

基本配置 / 品牌

Basic configuration/ Brands

机架 / Base frame

—— 通锦 / TJ

伺服马达 / Servo Motor

—— Panasonic / Rexroth

减速机 / Gear Box

—— APEX / Nidec

导轨 / Guide Rail

—— HIWIN

齿条 / Rack

—— GAMBINI/TJ品牌

行程开关 / Travel Switch

—— OMRON/Sick

技术参数 / Technical parameters	
最大行程 / Max. Travel	70m
最大速度 / Max. Velocity	3m/s
最大加速度 / Max. Acceleration	3m/s <sup>2</sup>
最大负载 / Max. Payload	10000KG
重复定位精度 / Repositioning accuracy	±0.1mm/0.05mm

※ 行程按客户要求

※ Travel depends

Servo Motor

第七轴机器人客户需求表 / Customer request list for the 7 <sup>th</sup> Axis Robot	
机器人型号 / Type of the Robot	
机器人品牌 / Brand of the Robot	
有效行程 / Effective travel (m)	
速度要求 / Speed requirement (m/s) 【参考值 / Reference value : ≥2T ( < 0.8m/s ) ; 200-800KG ( < 3m/s ) 】	
加速度要求 / Velocity requirement (m/s <sup>2</sup> ) 【参考值 / Reference value : ≥2T ( < 1m/s <sup>2</sup> ) ; 200-800KG ( < 3m/s <sup>2</sup> ) 】	
宽度要求 / Width requirement (m)	
高度要求 / Height requirement (m) ( 工作台面到地面的距离 / Distance from workbench to the ground )	
重复定位精度要求 / Repositioning accuracy requirement	<input type="checkbox"/> 标准 / Standard ±0.1mm <input type="checkbox"/> 最高 / Precision ±0.05mm
最大负载 / Max. Load (KG)	
防尘要求 / Dust preventing requirement	<input type="checkbox"/> 风琴护罩 / Rgan shieldo <input type="checkbox"/> 金属护板 / Sheet metal guard <input type="checkbox"/> 花纹板 / Pattern plate <input type="checkbox"/> 自定义 / Custom
润滑要求 / Lubricating oil requirement	<input type="checkbox"/> 手动集中供油 / Manual concentrated oil supply <input type="checkbox"/> 自动集中供油 / Automatic concentrated oil supply
颜色 / Color requirement	
应用场合 / Application	
其他要求 / Other requirement	



通锦精密

第七轴&桁架  
机械手

应用集成商

APPLICATION INTEGRATOR FOR THE 7<sup>TH</sup>.  
AXIS ROBOT & TRUSS MANIPULATOR

定制化解决方案  
CUSTOMIZED SOLUTION



- ✓ 机器人地轨
  - ✓ 龙门桁架机械手
  - ✓ 变位机
  - ✓ 助力臂 KBK机械手
  - ✓ 自动化装备产线
- 
- ✓ Robot track
  - ✓ Gantry truss manipulator
  - ✓ Positioner
  - ✓ Assist arm KBK manipulator
  - ✓ Automated equipment production line

苏州通锦精密工业股份有限公司

Suzhou Tongjin Precision Industry Joint-stock Co.,Ltd

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愿 景：工厂实现绿色无人化  
使 命：通向世界 锦绣中华  
价值观：创新 进取 诚信 和谐

## COMPANY PROFILE

### 公司简介

苏州通锦精密工业股份有限公司成立2002年12月，目前座落于苏州市高新区建林路411号，注册资本4536万元，2015年9月股改，2016年5月18日在全国中小企业股份转让系统挂牌，股票代码837453，现有员工200余人，其中大专以上学历占比85%，研发人员80余人。目前拥有现代化的办公和厂房面积约15000平方米。

多年来公司一直以“工厂实现绿色无人化”为愿景；以“通向世界、锦绣中华”为使命；以“创新、进取、诚信、和谐”为企业核心价值观。公司在引进国外高尖端自动化核心元件的基础上，大力投入研发资金，主要针对新能源汽车，军工，光伏、5G等行业智能伺服装配技术需求，已成功自主研发、设计、组装、销售通锦牌伺服电动缸、智能伺服压装机、第七轴机器人、（重型）桁架机器人等自主产品，结合六关节机器人实现自动化、安全化、无人化的智能装备绿色无人化生产线，提供一站式工厂智能装备自动化系统整体解决方案，实现工业4.0。同时为客户提供高端贸易品牌工控核心零部件：意大利Gambini齿轮齿条、Panasonic伺服系统、Rexroth变频器、Nidec减速机、APEX减速机。

通锦近年来一直注重研发投入，加大人才引进与自身培养，公司已申请专利200余项，已授权92项，其中发明专利21项；实用新型专利71项；已获得软件著作权10项；软件产品3项；江苏省高新技术产品5项；有效商标注册5项，申请国际PCT专项2项。

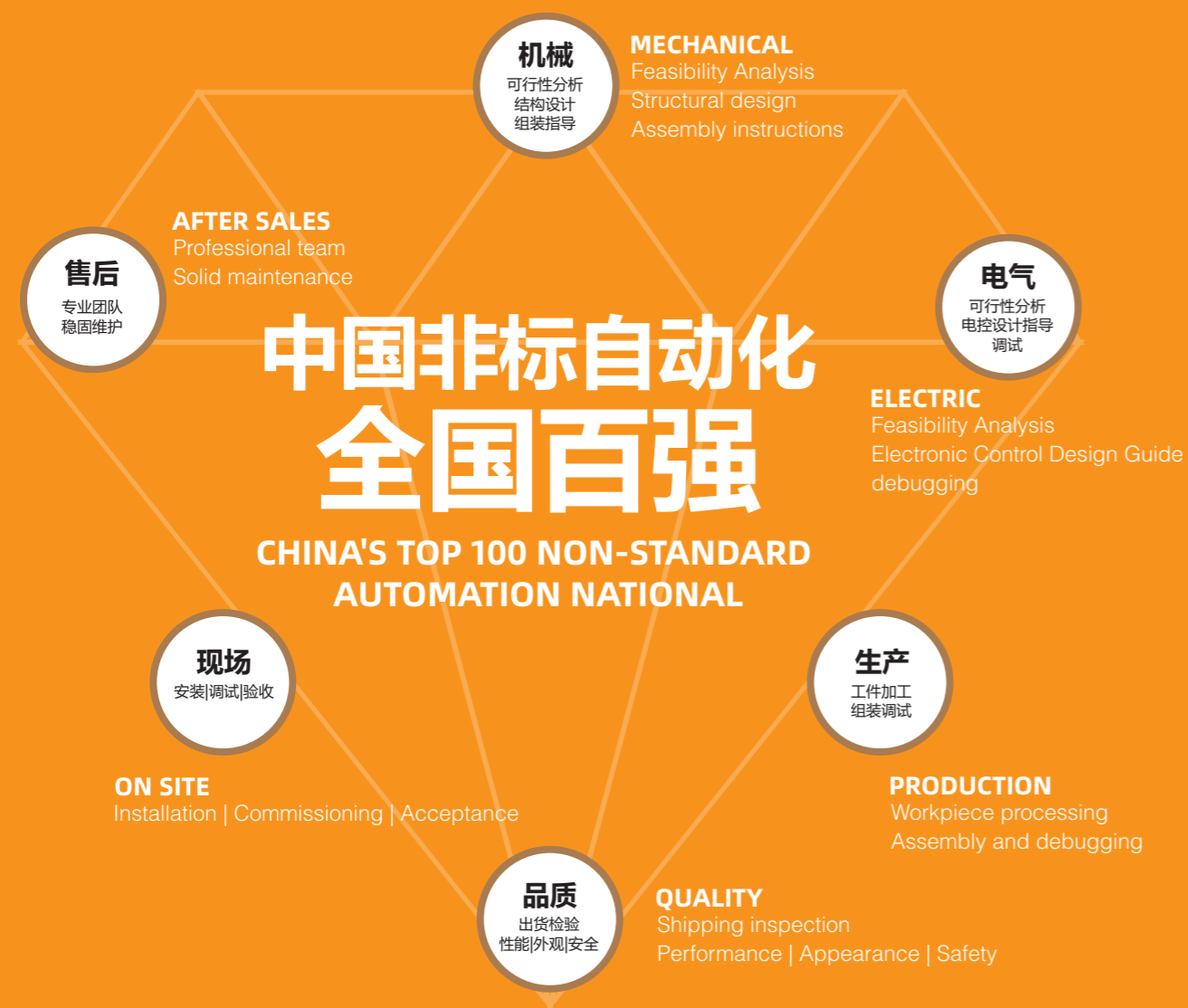
- ▲ 2020中国非标自动化集成商全国百强
- ▲ 江苏省智能制造领军服务机构
- ▲ 江苏省高新技术企业
- ▲ 江苏省智能装配工程技术研究中心
- ▲ 江苏省研究生工作站
- ▲ 江苏省民营科技企业
- ▲ 苏州市企业技术中心
- ▲ 苏州市智能伺服压装机工程技术研究中心
- ▲ 科技创新先进单位
- ▲ 优秀产学研合作单位
- ▲ 高新区瞪羚企业
- ▲ 高新区专精特新企业
- ▲ 知识产权贯标单位
- ▲ 华东理工大学
- ▲ 南京航空航天大学研究生培养基地
- ▲ 江苏省HV电机自动化产线首台套项目
- ▲ 江苏省智能制造服务示范企业
- ▲ 苏州高新区智能制造十强示范企业
- ▲ 苏州市质量奖
- ▲ ISO9001:2015质量管理体系认证
- ▲ ISO14001:2015环境管理体系认证

Suzhou Tongjin Precision Industry Co., Ltd., established in December 2002, is currently located at No. 411 Jianlin Road, Suzhou New District, Suzhou, with a registered capital of 45.36 million yuan. It was reformed in September 2015, and it was listed in the national small and medium-sized enterprises on May 18, 2016. The company is listed on the enterprise share transfer system with stock code 837453. There are more than 200 employees, of which 85% have college degrees and more than 80 R&D personnel. At present, it has a modern office and workshop area of about 15,000 square meters.

Over the years, the company has been taking "factory to achieve green and unmanned" as its vision; "leading to the world, splendid China" as its mission; "innovation, enterprising, honesty, harmony" as its core values. Based on the introduction of foreign high-end automation core components, the company has invested heavily in research and development funds, mainly for the needs of intelligent servo assembly technology in new energy vehicles, military industry, photovoltaics, 5G and other industries, and has successfully independently developed, designed, assembled and sold Tongjin brand Servo electric cylinder, intelligent servo press, seventh-axis robot, (heavy-duty) truss robot and other independent products, combined with six-joint robot to realize automatic, safe and unmanned intelligent equipment green unmanned production line, providing a one-stop factory The overall solution of intelligent equipment automation system realizes Industry 4.0. At the same time, we provide customers with high-end trade brand industrial control core components: Italian Gambini rack and pinion, Panasonic servo system, Rexroth inverter, Nidec reducer, APEX reducer.

The company has been awarded as a high-tech enterprise in Jiangsu Province. Jiangsu province engineering research center for intelligent assembly graduate workstation private technology enterprises in jiangsu province suzhou city in jiangsu province enterprise technology center of suzhou intelligent servo press machine engineering technology research center of advanced science and technology innovation of enterprises industry-university-institute cooperation unit high-tech zone gazelle unit high-tech zone specialization, the new east China university of science and technology enterprise intellectual property rights, jitc unit of nanjing aerospace university graduate cultivation base title of HV motor automatic production line of jiangsu province first sets project intelligent manufacturing service demonstration enterprise of jiangsu province A number of honorary titles, such as The Top ten Intelligent Manufacturing Demonstration enterprises in Suzhou High-tech Zone, have passed the ISO9001:2015 quality management system certification, ISO14000:2015 environmental management system certification.

In recent years, Tongjin has been paying attention to R&D investment, increasing talent introduction and self-training. The company has applied for more than 200 patents, and has authorized 60 patents, including 20 invention patents. 40 utility model patents; 10 software Copyrights have been obtained; 2 software products; 5 high-tech products of Jiangsu Province; There were 5 valid trademark registrations and 2 special applications for international PTC.



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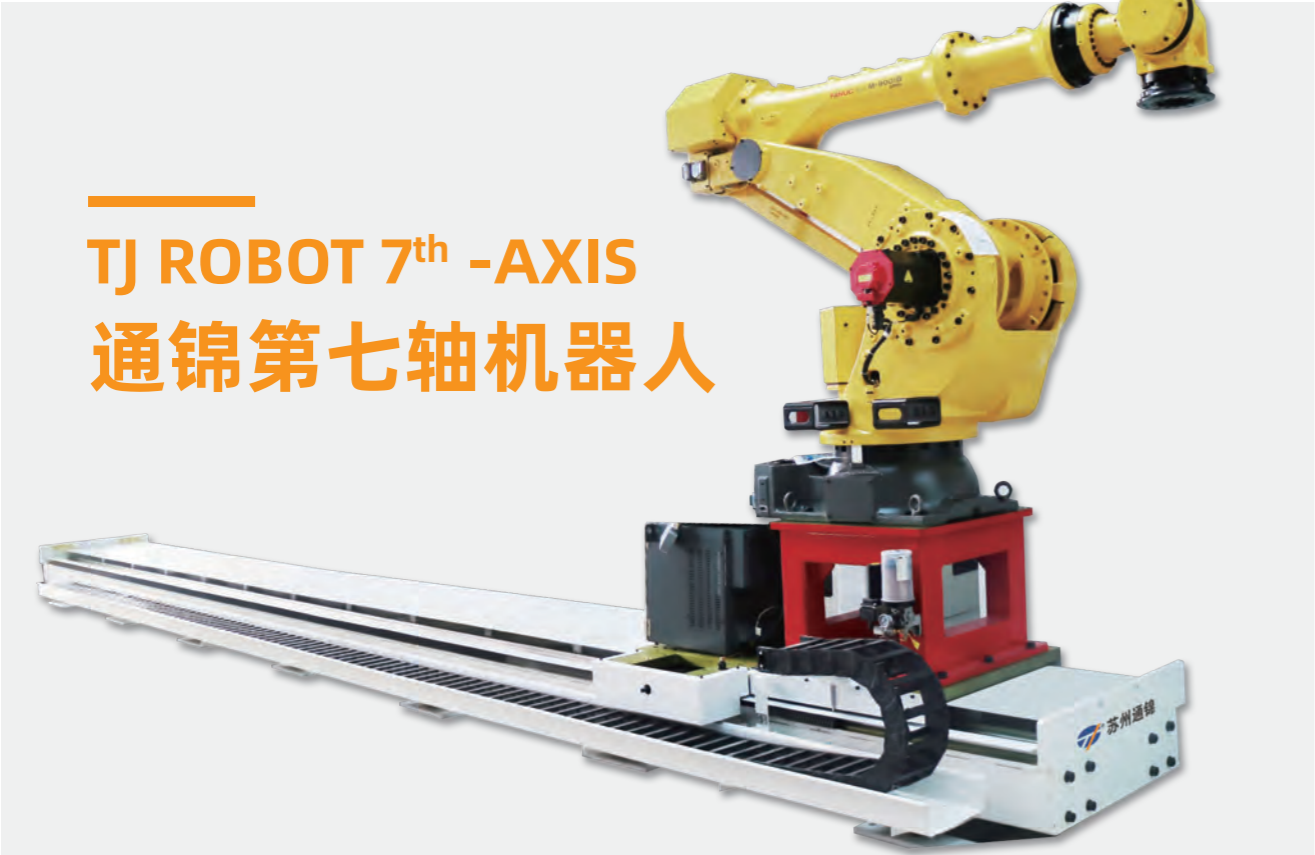
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Your needs are the driving force for our development  
Your satisfaction is our eternal pursuit  
Serve wholeheartedly, let Made in China shine in the world.

[www.sztongjin.com](http://www.sztongjin.com)



## GLOBAL PARTNERS 全球合作伙伴





# TJ ROBOT 7<sup>th</sup> -AXIS 通锦第七轴机器人

机器人行走轴又称机器人第七轴，机器人轨道等，用于扩大机器人作业半径，扩展机器人使用范围功能，主要应用于焊接、铸造、喷涂、机械加工、智能仓储、汽车、航天等行业领域。不管是焊接，喷涂，物流搬运等工艺上均有广泛应用。相比人工劳动力，机器人第七轴具有高效，工作时间长，可以昼夜不停工作，在使用期内几乎不需要保养和维护的优势，满足了自动化生产制造需求。同时可定制编程设计的特点，满足了生产制造定制化的需求，极大地拓展了工业制造的模式及范畴。

The robot walking axis, also known as the seventh axis of the robot, the robot track, etc., is used to expand the working radius of the robot and expand the range of functions of the robot. It is mainly used in welding, casting, spraying, machining, intelligent storage, automobile, aerospace and other industries. Whether it is welding, spraying, logistics handling and other processes are widely used. Compared with manual labor, the seventh axis of the robot has the advantages of high efficiency, long working hours, non-stop work around the clock, and almost no maintenance and maintenance during the service period, which meets the needs of automated production and manufacturing. At the same time, the characteristics of customizable programming design meet the needs of manufacturing customization, and greatly expand the mode and scope of industrial manufacturing.

通锦第七轴机器人由一个或一组的高强度结构件捏接而成，经过二次去应力回火后通过精密龙门铣床对基座进行精加工，并采用意大利伽比尼研磨的齿轮齿条配合台湾/日本直线导轨为传动，最后通过伺服电机、高精度减速机的精密配合，使得机器平稳快捷。

GAMBINI  
meccanica  
意大利伽比尼

POSITION THE MOUNTING TEMPLATE

# MODEL DEFINITION 型号定义

TJS	05	LG	L040	V08	A08	L1	E1	2
1	2	3	4	5	6	7	8	9
1	“TJS”代表通锦公司出品的第七轴，与电缸中的“TJE”、模组中的“TJM”、“TJH”相呼应，代表公司品牌。 “TJS”It represents the seventh axis produced by Tongjin Company, which echoes the “TJE” in the electric cylinder, “TJM” and “TJH” in the module, and represents the company’s brand.							
2	两位数字表示负载，单位为“吨”，“05”表示0.5吨“20”表示2吨。 Two digits indicate the load, the unit is “ton”, “05” means 0.5 tons and “20” means 2 tons.							
3	第七轴机器人分为两种类型。线性导轨英文linear guide，取首字母“LG”表示线性导轨式第七轴机器人；滚轮英文trolley wheel，取首字母“TW”表示滚轮式第七轴机器人。 Seventh-axis robots are divided into two types. Linear guide in English linear guide, take the first letter “LG” to indicate the seventh-axis robot with linear guide rail; trolley wheel in English, take the first letter “TW” to indicate the seventh-axis robot with roller.							
4	取“L”加三位数字表示总长。总长单位为“米”，“040”表示4米，“120”表示12米。（有效行程在最终技术文件中确定） Take “L” and add three digits to indicate the total length. The total length unit is “meter”, “040” means 4 meters, “120” means 12 meters. (The valid itinerary is determined in the final technical document)							
5	速度英文velocity，取首字母“V”加两位数字表示额定速度。速度单位“米每秒”。数字“08”表示0.8m/s。如无要求可不填以1m/s为准。 Velocity in English, take the initial letter “V” and add two digits to indicate the rated speed. The unit of speed is “meters per second”. The number “08” means 0.8m/s. If there is no requirement, 1m/s shall prevail.							
6	加速度英文acceleration，取首字母“A”加两位数字表示加速度。单位为“米每二次方秒”。数字“08”表示0.8m/s²。如无要求可不填以1m/ s²为准。 Acceleration in English, take the first letter “A” and add two digits to indicate acceleration. The unit is “meters per second squared”. The number “08” means 0.8m/s². If there is no requirement, 1m/s² shall prevail.							
7	润滑英文lubrication，取首字母“L”表示。目前润滑有“手动润滑脂”、“自动润滑油”、“自动润滑脂”三种，分别用L1、L2、L3表示；“L1”表示手动润滑（脂），“L2”表示自动润滑油、“L3”表示自动润滑脂（如不填表示自动润滑脂） Lubrication in English is represented by the first letter “L”. At present, there are three types of lubrication: “manual grease”, “automatic lubricating oil” and “automatic grease”, which are represented by L1, L2, and L3 respectively; “L1” means manual lubrication (grease) “L2” means automatic oil “L3” means automatic grease (if not filled, it means automatic grease)							
8	取环境英文Environment首字母“E”表示防尘方式。目前齿条防尘基本为钣金折弯一种。导轨分为钣金折弯和风琴罩两种，分别用E1、E2表示； “E0”表示无防护、“E1”表示钣金防护（如不填表示钣金防护）、“E2”表示风琴罩防护 “E3”表示焊接用全密封、“E4”表示喷涂用全密封 Take the initial letter “E” of the English environment to indicate the dustproof method. At present, the dustproof of the rack is basically a kind of sheet metal bending. The guide rail is divided into two types: sheet metal bending and organ cover, which are represented by E1 and E2 respectively; “E0” means no protection, “E1” means sheet metal protection (if not filled, it means sheet metal protection), “E2” means organ shield protection, “E3” means fully sealed for welding, “E4” means fully sealed for spraying							
9	最后一位数字代表拖链要求，现以“1”表示塑料拖链，“2”表示金属拖链，“3”表示特殊要求。（如不填表示塑料拖链） The last digit represents the requirements of the towline. Now, “1” represents the plastic towline, “2” represents the metal towline, and “3” represents the special requirement. (If not filled, it means plastic drag chain)							

## FUNCTIONAL ADVANTAGES 功能优点

### 定制化行程 Customized itinerary

第七轴可以根据客户需要进行扩展长度。  
The seventh axis can be extended in length according to customer needs.

### 安装灵活 精度高 Flexible installation High precision

第七轴可以使用调节的地脚螺栓安装在地面上，这使得凹凸不平的地面以及其他路线和管道等不利于安装的空间能够快速安装并确保其精确度。  
The seventh axis can be mounted on the ground using adjustable anchor bolts, which enables quick and accurate installation on uneven ground and other spaces that are not conducive to installation such as routes and pipes.

### 安全性高 High security

第七轴设置了限位开关，增加了机械安全限位机构防止关节机器人意外脱轨，确保机器运行安全可靠。  
The seventh axis is equipped with a limit switch, and a mechanical safety limit mechanism is added to prevent the joint robot from accidentally derailing, ensuring the safe and reliable operation of the machine.

### 绿色环保 Environmental Protection

第七轴轴上可装配盖板、钣金护罩、风琴护罩，防止无污染，便于维护保养。  
Cover plate, sheet metal shield and organ shield can be assembled on the seventh axis to prevent pollution and facilitate maintenance.

## OPTIONAL ACCESSORIES 可选配件

运动控制相关系统  
Control system related to motion control

运动部件防尘组件  
①风琴护罩 ②全封闭金属护板  
Dustproof components  
①Organ shield ②Fully enclosed metal shield

分段式行程开关  
Segment-based travel switch

高精度的位移光栅尺/磁栅尺  
High-precision displacement  
grating scale/Magnetic scale

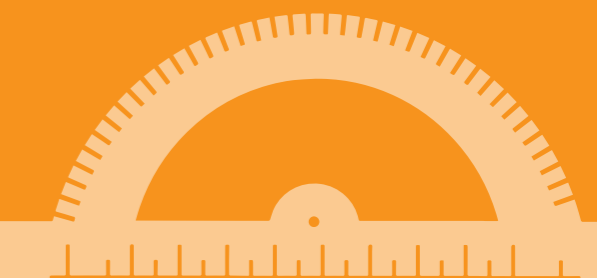


## 长度配置

单根最长7m 定制化行程  
不同关节机器人行程稍有变化

## LENGTH CONFIGURATION

Single length up to 7m  
The stroke of different joint robots varies slightly



# ROBOT SEVENTH AXIS STYLE

## 机器人第七轴样式



折弯钣金地轨



Bending Sheet Metal robot track

滚轮式地轨



Trolley wheel robot track

花纹板地轨



Checkered plate robot track

封闭型地轨



Closed robot track

风琴护罩式地轨



Organ shroud robot track

德国铝型材轻型地轨



Germany aluminum profile light robot track

# ie-ie 150/300/450

模块化设计，单轴/多轴自由搭配，3m倍数无限拼接  
搭配自主研发的单轴/多轴运动控制系统，开放式通讯接口，软件可选  
搭配多品牌小型工业机器人/协作机器人，极速通讯，即插即用  
超大行程：30m 超高移速：1.5m/s 超大负载：600kgs 丝杆-齿条-直线电机无限切换  
可用于各种恶劣的工作环境（高低温、高低压、粉尘、潮湿溅水等）  
也可用于洁净室环境（ISO 4/6级，德国Fraunhofer IPA认证）

Modular design, single-axis / multi-axis free collocation, unlimited splicing in multiples of 3m.  
With self-developed single-axis / multi-axis motion control system, open communication interface, software.  
With multiple brands of small industrial robots / collaborative robots, extremely fast communication, plug and play.  
Stroke max.30 m, feed max. 1.5 m/s, load max. 600 kgs, unlimited switching between spindle drive, rack system drive and linear motor drive.  
It can be used in a variety of harsh working environments (high and low temperature, high and low pressure, dust, humid and splashing water, etc.).  
It can also be used in clean rooms (ISO 4/6, German Fraunhofer IPA certification).



## 细节 Details



50年精工品质  
50 years with good quality

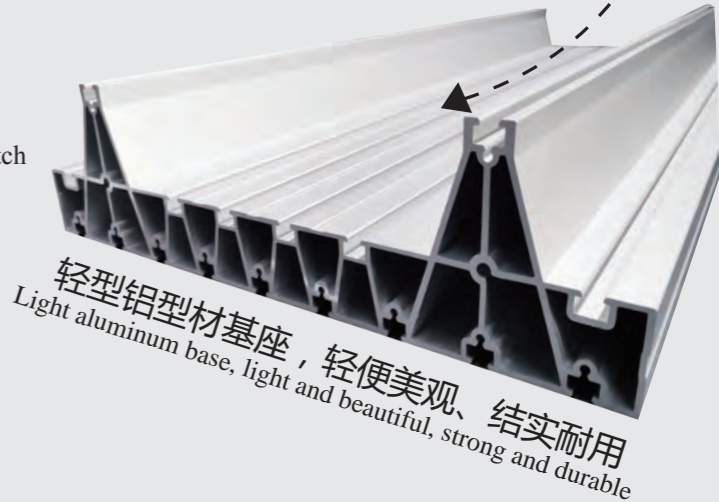
## 技术数据 Technical specification

产品型号	Part number	ie-ie 150	ie-ie 300	ie-ie 450
轴宽	Width	150 mm	300 mm	450 mm
轴高	Height	87 mm	115 mm	158 mm
轴长	Length	最长 max. 30m	最长 max. 30m	最长 max. 30m
驱动齿条	Racks	M2	M2	M2/M3
直线导轨	Linear guide rail	W=15mm	W=20mm	W=25mm
滑动板数量	Sliding plate quantity	标准：1个；定制：根据客户需求 Standard: 1; Customization: According to customer requirements		
密封罩	Seal housing	客户可选有无密封罩，密封罩：钣金/风琴罩 Options: sealing cover, sealing cover: sheet metal/organ cover		
润滑系统	lubrication system	标准：手动润滑系统，定制：自动润滑系统 Standard: manual lubrication system, customized: automatic lubrication system		
驱动	Drive	步进或伺服电机 Stepper or servo motor		
速度	Velocity	≤1m/s	≤1.2m/s	≤1.5m/s
负载	Payload	最大 max.150kgs	最大 max.300kgs	最大 max.600kgs
精度	Repeat accuracy	标准精度 :Standard accuracy: ±0.1 mm；高精度：High accuracy: ±0.05 mm		
其他配件	Other Accessories	拖链槽，拖链，驱动电机等 Drag chain tray, cable drag chain, drive motor, etc.		

## 可选配

Options

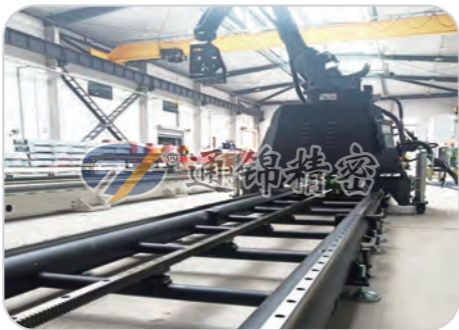
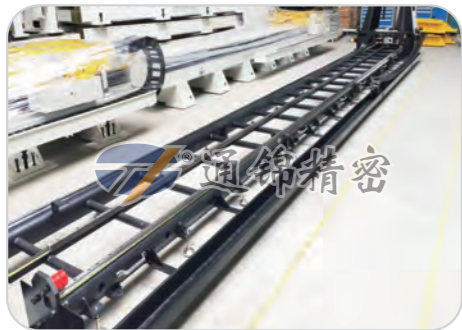
- 步进、伺服或直线电机驱动  
• Stepper, servo or linear motor drive
- 外置机械/光电限位开关  
• External mechanical/photoelectric limit switch
- 拖链  
• Drag Chain
- 自动或手动润滑系统  
• Automatic or manual lubrication system



# 应用案例

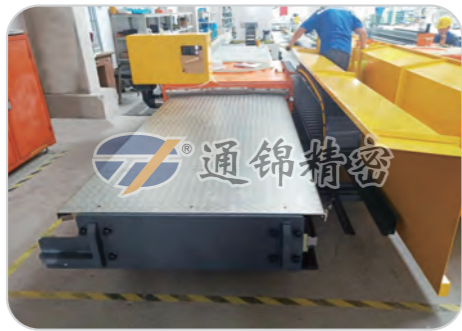
## APPLICATIONS

电影娱乐机器人地轨



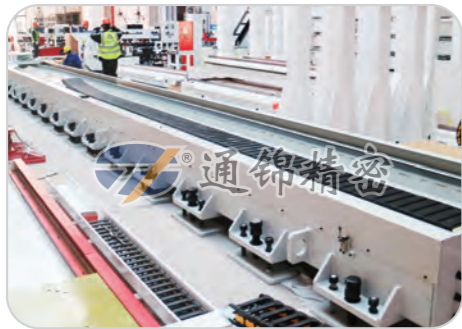
Movie entertainment robot track

铸造行业地轨



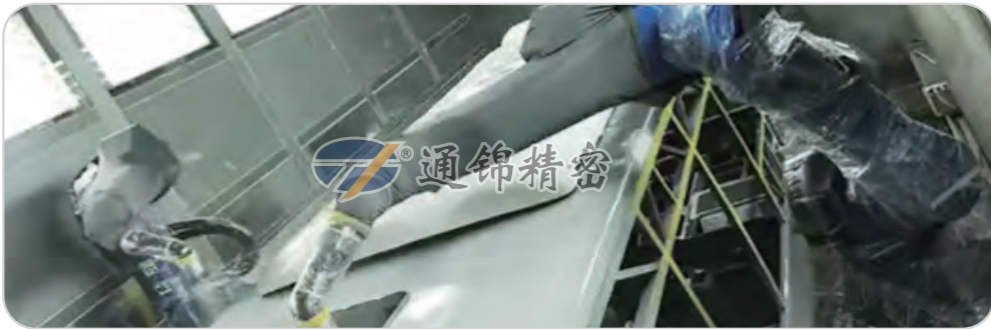
Foundry industry robot track

工程机械重型10吨地轨



Construction machinery heavy duty 10 ton robot track

大巴汽车喷涂地轨



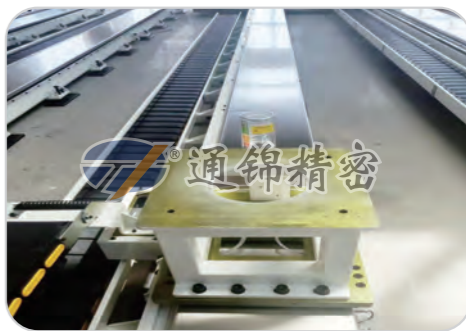
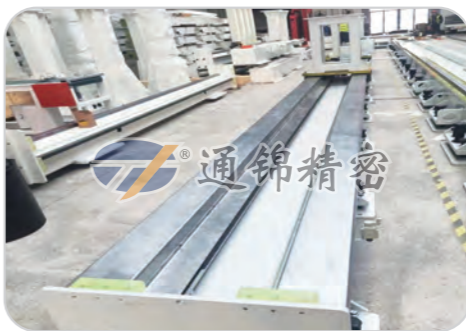
Bus spraying ground rail robot track

汽车焊装车间地轨



Automotive welding workshop robot track

油罐车喷涂地轨



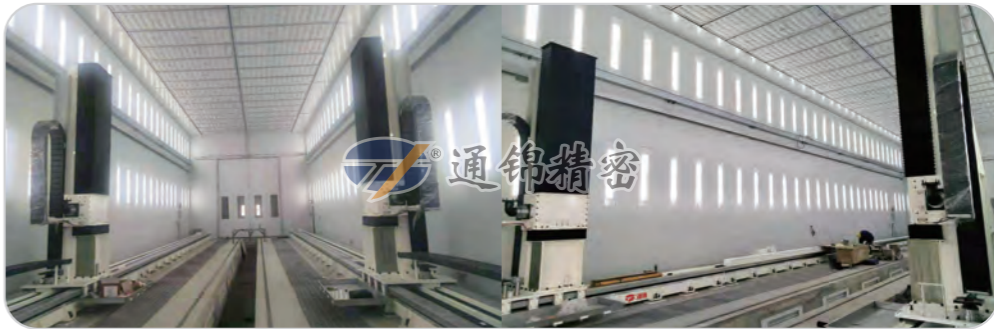
Tank Truck Spraying robot track

军工行业长行程地轨



Military industry long trip robot track

乘用车喷涂地轨



Passenger car spraying robot track

# TRUSS MANIPULATOR

## 桁架机器人

桁架式机床上下料机器人是用于数控机床自动化上下料的直角坐标机器人机械手，数控机床桁架式机械手是工业应用中，能够实现自动控制的、可重复编程、多功能、多自由度、运动自由度间成空间直角关系的自动化设备。桁架式机床上下料机器人与数控机床相结合，可以实现所有工艺过程的工件自动抓取、上料、下料、装卡、工件移位翻转、工件转序加工等，能够极大的节约人工成本，提高生产效率。

Truss manipulator for workpiece load/unload of the machine tools is a kind of cartesian coordinate robot for automatic workpiece load/unload of the CNC machine tools, truss manipulator for CNC machine tools is the automation equipment, which can achieve the automatic control, repeatable programming, multi-function, multi-degree of freedom, freedom of movement between the space at right angles in the industry application. Combined with CNC machine tools, the truss manipulator for workpiece load/unload of the machine tools can achieve the workpiece automatic collection, load, unload, mounting, workpiece inversion transference, workpiece turn sequence and so on, which can greatly reduce labor costs, improve production efficiency.

### 三轴桁架机械手/龙门桁架机械手主要技术参数

- (1) X轴行程范围内在0-30000mm
- (2) Z轴行程范围内在0-3000mm
- (3) Y轴行程范围在0-10000mm
- (4) 三轴龙门桁架配行程开关控制到达准确位置
- (5) Z轴最大负载5000kg

### Main technical parameters of three-axis truss manipulator/gantry truss manipulator

- (1) The X-axis travel range is 0-30000mm
- (2) The Z-axis travel range is 0-3000mm
- (3) Y-axis travel range is 0-10000mm
- (4) The three-axis gantry truss is equipped with a travel switch to control the accurate position
- (5) Z-axis maximum load 5000kg



# MODEL DEFINITION

## 型号定义

TJG 01 L ( X-030 ; Y-040 ; Z-008 ) V ( X-08 ; Y-06 ; Z-05 ) A ( X-06 ; Y-05 ; Z-04 ) L2 E0 1

苏州通锦精密工业股份有限公司桁架机械手产品命名规则分为八个部分，具体含义如下：

1	“TJG”代表通锦公司出品的桁架机械手（gantry manipulator），与电缸中的“TJE”、模组中的“TJM”相呼应，代表公司品牌；
2	两位数字表示负载load，单位为“吨”。“01”表示0.1T，“20”表示2T；
3	取“L”加三位数字表示总长，单位为“米”。L (X-030; Y-040; Z-008) 代表三轴桁架机械手X轴注、Y轴注和 Z轴注的长度分别为3米、4米和0.8米。根据实际情况可以扩展或者减缩。例如减缩为两轴桁架机械手时可表示为L (X-***; Z-***); 扩展为多轴桁架机械手时可表示为L (X <sub>1</sub> -***, X <sub>2</sub> -***, ..., X <sub>n</sub> -***; Y <sub>1</sub> -***, Y <sub>2</sub> -***, ..., Y <sub>n</sub> -***; Z <sub>1</sub> -***, Z <sub>2</sub> -***, ..., Z <sub>n</sub> -***), (n为≥2的整数); (有效行程在最终技术文件中确定)
4	速度英文velocity，取首字母“V”加两位数字表示额定速度。速度单位“米每秒”。V (X-08; Y-06; Z-05) 代表三轴桁架机械手X轴、Y轴和 Z轴的额定速度分别为0.8m/s、0.6m/s和0.5m/s。根据实际情况可以扩展或者减缩。例如减缩为两轴桁架机械手时额定速度可表示为V (X-**; Z-**); 扩展为多轴桁架机械手时额定速度可表示为V (X <sub>1</sub> -**, X <sub>2</sub> -**, ..., X <sub>n</sub> -**; Y <sub>1</sub> -**, Y <sub>2</sub> -**, ..., Y <sub>n</sub> -**; Z <sub>1</sub> -**, Z <sub>2</sub> -**, ..., Z <sub>n</sub> -**), (n为≥2的整数);
5	加速度英文acceleration，取首字母“A”加两位数字表示加速度。单位为“米每二次方秒”。A (X-06; Y-05; Z-04) 代表三轴桁架机械手X轴、Y轴和 Z轴的加速度分别为0.6m/s <sup>2</sup> 、0.5m/s <sup>2</sup> 和0.4m/s <sup>2</sup> 。根据实际情况可以扩展或者减缩。例如减缩为两轴桁架机械手时加速度可表示为A (X-**; Z-**); 扩展为多轴桁架机械手时加速度可表示为A (X <sub>1</sub> -**, X <sub>2</sub> -**, ..., X <sub>n</sub> -**; Y <sub>1</sub> -**, Y <sub>2</sub> -**, ..., Y <sub>n</sub> -**; Z <sub>1</sub> -**, Z <sub>2</sub> -**, ..., Z <sub>n</sub> -**), (n为≥2的整数);
6	润滑英文lubrication，取首字母“L”表示。目前润滑有“手动润滑(脂)”、“自动润滑脂”两种，分别用L1、L2表示；“L1”表示手动润滑（脂）；“L2”表示自动润滑脂；
7	取环境英文environment首字母“E”表示防尘方式。 “E0”表示无防护；“E1”表示钣金防护；“E2”表示风琴护罩防护；
8	最后一位数字代表拖链要求Towline，现以“1”表示全密封塑料拖链，“2”表示半密封塑料拖链，“3”表示特殊要求。

### 型号含义示例：

TJG02 L (X1-020, X2-020; Y-050; Z-008), V (X<sub>1</sub>-06, X<sub>2</sub>-06; Y-08; Z-06), A (X<sub>1</sub>-08, X<sub>2</sub>-08; Y-09; Z-07), L2 E0 1  
通锦四轴桁架机械手；载荷为0.2t；X<sub>1</sub>和X<sub>2</sub>轴长度皆为2m，Y轴长度5m，Z轴长度0.8m；X<sub>1</sub>和X<sub>2</sub>轴额定速度皆为0.6m/s，Y轴额定速度0.8m/s，Z轴额定速度0.6m/s；X<sub>1</sub>和X<sub>2</sub>轴加速度皆为0.8m/s<sup>2</sup>，Y轴加速度0.9m/s<sup>2</sup>，Z轴加速度0.7m/s<sup>2</sup>；自动润滑脂润滑方式；无防护要求；采用全密封塑料拖链。

TRUSS MANIPULATOR STYLE  
桁架机械手样式

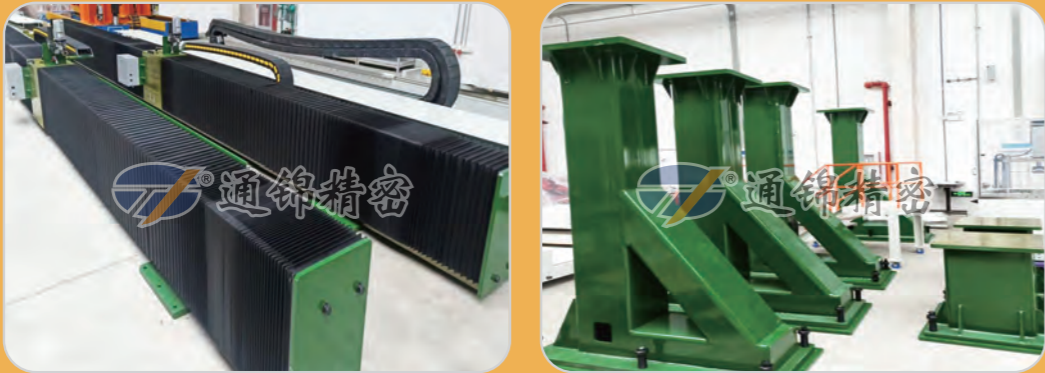


龙门桁架



Gantry Truss

风琴护罩龙门桁架



Organ Guard Gantry Truss

龙门滚轮桁架横梁



Gantry roller truss beam

重型龙门桁架



Heavy duty gantry truss

重型龙门桁架



Heavy duty gantry truss

龙门桁架



Gantry Truss

# 应用案例

## APPLICATIONS



工程机械龙门桁架  
Construction machinery gantry truss



优异材质  
Excellent material



持久耐用  
Durable



精密加工  
Precision Machining



高效工作  
Work efficiently



人性设计  
Human design



# INTRODUCTION TO THE FUNCTION OF THE LOADING AND UNLOADING MECHANISM

## 上下料机机构功能简介

### 链条输送机主要技术参数

- (1)最大负载6000kg
- (2)输送长度在4430mm
- (3)输送宽度在1400-2800mm
- (4)速度变频调速0.5-6m/min
- (5)链条输送机有三组行程开关和一组接近开关控制料到达准确位置

1

### 电动升降机举料主要技术参数

- (1)升降台最大负载在3000kg内
- (2)升降机升降变频调速在0.5-10m/min

2

### 成品置料架主要技术参数

- (1)最大负载4000kg内
- (2)可以放置工件长度1400-2800mm
- (3)可以放置直径500mm工件一件或者直接250mm工件三件
- (4)安装了聚氨酯减震垫

3

### 1- Main technical parameters about chain inslant freeze:

- (1)Max.load 6000kg.
- (2)Conveying length is 4430mm.
- (3)Conveying width is 1400-2800mm.
- (4)Speed frequency control 0.5-6m/min.
- (5)There are three sets of travel switches and a set of approach switch in the chain conveyor to control the workpiece to reach the precisely position.

### 2- Main technical paramenters about the electric life:

- (1)Max.load of the lift table is within 3000kg.
- (2)Lifting frequency control of the lifter 0.5-10m/min.

### 3- Main technical parameters about the finished parts rack:

- (1)Max.load is within 4000kg.
- (2)Length range of the placed workpiece is 1400-2800mm.
- (3)It can be placed with 1 pcs workpiece with diameter 500mm Or 3pcs workpiece with diameter 250mm.
- (4)Polyurethane cushion is installed.



# INTRODUCTION TO THE FUNCTION OF THE POSITIONER

## 变位机功能简介

### 变位机主要技术参数

- (1)夹持工件长度范围1400-2800mm
- (2)夹持工件直径范围200-500mm
- (3)适用工件重量在2000kg内
- (4)旋转台主轴速度为0.5-10r/min可任意调速
- (5)转台与尾架水平方向定位精度±1min
- (6)支撑台的垂直定位精度±1min

- (1) 自由度: 360°
- (2) 载荷: 50T
- (3) 重复定位精度: ±0.2mm
- (4) 回转最大速度: 55°/S
- (5) 倾斜最大速度: 55°/S
- (6) 回转角度: ±180°
- (7) 倾斜角度: ±75°
- (8) 安装方式: 落地式
- (9) 许用回转半径: 550mm
- (10) 驱动方式: 高精度伺服电机

### Main technical parameters about positioning equipment:

- (1)Length range of clamping workpiece 1400-2800mm.
- (2)Diameter range of clamping workpiece 200-500mm.
- (3)Suitable workpiece weight is within 2000kg.
- (4)Spindle speed of the ratary table is 0.5-10r/min(speed can be adjusted).
- (5)Horizontal positioning accuracy of rotary table and tailstock +/-min.
- (6)The vertical positioning accuracy of the support table is ±1min.

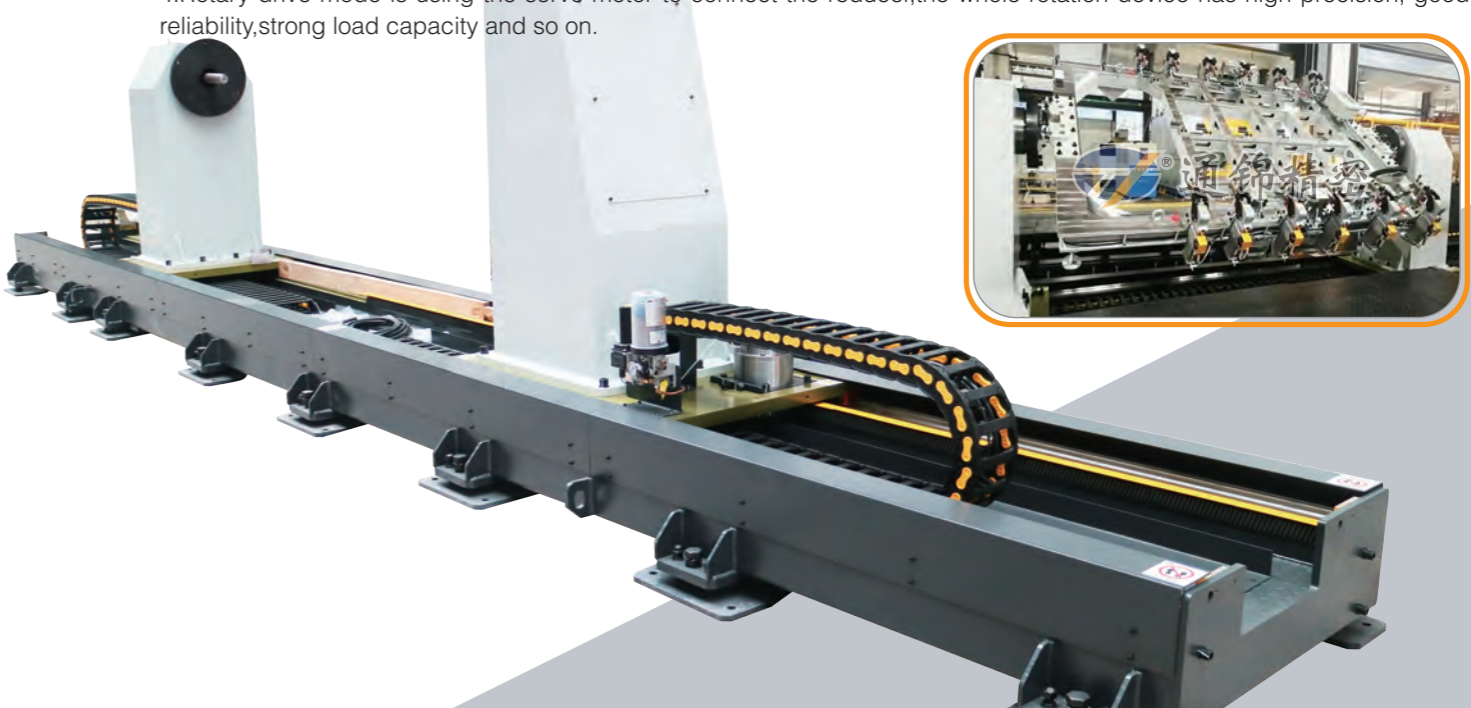
- (1)Degree of freedom: 360°
- (2)Load: 50T
- (3)Repeat positioning accuracy: ±0.2mm
- (4)Max.rotating speed: 55°/S
- (5)Max.tilting speed: 55°/S
- (6)Rotating angle: ±180°
- (7)Tilting angle: ±75°
- (8)Installation method: floor stand
- (9)Permissible rotary radius:550mm
- (10)Drive mode:High precision servo motor



### 功能及特点

- 1、变位机机座由钢件型材焊接、钣金件组装而成，整体钢性好，强度高，表面喷漆防锈，结构紧凑、小巧，外形美观。
- 2、旋转主轴采用专业厂家加工定制，严格按照轴的加工工艺、热处理，高精度，高钢性。轴承采用专用滚动轴承，承载能力强，寿命长。
- 3、摆动驱动方式采用伺服电机直连减速器，整个摆动装置精度高，具有高抗弯矩能力。
- 4、旋转驱动方式采用伺服电机连接减速器，整个旋转装置精度高，可靠性好，负载能力强等特点。

- 1.Stand of the positioning equipment is assembled by the welding steel profile,sheet metal: made by the whole steel; The overall rigidity is good,high strength,the surface spray for rust,compact,beautiful appearance.
- 2.Rotary spindle is custom-made by the professional manufacturers, strictly accordance with the the processing technology of the axis, heat treatment, high preciston,high rigidity.Using the professional rolling bearings,carrying capacity, long life.
- 3.Swing drive mode is using the servo motor to connect the reducer directly,the whole swing device has high precision and high bending resistabce.
- 4.Rotary drive mode is using the servo motor to connect the reducer,the whole rotation device has high precision, good reliability,strong load capacity and so on.





自动装配产线  
Automatic assembly line



机器人焊接解决方案  
Robotic Welding Solutions



数控机床上下料解决方案  
CNC machine tool loading and unloading solutions



机器人视觉检测  
Robot Vision Inspection

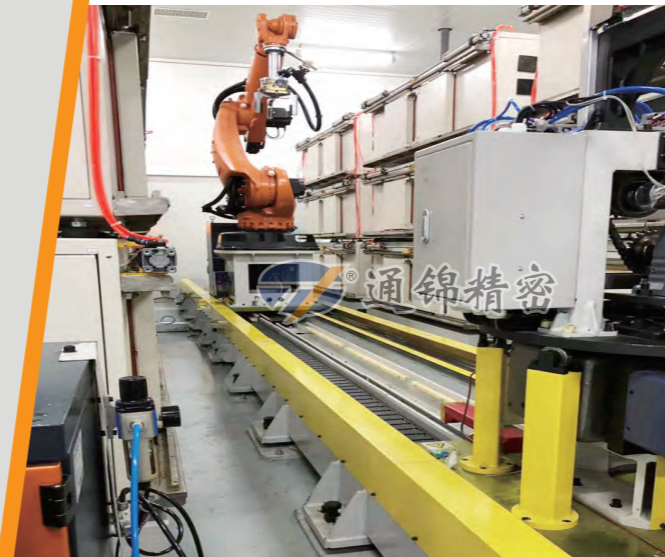
ROBOT INTEGRATION APPLICATION  
TONGJIN CAN PROVIDE FOR YOU  
机器人集成应用 通锦可为您提供



自动装配生产线  
Automatic assembly line

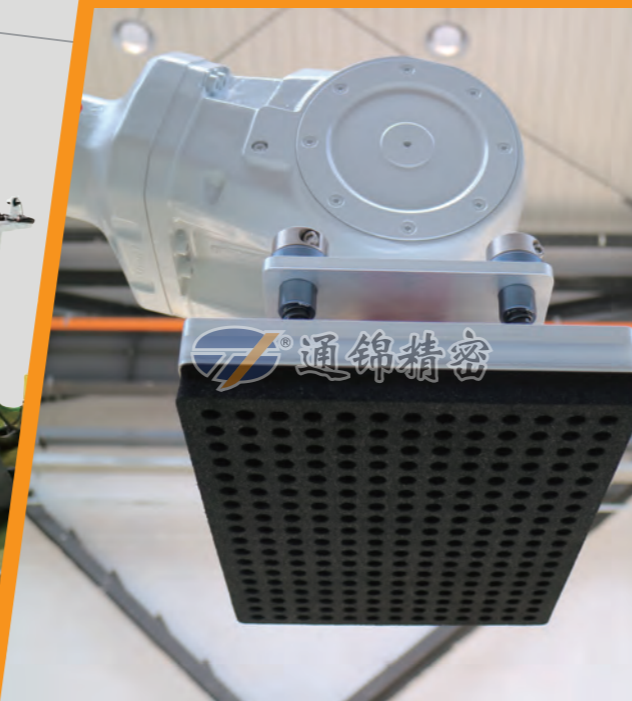
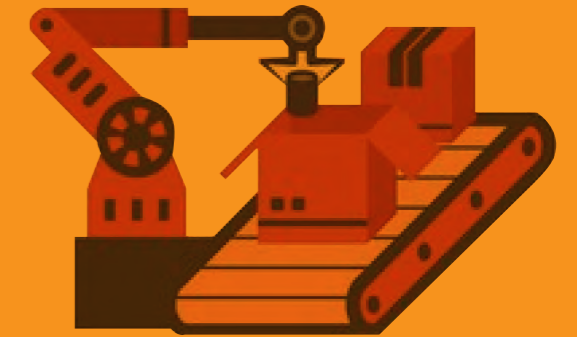
# 数控车床上下料机器人

Manipulator for workpiece load/unload of the CNC machine tools



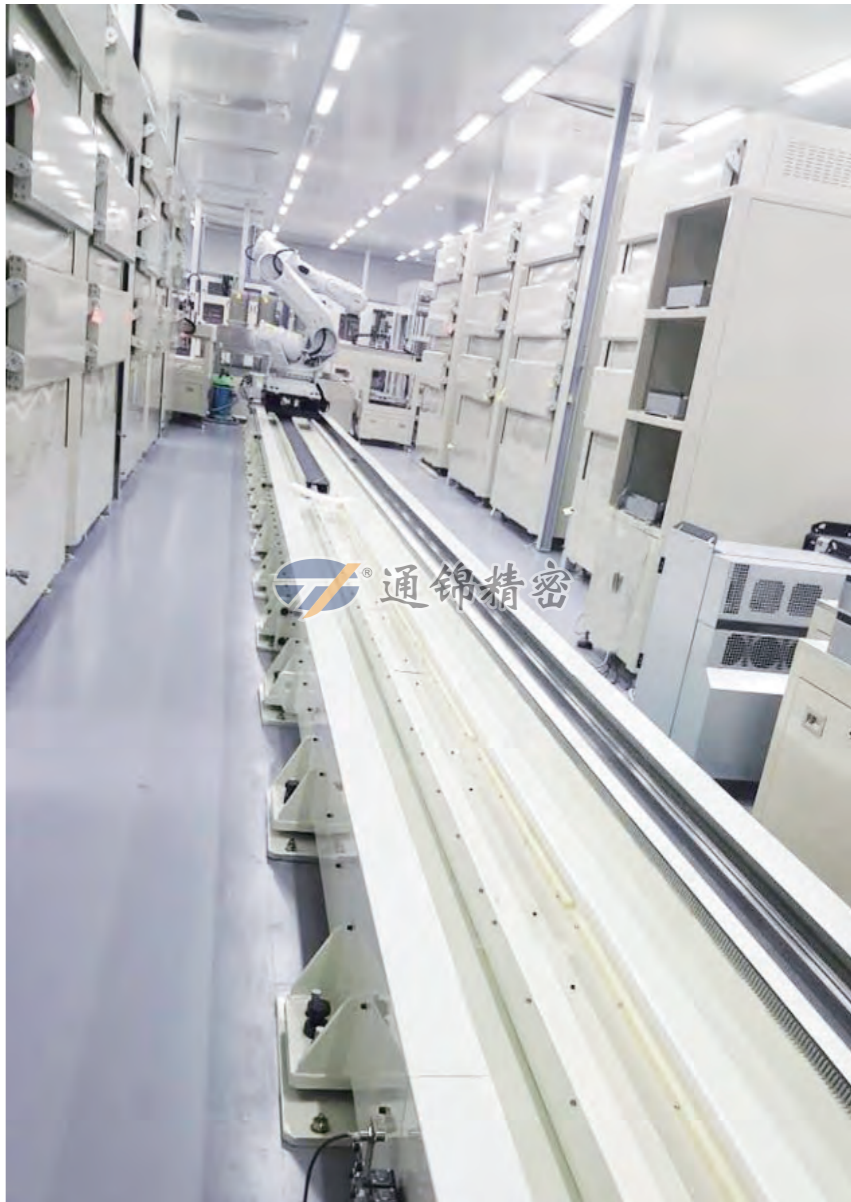
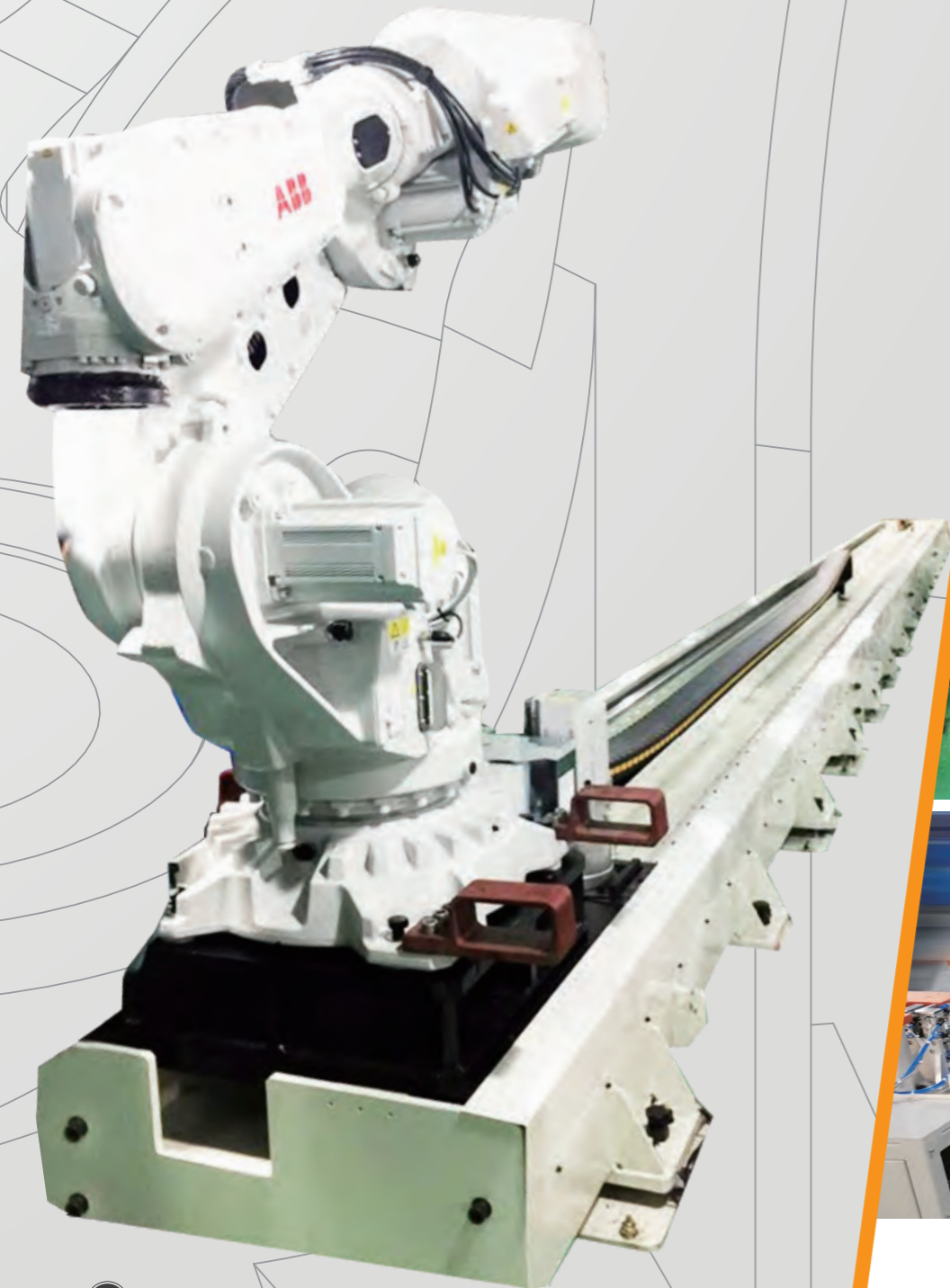
# 包装码垛上下料机器人

Packaging and palletizing robot



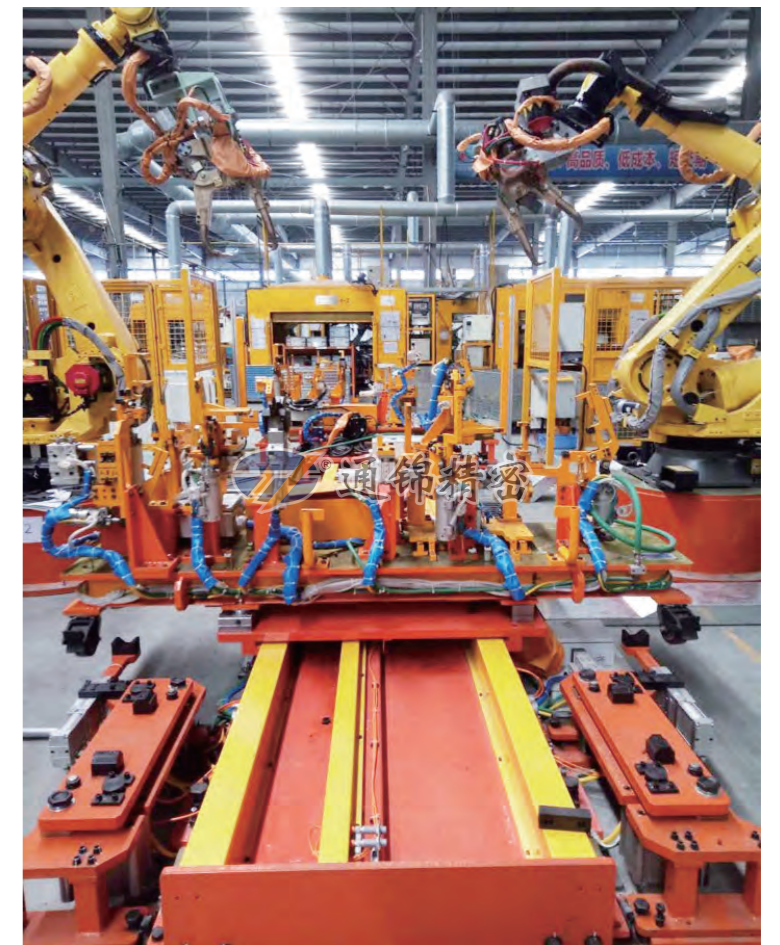
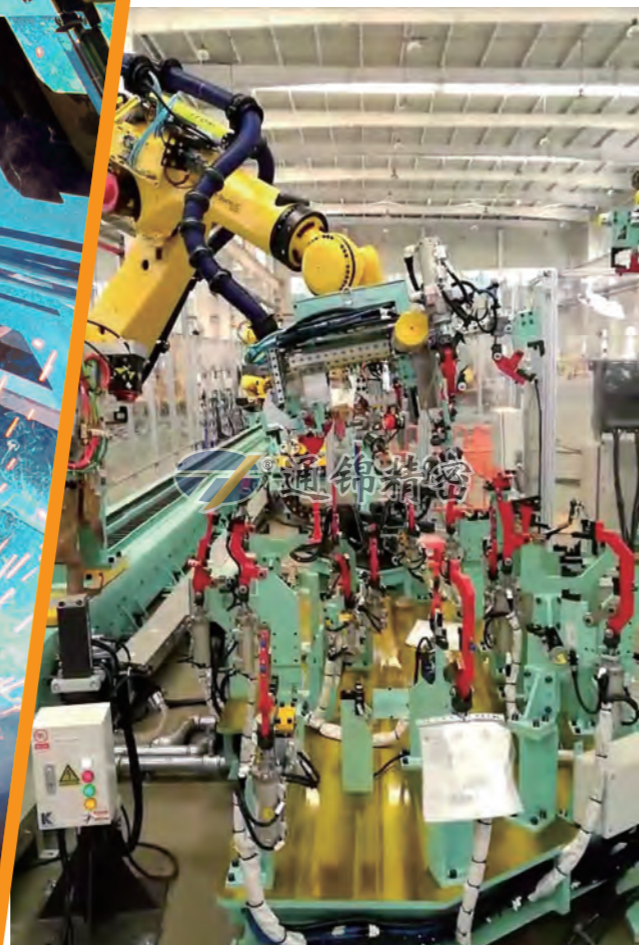
# 新能源电池电机/5G行业 机器人

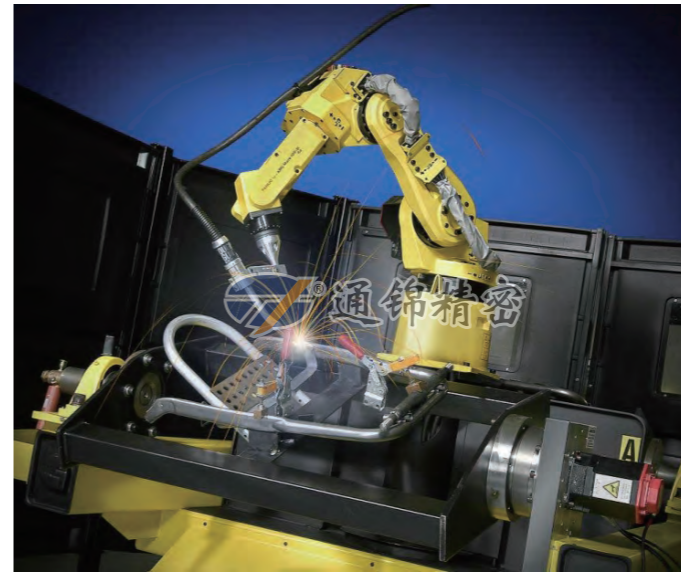
New energy battery motor/5G industry robot



# 机器人焊接解决方案

Robotic Welding Solutions





- 1、焊接
- 2、搬运
- 3、焊接
- 4、焊接
- 5、3D打印
- 6、热熔涂胶
- 7、加工
- 8、仓储
- 9、CNC加工上下料
- 10、电子类产品

1	2	3	
4	5	6	
7	8	9	10

- 1.Welding
- 2.carry
- 3.Welding
- 4.Welding
- 5.3D printing
- 6.Hot-melt gluing
- 7.Machining
- 8.Storage
- 9.Load/unlaod for CNC machining
- 10、 Electronic products

