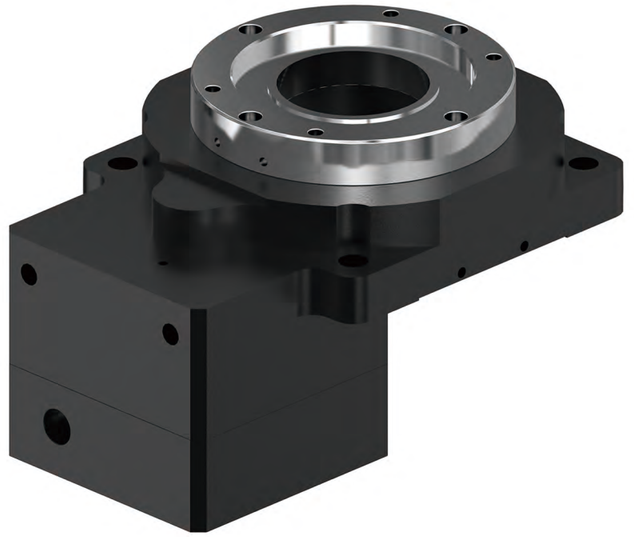
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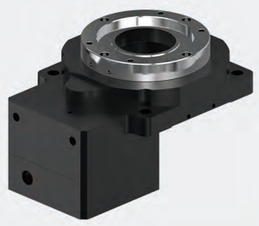


中空旋转平台样册

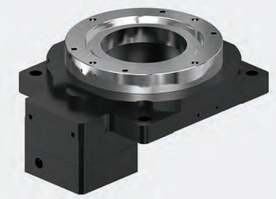
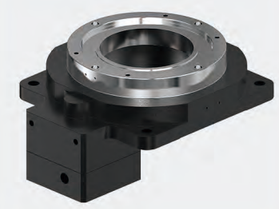
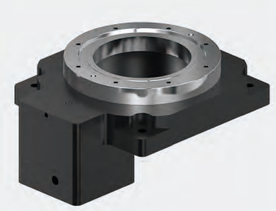
Hollow Rotary Platform catalog

CAT F.2501

目 录
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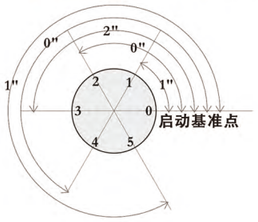
1-2	用语解说/应用案例 *Glossary Of Technical Terms/Application Examples*	
3-4	产品特征 *Features*	
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10-17	DYH85	

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33-36	马达安装说明 *Instructions of Motor Mounting*	

中空旋转平台 Hollow Rotary Actuators

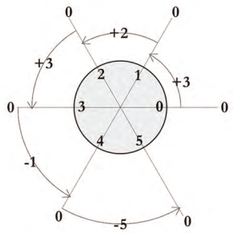
用语解说 *Glossary Of Technical Terms*



重复定位精度 *Repeated positioning accuracy*

以起动基准点设定为“0”点，做任何不同角度之往复运动，其每次回到启动点的精度误差值为“重复定位精度”所标示之数值。

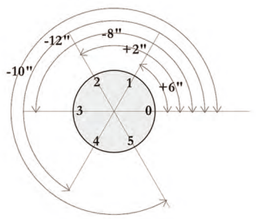
Set the starting reference point as "0" point, which make reciprocating motion at any different angle, and the precision error value of each moving point is the "Repeated positioning accuracy",as marked.



相对精度 *Relative accuracy*

每次的启动点，均视为“0"点，由此点转动至下一个停止点的角度误差值为“相对精度”标示，下次再启动旋转所设定的角度时，以目前的停止点，视为新的“0”点。

Each starting point is regarded as "0" point, the angular error from this point to the next stop point is the marked "Relative accuracy". When the next time the rotation is started, the current stop point will be regarded as the new "0" point.



绝对精度 *Absolute accuracy*

以同一个启动点的设定：经任意角度旋转的单向定位精度皆处于“绝对精度”的范围内。

The setting of the same starting point: the single positioning accuracy rotated by any angle is within the range of "Absolute accuracy".

注：图表中的数据为范围数字，实际值请参阅“规格表”

Note: the data in the chart are sample data, please refer to the specification table for actual values.

应用案例 *Application Examples*

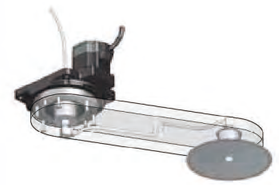
高性能、高刚性的用途

High performance&stiffness application

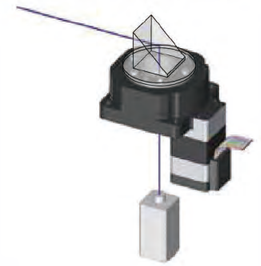
负载惯性产生变化的用途
Applications subject to changing load inertia



施以惯量载重的用途
Applications where a moment load is applied



光学用途
Optical applications using the hollow hole



高精度定位用途
High accuracy positioning applications



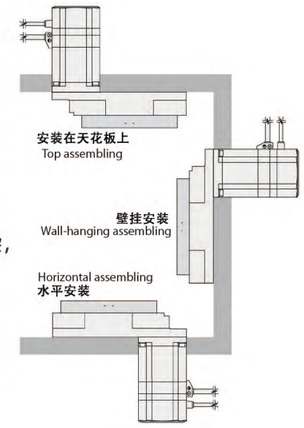
利用中空孔的高精度定位用途
High accuracy positioning applications using the hollow hole



安装方向自由设计
Flexible design of assembling direction

DY旋转平台除水平安装外，还可以垂直安装或倒挂安装，装置设计的范围较广。

DY rotary platform can be assembled in vertical direction or upside down direction as well as the parallel direction.



使用时注意事项：

中空旋转式传动装置偶尔会有少量润滑油渗出。如润滑油渗出导致周围环境污染，请在定期检查时进行确认或安装接油盘等装置。

Note:

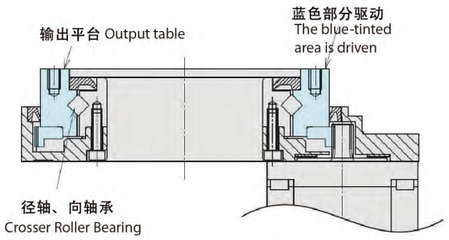
Hollow rotary drive system will occur the exudation of few lubrication oil. If the oil result in the environmental pollution, please check regularly or assemble the oil-receiving tray

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产品特征 Features

一体型产品 Integrated Products

DY系列为组合中空旋转平台与伺服马达的产品。平台内部为减速比构造，可实现高输出驱动。
DY series are combined with hollow rotary actuators platform and servo motor. Inside are reduction ratio device which can achieve high output drive.



短时间定位 Short Positioning Time

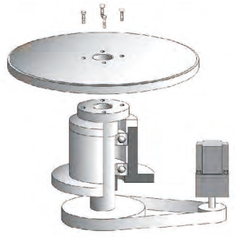
可在短时间内实现惯性负载的定位
It can realize inertia load positioning in a short time.

无齿隙的高精度定位 High Accuracy Positioning With Zero Backlash

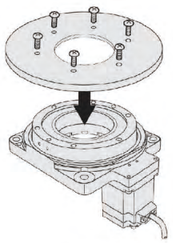
无齿隙，螺旋斜齿，研磨机齿轮：齿轮模数大，实现高扭矩反复定位精度±15arcsec（±0.04°）
*精度是在一定负载、一定温度（常温）下的数值。
*Zero backlash,spiral gear,grinding machine gear:high tooth module to achieve high torque.Repetitive Accuracy:±15arcsec（±0.04°）
Note: The repetitive positioning accuracy is measured at a constant temperature (normal temperature) under a constant load.

减少设计时间，缩短交期 Reduce Design Time And Shorten The Delivery

输出平台可直接安装设备的工作台或机械手臂，与使用皮带、皮带轮等机械零件时比较，可以减少机构设计。零件调配、皮带张力调整等时间及成本节省设备设计时间，有助于缩短交期。
Equipment tables and arms can be installed directly on the output table. This saves you the hassle and cost of designing an installation mechanism, arranging necessary parts, adjusting the belt tension, etc. when mechanical parts such as belt and pulley are used for installation.



马达+机构部件
（另行设计.安排）
Motor+mechanical parts(designed and arranged separately)

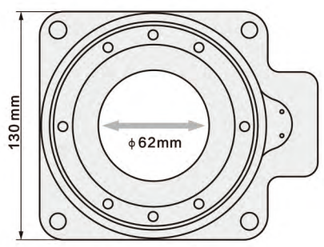


一体化设计
（结合伺服电机型产品）
Integrated product (combined with servo motor products)

大口径中空输出平台节省配线与配管 Large-Diameter, Hollow Output Table Makes Simple Wiring and Piping Possible

大口径的中空孔（贯穿）可利用在环境复杂的配线管上，可简化设备设计。
The large diameter hollow hole (through-hole) helps reduce the complexity of wiring and piping, thus simplifying your equipment design.

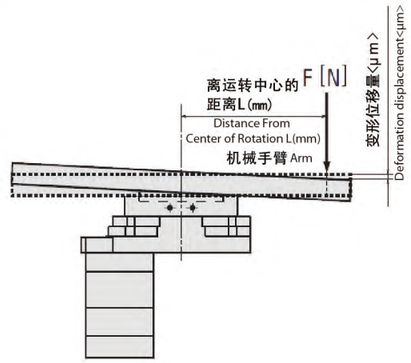
	安装尺寸mm Frame Size	中空径 Diameter of Hollow Section
DYH60	60	ϕ28
DYH85	85	ϕ33
DYH130	130	ϕ62
DYH200	200	ϕ100
DYH280	280	ϕ150



产品特征 Features

高输出 高刚性 High Power and Rigidity

Standard Type的输出平台轴承使用径、轴向轴承，实现了高载重、高刚性。
<输出> 最大容许惯量 200N·m
<刚性> 最大容许轴心方向载重 500N·m
型号越大容许惯量越大，相对于负载惯量的变形位移量就越小。
The standard type-hollow output table is integrated with a high rigidity cross roller bearing to achieve high load and high rigidity.
<output>max permissible inertia 200N·m
<rigidity>max permissible load in axis direction 500N·m.
Larger size with bigger permissible inertia ,and smaller deformation displacement relative to load inertia .

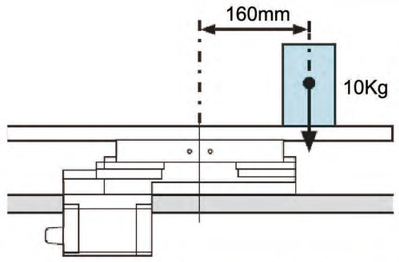


高刚性 High Rigidity

在距离平台中央部160mm的位置有10kg的工作物时，
惯重为15.7N·m。
When there is 10kg object working in the place which is distant 160mm from center plate, the inertia is 15.7N·m

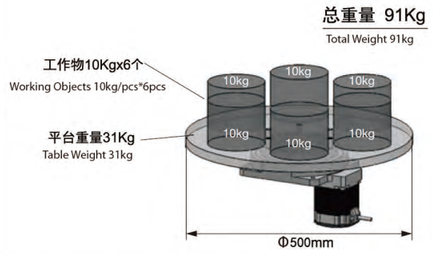
10kg×gm/s 2×0.16m=15.7N·m。

DYH200的容许惯重为200N·m，在容许值以内。
The DYH200's permissible inertia is 200N·m within the permissible value.



高刚性 High Rigidity

品名：DYH200　电源输入：AC220V
Name:DY200-10　Input Power:AC200V
搬运重量：91kg（工作物6个+平台）
：工作物10kg/个×6个
：平台31kg
(直径500mm、厚度200mm、铁质)
Weight：91kg(working objects 6pcs+table)
*working objects 10kg/pcs*6pcs*
table 31kg
(diameter 500mm,thickness 200mm,Iron Material)



拥有【原点检知器套件】的选购配件 Home Sensor Suite Available for Optional Accessories

由于原点设定所需的零件齐全，因此可节省安装检知器的设计、制造、零件调配时间。
As the complete parts of home position setup ,the time regarding design,manufacturing,parts allocation of assembling sensor can be saved.

搭配方便 Easy Match

可任意搭配任何品牌的伺服马达或步进马达。
It can be matched with any brand of servo motor or stepper motor.

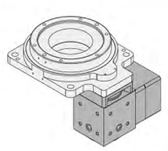
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型号订购码 Code

DYH60 本体型号 Item No. - **F** 马达连接方式 Lead Screw Specifications: F:标准型 F: Standard type; FP:行星型 FP: Planetary type; FR:直角型 FR: right-angled type - **5** 减速比 Reduction ratio: 5, 10, 15, 20, 25, 50 - **M10** 马达类型 Motor type: M10:三菱伺服100W Φ8，PCD46，M4 M10: Mitsubishi Servo100W Φ8，PCD46，M4; P10:松下伺服100W Φ8，PCD45，M3 P10: Panasonic Servo 100W Φ8，PCD45，M3; T1:42步进电机 Φ5，31，M3 T1: 42 Stepper motor Φ5，31，M3 - **RD3** 提供伺服电机及驱动 Provide servo motors and drives: 缺省：不提供 Default: Not provided



直角转向马达连接方式 Motor connection direction

马达右折安装 FR-R Type	马达左折安装 FR-L Type	马达直接安装 FR Type
		

技术参数 Technical Parameters

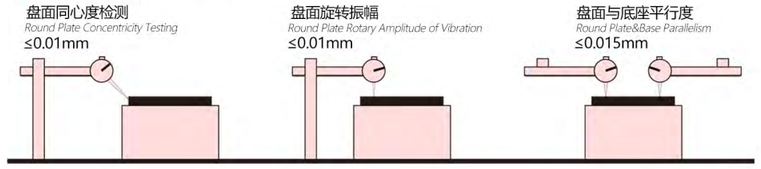
产品型号 Model Type	DYH60F	DYH60FP	DYH60FR
减速比i Reduction Ratio	5	15/20/25/50	10/15/25
容许扭矩(N·m) Permissible Torque (N·m)	5.2		
容许惯性力矩(N·m) Permissible Inertia Moment Load(N.M)	5		
容许轴向负载(N) Permissible Axial Load (N)	250		
定位精度(arc-min) Positioning Accuracy(arc-min)	≤3		
转台平面度(mm) Rotary table flatness(mm)	≤0.01		
转台同心度(mm) Rotary table concentricity(mm)	≤0.01		
重复定位精度(arc-sec) Repeatability accuracy(arc-sec)	≤15	≤120	
容许盘面转速(rpm) Permissible table rotation speed	200		
角度范围(°) Angle range(°)	360		
重量(kg) Weight(kg)	0.6	1	1.1
使用温度(℃) Operating temperature(℃)	-25~+90		
防护等级 Protection Grade	IP40		

定位检测精度 Module Dimension

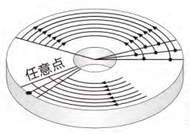
盘面同心度检测 Round Plate Concentricity Testing
≤0.01mm

盘面旋转振幅 Round Plate Rotary Amplitude of Vibration
≤0.01mm

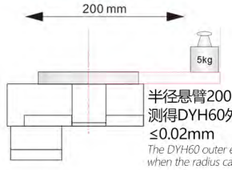
盘面与底座平行度 Round Plate&Base Parallelism
≤0.015mm



外径任意点定位精度 Positioning Accuracy of Arbitrary Point in Outer Diameter.
半径30mm Radius 30mm
≤3min



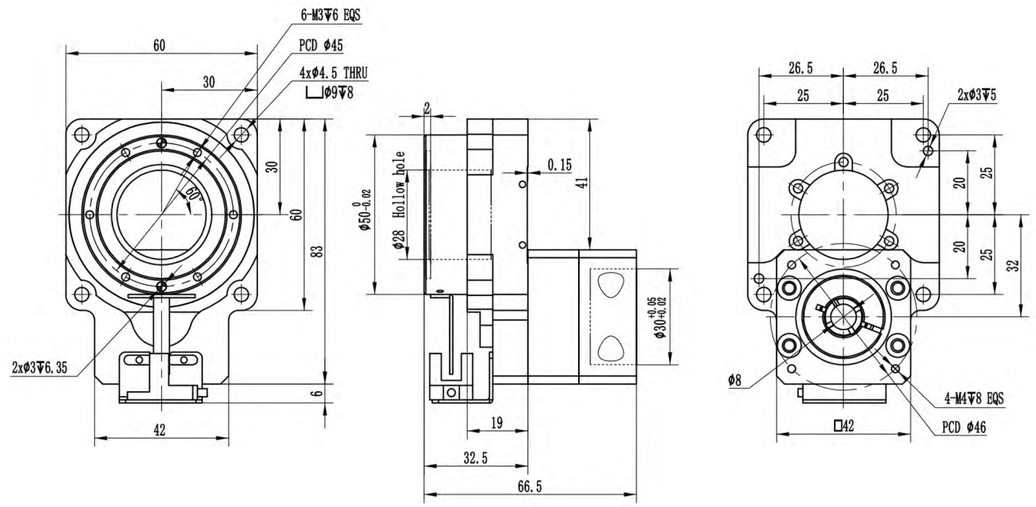
反复定位精度 Repetitive Accuracy Radius
半径30mm Radius 30mm
DYH60F:≤15sec
DYH60FP\DYH60FR:≤120sec



半径悬臂200mm施力重力5kg时，测得DYH60外边缘 ≤0.02mm
The DYH60 outer edge is ≤0.02mm when the radius cantilever is 300mm.

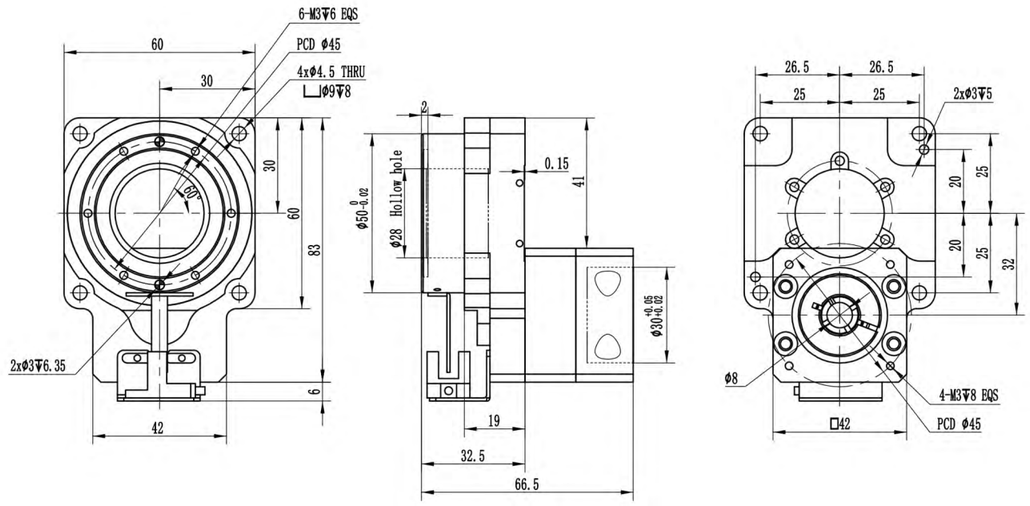
DYH60F-5-M10

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DYH60F-5-P10

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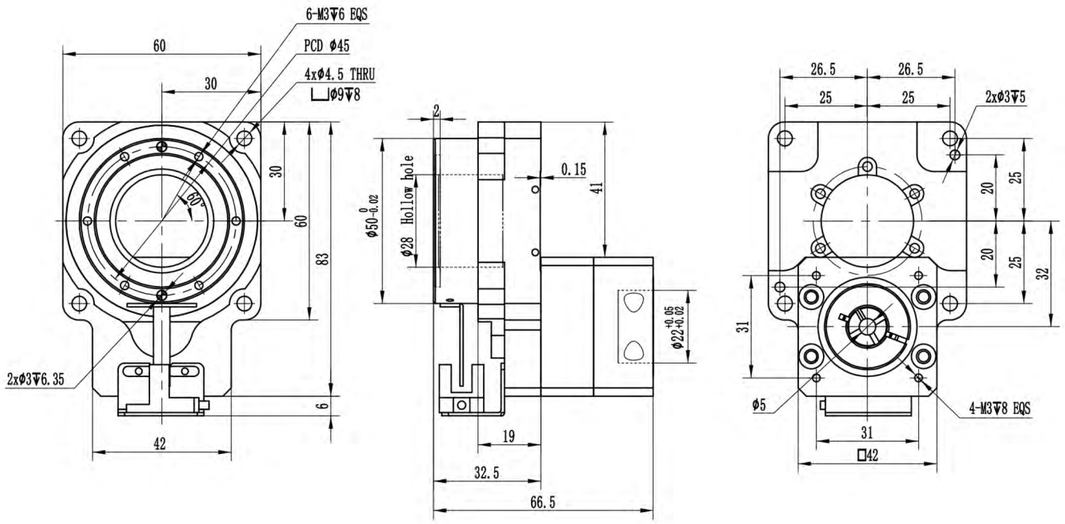


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DYH60 空旋转平台
DYH60 Hollow Rotary Actuators

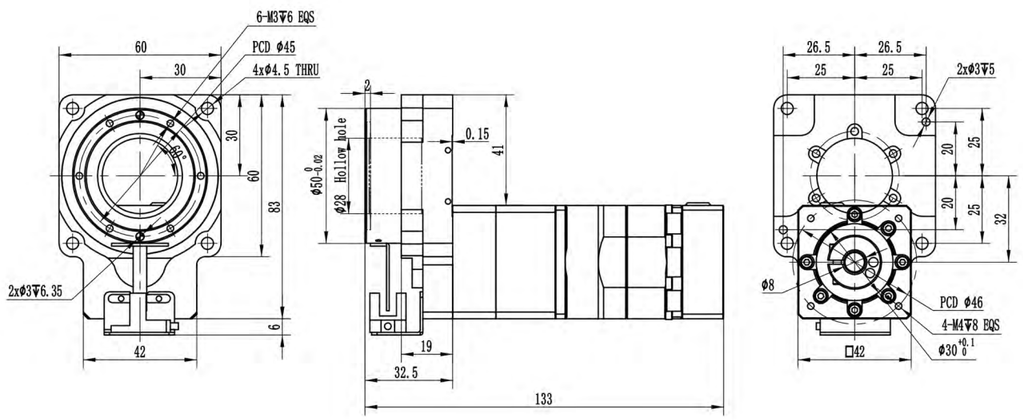
DYH60F-5-T1

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DYH60FP-15(20/25/50)-M10

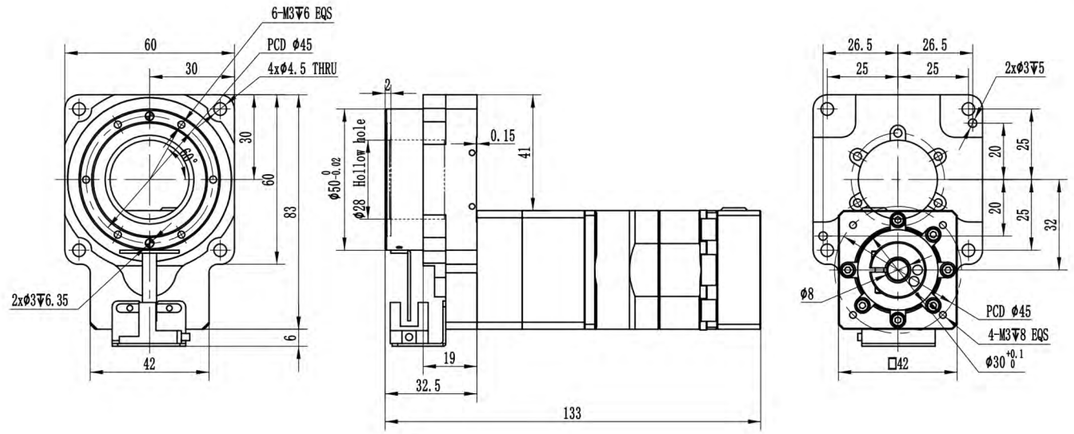
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DYH60 中空旋转平台
DYH60 Hollow Rotary Actuators

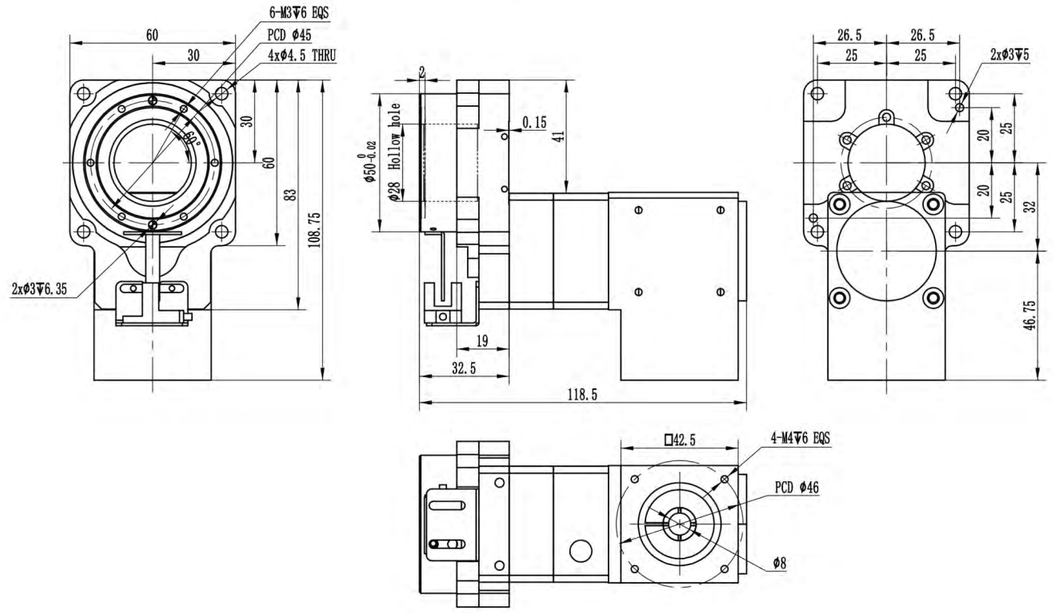
DYH60FP-15(20/25/50)-P10

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DYH60FR-10(15/25)-M10

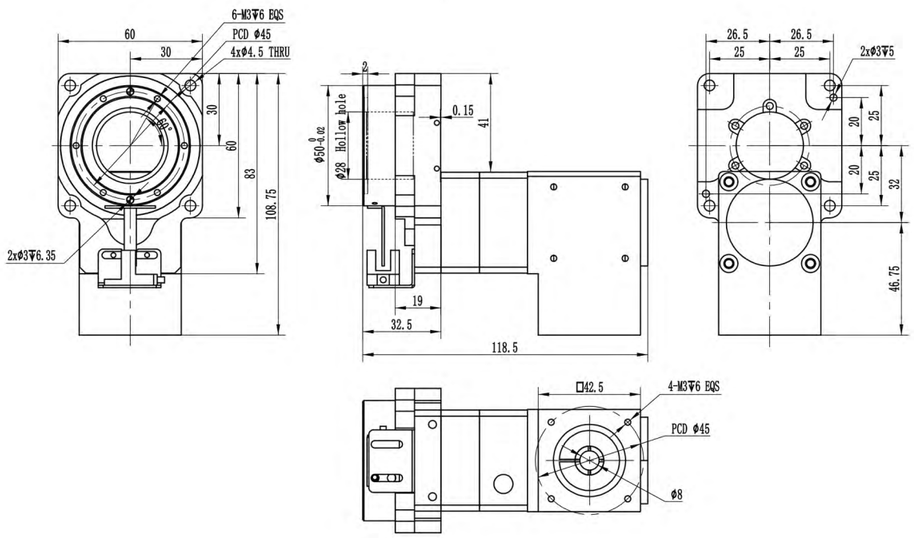
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DYH60FR-10(15/25)-P10

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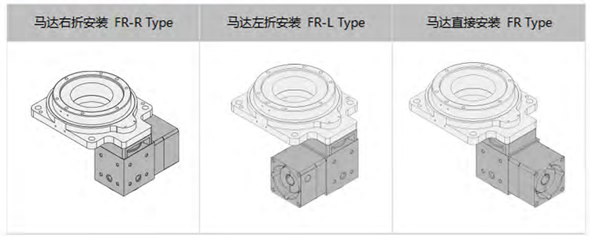


型号订购码 Code

DYH85	F	-	5	-	M40	-	RD3
本体型号 Item No.	马达连接方式 Lead Screw Specifications		减速比 Reduction ratio		马达类型 Motor type		提供伺服电机及驱动 Provide servo motors and drives
	F:标准型 F: Standard type		5		M40:三菱伺服400W Φ14，PCD70，M5 M40: Mitsubishi Servo400W Φ8，PCD70，M5		缺省：不提供马达 Default: Not provided
	FP:行星型 FP: Planetary type		10		P20:松下伺服200W Φ11，PCD70，M4 P20: Panasonic Servo200W Φ11，PCD70，M4		
	FR:直角型 FR: right-angled type		30		P40:松下伺服400W Φ14，PCD70，M4 P40: Panasonic Servo400W Φ14，PCD70，M4		
			40		T2:57步进电机 Φ8，47.14，M4 T2: 57 Stepper motor Φ8，47.14，M4		
			50		T2S:57步进电机 Φ6.35，47.14，M4 T2S: 57 Stepper motor Φ6.35，47.14，M4		



直角转向马达连接方式 Motor connection direction



技术参数 Technical Parameters

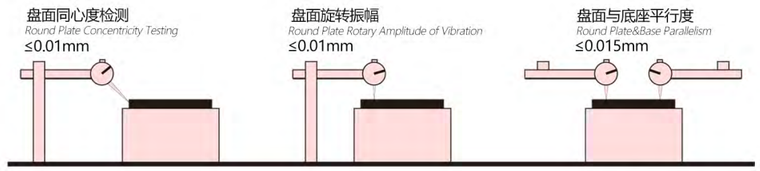
产品型号 ModelType	DYH85F		DYH85FP	DYH85FR
减速比i iReduction Ratio	5	10	30,40,50	30,40,50
容许扭矩(N·m) Permissible Torque (N·m)	20	16	16	
容许惯性力矩(N·m) Permissible inertia Moment Load(N.M)	10			
容许轴向负载(N) Permissible Axial Load (N)	500			
定位精度(arc-min) Positioning Accuracy(arc-min)	≤3			
转台平面度(mm) Rotary table flatness(mm)	≤0.01			
转台同心度(mm) Rotary table concentricity(mm)	≤0.01			
重复定位精度(arc-sec) Repeatability accuracy(arc-sec)	≤15		≤120	
容许盘面转速(rpm) Permissible table rotation speed	200			
角度范围(°) Angle range(°)	360			
重量(kg) Weight(kg)	1.4		2.6	2.6
使用温度(℃) Operating temperature(℃)	-25~+90			
防护等级 Protection Grade	IP40			

定位检测精度 Module Dimension

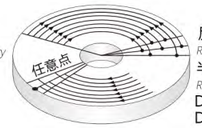
盘面同心度检测
Round Plate Concentricity Testing
≤0.01mm

盘面旋转振幅
Round Plate Rotary Amplitude of Vibration
≤0.01mm

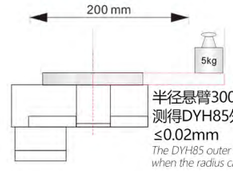
盘面与底座平行度
Round Plate&Base Parallelism
≤0.015mm



外径任意点定位精度
Positioning Accuracy of Arbitrary Point in Outer Diameter.
半径42.5mm
Radius 42.5mm
≤3min



反复定位精度
Repetitive Accuracy Radius
半径42.5mm
Radius 42.5mm
DYH85F:≤15sec
DYH85FP\DYH85FR:≤120sec

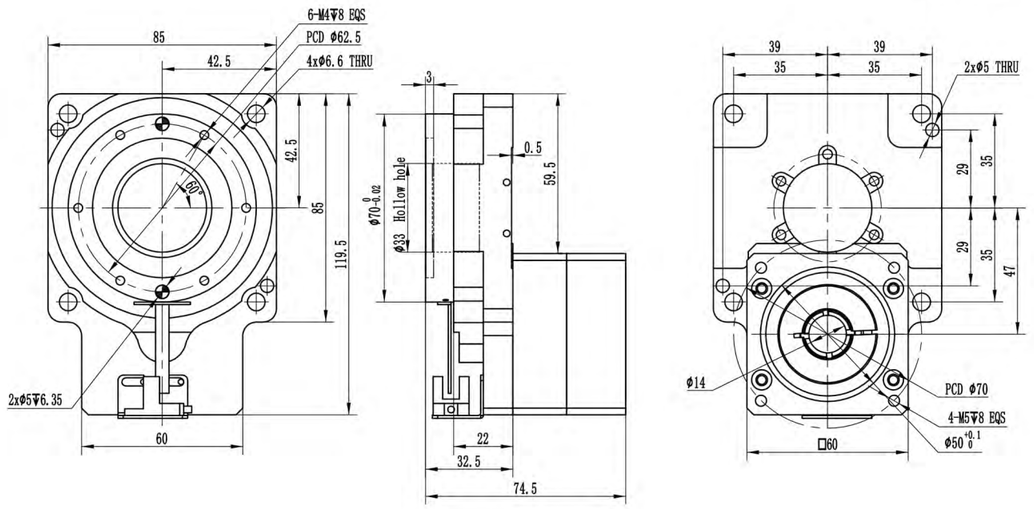


半径悬臂300mm施力重力10kg时，
测得DYH85外边缘
≤0.02mm
The DYH85 outer edge is ≤0.02mm when the radius cantilever is 300mm.

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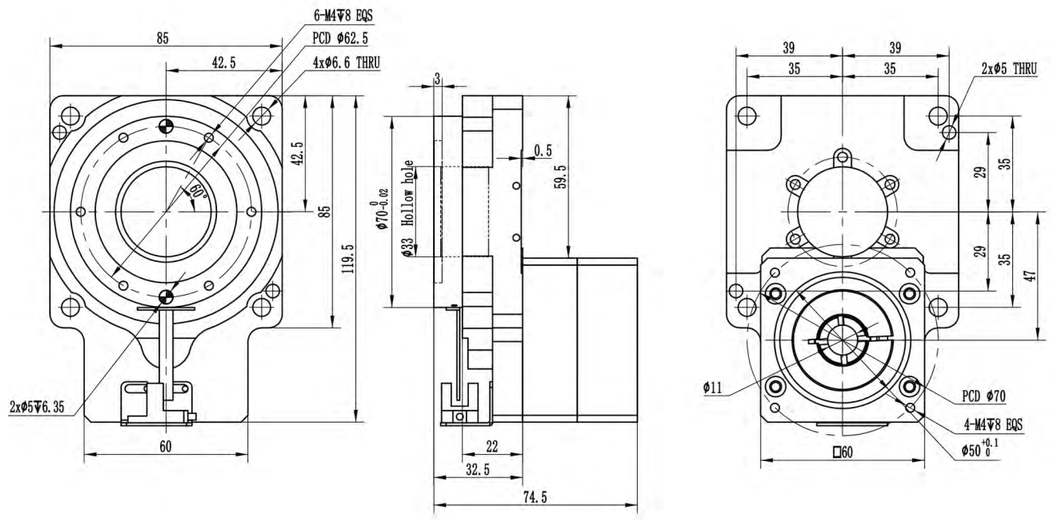
DYH85F-5-M40

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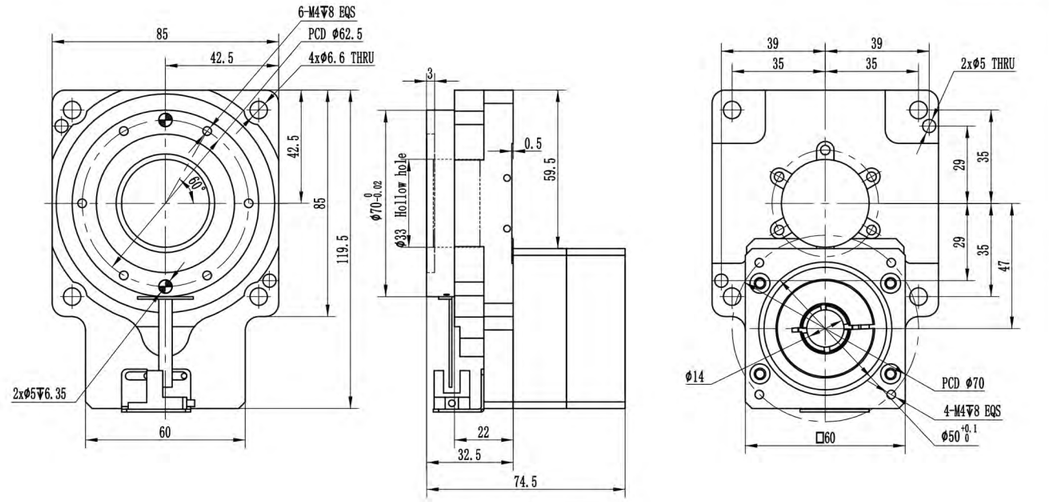
DYH85F-5-P20

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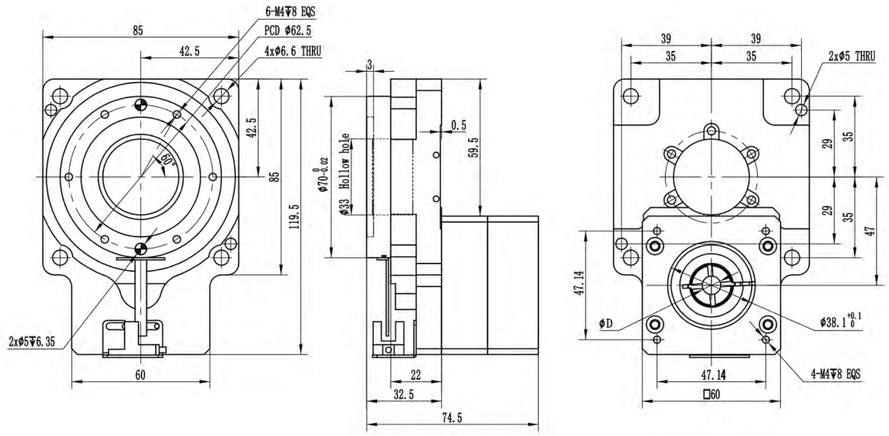
DYH85F-5-P40

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DYH85F-5-T2/T2S

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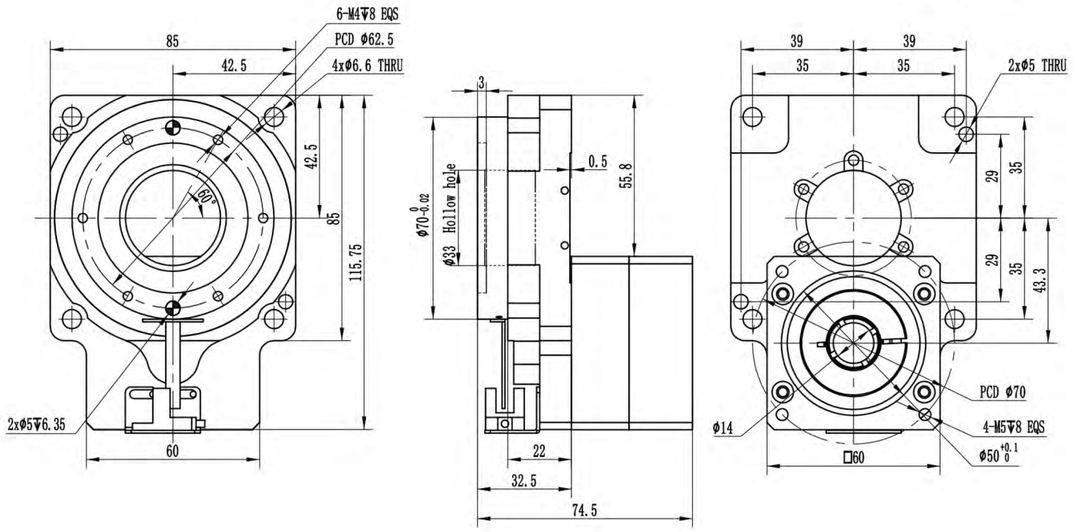


马达类型 Motor types	马达轴径φD Motor shaft diameter
T2	φ8
T2S	φ6.35

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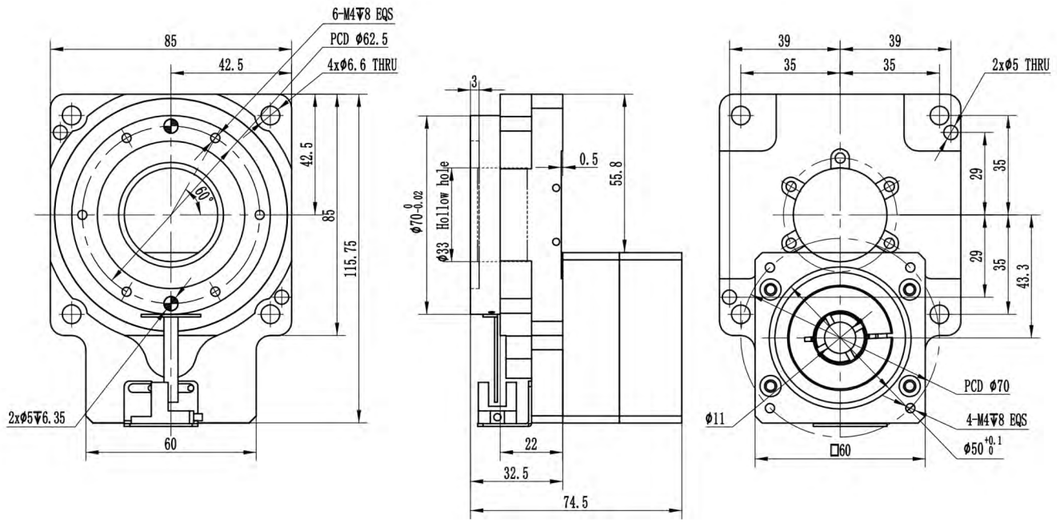
DYH85F-10-M40

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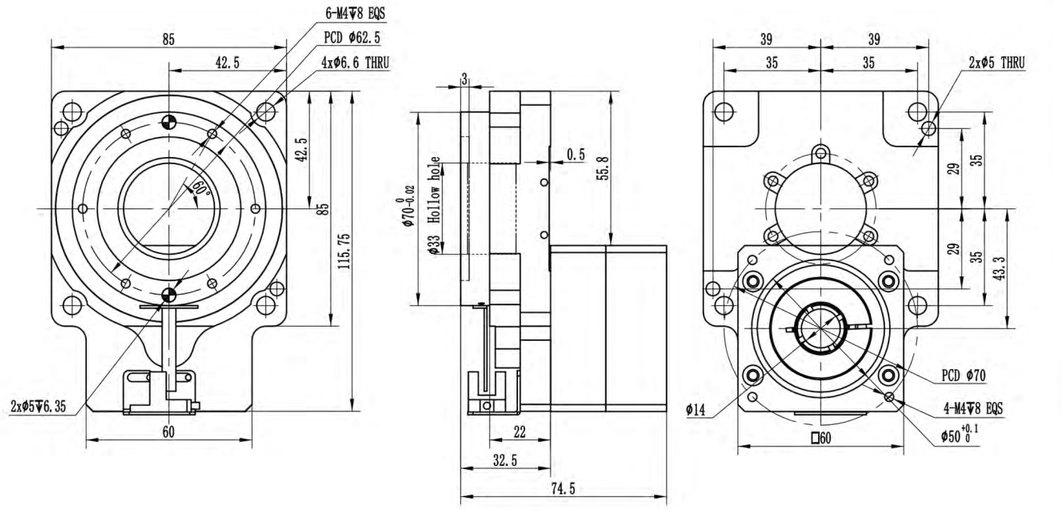
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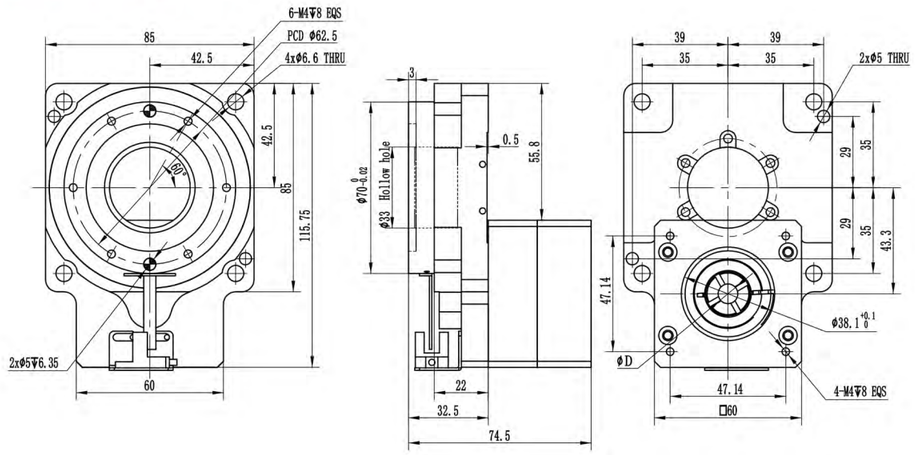
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DYH85F-10-T2/T2S

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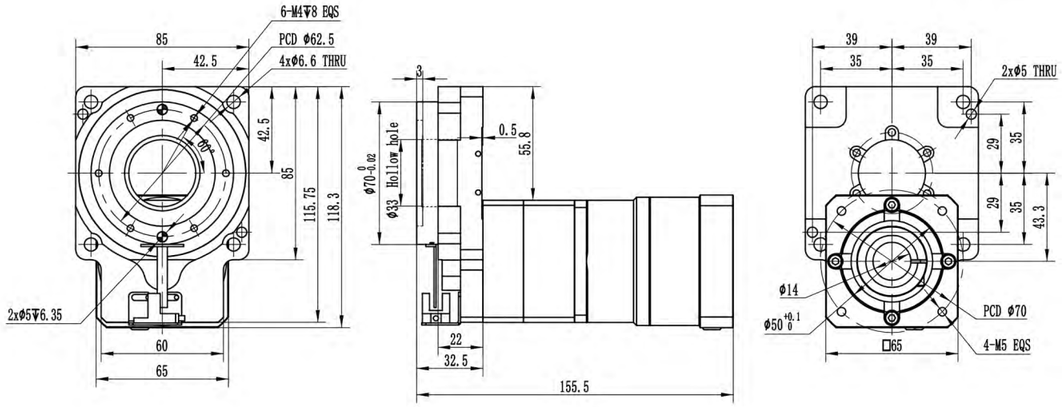


马达类型 Motor types	马达轴径φD Motor shaft diameter
T2	φ8
T2S	φ6.35

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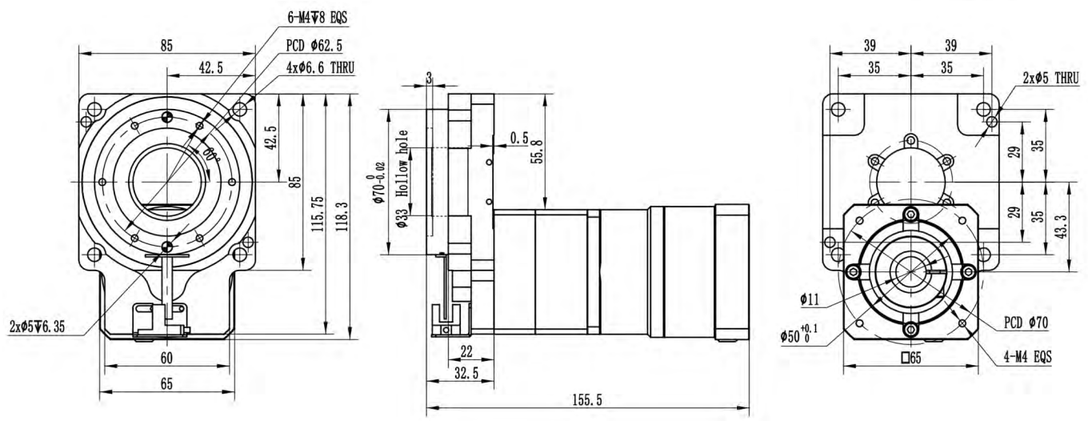
DYH85FP-30(40)(50)-M40

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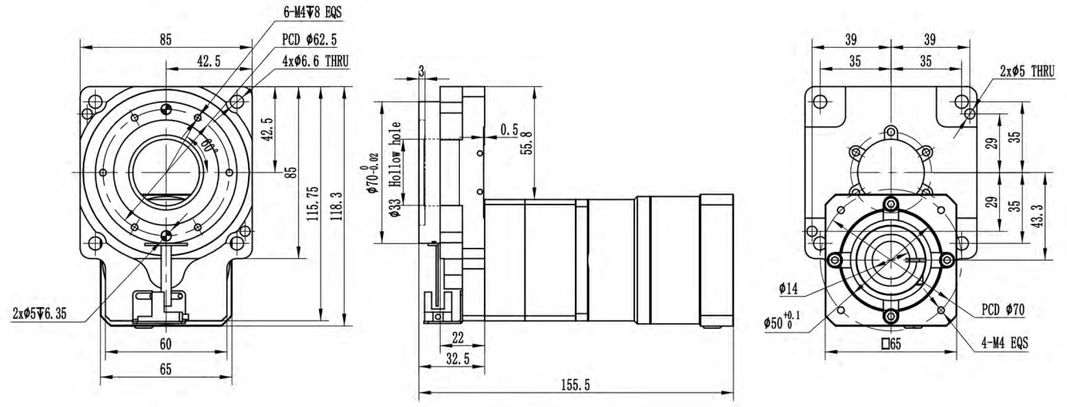
DYH85FP-30(40)(50)-P20

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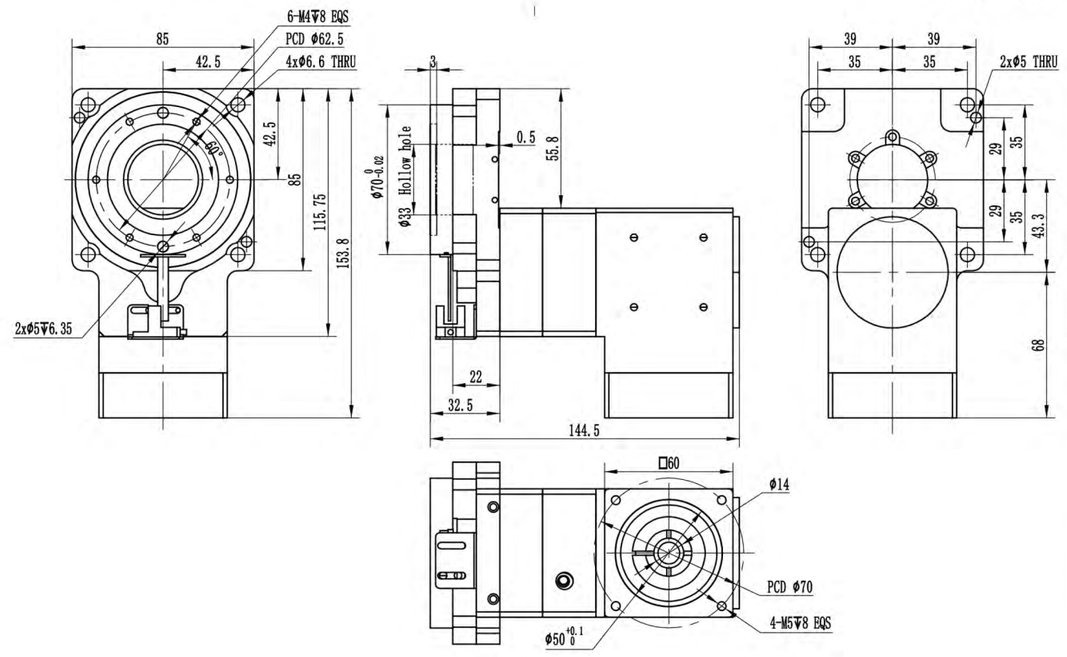
DYH85FP-30(40)(50)-P40

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DYH85FR-30(40)(50)-M40

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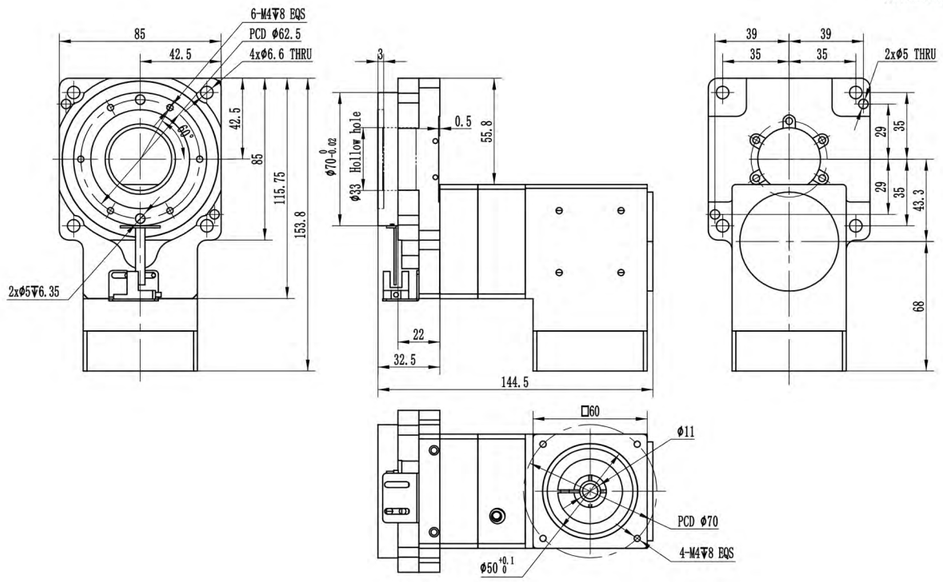
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LIMON
PRECISION&SPEED

DYH85 中空旋转平台
DYH85 Hollow Rotary Actuators

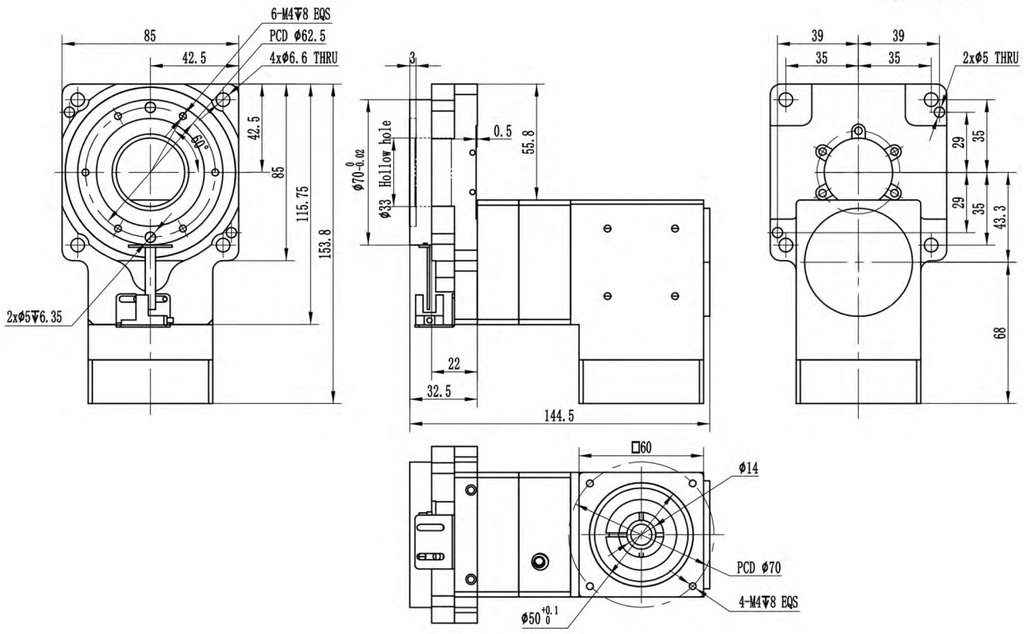
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DYH130 中空旋转平台
DYH130 Hollow Rotary Actuators

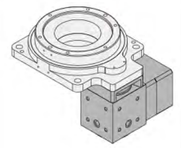
型号订购码 *Code*

DYH130 - **F** - **10** - **M40** - **RD3**

- **DYH130** 本体型号 *Item No.*
- **F** 马达连接方式 *Lead Screw Specifications*
  - F:标准型 *F: Standard type*
  - FP:行星型 *FP: Planetary type*
  - FR:直角型 *FR: right-angled type*
- **10** 减速比 *Reduction ratio*
  - 10
  - 18
  - 30
  - 40
  - 50
- **M40** 马达类型 *Motor type*
  - M40:三菱伺服400W Φ14，PCD70，M5 *M40: Mitsubishi Servo100W Φ14, PCD70, M5*
  - P20:松下伺服200W Φ11，PCD70，M4 *P20: Panasonic Servo 200W Φ11, PCD70, M4*
  - P40:松下伺服400W Φ14，PCD70，M4 *P40: Panasonic Servo 400W Φ14, PCD70, M4*
  - T2:57步进电机 Φ8，47.14，M4 *T2: 57 Stepper motor Φ8, 47.14, M4*
  - T2S:57步进电机 Φ6.35，47.14，M4 *T2S: 57 Stepper motor Φ6.35, 47.14, M4*
- **RD3** 提供伺服电机及驱动 *Provide servo motors and drives*
  - 缺省：不提供 *Default: Not provided*



直角转向马达连接方式 *Motor connection direction*

马达右折安装 FR-R Type	马达左折安装 FR-L Type	马达直接安装 FR Type
		

技术参数 *Technical Parameters*

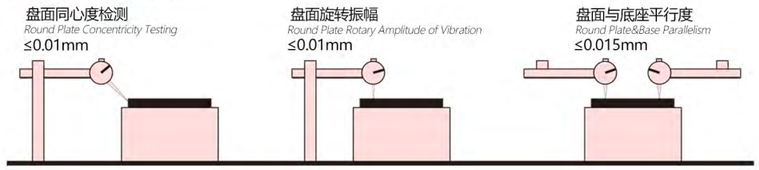
产品型号 ModelType	DYH130F		DYH130FP	DYH130FR
减速比i iReduction Ratio	10	18	30,40,50	30,50
容许扭矩(N·m) Permissible Torque (N·m)	30	18		30
容许惯性力矩(N·m) Permissible inertia Moment Load(N.M)	50			
容许轴向负载(N) Permissible Axial Load (N)	2000			
定位精度(arc-min) Positioning Accuracy(arc-min)	≤3			
转台平面度(mm) Rotary table flatness(mm)	≤0.01			
转台同心度(mm) Rotary table concentricity(mm)	≤0.01			
重复定位精度(arc-sec) Repeatability accuracy(arc-sec)	≤15		≤120	
容许盘面转速(rpm) Permissible table rotation speed	200	150	200	
角度范围(°) Angle range(°)	360			
重量(kg) Weight(kg)	2.5		3.8	3.8
使用温度(℃) Operating temperature(℃)	-25~+90			
防护等级 Protection Grade	IP40			

定位检测精度 *Module Dimension*

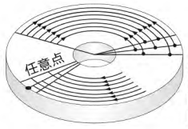
盘面同心度检测
Round Plate Concentricity Testing
≤0.01mm

盘面旋转振幅
Round Plate Rotary Amplitude of Vibration
≤0.01mm

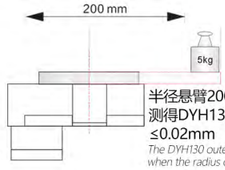
盘面与底座平行度
Round Plate&Base Parallelism
≤0.015mm



外径任意点定位精度
Positioning Accuracy of Arbitrary Point in Outer Diameter.
半径65mm
Radius 65mm
≤3min



反复定位精度
Repetitive Accuracy Radius
半径65mm
Radius 65mm
DYH130F:≤15sec
DYH130FP\DYH130FR:≤120sec

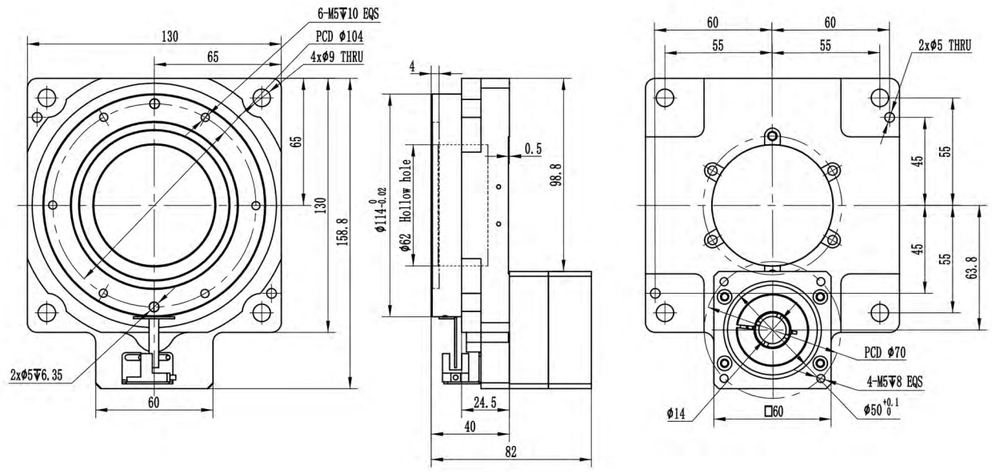


半径悬臂200mm施力重力5kg时，
测得DYH130外边缘
≤0.02mm
The DYH130 outer edge is ≤0.02mm when the radius cantilever is 300mm.

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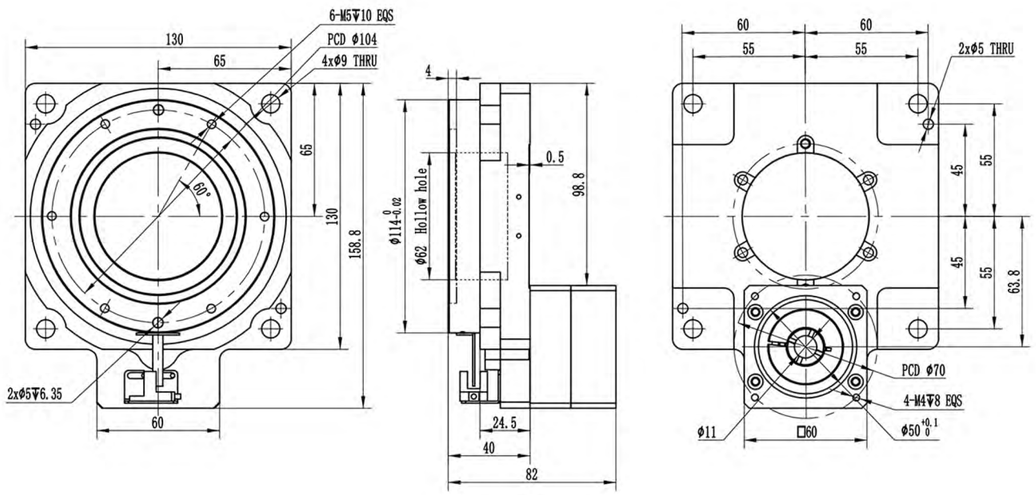
DYH130F-10(18)-M40

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DYH130F-10(18)-P20

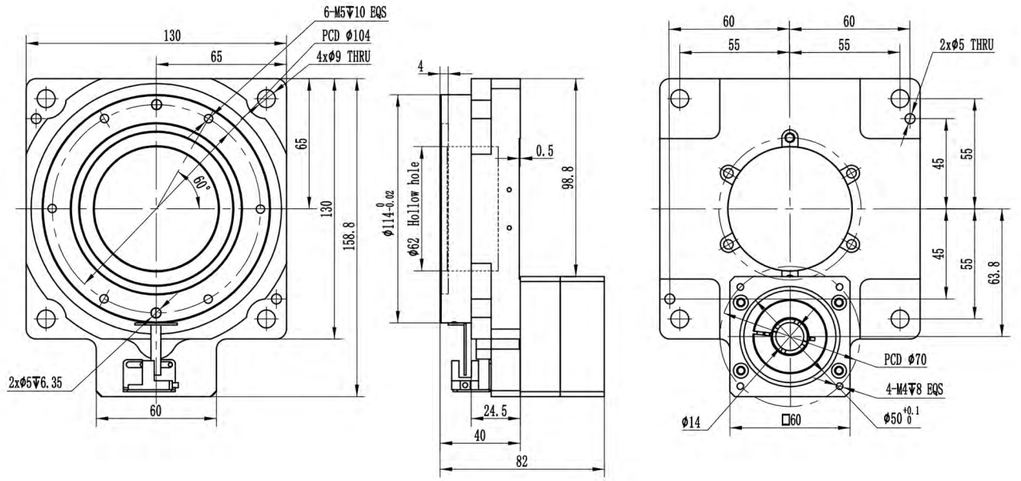
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DYH130 中空旋转平台
DYH130 Hollow Rotary Actuators

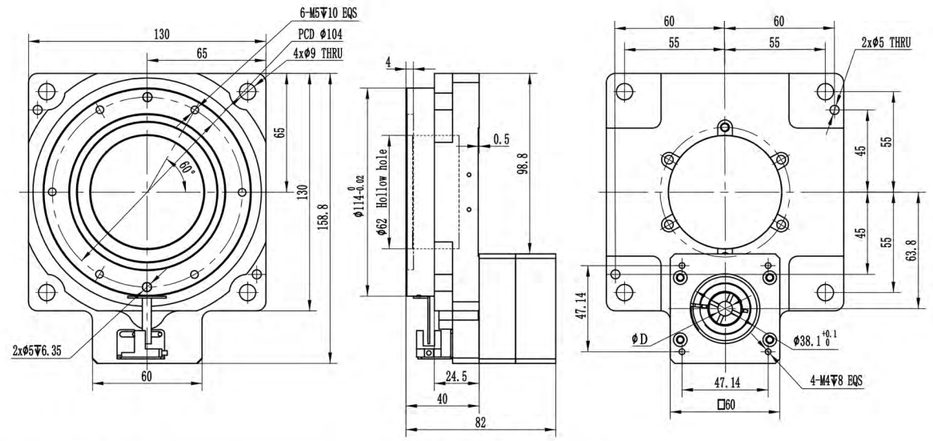
DYH130F-10(18)-P40

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DYH130F-10(18)-T2/T2S

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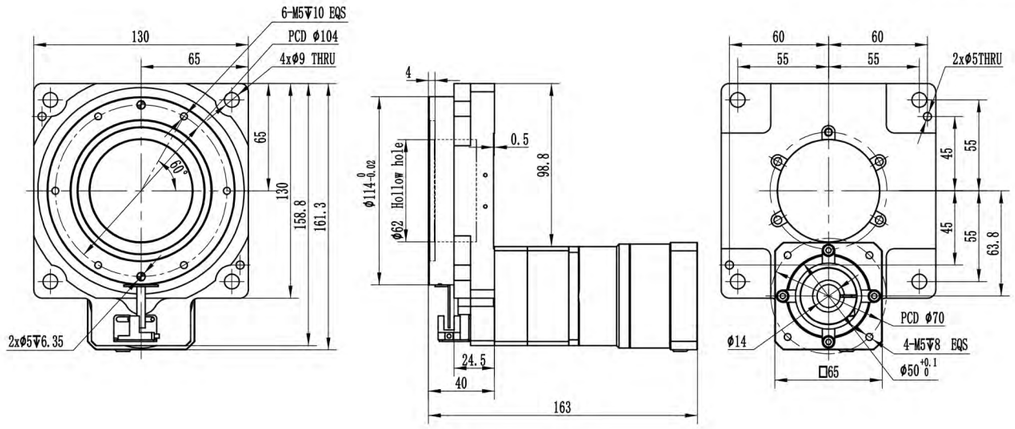


马达类型 Motor types	马达轴径φD Motor shaft diameter
T2	φ8
T2S	φ6.35

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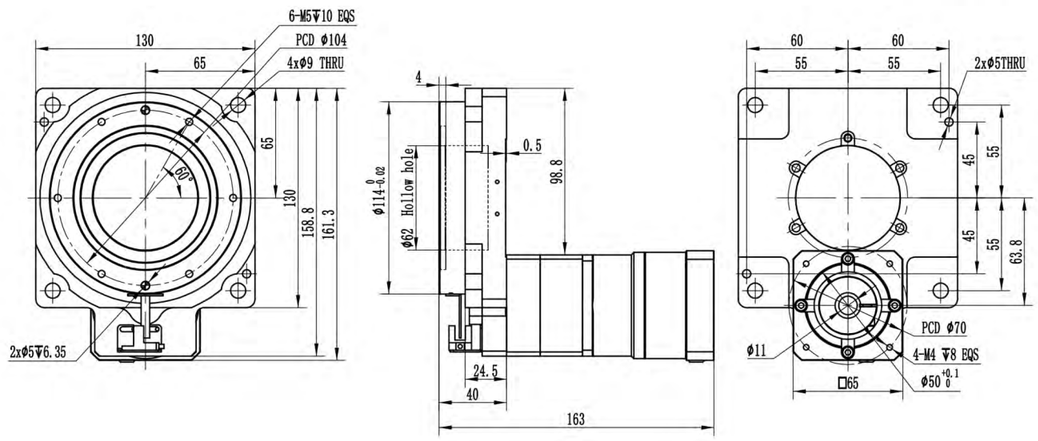
DYH130FP-30(40)(50)-M40

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DYH130FP-30(40)(50)-P20

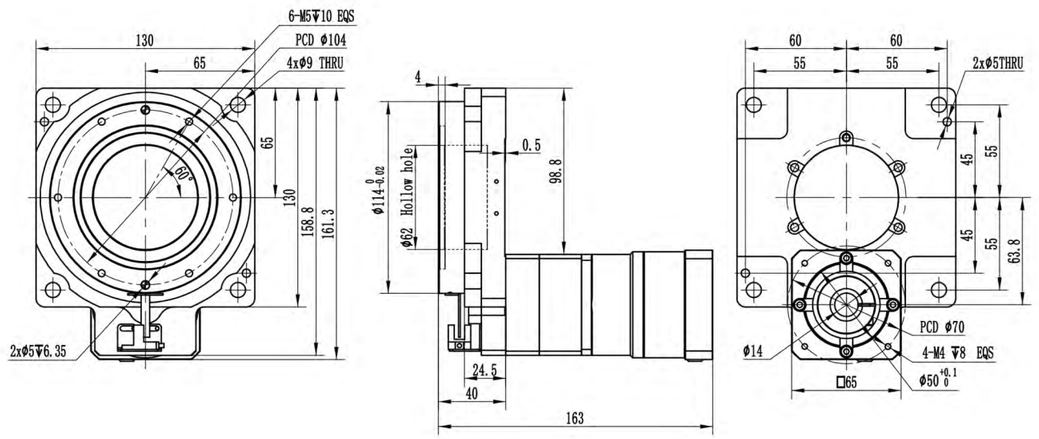
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DYH130 中空旋转平台
DYH130 Hollow Rotary Actuators

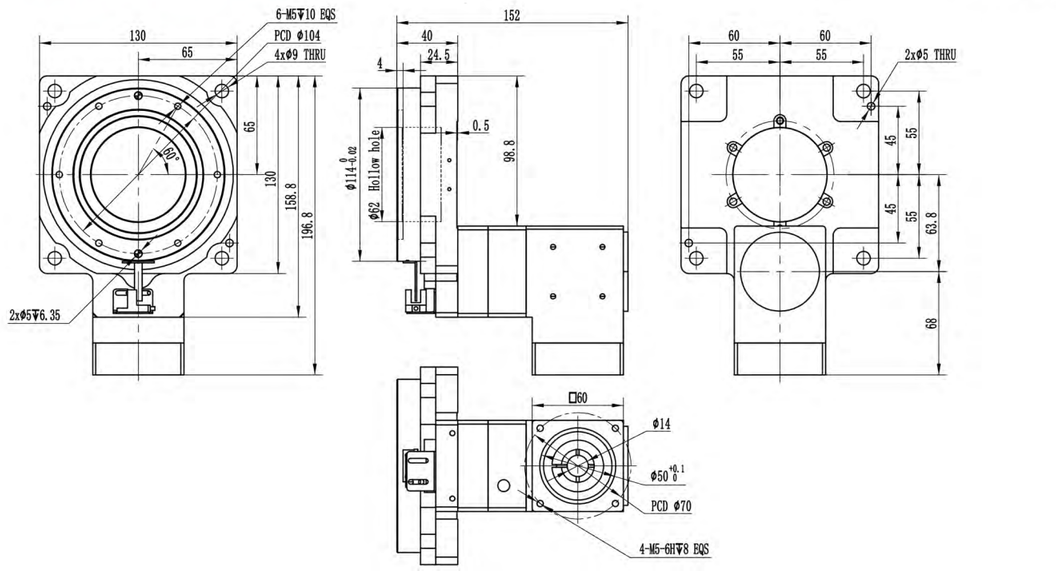
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DYH130FR-30(50)-M40

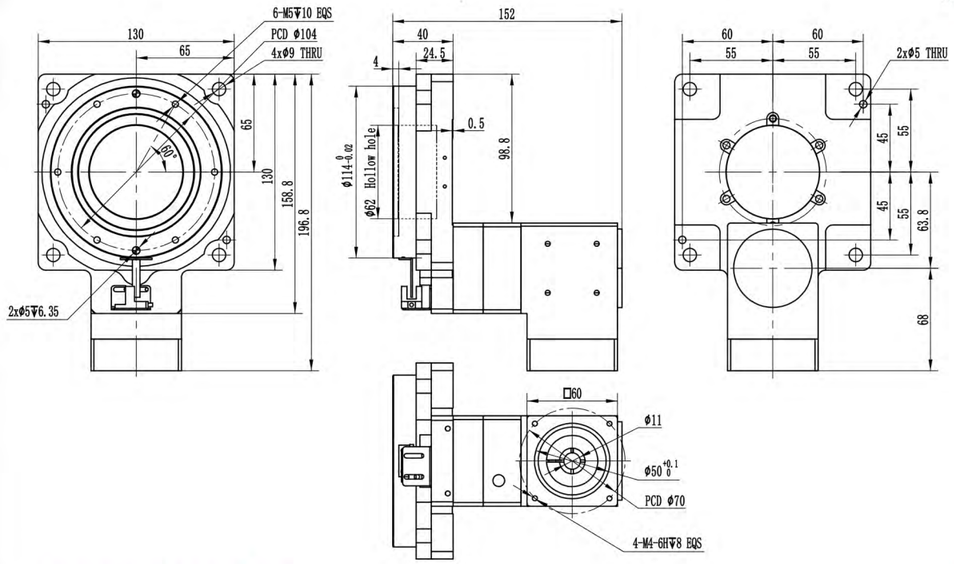
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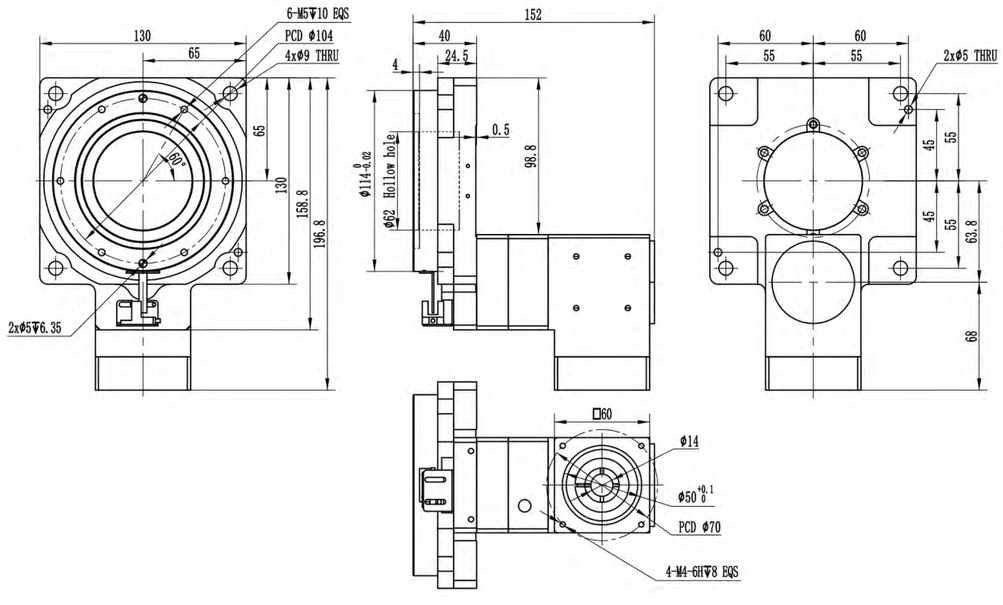
DYH130FR-30(50)-P20

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DYH130FR-30(50)-P40

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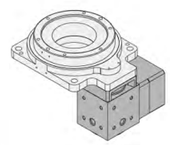
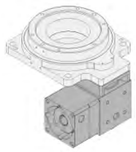


型号订购码 Code

DYH200	F	-	10	-	M75	-	RD3
本体型号 Item No.	马达连接方式 Lead Screw Specifications		减速比 Reduction ratio		马达类型 Motor type		提供伺服电机及驱动 Provide servo motors and drives
	F:标准型 F: Standard type FP:行星型 FP: Planetary type FR:直角型 FR: right-angled type		10 18 30 40 50		M75:三菱伺服750W Φ19，PCD90，M6 M75: Mitsubishi Servo750W Φ19，PCD90，M6 P75:松下伺服750W Φ19，PCD90，M5 P75: Panasonic Servo750W Φ19，PCD90，M5 T3:86步进电机 Φ14，69.6，M5 T3: 86 Stepper motor Φ14，69.6，M5 T3S:86步进电机 Φ12.7，69.6，M5 T3S: 86 Stepper motor Φ12.7，69.6，M5		缺省：不提供马达 Default: Not provided



直角转向马达连接方式 Motor connection direction

马达右折安装 FR-R Type	马达左折安装 FR-L Type	马达直接安装 FR Type
		

技术参数 Technical Parameters

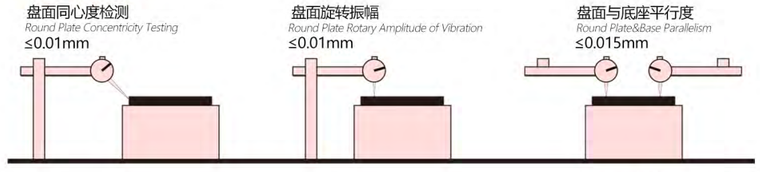
产品型号 ModelType	DYH200F		DYH200FP	DYH200FR
减速比i Reduction Ratio	10	18	30,40,50	30,50
容许扭矩(N·m) Permissible Torque (N·m)	65	50	65	
容许惯性力矩(N·m) Permissible inertia Moment Load(N.M)	100			
容许轴向负载(N) Permissible Axial Load (N)	4000			
定位精度(arc-min) Positioning Accuracy(arc-min)	≤3			
转台平面度(mm) Rotary table flatness(mm)	≤0.01			
转台同心度(mm) Rotary table concentricity(mm)	≤0.01			
重复定位精度(arc-sec) Repeatability accuracy(arc-sec)	≤15		≤120	
容许盘面转速(rpm) Permissible table rotation speed	200	150	200	
角度范围(°) Angle range(°)	360			
重量(kg) Weight(kg)	8		11.5	12
使用温度(℃) Operating temperature(℃)	-25~+90			
防护等级 Protection Grade	IP40			

定位检测精度 Module Dimension

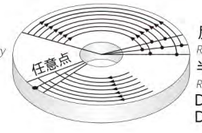
盘面同心度检测
Round Plate Concentricity Testing
≤0.01mm

盘面旋转振幅
Round Plate Rotary Amplitude of Vibration
≤0.01mm

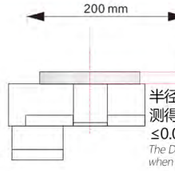
盘面与底座平行度
Round Plate&Base Parallelism
≤0.015mm



外径任意点定位精度
Positioning Accuracy of Arbitrary Point in Outer Diameter.
半径100mm
Radius 100mm
≤3min



反复定位精度
Repetitive Accuracy Radius
半径100mm
Radius 100mm
DYH200F:≤15sec
DYH200FP\DYH200FR:≤120sec

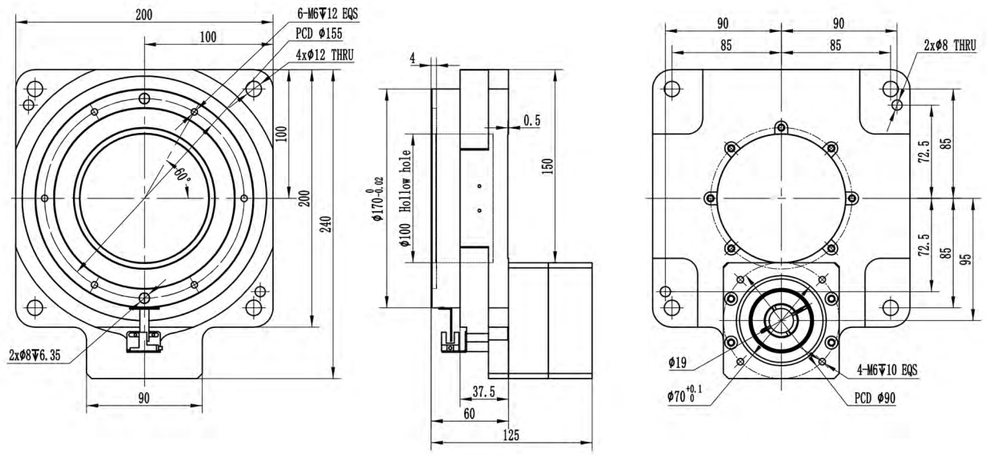


半径悬臂300mm施力重力15kg时，
测得DYH200外边缘
≤0.01mm
The DYH200 outer edge is ≤0.01mm when the radius cantilever is 300mm.

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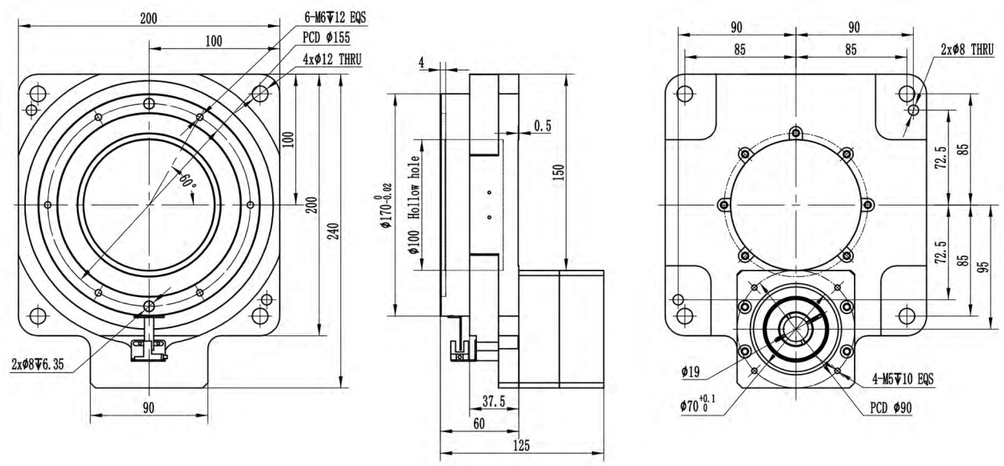
DYH200F-10(18)-M75

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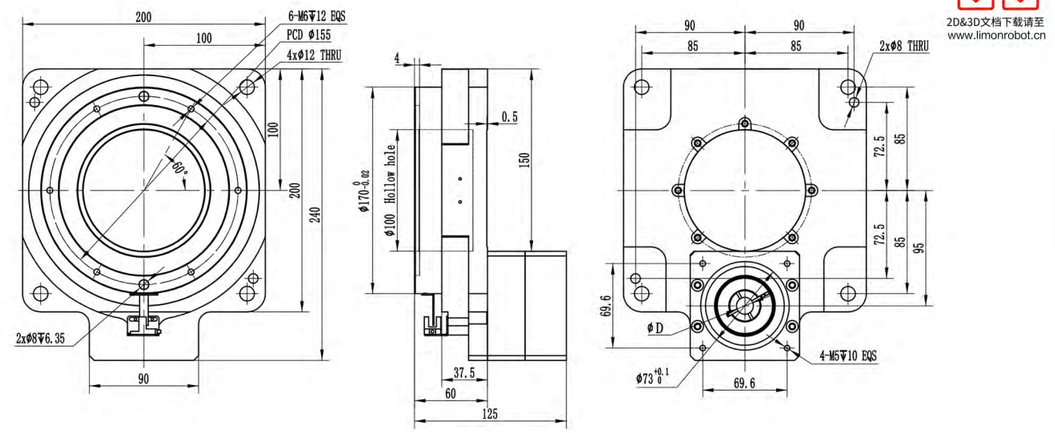
DYH200F-10(18)-P75

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DYH200F-10(18)-T3/T3S

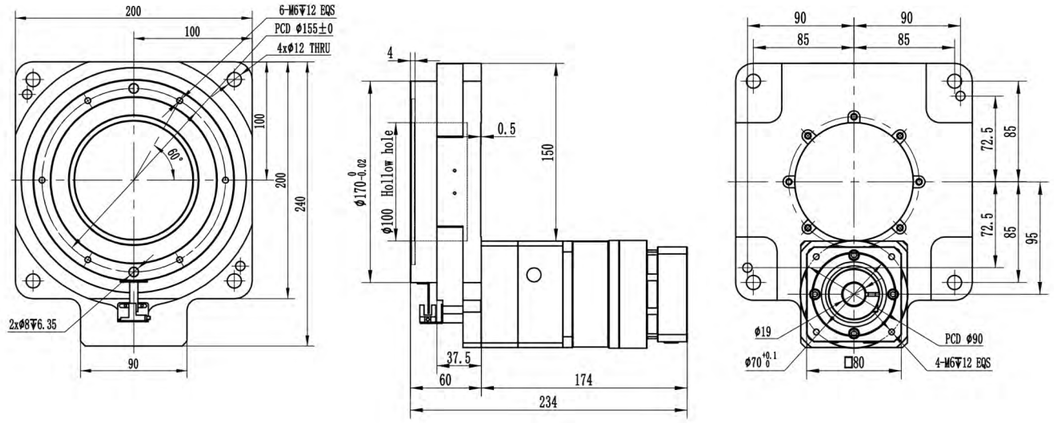
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马达类型 Motor types	马达轴径φD Motor shaft diameter
T3	φ14
T3S	φ12.7

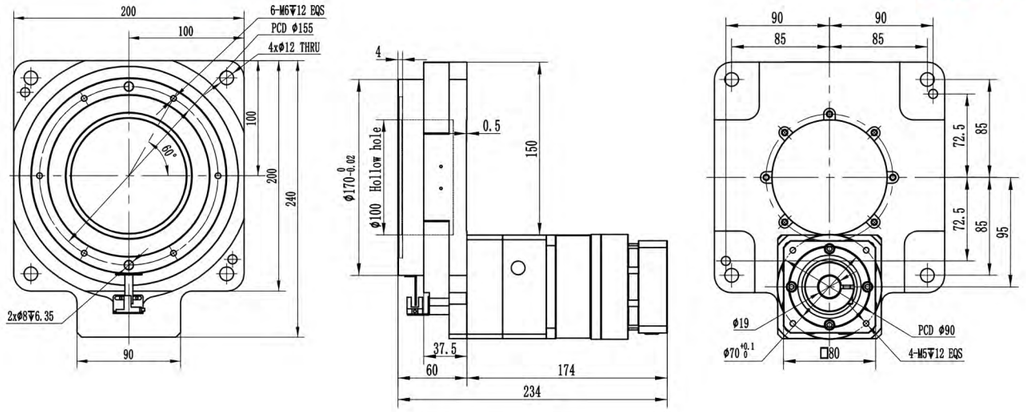
DYH200FP-30(40)(50)-M75

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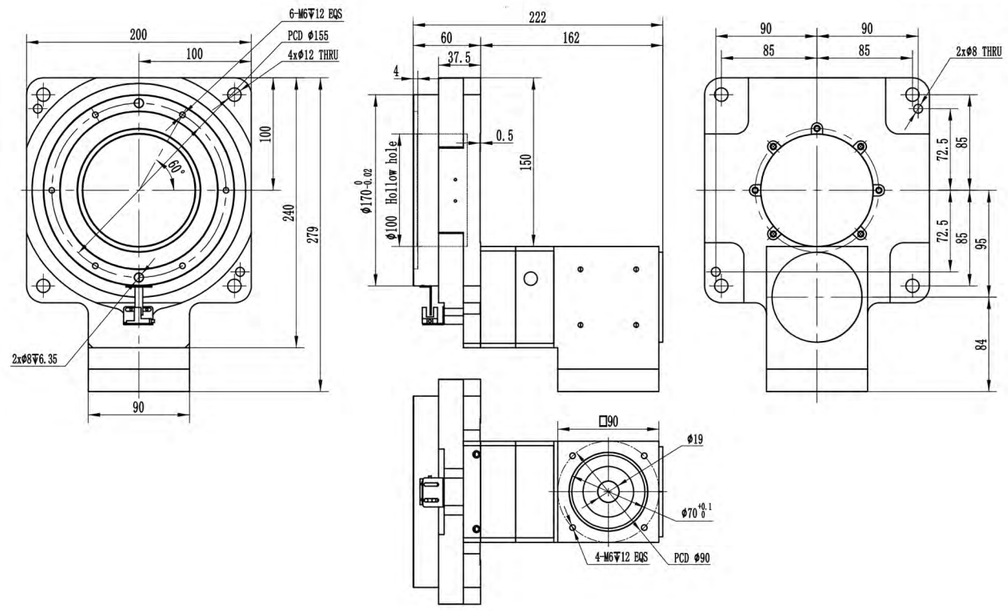
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DYH200FP-30(40)(50)-P75



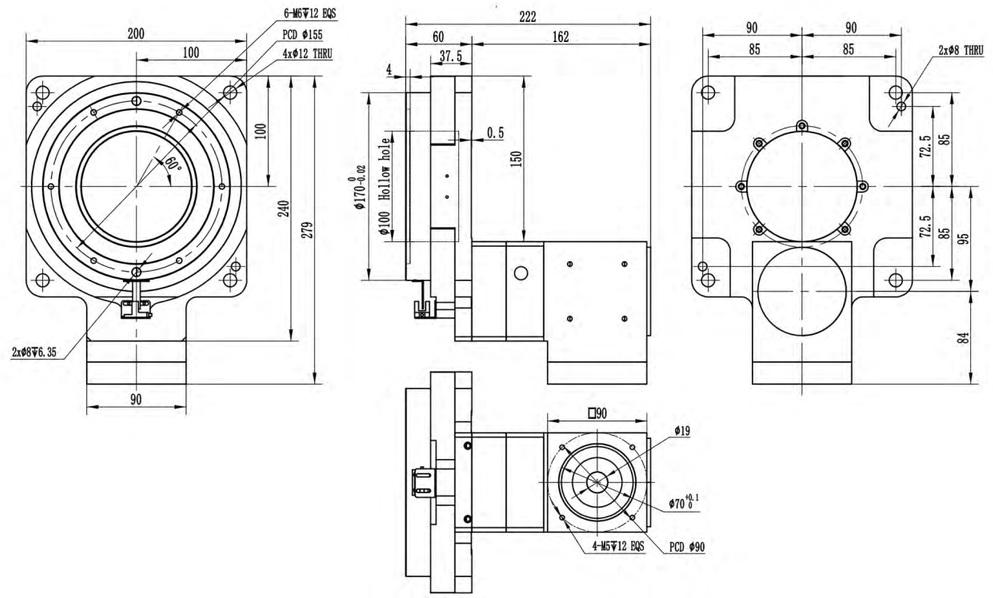
DYH200FR-30(50)-M75

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DYH200FR-30(50)-P75

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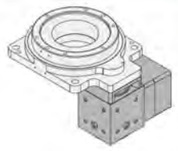
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型号订购码 Code

DYH280 本体型号 Item No. - **F** 马达连接方式 Lead Screw Specifications (F:标准型 F: Standard type; FP:行星型 FP: Planetary type; FR:直角型 FR: right-angled type) - **10** 减速比 Reduction ratio (10; 18; 30) - **M1KH** 马达类型 Motor type (M1KH:三菱伺服1000W Φ24，PCD145，M8 M1KH: Mitsubishi Servo1000W Φ24，PCD145，M8; P1KH:松下伺服1000W Φ22，PCD145，M8 P1KH: Panasonic Servo 1000W Φ22，PCD145，M8) - **RD3** 提供伺服电机及驱动 Provide servo motors and drives (缺省：不提供 Default: Not provided)



直角转向马达连接方式 Motor connection direction

马达右折安装 FR-R Type	马达左折安装 FR-L Type	马达直接安装 FR Type
		

技术参数 Technical Parameters

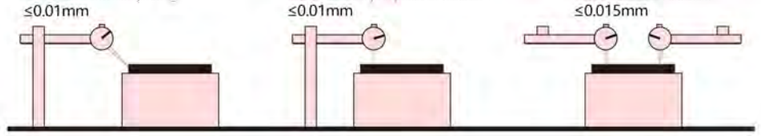
产品型号 ModelType	DYH280F		DYH280FP	DYH280FR
减速比 iReduction Ratio	10	18	30	
容许扭矩(N·m) Permissible Torque (N·m)	87	65	87	
容许惯性力矩(N·m) Permissible inertia Moment Load(N.M)	135	105	135	
容许轴向负载(N) Permissible Axial Load (N)	4840			
定位精度(arc-min) Positioning Accuracy(arc-min)	≤3			
转台平面度(mm) Rotary table flatness(mm)	≤0.01			
转台同心度(mm) Rotary table concentricity(mm)	≤0.01			
重复定位精度(arc-sec) Repeatability accuracy(arc-sec)	≤15arc-sec		≤2arc-min	
容许盘面转速(rpm) Permissible table rotation speed	200	150	200	
角度范围(°) Angle range(°)	360			
重量(kg) Weight(kg)	25		46	34
使用温度(℃) Operating temperature(℃)	-25~+90			
防护等级 Protection Grade	IP40			

定位检测精度 Module Dimension

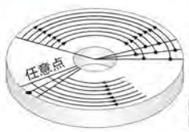
盘面同心度检测 Round Plate Concentricity Testing
≤0.01mm

盘面旋转振幅 Round Plate Rotary Amplitude of Vibration
≤0.01mm

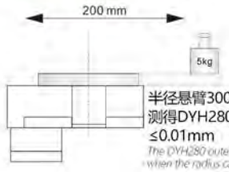
盘面与底座平行度 Round Plate&Base Parallelism
≤0.015mm



外径任意点定位精度 Positioning Accuracy of Arbitrary Point in Outer Diameter.
半径100mm Radius 100mm
≤3min



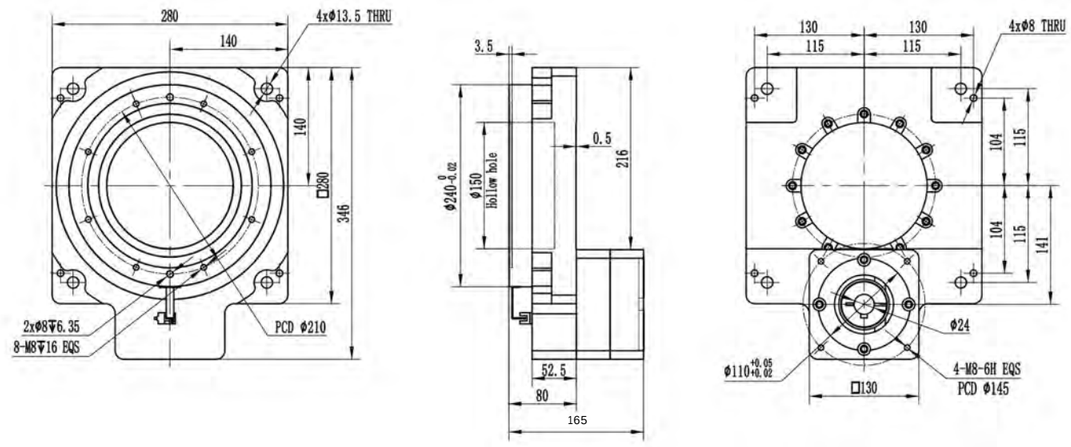
反复定位精度 Repetitive Accuracy Radius
半径100mm Radius 65mm
DYH280F:≤15sec
DYH280FP\DYH280FR:≤120sec



半径悬臂300mm施力重力15kg时，测得DYH280外边缘
≤0.01mm
The DYH280 outer edge is ≤0.01mm when the radius cantilever is 300mm

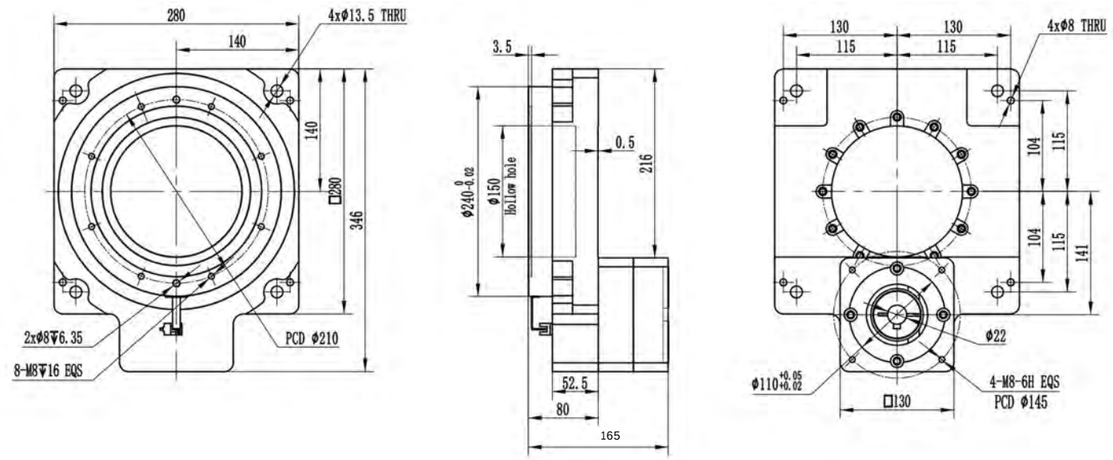
DYH280F-10/18-M1KH

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DYH280F-10/18-P1KH

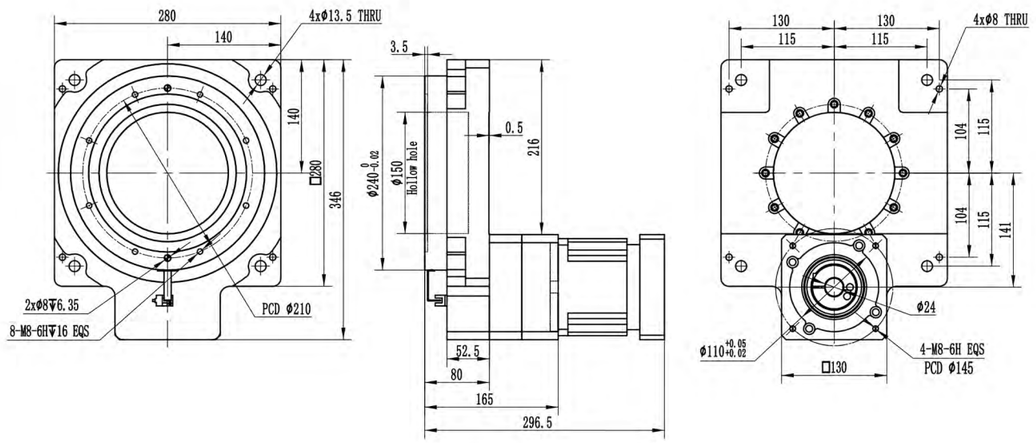
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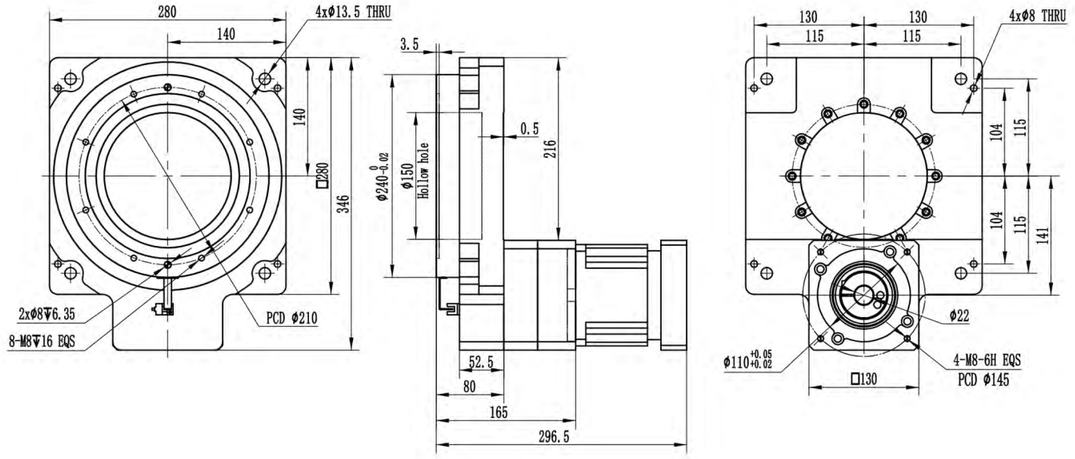
DYH280FP-30-M1KH

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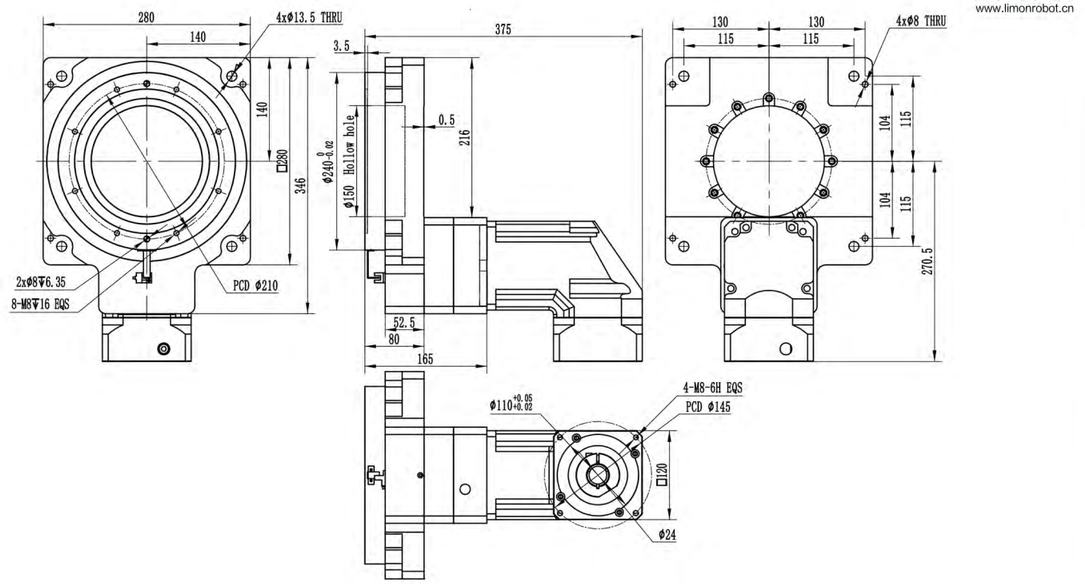
DYH280FP-30-P1KH

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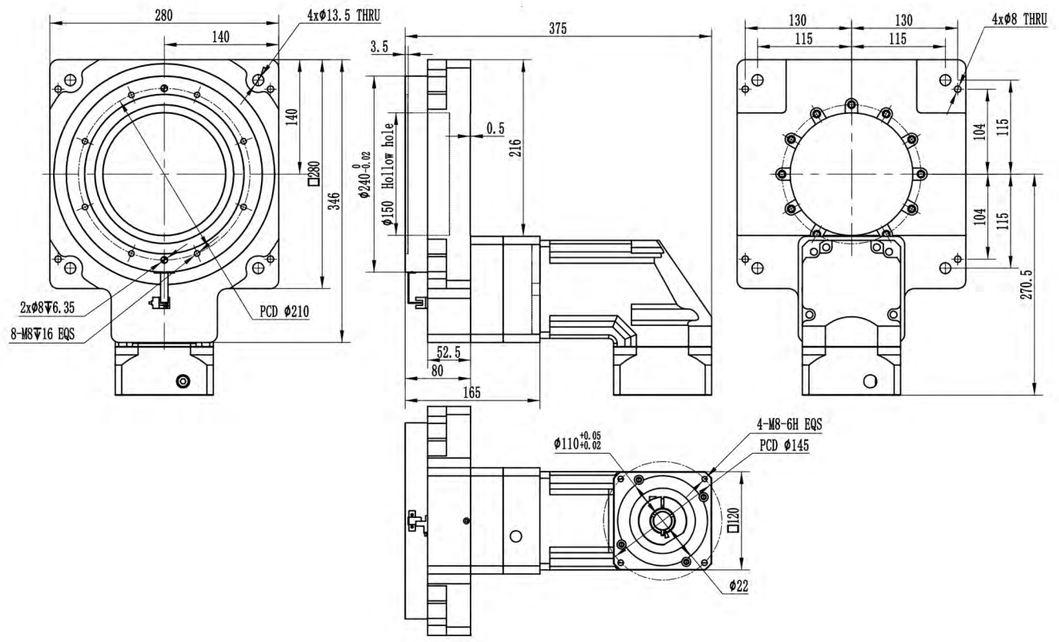
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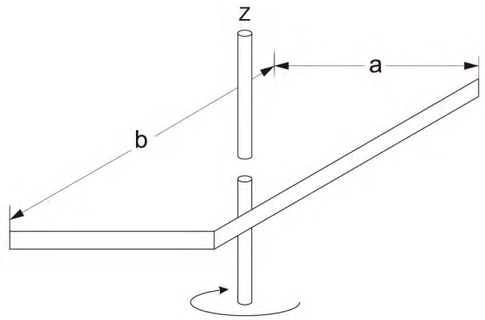
惯量计算范例 *Inertia Calculation Example*

如图(1)所示。
假设a=400mm，b=600mm，质量m为40kg
今令其每秒转90°

①先求转动惯量：
$I=1/12\ m(a^2+b^2)=1/_{12}*40*(0.4^2+0.6^2)=1.73kg\cdot m^2$

②求转动加速力矩：
M=I*α 其中α=ω/T
ω=2πN（每秒转动360°=2π，180°=π，90°=1/2π）
(revolve 360°per second=2π，180°=π，90°=1/2π)

因要求每秒90°，角加速度设定其0.5秒
得α=1/2π/0.5=3.14
故M=1.73*3.14=5.4N·m



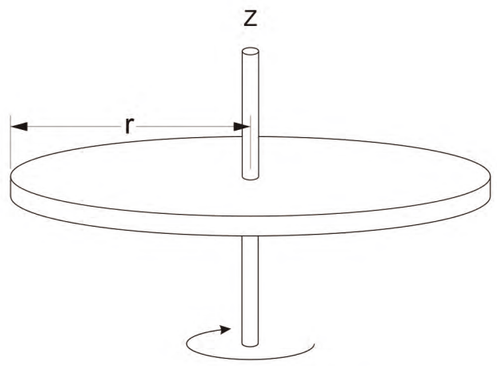
图（1）Picture(1)

① Calculate the rotary inertia:
$I=1/12\ m(a^2+b^2)=1/12*40*(0.4^2+0.6^2)=1.73kg\cdot m^2$
②Calculate the rotary accelerating moment:
*M=I*α whichα=ω/T*
ω=2πN（revolve 360°per second=2π，180°=π，90°=1/2π)
As it requires 90°per second, assuming the angular acceleration is 0.5 second.
*So α=1/2π/0.5=3.14 And M=1.73*3.14=5.4N·m*

如图(2)所示。
假设圆盘半径r=300mm，质量m为40kg
今令其每秒转180°

①先求转动惯量：
$I=mr^2/2=*40*0.3^2/2=1.8kg\cdot m^2$

②求转动加速力矩：
M=I*α 其中α=ω/T
ω=2πN（每秒转动360°=2π，180°=π）
因要求每秒180°，角加速度设定其0.5秒
得α=π/0.5=3.14/0.5=6.28
故M=1.8*6.28=11.3 N·m



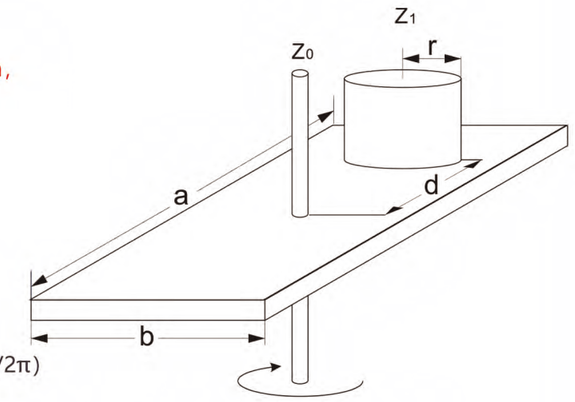
图（2）Picture(2)

As picture(2)
Assume Radius of the circular disk r=300mm，weight m=40kg,
And make it revolve 180°per second.
① Calculate the rotary inertia:
$I=mr^2/2=*40*0.3^2/2=1.8kg\cdot m^2$
②Calculate the rotary accelerating moment:
*M=I*α whichα=ω/T*
ω=2πN（revolve 360°per second=2π，180°=π，90°=1/2π)
As it requires 180°per second, assuming the angular acceleration is 0.5 second.
*So α=π/0.5=3.14/0.5=6.28 And M=1.8*6.28=11.3 N·m*

如图(3)所示。
假设圆盘半径r=100mm，
Z0到Z1的d=300mm，a=1000mm，b=600mm，
方形盘质量m为50kg，圆柱体质量为10kg
今令其每秒转90°

①先求转动惯量：
$I_1=1/_{12}m(a^2+b^2)=5.67kg\cdot m^2$
$I_2=mr^2/2+md^2=1.4kg\cdot m^2$
$I=I_1+I_2=5.67-1.4=7.07kg\cdot m^2$

②求转动加速力矩：
M=I*α 其中α=ω/T
ω=2πN（每秒转动360°=2π，180°=π，90°=1/2π）
因要求每秒90°，角加速度设定其0.5秒
得α=1/2π/0.5=3.14
故M=7.07*3.14=22.2 N·m



图（3）Picture (3)

As picture(3)
Assume Radius of Cylinder r=100mm，b=600mm
Square disk mass is 50kg,Cylinder mass is 10kg,
And make it revolve 90°per second.
① Calculate the rotary inertia:
$I_1=1/_{12}m(a^2+b^2)=5.67kg\cdot m^2$
$I_2=mr^2/2+md^2=1.4kg\cdot m^2$
$I=I_1+I_2=5.67-1.4=7.07kg\cdot m^2$
②Calculate the rotary accelerating moment:
*M=I*α whichα=ω/T*
ω=2πN（revolve 360°per second=2π，180°=π，90°=1/2π)
As it requires 90°per second, assuming the angular acceleration is 0.5 second.
*So α=1/2π/0.5=3.14 And M=7.07*3.14=22.2 N·m*

用语注释说明 *Terminology Annotation and Explanation*

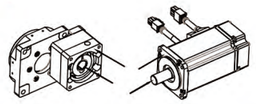
*1容许转矩：减速机构部的机械强度界限值。包括加速转矩、负载惯量，皆须在此容许转矩范围内使用。
*2允许转速：减速机构部的机械强度可允许的旋转平台之盘面转速。
*3定位精度：选装平台盘面于360°以内所累计的定位角度误差总和。
*4重复精度：旋转平台在任一点做正转方向定位，再由逆转方向定位的相对角度误差。
*5旋转平台平行度：旋转平台盘面运转时相对于底座安装面的平行度。
*6旋转平台同心度：指无负载时旋转平台内径与外径的同心度误差值。

1.Permissible torque : mechanical strength threshold value in the reducing gear part,including the accelerating torque,load inertia，all should be within the permissible torque.
2.Permissible rotating speed : round plate rotating speed in the rotary table which is within the mechanical strength's permission in reducing gear part.
3.Positioning accuracy : accumulated positioning angle error summation within 360°in the rotary table.
4.Repetitive accuracy : the relative angle error regarding forward positioning in any point of rotary table compared with reverse positioning.
5.Parallelism of rotary table : Parallelism when the rotary table in round plate revolving relative to bottom base assembling surface.
6.Concentricity of rotary table : Concentricity error value of the rotary table 's outer diameter and internal diameter when without any load

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马达安装说明 *Instructions of Motor Mounting*

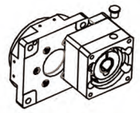
1



确认马达和旋转平台的安装尺寸，并清除表面所有的异物

Confirm the assembling size of motor and rotary plate as well as remove all the foreign materials in the surface.

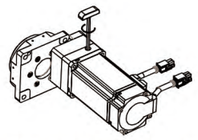
2



拆下马达法兰板的防尘塞，然后调整位置，直至能够看到紧固螺栓。查看(附件1)

Dismantle the dust plug in the motor flange plate，then adjust the place until the fastening bolt can be seen. (refer to attachment 1)

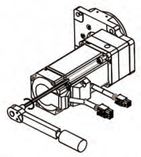
3



将马达与法兰板位置调整好，轻轻旋紧紧固螺栓，直至锁紧环不再空转。

Adjust the place of motor flange plate, then screw the fasting bolt gently until the binding ring no longer idle .

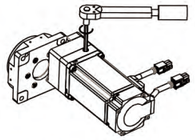
4



参照紧固扭力标准Ta，对角旋紧紧固螺栓。查看(附件2)

Confirm the assembling size of motor and rotary plate as well as remove all the foreign materials in the surface.

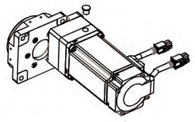
5



参照紧固扭力标准Tb,旋紧紧固螺栓。查看(附件2)

According to the tightening torque standard Tb ,screw the fasting bolt （refer to attachment 2)

6

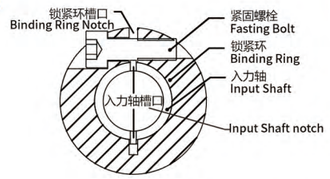


安装防尘塞。

Assemble the dust plug

附件1 Attachment 1 如何安装马达 *How to assemble the motor*

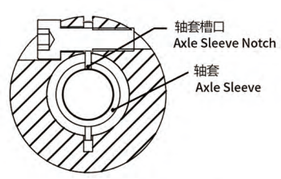
A



附有机械键的马达拔出机械键，调整锁紧环的位置使锁紧环槽口与入力轴槽口对齐，以便最大限度的紧固锁紧环的紧固螺栓。

Pull the motor out of mechanical key,then adjust the binding ring place to align the notch with the input shaft notch for screwing up the fasting bolt in the binding ring.

B



马达轴径与入力轴孔径不能匹配时，加入轴套，其安装方法与图A的安装方法一样，注意轴套槽口、入力轴槽口、锁紧环槽口要对齐。

If the motor shaft diameter can not match with the input shaft diameter, then add the axle sleeve (the assembling method is same with pic A).Please note that the notch of axle sleeve ,input shaft and binding ring are all in line.

附件2 Attachment 2 扳手螺栓紧固转矩 *Fastening the torque by using the wrench bolt*

扳手螺栓尺寸 Wrench Bolt Size	马达安装 Motor Mounting Ta-8.8T		锁紧环安装 Binding Ring Assembling Tb	
	N·m	N·m	kgf·cm	kgf·cm
M3	1.28	13	2.15	22
M4	2.9	30	4.95	50
M5	5.75	59	9.7	99
M6	9.9	101	16.5	168
M8	24	245	40	408
M10	48	489	81	826
M12	83	846	140	1428
M14	132	1346	220	2243
M16	200	2039	340	3467

中空旋转平台安装说明 *Hollow Rotary Table Assembling Instructions*

在中空旋转平台安装板上预留马达出口，以免马达与安装板干涉。

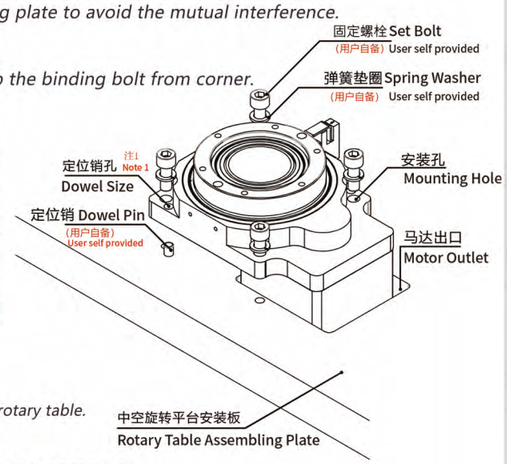
Reserve the place of motor outlet in the hollow rotary table assembling plate to avoid the mutual interference.

安装2个定位销孔将中空旋转平台定位，再对角旋紧紧固螺栓。

Assemble two dowel holes to fix the hollow rotary table, then screw up the binding bolt from corner.

注1 Note1 定位销孔尺寸 *Dowel Size*

平台规格 Table Specification	销孔直径 Pin Hole Diamete（mm）	销孔深度 Pin Hole Depth(mm)	销孔数量 Pin Hole Quantity
DYH60	φ3(H7)	5	2
DYH85	φ5(H7)	贯穿(through)	2
DYH130	φ5(H7)	贯穿(through)	2
DYH200	φ8(H7)	贯穿(through)	2
DYH280	φ8(H7)	贯穿(through)	2



中空旋转平台上安装负载 *Assembling load in the hollow rotary table.*

中空旋转平台2个负载的定位销孔，用于确认负载的位置。

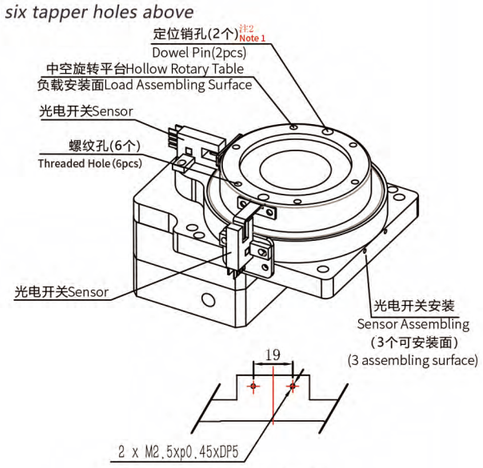
将负载安装在中空旋转平台安装面，使用上面的6个螺纹孔完成对负载的紧定。

Assemble two loading dowel pins in the hollow rotary table to confirm the loading position.

Assemble the load in the hollow rotary table assembling plate , use the six tapper holes above to finish load screwing.

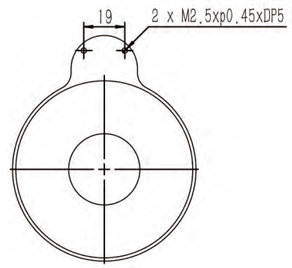
注1 Note1 定位销孔尺寸 *Dowel Size*

平台规格 Table Specification	销孔直径 Pin Hole Diamete（mm）	销孔深度 Pin Hole Depth(mm)	销孔数量 Pin Hole Quantity
DYH60	φ3(H7)	6.35	2
DYH85	φ5(H7)	6.35	2
DYH130	φ5(H7)	6.35	2
DYH200	φ8(H7)	6.35	2
DYH280	φ8(H7)	6.35	2



光电开关安装孔尺寸图

Sensor Assembling Hole Dimension Figure.



定位销孔尺寸 *Dowel Size*

安装之前，应通读如下安装注意事项，并按照如下条件安装:

1.室内(不直接接触阳光的区域)

2.没有热辐射的区域

3.工作环境(温度:-25 ~ +90℃/湿度:低于85%)

4.原点感测器下方温度:0 ~ +40℃

5.不存在易燃易爆的酸性气体

6.可阻挡灰尘、油和溅水的地方

7.不遭受直接震动和过度撞击的地方

Before assembling,please read below attention matters and assemble according to the conditions:

1.Indoor（not exposed to the sunshine).

2.Without the heat radiation.

3.Working environment(temperature:0 ~ +50℃/humidity：lower than 85%)

4.The temperature below home sensor:0 ~ +40℃

5.Without inflammable and explosive acid gas

6.Place where cut off the dust, oil and splash

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