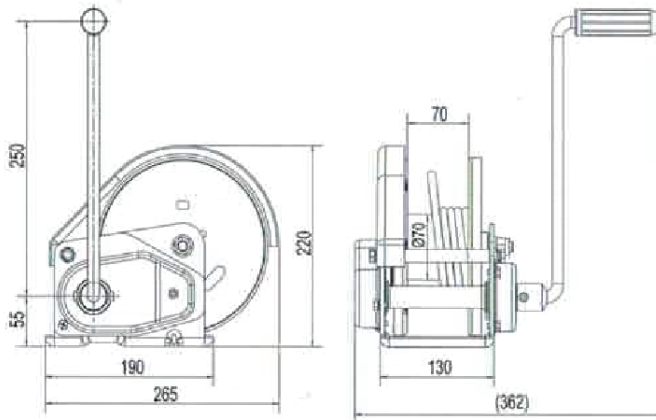
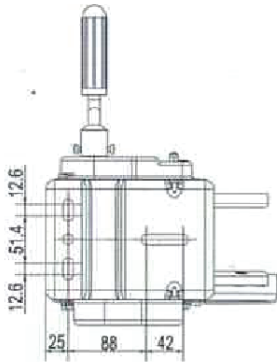


RBW3500

Specifications

Load Capacity (1st layer) (kgs)	Gear Ratio	Drum Capacity		Net weight (kgs)
		cable/ synthetic rope (mmxm)	Strap (mmxmmxm)	
1588	18.4:1	Ø7x22	1.4x60x13	9.1



Notes:

1. This winch is suitable for lifting and pulling of various loads.
2. A minimum load 25 kgs is required for the brake to function properly.
3. The winch is not permitted to move or lift people or to lift over the people.
4. The winch is not suitable for continuous operation.

SAFETY WARNING AND PRECAUTION

1. **Keep work area clean and dry.** Cluttered, or wet work areas can cause injuries.
2. **Keep children away from work area.** Do not allow children to handle this winch.
3. **Do not use this winch if under the influence of alcohol or drugs.** Read warning labels on the winch to determine if your judgement of reflexes are impaired while taking drugs. If there is any doubt, do not attempt to use this winch.
4. **Use eye and hand protection.** Wear safety impact eyeglasses and heavy duty work gloves when using this winch.
5. **Dress safely.** Do not wear loose clothing or jewelry as they can become caught in moving parts. Wear a protective hair covering to prevent long hair from becoming caught in moving parts. If wearing a long sleeve shirt, roll sleeves up above elbows.
6. **DO NOT OVERREACH**
Keep proper footing and balance at all times to prevent tripping, falling back etc.
7. **STAY ALERT**
Watch what you are doing at all times. Use common sense. Do not use this winch when you are tired.
8. **Check for damaged parts.** Before using this winch, carefully check that it will operate properly and perform its intended function. Check for damage parts and any other conditions that may affect the operation of this winch. Replace or repair damaged or worn parts immediately.
9. **Replacement parts and accessories.** When servicing, use only identical parts. Only use accessories intended for use with this winch.
10. **PERIODIC VERIFICATION AND TESTING**
Frequent and periodic inspections are to be performed by trained, experienced, and qualified person.
 - 1). Daily inspection before each start of shift should be conducted by the qualified person. There should be no cracks, no deformation, no abnormal sound, no damages and other unsatisfactory findings. The product should function well.

- 2). Inspection should be conducted prior to commissioning;
- 3). Inspection should be conducted after repair or reassembly or prolonged stoppage;
- 4). Inspection should be conducted during the period of use of the equipment.

SPECIAL WARNING & PRECAUTION

1. **Never exceed the maximum load capacity** specified on "Specification" table for each model.
2. **Avoid sideways cable slip.** The cable under a load should only be wound on to the drum to such an extent that a minimum space of 2 times the cable diameter remains on the drum flange (Fig.1). Winch overloading and a sideways cable slip will here be avoided.
3. **Always leave at least 5 wraps** of the cable on the drum (Fig.2). Failure to do so may break cable connection to drum and may result in serious accident.
4. Fitting the winch with the fleet angle no more than 4° . (Fig.2)

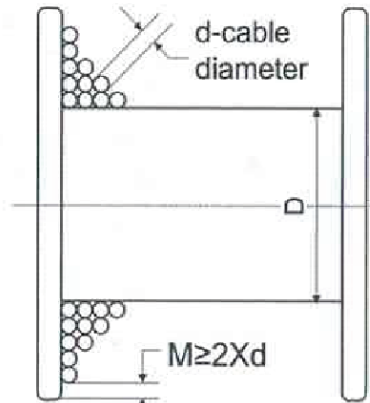


Fig.1

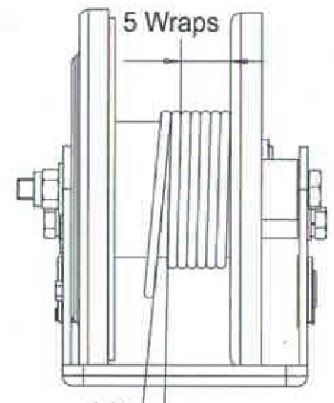


Fig.2

INSTALLATION INSTRUCTIONS



WARNING: Failure to follow these warnings and instructions may result in property damage and serious body injury or even death.

FITTING THE CABLE OR ROPE:

Insert the Steel Cable (not included, supplied to special order) through drum plate hole from inside to outside. Thrust Steel Cable into anchor with 5-10mm extending out of the clamp. Tighten the clamp nut to approximately 5-10 Nm. Fig.3 & Fig.4 Replace the cable anchor each time when Cable is replaced.

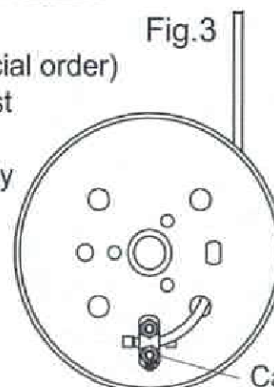


Fig.3
Cable Anchoring

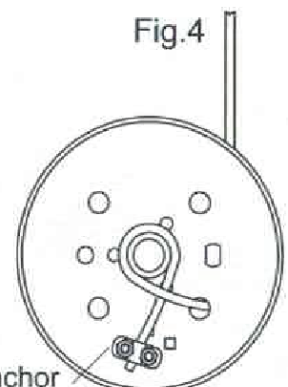


Fig.4
Rope Fitting

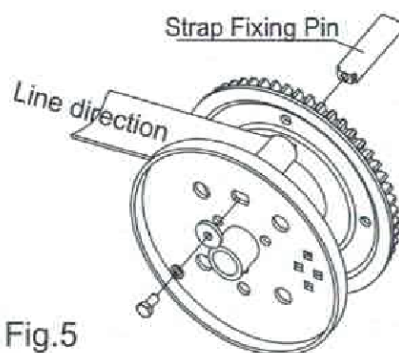


Fig.5

FITTING the Strap:

Insert the Pin through square holes on Drum Flanges into strap loop. Fix the Pin with M6 bolt and tighten to 5-10 Nm. Fig.5

CAUTION:

Pay attention to line direction when fitting the rope and strap.

MOUNT THE WINCH TO WINCH STAND:

The winch stand must be strong enough to support at least 5 times the rated capacity of the winch. The mounting surface must be equal to or larger than the footprint of the winch frame. When fixing the winch, use grade 8.8 hardware, M10 hardware, torque to about 45 Nm.

OPERATION INSTRUCTION

INSPECTION BEFORE OPERATION:

- 1). Check the rope/cable or strap. Replace it if necessary.
- 2). Check mounting hardware for proper torque.
- 3). Check gears, ratchet wheel and bushing for proper lubrication.

LIFTING, PULLING: Turn winch handle clockwise. Pay attention to rope(strap) pull-in direction.

STOPPING: Load can be stopped in any position simply by let go of the winch handle.

LOWERING, CABLE RELEASING: Turn the winch handle anti-clockwise to lower the load or release the line. The auto-brake can prevent the winch handle from kicking back.

FREE SPOOLING

1. Take the handle off away.
2. Push the Button down and turn in counterclockwise direction.
3. The winch drum is free to turn now.Fig.6

Note: If the handle is not removed, the button can not be turned to free-spooling position.

RESTORE PULLING/LIFTING MODE:

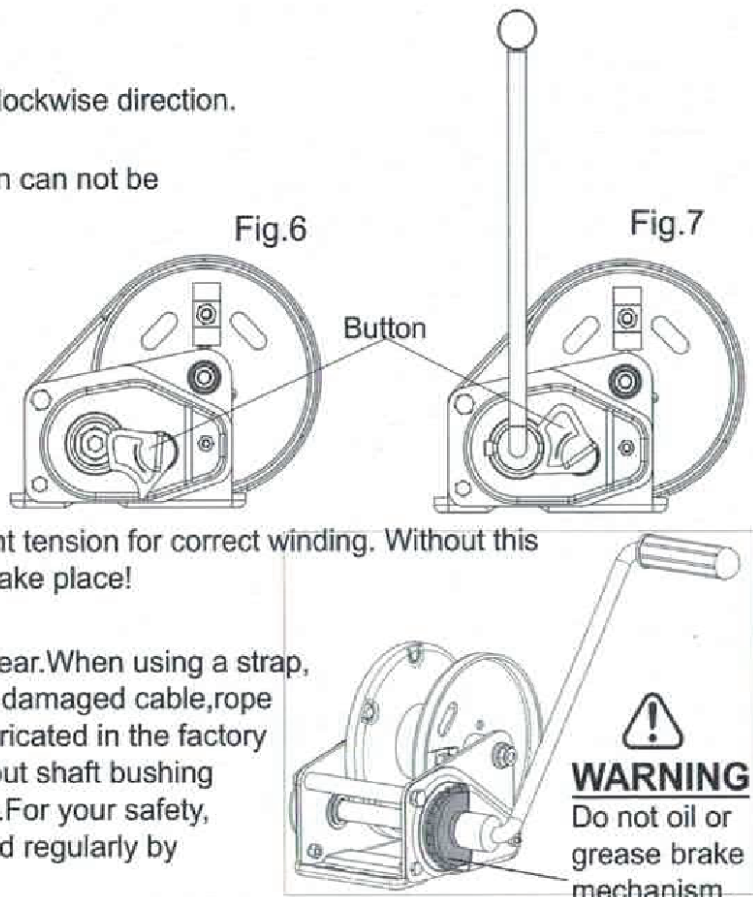
1. Push down the Button and turn in clockwise direction.
2. Fit the handle back properly. Fig.7

BRAKE FUNCTION:

The brake function will only be activated by a minimum load of 25 kgs. The line (cable, rope or strap) must be kept under slight tension for correct winding. Without this minimum load, the friction disc brake will not take place!

MAINTENANCE

Check the cable, rope or strap regularly for wear. When using a strap, check cracks, scrapes, fibre breaks. Replace damaged cable, rope or strap immediately. The winch has been lubricated in the factory already. However it is recommended to oil input shaft bushing and drum hub and grease the gears regularly. For your safety, service and maintenance should be performed regularly by a qualified technician.



TROUBLE SHOOTING

SYMPTOM	POSSIBLE CAUSE	CORRECTION
Turn handle, but drum does not turn	Loose or broken spring pins	Inspect winch and brake, repair as necessary
	Loose, stripped or broken gears	Inspect gears and repair as necessary
	Ratchet Pawl in wrong position	Push Ratchet Pawl in opposite position.
Handle turns hard or not turns at all	Overloaded	Do not overload
	Brake disc damaged or locked	Inspect brake, repair as necessary
	Gears or bearings broken or locked	Inspect and repair as necessary
Brake does not operate properly	Debris in gear tooth	Clean gears
	The brake function is not activated because lack of a minimum load of 25 kgs	Add a load of 25kgs to let the cable/rope in slight tension
	Brake discs worn or damaged	Inspect and replace as necessary
	Grease or oil on brake discs	Clean Friction Discs
	The Friction Nut is not tightened	Tighten Friction Nut properly
Excessively worn gears or bearings	No oil on Friction Nut thread	Oil Friction Nut thread
	Overloaded	Do not overload
	Poor lubrication of gears or bearings	Inspect and relubricate as necessary
Overheating	Operated too long without stopping	Stop operation till cooling down
	Overloaded	Do not overload
	Poor lubrication	Inspect and relubricate as necessary
High pitched squeak	Bearing seized up	Inspect and replace as necessary
	Poor lubrication	Inspect and relubricate as necessary
Grinding noise	Contaminated lubrication	Clean and relubricate winch
	Dirt in brake or winch gears	Inspect and clean as necessary
	Broken gears or bearings	Inspect and replace as necessary
Rattling noise	Loose fasteners	Tighten all bolts and other fasteners
Uneven clicking sound in	Broken gear tooth in brake	Inspect and replace as necessary
Weak clicking sound in brake	Spring or ratchet pawl dirty or damaged	Inspect and clean or replace as necessary
No clicking sound in brake	Ratchet incorrectly installed	Disengage and install correctly
	Ratchet pawl damaged or worn excessively	Inspect and replace as necessary