



BHW

Bushey Hall Winchmaster

www.bhwgroup.com



DC3500 HEAVY DUTY 12v or 24v DC WINCH

3500kg (34.39kN) Line Pull with Standard Drum or Long Drum options

TYPICAL USES: Commercial Recovery, Plant Moving and Utilities Vehicles

Compliant with EN14492-1 Power Driven Winches



DC3500 KIT

T-MAX Heavy Duty Electric Winch, 3.7m wanderlead, roller guides, tension roller, load limiter and 10mm diameter high tensile galvanised wire rope with grade 80 safety latch hook.

Options: Standard or long drum models, mounting plate. wireless IN-OUT control, circuit Isolator switch, In line slow burn fuse, heavy duty extension kit for wanderlead, air-shift freespool clutch., Emergency Stop.

FEATURES INCLUDE

- **4 Stage Heavy Duty Planetary Machined Gearing** - Providing long life and high mechanical efficiency.
- **Series Wound, 12v 4.8hp or 24v 7hp High Torque Motor** - Custom manufactured for extended service life.
- **Electronic Load Limiter** - Supplied as standard.
- **Freespool Manual Clutch** - Can also be operated by air-shift control.
- **10mm Diameter Wire Rope** - With grade 80 safety hook. Standard drum up to 23m, long drum up to 30m length.
- **Secure wire rope anchorage** - Providing full load holding.
- **Tension Roller** - Spring loaded to aid rope wrapping.
- **Heavy Duty Solenoids** - With silver layer on contacts to reduce heating and extend service life. Pre-wired to accept wireless control, reducing installation time.
- **4 Way Roller Guides** - The horizontal rollers are wide spaced to extend wire rope life.

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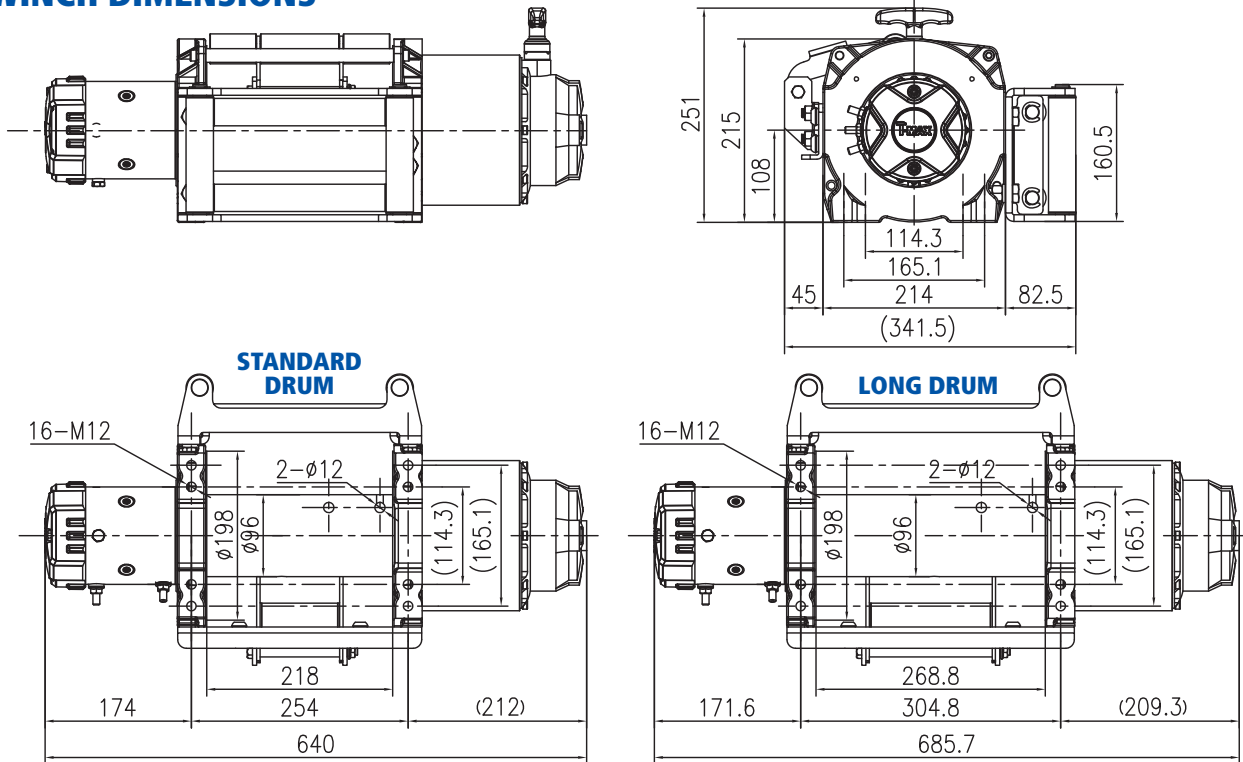
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WINCH DIMENSIONS



KEY DIMENSIONS

Standard Drum: Length 218mm, Diameter 94mm, Flange Diameter 198mm

Long Drum: Length 269mm, Diameter 94mm, Flange Diameter 198mm

Winch Fixing Centres: 254mm on length, 165mm on depth

Winch Fixing Centres: 305mm on length, 165mm on depth

RATED LINE PULL

		LAYER		
		1	2	3
Maximum Rated Line Pull by Layer*	kgf	3500	2935	2527
	kN	34	29	25
Cable Drum Capacity Cumulative by Layer (10mm Ø wire rope)	Standard Drum m	6.5	14.5	23.5
	Long Drum m	8	17.5	30

*By incorporating a snatch block in the line it is possible to double these capacities.

PERFORMANCE

PERFORMANCE FIRST LAYER OF CABLE				
LINE PULL kgf	LINE SPEED (approx)		AMP DRAW (approx)	
	12v m/min	24v m/min	12v	24v
0	6.2	7.8	80	48
750	4	5.3	146	85
1500	3.1	4	184	106
2250	2.8	3.3	222	127
3000	2.4	3.4	261	148
3500	2.2	3.3	286	162

All figures are based on battery maintaining normal voltage.

LEGALLY COMPLIANT

The Harmonised European Standard for pulling winches EN14492-1, states that any winch sold in the EU must comply with the essential Health and Safety requirements. To achieve this the following conditions must be met:

The rope used must provide a minimum breaking force (MBF) of 2:1 compared to the Working Load Limit of the winch.

Example - for a 3 Tonne rated winch the MBL of the rope must be at least 6 Tonne.

The maximum diameter of the wire rope that can be used must have a minimum ratio of 10:1 compared with the pitch circle diameter of the first layer of rope on the drum. Example - for a winch with drum diameter 90mm and rope 10mm the pitch circle is 100mm so the minimum permissible ratio is 10:1.

The maximum rope length wound on the drum that is permitted must provide a freeboard from the top layer to the edge of the drum flange of 1.5 x rope diameter. Example - a 10mm diameter wire rope would require a 15mm freeboard from the top layer.

All winches applying a force above 1000kg must be load limited.



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SPECIFICATIONS

Rated Line Pull Motor

3500kgf 34.39kN.

Powerful 12v, 4.8hp or 24v, 5.4hp purpose made series wound motors ensure constant high power and torque. Roller bearings instead of bushes provide higher efficiency. Casing sealed against water ingress with IP 65 rating.

Gear Ratio

329:1. 4 stage planetary machined gears to transfer high power and torque to the winch drum.

Brake

Heavy duty automatic In-The-Drum brake.

Drum Sizes

Standard Drum: Length 218mm, Drum diameter 94mm, Flange diameter 198mm.

Long Drum: Length 269mm, Drum diameter 94mm, Flange diameter 198mm.

Wire Rope

10mm Ø galvanised 1960N/mm² tensile grade, 6/36 wire core construction with 69.8kN 7.12 Tonne Minimum Breaking Load (MBL). This rope provides the 2:1 Working Load Limit (WLL) required by EN winch standard EN14492-1. Rope to drum ratio 13:1

Max. Rope Lengths

Standard drum: 23m.

Long drum: 30m.

Freespool Clutch

Spring loaded sliding ring gear engaged and disengaged by rotating lever on gear housing. Can also be operated by optional air-shift control.

Load Limiting Device

Electronic limiting device to provide 2:1 working load limit (WLL), for compliance with EN14492-1.

Wire Rope Tensioner

Spring loaded roller tensioner to assist wrapping.

Solenoids

Integrated Solenoid Module (ISM) manufactured for military and industrial use. Silver layer on the contactor surface ensures much lower surface temperature during operation, providing extended service life. They are pre-wired to accept optional wireless control saving significant installation time.

Wanderlead Control

3.7m control lead supplied as standard. Other wanderleads / extensions and emergency stop button options available on request.

Roller Guides

4 way supplied as standard.

Mounting Plate

Optional. Ensures securing holes are all in alignment and not oversized.

Complete Kit Weights

Standard drum: with roller guides, tension roller and 23m wire rope = 50kg approx.

Long drum: with roller guides, tension roller and 30m wire rope = 56kg approx.

WARRANTY

Each new winch is guaranteed against defects in workmanship and material defects for a period of twelve months from date of purchase.

Wire ropes are not included under warranty.

Not be used for the movement of personnel. Five wraps of wire rope must be maintained on the drum at all times.

Data shown is approximate and intended as a guide only.

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