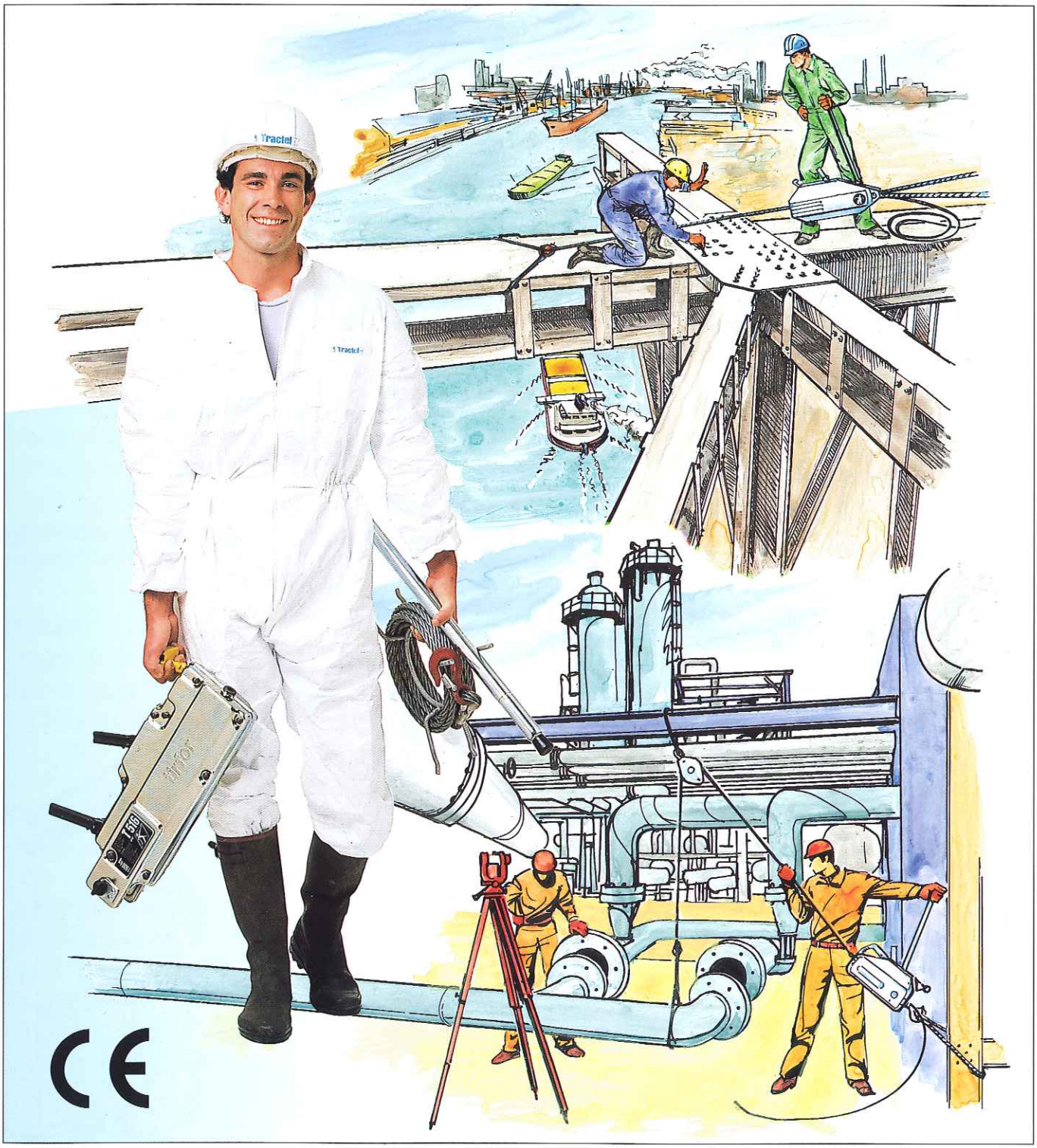
tirfor®

lifting and pulling machines with unlimited wire rope



Tractel Group

TIRFOR... lift, pull lower and position

Fig. 1 - TIRFOR TU standard range

POWERFUL: 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 range is approved for man-riding. (Please refer to your local safety regulations which may require additional safety features).

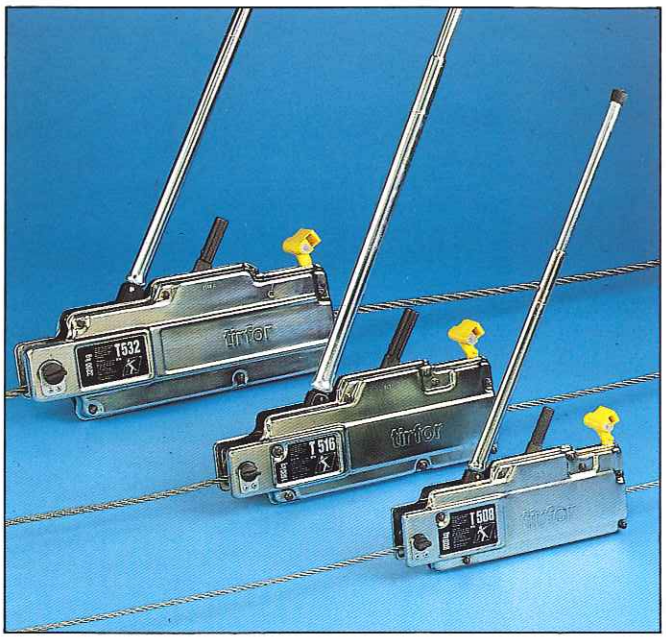


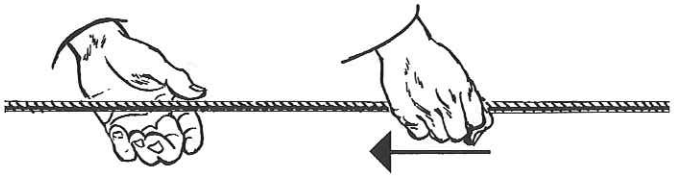
Fig. 2 - TIRFOR T-500 light dutry range

CHOICE: Smaller and lighter, the TIRFOR T-500 machines are even easier to handle, whilst still giving a high mechanical advantage and complete operating safety.

The TU and T-500 ranges of versatile TIRFOR lifting and pulling machines are safe, reliable and efficient. Suitable for many applications, 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 TIRFOR principe

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 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 transfered to the jaws by two levers: one for forward operation and the other for reverse operation. The load is held securely at all times.



TIRFOR wire rope

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

Fig. 3 - Standard 20 m wire rope on reeler

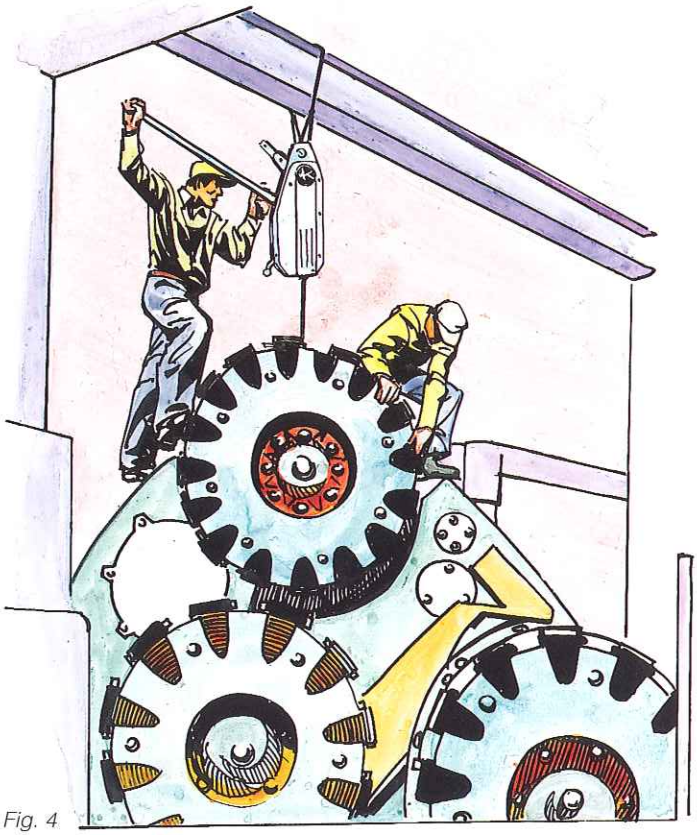


Fig. 4

in complete safety...

the main advantages of the TIRFOR

multiple operation
- works in any position horizontal, vertical or angled
- unlimited length of wire rope
- 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 snatching
- reduced maintenance by simple cleaning and regular lubrication
- changeover from forward to reverse operation by transfering the operating handle from one lever to another

robust
- high mechanical advantage
- both ranges will operate in the most difficult conditions

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

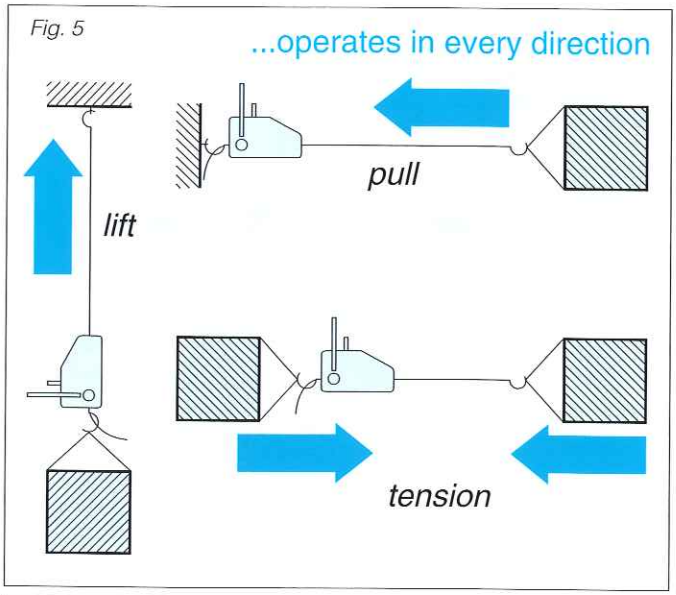


Fig. 5

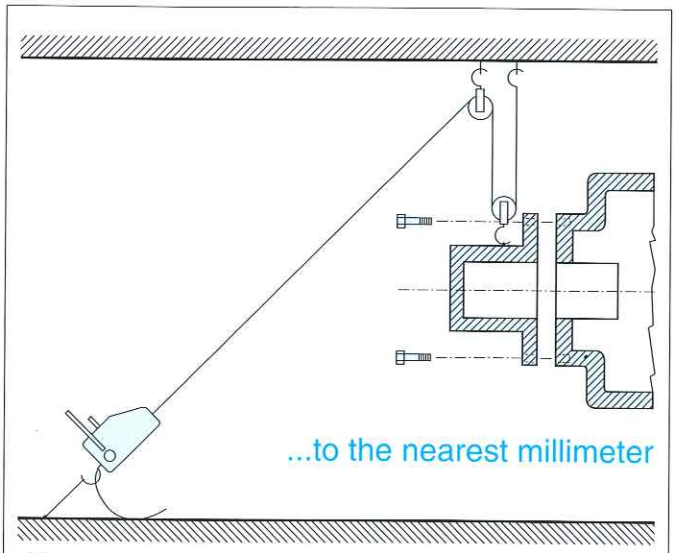


Fig. 6

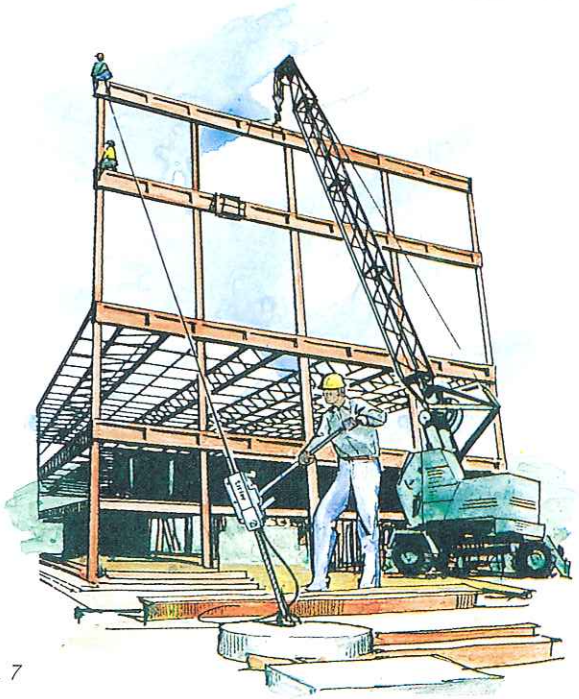
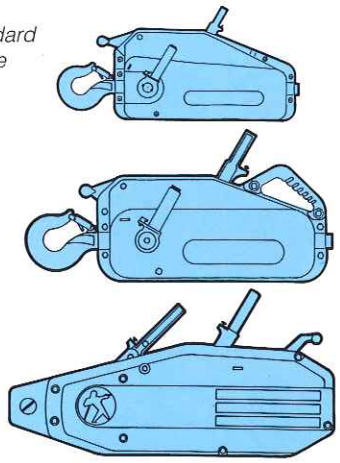


Fig. 7

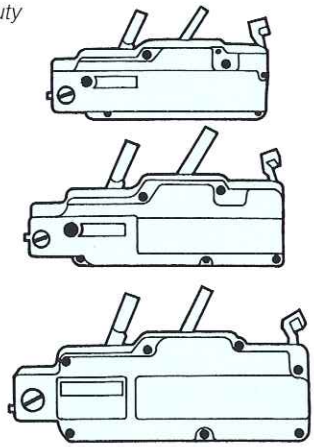
the original TIRFOR... even better than ever

Technical specification

standard range



light-duty range



model	nominal capacity daN/kg	weight (kg) machine	weight (kg) w. r. 20 m	dimensions (mm) machine	dimensions (mm) handle ext./closed	special TIRFOR w. r. dia. mm	special TIRFOR w. r. break. strain kg
TU-8	800	8.4	7	528 x 284 x 113	730 450	8.3	4800
TU-16	1600	20	12.5	660 x 360 x 145	1147 648	11.5	9600
TU-32	3200	27	26	685 x 365 x 156	1147 648	16.3	19200
T-508 D	800	6.6	7	420 x 250 x 99	690 405	8.3	4800
T-516 D	1600	13.5	12.5	530 x 315 x 127	1147 648	11.5	9600
T-532 D	3200	24	26	631 x 357 x 148	1147 648	16.3	19200

Increase the capacity of the TIRFOR

The lifting and pulling power of TIRFOR machines can be greatly increased by the use of multiple sheave blocks. These can increase the nominal capacity of the 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 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.

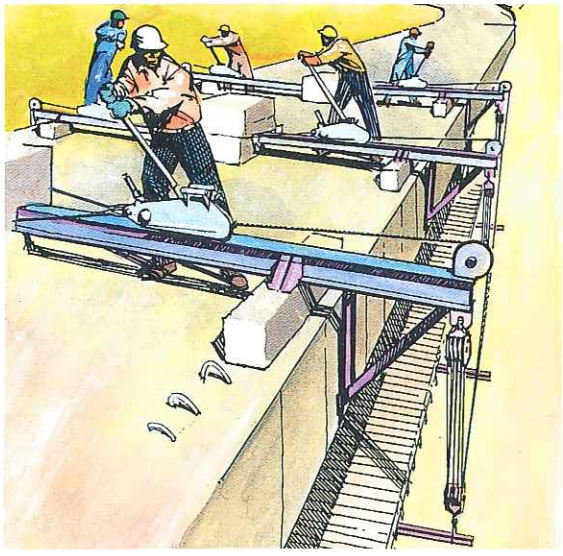
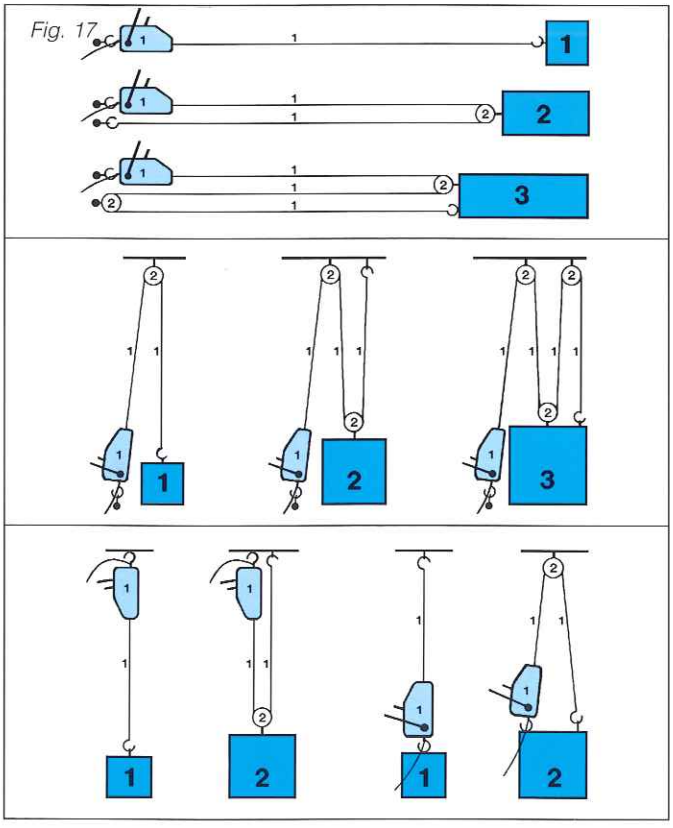


Fig. 16

Fig. 17



Powered TIRFOR... a winning hand!

The powered models of the TIRFOR machines complement the manual units for heavy loads, such as operating large work platforms, lifting shuttering, 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 labour
- no operator fatigue
- continuous operation
- increased safety

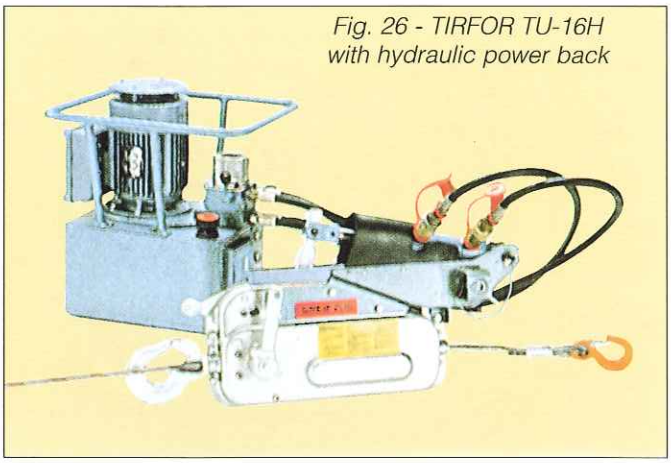


Fig. 26 - TIRFOR TU-16H with hydraulic power back

HydraulicTIRFOR

The TIRFOR hydraulic system includes a hydraulic power pack which allows remote operation (individually or simultaneously) of one, two or four machines: TIRFOR TU-16H (1600 kg) or TU-32H (3200 kg), each fitted with a self reciprocating hydraulic ram.

Pneumatic 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 motorised TIRFOR.

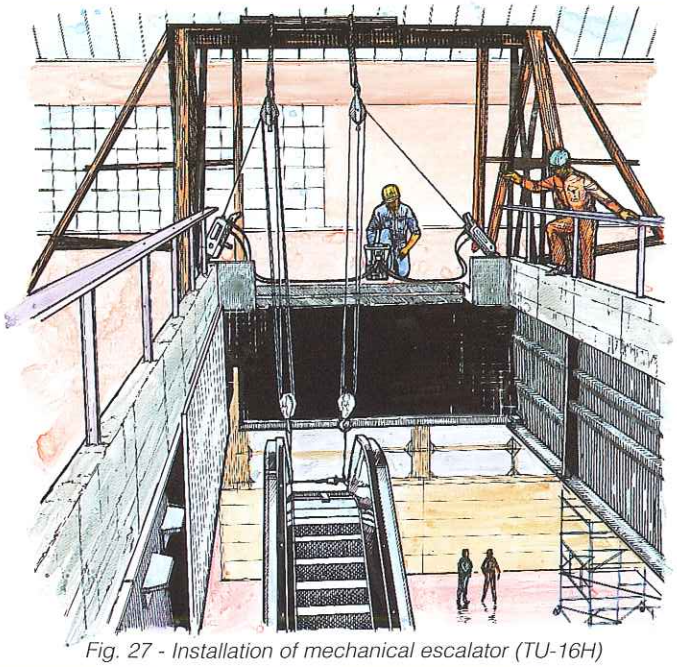


Fig. 27 - Installation of mechanical escalator (TU-16H)

TIRAK
the fast powered winch

As with the TIRFOR machine, the TIRAK 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 TIRAK assembly is very compact and easily moved from site to site.
The TIRAK has been approved as a man-riding hoist by safety organisations in the majority of industrialised countries.

For additional information, please ask for the descriptive documentation on TIRAK.

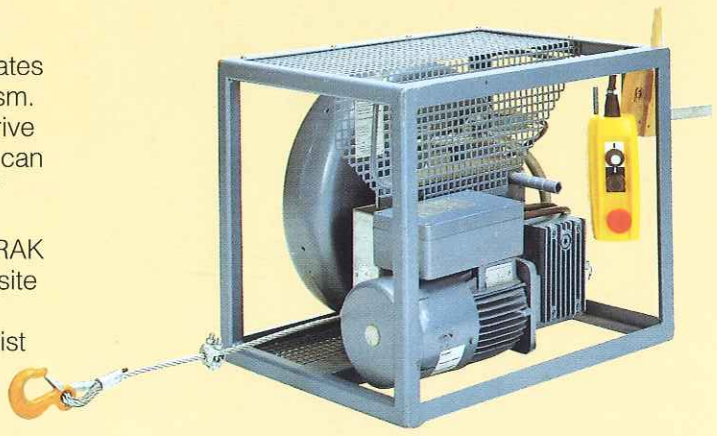


Fig. 28 - TIRAK mobile winch with wire rope reeler mounted in a compact frame.

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