MODERN

MATERIALS HANDLING SOLUTIONS

智能物流解决方案

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NOVA

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六维物流

COMPANY INTRODUCTION

公司简介及能力

六维公司成立于1997年，是国内规模较大的智能物流装备系统和自动化立体仓库系统集成制造企业，经营范围覆盖规划、设计、制造、安装、调试、维保及咨询服务，产品畅销海内外。

公司拥有南京、苏州两大物流装备加工基地，南京总部下辖江苏省企业研究生工作站、南京市级工程技术研发中心、试验基地、营销中心、制造工厂及安装维保公司。公司营销网络分布海内外，可为客户提供快捷的服务。

NOVA was established in 1997, one of the largest integration enterprise for smart logistics system and automated warehouse system in domestic market.

Business scope covers planning, designing, manufacture, installation, maintenance and consulting services, that makes the products popular at home and abroad.

NOVA has two logistics equipment processing base in Nanjing and Suzhou. Nanjing headquarter is under the jurisdiction of Jiangsu Province Enterprise Postgraduates Service Station; Nanjing Municipal Engineering and Technology Research and Development Center; test base; marketing center, manufacturing plants; installation & maintenance company. With a mature marketing network distribution at home and abroad, NOVA can provide customers with swift service.



COMPANY INTRODUCTION
公司简介及能力

公司秉承传统，放眼世界，积极吸收国外先进的规划理念、制造技术和工艺，结合国内实际情况，创造出具有自身特色的核心技术。公司已获得七十多项国家专利和多项自动化物流系统计算机管理软件（WMS）著作权。

公司严格按照ISO9001质理管理体系、ISO14001环境管理体系、ISO10012测量管理体系运行，始终坚持"规划时空、超越期望、精心制造、表里如一"的质量方针，以质量和服务来打造品牌。

公司自成立以来，已承接了各行各业数百个智能物流系统和自动化立体仓库工程，典型客户如大连爱丽思欧亚玛、百灵制药、济川医药、中车集团、中石油、中石化、上汽、一汽、许继电气、平高电气、玖龙纸业、中国印钞、天津地铁、西安地铁、朔黄铁路、南京军区某部队等，涵盖了常温、低温和防爆系统类型，深得广大客户的好评。公司多次得到政府表彰，获得了高新技术企业、江苏省名牌产品和著名商标、江苏省AA级质量信用企业、南京市名牌产品和南京市科技100强企业等荣誉，是全国物流仓储设备标准化技术委员会（TC499）秘书处成员之一，担负了多项国家和行业物流标准的制定工作。

Based on the tradition and the whole world in view, NOVA actively absorbs the advanced foreign planning concepts, manufacturing technology and process, combining with the actual situation at home, to create a core technology with its own characteristics. NOVA has already received more than 70 national patents and the automated logistics system computer management software (WMS) copyright.

NOVA strictly follows the ISO9001 quality management system, ISO14001 environmental management system and ISO10012 measurement management system, always adhering to the quality policy of " Planning Time and Space; Exceeding Expectation; Manufacturing Intensively; Conformity of Profession and Conduct ", which is in order to brand NOVA with quality and service.

Since the establishment of the company, NOVA has undertaken hundreds of smart logistics systems and automated warehouse projects for various industries, with typical projects such as IRIS CHINA, BAILIN Pharmaceuticals, JUMPCAN, CRRC, CNPC, CHINA SINOPEC, SAICMOTOR ,FAW, STATE GRID, PINGAO Electric, Nine Dragons Paper, China Banknote Printing and Minting Corporation (CBPM), Tianjin Subway, XI'AN Subway, Shuohuang Railway, certain unit of Nanjing Military Region, etc.

It covers system types for the ordinary temperature, low temperature and explosion-proof, achieving a favorable reception from the majority of customers. NOVA also wins the government recognition repeatedly, getting the honor of high-tech enterprise, Jiangsu Province famous brand and well-known trademark, Jiangsu Province AA grade quality credit enterprise, Nanjing famousbrand and Nanjing Top 100 Science and Technology Enterprise.

As the one of the members of the national logistics warehousing equipment standardization technology Committee (TC499), NOVA undertakes the formulating development work for a number of national and industry logistics standards.







高速专用轧机生产线
Highly Efficient Rolling Mills





全自动喷塑生产线
Automatic Painting System





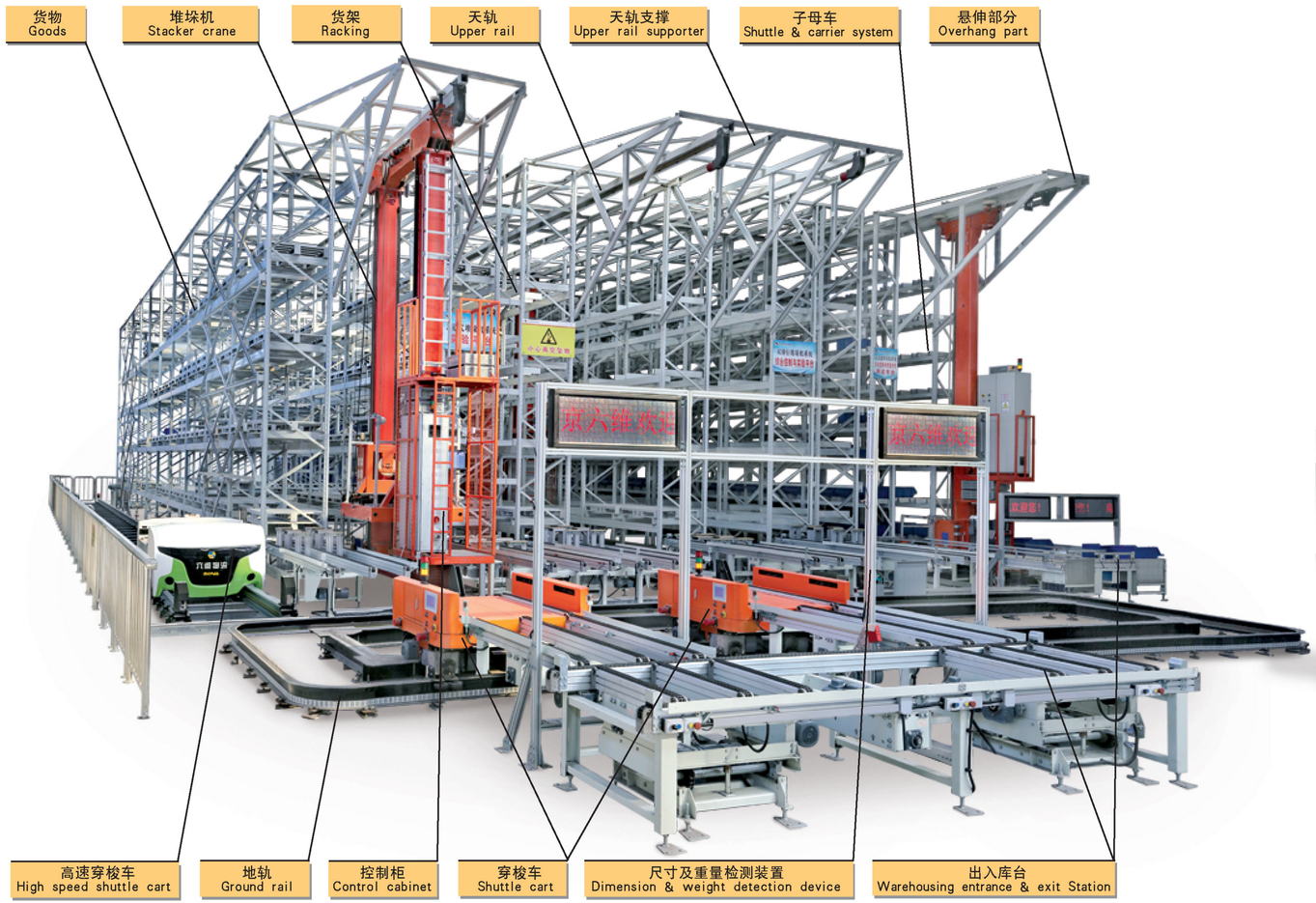
堆垛机加工车间
Stacker Crane Manufacturing Workshop



机器人自动焊接生产线
Robot Welding Lines

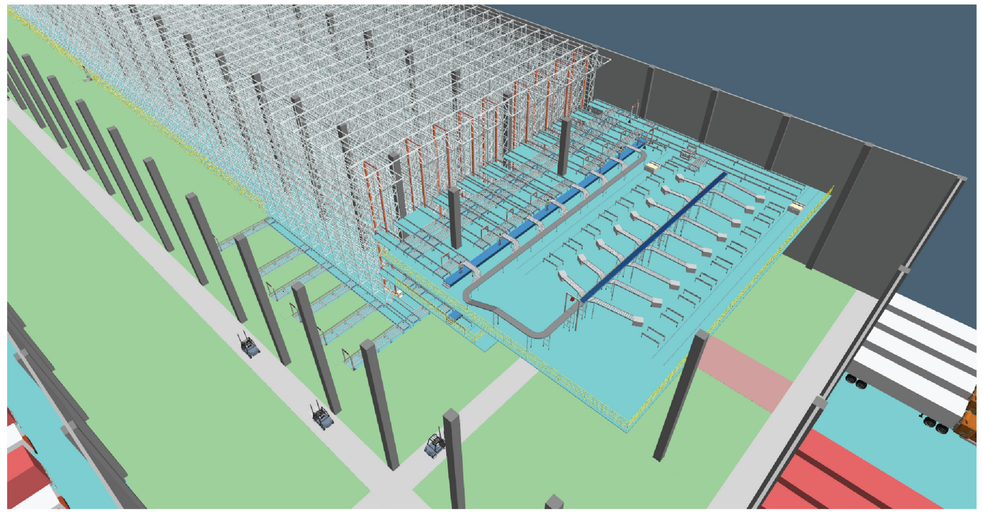
GENERAL PLANNING AND DESIGNING OF LOGISTIC SYSTEM

物流系统总体规划与设计





电柜控制系统
Electric control system



1、总体规划：可根据每位客户的具体情况量体裁衣，提供最合适的优化方案和动画模拟。
2、方案设计：根据总体规划进行细化设计和配置选型。
3、设备制造：根据设备选型、设计图纸进行采购制造。
4、安装调试：根据方案总图进行组装、安装与调试。
5、售后服务：全天候24小时快速响应，专业的维保工程师进行全面的技术支持、服务和远程维修。

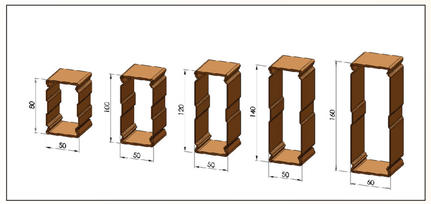
1、General planning: Customized as per requirements from different customers, to provide them with optimized layout planning.
2、Designing: Refine on the general planning and properly configured.
3、Manufacturing: Purchase and produce according to configured mode and designing drawings.
4、Installation and debugging: Assemble, install and debug according to general layout design.
5、After sales service: Overall technical support, service & remote maintenance by professional engineer round-the-clock.

RACKING SYSTEM
货架系统

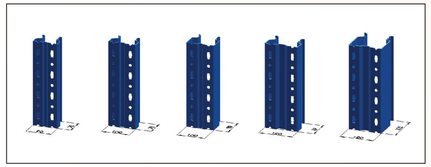
货架系统：自动化立体仓库货架系统通常分横梁式（又称托盘式）和牛腿式两种，构件表面自动静电喷塑处理，现场组装安装。
Racking system used for AS/RS usually consists of pallet racking and cantilever racking, treated with powder coated, dismantled structure.

货架系统特点：
1、优化型截面设计，高品质钢材
2、立柱层高75毫米可调，安全销锁定
3、高强度螺栓联接，牢固可靠
4、结构优异，强度高，稳定性好
5、环氧树脂静电喷涂，漂亮美观

Advantages of Racking System:
1、Optimized sectional design, quality steel used.
2、Pitch is adjustable by 75mm for uprights, and beams are tightly locked by safety pins.
3、Strengthened by quality bolt & nut, safe and reliable.
4、Perfect structure, high intensity, good stability.
5、Good looking with epoxy powder coated surface.



常用横梁规格系列(Standard spec of beams)



常用立柱规格系列(Standard spec of uprights)



石油化工行业案例
Petroleum Chemical Industry case

STACKER SYSTEM
堆垛机系统

运行控制方式：计算机监控系统和PLC检测系统实现全自动控制运行。
操作模式：联机自动模式、单机自动模式、半自动模式、手动模式、维修模式
自动寻址方式：激光测距寻址，旋转编码器寻址，条码认证
通讯方式：红外光通讯、无线通讯

Operation control mode: Computer monitoring & controlling system and PLC detecting system to get automatic control system achieved.
Operator Schema: Online automatic mode, single-computer automatic mode, semi-automatic mode, manual mode, maintenance mode.
Automatic addressing modes: Laser-measuring addressing, rolling addressing, barcode addressing
Communication modes: infrared communication, wireless communication

堆垛机结构特点：

1、单柱或双立柱结构，稳定、可靠
2、关键电气元件均采用进口产品，安全性高
3、矢量变频驱动和编码器位置控制，采用快速平滑的运动曲线控制
4、采用机械和电气双重保险装置，保证安全
5、信息传递全程跟踪技术
6、触摸屏界面，操作简单方便
7、实现手动、半自动、自动和联动自动控制
8、与各种物流设备组合，形成完整的物流系统

Advantage Of Stacker Crane:

1、Single or double-Mast structure makes operation stable and reliable.
2、Key electrical components adopted are imported.
3、Vector frequency conversion driver & encoder position controlling.
4、To guarantee safety in operation Mechanically and Electrically to prevent any damages/accidents.
5、Real-time information tracing of each pallet
6、Touch screen makes operation convenient.
7、Manual, semi-automatic, automatic and linkage automatic control.
8、Assembled with other logistics equipments to build a complete logistics system.



MAST STRUCTURE OF STACKER CRANE
堆垛机立柱结构

根据不同的使用要求，堆垛机立柱结构有单立柱、双立柱、多立柱等多种型号。
According to different requirements, the structure of stacker has single mast, double mast, multi-mast and other models.



单立柱堆垛机
Single Mast Stacker Crane

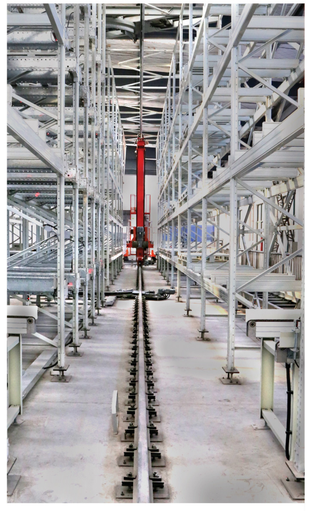


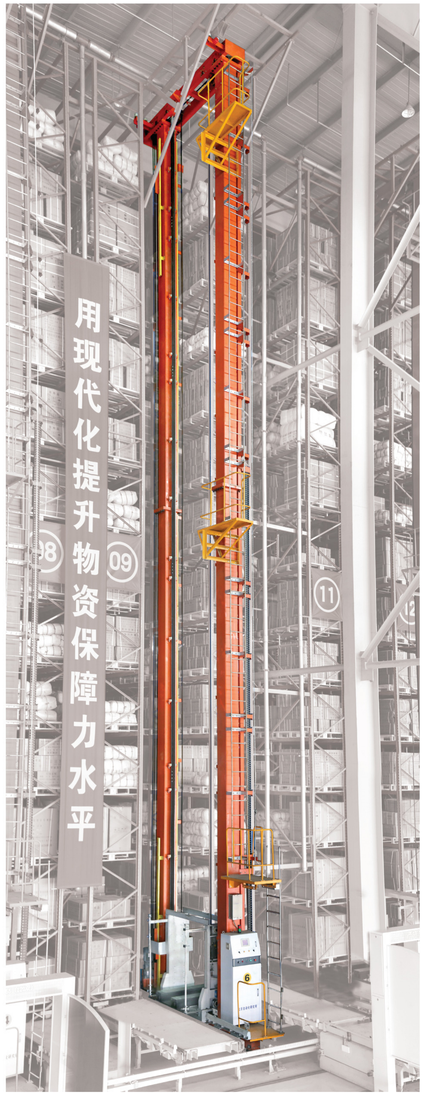
双立柱堆垛机
Double Mast Stacker Crane

CLASSIFICATION OF STACKER CRANE
堆垛机导向轨道结构系统

直线型(L系列)
L系列自动化仓库应用最为普遍，堆垛机采用直线导向，适用于出入库频率较高的存储行业。

Linear type (L series)
Linear Aisle Stacker cranes are most common used in AS/RS system, suitable for relatively high storing efficiency warehouse.





转弯型(C系列)
C系列自动仓库也较为常用，堆垛机采用U线导向，适用于出入库频率较低的存储行业。

Aisle changeable type (C series)
C series stacker cranes are common also which enable it to walk from one aisle to the other so fewer stacker cranes is required. It can be used for relatively low storing frequency warehouse.





L系列堆垛机规格参数表
Parameter Table of Linear Aisle Stacker Crane

型号 Model / 参数 Parameter	轻型 Light Duty				中型 Medium Duty				重型 Heavy Duty			
	LL-06	LL-12	LL-18	LL-22	LM-06	LM-12	LM-18	LM-22	LH-06	LH-12	LH-18	LH-22
货架最大高度(M) Max height of racking	6	12	18	22	6	12	18	22	6	12	18	22
单元承载(T) Loading capacity	0.5				1.5				3			
最大行走速度(m/min) Max moving speed	200	200	180	180	180	180	140	140	160	160	120	120
最快升降速度(m/min) Max lifting speed	30	30	40	60	20	25	30	40	20	25	30	40
最快叉取速度(m/min) Max loading speed	40				30				30			
行走方式 Moving method	直线往复 Lineal reciprocation											
单元装载尺寸(mm) Rack dimension	800-1500(W) × 800-1500(D) × 300-2000(H)											

C系列堆垛机规格参数表
Parameter Table of Aisle Changeable Stacker Crane

型号 Model / 参数 Parameter	轻型 Light Duty				中型 Medium Duty				重型 Heavy Duty			
	CL-06	CL-12	CL-18	CL-22	CM-06	CM-12	CM-18	CM-22	CH-06	CH-12	CH-18	CH-22
货架最大高度(M) Max height of racking	6	12	18	22	6	12	18	22	6	12	18	22
单元承载(T) Loading capacity	0.5				1.5				3			
最大行走速度(m/min) Max moving speed	160	160	120	120	160	120	120	120	120	120	100	100
最快升降速度(m/min) Max lifting speed	30	30	40	60	20	25	30	40	20	25	30	40
最快叉取速度(m/min) Max loading speed	40				30				30			
行走方式 Moving method	U线往复 Walk from one aisle to the other like word "U".											
单元装载尺寸(mm) Rack dimension	800-1500(W) × 800-1500(D) × 300-2000(H)											

LIFT SYSTEM
提升机系统

转轨车型(D系列)

D系列自动化仓库应用较少，堆垛机采用转轨车分配到指定巷道，适用于出入库频率低的存储行业。

Shuttle carrier type(D series)

Such stacker crane can be transferred from one aisle to another by carrier, used for relatively low storing frequency warehouse only.











D系列堆垛机规格参数表
Parameter Table of Shuttle Carrier Type Stacker Crane

型号 Model / 参数 Parameter	轻型 Light duty				中型 Medium duty				重型 Heavy duty			
	DL-06	DL-12	DL-18	DL-22	DM-06	DM-12	DM-18	DM-22	DH-06	DH-12	DH-18	DH-22
货架最大高度(M) Max height of racking	6	12	18	22	6	12	18	22	6	12	18	22
单元承载(T) Loading capacity	0.5				1				3			
最大行走速度(m/min) Max moving speed	120	120	100	80	120	120	100	80	120	120	100	80
最快升降速度(m/min) Max lifting speed	25	25	25	25	25	25	25	25	20	20	25	25
最快叉取速度(m/min) Max loading speed	40				30				30			
最大转轨速度(m/min) Max transferring speed	60											
行走方式 Moving method	转轨分配 Distribute by transferred rail											
单元装载尺寸(mm) Loading dimension	800-1500(W)×800-1500(D)×300-2000(H)											

提升机(E)选型表
Parameter Table of Lift

型号Model / 项目Item	EL-SL	EL-L	EM-M	EH-H
接驳方式 Connection modes	滚筒/链式/叉取 by roller conveyor/by Chain conveyor/by forklift			
单元载重(Kg) Loading capacity	<200	200-500	500-1500	1500-3000
升降速度(m/min) lifting speed	MAX.80	MAX.60	MAX.40	MAX.40
升降范围(mm) Lifting height	MAX.15	MAX.18	MAX.30	MAX.30
机架结构 Frame material	铝合金 aluminum	铝合金/钢 aluminum/ steel	钢 steel	钢 steel
升降传动方式 Lifting & Conveying modes	链式/卷筒 By chain or coiling block	链式/卷筒 By chain or coiling block	链式/卷筒/曳引 By chain or coiling block or traction	链式/卷筒/曳引 By chain or coiling block or traction
调速方式 Speed control	变频 Frequency conversion			
单元装载尺寸(Loading dimension)：800-1500(W)×800-1500(D)×300-2000(H)				

CONVEYOR SYSTEM
输送分拣系统

输送系统由各类输送机、顶升移栽机、提升机、各类穿梭车、检测门、计算机监控系统、自动控制系统组成。

商品或货物的到达、卸货、分类、存储，再到出货、分类、发出等作业，势必要通过不同复杂程度的输送分拣设备，以实现在最短的时间内将这些商品卸下并按商品品种、货主、储位或发送地点进行快速准确的分类，将这些商品运送到指定地点（如指定的货架、加工区域、出货站台等），同时，当供应商或货主通知物流中心按配送指示发货时，自动分拣系统须在最短的时间内从庞大的高层货架存储系统中准确找到要出库的商品所在位置，并按所需数量出库，并将从不同储位上取出的不同数量的商品按配送地点的不同运送到不同的理货区域或配送站台集中，以便转运或装车配送，充分实现快速输送分拣功能。

Conveying system is include by various of conveyor system , lifting & transferring device , lift, various shuttle, det cting door, computer monitoring system, automated control system.

The operation of commodity arrival, unloading, sorting, storage, shipment, classification, issuing, is bound to go through the transport sorting equipment in different levels of complexity to realized unloading and sorting according to the product type; owner; storage or sending location in the shortest possible time; also delivered to the designated positions (such as the designated shelves, processing areas, shipping platform, etc).

Meanwhile, when the supplier or owner notify the logistics center to make the shipment according to the distribution instructions, automated sorting system must accurately find out the location of the goods which need to be shipped from the giant high-level storage system in the shortest time and delivery as per required quantity.

It also picks different quantity of goods from different storage positions, delivering to different tally area or distribution platform based on different delivery locations; making an easy transportation or loading distribution; fully realizing a rapid delivery sorting function.

Conveying system is include by various of conveyor system,lifting & transferring device , lift,various shuttle,detecting door,computer monitoring system,automated control system.





输送分拣系统案例 Conveyor & sorting System Finished Case



滚筒输送机(R)选型表
Parameter Table of Roller Conveyor

型号Model / 项目Item	RL—SL	RL—L	RM—M	RH—H
滚筒直径(mm) Dia of roller	<50	60	76/89	>126
单元载重(Kg) Loading capacity	<200	200—500	500—1500	1500—3000
输送速度(m/min) Conveying speed	30	25	18	12
长度范围(m) Length	<15	<10	<6	<6
机架结构 Frame material	铝合金 Aluminum	铝合金/钢 Aluminum/steel	铝合金/钢 Aluminum/steel	钢 Steel
滚筒表面处理 Surface treatment of roller	镀锌/镀铬/包胶 Galvanization/chroming/Rubber coating	镀锌/镀铬 Galvanization/chroming	镀锌/镀铬 Galvanization/chroming	镀锌 Galvanization
调速方式 Speed control	变频 Frequency conversion			
单元装载尺寸(Loading dimension)：800—1500(W)×800—1500(D)×300—2000(H)				

升降/移载机(H)选型表
Parameter Table of Rising&Transferring Device

型号Model / 项目Item	HL—SL	HL—L	HM—M	HH—H
移载方式 Moving method	滚筒/链式			
单元载重(Kg) Loading capacity	<200	200—500	500—1500	1500—3000
升降速度(m/min) Lifting speed	8	6	5	3
升降范围(mm) Lifting height	0—150	0—150	0—200	0—250
机架结构 Frame material	铝合金 Aluminum	铝合金/钢 Aluminum/steel	钢 Steel	钢 Steel
升降方式 Lifting way	机械/气动 Machine/ pneumatic	机械/液压 Machine/ hydraumatic	机械/液压 Machine/ hydraumatic	机械/液压 Machine/ hydraumatic
调速方式 Speed control	变频 Frequency conversion			
单元装载尺寸(Loading dimension)：800—1500(W)×800—1500(D)×300—2000(H)				



链式输送机(C)选型表
Parameter Table of Chain Conveyor

型号Model / 项目Item	CL—SL	CL—L	CM—M	CH—H
链条型号 Model of Chain	08A	10A	10A—2	60A—2
单元载重(Kg) Loading capacity	<200	200—500	500—1500	1500—3000
输送速度(m/min) Conveying speed	30	25	18	12
长度范围(m) Length	<15	<10	<6	<6
机架结构 Frame material	铝合金 Aluminum	铝合金/钢 Aluminum/steel	铝合金/钢 Aluminum/steel	钢 Steel
链条材料 Material of chain	金属/非金属 Metal / Nonmetal	金属 Metal	金属 Metal	金属 Metal
调速方式 Speed control	变频 Frequency conversion			
单元装载尺寸(Loading dimension)：800—1500(W)×800—1500(D)× 300—2000(H)				

RELATIVE EQUIPMENT
周 边 设 备

形位及重量检测装置
(Dimension & weight detecting device)

由各类传感器装置的检测门及承重输送机在托盘通过时对其形位状态及重量进行检测，并将信息上传至系统数据库。

Detecting the dimension and weighting the pallet upon it pass the door and conveyor with various sensors, unloading the data to database.





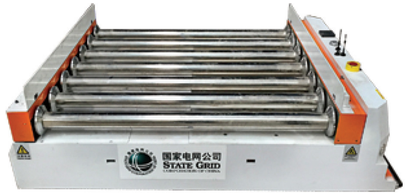
机器人拆码垛系统、搬运系统
(Palletizing & depalletizing robot system,handling system)

1).选配品牌：ABB、KUKA、FAUNC、YASKAWS、SIASUN等国内外知名品牌；
2).系统功能：托盘在线码垛、拆垛、货物在线搬运、移载；
3).极限负荷：300kg；最大工作区域：3326/3076/2826mm；
4).手爪型式：夹取式、吸取式；
5).系统兼容性：可与WMS、MES、AGV管理系统无缝对接。
6).系统特点： 配置灵活，兼容性好，操控精准，安全可靠，作业效率高，适合各种作业环境及对象。

1).Option brand: ABB, KUKA, FAUNC, YASKAWS, SIASUN, etc.
2).Function:palletizing and depalletizing on line, moving and transfering goods on line;
3).Max loading capacity:300kg;max wrist radii: 3326/3076/2826mm;
4).Gripper type:2-finger parallel gripper, Pneumatic, customizable;
5).System integration performance: seamless docking with WMS, MES, AGV management system;
6).Feature: Flexible configuration, good compatibility, accurate control, safe and reliable, high efficiency operation, suitable for a variety of operation environment and objects.



自导引小车(AGV)



型号Model / 项目Item	AGVQ-L05-40	AGVY-L05-40	AGVB-L05-40	AGVC-L05-15
移载方式 Moving method	潜伏拖拽 By Lurking	曳引拖拽 By Traction	背负输送 By Knapsack	叉取输送 By Forklift
单元载重Kg Loading capacity	0.5～4.0	0.5～4.0	0.5～4.0	0.5～1.5
移载速度m/min Moving speed			20	15
行走速度m/min Moving speed	20～40	20～30	30～60	30～50
供电方式 Power supply	锂或铅酸电池 Lithium or lead-acid cell			
动力配置Kw Motor(kw)	0.5～4.0	0.5～4.0	0.5～4.0/0.5～3.0	0.5～4.0/0.5～4.0
调速方式 Speed control	直流控制器 DC controller	直流控制器 DC controller	直流控制器 DC controller	直流控制器 DC controller
单元装载尺寸 loading dimension	800~1500(W) × 800~1500(D) × 300~2000(H)			
系统集成性能 Integrated performance	自带管理系统，可在WMS、WCS无缝对接 Seamless docking with WMS and WCS			

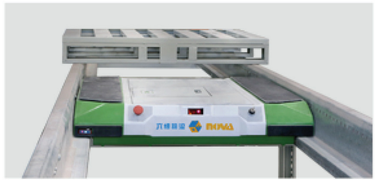
穿梭车(Shuttle)

四向穿梭车
(Four Entry Way Shuttle)



型号Model / 项目Item	HSC-L05	HSC-L10	HSC-L15	HSC-L20
移载方式 Moving method	顶升 Lifting	顶升 Lifting	顶升 Lifting	顶升 Lifting
单元载重Kg Loading way	500	1000	1500	2000
移载时间sec. Moving period	2	2	3	4
行走速度m/min Moving speed	60/40	60/35	50/25	50/20
供电方式 Power supply	锂电/混合 lithium/hybrid			
动力配置Kw Motor(Kw)	0.5/0.3	0.4/0.6	0.5/0.8	0.8/1.1
调速方式 Speed control	直流控制器 DC controller	直流控制器 DC controller	直流控制器 DC controller	直流控制器 DC controller
单元装载尺寸 Loading dimensions	800～1500(W) × 800～1500(D) × 300～2000(H)			
系统集成性能 integrated performance	可在WMS、MES及车辆调度系统下集成 Integrate able with WMS、WCS and Vehicle scheduling system			

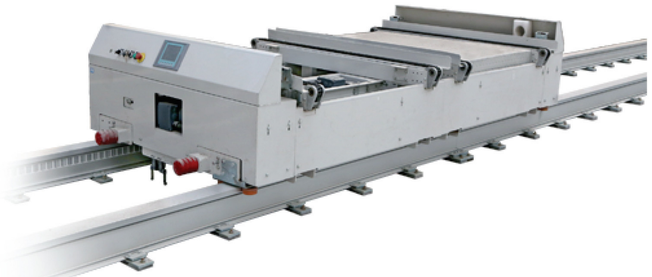
穿梭车(Shuttle)



货架穿梭子车
Racking Shuttle

型号Model / 项目Item	HZC—L05	HZC—L10	HZC—L15	HZC—L20
移载方式 Moving method	顶升 Lifting	顶升 Lifting	顶升 Lifting	顶升 Lifting
单元载重Kg Loading capacity	500	1000	1500	2000
移载时间sec. Transfer time(Sec)	2	2	3	4
行走速度m/min Moving speed	90/50	80/45	80/40	70/35
供电方式 Power supply	锂电/混合 lithium/Mix	锂电/混合 lithium/Mix	锂电/混合 lithium/Mix	锂电/混合 lithium/Mix
动力配置Kw Motor(kw)	0.3/0.5	0.4/0.6	0.5/0.8	0.8/1.1
调速方式 Speed control	直流控制器 DC controller	直流控制器 DC controller	直流控制器 DC controller	直流控制器 DC controller
单元装载尺寸 loading dimension	800~1500(W) × 800~1500(D) × 300~2000(H)			
系统集成性能 Integrated performance	可在WMS、WCS及车辆调度系统下集成 Integratable with WMS、WCS and vehicle dispatch system			





双工位直线导轨穿梭车
Double Location Linear RGV

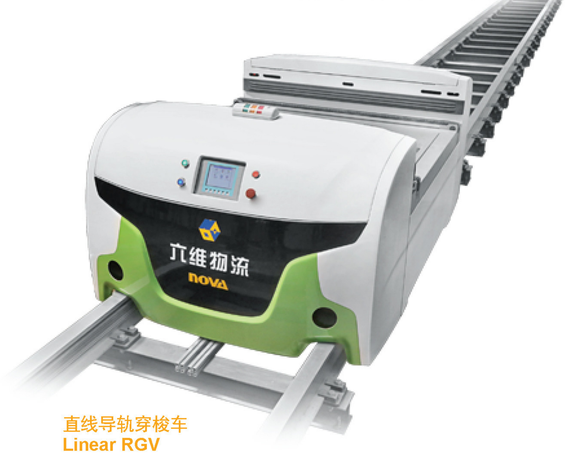
型号Model / 项目Item	ZCS—L05	ZCS—L10	ZCS—L15	ZCS—L20
移载方式 Moving method	链条/辊筒/货叉 By Chain/By Roller/By fork	链条/辊筒/货叉 By Chain/By Roller/By fork	链条/辊筒/货叉 By Chain/By Roller/By fork	链条/辊筒/货叉 By Chain/By Roller/By fork
单元载重Kg Loading capacity	500×2	1000×2	1500×2	2500×2
移载速度m/min Moving speed	20	20	20	20
行走速度m/min Moving speed	100	100	80	80
供电方式 Power supply	滑触线 Slide wire	滑触线 Slide wire	滑触线 Slide wire	滑触线 Slide wire
动力配置Kw Motor(kw)	0.75×2/2.2	1.1×2/3	1.5×2/4	2.2×2/5.5
调速方式 Speed control	变频 Frequency conversion	变频 Frequency conversion	变频 Frequency conversion	变频 Frequency conversion
单元装载尺寸 loading dimension	800~1500(W) × 800~1500(D) × 300~2000(H)			
系统集成性能 Integrated performance	可在WMS、WCS系统下集成 Integratable with WMS、WCS and vehicle dispatch system			

货架穿梭母车
Racking Shuttle Mover

型号Model / 项目Item	HMC—L05	HMC—L10	HMC—L15	HMC—L20
移载方式 Moving method	链条/导轨 Chain/Guide rail	链条/导轨 Chain/Guide rail	链条/导轨 Chain/Guide rail	链条/导轨 Chain/Guide rail
单元载重Kg Loading capacity	500	1000	1500	2000
移载速度m/min Moving speed	20	20	20	20
行走速度m/min Moving speed	120	120	100	80
供电方式 Power supply	滑触线 Slide wire	滑触线 Slide wire	滑触线 Slide wire	滑触线 Slide wire
动力配置Kw Motor(kw)	0.75/1.5	1.1/2.2	1.5/3	2.2/4
调速方式 Speed control	变频 Frequency conversion	变频 Frequency conversion	变频 Frequency conversion	变频 Frequency conversion
单元装载尺寸 loading dimension	800~1500(W) × 800~1500(D) × 300~2000(H)			
系统集成性能 Integrated performance	可在WMS、WCS及车辆调度系统下集成 Integratable with WMS、WCS and vehicle dispatch system			

直线导轨高速穿梭车
High-speed Linear RGV

型号Model / 项目Item	ZCG—L05	ZCG—L10	ZCG—L15	ZCG—L25
移载方式 Moving method	链条/辊筒/货叉 By Chain/By Roller/By fork	链条/辊筒/货叉 By Chain/By Roller/By fork	链条/辊筒/货叉 By Chain/By Roller/By fork	链条/辊筒/货叉 By Chain/By Roller/By fork
单元载重Kg Loading capacity	500	1000	1500	2500
移载速度m/min Moving speed	20	20	20	20
行走速度m/min Moving speed	500	500	400	300
供电方式 Power supply	滑触线 Slide wire	滑触线 Slide wire	滑触线 Slide wire	滑触线 Slide wire
动力配置Kw Motor(kw)	0.75/4×2	1.1/5.5×2	1.5/7.5×2	2.2/11.5×2
调速方式 Speed control	变频 Frequency conversion	变频 Frequency conversion	变频 Frequency conversion	变频 Frequency conversion
单元装载尺寸 loading dimension	800~1500(W) × 800~1500(D) × 300~2000(H)			
系统集成性能 Integrated performance	可在WMS、WCS系统下集成 Integratable with WMS、WCS and vehicle dispatch system			



环形轨道穿梭车
Circular RGV

型号Model / 项目Item	HC—L05	HC—L10	HC—L15	HC—L25
移载方式 Moving method	链条/辊筒/货叉 By Chain/By Roller/By fork	链条/辊筒/货叉 By Chain/By Roller/By fork	链条/辊筒/货叉 By Chain/By Roller/By fork	链条/辊筒/货叉 By Chain/By Roller/By fork
单元载重Kg Loading capacity	500	1000	1500	2500
移载速度m/min Moving speed	20	20	20	20
行走速度m/min Moving speed	150	120	100	80
供电方式 Power supply	滑触线 Slide wire	滑触线 Slide wire	滑触线 Slide wire	滑触线 Slide wire
动力配置Kw Motor(kw)	0.75/1.1×2	1.1/1.5×2	1.5/1.5×2	2.2/2.2×2
调速方式 Speed control	变频 Frequency conversion	变频 Frequency conversion	变频 Frequency conversion	变频 Frequency conversion
单元装载尺寸 loading dimension	800~1500(W) × 800~1500(D) × 300~2000(H)			
系统集成性能 Integrated performance	可在WMS、WCS及车辆调度系统下集成 Integratable with WMS、WCS and vehicle dispatch system			

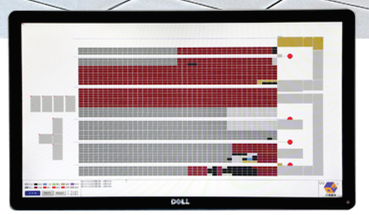
直线导轨穿梭车
Linear RGV

型号Model / 项目Item	ZC—L05	ZC—L10	ZC—L15	ZC—L25
移载方式 Moving method	链条/辊筒/货叉 By Chain/By Roller/By fork	链条/辊筒/货叉 By Chain/By Roller/By fork	链条/辊筒/货叉 By Chain/By Roller/By fork	链条/辊筒/货叉 By Chain/By Roller/By fork
单元载重Kg Loading capacity	500	1000	1500	2500
移载速度m/min Moving speed	20	20	20	20
行走速度m/min Moving speed	150	120	100	80
供电方式 Power supply	滑触线 Slide wire	滑触线 Slide wire	滑触线 Slide wire	滑触线 Slide wire
动力配置Kw Motor(kw)	0.75/1.5	1.1/2.2	1.5/3	2.2/4
调速方式 Speed control	变频 Frequency conversion	变频 Frequency conversion	变频 Frequency conversion	变频 Frequency conversion
单元装载尺寸 loading dimension	800~1500(W) × 800~1500(D) × 300~2000(H)			
系统集成性能 Integrated performance	可在WMS、WCS系统下集成 Integratable with WMS、WCS			









MANAGEMENT CONTROL SYSTEM

管 理 控 制 系 统

WCS & WMS



管理控制系统系统硬件构成：

1、星型网络结构
2、网络服务器:RF服务器　管理计算机　监控计算机
3、入出库区设置RF基站和RF手持终端等

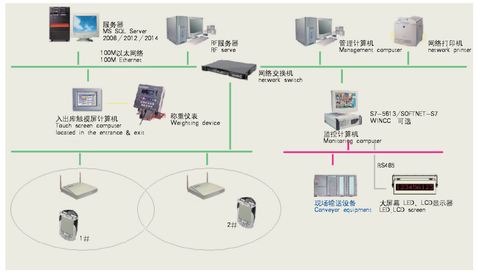
Composition of hardware:

1. Star structure
2. Network serves: RF server, Management computer, monitoring computer
3. RF station and terminal are equipped in dispatch area

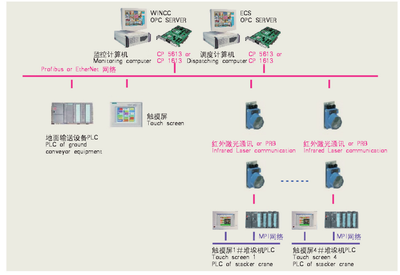
系统软件配置:Software configuration

1、操作系统 Operating system:windows server 2008 / 2012
2、数据库 Data Base:MS SQL Server 2008 / 2012 / 2014
3、仓库管理软件:WMS
4、设备控制软件:ECS
5、条形码管理软件 Barcode management system:RFS

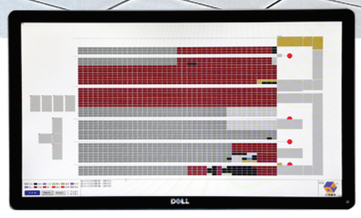
管理系统架构图
Management System Chart



控制系统架构图
Control System Chart







管理系统特点：

1、实现对仓库物流的实时监测与优化调配
2、合理调度设备，最大化设备利用率
3、满足与上层系统的无缝对接
4、机面人界充分考虑实用性，操作简单，通俗易懂

Advantage of management system:

1. To do real-time monitoring and optimize allocation on warehouse material handling.
2. To dispatch equipment properly and maximize use of equipment.
3. Perfectly compatible with other systems.
4. Friendly user's interface is easy for operating and understanding.

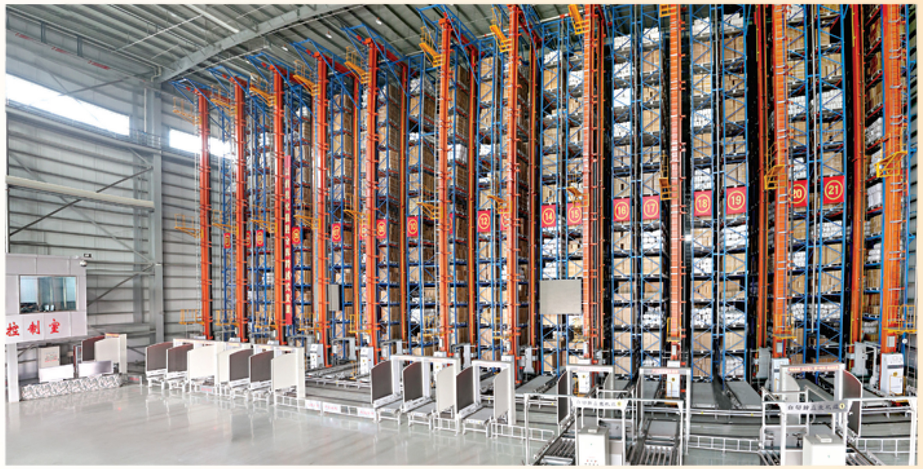
控制系统的特点：

1、控制系列采用OPC协议与WMS和ECS通迅
2、可在脱机状态下调度所有输送设备，完成物料的自动输送
3、采用SIEMENS　S7-300系列控制器组建PROFIBUS现场总线网络

Advantage of control system:

1. OPC protocol and WMS & ECS are adopted.
2. The system can control all conveying equipment offline.
3. SIEMENS S7-300 series Profibus system.

AS/RS FINISHED CASE
自动化物流系统典型案例



军工装备行业案例 Military Equipment Industry Case



电子电气行业案例 Electronic & Electric Industry Case



制药行业案例 Pharmaceutical Industry Case



机械行业案例 Machinery Industry Case



综合物流行业案例 Material Handling Industry Case



航空航天行业案例 Aerospace Industry Case

AS/RS FINISHED CASE
自动化物流系统典型案例



造纸行业案例 Paper Industry Case



交通运输行业案例 Transportation Industry Case



印钞行业案例 Printing Industry Case

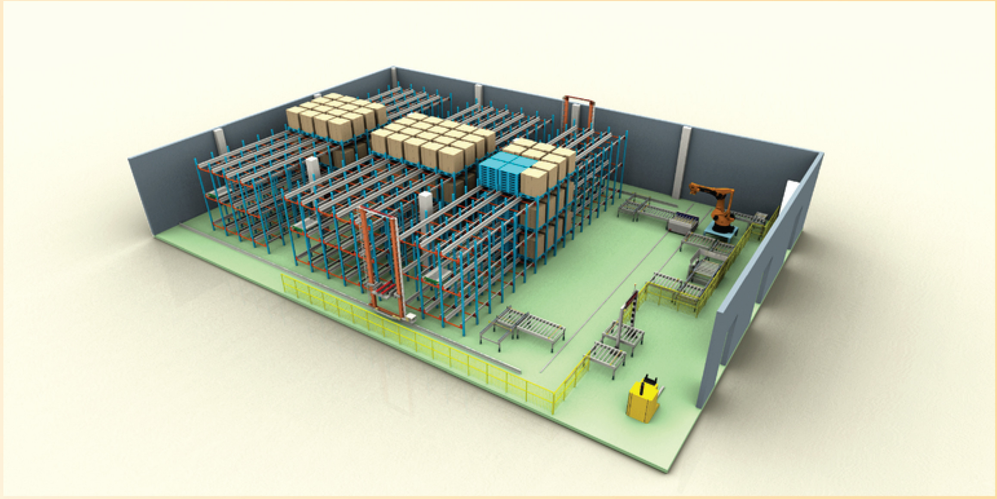


防爆自动化物流系统案例 Explosion-proof AS/RS Case





低温自动化物流系统案例 Cold Chain Case



高密度自动化物流系统案例 High-density AS/RS Case

APPLICATION OF MODERN MATERIALS HANDLING SYSTEM

智能物流系统应用

智能物流系统广泛应用于机械、电子电气、医药、石油化工、轻工造纸、食品冷链、航空航天、轨道交通、综合物流等众多行业，大大地提高了自动化、信息化、智能化水平。

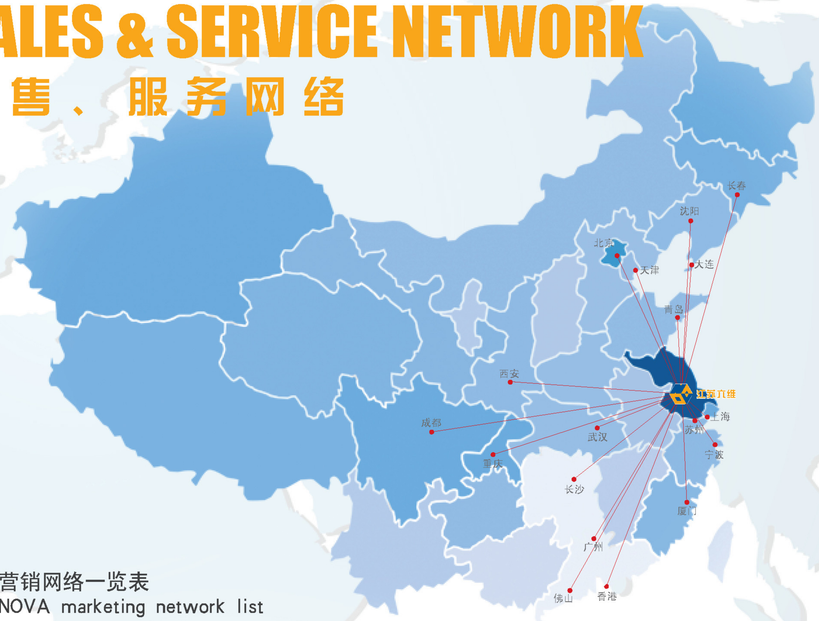
Modern materials handling system widely used in mechanical industry, electronic & eletric industry, light papermaking industry, food cold chain industry, Aerospace industry, logistic industry and other numerous industries, it greatly improved the level of automation, informatization and intelligentialize.

PART OF PARTNER

部分合作伙伴

SALES & SERVICE NETWORK

销售、服务网络



营销网络一览表

NOVA marketing network list

名　称 Office	地　址 Address	邮　编 P.C.	电　话 Tel	传　真 Fax	邮　箱 E-mail
营销总部	南京市建邺区奥体大街118号紫金西城中心A座9楼	210019	025-51873980 025-86106188	025-51873970	market@nova-china.com
国际销售部	南京市建邺区奥体大街118号紫金西城中心A座9楼	210019	025-51873962	025-51873970	export@nova-china.com
国内销售部	南京市建邺区奥体大街118号紫金西城中心A座9楼	210019	025-51873980 025-86106188	025-51873970	sales@nova-china.com
物流规划部	南京市建邺区奥体大街118号紫金西城中心A座9楼	210019	025-51873927	025-51873970	zhichi@nova-china.com
北京分公司	北京市大兴区兴华大街绿地中央广场8座1703室	100078	010-67635966	010-67622878	beijing@nova-china.com
上海分公司	上海市松江区茸梅路518号中山硅谷城411室	201613	021-51693738	021-51693738-808	shanghai@nova-china.com
美国分公司	Sample Street Business Complex 3702 West Sample St., South Bend,	46619	574-309-3599	025-51873970	Bin@starnovasu.com
天津办事处	天津市河东区万达广场尚东雅园7-2-701室	300011	022-58267520	022-58227657	tianjin@nova-china.com
青岛办事处	青岛市市北区良辰美景大厦II-903室	266000	0532-83849550	0532-83751626	qingdao@nova-china.com
华南办事处	广州市天河区福元中路5号晨晖商务大厦D座508室	510660	020-82303526 020-82317626	020-82317626	guangzhou@nova-china.com
成都办事处	四川省成都市双流县航空港大件路白家段280号蓝光空港国际城7栋5单元1012室	610225	028-85871822 028-85662127	028-85871822	chengdu@nova-china.com
西安办事处	西安市未央区凤城二路海景国际小区A-1302室	710016	029-85693343	029-85693343	xibei@nova-china.com
长沙办事处	长沙市雨花区人民东路46号铭诚国际大厦703室	410016	0731-84119937	0731-84119837	changsha@nova-china.com
宁波办事处	宁波段塘东路636号泛亚中心28号5-14室	315012	0574-87277120	0574-87271030	ningbo@nova-china.com