Winch and Hoist Application Guidelines

Line Speed Considerations

The line speed of a winch or hoist is based on how fast the drum is turning as it is winding line on or off the drum. It is stated as the distance a load travels in a given period of time and typically expressed in feet per minute (fpm).

Assuming the drum turns at a constant RPM, the line speed increases with each layer of line wound on the drum.

Line being wound on the first layer accumulates at the slowest speed and as the line moves up to successive layers the line speed increases as the diameter on which it is being pulled increases.

For any given combination of input speed and torque at the drum, increasing the drum core diameter will increase line speed with a proportionately equal decrease in line pull.