



伺服电动缸&模组&滑台

THE SERVO ELECTRIC CYLINDER



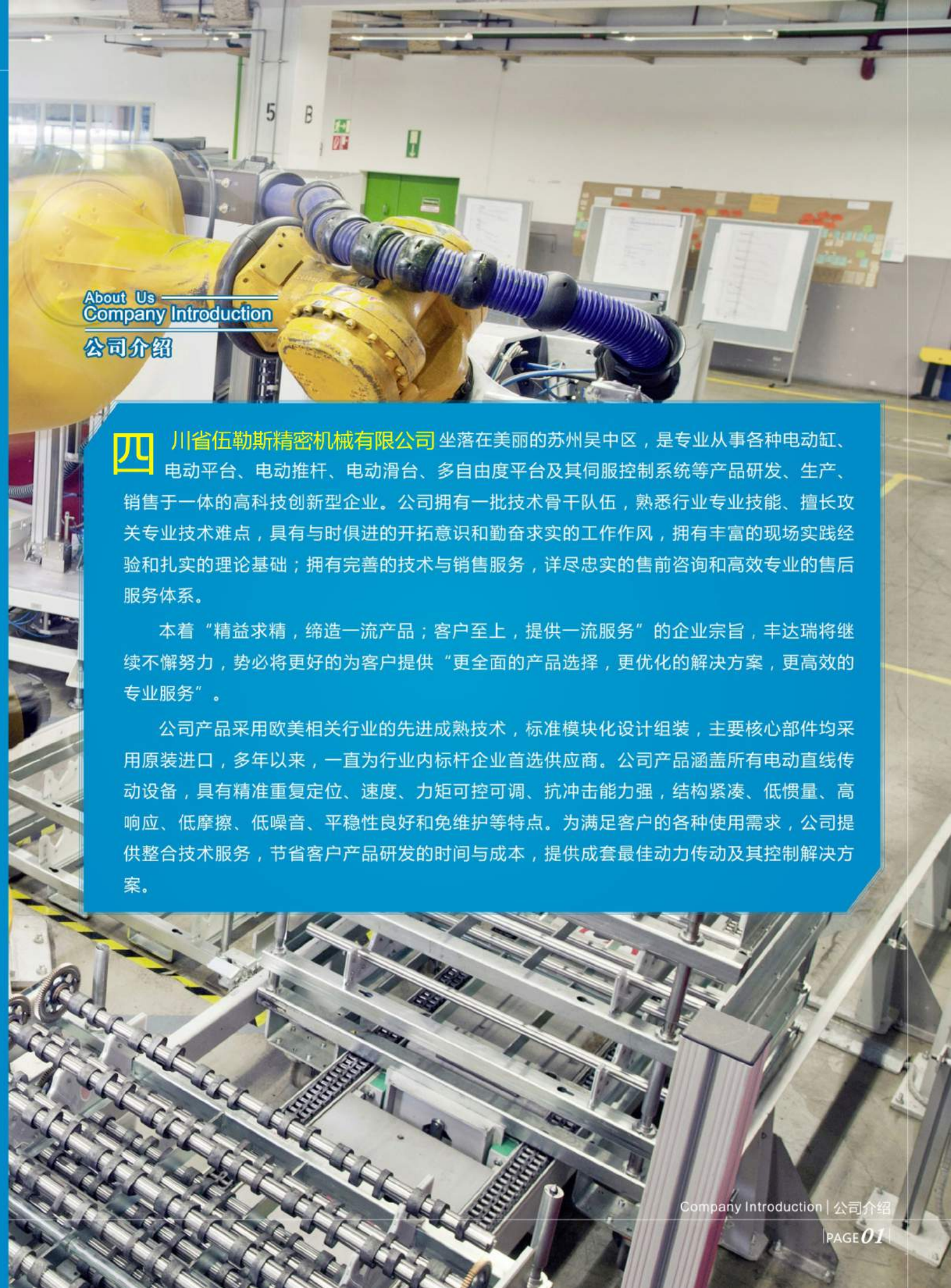
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About Us
Company Introduction
公司介绍

四 四川省伍勒斯精密机械有限公司坐落在美丽的苏州吴中区，是专业从事各种电动缸、电动平台、电动推杆、电动滑台、多自由度平台及其伺服控制系统等产品研发、生产、销售于一体的高科技创新型企业。公司拥有一批技术骨干队伍，熟悉行业专业技能、擅长攻关专业技术难点，具有与时俱进的开拓意识和勤奋求实的工作作风，拥有丰富的现场实践经验和扎实的理论基础；拥有完善的技术与销售服务，详尽忠实的售前咨询和高效专业的售后服务体系。

本着“精益求精，缔造一流产品；客户至上，提供一流服务”的企业宗旨，丰达瑞将继续不懈努力，势必将更好的为客户提供“更全面的产品选择，更优化的解决方案，更高效的专业服务”。

公司产品采用欧美相关行业的先进成熟技术，标准模块化设计组装，主要核心部件均采用原装进口，多年以来，一直为行业内标杆企业首选供应商。公司产品涵盖所有电动直线传动设备，具有精准重复定位、速度、力矩可控可调、抗冲击能力强，结构紧凑、低惯量、高响应、低摩擦、低噪音、平稳性良好和免维护等特点。为满足客户的各种使用需求，公司提供整合技术服务，节省客户产品研发的时间与成本，提供成套最佳动力传动及其控制解决方案。



▶ 结构特点 Structural Features

电动缸是将电机的旋转运动通过丝杆和丝杠副的机械运动转换为推杆的直线运动。利用伺服电机的闭环控制特性，可以很方便地实现对推力、速度和位置的精密控制；利用现代运动控制技术、数控技术及总线（网络）技术，实现程序化、总线（网络）化控制。由于其控制、使用的方便性，将实现气缸和液压缸传动所不能实现的精密运动控制。

Servo electric cylinder is known that rotary motion of motor is converted to the straight motion of push rod by mechanical motion of screw rod and bar pair. Close-loop control of servo electric cylinder can make precise control of thrust, speed and location convenient; To use modern motion control technique, CNC technology and BUS (network) technology can achieve routinization and BUS-construction control. Owing to convenience of control and utilization, it can realize the precise motion control that pneumatic cylinder and hydraulic cylinder can't achieve.

FDR系列电动缸采用先进的模块化设计方法，具有：

- 结构紧凑、外形尺寸小
- 高性能、低惯量、低噪音、高响应
- 高可靠性、长工作寿命
- 同时拥有滚珠丝杆和滚柱丝杆的应用技术
- 安装、使用方便、省能源、简维护

FDR series electric cylinder adopts advanced modular design, with the feature of:

- Compact structure and small overall dimension
- High performance, low inertness, low noise, high response
- High reliability and long operating life
- Application technology of both ball screw and roller screw
- Convenient assembling and utilization, energy saving, and simple maintenance

▶ 直线式电动缸 Linear Electric Cylinder

本系列电动缸集成了交流伺服电机、伺服驱动器、高精度滚珠丝杆、模块化设计等技术，整个电动缸具有结构紧凑、惯量小、响应快、低噪音和长寿命等特点。伺服电机与电动缸的传动丝杆直接相连接，使伺服电机的编码器直接反馈电缸移动活塞的位移量，减少了中间环节的惯量和间隙，提高了控制性和控制精度。伺服电机与电动缸整体相连，安装容易、设定简单、使用方便。电动缸的主要零部件均采用国外名牌产品，性能稳定、故障率低、可靠性高。

This series of electric cylinder with the feature such as compact structure, low inertness, quick response, low noise and long lifetime integrate the technology of alternating AC servo motor & driver, high-precision ball screw and modular design. Transmission screws and AC servo motor are connected directly so that the encoder of AC servo motor will feedback the offset of movable piston of electric cylinder, which will improve the control ability and precision without the inertness and interval of intermediate link. AC Servo motor and electric cylinder are connected entirely for easy assembling, simple setting and convenient use. All the main components are imported product of famous brands with stable performance, low fault rate and high reliability.



▶ 折返式电动缸 Parallel Electric Cylinder

折返式电动缸由于整体长度短，适用于安装位置比较小的场合。同时本方案选用的同步带，具有强度高、间隙小、寿命长的特点，使整个电动缸具有较高的控制性和控制精度。伺服电机与电动缸配合灵活，安装容易、设定简单、使用方便。



Parallel electric cylinder with short size apply to the relatively small installation site. Synchronous belt adopted in this project is possessed of high strength, small interval and long lifetime so that the electric cylinder have the high control ability and precision. AC Servo motor and electric cylinder can match flexibly for easy assembling, simple setting and convenient use.



主要特性 Structural Features

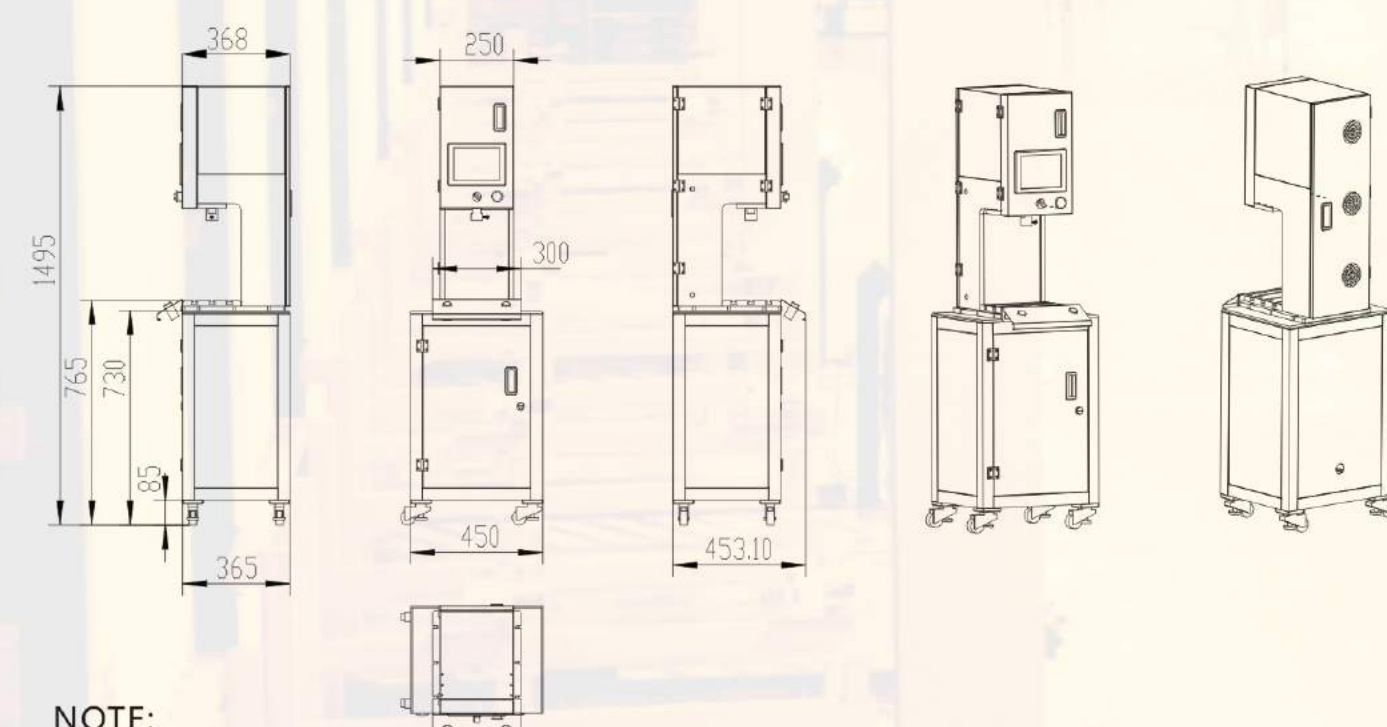
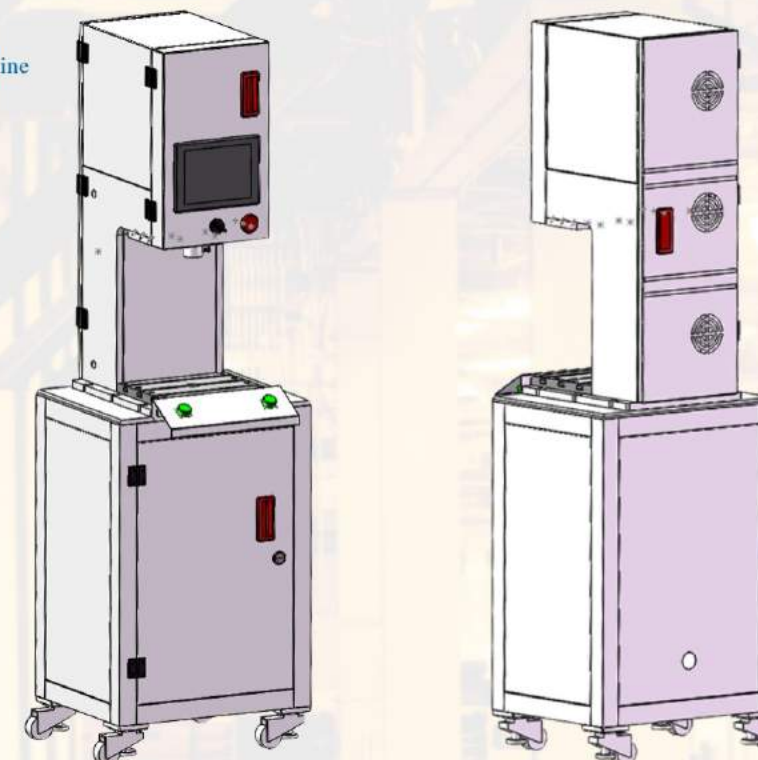
材质 Material	<ul style="list-style-type: none"> ★ 外壳：锻造铝合金，光滑处理，美观大方 ★ 伸缩杆：高合金钢，耐腐蚀 ★ Shell: forging aluminium alloy, smooth, elegant appearance. ★ Tie Rod: high alloy steel, corrosion resistant
精度 Positioning Material	<ul style="list-style-type: none"> ★ 一般情况下按重复精度考虑选择，同时考虑电机的精度。直线度不应以电动缸的推杆作为导向，客户应设计自己的导向机构。 ★ 电机并联比直联精度会降低因为中间经过同步带齿轮。 ★ Consider and choose with repeatability precision as usual and take precision of motor into consideration. Should not take push rod of electric cylinder as guidance for straightness and customer should design own guide mechanism. ★ Motor parallel than direct precision will decrease as intermediate through synchronous belt gear.
速度 Velocity	<ul style="list-style-type: none"> ★ 高速运动(大于200mm/s)时要特别考虑寿命。同时，承载能力和精度都会有所下降。 ★ Take the lifetime into special consideration under motion in high velocity (more than 200mm/s).
行程 Stroke	<ul style="list-style-type: none"> ★ 电动缸选型时的行程应比实际使用的有效行程大20至50毫米，是为推杆碰到限位开关后减速停下留出空间。速度越快，空间越大。 ★ The stroke of model-selected electric cylinder should be 20-50mm larger than the effective stroke under practical operation in order to allow room for slowing down and stop when push rod meeting limit switch Higher velocity, larger space.
推力 Thrust	<ul style="list-style-type: none"> ★ 电机并联时，选择齿轮传动要比同步带传动时，推力更大。 ★ Tgear drive will bring about great thrust than synchronous belt drive under motor in parallel
运行周期 Operational Cycle	<ul style="list-style-type: none"> ★ 使用滚珠丝杠可频繁运行(大于50%)或连续运行 ★ Run frequently (more than 50%) or continuously by using ball screw.
电机选择 Motor Choice	<ul style="list-style-type: none"> ★ 交流伺服电机精度高、速度快、推力大、不丢步。 ★ 步进电机精度较高、速度慢、推力不太大(小于600公斤)。 ★ 普通直流电机可以调速，不能定位。 ★ 普通异步交流电机不能调速和定位。 ★ AC servo motor: high precision, high velocity, great thrust and equilibrium step. ★ Stepping motor: high precision, slow velocity and not very great thrust (less than 600kg). ★ Normal DC motor can be implemented to regulate speed but not be positioned. ★ Normal asynchronous motor can't be regulated and positioned.

特殊制作(可选配) Special Production (Optional)

- 特殊安装、防护、防尘、防潮
- 高低温环境
- 海上防水、防爆作业
- 配线性位移传感器
- 配压力传感器
- 可抗回转机构
- 配行星减速机
- 电机：伺服电机、直流无刷电机、步进电机、直流电机、交流变频电机等。
- Special installation, preservation, dust prevention
- High low temperature environment
- Waterproof at sea, anti-explosion work
- Linear displacement sensor
- Pressure sensor
- Resistance swing mechanism
- Planetary gearbox
- Motor: AC servo motor, DC brushless motor, stepping motor, DC motor, AC frequency conversion motor, etc.



伺服压机 The Servo Press Machine



NOTE:
电机750W
有效行程0--200mm可调
压力0--300KG可调
速度0--200mm/s可调



1、电机输出扭矩与电动缸输出力的关系

The relationship between the motor output torque and the output force of the electric cylinder

$$F = T \times \eta \times 2\pi \times R / L$$

- F : 电动缸输出力, 单位 : Kn
 - T : 电机输出扭矩, 单位 : Nm
 - R : 减速比
 - L : 丝杆导程, 单位 : mm
 - η : 效率(一般选择电动缸的总效率为85%,但是效率根据实际使用工况会有变化, 请注意)
-
- F : electric cylinder output force, Units: Kn
 - T : motor output torque, Units: Nm
 - R : Reduction ratio
 - L : screw lead, Units: mm
 - η : efficiency (generally opt for electric cylinder, the total the total efficiency of 85% , but the efficiency is based on the actual use conditions are subject to change, please note)

2、电动缸的寿命计算

The electric cylinder of life calculated

电动缸的寿命一般指电动缸内部使用的丝杆寿命, 可分为两个部分, 一是丝杆的疲劳寿命, 它可以通过计算得出; 另一个是使用寿命, 取决于使用条件(如温度、灰尘、使用润滑的种类和定期添加的频率等)。

使用寿命往往通过经验得出。以下是疲劳寿命的计算方法:

The life of the electric cylinder is generally refers to the internal use of the electric cylinder screw command, can be divided into two parts, one screw of the fatigue life, it can be calculated; another life, depending on the conditions of use (such as temperature, dust, using the type of lubrication, and periodically add frequency, etc.)

Life is often drawn from the experience. The following is a calculation method of the fatigue life of the electric cylinder.

$$L10 = (Ca / Fm)^3 \times L$$

- L10 : 电动缸的寿命, 单位 : Km
 - Fm : 电动缸承受的平均负载, 单位 : Kn
 - Ca : 丝杆螺母的基本额定动负载, 单位 : Kn (可通过丝杆样本查出)
 - L : 丝杆导程, 单位 : mm
-
- L10 : The life of the electric cylinder, Units: Km
 - Fm : Electric cylinder is exposed to the average load, Units: Kn
 - Ca : Screw nut basic dynamic load, Units: Kn (By screw samples to detect)
 - L : screw lead, Units: mm

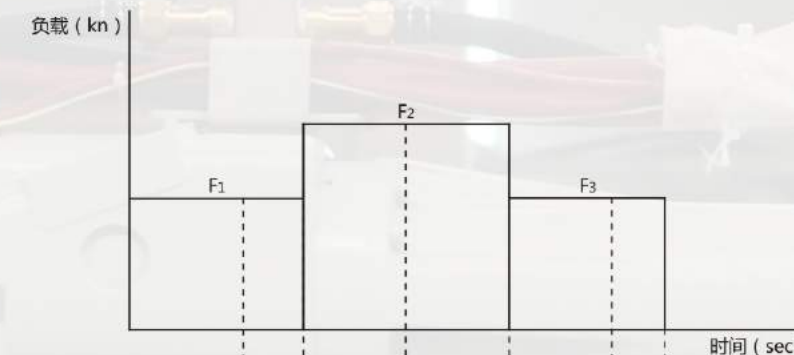
3、平均负载的计算

The calculation of the average load

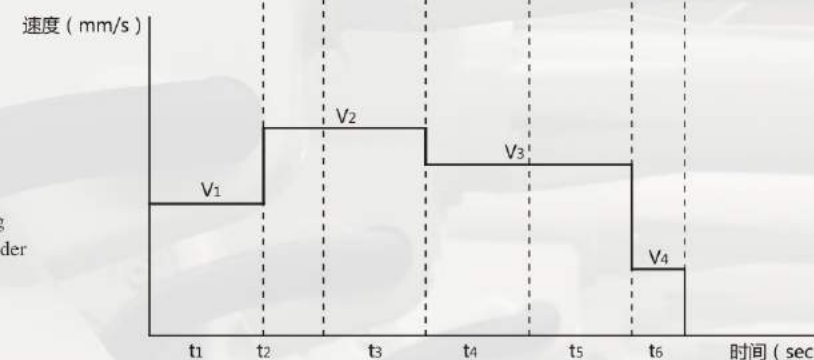
平均负载是指电动缸在一个工作循环中, 综合在各个不同工作区间的力、速度和时间后得出的立方平均值。

Average load refers to the average of the electric cylinder in a working cycle, the consolidated draw in force, speed and time of the different working interval cubic.

电动缸的负载变化如右图所示
The change in load of the electric cylinder As shown on the right



电动缸的运行速度变化如右图所示
The change in the running speed of the electric cylinder As shown on the right



电动缸平均负载的计算公式如下:

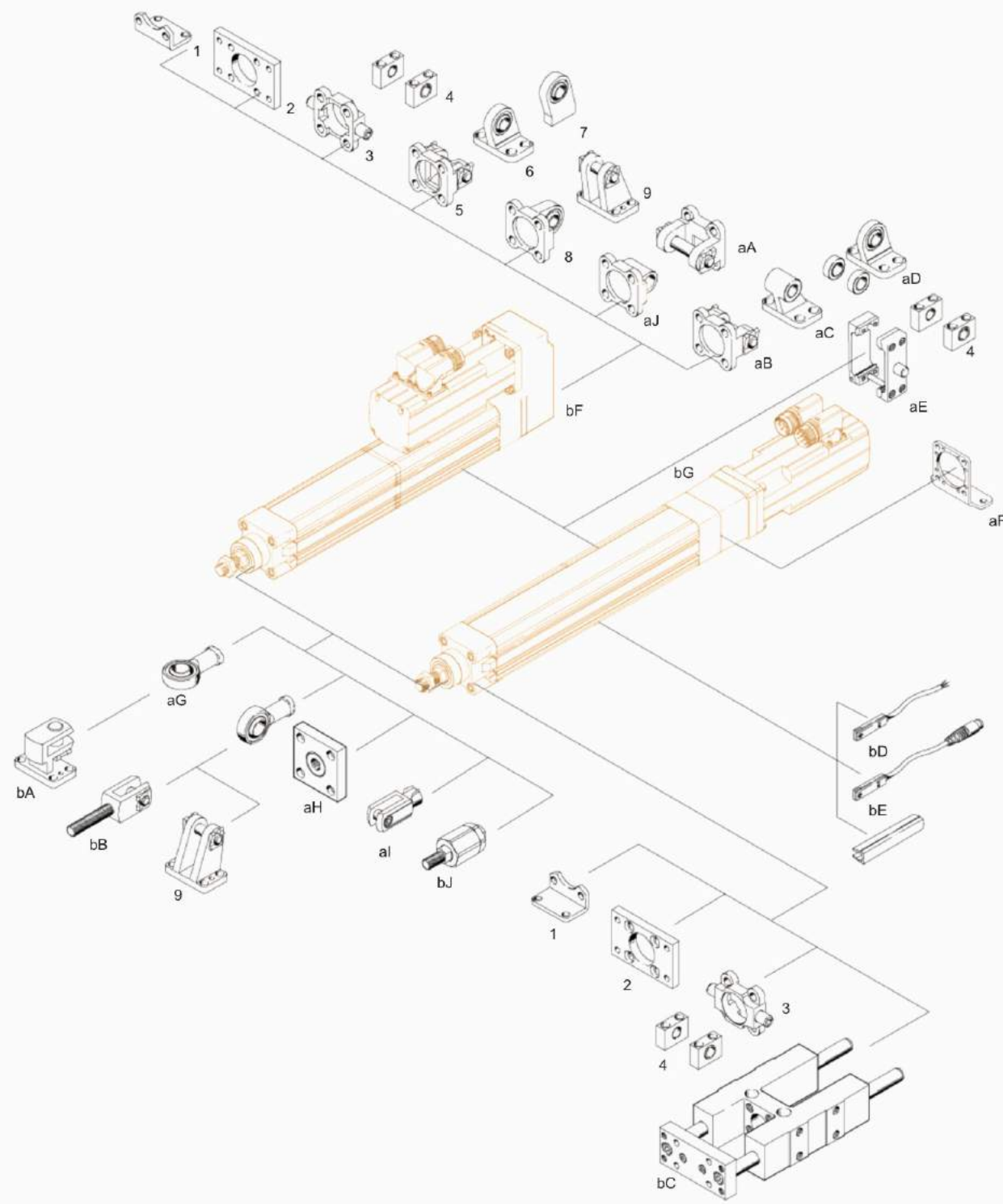
The average load of the electric cylinder is calculated as follows:

$$Fm = 3 \sqrt{\frac{F_1^3 \times v_1 \times t_1 + F_1^3 \times v_2 \times t_2 + F_2^3 \times v_2 \times t_3 + F_2^3 \times v_3 \times t_4 + F_2^3 \times v_3 \times t_4 + F_3^3 \times v_3 \times t_5 + F_3^3 \times v_4 \times t_6}{v_1 \times t_1 + v_2 \times t_2 + v_2 \times t_3 + v_3 \times t_4 + v_3 \times t_5 + v_4 \times t_6}}$$



伺服电动缸外围部件一览表

THE SERVO ELECTRIC CYLINDER PERIPHERAL PARTS LIST



安装辅件和附件 Installation Accessories and Attachments

名称 Name	简要说明 Explain	页码 Page
1-脚架安装件 1-HNC/CRHNC Foot mounting	马达平行安装时, 用于安装轴承和减速机端盖 The motor parallel installation for installation of bearings and reducer end caps 马达平行安装时, 用于安装轴承端盖 Motor axial mounting for installation bearings cover	18-33
2-法兰安装件 2-FNC/CRFNG Flange mounting	马达平行安装时, 用于安装轴承和减速机端盖 The motor parallel installation for installation of bearings and reducer end caps 马达平行安装时, 用于安装轴承端盖 Motor axial mounting for installation bearings cover	18-33
3-耳轴安装件 3-ZNCF/CRZNG Trunnion mounting	马达平行安装时, 用于安装轴承和减速机端盖 The motor parallel installation for installation of bearings and reducer end caps 马达平行安装时, 用于安装轴承端盖 Motor axial mounting for installation bearings cover	18-33
4-耳轴支座 4-LNZG/CRLNZG Trunnion bearing	用于将耳轴安装件安装到缸体上 For trunnion mounting attached to the cylinder block	18-33
5-双耳环支座 5-SNC Trunnion bearing	用于马达平行安装时 For parallel motor mounting	18-33
6-球铰耳环支座 6-LSNG Clevis foot	用于马达平行安装时, 带球面轴承 For parallel motor mounting, Spherical bearing	18-33
7-球铰耳环支座 7-LSNSG Clevis foot	用于马达平行安装时, 焊接合成, 带球面轴承 For parallel motor mounting, Weld-on, Spherical bearing	18-33
8-双耳环安装件 8-SNCB Clevis mounting	用于马达平行安装时, 带球面轴承 For parallel motor mounting, Spherical bearing	18-33
9-双耳环支座 9-LBG Clevis	用于马达平行安装时, 带球面轴承 For parallel motor mounting, Spherical bearing	18-33
aJ-双耳环安装件 SNCL aJ-Clevis mounting	用于马达平行安装时 For parallel motor mounting	18-33
aA-双耳环安装件 SNCB/SNCB-...-R3 aA-Clevis mounting	用于马达平行安装时, 带球面轴承 For parallel motor mounting, Spherical bearing	18-33
aB-双耳环安装件 SNCB/SNCB-...-R3 aB-Clevis mounting	用于马达平行安装时 For parallel motor mounting	18-33
aC-耳环支座 LNG/CRLNG aC-Clevis	用于马达平行安装时 For parallel motor mounting	18-33
aD-球铰耳环支座 LSN aD-Clevis foot	用于马达平行安装时, 带球面轴承 For parallel motor mounting, Spherical bearing	18-33
aE-耳轴安装支座 ZNCM aE-Trunnion mounting kit	用于安装到缸体的任意位置, 在马达平行安装时, 安装位置不能临近马达 Installation location is not near the motor	18-33
aF-脚架安装件 HNCE aF-Foot mounting	用于马达轴向安装时 For parallel motor mounting	18-33
aG-关节轴承 SGS/CRSGS aG-Bearing joints	带球面轴承 Spherical bearing	18-33
aH-连接法兰 KSZ aH-Connecting flange	用于补偿径向偏差 For compensating radial deviations	18-33
aI-双耳环 SG/CRSG aI-Clevis	用于缸体在一个平面内作摆动运动 Use for the cylinder for swinging movement in a plane	18-33
bJ-自对中连接件 FK bJ-Self in connection	用于补偿径向和角度偏差 For compensating radial and angular deviations	18-33
bA-直角球铰耳环支座 LQG bA-Straight corner clevis foot	用于关节轴承SGS For bearing joints	18-33
bB-双耳环 SGA bB-Clevis	用于缸体摆动安装 For cylinder swing installation	18-33
bC-导向单元 FENG bC-Guide unit	在高力矩下防止缸体扭转 Prevent cylinder torsion under high torque	18-33
bD-接近开关 SME/SMT-8 bD-Proximity Switches	用于位置检测, 可集成于传感器安装槽内, 没有了突出部分 For position sensing, May be integrated in the sensor mounting groove, projecting portion	18-33
bE-沟槽盖 ABP-5-S bE-Slot cover	用于防止灰尘进入 For preventing dust from entering	18-33
bF-平行安装组件 EAMM-U bF-Parallel installation components	用于马达平行安装时 For parallel motor mounting	18-33
bG-轴向安装组件 EAMM-A bG-Axially mounted components	用于马达轴向安装时 For parallel motor mounting	18-33

产品型号定义

PRODUCT MODEL DEFINITION

FDR075 S100 B R 05 A M C 2 05

FDR075

电动缸型号 Series No.

- FDR040: 44 x 44mm
- FDR065: 64 x 64mm
- FDR075: 75 x 75mm
- FDR095: 93 x 93mm
- FDR140: φ 140
- FDR270: φ 270

S100

有效行程 Stroke Range(mm)

- FDR040: 50-200mm
- FDR065: 50-500mm
- FDR075: 50-1200mm
- FDR095: 50-1500mm
- FDR140: 50-1500mm
- FDR270

B

丝杆 Screw

- A: 滑动丝杆 Acme Screw
- B: 滚珠丝杆 Ball Screw
- C: 滚柱丝杆 Roller Screw

R

防转机构 Anti-rotation

- R: 无防转型 No
- T: 有防转型 Have

05

丝杆导程 Lead Screw

- 04.05.10.16
- 20.25.32.40

A

电机连接 Motor Mount

- A: 直线式 Liner
- B: 折返式 Parallel

M

电动缸安装方式 Mounting Style

- M1: 底部螺孔 Double side mount
- M2: 底板式 Side turnion mount
- M3: 前法兰 Front flange mount
- M4: 后法兰 Rear flange mount
- M5: 尾部销孔 Rear shaft mount
- MX: 用户自定义 Custom mounting

C

负载连接方式 Rod frnd

- C1: 外螺纹 Male
- C2: 内螺纹 Female
- C3: U型插销 U-bolt
- C4: 球头铰 Ball head hinge
- CX: 用户自定义 Custom mounting

2

限位开关数量 Number of limit switches

- 2: 2个
 - 3: 3个
- (默认发货为常开)

05

减速比 Reduction ratio

- 03: 为3比1 Three-to-one
- 05: 为5比1 Five-to-one
- 10: 为10比1 Ten-to-one
- 15: 为15比1 fifteen-to-one
- 20: 为20比1 Twenty-to-one
- 25: 为25比1 Twenty five-to-one
- 30: 为30比1 Thirty-to-one



选型标准

缸型	推力 (Kg)	行程(mm)	速度(mm/s)	丝杆直径(mm)	推杆直径(mm)
44	≤100	≤200	≤200	Φ12	Φ20
65	≤450	≤500	≤800	Φ16	Φ40
75	≤1000	≤1200	≤1000	Φ20	Φ40
95	≤3000	≤2000	≤1600	Φ32	Φ55
140	≤5000		≤2080	Φ40	Φ63
260	≤20000		≤50	Φ80	Φ145

集成服务
INTEGRATION
SERVICES

机械结构
MACHINERY

伺服驱动
DRIVING

传动结构
TRANSMISSION

人机界面
INTERFACE

运动控制器
CONTRLLER

集成服务
INTEGRATION
SERVICES

注: 1、为保证有效行程, 两端的极限各留5mm的间隙;
2、并联安装时, 传感器不能与电机同侧。

Mark: 1. In order to ensure the effective stroke, Two ends reserved 5mm space;
2. The sensor on the other side when the motor is parallel mount.

FDR044 系列伺服电动缸驱动扭矩和功率选型表

FDR044 series electric servo cylinder drive torque and power selection table

▶ 100W

丝杆导程 Screw lead	[mm]	4			
行星减速比 Planetary gear ratio		1	2	4	5
伺服电机功率 Motor power	[KW]	0.1			
伺服额定扭矩 Servo rated torque	[N.M]	0.32			
伺服额定转速 Servo rated speed	[r/min]	3000			
电动缸额定出力 Electric cylinder rating	[KN]	0.42	0.84	100	100
电动缸最大出力 Electric cylinder maximum output	[KN]	100			
电动缸伸缩速度 Electric cylinder expansion speed	[mm/s]	200	100	50	40

▶ 200W

丝杆导程 Screw lead	[mm]	4			
行星减速比 Planetary gear ratio		1	2	4	5
伺服电机功率 Motor power	[KW]	0.2			
伺服额定扭矩 Servo rated torque	[N.M]	0.64			
伺服额定转速 Servo rated speed	[r/min]	3000			
电动缸额定出力 Electric cylinder rating	[KN]	0.85	100	100	100
电动缸最大出力 Electric cylinder maximum output	[KN]	100			
电动缸伸缩速度 Electric cylinder expansion speed	[mm/s]	200	100	50	40

FDR065 系列伺服电动缸驱动扭矩和功率选型表

FDR065 series electric servo cylinder drive torque and power selection table

▶ 400W

丝杆导程 Screw lead	[mm]	4				5				10				16			
行星减速比 Planetary gear ratio		1	2	4	5	1	2	4	5	1	2	4	5	1	2	4	5
伺服电机功率 Motor power	[KW]	0.4															
伺服额定扭矩 Servo rated torque	[N.M]	1.27															
伺服额定转速 Servo rated speed	[r/min]	3000															
电动缸额定出力 Electric cylinder rating	[KN]	1.69	3.39	4.5	4.5	1.35	2.71	4.5	4.5	0.67	1.35	2.71	3.39	0.42	0.84	1.69	2.12
电动缸最大出力 Electric cylinder maximum output	[KN]	4.5															
电动缸伸缩速度 Electric cylinder expansion speed	[mm/s]	200	100	50	40	250	125	62.5	50	500	250	125	100	800	400	200	160

▶ 750W

丝杆导程 Screw lead	[mm]	4				5				10				16							
行星减速比 Planetary gear ratio		1	2	4	5	10	1	2	4	5	10	1	2	4	5	10	1	2	4	5	10
伺服电机功率 Motor power	[KW]	0.8																			
伺服额定扭矩 Servo rated torque	[N.M]	2.39																			
伺服额定转速 Servo rated speed	[r/min]	3000																			
电动缸额定出力 Electric cylinder rating	[KN]	3.2	4.5	4.5	4.5	4.5	2.5	4.5	4.5	4.5	4.5	1.28	2.56	4.5	4.5	4.5	0.8	1.6	3.2	4	4.5
电动缸最大出力 Electric cylinder maximum output	[KN]	4.5																			
电动缸伸缩速度 Electric cylinder expansion speed	[mm/s]	200	100	50	40	20	250	125	62.5	50	25	500	250	125	100	50	200	100	50	40	20

FDR075 系列伺服电动缸驱动扭矩和功率选型表

FDR075 series electric servo cylinder drive torque and power selection table

▶400W

丝杆导程 Screw lead	[mm]	4				5				10				20			
行星减速比 Planetary gear ratio		1	2	4	5	1	2	4	5	1	2	4	5	1	2	4	5
伺服电机功率 Motor power	[KW]	0.4															
伺服额定扭矩 Servo rated torque	[N.M]	1.27															
伺服额定转速 Servo rated speed	[r/min]	3000															
电动缸额定出力 Electric cylinder rating	[KN]	1.69	3.39	6.78	8	1.35	2.71	5.42	6.78	0.67	1.35	2.71	3.39	0.34	0.68	1.35	1.69
电动缸最大出力 Electric cylinder maximum output	[KN]	8															
电动缸伸缩速度 Electric cylinder expansion speed	[mm/s]	200	100	50	40	250	125	62.5	50	500	250	125	100	1000	500	250	200

▶750W

丝杆导程 Screw lead	[mm]	4				5				10				20									
行星减速比 Planetary gear ratio		1	2	4	5	10	1	2	4	5	10	1	2	4	5	10	1	2	4	5	10		
伺服电机功率 Motor power	[KW]	0.75																					
伺服额定扭矩 Servo rated torque	[N.M]	2.39																					
伺服额定转速 Servo rated speed	[r/min]	3000																					
电动缸额定出力 Electric cylinder rating	[KN]	3.2	6.4	8	8	8	2.5	5.1	8	8	8	1.28	2.56	5.12	6.4	8	0.64	1.28	2.56	3.2	6.4		
电动缸最大出力 Electric cylinder maximum output	[KN]	4.5																					
电动缸伸缩速度 Electric cylinder expansion speed	[mm/s]	200	100	50	40	20	250	125	62.5	50	25	500	250	125	100	50	1000	500	250	200	100		

FDR095 系列伺服电动缸驱动扭矩和功率选型表

FDR095 series electric servo cylinder drive torque and power selection table

▶750W

丝杆导程 Screw lead	[mm]	5					10					20					32									
行星减速比 Planetary gear ratio		1	2	4	5	10	1	2	4	5	10	1	2	4	5	10	1	2	4	5	10	1	2	4	5	10
伺服电机功率 Motor power	[KW]	0.75																								
伺服额定扭矩 Servo rated torque	[N.M]	2.39																								
伺服额定转速 Servo rated speed	[r/min]	3000																								
电动缸额定出力 Electric cylinder rating	[KN]	2.5	5.1	10.2	12	12	1.28	2.56	5.12	6.4	12.8	0.64	1.28	2.56	3.2	6.4	0.4	0.8	1.6	2	4					
电动缸最大出力 Electric cylinder maximum output	[KN]	30																								
电动缸伸缩速度 Electric cylinder expansion speed	[mm/s]	250	125	62.5	50	25	500	250	125	100	50	1000	500	250	200	100	1600	800	400	320	160					

▶1.5KW

丝杆导程 Screw lead	[mm]	5					10					20					32									
行星减速比 Planetary gear ratio		1	2	4	5	10	1	2	4	5	10	1	2	4	5	10	1	2	4	5	10	1	2	4	5	10
伺服电机功率 Motor power	[KW]	1.5																								
伺服额定扭矩 Servo rated torque	[N.M]	6																								
伺服额定转速 Servo rated speed	[r/min]	2500																								
电动缸额定出力 Electric cylinder rating	[KN]	6.4	12	12	12	12	3.2	6.4	12.8	16	30	1.6	3.2	6.4	8	16	1	2	4	5	10					
电动缸最大出力 Electric cylinder maximum output	[KN]	30																								
电动缸伸缩速度 Electric cylinder expansion speed	[mm/s]	208	104	52	41.6	20.8	416	208	104	83.2	41.6	833	416	208	166	83.3	1331	665	332	266	133					

注：1. 客户可以选择其他规格的丝杆导程，请联系生产厂家了解更多详情。
2. 客户可以选择其他减速机或减速比，请联系生产厂家了解更多详情。
3. 客户对产品有特殊要求可订制，请联系生产厂家了解更多详情。

Notice: 1. Customers can choose other specifications screw lead, please contact the manufacturer for more details.
2. Customers can choose other gear or gear ratio, please contact the manufacturer for more details.
3. The customer's special requirements can be customized, please contact the manufacturer for more details.

FDR140 系列伺服电动缸驱动扭矩和功率选型表

FDR140 series electric servo cylinder drive torque and power selection table

▶1.5KW

丝杆导程 Screw lead	[mm]	5					10					20					50									
行星减速比 Planetary gear ratio		1	2	4	5	10	1	2	4	5	10	1	2	4	5	10	1	2	4	5	10	1	2	4	5	10
伺服电机功率 Motor power	[KW]	1.5																								
伺服额定扭矩 Servo rated torque	[N.M]	6																								
伺服额定转速 Servo rated speed	[r/min]	2500																								
电动缸额定出力 Electric cylinder rating	[KN]	6.4	20	20	20	20	3.2	6.4	12.8	16	32	1.6	3.2	6.4	8	16	0.64	1.28	2.56	3.2	6.4					
电动缸最大出力 Electric cylinder maximum output	[KN]	50																								
电动缸伸缩速度 Electric cylinder expansion speed	[mm/s]	208	104	52	41.6	20.8	416	208	104	83.2	41.6	833	416	208	166	83.3	2080	1040	520	416	208					

▶3.0KW

丝杆导程 Screw lead	[mm]	5					10					20					50									
行星减速比 Planetary gear ratio		1	2	4	5	10	1	2	4	5	10	1	2	4	5	10	1	2	4	5	10	1	2	4	5	10
伺服电机功率 Motor power	[KW]	3																								
伺服额定扭矩 Servo rated torque	[N.M]	10																								
伺服额定转速 Servo rated speed	[r/min]	3000																								
电动缸额定出力 Electric cylinder rating	[KN]	10.6	21.3	42.6	50	50	5.34	10.6	21.3	26.7	50	2.67	5.34	10.6	13.3	26.6	50	26.7	13.3	5.34	10.6					
电动缸最大出力 Electric cylinder maximum output	[KN]	50																								
电动缸伸缩速度 Electric cylinder expansion speed	[mm/s]	250	125	62.5	50	25	500	250	125	100	50	1000	500	250	200	100	2500	1250	625	500	250					

FDR270 系列伺服电动缸驱动扭矩和功率选型表

FDR270 series electric servo cylinder drive torque and power selection table

▶3.0KW

丝杆导程 Screw lead	[mm]	10					20					
行星减速比 Planetary gear ratio		1	5	10	20	32	1	5	10	20	32	
伺服电机功率 Motor power	[KW]	3										
伺服额定扭矩 Servo rated torque	[N.M]	10										
伺服额定转速 Servo rated speed	[r/min]	3000										
电动缸额定出力 Electric cylinder rating	[KN]	5.34	26.7	53.4	106	170	2.67	13.4	26.7	53.4	85.4	
电动缸最大出力 Electric cylinder maximum output	[KN]	50										
电动缸伸缩速度 Electric cylinder expansion speed	[mm/s]	500	100	50	25	15.6	1000	200	100	50	31.2	

▶5.5KW

丝杆导程 Screw lead	[mm]	10					20					
行星减速比 Planetary gear ratio		1	5	10	20	32	1	5	10	20	32	
伺服电机功率 Motor power	[KW]	5.5										
伺服额定扭矩 Servo rated torque	[N.M]	35										
伺服额定转速 Servo rated speed	[r/min]	1500										
电动缸额定出力 Electric cylinder rating	[KN]	18.6	93.4	186	200	200	9.3	46.5	93	186	200	
电动缸最大出力 Electric cylinder maximum output	[KN]	200										
电动缸伸缩速度 Electric cylinder expansion speed	[mm/s]	250	50	25	12.5	7.8	500	100	50	25	15.6	

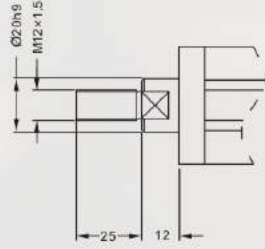
直线式外形图 FDR044

FDR040 Linear outline drawing

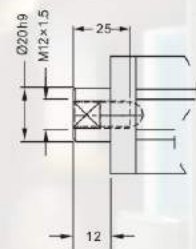
单位 (mm)

可选前端连接附件 Optional front-end connection attachments

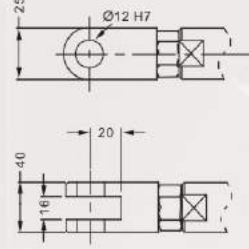
C1 外螺纹
External thread



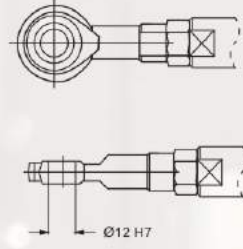
C2 内螺纹
Internal thread



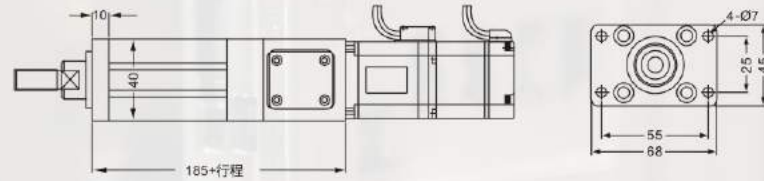
C3 U型插销
U-bolt



C4 球头铰
Ball head hinges



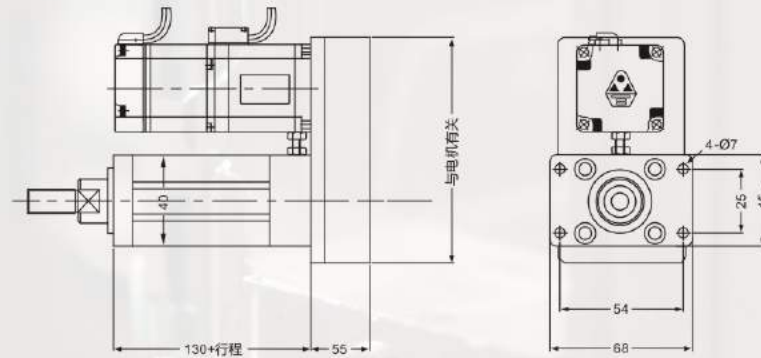
M3 前法兰安装方式
M3 Front flange installation



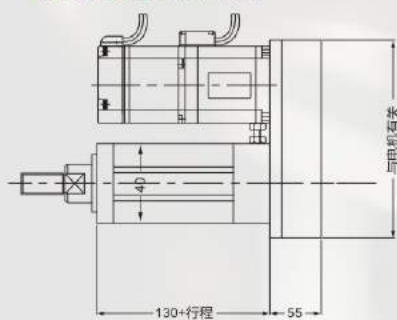
FDR040 折返式外形图

FDR040 Foldback outline drawing

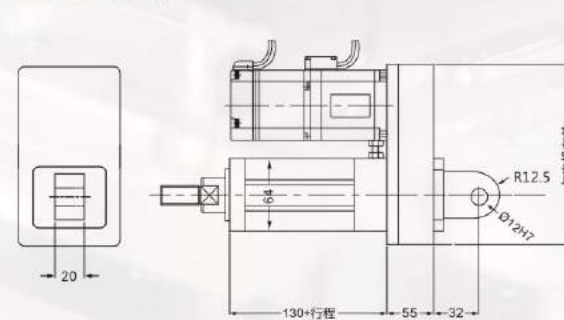
M3 前法兰安装方式
M3 Front flange installation



M4 后法兰安装方式
M4 Rear flange installation



M6 尾部销孔安装方式
M6 Rear shaft mount



注：伺服电动缸缸体与伺服电机处的连接板是根据伺服电机的法兰尺寸订制，需要具体尺寸图，请联系生产厂家。
Notice: The servo motor and servo motor plate cylinder block is based at the servo motor flange size order, need specific dimensions, please contact the manufacturer.

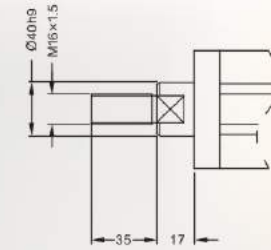
FDR065 直线式外形图

FDR065 Linear outline drawing

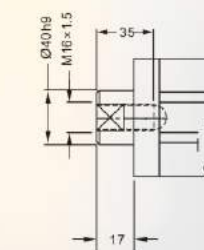
单位 (mm)

可选前端连接附件 Optional front-end connection attachments

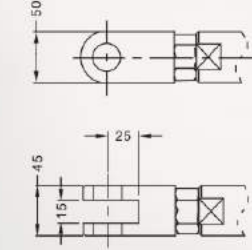
C1 外螺纹
External thread



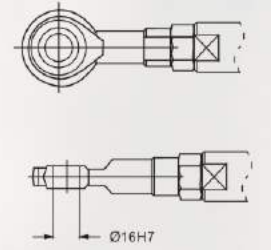
C2 内螺纹
Internal thread



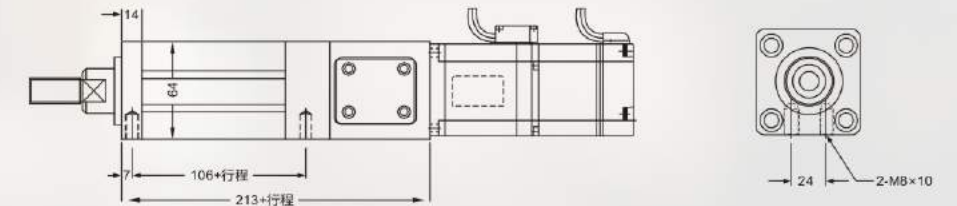
C3 U型插销
U-bolt



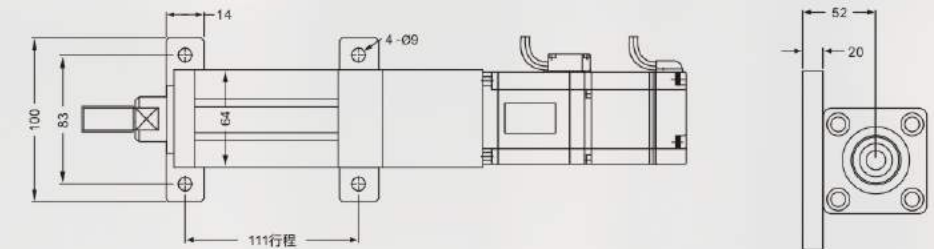
C4 球头铰
Ball head hinges



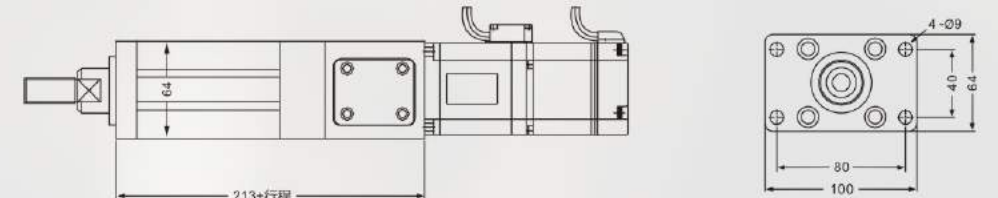
M1 底部螺纹孔安装方式
M1 Threaded hole at the bottom installation



M2 底板式安装方式
M2 Bottom type installation



M3 前法兰安装方式
M3 Front flange installation



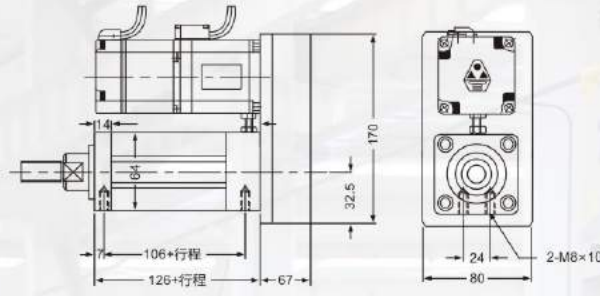
注：伺服电动缸缸体与伺服电机处的连接板是根据伺服电机的法兰尺寸订制，需要具体尺寸图，请联系生产厂家。
Notice: The servo motor and servo motor plate cylinder block is based at the servo motor flange size order, need specific dimensions, please contact the manufacturer.

折返式外形图 FDR065

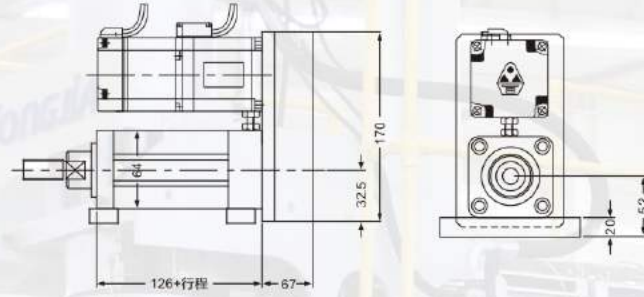
FDR065 Foldback outline drawing

单位 (mm)

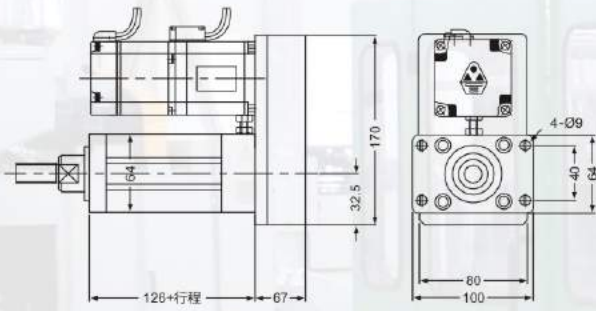
M1 底部螺纹孔安装方式 M1 Threaded hole at the bottom installation



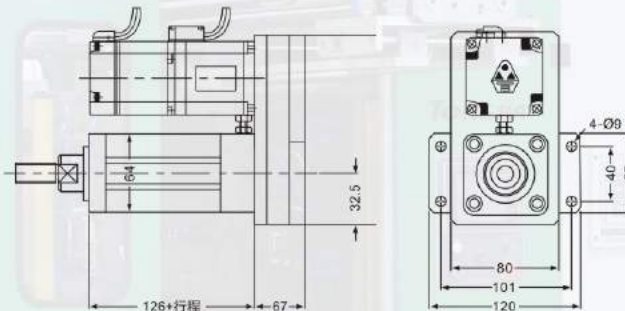
M2 底板式安装方式 M2 Bottom type installation



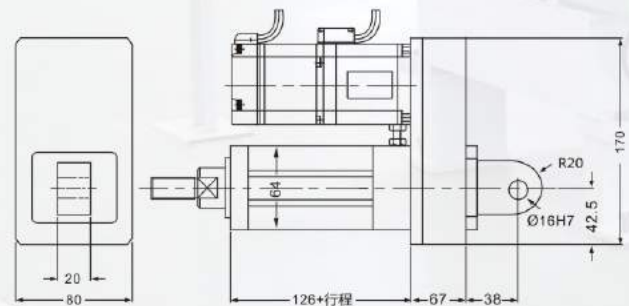
M3 前法兰安装方式 M3 Front flange installation



M4 后法兰安装方式 M4 Rear flange installation



M6 尾部销孔安装方式 M6 Rear shaft mount



注：伺服电动缸缸体与伺服电机处的连接板是根据伺服电机的法兰尺寸订制，需要具体尺寸图，请联系生产厂家。
Notice: The servo motor and servo motor plate cylinder block is based at the servo motor flange size order, need specific dimensions, please contact the manufacturer.

FDR075 直线式外形图

FDR075 Linear outline drawing

单位 (mm)

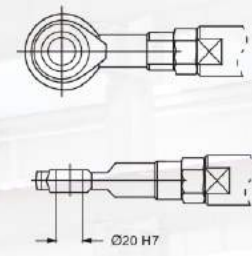
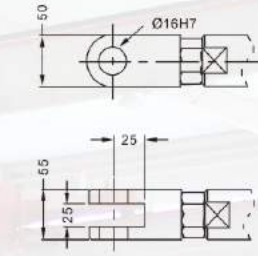
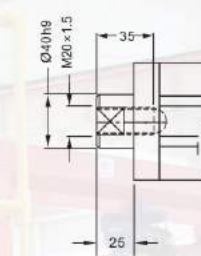
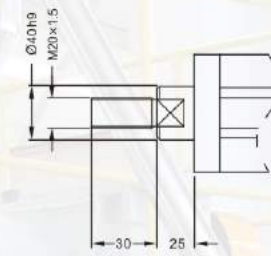
可选前端连接附件 Optional front-end connection attachments

C1 外螺纹
External thread

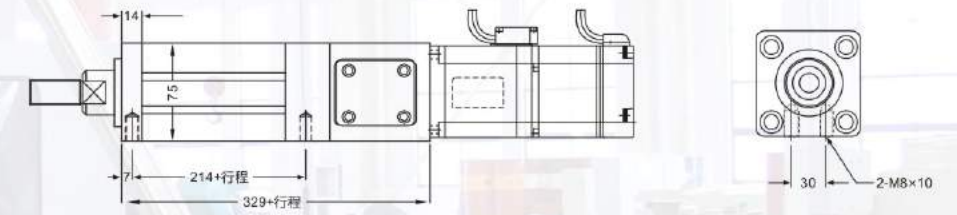
C2 内螺纹
Internal thread

C3 U型插销
U-bolt

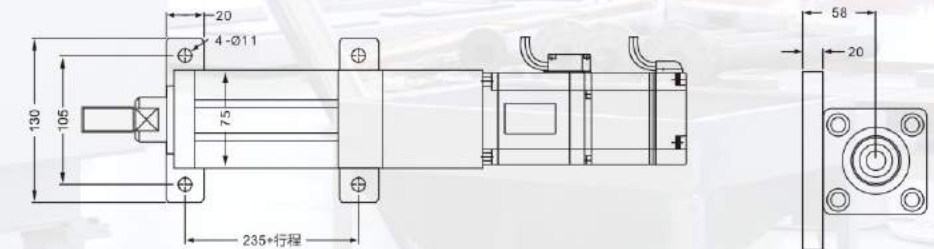
C4 球头铰
Ball head hinges



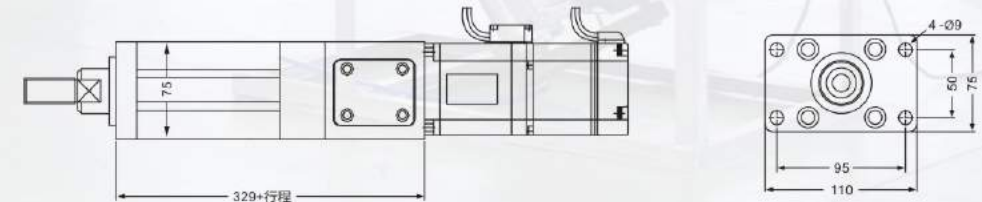
M1 底部螺纹孔安装方式 M1 Threaded hole at the bottom installation



M2 底板式安装方式 M2 Bottom type installation



M3 前法兰安装方式 M3 Front flange installation



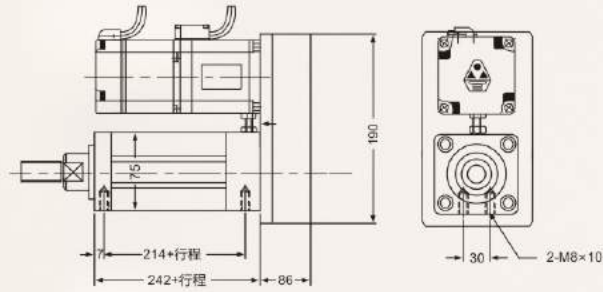
注：伺服电动缸缸体与伺服电机处的连接板是根据伺服电机的法兰尺寸订制，需要具体尺寸图，请联系生产厂家。
Notice: The servo motor and servo motor plate cylinder block is based at the servo motor flange size order, need specific dimensions, please contact the manufacturer.

折返式外形图 FDR075

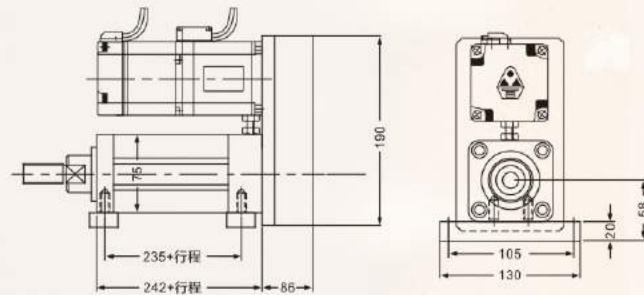
FDR075 Foldback outline drawing

单位 (mm)

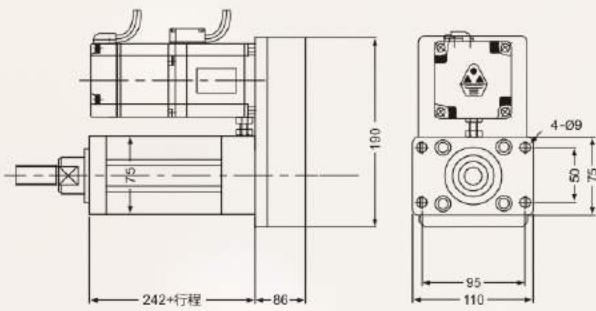
M1 底部螺纹孔安装方式
M1 Threaded hole at the bottom installation



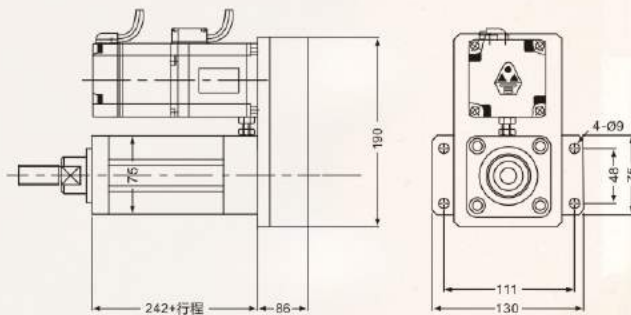
M2 底板式安装方式
M2 Bottom type installation



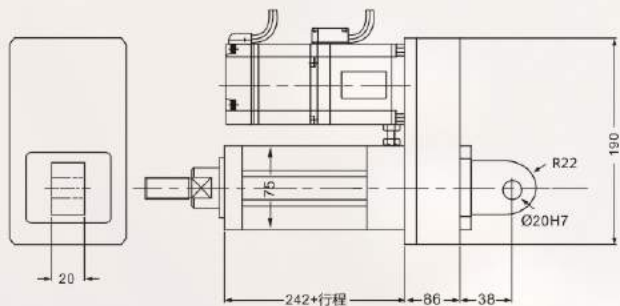
M3 前法兰安装方式
M3 Front flange installation



M4 后法兰安装方式
M4 Rear flange installation



M6 尾部销孔安装方式
M6 Rear shaft mount

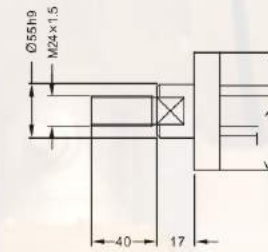


注：伺服电动缸缸体与伺服电机处的连接板是根据伺服电机的法兰尺寸订制，需要具体尺寸图，请联系生产厂家。
Notice: The servo motor and servo motor plate cylinder block is based at the servo motor flange size order, need specific dimensions, please contact the manufacturer.

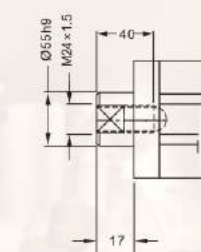
单位 (mm)

可选前端连接附件 Optional front-end connection attachments

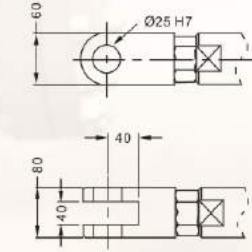
C1 外螺纹
External thread



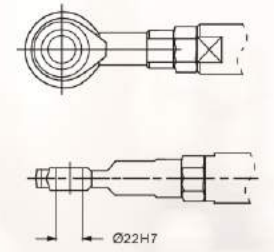
C2 内螺纹
Internal thread



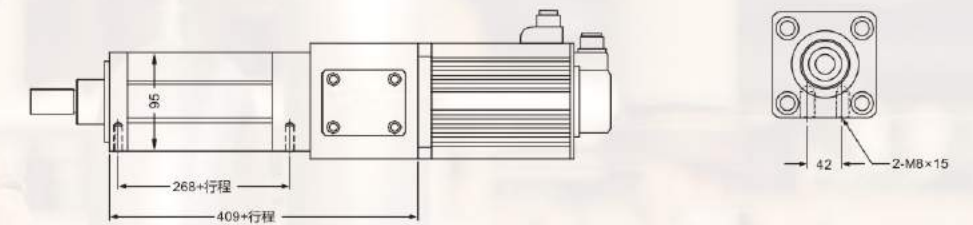
C3 U型插销
U-bolt



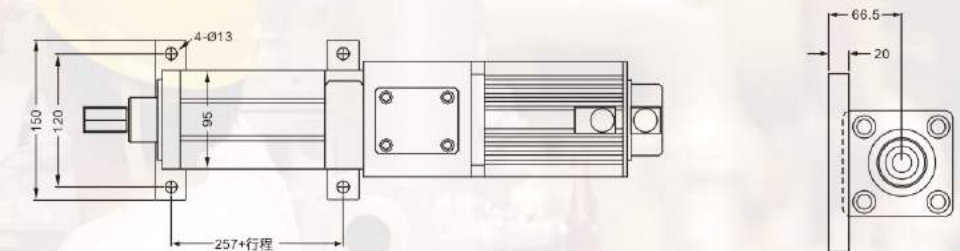
C4 球头铰
Ball head hinges



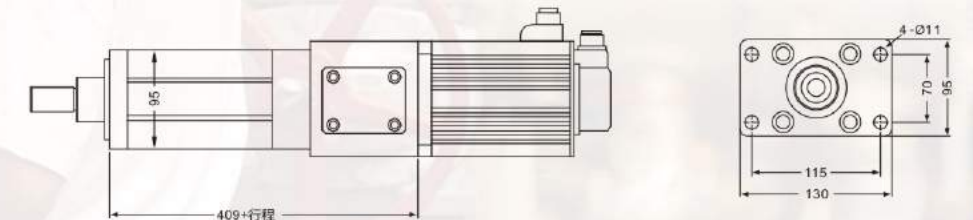
M1 底部螺纹孔安装方式
M1 Threaded hole at the bottom installation



M2 底板式安装方式
M2 Bottom type installation



M3 前法兰安装方式
M3 Front flange installation



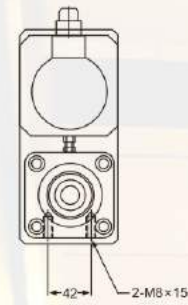
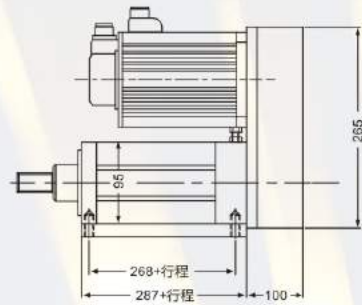
注：伺服电动缸缸体与伺服电机处的连接板是根据伺服电机的法兰尺寸订制，需要具体尺寸图，请联系生产厂家。
Notice: The servo motor and servo motor plate cylinder block is based at the servo motor flange size order, need specific dimensions, please contact the manufacturer.

折返式外形图 FDR095

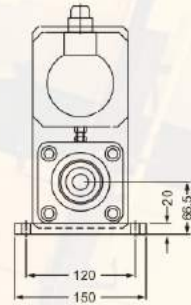
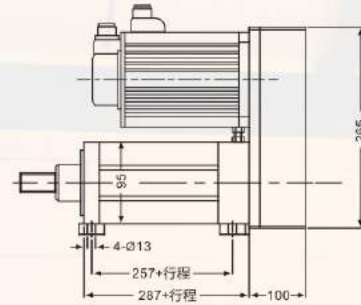
FDR095 Foldback outline drawing

单位 (mm)

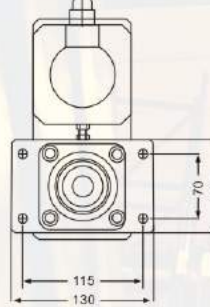
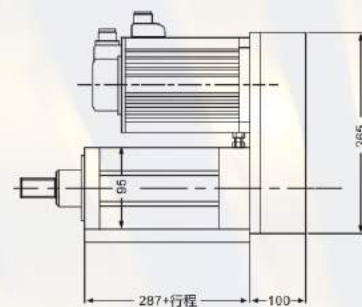
M1 底部螺纹孔安装方式
M1 Threaded hole at the bottom installation



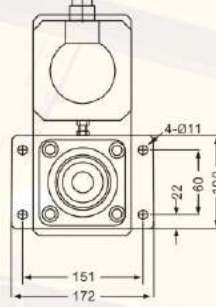
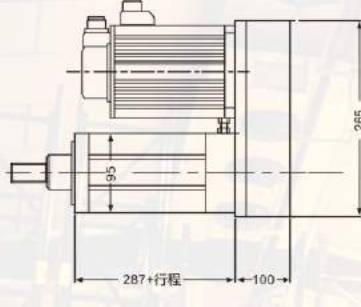
M2 底板式安装方式
M2 Bottom type installation



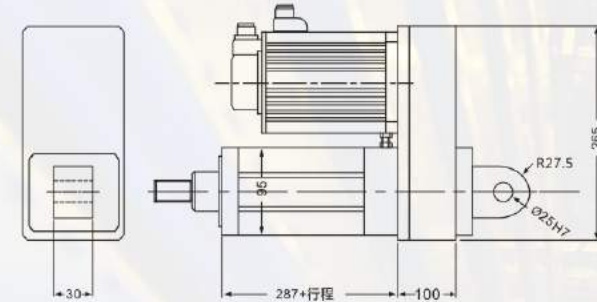
M3 前法兰安装方式
M3 Front flange installation



M4 后法兰安装方式
M4 Rear flange installation



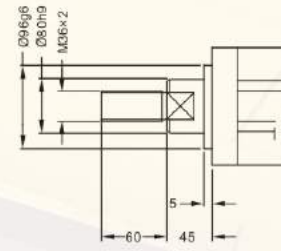
M6 尾部销孔安装方式
M6 Rear shaft mount



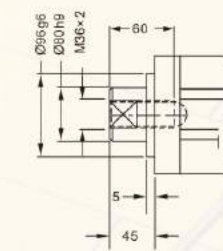
单位 (mm)

可选前端连接附件 Optional front-end connection attachments

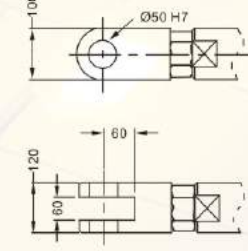
C1 外螺纹
External thread



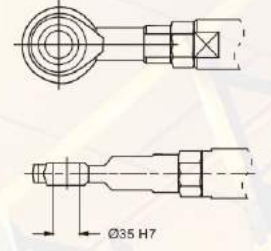
C2 内螺纹
Internal thread



C3 U型插销
U-bolt

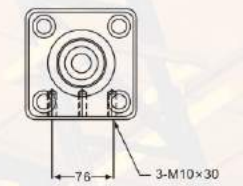
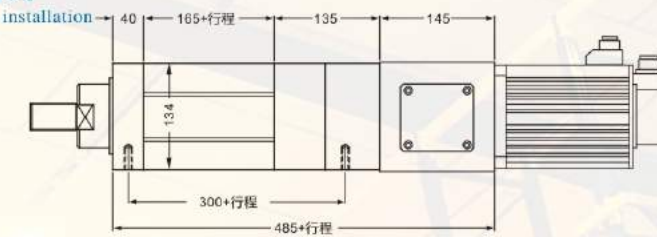


C4 球头铰
Ball head hinges



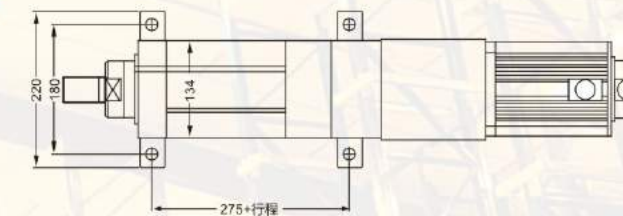
M1 底部螺纹孔安装方式
M1 Threaded hole at the bottom installation

M1 Threaded hole at the bottom installation



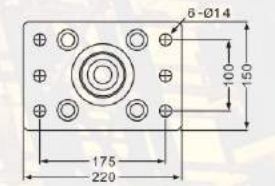
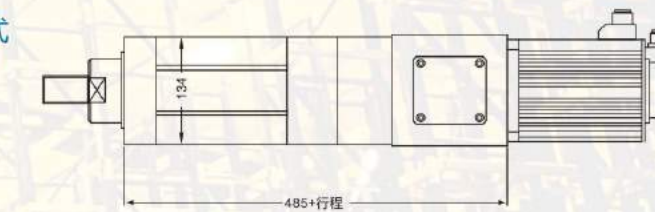
M2 底板式安装方式
M2 Bottom type installation

M2 Bottom type installation



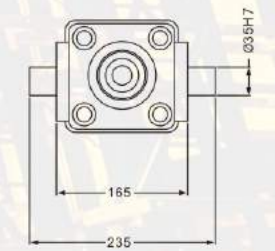
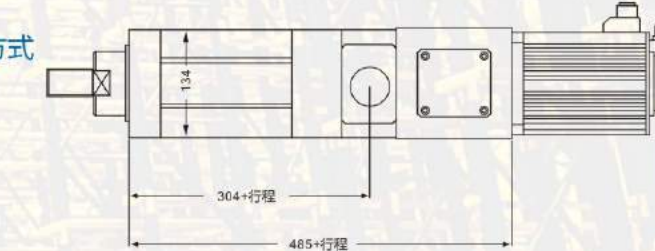
M3 前法兰安装方式
M3 Front flange installation

M3 Front flange installation



M5 尾部销轴安装方式
M5 Rear clevis mount

M5 Rear clevis mount



注：伺服电动缸缸体与伺服电机处的连接板是根据伺服电机的法兰尺寸订制，需要具体尺寸图，请联系生产厂家。
Notice: The servo motor and servo motor plate cylinder block is based at the servo motor flange size order, need specific dimensions, please contact the manufacturer.

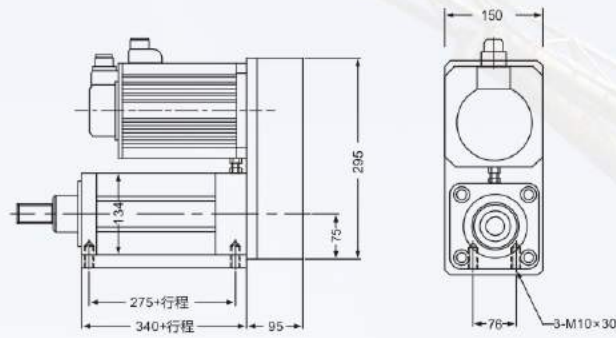
注：伺服电动缸缸体与伺服电机处的连接板是根据伺服电机的法兰尺寸订制，需要具体尺寸图，请联系生产厂家。
Notice: The servo motor and servo motor plate cylinder block is based at the servo motor flange size order, need specific dimensions, please contact the manufacturer.

折返式外形图 FDR135

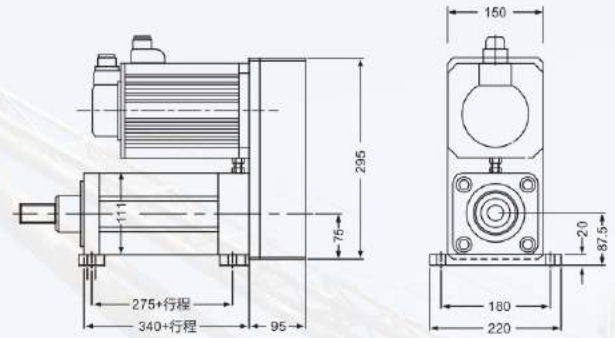
FDR135 Foldback outline drawing

单位 (mm)

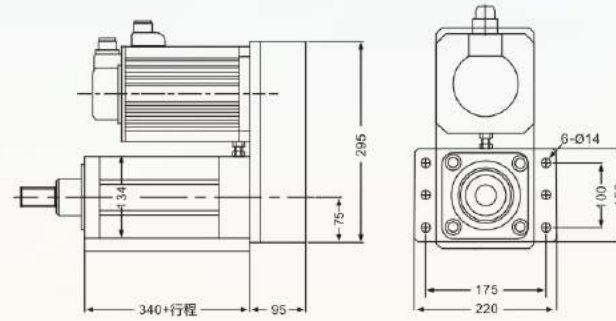
M1 底部螺纹孔安装方式
M1 Threaded hole at the bottom installation



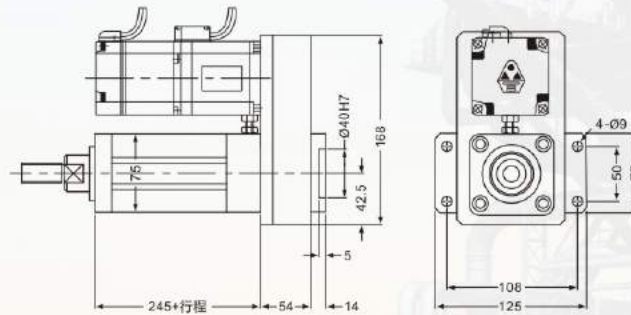
M2 底板式安装方式
M2 Bottom type installation



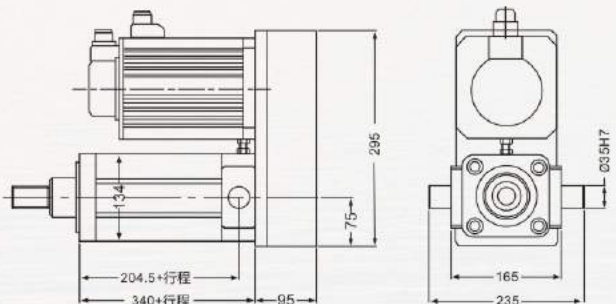
M3 前法兰安装方式
M3 Front flange installation



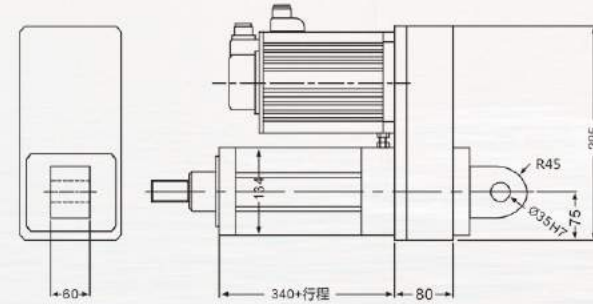
M4 后法兰安装方式
M4 Rear flange installation



M5 尾部销轴安装方式
M5 Rear clevis mount



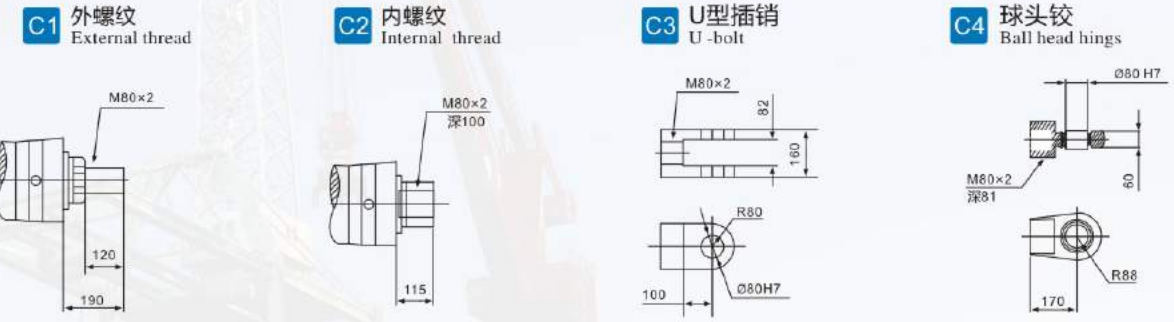
M6 尾部销孔安装方式
M6 Rear shaft mount



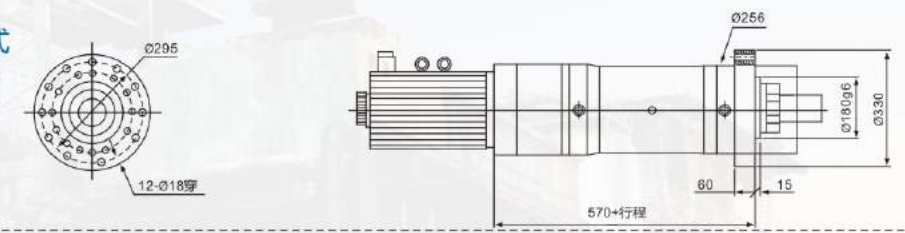
注：伺服电动缸缸体与伺服电机处的连接板是根据伺服电机的法兰尺寸订制，需要具体尺寸图，请联系生产厂家。
Notice: The servo motor and servo motor plate cylinder block is based at the servo motor flange size order, need specific dimensions, please contact the manufacturer.

单位 (mm)

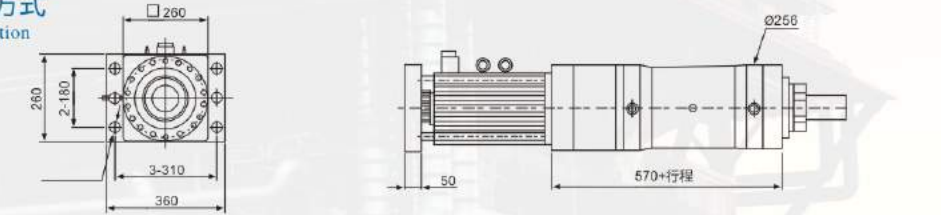
可选前端连接附件 Optional front-end connection attachments



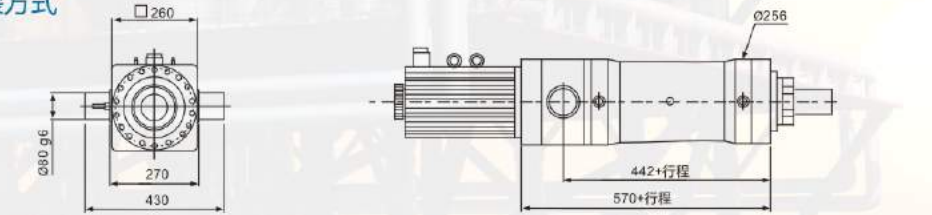
M3 前法兰安装方式
M3 Front flange installation



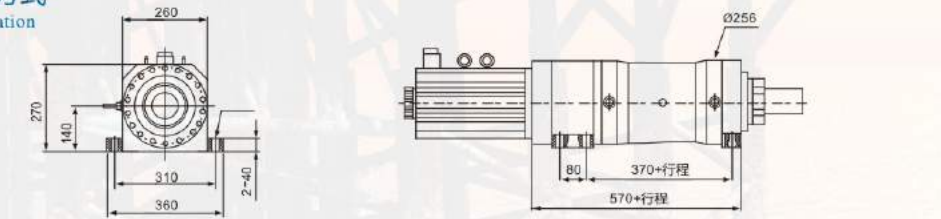
M4 后法兰安装方式
M4 Rear flange installation



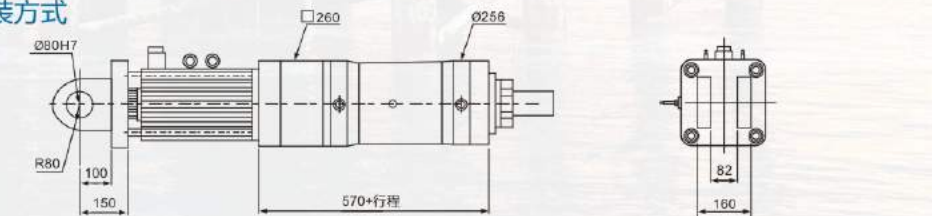
M5 尾部销轴安装方式
M5 Near clevis mount



M2 底板式安装方式
M2 Bottom type installation



M6 尾部销孔安装方式
M6 Rear shaft mount



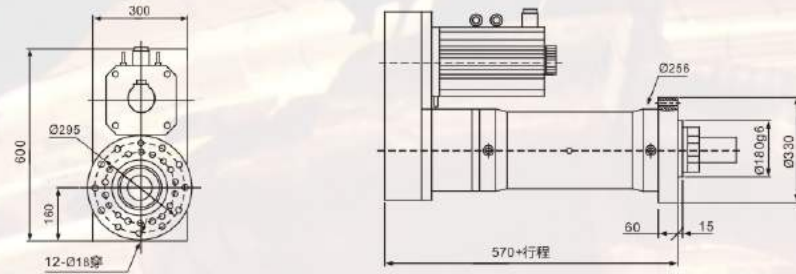
注：伺服电动缸缸体与伺服电机处的连接板是根据伺服电机的法兰尺寸订制，需要具体尺寸图，请联系生产厂家。
Notice: The servo motor and servo motor plate cylinder block is based at the servo motor flange size order, need specific dimensions, please contact the manufacturer.

折返式外形图 FDR250

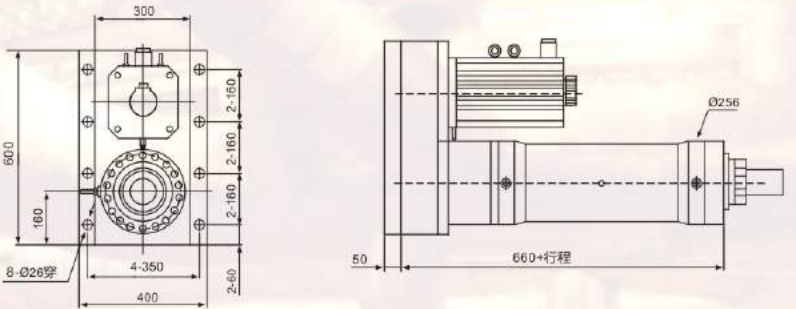
FDR250 Foldback outline drawing

单位 (mm)

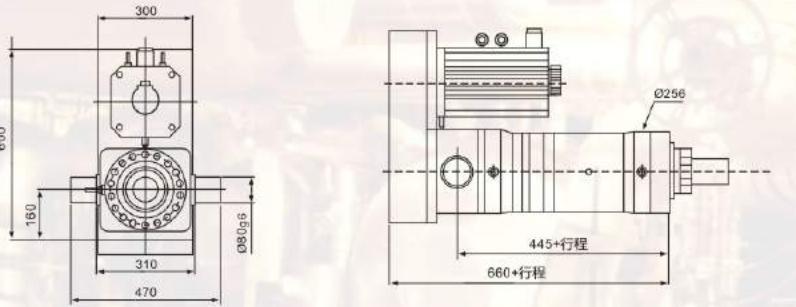
M3 前法兰安装方式 M3 Front flange installation



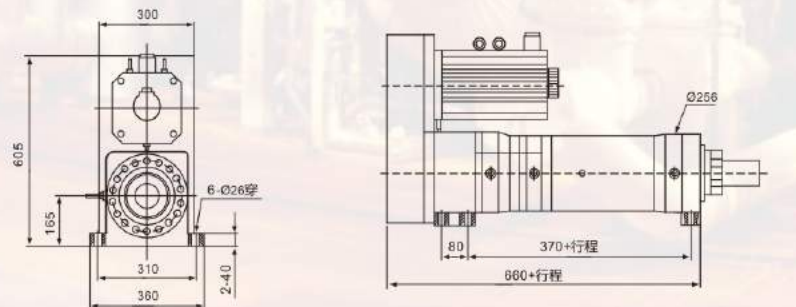
M4 后法兰安装方式 M4 Near flange installation



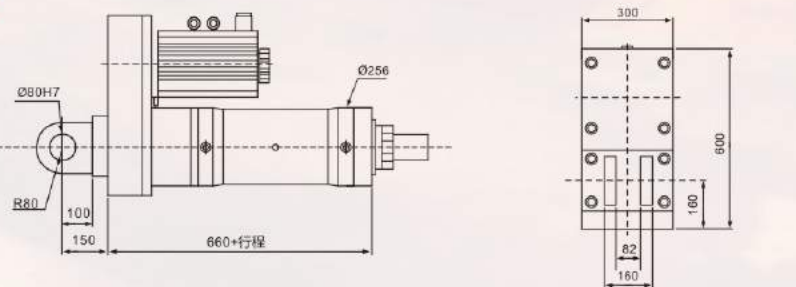
M5 尾部销轴安装方式 M5 Near clevis mount



M2 底板式安装方式 M2 Bottom type installation



M6 尾部销孔安装方式 M6 Rear shaft mount



注：伺服电动缸缸体与伺服电机处的连接板是根据伺服电机的法兰尺寸订制，需要具体尺寸图，请联系生产厂家。
Notice: The servo motor and servo motor plate cylinder block is based at the servo motor flange size order, need specific dimensions, please contact the manufacturer.

伺服电动缸和传统液压缸、气缸的对比

COMPARISON OF THE SERVO ELECTRIC CYLINDER AND THE TRADITIONAL HYDRAULIC CYLINDERS, CYLINDER

	项目 Items	电动缸 Electric cylinders	液压缸 Hydraulic cylinders	气缸 Pneumatic cylinders
成本比较 Cost Contest	操作方式 Operations	简单、即插即用 Easy	复杂 Complex	复杂 Complex
	环境影响 Environmental	无污染，几乎无隐患 Pollution-free	经常漏油 Hydraulic Fluid Leaks	噪音较大 High Noise Levels
	安全隐患 Safety	安全，几乎无隐患 Safe	有油泄露 Hidden Danger/Oil	有气泄露 Hidden Danger/Gas
	能源应用 Energy	节约能源 Save	损耗大 Waste(Oil)	损耗大 Waste(Gas)
	寿命 Lifetime	超长 Long	较长(维护得当) Can be long with proper maintenance	较长(维护得当) Can be long with proper maintenance
	维护保养 Maintenance	几乎免维护 Low	经常高成本维护 Very High	定期高成本维护 Very High
	性价比 Prices	高 High	较低 Moderate	较低 Low
功能比较 Function Contest	速度 Velocity	很高 Very High	中等 Moderate	很高 High
	加速度 Acceleration	很高 Very High	较高 Moderate	很高 High
	刚性 Rigidity	超高 Very High	较低且不稳定 Moderate	很低 Low
	承载能力 Load Ability	很强 Strong	很强 Strong	中等 Moderate
	抗冲击载荷能力 Shock Load	很强 Strong	很强 Strong	较强 Moderate
	传递效率 Efficiency	> 90%	< 50%	< 50%
	定位控制 Location Control	非常简单 Easy	复杂 Hard	复杂 Hard
定位精度 Location Precision	很高 Very High	一般 Moderate	一般 Moderate	

应用领域 Applications

- **军事装备**：雷达、导弹起竖架、装甲车摇摆台、特种设备等战舰与飞机的舱门开启，座位高低调节，武器随动系统执行机构，实验升降支架、坦克的火炮高低向动作调节，火箭燃料的推送、炉门开启等。
- **专用设备**：工业自动化生产线、装配线、物流传送、升降台、调偏控制、阀门控制、坐标机械手、机械设备、CT伽玛刀、食品医药行业、数控机床、行业包装机、汽车电子压装机、纺织设备卷绕机分度、模具位置控制、夹紧、钻孔、定位。
- **实验设备**：仿真平台、试验台、造波机、检测设备。

- Military Equipment Radar, missile erecting support, swaying platform of armored car, special equipment, cabin door of warship and plane opening, height adjustment of seat, weapon servo system actuator, experimental lifting mechanism, height adjustment of artillery of tank, rocket fuel pushing, furnace door opening.
- Special Equipment: Automatic production line, logistics transmission, elevating platforms, leaning adjustment, valve control, coordinates manipulator, mechanical device, Ct gamma, food and pharmaceuticals industry, numerical control machine, industry packing device, automotive electronic press machine, winding machine dividing of textile device, and mold position control, clamping, drilling and positioning of module.
- Experimental Equipment: Simulation platform, test bed, wave machine, checkout equipment etc.

使用寿命与维护 Service life and maintenance

电动缸的寿命主要取决于丝杠和轴承的寿命。我们将轴承的承载能力设计成大于丝杠。影响寿命的因素是金属的疲劳寿命，在不同的速度下负载(受力)不同，作用时间不同，加速度不同都会有影响。所以很难精确确定。建议你在估算时，按照同样丝杠在同种环境下工作，以其使用寿命的90%计算。

- 电动缸在出厂时丝杠上已经加上润滑脂 GB7324-1994通用锂基润滑脂3号。
- 电动缸工作达到300小时后，应对润滑脂进行补加。根据使用的环境和每天运行的时间来确定加油的次数，一般情况下，每2000小时加一次。
- 加油方法：将电动缸外壳上的注油孔打开，转动丝杠，找到丝杠母上的注油孔，注入润滑油。
- 润滑脂要求：GB7324-1994通用锂基润滑脂3号。

Lifetime of electric cylinders depend on the ball screw and bearing's lifetime. In our design, loading ability of the bearing more than ball screw, metal fatigue is the main influencing factors, but the different of speed, load, acceleration, working time will also affect its lifetime cycle, so it's too hard to accurately calculate. It is a suggestion for estimating to calculate by 90% of the service life as the same screw is running under the same environment.

- Electric cylinder is refueled with lubrication grease GB7324-1994 general lithium base 3 lubricating grease when leaves factory.
- After electric cylinder has run for 300 hours, refill the lubricating grease. Refueling frequency, per 2000 hours one time as usual, is determined on basis of the operating environment and day-to-day operational time.
- Refuelling method: open the filler hole on the shell of electric cylinder, turn the screw to find the filler hole on the screw nut and refuel lubricating grease.
- Requirement for lubricating grease: GB7324-1994 general lithium base 3 lubricating grease.

电动缸使用注意事项:

Note the use of the Servo Electric Cylinder

1. 伺服电动缸是精密机电一体化产品,使用时要事先阅读本使用注意事项和相关电机、驱动器的使用说明书,并在使用中十分注意。未经生产厂的许可不得擅自拆卸电动缸,尤其是电动缸外面的各个螺丝,否则生产厂将不 负责 任。
2. 伺服电动缸是基本免维护产品,任何零部件的交换等必须在生产厂或者生产厂授权场所进行。否则生产厂将不 负责 任。
3. 电机与伺服电动缸是通过高强度同步带连接,并经过张力调整。所以不能随意拆卸电机,否则会造 成同步带因张力不妥而损坏。
4. 安装时,绝对不要在活塞杆上作用外力扭矩,以免损坏电动缸。
5. 伺服电动缸采用润滑脂润滑方式,缸体上有润滑脂添加口。添加时要使用Mobilith SHC220润滑脂和润滑脂枪,添加量和时期为:2次(枪行程)/6个月(或者50公里行程)。
6. 对丝杆螺母的加油方法为:将电动缸全行程伸出后,停止电机,切断电源。打开缸筒上的丝杆油脂注入口处的螺塞,用专用的注油枪进行加油。加油后,安装上螺塞,接通电源,全行程走2至3个来回即可。
7. 伺服电动缸调试时,应先在低速下进行,等各方面均正常后在提高速度,以免损坏电动缸。
8. 产品工作中严禁接触滑动座并保持安全工作范围。
9. 滚珠螺杆产品垂直使用时‘Z轴’为防止物品掉落建议马达需安装刹车装置;齿轮皮带驱动不建议垂直使用‘Z轴’。
10. 有效行程过大时可能会发生共振,行程越大时最大速度应该相对的降低。

保修:

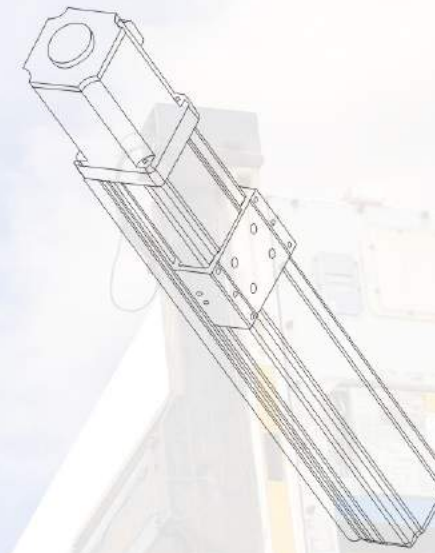
1. 保修宗旨:24小时全天候及时响应,及时解决,确保使用。
2. 保修期:产品在出厂后12个月内免费保修,终身维护,超过保修期后,只向用户收取维修服务中所用的材料成本费和人工费。
3. 保修范围:

在使用过程中如发现问题,可直接用电话、传真、网站在线技术支持等方式与我公司取得联系,我公司将在2小时内作出响应,与使用现场了解情况并提供解决办法。

保修期内,在正常的使用情况下,我公司对设备质量负责。如因产品质量发生故障,我公司将及时免费进行维修和配件更换。如果发现设备不能正常运行,为了更快、更准、更好的为您服务,使用方应向我公司出具详细的书面报告,说明问题的细节情况
4. 以下情况不在保修范围内:
 - 1): 使用方对设备在未被授权情况下的拆卸、修改造成的设备问题;
 - 2): 使用方非正常使用造成的设备问题
 - 3): 使用方人为损坏引起的故障。
 - 4): 因不可抗因素所引起的故障;
 - 5): 售后服务定期性:定期回访,征求意见,提升服务质量。

单位	行程	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
重量	kg	1.8	2.0	2.2	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.8	4.0	4.2	4.4	4.6	4.8	5.0	5.2	5.4

行程、重量参考表

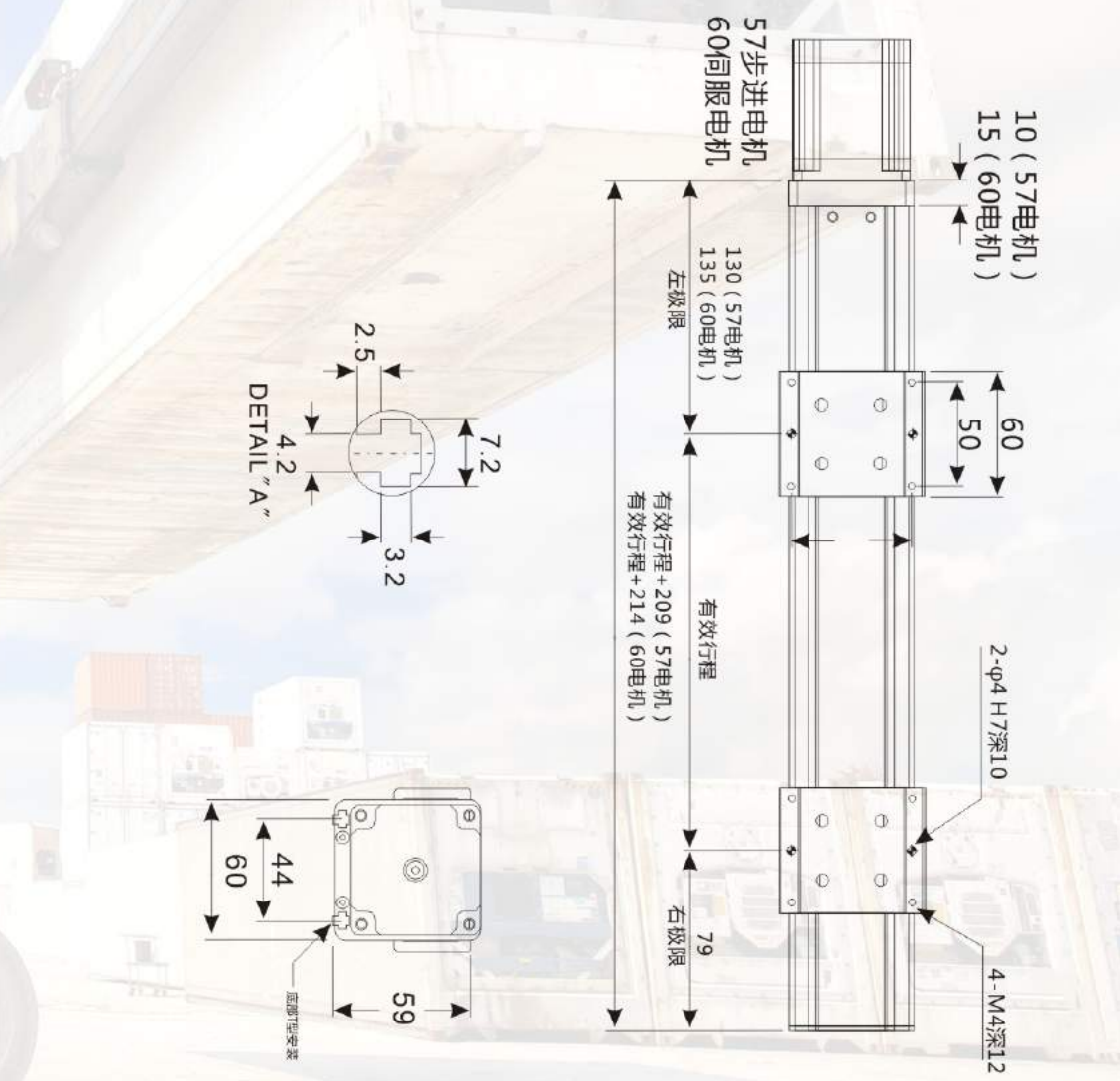


◆FDR60系列 订购型号

基本规格	
适配电机类型	57步进 100瓦、200瓦、400瓦伺服
定位精度	-0.02 ~ (+0.02)
减速机	滚珠螺杆 (C75级)
滚珠螺杆导距 (mm)	10
最高速度 (mm/sec)	500
最大搬运	水平使用时 5 垂直使用时 8
重量 (KG)	5
额定推力 (N)	84
行程 (mm)	50~800 (50间隔)
全长 (mm)	见图纸
主机截面最大外形 (mm)	W60XH69.5
线性导轨形式	上银微型加宽MGW12导轨,加长滑块

※行程超过一定距离时,根据动作区域不同,可能会出现共振情况,注意下调最高速度。

57步进及60伺服电机外置尺寸图



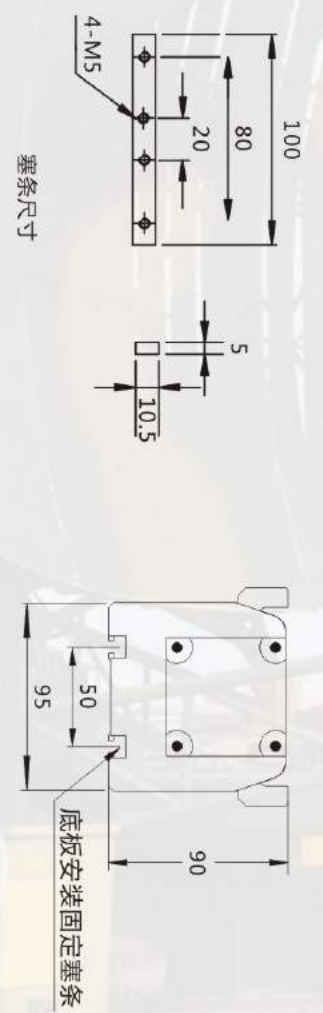
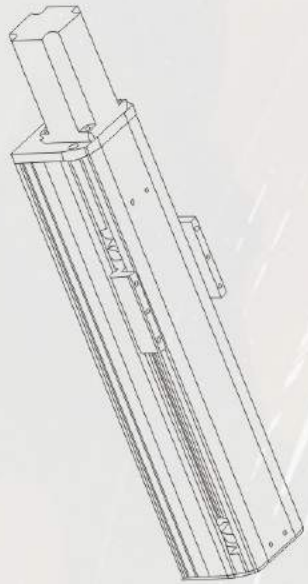
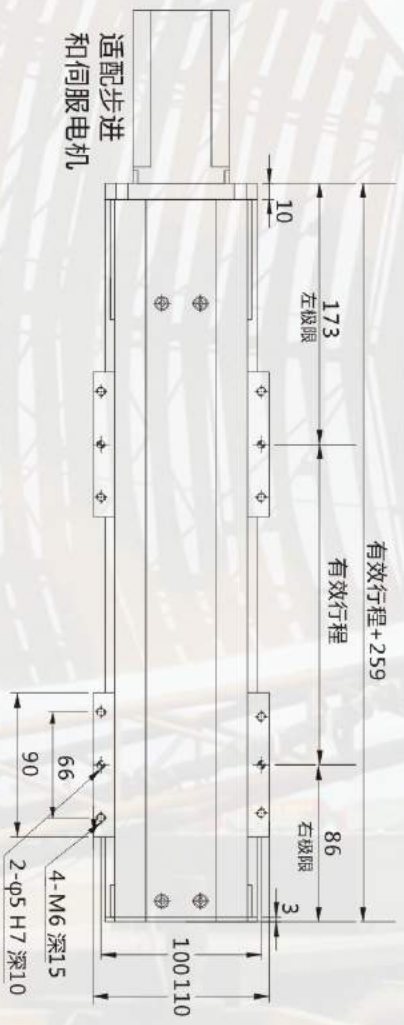
◆FDR95系列 订购型号

基本规格

适配电机类型	57, 86步进 100瓦, 200瓦, 400瓦伺服		
定位精度	-0.02~(+0.02)		
减速机构	滚珠螺杆 (C7S级)		
滚珠螺杆导距 (mm)	16/20	10	5
最高速度 (mm/sec)	800/1000	500	250
最大搬运	水平使用时	10	15
重量 (KG)	垂直使用时	7	9
额定推力 (N)	100	260	430
行程 (mm)	50~1200 (50间距)		
全长 (mm)	见图纸		
主机截面最大外形 (mm)	W95XH90		
线性导轨形式	上银高扭矩HG120导轨, 法兰型滑块		

※行程超过一定距离时, 根据动作区域不同, 可能会出现共振情况, 注意下调最高速度。

丝杆型电机外置安装尺寸图—滑块标准型



单位	行程	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
重量	kg	4.9	5.4	5.9	6.4	6.9	7.4	7.9	8.4	8.9	9.4	9.9	10.4	10.9	11.4	11.9	12.4	12.9	13.4	13.9

行程、重量参考表

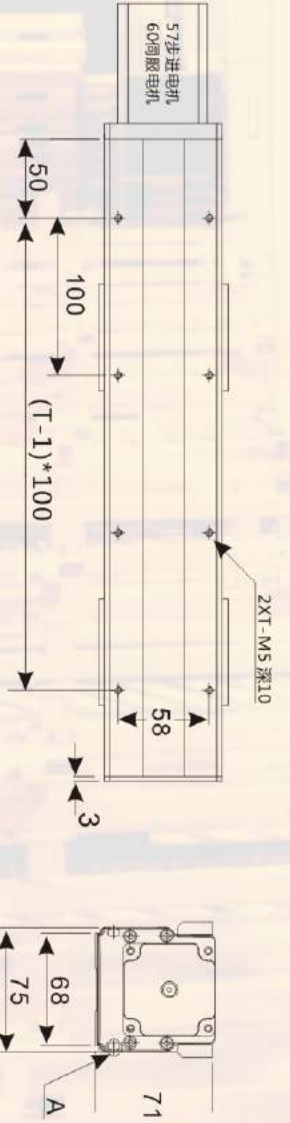
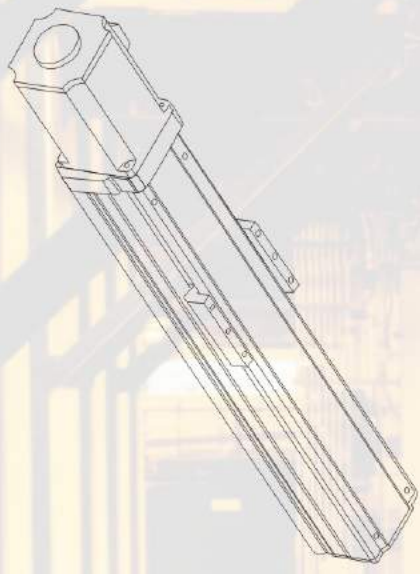
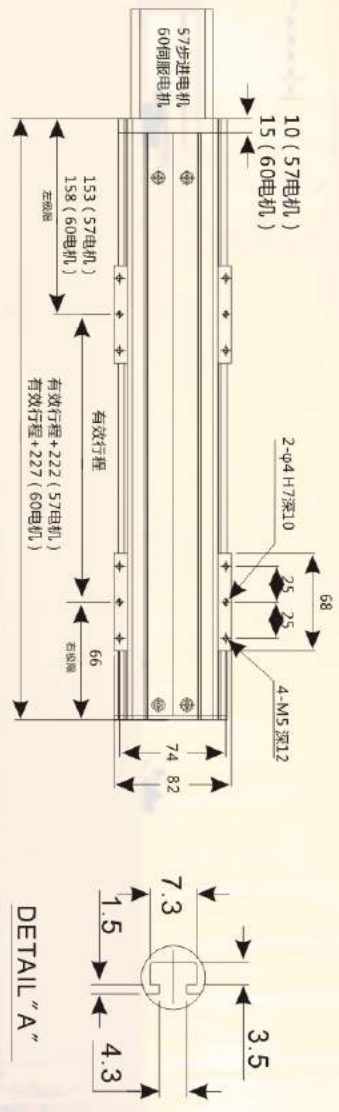
◆FDR75系列 订购型号

基本规格

适配电机类型	57步进 100瓦, 200瓦, 400瓦伺服		
定位精度	-0.02~(+0.02)		
减速机构	滚珠螺杆 (C7S级)		
滚珠螺杆导距 (mm)	16/20	10	5
最高速度 (mm/sec)	800/1000	500	250
最大搬运	水平使用时	6	10
重量 (KG)	垂直使用时	4	6
额定推力 (N)	87	145	290
行程 (mm)	50~800 (50间距)		
全长 (mm)	见图纸		
主机截面最大外形 (mm)	W75XH70.5		
线性导轨形式	上银微型加宽MGW12单导轨, 加长滑块		

※行程超过一定距离时, 根据动作区域不同, 可能会出现共振情况, 注意下调最高速度。

57步进及60伺服电机外置尺寸图



单位	行程	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
重量	kg	3.0	3.3	3.6	3.9	4.2	4.5	4.8	5.1	5.4	5.7	6.0	6.3	6.6	6.9	7.2	7.5	7.8	8.1	8.4

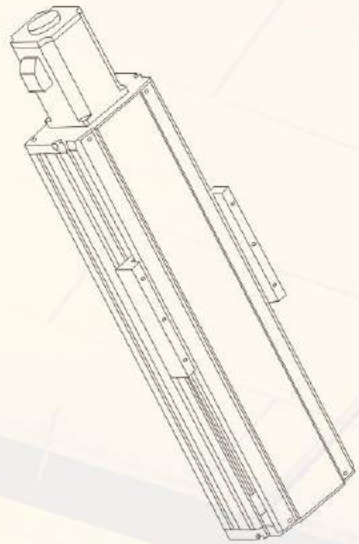
行程、重量参考表

◆FDR140系列 订购型号

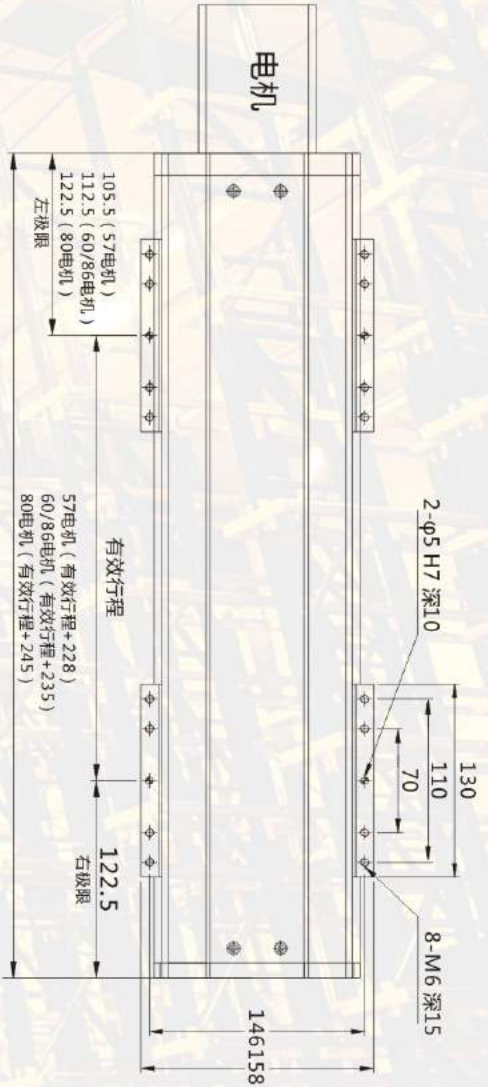
基本规格

适配电机类型	57, 86步进 100瓦, 200瓦, 400瓦伺服			
定位精度	-0.02~(+0.02)			
减速机构	滚珠螺杆 (C7S级)			
滚珠螺杆导距 (mm)	16/20	10	5	
最高速度 (mm/sec)	800/1000	500	250	
最大搬运重量 (KG)	水平使用时	48	48	48
	垂直使用时	15	22	26
额定推力 (N)	150	300	450	
	行程 (mm)			
全长 (mm)	50~1200 (50间距)			
主机截面最大外形 (mm)	见图纸			
线性导轨形式	W140XH91			
	上银导轨HG15+2, 标准型滑块4个			

※行程超过一定距离时, 根据动作区域不同, 可能会出现共振情况, 注意下调最高速度。



丝杆型电机外置安装尺寸图



行程、重量参考表

单位	行程	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
重量	kg	10.7	11.2	11.7	12.2	12.7	13.2	13.7	14.2	14.7	15.2	15.7	16.2	16.7	17.2	17.7	18.2	18.7	19.2	19.7

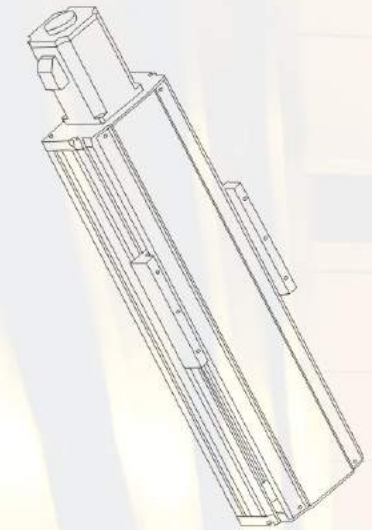
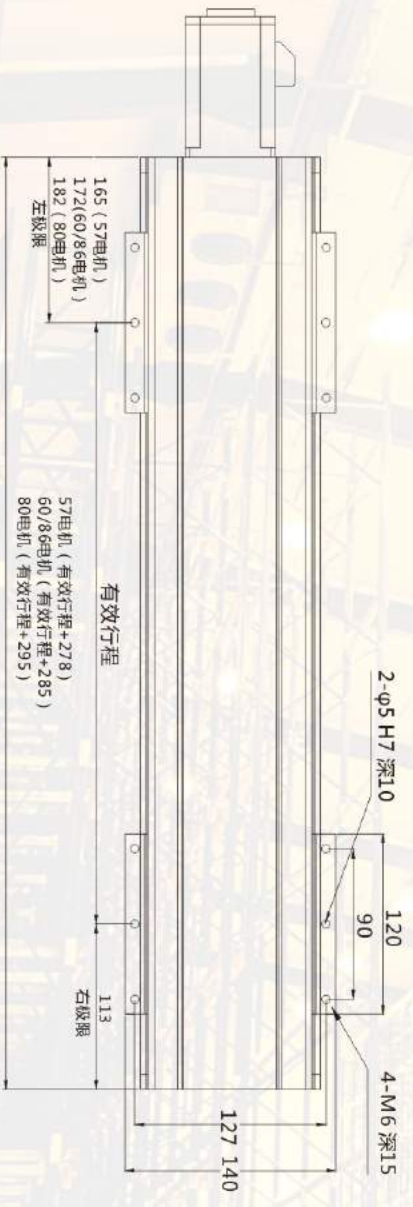
◆FDR120系列 订购型号

基本规格

适配电机类型	57, 86步进 100瓦, 200瓦, 400瓦伺服			
定位精度	-0.02~(+0.02)			
减速机构	滚珠螺杆 (C7S级)			
滚珠螺杆导距 (mm)	16/20	10	5	
最高速度 (mm/sec)	800/1000	500	250	
最大搬运重量 (KG)	水平使用时	40	43	43
	垂直使用时	14	18	22
额定推力 (N)	120	280	450	
行程 (mm)	50~1200 (50间距)			
全长 (mm)	见图纸			
主机截面最大外形 (mm)	W120XH84			
线性导轨形式	上银导轨GH15+2, 标准型滑块4个			

※行程超过一定距离时, 根据动作区域不同, 可能会出现共振情况, 注意下调最高速度。

丝杆型电机外置安装尺寸图



行程、重量参考表

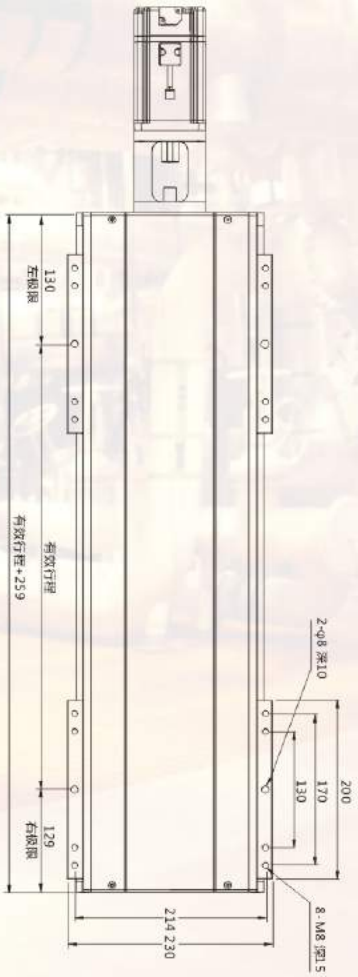
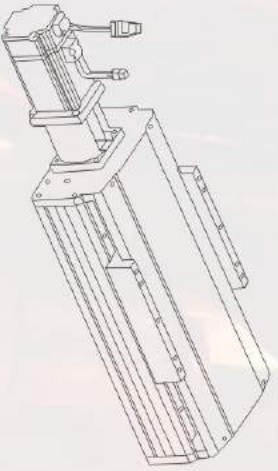
单位	行程	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
重量	kg	4.8	5.5	6.2	6.9	7.6	8.3	9.0	9.7	10.4	11.1	11.8	12.5	13.2	13.9	14.6	15.3	16.0	16.7	17.4

◆FDR210系列 订购型号

丝杆型电机外置安装尺寸图

适配电机类型	57, 86步进 100, 200, 400, 750匝/伺服		
定位精度	-0.02 ~ (+0.02)		
减速机构	滚珠螺杆 (C7S级)		
滚珠螺杆导距 (mm)	16/20	10	5
最高速度 (mm/sec)	800/1000	500	250
最大搬运	水平使用时	100	150
重量 (KG)	垂直使用时	60	80
额定推力 (N)	800	1100	1100
行程 (mm)	50-1200 (50间距)		
全长 (mm)	见图纸		
主机截面最大外形 (mm)	W210XH119		
线性导轨形式	上银导轨HGH20*2, 标准型滑块4个		

※行程超过一定距离时，根据动作区域不同，可能会出现共振情况，注意下调最高速度。



单位	行程	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
重量	kg	229	242	25.5	26.8	28.1	29.4	30.7	32.0	33.3	34.6	35.9	37.2	38.5	39.8	41.1	42.4	43.7	45.0	46.3

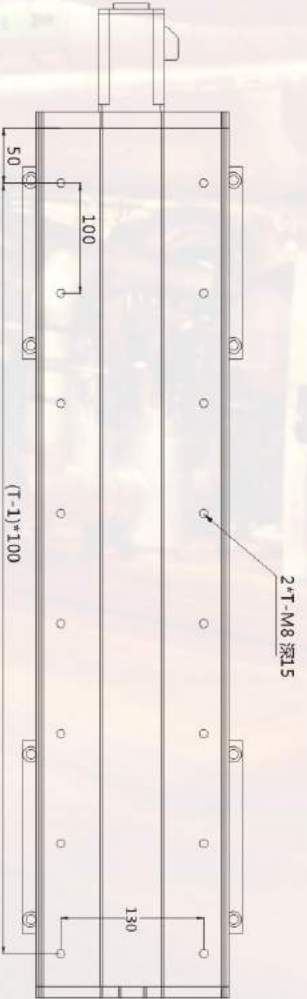
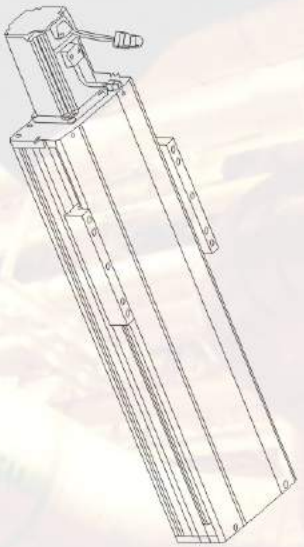
行程、重量参考表

◆FDR175系列 订购型号

丝杆型电机外置安装尺寸图

适配电机类型	57, 86步进 100, 200, 400, 750匝/伺服		
定位精度	-0.02 ~ (+0.02)		
减速机构	滚珠螺杆 (C7S级)		
滚珠螺杆导距 (mm)	16/20	10	5
最高速度 (mm/sec)	800/1000	500	250
最大搬运	水平使用时	70	80
重量 (KG)	垂直使用时	45	50
额定推力 (N)	560	850	1050
行程 (mm)	50-1500 (50间距)		
全长 (mm)	见图纸		
主机截面最大外形 (mm)	W175XH102		
线性导轨形式	上银导轨EGH20*2, 标准型滑块4个		

※行程超过一定距离时，根据动作区域不同，可能会出现共振情况，注意下调最高速度。



单位	行程	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
重量	kg	128	137	14.6	15.5	16.4	17.3	18.2	19.1	20.0	20.9	21.8	22.7	23.6	24.5	25.4	26.3	27.2	28.1	29.0

行程、重量参考表