

Winches

A winch is a mechanical tool that specializes in pulling in or winding up or letting out or winding out the tension of a rope, wire cable, cable or a wire rope. In its most basic form it is made of a spool with an attached hand crank. More complicated winches are found at the heart of machines like steam shovels, tow trucks and elevators. Every so often the spool can be referred to as the winch drum. Elaborate designs have gear assemblies which could be driven by hydraulic, electric, pneumatic or internal combustion drives. Various winches can comprise a solenoid brake or a mechanical brake or a ratchet and pawl mechanism in order to stop it from unwinding unless the pawl is retracted.

Normally, the rope is stored on the winch. There is similar machinery referred to as a capstan that does not store the rope. In sailing, when a line is trimmed on a sailboat, the crew member operates the winch handle using one hand while tailing the other to be able to maintain tension on the turns. Several winches have a stripper or cleat to maintain tension. These designs are called "self-tailing" winches.

Usually, a winch is utilized in big theatrical shows as a part of the mechanics to transfer setting. Sometimes there are likewise winches actually imbedded in the stage to be able to help transfer the various larger set pieces off and on the stage.

The new generation of winches have been made for snow and water sports enabling the riders to be pulled swiftly across a body of snow or of water. This could stimulate a riding experience which is usually supplied by a wave runner, boat or a snow mobile.