



SAFE USE OF MANUAL WIRE ROPE WINCHES

Applies to: Tirfor T532/T516, Griphoist, TU Series, and all manual wire rope pulling/lifting winches

✓ Purpose

Manual wire rope winches (Tirfor-style) are portable devices used for **lifting, pulling, tensioning**, and **recovering** loads via a continuous passing wire rope system.

They provide strong, controlled movement and are widely used in construction, utilities, lifting, rescue, and mechanical installation work.

This leaflet provides safe-use guidance to prevent overload, rope damage, runaway loads, and operator injury.

⚙ Before Use

- Inspect the winch – Check casing, levers, anchor eye, rope intake, and release mechanism for cracks, damage, or distortion.
- Inspect the wire rope – Check for kinks, bird-caging, flattened strands, broken wires, corrosion, or crushed sections.
- Verify SWL/WLL – Ensure winch capacity exceeds the weight or pulling force required.
- Confirm direction – Identify lifting/pulling direction indicators on the winch.
- Check rope grips – Ensure rope jaws are clean and free from debris.
- Test rope feed – Run a small section of rope through to confirm smooth travel.
- Check anchor point – Must be structurally strong, rated, and aligned to the direction of pull.
- Inspect sheave blocks – If changing direction, ensure pulleys are certified and compatible.
- Check ground conditions – Ensure clear working area free from trip hazards or sharp edges.
- Verify handle length – Only use the manufacturer-supplied handle; do not extend it.
- Ensure operator competence – Only trained personnel should operate Tirfor-style winches.

🔧 During Operation

- Feed the rope fully straight into the winch — avoid twists or loops.
- Keep the wire rope aligned with the winch to prevent side-loading the jaws.
- Operate the forward lever using steady, controlled strokes.
- Use proper sheave blocks if redirecting rope — never drag rope around corners.
- Maintain communication if multiple operators are involved.
- Keep the rope free from sharp edges and pinch points.
- Use gloves when handling rope.
- Stand clear of the rope line — maintain a **danger zone** in case of rope recoil.
- For lifting operations:
 - Always use a rated lifting sling/anchorage
 - Keep load vertical
 - Use tag lines for control
- For pulling operations:
 - Ensure load path is clear
 - Use chocks, wedges, or restraints if needed
- Stop immediately if rope jams, slips, or the winch makes unusual noise.
- Use the release lever carefully — loads may shift when tension is removed.

⊘ Do Not

- Exceed the winch's rated load (lifting or pulling).
- Use damaged rope or rope of incorrect diameter/type.
- Use winches on worn, dirty, or oiled rope jaws.
- Shock load the winch by jerking the handle.

- Lift or support people.
- Use improvised anchor points (fence posts, vehicle tow balls, etc.).
- Straddle or stand over the rope under tension.
- Use longer-than-supplied handles for extra force.
- Allow rope to bend around sharp corners or edges.
- Allow untrained personnel to operate a Tirfor.

After Use

- Release tension slowly and safely.
- Pull the rope fully out and clean it.
- Coil and store wire rope using large loops to prevent kinking.
- Wipe down winch body and clean jaws of dirt or grit.
- Inspect rope and jaws for damage after each job.
- Store winch and rope in a dry, clean, secure area.
- Tag and remove damaged equipment immediately.
- Maintain written inspection and servicing records under LOLER/PUWER.

Safety Reminders

- Always maintain a safe zone along the rope line — tensioned rope can recoil dangerously.
- Never exceed SWL or use incorrect rope diameter.
- Only use manufacturer-approved rope for Tirfor-style winches.
- Keep the winch, rope, and jaw mechanism clean.
- Ensure suitable anchor points before every job.
- Wear PPE: gloves, safety boots, helmet, hi-vis.
- Conduct full pre-use checks at every shift.
- Only trained personnel should operate manual wire rope winches.

Support and Maintenance

For service, inspection, and spare parts, contact your local Lifting Gear and Safety Depot

Depot List

Bristol: 0117 9714883
Avonmouth: 0117 9550456
Newport: 01633 334450
Port Talbot: 01639 540007
Pembroke: 01646 574000
Plymouth: 01752 474488
Fareham: 01329 550988
Redruth: 01209 703990