

# MASTER 万事达

Specialized In Logistics Equipment

£ million

Income  
PBT  
BGI/BlackRock deal costs

CAGR (04 – 08)  
Revenue 20%  
PBT 15%

H1 09 v H1 08  
Revenue (2%  
PBT 4%

Projected sales products in 2013

Share of market activity

Changes in the activity of the active and passive market is uncertain. Established positive trends in various market segments.



堆垛机自动化存储系统  
STACKER CRANE STORAGE AUTOMATION SYSTEM

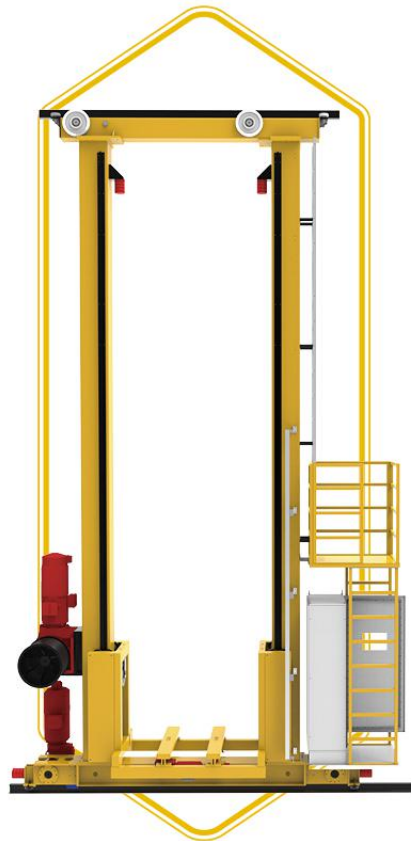
天津万事达物流装备有限公司  
Tianjin Master Logistics Equipment Co., Ltd.

# Stacker Crane Storage Automation System

## 堆垛机自动化存储系统



货架系统  
Racking System



自动巷道堆垛机  
Automatic laneway Stacker Crane



水平输送及接驳系统  
Horizontal Conveying  
and Feeder  
System



**WMS**  
库房管理系统



**WCS**  
设备控制系统

该系统是非密集自动化存储领域的主要应用形式。

系统由自动巷道堆垛机、货架系统、WMS 管理系统、WCS 控制系统、水平输送及接驳系统组成。相较于密集存储系统，该系统可以实现对任一托盘位的管理，适合于 SKU 数量较多，对回库及分拣有要求的存储模式。

根据项目的要求，可以进行单进深的设计，也可以进行双进深的设计，以弥补存储密度的不足。

根据出入库效率的不同可以进行环形轨道的设计，以减少堆垛机的数量，降低造价。

The system is the main application form in the field of non-dense automated storage.

The system is composed of an automatic laneway Stacker Crane, racking system, WMS management system, WCS control system, horizontal conveying and feeder system. Compared with the dense storage system, this system can realize the management of any pallet position, and is suitable for the storage mode with a large number of SKUs and requirements for return and sorting.

According to the requirements of the project, it can be designed to be single-depth or double-depth, so as to make up for the lack of storage density.

Based on different inbound and outbound efficiency, the design of the circular railway can be adopted to reduce the number of stackers and reduce the cost.

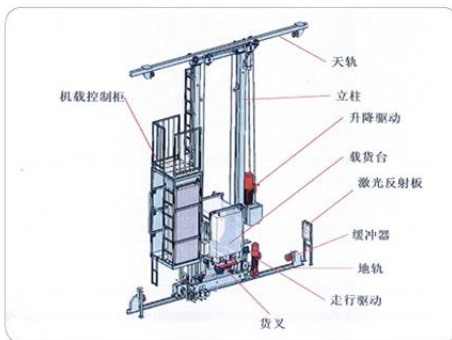
# Stacker

## 堆垛机

### 堆垛机设备由水平驱动装置，垂直提升装置，及伸缩货叉组成

堆垛机主体采用双立柱式稳定强化结构设计，水平驱动采用德国德玛格行走装置，提升采用卷扬机提升设计，货叉选用欧洲进口品牌，SEW 电机驱动，西门子控制总成，在水平及垂向上采用二维码精确定位控制。

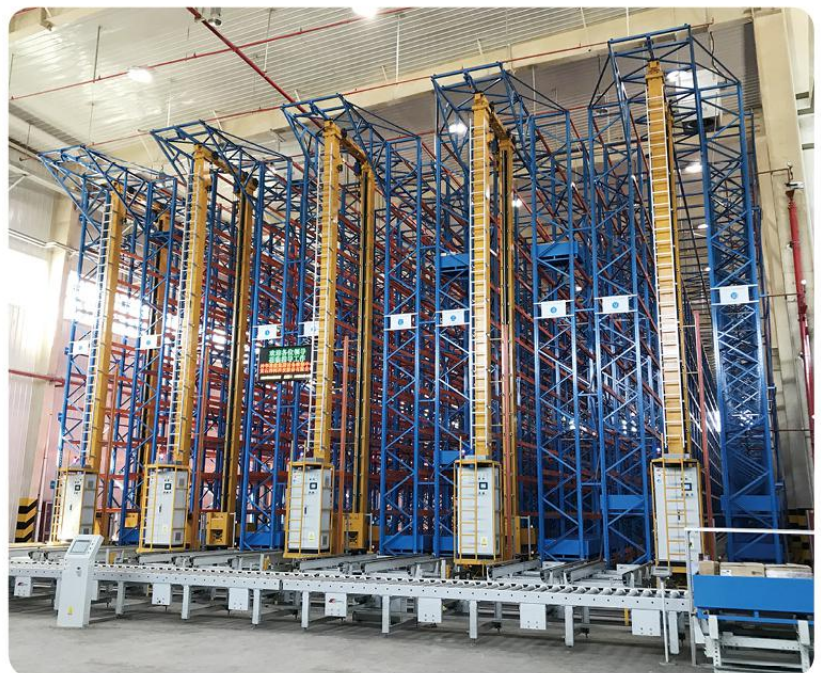
整机设计新颖，结构稳定，行驶速度快，加速度大，定位精度高，行驶噪音小的特点。经过特别处理的防低温设计使得本系统亦适用于冷库型存储项目。



### THE STACKER CRANE CONSISTS OF A HORIZONTAL DRIVE DEVICE, A VERTICAL LIFTING DEVICE, AND A RETRACTABLE FORK

The main body of the Stacker Crane adopts double-column stabilization strengthening structure; the horizontal drive device adopts German Demag running gear, and the lifting device adopts winch hoisting design. The retractable fork adopts European imported brand. Stacker adopts SEW motor for driving, Siemens control assembly, and QR code precise positioning control in both horizontal and vertical directions.

The whole machine is featured with novel design, stable structure, fast driving speed, high acceleration, high positioning accuracy and low driving noise. The specially designed low temperature-proof design makes the system be suitable for refrigeration storage projects.



# Stacker Parameter

## 堆垛机参数

序号 Number	名称 Name	参数 Parameter	
1	额定载荷 Rated load	1200KG	
2	水平行走 Horizontal running	定位精度 Positioning accuracy	$\leq \pm 5\text{mm}$
		水平运动速度 Speed of horizontal running	220m/min
		水平运动加速度 Horizontal running acceleration	$0.5\text{m/s}^2$
		升降方式 Lifting mode	钢丝绳牵引 Cable-driven
		定位 (Y 方向) 精确 Accurate positioning (Y direction)	$\leq \pm 3\text{mm}$
3	货台升降 Cargo platform lifting	垂直运动速度 Vertical running speed	60m/min
		垂直运动加速度 Vertical running acceleration	$0.5\text{m/s}^2$
		定位 (Z 方向) 精确 Accurate positioning (Z direction)	$\leq \pm 3\text{mm}$
	伸缩货叉 Retractable fork	空载伸叉速度 No-load fork extension speed	60m/min
		重载伸叉速度 Heavy-load fork extension speed	30m/min
		操作方式 Operation method	手动、本机自动、联机自动 Manual, local auto, online auto
5	通讯方式 Communication mode	红外光通讯 Infrared communication	
6	各电机驱动方式 Motor driving mode	变频调速 Frequency contro	
7	供电方式 Power supply mode	4P 安全滑触线 4P safe electrical sliding contact line	
8	供电电源 Power supply	AC 380V 50Hz	



# Horizontal Conveying System

## 水平输送系统



该系统主要由链式输送线、滚筒输送线、顶升移栽机组成。

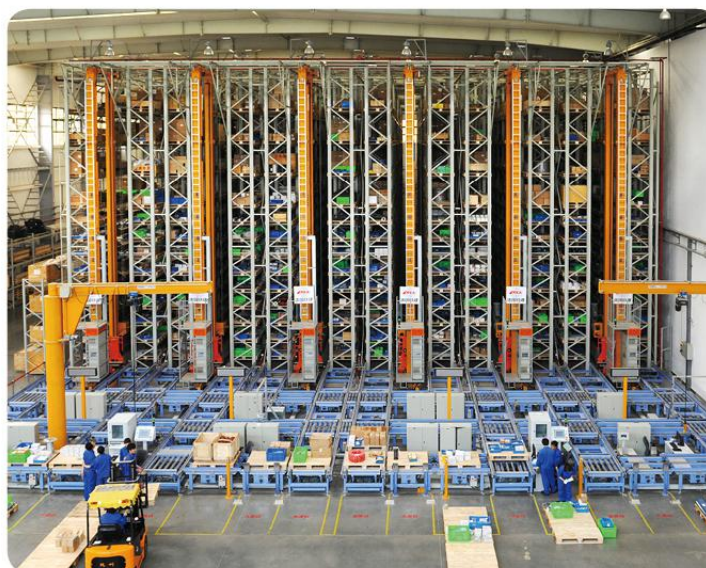
其功能是：根据控制系统的指令驱动输送线上的电机正转、反转、顶升和直角转向，用于托盘类货物的水平输送以及与其它设备的货物交接。

具有结构简单，可靠性高，使用维护方便等特点。

The system is mainly composed of chain conveying line, roller conveying line and jacking load transfer machine. Its function is to drive the motors on the conveying line to complete forward, reverse, jacking or right-angle steering actions according to the commands from the control system. It is used for the horizontal conveying of pallet goods and the delivery of goods with other equipment.

It has the characteristics of simple structure, high reliability, convenient use and maintenance, etc.

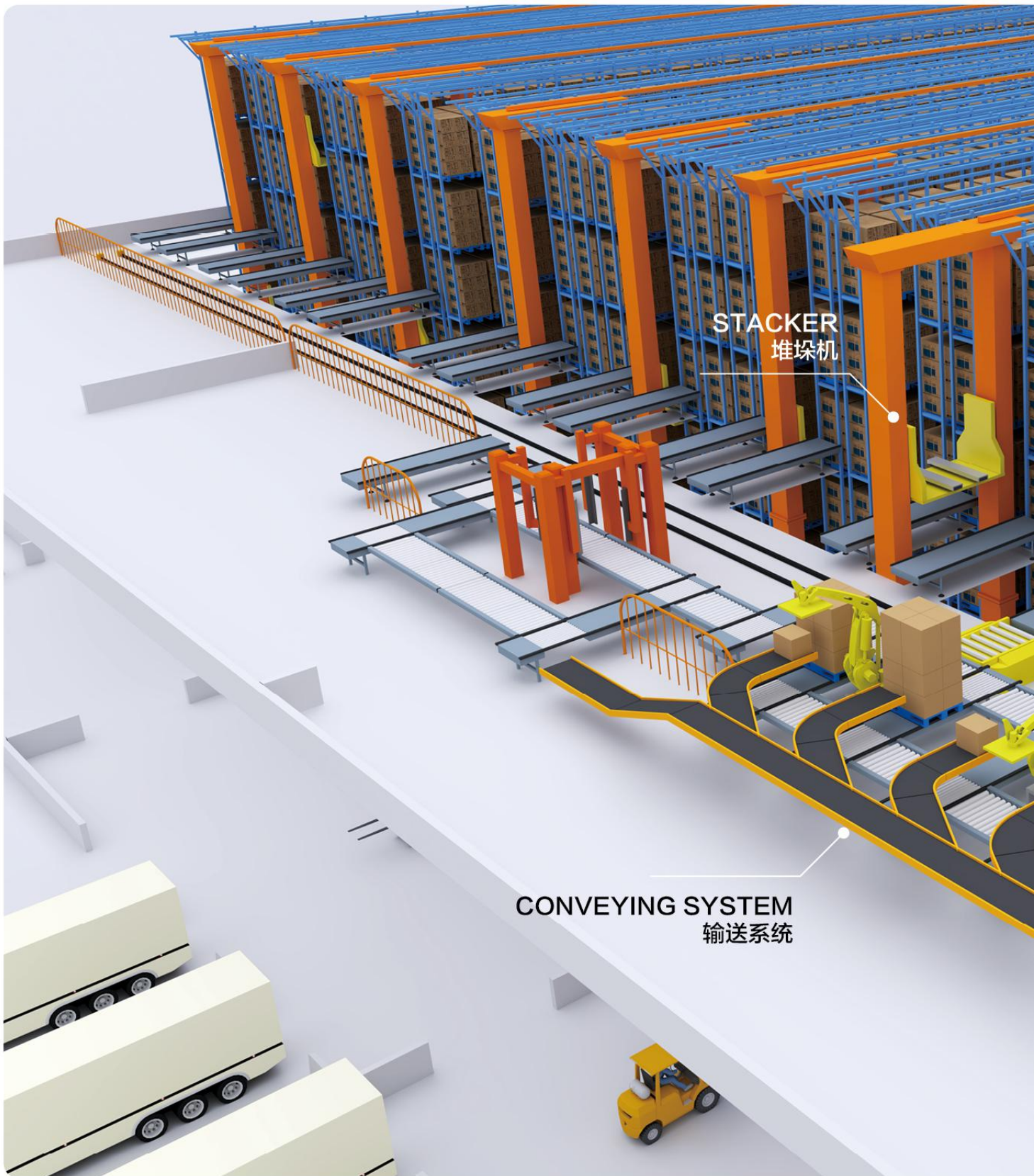
序号 Number	名称 Name	参数 Parameter
1	额定载荷 Rated load	1200 KG
2	输送速度 Conveying speed	16m/min 符合设计和环境噪声控制标准要求 16m / min, meeting design and environmental noise control standards
3	机架材质 Frame structure material	碳钢 Carbon steel
4	电机品牌 Motor brand	西门子或同等品牌 Siemens or equivalent brands
5	供电功率 Power supply	0.75 kw
6	设备涂装 Equipment painting	环氧树脂粉末静电喷涂，推荐灰色，厚度 60 ~ 80 μm Epoxy resin powder electrostatic spraying, gray recommended, thickness 60 ~ 80 μm
7	控制方式 Control mode	手动、单机自动及联机自动控制方式 Manual, stand-alone automatic and online automatic control methods



# Stacker Crane Storage Automation Sys

堆垛机自动化存储系统鸟瞰图

Tianjin Master Logistics Equipment Co., Ltd.



STACKER  
堆垛机

CONVEYING SYSTEM  
输送系统

# System Aerial View



RACKING SYSTEM  
货架系统



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Specialized In Logistics Equipment

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