

UPPERSTAGE MACHINERY  
POWERED FLYING WINCHES

# EHS Flying Winches

Essential design  
Effective solution

Its simplicity and the low number of components, make the EHS winch an extremely reliable and cost-effective solution, easy to adapt to all the customer's needs.

The first choice to consider for new facilities, where the installation room can be designed with minimal restrictions.



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# EHS Flying Winches

EHS powered winches mainly consist of a grooved drum and a gearbox installed on a fixed chassis. External sheaves, installed above the winch at a suitable distance to keep the diverting angles to a minimum, collect all the ropes off the drum and divert them to the loft blocks. These are the key features of the EHS generation, which assure a very essential design.

## ADAPTED TO THE CUSTOMER'S NEEDS

**Both small and large venues can benefit of the advantages of the EHS theatre winches.**

Each unit is configured and adapted to meet the specific performances required.

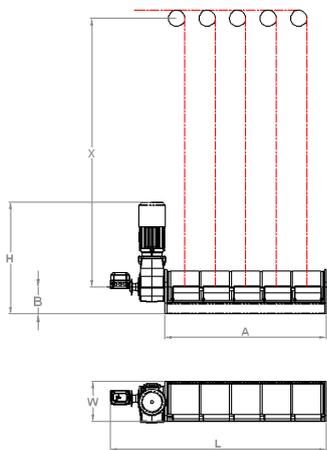
EHS winches can be arranged as stage batten hoists, with load capacities up to more than 1000 kg, speeds up to 1.8 m/s and travels up to 30 m; or as simple lightweight FOH battens, with a load capacity of 300 kg, a fixed speed of less than 0.1 m/s and a travel of just a few meters.

EHS winches are suitable also as point hoists.

## INSTALLATION NOTES

EHS winches can only be **mounted horizontally**. Different solutions are possible: on a gallery under the grid; directly on the grid if a upper structure, to which fasten the sheaves, is available; etc... EHS winches are usually the best solution where a dedicated machinery room is provided.

Should the distance X from the head sheaves be a problem, **EHS winches can also be provided in a sliding version which compensate the fleet angle**, allowing to reduce the height of the installation to a minimum.



**Configuration example:**  
EHS350 - 11 kW power  
WLL 750 kg at 1.2 m/s  
1.5 m/s<sup>2</sup> maximum acceleration  
5 steel wire ropes, Ø6 mm



## SAFETY AND RELIABILITY AS A STANDARD

EHS theatre winches are developed and manufactured according to the European standards and the international guidelines for stage engineering and machinery (DIN 56950, FEM 9.756, BGV C1, etc...) and they go with EC Declaration of Conformity according to Machinery Directive 2006/42/EC of the European Parliament.

**High safety factors** Faults are excluded by applying high safety factors as a standard rule. All components between the load and the brakes are always designed for a minimum of two times the rated load.

**Double-brake** EHS theatre winches are always equipped with two independent brakes, each able to safely stop the load, precluding unintentional hazardous movements.

**Double limit switches** Movement of the load is limited by means of two travel switches. Two over-travel switches, with separate and redundant circuits, stop the winch in the event of a failure of the first switches.

**Keeper roller** Ropes are kept in their intended grooves in the drum by means of a spring-loaded keeper roller.

**Low-maintenance** All EHS winches are designed to perform a working life of 1600 hours at full load and full speed, ensuring low-maintenance, reliability and no replacements. ALL components are lubricated for life or are self-lubricating.

**Preliminary testing** All EHS winches are factory fitted and tested with the related control system, ensuring short-time installation and turn-on.

## CUSTOMIZABLE FEATURES

**Double-brake** Depending on the application, brakes can be both in the motor side or one in the motor side and one in the drum side for maximum safety.

**Load sensor** The applied load is continuously monitored by a load cell, ensuring immediate overload and underload detection and reducing the probability of accidents. For interfacing with entry-level control systems, an electromechanical load limiter is available.

**Cross-groove detection** Two microswitches inhibit upward motion should a wire rope come out of its groove.

**Encoders** Depending on the control system, load speed and position can be measured by incremental and absolute encoders.

**Slack rope detector** Slack condition of the wire ropes is detected by a slack rope detector, usually installed remote from the winch.

**Cover** Depending on the general installation conditions, EHS winches can be provided with a cover which can be in a noise reducing version.

**Zero fleet angle base** EHS winches can be provided in a sliding version which allows to eliminate the fleet angle and to reduce the height of the installation to a minimum.

**Other fittings** To get a complete installation set, winches can be supplied with connection clamps, certified steel wire ropes, pulleys and batten.

## CONTROL OPTIONS

EHS theatre winches can be configured to be used with entry-level push button solutions up to top-level control systems.