GH
Cranes & Components

HOIST CATALOGUE

HIGH CAPACITY HOISTS
A New Conception
Future Technology

GH has manufactured hoists and other lifting equipment for over 50 years.

More than 100,000 installations are the proof of our experience and know-how.

Over the years we have installed lifting systems in over 60 different countries.

Cutting-edge design technology, highly sophisticated production resources and efficient organisation have placed GH among Europe’s top lifting equipment manufacturers.

The new range of GH hoists have been designed with the following principles: reliability, security, durability, price and easy maintenance. The design is rectangular, modern, compact with perfect dimensional balance.

The functional arrangement of the different elements are standardised on a modular construction, permitting the easy interchangability of groups combining different lifting speeds, heights and duty factors, according to the requirements and working conditions of each application.

The construction of the GH electric wire rope hoist, is based on the rules and regulations of lifting devices according to the FEDERATION EUROPÉENNE DE LA MANUTENTION (FEM) and the standards I.E.C.

Many years of experience and constant updating of our mechanisms, has enabled us to introduce our new range of hoists and standard crane components, which are represented in this technical catalogue.

Good documentation is the base which allows us to choose the best and profitable handling solutions.
GEARBOX

Robust and compact, situated on the exterior, allowing ease of access.

The helical teeth in all the gears are cut with great precision, in cemented steel, assuring silent running, great reliability and long life.

The drive from the motor to the gearbox is direct, avoiding coupling devices which have a tendency to fail.

All of the gears are lubricated by an oil bath in the interior of a closed casing, machining of the gear locations is made by high precision machine tools.

LIFTING MOTOR

The hoist has a cylindrical short circuit motor with an incorporated electromagnetic brake.

The motor and brake have been designed for continuous service with high duty factors and cycles.

The brakes are electromagnetic disc, with asbestos free flat faced linings. They offer great reliability and automatic braking in the event of power failure. The friction linings are long lasting and the brake is easy to regulate.

Protection IP-55 to DIN 140050.

The standard version motor has the option of one or two speeds. The second speed has a relation of 1/6. Other relations 1/2, 1/3, 1/4 are available by customer request. Also upon customer request, we can supply inverter control of slip-ring motors.

PUSH BUTTON PENDANT

Is manufactured from high impact polypropylene and provides double insulation. The various motions are controlled by push buttons which are colour coded as well as being indentified by internationally recognised symbols. Low dead weight and ergonomically styled housing reduces operator’s fatigue.

WHEELS

Dependant on the hoist model, the wheel material can be GG 60 for monorail hoists and GGS 70 (nodular cast iron with graphite structure) for bridge crabs. As shown, drive is via a direct splined axle.

ELECTRICAL CABINET

A metallic box located on the hoist frame, allowing easy access to the electrical control components.
**TRAVELLING GEARED MOTORS**

Are specially designed for crane application. Low torque high inertia drives, provide gradual acceleration and smooth deceleration without excessive swing.

The drive to the wheel is via a direct splined shaft.

**OVERLOAD LIMIT DEVICE**

All of our hoists are fitted with an electromechanical load cell as standard electronic control.

This load cell consists mainly of 2 parts:
- A electronic cell on
- Load cell unit (to be installed in the electric panel).

**SECURITY LIMIT SWITCH**

All of our hoists are fitted with a security limit switch in lifting, preventing a possible failure of the main limit switch.

**LIMIT SWITCH**

Is located in the drum axle. It limits hook movement in the up and down motions.

**DRUM & ROPE GUIDE**

The drum is designed and manufactured according to FEM 966 standard.

Constructed from a seamless steel tube with grooves machined according to DIN 15061. The groove is machined dependant on the wire rope exit, i.e., 1 or 2 exits.

The drum is fitted to the hoist frame using high-quality, self-lubricating, commercial bearings. The drive from the gearbox to the drum is via a direct splined shaft.

The rope guide is manufactured from GGG 70 nodular cast iron with self-lubricating graphite, which also gives particular resistance to wear.

The rope guide is formed by two pieces, which can easily be assembled without special tools.

**BOTTOM HOOK BLOCK**

The sheaves are designed according to FEM 9661. The machining of the groove is made according to DIN 15061. The cross pin and nut are machined according to DIN 15412 & 15413.

The hooks are selected according to DIN 154009 and machined to DIN 15401 & 15402, depending on whether they are single or double.
According to FEM classification, two fundamental criteria must be taken into account: the type of duty, and the time of operation (according to average daily operating time for the hoisting movement of the equipment).

**OPERATIONAL TIME**

Criteria to obtain the average operating time in hours per day (tm).

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2 \times \frac{\text{average hook travel (m)}}{\text{cycles per hour}} \times \frac{\text{number of working hours per day}}{60 \times \text{lifting speed (m/min)}} = \text{tm}
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**PRACTICAL EXAMPLE FOR SELECTION OF A HOIST**

- Capacity: 10,000 kgs
- Lifting height: 6 metres
- Average hook travel: Estimated 4 metres
- Lifting speed: 5 m/min
- Number of cycles per hour estimated: 12 cycles
- Number of working hours per day: 8 hours
- Duty factor, Standard

\[
tm = \frac{2 \times 4 \times 12 \times 8}{60 \times 5} = 2.56 \text{ hours}
\]

Consulting the classification chart we arrive to the conclusion that the group is 2 m (M5).
GH is present in more than 60 different countries, through its local representatives and dealers.

With a staff of over 300 in Spain and 600 worldwide, GH has a weekly production capacity of:

- 50 standard cranes
- 1 special crane
- 40 hoists/kits
- 2 industrial gantries
- 0.5 straddle carriers/travellifts

GH develops both standard and tailored products.