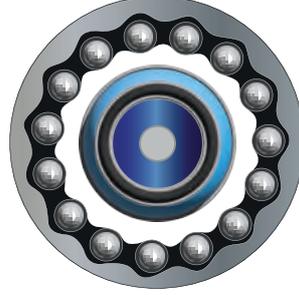


# Hollow Rotary Actuator Factory



**Cyclical Tech**



**AYZ ROBOTİK OTOMASYON  
SAN. TİC. LTD. ŞTİ.**

[www.ayzotomasyon.com.tr](http://www.ayzotomasyon.com.tr)



## Model: PTN60 Hollow Rotary Actuator

### Specifications:

1. Products size: 60mm
2. Ratio range: 5/10
3. Motor range: type 42 (stepper motor); 50/100W AC (servo motor)
4. Output installation size code: 830M345LR30 (ratio: 5/10); 830M446LR30 (ratio: 5/10); 5223.543.8LR30 (ratio: 5/10)

#### ● work objects can be directly locked:

The rotating disk surface can directly lock the work objects to improve the convenience of workpiece loading;

#### ● convenient wiring:

The rotary platform is of hollow design, which is convenient for wiring or piping;

#### ● high accuracy:

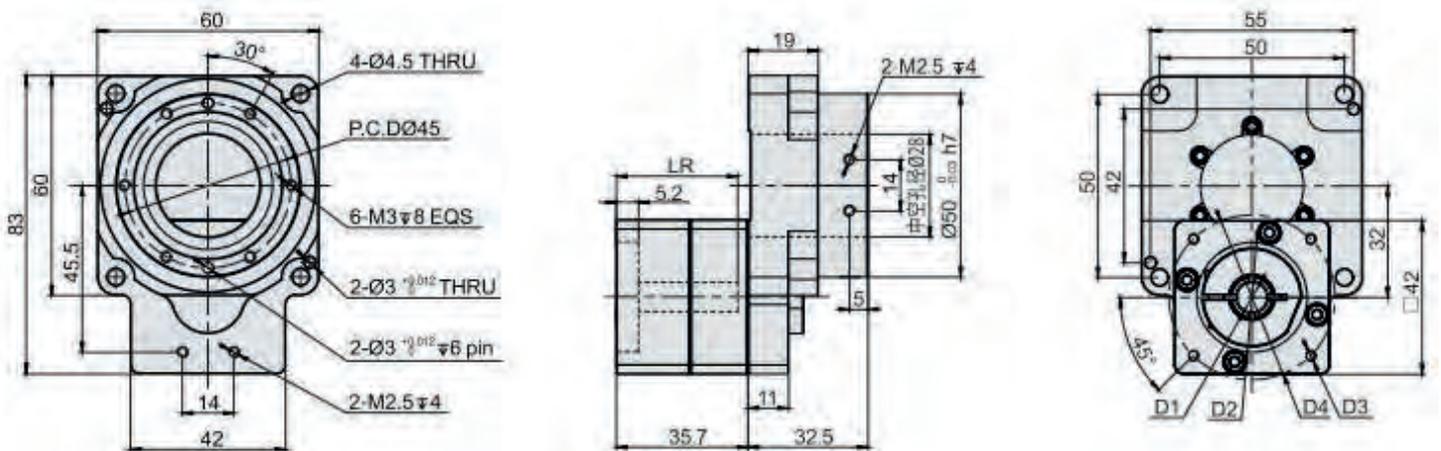
The positioning accuracy is less than 1arcmin;

The repetition accuracy can reach  $\pm 5$ arcsec;

#### ● stable operation:

The panel rotates smoothly and smoothly, and the cutting and positioning is fast

### PTN60 standard size:



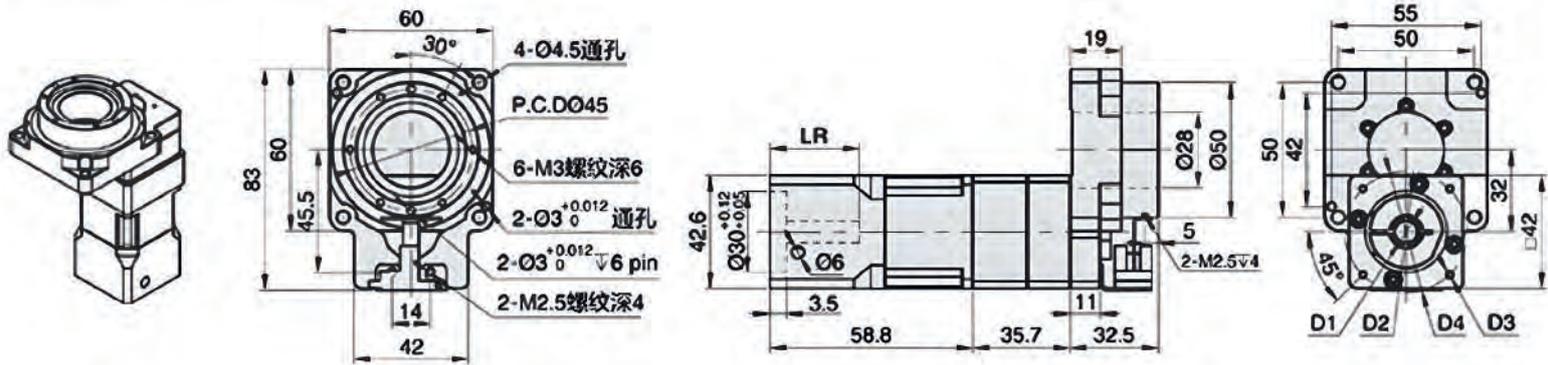
①系列规格	②传动比	③输入安装尺寸				
		D1	D2	D3	D4	LR
PTN060	5	8	30	M3	45	30
	10	8	30	M4	46	30
		5	22	3.5	43.8	31.7

PTN060应用范例(订购时请提供马达法兰尺寸)

**(PTN130 Application case/ please provide motor flange size when ordering)**

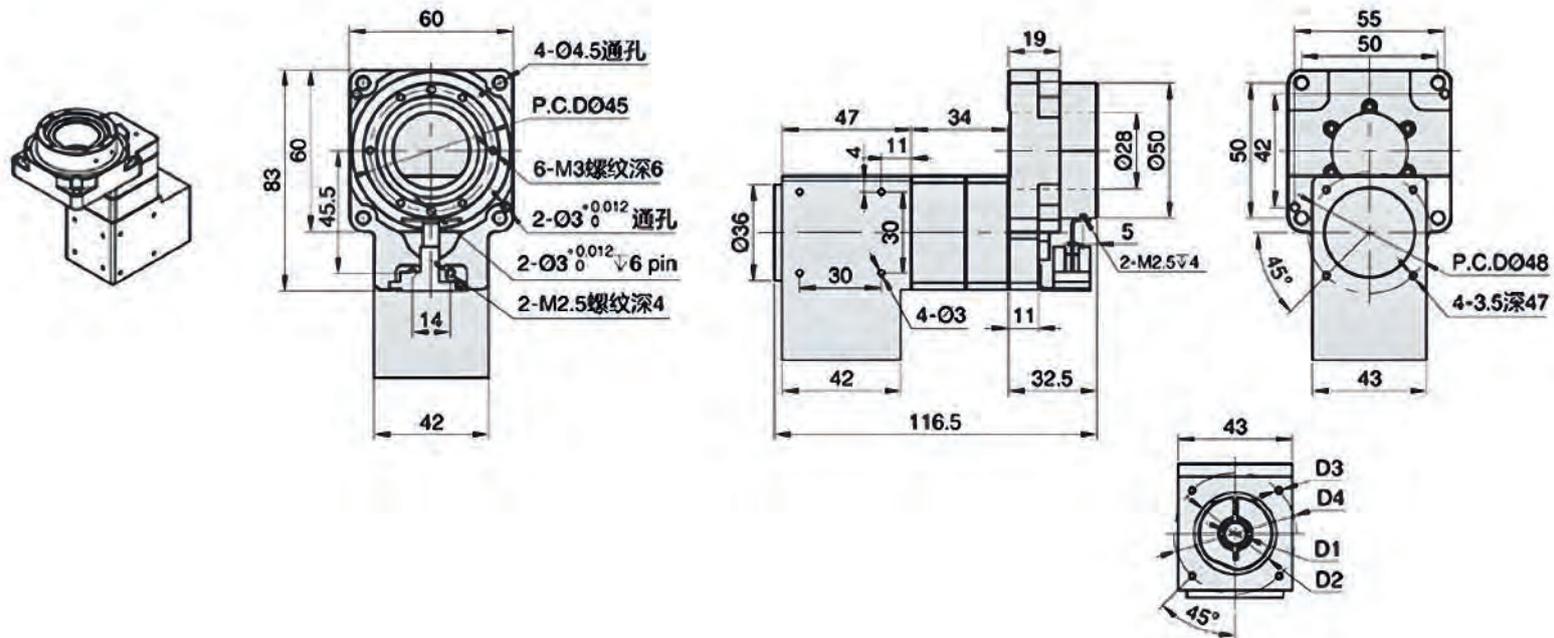
直结式行星减速机 PX42 (单位mm)

**(Planetary reducer PRF60)**



直角式转角器 DRS60 (单位:mm)

**(Right angle reducer DRS60)**



规格 Specifications		步进马达 stepper motor	42型	
		伺服马达 servo motor	50W AC	100W AC
适配马达 Motor				
旋转平台轴承 Rotating platform bearing	—	交叉滚子轴承 Cross roller bearing		
减速比 Ratio	—	1:5	1:10	
容许转矩 Allowable torque	Nm	5	7.5	
转动惯量 Moment of inertia	kg·m <sup>2</sup>	4300 × 10 <sup>-6</sup>		
出力允许转速 Allowable output speed	rpm	200		
容许惯性载重(倾侧力矩) Allowable inertia load	Nm	10		
容许轴向载重 Allowable axial load	N	250		
回程间隙 Return Backlash	arcmin	≤1		
重复定位精度 Repeat positioning platform	arcsec	±15		
旋转平台台面偏差 Deviation of rotating platform	mm	0.01		
旋转平台平行度 Parallelism of rotating platform	mm	0.02		
旋转平台同心度 Concentricity of rotating platform	mm	0.01		
精度寿命 Accuracy Life	h	20000		
保护等级 IP Grade	—	IP40		
重量 Weight	Kg	0.6		

应用实例技术数据 Technical Parameters		规格 Specification	i <sup>2</sup>	直结式行星减速机 Planetary Reducer	直角式转角器 Right Angle Reducer
				PX42	DRS42
额定输出扭矩 T <sub>2N</sub> <sup>3</sup>	Nm	2	-	15	
		3	55	15	
		4	50	-	
		5	60	-	
		7	50	-	
		10	40	-	
急停扭矩 Emergency stop torque	Nm	2.5 times to T <sub>2N</sub>		2 times to T <sub>2N</sub>	
额定输入转速 Rated input speed	rpm	5000		1500	
最大输入转速 Max. input speed	rpm	10000		2000	
回程间隙 Return backlash	Nm	≤3		≤3	
抗扭刚性 Torsional rigidity	Nm/arcmin	7		1.2	
容许径向力 Allowable radial force <sup>4</sup>	N	1530		300	
容许轴向力 Allowable axial force <sup>4</sup>	N	630		150	
使用寿命 Available life	Hr	20000			
效率 Efficiency	%	96			
工作温度 Operation temperature	°C	-15°C~ +90°C			
防护等级 Degree of protection	-	IP65			
润滑 Lubrication	-	Synthetic grease			
噪音 Noise	dB(A)	≤58		≤62	





## Model: PTN85 Hollow Rotary Actuator Specifications:

1. Products size: 85mm
2. Ratio range: 5/10/18
3. Motor range: type 42/ type57 (stepper motor);  
50/100/200/400W AC (servo motor)
4. Output installation size code: 1450M470LR34.5 (ratio: 5/10);  
1450M570LR34.5 (ratio: 5/10); 838.1M466.7-LR34.5 (ratio: 5/10)  
830M345LR30 (ratio:18); 830M446LR30 (ratio:18)

### ● work objects can be directly locked:

The rotating disk surface can directly lock the work objects to improve the convenience of workpiece loading;

### ● convenient wiring:

The rotary platform is of hollow design, which is convenient for wiring or piping;

### ● high accuracy:

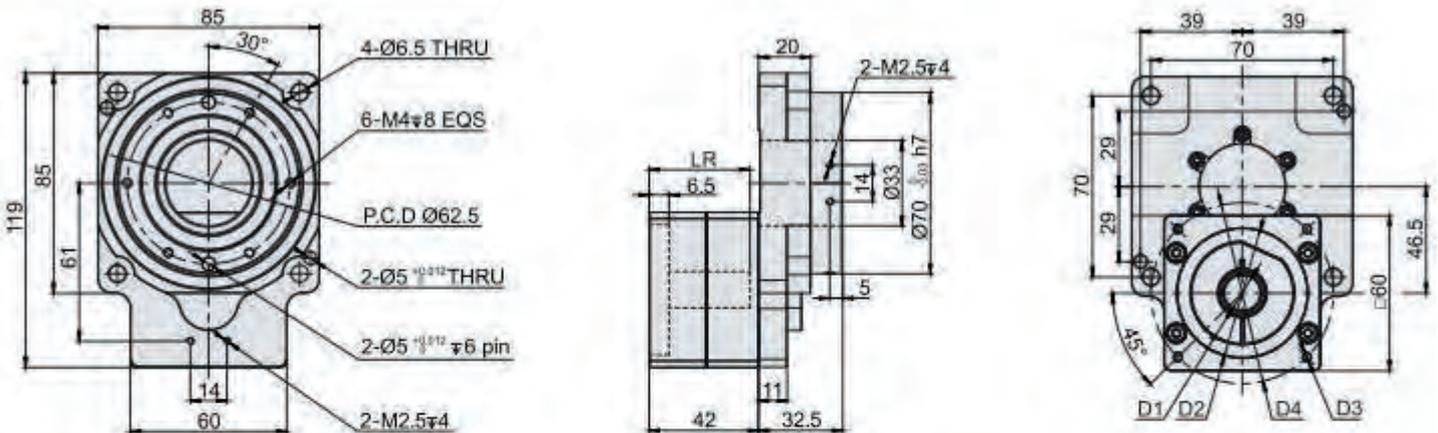
The positioning accuracy is less than 1arcmin;

The repetition accuracy can reach  $\pm 5$ arcsec;

### ● stable operation:

The panel rotates smoothly and smoothly, and the cutting and positioning is fast

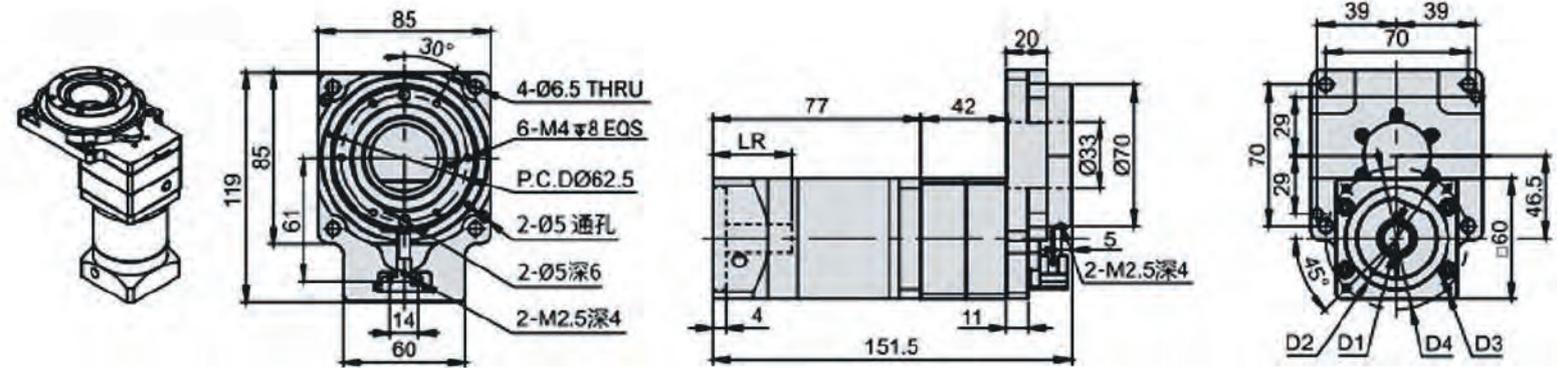
## PTN85 standard size:



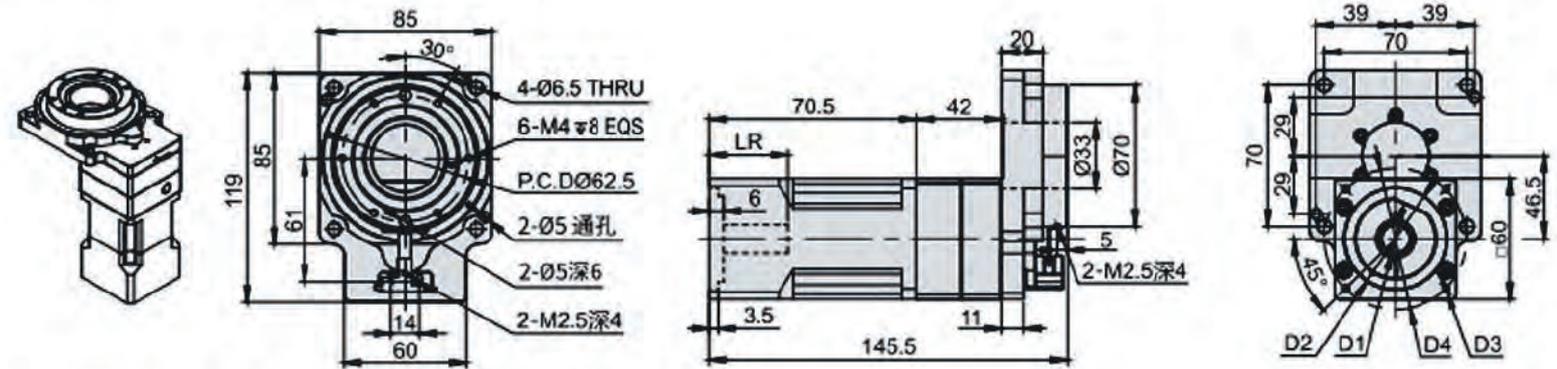
①系列规格	②传动比	③输入安装尺寸				
		D1	D2	D3	D4	LR
PTN085	5	14	50	M4	70	34.5
		14	50	M5	70	34.5
	18	8	38.1	M4	66.7	34.5
		8	30	M3	45	30
		8	30	M4	46	30
		5	22	3.5	43.8	30
8	38.1	M4	66.7	34.5		

PTN085应用范例(订购时请提供马达法兰尺寸)  
 (PTN130 Application case/ please provide motor flange size when ordering)

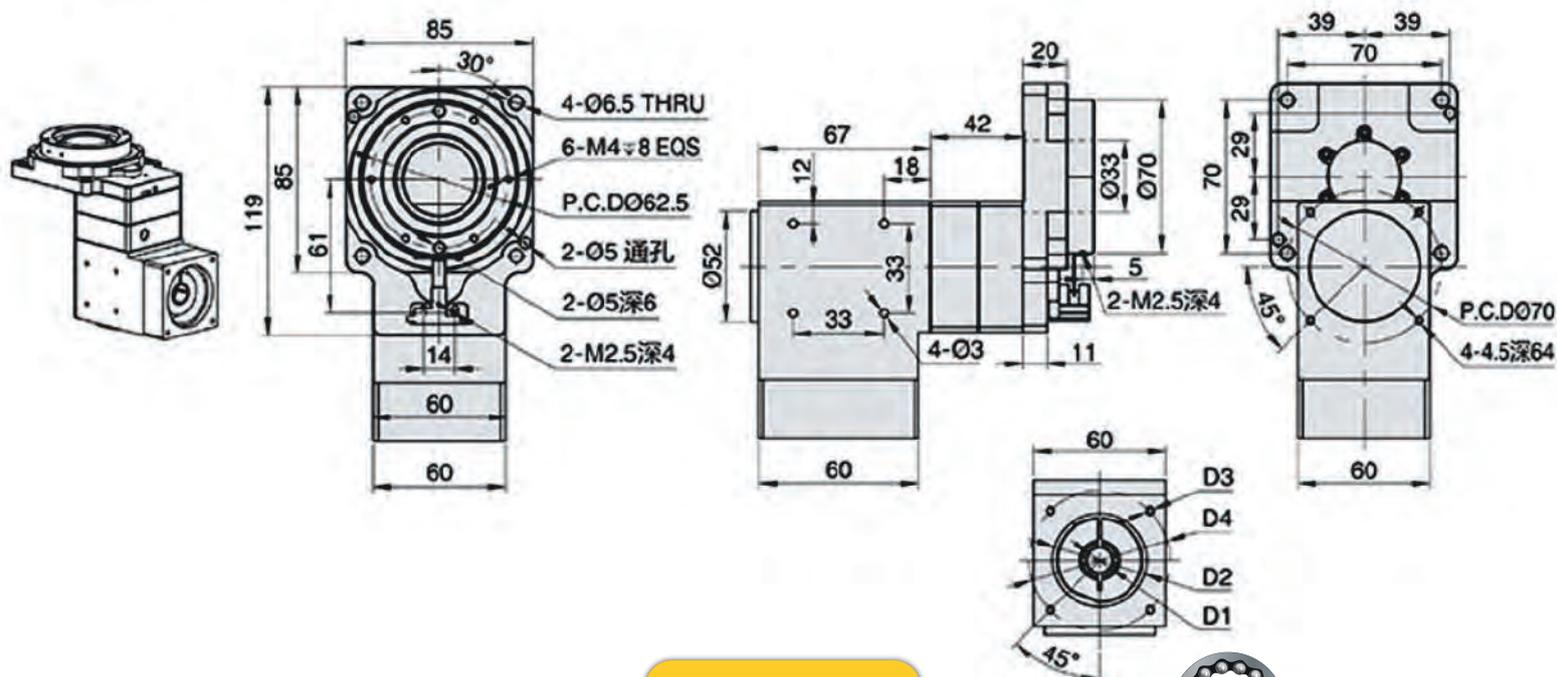
直结式行星减速机 PRF60 (单位mm)  
 (Planetary reducer PRF60)



直结式行星减速机 PX60 (单位mm)  
 (Planetary reducer PX60)



直角式转角器 DRS60 (单位mm)  
 (Right angle reducer DRS60)



规格 Specifications		步进马达 stepper motor		42型		57型	
		伺服马达 servo motor		50W AC	100W AC	200W AC	400W AC
适配马达 Motor							
旋转平台轴承 Rotating platform bearing	—	交叉滚子轴承 Cross roller bearing					
减速比 Ratio	—	1:18	1:5 / 1:10	1:18		1:5 / 1:10	
容许转矩 Allowable torque	Nm	9	20	9		20	
转动惯量 Moment of inertia	kg·m <sup>2</sup>	2500 × 10 <sup>-6</sup>					
允许转速 Allowable output speed	rpm	200					
容许惯性载重 Allowable inertia load	Nm	18					
容许轴向载重 Allowable axial load	N	500					
回程间隙 Return Backlash	arcmin	≤1					
重复定位精度 Repeat positioning platform	arcsec	±15					
旋转平台台面偏差 Deviation of rotating platform	mm	0.01					
旋转平台平行度 Parallelism of rotating platform	mm	0.02					
旋转平台同心度 Concentricity of rotating platform	mm	0.01					
精度寿命 Accuracy Life	h	20000					
保护等级 IP Grade	—	IP40					
重量 Weight	Kg	1.2					

应用实例技术数据 Technical Parameters		规格 Specification	直结式行星减速机 Planetary Reducer			直角式转角器 Right Angle Reducer	
			i <sup>2</sup>	PRF60	PX60	i <sup>2</sup>	DRS60
额定输出扭矩 T <sub>2N</sub> <sup>3</sup>	Nm	3	18	55	1	30	
		4	36	50	2	30	
		5	40	60	3	30	
		7	20	50	5	30	
		10	12	40	-	-	
急停扭矩 Emergency stop torque	Nm	2 times to T <sub>2N</sub>		2.5 times to T <sub>2N</sub>	2 times to T <sub>2N</sub>		
额定输入转速 Rated input speed	rpm	4000		5000	1000		
最大输入转速 Max. input speed	rpm	8000		10000	2000		
回程间隙 Return backlash	Nm	≤10		≤3	≤3		
抗扭刚性 Torsional rigidity	Nm/arcmin	1.8		7	0.06		
容许径向力 Allowable radial force <sup>4</sup>	N	240		1530	500		
容许轴向力 Allowable axial force <sup>4</sup>	N	220		765	200		
使用寿命 Available life	Hr	20000(连续运转降低使用寿命50%)					
效率 Efficiency	%	96%					
工作温度 Operation temperature	°C	-15°C~ +90°C					
防护等级 Degree of protection	-	IP65					
润滑 Lubrication	-	Synthetic grease					
噪音 Noise	dB(A)	≤61		≤58	≤65		



## Model: PTN130 Hollow Rotary Actuator Specifications:

1. Products size: 130mm
2. Ratio range: 10/18
3. Motor range: type57 (stepper motor);  
200/400W AC (servo motor)
4. Output installation size code: 1450M470LR34.5 (ratio: 10/18);  
1450M570LR34.5 (ratio: 10/18); 838.1M466.7-LR34.5 (ratio: 10/18)  
1473M698.4LR47 (ratio:10)

### ● work objects can be directly locked:

The rotating disk surface can directly lock the work objects to improve the convenience of workpiece loading;

### ● convenient wiring:

The rotary platform is of hollow design, which is convenient for wiring or piping;

### ● high accuracy:

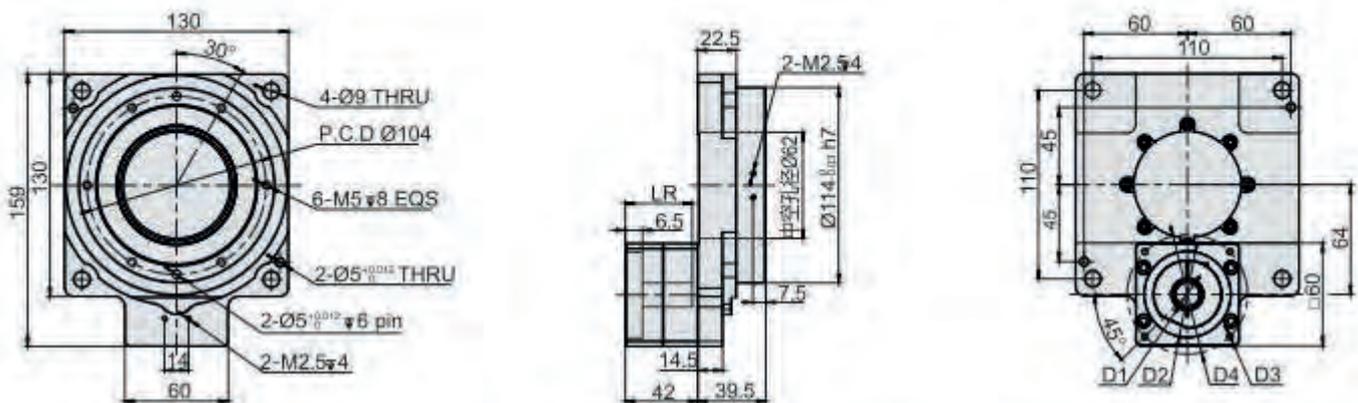
The positioning accuracy is less than 1arcmin;

The repetition accuracy can reach  $\pm 5$ arcsec;

### ● stable operation:

The panel rotates smoothly and smoothly, and the cutting and positioning is fast

## PTN130 standard size:



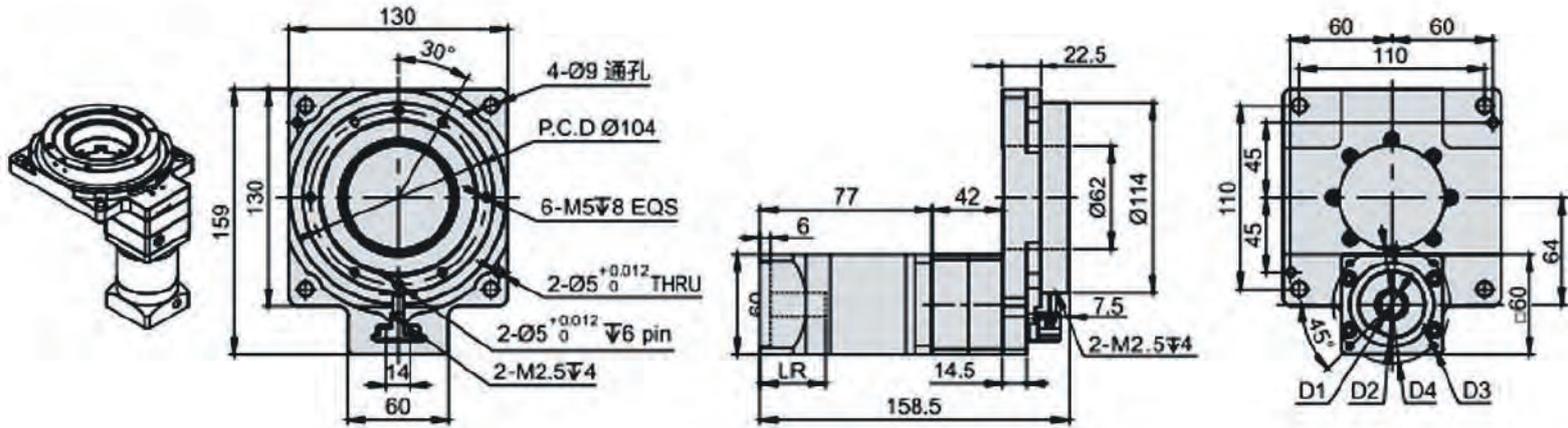
①系列规格	②传动比	③输入安装尺寸				
		D1	D2	D3	D4	LR
PTN130	10	14	50	M4	70	34.5
	18	14	50	M5	70	34.5
		8	38.1	M4	66.7	34.5
	10	14	73	M6	98.4	47

PTN130应用范例(订购时请提供马达法兰尺寸)

[PTN130 Application case/ please provide motor flange size when ordering]

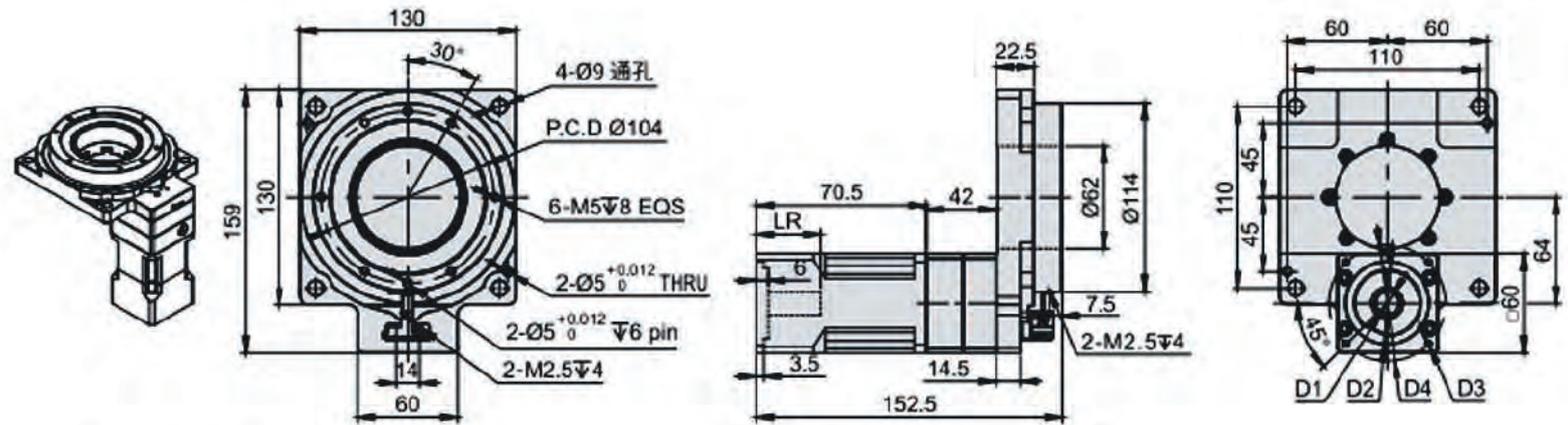
直结式行星减速机 PRF60 (单位mm)

[Planetary reducer PRF60]



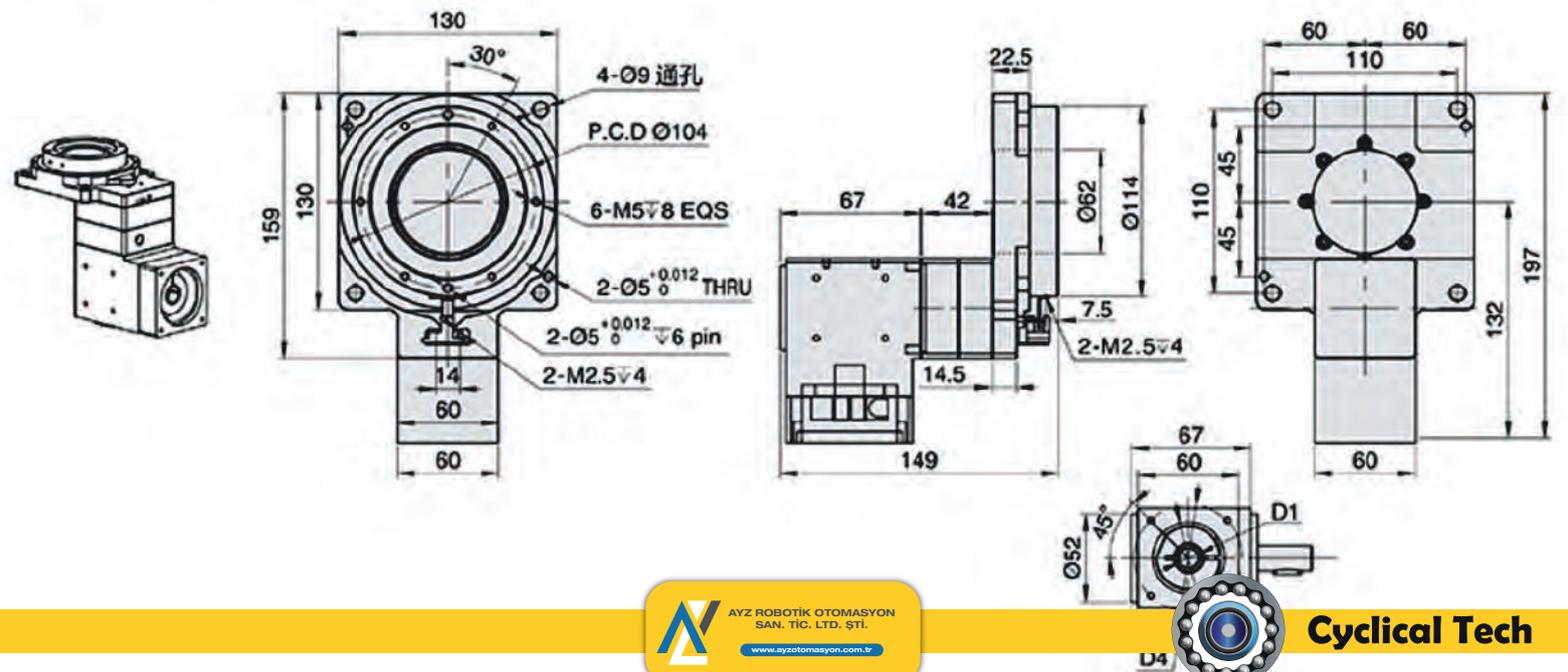
直结式行星减速机 PX60 (单位mm)

[Planetary reducer PX60]



直角式转角器 DRS60 (单位mm)

[Right angle reducer DRS60]



规格 Specifications		步进马达 stepper motor	57型	
		伺服马达 servo motor	200W AC	400W AC
适配马达 Motor				
旋转平台轴承 Rotating platform bearing	—	交叉滚子轴承 Cross roller bearing		
减速比 Ratio	—	1:10	1:18	
容许转矩 Allowable torque	Nm	30	18	
转动惯量 Moment of inertia	kg·m <sup>2</sup>	15870 × 10 <sup>-6</sup>		
允许转速 Allowable output speed	rpm	200		
容许惯性载重(倾侧力矩) Allowable inertia load	Nm	45		
容许轴向载重 Allowable axial load	N	2000		
回程间隙 Return Backlash	arcmin	≤1		
重复定位精度 Repeat positioning platform	arcsec	±15		
旋转平台台面偏差 Deviation of rotating platform	mm	0.01		
旋转平台平行度 Parallelism of rotating platform	mm	0.02		
旋转平台同心度 Concentricity of rotating platform	mm	0.01		
精度寿命 Accuracy Life	h	20000		
保护等级 IP Grade	—	IP40		
重量 Weight	Kg	2.5		



应用实例技术数据 Technical Parameters		规格 Specification	直结式行星减速机 Planetary Reducer			直角式转角器 Right Angle Reducer	
			i <sup>2</sup>	PRF60	PX60	i <sup>2</sup>	DRS60
额定输出扭矩 T <sub>2N</sub> <sup>3</sup>	Nm	3	18	55	-	-	
		4	36	50	2	30	
		5	40	60	3	30	
		7	20	50	5	30	
		10	12	40	-	-	
急停扭矩 Emergency stop torque	Nm	2 times to T <sub>2N</sub>		2.5 times to T <sub>2N</sub>	2 times to T <sub>2N</sub>		
额定输入转速 Rated input speed	rpm	4000		5000	1000		
最大输入转速 Max. input speed	rpm	8000		10000	2000		
回程间隙 Return backlash	Nm	≤10		≤3	≤3		
抗扭刚性 Torsional rigidity	Nm/arcmin	1.8		7	0.06		
容许径向力 Allowable radial force <sup>4</sup>	N	240		1530	500		
容许轴向力 Allowable axial force <sup>4</sup>	N	220		765	200		
使用寿命 Available life	Hr	20000(连续运转降低使用寿命50%)					
效率 Efficiency	%	96%					
工作温度 Operation temperature	°C	-15°C~ +90°C					
防护等级 Degree of protection	-	IP65					
润滑 Lubrication	-	Synthetic grease					
噪音 Noise	dB(A)	≤61		≤58	≤65		

# Model: PTN200 Hollow Rotary Actuator

## Specifications:



1. Products size: 200mm
2. Ratio range: 10/18
3. Motor range: type86 (stepper motor);  
750W AC (servo motor)
4. Output installation size code: 1970M590LR47 (ratio: 10/18);  
1970M690LR47 (ratio: 10/18); 1473M698.4LR47 (ratio: 10/18);  
1460M698.4LR47 (ratio: 10/18)

### ● work objects can be directly locked:

The rotating disk surface can directly lock the work objects to improve the convenience of workpiece loading;

### ● convenient wiring:

The rotary platform is of hollow design, which is convenient for wiring or piping;

### ● high accuracy:

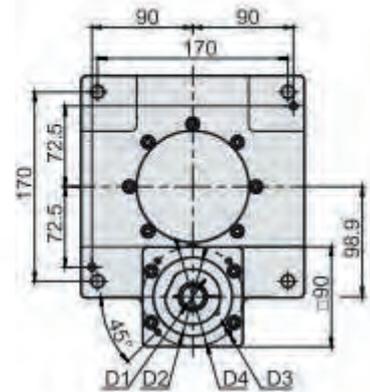
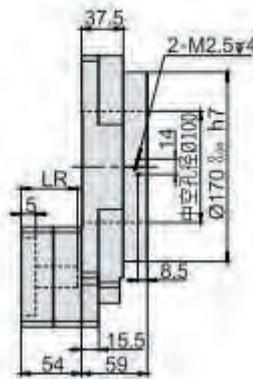
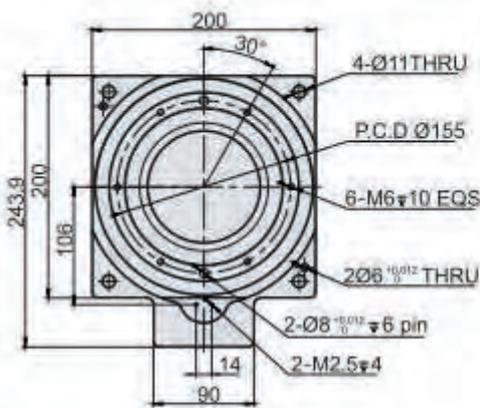
The positioning accuracy is less than 1arcmin;

The repetition accuracy can reach  $\pm 5$ arcsec;

### ● stable operation:

The panel rotates smoothly and smoothly, and the cutting and positioning is fast

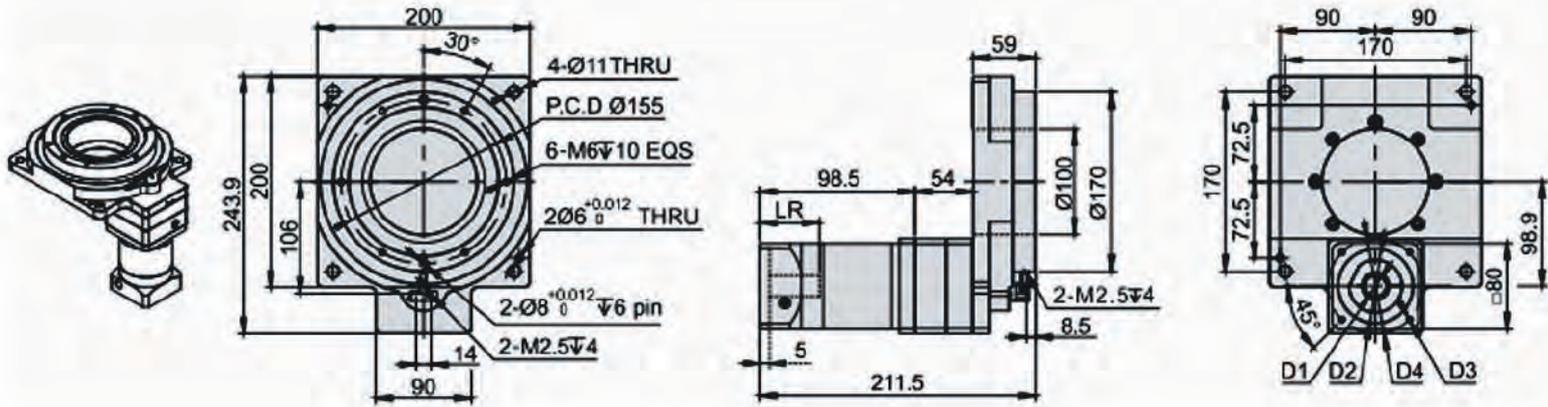
## PTN200 standard size:



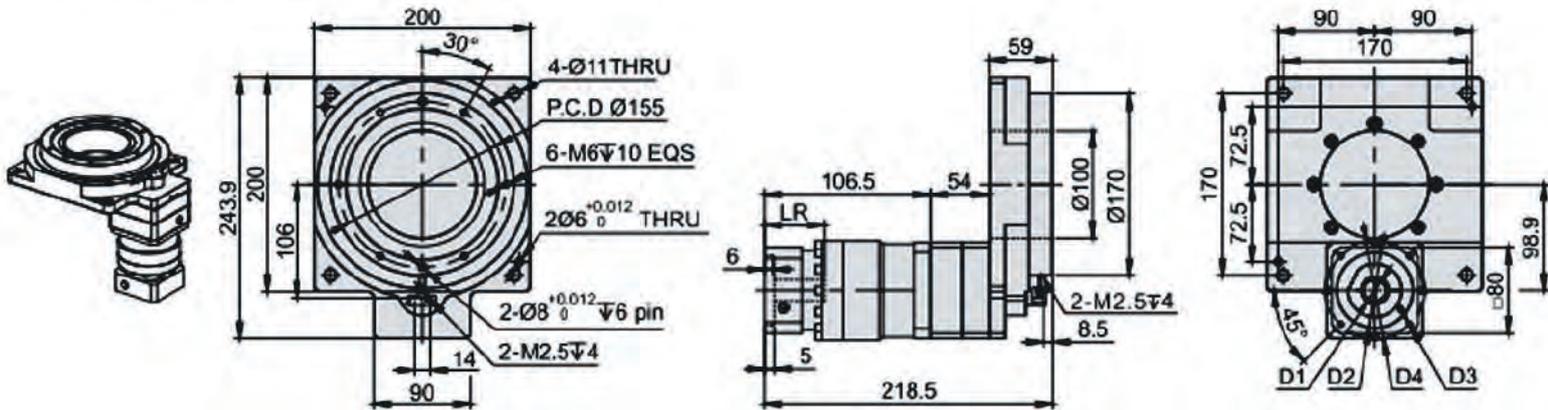
① 系列规格	② 传动比	③ 输入安装尺寸				
		D1	D2	D3	D4	LR
PTN200	10	19	70	M5	90	47
		19	70	M6	90	47
	18	14	73	M6	98.4	47
		14	60	M6	98.4	47

PTN200应用范例(订购时请提供马达法兰尺寸)  
 (PTN200 Application case/ please provide motor flange size when ordering)

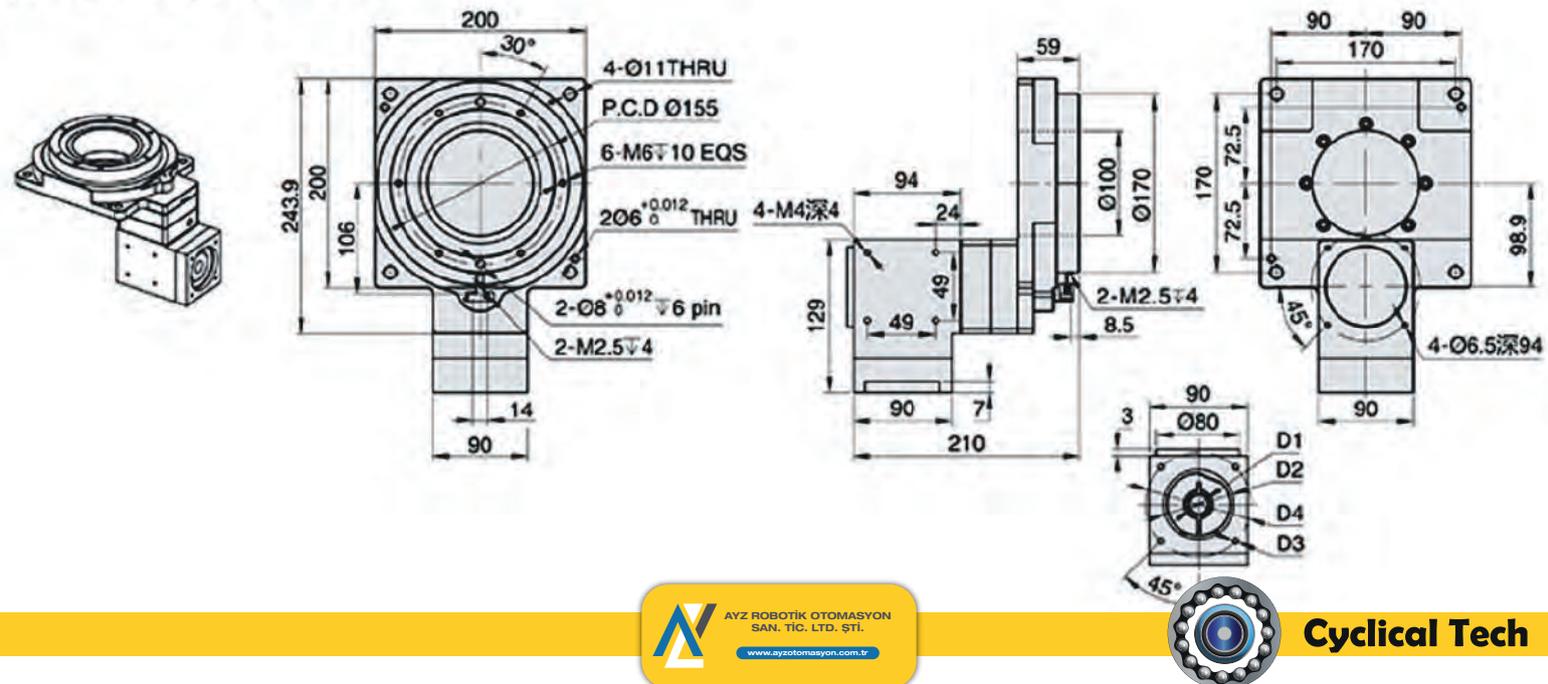
直结式行星减速机 PRF80 (单位mm)  
 (Planetary reducer PRF80)



直结式行星减速机 PA90 (单位mm)  
 (Planetary reducer PA90)



直角式转角器 DRS90(单位mm)  
 (Right angle reducer DRS90)



规格 Specifications		步进马达 stepper motor	86型
		伺服马达 servo motor	750W AC
适配马达 Motor			
旋转平台轴承 Rotating platform bearing	—	交叉滚子轴承 Cross roller bearing	
减速比 Ratio	—	1:10	1:18
容许转矩 Allowable torque	Nm	65	50
转动惯量 Moment of inertia	kg·m <sup>2</sup>	108150 × 10 <sup>-6</sup>	
允许转速 Allowable output speed	rpm	200	
容许惯性载重(倾侧力矩) Allowable inertia load	Nm	80	
容许轴向载重 Allowable axial load	N	4000	
回程间隙 Return Backlash	arcmin	≤1	
重复定位精度 Repeat positioning platform	arcsec	±15	
旋转平台台面偏差 Deviation of rotating platform	mm	0.01	
旋转平台平行度 Parallelism of rotating platform	mm	0.03	
旋转平台同心度 Concentricity of rotating platform	mm	0.01	
精度寿命 Accuracy Life	h	20000	
保护等级 IP Grade	—	IP40	
重量 Weight	Kg	8.0	

应用实例技术数据 Technical Parameters		规格 Specification	直结式行星减速机 Planetary Reducer			直角式转角器 Right Angle Reducer	
			i <sup>2</sup>	PRF80	PA90	i <sup>2</sup>	DRS90
额定输出扭矩 T <sub>2N</sub> <sup>3</sup>	Nm	3	40	130	1	60	
		4	110	140	2	60	
		5	90	160	3	60	
		7	22	140	5	60	
		10	22	100	-	-	
急停扭矩 Emergency stop torque	Nm	2 times to T <sub>2N</sub>		2.5 times to T <sub>2N</sub>	2 times to T <sub>2N</sub>		
额定输入转速 Rated input speed	rpm	3500		4000	1000		
最大输入转速 Max. input speed	rpm	6000		8000	2000		
回程间隙 Return backlash	Nm	≤10		≤3	≤3		
抗扭刚性 Torsional rigidity	Nm/arcmin	4.7		14	5		
容许径向力 Allowable radial force <sup>4</sup>	N	400		3250	1200		
容许轴向力 Allowable axial force <sup>4</sup>	N	420		1625	500		
使用寿命 Available life	Hr	20000(连续运转降低使用寿命50%)					
效率 Efficiency	%	96%					
工作温度 Operation temperature	°C	-15°C~ +90°C					
防护等级 Degree of protection	-	IP65					
润滑 Lubrication	-	Synthetic grease					
噪音 Noise	dB(A)	≤63		≤60	≤65		



## Model: PTN280 Hollow Rotary Actuator

### Specifications:

1. Products size: 280mm
2. Ratio range: 10/18
3. Motor range: type110 (stepper motor);  
1500W AC (servo motor)
4. Output installation size code: 22110M8145LR80 (ratio: 10/18);  
24110M8145LR80 (ratio: 10/18); 1985M8132LR80 (ratio: 10/18);

#### ● work objects can be directly locked:

The rotating disk surface can directly lock the work objects to improve the convenience of workpiece loading;

#### ● convenient wiring:

The rotary platform is of hollow design, which is convenient for wiring or piping;

#### ● high accuracy:

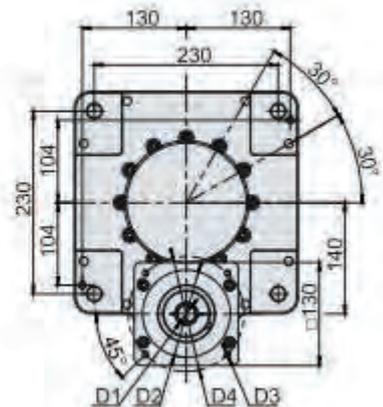
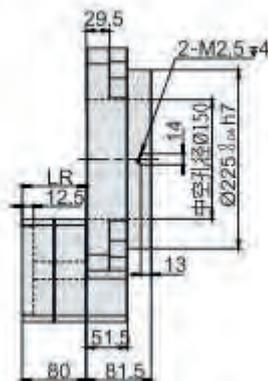
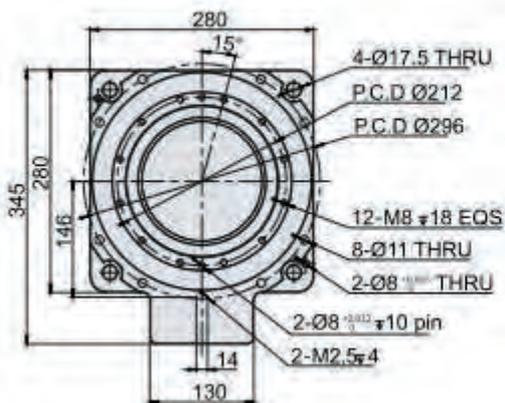
The positioning accuracy is less than 1arcmin;

The repetition accuracy can reach  $\pm 5$ arcsec;

#### ● stable operation:

The panel rotates smoothly and smoothly, and the cutting and positioning is fast

### PTN280 standard size:



① 系列规格	② 传动比	③ 输入安装尺寸				
		D1	D2	D3	D4	LR
PTN280	10	22	110	M8	145	80
	18	24	110	M8	145	80
		19	85	M8	132	80



规格 Specifications		步进马达 stepper motor	110型
		伺服马达 servo motor	1500W AC
适配马达 Motor			
旋转平台轴承 Rotating platform bearing	—	交叉滚子轴承 Cross roller bearing	
减速比 Ratio	—	1:10	1:18
容许转矩 Allowable torque	Nm	120	
转动惯量 Moment of inertia	kg·m <sup>2</sup>	146000×10 <sup>-6</sup>	
允许转速 Allowable output speed	rpm	200r	
容许惯性载重(倾侧力矩) Allowable inertia load	Nm	216	
容许轴向载重 Allowable axial load	N	7000	
回程间隙 Return Backlash	arcmin	≤1	
重复定位精度 Repeat positioning platform	arcsec	±15	
旋转平台台面偏差 Deviation of rotating platform	mm	0.01	
旋转平台平行度 Parallelism of rotating platform	mm	0.03	
旋转平台同心度 Concentricity of rotating platform	mm	0.01	
精度寿命 Accuracy Life	h	20000	
保护等级 IP Grade	—	IP40	
重量 Weight	Kg	19.0	

应用实例技术数据 Technical Parameters		规格 Specification	
		i <sup>2</sup>	直结式行星减速机 Planetary Reducer  PA120
额定输出扭矩 T <sub>2N</sub> <sup>3</sup>	Nm	3	208
		4	290
		5	330
		7	300
		10	230
急停扭矩 Emergency stop torque	Nm	2 times to T <sub>2N</sub>	
额定输入转速 Rated input speed	rpm	4000	
最大输入转速 Max. input speed	rpm	8000	
回程间隙 Return backlash	Nm	≤3	
抗扭刚性 Torsional rigidity	Nm/arcmin	25	
容许径向力 Allowable radial force <sup>4</sup>	N	6700	
容许轴向力 Allowable axial force <sup>4</sup>	N	3350	
使用寿命 Available life	Hr	20000(连续运转降低使用寿命50%)	
效率 Efficiency	%	96%	
工作温度 Operation temperature	°C	-15°C~ +90°C	
防护等级 Degree of protection	-	IP65	
润滑 Lubrication	-	Synthetic grease	
噪音 Noise	dB(A)	≤63	



## Model: PTN450 Hollow Rotary Actuator

### Specifications:

1. Products size: 450mm
2. Ratio range: 10
3. Motor range: 3000W AC (servo motor)
4. Output installation size code: 35114.3M12200LR124.5 (ratio: 10);  
42114.3M12200LR124.5 (ratio: 10);

#### ● work objects can be directly locked:

The rotating disk surface can directly lock the work objects to improve the convenience of workpiece loading;

#### ● convenient wiring:

The rotary platform is of hollow design, which is convenient for wiring or piping;

#### ● high accuracy:

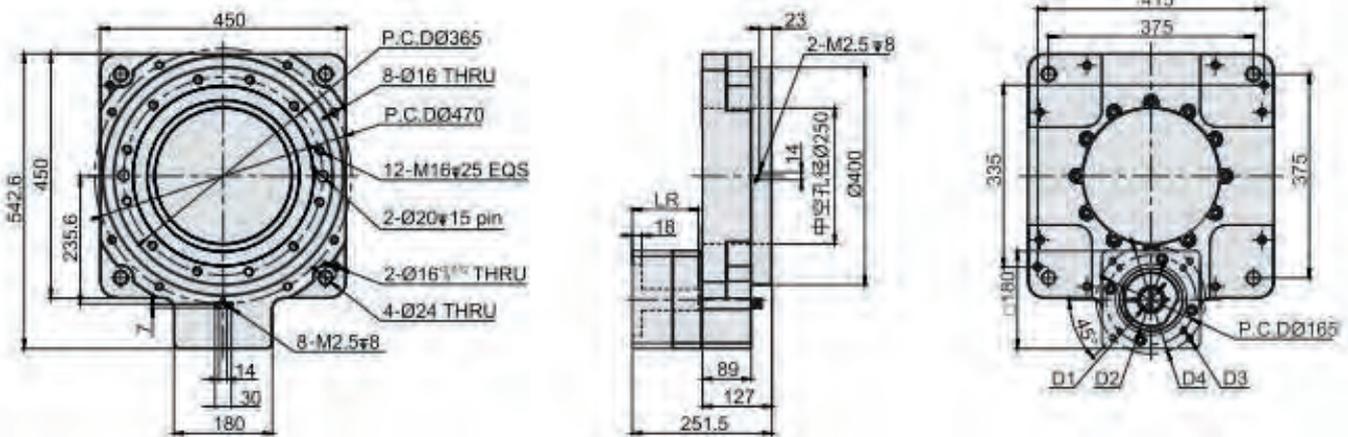
The positioning accuracy is less than 1arcmin;

The repetition accuracy can reach  $\pm 5$ arcsec;

#### ● stable operation:

The panel rotates smoothly and smoothly, and the cutting and positioning is fast

## PTN450 standard size:



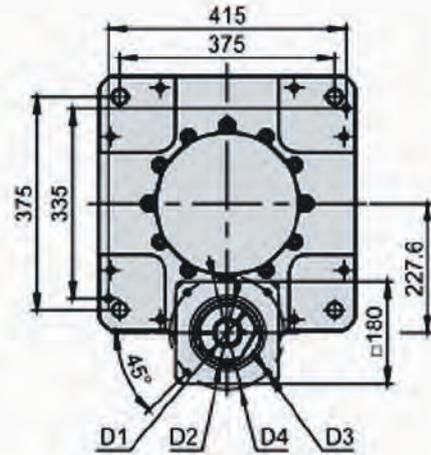
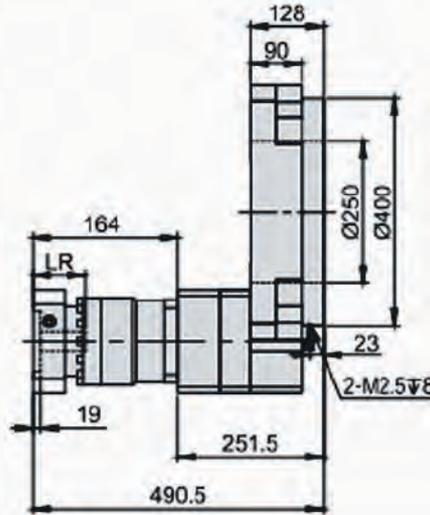
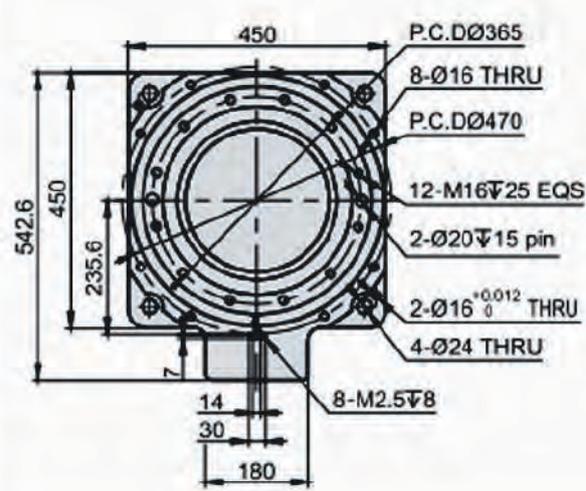
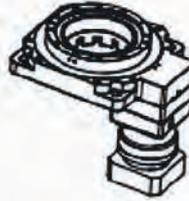
①系列规格	②传动比	③输入安装尺寸				
		D1	D2	D3	D4	LR
PTN450	10	37	114.3	M12	200	124.5
		42	114.3	M12	200	124.5

PTN450应用范例(订购时请提供马达法兰尺寸)

[PTN450 Application case/ please provide motor flange size when ordering]

直结式行星减速机 PA140 (单位mm)

[Planetary reducer PA140]



规格 Specifications		伺服马达 servo motor
		3000W AC
适配马达 Motor		
旋转平台轴承 Rotating platform bearing	—	交叉滚子轴承 Cross roller bearing
减速比 Ratio	—	1:10
容许转矩 Allowable torque	Nm	387
转动惯量 Moment of inertia	kg·m <sup>2</sup>	380230×10 <sup>-6</sup>
允许转速 Allowable output speed	rpm	200
容许惯性载重(倾侧力矩) Allowable inertia load	Nm	767
容许轴向载重 Allowable axial load	N	7000
回程间隙 Return Backlash	arcmin	≤1
重复定位精度 Repeat positioning platform	arcsec	±15
旋转平台台面偏差 Deviation of rotating platform	mm	0.01
旋转平台平行度 Parallelism of rotating platform	mm	0.03
旋转平台同心度 Concentricity of rotating platform	mm	0.01
精度寿命 Accuracy Life	h	20000
保护等级 IP Grade	—	IP40
重量 Weight	Kg	110

应用实例技术数据 Technical Parameters		规格 Specification		直结式行星减速机 Planetary Reducer	
		i <sup>2</sup>	PA140		
额定输出扭矩 T <sub>2N</sub> <sup>3</sup>	Nm	3	342		
		4	540		
		5	650		
		7	550		
		10	450		
急停扭矩 Emergency stop torque	Nm	2 times to T <sub>2N</sub>			
额定输入转速 Rated input speed	rpm	3000			
最大输入转速 Max. input speed	rpm	6000			
回程间隙 Return backlash	Nm	≤3			
抗扭刚性 Torsional rigidity	Nm/arcmin	50			
容许径向力 Allowable radial force <sup>4</sup>	N	9400			
容许轴向力 Allowable axial force <sup>4</sup>	N	4000			
使用寿命 Available life	Hr	20000(连续运转降低使用寿命50%)			
效率 Efficiency	%	96%			
工作温度 Operation temperature	°C	-15°C~ +90°C			
防护等级 Degree of protection	-	IP65			
润滑 Lubrication	-	Synthetic grease			
噪音 Noise	dB(A)	≤65			