

## ***Winch vs Hoist***

Unfortunately the terms winch and hoist have different meanings in different parts of the material handling market. For example, two different types of cranes may lift the same load, but one lifting device may be a hoist and the other a winch.

From a technical stand point, winches and hoists are very similar, since the physics of input torque, input speed, and drum dimensions are the same. In other words, if you have X lbs of torque at the drum, turning at Y speed, the output will be the same for a winch and a hoist with common dimensions.

### ***So what are the differences between the two?***

The biggest difference is that a hoist is designed to both lift and lower a load, whereas a winch is designed to pull a load – and depending on design, hold it in place. Winches generally do not have a brake that is adequate to absorb the energy created when a load is being lowered.

As winches typically pull loads in just one direction, many of them are equipped with a freespool control that disengages the drum and allows it to turn freely. If a winch is used for hoisting, and the freespool control is used, the load will drop freely – most likely with negative consequences.

Winches typically have smaller drum core diameters than hoists, and because they are not intended to suspend a load, they are equipped with smaller diameter wire rope than a hoist with an equivalent lift capacity. It is not an out for safe practices, but the failure of wire rope on a winch with the load on the ground will be less troublesome than a failure when the load is fully suspended. If a winch is used for hoisting and the brake fails, the load will turn the drum backwards and the gear reduction in the unit becomes a speed increaser. This, of course, can be catastrophic.

***Whatever your material handling needs, Allied Power Products, Inc. is ready to help.  
If you are deciding between a winch or a hoist, call our expert sales team at (503) 626-0654.***