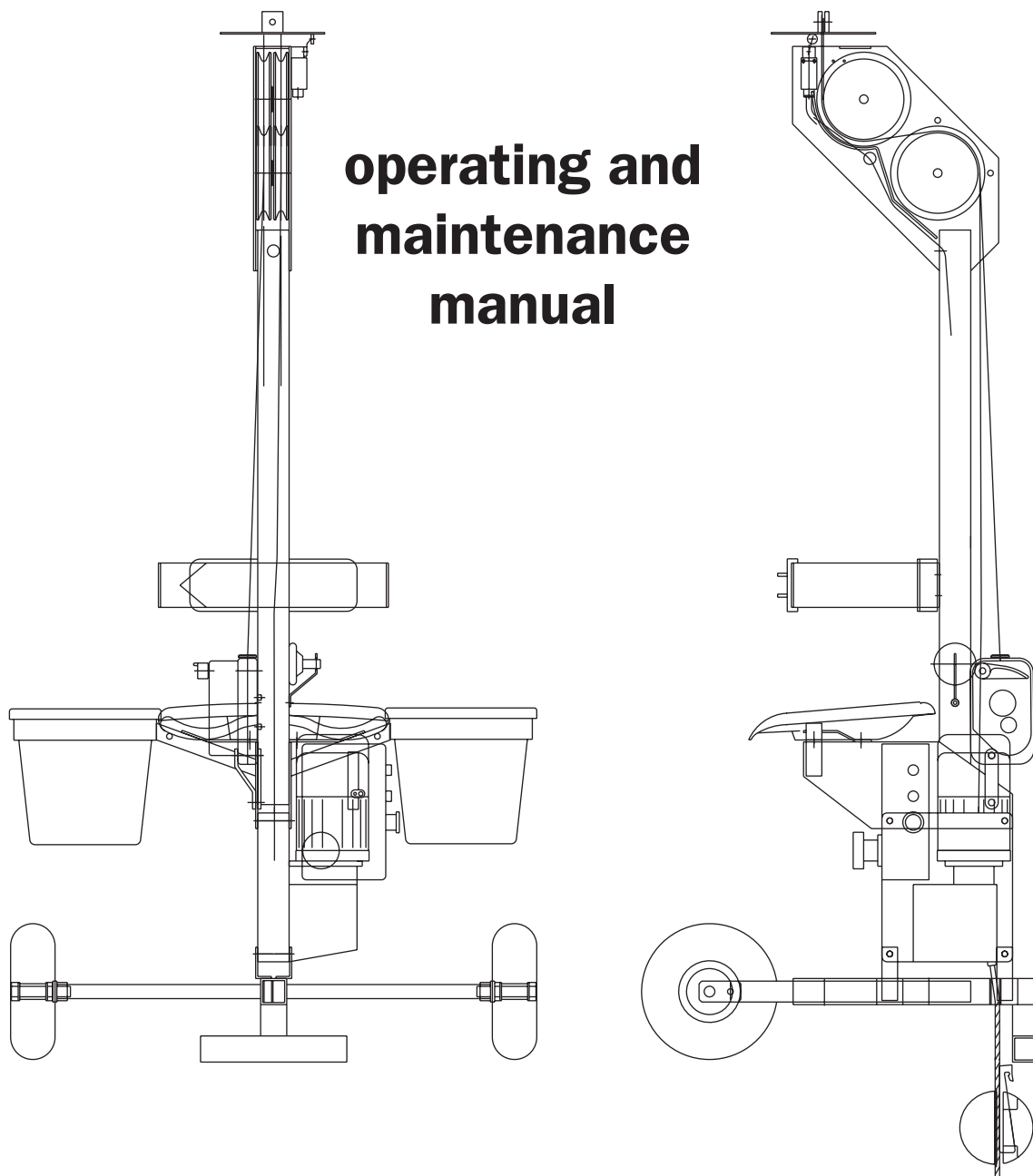


# solsit 2000

**temporary motorised seat  
for inspection and maintenance**

## **operating and maintenance manual**



**The SOLSIT equipment conforms to  
EU Directives and is manufactured  
in accordance with ISO 9001**



MC1586 SOLSIT\_6EN 09/2017

# Table of contents

<b>1. IMPORTANT SAFETY INFORMATION</b>	<b>3</b>
1.1. Safety instructions	3
1.2. General technical data	3
<b>2. ASSEMBLY OF THE SOLSIT</b>	<b>4</b>
2.1. Main components	4
2.2. Assembly	4
<b>3. OPERATION</b>	<b>5</b>
3.1. General	5
3.2. Maximum working time/start-up frequency	5
3.3. Electrical connections	5
3.4. Electrical controls	5
3.5. Fitting the lifting and safety wire ropes	6
3.6. Checks before starting work	7
3.7. Manual descent (Fig. 8)	9
3.8. Traversing	9
<b>4. SAFETY DEVICES</b>	<b>9</b>
4.1. Emergency stop	9
4.2. BLOCSTOP™ BSO safety device	9
4.3. Upper limit safety device (Fig. 11)	10
4.4. Overload safety device (Fig. 12)	10
<b>5. TROUBLESHOOTING</b>	<b>10</b>
<b>6. MAINTENANCE OF THE TIRAK™ HOIST AND WIRE ROPES</b>	<b>10</b>
<b>APPENDIX – “CE” DECLARATION OF CONFORMITY</b>	<b>11</b>

---

**Manufacturer:**

**Tractel Secalt S.A.**  
**Rue de l'Industrie • L-3895 Foetz**  
**P.O. Box 75 • L-4001 Esch-sur-Alzette**  
**Phone (+352) 43 42 42-1**  
**Fax (+352) 43 42 42-200**  
**e-mail: secalt@tractel.com**  
**www.tractel.com**

---

# 1. IMPORTANT SAFETY INFORMATION

## 1.1. Safety instructions

The SOLSIT, motorised seat for inspection and maintenance, has been specifically designed for man-riding applications. The compact design of the SOLSIT makes it extremely quick and simple to rig. The SOLSIT is suitable for many light jobs and is fitted with a TIRAK™ X-300P series hoist and a TIRAK™ wire rope which passes through the machine. The working height is limited only by the length of the wire rope supplied. In accordance with current safety regulations, a secondary safety wire rope is fitted in conjunction with a BLOCSTOP™ BSO, automatic secondary device. In the standard version the SOLSIT is supplied with 2 cleaning buckets, and 2 wall rollers to prevent damage to the facade and twisting of the unit.



- The equipment enables operators to carry out work which requires complete safety. Consequently, it is important to ensure that this equipment is only handed over for use to an operator who is competent and correctly trained to operate it in a safe and responsible manner.

- Particularly check the suspension anchor points of the SOLSIT. Ensure that the anchor points can accept at least 1.3 times the capacity of the hoist.
- Check that the lifting and safety wire ropes as well as the electric supply cable are sufficient for the job. The length of the wire ropes is marked on the ferrule of the hook or eye.
- Ensure that the diameter of the wire ropes is correct for the TIRAK™ hoist and BLOCSTOP™ safety device. Check the labels on the machines.
- When first put into operation and after every service-repair on the electrics, check the correct rotation of the TIRAK™ motor in relation to the controls. If necessary, call for an electrician to reverse the phase (3-phase motor) (see Fig. 6).
- Never operate the SOLSIT during high winds or storms.

These instructions should be read in conjunction with the TIRAK™ X-300P operating and maintenance manual, which should be considered as an integral.

## 1.2. General technical data

Working load (kg)	120 = 1 man + 40 kg of materials
Lifting / lowering speed (m/min)	8,5
Total weight (kg)	58
Hoist (model) nominal capacity (kg) diameter of lifting rope (mm) motor	TIRAK™ X-300P 300 6.5 or 8.4 or
Safety device (model) diameter of safety rope (mm)	BLOCSTOP™ BSO 500 8.4
Noise level emitted	< 73 db

Our political is based on the constant improving of our products. It is therefore possible that particular details may not apply to your installation.

## 2. ASSEMBLY OF THE SOLSIT

### 2.1. Main components

- 1 Stirrup
- 2 Base frame
- 3 Roller assembly
- 4 TIRAK™ hoist, X-300P
- 5 Bucket
- 6 Frame support for bucket
- 7 BLOCSTOP™ BSO 500 secondary safety device
- 8 Upper limit switch
- 9 Safety belt
- 10 Lifting wire rope
- 11 Safety wire rope
- 12 Counterweight for safety wire rope
- 13 Mechanical overload safety device integrated in the TIRAK™ hoist
- 14 Limit stop plate

### 2.2. Assembly

Generally, the SOLSIT is delivered already assembled. However, if this is not possible, e.g. for transport reasons, follow the assembly instruction below (Fig. 1):

1. Fit the TIRAK™ hoist (4) with the motor turned upwards, to the stirrup (1) and base frame (2).
  2. Stabilise the equipment by fitting the roller assembly (3) into the base frame (2). Lock it into position using the clip pin (2.1).
- The base frame (3) has three holes, to allow adjustment of the distance between the SOLSIT and the facade (Fig. 1.1).
3. Fix the frame supports (6) for the buckets.
  - Fit the 2 buckets (5).
  4. Fix the upper limit switch (8) to the top of the mast.
  - Connect to the control box of the TIRAK™ hoist (Fig. 3).

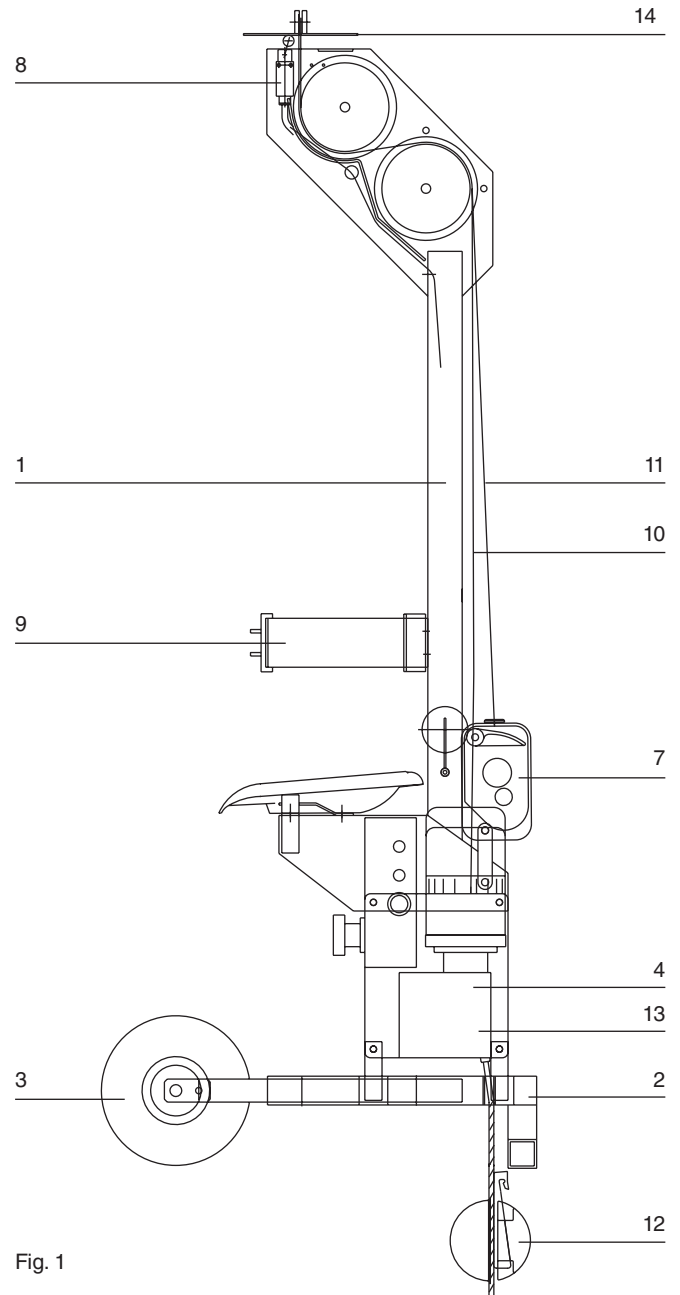


Fig. 1

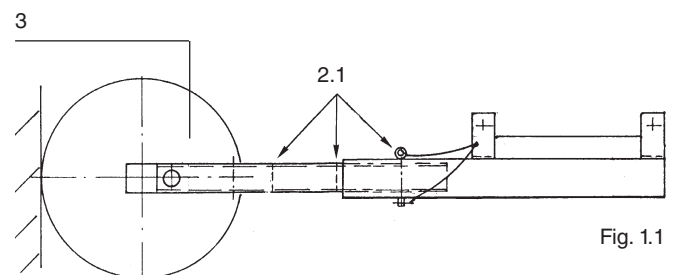
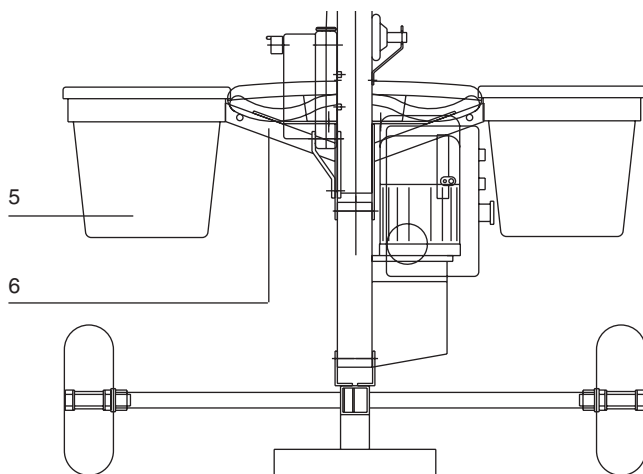


Fig. 1.1

## 3. OPERATION

### 3.1. General

Rigging and maintenance of the SOLSIT must be carried out with due regard for the current safety regulations and in accordance with the instructions in this operating and maintenance manual.

Check the correct operation of the TIRAK™ hoist (see TIRAK™ installation manual) and the BLOCSTOP™ safety device (see 3.6.).



**DANGER**

**Risk of mortal fall!**

**Ensure that the lifting and safety wire ropes are sufficient for the job.**

**Always fasten the safety belt.**

### 3.2. Maximum working time/start-up frequency

The TIRAK™ motor is designed for continuous operation - motor rating: 100 %.

The contactors and the controls are also manufactured for continuous operation: (100 %).

### 3.3. Electrical connections

- Ensure that the main voltage corresponds to the motor supply voltage (see the relevant labels).
- Should there be a long distance between the connection to the mains supply and the SOLSIT, it is important to note the following minimum cross-section of the electric supply cable:

		Electric supply cable (m)			
		20	50	100	200
3-phase motor	380 V	1.5	1.5	1.5	1.5
3-phase motor	220 V	1.5	1.5	1.5	2.5
Single phase motor	220 V	1.5	2.5	2.5	4
		Cross-section in mm <sup>2</sup>			

- The electrical power supply must be protected at entry by a 6A earth leakage with 30 mA differential.
- Hanging cables longer than 30 m must be fixed by means of a cable sleeve or cable clamp (Fig. 2).
- When using a generator, its output must be at least 3 times higher than the SOLSIT power consumption.

### 3.4. Electrical controls

The TIRAK™ hoist is fitted with a control box comprising one light push button UP and an overload safety device (a), and DOWN (b), together with a red EMERGENCY STOP button (c).

To operate the hoist, release the EMERGENCY STOP button (c) by turning in the direction indicated.

The electrical socket (d) (optional) can be used for connecting an inspection lamp or power tool, such as an electric drill, etc.

Fig. 2  
Sleeve for the electric cable

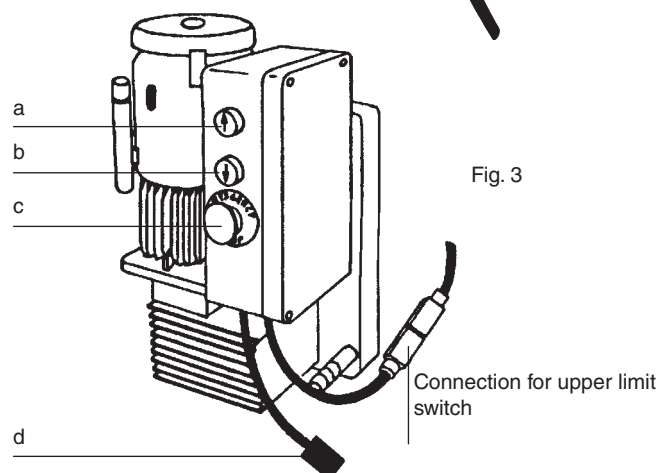
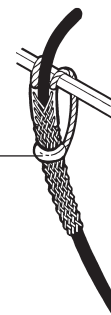


Fig. 3

### 3.5. Fitting the lifting and safety wire ropes

Only TIRAK™ wire rope in perfect condition can ensure the correct operation of the SOLSIT. Ensure that the diameter corresponds to that indicated on the appropriate labels on the TIRAK™ hoist and the BLOCSTOP™ BSO.



**Before fitting the wire ropes ensure that the suspension point is appropriate to take the full load of the SOLSIT and its operator (see chapter 1.1).**

1. Unreel the wire ropes at ground level and lift them to the top of the building using a cord.

**Never unreel or throw a wire rope from the top of the building.**

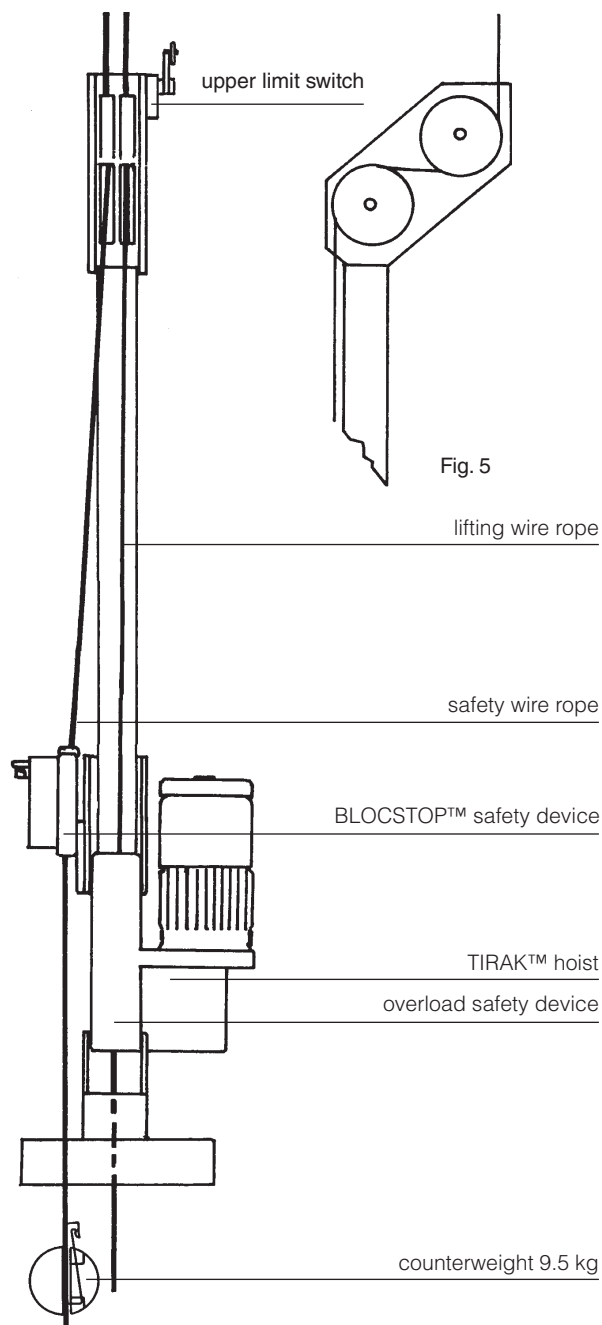
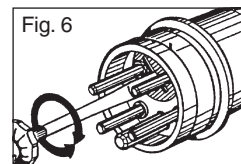
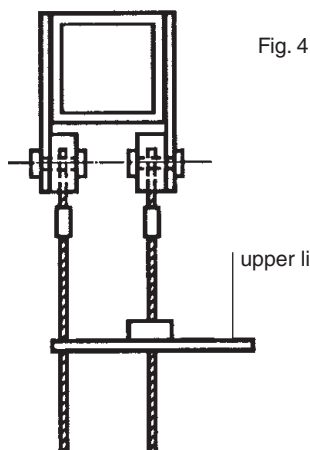
2. Anchor the lifting and safety wire ropes to **separate suspension points** (Fig. 4).
3. Fit an upper limit stop plate to the safety wire rope (Fig. 4).

#### 3.5.1. Feeding-in the lifting wire rope

1. Connect the power supply cable to the TIRAK™ hoist.
2. Pass the lifting wire rope around the two return pulleys on the TIRAK™ hoist side (Fig. 5).
3. Insert the wire rope through the rope guide and into the TIRAK™ hoist.
4. Press the "UP" button. The wire rope should feed automatically\* and exit at the other side of the machine.
5. Continue to operate the "UP" button of the TIRAK™ until the lifting wire rope is slightly tensioned.

#### 3.5.2. Feeding-in the safety wire rope

1. Check that the safety wire rope is not twisted around the lifting wire rope.
2. Pass the safety wire rope around the two return pulleys on the BLOCSTOP™ side (Fig. 5).
3. Put the lever (a) of the BLOCSTOP™ safety device into the "OPEN" position (Fig. 7).
4. Insert the wire rope into the BLOCSTOP™ and pass it slowly through the mechanism by hand until it is slightly tensioned.
5. Using a "frog" wire rope gripper, attach a counterweight (approx. 9.5 kg) to the safety wire rope at about 20 cm from the ground.
6. Carefully reel any excess wire rope back onto the reeler.



\* N.B.: 3-PHASE MOTORS

If the wire rope does not feed automatically, reverse direction of rotation of the motor by using a screw-driver to turn the phase reverser in the CEE plug of the hoist (Fig. 6).

### 3.6. Checks before starting work

Record all your checks in the equipment log.

#### 3.6.1. Check of suspension wire ropes

- Check that the suspension wire ropes are properly secured.
- Check that the TIRAK™ hoist and the BLOCSTOP™ BSO are properly secured.

#### 3.6.2. Checking the operation of the BLOCSTOP™ BSO

##### Operation (Fig. 7)

The BLOCSTOP™ engages in the following cases:

- A** downward “overspeed”,
- B** rupture of lifting wire rope or failure of gear motor.

In normal operation, the lever (7.1) of the BLOCSTOP™ must be in the “OPEN” position.



**DANGER**

**Risk of injury by serious fall due to slack safety wire rope between suspension and BLOCSTOP™.**  
If the BLOCSTOP™ is closed during upward movement, the safety wire rope will no longer be tensioned and the BLOCSTOP™ will become ineffective.

##### Measures to be taken immediately following an incident

**Case B:** If the BLOCSTOP™ engaged following rupture of the lifting wire rope or failure of the hoist:



**DANGER**

**Evacuate the operator(s).**

**Secure the SOLSIT by appropriate means in order to allow replacement of the wire rope or hoist.**

**Case A:** If you have ascertained that the lifting wire rope is not broken and the hoist has not failed (Fig. 7.1):

1. Bring up the SOLSIT (43) to relieve the load on the safety wire rope.
2. Place the lever (7.1) in the “OPEN” position.
3. Carefully lower the SOLSIT to the ground.
4. Before continuing work, check operation of the BLOCSTOP™ as instructed in the following pages.



**DANGER**

**If the fault persists, contact the After Sales service.**

Fig. 7

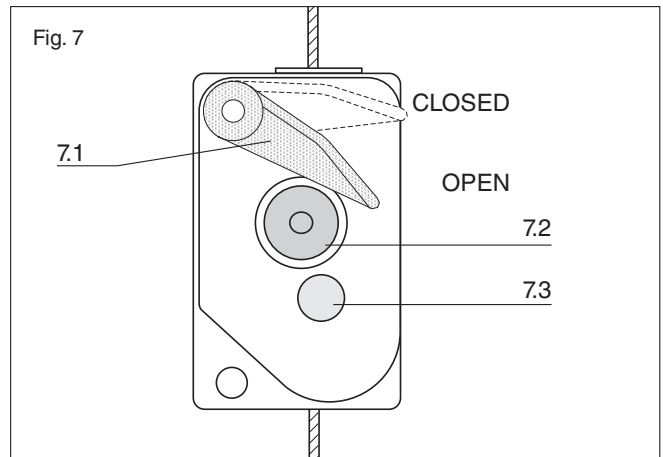
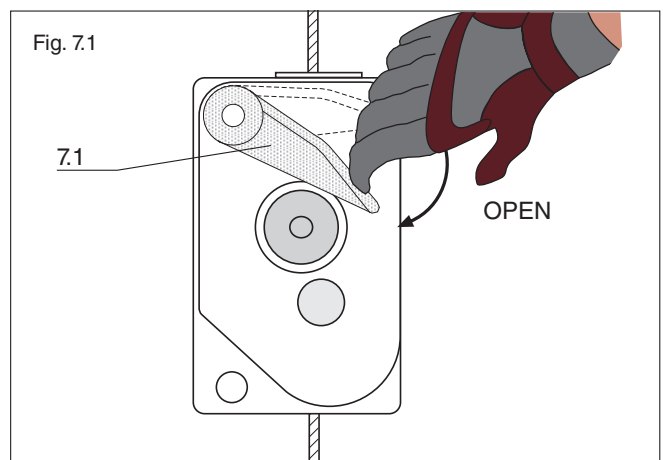


Fig. 7.1



## Check before starting work (Fig. 7.2)

The SOLSIT is set on the ground.



**Risk of injury!**  
**Wear safety gloves!**

1. Press (7.2).

The BLOCSTOP™ should close; the lever (7.1) should return to the CLOSED position.

2. Try to pull upward on the safety wire rope.

**Risk of fall if malfunction!**  
**If the wire rope can be pulled upward:**  
- Do not place the equipment in service.  
- Immediately replace the BLOCSTOP™.

If the safety wire rope cannot be pulled upward (Fig. 7.3):

1. Return the lever (7.1) to the "OPEN" position.

2. Pull upward sharply on the safety wire rope (Fig. 7.4).

The BLOCSTOP™ should immediately lock.

3. Return the lever (7.1) to the "OPEN" position.
4. Repeat steps 2 and 3 three times.

When the two checks have been performed successfully, the equipment can be placed in service.

**Regularly check rotation of the centrifugal mechanism through the opening (7.3).**



**DANGER**

**Risk of fall if malfunction!**  
- Do not place the equipment in service.  
- Immediately replace the BLOCSTOP™.  
- Send the failed BLOCSTOP™ for overhaul to the manufacturer or to an approved After Sales service.

Fig. 7.2

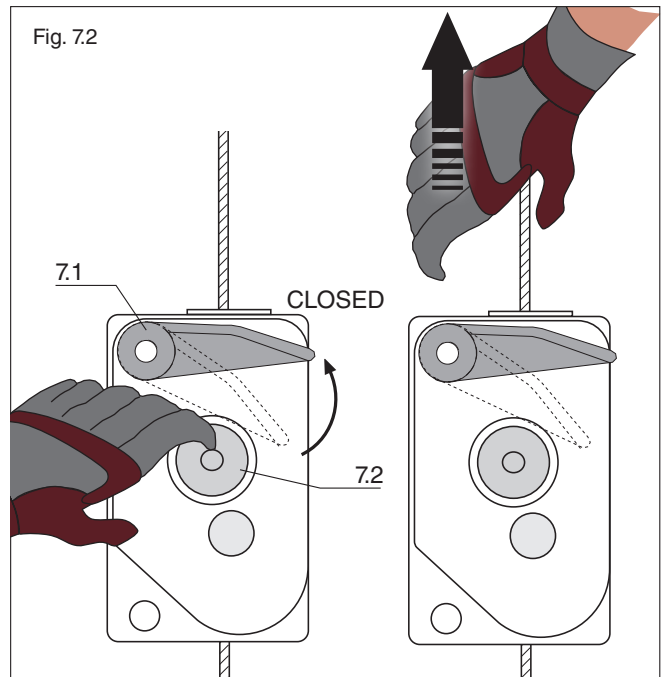


Fig. 7.3

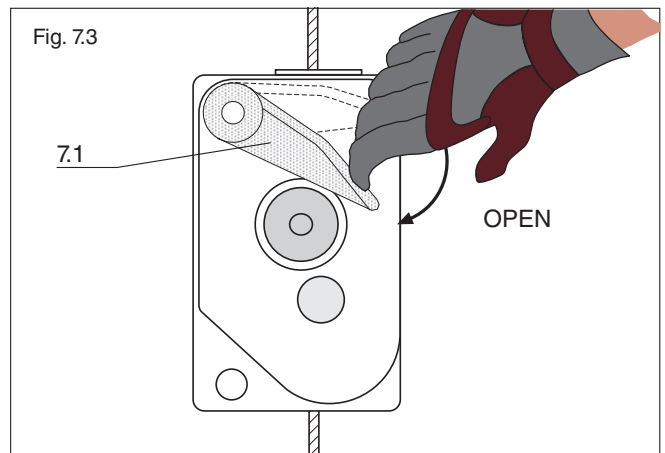
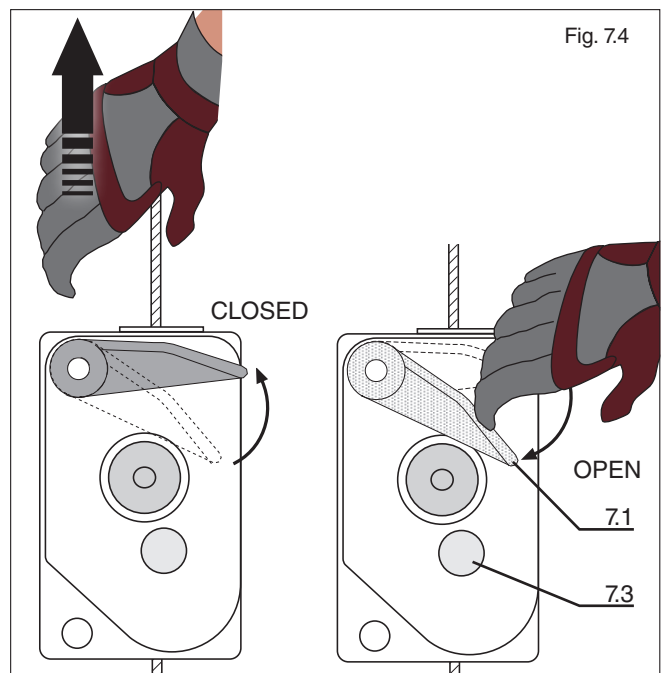


Fig. 7.4





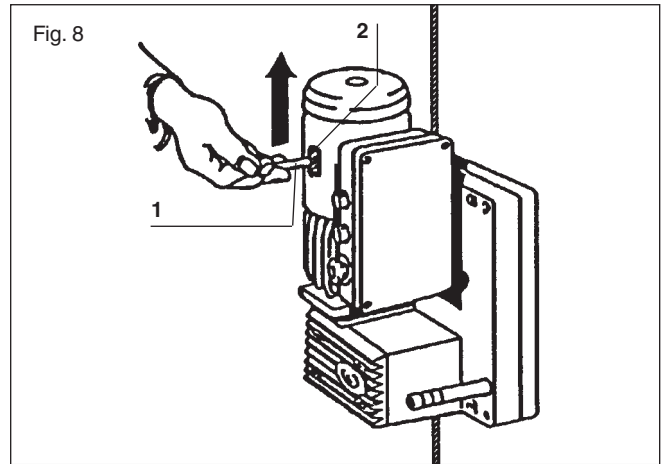
### 3.7. Manual descent (Fig. 8)

In case of a power failure, it is possible to lower the SOLSIT through the centrifugal brake of the TIRAK™ hoist.

1. Fit the brake lever (1) on the brake yoke by inserting it through the slot (2) on the cover.
2. Without using excessive force, raise the control lever to release the electromagnetic brake. The SOLSIT will descent under its own weight and the speed of descent is controlled by the centrifugal brake.
3. To stop or brake, release the control lever (1).

### 3.8. Traversing

1. Stop the SOLSIT at about 40 cm from the ground.
2. Remove the counterweight from the safety wire rope. Slowly pull some wire rope through the BLOCSTOP™.
3. Lower the SOLSIT to the ground and continue to operate the "DOWN" button to have some slack on the lifting wire rope.
4. Reposition the suspension point.
5. Reposition the SOLSIT below the suspension point.
6. Operate the "UP" button to lift the SOLSIT about 40 cm above the ground. Carefully retension the safety wire rope by hand and refit the counterweight (Fig. 5).



## 4. SAFETY DEVICES

### 4.1. Emergency stop

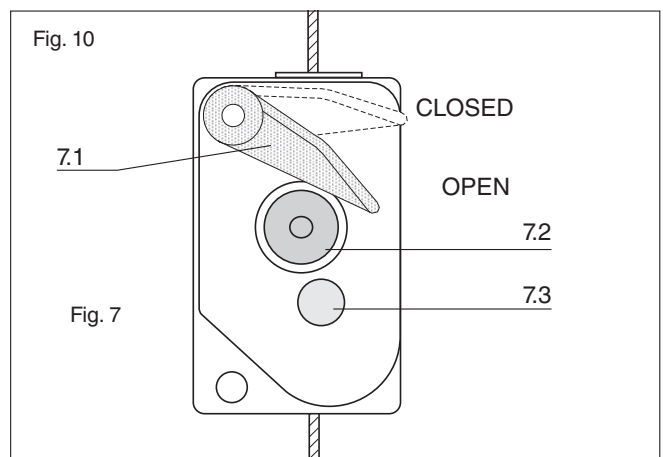
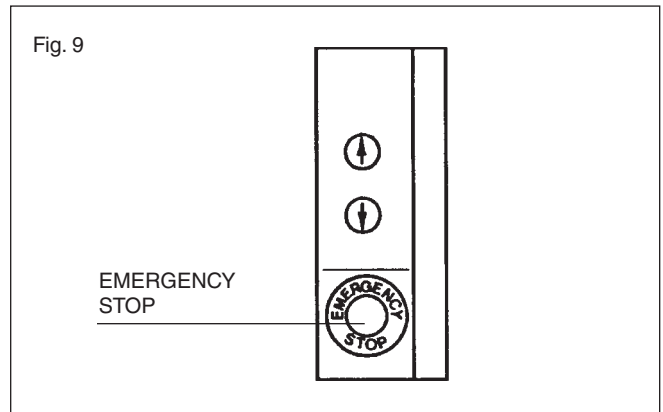
Should there be any danger whatsoever, lifting or lowering of the SOLSIT can be stopped immediately by pressing the red EMERGENCY STOP button (Fig. 9).

Before every putting into service of the SOLSIT, check the correct working of the EMERGENCY STOP.

### 4.2. BLOCSTOP™ BSO safety device

The safety wire rope passes through an overspeed BLOCSTOP™, model BSO 500, which operates automatically and which acts as a secondary brake, as required by the safety regulations of certain countries. The centrifugal mechanism of the BLOCSTOP™ BSO permanently checks the speed at which the wire rope passes through the unit. It automatically locks the jaws onto the wire rope should the speed become excessive. The BLOCSTOP™ BSO also operates instantly and automatically in a no load situation, e.g. in the event of the lifting wire rope breaking.

Under normal working conditions of the SOLSIT, the lever (a) of the BLOCSTOP™ BSO should be in the "OPEN" position (Fig. 10).



### 4.3. Upper limit safety device (Fig. 11)

When the upper limit switch, fixed to the top of the SOLSIT mast, hits the stop plate fitted to the safety wire rope, the SOLSIT stops automatically, and cuts off all the electrical controls of the SOLSIT.

To release the upper limit switch, either lower the SOLSIT slightly through the centrifugal brake of the TIRAK™ hoist (see 3.7) or raise the stop plate slightly. In the latter case, do not forget to reposition the stop plate.

Regularly check the operation of the upper limit switch: manually press the spring-loaded lever of the upper limit switch and at the same time press the "UP" button. The SOLSIT should not lift. If it does, or in case of doubt, call for an electrician to check the mechanism.

### 4.4. Overload safety device (Fig. 12)

The overload safety device (13) is activated when the SOLSIT is overloaded. In this case, the UP movement is stopped and the indicator lamp (a) on the SOLSIT control box indicates the overload (Fig. 3). To continue working, decrease the load in the SOLSIT. The adjustment of the overload safety device is lead sealed in the factory. For the setting and control, call the After Sales Service.

## 5. TROUBLESHOOTING

See TIRAK™ operating and maintenance manual.

## 6. MAINTENANCE OF THE TIRAK™ HOIST AND WIRE ROPES

See TIRAK™ operating and maintenance manual.

Fig. 11

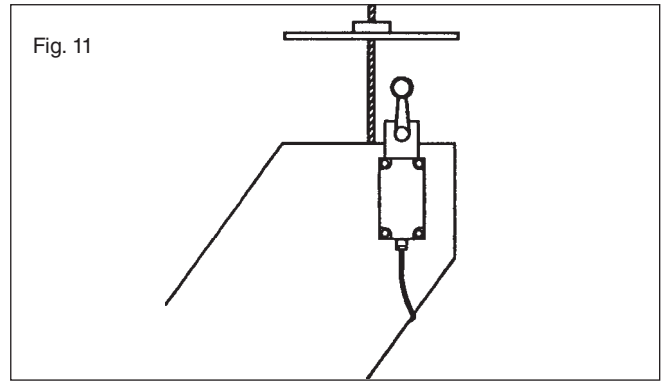
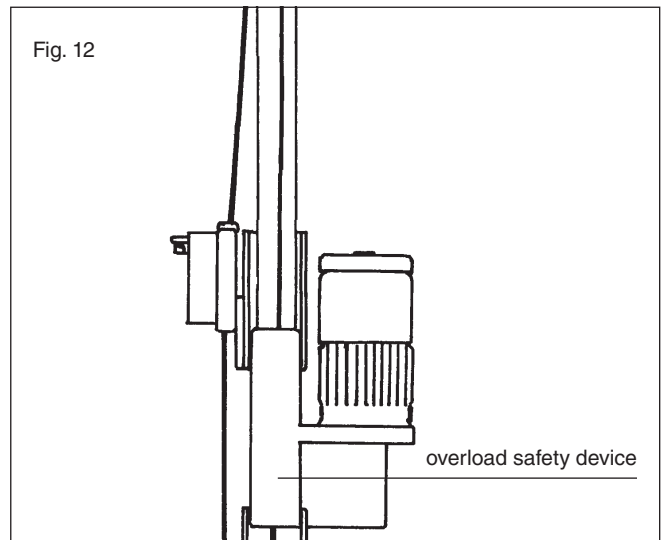


Fig. 12



## APPENDIX – “CE” DECLARATION OF CONFORMITY

### "CE" Declaration of Conformity

according to annex II. 1. A of the European Machinery Directive 2006/42/EC

Temporary suspended platform "TSP"

#### Model "SOLSIT 2000"

(no serial number)

**The manufacturer:** Tractel Secalt S.A. (a TRACTEL® Group company)  
3, rue du Fort Dumoulin  
P.O. box 1113, L-1011 Luxembourg  
Tel. (352) 43 42 42-1 \* Fax (352) 43 42 42-200

declares that the machine is in accordance with the model having received the CE type approval No. 0062/5310/760/12/2009/0018, confirming the conformity to the "machinery directive" ( No. 2006/42/EC ) delivered by the notified body:

**BUREAU VERITAS**, 32/34 rue Rennequin, F-75850 PARIS CEDEX 17, France (No. 0062)

**The machine also complies with the other following directives:**

- directive on electromagnetic compatibility N° 2004/108/EC
- directive on low voltage N° 2006/95/EC

**with the following harmonized standards:**

- EN ISO 12100-1-1/A1-2-2/A1, EN ISO 13850, EN 60204-1-1/A1, EN 1808+A1

**and with the other standards, recommendations and following specifications:**

- DIN 15020

**NOTE: The suspension points are not scope of delivery**

**Responsible for the documentation:** Jörg Thierer; see company address above.

**Authorised signature:**

Name: Jörg THIERER  
Function: General Manager  
Place and date of signature: Luxembourg, 01/02/2013  
Signature:

