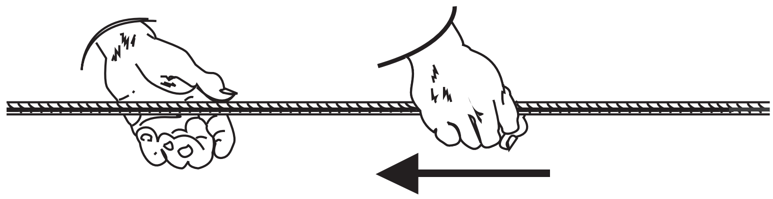
Lifting - Materials Handling
Measurement & Control

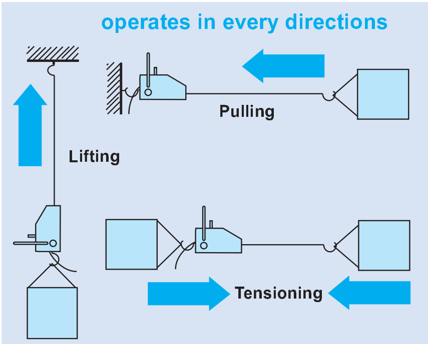
Tractel Group

The Tirfor® Principle

- A TIRFOR® has neither wheels nor gears.
  - Two jaws alternately pull the wire rope and the load in the required direction, just like pulling on a rope with both hands.

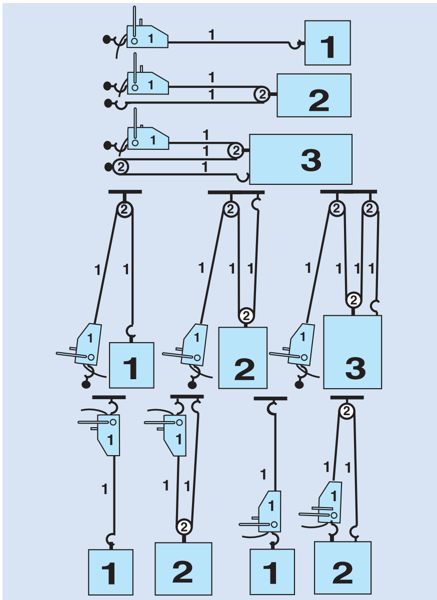


  - The jaws are self-clamping, providing immediate and gradual safety - the heavier the load, the tighter they clamp.
  - A release mechanism allows the wire rope to be inserted between the jaws.



- **Multifunction**
  - Work can be performed in any position : horizontal, vertical or at an angle.
  - There is no limit to the length of wire rope.
  - The capacity can be increased.

- **Safe and reliable**
  - Constant control of the load during lifting and lowering with accuracy to within one millimetre. When stationary the load is automatically distributed between the two jaw units.
  - Overload safety device
  - TU range approved for lifting personnel in most countries.



- **Increased capacity**
  - Using the sheave block technique, the capacity of the TIRFOR® can be increased by a factor of 2, 3, 4 or more (see diagrams).
  - The figures given must be multiplied by the nominal capacity of the device.
  - When calculating the working load limit, include a loss of around 4% per sheave, due to the friction of the sheaves.

Tirfor® 500 serie

- Compact, lightweight and easy to handle, TIRFOR® T-500 units combine ease of handling and safety.

They are recommended for applications where portability is an important criteria.

Model	WLL	Machine weight (kg)	Wire rope weight (20 m) (kg)	Special Tirfor wire rope ø (mm)	Wire rope breaking strain (kg)	Dimensions of the machine L x l x w (mm)	Dimensions of the handle opened/closed (mm)
T-508D	800 kg	6,6	6,1	8,3	4000	420 x 250 x 59	690 - 400
T-516D	1600 kg	13,5	13,1	11,5	8000	530 x 315 x 127	1150 - 650
T-532D	3200 kg	24	26,6	16,3	16000	620 x 355 x 130	1150 - 650

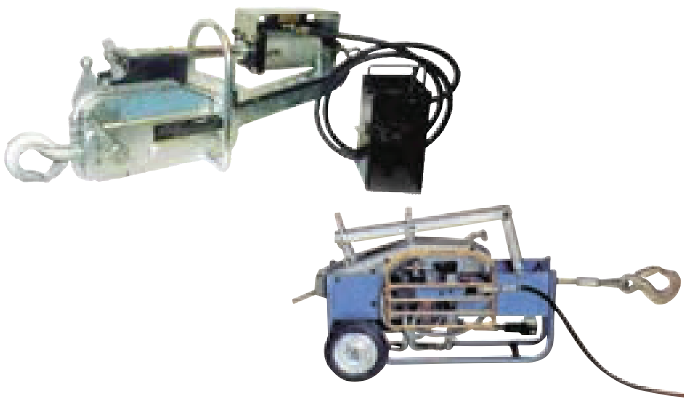
Tirfor® TU serie

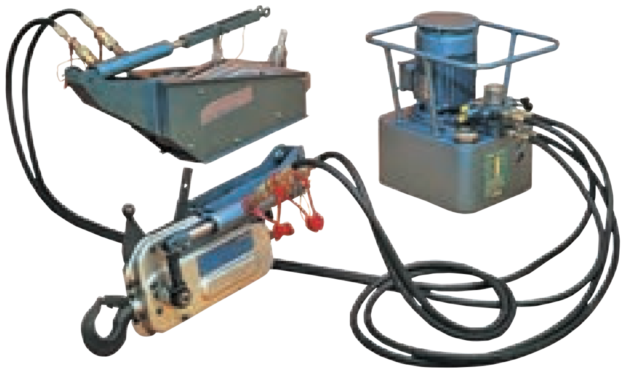
- For lifting, pulling and positioning heavy loads, the models in the TIRFOR® TU range are unrivalled in terms of durability and sturdiness.

They are also approved for lifting personnel (see national regulations).

Model	WLL	Machine weight (kg)	Wire rope weight (20 m) (kg)	Special Tirfor wire rope ø (mm)	Wire rope breaking strain (kg)	Dimensions of the machine L x l x w (mm)	Dimensions of the handle opened/closed (mm)
TU-8	800 kg	8,4	6,1	8,3	4000	527 x 265 x 108	770 - 510
TU-16	1600 kg	20	13,1	11,5	8000	660 x 330 x 140	1190 - 680
TU-32	3200 kg	27	26,6	16,3	16000	676 x 330 x 156	1190 - 680

Hydraulic & Pneumatic Tirfor®



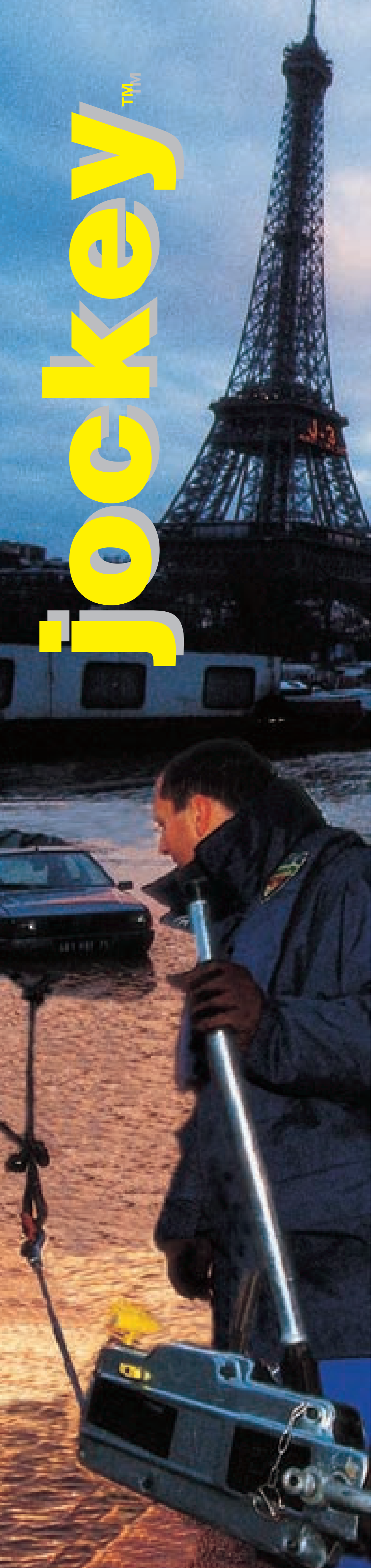


pneumatic tirfor®

TIRFOR® TU-16A and TU-32A are mainly used in applications on building sites and in industries where there is a risk of explosion or where compressed air facilities are readily available (power stations, shipyards, etc.).

hydraulic tirfor®

This consists of a hydraulic power pack with an electric or petrol motor, which allows remote operation - either singly or with up to 4 TIRFOR® TU-16H or TU-32H machines together, each fitted with hydraulic jacks.



Jockey™ J3 - J5

- Universal lifting and pulling device, capacity : 300 kg and 500 kg.
- Ultra-lightweight and robust, easy to operate and maintain, can be used in numerous applications.

Model	WLL	Weight of unit (kg)	ø Special Jockey™ wire rope* (mm)	Effort on handle (kg)	Dimensions of the machine L x l x w (mm)
Jockey™ J3	300 kg	1,75	4,7	12	320 x 200 x 40
Jockey™ J5	500 kg	3,75	6,5	20	370 x 215 x 55

* Cable travel per complete stroke (to and from) of the lever : 25 mm, rope breaking load 3100 kg

Tirvit™

- Tensioning device for wires and wire ropes.
- Lightweight, easy to handle and compact.
- 3 models : F2, F3, F4.

Model	WLL	Weight of unit (kg)	ø Cable or ø wire to be pulled (mm)	Lever stroke (mm)	Frog model
F2	400 kg	4	to 5 from 8	65	G2
F3	600 kg	5,2	7 - 15	75	G3
F4	800 kg	6,2	14 - 18	90	G4

Maxiflex™ wire rope

Model		ø Wire rope (mm)	Unit model to equip
J		4,7	Jockey™ J3
K		6,5	Jockey™ J5
C8		8,3	T-508D & TU-8
C12		11,5	T-516D & TU-16
C16		16,3	T-532D & TU-32

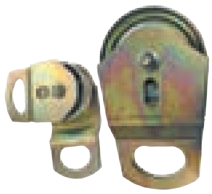
Maxiflex™ wire ropes are fitted with a safety hook secured by a ferrule

Pulleys and sheaves

A comprehensive range of pulleys and sheaves






Range of accessories

A comprehensive range of wire ropes and accessories designed for your Tractel lifting and pulling equipment.

- **Slings**
- **Reelers and Drums**
- **Hooks**
- **Tractancrage**
  - Hot galvanised steel anchorage system creating a fixed point in the ground for : • Guying pylons and posts • Attachment constructions • Fixed point for pulling or lifting operations etc.
- **Coni-Klam**
  - Wire rope clamps with conical coupling for quick attachment to extension wire ropes or slings.
- **Wire rope grippers**
  - Wire rope gripper with self-clamping cam for gripping a wire or wire rope in any location, to hold a load or maintain tension while awaiting adjustment d'une tension en attente de réglage.

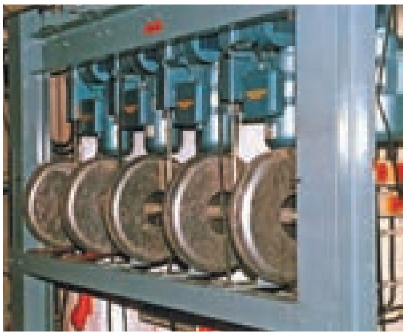
JML Wire rope reeler

- **Wind, unwind and store all your wire ropes easily and without restrictions...**

  - The JML reeler is available in two sizes :
    - Model 11.30 stores up to 50 m of wire rope, diameter 8,3 mm.
    - Model 16.30 stores up to 60 m of wire rope, diameter 11,5 mm.

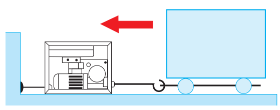
Tirak™

- The TIRAK™ is a powered hoist through wire which the rope passes. It has the following advantages :
  - Unlimited length of wire rope.
  - Constant speed.
  - Orientation in direction of effort.
  - Mobile and compact.
  - High lifting capacity : up to 3000 kg.
  - Safe and reliable design.
  - Also available with hydraulic or pneumatic motor.



Tirak™ - method of operation

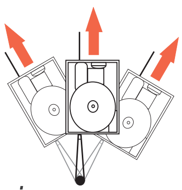
• to anchor the frame



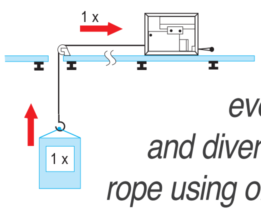
All you need is a sling or a chain, secured to a sufficiently strong fixed point.

• orientation

automatically aligns itself with the pull. Its capacity and speed always remain constant.

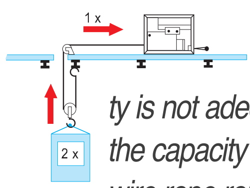


• lifting a load



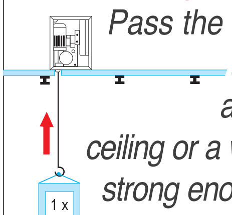
Anchor the hoist wherever you wish and divert the wire rope using one or more return pulley blocks.

• lifting and sheave blocks



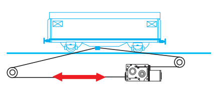
If the direct pulling capacity is not adequate, increase the capacity by passing the wire rope round one or more sheave blocks.

• Direct lifting or pulling



Pass the wire rope through an aperture in a ceiling or a wall which is strong enough to take the load, and place the hoist against the opening.

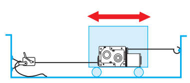
• To-and-fro movement



uniquement TIRAK™ T-1000

The hoist moves the load to and fro.

The hoist moves with the load.



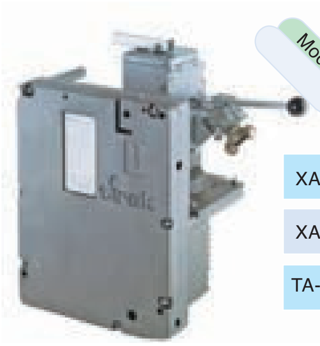
Tirak™ X serie

Model	WLL	Wire rope speed (m/min)	Motor type M = 1 phase T = 3 phase	Lifting motor power (kW)	Wire rope diameter (mm)	Hoist weight (kg)	Hoist dimensions L x l x w (mm)
x-301	300 kg	9	M	0.5	8.3	29	430 x 250 x 213
x-300	300 kg	9	T	0.5	8.3	27	400 x 250 x 213
x-302	300 kg	18	T	0.9	8.3	27	400 x 250 x 213
x-501	500 kg	9	M	0.9	8.3	49	546 x 297 x 256
x-500	500 kg	9	T	0.9	8.3	40	585 x 297 x 250
x-502	500 kg	18	T	1.8	8.3	43	585 x 297 x 250
x-506	500 kg	4.5/18	T	0.45/1.8	8.3	47	500 x 297 x 250
x-503	500 kg	9/18	T	0.9/1.8	8.3	47	500 x 297 x 250
x-800	800 kg	9	T	1.5	8.3	45	541 x 297 x 256
x-802	800 kg	18	T	3	8.3	49	535 x 297 x 256
x-806	800 kg	4.5/18	T	0.75/3.0	8.3	49	510 x 297 x 256
x-803	800 kg	9/18	T	1.75	8.3	49	510 x 297 x 256
x-1020	1000 kg	9	T	1.9	9,5	45	-
x-1025	1000 kg	18	T	0.9/1.9	9.5	55	-
x-1026	1000 kg	4.5/18	T	0.9/3.8	9.5	71	-
x-1023	1000 kg	9/18	T	1.9/3.8	9.5	56	-
x-3050	3000 kg	6	T	3.8	14	105	650 x 400 x 360
x-3052	3000 kg	12	T	7.5	14	117	660 x 400 x 360

Tirak™ T serie

Model	WLL	Wire rope speed (m/min)	Motor type T = 1 phase T = 3 phase	Lifting motor power (kW)	Wire rope diameter (mm)	Hoist weight (kg)	hoist dimensions L x l x w (mm)
T-1020P	1000 kg	9	T	1.95	9.5	72	-
T-1022P	1000 kg	18	T	3.5	9.5	72	-
T-1025	1000 kg	4.5/9	T	0.9/1.95	9.5	85	-
T-1026	1000 kg	4.5/18	T	0.9/3.5	9.5	85	-

Tirak™ hydraulic and pneumatic version



Model	WLL	Wire rope speed (m/min)	Commande T = pendant D= direct	Wire rope diameter (mm)
XA-300P	300 kg	up to 9	T T	8.3
XA-500P	500 kg	up to 9	D T	8.3
TA-1020P	980 kg	up to 9	D	9.5

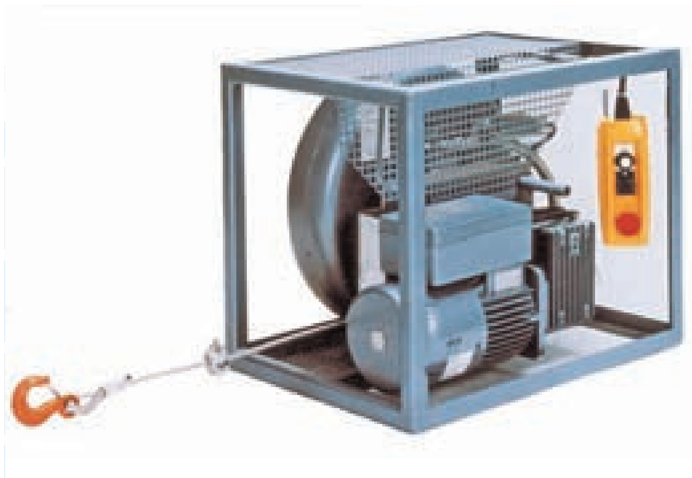
Pneumatic Tirak™

Model	WLL	Wire rope speed (m/min)	Hydraulic motor E = électric T = petrol	Wire rope diameter (mm)
THB-1020	980 kg	as far as 7	E T	9.5

Hydraulic Tirak™

Tirak™ mobile winch with tirak™

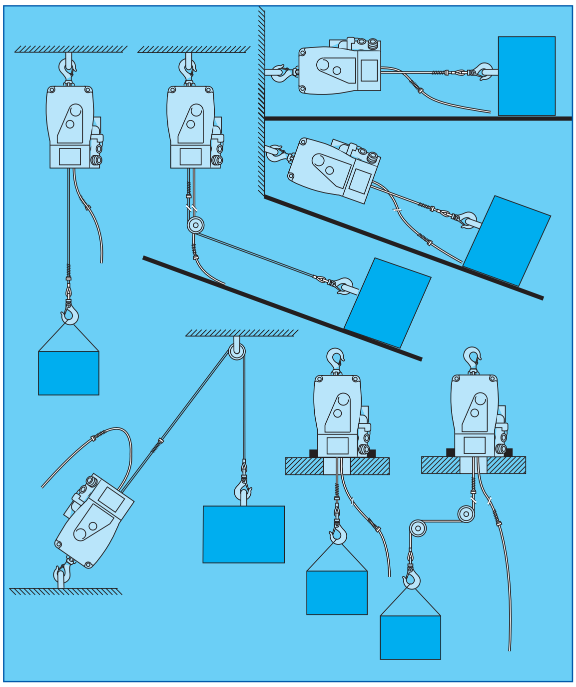
Model	WLL	Lifting speed (m/min)	Motor power (kW)	Wire rope diameter (mm)	With wire rope length (m)	Weight with wire rope (kg)	With wire rope length (m)	Weight with wire rope (kg)
Tirak™	300 kg	9	0,5	8	80	60	-	-
	300 kg	18	0,9	8	80	60	-	-
in frame	500 kg	4.5	0,5	8	80	75	500	115
	500 kg	9	0,9	8	80	75	500	115
	500 kg	4.5/9	0.5/0.9	8	80	85	500	125
	500 kg	4.5/18	0.5/1.8	8	80	85	500	125
	500 kg	9/18	0.9/1.8	8	80	85	500	125
With rope reeling drum	800 kg	4.5	0.8	8	80	80	500	120
	800 kg	9	1.6	8	80	80	500	120
	800 kg	4.5/9	0.8/1.6	8	80	85	500	125
	800 kg	4.5/18	0.8/1.6	8	80	105	500	145
	800 kg	9/18	1.75/3.5	8	80	85	500	125
	980 kg	4.5	0,9	9	70	85	400	125
	980 kg	9	1,8	9	70	80	400	120
	980 kg	4.5/9	0.9/1.8	9	70	90	400	130
	980 kg	4.5/18	0.9/3.8	9	70	105	400	145
	980 kg	9/18	1.9/3.8	9	70	90	400	130
	3000 kg	6	3.8	14	110	200	500	550
	3000 kg	12	7.5	14	110	225	500	550



Minifor™

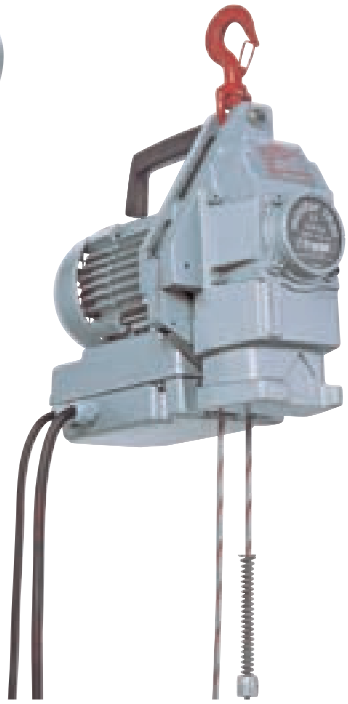
A comprehensive range of universal, high-performance portable electric hoists, for work at any height.

- WLL : 100 to 950 kg.
- Unlimited height of lift.
- Wire rope hanging free or on winder.
- Hard-wired or radio remote control.
- Direct lifting or sheave block kit.
- Single phase or three-phase motor.



Minifor™ TR10 - TR30 - TR30S - TR50

Compact, easy to handle and lightweight, the minifor™ range is ideal for working on building sites.



• High Performance - Sturdy

- Excellent weight-power ratio.
- Aluminium alloy housing.
- Unlimited length of lifting wire rope.

• Safety

- Adjustable upper and lower end stops.
- Brake incorporated in motor.
- Wire rope, diameter 6.5 mm.

• Ergonomics

- Built-in carrying handle.
- Quick and easy to set up.
- Swivelling suspension hook.

• Standard

- Conforms to : - Machine directive 98/37/EEC
  - European standard EN 121-1 and EN 12100-2.

• Specifications

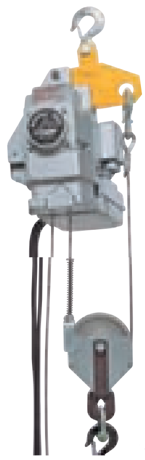
- Degree of protection : IP 55.
- Double-insulated pendant control with emergency stop button.
- Motors with thermal production.
- Radio control : 433 MHz (418 MHz at 115 volts).
- Wire rope ø 6.5 mm ; breaking load 2500 daN; weight per metre : 0.170 kg.

Model	Dimensions L x W x D (mm)	Weight without wire rope (kg)	WLL (kg) Direct	WLL (kg) sheaved	Speed (m/min) Direct	Speed (m/min) sheaved	Power supply* Single phase 115 Volt	Power supply* Single phase 230 Volt	Power supply* 3 phase 400 Volt	Wire rope reeler 20 m	Wire rope reeler 27 m	Wire rope reeler 40 m	Radio control
TR 10	355 x 420 x 180	21	100		15		•	•		•	•	•	•
				200		7.5	•	•		•	•	•	•
TR 30	355 x 420 x 180	21.5	300		5		•	•		•	•	•	•
				600		2.5	•	•		•	•	•	•
TR 30S	495 x 425 x 225	32	300		13		•	•	•				•
				600		6.5	•	•	•				•
TR 50	495 x 425 x 225	32	500		7		•	•	•				•
				950		3.5	•	•	•				•

* - Power supply for 50 and 60Hz

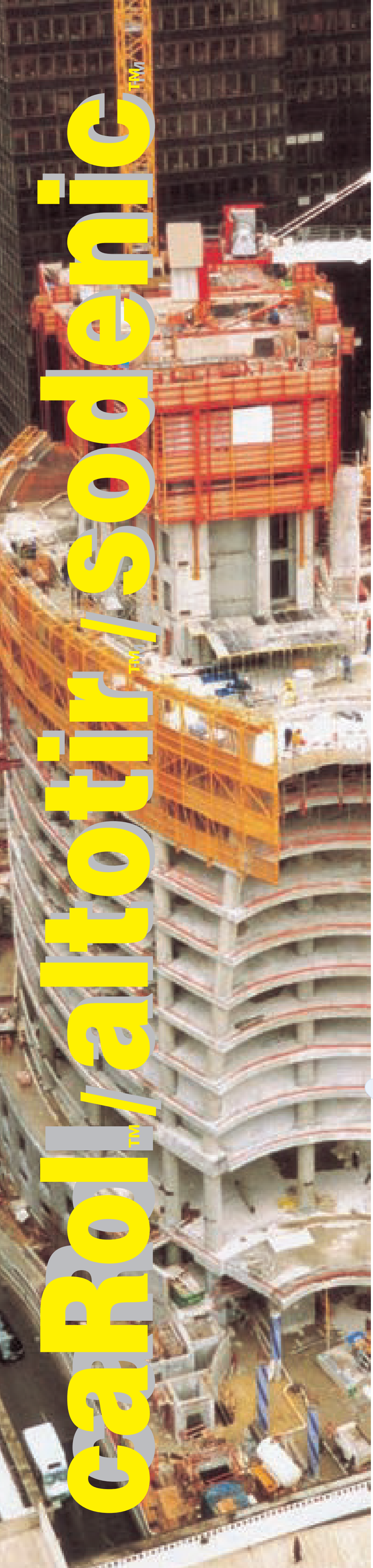
Versions : with sheave block - reeler - radio transmission

minifor™
fitted with wire rope reeler



minifor™ TR10 - TR30
fitted with sheave block kit

radio controlled
minifor™



caRol™ manual drum winch

• TR SERIES

- Manual spur gear winches.
- Multiple anchoring positions : from base or side, depending on the model.

Model	WLL	Speed	Wire rope diameter (mm)	Wire rope maximum capacity (kg)	Number of layer	Effort on the handle (kg)	Lift per turn of handle (mm)	Weight (kg)
TR-150	150 kg	1	4	22	6	15	185	8
TR-300	300 kg	1	5	40	6	10	35	16
TR-500	500 kg	1	6,8	20	4	13	35	16
TR-1000	1000 kg	1	9	35	4	12	24	38
TR-2000	2000 kg	1	13	30	3	13	13	70

• TS SERIES

- Manual worm gear winches.
- Anchored using 4 or 6 anchor points at the rear of the unit, depending on the model.

Model	WLL	Speed	Wire rope diameter (mm)	Wire rope maximum capacity (kg)	Number of layer	Effort on the handle (kg)	Lift per turn of handle (mm)	Weight (kg)
TS-250*	250 kg	1	5	20	4	11	21	10
TS-500	500 kg	1	6,8	25	4	12	15	15
TS-1000	1000 kg	1 & 2	9	35	4	14	12	35
TS-1500	1500 kg	2	11,5	20	3	12	7	39
TS-2000	2000 kg	2	13	30	3	15	8	61
TS-3000	3000 kg	2	15	40	3	12	4	145

* - The 250 kg hoist has no clutch release drum

caRol™ powered drum winch

TE-TC : the multi-purpose powered winch

• DURABLE STRENGTH

- Made of pressurised aluminium and injected polycarbonate, mass-coloured.
- The helical teeth of the gears provide significant noise reduction. Permanently greased sealed gearbox.

Model	WLL	Motor single phase : 220 v - 50 Hz 3 phases : 220/380 v - 50 Hz (kW)	Wire rope speed (m/min)	Wire rope capacity (m)	Wire rope diameter (mm)	Weight TE (kg)	Weight TC (kg)
	250 kg	1.1 single ph.	25	60	5	39	50
		1.1 3 ph.	25	60	5	39	50
	300 kg	1.1 single ph.	20	60	5	39	50
		1.1 3 ph.	20	60	5	39	50
	500 kg	1.5 single ph.	12	85	6,8	85	95
		0.55 3 ph.	5	85	6,8	85	95
		1.1 3 ph.	9	85	6,8	85	95
		1.5 3 ph.	12	85	6,8	85	95
		2.2 3 ph.	18	85	6,8	85	95
		3 3 ph.	23	85	6,8	85	95
	800 kg	1.1 3 ph.	5	60	8	90	100
		2.2 3 ph.	10	60	8	90	100
		2.2 3 ph.	13	60	8	90	100
		3 3 ph.	17	60	8	90	100

- Speed 1500 rpm. Starting by condenser - Class F, IP 55 protection
- Electromagnetic brake, 24Vdc - Welded steel drum
- Low voltage (24 Volts) remote control with emergency stop
- Optional equipment on request

Altotir™

The ideal solution for your materials lifting requirements


Altotir™ 100

• ALTOTIR™ 100

Compact, lightweight and reliable. It can be installed anywhere thanks to its quick attachment system. The length of its jib crane (option 1,5 m) enables you to lift bulky materials.

• ALTOTIR™ 150 & ALTOTIR™ 200

Specially designed for professional use on building sites and in confined spaces.
The altotir™ 150 is supplied with two fixing brackets on struts.
The altotir™ 200 must be mounted on the supporting jib crane which is sold separately.


Altotir™ 150 - Altotir™ 200

• ALTOTIR™ 300

This has been designed to provide maximum reliability and safety.
Its lifting power and ability to be mounted on a stand make it suitable for a wide range of possible applications.

Option : A choice of fixings according to your application :

- ***Stand for Altotir™ 300***
- ***Internal strut with height adjustment from 2 to 3.30 m***
- ***Side window strut***
- ***Fixings for scaffolding***
- ***Containers for counterweights***


Altotir™ 300

Model	WLL	Lifting speed (m/min)	Electric motor power (kW/V)	Wire rope diameter (mm)	Wire rope length (m)	Maximum working height (m)	Weight (kg)	Packed dimensions (Lxlxw) (mm)
Altotir™ 100	100 kg	15	0.3/230	3	26	20	18	400 x 330 x 370
Altotir™ 150	150 kg	19	0.45/230	5	26	25	39	820 x 350 x 500
Altotir™ 200	200 kg	20	0.7/230	5	26	25	42	820 x 350 x 500
Altotir™ 300	300 kg	20	0.88/230	5	26	25	48	820 x 440 x 500

Sodenic™ jib crane for building materials

Product only available on inquiry

Specially designed for work on inclines : waterproofing, roofing, masonry, metalwork, plumbing, joinery, etc

• TILTING BOOM, GALVANISED STRUCTURE, PIVOTING JIB

The sodenic™ crane can be used for any work which requires the installation of a safe, fast lifting device.
• Three motors available : electric, petrol and diesel.

tralift™

Tralift™ TE electric hoist

- Upper and lower electrical limit switches.
- Extra low voltage control using Schneider group components.
- Emergency stop button on pendant control station.
- Control cable with plug-in connector.
- Friction load limiter acting as a mechanical safety limit switch.
- Lifting chain to DIN 5684 + EN 818 galvanised.
- Multi-sized chain storage buckets and bags.
- IP54 protection - Class F motor insulation.
- Supply voltage 230 or 400 V one speed and two speed 3-phase - 50 or 60 Hz.
- FEM group 1 Am ISO M4.

Model		Number of falls	Load chain Dia. x pitch (mm)	Lifting speed (m/min)	Hoisting motor power (kW)	Hoist weight lift 3 m (kg)	Hoist headroom (mm)	Trolley speed (m/min)	Trolley motor power (kW)	Hoist/trolley weight push type (kg)	Hoist/trolley weight chain type[1] (kg)	Hoist/trolley weight électric type (kg)	Beam adjustment mini/maxi (mm)	Mini curve radius (mm)
TE125	125 kg	1	4 x 12	10 10/3.3	0,3 0.3/0.13	24	330	Single	-	3,5	-	-	50 to 220	900
TE250	250 kg	1	5 x 15	8 8/2.7	0,4 0.4/0.13	30	340	speed	-	3,5	-	-	or	900
TE500	500 kg	2	5 x 15	4 4/1.3	0,4 0.4/0.13	33	430	5 or 10	0.18	8,5	-	50	221 to 300[2]	900
TE500	500 kg	1	6.3 x 19	8 8/2.7	0,9 0.9/0.13	38	400	20	0.25	8,5	-	55		900
TE1000	1000 kg	2	6.3 x 19	4 4/1.3	0,9 0.9/0.13	41	480	dual speed		10,5	19	60	58 to 220 or	1000
TE1000	1000 kg	1	8 x 24	6,3 6.3/1.9	1,6 1.6/0.55	58	490	9 and 3 or	0.18/0.6	10,5	19	73	221 to 300[2]	1000
TE2000	2000 kg	2	8 x 24	3.15 3.15/0.8	1,6 1.6/0.55	62	580	19 and 6		18	22,5 [1]	89	66 to 220 ou 220 to 300[2]	1500

(1) - The weight includes operating chain (loop 3 m) (2) - Not standard cross bar

• Also available in pneumatic version : TRALIFT™ TR from 125 to 6000 kg

Tralift™ TK electric hoist

• COMPREHENSIVE RANGE OF ELECTRIC CHAIN HOISTS

- WLL 250 kg to 2000 kg in single phase model
- WLL 1600 kg to 5000 kg in 3-phase model

• The Tralift™ TK range is also available for theatre and showbiz configuration (upside down hoist, black, with multi-hoist remote control system)

Model	WLL	Number of falls	lifting speed (m/min)	Load chain Dia. x pitch (mm)	Lifting motor power (kw)	Hoist weight lift (kg)	Hoist headroom (mm)	Trolley speed (m/min)	Trolley motor power (kw)	Hoist/trolley weight push type (kg)	Hoist/trolley weight chaîn type* (kg)	Hoist/trolley weight électric type (kg)	Beam adjustment** min./max. (mm)	Min. curve radius** (mm)
TK 2M	250	1	8	5 x 15	0.4	35	403	10	0.18	44	54	61	58 à 113 or	1.5
TK 5M	500	1	4	5 x 15	0.4	40	403	or	0.18	45	59	63	119 à 170	1.5
TK 10M	1000	1	6	7 x 21	1.1	50	467	20	0.18	61	69	90		2
TK 20M	2000	2	3	7 x 21	1.1	60	593		0.18	78	83	109	66 to 113 119 to 160	2.5

Tralift™ TK single phase range
* - The weight includes operating chain (loop 3 m)
** - With electric drive trolley - for hand operated trolley (refer to the corso trolley leaflet)

Model	WLL	Number of falls	Lifting speed (m/min)	Load chain Dia. x pitch (mm)	Lifting motor power (kw)	Hoist weight lift 3 m (kg)	Hoist headroom (mm)	Trolley speed (m/min.)	Trolley motor power (kw)	Hoist/trolley weight push type (kg)	Hoist/trolley weight chaîn type* (kg)	Hoist/trolley weight électric type (kg)	beam adjustment** min./max. (mm)	Min. curve radius** (mm)
TK 16	1600	1	6	8 x 24	1.85	68	579		0.18	86	91	113		2500
TK 16	1600	1	5/1.25	8 x 24	1.7/0.42	78	579	Single	0.18	94	99	121	66 to 113	2500
TK 20	2000	1	5	10 x 28	1.85	71	574	speed	0.18	89	94	121	or 119 to 160	2500
TK 20	2000	1	5/1.25	10 x 28	1.7/0.42	78	574	10 or 20	0.18	94	99	125		2500
TK 25	2500	1	4	10 x 28	1.85	71	574		0.18	103	109	121		2500
TK 25	2500	2	3/0.75	8 x 24	1.5	78	651		0.18	108	114	126		2500
TK 32	3200	2	3	8 x 24	1.85	78	651	dual	0.44/0.11	108	114	126		2500
TK 32	3200	2	2.5/0.6	8 x 24	1.7/0.42	78	651	speed	0.44/0.11	108	114	126		2500
TK 40	4000	2	2.5	10 x 28	1.85	88	732	20 and 5	0.66/0.17	137	143	182	90 to 143	2500
TK 40	4000	2	2.5/0.6	10 x 28	1.7/0.42	88	732		0.66/0.1	137	143	182	or 149 to 190	2500
TK 50	5000	2	2	10 x 28	1.85	88	732		0.66/0.17	137	143	182		2500

Tralift™ TK 3 phase range
* - The weight includes operating chain (loop 3 m)
** - With electric drive trolley - for hand operated trolley (refer to the corso trolley leaflet)