

WINDING TO THE MAXIMUM.

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For competition, there is no sense carrying rubber mass that is not loaded with the maximum possible stored energy. This requires being sensitive to knowing what the maximum really is, and taking risk of the motor breaking while packing it in. Stretch-winding is one key to success. If the rubber is stretched while winding, the knots that form are smaller and tighter, and you can pack in more turns. Example: Improperly stretched, a given motor might break at 110 turns of the (15: 1 turns ratio) winder. Properly stretched while winding, the same motor may yield 120 turns of the winder without breaking.

Competitive modelers often pre-stretch to four or five times the motor length when starting to wind, and then reducing the stretch after about 1/2 of the turns are in the motor. Ultimately, you want to end up with a virtually solid (tight, inelastic) motor at the length between the hooks. Once you have fixed on a motor size, do some testing to determine the stretch-winding technique that yields the maximum turns. Once you have it, practice doing it consistently. You have to break some motors to develop the feel and technique. Learning to wind the motor to the maximum is as important as the building and trimming of the model. It's worth practicing.

Most serious competitive modelers wind to the maximum with the aid of a torque meter. Lacking that, you have to go by feel, so the person cranking the winder has to develop sensitivity to know by the feel of it when it is compacting and about to break.