

USER MANUAL
WIRE ROPE PULLING HOIST



HANDELMAATSCHAPPIJ VLIERODAM B.V.
NIJVERHEIDSWEG 21

POSTBUS 827

3160 AA RHOON

010 - 5018000

010 – 5013843

www.vlierodam.nl



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SAFETY INSTRUCTIONS:

- 1 *Before installing and using this unit, in a safe and efficient manner, be sure you have read and fully understood the information and instructions given in this manual. A copy of this manual should be made available to every operator.*
- 2 *Do not use the unit if any of the identification plates mounted on the unit are missing or if any of the information on the plates, in particular the WLL , is missing or illegible.*
- 3 *It is essential for the safe operation of the machine to ensure that, before loading the machine, the anchor points, hooks or pins, are correctly secured.*
- 4 *Each time before use, check that the hoist and the accessories used with the hoist are in visibly good condition and that there are no parts missing.*
- 5 *Wire rope pulling hoists are very easy to use. Place the telescopic operating handle on either the forward or reverse operating lever, lock it into position by twisting, and move the operating handle to-and-fro. The operating arc is variable for ease of operation. When operation stops, both jaws automatically grip the wire rope and hold the load which is spread equally between the jaws. The to-and-fro operation of the forward or reverse lever gives continuous movement of the load.*
- 6 *The user must always ensure before operation that the anchor point(s) for the machine and wire-rope are of sufficient strength to hold the load.*
- 7 *It is forbidden to use the machine's wire rope as a sling, by passing it around the load and hooking it back onto itself.*
- 8 *Never attempt to motorize the models of wire rope pulling hoist machines described in this manual.*
- 9 *Never attempt to operate the rope release mechanism while the machine is under load.*
- 10 *Never obstruct the operating levers or the rope release lever and never operate the forward and reverse operating levers at the same time.*
- 11 *The wire rope must be in good condition to ensure safe, correct operation of the unit. Discard any wire rope which shows any signs of excess wear or damage. The condition of the wire rope should be checked each time before using the unit as detailed in the "wire rope" section.*
- 12 *Never use a handle, other than the telescopic operating handle supplied, to operate the wire rope pulling hoist machine.*
- 13 *The install and use of this hoist must be executed by an expert and under the circumstances which guarantees the safety of the installer, in accordance with the in this category applicable regulations.*
- 14 *The unit must be fastened to an anchoring point and to a structure having the necessary strength to support the maximum load (WLL) indicated on the unit. If several units are used, the strength of the structure must be compatible with the number of lifting units used and with the maximum utilization load of the units.*
- 15 *The unit is designed for manual operation and must never be motorized.*
- 16 *When using the unit, the operator must ensure that the wire rope remains constantly tensioned by the load, and more particularly, the operator must ensure that the load is not temporarily snagged by an obstacle when coming down as this could result in rupture of the wire rope when the load is release from its obstacle.*
- 17 *It is forbidden to replace sheared pins by anything other than genuine shear pins of the same model.*
- 18 *Never anchor the machine other than by its appropriate anchor point.*
- 19 *The unit must never be used for lifting people.*
- 20 *The unit must never be used for any operations other than those described in this manual. The unit must never be used to handle any loads exceeding the maximum utilization load indicated on the unit. It must never been used in explosive atmospheres.*
- 21 *Do not use the hoist if the marking is not readable.*
- 22 *Never park or circulate under a load. Mark out and prohibit access to the area located under the load.*
- 23 *When a load is to be lifted by several units, a technical study must first be carried out by a qualified technician before installation of the units. The installation must then be carried out in compliance with the study, in particular to ensure an even distribution of the load under appropriate conditions.*
- 24 *Never obstruct the machine, which could prevent the machine, the wire rope and the anchor points from operating in a straight line.*
- 25 *Never use the wire rope as a sling.*
- 26 *It is not allowed to make any changes to the hoist (like welding or burning).*
- 27 *Never apply a load to the loose wire rope exiting from the anchor point of the wire rope pulling hoist machine.*
- 28 *Never subject the controls to sharp knocks.*
- 29 *Do not attempt to lift fixed or blocked loads.*
- 30 *It is essential to take the load off the machine before attempting to release the jaws.*
- 31 *Store the machine and wire rope in a dry place, away from the effects of the weather. The wire rope should be completely removed from the machine and rewound onto its reeler.*
- 32 *Never expose the wire rope to temperatures beyond 100 degrees C.*



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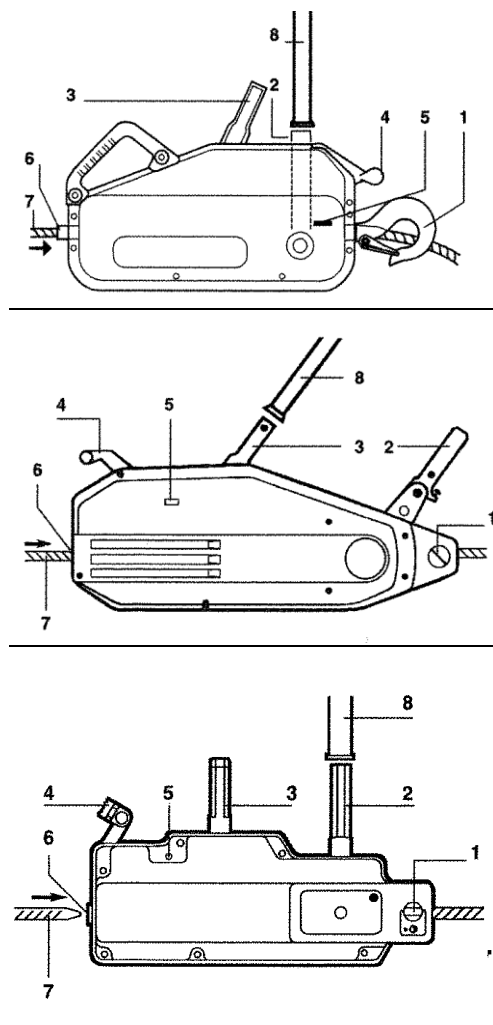
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- 33 *Never use wire rope that has been subject to damage such as fire, corrosive chemicals or atmosphere, or exposed to electric current.*
- 34 *Never attempt to reverse the rope completely through the machine while under load.*
- 35 *Do not operate the wire rope pulling hoist when the rope ferrule gets to within 10 cm of the machine. Otherwise the ferrule is likely to foul the casing and push the rope guide inside the machine.*
- 36 *It is necessary to continuously monitor the state of the wire rope, to clean and oil it with a rag soaked with motor oil or grease. Grease or oil containing graphite additives or molybdenum disulphide must not be used.*
- 37 *Do not use the hoist if there is a bad view on the bottom hook or load.*
- 38 *Hoists must be inspected and tested every year by an expert body.*

USER MANUAL:

Wire rope pulling hoist:



The **wire rope pulling hoist** is a hand-operated lifting and pulling machine. It is versatile, portable and multi-purpose, not only for pulling and lifting but also for lowering, tensioning and guying.



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The originality of the **wire rope pulling hoist** is the principle of operation directly on the wire rope which passes through the mechanism rather than being reeled onto a drum of a hoist or conventional winch. The pull is applied by means of two pairs of self-energised jaws which exert a grip on the wire rope in proportion to the load being lifted or pulled. A telescopic operating lever fitted to either the forward or the reverse lever transmits the effort to the jaw mechanism to give forward or reverse movement of the wire rope. The machine is fitted with a hook or anchor pin, depending on the model, so that it can be secured quickly to any suitable anchor point. Each machine is supplied with a telescopic operating handle, and usually with a 20 mtr standard length of special wire rope fitted with a safety hook and wound onto a metal reeler.

All **wire rope pulling hoist** incorporate a shear pin system. In case of overload, one or more pins (depending on the model), fitted to the forward operating lever, shear and prevent further forward or lifting operations. Reverse operation is still possible to enable the load to be lowered or the wire rope to be slackened.

The machine may be anchored to a fixed point with the wire rope travelling towards the machine, or travel along the wire rope, with the load, the wire rope itself anchored to a fixed point.

Whatever the rigging arrangement, and if the machine is anchored directly to a fixed point, ensure that there are no obstructions around the machine which could prevent the wire rope, the machine and anchor from operating in a straight line. It is therefore recommended to use a sling of an appropriate capacity between the anchor point and the machine. Any rigging arrangement which requires the calculation of the forces applied should be checked by a competent engineer, with special attention to the appropriate strength of fixed point used.

The capacity of the machine may be increase considerably for the same effort by the operator by using multiple sheave blocks. The increase in the capacity shown is reduced depending on the efficiency of the pulleys. The diameter of the pulleys used should be equal to at least 18 times the diameter of the wire rope.

When handling the wire rope it is recommended to protect the hands by using work gloves.

- 1 Uncoil the wire rope in a straight line to prevent loops or kinks.
- 2 Release the internal mechanism.
- 3 Insert the wire rope through the rope guide at the end apposite to the anchor point (hook or anchor pin).
- 4 Push the wire rope through the machine, and if necessary, helping it by operating the forward operating lever.
- 5 When the wire rope appears through the anchor point, pull the slack wire rope through the machine, to the point required.
- 6 Engage the jaws by operating the rope release mechanism.
- 7 Anchor the **wire rope pulling hoist** or the wire rope to the appropriate fixed point taking care to ensure that the anchor point is correctly fixed.
- 8 Extend the telescopic operating handle until the spring locks into position. If necessary twist the two sections of the handle, one inside other, to align the spring.
- 9 Replace the telescopic operating handle on the chosen operating lever (forward or reverse) and twist the handle to ensure that it is locked in position (about a half turn).

Following these operations, the unit is ready to operate, provided that the load is properly docked to the appliance or steel rope.

Each machine is fitted with a lever for releasing the jaw mechanism which should only be operated when the machine is not under load. There are two positions for the rope release lever: released or engaged.

Releasing:

Completely press the rope release safety catch and lift the rope release lever. Release the safety catch and continue to lift the rope release lever until it locks into position. The internal mechanism is in the released position.

Engaging:

Lift the rope release lever slightly. Press and maintain pressure on the rope release safety catch, allowing the release lever to slowly travel back to its original position.

When not in operation, it is recommended that the rope release lever should be in the engaged position. The machine must therefore be released before attempting to feed in the wire rope.