S125

The S125 sail winch servos are based on GWS best design and structure.It will offer you a reliable and durable operation . To match the different demand, we are offering 3 models 1/2T(turn) , 1T and 6T.

SERVO SPECIFICATIONS

ITEM	SIZE(mm)	WEIGHT	4.8V		6.0V	
			SPEED (sec/deg)	TORQUE kg-cm/oz-in	SPEED (sec/deg)	TORQUE kg-cm/oz-in
S125 1/2T	40.5x20x42	50g	0.26 SEC/60°	6.6/92	0.21 SEC/60°	7.6/106
S125 1T	40.5x20x42	50g	0.26 SEC/60°	6.6/92	0.21 SEC/60°	7.6/106
S125 6T	40.5x20x42	42g	0.93 SEC/60°	9.0/125	0.73 SEC/60°	10.0/139

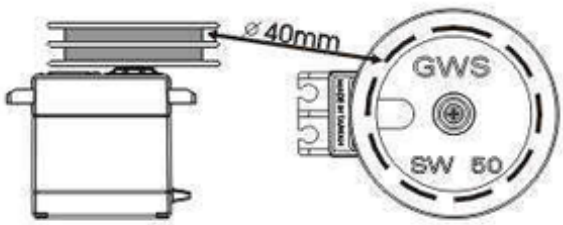
FEATURES:

Water and dust-tight seals for the case and shaft.
Dual ball bearing support for shaft.
Precise durable gears for accurate position and backlash.
Integrated circuit provides strong standing torque and stability.
Indirect drive for gear train protection.

INSTRUCTION

Each GWS S125 sail winch is provided with two groove wheel with spool that is 40mm (1.57") in diameter. Each turn of the wheel will wind up about 130mm(5.12") of string.

From the specification effective table showing above, if we choose S125 6T, the effective radius is 20mm (0.78") , the force with this spool equal to 9.0 kg/cm ÷ 2=4.5Kg/cm, which is sufficient to control sail with a total area 5120 cm^2(816 in^2)



The boom travel distance are determined by the turns of the wheel and the spool diameters.

FOR EXAMPLE

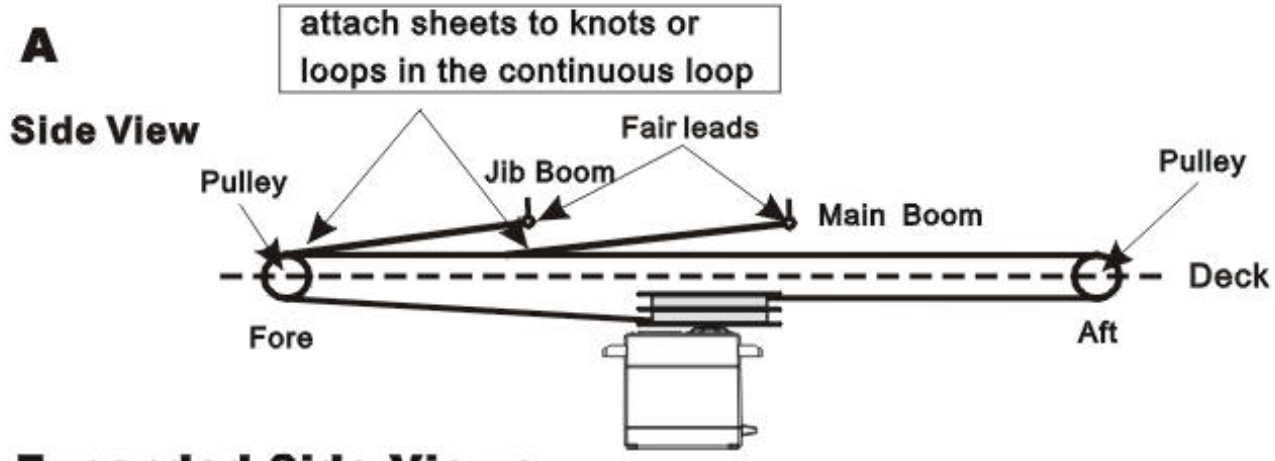
$$\frac{\text{260mm (102") of boom travel distance needed to trim sails}}{\text{130mm circumference of spool}} = \text{2 turns}$$

Do not attempt to reduce the turns and enlarge the spool diameter, otherwise it will damage the servo.

Adjust the trim of the transmitter to get your neutral position of the stick. The neutral position will be necessary for having equal length of string for either side.

We are offering the following 4 types of linkage for how to use S125 on the sail boat. Please note, different boat design may have some variations.

A



Expanded Side Views

B

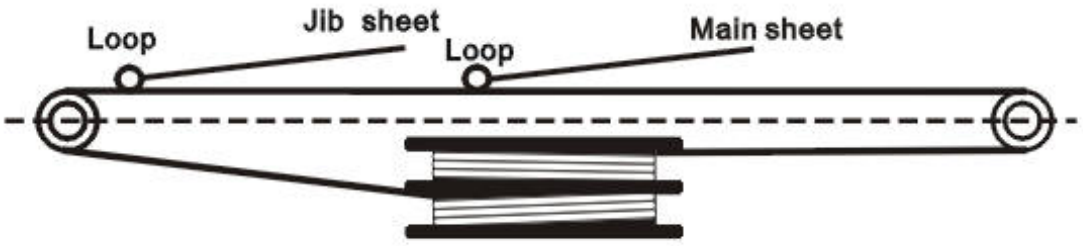
Sail will ease when string of the continuous loop goes:

off of lower spool----------and----------on to upper spool

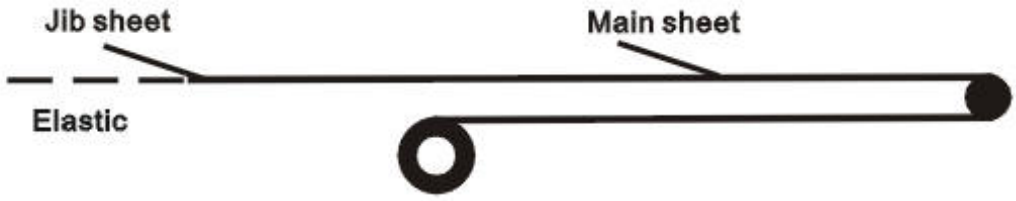
C

Sail will trim when string of the continuous loop goes:

on to lower spool----------and----------off to upper spool



D



Winding 1/2 to 1 turn of the string to the spool more than what you need to control the sail. Though pulley is used to allow the string to exit the deck , but if you could offer some tension to the string by rubber band in a certain position then you can avoid the string from jumping out of the spool.