

S 型平台 S-type platform

设计要求:

一电机同时驱动 5 个平台, 5 个平台呈 S 型布置, 每个平台互不干涉。电机动作时每个平台分别同时动作, 上升或下降, 并且升降的距离均等。
($X_1=X_2=X_3=X_4=X_5$)。

应用场合: 舞台机械, 自动化流水线等场合。

Design requirements:

Motor drives 5 platforms at the same time. The platforms are S-shaped layout. Each platform does not interfere with each other. When the motor moves, each platform moves at the same time, rises or falls, and the distance is equal. ($X_1 = X_2 = X_3 = X_4 = X_5$). Application: Stage machines, automated assembly line and so on.



三角型平台 Triangular platform

设计要求:

一电机同时驱动 3 个平台, 3 个平台呈三角型布置, 每个平台互不干涉。电机动作时每个平台分别同时动作, 上升或下降, 并且升降的距离均等。
($X_1=X_2=X_3$)。

应用场合: 舞台机械, 自动化流水线等场合。

Design requirements:

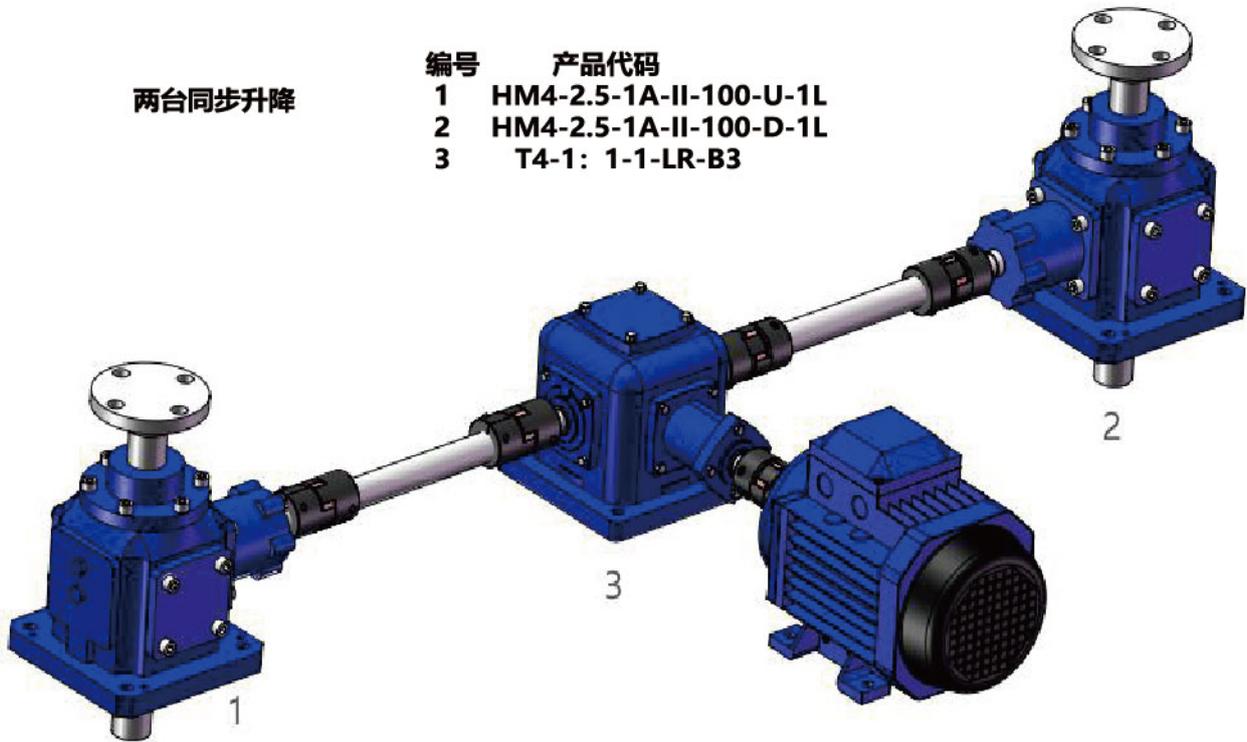
A motor drive three platforms, three platforms were triangular layout, each platform does not interfere with each other. When the motor moves, each platform moves at the same time, rises or falls, and the distance is equal. ($X_1 = X_2 = X_3$). Application: Stage machines; automated assembly line etc.



使用范例（升降示意图）

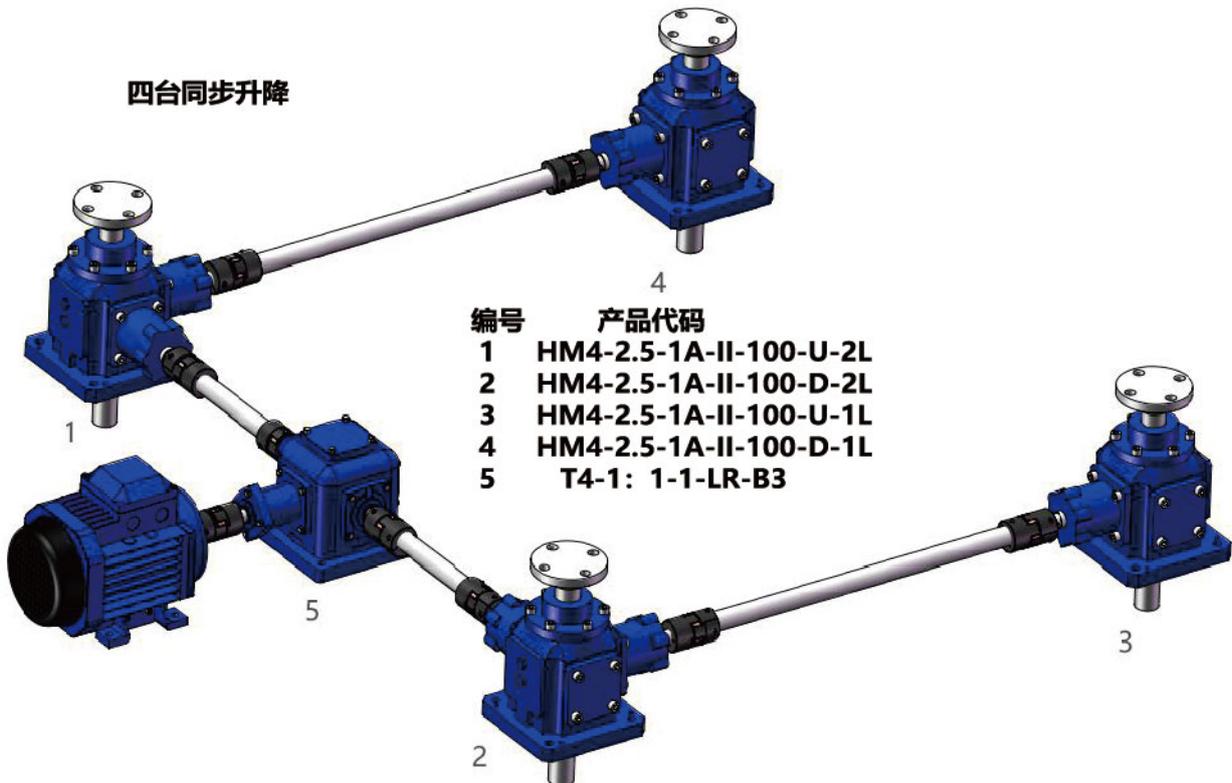
两台同步升降

- | 编号 | 产品代码 |
|----|------------------------|
| 1 | HM4-2.5-1A-II-100-U-1L |
| 2 | HM4-2.5-1A-II-100-D-1L |
| 3 | T4-1: 1-1-LR-B3 |



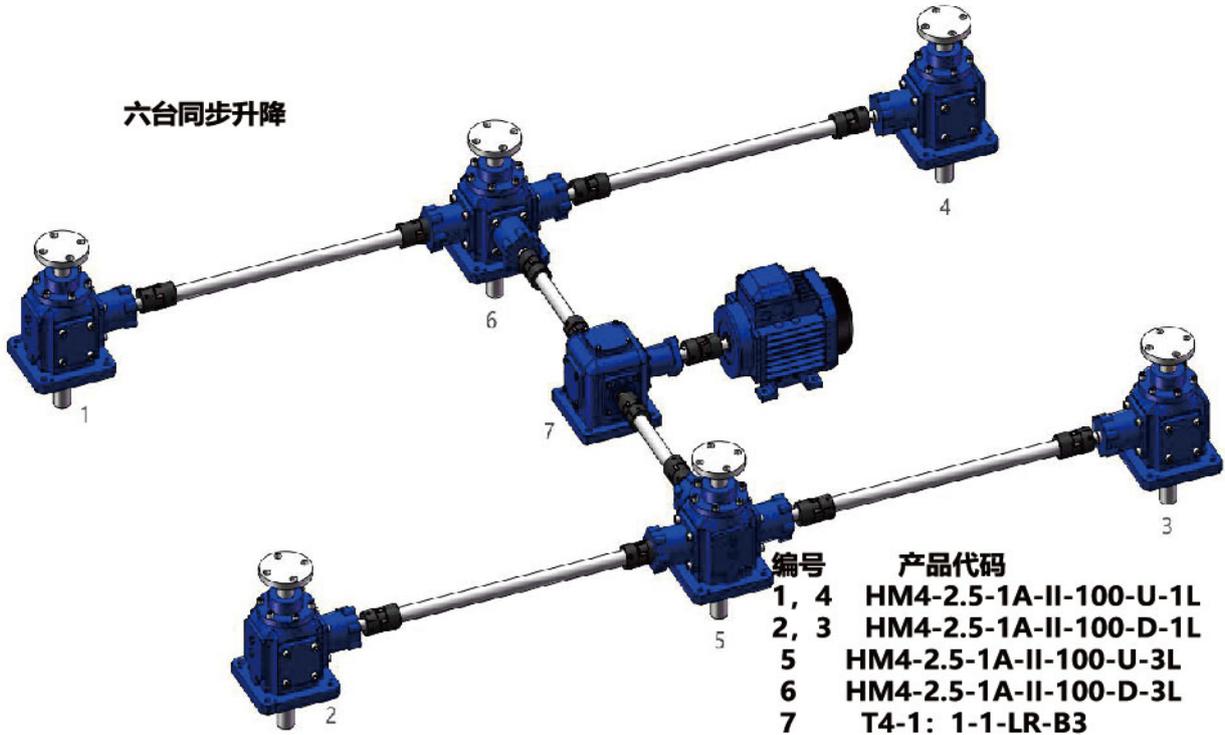
四台同步升降

- | 编号 | 产品代码 |
|----|------------------------|
| 1 | HM4-2.5-1A-II-100-U-2L |
| 2 | HM4-2.5-1A-II-100-D-2L |
| 3 | HM4-2.5-1A-II-100-U-1L |
| 4 | HM4-2.5-1A-II-100-D-1L |
| 5 | T4-1: 1-1-LR-B3 |

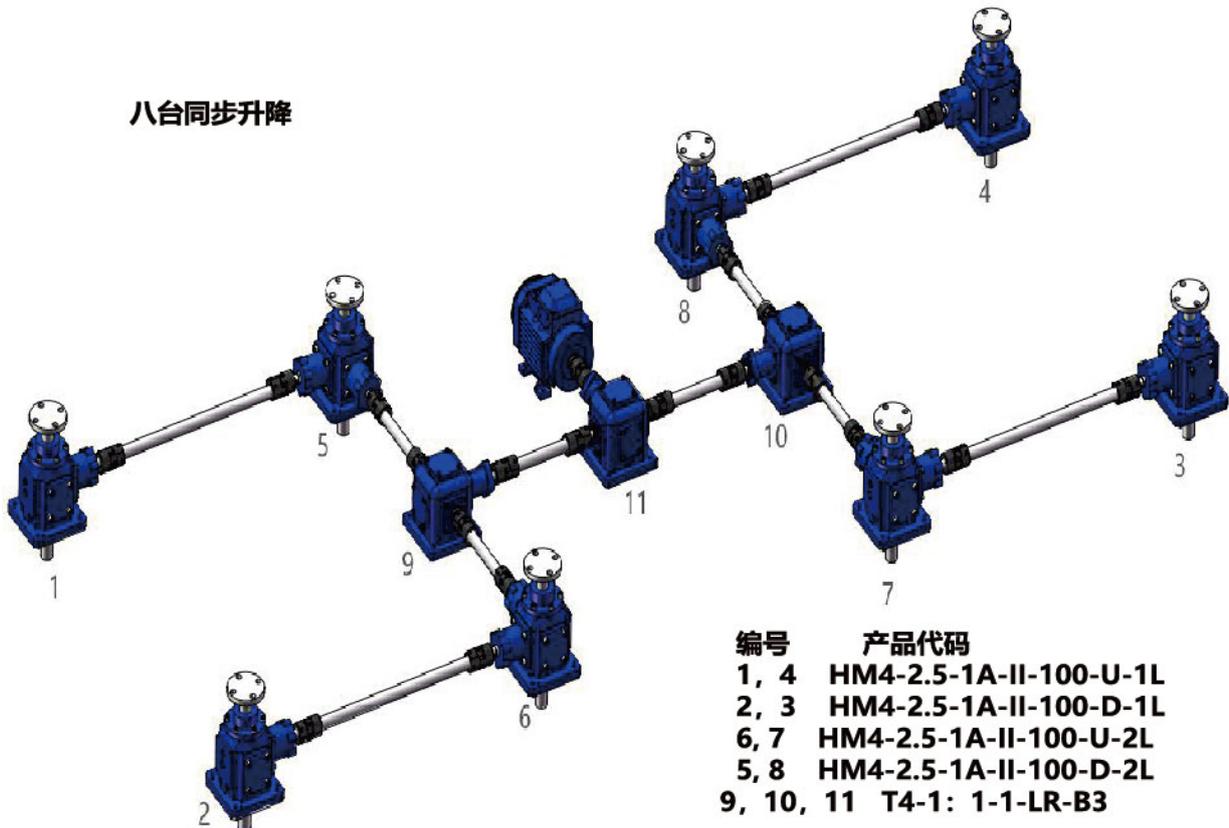


使用范例（升降示意图）

六台同步升降



八台同步升降



HM 说明

当今社会的发展朝着快速,绿色,精准方向在不断迭代,“中国制造 2025”亦是如此。“中国制造 2025”可以解析成两个“五五”,即是五条方针:创新驱动、质量为先、绿色发展、结构优化和人才为本;即五大工程:1.制造业创新中心(工业技术研究基地)建设工程;2.智能制造工程;3.工业强基工程;4.绿色制造工程;5.高端装备创新工程;

通过解析这两个“五五”,可以看到中国制造势必是基于智能机械,海量数据,云计算,物联网建立一个工业强国。

制作的产品是处于智能机械的基础部件,要想制作成更好地智能机械就必须更智能的线性运动件。基于这个基础建设要求,公司的技术团队确立开发更高升降速度、更精准的定位精度、更节能的线性运动产品。HM系列升降机经过技术团队数十个月的计算和设计,通过1年多的现场应用积累,终于应运而生:HM系列螺旋伞齿轮-T型丝杆升降机(可以在更紧凑的结构下完成更高速和更高的承载能力)和HMB系列螺旋伞齿轮滚珠丝杆升降机(可以在更紧凑的结构下完成更高速和更精准的定位精度)。

HM Description

Nowadays, the society development is constantly iterating in a fast, green, and precise direction, the same true of "Made in China 2025." Made in China 2025" can be parsed into two "Five - Five", that is, five principles: innovation - driven, quality first, green development, structural optimization and talent-based; five major projects: 1. Manufacturing Innovation Center (Industrial Technology Research Base) Construction Project; 2. Intelligent Manufacturing Engineering; 3. Industrial Foundation Engineering; 4. Green Manufacturing Project; 5. High-end Equipment Innovation Project

By analyzing the "Five- Five", we can see that Chinese manufacturing is bound to build an industrial power based on intelligent machinery, massive data, cloud computing and the Internet of things.

The products produced are the basic components of intelligent machinery, and in order to make better intelligent machinery, more intelligent linear motion parts are necessary. Based on this infrastructure requirement, the company's technical team has established the development of linear motion products with higher lifting speed, more accurate positioning accuracy, and greater energy efficiency. After decades of calculation and design by the technical team, and more than a year of on-site application accumulation, the HM series elevators have finally emerged: the HM series spiral bevel gear-T type screw elevator (which can achieve higher speed and load capacity in a more compact structure) and the HMB series spiral bevel gearball screw elevator (which can achieve higher speed and more accurate positioning accuracy in a more compact structure).

HM 初选表

类别 型号	HM2	HMB2	HM4	HMB4	HM6	HMB6	HM7	HMB7	HM8	HMB8	HM10	HMB10
静载	2000Kgf	2000Kgf	9766Kgf	9766Kgf	12400Kgf	12400Kgf	12691Kgf	12691Kgf	20288Kgf	20288Kgf	24960Kgf	24960Kgf
最大动载	950Kgf	950Kgf	3844Kgf	3844Kgf	4319Kgf	4319Kgf	4803Kgf	4803Kgf	5375Kgf	5375Kgf	6025Kgf	6025Kgf
丝杆参数	Tr24x4	2005/2010	Tr32x6	3210/3220	Tr40x7	4010/4020	Tr50x10	5010/5020	Tr65x12	6310/6320	Tr80x12	8010/8020
速比	2.5	2.5	2.5	2.5	3	3	3	3	3	3	3	3
转一圈丝杆变化量	1.6MM	2MM/4MM	2.4MM	4MM/8MM	2.3MM	3.3MM/6.7MM	3.3MM	3.3MM/6.7MM	4MM	3.3MM/6.7MM	4MM	3.3MM/6.7MM
升降效率	40%	80%	40%	80%	40%	80%	40%	80%	40%	80%	40%	80%
II型螺母材质	铝青铜	Gcr15	铝青铜	Gcr15	铝青铜	Gcr15	铝青铜	Gcr15	铝青铜	Gcr15	铝青铜	Gcr15
外壳材质	球墨	球墨	球墨	球墨	球墨	球墨	球墨	球墨	球墨	球墨	球墨	球墨

注:表格中动载值需满足有良好导向,丝杆安装垂直度和平行度小于0.05mm,II型结构可以通过多导程方式加大承载。

HM 2- 2.5 - 1A - II - 100 - F - Z - U - 3L

1 2 3 4 5 6 7 8 9 10

1 HM:T型丝杆伞齿轮升降机;

HMB:滚珠丝杆伞齿轮升降机;

2 伞齿轮升降机型号: 2 (T2), 4 (T4), 6 (T6), 7 (T7), 8 (T8), 10 (T10);

3 速比: 2.5,3

4 1A:升降机安装方式:

1A:丝杆运动丝杆在上; 1B:丝杆运动丝杆在下;

2A:螺母运动螺母在上并螺母朝上; 2B:螺母运动螺母在下并螺母朝上

2C:螺母运动螺母在上并螺母朝下; 2D:螺母运动螺母在下并螺母朝下; (附图1)

5 II型丝杆头部: I光柱, II法兰, III螺纹, IV扁头; (附图2)

6 100:行程:升降机运行线性距离;

7 F:是否防旋转; F防旋,不防旋就不写

8 Z:防护罩, X:伸缩护罩, Q:两种防护罩都要

9 U:齿轮安装位置:

U:输入轴逆时针,丝杆、螺母上升;

D:输入轴逆时针,丝杆、螺母下降; (附图3)

10 3L:轴承座安装方式: 1L,2L,2L-1, 3L,4L; (附图4)

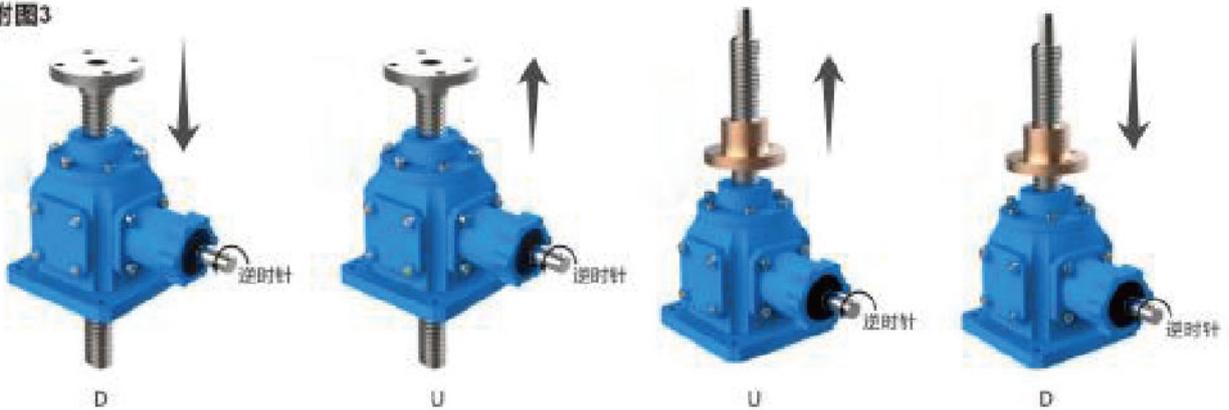
附图1



附图2



附图3



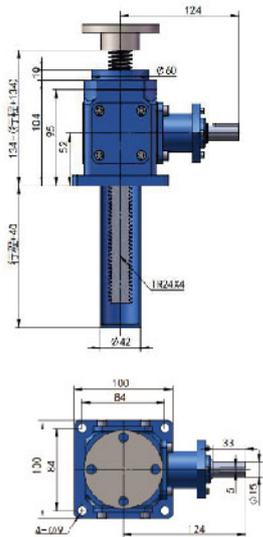
附图4



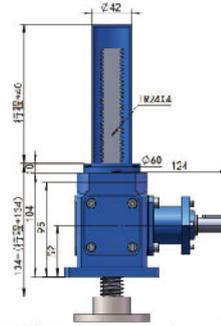
HM2装配型式/HM2 Assembly type

1型结构/Type1 structure

1A丝杆头部在上
1A Upright translating screw optional



1B丝杆头部在下
1B Inverted translating screw optional



丝杆头部可选/Screw head optional



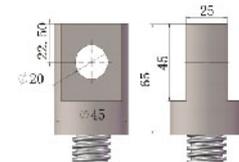
I型/Type I



II型/Type II



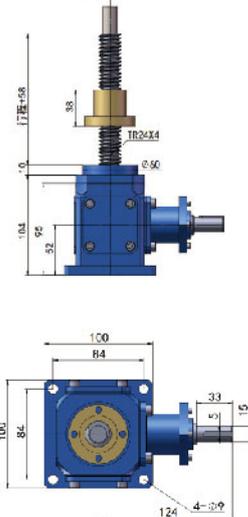
III型/Type III



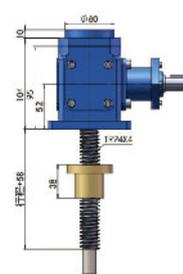
IV型/Type IV

2型结构/Type2 structure

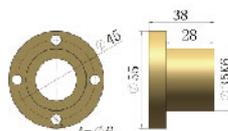
2A螺母在上
2A Upright rotating screw



2B螺母在下
2B Inverted rotating screw



2型丝杆螺母/Type 2 screw nut



丝杆头部可选/Screw head optional



I型/Type I



III型/Type III

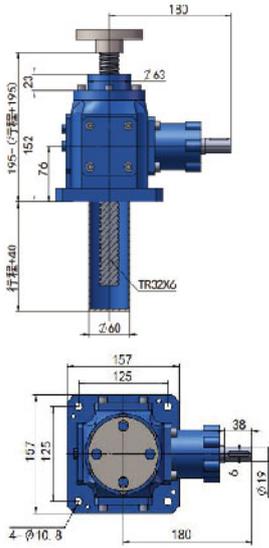
轴指向/Shaft direction



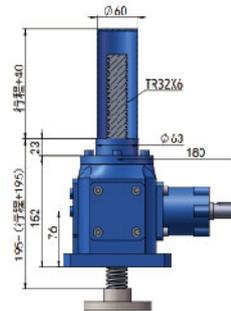
HM4装配型式/HM4 Assembly type

1型结构/Type1 structure

1A丝杆头部在上
1A Upright translating screw optional



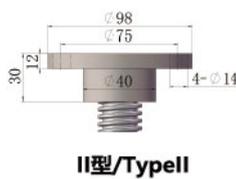
1B丝杆头部在下
1B Inverted translating screw optional



丝杆头部可选/Screw head optional



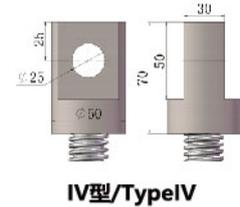
I型/Type I



II型/Type II



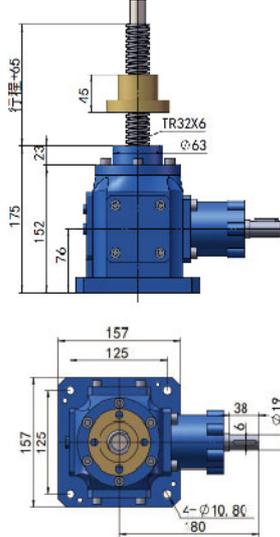
III型/Type III



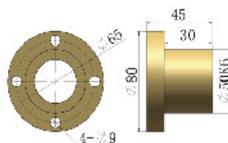
IV型/Type IV

2型结构/Type2 structure

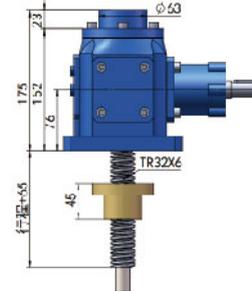
2A螺母在上
2A Upright rotating screw



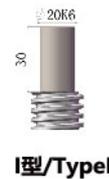
2型丝杆螺母/Type 2 screw nut



2B螺母在下
2B Inverted rotating screw



丝杆头部可选/Screw head optional



I型/Type I



III型/Type III

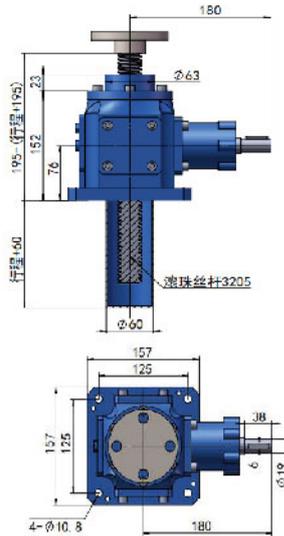
轴指向/Shaft direction



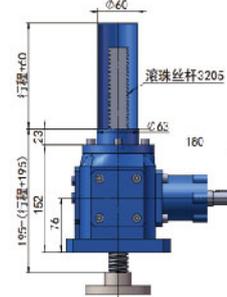
HMB4装配型式/HMB4 Assembly type

1型结构/Type1 structure

1A 滚珠丝杆头部在上
1A Upright translating ball screw optional



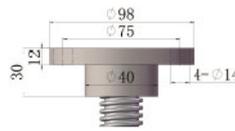
1B 滚珠丝杆头部在下
1B Inverted translating ball screw optional



滚珠丝杆头部可选/Ball screw head optional



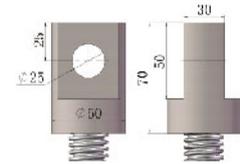
I型/TypeI



II型/TypeII



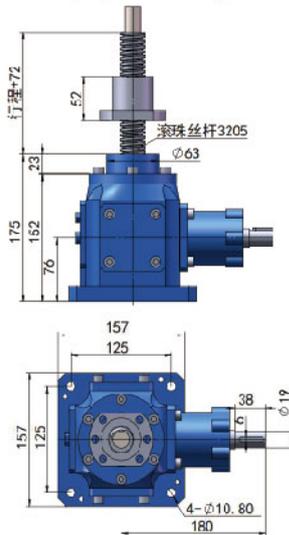
III型/TypeIII



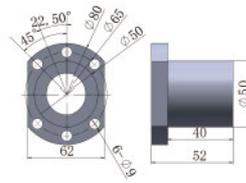
IV型/TypeIV

2型结构/Type2 structure

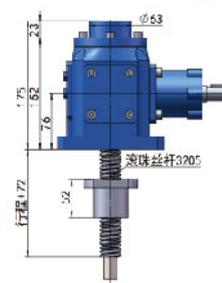
2A 螺母在上
2A Upright rotating screw



2型滚珠丝杆螺母
Type 2 ball screw nut



2B 螺母在下
2B Inverted rotating screw



滚珠丝杆头部可选/Ball screw head optional

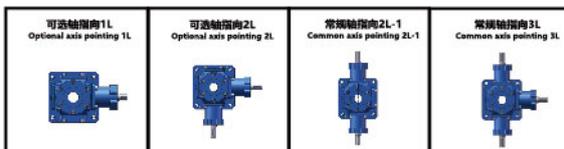


I型/TypeI



III型/TypeIII

轴指向/Shaft direction



注：①为满足不同工况需求，滚珠丝杆另有型号可供选择

②32X10、③32X20

④To meet the requirements of other working conditions, there are other models of ball screws available for selection ③32X10、③32X20

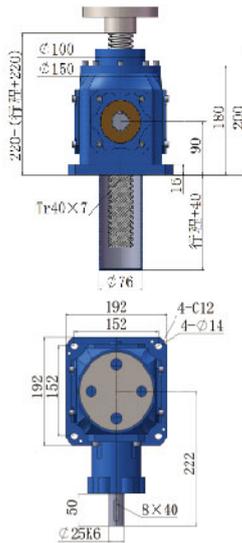
⑤滚珠丝杆型号选择，更多不同方案，详询选型工程师

⑥Selection of ball screw models, please consult the selection engineer for details based on different schemes

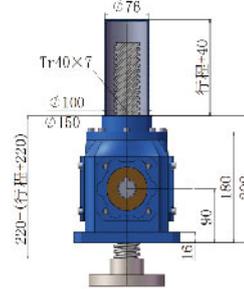
HM6装配型式/HM6 Assembly type

1型结构/Type1 structure

1A丝杆头部在上
1A Upright translating screw optional



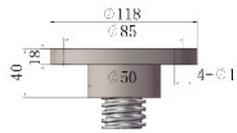
1B丝杆头部在下
1B Inverted translating screw optional



丝杆头部可选/Screw head optional



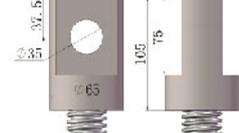
I型/TypeI



II型/TypeII



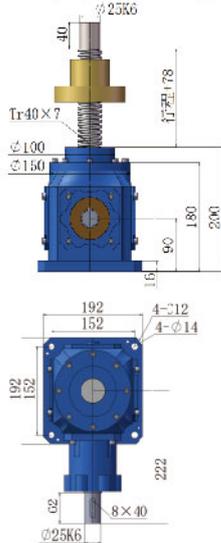
III型/TypeIII



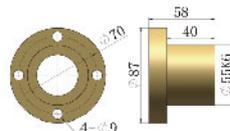
IV型/TypeIV

2型结构/Type2 structure

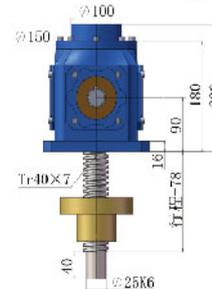
2A螺母在上
2A Upright rotating screw



2型丝杆螺母/Type 2 screw nut



2B螺母在下
2B Inverted rotating screw



丝杆头部可选/Screw head optional



I型/TypeI



III型/TypeIII

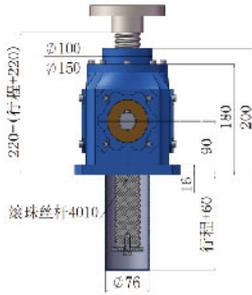
轴数结构/Axis structure



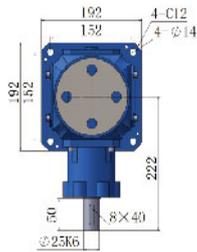
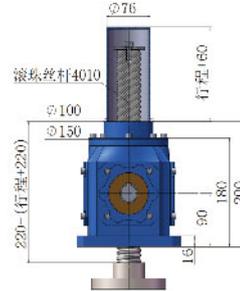
HMB6装配型式/HMB6 Assembly type

1型结构/Type1 structure

1A 滚珠丝杆头部在上
1A Upright translating ball screw optional



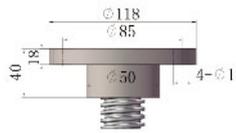
1B 滚珠丝杆头部在下
1B Inverted translating ball screw optional



滚珠丝杆头部可选/Ball screw head optional



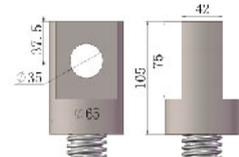
I型/TypeI



II型/TypeII



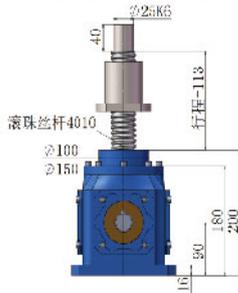
III型/TypeIII



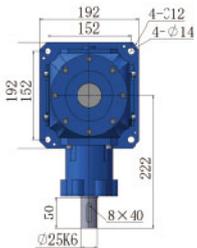
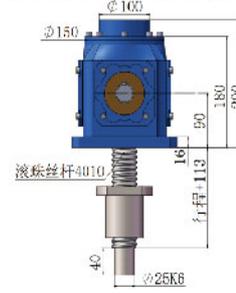
IV型/TypeIV

2型结构/Type2 structure

2A 螺母在上
2A Upright rotating screw

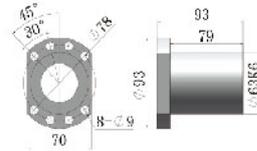


2B 螺母在下
2B Inverted rotating screw



2型滚珠丝杆螺母
Type 2 ball screw nut

滚珠丝杆头部可选/Ball screw head optional



I型/TypeI



III型/TypeIII

轴数结构/Axis structure



注：①为满足不同工况需求，滚珠丝杆另有型号可供选择
④40X20

②To meet the requirements of other working conditions, there are other models of ball screws available for selection
④40X20

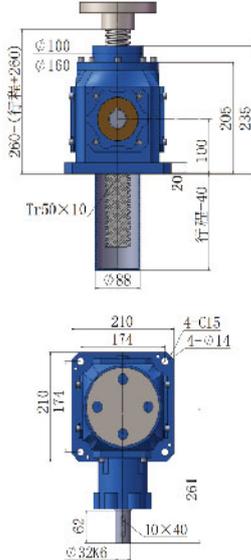
③滚珠丝杆型号选择，更多不同方案，详询选型工程师

③Selection of ball screw models, please consult the selection engineer for details based on different schemes

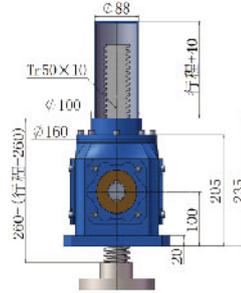
HM7装配型式/HM7 Assembly type

1型结构/Type1 structure

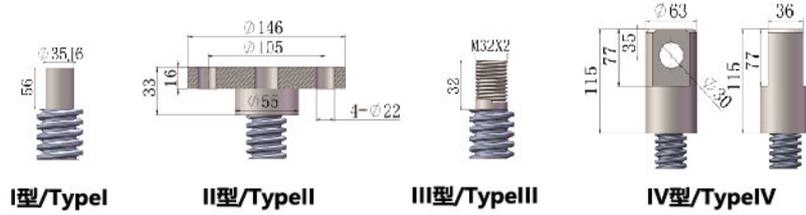
1A丝杆头部在上
1A Upright translating screw optional



1B丝杆头部在下
1B Inverted translating screw optional

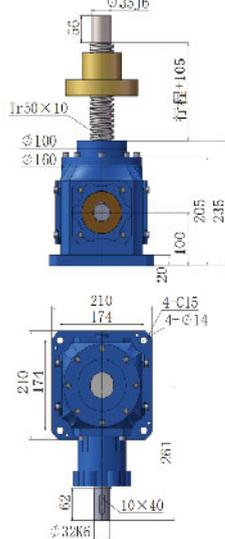


丝杆头部可选/Screw head optional

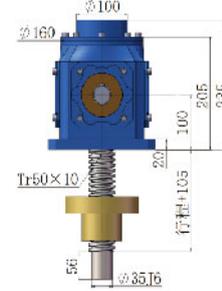


2型结构/Type2 structure

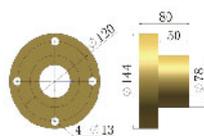
2A螺母在上
2A Upright rotating screw



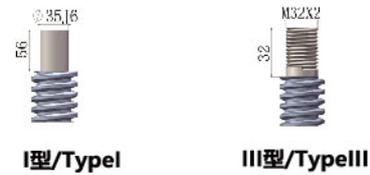
2B螺母在下
2B Inverted rotating screw



2型丝杆螺母/Type 2 screw nut



丝杆头部可选/Screw head optional



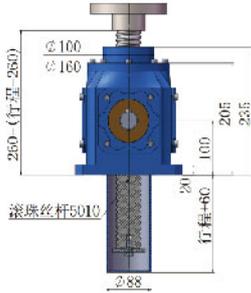
轴数结构/Axis structure



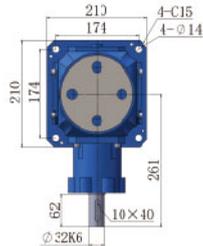
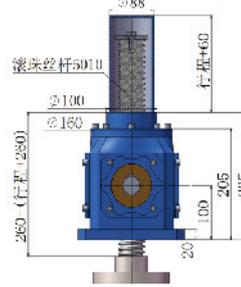
HMB7装配型式/HMB7 Assembly type

1型结构/Type1 structure

1A 滚珠丝杆头部在上
1A Upright translating ball screw optional



1B 滚珠丝杆头部在下
1B Inverted translating ball screw optional



滚珠丝杆头部可选/Ball screw head optional



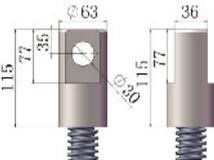
I型/Type I



II型/Type II



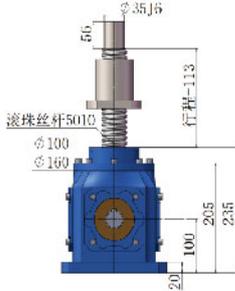
III型/Type III



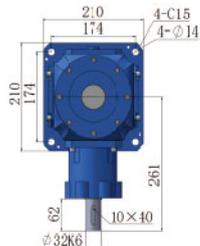
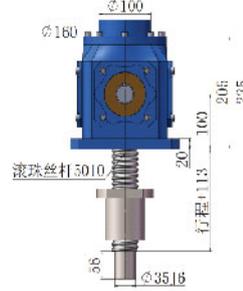
IV型/Type IV

2型结构/Type2 structure

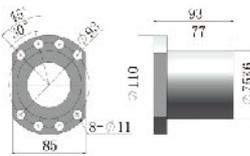
2A 螺母在上
2A Upright rotating screw



2B 螺母在下
2B Inverted rotating screw



2型滚珠丝杆螺母
Type 2 ball screw nut



滚珠丝杆头部可选/Ball screw head optional



I型/Type I



III型/Type III

轴数结构/Axis structure



注：①为满足不同工况需求，滚珠丝杆另有型号可供选择
Ø50X20

①To meet the requirements of other working conditions, there are other models of ball screws available for selection
Ø50X20

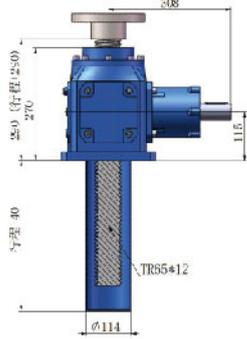
②滚珠丝杆型号选择，更多不同方案，详询选型工程师

②Selection of ball screw models, please consult the selection engineer for details based on different schemes

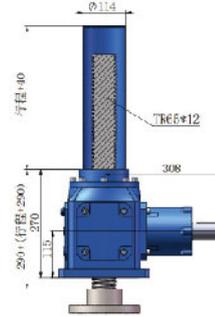
HM8装配型式/HM8 Assembly type

1型结构/Type1 structure

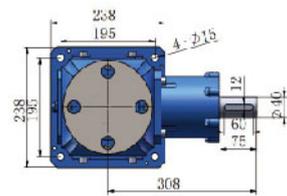
1A丝杆头部在上
1A Upright translating screw optional



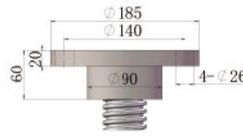
1B丝杆头部在下
1B Inverted translating screw optional



丝杆头部可选/Screw head optional



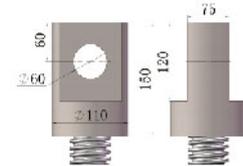
I型/Type I



II型/Type II



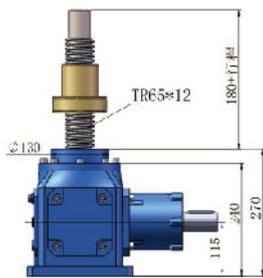
III型/Type III



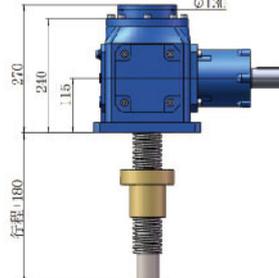
IV型/Type IV

2型结构/Type2 structure

2A螺母在上
2A Upright rotating screw

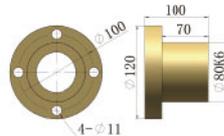
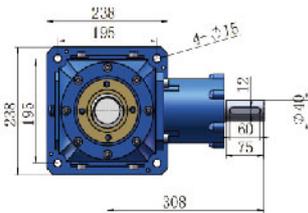


2B螺母在下
2B Inverted rotating screw



2型丝杆螺母/Type 2 screw nut

丝杆头部可选/Screw head optional



I型/Type I



III型/Type III

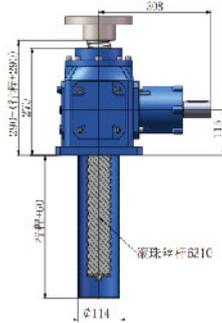
轴数结构/Axis structure



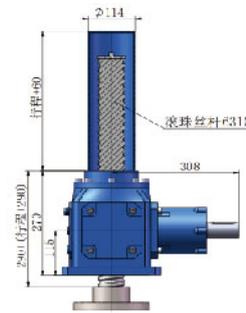
HMB8装配型式/HMB8 Assembly type

1型结构/Type1 structure

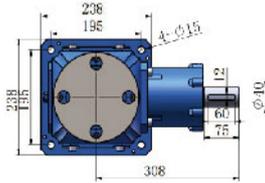
1A滚珠丝杆头部在上
1A Upright translating ball screw optional



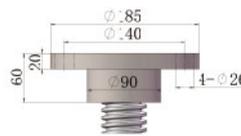
1B滚珠丝杆头部在下
1B Inverted translating ball screw optional



滚珠丝杆头部可选/Ball screw head optional



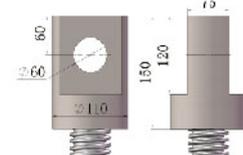
I型/Type I



II型/Type II



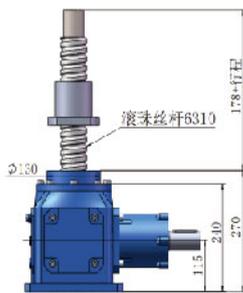
III型/Type III



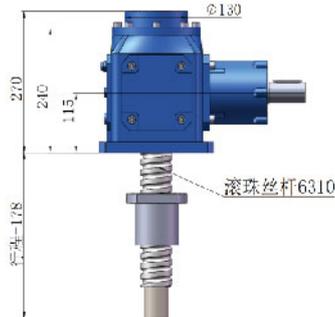
IV型/Type IV

2型结构/Type2 structure

2A螺母在上
2A Upright rotating screw

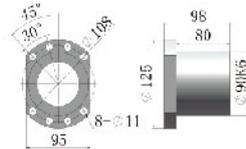
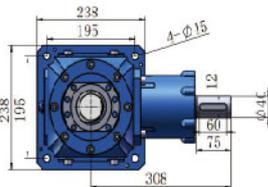


2B螺母在下
2B Inverted rotating screw



2型滚珠丝杆螺母
Type 2 ball screw nut

滚珠丝杆头部可选/Ball screw head optional



I型/Type I



III型/Type III

轴数结构/Axis structure



注：①为满足不同工况需求，滚珠丝杆另有型号可供选择
Ø63X20

②To meet the requirements of other working conditions, there are other models of ball screws available for selection
Ø63X20

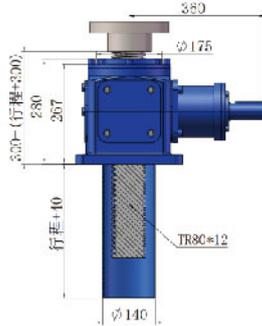
③滚珠丝杆型号选择，更多不同方案，详询选型工程师

④Selection of ball screw models, please consult the selection engineer for details based on different schemes

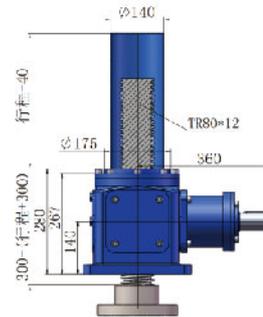
HM10装配型式/HM10 Assembly typer

1型结构/Type1 structure

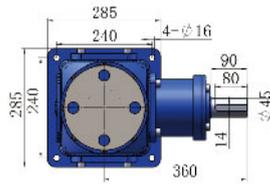
1A丝杆头部在上
1A Upright translating screw optional



1B丝杆头部在下
1B Inverted translating screw optional



丝杆头部可选/Screw head optional



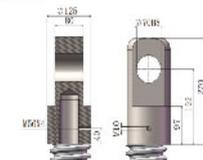
I型/TypeI



II型/TypeII



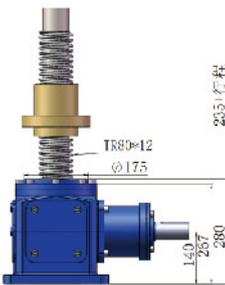
III型/TypeIII



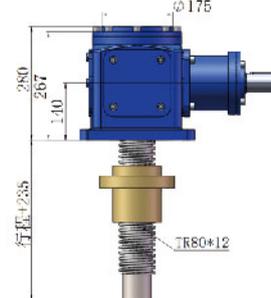
IV型/TypeIV

2型结构/Type2 structure

2A螺母在上
2A Upright rotating screw

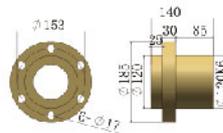
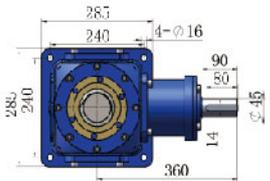


2B螺母在下
2B Inverted rotating screw



2型丝杆螺母/Type 2 screw nut

丝杆头部可选/Screw head optional



I型/TypeI



III型/TypeIII

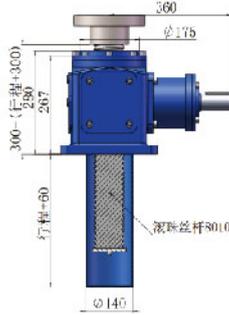
轴数结构/Axis structure



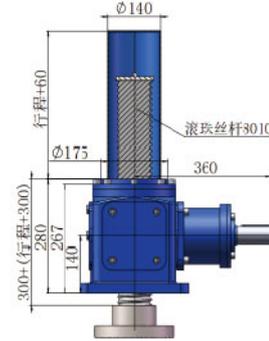
HMB10装配型式/HMB10 Assembly type

1型结构/Type1 structure

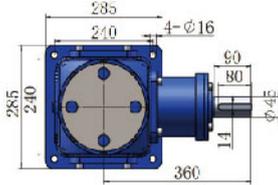
1A 滚珠丝杆头部在上
1A Upright translating ball screw optional



1B 滚珠丝杆头部在下
1B Inverted translating ball screw optional



滚珠丝杆头部可选/Ball screw head optional



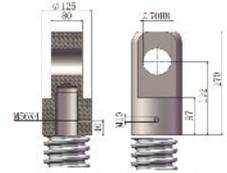
I型/TypeI



II型/TypeII



III型/TypeIII



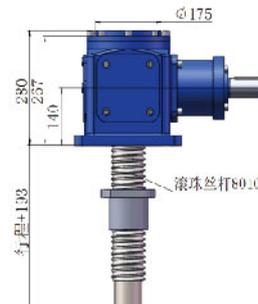
IV型/TypeIV

2型结构/Type2 structure

2A 螺母在上
2A Upright rotating screw

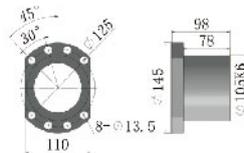
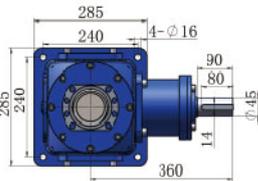


2B 螺母在下
2B Inverted rotating screw



2型滚珠丝杆螺母
Type 2 ball screw nut

滚珠丝杆头部可选/Ball screw head optional



I型/TypeI



III型/TypeIII

轴数结构/Axis structure



注：①为满足不同工况需求，滚珠丝杆另有型号可供选择
②To meet the requirements of other working conditions, there are other models of ball screws available for selection

③滚珠丝杆型号选择，更多不同方案，详询选型工程师
③Selection of ball screw models, please consult the selection engineer for details based on different schemes

④滚珠丝杆型号选择，更多不同方案，详询选型工程师
④Selection of ball screw models, please consult the selection engineer for details based on different schemes