

tirak[®]

Materials handling hoist
Lifting & Pulling with unlimited rope length!



Capacities
from **300**
to **3000 kg**

 **Tractel** Group

www.tractel.com

Whether as crane-substitute, or as a draught-horse, ...

... with the **tirak[®]** as an “endless”-hoist, which drives the wire rope without storing it, **any height of lift or length of pull is possible**, only depending on the wire rope's length.

That's why it is often not only a reasonable, but **most of all an economic alternative** to cranes or drum winches.

And You can also get the load “**climbing up**”, together with the **tirak[®]**, alongside the wire rope.



With hand made precision ...

The **reliability** of the **tirak[®]** is the result of **more than 50 years' experience** in the construction of lifting equipment. Thanks to our customers' trust in this reliable and safe technique, it is **N° 1 in the world** for suspended platform hoists – and certainly **best reference for quality and safety!**

... to a synonym for economic efficiency

Due to the genially simple wire rope driving mechanism, besides the mandatory safety inspections, there are only **minimal maintenance expenses**.

And the mechanism gently driving the wire rope provides for a **high longevity of the ropes**.

... with the tirak[®], we always grant you a practical and economic problem-solution!

The “double-pull”

By the way, the **tirak[®] T 1000 series** pulls in both directions, with full capacity!

The **tirak[®]** is consequently more than a simple „wire rope hoist“, it also serves for **moving back-and fro of loads** – waggon shunting, internal transport systems, or traversing of site protection shelters – three examples, which might pave the way for a long-desired problem-solution!



Chartered safety!



Of course, **all tirak[®] hoists** are built according to the state of the art, that's why they all possess a **CE declaration of conformity**.



Lifting of a circular platform segment – tirak® at ground level, wire rope guiding by deflection pulley.

By nature ...

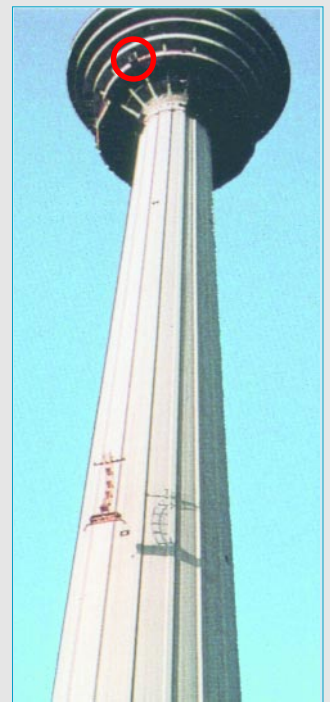
... the tirak® is, due to its special advantages,

- minimum own weight,
- compact shape,
- unlimited rope length ...

... an ideal **materials handling hoist**, applicable for a **wide scope of purposes**.

Above all, **during assembly and installation works**, where mobility is of utmost importance, it pays in a **minium of time**.

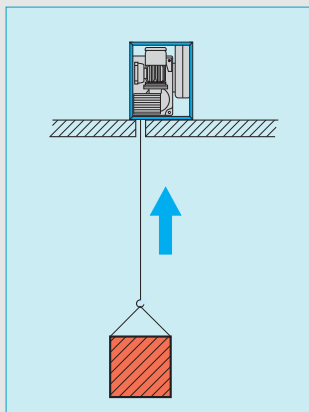
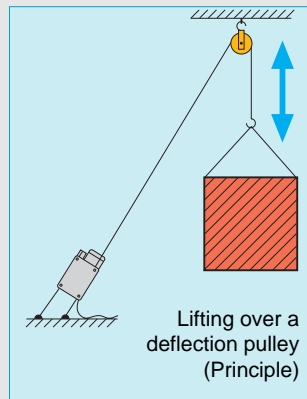
tirak® above the load at the tower platform



Three variations ...

... offer a **wide scope** of applications using the tirak®:

- tirak® above the load.
- tirak® anchored „within reach” – which, due to the non-restricted wire rope length, is a rather relative term. On top, only a deflection pulley has to be anchored. This facilitates any installation, saving a lot of time.
- Or, even easier and quicker: If you want to pull through an opening in a wall or ceiling **capable of bearing the load**: Simply site the tirak® by or above the hole! However, in this case it is recommended to use the tirak® as a **“Mobile Winch”**.



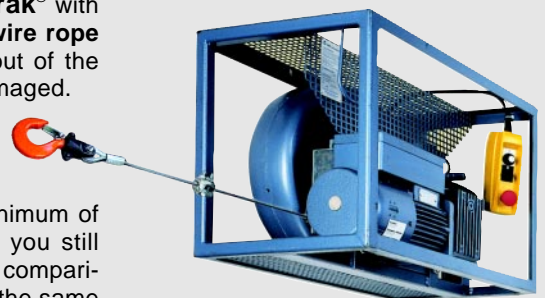
Mobile Winch above a ceiling capable of bearing the load (Principle)

The “Mobile Winch” ...

... is the logical completion of the tirak® with a storage device for the **unloaded wire rope** exiting „behind the hoist”, to get it out of the way, and to protect it from being damaged.

The three main advantages are not at all given away.

The exiting rope is stored with a minimum of space and weight required, so that you still **save space, weight and expense** in comparison to cranes or a big drum winch of the same lifting capacity and range.



No burden with heavy loads!

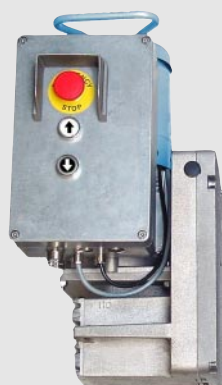
Capacities, motors and wire rope speeds

		tirak® Capacity [kg]					
		300	500	800	1000	1500	3000
		Wire rope speed ¹⁾ [m/min]					
tirak® motors	400 V / 50 Hz, three phases	9 / 18	4,5 / 9 / 18			3 / 6 / 12	
	230 V / 50 Hz, single phase	9					
	24 V direct current	10					
	Hydraulic motor				0 - 25		
	Air motor	9	8	6,5		3,5	

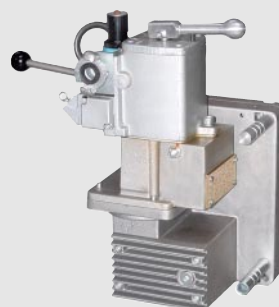
1) Including three-phase-driven hoists for two wire rope speeds.
Optionally available with continuously variable speed.



3000 kg



500 kg



300 kg
Air motor

Capacities and Own weights

		Range	tirak® Capacity [kg]					
			300	500	800	1000	1500	3000
		Own weight ³⁾ [ca. kg]						
tirak® Equipment	Standard ¹⁾ tirak®	∞ (on principle)	27	40 / 30 ⁴⁾	45	45	49	105
	● tirak® + rope reeler ⁵⁾	30 - 110 m ²⁾	41	54	59	59	63	130
	● tirak® + rope winder A	90 m ²⁾	37	50	55			
		80 - 120 m ²⁾		59	64	64	69	
		150 - 220 m ²⁾		63	68	68	73	
	● tirak® + rope winder B	220 - 320 m ²⁾		75	80	80	85	
		40 - 110 m ²⁾		60	75	80	80	85
	● tirak® as "Mobile Winch"	90 m ²⁾		57				
350 - 800 m ²⁾				122	127	127	132	550

● ● ● ●
Details on page 5

- 1) Standard = 9 resp. 6 m/min, three phases/50 Hz, with pendant control.
- 2) Rope storage capacity depending on the rope-Ø. Details in table "Capacities and ranges"
- 3) Weight for standard hoist (9 resp. 6 m/min) w/o wire rope – rope weights:
Ø 8 mm = 0,25 kg/m; Ø 9 mm = 0,31 kg/m; Ø 10 mm = 0,39 kg/m; Ø 14 mm = 0,74 kg/m
- 4) 40 kg = X 500 series; 30 kg = L 500 series
- 5) Weight for the greatest range of table "Capacities and ranges"

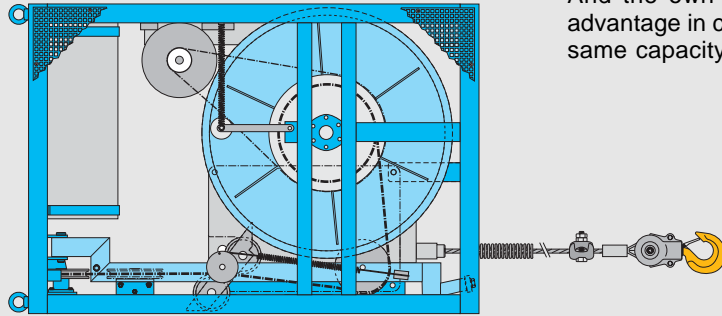
Standard operating ranges

tirak®



● tirak® with rope winder A

500 kg capacity and
90 resp. 160 m range
with 8 resp. 6 mm rope-Ø!



3000 kg capacity and 800 m range!
L x W x H 1.46 x 0.98 x 0.98 m only

Up to 800 m range ...

... offer an operating range to easily solve almost every lifting problem.

And the own weight presents an unbeatable advantage in comparison to a drum winch of the same capacity and range.

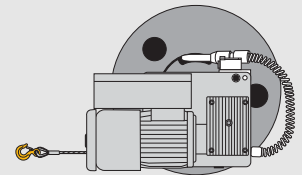
Up to 3 tons ...

... can be lifted – in direct pull, a multiple, if you reeve the wire rope according to the block-and-tackle system.

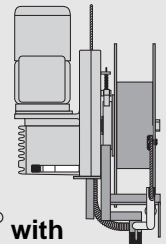
Capacities and ranges

		tirak® Capacity [kg]					
		300	500	800	1000	1500	3000
		tirak® ● with reeler, ● with winder ● as "Mobile Winch"					
tirak® Range [m]	30						●
	40/65 ¹⁾	●	●	●		●/●	
	50				●/●		
	60/100 ¹⁾	●/●	●/●	●/●			
	80					●/●	
	90/160 ¹⁾	●/●	●/●	●/●	●/●		
	110						●/●
	120/190 ¹⁾		●/●	●/●			
	150					●/●	
	170				●/●		
	220/360 ¹⁾		●/●	●/●		●	
	250				●		
	320/520 ¹⁾		●	●			
	350					●	
	400				●		
	500/820 ¹⁾		●	●			
800						●	

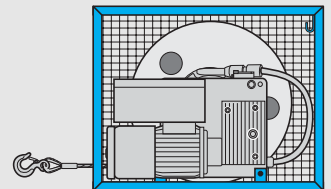
1) Range with 6.5 mm rope diameter up to 500 kg capacity



● tirak® with rope reeler

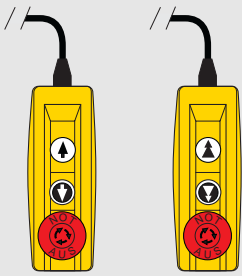


● tirak® with rope winder B



● tirak® as "Mobile Winch"

Tell us your problem – we'll find you the suitable solution!



Single control for 1 resp. 2 wire rope speeds



Push button control ...

... as the standard by means of a pendant control for either 1 or 2 wire rope speeds.

If two or more **tirak®** hoists shall be controlled from one place, a central control may be used to either control a single hoist or all hoists together.

The control cables contain at the same time the power supply for the attached hoists, which avoids any unnecessary additional power cables.

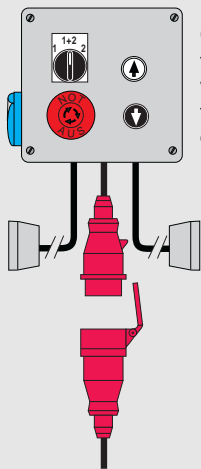
If only a single hoist shall be used, which is equipped for a central control, power supply and control signals are given by a special pendant control.



Radio control ...

... for 1 or 2 wire rope speeds.

Optionally two senders are available to alternatively control the hoist from different places.



Central control for 2 hoists with socket for electric tools or lamps



Single control for hoists which are equipped for central control

Continuously variable speed ...

... is available using a frequency converter.



Hand valve control ...

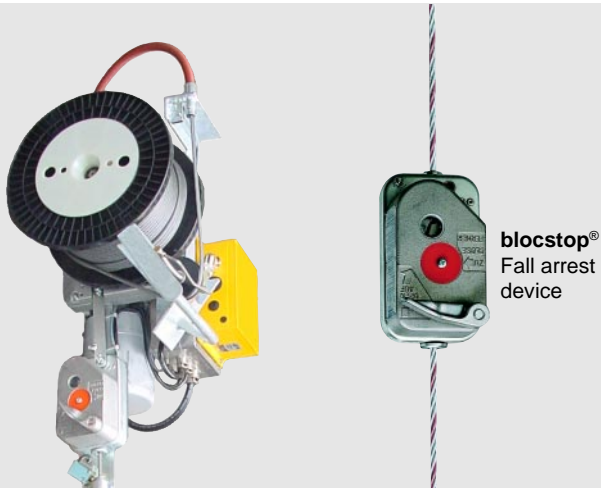
... for air driven **tirak®** hoists.

This kind of motorization is primarily used in surroundings with explosive atmosphere.



Other details, such as for hydraulic driven machines, on request

*You define the direction – the **tirak®** follows at the push of a button!*



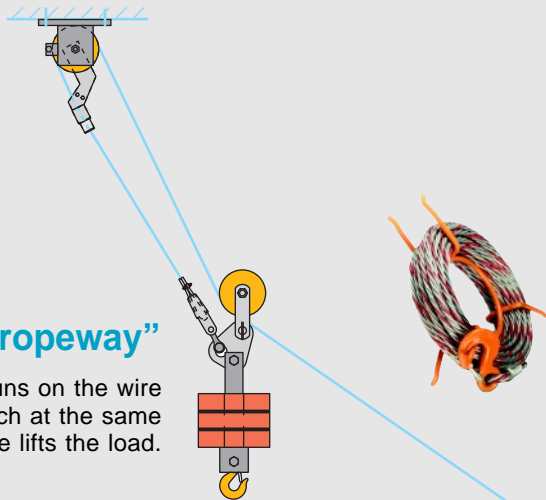
blocstop®
Fall arrest device

Safety first!

Even if not requested for materials handling, **blocstop®** fall arrest devices are optionally used, in order to protect loads against falling in case of wire rope rupture, or simply to improve operational safety.

„Aerial ropeway”

The load runs on the wire rope, which at the same time lifts the load.



Limit switch

Double clamp

Thus far – and no farther!

In most cases the hoists are equipped with a limit switch, which stops lifting resp. pulling, before the wire rope hook reaches the machine. This protects the connection between wire rope and hook from being damaged.

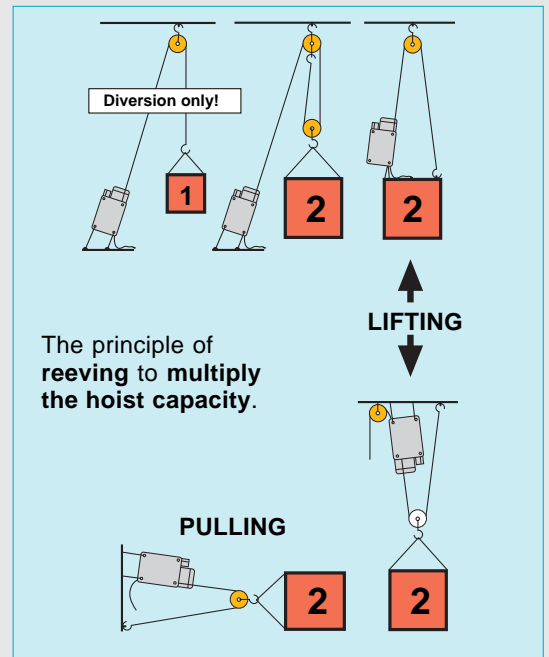
Of course, the double clamp used for tripping the switch can be mounted in such way to the wire rope, that the load stops at any required level or place.

Deflection pulleys

Pulley blocks with one or more pulleys for diverting the **tirak®** wire rope, or for reeving it according to the block and tackle principle.



Diverting & Reeving

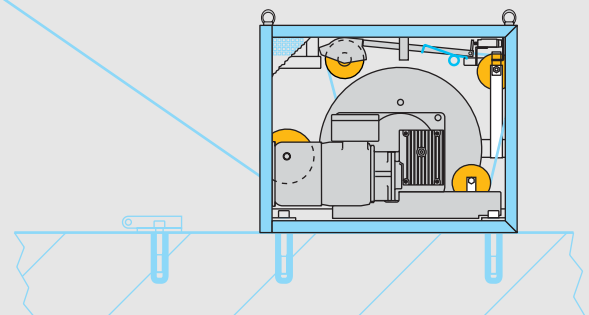


The principle of reeving to multiply the hoist capacity.

tirak® wire ropes

Special **tirak®** wire ropes in any length, on hand or drum hasps.

If a suspended load cannot be guided, the use of **non-rotating wire ropes with swivel hook** is mandatory.



Necessary equipment – to Your complete satisfaction!



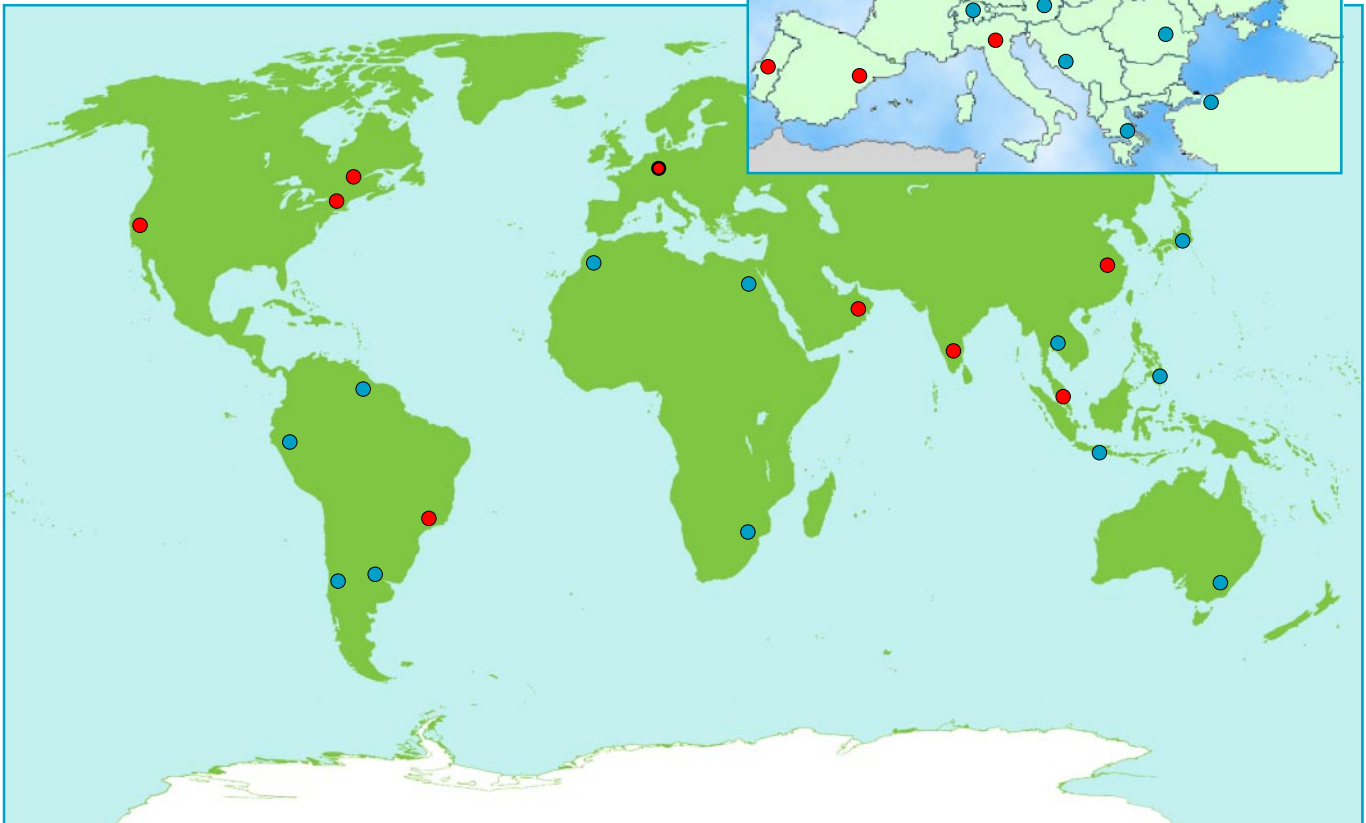
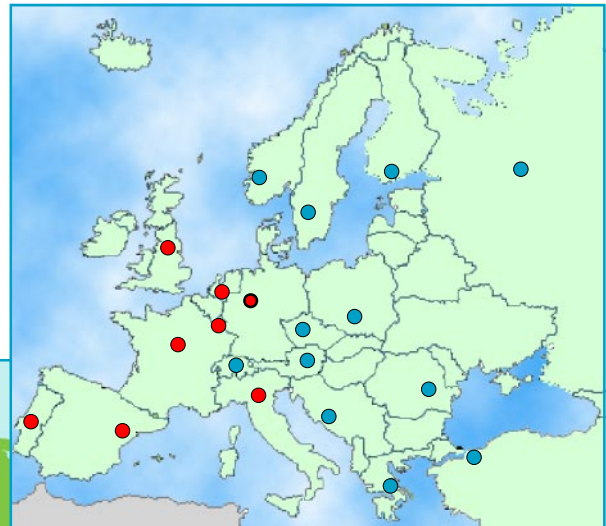
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