HS - 725BB

This sail winch is derived from a heavy duty servo with many advanced features that provide performance and reliability. These features include:

Precise heavy duty gears for accurate positioning and minimal backlash. Integrated circuit that provides strong standing torque and stability. Ball bearing at the top and oilite bearing at the bottom of the drive shaft. Indirect drive for gear train protection. Water- and dust-tight seals for the case and the drive shaft.

• SPECIFICATIONS

Dimensions : 30X59X52 mm (1.14" X 2.32" X 2.05")
Weight : 110g (3.88 Oz)
Speed At 6.0V : 1.3 Sec/360° (no load)
Torque At 6.0V : 13.8 Kg/cm (193 Oz/In)
Current (at idle) : 8 mA (6.0V)
Current (running) : 230 mA (6.0V and no load)

• PRECAUTIONS

The drum on this winch usually rotates between 2 and 4 turns, depending on the model of transmitter used. **Rotating this sail winch by hand may lead to severe damage to the gears or the potentiometer.** (In case of using a Hitec radio, It rotates 3 & 1/2 turns)

• APPLICATIONS

Each Hitec 725 sail winch is provided with a two section drum, with spools that are 38mm (1.50") in diameter. Each turn of this diameter drum will wind up about 120mm (4.75") of string. With an effective radius of 19mm (0.75") the force available with these spools exceeds 5.67Kg (200 Oz) which is sufficient to control sails with a total area equal to 6,450 cm^2 (1000 square inches).

Do not attempt to reduce sheeting times by increasing the diameter of the drum used on the winch, or by moving the sheet attachment closer to the gooseneck and reducing the number of turns. This will reduce battery life and could damage the winch.

Determine the length of string required to trim the sails and divide this value by the diameter of the spool; This quotient is the number of turns that the sail winch needs to rotate.

For example:

$$\frac{\text{240mm (9.5") of string movement needed to trim sails}}{\text{120mm (4.75") circumference of spool}}$$

= 2 turns of the drum

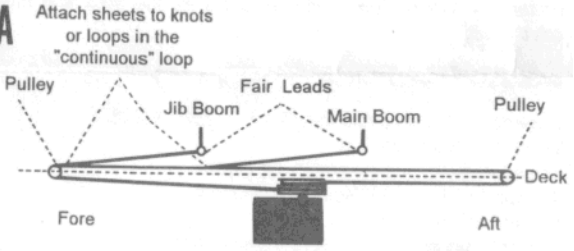
Adjust the throw of the transmitter stick (or the ATV of the sail winch channel) to make the sail winch rotate the required number of turns.

For a "continuous" sheeting system (figure A,B,C), both sections of the drum are used, so that the ends of the "loop" feed on and off the spools at the same rate. In addition to the number of turns required to trim the sail, place a extra half to full turn of string on the spool. In this example, the sail winch and its drum are located under the deck of the boat. Pulleys are used to allow the string to exit the deck and turn with little friction.

- "Continuous" Loop Sheeting

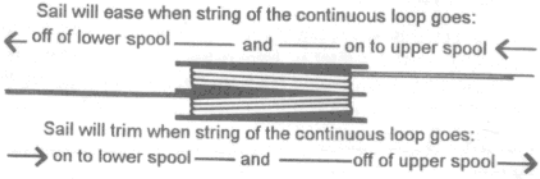
Side View

A

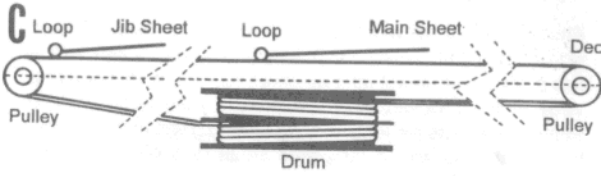


Expanded Side Views

B



C



For a single "non-continuous" sheeting system (figure D), where tension is maintained by an elastic, either spool can be used. In addition to the number of turns required to trim the sails, place a extra half to full turn of string on the spool. Run the string from the drum, through a pulley that allows the string to exit the deck. Attach an elastic to string on the deck to keep tension on the string as winds on and off the spool.

D