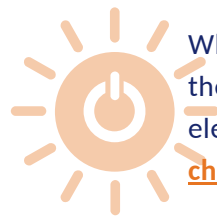
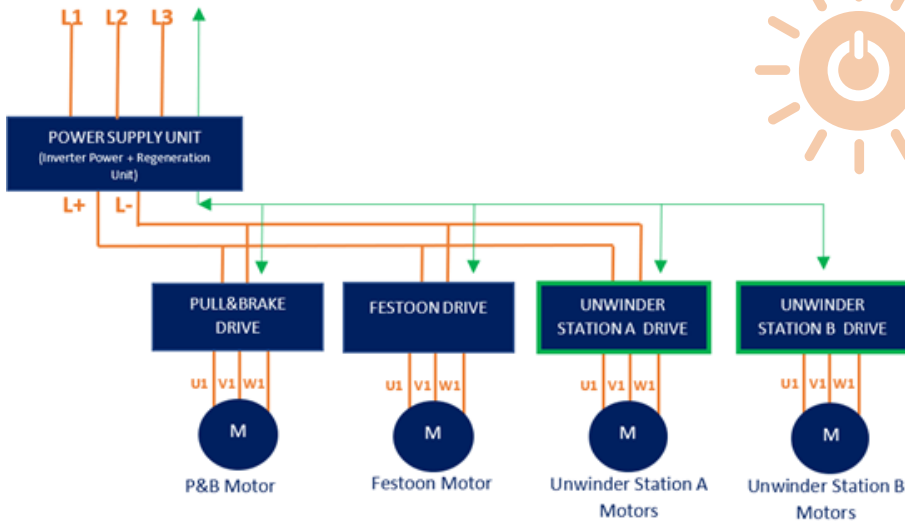


MOTORIZED CHUCK DRIVEN UNWINDERS

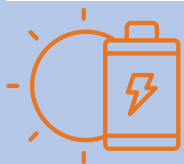
We know energy prices are rising almost every day. Although 2023 might look a little bit better, do you see any light at the end of this tunnel?

With today's unstable energy market, it's time to discover new ways to **reduce energy consumption** and consider **energy recovery systems**. Using regenerative drives along with motorized chucks becomes more cost effective, as well as offers other benefits.



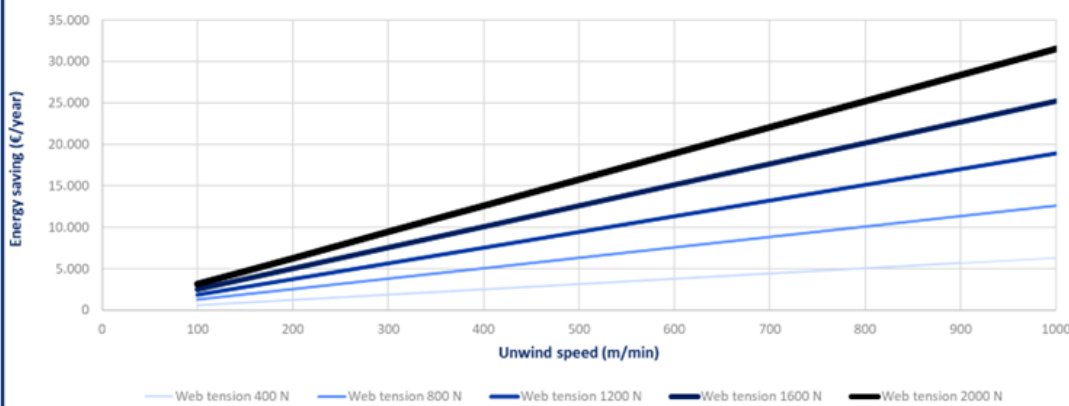
Why not convert the mechanical energy of the motor, under braking conditions, into electrical energy? **MTorres offers motorized chucks as an option on all our unwinders.**

The system is designed to return energy to the grid or to other connected devices, while working as brakes. These motors are also used to rewind the tail of the expired reel after splicing when not running off the core. This also applies tension to the new web after the splice has been prepared.



Process speed and web tension are the most important parameters to regenerate energy. This graph illustrates some estimated energy savings. Several process speeds and tensions are also shown.

Chuck Driven Unwind - Estimated Annual Savings



Estimated Annual Saving - High Efficiency Unwind Process



Maximum Line Speed = 1.000 m/min (3280 fpm)

Total Losses (mechanical + Electrical) = 25%

Working Days = 350 (24h)

Duty Cycle (average speed / maximum speed) = 0,75

Average Non-household kWh price (€) = 0,2

It is possible to optimize the use of energy resources even more!

Another benefit to motorized chucks is operational. Having pneumatic brakes replaced, tension can be controlled off of the motor's torque setting. As this torque is set during startup, production will be consistent in the future. This also avoids the cost of brake pad replacement, which can add up quickly with high production speeds and tensions.

