Griphoist-Tirfor

Lifting and pulling machines with unlimited wire rope

Tractel Inc.
Griphoist Division
POWERFUL: GRIPHOIST-TIRFOR TU machines are in daily operation on construction sites around the world putting power where it is needed for lifting, pulling and handling a wide variety of loads. Only the TU models are UL classified for man-riding. (Please refer to your local safety regulations).

The TU and T-500 ranges of versatile GRIPHOIST-TIRFOR lifting and pulling machines are safe, reliable and efficient. Suitable for many applications, GRIPHOIST-TIRFOR machines are lever operated hoists using a separate wire rope. One-man operated, using a telescopic operating handle, they can work in any position and over any height of lift. They can replace conventional winches and other hoists for many applications.

The GRIPHOIST-TIRFOR principle
The principle may be described as "hand-to-hand", like a sailor pulling on a rope. While one hand pulls the other changes position to pull in turn. The two hands represent the 2 jaws of the GRIPHOIST-TIRFOR. They grip the wire rope without damaging it, and alternately pull it during forward operation and hold it during reverse operation. The effort is transferred to the jaws by two levers: one for forward operation and the other for reverse operation. The load is held securely at all times. Without a ratchet or pawl, loads can be precisely positioned.

GRIPHOIST-TIRFOR wire rope
The wire rope for the GRIPHOIST-TIRFOR machine is not a standard production rope; it has been developed specially to suit the GRIPHOIST-TIRFOR machine. GRIPHOIST-TIRFOR wire ropes are supplied on a reeler for ease of transport and storage.

Fig. 1 - GRIPHOIST-TIRFOR TU standard range
Fig. 2 - GRIPHOIST-TIRFOR T-500 light duty range
Fig. 3 - Typical 60' wire rope on reeler. Longer lengths are available.
Fig. 4

CHOICE: Light and compact, the the GRIPHOIST-TIRFOR T-500 machines are even easier to handle, provide a high mechanical advantage and are economical.
the main advantages
of the GRIPHOIST-TIRFOR

versatility
- works in any position
  horizontal, vertical or angled
- unlimited length of wire rope
  eases rigging
- increase the nominal capacity with
  multiple sheave blocks

simple
- fast and easy installation
- simple to feed in
  or remove the wire rope
- continuous operation without jerking
- reduced maintenance by simple
  cleaning and regular lubrication
- changeover from forward to reverse
  operation by transferring the operating
  handle from one lever to another

strong
- high mechanical advantage
- both ranges will operate in the most
  difficult conditions or rough construction
  environments

safe and reliable
- whether lifting or lowering, the load is
  permanently controlled with the utmost
  precision; when operation stops,
  the load is distributed on two
  jaw blocks
- safety device to prevent overloading
- TU range approved for man-riding
  applications

the original
GRIPHOIST-TIRFOR... even better than ever
GRIPHOIST-TIRFOR, the right tool for the job. Here is a selection of the many applications.

... and wherever there is a need for lifting, or pulling heavy loads.
<table>
<thead>
<tr>
<th>Model</th>
<th>Approx. speed per min. (fpm)</th>
<th>Nominal capacity lbs (kg)</th>
<th>Weight machine lbs (kg)</th>
<th>Wire rope</th>
<th>Dimensions in. (mm) handle ext./closed</th>
<th>Special TIRFOR w. r. break strain lbs (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TU-17</td>
<td>7-9</td>
<td>2,000/<em>1,500</em>* (800/600)</td>
<td>18.5</td>
<td>30ft/9m</td>
<td>20-3/4x9-3/4x4-1/2 (528x284x113)</td>
<td>28/18 (730/450)</td>
</tr>
<tr>
<td>TU-28</td>
<td>7-8</td>
<td>4,000/<em>3,000</em>* (1,600/1,200)</td>
<td>41</td>
<td>60ft/18m</td>
<td>26x13x5-3/4 (660x360x145)</td>
<td>45/26 (1147/648)</td>
</tr>
<tr>
<td>TU-32</td>
<td>5</td>
<td>8,000/<em>6,000</em>* (3,200/2,400)</td>
<td>59.5</td>
<td>30ft/9m</td>
<td>27x13x6-1/8 (685x365x156)</td>
<td>45/26 (1147/648)</td>
</tr>
<tr>
<td>T-508</td>
<td>7-9</td>
<td>2,000* (800)</td>
<td>14.25</td>
<td>30ft/9m</td>
<td>16-1/2x9-7/8x3-7/8 (420x250x99)</td>
<td>27/16 (690/405)</td>
</tr>
<tr>
<td>T-516</td>
<td>6</td>
<td>4,000* (1,600)</td>
<td>30</td>
<td>60ft/18m</td>
<td>20-7/8x12-7/16x5 (530x315x127)</td>
<td>45/26 (1147/648)</td>
</tr>
<tr>
<td>T-532</td>
<td>6</td>
<td>8,000* (3,200)</td>
<td>51</td>
<td>30ft/9m</td>
<td>24-7/16x14x5-1/8 (631x357x148)</td>
<td>45/26 (1147/648)</td>
</tr>
</tbody>
</table>

* Capacity for material handling  ** Capacity for manriding

Increase the capacity of the TIRFOR
The lifting and pulling power of GRIPHOIST-TIRFOR machines can be greatly increased by the use of multiple sheave blocks. These can increase the nominal capacity of the GRIPHOIST-TIRFOR machine by 2, 3 or 4 times or more (see diagram opposite). For most applications, an allowance must be made for friction in the sheaves. Ensure that the capacity of the blocks and fittings and anchor points are suitable for the load. When using the GRIPHOIST-TIRFOR for pulling purposes it should be remembered that the necessary pulling effort is not equal to the weight of the load to be moved. It should be calculated.
SHACKLES
A range of "D" shackles is available for use with all GRIPHOIST-TIRFOR machines.

To make the best use of the GRIPHOIST-TIRFOR machine, choose from the range of specially developed accessories.

Sheave blocks
to increase the capacity of GRIPHOIST-TIRFOR machines in complete safety as described on the previous page.
The following standard blocks are available:
- single side opening snatch block (Fig. 24)
- single snatch block, non-opening
- double blocks
- lightweight opening blocks

CONI-KLAM, wire rope gripper (Fig. 23)
to quickly lengthen a wire rope or sling. The wire rope is held by a pair of serrated jaws, operated by a self-gripping wedge.

<table>
<thead>
<tr>
<th>Type</th>
<th>Max. Load lbs (kg)</th>
<th>Suitable for Wire Rope Dia. in (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC 10</td>
<td>2,200 (1000)</td>
<td>3/16 - 3/8 (5 - 10)</td>
</tr>
<tr>
<td>EC 14</td>
<td>4,400 (2000)</td>
<td>7/16 - 9/16 (10.5 - 14)</td>
</tr>
<tr>
<td>EC 21</td>
<td>6,600 (3000)</td>
<td>5/8 - 13/16 (15 - 21)</td>
</tr>
</tbody>
</table>

Slings (Fig. 21)
for anchoring the GRIPHOIST-TIRFOR or the load. Manufactured in steel wire rope. The diagram shows the standard types, which are available in the length required.

Any other type on request.

Anchor hooks (Fig. 22)
for GRIPHOIST-TIRFOR model TU-32 and all the models of the T-500 series.

Clamps and Trolleys (Fig. 25)
Fixed beam clamps or overhead travelling trolleys.
Powered GRIPOIST-TIRFOR... a winning hand!

The powered models of the GRIPOIST-TIRFOR machines complement the manual units for heavy loads, such as operating large work platforms, lifting forms, moving machinery, etc...

Depending on the application, the working conditions and the power available, powered operation can be electro-hydraulic or pneumatic.

- saves time and labor
- no operator fatigue
- continuous operation
- increased safety
- multiple hoist operations

Hydraulic GRIPOIST-TIRFOR
The GRIPOIST-TIRFOR hydraulic system includes a hydraulic power pack which allows remote operation (individually or simultaneously) of one, two or four machines: GRIPOIST-TIRFOR TU-28H or TU-32H, each fitted with a self-reciprocating hydraulic ram.

Pneumatic GRIPOIST-TIRFOR
This machine (model TU-32P) is particularly suitable for operating on construction sites and in industries where there is a danger of explosions or in industries already provided with compressed air facilities.

For additional information, please ask for descriptive documentation on motorized GRIPOIST-TIRFOR.

GRIPWING
the fast powered winch
As with the GRIPOIST-TIRFOR machine, the GRIPWING also operates on a wire rope which passes through the mechanism. The originality and dependability of its wire rope drive mechanism make it a powered mobile winch which can replace conventional winches in a large number of applications.

Mounted in a frame with its wire rope reeler, the GRIPWING assembly is very compact and easily moved from site to site.

The GRIPWING, which is approved for man-riding, is available in the frame and reeler configuration.

For additional information please ask for the brochure.