

■ **GH** ■  
Cranes & Components

WASTE TREATMENT **CRANES (WTC)**  
垃圾吊

# LIFTING YOUR WORLD

## 提升你的世界

# GH

Cranes & Components



Certificate No. E199326



DESIGNED, ENGINEERED  
& 100% KIT  
MADE IN EUROPE

MORE THAN 40 FULLY DESIGNED INSTALLATIONS  
安全  
可靠  
高效流程  
领先技术  
最高质量标准  
全球40多个全揽设计的样板工程

HIGHEST QUALITY STANDARDS  
VANGUARD TECHNOLOGY  
PROCESS EFFICIENCY  
RELIABILITY  
SAFETY

Cranes & Components



## GH GROUP GH集团

GH is one of the global leaders in the lifting industry, who has been always driven by the following belief: "science and technology should serve to enhance the civilization of the mankind", sparing no efforts to promote mature technology in each lifting industry, which has been widely recognized and supported. Over the course of more than half a century of development, GH has been a reference in lifting business, step by step, reinventing the business, each time more powerfully. In many industries, GH is recognized as the world's leading supplier for the lifting equipment, spare parts and services. GH是全球起重行业的主要制造商之一，我们一贯坚持“科技应该为提升人类文明服务”的信念，并始终不遗余力地推动将每一项成熟科技应用于起重行业，并得到了广泛的认可和支持；在长达半个多世纪的发展历程中，GH一步一个脚印，引领这个古老的行业一次次焕发出青春和活力；在诸多行业被公认为起重设备和备件及服务的全球顶尖供应商。

GH is a family owned company with deep roots on its business basics: safety, efficiency, robustness and environmental protection, designing user-friendly low-in-maintenance products, persevering on integrating all these elements into every single aspect of GH products' development and manufacturing.

GH是一家家族企业，深谙起重设备必备要素：安全、效率、耐用、环保、用户友好、维护率低，并持之以恒把这些要素的考虑融入进公司从产品研发到设计制造的每一个细节。

Focused on continuous R&D and innovation, GH MISSION is to PROMOTE our CUSTOMERS' EFFICIENCY & PROFITABILITY by offering suitable SOLUTIONS TO THEIR NEEDS, minimizing our clients' operating costs and easing adverse environmental impact involved in the industrial production.

通过持续不断的研发和革新，GH致力于向各行业用户提供最适合其业务需求的产品和服务，在极力提高用户的商业效率和盈利能力的同时，降低用户的长期运营成本，减少工业生产对环境带来的负面影响。

GH choice is to design completely its products in house and promote commercial components to maximize parts' interchange ability, and doing so mitigate end users risks. Behind this it is a clear belief: GH proposal is to provide high quality and high value added service to enhance users' experience offering the lowest risks and best performance in the market.

GH主要使用自主开发设计的零部件，同时也采用商业部件最大程度提高部件互换性以降低用户顾虑和不可控风险。因为我们深信：GH的报价方案旨在提供高质量和高附加值的产品和服务，最大程度降低风险，优化性能，以提高用户体验。

## EXPERIENCE

### 丰富经验

GH meets the demands of our customers' plants with a skilled team in order to deliver GH global project experience that will fit the needs and requirement of Waste Treatment Plants of any throughput and size.

为了满足客户的在废物处理生产线中各种生产量的需求，GH为您带来全球优秀的工程经验以及专业的团队。

## INTEGRAL SOLUTIONS

### 全方位解决方案

From design stage we offer tailor made solutions to our customers being able to supply all the cranes involved in the typical installations of the sector. The solutions are integral according to the complete process needs demanded by our clients.

从设计阶段起，我们就为客户提供量身定制的方案。我们可提供各行业典型工程中所需要的各类起重机，根据客户提供的完整流程需求，提供全方位解决方案



## PROCESS EFFICIENCY

### 高效流程

Cranes are key in plants nowadays to ensure an efficient handling and optimized output process, where strict compliance with environment rules are a must. GH Cranes product and service ensures an optimal process from the arrival of the material, to the handling and its separation. GH provides tailor made solutions specially designed to meet our customers' processes and needs to enlarge the cranes long span with GH complete turnkey solutions.

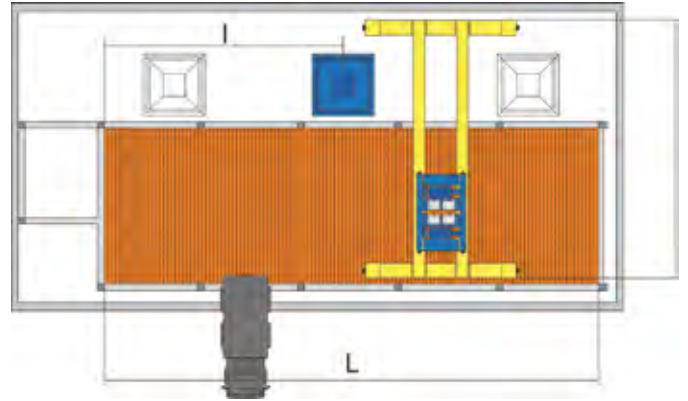
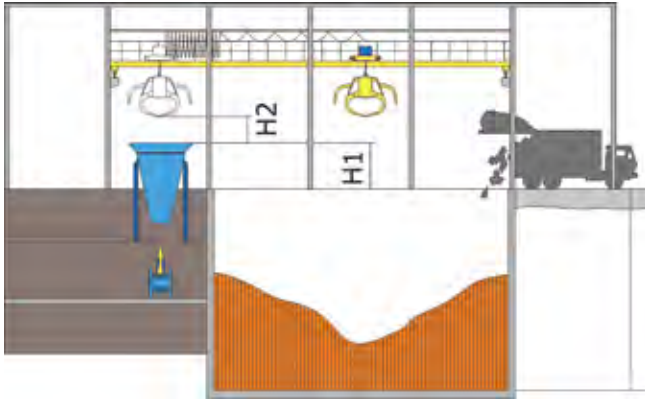
现如今，在生产线上，起重机是保证有效工作和优化工作流程的关键，必须严格的按照具体的环境特点来设计制造。由于每个部分都能使用最优质的材料，GH的起重机产品及服务保证了这个优化流程的实现。GH为客户特别量身订做的方案，更加符合客户的使用要求，GH的整体解决方案也更加能增加产品的使用寿命。

# WASTE HANDLING CRANES

## 垃圾吊

Vanguard Technology  
前沿技术

### WORKING CYCLE 工作周期

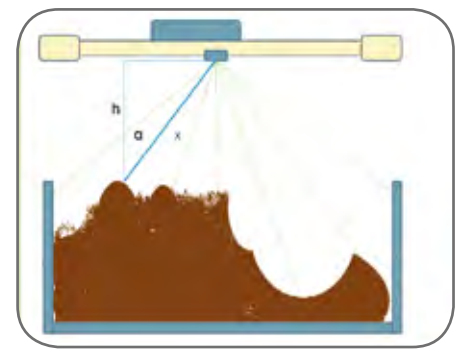
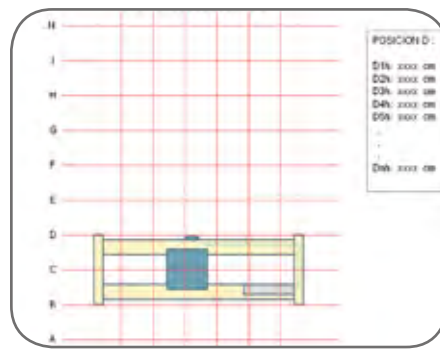
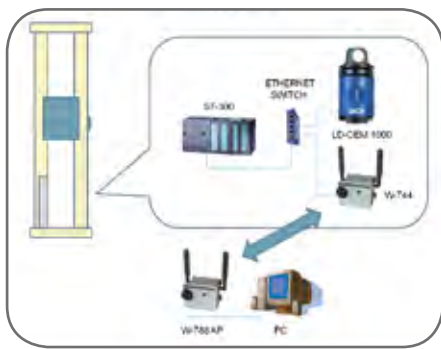


Representative drawing 示意图

#### IMPORTANT INFORMATION TO BE DEFINED/ 重要信息

- ✓ Orange peel grab resting area 桔瓣抓斗停靠区域
- ✓ EOT crane parking area 垃圾吊停靠区域
- ✓ Available length to roll up the rope-holder carriages 扁电缆小车极限停靠区长度
- ✓ Crane maintenance access location 垃圾吊维保区

### AUTOMATIC CRANES EXPERTISE 起重机自动化专家



Each time that the waste handling crane cover predefined positions, either forward and backwards, it carries out a scanning and refresh heights data on each position. 垃圾吊每次经过预设位置时，无论是向前还是向后，扫描装置启动，并更新每个位置的高度数据。

PLC compares the data obtained and record the shortest height registered (h).

PLC将获取的数据与历史记录的最小高度作比较。

Knowing that each data/position is assigned to specific long travel and cross travel coordinates, the coordinates for the automatism are obtained (x, y, h).

每个获取的数据/位置与小车运行和小车运行坐标轴相匹配，由此可获得自动化运行的坐标轴 (x,y,h)。

# GH

## YOUR PARTNER

GH is aware of the importance role of the cranes, that is, they must be operational when needed. Layout of handling areas, back-up cranes and complete working cycle are key elements taken into account by our sales team and expert engineers. GH offer includes automated cranes equipped with latest technology to maximize the return on investment of our customers.

GH十分理解客户对起重机的要求。起重机最重要的方面就是要能够根据具体的使用需求，实现相应的功能。操作区域的布局，备用起重机的安置，整体工作周期的设计，都是我们的销售团队和工程团队面对客户需求时考虑的关键因素。GH可提供全自动垃圾吊，配备最先进的技术，以最大程度提高客户投资回报。

# WASTE TREATMENT CRANES (WTC) 垃圾吊

### BOILER AND TURBINE MAINTENANCE CRANES 锅炉和涡轮机维护起重机

Manual cranes.  
Lifting tool not needed.  
Standard hoist up to M5 duty mounted.  
Up to 50t capacity including (optionally) aux hoists.

手动起重机  
无需吊具  
标准葫芦，工作级别至M5  
起重量至50吨，可选配副葫芦



### MAINTENANCE HOIST 维保葫芦

Up to 3-5t capacity  
M4 duty needed  
Used to ease the maintenance of the main waste handling crane.

起重量至3-5吨  
便于对垃圾吊进行维护  
工作级别M4



### WASTE HANDLING CRANES 垃圾吊

Process crane ensuring the needed tons/year to be treated (cycle).  
Semiautomatic or automatic cranes.  
Solution by open winch in M7-M8 duty strongly recommended.  
Crane redundancy recommended in case of failure.

特种起重机，确保年处理吨数（周期）  
半自动或全自动运行  
推荐使用工作级别M7-M8的开放式葫芦  
推荐安装备用起重机，以备不时之需



### SLAG CRANE 焚灰处理起重机

Manual crane  
Clamshell grab as most convenient lifting tool  
Standard hoist up to M6 mounted

手动起重机  
蚌式抓斗，使用便捷  
标准葫芦，工作级别至M6



## TYPICAL INSTALLATIONS 典型工程

### WASTE TO ENERGY (WTE) PLANTS 垃圾能源厂房

Waste handling cranes  
Stag(lash) handling cranes  
Maintenance crane for Boiler area  
Service hoists  
垃圾吊  
焚灰处理起重机  
焚烧炉区维护用起重机  
维修用葫芦

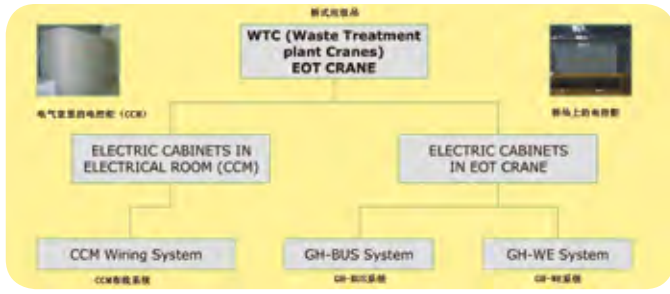
### BIOMASS PLANTS 生物能源厂房

Biomass handling cranes  
Maintenance crane for Boiler area  
Service hoists  
生物质处理起重机  
焚烧炉区维护用起重机  
维修用葫芦

### COMPOST PLANTS 堆肥处理厂房

Waste handling cranes  
Service hoists  
垃圾吊  
维修用葫芦

## DIFFERENT TYPES OF ELECTRIC INSTALLATIONS 电气布置形式



## 2 DIFFERENT CONFIGURATIONS 2种抓斗配置

### ELECTRO HYDRAULICALLY DRIVEN CRANES

#### 电液驱动的起重机

The orange peel grab or the grab are driven by an electro - hydraulic unit, consisting on an electric motor, a pump and hydraulic valves, which supply oil under pressure through duly protected hoses, to the cylinders operating the teeth or shells. All this units are integrated on the orange peel grab or grab body.

桔色抓斗是由一个液压装置驱动的，该装置是由一个电动马达，一个泵，以及一系列通过适当保护软管给气缸提供油压用于操控抓斗的液压阀组成

The orange peel grab or grab's electric supply is carried out through a spring reel or motorized cable reel, depending on the lifting/lowering travel and speeds.

桔色抓斗的电源供给是通过一个弹簧卷或者电动电缆盘实现的，其选择是根据起升或下降的行程距离和速度决定的

Nowadays, most of the waste treatment plant cranes (WTC) are equipped with this type of grabs. 现今，大多数的垃圾吊（WTC）都采用此类型的抓斗

### ELECTROHYDRAULIC DRIVE MAIN CHARACTERISTICS

#### 液压抓斗特性

- Higher control of the working process.更好地控制工作流程
- Lighter crab and thus lighter crane for the same capacity. 抓斗重量更轻，因此相同起重量的行车重量也更轻
- Simpler electric control gear, and consequently cheaper.电气控制机构更简单，成本降低
- Better side approaches.侧边距离浪费少，利用率高
- Better filling rate, due to a better nailing into the waste mass. 更好的填充率，可以更好的挖掘废弃物
- Shorter orange peel grab's replacement times. 减少了更换抓斗的次数
- Shorter height needed for grab installation.抓斗安装所需高度小

### MECHANICALLY DRIVEN CRANES

#### 机械驱动垃圾吊

The mechanically driven orange peel grabs and grabs are generally provided with four-ropes. They are based on two closing ropes and two suspension ropes.机械方式驱动的桔瓣多爪抓斗或两瓣蚌式抓斗一般通过4根吊绳控制，两根用于闭合，两根控制保持张开。



This is why it is necessary to have a special lifting system available with two drums. Both drums must make movements, completely determined by a differential combiner, sometimes in the same direction and sometimes in the opposite direction.因此需要配套特殊起升系统，含两个卷筒。这两个卷筒都需动作，并完全由差分组合器控制，是否同向运行或反向运行。

### MECHANICAL DRIVE MAIN CHARACTERISTICS

#### 机械驱动主要参数

- As a general rule, higher opening and closing speed.总体来说，抓斗打开和闭合速度快
- Less maintenance of the proper orange peel grab or grab.如桔瓣抓斗或蚌式抓斗配置得当，维护率低
- Requires a frequent closing rope replacement in the hook block.需要经常更换吊钩组中的闭绳
- Since the orange peel grab works quite inclined over the irregular surface it can affect the rope systems.桔瓣抓斗需在垃圾池内物料不规则表面倾斜工作，这会会影响绳组系统。

GH has more than 40 waste treatment plants all over the world operating with its design and technology. 目前全球有40多个垃圾处理工厂配备了GH提供的设计和技术方案。

## WASTE HANDLING CRANES

### REFERENCES

#### 垃圾吊典型业绩



### TURKEY

#### 土耳其

##### ANDRITZ

Double girder WTC of 6.3  
For treatment of sludge  
Annual installation 120,000t  
6.3吨双梁垃圾吊  
用于污泥处理  
年处理量12万吨



### SPAIN

#### 西班牙

##### CEMENTOS ALFA

Double girder WTC of 5 Ton  
Annual installation 80,000 t  
5吨双梁垃圾吊  
年处理量8万吨



### PORTUGAL

#### 葡萄牙

##### METROCOMPOST

Double girder WTC of 6.3 Ton  
Annual installation 120,000 t  
6.3吨双梁垃圾吊  
年处理量12万吨

### SWEDEN

#### 瑞典

##### SVENSKA LIFT

Double girder WTC of 8 Ton  
For treatment of biomass  
Annual installation 120,000t  
8吨双梁垃圾吊  
用于生物质处理  
年处理量12万吨



### FRANCE

#### 法国

##### URBASER NANTES

Double girder WTC of 6.3 Ton  
Annual installation 100,000t  
6.3吨双梁垃圾吊  
年处理量10万吨



### CHINA

#### 中国

##### ZUNYI XINHUAN

遵义市欣环垃圾处理有限责任公司

Double girder WTC of 8 Ton  
Annual installation 140,000 t  
8吨双梁垃圾吊  
年处理量14万吨



“ We bought the GH WTC in 2003 through a company in Madrid. During the 11 years of its operation, it shows high reliability, the quality is very good in all aspects. Maintenance is rarely required, therefore the maintenance cost is really low. 我们于2003年通过马德里的一家公司购买了GH的垃圾吊。在其11年的使用中，运行稳定可靠，各方面质量都不错。维修少，维修成本低。”

Comments from the plant responsible of Zunyi Xinhuan.  
遵义欣环公司工厂负责人语



## INTERNATIONAL REFERENCES LOCATION

全球业绩分布



### RELIABILITY

可靠

GH cranes are known due to their durability and reliability, which are important in any industry given but even more important when dealing with process cranes as "waste handling cranes". The whole process depends on those cranes and only best performance can be accepted. GH 起重机以耐用可靠著称，对于任何一个行业应用来讲，这点都是非常重要的，尤其是对于垃圾吊这类特种起重机。整个垃圾处理流程的效率很大程度上取决于这几台起重机，因此它们一定要有最佳的运行表现。

### SERVICE

售后服务

Service and maintenance plays a key role in our GH product strategy. The Crane should be inspected and maintained before any problem appears in order to avoid stops, and reduce the impact of the operating costs on our customers' profits. GH Cranes uses the best design, delivering a higher quality product with even higher requirement than most of the competitors to ensure additional features, reduce the maintenance cost and extend the working life of the investment. 起重机的售后服务和维护保养一直是GH产品战略的重要组成部分。起重机应进行定期的检查和保养，以避免不必要的停机，由此减少客户运营成本。GH 起重机设计合理、质量可靠、性价比高、维护成本低、使用寿命长。

### SAFETY

安全

We are not just concerned about the safety of the lifting equipment and the load handled, we are committed to improve the safety performance of the entire production system. 我们不仅仅关注起重设备及吊运载荷的安全，更致力于提升用户整个生产系统的安全性能。

## SPAIN





■ **GH** ■  
Cranes & Components

GH (SHANGHAI) LIFTING EQUIPMENT CO.,LTD.  
No.1438 North Shaanxi Road - Room1416  
Putuo District · Shanghai 200060  
Tel.: +86-21-6299 7681  
Fax: +86-21-6299 2576

岂葛居（上海）起重设备贸易有限公司  
上海市普陀区陕西北路1438号  
财富时代大厦1416 · 200060  
电话：+86-21-6299 7681  
传真：+86-21-6299 2576

ghsa@ghsa.com.cn  
[www.ghsa.com](http://www.ghsa.com)