

# TIRLIFT®



**Electric winches  
TIRLIFT types TC and TL  
for loads from 125 up to 990 kg**



2, boulevard de l'Industrie - B.P. 20059 - 28509 Vernouillet cedex - France

Phone: (33) 02 37 38 95 95 - Fax : (33) 02 37 38 95 99

Internet : [www.verlinde.com](http://www.verlinde.com)

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TIRLIFT type TC and TL Electric Winches for loads from 125 up to 990 kg



This line of general-use electric winches for lifting and pulling will adapt perfectly to all your needs (large range of loads, many available options). In addition, this winch is designed to be heavy-duty to provide very long durability and low maintenance to its owner.

## General description

These winches are designed for pulling and lifting of loads between 125 kg and 990 kg (Class FEM 1Bm). They comply with directive "CE" 98/37/EEC. TIRLIFT type TL and TC electric winches offer the following standard features :

- A drum for 5-mm wire rope for loads up to 250 kg, for 6-mm wire rope for loads up to 500 kg and for 7-mm wire rope for loads between 800 kg and 990 kg.
- Protection of electrical components (control panel and motor), type IP55.
- 2 types of totally enclosed, life lubricated, helicoidal gear treated (type according load range).
- One or two lifting speed.
- A wide line of hoisting motor 380-400V / 50 Hz/3 PH (power from 1.1 to 2.2 kW for the high speed and from 0.37 to à 0.75 kW for the low speed) with insulation class F, IP 55 protection. Spring loaded disc brake.
- A start/stop contactor (for type B and C equipment).
- A 48 V Low Voltage transformer (for type B and C equipment).
- A modular and evolutional under-frame allowing many directions for wire rope outlets from the drum.



These winches are available with 3 types of electrical equipment :

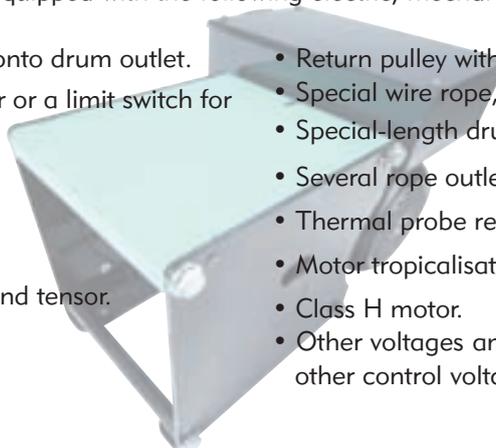
- **Type A** : without connection to terminal box, with rectifier bridge.
- **Type B** : components built into box attached to winch, with a 2-meter cable to the push button box.
- **Type C** : components built into remote box with control on the box (2 buttons + Emergency stop) and 3-meter cable between the electric box and the winch.



## Optional equipment

TIRLIFT TC and TL winches can be equipped with the following electric, mechanical or protection options :

- Limit switch with cams is mounted onto drum outlet.
- Drum outlet shaft (to install a coder or a limit switch for special lifting).
- Roll for tightening wire rope.
- Rope pressure roller.
- Manual brake release.
- Fixed-point plate with load limiter and tensor.
- Centred lifting.
- Capstan-type winch.
- Return pulley without axle, Return pulley assembly
- Special wire rope, stainless steel wire rope
- Special-length drum.
- Several rope outlets on the drum.
- Thermal probe relay for motor.
- Motor tropicalisation.
- Class H motor.
- Other voltages and frequency of power supply and other control voltage.

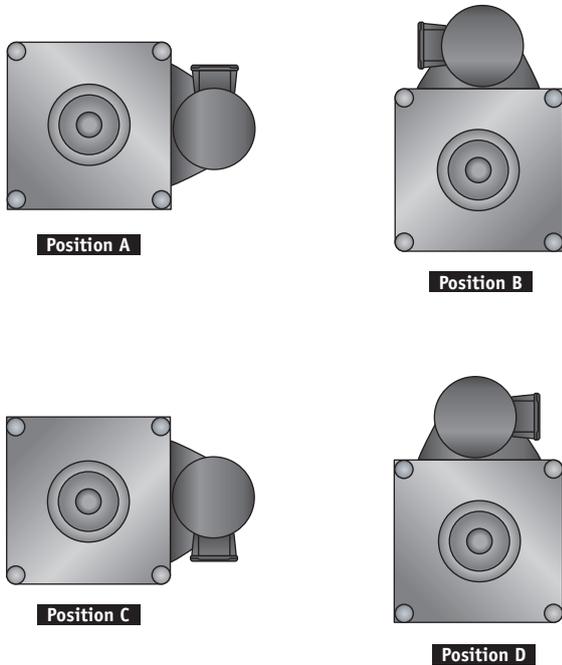


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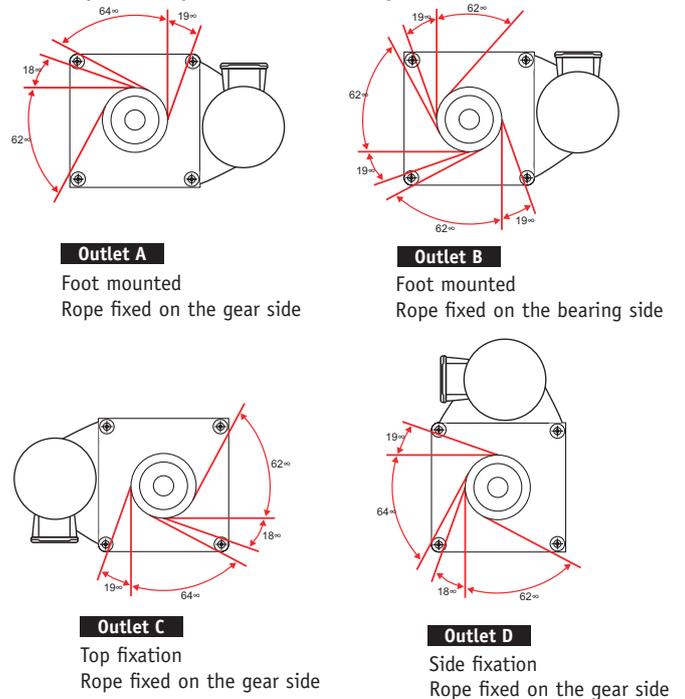
## Winch positions - Wire rope outlets - Uses

The winch can be mounted on the ground (**Position A**), onto a wall (**Positions B and D**) and on the ceiling (**Position C**).



Outlets are possible over a range from 0° to 360°. The wire rope can be set to the right or to the left of the drum, according to desired outlet.

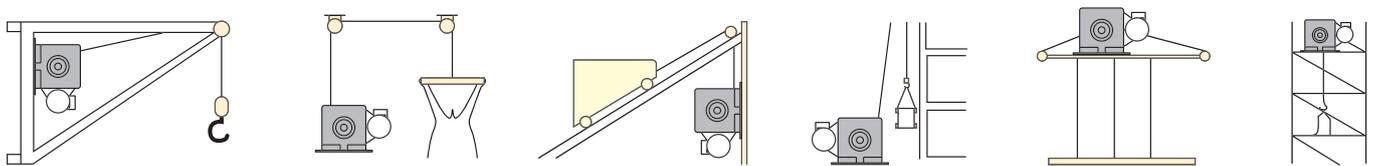
*Example of possible outlet angles for the first layer in position A, with the wire rope set on gear side or on bearing side.*



## Recommended type of wire rope

Rope	Winch	Rope type	Falls breaking (N/mm <sup>2</sup> )	Minimum breaking (kg)	Load max per rope (kg)	Security coefficient	Specifications
Ø 5	TC et TL	17x7 Nuflex	2160	1924	250	7,7	Rotation resistant
Ø 6	TC et TL	17x7 AGM	2160	2966	500	5,93	Rotation resistant
Ø 7	TC et TL	17x7 AGM	2160	4118	990	4,15	Rotation resistant

## Examples of uses



## Safety precautions

TIRLIFT type TC and TL electric winches have been designed to respond to all the demands of the lifting – pulling equipment market. This type of winch can be used in its “lifting function”, complying with all the safety requirements dictated by current laws in effect, or in its “pulling function” offering the same strength as in lifting.

**Note :** the pulling load indicated is valid for a mobile unit travelling under optimal conditions.

**Important !** There must always be 3 lengths of wire rope wrapped around the drum at the limit.

### Conditions for pulling with a winch.

Upon a pulling action, the tractive effort applied to the wire rope must never exceed the nominal load capacity of the lifting winch. Optimum winding conditions: calculation of the potential load to be pulled is random following conditions of the mobile unit, meaning the following parameters :

- Wheels mounted onto ball bearings or not.
- Diameter of the wheels (the larger the diameter, the lower the effort).
- The material the wheels are made with influences the rolling friction coefficient (rail, asphalt, concrete or sand) and the inclination if present.

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## Product range - Technical characteristics



Type	Load (kg)*	Maximum speed (m/min.)**	Motor (kW)***	Voltage (V)	Ø wire rope (mm)	Capacity (m)		
						1 layer	2 layers	3 layers
TC122M...	125	22	1,1	3 Ph 380	5	7	16	26
TC116M...	125	16	1,1	3 Ph 380	5	7	16	26
TC122B...	125	22/7	1,1/0,37	3 Ph 380	5	7	16	26
TC116B...	125	16/5	1,1/0,37	3 Ph 380	5	7	16	26
TL122M...	125	22	1,1	3 Ph 380	5	16	35	56
TL116M...	125	16	1,1	3 Ph 380	5	16	35	56
TL122B...	125	22/7	1,1/0,37	3 Ph 380	5	16	35	56
TL116B...	125	16/5	1,1/0,37	3 Ph 380	5	16	35	56
TC216M...	250	16	1,1	3 Ph 380	5	7	16	26
TC216B...	250	16/5	1,1/0,37	3 Ph 380	5	7	16	26
TC222B...	250	22/7	1,1/0,37	3 Ph 380	5	7	16	26
TL216M...	250	16	1,1	3 Ph 380	5	16	35	56
TL216B...	250	16/5	1,1/0,37	3 Ph 380	5	16	35	56
TL222B...	250	22/7	1,1/0,37	3 Ph 380	5	16	35	56
TC509M...	500	9	1,1	3 Ph 380	6	7	16	26
TC509B...	500	9/3	1,1/0,37	3 Ph 380	6	7	16	26
TC518B...	500	18/6	2,2/0,75	3 Ph 380	6	7	17	26
TL509M...	500	9	1,1	3 Ph 380	6	20	43	68
TL509B...	500	9/3	1,1/0,37	3 Ph 380	6	20	43	68
TL518B...	500	18/6	2,2/0,75	3 Ph 380	6	20	43	68
TC809B...	800	9/3	2,2/0,75	3 Ph 380	7	6	14	22
TC812B...	800	12/4	2,2/0,75	3 Ph 380	7	6	14	22
TL809B...	800	9/3	2,2/0,75	3 Ph 380	7	17	38	60
TL812B...	800	12/4	2,2/0,75	3 Ph 380	7	17	38	60
TC909B...	990	9/3	2,2/0,75	3 Ph 380	7	6	14	22
TL909B...	990	9/3	2,2/0,75	3 Ph 380	7	17	38	60

\* Max. load for every layer

\*\* For the first layer

\*\*\*380-400 V / 50 Hz in standard

Winch without overload device

FEM classification 1Bm

Electrics type A, B or C

 **VERLINDE**  
LIFTING EQUIPMENT

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