

MOTORIZED BAR HOISTS ZERO FLEET - MODULAR CONCEPT

Green Stage Machinery Ltd is proud to introduce its standard range of patent pending Zero Fleet Hoists.

Our range of standard Zero Fleet Hoists have Safe Working Load capacities that range between 250 lb to 2000 lb with output speeds from 20 F.P.M. to 360 F.P.M. and travel distances from 30 to 80 feet depending on the number of suspension points.

Our engineers have worked extremely hard to ensure that our zero fleet hoists are one of the most compact and modular designs available.

The design of our zero fleet hoists are specifically engineered to suit layouts that require the motorized sets to be set out as close and compact as possible.

Due to its simple and modular design a second hoist can be simply attached to the primary hoist to either double the total set capacity, double the available set travel or increase the number of suspension points up to a maximum of 16 points.

With the attachment of a secondary unit the customer has a considerable number of hoisting options to choose from. The double hoist design offers an almost infinite number of load, speed and suspension point combinations.

If greater **TRAVEL** is required a secondary *non-motorised* drum assembly can be simply under hung from the primary unit that effectively doubles the travel capacity of the hoist.

If greater **LOAD** is required a secondary *motorised* drum assembly can be simply under hung from the primary unit that effectively doubles the output power and load capacity of the hoist.

In addition, each single or double hoist system can be mounted upright, under hung or vertical without further modification as standard.

A standard primary single drum hoist containing 3 - 8 lines measures only 10" wide x 21" high x 96" long and is ideal for set layouts as close as 12" on centre.

A double drive, double drum hoist containing 4 – 16 lines measures only 10" wide x 36" high x 96" long and is ideal for set layouts as close as 12" on centre.

The hoists can be configured for 2 line suspension with 110 feet of travel if requested but is non-preferred due to the effects of single point failure of a suspension cable

KEY COMPONENTS

The key components and materials for the **Modular Zero Fleet Hoist** have been carefully selected to ensure absolute safety, reliability and serviceability of the hoist.

The motorized geared reducer consisting of the motor, gearbox, primary disc brake and encoder is supplied from a single sourced manufacturer whom is renowned for their superb engineering quality and worldwide technical and maintenance support.

Gearboxes are designed around either helical bevel or helical worm gear units. This type of gearing is highly efficient and is designed to withstand the rigorous acceleration, braking and reversing demands of theatre powered flying. The high performance gear units selected by Green Stage Machinery Ltd have noise optimized motors and gearing with a minimum AGMA service factor of 1.0 and a mechanical strength service factor of 2.0.

For reasons of absolute safety, each hoist unit is fitted with a secondary spring applied 'mechanical fail safe' electrically released disc brake as standard.

The hauling drum is of a 6351-T6 aluminum construction and is precision machined to ensure constant rope layering along its entire length. The drum shafting is of high-grade steel and is supported at the gear head by high capacity bearings and at its opposite end by a self-aligning flange bearing.

Each winch is equipped with a positively driven rotary limit box that contains normal travel and ultimate over travel limit switches.

Each hauling drum is fitted with a 'patent pending' zero fleet drive mechanism that ensures smooth and constant linear motion of the drum.

Each drum is protected by four (4) cable retaining bars to prevent cross grooving of the suspension cables, one of which has been electrically isolated for use as a low voltage slack cable detector if desired.

Diverter pulleys are fitted to the suspension frame as standard on Under Hung and Vertical Mount systems.

Each diverter pulley is grooved to suit the maximum number of cables for ease of cable management and fitted with taper roller bearings as standard to ensure a smooth and quiet hoisting operation at high speed.

The pulley mountings are easily reversible to allow for cable take-off in either direction.