handle automatically unlocks. To restart the operation, reposition the handle at the starting point.

3.6. Lowering

For lowering, only use the right hand handle (4).
Turn it in the direction opposite to that used for lifting.
The left hand handle (20) should be in the low position (unlocked).
In an emergency, push the red lever (18) away from the operator.
The jaws will lock onto the safety wire rope.

4. SAFETY DEVICES

The SCAFOR is fitted with the following safety features:

4.1. Emergency stop

To stop further lowering, push the red emergency lever (18) away from the operator. The jaws will lock onto the safety rope (B).

4.2. No-load device

Should there be a no-load situation (e.g. catching the cradle on a ledge during lowering, breaking of the lifting rope (A), etc. . .) a set of jaws immediately locks onto the safety rope (B) to take up the load.

4.3. Anti-tilt device

Should the two hoists be operated at different speeds, lowering is automatically stopped if the platform becomes tilted by more than 10 to 12 degrees. To correct its position, operate the hoist which is behind.
To unlock the anti-tilt device, lift the platform slightly and engage the yellow operating lever (17).

N.B.: This device only operates on platforms fitted with **fixed stirrups.**

4.4. Centrifugal brake

The lifting wire rope (A) speed is constantly checked by the centrifugal mechanism. Should the lowering speed approach 10 m/mn, the jaws will automatically lock onto the safety wire rope (B).

5. SCAFOR WIRE ROPE

Use only the SCAFOR special wire rope.
The rope has to be in perfect condition for the hoist to operate correctly. The following recommendations, if followed, will ensure its protection for the longest life possible:

a) The wire rope should be reeled and unreeled in a straight line to prevent loops and kinks (fig. 4). Never try to feed kinked or otherwise deformed rope into the unit.
The damaged portion will almost invariably become trapped inside the unit.

b) Before feeding the rope into the unit remove all dirt. Use an oil-soaked rag to clean the rope.

c) The rope should never rub over sharp edges.

d) Never use the rope to sling a load. Use a separate sling or a chain

e) The rope exit of the hoist should never be obstructed.

f) Regularly inspect the rope. Replace the wire rope should any of the following defects be noticed:

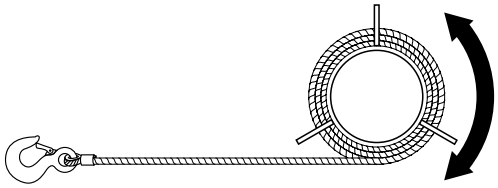
- broken wires or strands;
- corrosion;
- reduction of diameter by 10 % compared to the nominal rope diameter (fig. 5);
- exterior damage or deformation as in fig. 6.

6.1 birdcaged wire rope
6.2 wire rope torn over sharp edges
6.3 crushed wire rope
6.4 loop formation on wire rope
6.5 kinked wire rope or, any other defect

6. MAINTENANCE

The SCAFOR does not require any special maintenance. According to safety regulations, it should be checked by a qualified person at least once a year. Should the SCAFOR require overhaul and repair, it should only be carried out by a qualified person. After repair, the SCAFOR should be retested and certified.

Fig. 4



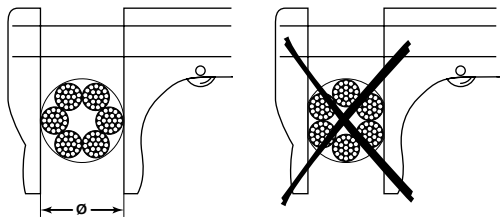


Fig. 5

Fig. 6.1

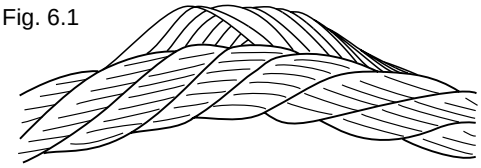


Fig. 6.2

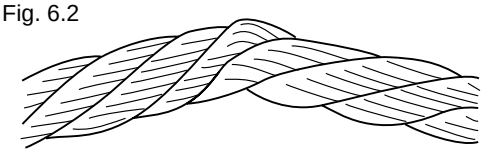


Fig. 6.3

Fig. 6.4

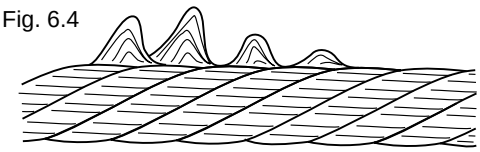


Fig. 6.5