

ARBPRO LD1 Instruction Manual



IMPORTANT INFORMATION

Please read these instructions carefully and make sure you understand them before using this unit. Retain these instructions for future reference.

lowering & climbing gear
Arbpro

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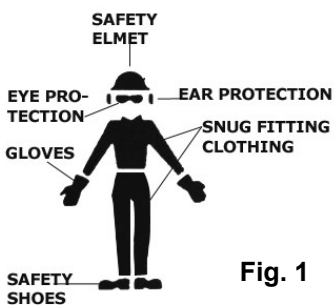
IDENTIFICATION OF SYMBOLS:



WARNING! This device can be dangerous. Careless or improper use can cause serious or even fatal injury.



Read and understand the instruction manual before using the device



Protective Gear

Fig. 1

Winch/Arborist Lowering Device

Attention danger!

Use of this device is only permitted in tree care. Professional trained persons can only use this product and in total respect of the instructions written in this manual. The instruction manual can only give indications on the correct use of the device and can not replace professional training in tree care rigging operations.

Read and understand instructions manual before using the device.

In no circumstances this device can be used to lift persons.

Always wear suitable PPE (refer to picture n. 1):

- wear clothes suitable to the job, comfortable and close-fitting. Do not wear necklaces or scarfs that can be caught up.
- wear strong boots with rubber sole and protection cap.
- wear eye protection
- always wear protection helmet
- wear strong gloves

Not following all safety informations of this manual can lead to serious dangers or death.

The user is responsible of all accidents or dangers concerning persons or property.

Always entrust or give only to persons trained on use of this device. Always give together with instruction manual.

User must be rested, good health and in good psychophysical conditions.

Never modify the product. This could lead to injuries or serious damages.

Do not use this device before reading and understand this manual in all his parts. In case of doubts contact the manufacturer or dealer



1. Description

ARPRO LD1 is a combined tool, thanks to the multi function main frame can hold a powerful winch or a simple descending brake

2. Components and technical features

- 1 Main Frame – Steel 10 mm dimensions cm 37*32*10
- 2 Winch- Manufacturer Harken Type 40.1 Maximum pulling force kg 800
- 3 Stopper- Manufacturer Spinlock Type XTS 0814/1
- 4 Stopper anchor plate
- 5 Guide
- 6 Detachable rubber pad
- 7 Stabilisation plate – Steel mm 210 x 32 x 10 mm
- 8 Anchor point rings
- 9 Guide for lowering line
- 10 Self Tailer
- 11 Descending brake – 5 mm chrome steel diameter 80 mm
- 12 Polyester anchor sling – 4 mt lenght - 50kN

Technical features:

Weight (main frame): kg 15

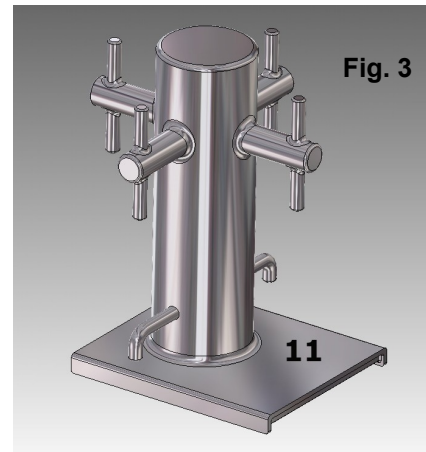
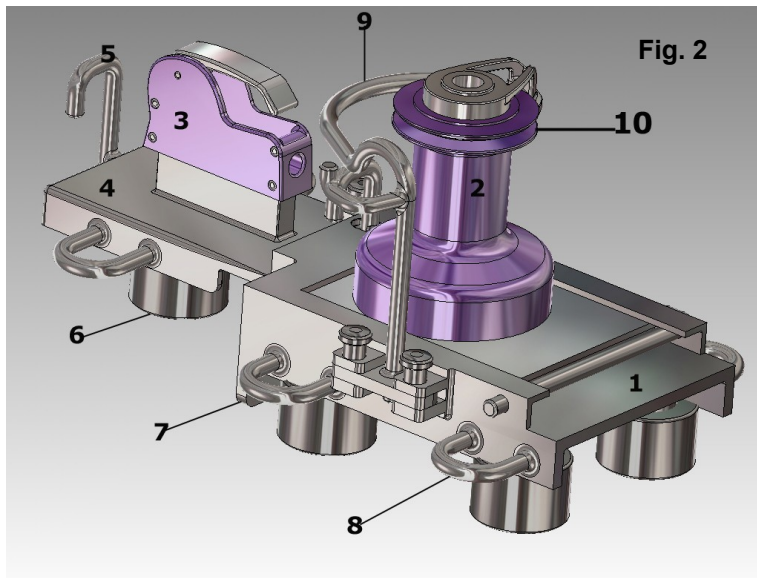
Weight (winch): kg 6.3

Weight (descennding brake): kg 11

Breaking strenght with brake installed: kg 4900

Safe working load limit with winch installed: kg 800

Safe working load with descending brake installed: kg 1000



3. Working area

ARBPRO LD1 is designed and manufactured only for tree care operations, to lower branches and limbs during pruning and rigging operations. It must be attached at the base of a tree with correct dimensions and enough strength to complete the job. User must be trained and must be sure that the tree has enough strength to support forces generated by rigging operations

4. Rigging rope

ARBPRO LD1 must be used only in combination with high quality textile ropes. In no circumstances can be used with metal wire ropes. Use of double braided polyester ropes is recommended in the dimensions written in this manual. Always check rigging gear before using it. User must check rope conditions and be sure of rope strength. In case of any doubt on rope conditions, replace it with a new one. Rope size depends on the installed application. Following rules must be respected:

- ARBPRO LD1 with winch installed: rope diameter must be 12 or 14 mm ($\frac{1}{2}$ or $\frac{9}{16}$ ")
- ARBPRO LD1 with descending brake installed: rope diameter must be 12, 14 or 16 mm ($\frac{1}{2}$, $\frac{9}{16}$ or $\frac{5}{8}$ ")

5. Installation

ARBPRO LD1 can be installed on the same tree where the job will be done or on a different tree. User must be sure that the tree is strong enough. Two different types of installation are possible:

-**"Light"** this installation is recommended if the tree must be preserved. For this installation rubber pads (6) must be mounted in the slots on back of the main frame.

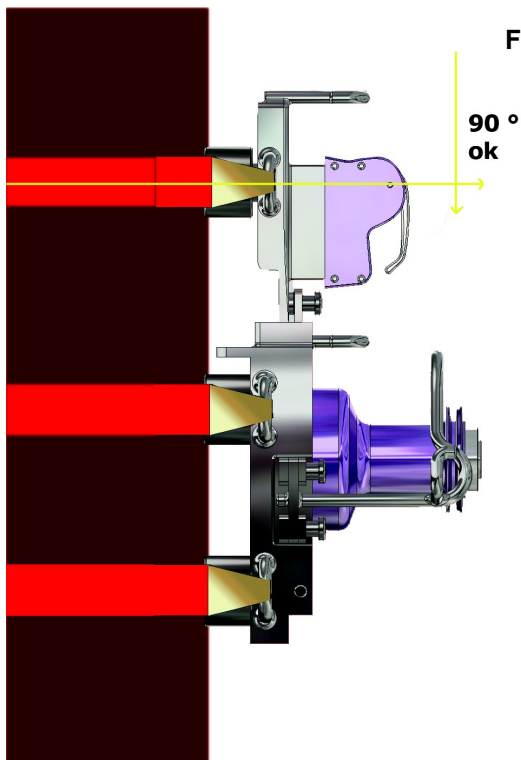


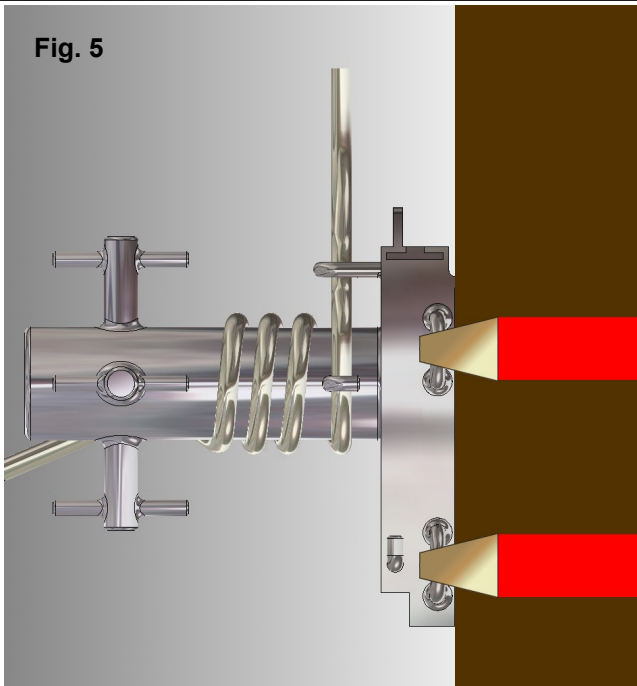
Fig. 4

Safe working load with this type of installation is kg 800 (with both winch or descending brake installed)

Straps assembly (in all kind of installation):

Check straps before installation.
Install straps by inserting the hooks into the rings placed on side of main frame (Attention! Ratched bar should be mounted facing outside). Straps must be at 90°. Any other angle in not correct and potentially dangerous.
Tighten straps by pulling on ratched bar to reach a good anchorage.





- **“Heavy”**. This installation offer best anchor of the device. Can be used only if the tree has to be removed.

Remove rubber pads from the back of the main frame. Cut the tree (cm 22 x 4) using a chainsaw allowing the stabilisation plate (7) to fit inside.

Attention! Do not use this type of installation if the cut may reduce tree strength.

Install the main frame using the straps (follow instructions for “Light” installation)

Safe Working Load for this installation is: 800 kg (with Winch), 1000 kg (descennding brake).

6. Use

6.1 Control Checks

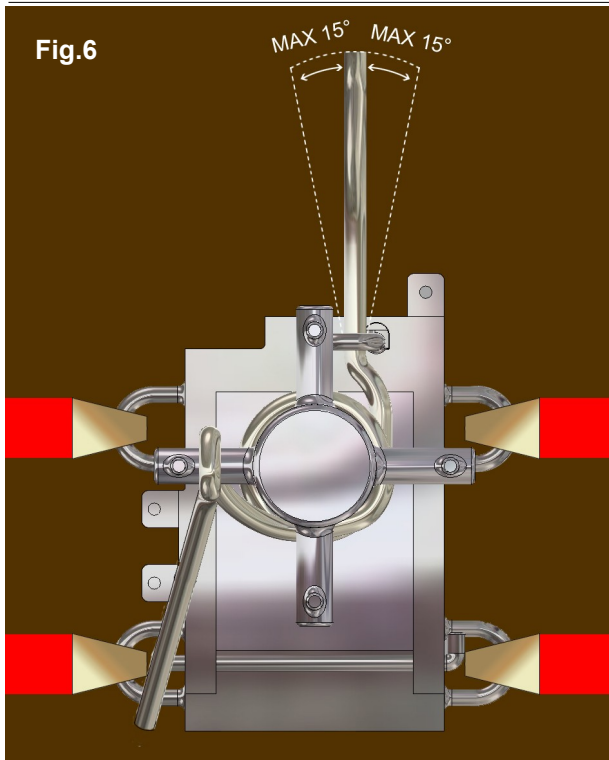
Read and understand the instruction manual before using the device. If you have any doubt please contact the manufacturer or the distributor.

Before any use check the device as follow:

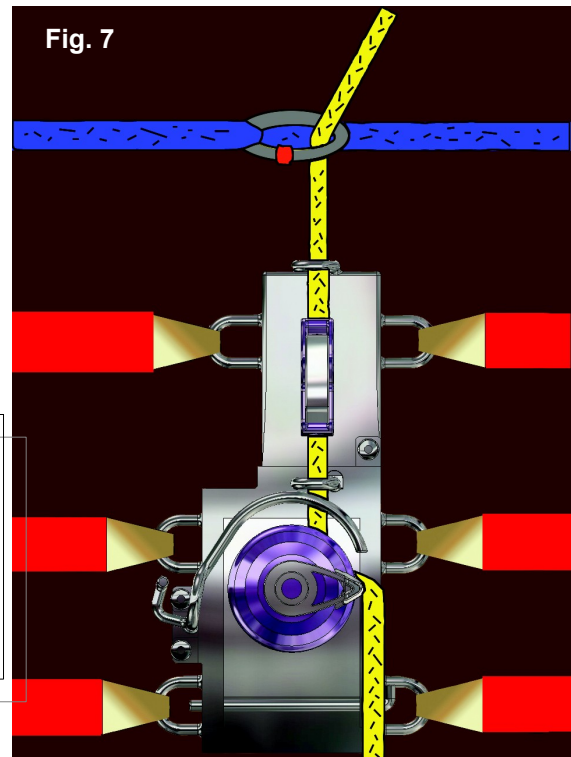
- check the metal parts for deformations, damages, cracks, rust on:
 - . main frame
 - . stabilisation plate
 - . anchor rings
 - . guides
 - . descennding brake
 - . winch
 - . straps
 - . identification plates
- rigging chain (rope, block, slings, carabiners etc.)
- tree and rigging point strength
- rope angles
- rules and laws
- security and emergency plan
- user training grade and knowledge of tree rigging operations

Attention! Do not use the device if any of the control checks above failed, or if there is any doubt concerning the strength of one of the components of rigging system.





For a correct use of the device rope insert angles must respect the indications on picture n. 6, Rigging rope must enter the device vertical. From a front view maximum side angle right and left is 15°. From a side view rope angle must be 0°. Different angles are not correct and potentially dangerous.



If ARBPRO LD1 is in a position not allowing correct rope entry angles, it is imperative to redirect the rope to obtain a correct installation. See picture n. 7



6.2 Using ARBPRO LD1 with Winch installed.

Winch must be only used in combination with Stopper.

Set up (refer to picture n. 8):

- open locking pin (1) by pulling the handle and twist
- connect stopper plate (2) to the main frame by sliding into the guides
- pull and twist the handle to relise and let the pin lock into the frame
- connect main frame (3) to the tree (see chapter 5)
- insert the winch plate (4) with "top" sign up and lock it using the bar and pin.
- open stopper handle by pulling to top
- insert rope and close the stopper by pulling the handle down
- with the stopper (5) locked the rope can only move down in the direction of the winch
- place the rope into the guides (6) before stopper and winch
- spin the rope on winch drum clockwise and fill the space on the drum. Last turn must exit the drum (7) and locked in the self tailer
- insert winch bar (8) in the front hole and the system is ready to pull
- open side locking pins and insert rope guide (10)
- close locking pins and check rope guide is in correct position

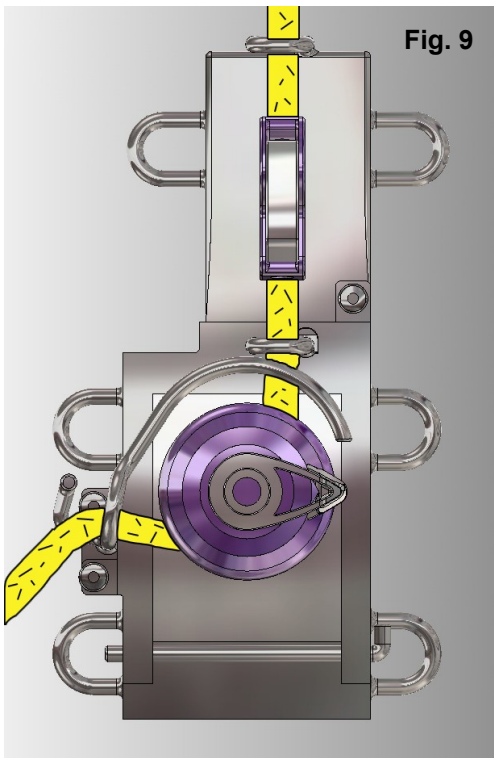
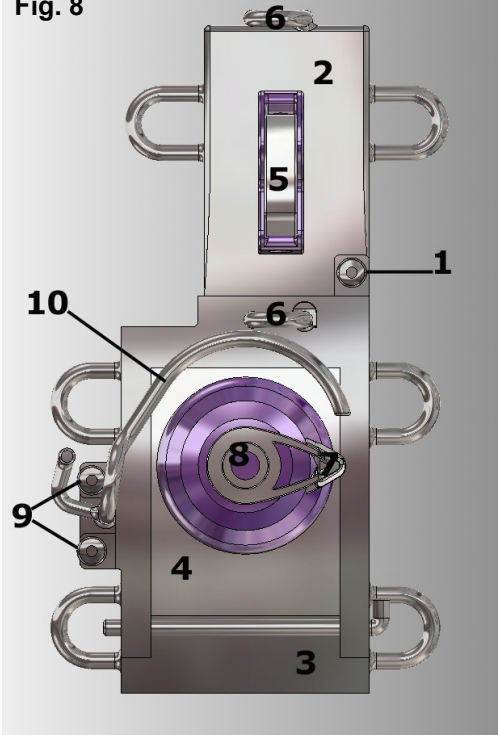
Pull:

Turn the handle clockwise to obtain a 40,1:1 pulling rate.
Turn the handle anticlockwise to obtain a 13,4:1 pulling rate

Attention!
Pulling winch handle is strictly a one man operation. User must NEVER stay in the rigging direction if any part of the rigging system should fail



Fig. 8



Lowering:

Once the branch or limb has been cutted prepar to rig.
During lowering operations never lose hand control of the rigging rope.

- Release the rope from self tailer
- hold the rope fermaly and rotate it perpendicular to the winch axis to remove as many wraps needed to lower the weight correctly. (refer to indications at 6.3)
- place the rope into the rope guide (10) for lowering
- only after the rope is placed into the rope guide, hold rope with left hand and release the stopper with right hand.

Always hold the rope at this point and never loose the contact.



- prepare to lower. Place yourself in a safe zone. User must NEVER be in the bull eye of fall/drp zone. Always keep rope at safe distance. A tangle of rope can catch the operator and graze or pull himself dangerously towards the device.

- Lower the piece controlling descend

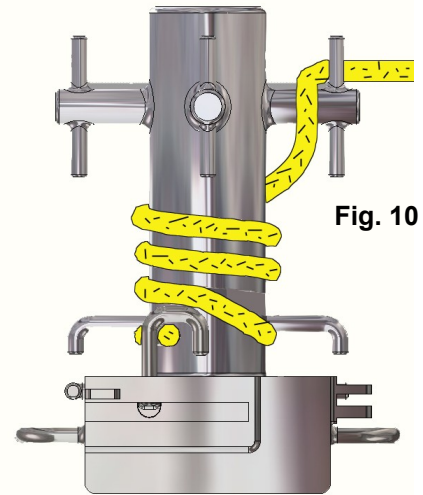
6.3 Using ARBPRO LD1 with descending brake installed:

- remove stopper frame opening locking pin
- remove rope guide opening locking pins
- insert tube in place with "top" sign pointing up. Lock it with pin
- instal rope as shown. Rope must pass back of the guides (left and right) to avoid overlapping
- it is possible to change breaking force by changing the number of wraps (more wraps more breaking force). This force depends on several things:
 - . braiding type of the rope
 - . rope diameter
 - . rope wear
 - . rope manutention (dirt, umidity, storage etc.)

It is also possible to change breaking force by changing exit angles form rope guides placed on tube.

Due to different **variables** it is difficult to give sharp datas on breaking forces. As an example the following datas was mesured with a Yale Double Esterlon 12 mm (1/2") brand new rope:

- ¾ wrap: kg 80
- 2 ¾ wraps: kg 400
- 3 ¾ wraps: kg 800



Attention:

When lowering the operator must always keep clear from lowering zone. Always wear PPE. User must always control rope with both hands. Rope must always be coiled and stored in a bag to avoid knots and tangles. **Never stay in the direction of the rope. Never twist the rope around hands, arms or any part of the body.**

Attention!

During rigging operations dynamic loads can accour. It is imperative to reduce dynamic loads. To many wraps or sudden stops during lowering can chock load the entire system (lowering device, rope, block, sling, rigging point) and lead to potential dangers. For example 100 kg x 1 mt free fall genrates 600 kg impact force! Never stop the work suddenly. Always let the load run and break it slowly to reduce kinetic force.

7. Transport, maintenance and care

7.1 Transport:

Chocs and crashes can cause hidden damages and reduce the strenght of this device. Damages can be serious and irreverisbles. For all these reasons it is important to take maximun care during transportation to avoid collisions with solid objects or sharp edges. Avoid any contact with aggressive agents such as acids, oils, chemicals, gasoline.

7.2 Abrasion

Dirt ropes with sand, mud, soil accelerate abrasion on tube, winch, rope guides. Clean rigging ropes frequently.

7.3 Cleaning

Do not use aggressive chemical products. Clean with warm water (<40° C) and light soap. For Harken winch maintenance refer to Harken guide.

7.4 Storage

Store the device in cool and dry place. Do not store in direct sunlight, umidity, salt, avoid contact with chemical such as acids, oils, carburanti. Keep from direct heat sources and store at temperatures under 40° C.

7.5 Repairs

For repairs only address to manufacturer or distributor.

8. Simbols and identification

On the main frame of ARBPRO LD1 there is a tag for identification and control wich gives essential product information:

- Product name and model
- Serial number
- Year of production
- CE mark

Presence of this tag is essential. In case it should be damaged or can't read one or more details, it is possible to ask for a copy. Just ask the manufacturer or distributor giving name, serial number and date of purchase. Serial number is also printed on back of descending brake and winch frames.

DECLARATION OF CONFORMITY

The manufacturer:
Bambin Sementi s.n.c. Di Mazza V. & C.
Via Briantina, 25
20038 SEREGNO – Italy
VAT# IT02088760968

Declares under his responsibility that the following brand new product:

Product Type: **ARBPRO LD1**

Serial Number: **SEE PRODUCT TAG**

Year of production: : **SEE PRODUCT TAG**

Safe working load with descending brake installed:

KG 1000

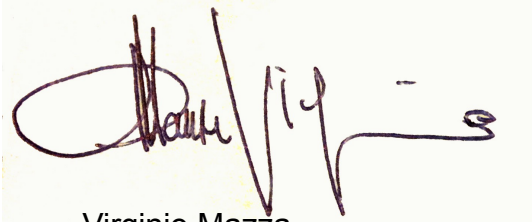
Safe working load with winch installed::

KG 800

Follows the provisions of the directive 2006/42/CE (machinery)

Seregno, September 1st 2009

Technical file kept by
Bambin Sementi s.n.c. Di Mazza V. & C.



Virginio Mazza
Legal Representative