

# 苏州绿的谐波传动科技股份有限公司

Leader Harmonious Drive Systems Co.,Ltd



## 面向未来的新一代谐波减速器

New generation strain wave reducers for the future

**Y** 系列谐波减速器

model **Y**

产品介绍手册

Product Introduction Manual

**Y系列谐波减速器是世界上首款实现了10弧秒以内传动精度的齿轮减速器**  
Y series is the first strain wave reducer in the world that achieves transmission accuracy within 10 arc sec



**扭转刚度提升一倍**

Torsional rigidity doubled



**单向传动精度提升两倍以上**

Accuracy of one-way drive doubled or more



**从根本上解决振动耦合问题**

Solve the problem of coupling vibration

## **Y** 系列谐波减速器 ( model **Y** ) 改进之处 Advantages of model **Y**

### **全新结构与齿形设计**

New structure and tooth profile design

### **三次谐波取代二次谐波**

Third-harmonic generation (frequency tripling) replaces second -harmonic generation ( frequency doubling )

### **特制材料及热处理工艺**

Special material and heat treatment technology

### **柔轮及轴承的材料和热处理工艺特制**

Special material for flex spline and bearing Special heat treatment technology

#### **柔轮的热处理TW工艺**

TW technology of heat treatment for flex spline

#### **柔性轴承的TTN工艺**

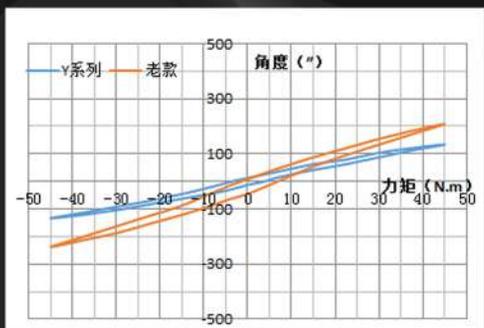
TTN technology of heat treatment for flexible bearing

# Y 系列谐波减速器 ( model Y ) 与老款的刚度对比

## Rigidity of model Y compared with the old models'

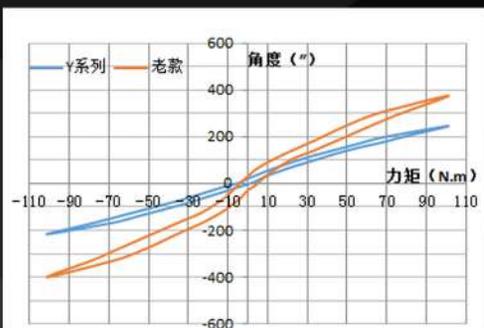
YLHS-20-80(Y系列)与LHSG-20-80(老款)  
刚度数据变化趋势图

YLHS-20-80(Y series) and LHSG-20-80( old model)  
Change trend chart of stiffness



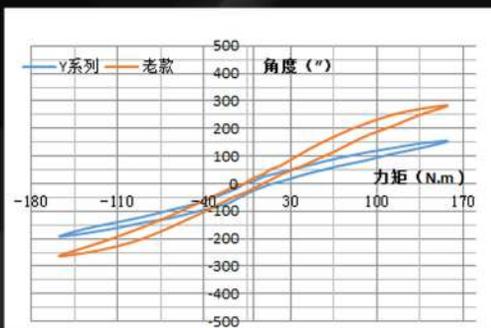
YLHS-25-80(Y系列)与LHSG-25-80(老款)  
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YLHS-25-80(Y series) and LHSG-25-80( old model)  
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YLHS-32-80(Y系列)与LHSG-32-80(老款)  
刚度数据变化趋势图

YLHS-32-80(Y series) and LHSG-32-80( old model)  
Change trend chart of stiffness

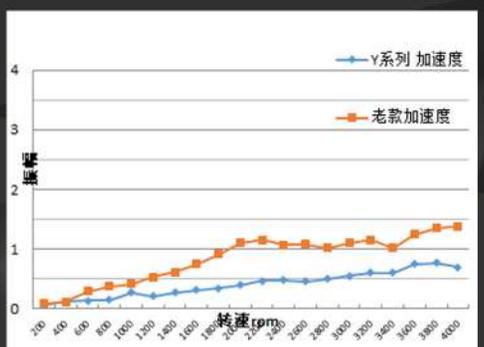


# Y 系列谐波减速器 ( model Y ) 与老款的振动对比

## Vibration of model Y compared with the old models'

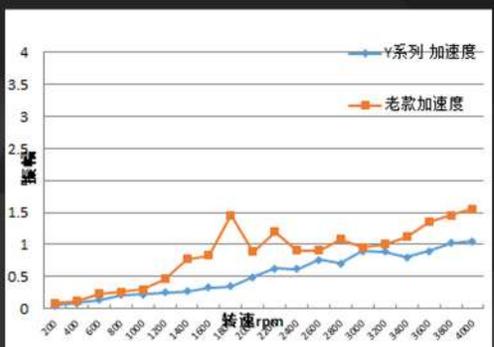
YLHS-20-80(Y系列)与LHSG-20-80(老款)  
振幅趋势图 8KG负载

YLHS-20-80(Y series)与LHSG-20-80(old model)  
Amplitude trend chart Load:8KG



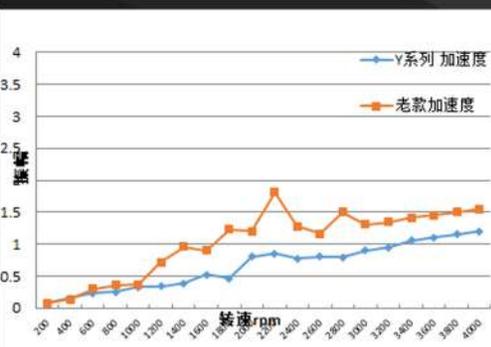
YLHS-25-80(Y系列)与LHSG-25-80(老款)  
振幅趋势图 8KG负载

YLHS-25-80(Y series)与LHSG-25-80(old model)  
Amplitude trend chart Load:8KG



YLHS-32-80(Y系列)与LHSG-32-80(老款)  
振幅趋势图 18KG负载

YLHS-32-80(Y series)与LHSG-32-80(old model)  
Amplitude trend chart Load:18KG

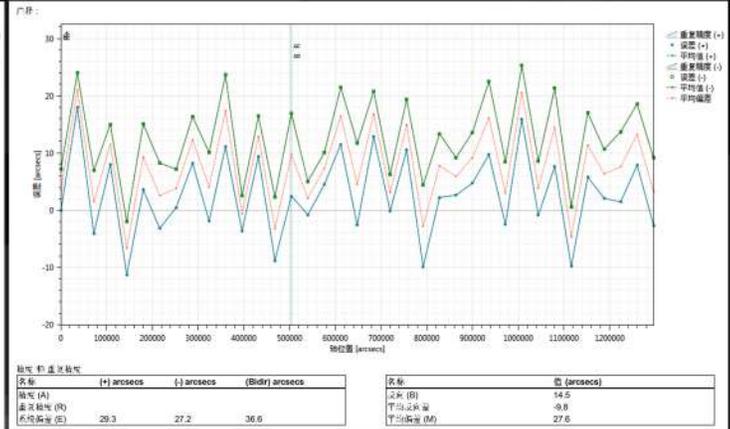
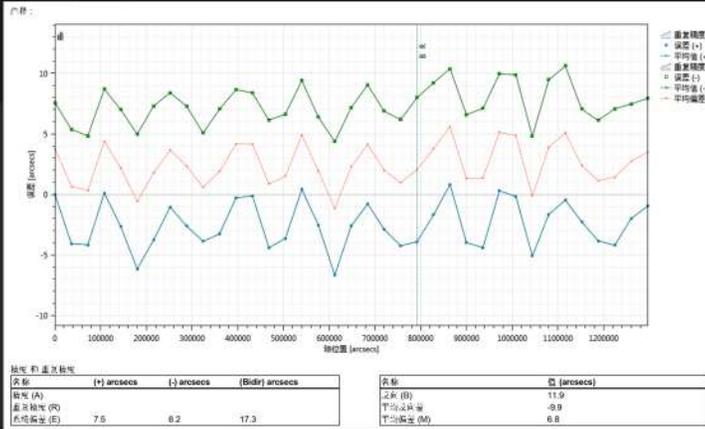


# Y系列谐波减速器 (model Y) 与老款的单向传动精度对比

## Accuracy of one-way drive model Y compared with the old models'

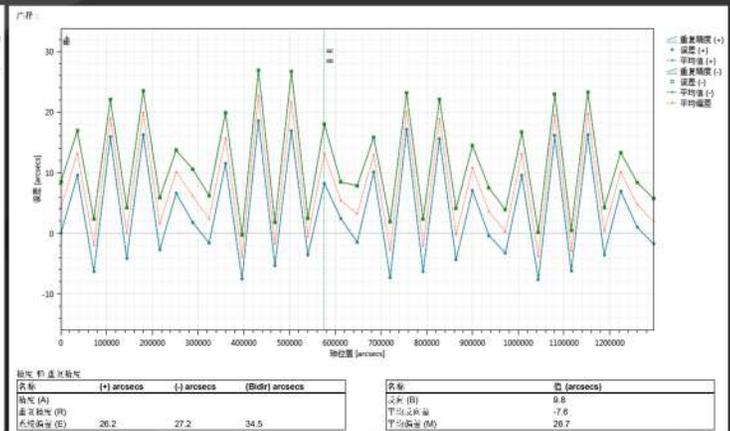
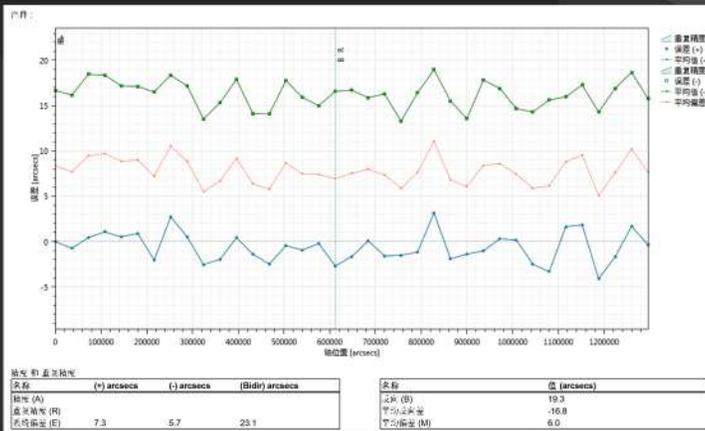
YLHS-20-80(Y系列)  
YLHS-20-80(Y series)

LHSG-20-80(老款)  
LHSG-20-80(old model)



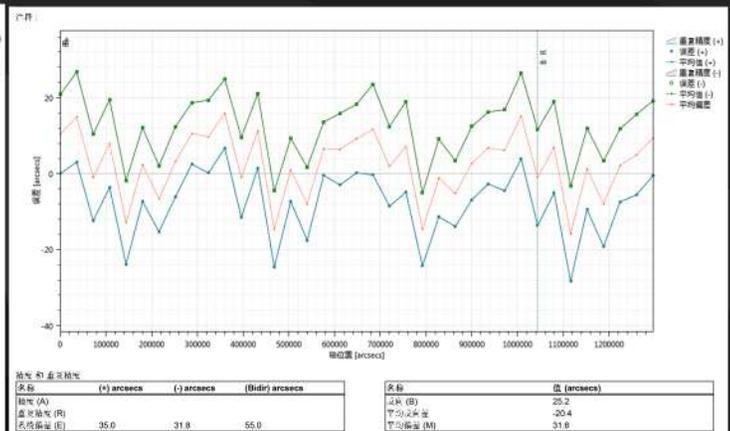
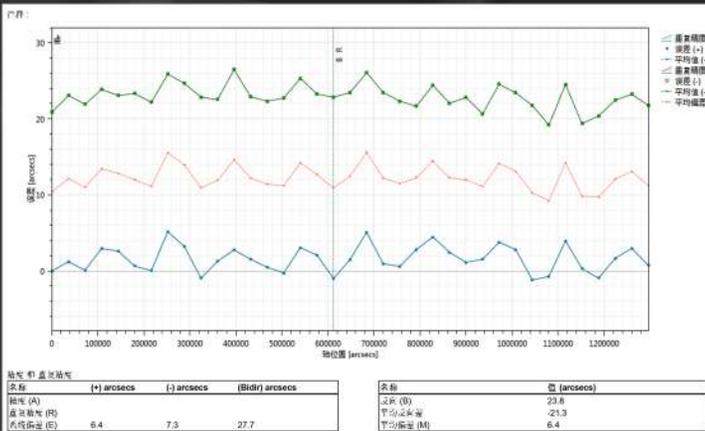
YLHS-25-80(Y系列)  
YLHS-25-80(Y series)

LHSG-25-80 (老款)  
LHSG-25-80(old model)



YLHS-32-80(Y系列)  
YLHS-32-80(Y series)

LHSG-32-80 (老款)  
LHSG-32-80( old model)



(Model Y) YLHS系列谐波减速器性能参数表

项目 型号	减速比	输入 2000/min 时的额定转 矩	启动、停 止 时的容许 最大转矩	平均负载 转矩的容 许最大值	瞬间容许 最大转矩	容许最高 输入转速	刚性	单向角度 传达精度	双向角度 传达精度	传动 效率	重量	设计 寿命
		Nm	Nm	Nm	Nm	r/min	$\times 10^4 \text{Nm/rad}$	Arc sec	Arc sec	%	Kg	Hour
17	80	20	40	25	108	6000	3.5	$\leq 20$	$\leq 40$	75 ~ 80	0.56	10000
	100	23	46	35	134	6000	3.5					10000
20	80	33	66	45	158	6000	5.4				0.76	10000
	100	50	100	60	180	6000	5.4					10000
25	80	80	160	105	315	5000	9.3				1.24	10000
	100	85	170	130	350	5000	9.3					10000
	120	85	170	135	376	5000	9.3					10000
32	80	145	300	200	600	4000	15				2.6	10000
	100	170	340	220	700	4000	15					10000
	120	170	400	250	800	4000	15					10000
40	100	300	600	450	1334	3500	32				5	10000
	120	330	660	500	1458	3500	32					10000
	160	350	700	550	1458	3500	32	10000				

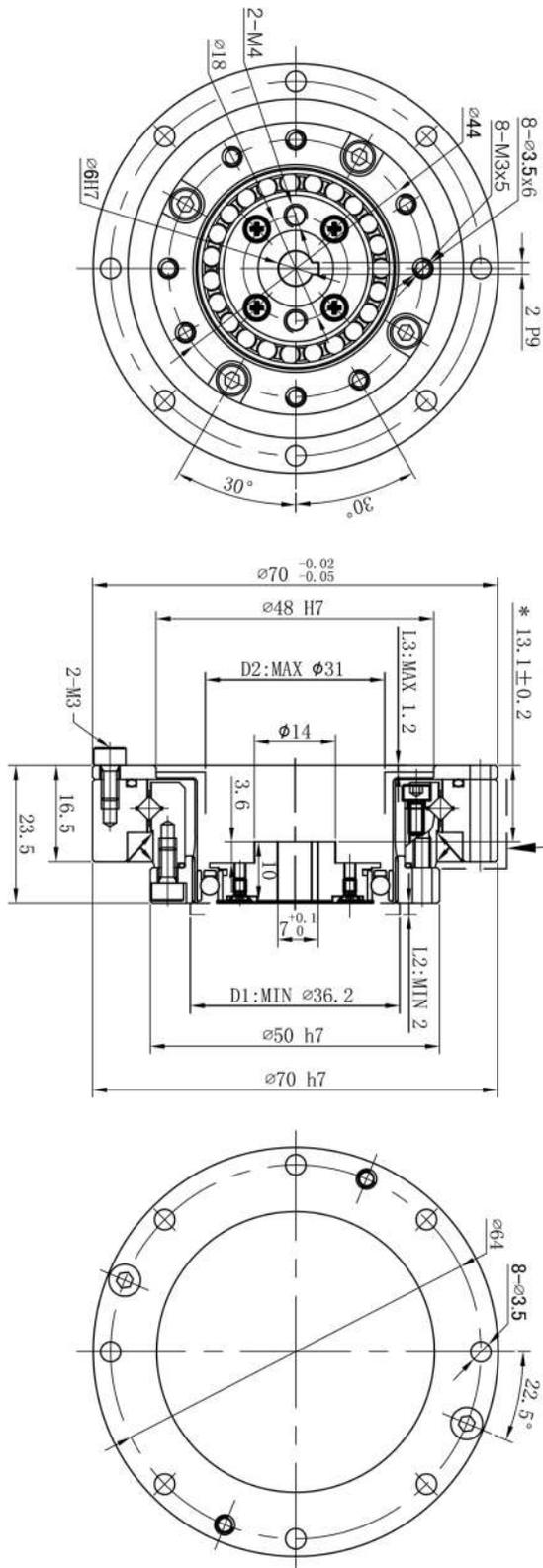


# Y 系列谐波减速器 (model Y) 图纸

## model Y Series drawings

*Leaderdrive*

Rev C/2



交叉滚子轴承发黑  
 cross roller bearing

L2/D1: 与刚轮安装零件避免干涉的最小安全尺寸  
 L3/D2: 与柔轮安装零件避免干涉的最大安全尺寸

L2/D1: minimum dimensions of mating part in order to maintain clearance with circular spline  
 L3/D2: maximum dimensions of mating part in order to maintain clearance with flexspline

YLHS-14-XXX-C-1

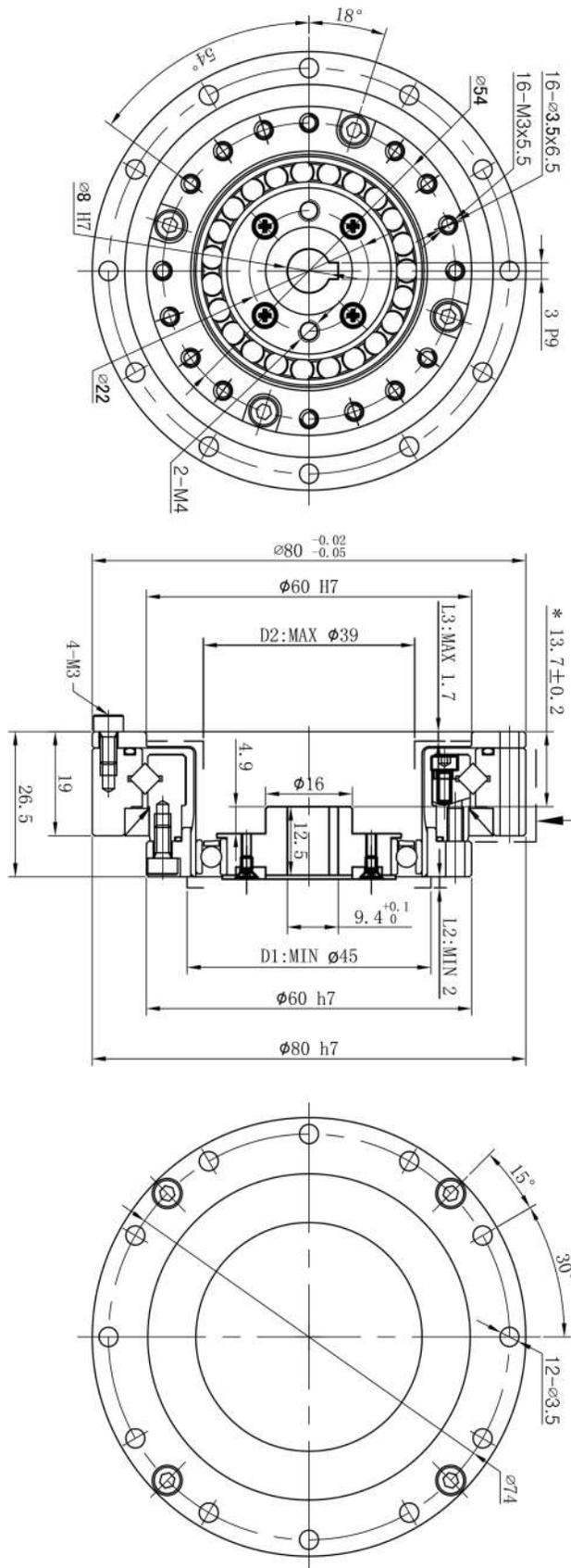
YLHS-14-XXX-C-1

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Leaderdrive

Rev C/2



交叉滚子轴承发黑  
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- L3/D2: 与柔轮安装零件避免干涉的最大安全尺寸  
maximum dimensions of mating part in order to maintain clearance with flexspline

YLHS-17-XXX-C-I

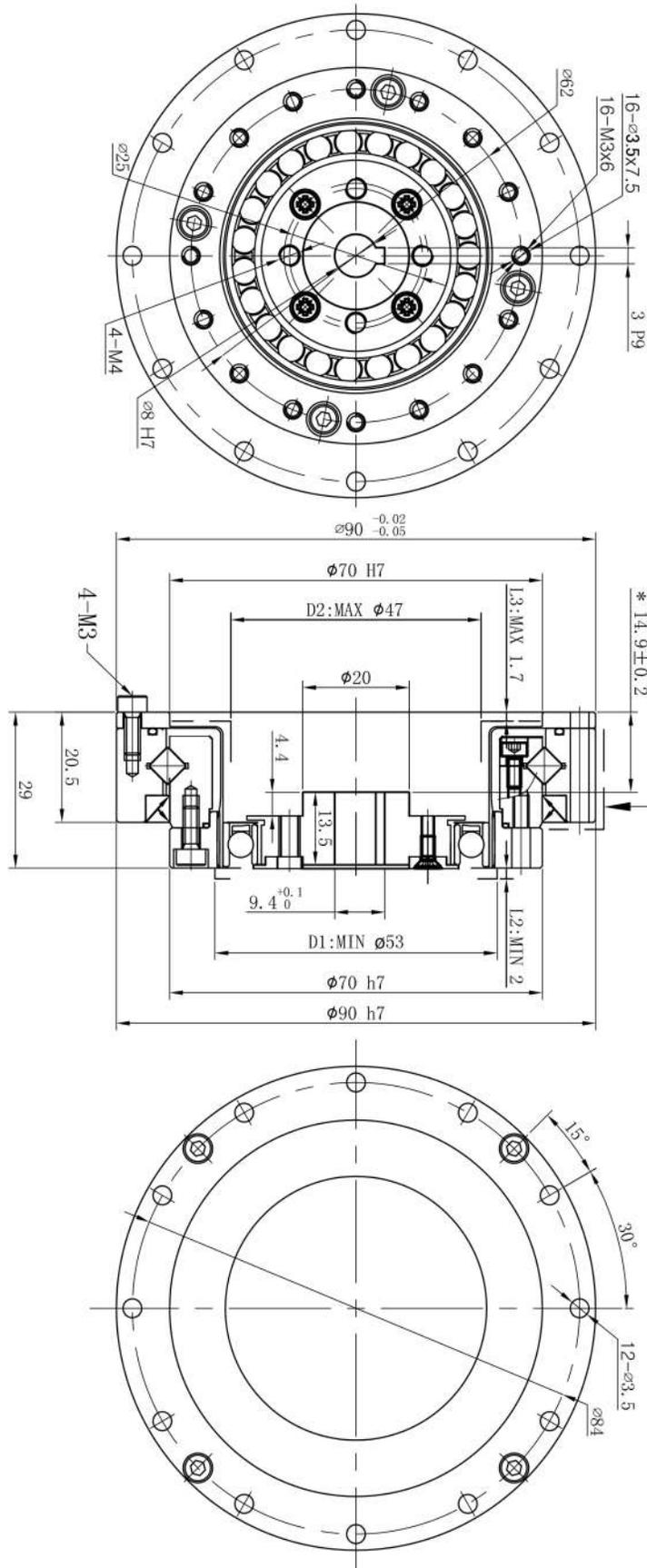
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## model Y Series drawings

*leaderdrive*

交叉滚子轴承发黑  
 cross roller bearing

Rev C/2



L2/D1: 与刚轮安装零件避免干涉的最小安全尺寸  
 L3/D2: 与柔轮安装零件避免干涉的最大安全尺寸  
 L2/D1: minimum dimensions of mating part in order to maintain clearance with circular spline  
 L3/D2: maximum dimensions of mating part in order to maintain clearance with flexspline

YLHS-20-XXX-C-1

YLHS-20-XXX-C-1

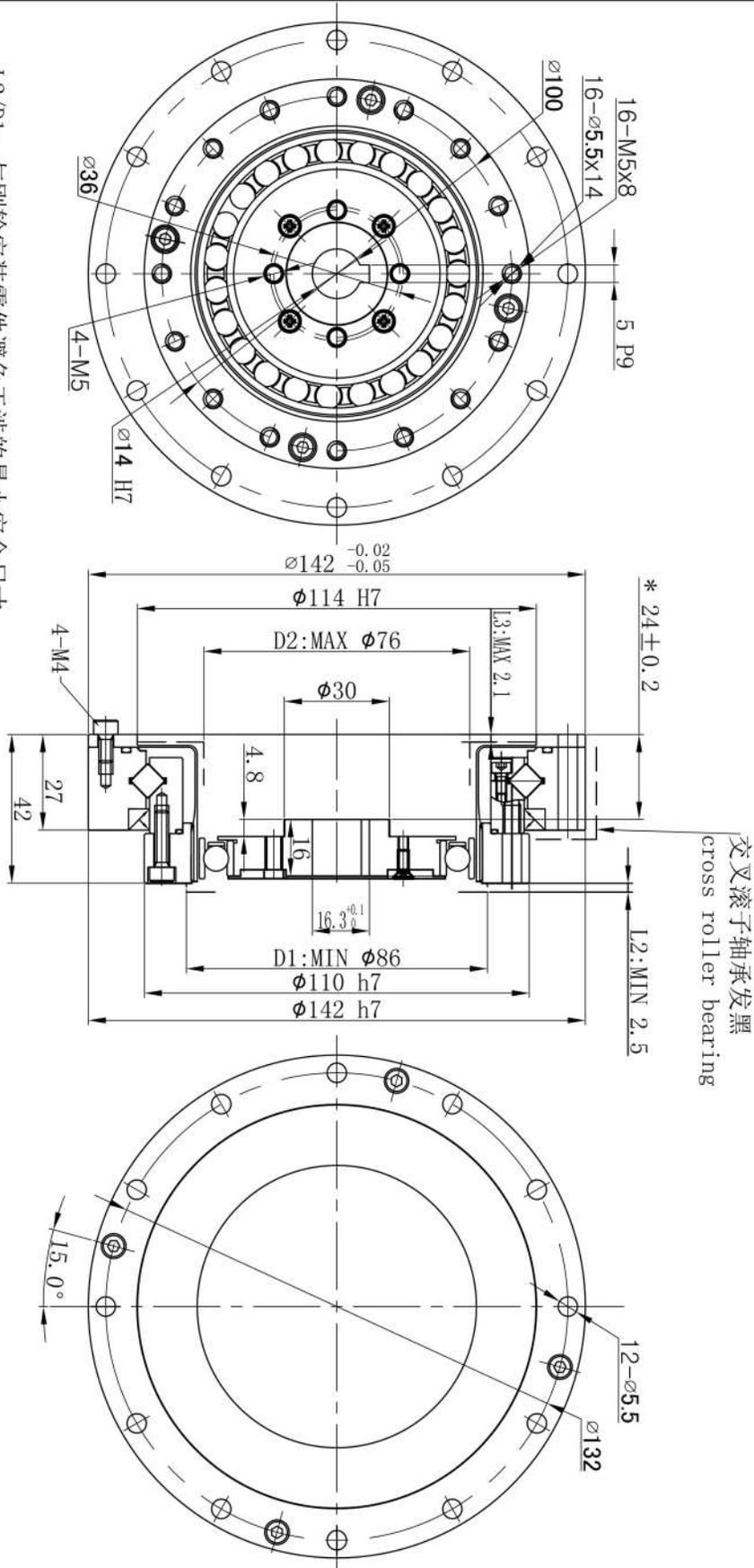


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## model Y Series drawings

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Rev C/2



L2/D1: 与刚轮安装零件避免干涉的最小安全尺寸  
 L3/D2: 与柔轮安装零件避免干涉的最大安全尺寸  
 L2/D1: minimum dimensions of mating part in order to maintain clearance with circular spline  
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YLHS-32-XXX-C-I

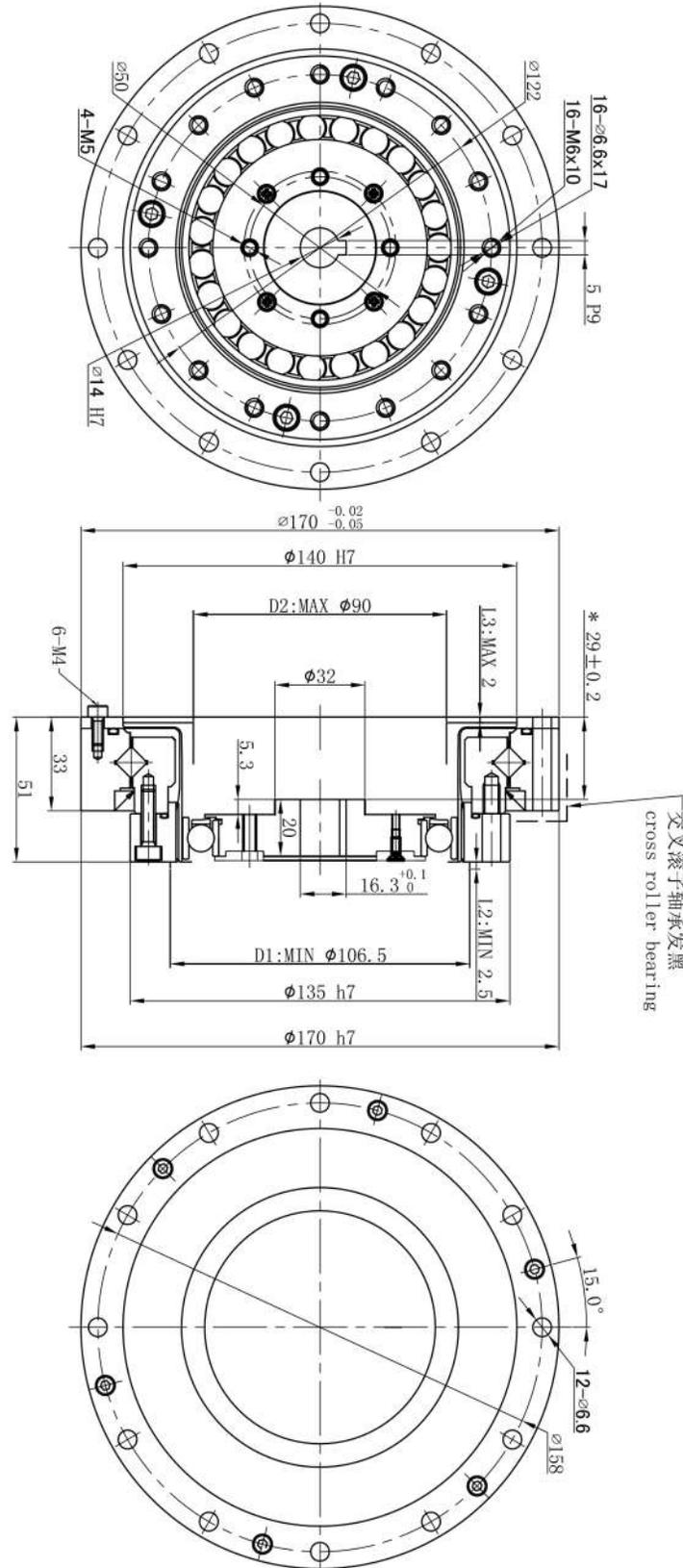
YLHS-32-XXX-C-I

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## model Y Series drawings

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Rev C/2



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- L2/D1: minimum dimensions of mating part in order to maintain clearance with circular spline
- L3/D2: maximum dimensions of mating part in order to maintain clearance with flexspline

YLHS-40-XXX-C-I

YLHS-40-XXX-C-I

## 绿的谐波区域负责人联系方式

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