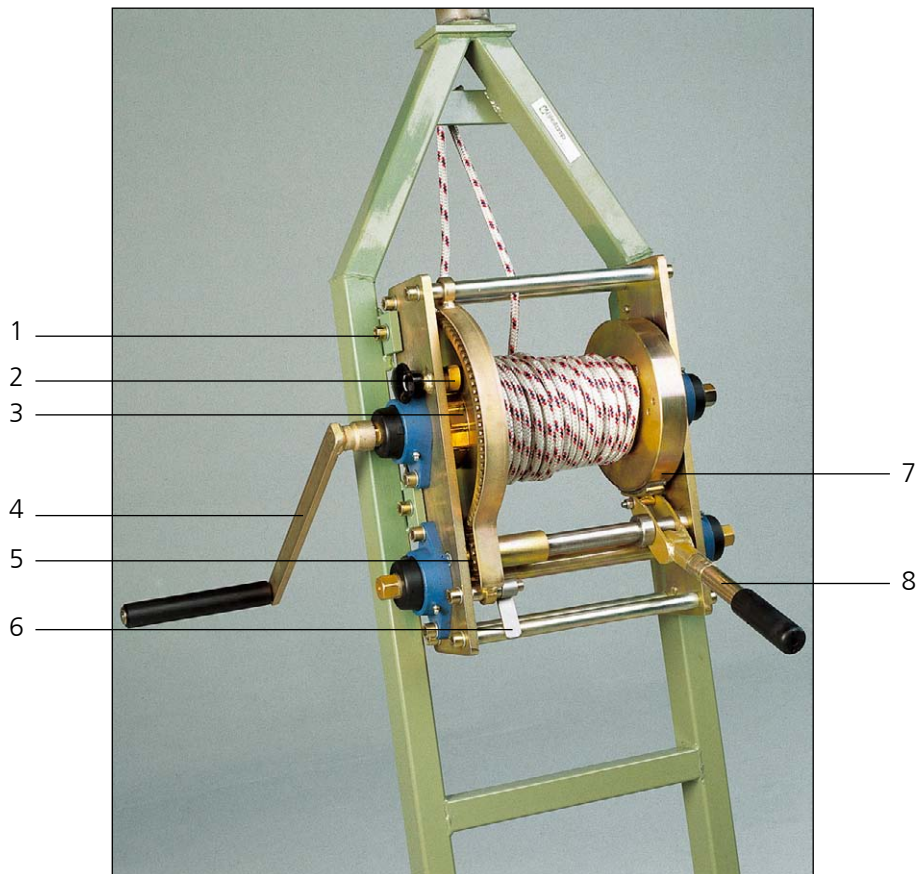




HAND-WINCHES

OPERATING INSTRUCTIONS



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All it takes for environmental research

P.O. Box 4, 6987 ZG Giesbeek,
the Netherlands

T +31 313 88 02 00
F +31 313 88 02 99

E info@eijkelkamp.com
I www.eijkelkamp.com



a Royal Eijkelkamp Company

On these operating instructions



If the text follows a mark (as shown on the left), this means that an important instruction follows.



If the text follows a mark (as shown on the left), this means that an important warning follows relating to danger to the user or damage to the apparatus. The user is always responsible for its own personal protection.

Text

Italic indicated text indicates that the text concerned appears in writing on the display (or must be typed).

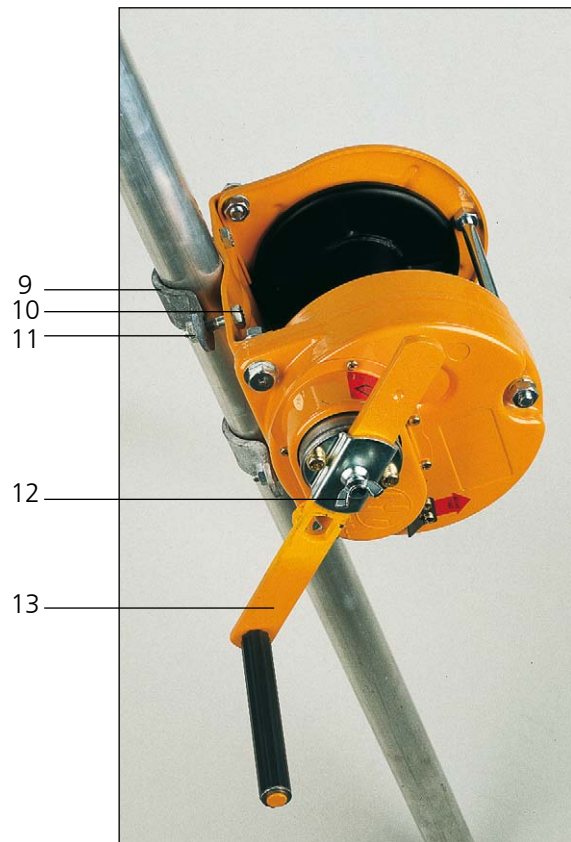
1. Short description

Hand-operated winches are used for in-situ bailer boring, pulling casings and lowering sampling equipment. They are not suited for general lifting activities. They are mounted on one of the legs of a tripod. The choice of winch depends on the purpose. Equally essential is the selection of the type of tripod on which a winch will be mounted.

The instructions for use describe two types of hand-operated winches.

The light type of winch matches the light type of tripod (02.01.04) and has been fitted with a load brake.

The heavy type is suitable for use with the heavy tripod and has been fitted with a free fall facility and band brake. Two persons may operate this type of winch: directly on the drum (1:1) or using a speed reduction (1:7:5).



2 Technical specifications

Article no.: 02.02.06

Max. pulling force: 5 kN

Suitable for tripod: 02.01.01

Speed reduction: 1:8,9

Weight: 12 kg

Article no.: 02.02.05

Max. pulling force: 20 kN

Suitable for tripod: 02.01.04

Speed reduction: 1:1 of 1:7,5

Weight: 39 kg



Both types of winches are to be operated manually.



The maximum tensile force of the cable used may be less than that of the winch. See the specifications of the cable used.



The lowest specification is determining the load of the total system.



Eijkelkamp Agrisearch Equipment provides various suitable cables.

3. Safety instructions



Avoid close proximity to moving parts. You may incur serious injuries



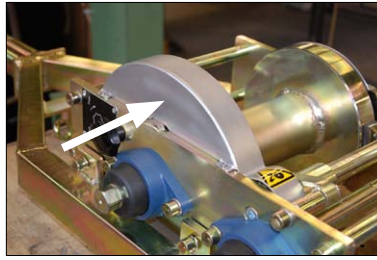
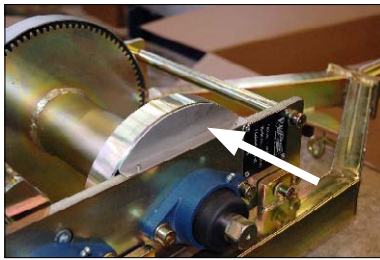
Make sure the cable is evenly wound and unwound. A cable unevenly wound may cause damage to the drum, or the cable to break.



Make sure the heavy hand winch blocking strip (6) is tipped forward during operation to lock the central gear wheel (5).



Never remove the protective covers (only remove them during maintenance).



4. Preparing for use

4.1 Preparing the heavy hand-operated winch (0.2.02.05)

1. Use the 4 socket head screws (1), 4 flat washers and the M10 socket head wrench supplied to mount the hand winch on the ladder frame of the heavy tripod.
2. Lead the cable through the opening in the band brake (7). Use 2 socket head screws, 2 flat washers and the M6 socket wrench to jam the cable between the blocks.
3. Wind the cable and lead it up along the inside of the ladder (see figure 1). Wind the cable evenly.



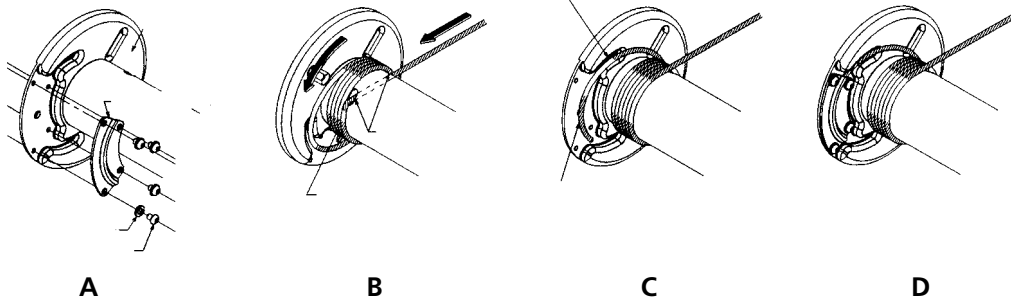
The heavy winch cable is well led when winding on the drum is achieved by turning the crank anti-clockwise (see figure 1).

4. Lead the cable over the hook on the ladder frame to the hatch pulley. Open the pulley, lead the cable through it and close it again.
5. Use the bow shackle to attach the cable to the object to be lifted.
6. Place the safety ratchet (2) on the central gear wheel (3) to prevent the winch from unwinding.



4.2 Preparing the light hand-operated winch (02.02.06)

1. Use the 2 cap brackets (9 see photo page 2), 4 bolts (10) and 4 nuts (11) to attach the winch to the Ø80-mm leg of the light tripod.
2. Remove the cable locking plate (see page 4, A).
3. Lead the cable through the opening in the drum (B).
4. Pull the cable from the opening for approx. 1,3 m.
5. Wind the 1,3-m length of cable 5 laps around the drum.
6. Lead the end of the cable to the place where the cable locking plate will be installed (C).
7. Install the cable locking plate and screw in the bolts (D).
8. Loosen the wing bolt (12 photo on page 2) to allow attaching of the crank to the winch.
9. Adjust the crank's length and tighten the wing bolt (12) to secure it in place.



The light winch cable is well led when winding on the drum is achieved by turning the crank anti-clockwise.

5. Operation

5.1 Operation of the heavy hand-operated winch (02.02.05)

One or two person may operate the hand winch. The heavy hand winch is supplied with two cranks. The drum may be driven directly or by using the speed reduction.

5.1.1 Speed reduction

Speed reduction is only required in heavy lifting.

1. Place the safety ratchet (2) on the central gear wheel (3) to prevent the winch from unwinding.
2. Position the crank (4) on the lower shaft.
3. Remove the blocking strip (6) from the gear shaft.
4. Gently slide the central gear wheel (5) to the left and use the crank to turn the lower shaft at the same time to interlock the three gear wheels.
5. Position the blocking strip (6) on the gear shaft to lock the central gear wheel.

In the case the drum needs to be driven directly:

1. Place the safety ratchet (2) on the central gear wheel (3) to prevent the winch from unwinding.
2. Remove the blocking strip (6) from the gear shaft.
3. Make sure the security ratchet (2) controls the tension. Use the crank to gently turn the lower shaft so as to be able to slide the central gear wheel (5) to the right.
4. Place the blocking strip (6) on the gear shaft in order to lock the central gear wheel.

5.1.2 Free fall

The heavy hand winch is fitted with free fall facility. Proceed as follows:

1. Slightly turn the crank so as to release the security ratchet.
2. Block the hand winch using the hand brake (8).
3. Remove the crank(s) before engaging the free fall facility.



A rapidly spinning crank may cause serious injury

4. Remove the security ratchet (2)
5. Release the hand brake in order to unwind the cable. Use the hand brake to apply braking force.

5.2 Operation of the light hand winch (02.02.06)

One person may operate the light hand winch.

 **Shift the brake arm into position C only for rapid unwinding (free fall).**

5.2.1 Free fall

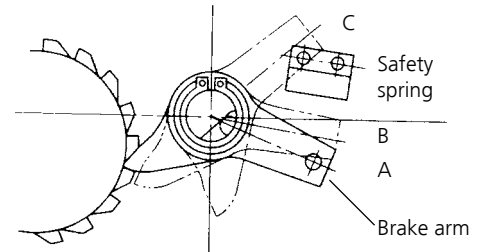
1. Remove, if possible the crank prior to engaging the free fall facility.



The free fall facility may only used for lowering the bailer in the auger hole.



A spinning crank may cause serious injury



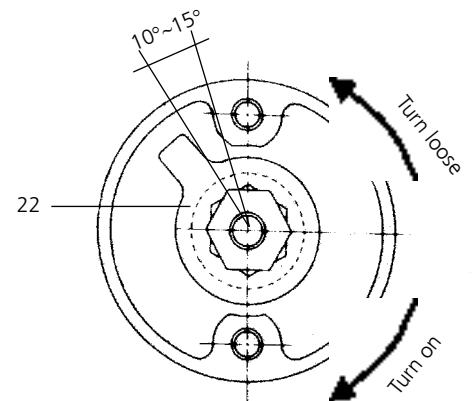
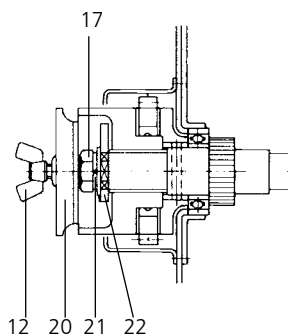
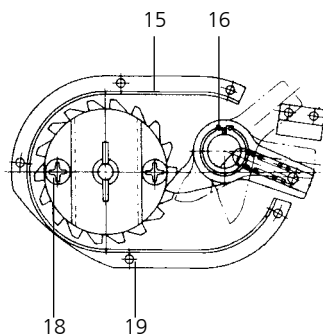
2. Press the safety spring and shift the break arm to position C, thereby disengaging the brake.
3. After free fall reset the break arm to position A/B.

6. Application

Hand-operated winches are used for in-situ bailer boring, pulling casings and lowering sampling equipment. They are not suited for general lifting activities. The maximum load capacity of the different parts used, such as tripod, cable and hand winch should be considered in that case. The lowest specification is determining the load of the total system.

7. Maintenance

- Remove mud and sand from gear wheels and brake regularly.
- Check the heavy winch grease lubrication frequently. Use the grease nipples to lubricate the ball bearings regularly, preferably with biodegradable grease. Pump until resistance is felt. Keep sand off the gear wheels.
- Make sure to regularly check the cable. Never use a damaged cable. By spraying the cable with a water thin oil (which will draw in the cable), the life time of the cable will be lengthened.
- Use grease to lubricate the light winch brake arm rotary shaft regularly.
- In the case the light winch brake mechanism does not function properly, clean it carefully. Proceed as follows:



1. Remove the five bolts (19) and the cap (15).
2. Remove the two bolts (18) and remove the crank holder (20).
3. Remove the nut (17), washer (21) and tongue washer (22).
4. After removing of the locking ring (16), integral removal of the brake arm is possible. Make sure not to displace any parts.
5. Carefully clean all parts and replace damaged ones if necessary. Make sure the brake is in optimum condition.
6. Re-assemble the hand winch, follow step 1 up to and including 4 in reverse order. Proceed carefully. Mount the tongue washer (22) as shown in the figure above at right.



Tighten re-assembled parts well to avoid any play. In the case of play re-tighten the part in question.



The equipment must be inspected at least every year on damage and wear.

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EC-declaration of conformity for machinery

(Directive 98/37/EG, Annex II, sub A)

Manufacturer:

Eijkelkamp Agrisearch Equipment
Nijverheidsstraat 30
6987 EM Giesbeek
Netherlands

herewith declares that:

Machine : Tripod Art. no.: 02.01.01 / 02.01.04
Hand winch Art. no.: 02.02.05 / 02.02.06

is in compliance with:

- Machinery Directive 98/37/EG

Place : Giesbeek

Date : 18-06-2009

Name : F. Tillmann

Signature :

A handwritten signature in blue ink, consisting of several loops and a long horizontal stroke.

Eijkelkamp
Agrisearch Equipment
P.O. Box 4, NL-6987 ZG Giesbeek
Nijverheidsstraat 30, NL-6987 EM Giesbeek

T +31 313 880200
F +31 313 880299
E info@eijkelkamp.com
I www.eijkelkamp.com