

Manual winches

# TIREX 150 and 300 Kg

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Instruction manual

UK



129-236.11/5

**PRODUCT DEVELOPED AND MANUFACTURED ACCORDING TO EUROPEAN STANDARD EN 13157 -  
REGISTERED DESIGN**

To ensure the constant improvement of its products, HUCHEZ reserves the right to change the equipment as described below and, in this case, to supply products which differ from the illustrations in this instruction manual.

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## 1 - General warning

This machine is governed by European regulations and, more specifically, machinery directive 2006/42/EC and the European standard EN 13157.

- Before using this winch, the user must read this instruction manual and comply with all the instructions in order to ensure the safe and efficient use of the equipment.
- This instruction manual must be available to all operators. The manufacturer will provide additional copies on request.
- TIREX winches are designed to enable **lifting** and **hauling** operations. Please ensure that the operator has read this manual and is qualified to operate the machine in the conditions provided for in this manual. This will ensure the safety of both people and the environment.
- Never use this winch with a load which exceeds the maximum load indicated (see p. 5 § 2.4).
- This machine is used to lift loads. Under no circumstances should it be used to hold a load with the rope taut, in particular if the load is likely to increase as this could cause the rope or winch to break (barges, circus tents, etc.).
- This machine may not, under any circumstances, be used to lift people.
- This machine may not, under any circumstances, be used above people unless the load is secured by some other means.
- Before use, the operator must always check that the machine, rope, hook, markings and fastenings are in good working order.
- The manufacturer shall not accept any liability for consequences resulting from the use or installation of equipment not provided for in these instructions; or for the consequences of removal, modification or replacement of original parts or components with parts or components from other sources without the written agreement of HUCHEZ.
- It is strictly forbidden to motorise these machines.

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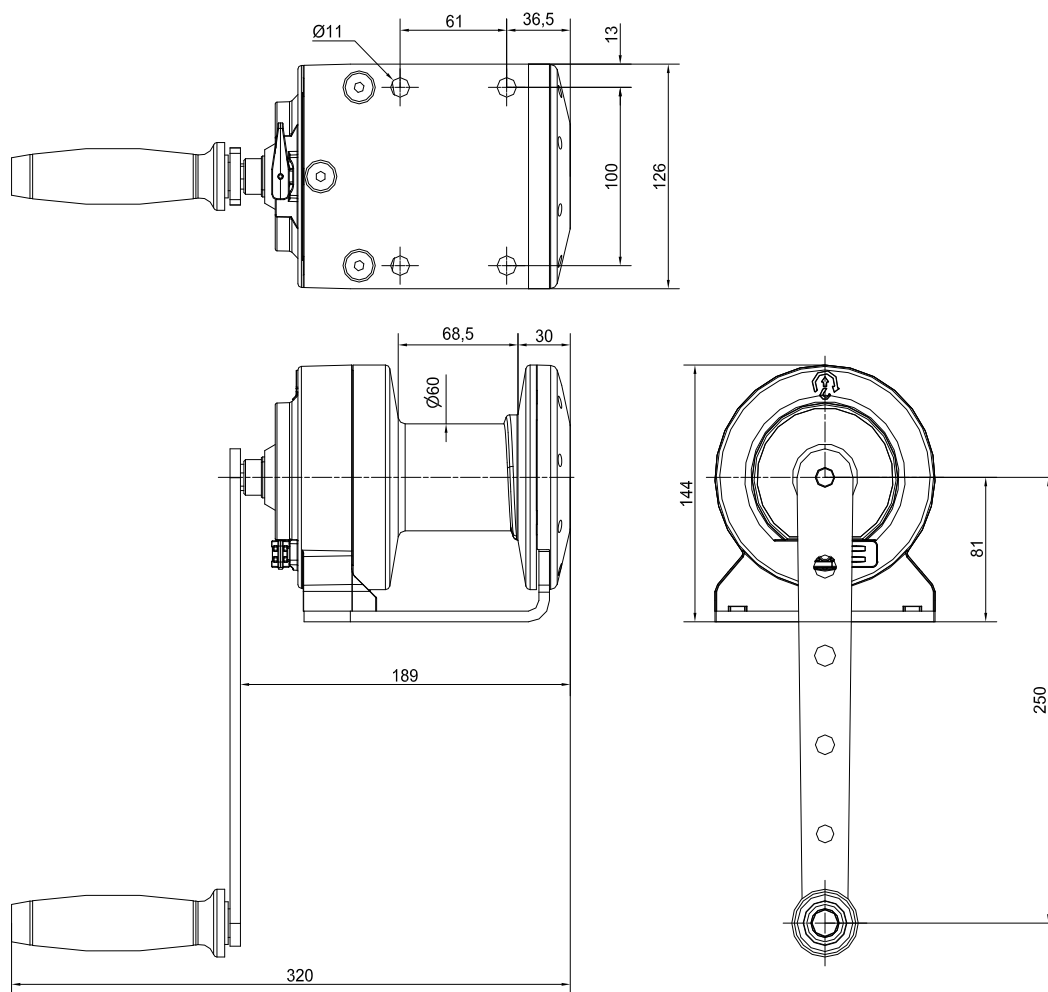
## 2 – Presentation of the machines

The TIREX is a manual lifting and hauling winch that meets all current regulations and requisites.

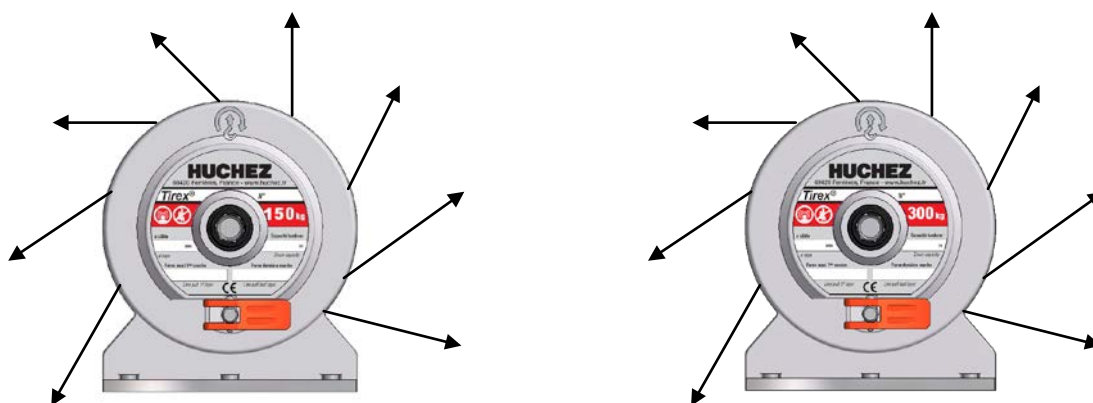
### 2.1. Construction

- Frame with an aluminium structure and thick steel sheet (or stainless steel depending on the option).
- Polymer drum.
- Entirely protected reduction system.
- Drum disengaging system (no disengaging when loaded).
- Automatic brake
- Ergonomic handle unit with rotating handle. The handle clips on and off to prevent it from being used by unauthorised people.
- Natural rustproof protection (aluminium/polymer) or treatment (for steel parts).

## 2.2. Dimensions:



Possible rope release:



### 2.3. Technical specifications

| Model     | Capacity on 1 <sup>st</sup> layer Kg | Capacity on the last layer Kg | Number of layers | rope |              | Max. handle force Kg | Minimum lift per turn of the handle mm | Weight (ropeless winch) Kg |
|-----------|--------------------------------------|-------------------------------|------------------|------|--------------|----------------------|----------------------------------------|----------------------------|
|           |                                      |                               |                  | Ø mm | Capacity (m) |                      |                                        |                            |
| TIREX 150 | 250                                  | 150                           | 6                | 4    | 24           | 8                    | 40                                     | 3.7                        |
| TIREX 300 | 400                                  | 300                           | 3                | 5    | 8.5          | 14                   | 41                                     | 3.7                        |

**The rope diameter indicated above corresponds to the load on the top layer.**

*Important: it is obligatory to check that the rope resistance coefficient complies with the lifted load (coefficient 5).*

### 2.4. Maximum loads depending on the layer used (for Ø 4mm rope (TIREX 150) or 5 mm (TIREX300)).

| Models    | 1 <sup>st</sup> layer | 2 <sup>nd</sup> layer | 3 <sup>rd</sup> layer | 4th layer | 5th layer | 6th layer |
|-----------|-----------------------|-----------------------|-----------------------|-----------|-----------|-----------|
| TIREX 150 | 250 Kg                | 220 Kg                | 200 Kg                | 180 Kg    | 160 Kg    | 150 Kg    |
| TIREX 300 | 400 Kg                | 340 Kg                | 300 Kg                |           |           |           |

### 2.5. Accessories

The TIREX may be delivered complete with ropes and accessories. The pulleys and pulley blocks used with these winches must comply with standard EN 13157.

### 2.6. Operation:

When using the winch, the load is raised or lowered depending on the direction in which the handle is turned. When the handle is released, the brake comes on and holds the load in place.

#### Automatic brake activation

A load of at least 10 kg for the TIREX 150 or 15 kg for the TIREX 300 is required for the brake to activate automatically.

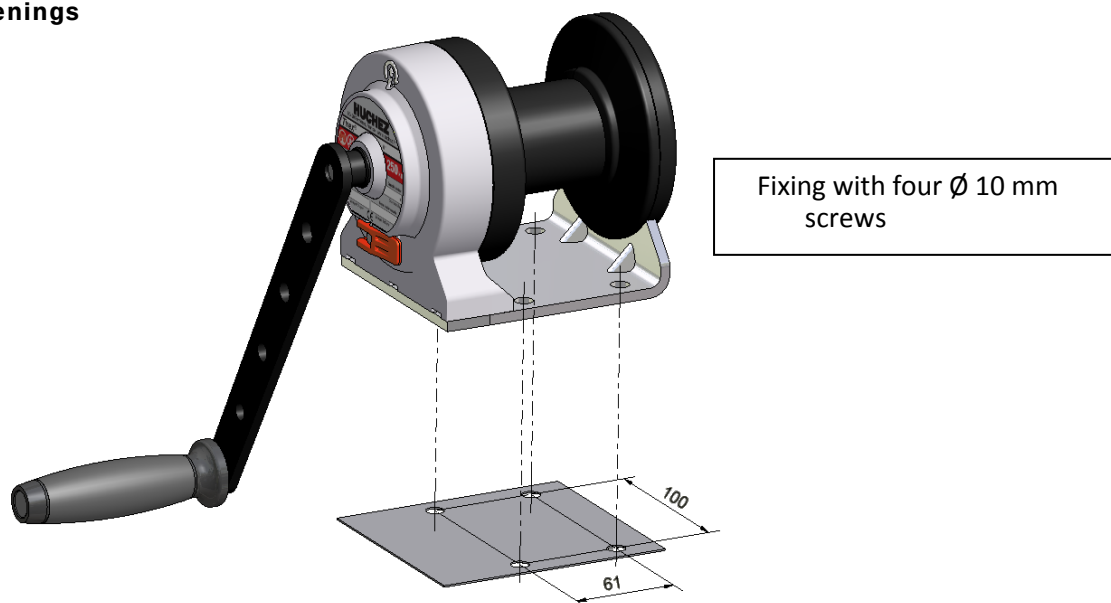
## 3 – Handling – Storage

This light machine can be carried and needs no fixing means.  
It is advisable to store the equipment in weatherproof conditions.

## 4 – Use, assembly and set up

The following precautions should be respected.

### 4.1. Fastenings



Use at least type 8.8 screws.

### 4.2. Rope

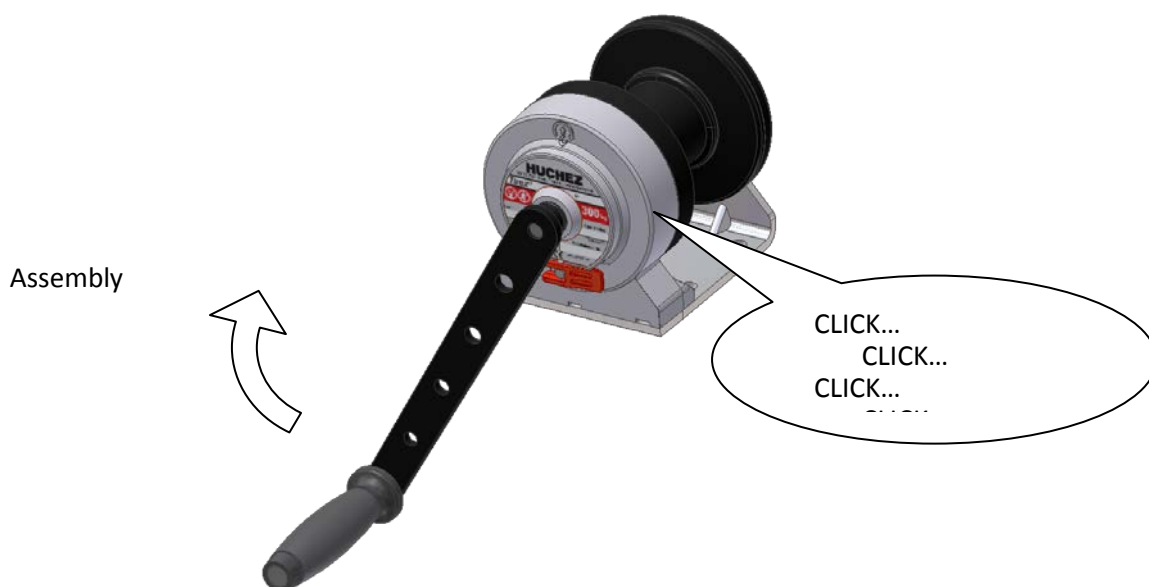
Make sure the rope used is right for the application.

By default, the winch is prepared for work with Ø 4 mm rope (TIREX 150) or 5 mm (TIREX 300).

Reminder: the safety coefficient of steel rope must be 5 in lifting and 3 in hauling.

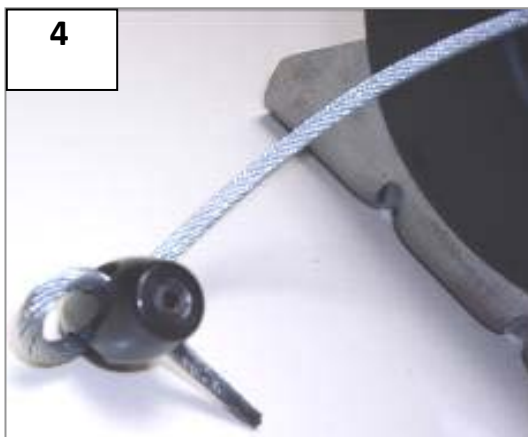
### 4.3. Rope assembly

The winding direction of the rope must be strictly observed. To lift the load, turn the handle clockwise: a clicking sound is heard. To lower the load, turn the handle anti-clockwise.



**Rope assembly:**

- 1) Pass the rope through the drum until it protrudes at the rear of the winch.
- 2) Pass the rope through the first hole of the rope clamp.
- 3) Pass the rope through the second hole of the rope clamp until 2 cm of rope protrudes and tighten the screw (using a BTR no. 3 spanner).
- 4) Pull on the rope to tighten it against the clamp.
- 5) Fit the rope clamp back inside the drum.



#### 4.4. Disengaging



- Never disengage when the winch is loaded. In the event of mishandling, a device blocks the disengaging lever when a load is applied to the winch.
- The winch is also provided with a security device that prevents the rope from being wound in the wrong direction. In such a case, the winch disengages automatically.

## 5 – Servicing and maintenance

**The delivered winches are ready to be used (after installing the rope if not supplied by the manufacturer).**

**A maintenance check** is required at least once a year and must be carried out by a skilled person or body:

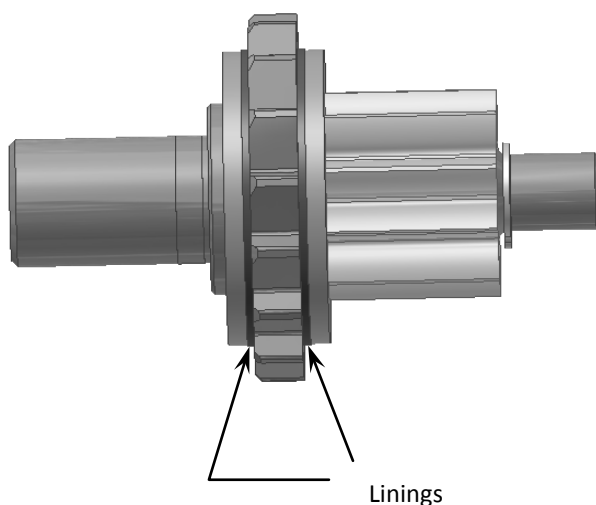
**Regularly grease** the gears with **EP.2 grade grease for open gearing**.

**Regularly and before every use:** check the condition of the rope, hook and safety latch.

If the rope and hook are not supplied by the manufacturer along with the machine, check that the rope and hook used guarantee a level of safety according to breaking factor 5 (Machinery directive 2006/42/EC).

**Regularly check** the state of the brake (static tests: nominal load + 50%).

**Regularly monitor the wear of brake linings. When they are no longer visible, they must be replaced:**





**Automatic brake application:**

The brake will apply automatically when a winch is placed under a minimum load of :

- . 10 kg for the TIREX 150
- . 15 Kg for the TIREX 300.

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**6 – Contraindications for use**

**Before using the equipment, check for potential causes of overloading such as: adhesion to the ground, suction, jamming, etc. All forbidden and incorrect uses or operations are presented below:**

**It is forbidden to:**

- lift loads in excess of the nominal load indicated on the machine plate;
- unwind the drum completely (keep two or three residual winds);
- pull at an angle;
- swing the load;
- use the winch to lift staff;
- walk under a load;
- use ropes with a different diameter and texture from the specifications in this instruction manual (breaking factor 5);
- use damaged ropes or spliced ropes;
- use hooks without a latch, which do not correspond to the loads indicated on the machine or which are in poor condition;
- insert objects into moving parts;
- perform operations on a machine while it is loaded;
- disengage the drum while loaded;
- let the load free fall;
- motorise the machines;
- use the machine rope as a chain;
- use handles other than the original ones;
- use the machine for operations other than those for which it is intended;
- use the winch as an anti-fall device, regardless of the height of the drop and the load applied;
- use parts or components other than the original ones provided by the manufacturer;
- tow by positioning a fixed point on the winch.

There must not be any obstacle in the load moving area either; any obstacles might cause sharp changes in the rope tension and break it.

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## 7 – Precautions for use

- Long descents are liable to overheat and damage the braking system. It is strongly advisable to wait a few minutes half way (around 12 meters for the TIREX 150 and around 4 metres for the TIREX 300) through descent phases.
- The operating temperature should be between  $-10^{\circ}\text{C}$  and  $+50^{\circ}\text{C}$ .
- These winches are manufactured for use in a normal environment. If they are used in an aggressive environment (saline, chemical atmosphere, etc.), special care should be taken or advice should be sought from the manufacturer.
- The winches should be used on a regular basis, even with no load, in particular when used in a harsh environment. Prolonged inactivity entails the risk of damaging the braking system (brake sticking).
- It is highly recommended not to handle the rope unless protected by gloves.

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## 8 – Compulsory regulatory checks

This equipment has been designed to be tested:

- In a dynamic situation, with coefficient 1.1
- In a static situation, with coefficient 1.5.

A periodic maintenance check is required at least once a year:

In accordance with regulations, the user must keep an inspection booklet recording all the inspections and operations carried out on the machine (Rule FEM 9755).

### **In France, since 1 April 2005, the owner of a lifting machine must:**

1. **Pursuant to the provisions of the order of 2 March 2004**, keep a maintenance log in which the following must be recorded:

- Maintenance operations performed in accordance with the recommendations of the manufacturer.
- All other operations (inspection, maintenance, repairs, replacement or changes to the machine).

The following must be recorded for each of these operations: the date of the work, the names of the people and, where appropriate, the companies which carried out the work, the nature of the operation and, if it is a regular operation, the frequency. If the operations involve the replacement of certain machine components, the references of these components must be indicated.

### **2. By virtue of the order of 1 March 2004, article R 232.12 of the Labour Code:**

#### Checks during set-up (section 3 of the order - articles 12 to 17):

- Suitability test (article 5-1): suitable equipment and compliant installation. It must be provided, in writing, by the user (article 3d).
- Assembly and installation test (article 5-11): equipment installed according to the instruction manual.
- Operating test (article 6c or 14-II): loaded with safety tests.
- Static test (art. 10)
- Dynamic test (art. 11)

#### Regular general checks (section 5 of the order - articles 22 to 24):

- Inspection of the state of preservation (art. 9): equipment kept in good condition, with nothing missing or added, compliant.
- Operating test (art. 6b and c).

#### Checks when resuming service (section 4 of the order - articles 18 to 21):

- Suitability test (art. 5-I).
- Assembly and installation test (art. 5-II).
- Inspection of the state of preservation (art. 9).
- Operating test (art. 19-II).
- Static test (art. 10)
- Dynamic test (art. 11)

## 9 – Taking out of use

If the equipment is in a state of disrepair likely to give rise to risks, the user is obliged to ensure that this equipment is eliminated, i.e.: that it is taken out of service, and possibly: disassembled.

## 10 - FAQs

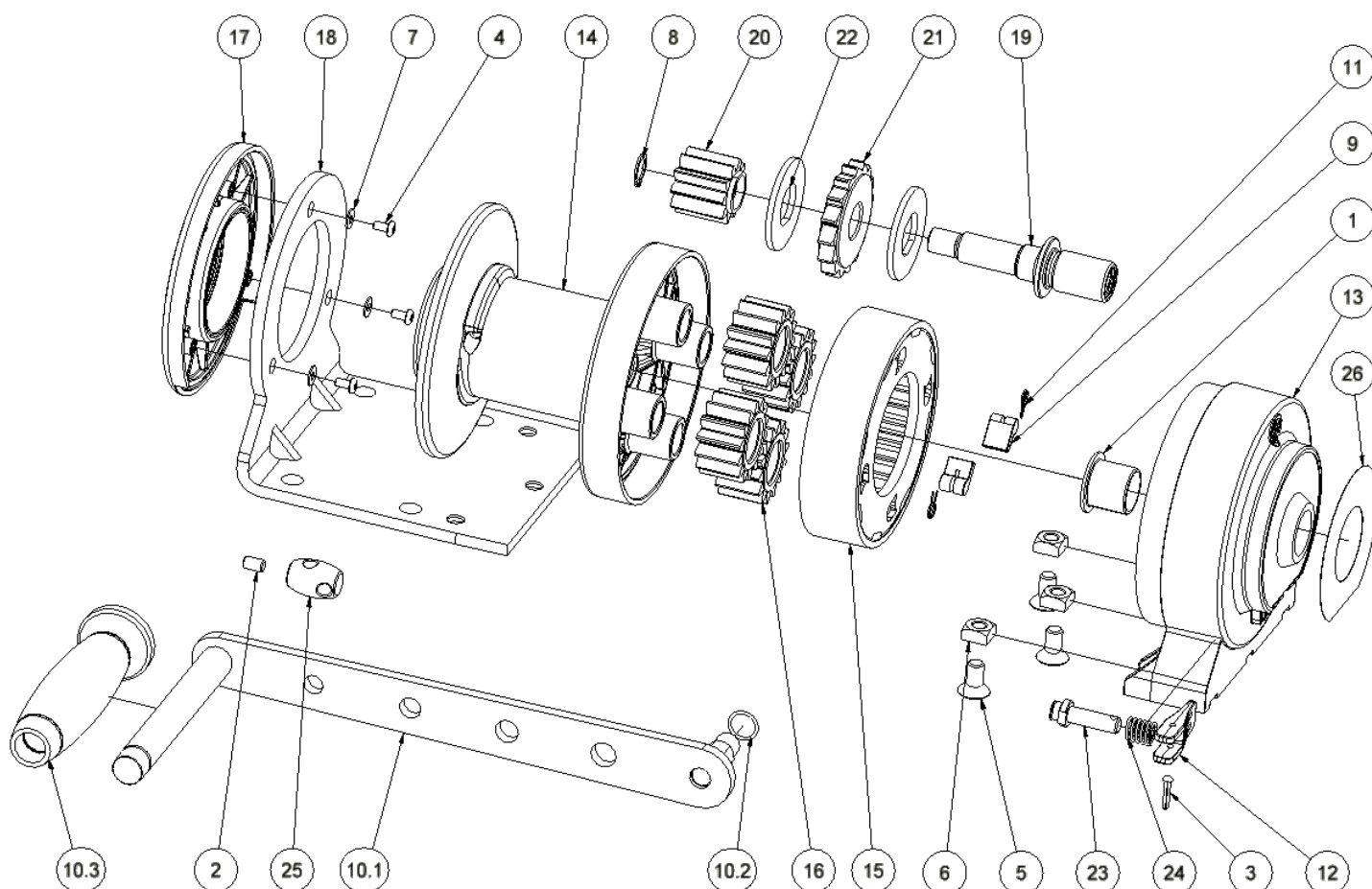
| Question                                                | Cause                                                                           | Solution                                                                                                                            |
|---------------------------------------------------------|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| <b>The drum fails to turn when the handle is turned</b> | The winch is disengaged.                                                        | Make sure the disengaging lever is firmly in position. See § 4.4.                                                                   |
|                                                         | The rope is fitted in the wrong direction and the security device is triggered. | Make sure the rope is fitted in the right direction. See § 4.3.                                                                     |
| <b>The disengaging lever is too stiff to use</b>        | The winch is still loaded or the rope is simply taut.                           | Make sure there is no load on the winch and that the rope is not taut. See §4.4.                                                    |
| <b>Great force is required to move the handle</b>       | Excessive load to be lifted or hauled.                                          | Carefully settle the load and check the real weight to be lifted or hauled. The load must not exceed the winch capacity. See § 2.4. |
| <b>The winch vibrates or screams</b>                    | Brake overheating. This only happens when unwinding the rope. See § 7.          | Allow to cool for at least 5 minutes.                                                                                               |
|                                                         | The brake linings are worn. See § 8.                                            | The winch needs a service.                                                                                                          |
|                                                         | The gears are no longer greased.                                                | Grease the gears. See § 5.                                                                                                          |

## 11 – Spare parts

# TIREX 150 Kg

| No.  | Part no. | Description                                   |
|------|----------|-----------------------------------------------|
| 1    | 2763     | GFM-2023-21 bearing ring                      |
| 2    | 13162    | 10 x Hc M6 headless screw                     |
| 3    | 13659    | 18 x aluminium 3.2 rivet                      |
| 4    | 13681    | 8 x M4 HC roundhead screw                     |
| 5    | 13682    | 16 x M8 HC stainless steel slotted head screw |
| 6    | 13683    | M8 stainless steel square nut                 |
| 7    | 13685    | MU 4 stainless steel washer                   |
| 8    | 21045    | 12 x 1 exterior circlip                       |
| 9    | 21894    | Ratchet                                       |
| 10   | 21895    | Assembled handle                              |
| 10.1 | 21896    | Handle                                        |
| 10.2 | 2864     | Trim                                          |
| 10.3 | 23216    | Grip                                          |
| 11   | 21901    | Ratchet spring                                |
| 12   | 22929    | Disengaging lever                             |

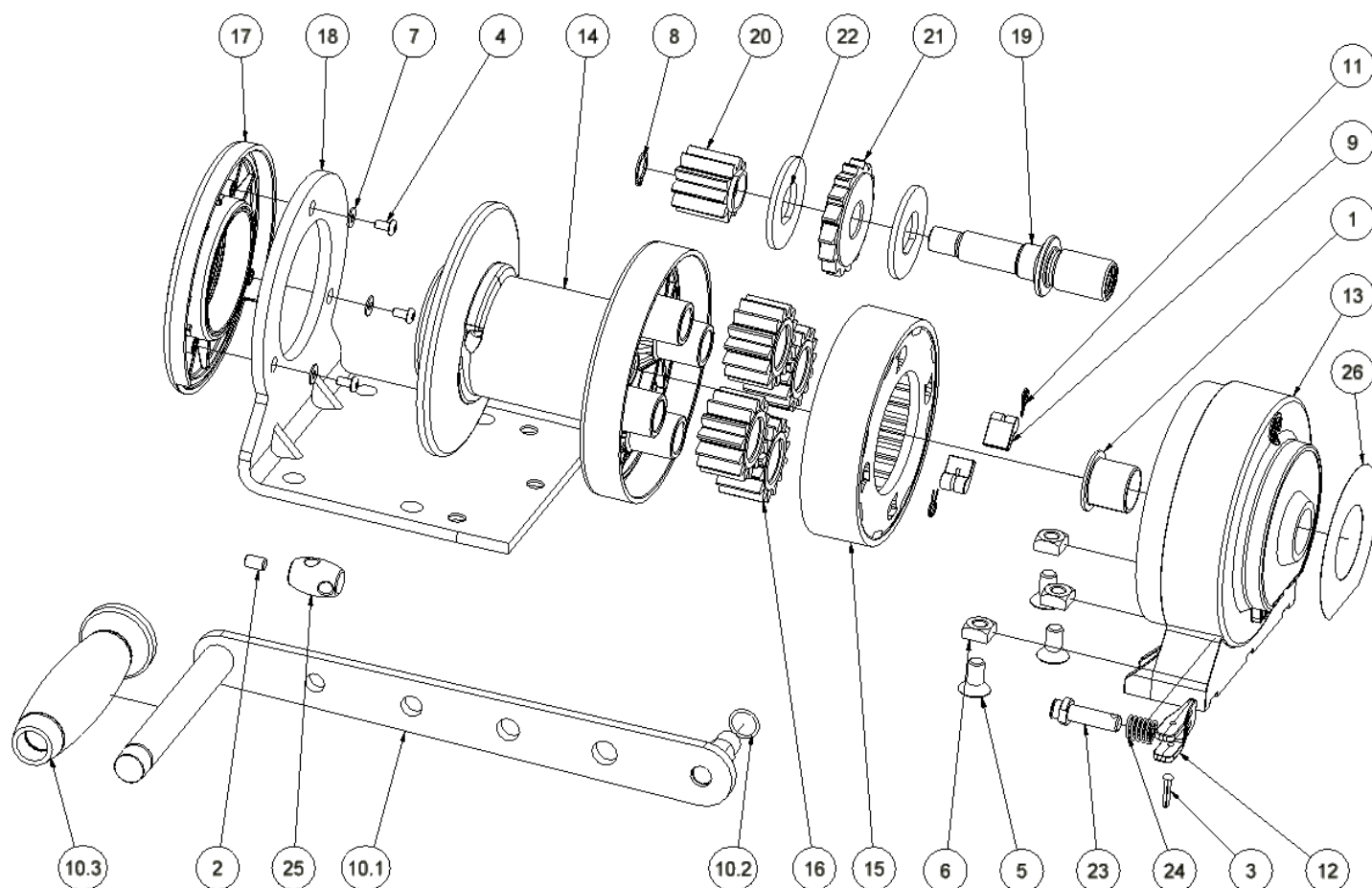
| No. | Part no. | Description         |
|-----|----------|---------------------|
| 13  | 23451    | Structure           |
| 14  | 23452    | Drum                |
| 15  | 23453    | Disengageable crown |
| 16  | 23454    | Planet wheel        |
| 17  | 23455    | Bearing             |
| 18  | 23456    | Bracket             |
| 19  | 23457    | Shaft               |
| 20  | 23458    | Sprocket wheel      |
| 21  | 23459    | Ratchet wheel       |
| 22  | 23460    | Support washer      |
| 23  | 23461    | Disengaging axle    |
| 24  | 23463    | Disengaging spring  |
| 25  | 23464    | Rope clamp          |
| 26  | 60417    | Label               |



# TIREX 300 Kg

| No.  | Part no. | Description                                   |
|------|----------|-----------------------------------------------|
| 1    | 2763     | GFM-2023-21 bearing ring                      |
| 2    | 13162    | 10 x Hc M6 headless screw                     |
| 3    | 13659    | 18 x aluminium 3.2 rivet                      |
| 4    | 13681    | 8 x M4 HC roundhead screw                     |
| 5    | 13682    | 16 x M8 HC stainless steel slotted head screw |
| 6    | 13683    | M8 stainless steel square nut                 |
| 7    | 13685    | MU 4 stainless steel washer                   |
| 8    | 21045    | 12 x 1 exterior circlip                       |
| 9    | 21894    | Ratchet                                       |
| 10   | 21895    | Assembled handle                              |
| 10.1 | 21896    | Handle                                        |
| 10.2 | 2864     | Trim                                          |
| 10.3 | 23216    | Grip                                          |
| 11   | 21901    | Ratchet spring                                |
| 12   | 22929    | Disengaging lever                             |

| No. | Part no. | Description         |
|-----|----------|---------------------|
| 13  | 23451    | Structure           |
| 14  | 23452    | Drum                |
| 15  | 23453    | Disengageable crown |
| 16  | 23454    | Planet wheel        |
| 17  | 23455    | Bearing             |
| 18  | 23456    | Bracket             |
| 19  | 23457    | Shaft               |
| 20  | 23458    | Sprocket wheel      |
| 21  | 23459    | Ratchet wheel       |
| 22  | 23460    | Support washer      |
| 23  | 23461    | Disengaging axle    |
| 24  | 23463    | Disengaging spring  |
| 25  | 23464    | Rope clamp          |
| 26  | 60416    | Label               |



## 12 – Example of the Declaration of Conformity





### DECLARATION OF CONFORMITY

F03.30.1 - UK Treuil manuel  
MANIBOX – MANISTOR – TIREX

We hereby declare that the design and manufacture of the machinery referred to below comply with the relevant requirements of Directive 2006/42/CE on Machinery.  
The machinery's technical file has been put together by the signatory of this declaration.  
This declaration shall become null and void in the event it is changed or if any item is added without our prior consent.  
Moreover, this declaration shall become null and void if the machinery is not used in accordance with its instructions for use and if it is not inspected regularly.

Type of device:      hand winch

Model:

Force:

Serial n°:

Function:              Hoisting equipment

Harmonised standard(s) used, notably: EN 13157

Quality assurance:    ISO 9001 (certificate registration n°: FQA 9911492)

Equipment delivered: ☐ with cable                      ☐ with hook  
☐ without cable                      ☐ without hook  
*Important: these items must comply strictly with the specifications indicated on the manufacturer's plate affixed to the winch and the instructions for use, and they must be supplied by professionals specialised in their use.*  
and with instructions for use.

Issued in Ferrières on:

**Antoine Huchez,**  
*President*

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