Operating manual

Container lifting device

- retractable version -

Type 1889
This operating manual is to be kept on the lifting device. It must be ensured that everybody who must complete work on the lifting device can examine this operating manual at any time. In addition, the operating manuals described in the Safety of Work Law and the Equipment Usage Directive must be provided.

All safety and operating notice signs on the machine are to be kept in a clearly legible condition at all times. Damaged or illegible signs are to be replaced immediately.
1. Safety instructions

Duty of care of the operator

The lifting device Type 1889 has been designed and built to after the careful selection of the harmonised standards with which it must comply and other technical specifications. It is therefore state of the art and offers maximum safety.

However, this safety level can only be achieved in practice if all the action required for it is actually taken. It is a matter for the operator of the lifting device to plan this action and to check that it is implemented.

The operating must in particular ensure that

- the lifting device is only used for the purpose for which it is design (see the section entitled General).
- the lifting device is only operated if it is in perfect working order and special safety equipment is checked regularly to ensure that it remains fully functional.
- the operating manual is available at the place of use of the lifting device at all times in legible condition.
- only suitably qualified and authorised personnel is allowed to operating, service and repair the lifting device.
- this personnel is instructed at regular intervals in all matters of industrial safety and environmental protection and that they are familiar with the operating manual and the safety instructions contained there in.
- all the safety and warning notices on the lifting device remain on the device and are kept in legible condition.
- nobody is on, in or under the container with the mounted lifting device during the lifting or lowering procedure.
- persons only enter the system if the distance between the bottom of the container and the ground is less than 400 mm or load holders are fitted to act as additional safety devices pursuant to VBG 14.

Basic safety action

To prevent damage and fatal injuries when operating the lifting device:

- not exceed the maximum (see section entitled Technical data).
- not allow people to ride on the device.
- not work in, on or under the raised load if it exceeds the maximum height off the ground or load holders pursuant to VBG 14 are fitted.
- not exceed the maximum angle (see section entitled Other instructions).
- not to depose at wind speed overriding:
  20 ft – max. 40 mph
  30 ft – max. 32 mph
  40 ft – max. 28 mph.

You must also ensure that if you wish to lift the maximum load the centre of gravity of the load is positioned as centrally as possible between the supports.

Requirements on the operating personnel

The lifting device Type 1889 may only be operated by people who have been trained, instructed and authorised to do so. These people must be familiar with the operating manual and act accordingly. The authority of the operating personnel must be defined clearly.

Damage or defects on the lifting device are to be reported to the appropriate person without delay. Do not work with the lifting device until the damage or defect has been rectified.
Servicing and repair work

Servicing and repair work may only be completed by trained personnel.

Do not make any unauthorised modifications to the lifting device for safety reasons – this particularly applies to welding work on load-bearing parts. All planned modifications must be approved in writing by haacon hebetechnik gmbh.

Only use original spare parts / original wear parts. These parts have been specially designed for the machine. If you use other parts it cannot be guaranteed that they are designed and built to withstand the stresses safely. Parts and special equipment that are not supplied by haacon hebetechnik gmbh have not been approved for use on the lifting device.

The maintenance work set out in the operating manual (cleaning, lubrication, servicing, inspection, etc.) must be completed on schedule.

Other instructions

Important!

1. Drive under the container with great care. Do not bump anything with the truck since otherwise there is a danger that the hoist will buckle.

   Ask another person to guide you as you drive the truck under the container.

2. People must not be allow to stand in, on or under the container during the lifting and lowering procedure.

3. People may stand on and in the raised container if it is no more than 400 mm off the ground or load holders pursuant to VBG 14 are fitted.

4. The lifting device with a container must not be made to vibrate by means of crank impulses.

5. The container may only be placed on solid ground by the lifting device.

6. The area on which the container is placed or from which it is lifted must be as flat as possible.

7. The maximum angle of 2° applies to all types with a maximum load and at full lifting height.

8. If the site incline is greater than 2°,
   – all four supports must be loaded uniformly.
   – the cab must be aligned horizontally.
   To eliminate the bending stress on the gear rack tubes, the stress must be removed form the supports individually.
   – the sag of the gear rack tubes must be observed. It must be even.
   – additional safety devices may be required if larger angles are used or the gear rack tubes are exposed to considerable sag.
   – the centre of gravity of the container must be central.

9. Do not set up the device in storms.

![Diagram](image-url)
Technical instructions on the lifting device

To prevent accidents and damage, notice signs (figure 1-2) are affixed to the landing gear (figure 1-3), and the instructions there on must be followed:

![figure 1-2]

WARNING!
Do not mount on the system, before reading and understanding the operating instructions.

![figure 1-3]

WARNING!
- unlock the container from the support before lifting.
- do not lift the container if the wind velocity exceeds 40 mph.
- max. inclination of the container 2°
- in operating position the rack jacks have to be bolted.

All the safety signs and operating instruction signs on the lifting device are to be kept clearly legible at all times. Damaged or illegible signs are to be replaced without delay.

2. Technical data

<table>
<thead>
<tr>
<th>TYPE</th>
<th>1889.10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum load / set</td>
<td>t</td>
</tr>
<tr>
<td>Maximum load / support</td>
<td>t</td>
</tr>
<tr>
<td>Weight / set approx.</td>
<td>kg</td>
</tr>
<tr>
<td>Lifting time approx.</td>
<td>min.</td>
</tr>
<tr>
<td>Crank force / Support pair</td>
<td>N</td>
</tr>
<tr>
<td>Lift / Turn of crank</td>
<td>mm</td>
</tr>
<tr>
<td>Lift</td>
<td>mm</td>
</tr>
<tr>
<td>Design height</td>
<td>mm</td>
</tr>
<tr>
<td>Working temperature</td>
<td>-33°C to +50°C</td>
</tr>
</tbody>
</table>
3. General
The lifting device Type 1889 is designed to move and position containers with a maximum gross weight of 10 tonnes. It consists of four rack supports with spur gears. The support plates and cranks are loaded separately. During transport the hoist is securely fixed to the container in its stowed position. When required for use, the supports can easily be extended by the operator and secure in their operating position. A locking device that can be inserted into the crank drive prevents the gear rack moving downwards.

The lifting device Type 1889 has a self-inhibiting spur gear, which holds the load securely at any height (you must nevertheless comply with the safety instructions).

The rack supports form a stable unit with the container. The large support plates means that the device can be used anywhere in the open air where there is firm ground. They are driven using connecting crank handles.

4. Structure
The lifting device has a robust tubular steel construction.

The rack support is a product that has proven its worth over many decades that offers a long service life and operational reliability. The gear has an internal load lock, which can hold the load securely at any height.

Rack jack support and support plates form a unit. Each unit includes a ratched lever.


5. Delivery
1 lifting device set Type 1889 consists of:
- 4 rack supports retractable
- 4 support plates
- 4 Ratchet cranks
- 2 Guide tubes

6. Assembly
Bolt both guide tubes securely to the container at the interfaces provided for this purpose. Then push in the four rack supports and lock them.
7. Operating

⚠️ When operating the lifting device, always keep the four supports in sight.
If necessary, ask another person to guide you.

To avoid danger for persons and the machine, before you lift a container it is essential to ensure the following

⚠️ - The lifting capacity is not exceeded.
- The ground is adequately compacted.
- The container has been released from the carrier vehicle.
- The rack supports have been locked in their operating position.
- If the container is raised and lowered in manual mode, the container is not tilted at an angle of over 2° by winding the winches alternately.

Procedure

Release the four retracted rack supports in their transport position. Carefully pull the supports out of the guide struts. Ensure that the lock engages automatically and locks the supports in their operating position after you have extended them approx. 500 mm. If the locking bolts do not work correctly, red limit marks will be visible on the retractable tubes. **In this case do not pull the rack supports any further out of the guide tubes.**

Fix all rack jack supports in operation position, then remove the securing lock ① from the gearbox drive. Insert the crank ② into the gearbox square hole, place the support plate ③ aligned on firm ground and extend the support until the ground is contacted. The container may now be lifted.

7.1 Stowing of rack jack support

Retract the rack jack, remove crank ②.
Insert the securing lock ① into the gearbox drive. Release the securing bolt ④, push in the rack jack until the securing bolt snaps in and thus the rack jack support is fixed.
8. Servicing
The lifting device Type 1889 is to be inspected by an expert at intervals that depend on the conditions in which it is used, but at least once per year (annual safety inspection pursuant to Accident Prevention Directive BGV D8, §23, Sub-Section 2). In addition to the annual inspection all the safety parts must be tested every ten years (including all gear parts such as the safety lock, etc.). We recommend that you have this safety check conducted by haacon hebetechnik gmbh.

Experts are persons who, as a result of their training and experience, have adequate knowledge in the field of winches, lifting and towing equipment and are familiar with the relevant state industrial safety directives, regulations and generally acknowledged rules of engineering (for example DIN EN standards) so that they can assess the safe condition of winches, lifting and towing equipment.

**Servicing work**

<table>
<thead>
<tr>
<th>Description</th>
<th>Intervals</th>
<th>Parts / Numbers</th>
</tr>
</thead>
</table>
| Grease gear                                       | Depending on usage, at least every month | Grease nipple  
|                                                   |                            | Gleitmo 805 K      |
| Clean and grease gear rack                        | Every month                | Steel brush, 
|                                                   |                            | Gleitmo 805 K      |
| Grease all the moving parts of the suspension construction | Every quarter             | 55, 56, 57, 59, 69, 75  
|                                                   |                            | Gleitmo 805 K      
|                                                   |                            | Fuchs Lubritech     |

9. Spare parts
Only use original spare parts / original wear parts. These parts have been specially designed for the machine. If you use other parts it cannot be guaranteed that they are designed and built to withstand the stresses safely. Parts and special equipment that have not been supplied by us have not been approved by us for use on the lifting device.

Please quote the following to order spare parts:

Type: – See model plate
Factory No: – See model plate
Part No: – See spare parts list / drawing
Description: – See spare parts list / drawing

**Spare parts list / drawing**
See attachments

10. Dismounting and waste disposal
- Safety instructions have to be observed.
- The disposal of the product and its components has to be according to environmental standards.
# E.C. Declaration of Conformity

## to 98/37/EC IIA

### Name and address:

<table>
<thead>
<tr>
<th>Company:</th>
<th>haacon hebetechnik gmbh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address:</td>
<td>Josef-Haammann-Straße 6</td>
</tr>
<tr>
<td>City:</td>
<td>97896 Freudenberg/Main</td>
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### Description:

<table>
<thead>
<tr>
<th>Designation:</th>
<th>Container lifting device</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type:</td>
<td>1889 6177 1890</td>
</tr>
<tr>
<td>Capacities:</td>
<td>5 to 20 t 5 t 5 to 10 t</td>
</tr>
</tbody>
</table>

### Relevant E.C. Directives:

<table>
<thead>
<tr>
<th>Directive</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>98/37/EC</td>
<td>EC-machinery directive</td>
</tr>
<tr>
<td>73/23/EWG</td>
<td>EC-low voltage directive</td>
</tr>
</tbody>
</table>

### Harmonised standards:

<table>
<thead>
<tr>
<th>Standard</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIN EN ISO 12100-1/-2</td>
<td>safety of machines</td>
</tr>
</tbody>
</table>

### National standards and technical specifications:

<table>
<thead>
<tr>
<th>Standard</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BGV A1</td>
<td>Unfallverhütungsvorschriften (Grundsätze der Prävention)</td>
</tr>
<tr>
<td>BGV D8</td>
<td>Unfallverhütungsvorschriften (Winden, Hub-Zuggeräte)</td>
</tr>
<tr>
<td>DIN 1055</td>
<td>Blatt 4; Verkehrslasten - Windlast</td>
</tr>
<tr>
<td>DIN 7355</td>
<td>Stahlwinden</td>
</tr>
<tr>
<td>DIN 2687</td>
<td>Lastaufnahmemittel für Container, Wechselbehälter und Sattelanhänger</td>
</tr>
<tr>
<td>DIN/VDE 0530</td>
<td>Teil 1 umlaufende, elektrische Maschinen</td>
</tr>
<tr>
<td>DIN/VDE 0660</td>
<td>Teil 2 Niederspannungsgeräte, Steuergeräte, Schaltelemente</td>
</tr>
<tr>
<td>DIN/VDE 0470</td>
<td>Schutzarten IP</td>
</tr>
</tbody>
</table>

### Signed:

Freundenberg, 27.06.2007

(i.V. Konrad Lazarus)

(issue 8; 06/07)
Schnittdarstellungen des Getriebes siehe Blatt 2
Schnitt A-A
um 90° gedreht

Schnitt C-C

Schnitt B-B

Anlagefläche nach WN 77100 abgedichtet

Teile 100959, 100964, 100970, 100975, 100976 und 100978 mit anaerobem Kleber hochfest fixiert.
Getriebeteile mit "Fuchs Lubritech Gleitmo 805 K (301038)" eingefettet.
(ca. 300 g)

Stütze links mont.
Teile 100959, 100964, 100970, 100975, 100976 und 100978 mit anaeroben Kleber hochfest fixiert
Getriebeteile mit Fuchs Lubritech Gleitmo 605 K (301038) eingefettet.
(ca. 300 g)