TPA 玖钧传动 Motion Control

STEEL BASE LINEAR MODULES

钢基模组

玖钧传动·智造兴邦

玖钧传动·智造兴邦

详细代理商资料查询TPA官网 Please check TPA official website for detailed agent information

华东制造基地：East China manufacturing base:
电 话 Tel:0512-50127418
地 址：江苏省昆山市高新区莱斯路15号
Address: No.15 Laisi Road, High-tech Zone, Kunshan City, Jiangsu Province

华南制造基地：South China manufacturing base:
电 话 Tel:0755-84644758
地 址：深圳市坪山区坑梓街道金沙社区东联工业区5号玖钧产业园
Address: Jiujun Industrial Park, No.5 Donglian Industrial Zone, Jinsha Community, Kengzi Street, Pingshan District, Shenzhen City

宁波制造基地：Ningbo manufacturing base
地 址：宁波市奉化区江口街道四明东路299号启迪工业园
Address: Tu Industrial Park, 299 Siming East Road, Jiangkou Street, Fenghua District, Ningbo City

上海分公司：Shanghai Branch
地 址：上海市松江区车墩镇北松公路5255号(智兆大厦)
Address: No.5255 Beisong Highway, Chedun Town, Songjiang District, Shanghai (Zhizhao Building)

北京办事处：Beijing office:
地 址：北京经济技术开发区科创十四街6号院1号楼
Address: Building 1, Yard 6, Kechuangshisi Street, Beijing Economic and Technological Development Zone

无锡办事处：Wuxi office:
地 址：无锡新吴区浩展大厦
Address: Haozhan Building, Xinwu District, Wuxi

浙江办事处：Zhejiang office:
地 址：浙江省绍兴市上虞区江扬路888号中富大厦
Address:Zhongfu Building, 888 Jiangyang Road, Shangyu District, Shaoxing City, Zhejiang Province, China

华中办事处：Central China office:
地 址：武汉市江夏区关南四路35号东港科技产业园
Address: Donggang Science and Technology Industrial Park, No.35 Guannansi Road, Jiangxia District, Wuhan City

东莞办事处：Dongguan office:
地 址：东莞市松山湖研发五路1号林润智谷6栋
Address: Building 6, Linrun Zhigu, No.1 R&D Fifth Road, Songshan Lake, Dongguan City

深圳办事处：Shenzhen office:
地 址：深圳市龙华区龙华街道龙观东路57号时代大厦
Address: Times building, No.57,Long Guan East rd, Longhua district, Shenzhen

TPA 网站
TPA website

微信公众号
Wechat public account

ISO 9001

CE

产品型录编号:TPA-BD-ZE-004

玖钧传动
Motion Control

— 玖 钧 传 动 · 智 造 兴 邦 —

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公司简介
COMPANY INTRO

TPA玖钧传动创立于2016年10月，隶属玖钧集团，总部坐落在中国·昆山，现有苏州、深圳、宁波三大研发中心、制造基地；全国拥有十几处服务据点。产品畅销海内外主要有：中国(台湾)、日本、越南、印度、美国、欧洲。总生产面积达45000余平方米，在职员工500人+，拥有各类先进设备近400台+。

注册商标TPA，寓意：TPA玖钧传动在摸索中“Transfer”不断改变，工作中“Passion”充满激情，发展中“Active”积极进取，永远以昂扬的斗志奋发向前。

TPA玖钧传动——专注于高速高精传动产品，是一家集专业研发、生产、销售、售后、服务为一体的国家级专精特新“小巨人”企业、国家高新技术企业、江苏省级专精特新、省级技术研发中心、江苏省民营科技企业、昆山市专精特新、智能控制SCARA机器人工程技术研究中心。主要产品有：精密传动部件（精密滚珠丝杆副、精密直线导轨副）、精密直线模组（日规模组、欧规模组、电动缸、钢基模组、内嵌式铝基模组、简易模组、直线电机、直驱旋转电机）、气浮运动控制平台系统、磁悬浮智能传输系统（磁驱环形线、磁悬浮传输系统）。

TPA玖钧传动产品主要服务于：汽车、激光、光伏、3C、锂电、医疗、集成电路、半导体、数控机床、储能、军工等11大产业及其他非标自动化设备；被广泛应用于取放、搬运、定位、分类、扫描、检测、点胶、焊锡等各类作业形式，模块化的产品满足客户多元化的应用场景。

TPA玖钧传动将秉承“永远为伙伴提供优质的服务，有责方远，利他共赢”的公司使命，优化产品，不断创新，始终坚持以高效的运作，优质的产品，精益求精的精神服务客户。

TPA玖钧传动以技术为核心、产品为基础、市场为导向、出色的服务团队、打造“TPA玖钧传动 · 智造兴邦”的行业新标杆。

TPA Motion Control was founded in October 2016 and is affiliated to Jiujun Group, Our headquarters is located in Kunshan, China. We have 3 R&D centers and manufacturing bases in Suzhou, Shenzhen and Ningbo, and have more than a dozen service locations across the world. Our products sell well at china and abroad mainly in: China (Taiwan), Taiwan(China), Japan, Vintem, India, USA, Europe. Our production area reaches more than 45,000 square meters, with 500+ employees and nearly 400+ sets of various advanced equipment.

Our registered trademark TPA means: TPA Robot "Transfer" continues to make progress in the process of exploration, "Passion" is full of passion in work, "Active" is proactive in development, and we always strives to move forward with high morale.

TPA Robot focuses on high-speed and high-precision transmission products. We are a national-level specialized and new "LITTLE GIANT" enterprise integrating professional R&D, production, sales, after-sales and service. Our main products include: precision transmission components (precision ball screws, precision linear guideways), linear modules (Ball screws driven linear modules, belt driven linear modules, rack & pinion linear modules, linear motors), air-floating motion control systems, magnetic drive intelligent transmission systems (magnetic drive ring lines, magnetic levitation transmission systems).

TPA Robots products mainly serve industries such as automobiles, lasers, photovoltaics, 3C, lithium batteries, medical care, integrated circuits, semiconductors, CNC machine tools, energy storage, military industry and other non-standard automation equipment; they are widely used in pick and place , handling, positioning, classification, scanning, detection, dispensing, soldering and other types of operations, modular products meet customers' diverse application scenarios.

TPA Robot will adhere to the company mission of "always providing high-quality services to partners, being responsible, altruistic and win-win", optimizing products, constantly innovating, and always insisting on serving customers with efficient operations, high-quality products, and the spirit of excellence. .

TPA Robot takes technology as the point, product as the foundation, market as the guide, and excellent service team to create a new industry benchmark of "TPA Robot · Intelligent Manufacturing to Prosper the Nation".

>> 公司价值观 Corporate values

核心的竞争和公司的价值观是企业品牌价值的重要体现。
The core competition and the company's values are the important embodiment of enterprise brand value.

出色的营销团队，专业的产品咨询，悉心的客户服务，完善的售后体系。
Excellent marketing team, professional product consultation, attentive customer service and perfect after-sales system.

正直，尊重个人。任何讨论都以改善工作为前提。尊重差异，保护多样式的个性。
Integrity and respect for individuals.Any discussion is premised on improving the work. Respectdifferences and protect multi-style personalities.

敬业，客户至上。为客户提供无可挑剔的服务。公司在做任何事情或任何决定时都必须同时考虑到客户的感受和利益。
Dedicated, customer first.Provide impeccable service to customers. The company must consider thefeelings and interests of customers at the same time when doing anything or making any decision.

专业，充满激情。勤奋和敬业让我们出色，投入让我们生动，激情让我们卓越。
Professional and full of passion.Diligence and dedication make us outstanding, devotion makes us vivid, and passion makes us outstanding.

主动，不断创新。每个人都是推动公司前进的力量。我们崇尚个人主动创新。任何对公司有益的事情大家都会不遗余力的支持，主动配合。我们相信每个人的努力都会对公司产生深远的影响。
Initiative and continuous innovation.Everyone is a force to push the company forward. We advocate individual initiative innovation. Everyone will spare no effort to support and actively cooperate with anything that is beneficial to the company. We believe that everyone's efforts will have a profound impact on the company.

我们的优势 Our advantage

1 平台优势 Platform advantage

专业的传动组件制造厂商，有苏州、深圳、宁波三大生产制造基地和研发中心，拥有45000余平方米生产制造车间，自有加工设备近400台+，销售的产品都具有全自主知识产权。
Professional transmission component manufacturers, Suzhou, Shenzhen, Ningbo three major manufacturing bases and R & D center, with more than 45,000 square meters of production and manufacturing workshops, its own processing equipment

2 团队优势 Team advantage

公司组织架构齐全，团队核心成员均在行业耕耘十余年，团队年轻化，富有活力，勇于担当，可为客户提供准确的选型方案及其他相关咨询服务。
The company has a complete organizational structure, and the core members of the team have worked in the industry for more than ten years. The team is young, energetic and courageous, and can provide customers with accurate selection

3 技术优势 Technological advantage

公司拥有百余位行业内资深技术研发人员，可为客户提供非标定制化需求，多样灵活的方案。
The company has more than 100 senior technical research and development personnel in the industry, can provide

4 产品优势 Product advantage

核心配件自产，自给率高，立足于自动化设备传动领域，产品类别齐全，可满足客户在传动形式上多种需求。
Professional transmission component manufacturers, Suzhou, Shenzhen, Ningbo three major manufacturing bases and R & D center, with more than 45,000 square meters of production and manufacturing workshops, its own processing equipment

5 品质优势 Quality advantage

拥有先进的制造设备、专业的检测设备，完整的生产工艺流程、专业的团队，多道品质检验流程，确保产品一致性。
With advanced manufacturing equipment, professional testing equipment, complete production process, professional team, multi-channel quality inspection process to ensure product consistency.

6 服务优势 Service advantage

我司拥有全球化销售网络，办事处及专业的售后团队，更快速响应客户售前、售中、售后服务需求。
Our company has a global sales network, offices and professional after-sales team, more quickly respond to customer pre-

7 社会责任 Social responsibility

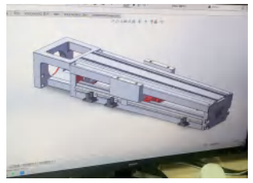
为员工提供舒适、安全、健康的工作环境，精密传动配件自产自销，打破进口依赖，摆脱“卡脖子”障碍，专注高速高精传动产品，为国家智能制造发展添砖加瓦。
To provide employees with a comfortable, safe and healthy working environment, self-production and self-marketing of precision transmission parts, breaking the import dependence, getting rid of the "jam neck" barrier, focusing on high-speed

8 价格优势 Price advantage

规模大、产能高、编制精、人员结构稳定;可帮助客户降低生产成本，提高产品利润及市场竞争力。
Large scale, high production capacity, fine establishment, stable personnel structure; It can help customers reduce

TPA公司环境
Company Environment

TPA模组生产流程
Production process



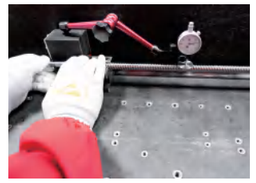
1. 按照客户需求设计定制图纸。
Design customized drawings according to customer requirements.

2. 订单确认，客户回传合同及图纸。
Order confirmation, Customers return contracts and drawings.

3. 按照图纸CNC生产加工。
CNC production and processing according to drawings

4. 检查底座垂直度。
Check the verticality of the base.

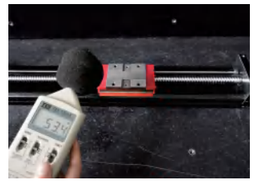
5. 检查底座平面度。
Check the flatness of the base.



6. 检查螺杆全跳动。
Check the full run-out of the screw.

7. 检查有无卡顿情况。
Check for any stuck condition.

8. 通电测试重复定位精度。
Test the accuracy of repeated positioning by electrifying.



9. 模组运行噪音检测。
Running noise detection of module.


TPA 玖钧传动 Motion Control

线性模组出厂检验报告
FACTORY INSPECTION REPORT OF LINEAR MODULE

产品名称_____ 客户型号_____
产品型号_____ 订单号_____

检验项目							检验人
1	检查包装是否精细						
2	检查滑台表面有无明显划伤碰痕						
3	导轨螺栓是否打平或点胶						
4	滑台两侧安装孔位是否完整						
5	丝杆两端螺纹是否完整无损伤螺牙是否平滑						
6	检查两端面螺纹是否完整						
7	各部位螺丝紧固无松动						
8	产品外观无污渍等异物						
9	确认两端丝杆轴承是否与图纸相符						
10	外观检查						
11	马达型号	法兰	轴径	长L	安装马达减速机		
12	减速比	法兰	轴径	长L			
测试							
测试数据与测试表格							检验人
1	10cm测试重复行程精度						
2	整体精度测试结果						
3	轴向窜动测试结果						
4	噪音值	dB(A)以下	实际				
5	20cm空载电流	mA以下	实际				
组件确认							检验人
丝杆规格	导程	长	公差精度	C7(mm)			
丝杆数量	个	内螺距	条	滑块数	套	导轨数	条
丝杆支撑	一端	两端	支	滑块型号	套	导轨型号	套
丝杆支撑	一端	两端	支	导轨数	套	导轨型号	套
联轴器	型号		数量	连接线	型号	数量	
客户确认部分							检验人员
客户检验确认人		确认日期：		随货物出厂			
备注事项			备注				

检验日期：_____年_____月_____日

玖钧传动·智造兴邦
www.tparobot.cn

滑台出厂均附有相应检验报告，确保产品符合使用要求，方准予出厂。

The sliding table is shipped with the corresponding inspection report to ensure that the products meet the use requirements, and the sliding table is allowed to leave the factory.

综合解说
Comprehensive explanation

注意事项 Matters needing attention

钢基模组系列产品属于机电设备，为维护使用者的安全，在选择机型及实际操作本产品之前，请务必详细阅读相关型录及下列注意事项并依照指示使用，若未依照本注意事项使用本产品而造成功能异常、损坏或其他事故本公司概不负责。

Steel module series products belong to mechanical and electrical equipment. In order to maintain the safety of users, please read the relevant catalogues and the following precautions carefully before selecting models and actually operating this product. And use it according to the instructions. If the product is not used according to this notice, the company will not be responsible for abnormal function, damage or other accidents.

人生安全 Life safety

- ✻ 本产品适用于工业用途，不可应用在直接与人命或人员相关的保安元件上。
- ✻ 本产品操作运转时人员应维持在机械动作范围外,以免夹伤或发生其他安全事故。
- ✻ 本产品接装电机并通电时，装置心律调节器者应维持在一公尺距离外，以免受到干扰。
- ✻ 本产品勿装置在火源、易燃物、可燃气体附近，以防火灾。

This product is suitable for industrial use, and cannot be applied to security components directly related to human life or personnel.
During the operation of this product, personnel should be kept out of the range of mechanical action to avoid pinching or other safety accidents.
When this product is connected to the motor and powered on, the pacemaker should be kept at a distance of one meter to avoid interference.
This product should not be installed near fire sources, inflammables and combustible gases to prevent fire.

储放与安装 Storage and installation

- ✻ 搬运时应避免坠落或碰撞。
- ✻ 储放本产品时，建议平放并应妥善包装,避免暴露于高温、低温、潮湿的环境。
- ✻ 切勿自行拆解或改装本产品，以免异物进入或产品破坏，造成功能异常或工安事故。
- ✻ 安装时应将本产品锁固，以免因振动松脱。
- ✻ 安装联轴器及电机时，须选用适当的元件，并注意对准轴中心线后将螺丝锁固，切勿强行安装。

Avoid falling or collision when handling.
When storing this product, it is recommended to lay it flat and properly package it to avoid exposure to high temperature, low temperature and humidity.
Do not disassemble or modify this product by yourself, so as to avoid foreign matter entering or product damage, resulting in abnormal function or work safety accidents.
When installing, lock the product to avoid loosening due to vibration.
When installing the coupling and motor, select appropriate components, and pay attention to lock the screws after aligning with the axis center line, and do not install them forcibly.

操作使用 Operation use

- ✻ 操作时须依照型录记载的额定条件,例如最高转速、负荷等，以免造成功能损坏或工安事故。
- ✻ 应避免粉尘、切屑等异物侵入滚珠循环系统内，造成损坏、寿命减短或功能异常。
- ✻ 操作环境温度应在80℃以下，若需应用在高温场所的产品，请洽谈TPA业务。
- ✻ 环境特殊时，例如强大振动、真空室、无尘室、腐蚀性化学物、有机溶剂或药剂、极高温或低温、潮湿溅水、油滴油雾、高盐分、重负荷、垂直或悬臂安装等，请先洽谈TPA业务确认本产品适用条件。
- ✻ 垂直安装时,负载有坠落的危险,建议加装适当的刹车,并于使用前确认刹车功能正常。

Operation shall be in accordance with rated conditions recorded in catalogue, such as maximum speed and load, so as to avoid functional damage or work safety accidents.
Avoid dust, chips and other foreign bodies invading the ball circulation system, causing damage, shortened service life or abnormal function.
The operating temperature should be below 80°C. If you need to apply products in high temperature places, please discuss TPA business.
Under special circumstances, such as strong vibration, vacuum chamber, clean room, corrosive chemicals, organic solvents or chemicals, extremely high or low temperature, wet splashing water, oil droplets and fog, high salinity, heavy load, vertical or cantilever installation, etc., please negotiate TPA business first to confirm the applicable conditions of this product.
During vertical installation, the load is in danger of falling. It is recommended to install appropriate brakes, and make sure that the brake function is normal before use.

维护 maintenance

- ✻ 初次使用前应先将润滑油补满，请注意油品种类，不同的润滑油不可混用。
- ✻ 正常使用状况下建议每行100km应检查运转状况一次‘清除积污’并补充润滑油导轨及螺杆均应保持润滑。

Fill up the lubricating oil before using for the first time. Please pay attention to the types of oil products. Different lubricating oils cannot be mixed.
Under normal operating conditions, it is recommended to check the operating condition once every 100km to' clean up accumulated dirt' and replenish lubricating oil. Guide rails and screws should be kept lubricated.

产品特色 Product features

- ✻ 产品多样化可搭配需要选用。
- ✻ 驱动方式:滚珠螺杆。
- ✻ 电机出力:可自行选配伺服电机或步进电机。
- ✻ 电机连接:直接、上接、下接、左接、右接，依使用空间而定。
- ✻ 有效行程:50～1600mm（依螺杆转速限制）。
- ✻ 组装与维护容易。
- ✻ 可依顾客需要做客制化、单件或组合件的特殊设计制造。
- ✻ 单轴可组合成多轴使用。

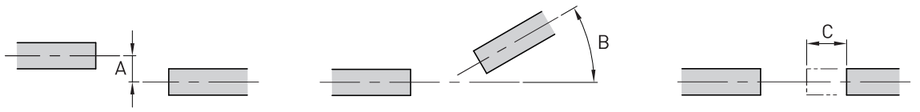
Diversified products can be matched and needed to be selected.
Driving mode: ball screw.
Motor output: servo motor or stepping motor can be selected.
Motor connection: direct, upper connection, lower connection, left connection and right connection, depending on the use space.
Effective travel: 50 ~ 1600 mm (limited by screw speed).
Easy to assemble and maintain.
According to customers' needs, we can make customized, single-piece or combined special design and manufacture.

电机法兰座、电机与联轴器安装注意事项 Precautions for installation of motor flange seat, motor and coupling

✻ 螺杆肩部与电机轴两轴组装时，需注意以下三种基本偏差，说明图示如下:

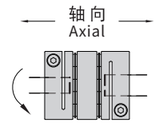
When assembling the screw and the motor shaft, the following three basic deviations should be paid attention to. The illustration is as follows:

1、偏心（A）Eccentricity　　2、偏角（B）Deflection　　3、轴向位移（C）Axial displacement



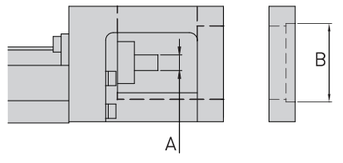
✻ 两轴中心线简易校准确认方式，可将位于螺杆肩部与电机轴间的联轴器处于松动状态下，转动联轴器，确认联轴器是否能够沿轴向旋转方向轻轻移动，以确认两轴心的同心度，说明图示如右：

A simple calibration and confirmation method of two shaft centerlines can loosen the coupling between the shoulder of the screw and the motor shaft. Next, turn the coupling to confirm whether the coupling can move gently along the axial rotation direction to confirm that the two axes are the same. Heart, the illustration is as shown on the right:



✻ 螺杆肩部（A)与电机法兰座定位孔（B)的同心度，请制作轴孔同心治具协助安装，说明图示如下：

For the concentricity of the screw shoulder (A) and the positioning hole (B) of the motor flange seat, please make a concentric jig for the shaft hole to assist the installation. The illustration is as follows:



安装注意事项：Installation precautions:

1.电机法兰座安装时，请注意电机法兰座定位孔与螺杆肩部的偏差需在联轴器相关容许偏差值内。
2.螺杆肩部与电机轴两轴的偏差过大时，仍强行装上联轴器，会造成联轴器或螺杆肩部断裂的情况产生，所以请确认两轴的偏差是在联轴器可以容许偏差值内。
3.选用联轴器时，建议选择可吸收偏心、偏角与轴向位移的挠性联轴器。

1. When installing the motor flange seat, please note that the deviation between the positioning hole of the motor flange seat and the shoulder of the screw should be within the allowable deviation of the coupling.
2. When the deviation between the screw shoulder and the motor shaft is too large, the coupling is still forcibly installed, which will cause the fracture of the coupling or the screw shoulder, so please make sure that the deviation between the two shafts is connected. The shaft can be within the allowable deviation.
3. When selecting coupling, it is recommended to choose flexible coupling which can absorb eccentricity, deflection angle and axial displacement.

选型步骤 Selection step

单轴机器人产品的选用,依不同使用条件及限制,可参考下列选用流程。
The selection of single-axis robot products can refer to the following selection process according to different use conditions and restrictions.

1、使用条件 1. Conditions of use
- ✻ 有效行程 Effective itinerary.
- ✻ 空间位置限制(宽度、高度、长度) Spatial restrictions (width, height, length).
- ✻ 安装方式(水平、垂直、侧挂) Installation method (horizontal, vertical, side hanging).
- ✻ 负载重心位置 Load center of gravity position.
- ✻ 运转条件(导程、速度、加减速度、工作周期) Operating conditions (lead, speed, acceleration and deceleration, working cycle).
- ✻ 使用环境(高温、振动、油、水、腐蚀) Service environment (high temperature, vibration, oil, water, corrosion).

2、要求精度 2. Accuracy is required.
- ✻ 位置精度 Position accuracy.
- ✻ 重现精度 Reproduction accuracy.
- ✻ 行走平行度 Walking parallelism.

3、应用形式 3. Application form
- ✻ 单轴 Uniaxial.
- ✻ 两轴 Two axes.
- ✻ 多轴 Multi-axis.
- ✻ 特殊组合 Special combination.

4、电机选用 4. Selection of motor
- ✻ AC伺服电机 AC servo motor.
- ✻ 步进电机 Stepping motor.
- ✻ 有无刹车(内附、外挂) With or without brakes (internal and external).

5、电机负载计算 5. Calculation of motor load
- ✻ 最高速度 Top speed.
- ✻ 电机解析度 Motor resolution.
- ✻ 电机扭矩计算 Calculation of motor torque.

6、运转分析 6. Operation analysis
- ✻ 加速度 Acceleration.
- ✻ 实际运转模式 Actual operation mode.

7、其他配件 7. Other accessories
- ✻ 相关配件选用 (极限开关、转接板、伸缩护套、电缆保护管) Selection of related accessories (limit switch, adapter plate, telescopic sheath, cable protection tube)

8、最终确认 8. Final confirmation
- ✻ 使用条件再确认 Re-confirm the use conditions.
- ✻ 价格、交期 Price and delivery date.
- ✻ 追加加工 Additional processing.
- ✻ 特殊要求 Special requirements.

精度 accuracy

精度包含准确度与精密度,如下说明：Accuracy includes accuracy and precision, as follows:

1、定位精度(准确度) Positioning accuracy (accuracy)

模组由基准点沿一方向移动,最终实际到达的距离与原设定到达的距离的最大差异值(绝对值)称之为定位精度。

The module moves in one direction from the reference point, and the maximum difference (absolute value) between the final actual distance and the original set distance is called positioning accuracy.

2、往返位置重现性(精密度) Reproducibility (precision) of round-trip position

指定位重现性,表示钢基模组往返移动过程中,在某一设定位置测得的位置差异值,以全行程中的最大值称之往返位置重现性。

Specified bit reproducibility, which means the position difference value measured at a certain set position during the reciprocating movement of the steel-based module, and the maximum value in the whole journey is called the reciprocating position reproducibility.

3、行走平行度 Walking parallelism

(1)指钢基模组的滑台平面与模组安装平面之间的平行度。量表架于滑台平面中央,指针置于安装平面上,取全行程量测的最大差异。

(2)指钢基模组的滑台与模组安装基准面之间的平行度。量表架于滑组侧边安装基准面上,取全行程量测的最大差异值。

(1) refers to the parallelism between the sliding table plane of the steel-based module and the module installation plane. The gauge is placed in the center of the plane of the sliding table, and the pointer is placed on the installation plane, so as to take the maximum difference of the whole stroke measurement.
(2) It refers to the parallelism between the sliding table of the steel-based module and the module installation datum plane. The gauge is mounted on the mounting datum at the side of the sliding block, and the maximum difference value of the whole stroke measurement is taken.

速度 Speed

1、最大线速度 Maximum linear velocity

钢基模组最大线速度(V)系由滚珠螺杆最高转速(S)乘以导程(L)计算而得。
The maximum linear velocity (V) of the steel base module is calculated by multiplying the maximum rotational speed (S) of the ball screw by the lead (L).

$$V(mm/sec)=S(rpm)\div 60\times L(mm)$$

2、最高转速 Maximum speed

表示滚珠螺杆的最大容许转速由其临界转速而定。螺杆转速超过临界转速时将可能发生共振。
临界转速和螺杆长度有关,因此,滚珠螺杆的临界转速也间接决定的有效行程和总长度。
滚珠螺杆的最大容许转速计算方式如下:
Indicates that the maximum allowable rotational speed of the ball screw depends on its critical rotational speed. Resonance may occur when the screw speed exceeds the critical speed.
The critical speed is related to the screw length, so the critical speed of the ball screw indirectly determines the effective stroke and total length.
The maximum allowable speed of ball screw is calculated as follows:

$$Np=0.8\times 2.71\times 10^{8}\times \frac{M_f d_r}{L_t^2}$$

N_P = 最大容许转速 [rpm]
M_f = 组装型式系数,Mf=0.689
d_r = 螺杆根径 [mm]
L_t = 轴承间的螺杆跨距 [mm]

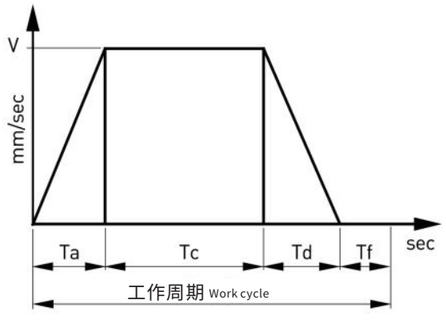
N_P = Maximum allowable speed [rpm]
M_f = assembly type coefficient, MF = 0.689
d_r = screw root diameter [mm]

3、加减速度 Acceleration and subtraction speed

所谓速度系指滑台设定的运转工作速度,滑台须自停止状态开始加速,达工作速度后维持该速度往目的地移动,抵达前开始减速,终至停止。
加减速度由使用者依实际使用需要而定,钢基模组设计时,加速度的设定：导程 5 以下以0.15G计算,其他导程均以0.3G计算。
1G=9.8m/s²;则0.15G=1470mm/s²;0.3G=2940mm/s²。钢基模组最大可搬质量须依加速度而定。
*注意：加减速度将使搬运的质量产生惯性负荷,加减速度愈大,可搬质量愈小。过大的加减速度会产生大的冲击力,应避免之。
The so-called speed refers to the running working speed set by the sliding table. The sliding table must start to accelerate from the stop state, maintain the speed to move to the destination after reaching the working speed, and start to slow down before arrival, and finally arrive. Stop.
The acceleration and deceleration speed is determined by the user according to the actual use needs. When designing the steel-based module, the acceleration is set as follows: 0.15G for lead 5 or less, and 0.3G for other leads.
1G=9.8m／s²; 0.15g = 1470mm/s; 0.3G=2940mm／s²。The maximum movable mass of the steel base module depends on the acceleration.
* Note: The acceleration and deceleration will cause inertia load to the handling quality. The greater the acceleration and deceleration, the smaller the movable quality.

4、工作周期 Work cycle

工作周期由客户依实际需要决定。常用工作周期如下图所示,包括加速时间Ta、等速时间Tc、减速时间Td、停留时间Tf。
The work cycle is determined by the customer according to the actual needs. Common working cycles are shown in the figure below, including acceleration time Ta, constant speed time Tc, deceleration time Td and residence time Tf.



加速度=V/Ta
减速度=V/Td
工作周期(sec)=Ta + Tc + Td + Tf
工作时间=工作周期×次数
运转率=工作时间/(工作时间 + 停机时间)
运转率需配合电机负荷而定,通常不宜长时间连续不停的工作,建议以0.5为准。
Acceleration = v/Ta
Deceleration = V/Td
Work cycle (sec) = Ta-Tc-Td-Tf
Working time = working period× times
Operating rate = working time/(working time/downtime)
The operating rate depends on the motor load, and it is usually not suitable to work continuously for a long time. Recommendation 0.5 shall prevail.

电机负载计算 Motor load calculation

1、确认负载机构的运动条件要求，包括加减速度，运动速度，机构的重量，机构的运动方式。
Confirm the movement conditions of the loading mechanism, including acceleration and deceleration, movement speed, weight of the mechanism and movement mode of the mechanism.

2、负载之惯量计算 Calculation of inertia of load

直线运动负载惯量计算方式：Calculation method of linear load inertia:

$$J_L = W \times \left(\frac{V}{2 \times \pi \times N \times 10} \right)^2 = W \times \left(\frac{\triangle S}{20 \times \pi} \right)^2$$

J_L：负载惯量，计算至电机输出轴[kg·cm^2]
V：负载直线运动速度[mm/min]
ΔS：电机转一圈，负载的移动量[mm]
W：负载重量[kg]
N：电机转速[r/min]

J_L： load inertia, calculated to the output shaft of the motor [kg cm^2]
V：linear movement speed of load [mm/min]
ΔS：the movement of the load [mm] when the motor rotates once.
W：load weight [kg]
N：Motor speed [r/min]

3、由负载惯量与电机惯量的比例原则，选出适当的电机规格。
According to the proportional principle of load inertia and motor inertia, the appropriate motor specification is selected.

4、将选定的电机惯量合并负载惯量，计算出加速转矩及减速转矩。
Combine the selected motor inertia with the load inertia to calculate the acceleration torque and deceleration torque.

加速转矩：Acceleration torque:

$$T_a = \frac{(J_L + J_M) \times N}{9.55 \times 10^4 \times T_{psa}}$$

J_L：负载惯量，计算至电机输出轴[kg·cm^2]
J_M：电机惯量[kg·cm^2]
N：电机转速[r/min]
T_{psa}：加速时间[s]
T_{psd}：减速时间[s]

减速转矩：Deceleration torque:

$$T_d = \frac{(J_L + J_M) \times N}{9.55 \times 10^4 \times T_{psd}}$$

J_L： load inertia, calculated to the output shaft of the motor [kg cm^2]
J_M： Motor inertia [kg cm^2]
N： Motor speed [r/min]
T_{psa}: Acceleration time [s]
T_{psd}: Deceleration time [s]

5、依据负载重量，安装方式，磨擦系数，电机效率，计算出等速运动时的负荷转矩。
According to the load weight, installation method, friction coefficient and motor efficiency, the load torque at constant speed is calculated.

$$T_L = \frac{F \times V}{2 \times 10^3 \times \pi \times \eta \times N} = \frac{F \times \triangle S}{2 \times 10^3 \times \pi \times \eta}$$

J_L：直线运动时的轴向力 $F=F_C+\mu x(Wxg+F_0)$
T_L：负荷转矩[N·m]
F_C：轴方向的外加作用力[N]
F_0：负载对SR模组的外加正压力[N]
W：负载重量（含滑台）[kg]
μ：磨擦系数
η：机械效率
V：负载直线运动速度[mm/min]
N：电机转速[r/min]
g：重力加速度（9.8m/s^2）
ΔS：电机转一圈，负载的移动量[mm]

J_L： Axial force in linear motion
T_L： Torque [N m]
F_C： Axial applied force [N]
F_0： External positive pressure on the loaded SR module [N]
W： Weight (including sliding table) [kg]
μ :coefficient of friction
η :Mechanical efficiency
V :Linear motion speed of load [mm/min]
N :Motor speed [r/min
g :Gravity acceleration (9.8m/s^2)
ΔS :The movement of the load [mm] after one revolution of the motor.

6、选定电机的最大输出转矩，须大于加速转矩和负荷转矩相加的和；如果不符合条件，必须选用其他型号，再计算验证至符合要求为止。
The maximum output torque of the selected motor must be greater than the sum of acceleration torque and load torque; If it does not meet the requirements, other models must be selected and then calculated. Until it meets the requirements.

7、依据负荷转矩、加速转矩、减速转矩及保持转矩，求出连续实效转矩。
According to the load torque, acceleration torque, deceleration torque and holding torque, calculate the continuous effective torque.

$$T_{RMS} = \sqrt{\frac{T_a^{\,2} \times T_{psa} + T_L^{\,2} \times t_c + T_d^{\,2} \times T_{psd} + T_{LH}^{\,2} \times t_h}{T_f}}$$

T_{psa}：加速时间[s]
T_{psd}：减速时间[s]
T_f ：周期时间
T_L ：负荷转矩[N·m]
T_{LH} ：保持转矩（水平运动时，T_{LH}=0）

T_{psa}: Acceleration time [s]
T_{psd}: Deceleration time [s]
T_f : Periodic time
T_L : Torque [N m]
T_{LH} : Holding torque (when moving horizontally T_{LH}=0)

t_c：等速时间[s]
t_h：停止时间[s]
T_a：加速转矩
T_d：减速转矩

t_c : Isokinetic time [s]
t_h : Stop time [s]
T_a : Acceleration torque
T_d : Deceleration torque

8、选定电机的额定输出转矩必须大于连续实效转矩；如果不符合条件，必须选用其他型号，再计算验证至符合要求为止。
The rated output torque of the selected motor must be greater than the continuous effective torque; If it does not meet the requirements, other models must be selected, and then calculated and verified to meet the requirements. Until now.

安装 Installation

滚珠螺杆型式若确定用途为垂直方向(z轴)请注意，垂直安装属于特殊使用状态，承载负荷请在表列最大可搬重量(直立)范围内使用，除此之外，时规皮带型式禁止垂直方向使用。

*注意：为防止负载滑落,垂直安装时,采用电机宜含刹车。
If the ball screw type is determined to be used in the vertical direction (Z axis), please note that the vertical installation is a special use state, and the bearing load should be used within the maximum movable weight (vertical) listed in the table, except that Besides, it is forbidden to use the timing belt type in the vertical direction.
* Note: In order to prevent the load from slipping, when installing vertically, the motor should include brakes.

保养 Maintenance

钢基模组需要维修保养的部分包括滚珠螺杆、U型导轨及相关配件。每三个月或每行走100公里的距离后，必须对滚珠螺杆和直线导轨

Parts of the steel base module that need maintenance include ball screws, U-shaped guide rails and related accessories. Every three months or every 100 kilometers, lubricant must be added to the ball screw and linear guide rail, and please check whether there is any dirt or debris in the system. If the grease becomes dirty, please replace the grease. Please contact TPA if you have any special maintenance problems.

产品应用 Product application

钢基模组系列产品用途广泛，一般自动化设备均可应用，举例如下：
自动锡焊机、锁螺丝机、料架零件盒取放、小型堆栈、黏胶涂布机、零附件取放搬运、CCD镜头移动、自动喷漆机、自动上下料装置、切割机、电子元件生产设备、小型装配线、小型压台、点焊机、表面复膜制程、自动贴标签机、液料灌注分装、零附件检验设备、生产线工件整理、材料充填装置、包装机、刻印机、输送带移位、工件清洁装置等等。

ISteel base module series products are widely used and can be used in general automation equipment, for example:
Automatic tin welding machine, screw-locking machine, pick-and-place of rack parts box, small stack, glue coating device, pick-and-place and transport of parts, CCD lens movement, automatic paint sprayer, automatic loading and unloading device, cutting machine, Electronic component production equipment, small assembly line, small pressing table, spot welding machine, surface laminating process, automatic labeling machine pasting, liquid material pouring and packaging, spare parts inspection equipment, work piece finishing in production line, and material processing. Material filling device, packaging machine, marking machine, conveyor belt shift, workpiece cleaning device, etc.

寿命的计算 Calculation of life span

1、寿命。Life.

当线性滑轨承受负荷并作运动时，珠道表面与钢珠因不断地受到循环应力的作用，一但到达滚动疲劳的临界值，接触面就会开始产生疲劳破损，并在部份表面发生鱼鳞状薄片的剥落现象，此种现象叫做表面剥离。寿命的定义即为珠道表面及钢珠因材料疲劳而产生表面剥离时为止的总运行距离。

When the linear guide rail bears the load and moves, the bead surface and the steel ball are constantly subjected to cyclic stress, and once they reach the critical value of rolling fatigue, they are connected. The contact surface will start to be fatigued and damaged, and the peeling phenomenon of fish scales will occur on some surfaces, which is called surface peeling. Life is defined as The total running distance between the bead surface and the surface peeling of steel balls due to

2、额定寿命。Rating life.

单轴机器人的寿命，具有很大的分散性，即使同一批制造的产品，在相同的运动状态下使用，寿命也会有所不同。因此额定寿命即用来定义钢基模组在操作过程中寿命的基准。

The life of a single-axis robot is highly dispersed. Even if the products manufactured in the same batch are used in the same motion state, the life will be different. So, rating life is the benchmark used to define the life of steel-based modules during operation.

3、钢基模组的额定寿命计算。Calculation of rated life of steel base module.

单轴机器人的寿命计算可分为两部分进行，包括直线导轨与滚珠螺杆，并以计算过程中数值较小者为该模组的额定寿命。其计算式分别如下：

The life calculation of single-axis robot can be divided into two parts, including linear guide rail and ball screw, and the rated life of the module is the one with the smaller value in the calculation process. The formulas are as follows:

线性滑轨 Linear slide rail

$$L = \left(\frac{f_t}{f_w} \cdot \frac{C}{P_n} \right)^3 \times 50\ km$$

L：额定寿命 [公里km]
f_t：接触系数 [参考表格1]
f_w：负荷系数 [参考表格2]
C：基本动额定负荷 [N]
P_n：工作负荷 [N]

L：Rated life [km]
f_t：Contact coefficient [refer to Table 1]
f_w：Load factor [refer to Table 2]
C：Basic dynamic rated load [N]
P_n：Workload [N]

表格1 Form 1

滑座型式 Sliding seat type	接触系数f_t Sliding seat type
A1, S1	1
A2, S2	0.81

表格2 Form 2

工作环境 Working environment		负荷系数f_w Load factor
负荷状况 Load condition	速度[V] Speed	
无冲击力且平滑 No impact and smooth	低速V Low speedV<15m/min	1 ~ 1.5
普通负荷力 Ordinary load force	中速15 Medium speed 15<V<60m/min	1.5 ~ 2
受冲击力及振动 Affected by impact force and vibration	高速V High speed v>60m/min	2 ~3.5

滚珠螺杆及轴承 Ball screw and bearing

$$L = \left(\frac{1}{f_w} \cdot \frac{C_a}{P_{a,n}} \right)^3 \times 10^6\ rev$$

L：额定寿命 [旋转数]
f_w：负荷系数 [参考表格2]
C：基本动额定负荷 [N]
P_n：轴向工作负荷 [N]

L：Rated life [rotation number]
f_w：Load factor [refer to Table 2]
C：Basic dynamic rated load [N]
P_n：Axial working load [N]

润滑 Lubrication

钢基模组若没有适当的给予润滑，滚动部分的摩擦就会增加，长期的使用下来会成为缩短寿命的主要原因。润滑剂便提供下列几种作用：

✽ 减少滚动部分的摩擦、防止烧伤并降低磨损。
✽ 在滚动的面与面之间形成油膜，可延长滚动疲劳寿命。
✽ 防止生锈。

If the steel base module is not properly lubricated, the friction of rolling parts will increase, and the long-term use will be the main reason for shortening the life.
Lubricants provide the following functions:
✽ Reduce friction of rolling parts, prevent burns and reduce wear.
✽ Forming oil film between rolling surfaces can prolong the rolling fatigue life.
✽ Prevent rust.

1、润滑油脂。Lubricant grease

润滑油脂虽然较不易流失，但为避免因润滑损耗造成润滑不足，建议客户使用距离达100km时，应再补充润滑油脂一次，此时可用注油枪借由滑块上所附油嘴，将油脂打入滑块中。润滑油脂适用于速度不超过60m/min，且对冷却作用无要求的场合。

Although lubricating grease is not easy to be lost, in order to avoid insufficient lubrication caused by lubrication loss, it is suggested that customers should replenish lubricating grease I when the distance is 100km. Second, at this time, the grease gun can be used to drive the grease into the slider through the nozzle attached to the slider. Grease is suitable for speed less than 60m/min, and has no cooling effect. The occasion of the request.

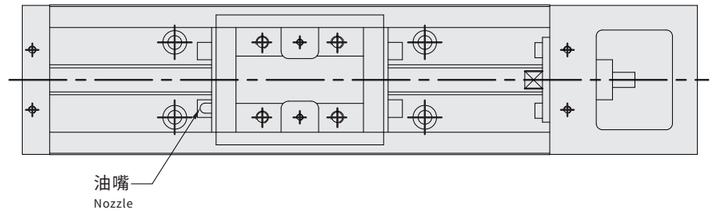
$$T = \frac{100 \times 1000}{V_e \times 60}$$

T：注油频率 [hour]
V_e：速度 [m/min]

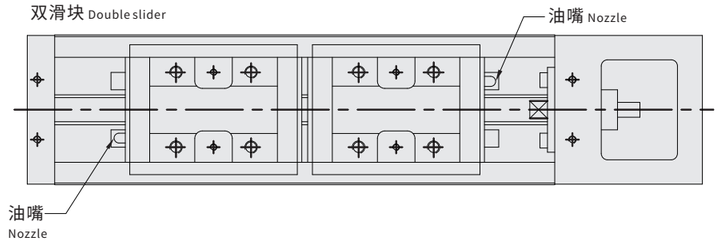
T：Oil injection frequency [hour]
V_e：Speed [m/min]

2、油嘴配置图。Nozzle configuration diagram

单滑块 Single slider

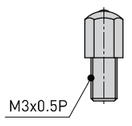


双滑块 Double slider

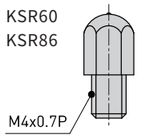


KSR使用油嘴
KSR uses oil nozzle.

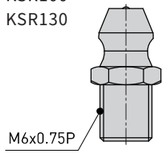
KSR40



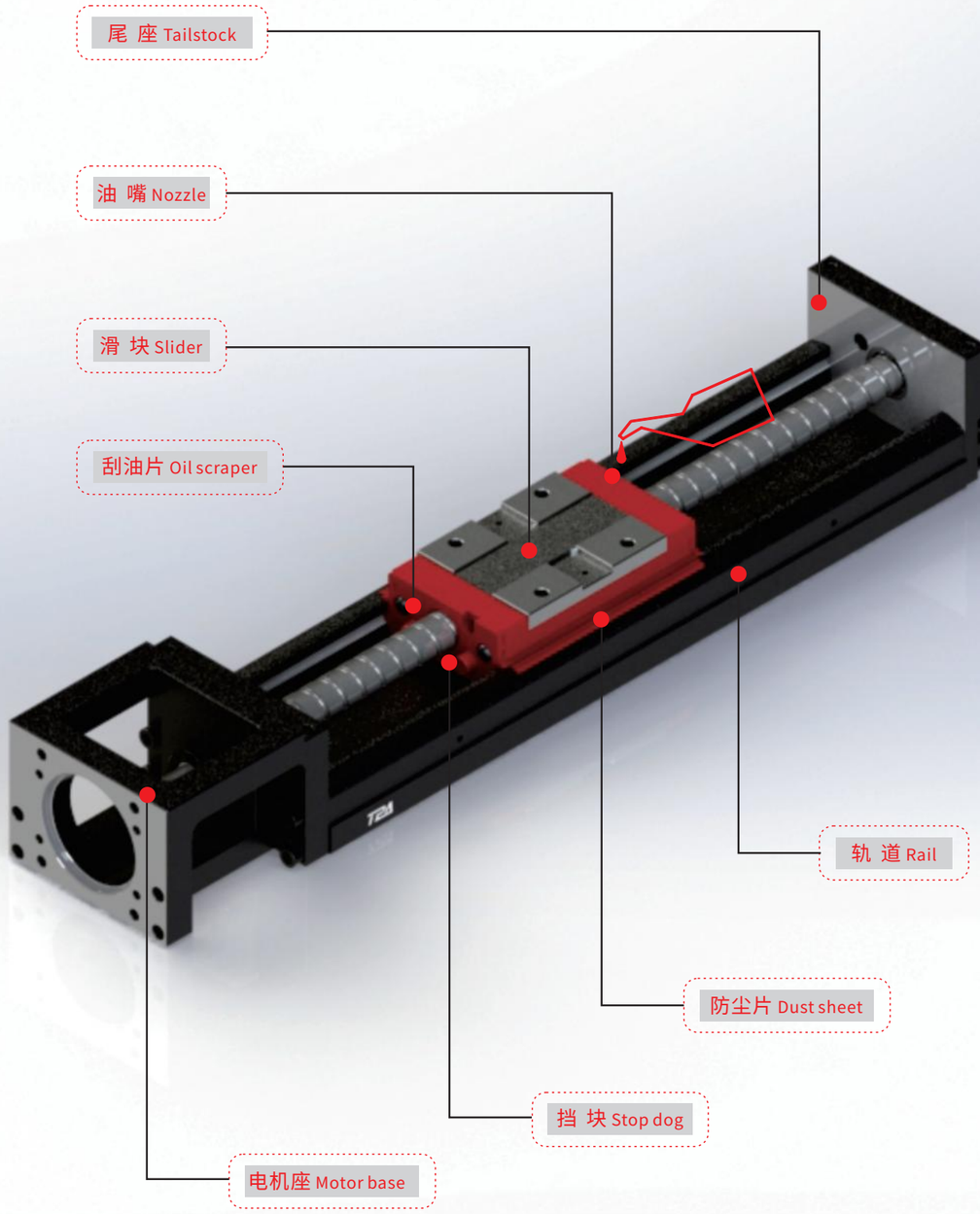
KSR50
KSR60
KSR86



KSR100
KSR130



钢基内部结构图说明
Description of internal structure diagram of steel base



滚珠螺杆 Ball screw

由高精度的滚珠螺杆做为传动结构，以及配合最佳化设计的∪型轨道做为导引结构，来确保精度与刚性需求。
The high-precision ball screw is used as the transmission structure, and the U-shaped track is matched with the optimized design. As a guide structure, to ensure the accuracy and rigidity requirements.

体积更小 Smaller size

宽度缩小，让设备安装所需空间更小。
The width is reduced, so that the space required for equipment installation is smaller.

组装，省时、方便 Easy assemble

将滚珠螺杆和U型轨道整合在一起，因此可提供具有高精度、高刚性、快速安装等特性。
The ball screw and the U-shaped rail are integrated together, so tools can be provided. It has the characteristics of high precision, high rigidity and quick installation.

特性 Characteristics

①最简化设计。
①Simplified design.

②高刚性。
② High rigidity.

③配置齐全。
③ Complete configuration.

④体积小、重量轻。
④Small size and light weight.

⑤高精度。
⑤ High precision.

⑥安装维护方便。
⑥ Easy to install.

应用领域 Application field

①FPD产业。
①FPD industry.

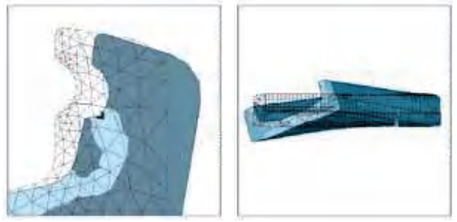
②医疗自动化产业。
② Medical automation industry.

③半导体。
③ semiconductor.

④精密测量仪器。
④ Precision measuring instruments.

主要特性
Key property

工业机器人 Industrial robot



- ✻ 模组化设计，体积更小。
- ✻ 标准化生产，交期快，成本更低。
- ✻ U型钢基轨道，局部淬火，HRC58度以上，高强度，高承载。
- ✻ 通用性高，规格型号全，适应各行业客户需要。
- ✻ 最适化设计。轨道结构由有限元素分析，得到最好刚性与重量。
- ✻ Modular design, smaller size.
- ✻ Standardized production, fast delivery and lower cost.
- ✻ U-shaped steel base track, local quenching, HRC58 above 58 degrees, high strength, high load.
- ✻ High versatility, complete specifications and models, to meet the needs of customers in various industries.
- ✻ Optimal design. The track structure is analyzed by finite elements, and the best rigidity and weight are obtained.

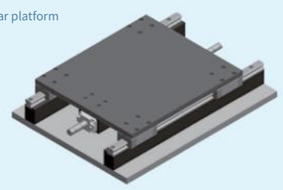
1.模组化 Modular

钢基模组透过模组化之设计，整合滚珠螺杆和U型轨道，可节省以往传统致动平台需经过导引和驱动元件之选用、安装校验、体积大、占空间等缺点因此钢基模组可提供快速选用、安装、体积精简、高刚性等特性，可大幅减少客户端的使用空间与时间。

Through modular design, the steel base module integrates ball screw and U-shaped rail, which can save the traditional actuating platform from having to go through the selection of guiding and driving components, installation and verification, large volume and occupying space. Therefore, the steel-based module can provide the characteristics of quick selection, installation, compact size, high rigidity and so on, which can greatly reduce the use space and time of the client.

传统直线平台 Traditional linear platform

1平台 1Platform
2直线导轨 2Linear guide
1滚珠螺杆 1Ball screw
1基座 1Platform



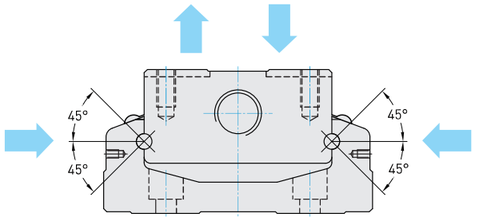
钢基模组 Steel base module

1滚珠螺杆 1Ball screw
1导轨 1Guide

2.四方向等负荷 Four-direction equal load

轨道和滑块之间的回流系统,其滚珠与珠槽接触面采用2列式歌德牙型之设计，具有45度接触角之特性，该设计可使得钢基模组可承受四方向等负荷之能力。

And the contact surface between the ball and the bead groove adopts a 2-row Goethe tooth type. The design has the characteristics of 45-degree contact angle, which enables the steel-based module to withstand four directions. The ability of equal load.

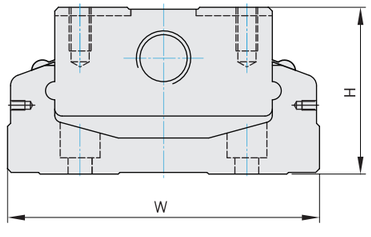


3.规格全 Full line of specification

针对各种不同的使用需求,开发出下列多种钢基模组系列模组提供客户依使用需求、空间、负载来选用。

According to various use requirements, the following series of steel-based modules have been developed for customers to choose according to use requirements, space and load.

型 号 Model	W	H
TPA-KSR-30	30	15
TPA-KSR-40	40	20
TPA-KSR-50	50	26
TPA-KSR-60	60	33
TPA-KSR-86	86	46
TPA-KSR-100	100	55



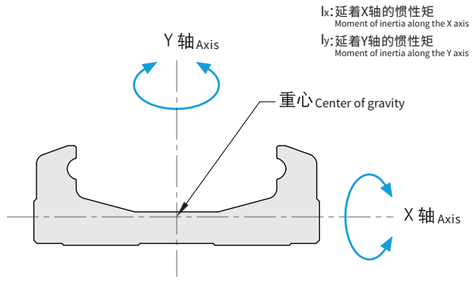
4.高刚性 High rigidity

轨道构型采用∪型断面，并透过有限元素分析软体的设计，在体积与刚性上取得平衡点，使得轨道具有高刚性、体积精简、重量轻等特性。

The configuration of the track adopts ∪-shaped section, and through the design of finite element analysis software, the balance between volume and rigidity is achieved, which makes the track have the characteristics of high rigidity, compact volume and light weight.

惯性矩 Moment of inertia　　单位Unit:mm^4

型 号 Model	I_x	I_y
TPA-KSR-30	$7.554x10^2$	$12.726x10^3$
TPA-KSR-40	$3.533x10^3$	$5.137x10^4$
TPA-KSR-50	$9.6x10^3$	$1.34x10^5$
TPA-KSR-60	$5.056x10^4$	$2.802x10^5$
TPA-KSR-86	$7.455x10^4$	$1.134x10^6$
TPA-KSR-100	$1.296x10^5$	$2.035x10^6$



5.选购配件 Accessories selection

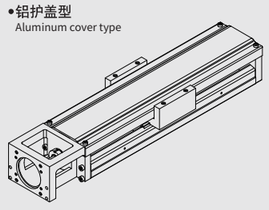
为了因各种的使用需求，可另外选购铝护盖、伸缩护套、电机连接法兰、极限开关。

- ✻ 铝护盖、伸缩护套：可防止异物、杂质进入工业机器人的内部而影响其使用寿命、精度、顺畅度。
- ✻ 电机连接法兰：可将各种不同电机锁在工业机器人上。
- ✻ 极限开关：提供滑块定位、启动原点以及防止滑块超过行程的安全机制。

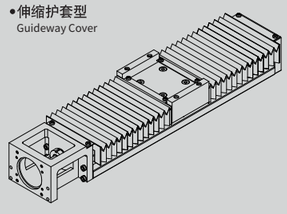
For various use requirements, aluminum protective cover, telescopic sheath, motor connecting flange and limit switch can be purchased separately.

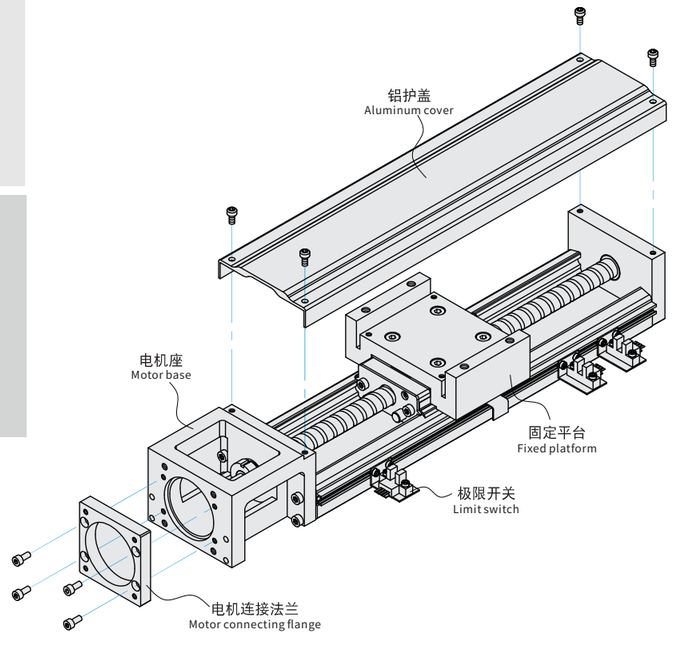
- ✻ Aluminum protective cover and telescopic sheath: It can prevent foreign matter and impurities from entering the interior of industrial robot and affecting its service life, accuracy and smoothness.
- ✻ Motor connecting flange: various motors can be locked on industrial robots.
- ✻ Limit switch: provides a safety mechanism for positioning the slider, starting the origin and preventing the slider from exceeding the stroke.

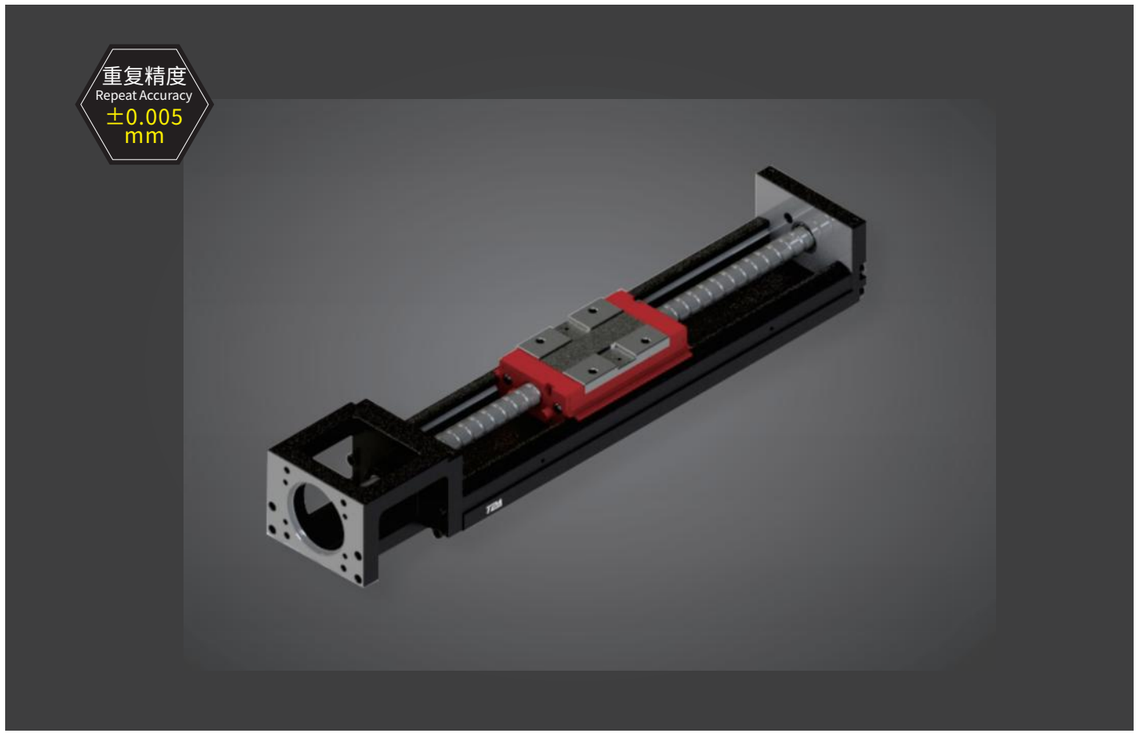
•铝护盖型
Aluminum cover type



•伸缩护套型
Guideway Cover







此图仅供参考，出货规格详见尺寸图面
This drawing is for reference only, Please refer to the size drawing for shipment specifications.

最大行程 Max Stroke 156mm

最高速度 Max Speed 50mm/sec

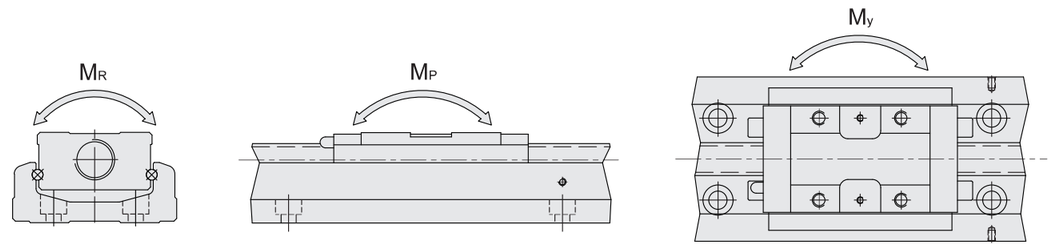
滚珠螺杆 Ball Screw Ø6mm

型号表达方式 Ordering method

TPA-KSR-3001CK-100A1-M-F0S2-N3-D-F

- 品牌名称 Brand
  - H 日规模组 Ball Screw Linear Module
  - O 欧规模组 Belt Linear Module
  - E 电动缸 Electric Cylinder
  - L 直线电机 Linear Motor
  - K 钢基模组 Steel Linear Module
  - G 内嵌式模组 Built-in Rail Type
  - D 简易模组 Splinde Linear Unit
  - M 直驱旋转电机 Rotary Motor
- N 半封闭-铝护盖 Semi Seal -Aluminum cover / F 风琴罩-伸缩护套 Guideway Cover / S 无防护 No protection
- R 螺杆 Screw / P 有铁芯 Ferreous
- 轨道宽度 Track width: 30、40、50 / 60、86、100
- 导程 Lead: 01mm
- 精度等级 Precision grade: C：普通级 Common / P：精密级 Precision
- 轴端有键槽 / 无标记:无 Shaft end with keyway / None: none
- 轨道长度 Track length: 100/150/200
- A：标准型 Standard type / S：轻载型 Light load type
- 滑座数量 Slide number
- 电机方向 Motor direction
  - M 电机外置直连
  - MP 电机外置下方
  - MU 电机外置上方
  - MR 电机外置右侧
  - ML 电机外置左侧
  - M Motor external direct connection / MP Motor external under below / MU Motor external above / MR Motor external right side / ML Motor external left side
- 参考法兰页 Reference flange page
- 包含极限开关 / S0：极限轨道 / S1：671光电支架 / S2：674光电支架 / S3：GX-F12A型 / S4：GX-F12A-P型 / 无标记:无 (include limit switches.)
  - S0: limit orbit
  - S1: 671 photoelectric support
  - S2: 674 photoelectric support
  - S3:GX - F12A type
  - S4:GX - F12A - P type
  - None: none
- 光电类型 Photoelectric Mode: N：NPN / P：PNP
- 数量 Quantity: 1PCS / 2PCS / 3PCS / 无标记:无 None
- 联轴器 Couplings / 无标记:无 None
- 客制/特殊加工 Custom/special processing

负载规格 Load specification



技术参数 Technical parameter

型号 Model		滚珠螺杆 Ballscrew				线性滑轨 Linearsliderail															
		公称外径(mm) Nominal outer diameter	导程(mm) Lead	基本动额定负荷(N) Basic dynamic rated load	基本静额定负荷(N) Basic static rated load	基本动额定负额(N) Basic dynamic rated load		基本静额定负额(N) Basic static rated load		容许静力矩 Allowable static moment											
										俯仰 M_P(N-m)				偏拢 M_Y(N-m)				滚动 M_R(N-m)			
						滑座A Slide carriage	滑座S Slide carriage	滑座A Slide carriage	滑座S Slide carriage	滑座A1 Slide carriage	滑座A2 Slide carriage	滑座S1 Slide carriage	滑座S2 Slide carriage	滑座A1 Slide carriage	滑座A2 Slide carriage	滑座S1 Slide carriage	滑座S2 Slide carriage	滑座A1 Slide carriage	滑座A2 Slide carriage	滑座S1 Slide carriage	滑座S2 Slide carriage
KSR 3001	精密级 Precise grade	6	1	647	1088	2210	–	3510	–	14	73	–	–	14	73	–	–	41	82	–	–
	一般级 General grade			618	1079																

精度等级 Precision grade

单位：mm

型号 Model	轨道长度 Track length	定位重现性 Positioning reproducibility		定位精度 positioning accuracy		行走平行度 Walking parallelism		最大启动扭力:(N-cm) Maximum starting torque	
		精密级 Precise grade	一般级 General grade	精密级 Precise grade	一般级 General grade	精密级 Precise grade	一般级 General grade	精密级 Precise grade	一般级 General grade
KSR 30	75	±0.003	±0.004	0.020	0.040	0.010	0.020	1.2	0.8
	100								
	125								
	150								
	175								
	200								

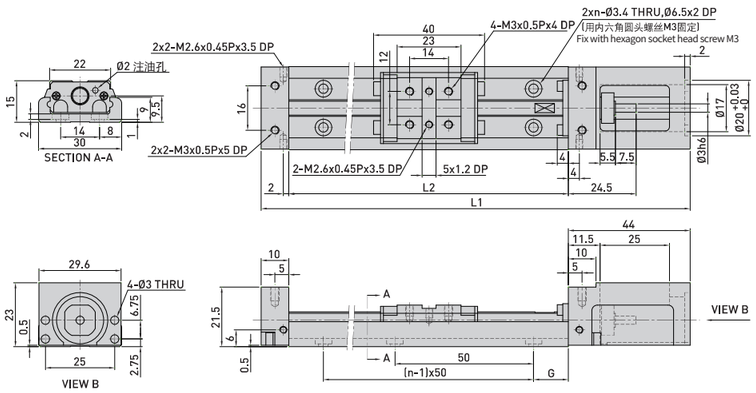
最大速度 Maximum speed

型号 Model	滚珠螺杆导程(mm) Ballscrew lead	轨道长度L2(mm) Track length	速度(mm/sec) Speed	
			精密级 Precise grade	一般级 General grade
KSR 30	01	75	160	160
		100	160	160
		125	160	160
		150	160	160
		175	160	160
		200	160	160

外形尺寸(不含护盖)/电机座与电机连接法兰
Overall dimensions(without cover)/Motor seat and motor connecting flange

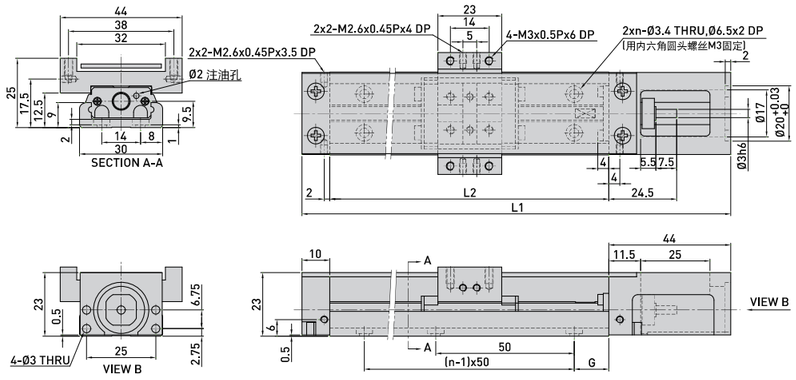
M KSR-30 电机外置直连(不含护盖) KSR-30 Motor external direct connection (without cover)

单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	n	重量(kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage			滑座 A1 Slide carriage	滑座 A2 Slide carriage
75	129	31	–	12.5	2	0.2	–
100	154	56	–	25	2	0.23	–
125	179	81	45	12.5	3	0.26	0.3
150	204	106	70	25	3	0.29	0.33
175	229	131	95	12.5	4	0.32	0.36
200	254	156	120	25	4	0.35	0.39

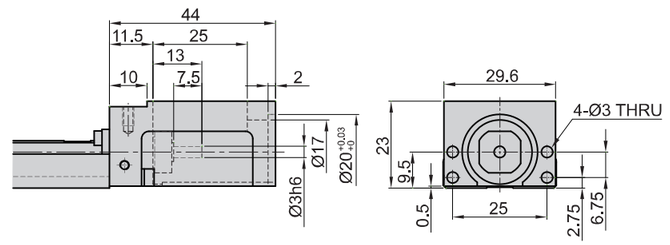
M KNR-30 电机外置直连(含护盖) KNR-30 Motor external direct connection (Cover included)



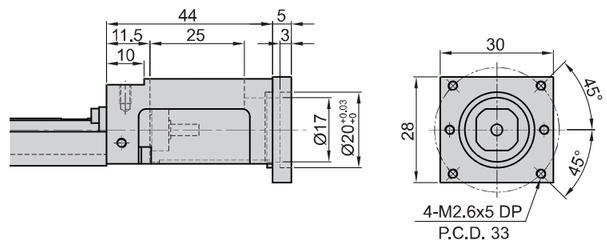
轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	n	重量(kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage			滑座 A1 Slide carriage	滑座 A2 Slide carriage
75	129	31	–	12.5	2	0.24	–
100	154	56	–	25	2	0.27	–
125	179	81	45	12.5	3	0.3	0.36
150	204	106	70	25	3	0.33	0.39
175	229	131	95	12.5	4	0.37	0.43
200	254	156	120	25	4	0.4	0.46

电机座与电机连接法兰
Motor seat and motor connecting flange

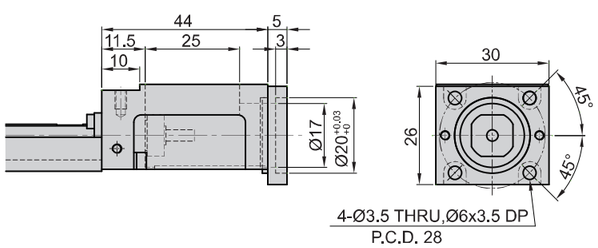
30 电机座F0 Motor seat F0



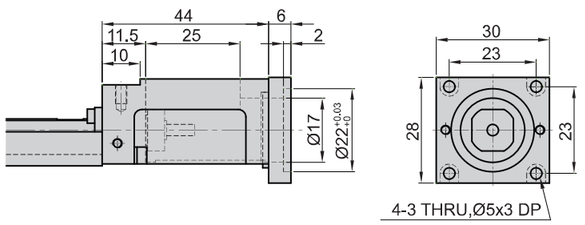
电机连接法兰F1 Connecting flange F1 of motor

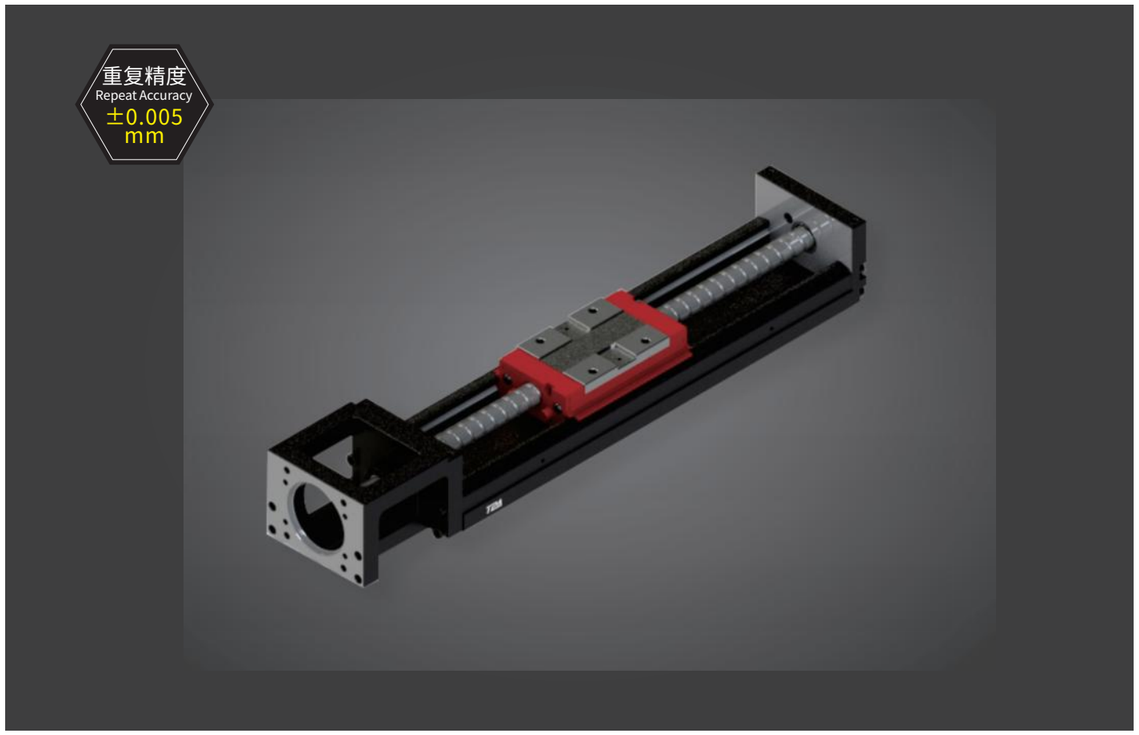


30 电机连接法兰F2 Connecting flange F2 of motor



电机连接法兰F3 Connecting flange F3 of motor





此图仅供参考，出货规格详见尺寸图面
This drawing is for reference only, Please refer to the size drawing for shipment specifications.

最大行程 Max Stroke 136mm

最高速度 Max Speed 100mm/sec

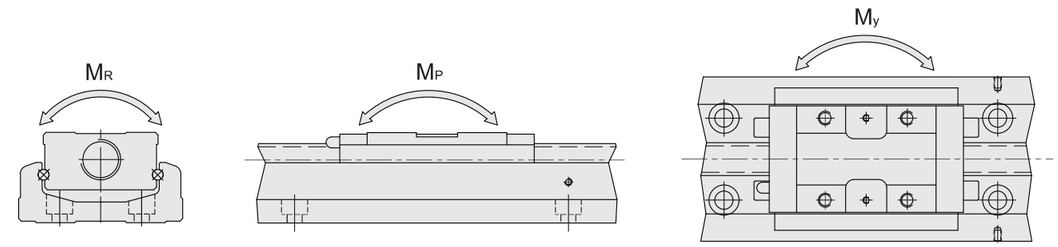
滚珠螺杆 Ball Screw Ø8mm

型号表达方式 Ordering method

TPA-KSR-4002CK-100A1-M-F0S2-N3-D-F

- 品牌名称 Brand
  - H 日规模组 Ball Screw Linear Module
  - O 欧规模组 Belt Linear Module
  - E 电动缸 Electric Cylinder
  - L 直线电机 Linear Motor
  - K 钢基模组 Steel Linear Module
  - G 内嵌式模组 Built-in Rail Type
  - D 简易模组 Splinde Linear Unit
  - M 直驱旋转电机 Rotary Motor
- N 半封闭-铝护盖 Semi Seal -Aluminum cover
  F 风琴罩-伸缩护套 Guideway Cover
  S 无防护 No protection
- R 螺杆 Screw
  P 有铁芯 Ferreous
- 轨道宽度 Track width: 30、40、50 60、86、100
- 导程 Lead: 01mm
- 精度等级 Precision grade
  C：普通级 Common
  P：精密级 Precision
- 轴端有键槽 Shaft end with keyway
  无标记：无 None: none
- 轨道长度 Track length: 100/150/200
- A：标准型 Standard type
  S：轻载型 Light load type
- 滑座数量 Slide number
- 电机方向 Motor direction
  M 电机外置直连
  MP 电机外置下方
  MU 电机外置上方
  MR 电机外置右侧
  ML 电机外置左侧
  M Motor external direct connection
  MP Motor external under below
  MU Motor external above
  MR Motor external right side
  ML Motor external left side
- 参考法兰页 Reference flange page
- 光电类型 Photoelectric Mode
  N：NPN
  P：PNP
- 包含极限开关 include limit switches.
  S0：极限轨道 S0: limit orbit
  S1：671光电支架 S1: 671 photoelectric support
  S2：674光电支架 S2: 674 photoelectric support
  S3：GX-F12A型 S3: GX - F12A type
  S4：GX-F12A-P型 S4: GX - F12A - P type
  无标记：无 None: none
- 数量 Quantity
  1PCS
  2PCS
  3PCS
  无标记：无 None
- 联轴器 Couplings
  无标记：无 None
- 客制/特殊加工 Custom/special processing

负载规格 Load specification



技术参数 Technical parameter

型号 Model		滚珠螺杆 Ballscrew				线性滑轨 Linearsliderail															
		公称外径(mm) Nominal outer diameter	导程 Lead (mm)	基本动额定负荷(N) Basicdynamic ratedload	基本静额定负荷(N) Basicstatic ratedload	基本动额定负额(N) Basic dynamic rated load		基本静额定负额(N) Basic static rated load		容许静力矩 Allowablestatic moment											
										俯仰 M_P(N-m)				偏拢 M_Y(N-m)				滚动 M_R(N-m)			
						滑座A Slide carriage	滑座S Slide carriage	滑座A Slide carriage	滑座S Slide carriage	滑座A1 Slide carriage	滑座A2 Slide carriage	滑座S1 Slide carriage	滑座S2 Slide carriage	滑座A1 Slide carriage	滑座A2 Slide carriage	滑座S1 Slide carriage	滑座S2 Slide carriage	滑座A1 Slide carriage	滑座A2 Slide carriage	滑座S1 Slide carriage	滑座S2 Slide carriage
KSR 4002	精密级 Precise grade	8	02	735	1538	3920	–	6468	–	33	182	–	–	33	182	–	–	81	162	–	–
	一般级 General grade			676	1284																

精度等级 Precision grade

单位：mm

型号 Model	轨道长度 Tracklength	定位重现性 Positioning reproducibility		定位精度 positioning accuracy		行走平行度 Walking parallelism		最大启动扭力:(N-cm) Maximum starting torque	
		精密级 Precise grade	一般级 General grade	精密级 Precise grade	一般级 General grade	精密级 Precise grade	一般级 General grade	精密级 Precise grade	一般级 General grade
KSR 40	100	±0.003	±0.005	0.020	–	0.010	–	1.2	0.8
	150								
	200								

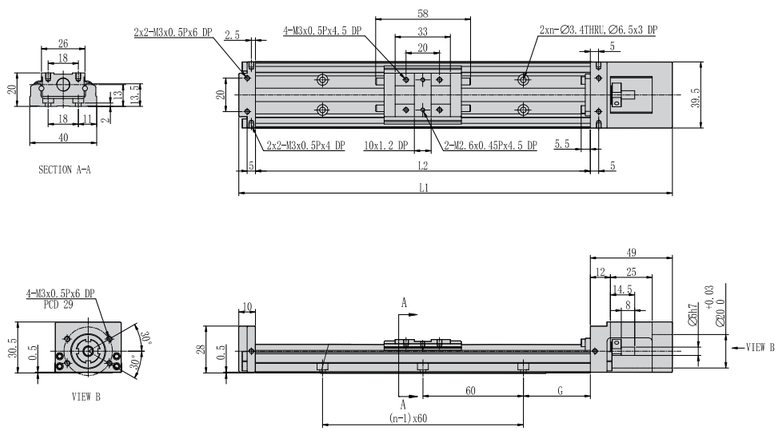
最大速度 Maximum speed

型号 Model	滚珠螺杆导程(mm) Ballscrewlead	轨道长度L2(mm) Tracklength	速度(mm/sec) Speed	
			精密级 Precise grade	一般级 General grade
KSR 40	02	100	190	190
		150	190	190
		200	190	190

KSR 外形尺寸（不含护盖）
KSR Overall dimensions(without cover)

M KSR-40 电机外置直连（不含护盖） KSR-40 Motor external direct connection (without cover)

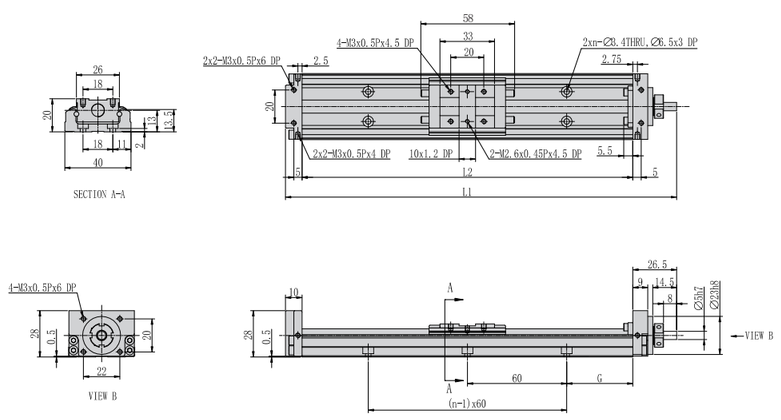
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage			滑座 A1 Slide carriage	滑座 A2 Slide carriage
100	159	36	–	20	2	0.48	–
150	209	86	34	15	3	0.6	0.67
200	259	136	84	40	3	0.72	0.79

H0 KSR-40-H0（不含护盖） KSR-40-H0 (without cover)

单位:Unit: mm

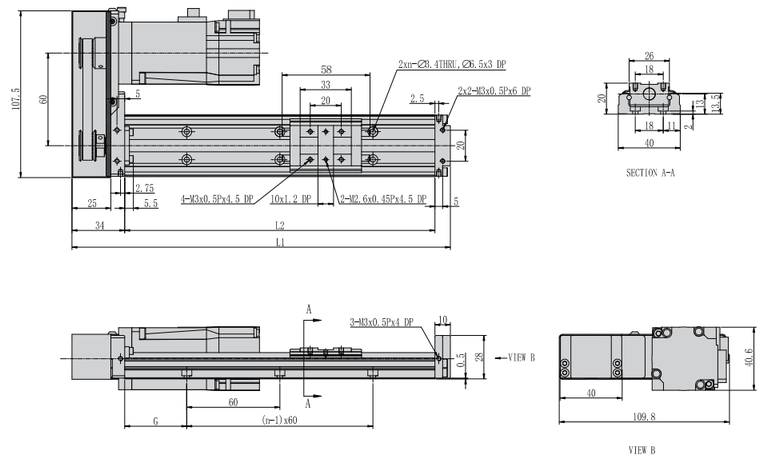


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage			滑座 A1 Slide carriage	滑座 A2 Slide carriage
100	159	36	–	20	2	0.48	–
150	209	86	34	15	3	0.6	0.67
200	259	136	84	40	3	0.72	0.79

KSR 外形尺寸（不含护盖）
KSR Overall dimensions(without cover)

MR KSR-40 电机外置右侧（不含护盖） KSR-40 Motor external right side (without cover)

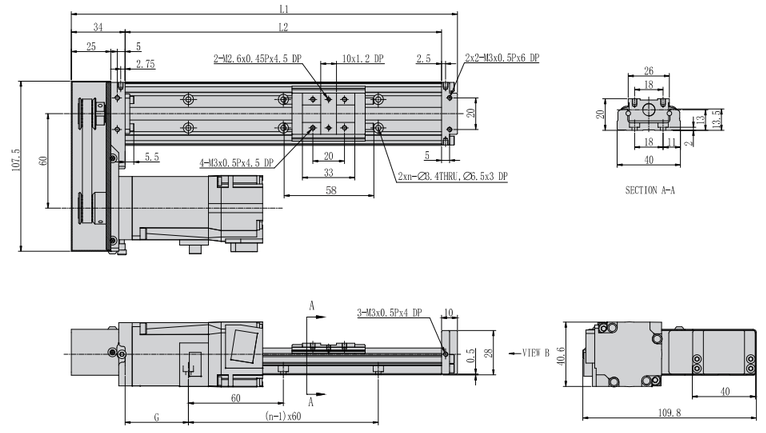
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage			滑座 A1 Slide carriage	滑座 A2 Slide carriage
100	159	36	–	20	2	0.48	–
150	209	86	34	15	3	0.6	0.67
200	259	136	84	40	3	0.72	0.79

ML KSR-40 电机外置左侧（不含护盖） KSR-40 Motor external left side (without cover)

单位:Unit: mm

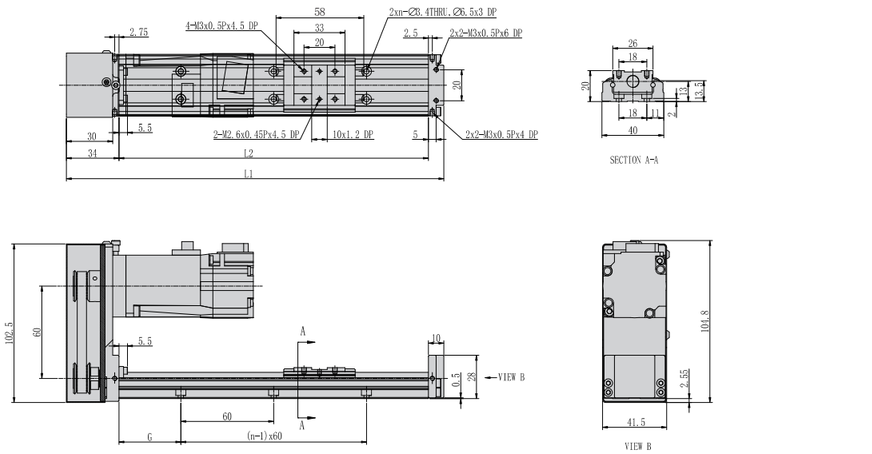


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage			滑座 A1 Slide carriage	滑座 A2 Slide carriage
100	159	36	–	20	2	0.48	–
150	209	86	34	15	3	0.6	0.67
200	259	136	84	40	3	0.72	0.79

KSR 外形尺寸（不含护盖）
KSR Overall dimensions(without cover)

MU KSR-40 电机外置上方（不含护盖） KSR-40 Motor external above (without cover)

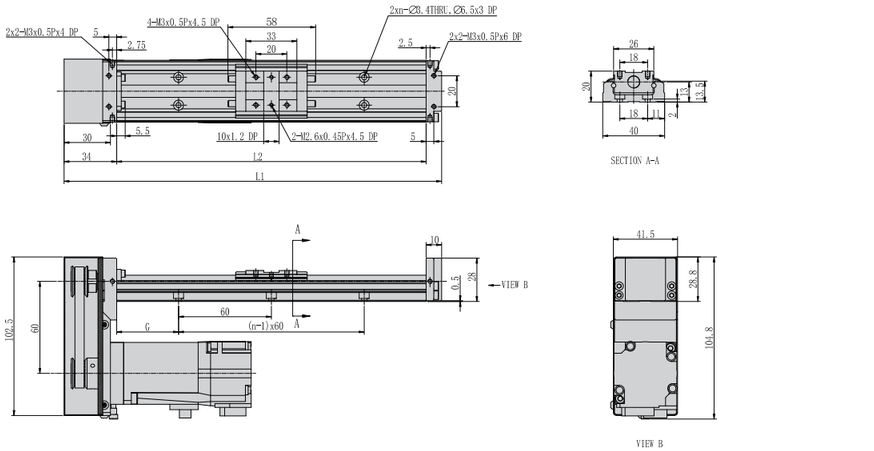
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage			滑座 A1 Slide carriage	滑座 A2 Slide carriage
100	159	36	–	20	2	0.48	–
150	209	86	34	15	3	0.6	0.67
200	259	136	84	40	3	0.72	0.79

MP KSR-40 电机外置下方（不含护盖） KSR-40 Motor external under below (without cover)

单位:Unit: mm

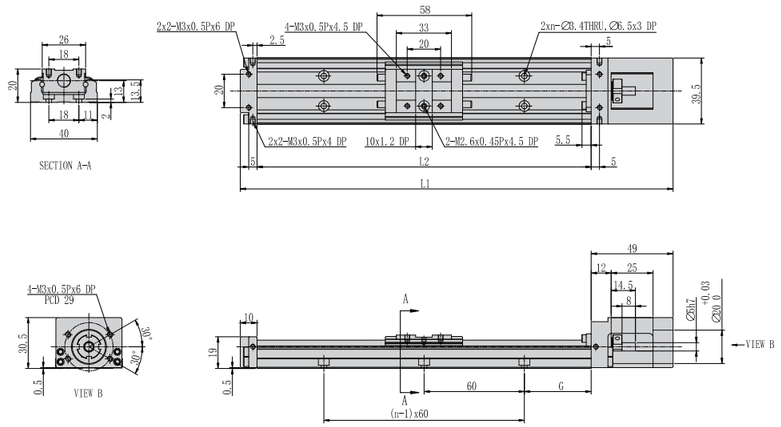


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage			滑座 A1 Slide carriage	滑座 A2 Slide carriage
100	159	36	–	20	2	0.48	–
150	209	86	34	15	3	0.6	0.67
200	259	136	84	40	3	0.72	0.79

KSR 外形尺寸（不含护盖）
KSR Overall dimensions(without cover)

M KSR-40-DZ电机外置直连（不含护盖） KSR-40-DZ Motor external direct connection (without cover)

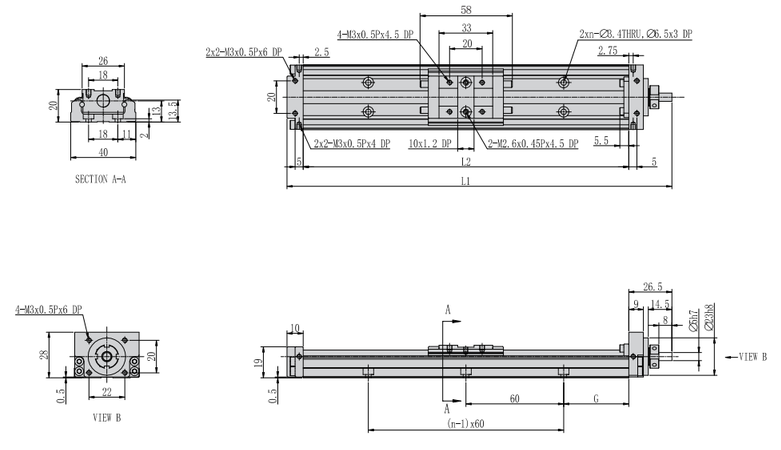
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage			滑座 A1 Slide carriage	滑座 A2 Slide carriage
100	159	36	–	20	2	0.48	–
150	209	86	34	15	3	0.6	0.67
200	259	136	84	40	3	0.72	0.79

H0 KSR-40-DZ-H0（不含护盖） KSR-40-DZ-H0 (without cover)

单位:Unit: mm

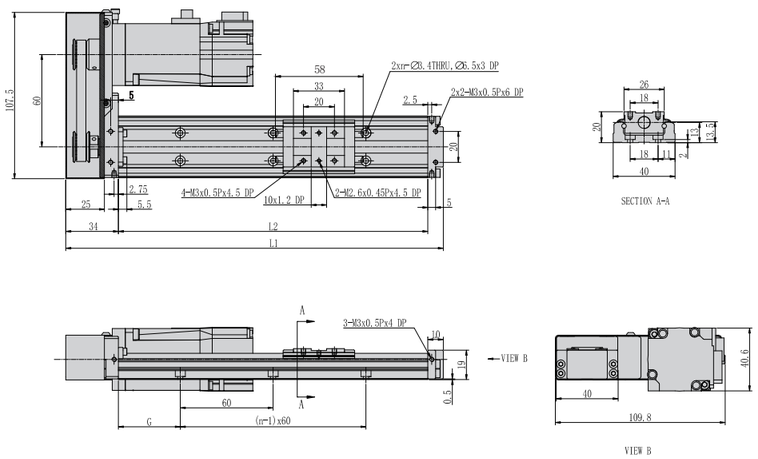


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage			滑座 A1 Slide carriage	滑座 A2 Slide carriage
100	159	36	–	20	2	0.48	–
150	209	86	34	15	3	0.6	0.67
200	259	136	84	40	3	0.72	0.79

KSR 外形尺寸（不含护盖）
KSR Overall dimensions(without cover)

MR KSR-40-DZ 电机外置右侧（不含护盖） KSR-40-DZ Motor external right side (without cover)

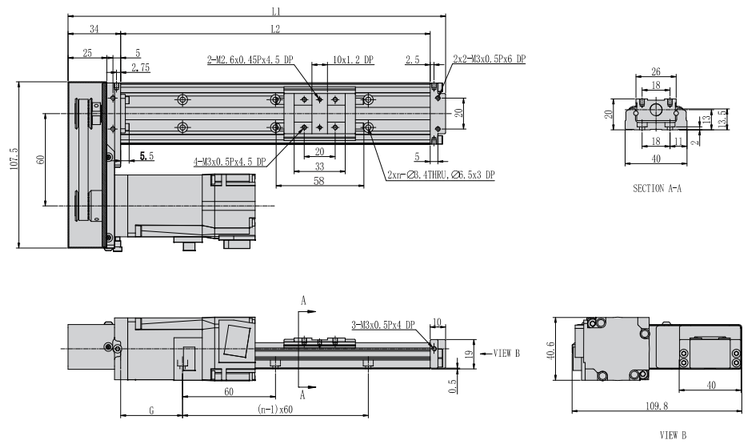
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage			滑座 A1 Slide carriage	滑座 A2 Slide carriage
100	159	36	–	20	2	0.48	–
150	209	86	34	15	3	0.6	0.67
200	259	136	84	40	3	0.72	0.79

ML KSR-40-DZ 电机外置左侧（不含护盖） KSR-40-DZ Motor external left side (without cover)

单位:Unit: mm

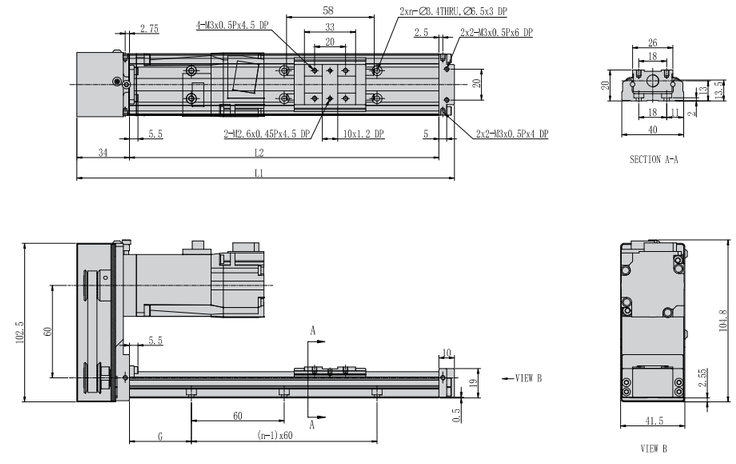


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage			滑座 A1 Slide carriage	滑座 A2 Slide carriage
100	159	36	–	20	2	0.48	–
150	209	86	34	15	3	0.6	0.67
200	259	136	84	40	3	0.72	0.79

KSR 外形尺寸（不含护盖）
KSR Overall dimensions(without cover)

MU KSR-40-DZ 电机外置上方（不含护盖） KSR-40-DZ Motor external above (without cover)

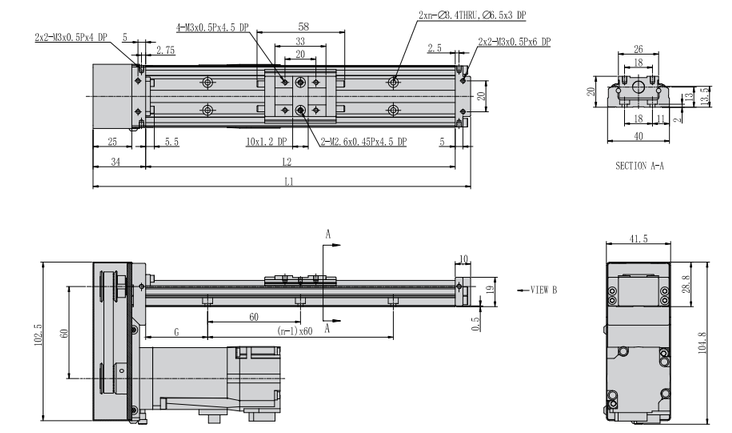
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage			滑座 A1 Slide carriage	滑座 A2 Slide carriage
100	159	36	–	20	2	0.48	–
150	209	86	34	15	3	0.6	0.67
200	259	136	84	40	3	0.72	0.79

MP KSR-40-DZ 电机外置下方（不含护盖） KSR-40-DZ Motor external under below (without cover)

单位:Unit: mm

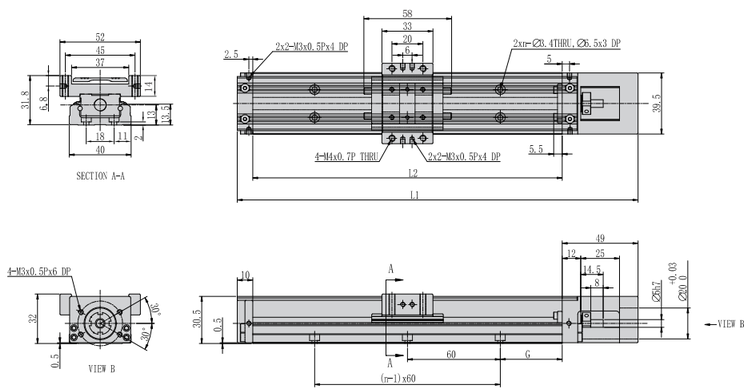


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage			滑座 A1 Slide carriage	滑座 A2 Slide carriage
100	159	36	–	20	2	0.48	–
150	209	86	34	15	3	0.6	0.67
200	259	136	84	40	3	0.72	0.79

KNR 外形尺寸（含护盖）
KNR Overall dimensions(cover included)

M KNR-40 电机外置直连（含护盖） KNR-40 Motor external direct connection (Cover included)

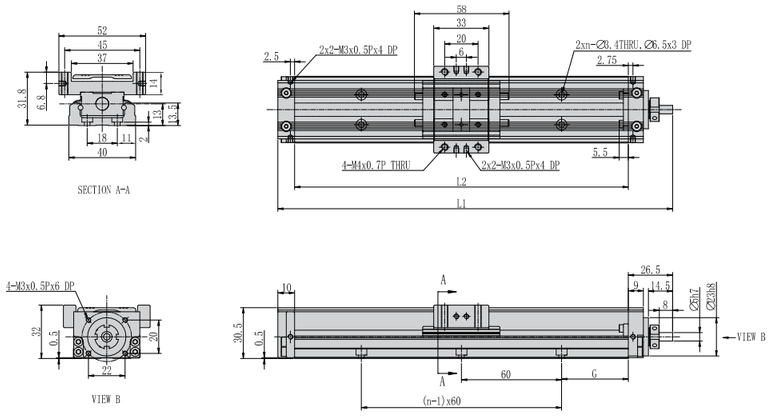
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage			滑座 A1 Slide carriage	滑座 A2 Slide carriage
100	159	36	–	20	2	0.55	–
150	209	86	34	15	3	0.68	0.76
200	259	136	84	40	3	0.82	0.89

H0 KNR-40-H0（含护盖） KNR-40-H0 (Cover included)

单位:Unit: mm

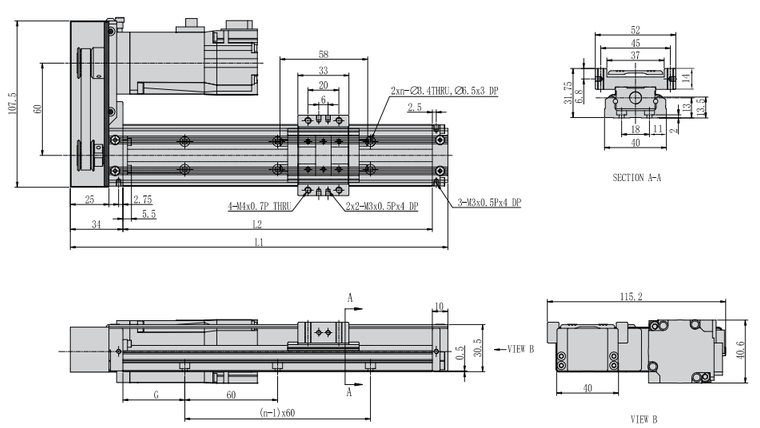


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage			滑座 A1 Slide carriage	滑座 A2 Slide carriage
100	159	36	–	20	2	0.55	–
150	209	86	34	15	3	0.68	0.76
200	259	136	84	40	3	0.82	0.89

KNR 外形尺寸（含护盖）
KNR Overall dimensions(cover included)

MR KNR-40 电机外置右侧（含护盖） KNR-40 Motor external right side (Cover included)

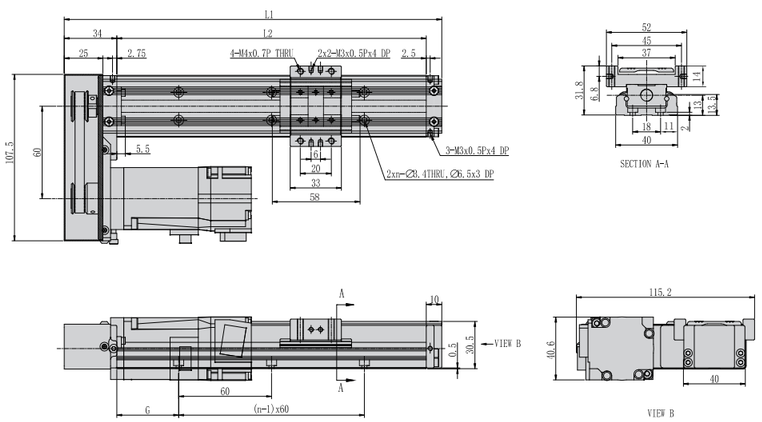
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage			滑座 A1 Slide carriage	滑座 A2 Slide carriage
100	159	36	–	20	2	0.55	–
150	209	86	34	15	3	0.68	0.76
200	259	136	84	40	3	0.82	0.89

ML KNR-40 电机外置左侧（含护盖） KNR-40 Motor external left side (Cover included)

单位:Unit: mm

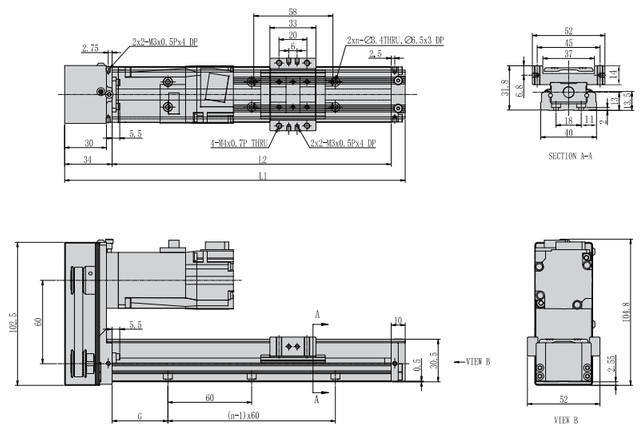


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage			滑座 A1 Slide carriage	滑座 A2 Slide carriage
100	159	36	–	20	2	0.55	–
150	209	86	34	15	3	0.68	0.76
200	259	136	84	40	3	0.82	0.89

KNR 外形尺寸（含护盖）
KNR Overall dimensions(cover included)

MU KNR-40 电机外置上方（含护盖） KNR-40 Motor external above (Cover included)

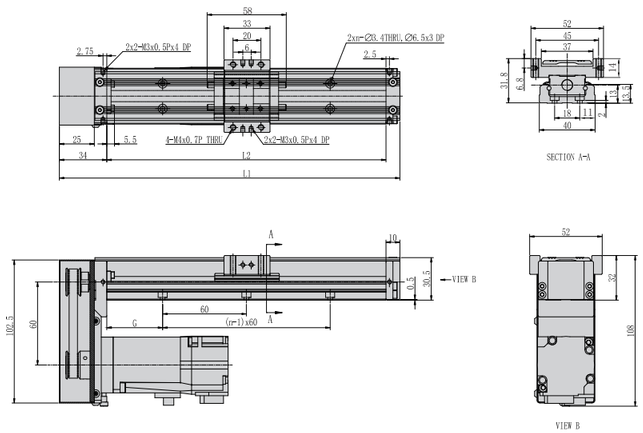
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage			滑座 A1 Slide carriage	滑座 A2 Slide carriage
100	159	36	–	20	2	0.55	–
150	209	86	34	15	3	0.68	0.76
200	259	136	84	40	3	0.82	0.89

MP KNR-40 电机外置下方（含护盖） KNR-40 Motor external under below (Cover included)

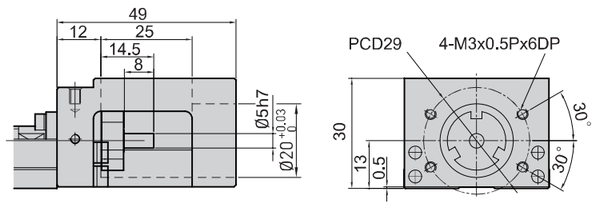
单位:Unit: mm



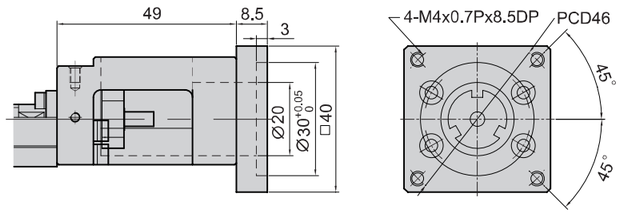
轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage			滑座 A1 Slide carriage	滑座 A2 Slide carriage
100	159	36	–	20	2	0.55	–
150	209	86	34	15	3	0.68	0.76
200	259	136	84	40	3	0.82	0.89

电机座与电机连接法兰
Motor seat and motor connecting flange

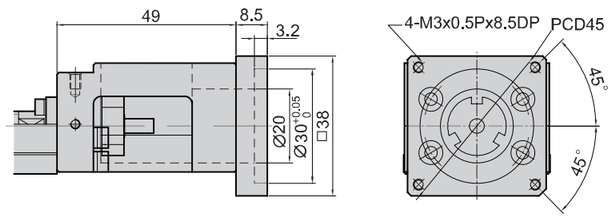
40 电机座F0 Motor seat F0



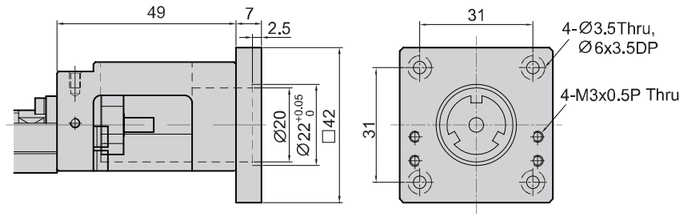
电机连接法兰F1(台达/安川/汇川/三菱/富士 100W) Connecting flange F1 of motor (Delta/Yaskawa/Inovance/Mitsubishi/Fuji 100W)



40 电机连接法兰F2(松下 100W) Connecting flange F2 of motor (Panasonic 100W)

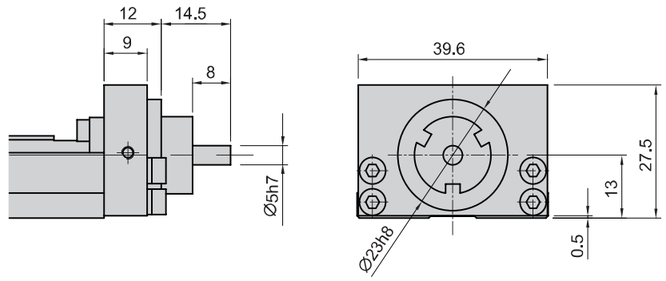


电机连接法兰F3(42步进) Connecting flange F3 of motor (42 Stepper)

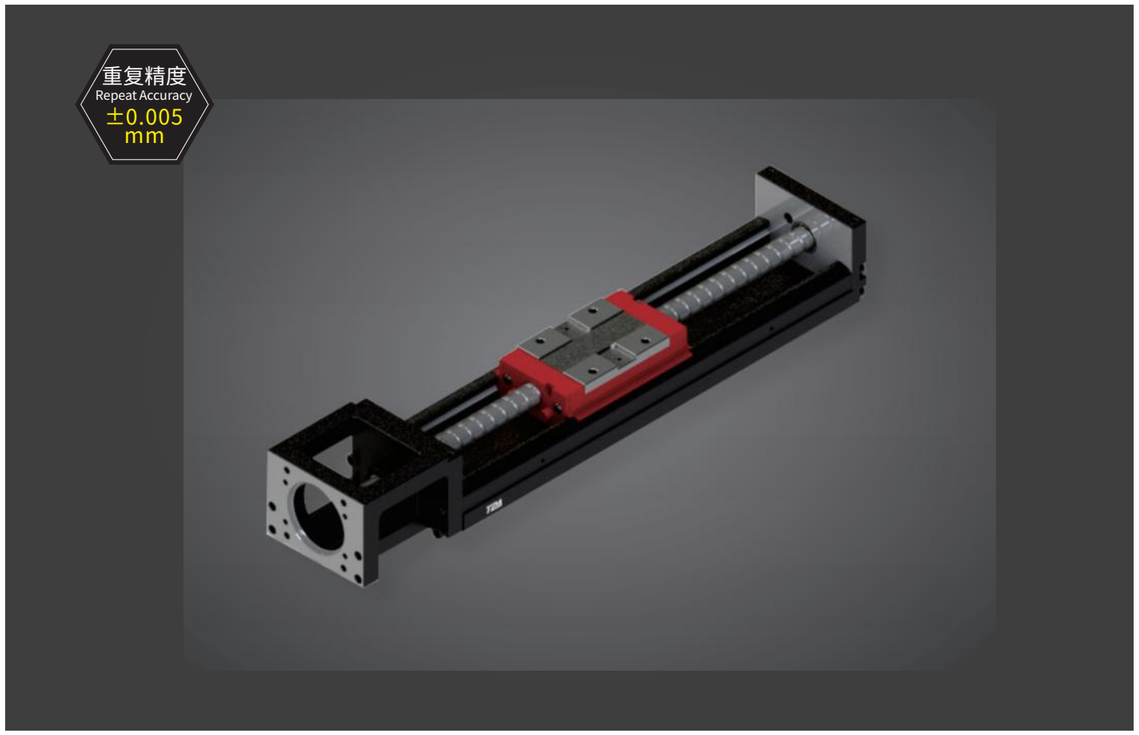


电机座与电机连接法兰
Motor seat and motor connecting flange

40 转接固定H0 Fixed transfer H0



MEMO



此图仅供参考，出货规格详见尺寸图面
This drawing is for reference only, Please refer to the size drawing for shipment specifications.

最大行程 Max Stroke 220mm

最高速度 Max Speed 100mm/sec

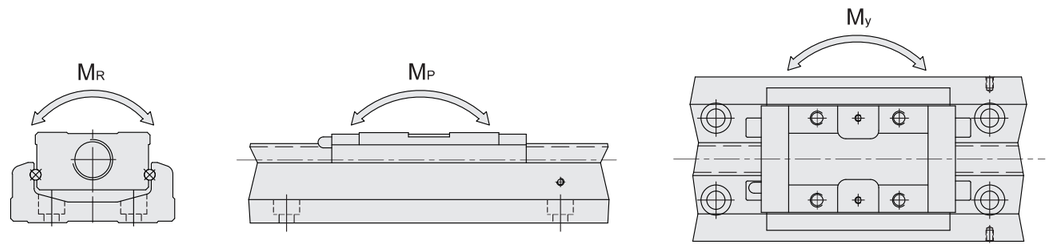
滚珠螺杆 Ball Screw Ø8mm

型号表达方式 Ordering method

TPA-KSR-5002CK-150A1-M-F0S2-N3-D-F

- 品牌名称 Brand
- H 日规模组 Ball Screw Linear Module
- O 欧规模组 Belt Linear Module
- E 电动缸 Electric Cylinder
- L 直线电机 Linear Motor
- K 钢基模组 Steel Linear Module
- G 内嵌式模组 Built-in Rail Type
- D 简易模组 Splinde Linear Unit
- M 直驱旋转电机 Rotary Motor
- N 半封闭-铝护盖 Semi Seal -Aluminum cover
- F 风琴罩-伸缩护套 Guideway Cover
- S 无防护 No protection
- R 螺杆 Screw
- P 有铁芯 Ferreous
- 轨道宽度 Track width: 30、40、50 60、86、100
- 导程 Lead: 02mm
- 精度等级 Precision grade
  - C：普通级 Common
  - P：精密级 Precision
- 轴端有键槽 Shaft end with keyway
  无标记：无 None: none
- 轨道长度 Track length: 150/200/250/300
- A：标准型 Standard type
- S：轻载型 Light load type
- 滑座数量 Slide number
- 电机方向 Motor direction
  - M 电机外置直连 Motor external direct connection
  - MP 电机外置下方 Motor external under below
  - MU 电机外置上方 Motor external above
  - MR 电机外置右侧 Motor external right side
  - ML 电机外置左侧 Motor external left side
- 参考法兰页 Reference flange page
- 光电类型 Photoelectric Mode
  - N：NPN
  - P：PNP
- 包含极限开关 include limit switches.
  - S0：极限轨道 S0: limit orbit
  - S1：671光电支架 S1: 671 photoelectric support
  - S2：674光电支架 S2: 674 photoelectric support
  - S3：GX-F12A型 S3:GX - F12A type
  - S4：GX-F12A-P型 S4:GX - F12A - P type
  - 无标记：无 None: none
- 数量 Quantity
  - 1PCS
  - 2PCS
  - 3PCS
  - 无标记：无 None
- 联轴器 Couplings
  - 无标记：无 None
- 客制/特殊加工 Custom/special processing

负载规格 Load specification



技术参数 Technical parameter

型号 Model		滚珠螺杆 Ballscrew				线性滑轨 Linearsliderail															
		公称外径(mm) Nominal outer diameter	导程 Lead (mm)	基本动额定负荷(N) Basicdynamic rated load	基本静额定负荷(N) Basicstatic rated load	基本动额定负额(N) Basic dynamic rated load		基本静额定负额(N) Basic static rated load		容许静力矩 Allowablestatic moment											
										俯仰 M_P(N-m)				偏拢 M_Y(N-m)				滚动 M_R(N-m)			
						滑座A Slide carriage	滑座S Slide carriage	滑座A Slide carriage	滑座S Slide carriage	滑座A1 Slide carriage	滑座A2 Slide carriage	滑座S1 Slide carriage	滑座S2 Slide carriage	滑座A1 Slide carriage	滑座A2 Slide carriage	滑座S1 Slide carriage	滑座S2 Slide carriage	滑座A1 Slide carriage	滑座A2 Slide carriage	滑座S1 Slide carriage	滑座S2 Slide carriage
KSR 5002	精密级 Precise grade	8	2	2136	3489	8007	–	12916	–	116	545	–	–	116	545	–	–	222	444	–	–
	一般级 General grade			1813	2910																

精度等级 Precision grade

单位：mm

型号 Model	轨道长度 Tracklength	定位重现性 Positioning reproducibility		定位精度 positioning accuracy		行走平行度 Walking parallelism		最大启动扭力:(N-cm) Maximum starting torque	
		精密级 Precise grade	一般级 General grade	精密级 Precise grade	一般级 General grade	精密级 Precise grade	一般级 General grade	精密级 Precise grade	一般级 General grade
KSR 50	150	±0.003	±0.005	0.020	–	0.010	–	4	2
	200								
	250								
	300								

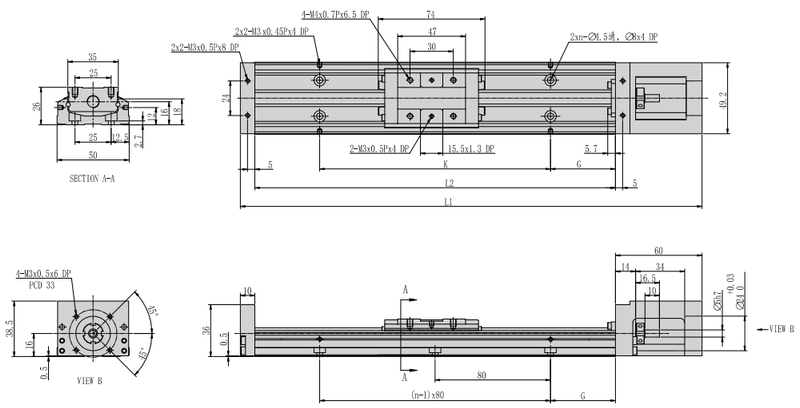
最大速度 Maximum speed

型号 Model	滚珠螺杆导程(mm) Ballscrewlead	轨道长度L2(mm) Tracklength	速度(mm/sec) Speed	
			精密级 Precise grade	一般级 General grade
KSR 50	02	150	270	270
		200	270	270
		250	270	270
		300	270	270

KSR 外形尺寸（不含护盖）
KSR Overall dimensions(without cover)

M KSR-50 电机外置直连（不含护盖） KSR-50 Motor external direct connection (without cover)

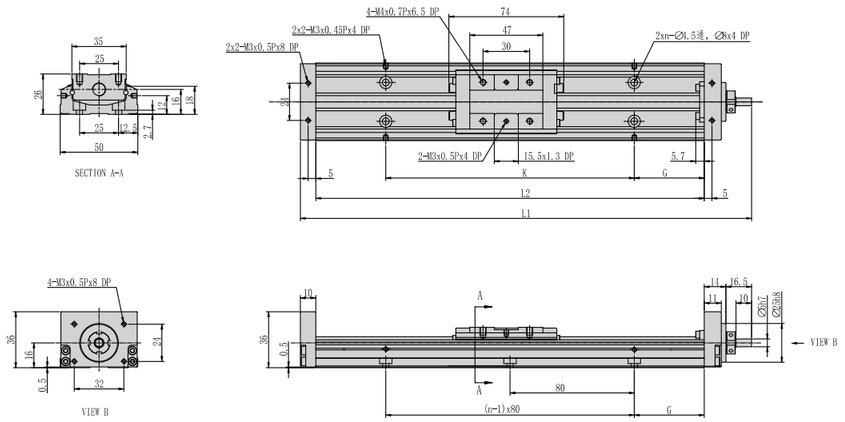
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	220	70	–	35	80	2	1	–
200	270	120	55	20	160	3	1.2	1.4
250	320	170	105	45	160	3	1.4	1.6
300	370	220	155	30	240	4	1.6	1.8

H0 KSR-50-H0（不含护盖） KSR-50-H0 (without cover)

单位:Unit: mm

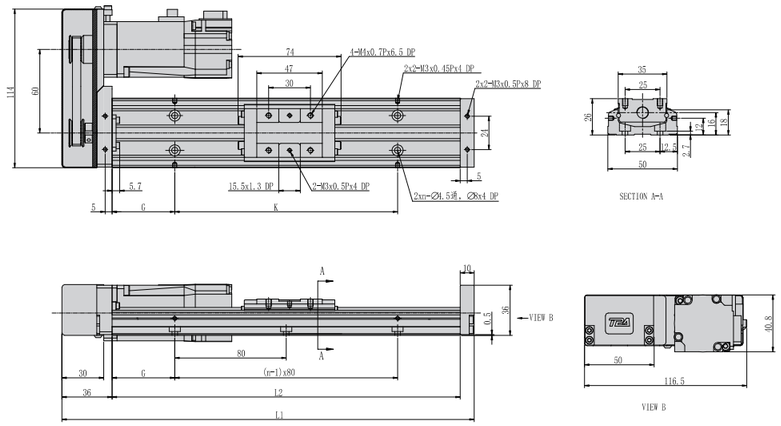


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	220	70	–	35	80	2	1	–
200	270	120	55	20	160	3	1.2	1.4
250	320	170	105	45	160	3	1.4	1.6
300	370	220	155	30	240	4	1.6	1.8

KSR 外形尺寸（不含护盖）
KSR Overall dimensions(without cover)

MR KSR-50 电机外置右侧（不含护盖） KSR-50 Motor external right side (without cover)

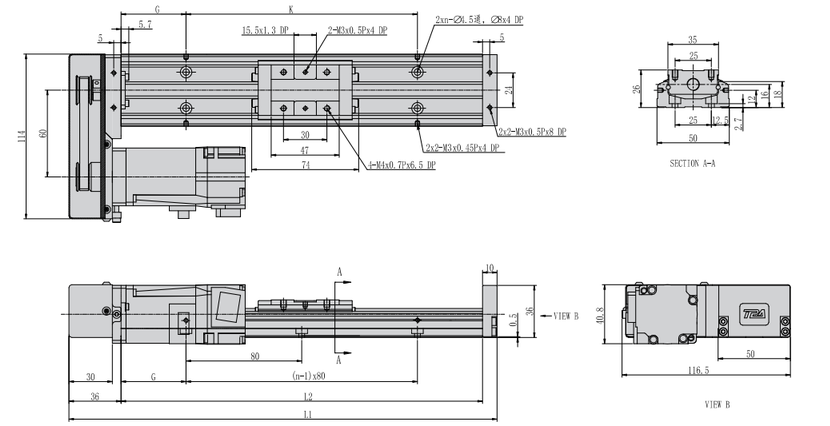
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	220	70	–	35	80	2	1	–
200	270	120	55	20	160	3	1.2	1.4
250	320	170	105	45	160	3	1.4	1.6
300	370	220	155	30	240	4	1.6	1.8

ML KSR-50 电机外置左侧（不含护盖） KSR-50 Motor external left side (without cover)

单位:Unit: mm

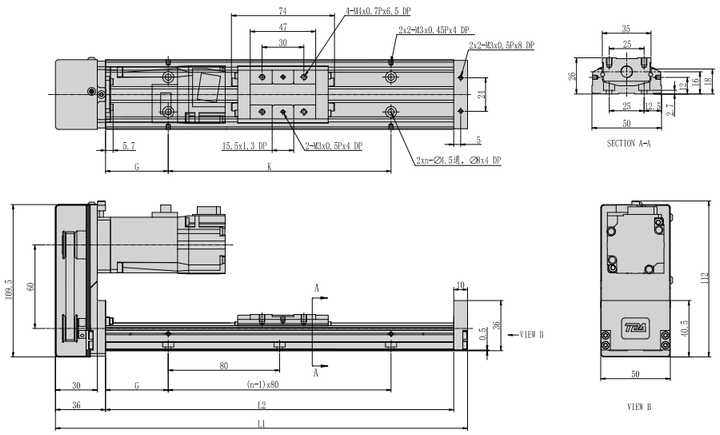


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	220	70	–	35	80	2	1	–
200	270	120	55	20	160	3	1.2	1.4
250	320	170	105	45	160	3	1.4	1.6
300	370	220	155	30	240	4	1.6	1.8

KSR 外形尺寸（不含护盖）
KSR Overall dimensions(without cover)

MU KSR-50 电机外置上方（不含护盖） KSR-50 Motor external above (without cover)

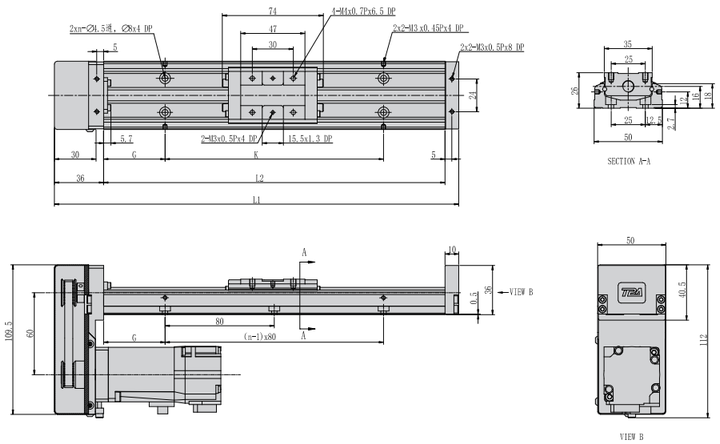
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	220	70	–	35	80	2	1	–
200	270	120	55	20	160	3	1.2	1.4
250	320	170	105	45	160	3	1.4	1.6
300	370	220	155	30	240	4	1.6	1.8

MP KSR-50 电机外置下方（不含护盖） KSR-50 Motor external under below (without cover)

单位:Unit: mm

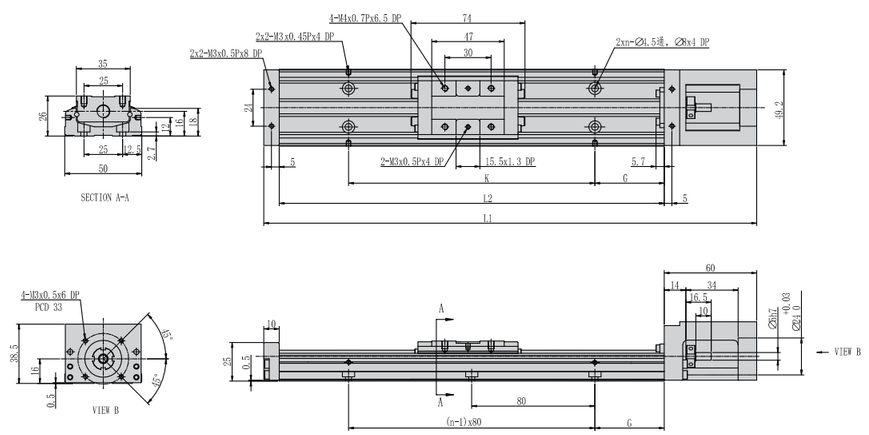


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	220	70	–	35	80	2	1	–
200	270	120	55	20	160	3	1.2	1.4
250	320	170	105	45	160	3	1.4	1.6
300	370	220	155	30	240	4	1.6	1.8

KSR 外形尺寸（不含护盖）
KSR Overall dimensions(without cover)

M KSR-50-DZ电机外置直连（不含护盖） KSR-50-DZ Motor external direct connection (without cover)

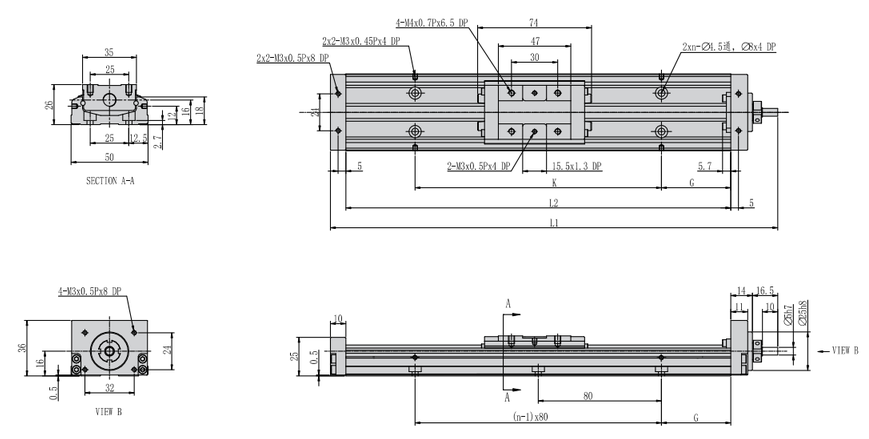
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	220	70	–	35	80	2	1	–
200	270	120	55	20	160	3	1.2	1.4
250	320	170	105	45	160	3	1.4	1.6
300	370	220	155	30	240	4	1.6	1.8

H0 KSR-50-DZ-H0（不含护盖） KSR-50-DZ-H0 (without cover)

单位:Unit: mm

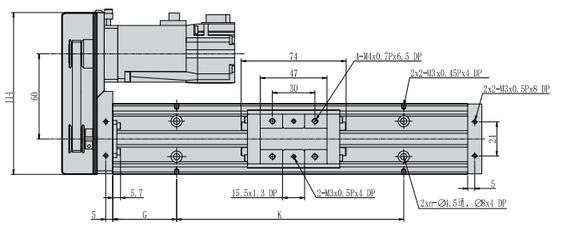


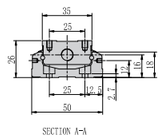
轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	220	70	–	35	80	2	1	–
200	270	120	55	20	160	3	1.2	1.4
250	320	170	105	45	160	3	1.4	1.6
300	370	220	155	30	240	4	1.6	1.8

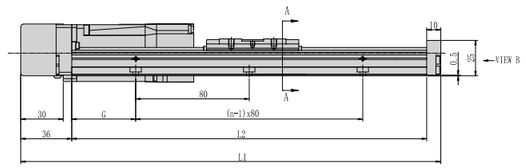
KSR 外形尺寸（不含护盖）
KSR Overall dimensions(without cover)

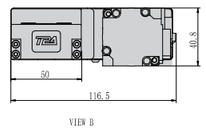
MR KSR-50-DZ 电机外置右侧（不含护盖） KSR-50-DZ Motor external right side (without cover)

单位:Unit: mm





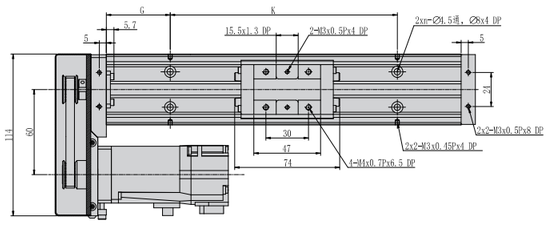


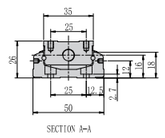


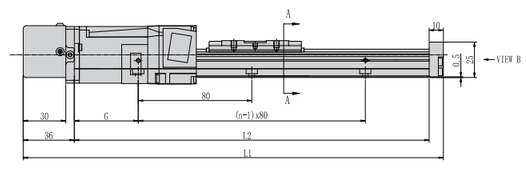
轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	220	70	–	35	80	2	1	–
200	270	120	55	20	160	3	1.2	1.4
250	320	170	105	45	160	3	1.4	1.6
300	370	220	155	30	240	4	1.6	1.8

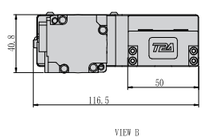
ML KSR-50-DZ 电机外置左侧（不含护盖） KSR-50-DZ Motor external left side (without cover)

单位:Unit: mm







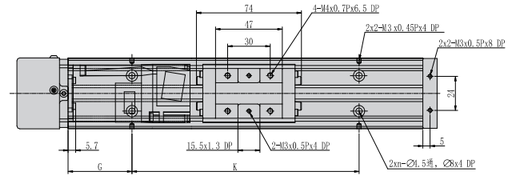


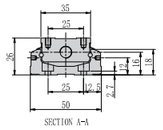
轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	220	70	–	35	80	2	1	–
200	270	120	55	20	160	3	1.2	1.4
250	320	170	105	45	160	3	1.4	1.6
300	370	220	155	30	240	4	1.6	1.8

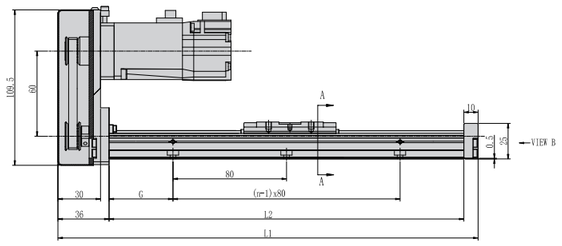
KSR 外形尺寸（不含护盖）
KSR Overall dimensions(without cover)

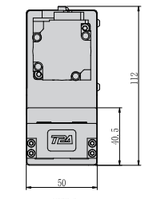
MU KSR-50-DZ 电机外置上方（不含护盖） KSR-50-DZ Motor external above (without cover)

单位:Unit: mm





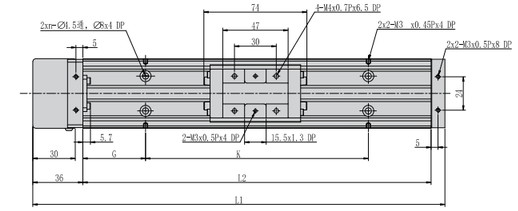


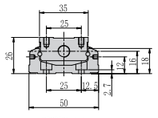


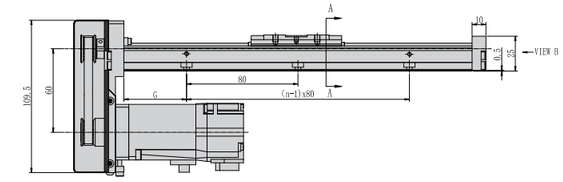
轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	220	70	–	35	80	2	1	–
200	270	120	55	20	160	3	1.2	1.4
250	320	170	105	45	160	3	1.4	1.6
300	370	220	155	30	240	4	1.6	1.8

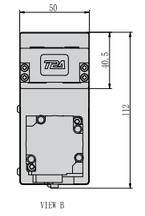
MP KSR-50-DZ 电机外置下方（不含护盖） KSR-50-DZ Motor external under below (without cover)

单位:Unit: mm







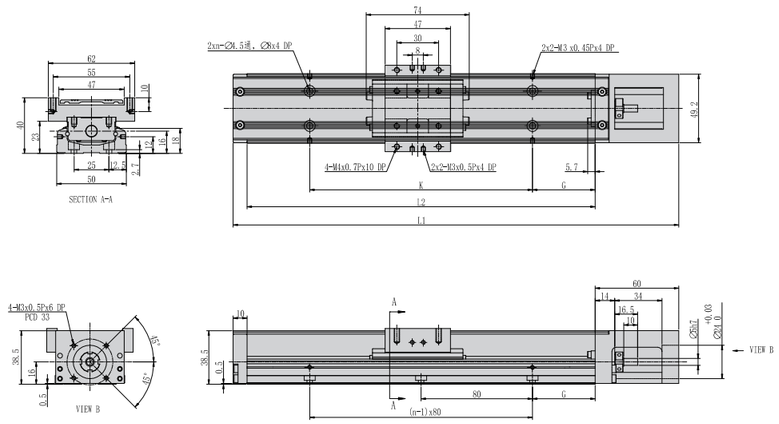


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	220	70	–	35	80	2	1	–
200	270	120	55	20	160	3	1.2	1.4
250	320	170	105	45	160	3	1.4	1.6
300	370	220	155	30	240	4	1.6	1.8

KNR 外形尺寸（含护盖）
KNR Overall dimensions(cover included)

M KNR-50 电机外置直连（含护盖） KNR-50 Motor external direct connection (Cover included)

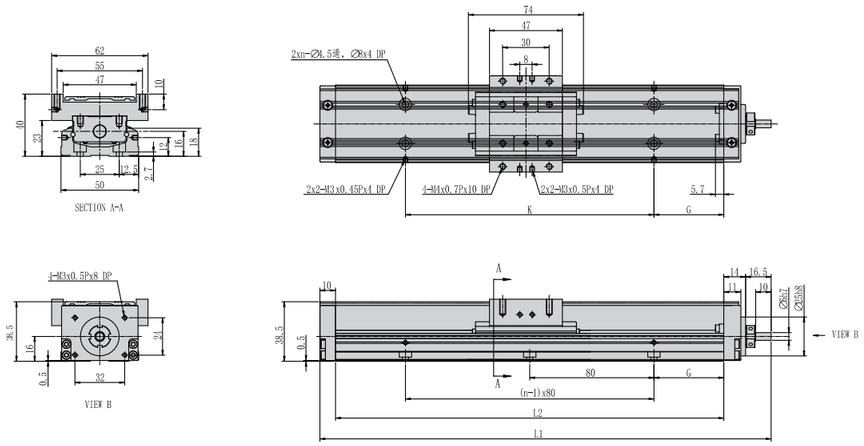
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	220	70	–	35	80	2	1.1	–
200	270	120	55	20	160	3	1.3	1.5
250	320	170	105	45	160	3	1.6	1.8
300	370	220	155	30	240	4	1.8	2

H0 KNR-50-H0（含护盖） KNR-50-H0 (Cover included)

单位:Unit: mm

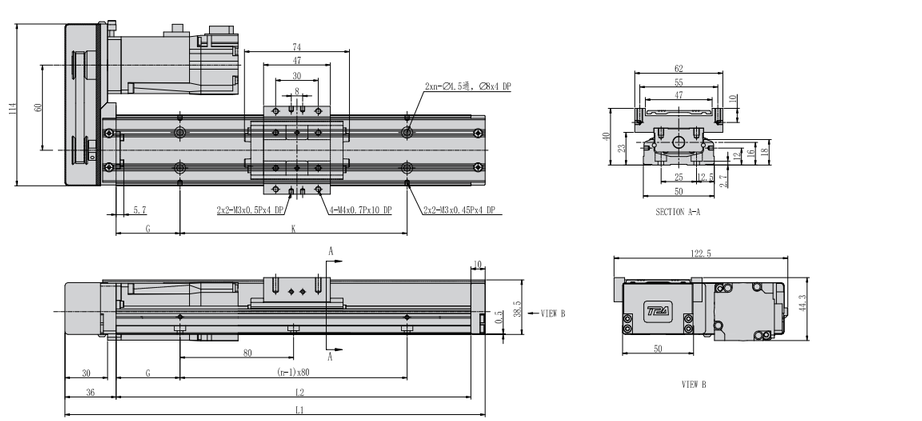


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	220	70	–	35	80	2	1.1	–
200	270	120	55	20	160	3	1.3	1.5
250	320	170	105	45	160	3	1.6	1.8
300	370	220	155	30	240	4	1.8	2

KNR 外形尺寸（含护盖）
KNR Overall dimensions(cover included)

MR KNR-50 电机外置右侧（含护盖） KNR-50 Motor external right side (Cover included)

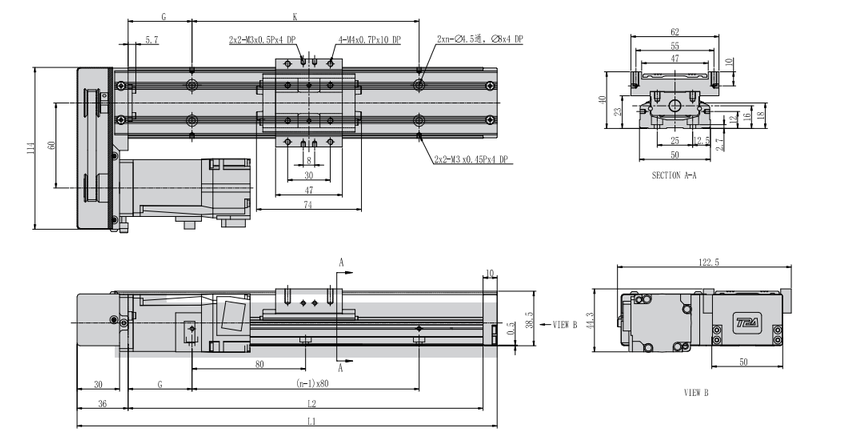
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	220	70	–	35	80	2	1.1	–
200	270	120	55	20	160	3	1.3	1.5
250	320	170	105	45	160	3	1.6	1.8
300	370	220	155	30	240	4	1.8	2

ML KNR-50 电机外置左侧（含护盖） KNR-50 Motor external left side (Cover included)

单位:Unit: mm

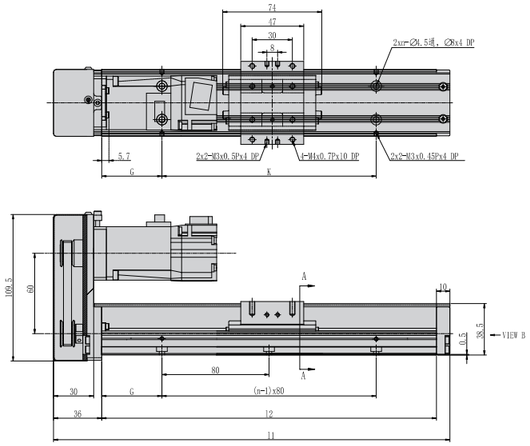


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	220	70	–	35	80	2	1.1	–
200	270	120	55	20	160	3	1.3	1.5
250	320	170	105	45	160	3	1.6	1.8
300	370	220	155	30	240	4	1.8	2

KNR 外形尺寸（含护盖）
KNR Overall dimensions(cover included)

MU KNR-50 电机外置上方（含护盖） KNR-50 Motor external above (Cover included)

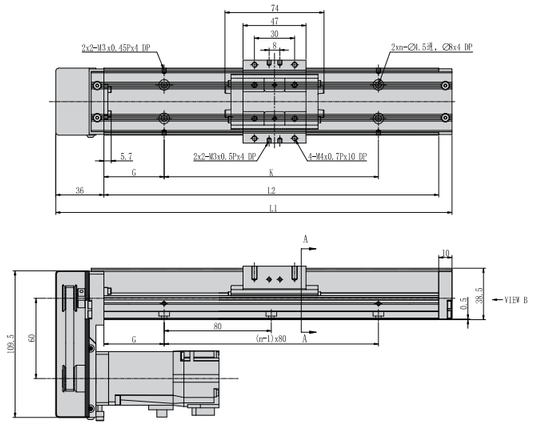
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	220	70	–	35	80	2	1.1	–
200	270	120	55	20	160	3	1.3	1.5
250	320	170	105	45	160	3	1.6	1.8
300	370	220	155	30	240	4	1.8	2

MP KNR-50 电机外置下方（含护盖） KNR-50 Motor external under below (Cover included)

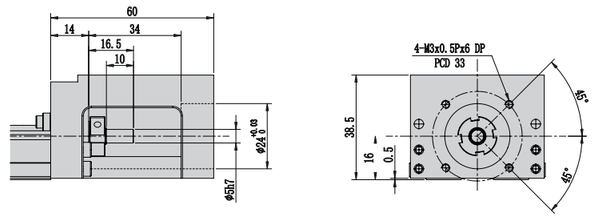
单位:Unit: mm



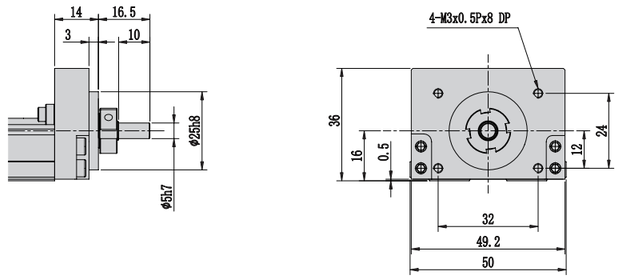
轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	220	70	–	35	80	2	1.1	–
200	270	120	55	20	160	3	1.3	1.5
250	320	170	105	45	160	3	1.6	1.8
300	370	220	155	30	240	4	1.8	2

电机座与电机连接法兰
Motor seat and motor connecting flange

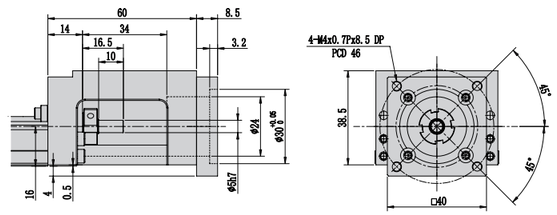
50 电机座F0 Motor seat F0



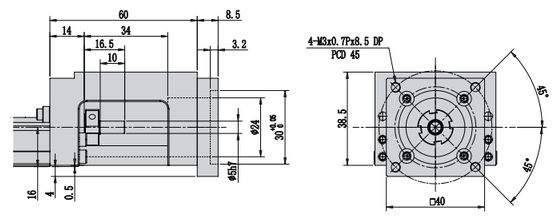
电机座H0 Motor seat H0



50 电机连接法兰F1(台达/安川/汇川/三菱/富士 100W) Connecting flange F1 of motor (Delta/Yaskawa/Inovance/Mitsubishi/Fuji 100W)

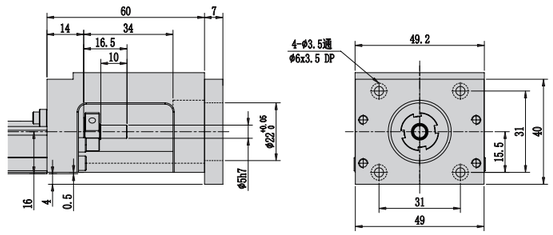


电机连接法兰F2(松下 50W/100W) Connecting flange F2 of motor (Panasonic 50W/100W)



电机座与电机连接法兰
Motor seat and motor connecting flange

50 电机连接法兰F3(42步进) Connecting flange F3 of motor (42 Stepper)



MEMO

此图仅供参考，出货规格详见尺寸图面
This drawing is for reference only, Please refer to the size drawing for shipment specifications.

最大行程 Max Stroke 510mm

最高速度 Max Speed 1000mm/sec

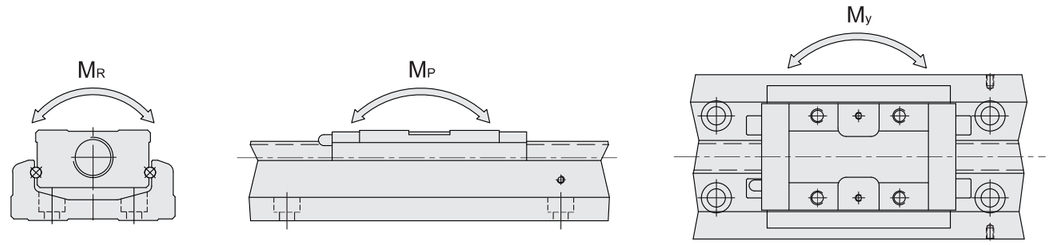
滚珠螺杆 Ball Screw Ø12mm

型号表达方式 Ordering method

TPA-KSR-6010CK-200A1-M-F0S2-N3-D-F

- 品牌名称 Brand
  - H 日规模组 Ball Screw Linear Module
  - O 欧规模组 Belt Linear Module
  - E 电动缸 Electric Cylinder
  - L 直线电机 Linear Motor
  - K 钢基模组 Steel Linear Module
  - G 内嵌式模组 Built-in Rail Type
  - D 简易模组 Splinde Linear Unit
  - M 直驱旋转电机 Rotary Motor
- N 半封闭-铝护盖 Semi Seal -Aluminum cover
  C 全封闭 Full Seal
  F 风琴罩-伸缩护套 Guideway Cover
  S 无防护 No protection
- R 螺杆 Screw
  P 有铁芯 Ferreous
- 轨道宽度 Track width: 30、40、50 / 60、86、100
- 导程 Lead: 05/10/20mm
- 精度等级 Precision grade
  C：普通级 Common
  P：精密级 Precision
- 轴端有键槽
  无标记：无
  Shaft end with keyway
  None: none
- 轨道长度 Track length: 150/200/300 / 400/500/600
- 滑座数量 Slide number
  A：标准型 Standard type
  S：轻载型 Light load type
- 电机方向 Motor direction
  M 电机外置直连
  MP 电机外置下方
  MU 电机外置上方
  MR 电机外置右侧
  ML 电机外置左侧
  M Motor external direct connection
  MP Motor external under below
  MU Motor external above
  MR Motor external right side
  ML Motor external left side
- 参考法兰页 Reference flange page
- 包含极限开关
  S0：极限轨道
  S1：671光电支架
  S2：674光电支架
  S3：GX-F12A型
  S4：GX-F12A-P型
  无标记：无
  Include limit switches.
  S0: limit orbit
  S1: 671 photoelectric support
  S2: 674 photoelectric support
  S3:GX - F12A type
  S4:GX - F12A - P type
  None: none
- 光电类型 Photoelectric Mode
  N：NPN
  P：PNP
- 数量 Quantity
  1PCS
  2PCS
  3PCS
  无标记：无 None
- 联轴器 Couplings
  无标记：无
  None
- 客制/特殊加工 Custom/special processing

负载规格 Load specification



技术参数 Technical parameter

型号 Model		滚珠螺杆 Ballscrew				线性滑轨 Linearsliderail															
		公称外径 Nominal outer diameter (mm)	导程 Lead (mm)	基本动额定负荷 Basic dynamic rated load (N)	基本静额定负荷 Basic static rated load (N)	基本动额定负额 (N) Basic dynamic rated load		基本静额定负额 (N) Basic static rated load		容许静力矩 Allowable static moment											
										俯仰 M_P(N-m)				偏拢 M_Y(N-m)				滚动 M_R(N-m)			
						滑座A Slide carriage	滑座S Slide carriage	滑座A Slide carriage	滑座S Slide carriage	滑座A1 Slide carriage	滑座A2 Slide carriage	滑座S1 Slide carriage	滑座S2 Slide carriage	滑座A1 Slide carriage	滑座A2 Slide carriage	滑座S1 Slide carriage	滑座S2 Slide carriage	滑座A1 Slide carriage	滑座A2 Slide carriage	滑座S1 Slide carriage	滑座S2 Slide carriage
KSR 6005	精密级 Precise grade	12	5	3744	6243	13230	7173	21462	11574	152	760	72	367	152	760	72	367	419	838	241	482
	一般级 General grade			3377	5625																
KSR 6010	精密级 Precise grade	12	10	2410	3743	13230	7173	21462	11574	152	760	72	367	152	760	72	367	419	838	241	482
	一般级 General grade			2107	3234																
KSR 6020	精密级 Precise grade	12	20	1610	2872	13230	7173	21462	11574	152	760	72	367	152	760	72	367	419	838	241	482
	一般级 General grade			1369	2442																

精度等级 Precision grade

单位：mm

型号 Model	轨道长度 Track length	定位重现性 Positioning reproducibility		定位精度 positioning accuracy		行走平行度 Walking parallelism		最大启动扭力：(N-cm) Maximum starting torque	
		精密级 Precise grade	一般级 General grade	精密级 Precise grade	一般级 General grade	精密级 Precise grade	一般级 General grade	精密级 Precise grade	一般级 General grade
KSR 60	150	±0.003	±0.005	0.020	–	0.010	–	15	7
	200								
	300								
	400								
	500	±0.003	±0.005	0.025	–	0.015	–	15	7
	600								

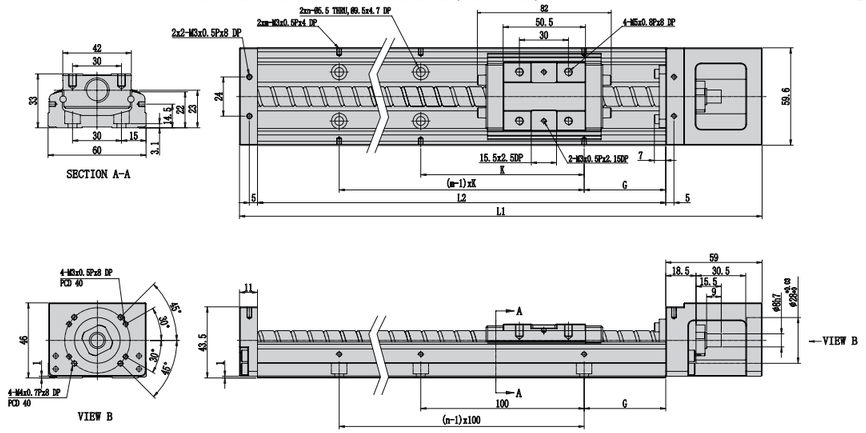
最大速度 Maximum speed

型号 Model	滚珠螺杆导程 (mm) Ballscrew lead	轨道长度 L2 (mm) Track length	速度 (mm/sec) Speed	
			精密级 Precise grade	一般级 General grade
KSR 60	05	150	550	390
		200	550	390
		300	550	390
		400	550	390
		500	550	390
		600	340	340
	10	150	1100	790
		200	1100	790
		300	1100	790
		400	1100	790
		500	1100	790
		600	670	670
	20	150	–	1000
		200	–	1000
		300	–	1000
		400	–	1000
		500	–	1000
		600	–	850

KSR 外形尺寸（不含护盖）
KSR Overall dimensions(without cover)

M KSR-60 电机外置直连（不含护盖） KSR-60 Motor external direct connection (without cover)

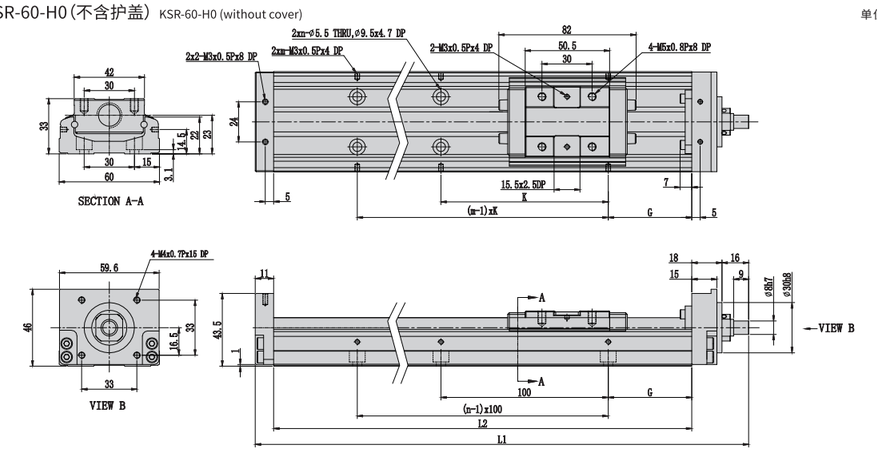
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage					滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	220	60	–	25	100	2	2	1.5	–
200	270	110	–	50	100	2	2	1.8	–
300	370	210	135	50	200	3	2	2.4	2.7
400	470	310	235	50	100	4	4	3	3.3
500	570	410	335	50	200	5	3	3.6	3.9
600	670	510	435	50	100	6	6	4.2	4.6

H0 KSR-60-H0（不含护盖） KSR-60-H0 (without cover)

单位:Unit: mm

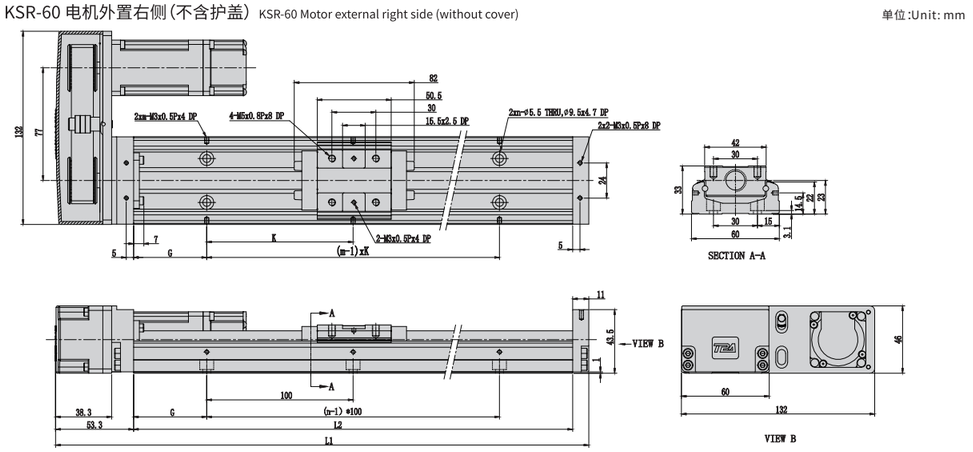


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage					滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	195	60	–	25	100	2	2	1.4	–
200	245	110	–	50	100	2	2	1.7	–
300	345	210	135	50	200	3	2	2.3	2.6
400	445	310	235	50	100	4	4	3.2	3.2
500	545	410	335	50	200	5	3	3.5	3.8
600	645	510	435	50	100	6	6	4.1	4.5

KSR 外形尺寸（不含护盖）
KSR Overall dimensions(without cover)

MR KSR-60 电机外置右侧（不含护盖） KSR-60 Motor external right side (without cover)

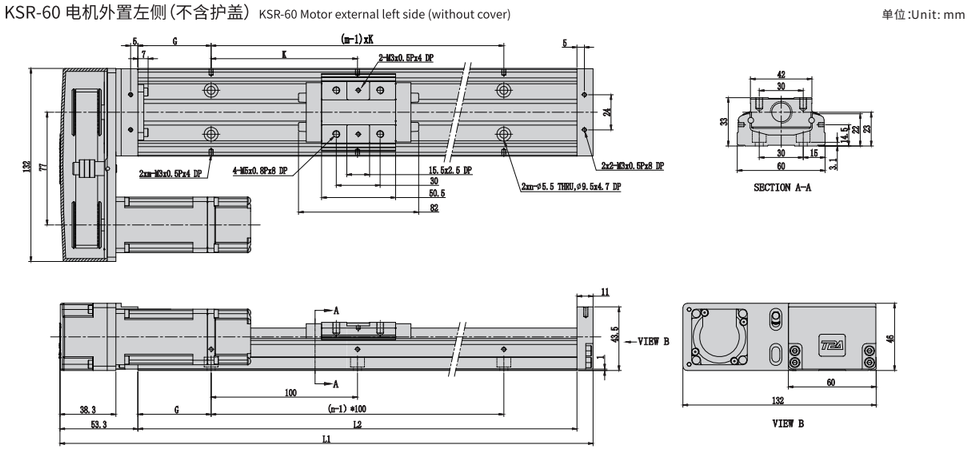
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage					滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	214.3	60	–	25	100	2	2	1.4	–
200	264.3	110	–	50	100	2	2	1.7	–
300	364.3	210	135	50	200	3	2	2.3	2.6
400	464.3	310	235	50	100	4	4	3.2	3.2
500	564.3	410	335	50	200	5	3	3.5	3.8
600	664.3	510	435	50	100	6	6	4.1	4.5

ML KSR-60 电机外置左侧（不含护盖） KSR-60 Motor external left side (without cover)

单位:Unit: mm

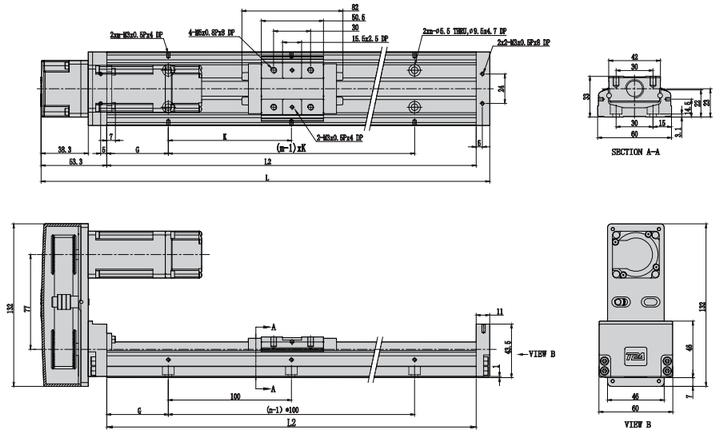


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage					滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	214.3	60	–	25	100	2	2	1.4	–
200	264.3	110	–	50	100	2	2	1.7	–
300	364.3	210	135	50	200	3	2	2.3	2.6
400	464.3	310	235	50	100	4	4	3.2	3.2
500	564.3	410	335	50	200	5	3	3.5	3.8
600	664.3	510	435	50	100	6	6	4.1	4.5

KSR 外形尺寸（不含护盖）
KSR Overall dimensions(without cover)

MU KSR-60 电机外置上方（不含护盖） KSR-60 Motor external above (without cover)

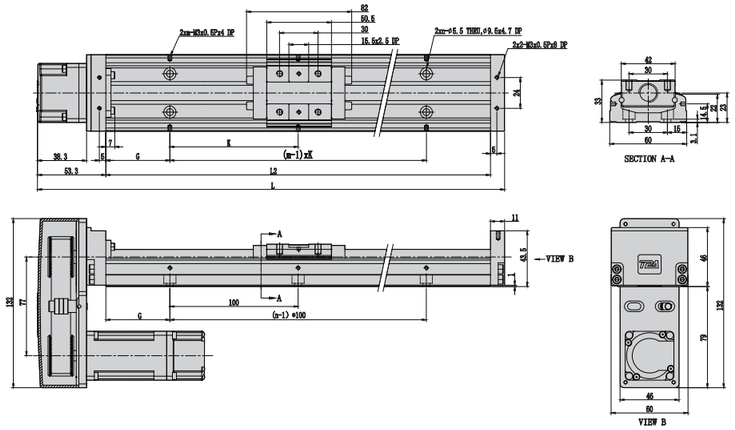
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage					滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	214.3	60	–	25	100	2	2	1.4	–
200	264.3	110	–	50	100	2	2	1.7	–
300	364.3	210	135	50	200	3	2	2.3	2.6
400	464.3	310	235	50	100	4	4	3.2	3.2
500	564.3	410	335	50	200	5	3	3.5	3.8
600	664.3	510	435	50	100	6	6	4.1	4.5

MP KSR-60 电机外置下方（不含护盖） KSR-60 Motor external under below (without cover)

单位:Unit: mm

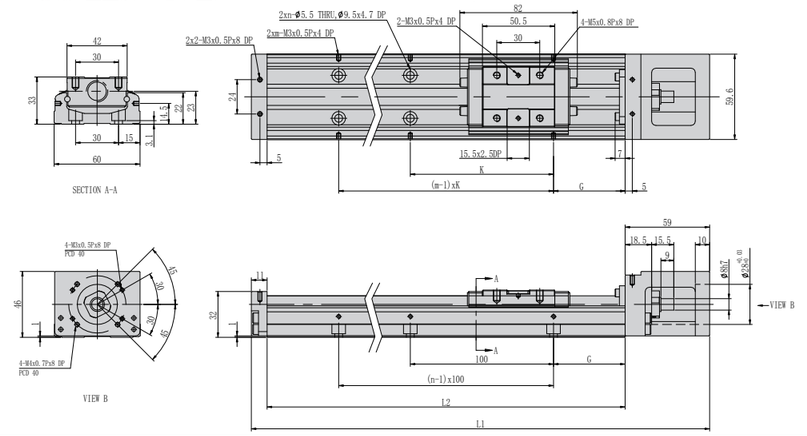


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage					滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	214.3	60	–	25	100	2	2	1.4	–
200	264.3	110	–	50	100	2	2	1.7	–
300	364.3	210	135	50	200	3	2	2.3	2.6
400	464.3	310	235	50	100	4	4	3.2	3.2
500	564.3	410	335	50	200	5	3	3.5	3.8
600	664.3	510	435	50	100	6	6	4.1	4.5

KSR 外形尺寸（不含护盖）
KSR Overall dimensions(without cover)

M KSR-60-DZ电机外置直连（不含护盖） KSR-60-DZ Motor external direct connection (without cover)

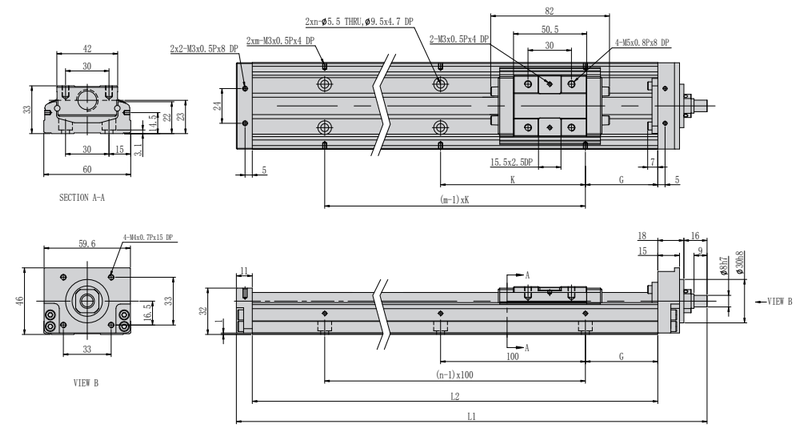
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage					滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	220	60	–	25	100	2	2	1.5	–
200	270	110	–	50	100	2	2	1.8	–
300	370	210	135	50	200	3	2	2.4	2.7
400	470	310	235	50	100	4	4	3	3.3
500	570	410	335	50	200	5	3	3.6	3.9
600	670	510	435	50	100	6	6	4.2	4.6

H0 KSR-60-DZ-H0（不含护盖） KSR-60-DZ-H0 (without cover)

单位:Unit: mm

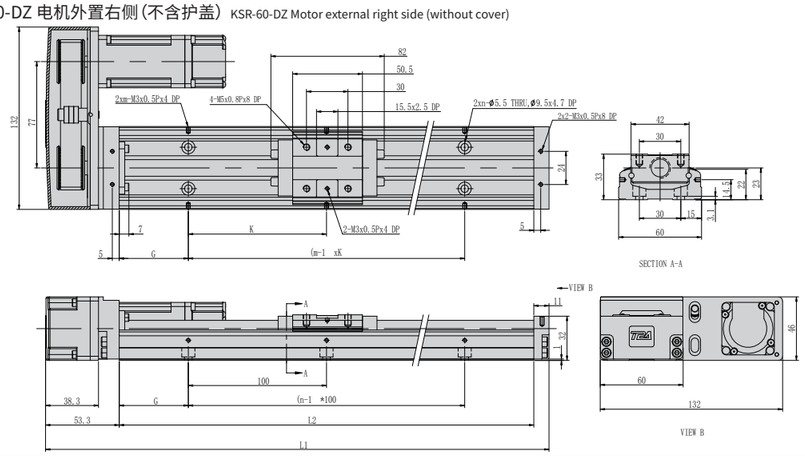


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage					滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	195	60	–	25	100	2	2	1.4	–
200	245	110	–	50	100	2	2	1.7	–
300	345	210	135	50	200	3	2	2.3	2.6
400	445	310	235	50	100	4	4	3.2	3.2
500	545	410	335	50	200	5	3	3.5	3.8
600	645	510	435	50	100	6	6	4.1	4.5

KSR 外形尺寸（不含护盖）
KSR Overall dimensions(without cover)

MR KSR-60-DZ 电机外置右侧（不含护盖） KSR-60-DZ Motor external right side (without cover)

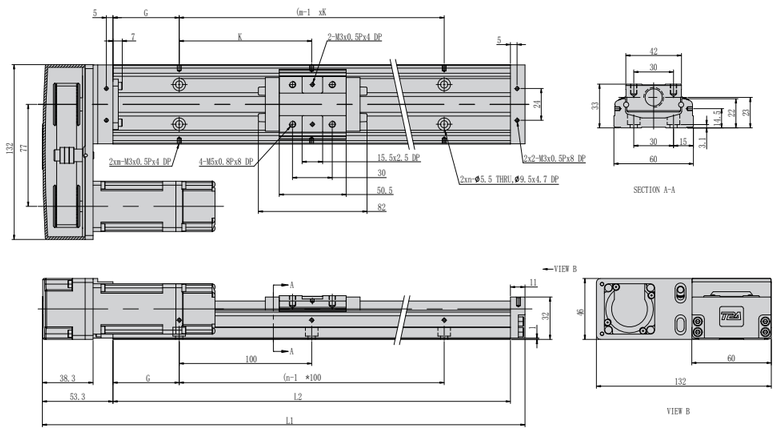
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage					滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	214.3	60	–	25	100	2	2	1.4	–
200	264.3	110	–	50	100	2	2	1.7	–
300	364.3	210	135	50	200	3	2	2.3	2.6
400	464.3	310	235	50	100	4	4	3.2	3.2
500	564.3	410	335	50	200	5	3	3.5	3.8
600	664.3	510	435	50	100	6	6	4.1	4.5

ML KSR-60-DZ 电机外置左侧（不含护盖） KSR-60-DZ Motor external left side (without cover)

单位:Unit: mm

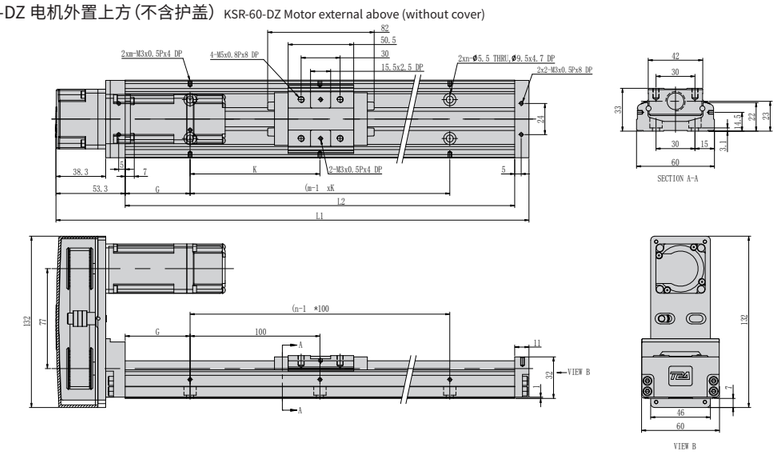


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage					滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	214.3	60	–	25	100	2	2	1.4	–
200	264.3	110	–	50	100	2	2	1.7	–
300	364.3	210	135	50	200	3	2	2.3	2.6
400	464.3	310	235	50	100	4	4	3.2	3.2
500	564.3	410	335	50	200	5	3	3.5	3.8
600	664.3	510	435	50	100	6	6	4.1	4.5

KSR 外形尺寸（不含护盖）
KSR Overall dimensions(without cover)

MU KSR-60-DZ 电机外置上方（不含护盖） KSR-60-DZ Motor external above (without cover)

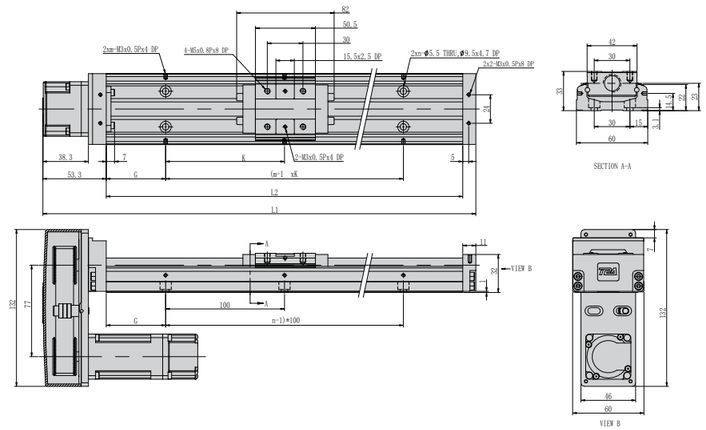
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage					滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	214.3	60	–	25	100	2	2	1.4	–
200	264.3	110	–	50	100	2	2	1.7	–
300	364.3	210	135	50	200	3	2	2.3	2.6
400	464.3	310	235	50	100	4	4	3.2	3.2
500	564.3	410	335	50	200	5	3	3.5	3.8
600	664.3	510	435	50	100	6	6	4.1	4.5

MP KSR-60-DZ 电机外置下方（不含护盖） KSR-60-DZ Motor external under below (without cover)

单位:Unit: mm

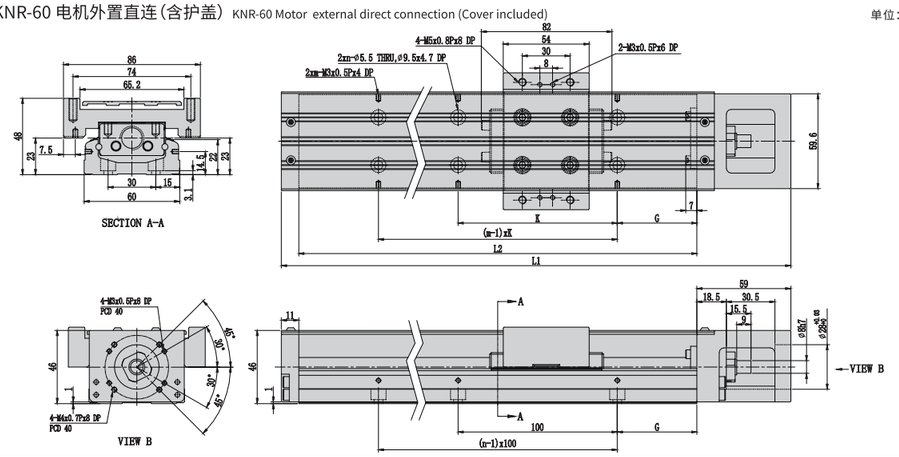


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage					滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	214.3	60	–	25	100	2	2	1.4	–
200	264.3	110	–	50	100	2	2	1.7	–
300	364.3	210	135	50	200	3	2	2.3	2.6
400	464.3	310	235	50	100	4	4	3.2	3.2
500	564.3	410	335	50	200	5	3	3.5	3.8
600	664.3	510	435	50	100	6	6	4.1	4.5

KNR 外形尺寸（含护盖）
KNR Overall dimensions(Cover included)

M KNR-60 电机外置直连（含护盖） KNR-60 Motor external direct connection (Cover included)

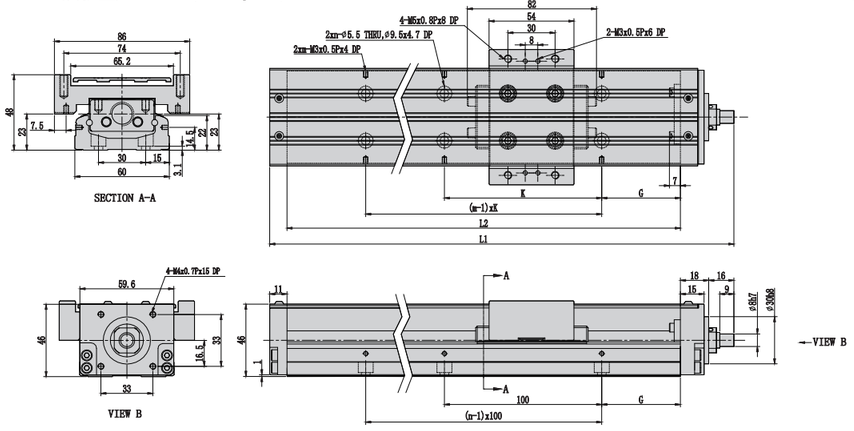
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage					滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	220	60	–	25	100	2	2	1.7	–
200	270	110	–	50	100	2	2	2.1	–
300	370	210	135	50	200	3	2	2.7	3
400	470	310	235	50	100	4	4	3.3	3.6
500	570	410	335	50	200	5	3	3.9	4.2
600	670	510	435	50	100	6	6	4.6	5

H0 KNR-60-H0（含护盖） KNR-60-H0 (including cover)

单位:Unit: mm

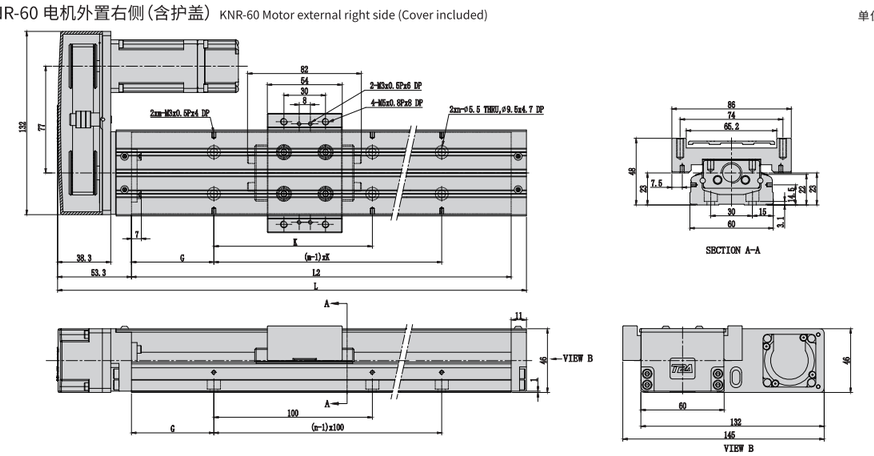


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage					滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	195	60	–	25	100	2	2	1.6	–
200	245	110	–	50	100	2	2	2	–
300	345	210	135	50	200	3	2	2.6	2.9
400	445	310	235	50	100	4	4	3.2	3.5
500	545	410	335	50	200	5	3	3.8	4.1
600	645	510	435	50	100	6	6	4.5	4.9

KNR 外形尺寸（含护盖）
KNR Overall dimensions(Cover included)

MR KNR-60 电机外置右侧（含护盖） KNR-60 Motor external right side (Cover included)

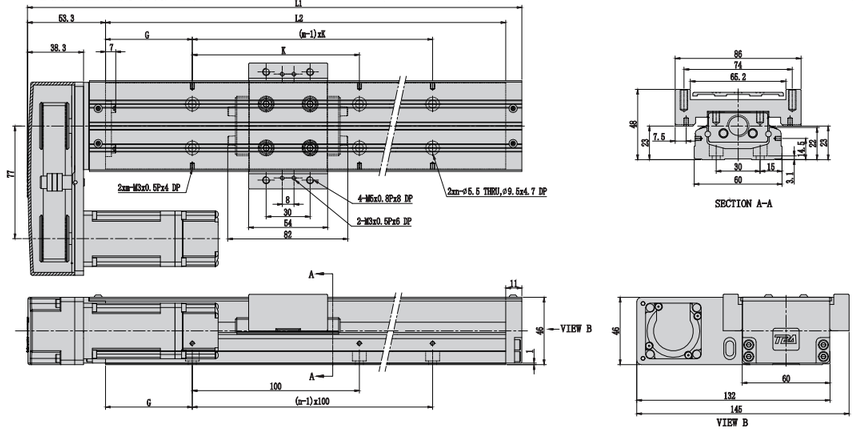
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage					滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	214.3	60	–	25	100	2	2	1.6	–
200	264.3	110	–	50	100	2	2	2	–
300	364.3	210	135	50	200	3	2	2.6	2.9
400	464.3	310	235	50	100	4	4	3.2	3.5
500	564.3	410	335	50	200	5	3	3.8	4.1
600	664.3	510	435	50	100	6	6	4.5	4.9

ML KNR-60 电机外置左侧（含护盖） KNR-60 Motor external left side (Cover included)

单位:Unit: mm

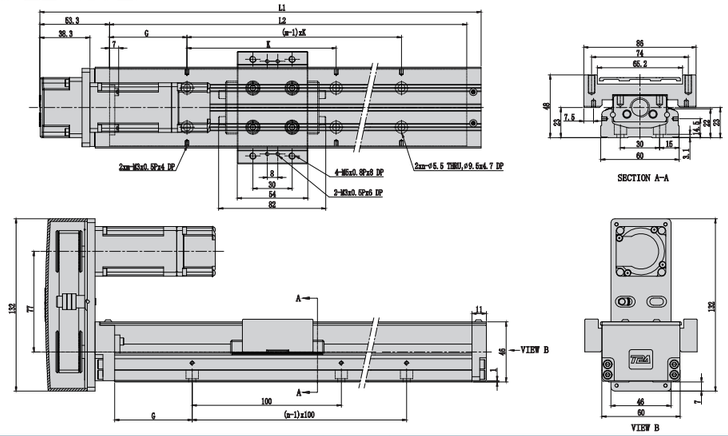


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage					滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	214.3	60	–	25	100	2	2	1.6	–
200	264.3	110	–	50	100	2	2	2	–
300	364.3	210	135	50	200	3	2	2.6	2.9
400	464.3	310	235	50	100	4	4	3.2	3.5
500	564.3	410	335	50	200	5	3	3.8	4.1
600	664.3	510	435	50	100	6	6	4.5	4.9

KNR 外形尺寸（含护盖）
KNR Overall dimensions(Cover included)

MU KNR-60 电机外置上方（含护盖） KNR-60 Motor external above (Cover included)

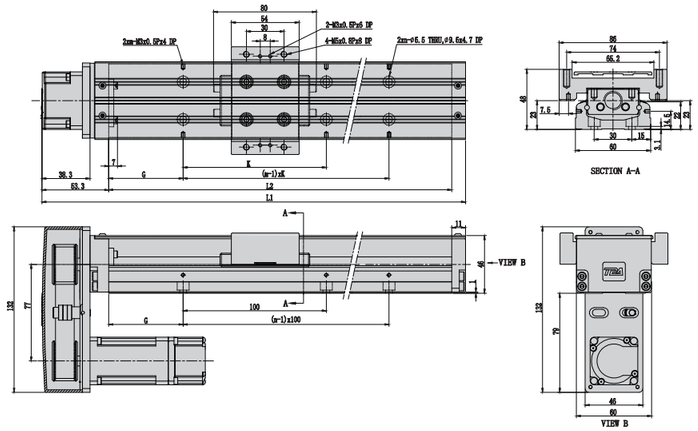
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage					滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	214.3	60	–	25	100	2	2	1.6	–
200	264.3	110	–	50	100	2	2	2	–
300	364.3	210	135	50	200	3	2	2.6	2.9
400	464.3	310	235	50	100	4	4	3.2	3.5
500	564.3	410	335	50	200	5	3	3.8	4.1
600	664.3	510	435	50	100	6	6	4.5	4.9

MP KNR-60 电机外置下方（含护盖） KNR-60 Motor external under below (Cover included)

单位:Unit: mm

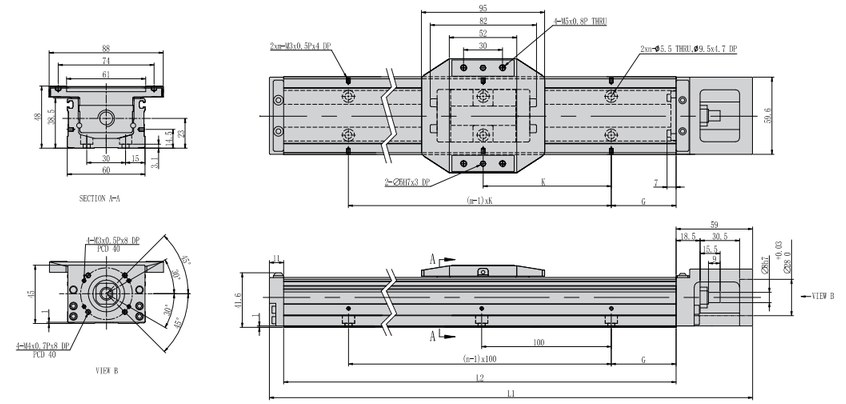


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage					滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	214.3	60	–	25	100	2	2	1.6	–
200	264.3	110	–	50	100	2	2	2	–
300	364.3	210	135	50	200	3	2	2.6	2.9
400	464.3	310	235	50	100	4	4	3.2	3.5
500	564.3	410	335	50	200	5	3	3.8	4.1
600	664.3	510	435	50	100	6	6	4.5	4.9

KCR 外形尺寸
KCR Overall dimensions

M KCR-60 电机外置直连 KCR-60 Motor external direct connection

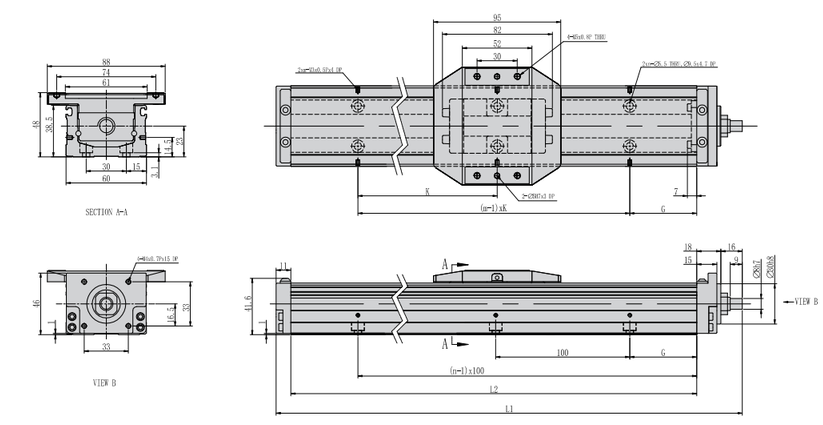
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage					滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	220	60	–	25	100	2	2	1.7	–
200	270	110	–	50	100	2	2	2.1	–
300	370	210	135	50	200	3	2	2.7	3
400	470	310	235	50	100	4	4	3.3	3.6
500	570	410	335	50	200	5	3	3.9	4.2
600	670	510	435	50	100	6	6	4.6	5

H0 KCR-60-H0

单位:Unit: mm

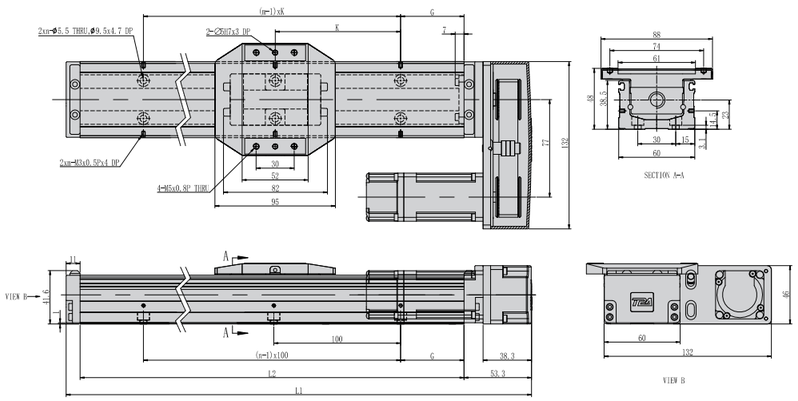


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage					滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	195	60	–	25	100	2	2	1.6	–
200	245	110	–	50	100	2	2	2	–
300	345	210	135	50	200	3	2	2.6	2.9
400	445	310	235	50	100	4	4	3.2	3.5
500	545	410	335	50	200	5	3	3.8	4.1
600	645	510	435	50	100	6	6	4.5	4.9

KCR 外形尺寸
KCR Overall dimensions

MR KCR-60 电机外置右侧 KCR-60 Motor external right side

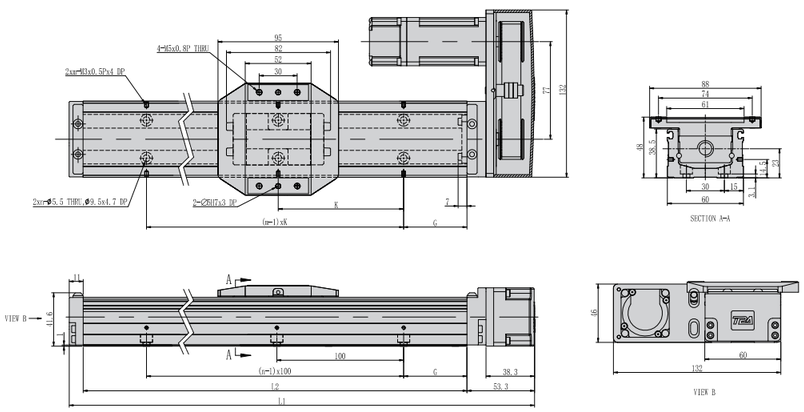
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage					滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	214.3	60	–	25	100	2	2	1.6	–
200	264.3	110	–	50	100	2	2	2	–
300	364.3	210	135	50	200	3	2	2.6	2.9
400	464.3	310	235	50	100	4	4	3.2	3.5
500	564.3	410	335	50	200	5	3	3.8	4.1
600	664.3	510	435	50	100	6	6	4.5	4.9

ML KCR-60 电机外置左侧 KCR-60 Motor external left side

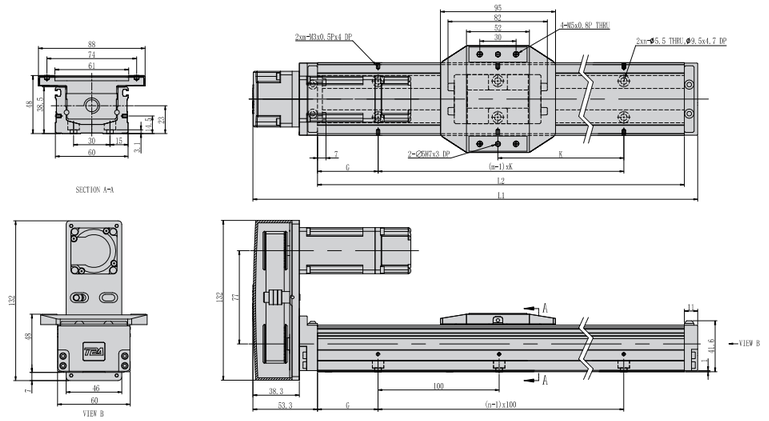
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage					滑座 A1 Slide carriage	滑座 A2 Slide carriage
150		60	–	25	100	2	2	1.6	–
200		110	–	50	100	2	2	2	–
300		210	135	50	200	3	2	2.6	2.9
400		310	235	50	100	4	4	3.2	3.5
500		410	335	50	200	5	3	3.8	4.1
600		510	435	50	100	6	6	4.5	4.9

MU KCR-60 电机外置上方 KCR-60 Motor external above

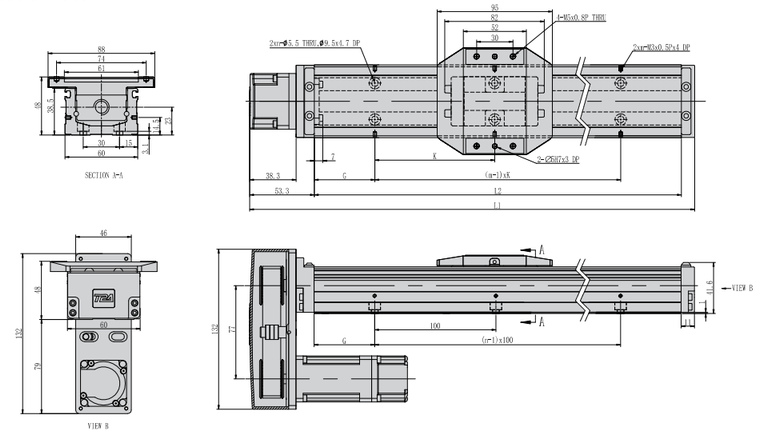
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage					滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	214.3	60	–	25	100	2	2	1.6	–
200	264.3	110	–	50	100	2	2	2	–
300	364.3	210	135	50	200	3	2	2.6	2.9
400	464.3	310	235	50	100	4	4	3.2	3.5
500	564.3	410	335	50	200	5	3	3.8	4.1
600	664.3	510	435	50	100	6	6	4.5	4.9

MP KCR-60 电机外置下方 KCR-60 Motor external under below

单位:Unit: mm

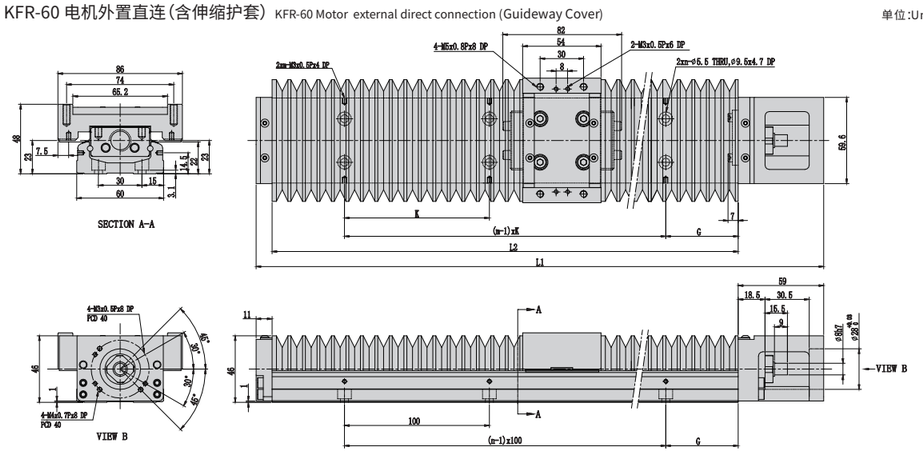


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	K(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage					滑座 A1 Slide carriage	滑座 A2 Slide carriage
150	195	60	–	25	100	2	2	1.6	–
200	245	110	–	50	100	2	2	2	–
300	345	210	135	50	200	3	2	2.6	2.9
400	445	310	235	50	100	4	4	3.2	3.5
500	545	410	335	50	200	5	3	3.8	4.1
600	645	510	435	50	100	6	6	4.5	4.9

KFR 外形尺寸(含伸缩护套)
KFR Overall dimensions (Guideway Cover)

M KFR-60 电机外置直连(含伸缩护套) KFR-60 Motor external direct connection (Guideway Cover)

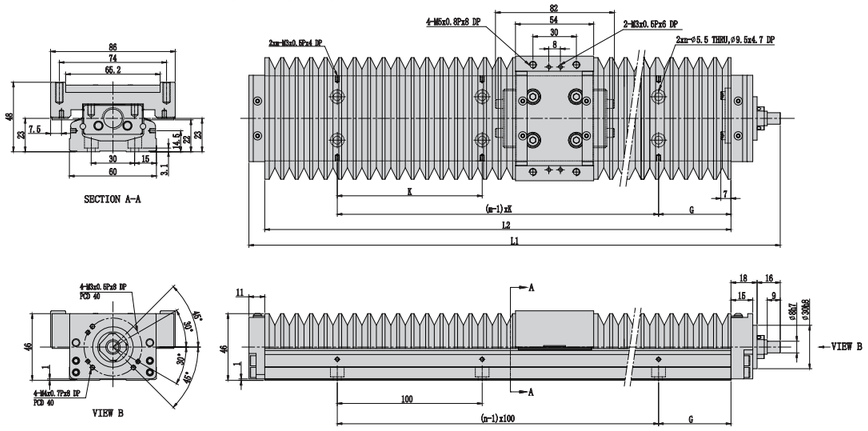
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	行程(mm) Stroke	护套伸缩量(mm) Telescopic amount of sheath		G(mm)	K(mm)	n	重量(kg) Weight	重量(kg) Weight
			最小伸缩量(mm) Minimum expansion	最大伸缩量(mm) Maximum expansion					
150	220	50	13	66	25	100	2	1.6	–
200	270	90	19.5	110	50	100	2	2	–
300	370	160	35	195	50	200	3	2.6	2.9
400	470	230	49.5	278	50	100	4	3.2	3.5
500	570	310	59.5	370	50	200	5	3.8	4.1
600	670	380	75	455	50	100	6	4.5	4.9

H0 KFR-60-H0(含伸缩护套) KFR-60-H0 (Guideway Cover)

单位:Unit: mm

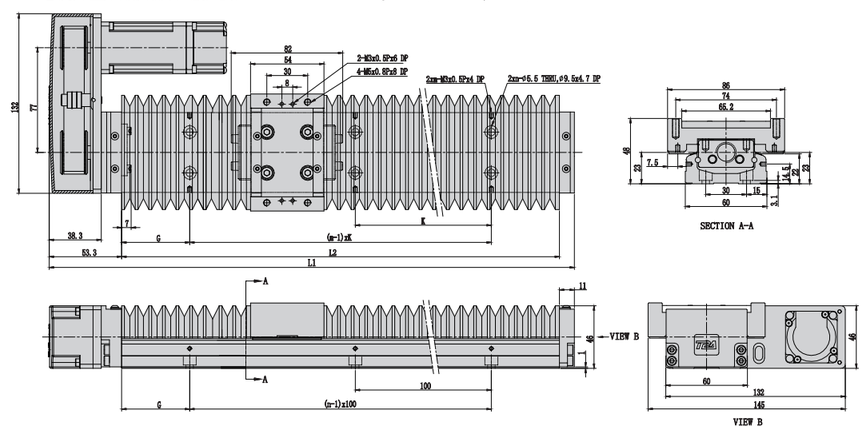


轨道长度 L2 Track length	全长(L1) Full length	行程(mm) Stroke	护套伸缩量(mm) Telescopic amount of sheath		G(mm)	K(mm)	n	重量(kg) Weight	重量(kg) Weight
			最小伸缩量(mm) Minimum expansion	最大伸缩量(mm) Maximum expansion					
150	220	50	13	66	25	100	2	1.6	–
200	270	90	19.5	110	50	100	2	2	–
300	370	160	35	195	50	200	3	2.6	2.9
400	470	230	49.5	278	50	100	4	3.2	3.5
500	570	310	59.5	370	50	200	5	3.8	4.1
600	670	380	75	455	50	100	6	4.5	4.9

KFR 外形尺寸(含伸缩护套)
KFR Overall dimensions (Guideway Cover)

MR KFR-60 电机外置右侧(含伸缩护套) KFR-60 Motor external right side (Guideway Cover)

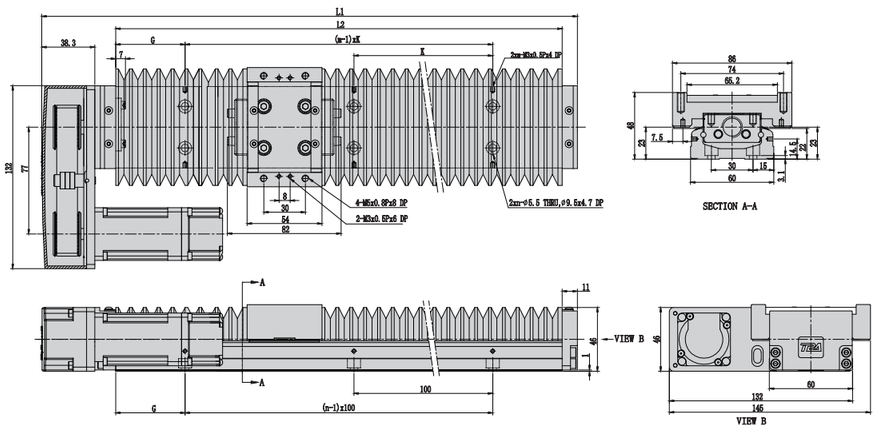
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	行程(mm) Stroke	护套伸缩量(mm) Telescopic amount of sheath		G(mm)	K(mm)	n	重量(kg) Weight	重量(kg) Weight
			最小伸缩量(mm) Minimum expansion	最大伸缩量(mm) Maximum expansion					
150	214.3	50	13	66	25	100	2	1.7	–
200	264.3	90	19.5	110	50	100	2	2.1	–
300	364.3	160	35	195	50	200	3	2.7	3
400	464.3	230	49.5	278	50	100	4	3.3	3.6
500	564.3	310	59.5	370	50	200	5	3.9	4.2
600	664.3	380	75	455	50	100	6	4.6	5

ML KFR-60 电机外置左侧(含伸缩护套) KFR-60 Motor external left side (Guideway Cover)

单位:Unit: mm

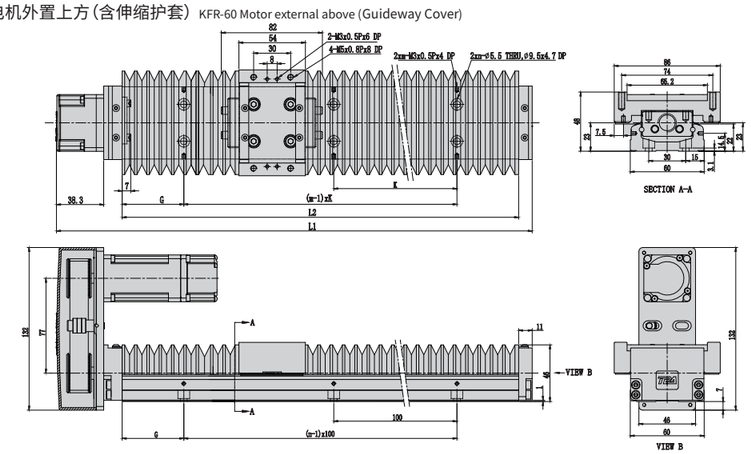


轨道长度 L2 Track length	全长(L1) Full length	行程(mm) Stroke	护套伸缩量(mm) Telescopic amount of sheath		G(mm)	K(mm)	n	重量(kg) Weight	重量(kg) Weight
			最小伸缩量(mm) Minimum expansion	最大伸缩量(mm) Maximum expansion					
150	214.3	50	13	66	25	100	2	1.6	–
200	264.3	90	19.5	110	50	100	2	2	–
300	364.3	160	35	195	50	200	3	2.6	2.9
400	464.3	230	49.5	278	50	100	4	3.2	3.5
500	564.3	310	59.5	370	50	200	5	3.8	4.1
600	664.3	380	75	455	50	100	6	4.5	4.9

KFR 外形尺寸(含伸缩护套)
KFR Overall dimensions (Guideway Cover)

MU KFR-60 电机外置上方(含伸缩护套) KFR-60 Motor external above (Guideway Cover)

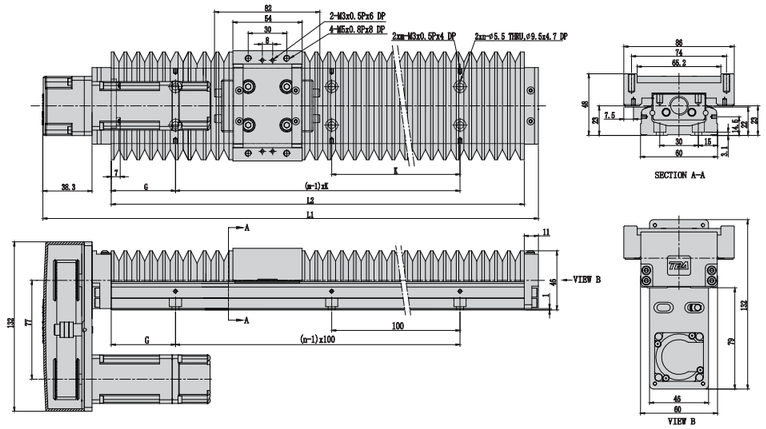
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	行程(mm) Stroke	护套伸缩量(mm) Telescopic amount of sheath		G(mm)	K(mm)	n	重量(kg) Weight	重量(kg) Weight
			最小伸缩量(mm) Minimum expansion	最大伸缩量(mm) Maximum expansion					
150	214.3	50	13	66	25	100	2	1.6	–
200	264.3	90	19.5	110	50	100	2	2	–
300	364.3	160	35	195	50	200	3	2.6	2.9
400	464.3	230	49.5	278	50	100	4	3.2	3.5
500	564.3	310	59.5	370	50	200	5	3.8	4.1
600	664.3	380	75	455	50	100	6	4.5	4.9

MP KFR-60 电机外置下方(含伸缩护套) KFR-60 Motor external under below (Guideway Cover)

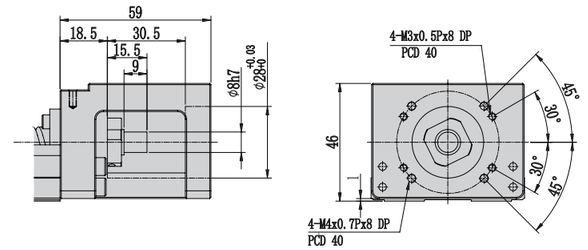
单位:Unit: mm



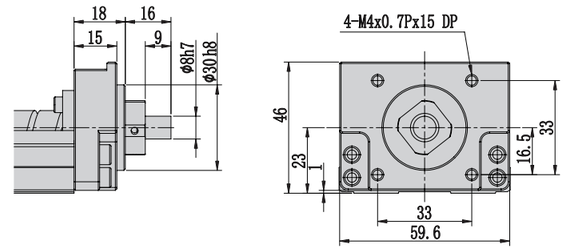
轨道长度 L2 Track length	全长(L1) Full length	行程(mm) Stroke	护套伸缩量(mm) Telescopic amount of sheath		G(mm)	K(mm)	n	重量(kg) Weight	重量(kg) Weight
			最小伸缩量(mm) Minimum expansion	最大伸缩量(mm) Maximum expansion					
150	214.3	50	13	66	25	100	2	1.6	–
200	264.3	90	19.5	110	50	100	2	2	–
300	364.3	160	35	195	50	200	3	2.6	2.9
400	464.3	230	49.5	278	50	100	4	3.2	3.5
500	564.3	310	59.5	370	50	200	5	3.8	4.1
600	664.3	380	75	455	50	100	6	4.5	4.9

电机座与电机连接法兰
Motor seat and motor connecting flange

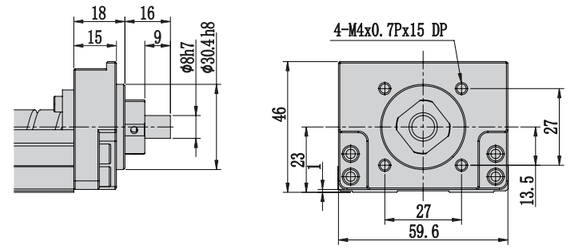
60 电机座F0 Motor seat F0



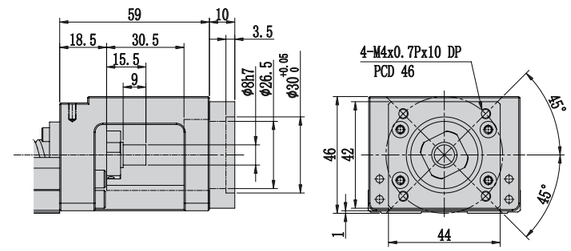
电机座H0 Motor seat H0



60 电机座H1 Motor seat H1

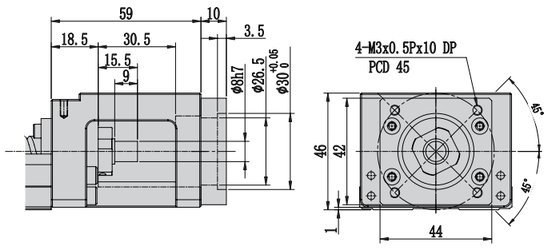


电机连接法兰F1(台达/安川/汇川/三菱/富士 100W) Connecting flange F1 of motor (Delta/Yaskawa/Inovance/Mitsubishi/Fuji 100W)

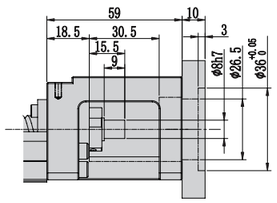


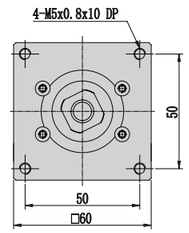
电机座与电机连接法兰
Motor seat and motor connecting flange

60 电机连接法兰F2(松下 50W/100W) Connecting flange F2 of motor（Panasonic 50W/100W)

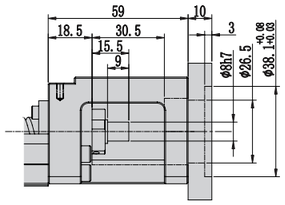


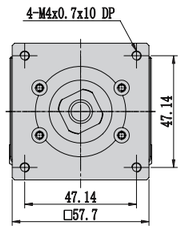
电机连接法兰F3(60步进) Connecting flange F3 of motor（60 Stepper)



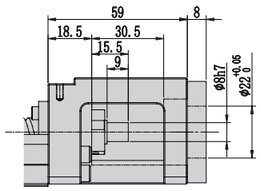


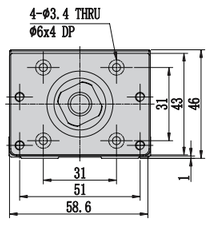
60 电机连接法兰F4(57步进) Connecting flange F4 of motor（57 Stepper)





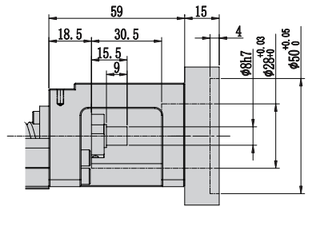
电机连接法兰F5(42步进) Connecting flange F5 of motor（42 Stepper)

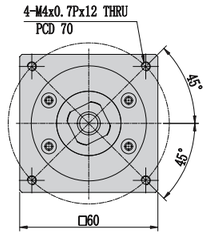




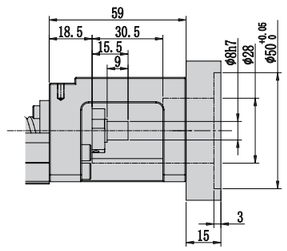
电机座与电机连接法兰
Motor seat and motor connecting flange

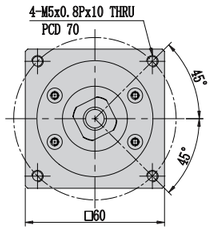
60 电机连接法兰F6(松下 200W/400W) Connecting flange F6 of motor（Panasonic 200W/400W)





电机连接法兰F7(台达/安川/汇川/三菱/富士 200W/400W) Connecting flange F7 of motor（Delta/Yaskawa/Inovance/Mitsubishi/Fuji 200W/400W)





此图仅供参考，出货规格详见尺寸图面
This drawing is for reference only, Please refer to the size drawing for shipment specifications.

最大行程 Max Stroke 816.5mm

最高速度 Max Speed 1600mm/sec

滚珠螺杆 Ball Screw Ø16mm

型号表达方式 Ordering method

TPA-KSR-8610CK-340A1-M-F0S2-N3-D-F

- 品牌名称 Brand
- 轨道宽度 Track width: 30、40、50 / 60、86、100
- 导程 Lead: 10/20/32mm
- 轨道长度 Track length: 340/440/540/640/740/840/940
- 滑座数量 Slide number
- 参考法兰页 Reference flange page
- 光电类型 Photoelectric Mode: N: NPN / P: PNP
- 联轴器 Couplings: 无标记:无 None
- 客制/特殊加工 Custom/special processing

品牌名称 Brand:
- H 日规模组 Ball Screw Linear Module
- O 欧规模组 Belt Linear Module
- E 电动缸 Electric Cylinder
- L 直线电机 Linear Motor
- K 钢基模组 Steel Linear Module
- G 内嵌式模组 Built-in Rail Type
- D 简易模组 Splinde Linear Unit
- M 直驱旋转电机 Rotary Motor

轨道宽度 Track width:
- R 螺杆 Screw
- P 有铁芯 Ferreous

滑座数量 Slide number:
- N 半封闭-铝护盖 Semi Seal -Aluminum cover
- C 全封闭 Full Seal
- F 风琴罩-伸缩护套 Guideway Cover
- S 无防护 No protection

精度等级 Precision grade:
- C: 普通级 Common
- P: 精密级 Precision

轨道长度 Track length:
- A: 标准型 Standard type
- S: 轻载型 Light load type

轴端有键槽 Shaft end with keyway
无标记:无 None: none

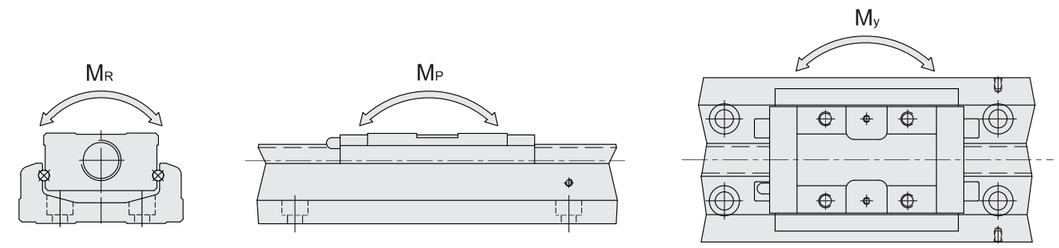
电机方向 Motor direction:
- M 电机外置直连
- MP 电机外置下方
- MU 电机外置上方
- MR 电机外置右侧
- ML 电机外置左侧

M Motor external direct connection
MP Motor external under below
MU Motor external above
MR Motor external right side
ML Motor external left side

光电类型 Photoelectric Mode:
包含极限开关 include limit switches.
- S0: 极限轨道 S0: limit orbit
- S1: 671光电支架 S1: 671 photoelectric support
- S2: 674光电支架 S2: 674 photoelectric support
- S3: GX-F12A型 S3:GX - F12A type
- S4: GX-F12A-P型 S4:GX - F12A - P type
- 无标记:无 None: none

数量 Quantity:
- 1PCS
- 2PCS
- 3PCS
- 无标记:无 None

负载规格 Load specification



技术参数 Technical parameter

型号 Model		滚珠螺杆 Ballscrew				线性滑轨 Linearsliderail															
		公称外径(mm) Nominal outer diameter	导程(mm) Lead	基本动额定负荷(N) Basic dynamic rated load	基本静额定负荷(N) Basic static rated load	基本动额定负额(N) Basic dynamic rated load		基本静额定负额(N) Basic static rated load		容许静力矩 Allowable static moment											
										俯仰 M_P(N-m)				偏拢 M_Y(N-m)				滚动 M_R(N-m)			
						滑座A Slide carriage	滑座S Slide carriage	滑座A Slide carriage	滑座S Slide carriage	滑座A1 Slide carriage	滑座A2 Slide carriage	滑座S1 Slide carriage	滑座S2 Slide carriage	滑座A1 Slide carriage	滑座A2 Slide carriage	滑座S1 Slide carriage	滑座S2 Slide carriage	滑座A1 Slide carriage	滑座A2 Slide carriage	滑座S1 Slide carriage	滑座S2 Slide carriage
KSR 8610	精密级 Precise grade	15	10	7144	12642	31458	21051	50764	29475	622	3050	228	1309	622	3050	228	1309	1507	3014	847	1694
	一般级 General grade			6429	11387																
KSR 8620	精密级 Precise grade	15	20	4645	7655	31458	21051	50764	29475	622	3050	228	1309	622	3050	228	1309	1507	3014	847	1694
	一般级 General grade			4175	6889																
KSR 8632	精密级 Precise grade	16	32	3488	6075	31458	21051	50764	29475	622	3050	228	1309	622	3050	228	1309	1507	3014	847	1694
	一般级 General grade			3140	5468																

精度等级 Precision grade

单位:mm

型号 Model	轨道长度 Track length	定位重现性 Positioning reproducibility		定位精度 positioning accuracy		行走平行度 Walking parallelism		最大启动扭力:(N-cm) Maximum starting torque	
		精密级 Precise grade	一般级 General grade	精密级 Precise grade	一般级 General grade	精密级 Precise grade	一般级 General grade	精密级 Precise grade	一般级 General grade
KSR 86	340	±0.003	±0.005	0.025	–	0.015	–	15	10
	440								
	540								
	640								
	740	±0.003	±0.005	0.030	–	0.020	–	17	10
	940	±0.003	±0.005	0.040	–	0.030	–	25	10

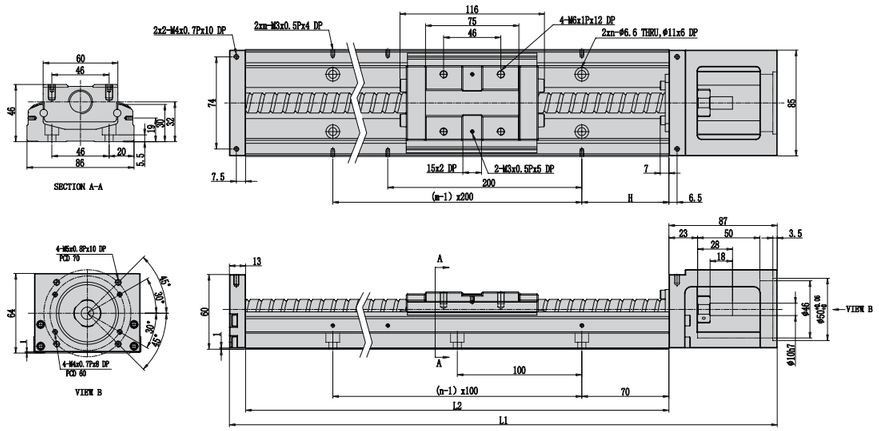
最大速度 Maximum speed

型号 Model	滚珠螺杆导程(mm) Ballscrew lead	轨道长度L2(mm) Track length	速度(mm/sec) Speed	
			精密级 Precise grade	一般级 General grade
KSR 86	10	340	740	520
		440	740	520
		540	740	520
		640	740	520
		740	740	520
		940	610	430
	20	340	1480	1050
		440	1480	1050
		540	1480	1050
		640	1480	1050
		740	1480	1050
		940	1220	870
	32	340	–	1600
		440	–	1600
		540	–	1600
		640	–	1600
		740	–	1600
		940	–	1320

KSR 外形尺寸（不含护盖）
KSR Overall dimensions(without cover)

M KSR-86 电机外置直连（不含护盖） KSR-86 Motor external direct connection (without cover)

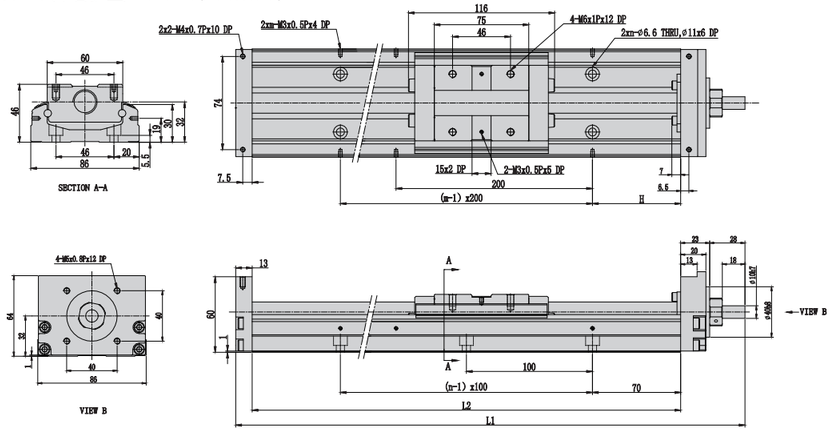
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		H(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
340	440	210	100	70	3	2	5.7	6.5
440	540	310	200	20	4	3	6.9	7.7
540	640	410	300	70	4	3	8	8.8
640	740	510	400	20	7	4	9.2	10
740	840	610	500	70	7	4	10.4	11.2
940	1040	810	700	70	9	5	11.6	12.4

H0 KSR-86-H0（不含护盖） KSR-86-H0 (without cover)

单位:Unit: mm

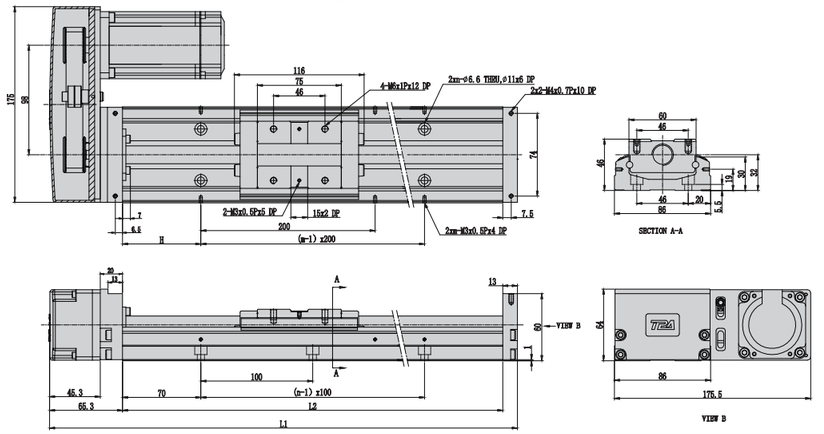


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		H(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
340	404	210	100	70	3	2	5.6	6.4
440	504	310	200	20	4	3	6.8	7.6
540	604	410	300	70	5	3	7.9	8.7
640	704	510	400	20	6	4	9.1	9.9
740	704	610	500	70	7	4	10.3	11.1
940	1004	810	700	70	9	5	11.5	12.3

KSR 外形尺寸（不含护盖）
KSR Overall dimensions(without cover)

MR KSR-86 电机外置右侧（不含护盖） KSR-86 Motor external right side (without cover)

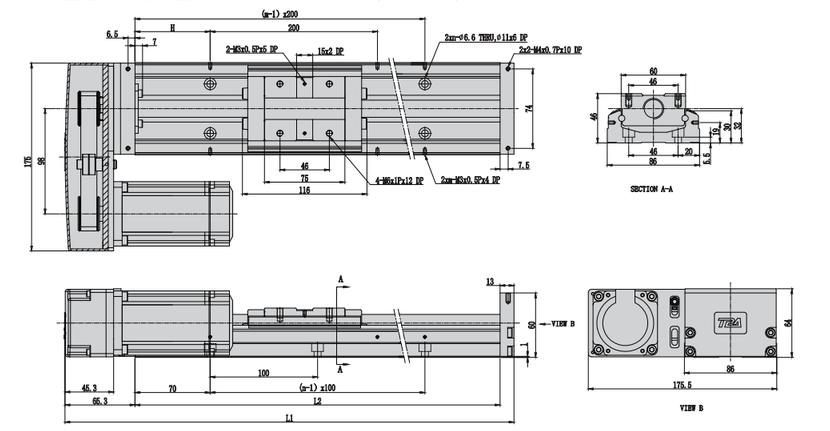
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		H(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
340	418.3	210	100	70	3	2	5.6	6.4
440	518.3	310	200	20	4	3	6.8	7.6
540	618.3	410	300	70	5	3	7.9	8.7
640	718.3	510	400	20	6	4	9.1	9.9
740	818.3	610	500	70	7	4	10.3	11.1
940	1018.3	810	700	70	9	5	11.5	12.3

ML KSR-86 电机外置左侧（不含护盖） KSR-86 Motor external left side (without cover)

单位:Unit: mm

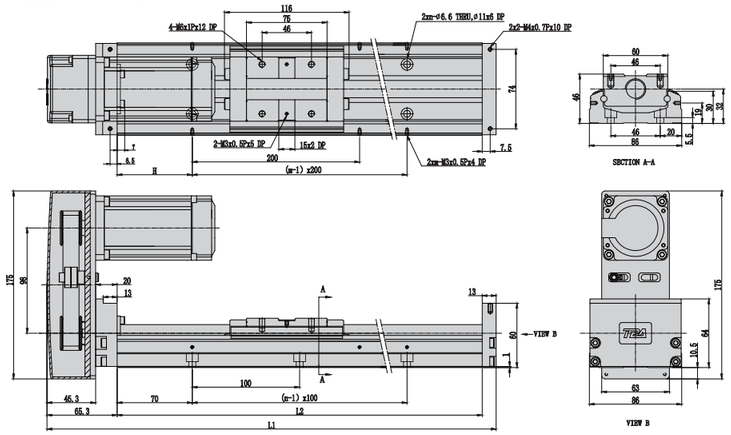


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		H(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
340	418.3	210	100	70	3	2	5.6	6.4
440	518.3	310	200	20	4	3	6.8	7.6
540	618.3	410	300	70	5	3	7.9	8.7
640	718.3	510	400	20	6	4	9.1	9.9
740	818.3	610	500	70	7	4	10.3	11.1
940	1018.3	810	700	70	9	5	11.5	12.3

KSR 外形尺寸（不含护盖）
KSR Overall dimensions(without cover)

MU KSR-86 电机外置上方（不含护盖） KSR-86 Motor external above (without cover)

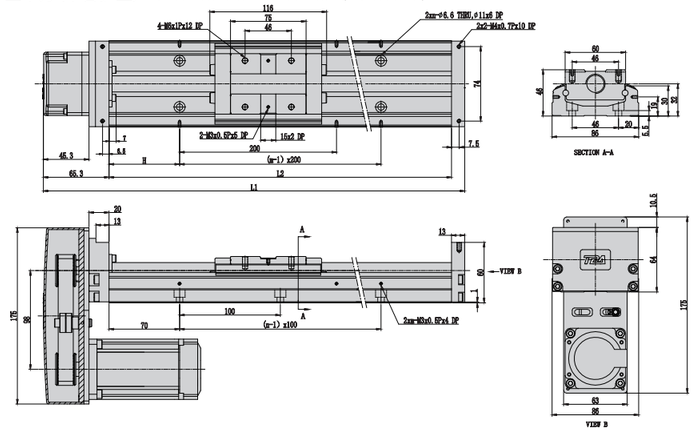
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		H(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
340	418.3	210	100	70	3	2	5.6	6.4
440	518.3	310	200	20	4	3	6.8	7.6
540	618.3	410	300	70	5	3	7.9	8.7
640	718.3	510	400	20	6	4	9.1	9.9
740	818.3	610	500	70	7	4	10.3	11.1
940	1018.3	810	700	70	9	5	11.5	12.3

MP KSR-86 电机外置下方（不含护盖） KSR-86 Motor external under below (without cover)

单位:Unit: mm

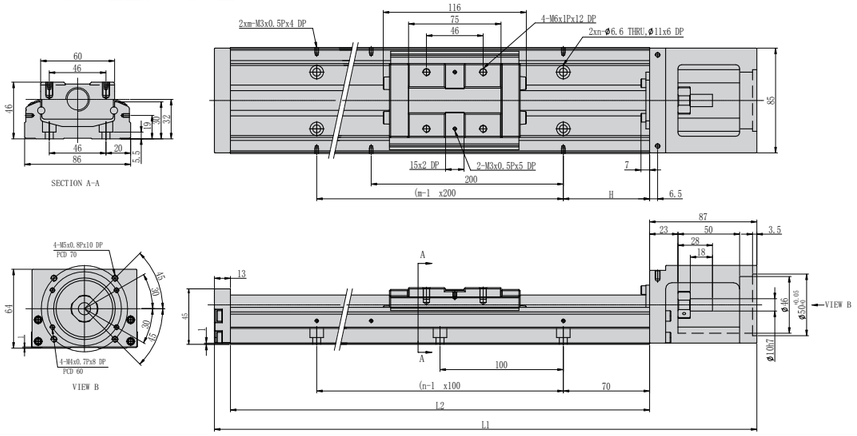


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		H(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
340	418.3	210	100	70	3	2	5.6	6.4
440	518.3	310	200	20	4	3	6.8	7.6
540	618.3	410	300	70	5	3	7.9	8.7
640	718.3	510	400	20	6	4	9.1	9.9
740	818.3	610	500	70	7	4	10.3	11.1
940	1018.3	810	700	70	9	5	11.5	12.3

KSR 外形尺寸（不含护盖）
KSR Overall dimensions(without cover)

M KSR-86-DZ电机外置直连（不含护盖） KSR-86-DZ Motor external direct connection (without cover)

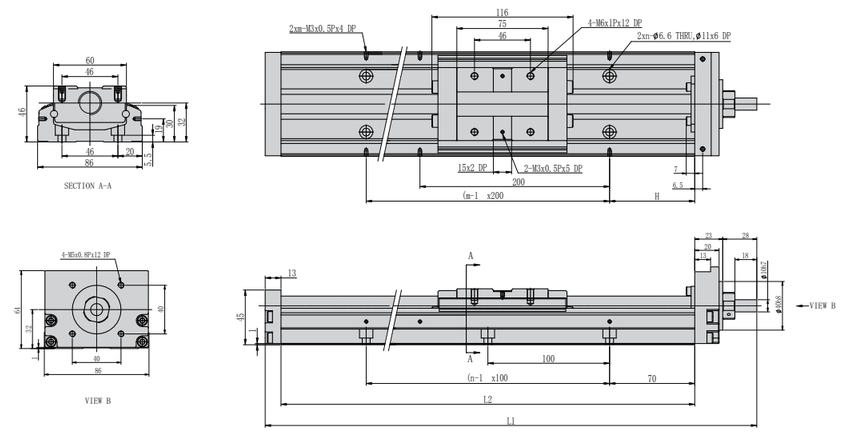
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		H(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
340	440	210	100	70	3	2	5.7	6.5
440	540	310	200	20	4	3	6.9	7.7
540	640	410	300	70	4	3	8	8.8
640	740	510	400	20	7	4	9.2	10
740	840	610	500	70	7	4	10.4	11.2
940	1040	810	700	70	9	5	11.6	12.4

H0 KSR-86-H0-DZ（不含护盖） KSR-86-H0-DZ (without cover)

单位:Unit: mm

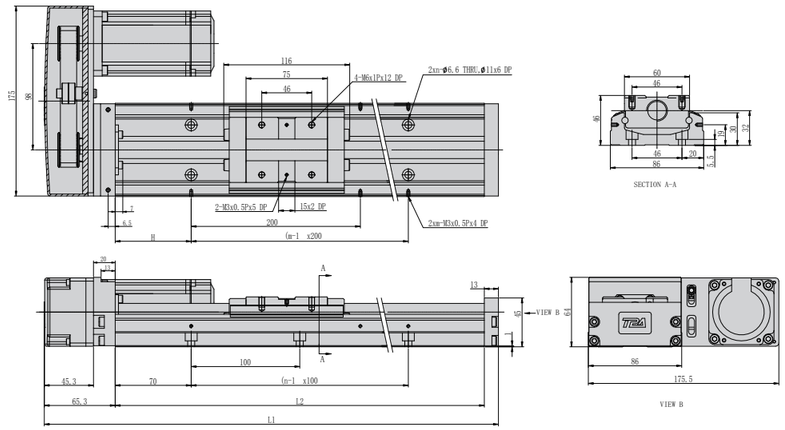


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		H(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
340	404	210	100	70	3	2	5.6	6.4
440	504	310	200	20	4	3	6.8	7.6
540	604	410	300	70	5	3	7.9	8.7
640	704	510	400	20	6	4	9.1	9.9
740	704	610	500	70	7	4	10.3	11.1
940	1004	810	700	70	9	5	11.5	12.3

KSR 外形尺寸（不含护盖）
KSR Overall dimensions(without cover)

MR KSR-86-DZ 电机外置右侧（不含护盖） KSR-86-DZ Motor external right side (without cover)

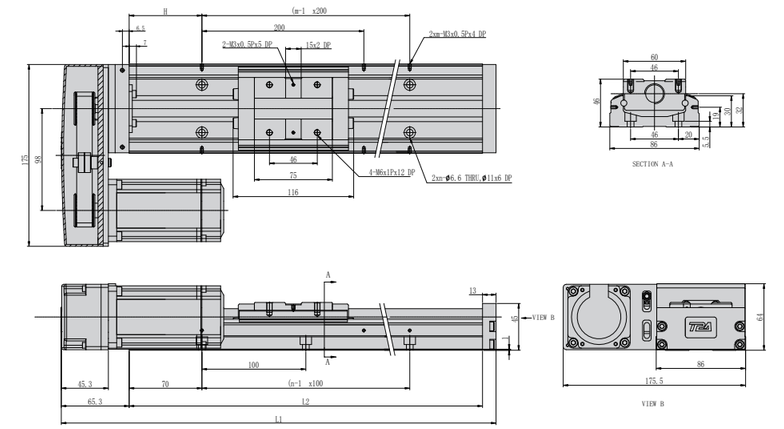
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		H(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
340	418.3	210	100	70	3	2	5.6	6.4
440	518.3	310	200	20	4	3	6.8	7.6
540	618.3	410	300	70	5	3	7.9	8.7
640	718.3	510	400	20	6	4	9.1	9.9
740	818.3	610	500	70	7	4	10.3	11.1
940	1018.3	810	700	70	9	5	11.5	12.3

ML KSR-86-DZ 电机外置左侧（不含护盖） KSR-86-DZ Motor external left side (without cover)

单位:Unit: mm

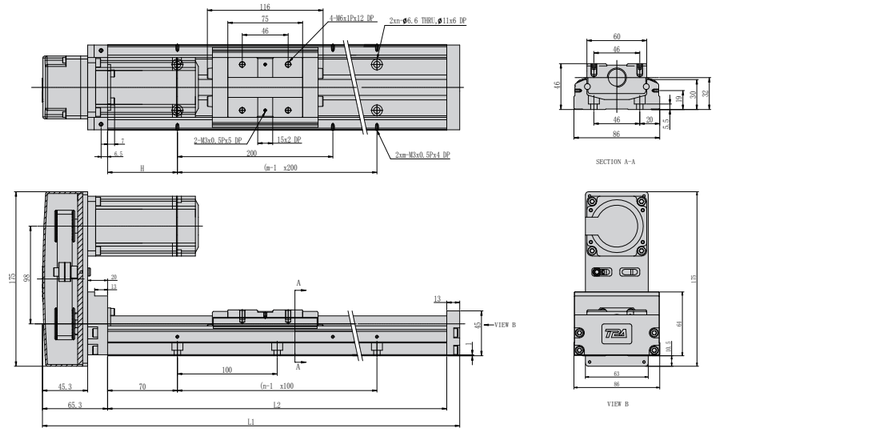


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		H(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
340	418.3	210	100	70	3	2	5.6	6.4
440	518.3	310	200	20	4	3	6.8	7.6
540	618.3	410	300	70	5	3	7.9	8.7
640	718.3	510	400	20	6	4	9.1	9.9
740	818.3	610	500	70	7	4	10.3	11.1
940	1018.3	810	700	70	9	5	11.5	12.3

KSR 外形尺寸（不含护盖）
KSR Overall dimensions(without cover)

MU KSR-86-DZ 电机外置上方（不含护盖） KSR-86-DZ Motor external above (without cover)

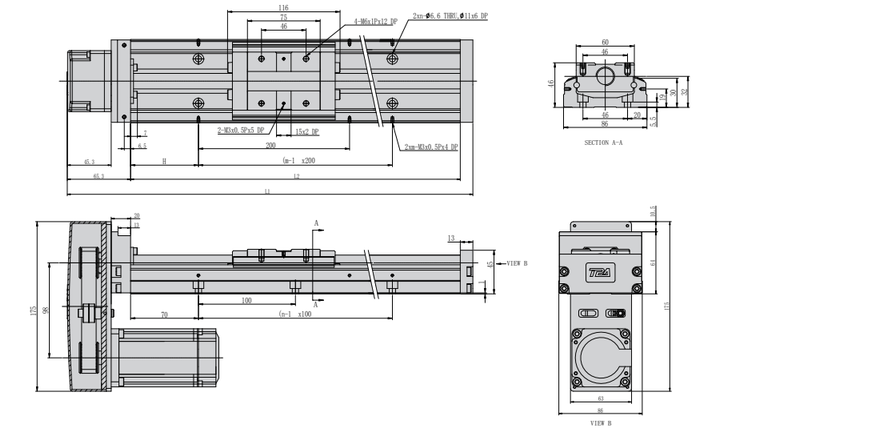
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		H(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
340	418.3	210	100	70	3	2	5.6	6.4
440	518.3	310	200	20	4	3	6.8	7.6
540	618.3	410	300	70	5	3	7.9	8.7
640	718.3	510	400	20	6	4	9.1	9.9
740	818.3	610	500	70	7	4	10.3	11.1
940	1018.3	810	700	70	9	5	11.5	12.3

MP KSR-86-DZ 电机外置下方（不含护盖） KSR-86-DZ Motor external under below (without cover)

单位:Unit: mm

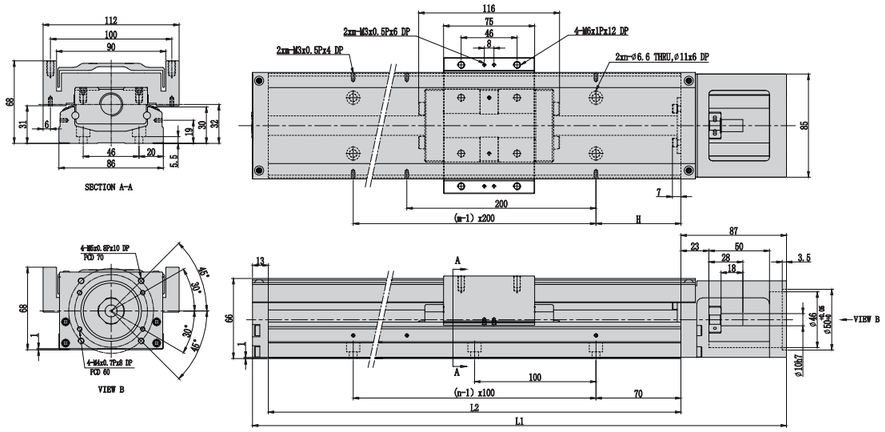


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		H(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
340	418.3	210	100	70	3	2	5.6	6.4
440	518.3	310	200	20	4	3	6.8	7.6
540	618.3	410	300	70	5	3	7.9	8.7
640	718.3	510	400	20	6	4	9.1	9.9
740	818.3	610	500	70	7	4	10.3	11.1
940	1018.3	810	700	70	9	5	11.5	12.3

KNR 外形尺寸（含护盖）
KNR Overall dimensions(Cover included)

M KNR-86 电机外置直连（含护盖） KNR-86 Motor external direct connection (Cover included)

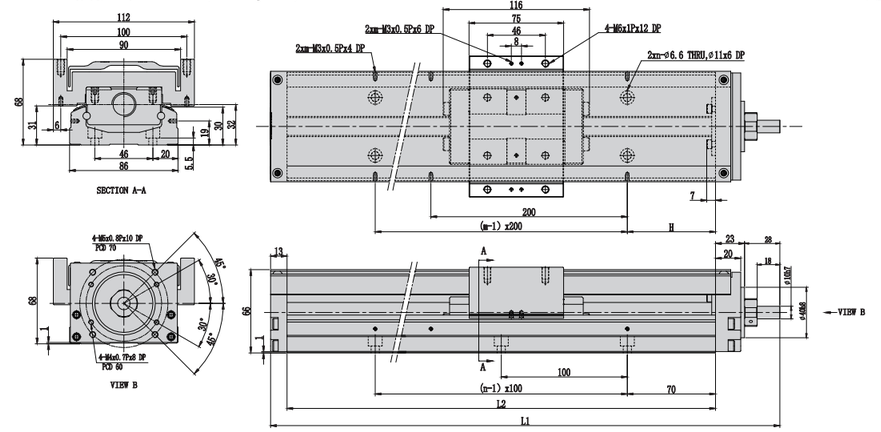
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		H(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
340	440	210	100	70	3	2	6.5	7.3
440	540	310	200	20	4	3	7.8	8.6
540	640	410	300	70	5	3	9	9.8
640	740	510	400	20	6	4	10.3	11.3
740	840	610	500	70	7	4	11.6	12.4
940	1040	810	700	70	9	5	13	13.8

H0 KNR-86-H0（含护盖） KNR-86-H0 (including cover)

单位:Unit: mm

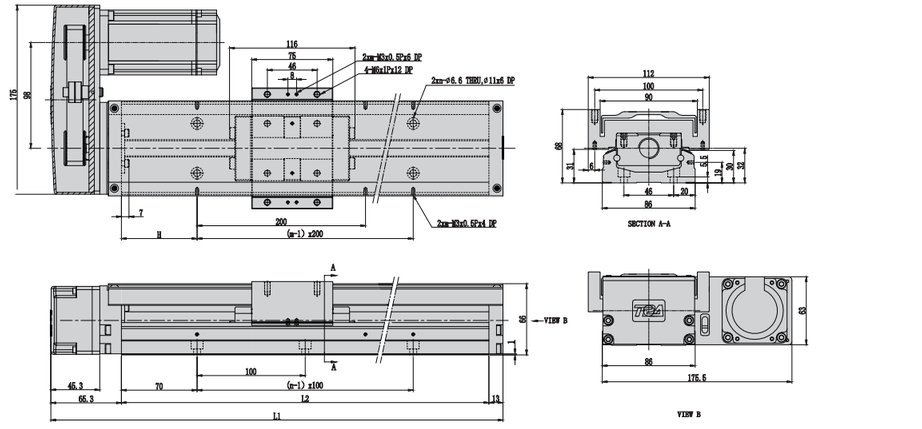


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		H(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
340	404	210	100	70	3	2	6.4	7.2
440	504	310	200	20	4	3	7.7	8.3
540	604	410	300	70	5	3	8.9	9.7
640	704	510	400	20	6	4	10	11.2
740	804	610	500	70	7	4	11.3	12.3
940	1004	810	700	70	9	5	12.7	13.7

KNR 外形尺寸（含护盖）
KNR Overall dimensions(Cover included)

MR KNR-86 电机外置右侧（含护盖） KNR-86 Motor external right side (Cover included)

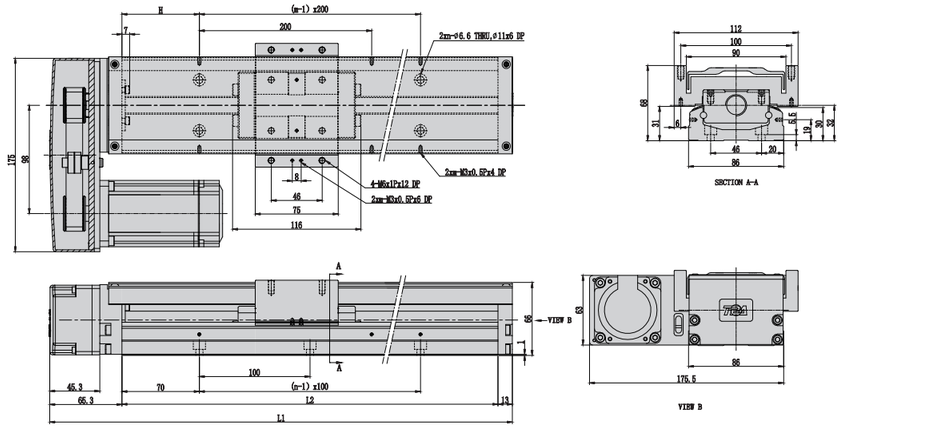
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		H(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
340	418.3	210	100	70	3	2	6.4	7.2
440	518.3	310	200	20	4	3	7.7	8.3
540	618.3	410	300	70	5	3	8.9	9.7
640	718.3	510	400	20	6	4	10	11.2
740	818.3	610	500	70	7	4	11.3	12.3
940	1018.3	810	700	70	9	5	12.7	13.7

ML KNR-86 电机外置左侧（含护盖） KNR-86 Motor external left side (Cover included)

单位:Unit: mm

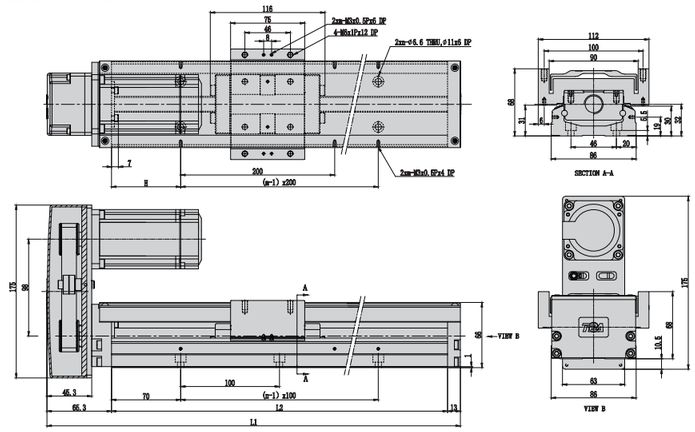


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		H(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
340	418.3	210	100	70	3	2	6.4	7.2
440	518.3	310	200	20	4	3	7.7	8.3
540	618.3	410	300	70	5	3	8.9	9.7
640	718.3	510	400	20	6	4	10	11.2
740	818.3	610	500	70	7	4	11.3	12.3
940	1018.3	810	700	70	9	5	12.7	13.7

KNR 外形尺寸（含护盖）
KNR Overall dimensions(Cover included)

MU KNR-86 电机外置上方（含护盖） KNR-86 Motor external above (Cover included)

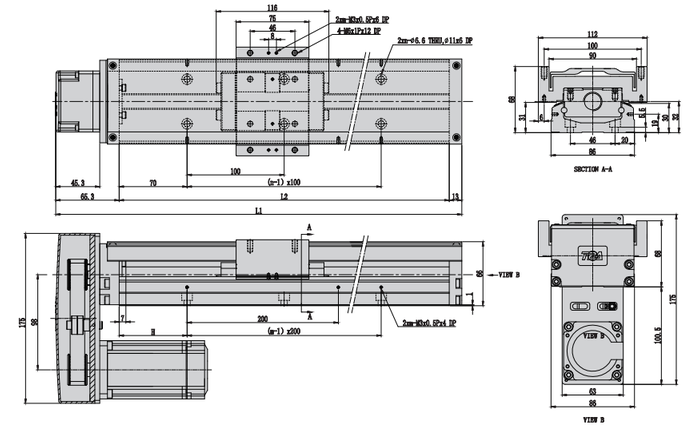
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		H(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
340	418.3	210	100	70	3	2	6.4	7.2
440	518.3	310	200	20	4	3	7.7	8.3
540	618.3	410	300	70	5	3	8.9	9.7
640	718.3	510	400	20	6	4	10	11.2
740	818.3	610	500	70	7	4	11.3	12.3
940	1018.3	810	700	70	9	5	12.7	13.7

MP KNR-86 电机外置下方（含护盖） KNR-86 Motor external under below (Cover included)

单位:Unit: mm

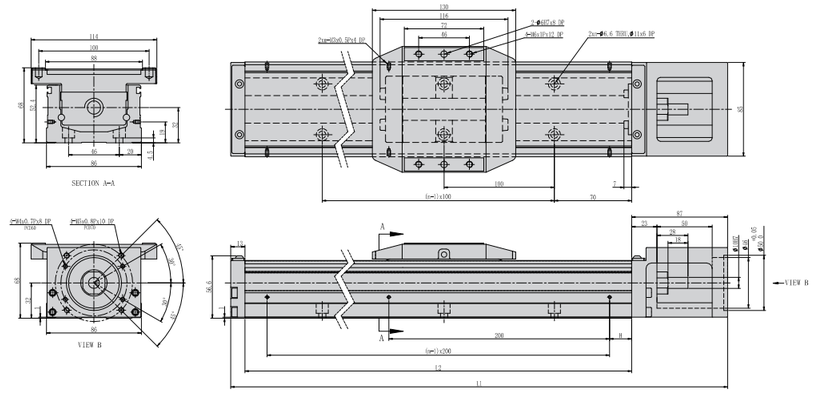


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		H(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
340	418.3	210	100	70	3	2	6.4	7.2
440	518.3	310	200	20	4	3	7.7	8.3
540	618.3	410	300	70	5	3	8.9	9.7
640	718.3	510	400	20	6	4	10	11.2
740	818.3	610	500	70	7	4	11.3	12.3
940	1018.3	810	700	70	9	5	12.7	13.7

KCR 外形尺寸
KCR Overall dimensions

M KCR-86 电机外置直连 KCR-86 Motor external direct connection

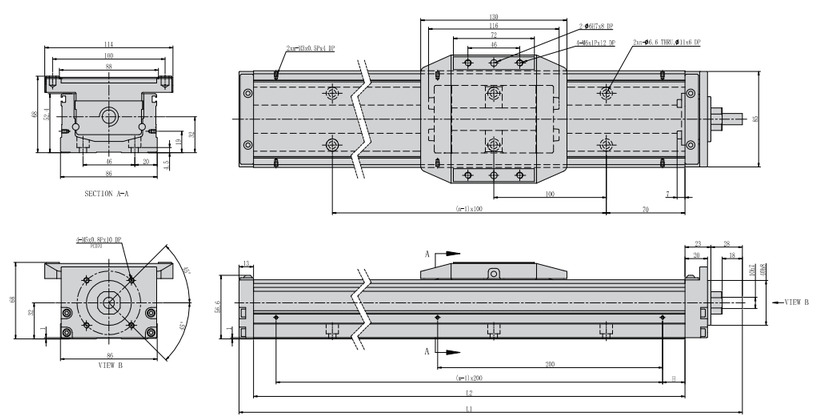
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		H(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
340	440	210	100	70	3	2	5.7	6.5
440	540	310	200	20	4	3	6.9	7.7
540	640	410	300	70	4	3	8	8.8
640	740	510	400	20	7	4	9.2	10
740	840	610	500	70	7	4	10.4	11.2
940	1040	810	700	70	9	5	11.6	12.4

H0 KCR-86-H0

单位:Unit: mm

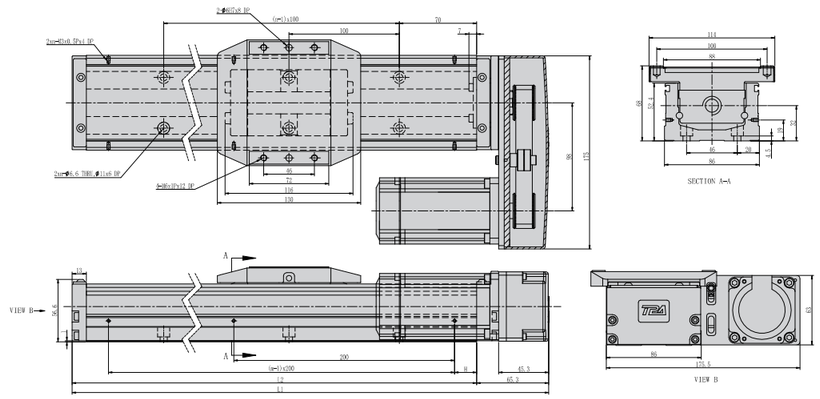


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		H(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
340	404	210	100	70	3	2	5.6	6.4
440	504	310	200	20	4	3	6.8	7.6
540	604	410	300	70	5	3	7.9	8.7
640	704	510	400	20	6	4	9.1	9.9
740	704	610	500	70	7	4	10.3	11.1
940	1004	810	700	70	9	5	11.5	12.3

KCR 外形尺寸
KCR Overall dimensions

MR KCR-86 电机外置右侧 KCR-86 Motor external right side

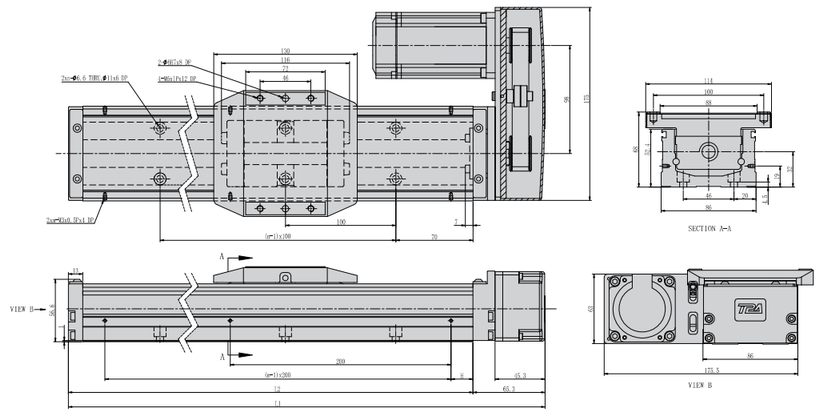
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		H(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
340	418.3	210	100	70	3	2	5.6	6.4
440	518.3	310	200	20	4	3	6.8	7.6
540	618.3	410	300	70	5	3	7.9	8.7
640	718.3	510	400	20	6	4	9.1	9.9
740	818.3	610	500	70	7	4	10.3	11.1
940	1018.3	810	700	70	9	5	11.5	12.3

ML KCR-86 电机外置左侧 KCR-86 Motor external left side

单位:Unit: mm

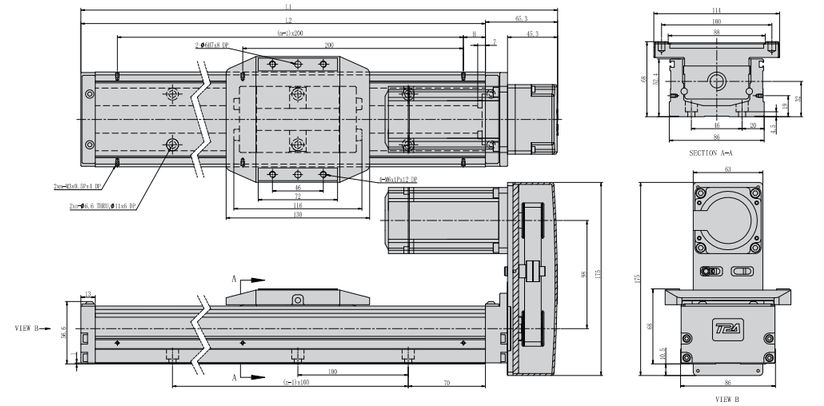


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		H(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
340	418.3	210	100	70	3	2	5.6	6.4
440	518.3	310	200	20	4	3	6.8	7.6
540	618.3	410	300	70	5	3	7.9	8.7
640	718.3	510	400	20	6	4	9.1	9.9
740	818.3	610	500	70	7	4	10.3	11.1
940	1018.3	810	700	70	9	5	11.5	12.3

KCR 外形尺寸
KCR Overall dimensions

MU KCR-86 电机外置上方 KCR-86 Motor external above

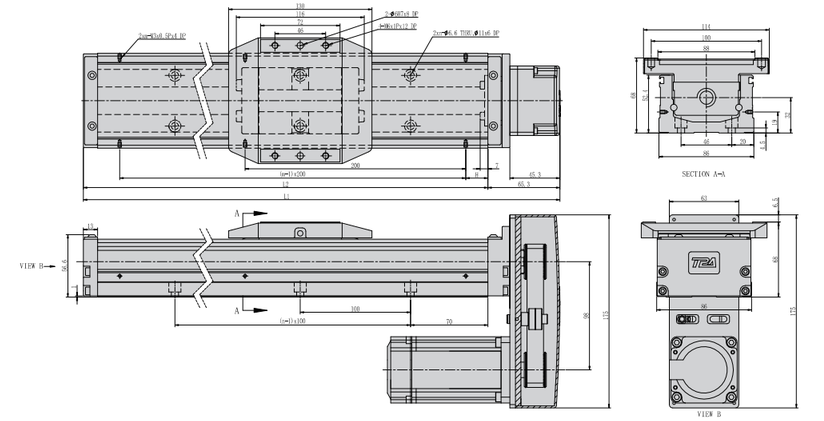
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		H(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
340	418.3	210	100	70	3	2	5.6	6.4
440	518.3	310	200	20	4	3	6.8	7.6
540	618.3	410	300	70	5	3	7.9	8.7
640	718.3	510	400	20	6	4	9.1	9.9
740	818.3	610	500	70	7	4	10.3	11.1
940	1018.3	810	700	70	9	5	11.5	12.3

MP KCR-86 电机外置下方 KCR-86 Motor external under below

单位:Unit: mm

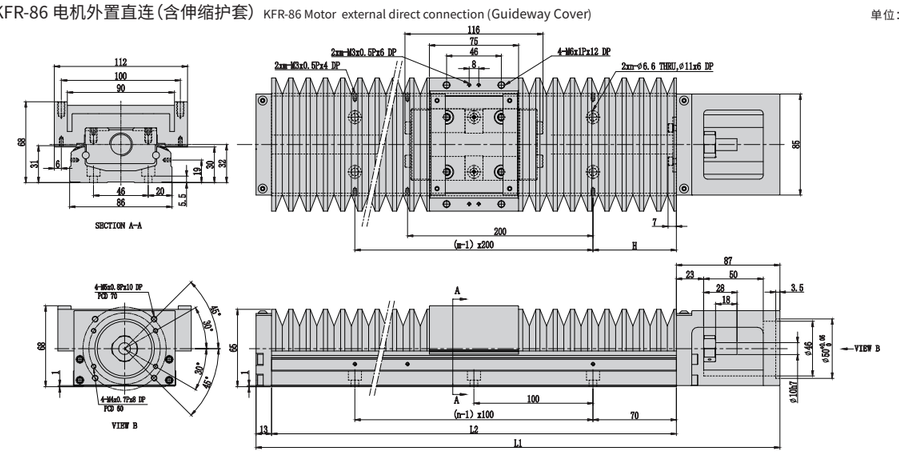


轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		H(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage				滑座 A1 Slide carriage	滑座 A2 Slide carriage
340	418.3	210	100	70	3	2	5.6	6.4
440	518.3	310	200	20	4	3	6.8	7.6
540	618.3	410	300	70	5	3	7.9	8.7
640	718.3	510	400	20	6	4	9.1	9.9
740	818.3	610	500	70	7	4	10.3	11.1
940	1018.3	810	700	70	9	5	11.5	12.3

KFR 外形尺寸(含伸缩护套)
KFR Overall dimensions (Guideway Cover)

M KFR-86 电机外置直连(含伸缩护套) KFR-86 Motor external direct connection (Guideway Cover)

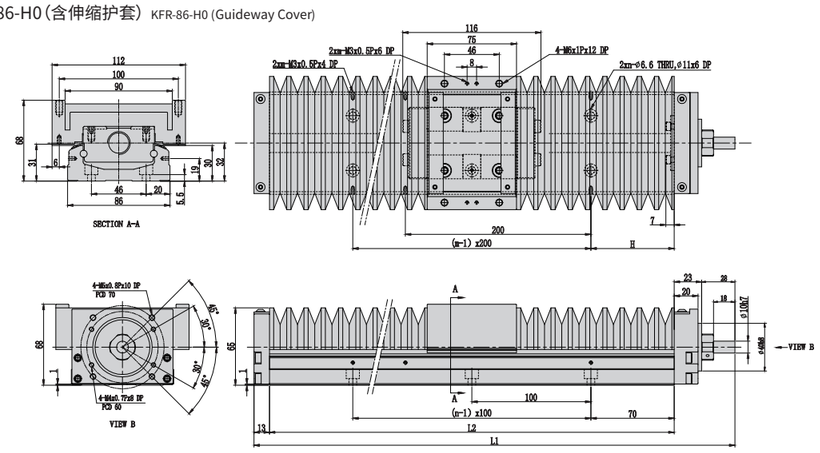
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	行程(mm) Stroke	护套伸缩量(mm) Telescopic amount of sheath		H(mm)	n	m	重量(kg) Weight
			最小伸缩量(mm) Minimum expansion	最大伸缩量(mm) Maximum expansion				
340	440	188	36	224	70	3	2	6.5
440	540	260	50	310	20	4	3	7.8
540	640	336	62	398	70	5	3	9
640	740	408	76	484	20	6	4	10.3
740	740	480	90	570	70	7	4	11.6
940	1040	640	110	750	70	9	5	13

H0 KFR-86-H0(含伸缩护套) KFR-86-H0 (Guideway Cover)

单位:Unit: mm

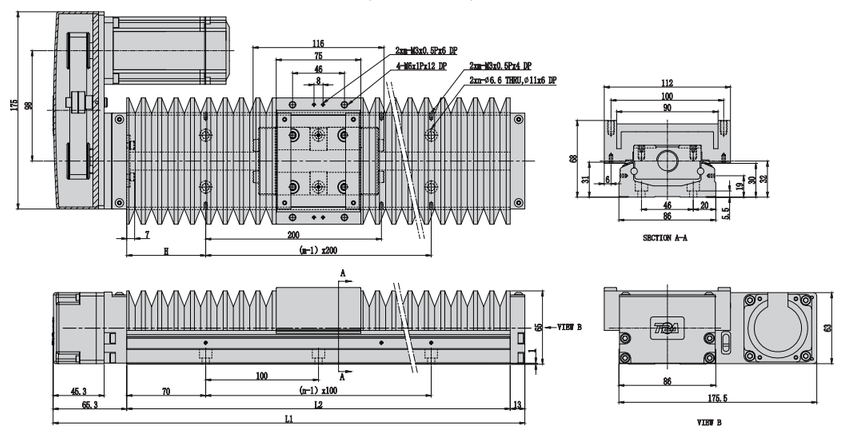


轨道长度 L2 Track length	全长(L1) Full length	行程(mm) Stroke	护套伸缩量(mm) Telescopic amount of sheath		H(mm)	n	m	重量(kg) Weight
			最小伸缩量(mm) Minimum expansion	最大伸缩量(mm) Maximum expansion				
340	404	160	38	200	70	3	2	6.4
440	504	240	49	289	20	4	3	7.7
540	604	320	59.5	378.5	70	5	3	8.9
640	704	390	75	463	20	6	4	10
740	704	460	89	549	70	7	4	11.3
940	1004	610	114	724	70	9	5	12.7

KFR 外形尺寸(含伸缩护套)
KFR Overall dimensions (Guideway Cover)

MR KFR-86 电机外置右侧(含伸缩护套) KFR-86 Motor external right side (Guideway Cover)

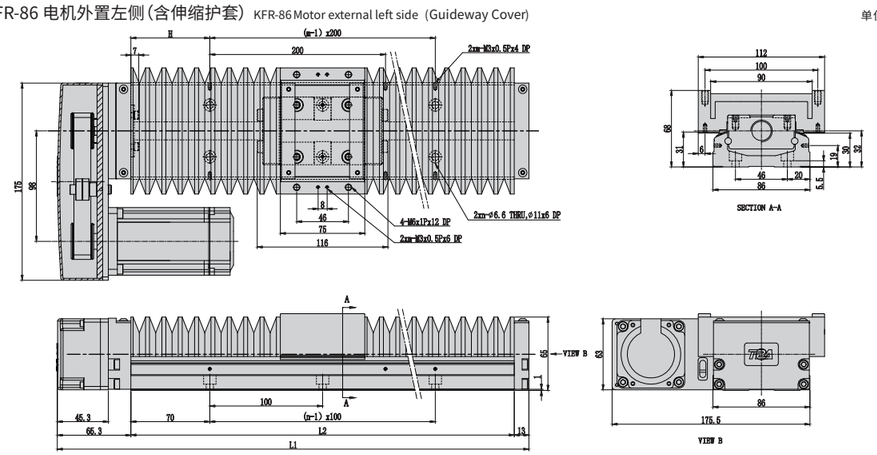
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	行程(mm) Stroke	护套伸缩量(mm) Telescopic amount of sheath		H(mm)	n	m	重量(kg) Weight
			最小伸缩量(mm) Minimum expansion	最大伸缩量(mm) Maximum expansion				
340	418.3	160	38	200	70	3	2	6.4
440	518.3	240	49	289	20	4	3	7.7
540	618.3	320	59.5	378.5	70	5	3	8.9
640	718.3	390	75	463	20	6	4	10
740	818.3	460	89	549	70	7	4	11.3
940	1018.3	610	114	724	70	9	5	12.7

ML KFR-86 电机外置左侧(含伸缩护套) KFR-86 Motor external left side (Guideway Cover)

单位:Unit: mm

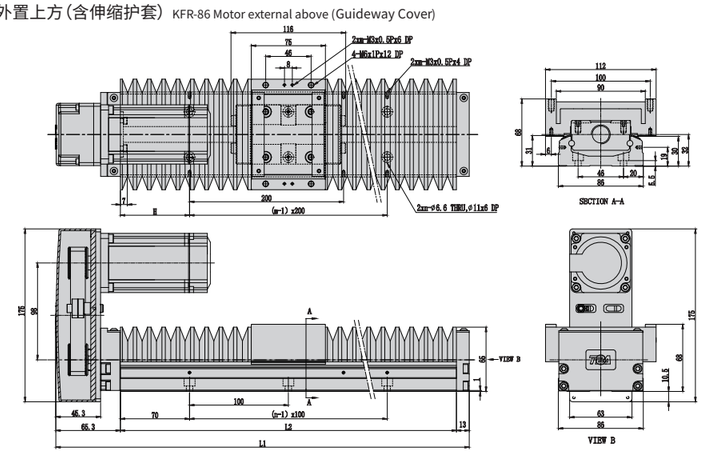


轨道长度 L2 Track length	全长(L1) Full length	行程(mm) Stroke	护套伸缩量(mm) Telescopic amount of sheath		H(mm)	n	m	重量(kg) Weight
			最小伸缩量(mm) Minimum expansion	最大伸缩量(mm) Maximum expansion				
340	418.3	160	38	200	70	3	2	6.4
440	518.3	240	49	289	20	4	3	7.7
540	618.3	320	59.5	378.5	70	5	3	8.9
640	718.3	390	75	463	20	6	4	10
740	818.3	460	89	549	70	7	4	11.3
940	1018.3	610	114	724	70	9	5	12.7

KFR 外形尺寸(含伸缩护套)
KFR Overall dimensions (Guideway Cover)

MU KFR-86 电机外置上方(含伸缩护套) KFR-86 Motor external above (Guideway Cover)

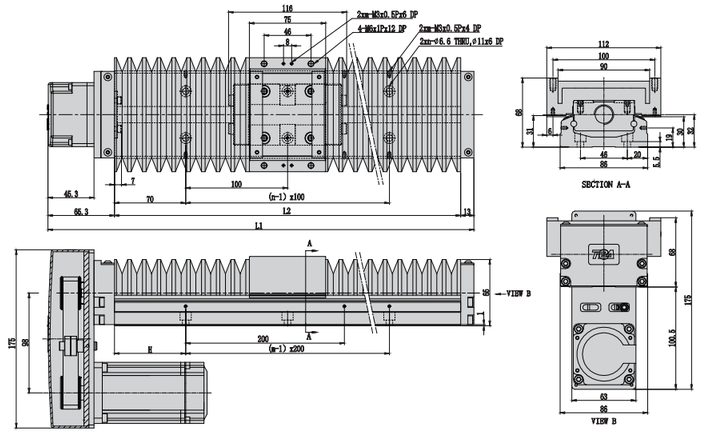
单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	行程(mm) Stroke	护套伸缩量(mm) Telescopic amount of sheath		H(mm)	n	m	重量(kg) Weight
			最小伸缩量(mm) Minimum expansion	最大伸缩量(mm) Maximum expansion				
340	418.3	160	38	200	70	3	2	6.4
440	518.3	240	49	289	20	4	3	7.7
540	618.3	320	59.5	378.5	70	5	3	8.9
640	718.3	390	75	463	20	6	4	10
740	818.3	460	89	549	70	7	4	11.3
940	1018.3	610	114	724	70	9	5	12.7

MP KFR-86 电机外置下方(含伸缩护套) KFR-86 Motor external under below (Guideway Cover)

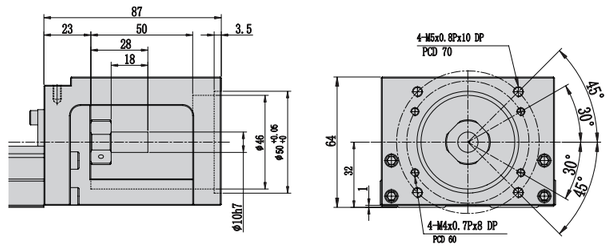
单位:Unit: mm



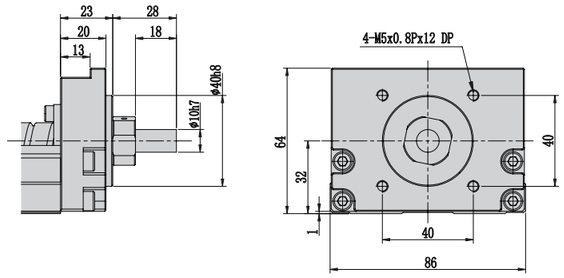
轨道长度 L2 Track length	全长(L1) Full length	行程(mm) Stroke	护套伸缩量(mm) Telescopic amount of sheath		H(mm)	n	m	重量(kg) Weight
			最小伸缩量(mm) Minimum expansion	最大伸缩量(mm) Maximum expansion				
340	418.3	160	38	200	70	3	2	6.4
440	518.3	240	49	289	20	4	3	7.7
540	618.3	320	59.5	378.5	70	5	3	8.9
640	718.3	390	75	463	20	6	4	10
740	818.3	460	89	549	70	7	4	11.3
940	1018.3	610	114	724	70	9	5	12.7

电机座与电机连接法兰
Motor seat and motor connecting flange

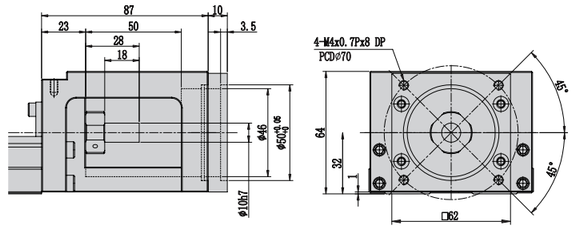
86 电机座F0(台达/安川/汇川/三菱/富士 200W/400W) Motor seat F0 (Delta/Yaskawa/Inovance/Mitsubishi/Fuji 200W/400W)



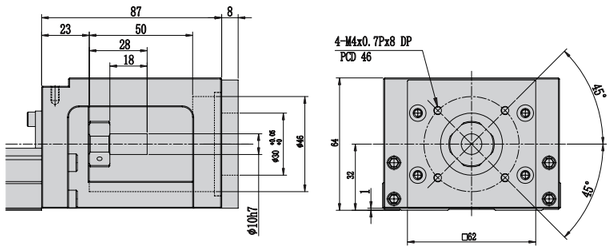
电机座H0 Motor seat H0



86 电机连接法兰F1(松下 200W/400W) Connecting flange F1 of motor (Panasonic 200W/400W)

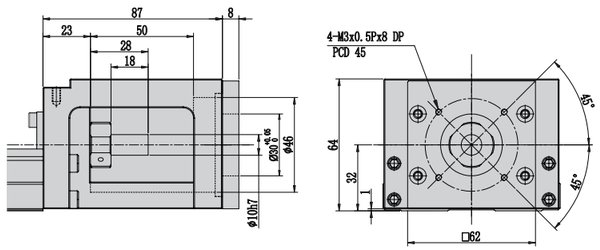


电机连接法兰F2(台达/安川/汇川/三菱/富士 100W) Connecting flange F2 of motor (Delta/Yaskawa/Inovance/Mitsubishi/Fuji 100W)

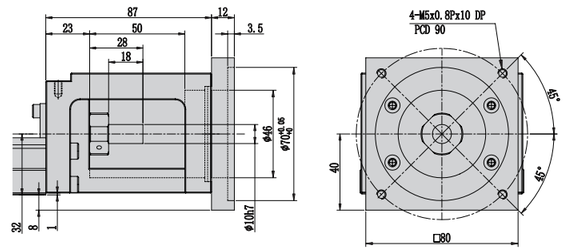


电机座与电机连接法兰
Motor seat and motor connecting flange

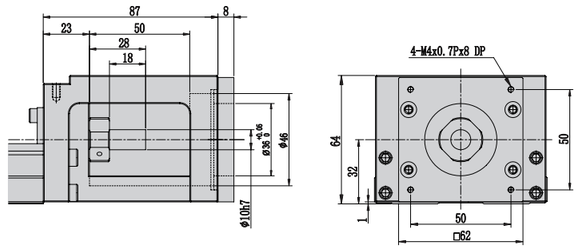
86 电机连接法兰F3(松下 50W/100W) Connecting flange F3 of motor (Panasonic 50W／100W)



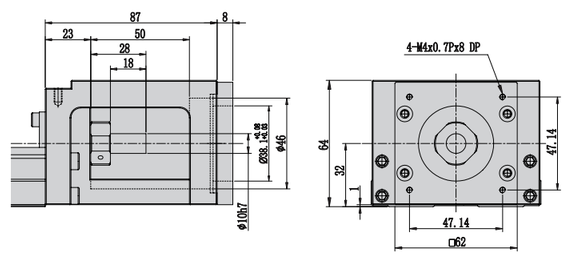
电机连接法兰F4(松下 750W) Connecting flange F4 of motor (Panasonic 750W)



86 电机连接法兰F5(60步进) Connecting flange F5 of motor (60 Stepper)

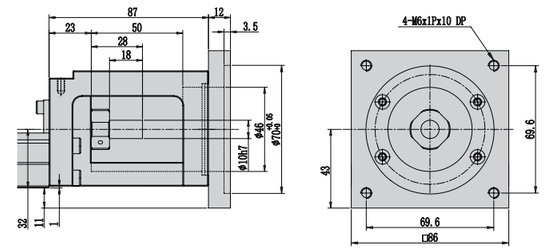


电机连接法兰F6(57步进) Connecting flange F6 of motor (57 Stepper)

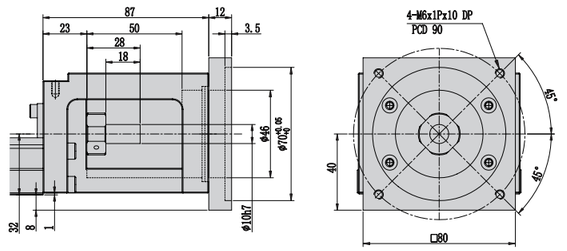


电机座与电机连接法兰
Motor seat and motor connecting flange

86 电机连接法兰F7(86步进) Connecting flange F7 of motor (86 Stepper)



电机连接法兰F8(台达/安川/汇川/三菱/富士 750W) Connecting flange F8 of motor (Delta/Yaskawa/Inovance/Mitsubishi/Fuji 750W)



此图仅供参考，出货规格详见尺寸图面
This drawing is for reference only, Please refer to the size drawing for shipment specifications.

最大行程 Max Stroke 1128mm

最高速度 Max Speed 1000mm/sec

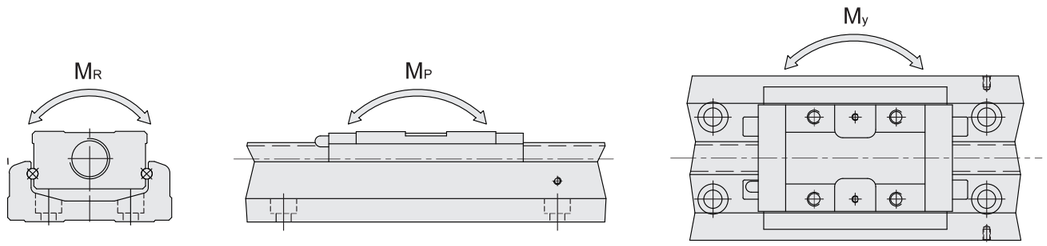
滚珠螺杆 Ball Screw Ø 20 mm

型号表达方式 Ordering method

TPA-KSR-10020CK-980A1-M-F0S2-N3-D-F

- 品牌名称 Brand
  - H 日规模组 Ball Screw Linear Module
  - O 欧规模组 Belt Linear Module
  - E 电动缸 Electric Cylinder
  - L 直线电机 Linear Motor
  - K 钢基模组 Steel Linear Module
  - G 内嵌式模组 Built-in Rail Type
  - D 简易模组 Splinde Linear Unit
  - M 直驱旋转电机 Rotary Motor
- 轨道宽度 Track width: 30、40、50 60、86、100
  - R 螺杆 Screw
  - P 有铁芯 Ferreous
- 导程 Lead: 20mm
  - N 半封闭-铝护盖 Semi Seal -Aluminum cover
  - C 全封闭 Full Seal
  - F 风琴罩-伸缩护套 Guideway Cover
  - S 无防护 No protection
- 精度等级 Precision grade
  - C：普通级 Common
  - P：精密级 Precision
- 轨道长度 Track length: 980/1080 1180/1280/1380
  - 轴端有键槽 Shaft end with keyway
  - 无标记：无 None: none
- 滑座数量 Slide number
  - A：标准型 Standard type
  - S：轻载型 Light load type
- 电机方向 Motor direction
  - M 电机外置直连
  - ML 电机外置左侧
  - M Motor external direct connection
  - ML Motor external left side
- 参考法兰页 Reference flange page
- 光电类型 Photoelectric Mode
  - N：NPN
  - P：PNP
- 数量 Quantity
  - 1PCS
  - 2PCS
  - 3PCS
  - 无标记：无 None
- 联轴器 Couplings
  - 无标记：无 None
- 客制/特殊加工 Custom/special processing
  - 包含极限开关 Include limit switches.
  - S0：极限轨道 S0: limit orbit
  - S1：671光电支架 S1: 671 photoelectric support
  - S2：674光电支架 S2: 674 photoelectric support
  - S3：GX-F12A型 S3:GX - F12A type
  - S4：GX-F12A-P型 S4:GX - F12A - P type
  - 无标记：无 None: none

负载规格 Load specification



技术参数 Technical parameter

型号 Model		滚珠螺杆 Ballscrew				线性滑轨 Linear slide rail															
		公称外径 (mm) Nominal outer diameter	导程 (mm) Lead	基本动额定负荷 (N) Basic dynamic rated load	基本静额定负荷 (N) Basic static rated load	基本动额定负额 (N) Basic dynamic rated load		基本静额定负额 (N) Basic static rated load		容许静力矩 Allowable static moment											
										俯仰 M_P (N-m)				偏拉 M_Y (N-m)				滚动 M_R (N-m)			
						滑座 A Slide carriage	滑座 S Slide carriage	滑座 A Slide carriage	滑座 S Slide carriage	滑座 A1 Slide carriage	滑座 A2 Slide carriage	滑座 S1 Slide carriage	滑座 S2 Slide carriage	滑座 A1 Slide carriage	滑座 A2 Slide carriage	滑座 S1 Slide carriage	滑座 S2 Slide carriage	滑座 A1 Slide carriage	滑座 A2 Slide carriage	滑座 S1 Slide carriage	滑座 S2 Slide carriage
KSR 10020	精密级 Precise grade	20	20	7046	12544	39200	–	63406	–	960	4763	–	–	960	4763	–	–	2205	4410	–	–
	一般级 General grade			4782	9163																

精度等级 Precision grade

单位：mm

型号 Model	轨道长度 Track length	定位重现性 Positioning reproducibility		定位精度 positioning accuracy		行走平行度 Walking parallelism		最大启动扭力：(N-cm) Maximum starting torque	
		精密级 Precise grade	一般级 General grade	精密级 Precise grade	一般级 General grade	精密级 Precise grade	一般级 General grade	精密级 Precise grade	一般级 General grade
KSR 100	980	±0.005	±0.02	0.035	–	0.025	–	17	12
	1080								
	1180	±0.005	±0.02	0.040	–	0.03	–	20	12
	1280	±0.005	±0.02	0.045	–	0.035	–	23	15
	1380			0.05		0.04		25	

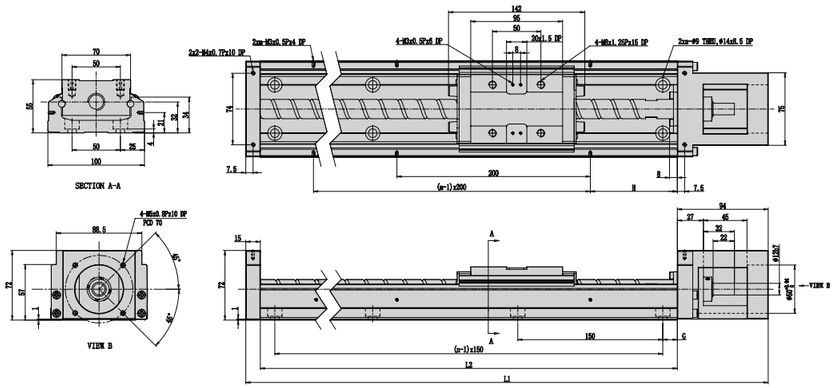
最大速度 Maximum speed

型号 Model	滚珠螺杆导程 (mm) Ballscrew lead	轨道长度 L2 (mm) Track length	速度 (mm/sec) Speed	
			精密级 Precise grade	一般级 General grade
KSR 100	20	980	1120	800
		1080	980	800
		1180	750	750
		1280	630	630
		1380	530	530

KSR 外形尺寸(不含护盖)/KNR 外形尺寸(含护盖)
KSR Overall dimensions(without cover)/KNR Overall dimensions(cover included)

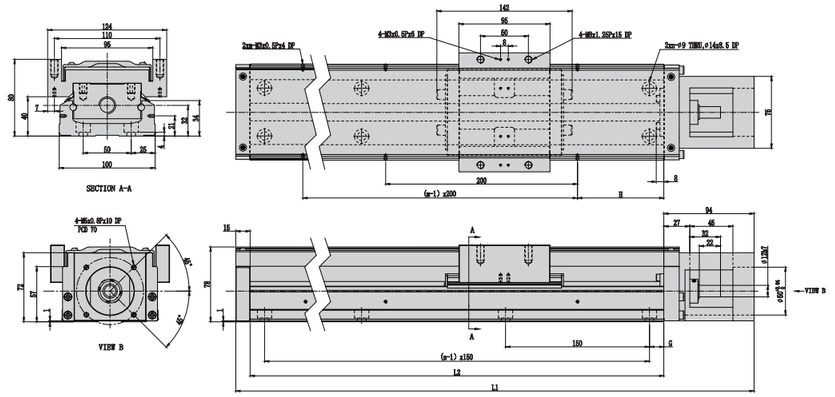
M KSR-100 电机外置直连(不含护盖) KSR-100 Motor external direct connection (without cover)

单位:Unit: mm



轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	H(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage					滑座 A1 Slide carriage	滑座 A2 Slide carriage
980	1089	828	700	40	90	7	5	18.6	20.3
1080	1189	928	800	15	40	8	6	20.3	22
1180	1289	1028	900	65	90	8	6	22	23.7
1280	1389	1128	1000	40	40	9	7	23.6	25.3
1380	1489	1228	1100	15	90	10	7	25.3	27

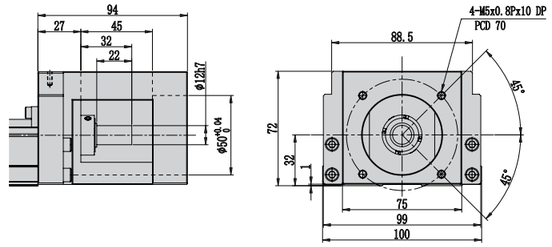
ML KNR-100 电机外置左侧(含护盖) KNR-100 Motor external left side (Cover included)



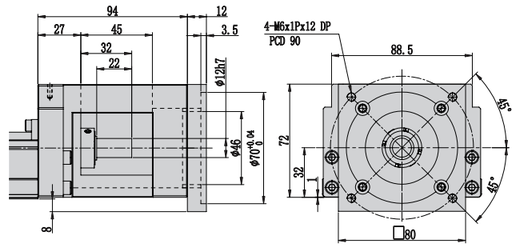
轨道长度 L2 Track length	全长(L1) Full length	最大行程(mm) Maximum travel		G(mm)	H(mm)	n	m	重量 (kg) Weight	
		滑座 A1 Slide carriage	滑座 A2 Slide carriage					滑座 A1 Slide carriage	滑座 A2 Slide carriage
980	1089	828	700	40	90	7	5	20.4	22.1
1080	1189	928	800	15	40	8	6	22.2	23.9
1180	1289	1028	900	65	90	8	6	24	25.7
1280	1389	1128	1000	40	40	9	7	25.7	27.4
1380	1489	1228	1100	15	90	10	7	27.5	29.2

电机座与电机连接法兰
Motor seat and motor connecting flange

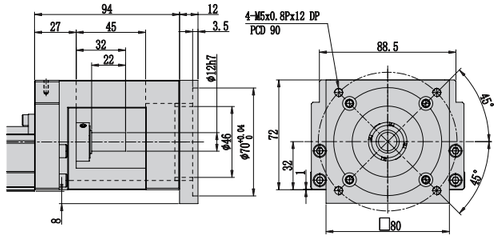
100 电机座F0(台达/安川/汇川/三菱/富士 200W/400W) Motor seat F0 (Delta/Yaskawa/Inovance/Mitsubishi/Fuji 200W/400W)



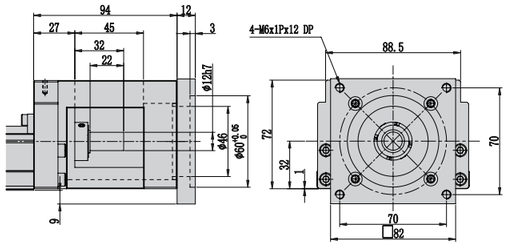
电机座F1(台达/安川/汇川/三菱/富士 750W) Motor seat F1 (Delta/Yaskawa/Inovance/Mitsubishi/Fuji 750W)



100 电机座F2(松下 750W) Motor seat F2 (Panasonic 750W)

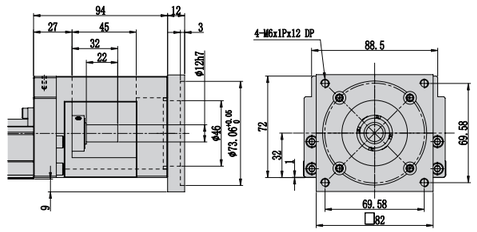


电机座F3 Motor seat F3

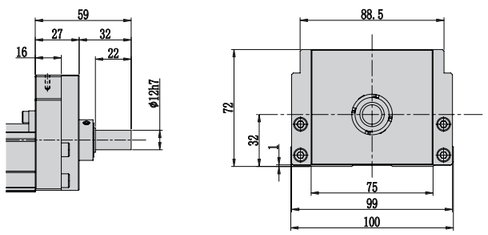


电机座与电机连接法兰
Motor seat and motor connecting flange

100 电机座F4(86步进) Motor seat F4(86 Stepper)



电机座H0 Motor seat H0



MEMO

此图仅供参考，出货规格详见尺寸图面
This drawing is for reference only, Please refer to the size drawing for shipment specifications.

最大行程 Max Stroke 800mm

最高速度 Max Speed 1000mm/s

马达容量 Motor Output 100W

滚珠螺杆 Ball Screw Ø12mm

型号表达方式 Ordering method

TPA-KNR-60E-1210C-L50A1-M-M10-N3-F001

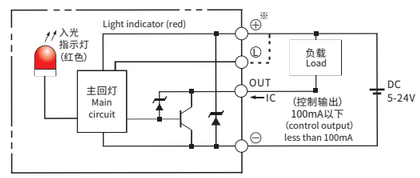
- 品牌名称 Brand
  - H 日规模组 Ball Screw Linear Module
  - O 欧规模组 Belt Linear Module
  - E 电动缸 Electric Cylinder
  - L 直线电机 Linear Motor
  - K 钢基模组 Steel Linear Module
  - G 内嵌式模组 Built-in Rail Type
  - D 简易模组 Splinde Linear Unit
  - M 直驱旋转电机 Rotary Motor
- 半封闭-铝护盖 Semi Seal -Aluminum cover
- 螺杆 Screw
- 型号 Model: 60、86 / 100、130
- 螺杆直径 Screw diameter: Ø12
- 导程 Lead: 05/10/20mm
- 精度等级 Precision grade: C：普通级 C:Common / P：精密级 P:Precision
- 行程 Stroke: 50-800mm (间隔50mm) Gap 50mm
- 滑座数量 Slide number
  - A：标准型 A:Standard type
  - S：轻载型 S:Light load type
- 电机方向 Motor direction
  - M 电机外置直连 M Motor external direct connection
  - MP 电机外置下方 MP Motor external under below
  - MR 电机外置右侧 MR Motor external right side
  - ML 电机外置左侧 ML Motor external left side
- 电机功率 Motor power: 10：100W / 20：200W / 40：400W
- 光电类型 Photoelectric Mode: N：NPN / P：PNP
- 客制/特殊加工 Custom/special processing
- 电机品牌 Motor brand
  - P 松下 Panasonic
  - M 三菱 Mitsubishi
  - Y 安川 Yaskawa
  - H 禾川 HCFA
  - T 台达 Delta
- 数量 Quantity: 1PCS / 2PCS / 3PCS / 无标记:无 None

产品性能参数如下 Product performance parameters are as follows

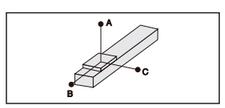
规格 Spec	重复定位精度(mm) Repeated positioning accuracy (mm)		±0.005		
	螺杆导程 (mm) Ball screw lead (mm)		5	10	20
	最高速度 (mm/s)※2 Maximum speed (mm/s)		250	500	1000
	最大可搬重量 Maximum Payload	水平使用 (kg) Horizontal (kg)	39	22	10
		垂直使用 (kg) Vertical (kg)	12	8	4
	定格推力 (N) Rated thrust (N)		341	170	85
	标准行程 (mm)※1 Stroke pitch (mm)		50~800mm/50 间隔 50 mm Pitch		
部品 Parts	AC伺服马达容量 (W) AC servo motor output (w)		100		
	滚珠螺杆外径 (mm) Ball screw Ø (mm)		C7Ø12		
	联轴器 (mm) Coupling(mm)		8X8		
	原点感应器 Original Sense	外挂 Outside	TPA-N674-WR		

※1 行程超过600mm时,会产生螺杆偏摆,此时请将速度调降。
※1 When the stroke exceeds 600mm, the screw deflection will occur. Please reduce the speed at this time.
※2 马达加减速设定0.2秒。
※2 Acceleration and deacceleration value is set 0.2 second.

感应器连接图<原点及端点> Sensor layout

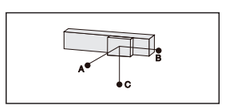


容许负载力矩表 N.m Allowable overhang



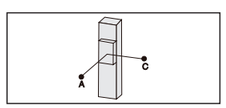
(单位Unit:mm)

水平安装 Horizontal installation		A	B	C
导程 5 Lead	13kg	845	96	130
	26kg	570	42	58
	39kg	350	25	32
导程 10 Lead	6kg	720	174	220
	12kg	444	84	102
	18kg	300	50	62
导程 20 Lead	5kg	320	120	130
	8kg	220	70	80
	10kg	175	55	60



(单位Unit:mm)

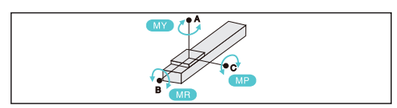
侧面安装 Side mounting		A	B	C
导程 5 Lead	13kg	130	96	845
	26kg	58	42	570
	39kg	32	25	350
导程 10 Lead	6kg	216	174	720
	12kg	102	84	444
	18kg	62	50	300
导程 20 Lead	5kg	130	120	320
	8kg	75	70	220
	10kg	60	55	175



(单位Unit:mm)

垂直安装 Vertical installation		A	C
导程 5 Lead	7kg	174	174
	9.5kg	130	130
	12kg	108	108
导程 10 Lead	1.5kg	1280	1280
	5kg	416	416
	8kg	248	248
导程 20 Lead	1.5kg	960	960
	3kg	480	480
	4kg	400	400

静态容许负载惯量 Static loading moment



(单位Unit:N.m)

MY	103
MP	103
MR	144

*力矩表所表示的数据,代表重心。
The torque value in the chart indicate the center of gravity.
*符合型录规范的正常试用下,保证寿命为10000公里。
Operation life is 10,000km when the product is using under the specified conditions.
*倒吊使用无法套用标准规范,如有需求请咨询我司业务。
The standard specification cannot be applied to the use of inverted crane. Please consult our business if necessary.

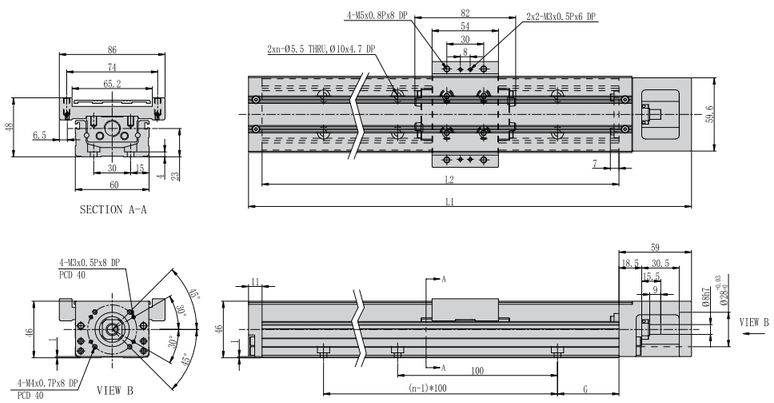
搭配伺服马达一览表 Suitable motor brand

品牌 Brand	马达记号 Mark	刹车有无 Brake	马达容量 Motor capacity	电源电压 AC-Voltage	伺服马达型号 Servo motor model	驱动器型号 Driver Model
三菱 Mitsubishi	M	无刹车(水平式样) No brake (horizontal type)	100	220	HG-KR13	MR-J4-10A
		有刹车(垂直式样) With brakes (vertical type)	100	220	HG-KR13B	MR-J4-10A
松下 Panasonic	P	无刹车(水平式样) No brake (horizontal type)	100	220	MHMD012G1U	MADHT1505
		有刹车(垂直式样) With brakes (vertical type)	100	220	MHMD012G1V	MADHT1505
台达 Delta	T	无刹车(水平式样) No brake (horizontal type)	100	220	ECMA-C20401ES	ASD-B20121-B
		有刹车(垂直式样) With brakes (vertical type)	100	220	ECMA-C20401FS	ASD-B20121-B

KNR 外形尺寸（含护盖）
KNR Overall dimensions(Cover included)

M KNR-60E 电机外置直连（含护盖） KNR-60E Motor external direct connection (Cover included)

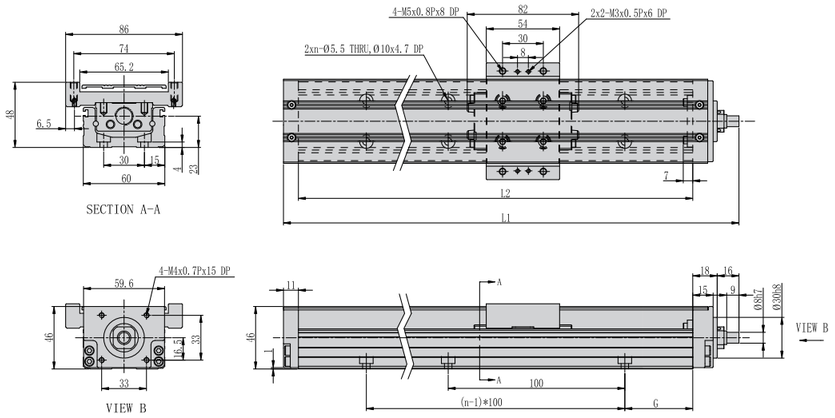
单位:Unit: mm



有效行程 Valid Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L2	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
L1	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970
G	25	50	25	50	25	50	25	50	25	50	25	50	25	50	25	50
n	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9
KG	1	1.4	1.7	2	2.3	2.6	2.9	3.2	3.5	3.8	4.1	4.4	4.7	5	5.3	5.6

H0 KNR-60E-H0（含护盖） KNR-60E-H0 (including cover)

单位:Unit: mm

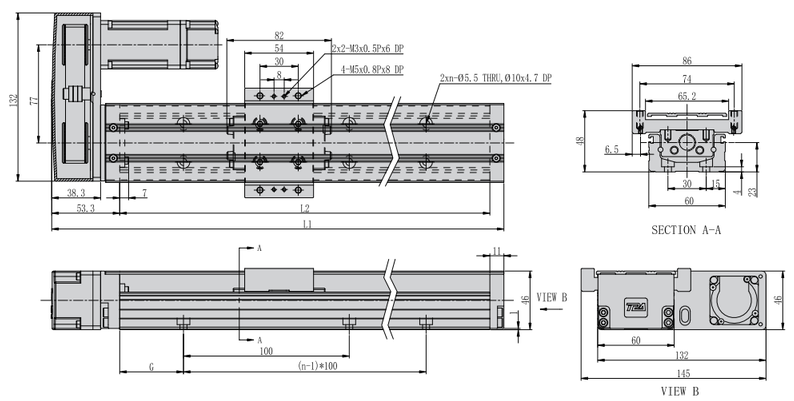


有效行程 Valid Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L2	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
L1	195	245	295	345	395	445	495	545	595	645	695	745	795	845	895	945
G	25	50	25	50	25	50	25	50	25	50	25	50	25	50	25	50
n	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9
KG	0.9	1.3	1.6	1.9	2.2	2.5	2.8	3.1	3.4	3.7	4	4.3	4.6	4.9	5.2	5.5

KNR 外形尺寸（含护盖）
KNR Overall dimensions(Cover included)

MR KNR-60E 电机外置右侧（含护盖） KNR-60E Motor external right side (Cover included)

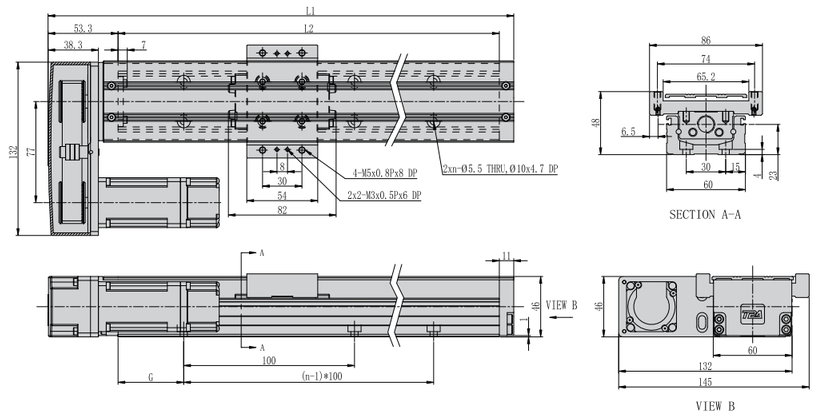
单位:Unit: mm



有效行程 Valid Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L2	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
L1	214	264	314	364	414	464	514	564	614	664	714	764	814	864	914	964
G	25	50	25	50	25	50	25	50	25	50	25	50	25	50	25	50
n	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9
KG	1	1.4	1.7	2	2.3	2.6	2.9	3.2	3.5	3.8	4.1	4.4	4.7	5	5.3	5.6

ML KNR-60E 电机外置左侧（含护盖） KNR-60E Motor external left side (Cover included)

单位:Unit: mm

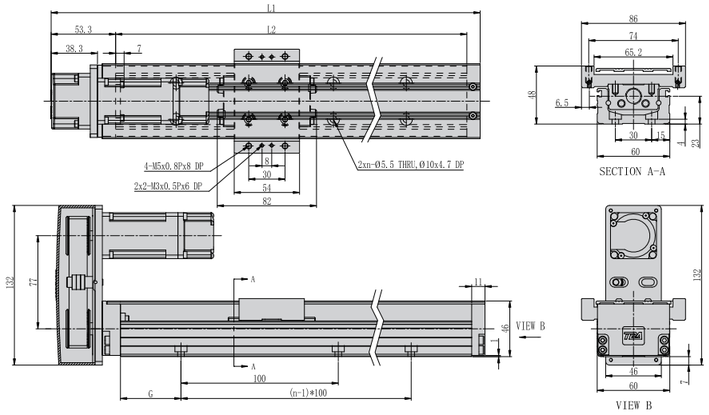


有效行程 Valid Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L2	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
L1	195	245	295	345	395	445	495	545	595	645	695	745	795	845	895	945
G	25	50	25	50	25	50	25	50	25	50	25	50	25	50	25	50
n	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9
KG	0.9	1.3	1.6	1.9	2.2	2.5	2.8	3.1	3.4	3.7	4	4.3	4.6	4.9	5.2	5.5

KNR 外形尺寸（含护盖）
KNR Overall dimensions(Cover included)

MU KNR-60E 电机外置上方（含护盖） KNR-60E Motor external above (Cover included)

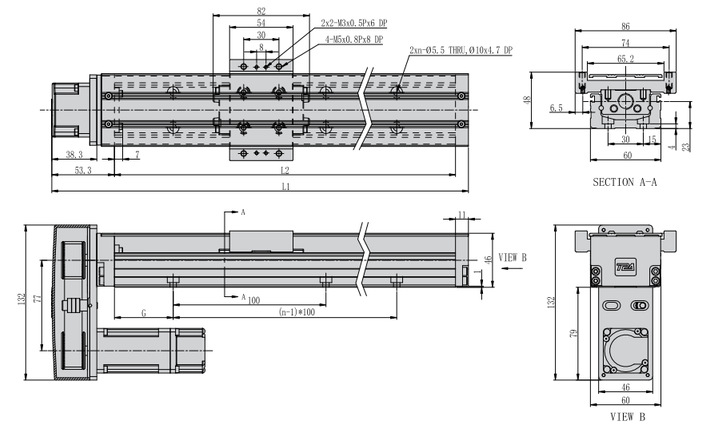
单位:Unit: mm



有效行程 Valid Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L2	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
L1	214	264	314	364	414	464	514	564	614	664	714	764	814	864	914	964
G	25	50	25	50	25	50	25	50	25	50	25	50	25	50	25	50
n	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9
KG	1	1.4	1.7	2	2.3	2.6	2.9	3.2	3.5	3.8	4.1	4.4	4.7	5	5.3	5.6

MP KNR-60E 电机外置下方（含护盖） KNR-60E Motor external under below (Cover included)

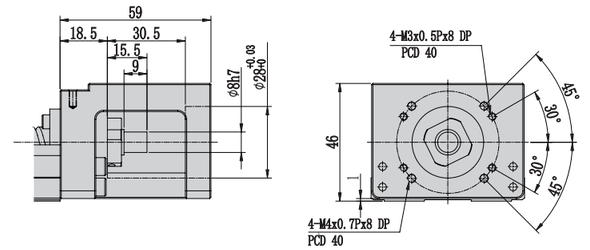
单位:Unit: mm



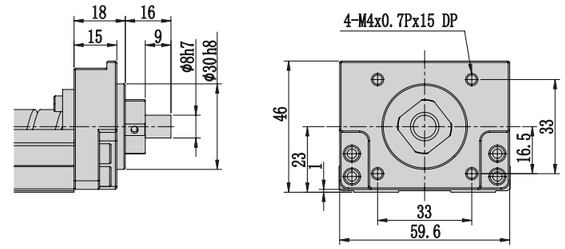
有效行程 Valid Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L2	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
L1	214	264	314	364	414	464	514	564	614	664	714	764	814	864	914	964
G	25	50	25	50	25	50	25	50	25	50	25	50	25	50	25	50
n	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9
KG	1	1.4	1.7	2	2.3	2.6	2.9	3.2	3.5	3.8	4.1	4.4	4.7	5	5.3	5.6

电机座与电机连接法兰
Motor seat and motor connecting flange

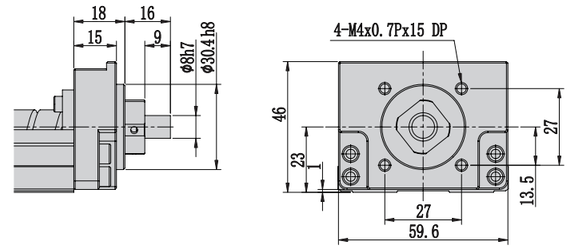
60 电机座F0 Motor seat F0



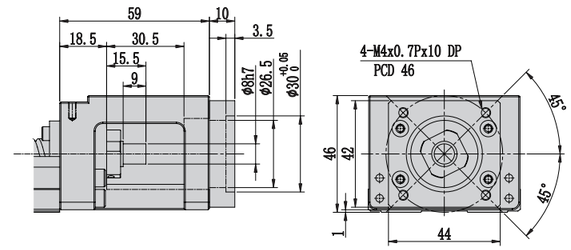
电机座H0 Motor seat H0



60 电机座H1 Motor seat H1

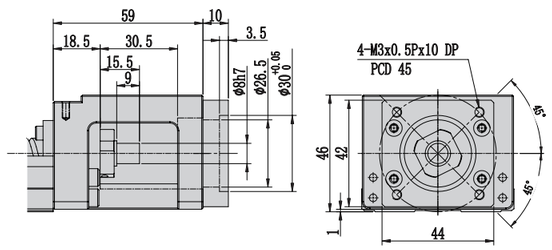


电机连接法兰F1(台达/安川/汇川/三菱/富士 100W) Connecting flange F1 of motor（Delta/Yaskawa/Inovance/Mitsubishi/Fuji 100W)

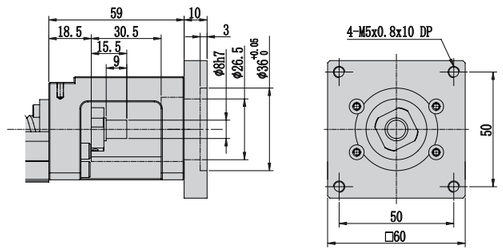


电机座与电机连接法兰
Motor seat and motor connecting flange

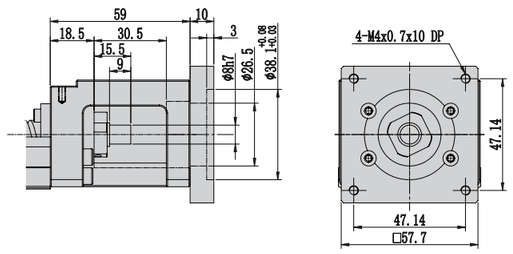
60 电机连接法兰F2(松下 50W/100W) Connecting flange F2 of motor（Panasonic 50W/100W)



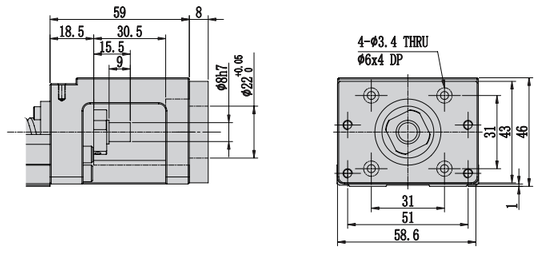
电机连接法兰F3(60步进) Connecting flange F3 of motor（60 Stepper)



60 电机连接法兰F4(57步进) Connecting flange F4 of motor（57 Stepper)

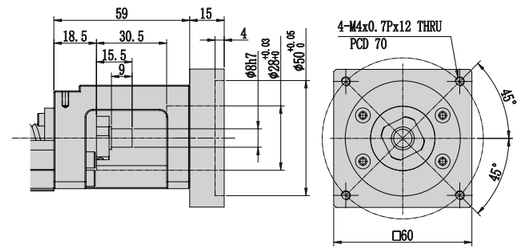


电机连接法兰F5(42步进) Connecting flange F5 of motor（42 Stepper)

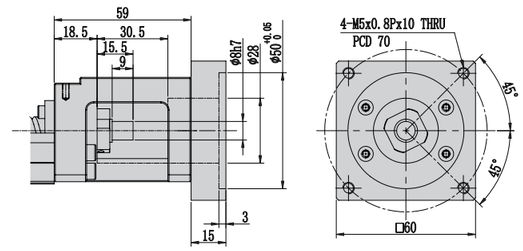


电机座与电机连接法兰
Motor seat and motor connecting flange

60 电机连接法兰F6(松下 200W/400W) Connecting flange F6 of motor（Panasonic 200W/400W)



电机连接法兰F7(台达/安川/汇川/三菱/富士 200W/400W) Connecting flange F7 of motor（Delta/Yaskawa/Inovance/Mitsubishi/Fuji 200W/400W)



此图仅供参考，出货规格详见尺寸图面
This drawing is for reference only, Please refer to the size drawing for shipment specifications.

最大行程 Max Stroke	最高速度 Max Speed	马达容量 Motor Output	滚珠螺杆 Ball Screw
1100mm	1600mm/s	400W	Ø16mm

型号表达方式 Ordering method

TPA-KNR-86E-1610C-L50A1-M-M10-N3-F001

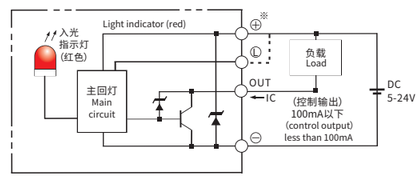
- 品牌名称 Brand
  - H 日规模组 Ball Screw Linear Module
  - O 欧规模组 Belt Linear Module
  - E 电动缸 Electric Cylinder
  - L 直线电机 Linear Motor
  - K 钢基模组 Steel Linear Module
  - G 内嵌式模组 Built-in Rail Type
  - D 简易模组 Splinde Linear Unit
  - M 直驱旋转电机 Rotary Motor
- 半封闭-铝护盖 Semi Seal -Aluminum cover
- 螺杆 Screw
- 型号 Model: 60、86 / 100、130
- 螺杆直径 Screw diameter: Ø16
- 导程 Lead: 05/10/20/32mm
- 精度等级 Precision grade: C：普通级 C:Common / P：精密级 P:Precision
- 行程 Stroke: 50-1100mm (间隔50mm) Gap 50mm
- 滑座数量 Slide number
  - A：标准型 A:Standard type
  - S：轻载型 S:Light load type
- 电机方向 Motor direction
  - M 电机外置直连 M Motor external direct connection
  - MP 电机外置下方 MP Motor external under below
  - MR 电机外置右侧 MR Motor external right side
  - ML 电机外置左侧 ML Motor external left side
- 电机功率 Motor power: 10：100W / 20：200W / 40：400W
- 电机品牌 Motor brand
  - P 松下 Panasonic
  - M 三菱 Mitsubishi
  - Y 安川 Yaskawa
  - H 禾川 HCFA
  - T 台达 Delta
- 光电类型 Photoelectric Mode: N：NPN / P：PNP
- 数量 Quantity: 1PCS / 2PCS / 3PCS / 无标记:无 None
- 客制/特殊加工 Custom/special processing

产品性能参数如下 Product performance parameters are as follows

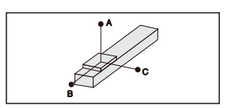
规格 Spec	重复定位精度(mm) Repeated positioning accuracy (mm)		±0.005		
	螺杆导程 (mm) Ball screw lead (mm)		5	10	20
	最高速度 (mm/s)※2 Maximum speed (mm/s)		250	500	1000
	最大可搬重量 Maximum Payload	水平使用 (kg) Horizontal (kg)	60	45	22
		垂直使用 (kg) Vertical (kg)	20	16	10
	定格推力 (N) Rated thrust (N)		683	341	174
	标准行程 (mm)※1 Stroke pitch (mm)		50~1100mm/50 间隔 50 mm Pitch		
部品 Parts	AC伺服马达容量 (W) AC servo motor output (w)		200/400		
	滚珠螺杆外径 (mm) Ball screw Ø (mm)		C7Ø16		
	联轴器 (mm) Coupling (mm)		10X14/11 (注1)		
	原点感应器 Original Sense	外挂 Outside	TPA-N674-WR		

※1 行程超过750mm时,会产生螺杆偏摆,此时请将速度调降。
※1 When the stroke exceeds 750mm, the screw deflection will occur. Please reduce the speed at this time.
※2 马达加减速设定0.2秒。
※2 Acceleration and deacceleration value is set 0.2 second.
*注1:使用Panasonic200W马达时,马达轴心为Ø11;其他品牌,马达轴心为Ø14。
*注1: Motor(200W) Shaft Diameter: Panasonic;11mm;Other:14mm.

感应器连接图<原点及端点> Sensor layout

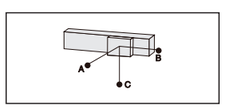


容许负载力矩表 N.m Allowable overhang



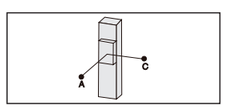
(单位Unit:mm)

水平安装 Horizontal installation		A	B	C
导程 5 Lead	24kg	1872	184	285
	42kg	1068	97	151
	60kg	660	64	98
导程 10 Lead	12kg	2076	343	494
	24kg	1006	163	235
	36kg	649	103	149
导程 20 Lead	7kg	1455	483	591
	10kg	960	316	387
	21kg	710	232	285



(单位Unit:mm)

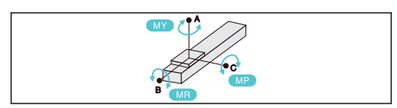
侧面安装 Side mounting		A	B	C
导程 5 Lead	24kg	256	184	1722
	42kg	135	97	1014
	60kg	88	64	607
导程 10 Lead	12kg	444	343	1680
	24kg	212	163	960
	36kg	134	103	594
导程 20 Lead	7kg	532	483	912
	10kg	350	316	332
	21kg	256	232	652



(单位Unit:mm)

垂直安装 Vertical installation		A	C
导程 5 Lead	13kg	430	430
	20kg	286	286
	–	–	–
导程 10 Lead	10kg	765	765
	16kg	478	478
	–	–	–
导程 20 Lead	10kg	1496	1496
	–	–	–
	–	–	–

静态容许负载惯量 Static loading moment



(单位Unit:N.m)

MY	318
MP	318
MR	626

*力矩表所表示的数据,代表重心。
The torque value in the chart indicate the center of gravity.
*符合型录规范的正常试用下,保证寿命为10000公里。
Operation life is 10,000km when the product is using under the specified conditions.
*倒吊使用无法套用标准规范,如有需求请咨询我司业务。
The standard specification cannot be applied to the use of inverted crane. Please consult our business if necessary.

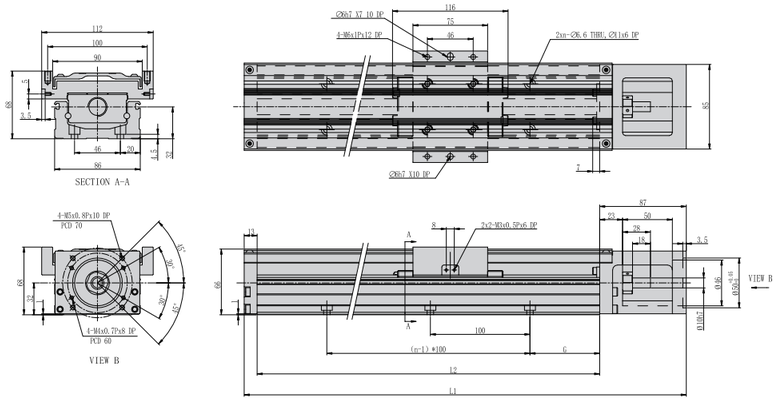
搭配伺服马达一览表 Suitable motor brand

品牌 Brand	马达记号 Mark	刹车有无 Brake	马达容量 Motor capacity	电源电压 AC-Voltage	伺服马达型号 Servo motor model	驱动器型号 Driver Model
三菱 Mitsubishi	M	无刹车(水平式样) No brake (horizontal type)	200	220	HG-KR23	MR-J4-20A
		有刹车(垂直式样) With brakes (vertical type)	200	220	HG-KR23B	MR-J4-20A
松下 Panasonic	P	无刹车(水平式样) No brake (horizontal type)	200	220	MHMD022G1U	MADHT1507
		有刹车(垂直式样) With brakes (vertical type)	200	220	MHMD022G1V	MADHT1507
台达 Delta	T	无刹车(水平式样) No brake (horizontal type)	200	220	ECMA-C20602ES	ASD-B20221
		有刹车(垂直式样) With brakes (vertical type)	200	220	ECMA-C20602FS	ASD-B20221

KNR 外形尺寸（含护盖）
KNR Overall dimensions(Cover included)

M KNR-86E 电机外置直连（含护盖） KNR-86E Motor external direct connection (Cover included)

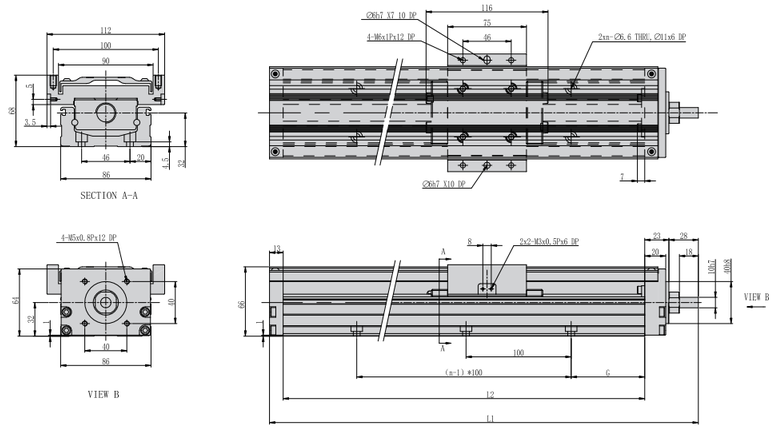
单位:Unit: mm



有效行程 Valid Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
L2	190	240	290	340	390	440	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240
L1	290	340	390	440	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340
G	45	70	45	70	45	70	45	70	45	70	45	70	45	70	45	70	45	70	45	70	45	70
n	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12
KG	4.3	4.5	4.7	4.9	5.1	5.3	5.5	5.7	5.9	6.1	6.3	6.5	6.7	6.9	7.1	7.3	7.5	7.7	7.9	8.1	8.3	8.5

H0 KNR-86E-H0（含护盖） KNR-86E-H0 (including cover)

单位:Unit: mm

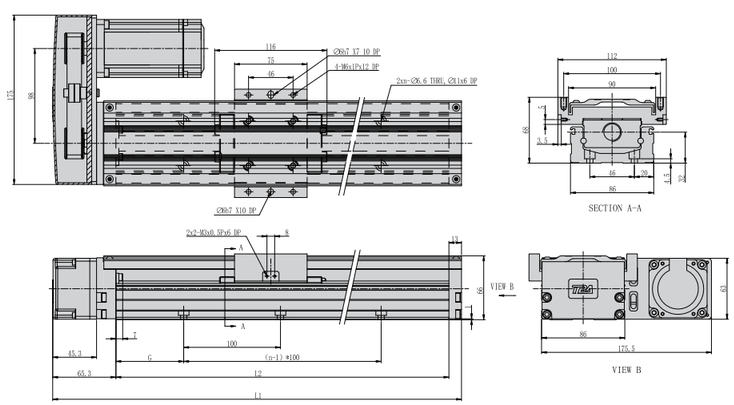


有效行程 Valid Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
L2	190	240	290	340	390	440	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240
L1	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
G	45	70	45	70	45	70	45	70	45	70	45	70	45	70	45	70	45	70	45	70	45	70
n	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12
KG	4.2	4.4	4.6	4.8	5	5.2	5.4	5.6	5.8	6	6.2	6.4	6.6	6.8	7	7.2	7.4	7.6	7.8	8	8.2	8.4

KNR 外形尺寸（含护盖）
KNR Overall dimensions(Cover included)

MR KNR-86E 电机外置右侧（含护盖） KNR-86E Motor external right side (Cover included)

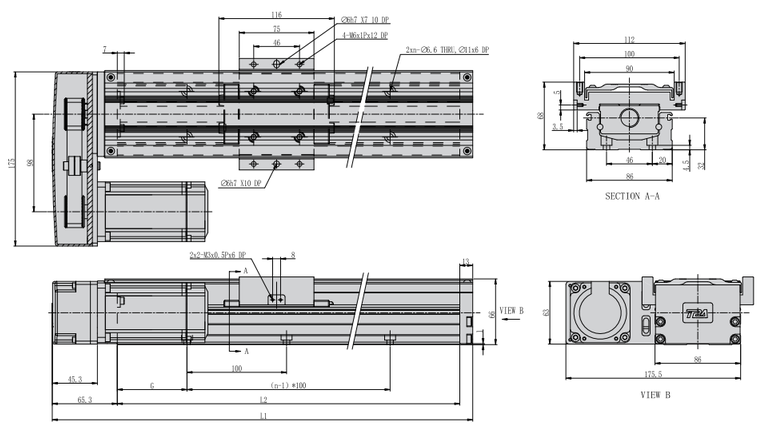
单位:Unit: mm



有效行程 Valid Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
L2	190	240	290	340	390	440	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240
L1	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318
G	45	70	45	70	45	70	45	70	45	70	45	70	45	70	45	70	45	70	45	70	45	70
n	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12
KG	4.3	4.5	4.7	4.9	5.1	5.3	5.5	5.7	5.9	6.1	6.3	6.5	6.7	6.9	7.1	7.3	7.5	7.7	7.9	8.1	8.3	8.5

ML KNR-86E 电机外置左侧（含护盖） KNR-86E Motor external left side (Cover included)

单位:Unit: mm

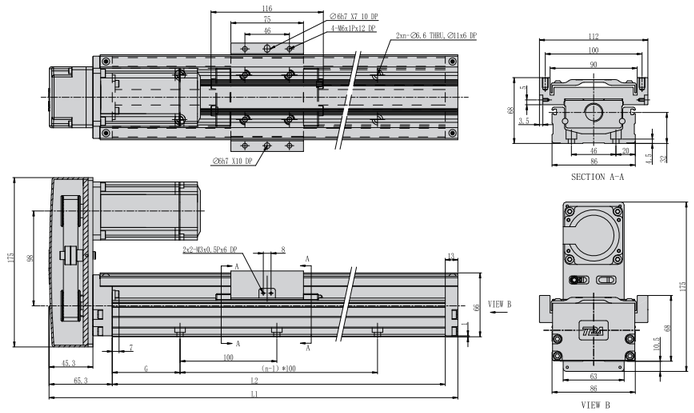


有效行程 Valid Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
L2	190	240	290	340	390	440	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240
L1	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318
G	45	70	45	70	45	70	45	70	45	70	45	70	45	70	45	70	45	70	45	70	45	70
n	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12
KG	4.3	4.5	4.7	4.9	5.1	5.3	5.5	5.7	5.9	6.1	6.3	6.5	6.7	6.9	7.1	7.3	7.5	7.7	7.9	8.1	8.3	8.5

KNR 外形尺寸（含护盖）
KNR Overall dimensions(Cover included)

MU KNR-86E 电机外置上方（含护盖） KNR-86E Motor external above (Cover included)

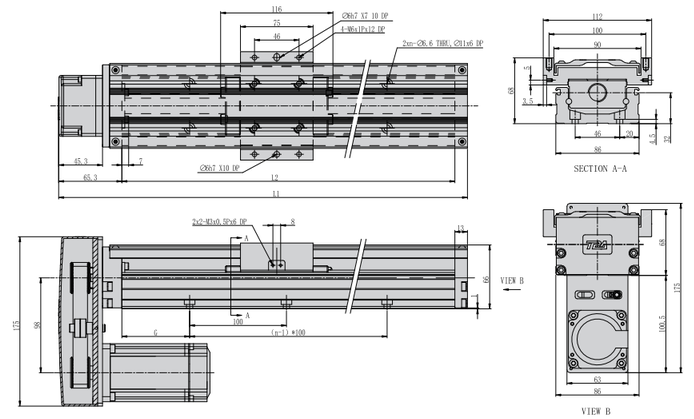
单位:Unit: mm



有效行程 Valid Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
L2	190	240	290	340	390	440	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240
L1	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318
G	45	70	45	70	45	70	45	70	45	70	45	70	45	70	45	70	45	70	45	70	45	70
n	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12
KG	4.3	4.5	4.7	4.9	5.1	5.3	5.5	5.7	5.9	6.1	6.3	6.5	6.7	6.9	7.1	7.3	7.5	7.7	7.9	8.1	8.3	8.5

MP KNR-86E 电机外置下方（含护盖） KNR-86E Motor external under below (Cover included)

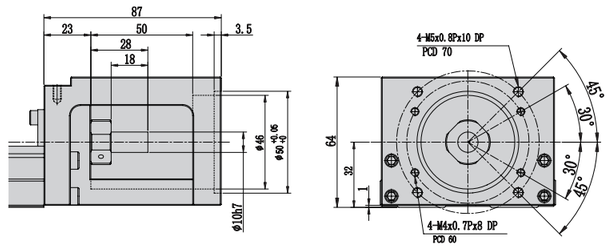
单位:Unit: mm



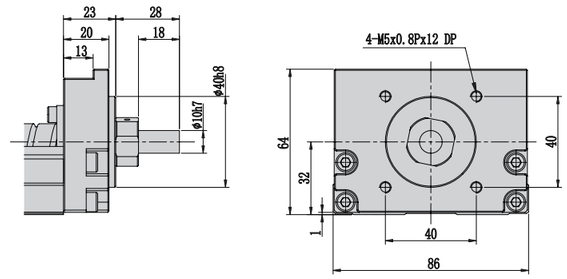
有效行程 Valid Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
L2	190	240	290	340	390	440	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240
L1	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318
G	45	70	45	70	45	70	45	70	45	70	45	70	45	70	45	70	45	70	45	70	45	70
n	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12
KG	4.3	4.5	4.7	4.9	5.1	5.3	5.5	5.7	5.9	6.1	6.3	6.5	6.7	6.9	7.1	7.3	7.5	7.7	7.9	8.1	8.3	8.5

电机座与电机连接法兰
Motor seat and motor connecting flange

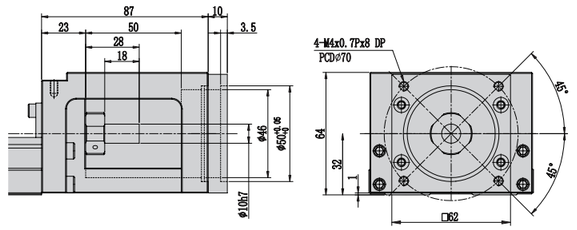
86 电机座F0(台达/安川/汇川/三菱/富士 200W/400W) Motor seat F0 (Delta/Yaskawa/Inovance/Mitsubishi/Fuji 200W/400W)



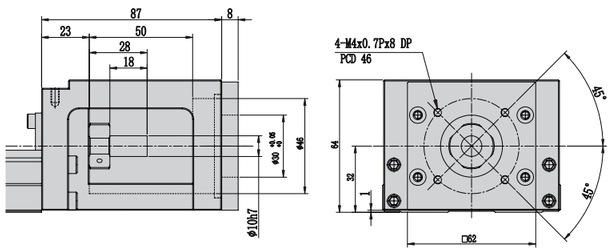
电机座H0 Motor seat H0



86 电机连接法兰F1(松下 200W/400W) Connecting flange F1 of motor (Panasonic 200W/400W)

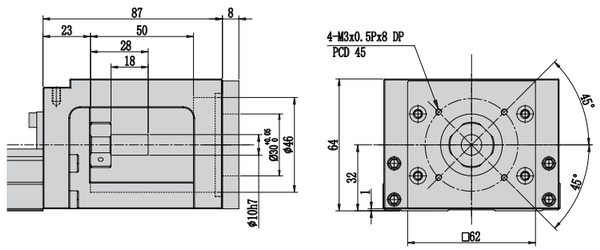


电机连接法兰F2(台达/安川/汇川/三菱/富士 100W) Connecting flange F2 of motor (Delta/Yaskawa/Inovance/Mitsubishi/Fuji 100W)

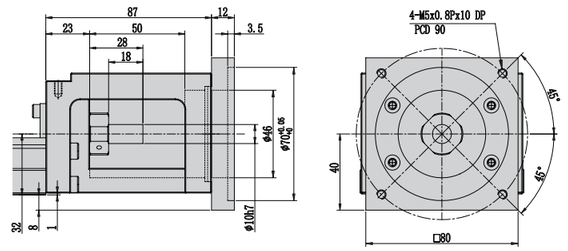


电机座与电机连接法兰
Motor seat and motor connecting flange

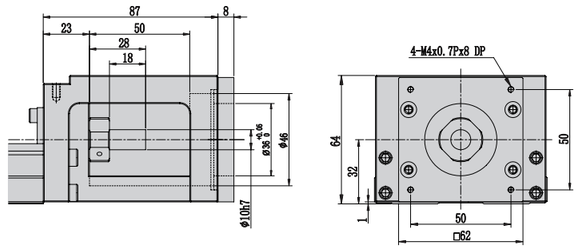
86 电机连接法兰F3(松下 50W/100W) Connecting flange F3 of motor (Panasonic 50W／100W)



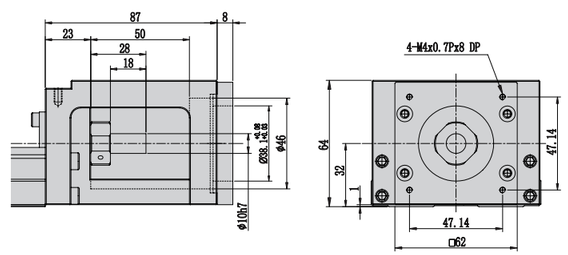
电机连接法兰F4(松下 750W) Connecting flange F4 of motor (Panasonic 750W)



86 电机连接法兰F5(60步进) Connecting flange F5 of motor (60 Stepper)

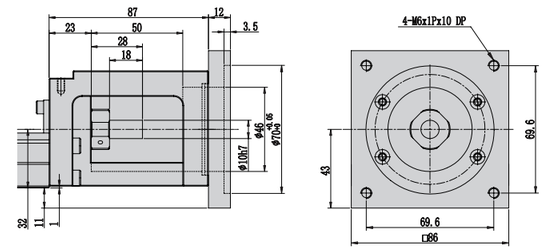


电机连接法兰F6(57步进) Connecting flange F6 of motor (57 Stepper)

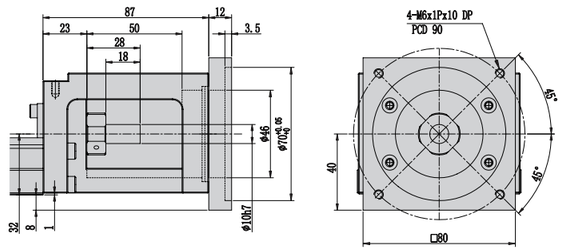


电机座与电机连接法兰
Motor seat and motor connecting flange

86 电机连接法兰F7(86步进) Connecting flange F7 of motor (86 Stepper)



电机连接法兰F8(台达/安川/汇川/三菱/富士 750W) Connecting flange F8 of motor (Delta/Yaskawa/Inovance/Mitsubishi/Fuji 750W)



此图仅供参考，出货规格详见尺寸图面
This drawing is for reference only, Please refer to the size drawing for shipment specifications.

最大行程 Max Stroke	最高速度 Max Speed	马达容量 Motor Output	滚珠螺杆 Ball Screw
1300mm	1000mm/s	750W	Ø20 mm

型号表达方式 Ordering method

TPA-KNR-100E-2010C-L50A1-M-M75-N3-F001

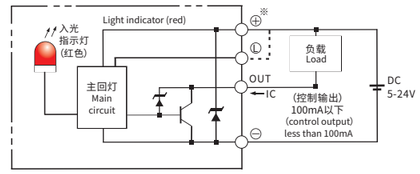
- 品牌名称 Brand
  - H 日规模组 Ball Screw Linear Module
  - O 欧规模组 Belt Linear Module
  - E 电动缸 Electric Cylinder
  - L 直线电机 Linear Motor
  - K 钢基模组 Steel Linear Module
  - G 内嵌式模组 Built-in Rail Type
  - D 简易模组 Splinde Linear Unit
  - M 直驱旋转电机 Rotary Motor
- 半封闭-铝护盖 Semi Seal -Aluminum cover
- 螺杆 Screw
- 型号 Model: 60、86 / 100、130
- 螺杆直径 Screw diameter: Ø20
- 导程 Lead: 05/10/20mm
- 精度等级 Precision grade: C：普通级 C:Common / P：精密级 P:Precision
- 行程 Stroke: 50-1300mm (间隔50mm) Gap 50mm
- 滑座数量 Slide number
  - A：标准型 A:Standard type
  - S：轻载型 S:Light load type
- 电机方向 Motor direction
  - M 电机外置直连 Motor external direct connection
  - MP 电机外置下方 Motor external under below
  - MR 电机外置右侧 Motor external right side
  - ML 电机外置左侧 Motor external left side
- 电机功率 Motor power: 75：750W
- 电机品牌 Motor brand
  - P 松下 Panasonic
  - M 三菱 Mitsubishi
  - Y 安川 Yaskawa
  - H 禾川 HCFA
  - T 台达 Delta
- 光电类型 Photoelectric Mode: N：NPN / P：PNP
- 数量 Quantity: 1PCS / 2PCS / 3PCS / 无标记:无 None
- 客制/特殊加工 Custom/special processing

产品性能参数如下 Product performance parameters are as follows

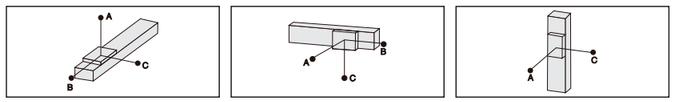
规格 Spec	重复定位精度(mm) Repeated positioning accuracy (mm)		±0.005		
	螺杆导程 (mm) Ball screw lead (mm)		5	10	20
	最高速度 (mm/s)※2 Maximum speed (mm/s)		250	500	1000
	最大可搬重量 Maximum Payload	水平使用 (kg) Horizontal (kg)	95	95	65
		垂直使用 (kg) Vertical (kg)	40	32	20
	定格推力 (N) Rated thrust (N)		2563	1281	640
	标准行程 (mm)※1 Stroke pitch (mm)		50~1300mm/50 间隔 50 mm Pitch		
部品 Parts	AC伺服马达容量 (W) AC servo motor output (w)		750		
	滚珠螺杆外径 (mm) Ball screw Ø (mm)		C7Ø20		
	联轴器 (mm) Coupling (mm)		12X19		
	原点感应器 Original Sense	外挂 Outside	TPA-N674-WR		

※1 行程超过850mm时,会产生螺杆偏摆,此时请将速度调降。
※1 When the stroke exceeds 850mm, the screw deflection will occur. Please reduce the speed at this time.
※2 马达加减速设定0.2秒。
※2 Acceleration and deacceleration value is set 0.2 second.

感应器连接图<原点及端点> Sensor layout



容许负载力矩表 N.m Allowable overhang



(单位Unit:mm)

水平安装 Horizontal installation		A	B	C
导程 5 Lead	55kg	2523	272	318
	70kg	1935	205	238
	95kg	1454	145	170
导程 10 Lead	50kg	1490	264	290
	68kg	1127	193	137
	120kg	780	128	142
导程 20 Lead	28kg	1300	426	419
	42kg	803	258	255
	65kg	512	160	159

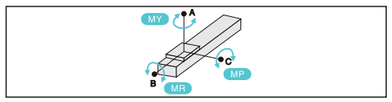
(单位Unit:mm)

侧面安装 Side mounting		A	B	C
导程 5 Lead	58kg	294	250	2330
	75kg	225	192	1820
	95kg	170	145	1443
导程 10 Lead	12kg	318	287	1632
	24kg	230	208	1212
	36kg	142	142	860
导程 20 Lead	24kg	494	502	1530
	40kg	284	288	891
	95kg	159	184	524

(单位Unit:mm)

垂直安装 Vertical installation		A	C
导程 5 Lead	16kg	1094	1094
	24kg	728	728
	50kg	436	436
导程 10 Lead	12kg	1294	1294
	20kg	776	776
	40kg	485	485
导程 20 Lead	8kg	1537	1537
	11kg	1100	1100
	20kg	615	615

静态容许负载惯量 Static loading moment



(单位Unit:N.m)

MY	886
MP	826
MR	1500

*力矩表所表示的数据,代表重心。
The torque value in the chart indicate the center of gravity.
*符合型录规范的正常试用下,保证寿命为10000公里。
Operation life is 10,000km when the product is using under the specified conditions.
*倒吊使用无法套用标准规范,如有需求请咨询我司业务。
The standard specification cannot be applied to the use of inverted crane. Please consult our business if necessary.

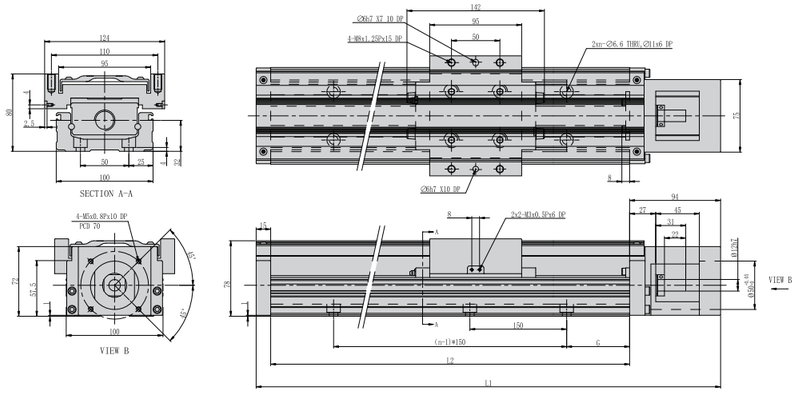
搭配伺服马达一览表 Suitable motor brand

品牌 Brand	马达记号 Mark	刹车有无 Brake	马达容量 Motor capacity	电源电压 AC-Voltage	伺服马达型号 Servo motor model	驱动器型号 Driver Model
三菱 Mitsubishi	M	无刹车(水平式样) No brake (horizontal type)	750	220	HG-KR73	MR-J4-70A
		有刹车(垂直式样) With brakes (vertical type)	750	220	HG-KR73B	MR-J4-70A
松下 Panasonic	P	无刹车(水平式样) No brake (horizontal type)	750	220	MHMD082G1U	MADHT3520
		有刹车(垂直式样) With brakes (vertical type)	750	220	MHMD082G1V	MADHT3520
台达 Delta	T	无刹车(水平式样) No brake (horizontal type)	750	220	ECMA-C20807ES	ASD-B20721-B
		有刹车(垂直式样) With brakes (vertical type)	750	220	ECMA-C20807FS	ASD-B20721-B

KNR 外形尺寸（含护盖）
KNR Overall dimensions(Cover included)

M KNR-100E 电机外置直连（含护盖） KNR-100E Motor external direct connection (Cover included)

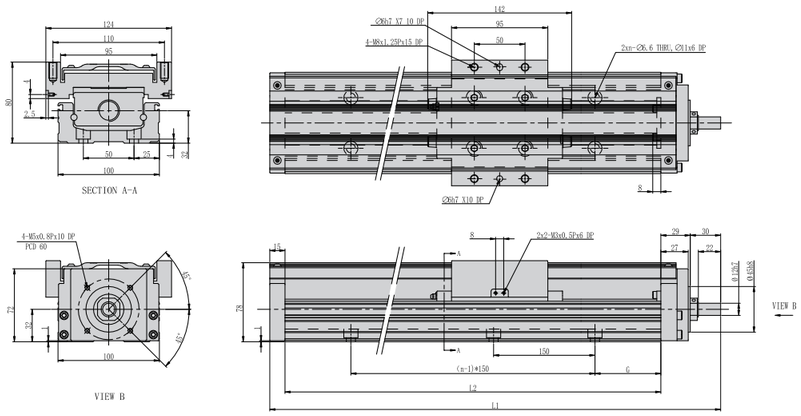
单位:Unit: mm



有效行程 Valid Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
L2	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280	1330	1380	1430	1480
L1	339	389	439	489	539	589	639	689	739	789	839	889	939	989	1039	1089	1139	1189	1239	1289	1339	1389	1439	1489	1539	1589
G	40	65	15	40	65	15	40	65	15	40	65	15	40	65	15	40	65	15	40	65	15	40	65	15	40	65
n	2	2	3	3	3	4	4	4	5	5	5	6	6	6	7	7	7	8	8	8	9	9	9	10	10	10
KG	5.8	6.2	6.6	7	7.4	7.8	8.2	8.6	9	9.4	9.8	10.2	10.6	11	11.4	11.8	12.2	12.6	13	13.4	13.8	14.2	14.6	15	15.4	15.8

H0 KNR-100E-H0（含护盖） KNR-100E-H0 (including cover)

单位:Unit: mm

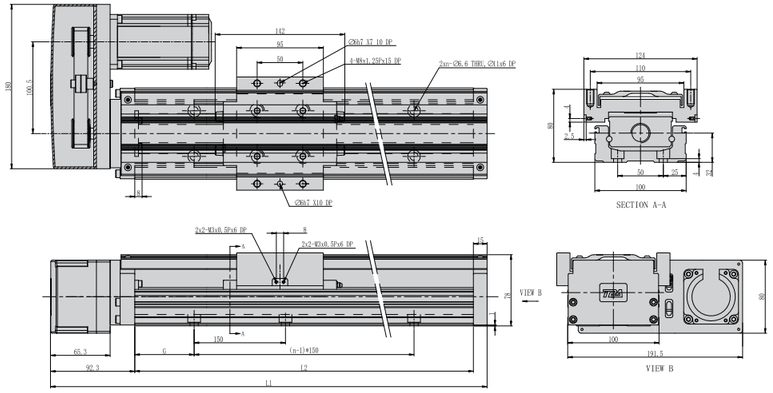


有效行程 Valid Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
L2	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280	1330	1380	1430	1480
L1	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304	1354	1404	1454	1504	1554
G	40	65	15	40	65	15	40	65	15	40	65	15	40	65	15	40	65	15	40	65	15	40	65	15	40	65
n	2	2	3	3	3	4	4	4	5	5	5	6	6	6	7	7	7	8	8	8	9	9	9	10	10	10
KG	5.7	6.1	6.5	6.9	7.3	7.7	8.1	8.5	8.9	9.3	9.7	10.1	10.5	10.9	11.3	11.7	12.1	12.5	12.9	13.3	13.7	14.1	14.5	14.9	15.3	15.7

KNR 外形尺寸（含护盖）
KNR Overall dimensions(Cover included)

MR KNR-100E 电机外置右侧（含护盖） KNR-100E Motor external right side (Cover included)

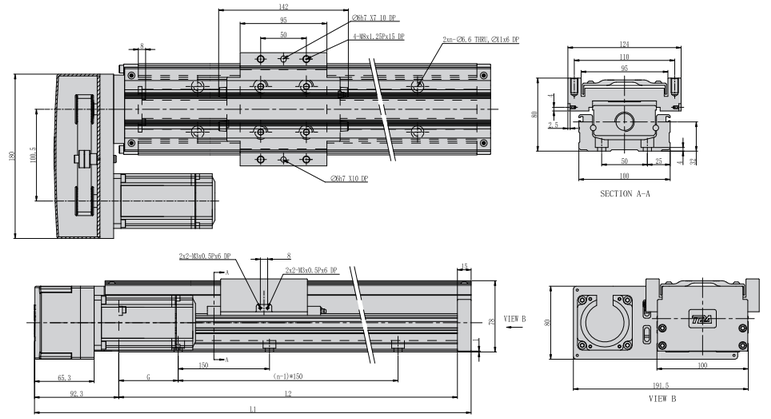
单位:Unit: mm



有效行程 Valid Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
L2	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280	1330	1380	1430	1480
L1	337	387	437	487	537	587	637	687	737	787	837	887	937	987	1037	1087	1137	1187	1237	1287	1337	1387	1437	1487	1537	1587
G	40	65	15	40	65	15	40	65	15	40	65	15	40	65	15	40	65	15	40	65	15	40	65	15	40	65
n	2	2	3	3	3	4	4	4	5	5	5	6	6	6	7	7	7	8	8	8	9	9	9	10	10	10
KG	5.8	6.2	6.6	7	7.4	7.8	8.2	8.6	9	9.4	9.8	10.2	10.6	11	11.4	11.8	12.2	12.6	13	13.4	13.8	14.2	14.6	15	15.4	15.8

ML KNR-100E 电机外置左侧（含护盖） KNR-100E Motor external left side (Cover included)

单位:Unit: mm

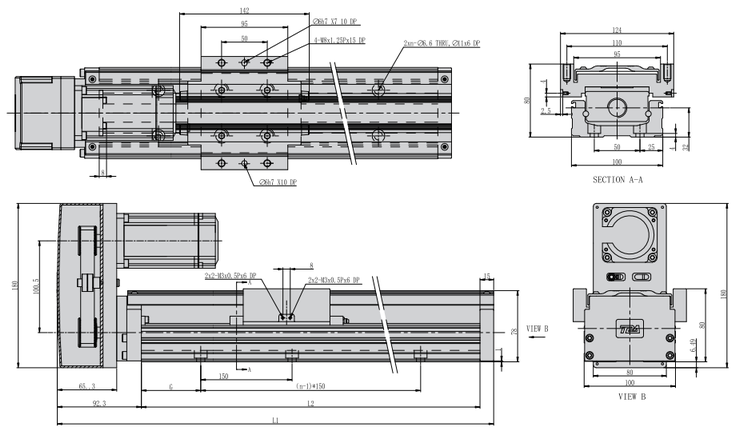


有效行程 Valid Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
L2	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280	1330	1380	1430	1480
L1	337	387	437	487	537	587	637	687	737	787	837	887	937	987	1037	1087	1137	1187	1237	1287	1337	1387	1437	1487	1537	1587
G	40	65	15	40	65	15	40	65	15	40	65	15	40	65	15	40	65	15	40	65	15	40	65	15	40	65
n	2	2	3	3	3	4	4	4	5	5	5	6	6	6	7	7	7	8	8	8	9	9	9	10	10	10
KG	5.8	6.2	6.6	7	7.4	7.8	8.2	8.6	9	9.4	9.8	10.2	10.6	11	11.4	11.8	12.2	12.6	13	13.4	13.8	14.2	14.6	15	15.4	15.8

KNR 外形尺寸（含护盖）
KNR Overall dimensions(Cover included)

MU KNR-100E 电机外置上方（含护盖） KNR-100E Motor external above (Cover included)

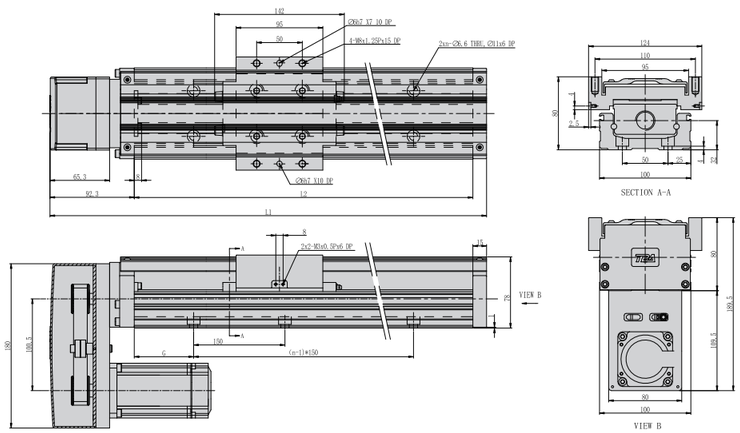
单位:Unit: mm



有效行程 Valid Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
L2	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280	1330	1380	1430	1480
L1	337	387	437	487	537	587	637	687	737	787	837	887	937	987	1037	1087	1137	1187	1237	1287	1337	1387	1437	1487	1537	1587
G	40	65	15	40	65	15	40	65	15	40	65	15	40	65	15	40	65	15	40	65	15	40	65	15	40	65
n	2	2	3	3	3	4	4	4	5	5	5	6	6	6	7	7	7	8	8	8	9	9	9	10	10	10
KG	5.8	6.2	6.6	7	7.4	7.8	8.2	8.6	9	9.4	9.8	10.2	10.6	11	11.4	11.8	12.2	12.6	13	13.4	13.8	14.2	14.6	15	15.4	15.8

MP KNR-100E 电机外置下方（含护盖） KNR-100E Motor external under below (Cover included)

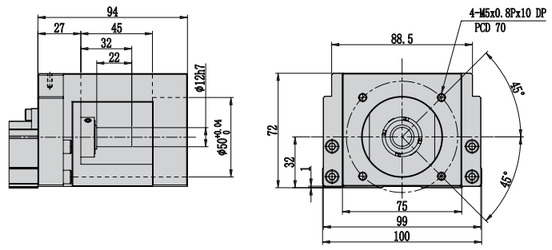
单位:Unit: mm



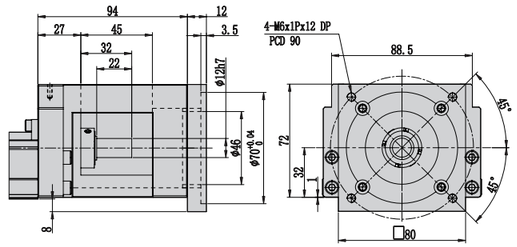
有效行程 Valid Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
L2	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280	1330	1380	1430	1480
L1	337	387	437	487	537	587	637	687	737	787	837	887	937	987	1037	1087	1137	1187	1237	1287	1337	1387	1437	1487	1537	1587
G	40	65	15	40	65	15	40	65	15	40	65	15	40	65	15	40	65	15	40	65	15	40	65	15	40	65
n	2	2	3	3	3	4	4	4	5	5	5	6	6	6	7	7	7	8	8	8	9	9	9	10	10	10
KG	5.8	6.2	6.6	7	7.4	7.8	8.2	8.6	9	9.4	9.8	10.2	10.6	11	11.4	11.8	12.2	12.6	13	13.4	13.8	14.2	14.6	15	15.4	15.8

电机座与电机连接法兰
Motor seat and motor connecting flange

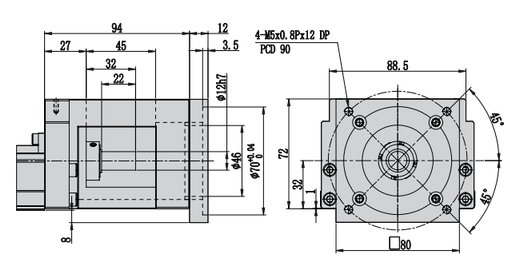
100 电机座F0(台达/安川/汇川/三菱/富士 200W/400W) Motor seat F0 (Delta/Yaskawa/Inovance/Mitsubishi/Fuji 200W/400W)



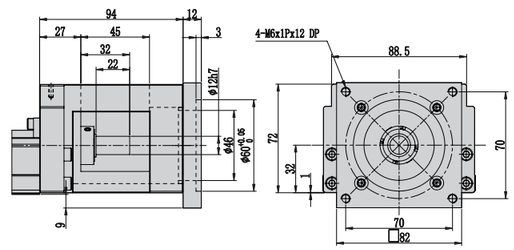
电机座F1(台达/安川/汇川/三菱/富士 750W) Motor seat F1 (Delta/Yaskawa/Inovance/Mitsubishi/Fuji 750W)



100 电机座F2(松下 750W) Motor seat F2 (Panasonic 750W)

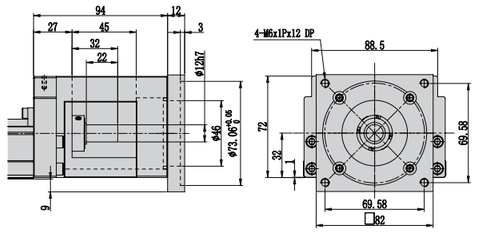


电机座F3 Motor seat F3

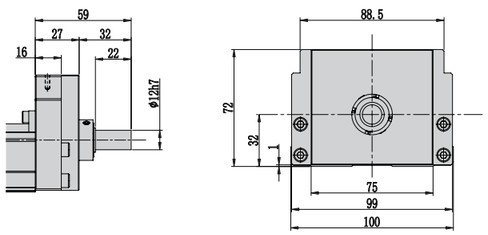


电机座与电机连接法兰
Motor seat and motor connecting flange

100 电机座F4(86步进) Motor seat F4(86 Stepper)



电机座H0 Motor seat H0



MEMO

此图仅供参考，出货规格详见尺寸图面
This drawing is for reference only, Please refer to the size drawing for shipment specifications.

最大行程 Max Stroke	1600mm
最高速度 Max Speed	1250mm/s
马达容量 Motor Output	750W
滚珠螺杆 Ball Screw	Ø25 mm

型号表达方式 Ordering method

TPA-KNR-130E-2510C-L50A1-M-M75-N3-F001

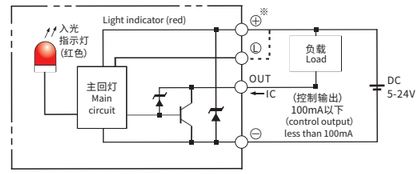
- 品牌名称 Brand
  - H 日规模组 Ball Screw Linear Module
  - O 欧规模组 Belt Linear Module
  - E 电动缸 Electric Cylinder
  - L 直线电机 Linear Motor
  - K 钢基模组 Steel Linear Module
  - G 内嵌式模组 Built-in Rail Type
  - D 简易模组 Splinde Linear Unit
  - M 直驱旋转电机 Rotary Motor
- 半封闭-铝护盖 Semi Seal -Aluminum cover
- 螺杆 Screw
- 型号 Model: 60、86 / 100、130
- 螺杆直径 Screw diameter: Ø25
- 导程 Lead: 05/10/25mm
- 精度等级 Precision grade: C：普通级 C:Common / P：精密级 P:Precision
- 行程 Stroke: 50-1600mm (间隔50mm) Gap 50mm
- 滑座数量 Slide number
  - A：标准型 A:Standard type
  - S：轻载型 S:Light load type
- 电机方向 Motor direction
  - M 电机外置直连 Motor external direct connection
  - MP 电机外置下方 Motor external under below
  - MR 电机外置右侧 Motor external right side
  - ML 电机外置左侧 Motor external left side
- 电机品牌 Motor brand
  - P 松下 Panasonic
  - M 三菱 Mitsubishi
  - Y 安川 Yaskawa
  - H 禾川 HCFA
  - T 台达 Delta
- 电机功率 Motor power: 75：750W
- 光电类型 Photoelectric Mode: N：NPN / P：PNP
- 数量 Quantity: 1PCS / 2PCS / 3PCS / 无标记:无 None
- 客制/特殊加工 Custom/special processing

产品性能参数如下 Product performance parameters are as follows

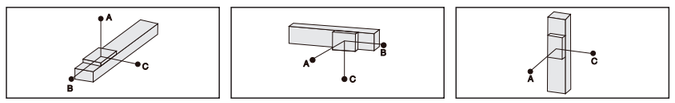
规格 Spec	重复定位精度(mm) Repeated positioning accuracy (mm)		±0.005		
	螺杆导程 (mm) Ball screw lead (mm)		5	10	25
	最高速度 (mm/s)※2 Maximum speed (mm/s)		250	500	1250
	最大可搬重量 Maximum Payload	水平使用 (kg) Horizontal (kg)	120	120	83
		垂直使用 (kg) Vertical (kg)	50	40	25
	定格推力 (N) Rated thrust (N)		2563	1281	640
	标准行程 (mm)※1 Stroke pitch (mm)		50~1600mm/50 间隔 50 mm Pitch		
部品 Parts	AC伺服马达容量 (W) AC servo motor output (w)		750		
	滚珠螺杆外径 (mm) Ball screw Ø (mm)		C7Ø25		
	联轴器 (mm) Coupling (mm)		15X19		
	原点感应器 Original Sense	外挂 Outside	TPA-N674-WR		

※1 行程超过850mm时,会产生螺杆偏摆,此时请将速度调降。
※1 When the stroke exceeds 850mm, the screw deflection will occur. Please reduce the speed at this time.
※2 马达加减速设定0.2秒。
※2 Acceleration and deacceleration value is set 0.2 second.

感应器连接图<原点及端点> Sensor layout



容许负载力矩表 N.m Allowable overhang



(单位Unit:mm)

水平安装 Horizomtal installation		A	B	C
导程5 Lead	70kg	3235	349	408
	90kg	2482	263	306
	120kg	1861	187	218
导程10 Lead	65kg	1911	338	373
	85kg	1445	248	276
	120kg	1000	164	182
导程25 Lead	35kg	1666	547	538
	55kg	1030	331	328
	83kg	654	206	204

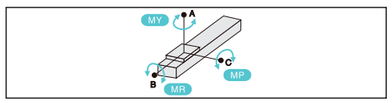
(单位Unit:mm)

侧面安装 Side mounting		A	B	C
导程5 Lead	75kg	377	322	2988
	95kg	288	246	2333
	120kg	218	187	1850
导程10 Lead	60kg	408	368	2092
	80kg	296	266	1554
	120kg	182	182	1102
导程25 Lead	30kg	633	644	1961
	50kg	365	369	1143
	83kg	230	231	656

(单位Unit:mm)

垂直安装 Vertical installation		A	C
导程5 Lead	20kg	1368	1368
	30kg	911	911
	50kg	546	546
导程10 Lead	15kg	1618	1618
	25kg	970	970
	40kg	607	607
导程25 Lead	10kg	1922	1922
	14kg	1377	1377
	25kg	769	769

静态容许负载惯量 Static loading moment



(单位Unit:N.m)

MY	886
MP	826
MR	1500

*力矩表所表示的数据,代表重心。
The torque value in the chart indicate the center of gravity.
*符合型录规范的正常试用下,保证寿命为10000公里。
Operation life is 10,000km when the product is using under the specified conditions.
*倒吊使用无法套用标准规范,如有需求请咨询我司业务。
The standard specification cannot be applied to the use of inverted crane. Please consult our business if necessary.

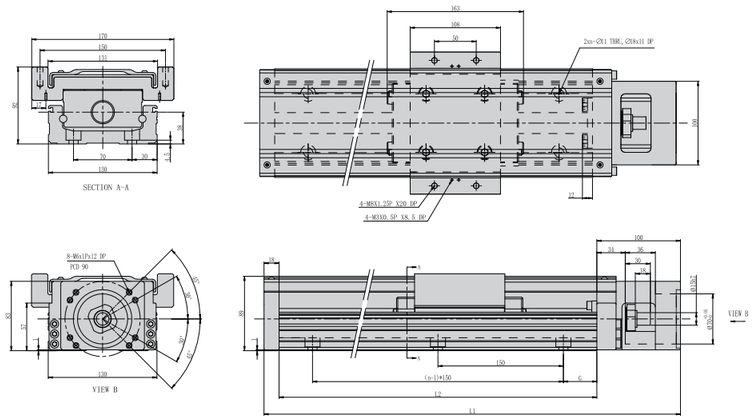
搭配伺服马达一览表 Suitable motor brand

品牌 Brand	马达记号 Mark	刹车有无 Brake	马达容量 Motor capacity	电源电压 AC-Voltage	伺服马达型号 Servo motor model	驱动器型号 Driver Model
三菱 Mitsubishi	M	无刹车(水平式样) No brake (horizontal type)	750	220	HG-KR73	MR-J4-70A
		有刹车(垂直式样) With brakes (vertical type)	750	220	HG-KR73B	MR-J4-70A
松下 Panasonic	P	无刹车(水平式样) No brake (horizontal type)	750	220	MHMD082G1U	MADHT3520
		有刹车(垂直式样) With brakes (vertical type)	750	220	MHMD082G1V	MADHT3520
台达 Delta	T	无刹车(水平式样) No brake (horizontal type)	750	220	ECMA-C20807ES	ASD-B20721-B
		有刹车(垂直式样) With brakes (vertical type)	750	220	ECMA-C20807FS	ASD-B20721-B

KNR 外形尺寸（含护盖）
KNR Overall dimensions(Cover included)

M KNR-130E 电机外置直连（含护盖） KNR-130E Motor external direct connection (Cover included)

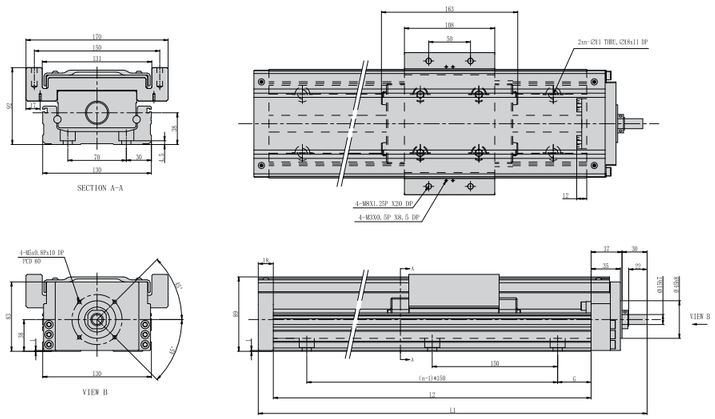
单位:Unit: mm



有效行程 Valid Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600
L2	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280	1330	1380	1430	1480	1530	1580	1630	1680	1730	1780
L1	348	398	448	498	548	598	648	698	748	798	848	898	948	998	1048	1098	1148	1198	1248	1298	1348	1398	1448	1498	1548	1598	1648	1698	1748	1798	1848	1898
G	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65
n	2	2	2	3	3	3	4	4	4	5	5	5	6	6	6	7	7	7	8	8	8	9	9	9	10	10	10	11	11	11	12	12
KG	6.98	7.48	7.98	8.48	8.98	9.48	9.98	10.5	11	11.5	12	12.5	13	13.5	14	14.5	15	15.5	16	16.5	17	17.5	18	18.5	19	19.5	20	20.5	21	21.5	22	22.5

H0 KNR-130E-H0（含护盖） KNR-130E-H0 (including cover)

单位:Unit: mm

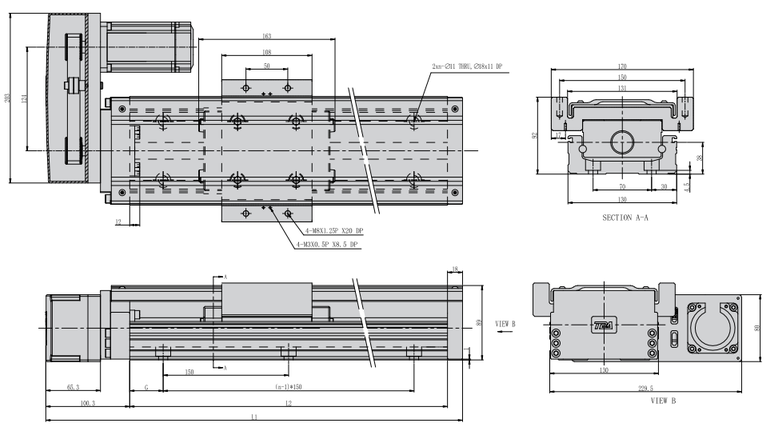


有效行程 Valid Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600
L2	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280	1330	1380	1430	1480	1530	1580	1630	1680	1730	1780
L1	315	365	415	465	515	565	615	665	715	765	815	865	915	965	1015	1065	1115	1165	1215	1265	1315	1365	1415	1465	1515	1565	1615	1665	1715	1765	1815	1865
G	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65
n	2	2	2	3	3	3	4	4	4	5	5	5	6	6	6	7	7	7	8	8	8	9	9	9	10	10	10	11	11	11	12	12
KG	6.88	7.38	7.88	8.38	8.88	9.38	9.88	10.4	10.9	11.4	11.9	12.4	12.9	13.4	13.9	14.4	14.9	15.4	15.9	16.4	16.9	17.4	17.9	18.4	18.9	19.4	19.9	20.4	20.9	21.4	21.9	22.4

KNR 外形尺寸（含护盖）
KNR Overall dimensions(Cover included)

MR KNR-130E 电机外置右侧（含护盖） KNR-130E Motor external right side (Cover included)

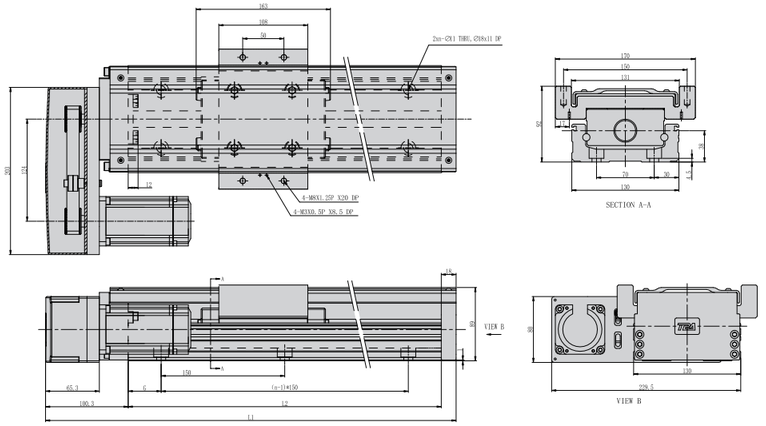
单位:Unit: mm



有效行程 Valid Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600
L2	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280	1330	1380	1430	1480	1530	1580	1630	1680	1730	1780
L1	348	398	448	498	548	598	648	698	748	798	848	898	948	998	1048	1098	1148	1198	1248	1298	1348	1398	1448	1498	1548	1598	1648	1698	1748	1798	1848	1898
G	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65
n	2	2	2	3	3	3	4	4	4	5	5	5	6	6	6	7	7	7	8	8	8	9	9	9	10	10	10	11	11	11	12	12
KG	6.98	7.48	7.98	8.48	8.98	9.48	9.98	10.5	11	11.5	12	12.5	13	13.5	14	14.5	15	15.5	16	16.5	17	17.5	18	18.5	19	19.5	20	20.5	21	21.5	22	22.5

ML KNR-130E 电机外置左侧（含护盖） KNR-130E Motor external left side (Cover included)

单位:Unit: mm

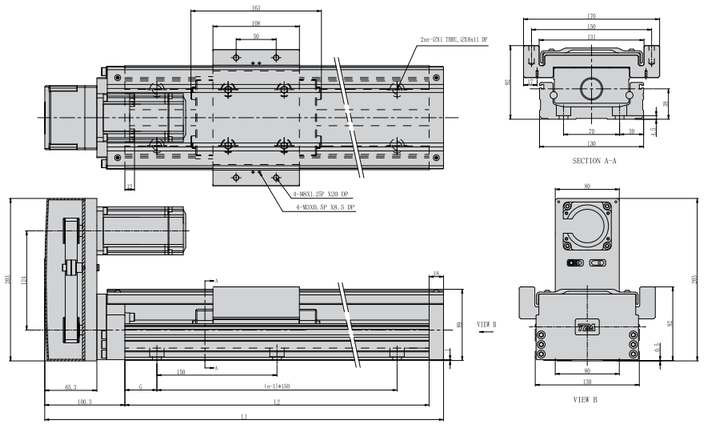


有效行程 Valid Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600
L2	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280	1330	1380	1430	1480	1530	1580	1630	1680	1730	1780
L1	348	398	448	498	548	598	648	698	748	798	848	898	948	998	1048	1098	1148	1198	1248	1298	1348	1398	1448	1498	1548	1598	1648	1698	1748	1798	1848	1898
G	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65
n	2	2	2	3	3	3	4	4	4	5	5	5	6	6	6	7	7	7	8	8	8	9	9	9	10	10	10	11	11	11	12	12
KG	6.98	7.48	7.98	8.48	8.98	9.48	9.98	10.5	11	11.5	12	12.5	13	13.5	14	14.5	15	15.5	16	16.5	17	17.5	18	18.5	19	19.5	20	20.5	21	21.5	22	22.5

KNR 外形尺寸（含护盖）
KNR Overall dimensions(Cover included)

MU KNR-130E 电机外置上方（含护盖） KNR-130E Motor external above (Cover included)

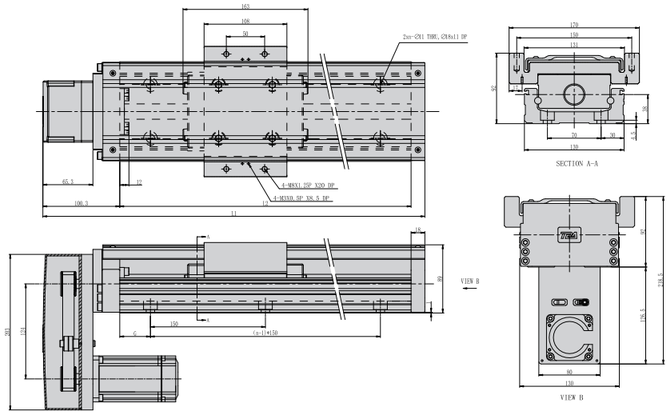
单位:Unit: mm



有效行程 Valid Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600
L2	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280	1330	1380	1430	1480	1530	1580	1630	1680	1730	1780
L1	348	398	448	498	548	598	648	698	748	798	848	898	948	998	1048	1098	1148	1198	1248	1298	1348	1398	1448	1498	1548	1598	1648	1698	1748	1798	1848	1898
G	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65
n	2	2	2	3	3	3	4	4	4	5	5	5	6	6	6	7	7	7	8	8	8	9	9	9	10	10	10	11	11	11	12	12
KG	6.98	7.48	7.98	8.48	8.98	9.48	9.98	10.5	11	11.5	12	12.5	13	13.5	14	14.5	15	15.5	16	16.5	17	17.5	18	18.5	19	19.5	20	20.5	21	21.5	22	22.5

MP KNR-130E 电机外置下方（含护盖） KNR-130E Motor external under below (Cover included)

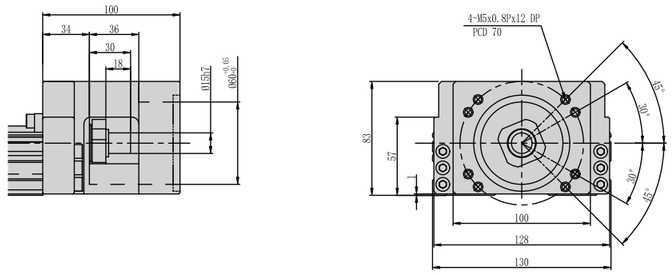
单位:Unit: mm



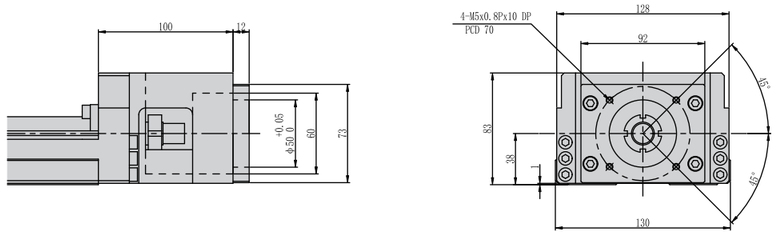
有效行程 Valid Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600
L2	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280	1330	1380	1430	1480	1530	1580	1630	1680	1730	1780
L1	348	398	448	498	548	598	648	698	748	798	848	898	948	998	1048	1098	1148	1198	1248	1298	1348	1398	1448	1498	1548	1598	1648	1698	1748	1798	1848	1898
G	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65	90	40	65
n	2	2	2	3	3	3	4	4	4	5	5	5	6	6	6	7	7	7	8	8	8	9	9	9	10	10	10	11	11	11	12	12
KG	6.98	7.48	7.98	8.48	8.98	9.48	9.98	10.5	11	11.5	12	12.5	13	13.5	14	14.5	15	15.5	16	16.5	17	17.5	18	18.5	19	19.5	20	20.5	21	21.5	22	22.5

电机座与电机连接法兰
Motor seat and motor connecting flange

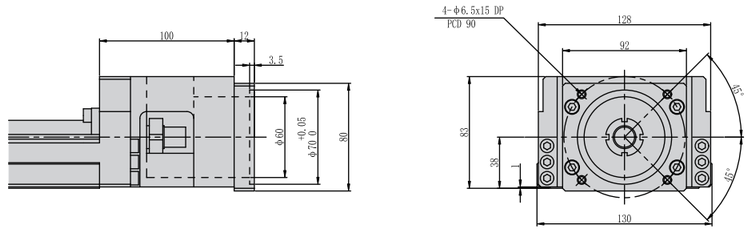
130 电机座F0 Motor seat F0



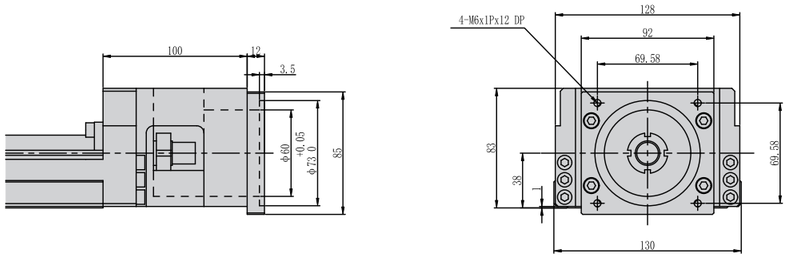
电机座F1 Motor seat F1



130 电机座F2 Motor seat F2

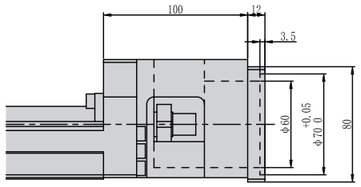


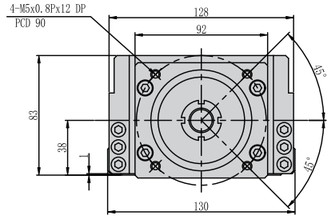
电机座F3 Motor seat F3



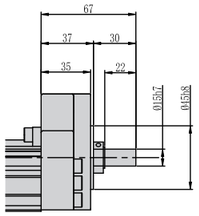
电机座与电机连接法兰
Motor seat and motor connecting flange

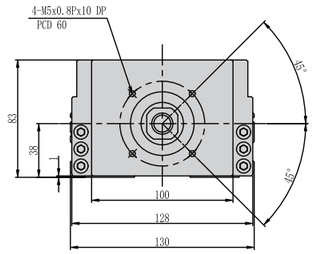
130 电机座F4 Motor seat F4





电机座H0 Motor seat H0





MEMO

减速机

Reducer

当使用上有低转速的运转需求时，则可使用减速机来降低马达回转速度，且可避免低速时不稳定运转。此外减速机能提高输出扭矩，扭矩输出比例按马达输出乘减速比，选配上需要注意不能超出减速机额定扭矩。

When there is a need for low-speed operation, a reducer can be used to reduce the rotation speed of the motor, and unstable operation at low speed can be avoided. In addition, the reducer can improve the output torque, torque The output ratio is multiplied by the reduction ratio according to the motor output, and attention should be paid in the selection not to exceed the rated torque of the reducer.

减速范例：3000rpm的马达，搭配上减速比1：5的减速机，即3000/5=600rpm=10rps。
其速度为：(导程X转速) 200X10=2000MM/S。

Example of deceleration: 3000rpm motor, matched with reducer with 1: 5 upper reduction ratio, that is, 3000/5 = 600 rpm = 10 RPS.
Its speed is: (lead x rotation speed) 200x10 = 2000MM/s.

※减速机会有高温产生，如果接触将有可能造成人员烫伤。所以接触检查等情况时，请切断控制器电源，静待片刻并在确认温度下降之后再行接触。如果有任何减速机搭配上的疑问，请与本公司联系。

※There is high temperature in the deceleration opportunity, and it may cause scalding if contacted. Therefore, please cut off the power supply of the controller and be quiet during contact inspection. Wait for a moment and make contact after confirming the temperature drop. If you have any questions about the matching of reducers, please contact our company.

减速机参考资料 Reducer reference

厂牌Brand	型号Model
APEX	AB060
	AB090
TWPX	PS060
	PS090
CST	RH060
	RH092
PHT	DS060
GTC	GNP60

滑台选配时可应使用需求，选择加装减速机，上列附表为减速机厂牌以及型号；而其详细规格尺寸信息，请参阅各厂牌规格。

When selecting the sliding table, you can choose to install the reducer according to the use requirements. The attached table above shows the brand and model of the reducer. And its detailed specification and size information, Please refer to the specifications of each brand.

伺服电机计算 Calculations about servo motors

A-电机扭矩计算公式：A- motor torque calculation formula:

$$T=9.5\times P/N$$

T=电机扭矩 T = motor torque
P=电机功率 P = motor power
N=电机转速 N = motor speed

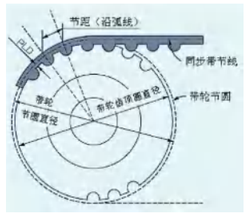
B-螺杆推力计算公式：B- Screw thrust calculation formula:

$$F=Tm\times 2\times \pi \times \eta /S$$

F=螺杆推力 F=Ball screw thrust
T_m=入力扭矩 T_m=Force torque
η=马达正效率 η=Positive efficiency of motor
S=螺杆导程 S=Lead of ball screw

C-皮带轮导程计算公式：B- pulley lead calculation formula:

节圆直径PD=节距×齿数/π
Pitch diameter PD = pitch × number of teeth/π



滚珠螺杆精度等级

Accuracy grade of ball screw

滚珠螺杆（示意图）
Ball screw(schematic diagram)

滚珠螺杆国际标准精度等级（单位：0.001mm）
International standard accuracy grade of ball screw

等级Class		研磨级Grinding grade							转造级Rolling grade		
		C0	C1	C2	C3	C4	C5	C6	C7	C8	C10
V300	ISO, DIN	–	6	–	12	–	23	–	52	–	210
	TBI/PMI	3.5	5	–	8	–	18	–	50	–	210
	HIWIN	3.5	5	6	8	12	18	23	50	100	210

螺杆外径、精度与制造长度对照表(单位：mm)
Diameter, accuracy and manufacturing length of ball serew

精度等级 Accuracy	外径Diameter								
	6	8	10	12	16	20	25	28	32
C3	170	250	500	630	1000	1400	1800	2000	2500
C4	170	250	500	630	1000	1400	1800	2000	2500
C5	170	250	500	630	1410	1700	2400	2500	3000
C6	400	800	1000	1200	1500	1800	2500	3000	3000
C7	400	800	1000	1200	3000	3000	4000	4000	4500

精度等级 Accuracy	外径Diameter								
	36	40	45	50	55	63	70	80	100
C3	3200	3500	4000	4500	5000	6000	7100	10000	10000
C4	3200	3500	4000	4500	5000	6000	7100	10000	10000
C5	3200	3800	4000	5000	5500	6900	7100	10000	10000
C6	4000	4000	4000	5600	5600	6900	7100	10000	10000
C7	4500	5600	5600	5600	5600	6900	7100	10000	10000

- 选配螺杆型滑台时，可应实际使用需求选配螺杆等级，下表为螺杆等级使用推荐表

When selecting the screw slide table, the screw grade can be selected according to the actual userequirements. The following table is the recommendation table for the use of screw grade.

用途Use	精密等级Accuracy	
	C5	C7
专用机Special machine	●	
木工机Woodworking machine		●
机械手臂（一般级） Robot Arm(General Grade)	●	●
传统机械Traditional machinery	●	
搬送装置Transport device	●	●
X-Y平台 X-Y stage	●	
阀门Valve		●
动力转向器Power steering gear		●
玻璃研磨机Glass grinder	●	
表面研磨机Surface grinder	●	
半导体设备Semiconductor equipment		●
全电式射出成形机 All electric injection molding	●	●

联轴器
Coupling

膜片联轴器安装注意说明 Notes on Installation of Diaphragm Coupling

锁付螺丝时有相对应之锁固力，请参阅下表，切勿过度施力或是未锁紧。
locking force when locking screws, please refer to the following table, do not overexert or unlocked.

在夹紧螺丝处于松动状态下，请确认连轴器是否能沿轴向和旋转方向轻轻移动。如果不能平稳移动的话，需重新调整两个轴的同心度（马达锁固螺丝）。
When the clamping screw is loose, please confirm whether the coupling can move slightly in the axial and rotational directions. If you can't move smoothly, you need to readjust two. Concentricity of shaft (motor locking screw).

两个轴的同心度若差异太大时，将产生异音或是造成连轴器损坏。
If the concentricity of the 2 axes is too large. it will cause abnormal sound or cause danage to the coupl ing.

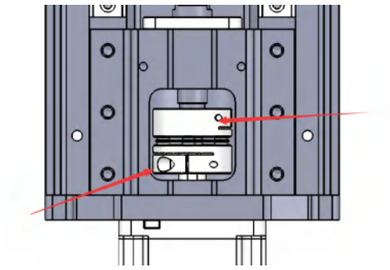


图1 Figure 1

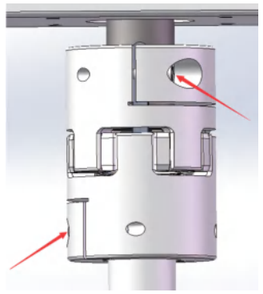


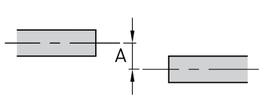
图2 Figure 2

尺寸 Size	夹紧螺栓 Clamping bolt	锁紧扭矩 Locking torque (N • m)
20	M2.5	1.0~1.1
25	M2.5	1.0~1.1
30	M3	1.5~1.9
35	M4	3.4~4.1
40	M4	3.4~4.1
50	M5	7.0~8.5

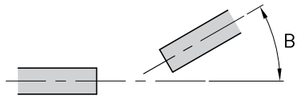
如图1、2先套上联轴器，用手先转动，检测同心度，然后按照左图扭力锁紧螺丝。
As shown in figure 1、2,first put on the coupling, turn it by hand to detect the concentricity,and then lock the screw according to the torsional force in the left figure.

螺杆肩部与电机轴两轴组装时，需注意以下三种基本偏差，说明图示如下：
Whenassemblingthescrewandthemotorshaft,thefollowingthreebasicdeviationsshouldbepaidattentionto.Theillustrationisasfollows:

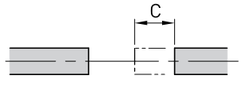
1、偏心（A）Eccentricity



2、偏角（B）Deflection



3、轴向位移（C）Axial displacement



若自行购买马达安装，安装联轴器时需特别注意下列几点：
◆ 锁付螺丝时相对应之锁固力，请参阅右表，切勿过度施力或是未锁紧。
◆ 在夹紧螺丝虽处于松动状态下，请确认连轴器是否能沿轴向和旋转方向轻轻移动。如果不能平稳移动的话，需重新调整2个轴的同心度（马达锁固螺丝）。
◆ 2个轴的同心度若差异太大时，将产生异音或是造成连轴器损坏。
※调整2个轴的对心若有问题时，请与本公司联络。

If you purchase the motor for installation by yourself, pay special attention to the following points when installing the coupling:
◆ Please refer to the right table for the corresponding locking force when locking screws. Do not apply excessive force or unlock them.
◆ Although the clamping screw is loose, please confirm whether the coupling can be light in the axial and rotational directions. Move lightly. If it can't move smoothly, it is necessary to readjust the concentricity of the two shafts (motor locking screws).
◆ If the concentricity of two shafts is too different, abnormal sound will be produced or the coupling will be damaged.
※If there is any problem in adjusting the alignment of two axes, please contact our company.

夹紧螺栓 The clamping bolt	锁紧扭矩 Locking torque (N • m)
M2.5	1.0~1.1
M2.5	1.0~1.1
M3	1.5~1.9
M4	3.4~4.1
M4	3.4~4.1
M5	7.0~8.5

联轴器参考资料 Reference data of coupling

型号 Model	容许扭矩 Permissible torque [N • m]	最大容许误差 Maximum permissible error			最高转速 Max speed [min-1]	扭转弹性 Torsional elasticity [N • m/rad]	轴向弹性 Axial elasticity [N • m/rad]	转动惯量 Moment of inertia [kg • m2]	质量 Weight [kg]
		偏心 Eccentricity [mm]	偏角 Declination [°]	轴向位移 Axial displacement [mm]					
SFC-005SA2	0.5	0.02	0.5	±0.05	10000	500	140	0.25x10-6	0.007
SFC-010SA2	0.8	0.02	1	±0.1	10000	1400	140	0.58x10-6	0.011
SFC-020SA2	1.5	0.02	1	±0.15	10000	3700	64	2.36x10-6	0.025
SFC-030SA2	4	0.02	1	±0.2	10000	8000	64	4.00x10-6	0.033
								6.06x10-6	0.041
								8.12x10-6	0.049
SFC-035SA2	6	0.02	1	±0.25	10000	18000	112	18.43x10-6	0.084
SFC-040SA2	10	0.02	1	±0.3	10000	20000	80	16.42x10-6	0.076
								22.98x10-6	0.09
								29.53x10-6	0.105
SFC-050SA2	25	0.02	1	±0.4	10000	32000	48	54.88x10-6	0.156
								77.10x10-6	0.185
								99.33x10-6	0.214
SFC-060SA2	60	0.02	1	±0.45	10000	70000	76.4	143.7x10-6	0.279
								206.1x10-6	0.337
								268.5x10-6	0.396
SFC-080SA2	100	0.02	1	±0.55	10000	140000	128	709.3x10-6	0.727
SFC-090SA2	180	0.02	1	±0.65	10000	100000	108	1227x10-6	0.959
SFC-100SA2	250	0.02	1	±0.74	10000	120000	111	1858x10-6	1.181

※表中的转动惯量及质量是最大孔径时之值；表中的扭转弹性常数值仅为元件部分之值。
※The moment of inertia and mass in the table are the values at the maximum aperture; The values of torsional elasticity constants in the table are only the values of components.

同步带轮的安装方法

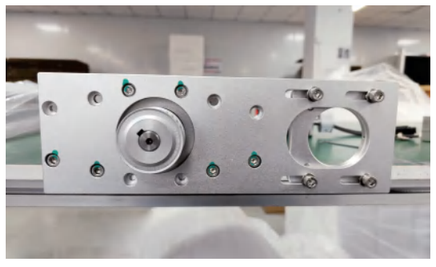
Installation of timing pulley and motor

1、下图为螺杆模组的转折形式：成品模组+同步轮+同步带+槽型光电（同步带形式模组安装方法一致，可参考本文）。

1、The following figure shows the turning form of screw module: finished module+synchronous wheel+synchronous belt+groove photoelectric (the installation method of synchronous belt module is the same, please refer to this article).

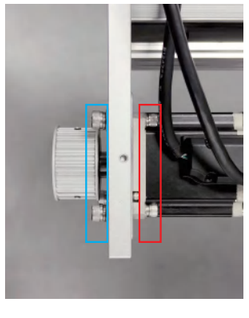
2、拆卸固定钣金的螺丝后，即可看到丝杆端同步轮我厂已安装好。只需要客户安装电机/减速机端的同步轮。

2、After removing the screws fixing the sheet metal, we can see that the screw end synchronous wheel has been installed in our factory. Only the customer needs to install the synchronous wheel at the motor/reducer end.



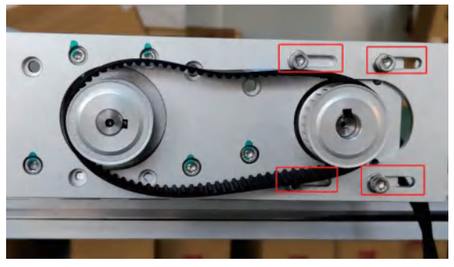
3、安装电机（一般电机包装内有螺丝提供），并锁紧固定电机的4颗螺丝（红色区域）之后拧松固定拉板的固定螺丝（蓝色和绿色区域）。

3、Install the motor (screws are provided in the general motor package), and after locking the four screws (red areas) that fix the motor, loosen the fixing screws (blue and green areas) that fix the pull plate.



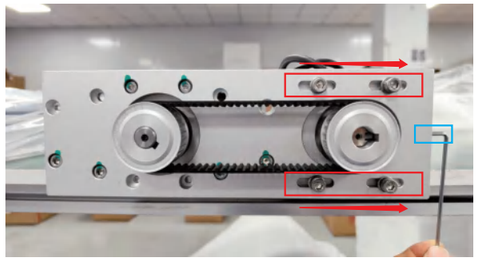
4、因拧松固定拉板的螺丝。电机端同步轮可左右来回活动。借助6MM六角扳手（不限于扳手）。

4、Loosen the screw fixing the pull plate. The synchronous wheel at the motor end can move back and forth left and right. With the help of a 6MM hex wrench (not limited to wrenches).



5、固定同步轮上紧固螺丝（一般情况下2个）。蓝色区域M3螺丝锁紧，红色区域螺丝会向右侧移动。蓝色区域张紧中，可用手感受同步带的张紧，也可使用专业设备测试张紧。最后在安装钣金折罩，固定螺丝即可。

5、Fastening screws on the synchronizing wheel (usually 2). The blue area M3 screw is locked, and the red area screw will move to the right. In the blue area, feel is available. When the timing belt is tensioned, you can also use professional equipment to test the tension. Finally, install the sheet metal folding cover and fix the screws.



使用安全注意事项

Safety use and cautions

◆ 以下为几条建议以防产品使用过程中产生问题。
Here are a few Suggestions to prevent problems during product use.

为防止事故发生及安全维护，请使用本公司产品前，必须了解产品的特性和使用条件、安装说明。
In order to prevent accidents and saf'ety maintenance, before you use the company's product,you must understand the characteristics of the products and use conditions,installation instructions.

请在选型的参数范围内使用本型号的产品，不可超出参数范围使用，否则会造成不可预知的危险。如果是特殊条件使用，必须确认在可控安全性能之内，方能使用，对产品参数如有疑问，在未使用之前，可咨询本公司相关技术。
Please use the product of this model within the selected parameter range, and do not use it beyond the parameter range, otherwise it will cause unpredictable danger. If it is used under special conditions, it must be confirmed that it is within the controllable safety performance before it can be used. If you have any questions about the product parameters, you can consult the relevant technology of our company before you use it.

请勿私自拆卸本产品结构，功能做分解及改造，如因人为造成的一切原因，本公司不负责产品故障造成的损失。
Please do not disassemble the structure and function of this product without permission, and decompose and transform it. For all reasons caused by man-made, our company will not be responsible for the loss caused by product failure.

请注意：当产品为垂直安装的时候，请注意拆卸马达时，滑座物件是否会自行下降，建议拆卸的时候将滑座物件下降到最低端再拆卸。
Please note: When the product is installed vertically, please pay attention to whether the slide object will drop by itself when the motor is disassembled. It is

产品运行前，先检查电缆线端子是否接触良好，否则会导致电机发热发烫，运行不畅。
Before running the product, check whether the cable terminals are in good contact or not, otherwise the motor will become hot and run poorly.

调试马达参数的时候需要考虑到惯性及加减速度等原因，先手动控制，来回点动，防止调试不适当，撞坏物件。不允许手及其它物体接触，保持一定安全距离，防止造成误伤。
When debugging the parameters of the motor, we need to consider the reasons of inertia, acceleration and deceleration. We should control the motor manually and move it back and forth to prevent the inappropriate debugging and damage the object. It is not allowed to contact hands and other objects to maintain a safe distance and prevent accidental injury.

当选用螺杆传动产品的时候，如超出螺杆细长比参数，可能会发生共振现象，此时应降低移动速度。如选用皮带传动产品的时候，如电机报警，产品运行不动，此时因加减速机，调节电机刚性，加大扭矩，从而平稳运行。
When the screw drive product is selected, if the slenderness ratio parameter of the screw exceeds, resonance may occur, so the moving speed should be reduced. Choose a belt. When the product is driven, such as the motor alarm, the product will not move. At this time, the reducer is added to adjust the rigidity of the motor

安装本产品时，请务必确认所有的螺丝均已按要求锁紧，否则产品运行时可能会发生危险。
When installing this product, please make sure that all screws are locked as required, otherwise the product may be in danger during operation.

请不要在接通电源的情况下进行产品拆装或零部件拆装，否则可能发生触电、故障或其它危险。
Please do not disassemble the product or parts when the power is turned on, otherwise electric shock, malfunction or other dangers may occur.

禁止撕除警告标示，或者警告标示被其它物品遮挡，否则可能因为没有看到警告而导致事故发生。
It is forbidden to tear off the warning signs, or the warning signs are blocked by other objects, otherwise the accident may occur because you don't see the warning.

本注意事项无法完全涵盖所有的问题，请务必详细了解产品及其使用说明，并遵守相关安全守则，做好必要保护措施，以免造成产品损坏或导致人身安全问题。如有其它相关问题，可咨询本公司。
This note can not cover all the problems. Please be sure to understand the product and its instructions in detail. comply with relevant safety codes, and take necessary protective measures to avoid product damage or personal safety problems. If you have any other related questions, you can consult us.

维护保养手册

一、日常检查项目

线性模组是一种常见的传动机构，在实际操作中，被广泛应用到各种各样的设备中，因使用环境和使用工况不同，需要及时检查和维护。

日 常 检 查 项 目	
1. 检查部件表面是否有损伤，压痕和摩擦情况。	2. 滚珠螺杆、轨道、轴承是否有异常震动或噪音。
3. 电机、联轴器是否有异常震动或噪音。	4. 所见部位是否有不明粉尘、油渍、痕迹等。

二、周期维护项目

配 件	维 护 方 案	维 护 周 期	具 体 操 作
滚珠螺杆	增加润滑脂（粘度：30-40cts）清理旧油污，注入新润滑脂。	每月一次或每行走100KM的距离	用无尘布直接擦拭干净螺杆珠槽和螺母两端，将新润滑脂直接注入油孔或涂抹螺杆表面。
线性滑轨	增加润滑脂（粘度：30-150cts）清理旧油污，注入新润滑脂。	每月一次或每行走100KM的距离	用无尘布直接擦拭干净轨道表面及轨道珠槽，将新润滑脂直接注入油孔。

三、异常问题以及解决方法

线 性 模 组 异 常 情 况	维 修 、排 除 方 法
电源接入时产生异音	1. 调整伺服驱动器内参数“机械共振抑制”数值。 2. 调整伺服驱动器内参数“自动调谐”数值。
马达转动时产生异音	1. 调整伺服驱动器内参数“机械共振抑制”数值。 2. 调整伺服驱动器内参数“自动调谐”数值。 3. 检查马达刹车是否释放。 4. 检查机构是否因超载产生变形。
马达运转时滑台不顺畅	1. 检查刹车是否释放。 2. 将马达与线性模组分离，手推滑动座，判断问题点原因。 3. 检查联轴器固定螺丝是否松动。 4. 检查线性模组移动区域是否有异物掉落。
线性模组行走距离与实际距离不符	1. 检查输入行走数值是否正确。 2. 检查导程输入数值是否正确。
马达运动ON，滑台没有移动	1. 检查刹车是否释放。 2. 检查联轴器固定螺丝是否松动。 3. 将马达与线性模组分离，判断问题点、原因。

另本公司负责自身商品的故障维修，并不负责因产品故障引起的其他损失。

Maintenance manual

一、Daily inspection items

Linear module is a common transmission mechanism, which is widely used in all kinds of equipment in actual operation. It needs to be checked and maintained in time because of the different environment and working conditions.

Daily inspection items	
1.Check the surface of parts for damage, indentation and friction.	2.Is there any abnormal vibration or noise in the screw, track and bearing.
3.Whether the motor and coupling have abnormal vibration or noise.	4.See if there are any unknown dust, oil stains, traces, etc.

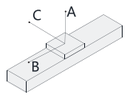
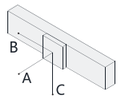
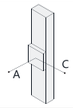
二、Periodic maintenance project

Parts	Maintenance scheme	Maintenance cycle	Specific operation
Ball screw	Add grease (viscosity: 30-40cts) Clean up old grease and inject new grease.	Once a month or every 100KM distance.	Clean the screw bead groove and both ends of the nut directly with a dust-free cloth, and directly inject new grease into the oil hole or coat the screw surface.
Linear slide rail	Add grease (viscosity: 30-150cts) Clean up old grease and inject new grease.	Once a month or every 100KM distance.	Clean the track surface and track bead groove directly with a dust-free cloth, and directly inject new grease into the oil hole.

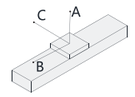
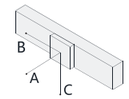
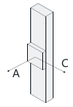
三、Exceptions and solutions

Linear module abnormal situation	Maintenance and troubleshooting methods
Abnormal sound is produced when the power supply is connected.	1. Adjust the value of the servo drive parameter "mechanical resonance suppression". 2. Adjust the value of Auto tuning in the servo driver.
Abnormal sound is produced when the motor rotates.	1. Adjust the value of the servo drive parameter "mechanical resonance suppression". 2. Adjust the value of Auto tuning in the servo driver. 3. Check whether the motor brake release. 4. Check whether the mechanism is deformed due to overload.
The sliding table is not smooth when the motor is running.	1. Check the brake release. 2. Separate the motor from the linear module and push the sliding seat to determine the cause of the problem. 3. Check the coupling setting screws for loosening. 4. Check whether foreign objects have fallen from the moving area of the linear module.
The linear walking distance of the module is inconsistent with the actual distance.	1. Check whether the input walking value is correct. 2. Check whether the lead input value is correct.
The motor is ON, and the slide table does not move.	1. Check the brake release. 2. Check whether the coupling fixing screw is loose. 3. Separate the motor from the linear module to determine the cause of the problem.

In addition, the company is responsible for the fault maintenance of its own goods, and is not responsible for other losses caused by product failure.

客户名称:					邮箱:				
电话:					:				
接洽人:					:				
使用需求	行程(mm):				(mm/s):				
	负载(kg):				mm				
	(s):				(s):				
	工件力矩 (mm)								
		A	B	C	A	B	C	A	C
组合形式	A系列	A1		A2	A3		A4	A:_____	
	G系列	G1		G2	G3		G4	G:_____	
	F系列	F1		F2	F3		F4	F:_____	
	P系列	P1		P2	P3		P4	P:_____	
Y		0-500			500-800			800-1200	
电机连接方式	X	M MD	MP MU	MR ML	LP LU	RP RU	DL DR		
	Y	M MD	MP MU	MR ML	LP LU	RP RU	DL DR		
	Z	M MD	MP MU	MR ML	LP LU	RP RU	DL DR		
		M MD	MP MU	MR ML	LP LU	RP RU	DL DR		
	:_____			:_____					
传感器位置	内置□ 外挂□	NPN PNP			数目:_____个				
应用方式	取放物料□	CCD检测□		加工物件□	涂胶□				
	定点检测□	位移检测□		锁螺丝□	其他:_____				
应用环境	无尘环境□								
	一般环境□								
	不要求□	70~80db□		60~70db□	(分贝等级会影响单价)				
				指定厂牌:	( )				
设备设计模式	量产机:			开发机:					
因组合形式较多，实际细节请和设计部门详细讨论。									
备注:									

Linear Servo Actuator Demand Specification Survey

Customer name					Email				
Telephone					Address				
Contact person					Title				
Usage requirement	Stroke(mm)				maximum speed(mm/s)				
	Load (kg)				Repetition positioning accuracy(mm)				
	Residence time(s)				Acceleration and deceleration time(s)				
	Installation method								
	Load and Cantilever Length(mm)								
		A	B	C	A	B	C	A	C
Combination form	A Series	A1		A2	A3		A4	A:_____	
	G Series	G1		G2	G3		G4	G:_____	
	F Series	F1		F2	F3		F4	F:_____	
	P Series	P1		P2	P3		P4	P:_____	
The Y-axis cantilever is too long. It is recommended to use auxiliary rails within the span of 0-500, auxiliary shafts for 500-800 and double drives for 800-1200.									
Motor connection mode	X axis	M MD	MP MU	MR ML	LP LU	RP RU	DL DR		
	Y axis	M MD	MP MU	MR ML	LP LU	RP RU	DL DR		
	Z axis	M MD	MP MU	MR ML	LP LU	RP RU	DL DR		
	single axis multi axis	M MD	MP MU	MR ML	LP LU	RP RU	DL DR		
Servo motor	Brand:_____			Model:_____					
Sensor position	Inside Outside	Type: NPN PNP			Quantity:_____ Pcs				
Application mode	Take and place materials	CCD detection		Machining material	Dispense Handling				
	Fixed-point detection	Displacement detection		Lock screw	Other:_____				
Application environment	Dust free environment	Drive Method	Screw	Belt	Gear rack				
	General environment								
Module noise requirements	Does not require	70~80db□	60~70db□	(decibel level will affect the unit price)					
Ball screw brand	Screw		Designated brand:	(Ball screw brand will affect unit price)					
Equipment design mode	Mass production machine:		Development machine:						
As there are many combinations, please discuss the actual details with the design department in detail.									
Remarks:									
Customer name:	Signature:	Date:							