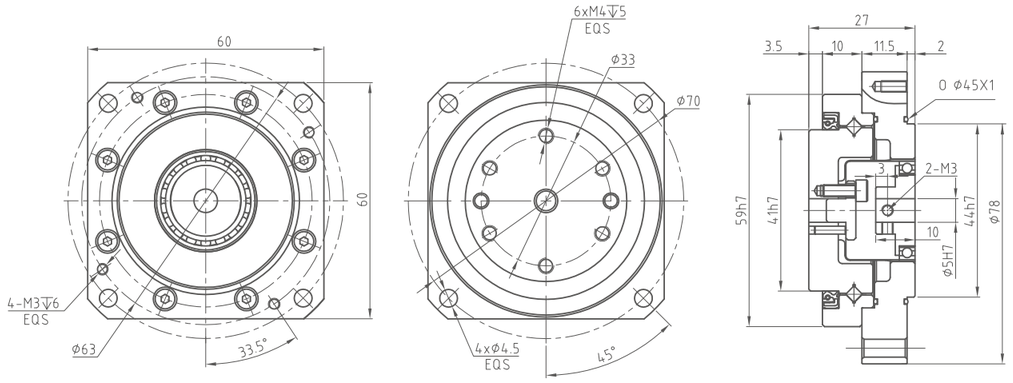
## FS-I

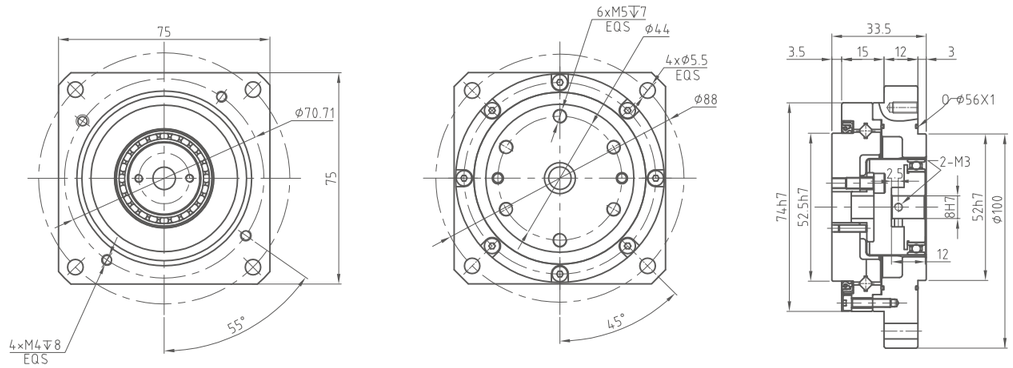
### 谐波减速器 harmonic reducer

结构图 STRUCTURE CHART

FS-11-XX-U-I




FS-14-XX-U-I




# S SERIES

低噪音 Low noise　大扭力 Large torque

高精度 High-precision

耐磨耐用 Wear resistance and durability

使用寿命长 Long service life

S系列谐波减速器

S series harmonic reducer





简易型
Simple type( ST/ SN-I)

# SERIES INTRODUCTION
## 系列介绍

### ST-I 系列Series
大口径中空孔扁平形状，易于操作的组合化产品。

A combination product that with large diameter hollow hole, flat shape, which is easy to operate.

### SN-I 系列Series
轻量型产品，相比标准品，重量减少了20%。

Light weight product, 20% lighter than standard products.

## 应用领域 Application

工业机器人 Industrial robots

服务机器人 Service Robots

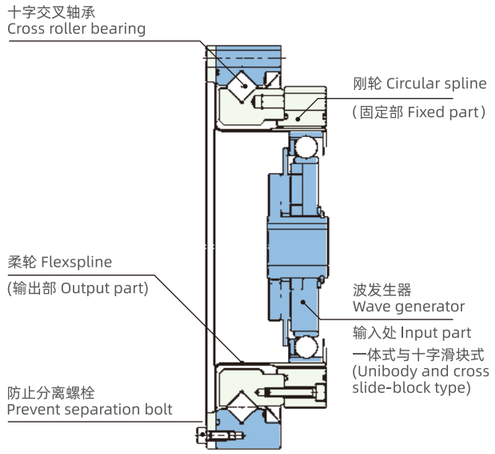
医疗器械设备 Medical Devices

印刷电路制造设备 Printed circuit manufacturing equipment

自动化及特种设备 Automation and special equipment

## ST/ SN-I系列组合型结构 Combinative structure of ST/ SN-I series

### 简易型Simple type ( ST/ SN-I)




## ST/ SN-I额定参数表 Rated parameter table of ST/ SN-I series

| 型号 Model | 速比 Reduction ratio | 输入2000r/min时的额定转矩 Rated torque at 2000r/min input | | 起动停止时的容许峰值转矩 Permissible peak torque at start and stop | | 平均负载转矩的容许最大值 Permissible maximum value for average load torque | | 瞬间容许最大转矩 Permissible maximum momentary torque | | 容许最高输入转速(脂润滑) Permissible maximum input rotational speed (Grease) | 容许平均输入转速(脂润滑) Permissible average input rotational speed (Greaae) | 背隙 Backlash | 设计寿命 Desian life |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Nm | kgfm | Nm | kgfm | Nm | kgfm | Nm | kgfm | r/min | r/min | Arc Sec | Hour |
| 14 | 50 | 5.4 | 0.55 | 18 | 1.8 | 6.9 | 0.70 | 35 | 3.6 | 8500 | 3500 | ≤20 | 10000 |
| | 80 | 7.8 | 0.80 | 23 | 2.4 | 11 | 1.1 | 47 | 4.8 | | | | 15000 |
| | 100 | 7.8 | 0.80 | 28 | 2.9 | 11 | 1.1 | 54 | 5.5 | | | | 15000 |
| | 120 | 7.8 | 0.80 | 28 | 2.9 | 11 | 1.1 | 54 | 5.5 | | | | 15000 |
| 17 | 50 | 16 | 1.6 | 34 | 3.5 | 26 | 2.6 | 70 | 7.1 | 7300 | 3500 | ≤20 | 10000 |
| | 80 | 22 | 2.2 | 43 | 4.4 | 27 | 2.7 | 87 | 8.9 | | | | 15000 |
| | 100 | 24 | 2.4 | 54 | 5.5 | 39 | 4.0 | 110 | 11 | | | | 15000 |
| | 120 | 24 | 2.4 | 54 | 5.5 | 39 | 4.0 | 86 | 8.8 | | | | 15000 |
| 20 | 50 | 25 | 2.5 | 56 | 5.7 | 34 | 3.5 | 98 | 10 | 6500 | 3500 | ≤20 | 10000 |
| | 80 | 34 | 3.5 | 74 | 7.5 | 47 | 4.8 | 127 | 13 | | | | 15000 |
| | 100 | 40 | 4.1 | 82 | 8.4 | 49 | 5.0 | 147 | 15 | | | | 15000 |
| | 120 | 40 | 4.1 | 87 | 8.9 | 49 | 5.0 | 147 | 15 | | | | 15000 |
| | 160 | 40 | 4.1 | 92 | 9.4 | 49 | 5.0 | 147 | 15 | | | | 15000 |
| 25 | 50 | 39 | 4.0 | 98 | 10 | 55 | 5.6 | 186 | 19 | 5600 | 3500 | ≤20 | 10000 |
| | 80 | 63 | 6.4 | 137 | 14 | 87 | 8.9 | 255 | 26 | | | | 15000 |
| | 100 | 67 | 6.8 | 157 | 16 | 108 | 11 | 284 | 29 | | | | 15000 |
| | 120 | 67 | 6.8 | 167 | 17 | 108 | 11 | 304 | 31 | | | | 15000 |
| 32 | 50 | 76 | 7.8 | 216 | 22 | 108 | 11 | 382 | 39 | 4800 | 3500 | ≤20 | 10000 |
| | 80 | 118 | 12 | 304 | 31 | 167 | 17 | 568 | 58 | | | | 15000 |
| | 100 | 137 | 14 | 333 | 34 | 216 | 22 | 647 | 66 | | | | 15000 |
| | 120 | 137 | 14 | 353 | 36 | 216 | 22 | 686 | 70 | | | | 15000 |
| 40 | 50 | 137 | 14 | 402 | 41 | 196 | 20 | 686 | 70 | 4000 | 3000 | ≤20 | 10000 |
| | 80 | 206 | 21 | 519 | 53 | 284 | 29 | 980 | 100 | | | | 15000 |
| | 100 | 265 | 27 | 568 | 58 | 372 | 38 | 1080 | 110 | | | | 15000 |
| | 120 | 294 | 30 | 617 | 63 | 451 | 46 | 1180 | 120 | | | | 15000 |

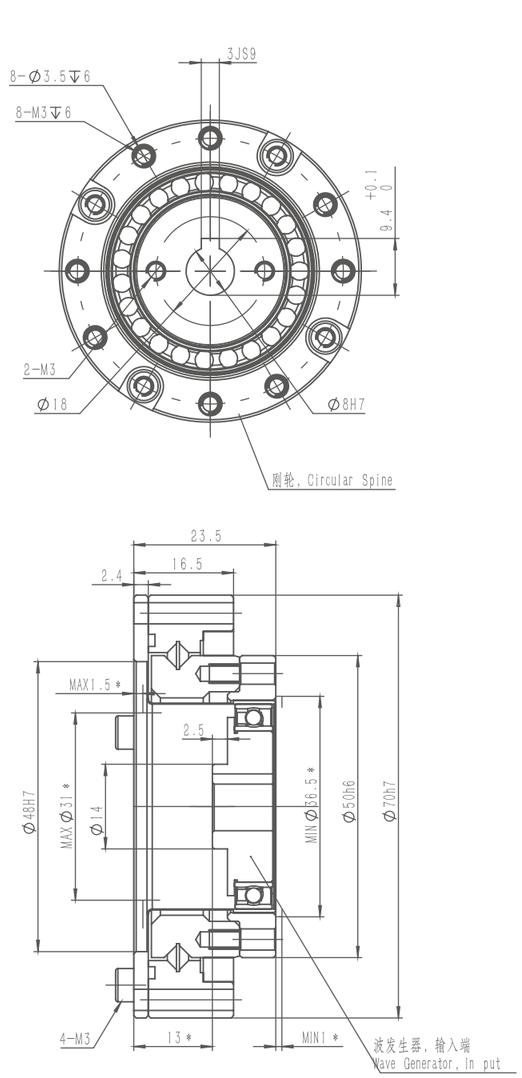
## ST/ SN-I型密封圈、槽尺寸 ST/ SN-I Seal Ring and Slot Size

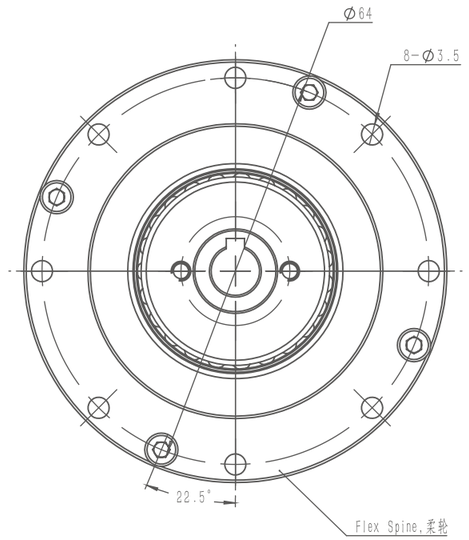
| 型号 Series | 上壳体 Upper shell | | | | 下壳体 Lower shell | | | | 备注 Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | 大径 Big diameter | 小径 Small diameter | 深度 Depth | 密封圈尺寸 Seal Ring Size | 大径 Big diameter | 小径 Small diameter | 深度 Depth | 密封圈尺寸 Seal Ring Size | |
| 14 | $39.6^{+0.1}_{0}$ | $37^{0}_{-0.1}$ | $0.75^{+0.1}_{0}$ | 37*1 | $56.8^{+0.1}_{0}$ | $53^{0}_{-0.1}$ | $1.15^{+0.1}_{0}$ | 53*1.5 | |
| 17 | $49.1^{+0.1}_{0}$ | $46.5^{0}_{-0.1}$ | $0.75^{+0.1}_{0}$ | 46.5*1 | $66.6^{+0.1}_{0}$ | $64^{0}_{-0.1}$ | $0.75^{+0.1}_{0}$ | 64*1 | |
| 20 | $57.6^{+0.1}_{0}$ | $55^{0}_{-0.1}$ | $0.75^{+0.1}_{0}$ | 55*1 | $76.86^{+0.1}_{0}$ | $73^{0}_{-0.1}$ | $1.15^{+0.1}_{0}$ | 73*1.5 | |
| 25 | $70.6^{+0.1}_{0}$ | $68^{0}_{-0.1}$ | $0.75^{+0.1}_{0}$ | 68*1 | $94.2^{+0.1}_{0}$ | $90^{0}_{-0.1}$ | $1.15^{+0.1}_{0}$ | 90*1.5 | |
| 32 | $92^{+0.1}_{0}$ | $88^{0}_{-0.1}$ | $1.15^{+0.1}_{0}$ | 88*1.5 | $123.1^{+0.1}_{0}$ | $119^{0}_{-0.1}$ | $1.15^{+0.1}_{0}$ | 120*1.5 | |

## ST/ SN-14-XX-U-I

### 14型谐波减速器 14 harmonic reducer

结构图 STRUCTURE CHART



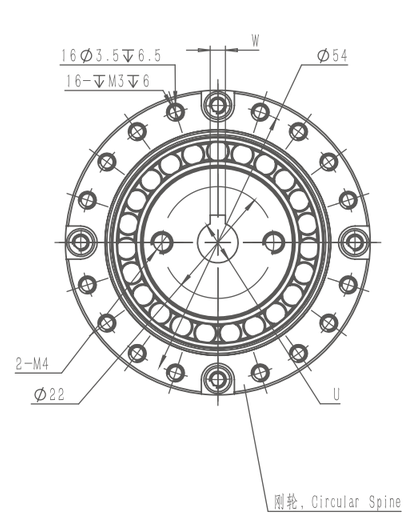



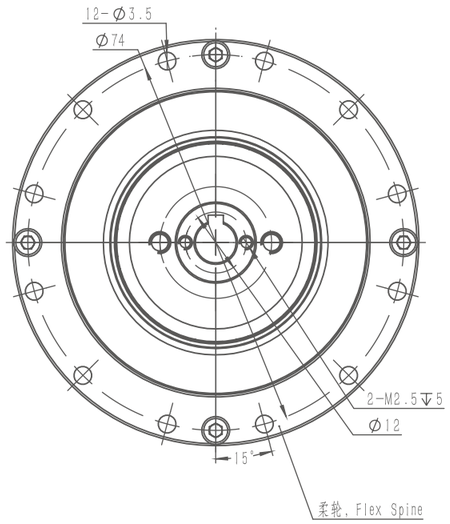

| 型号/MODEL | U | T | W |
|---|---|---|---|
| Wave Generator | Φ6H7 | 7 +0.1 0 | 2P9/JS9 |
| Wave Generator | Φ8H7 | 9.4 +0.1 0 | 3P9/JS9 |

## ST/ SN-17-XX-U-I

### 17型谐波减速器 17 harmonic reducer

结构图 STRUCTURE CHART



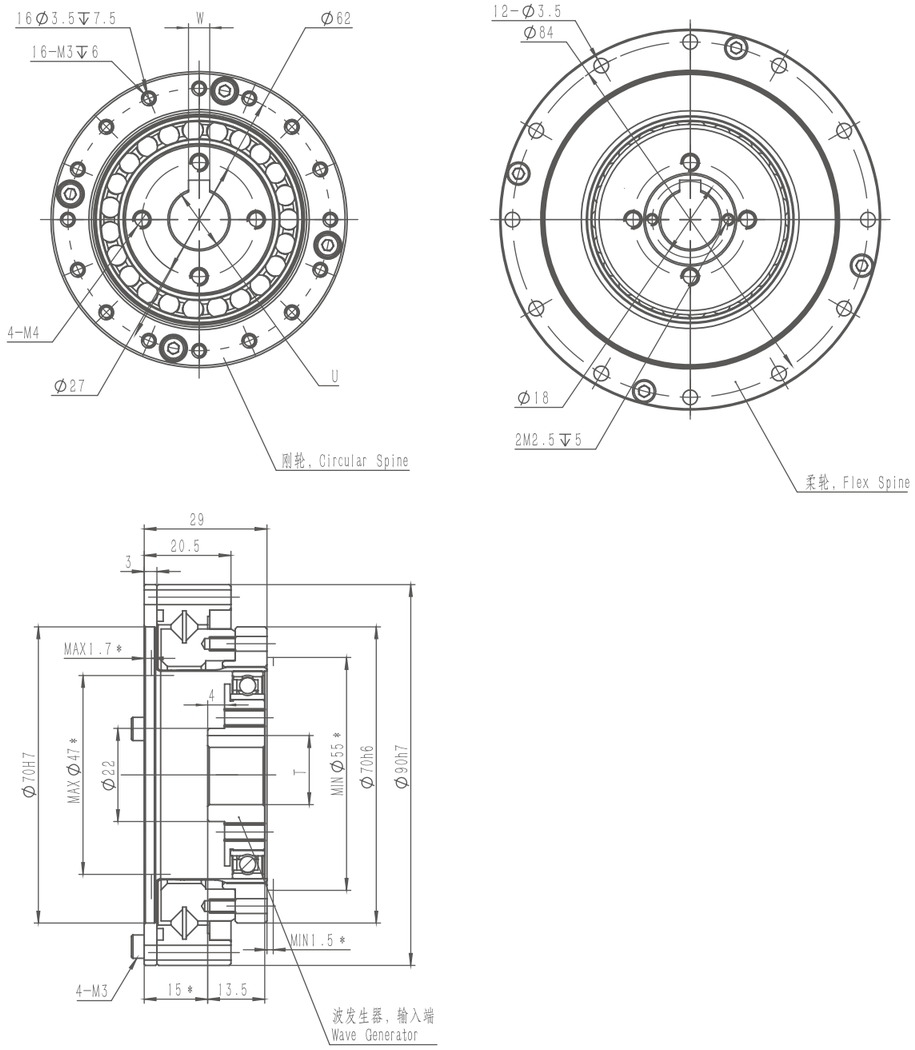




| 型号/MODEL | U | T | W |
|---|---|---|---|
| Wave Generator | Φ8H7 | 9.4 +0.1 0 | 3P9/JS9 |
| Wave Generator | Φ11H7 | 12.8 +0.1 0 | 4P9/JS9 |

## ST/ SN-20-XX-U-I

### 20型谐波减速器 20 harmonic reducer

结构图 STRUCTURE CHART

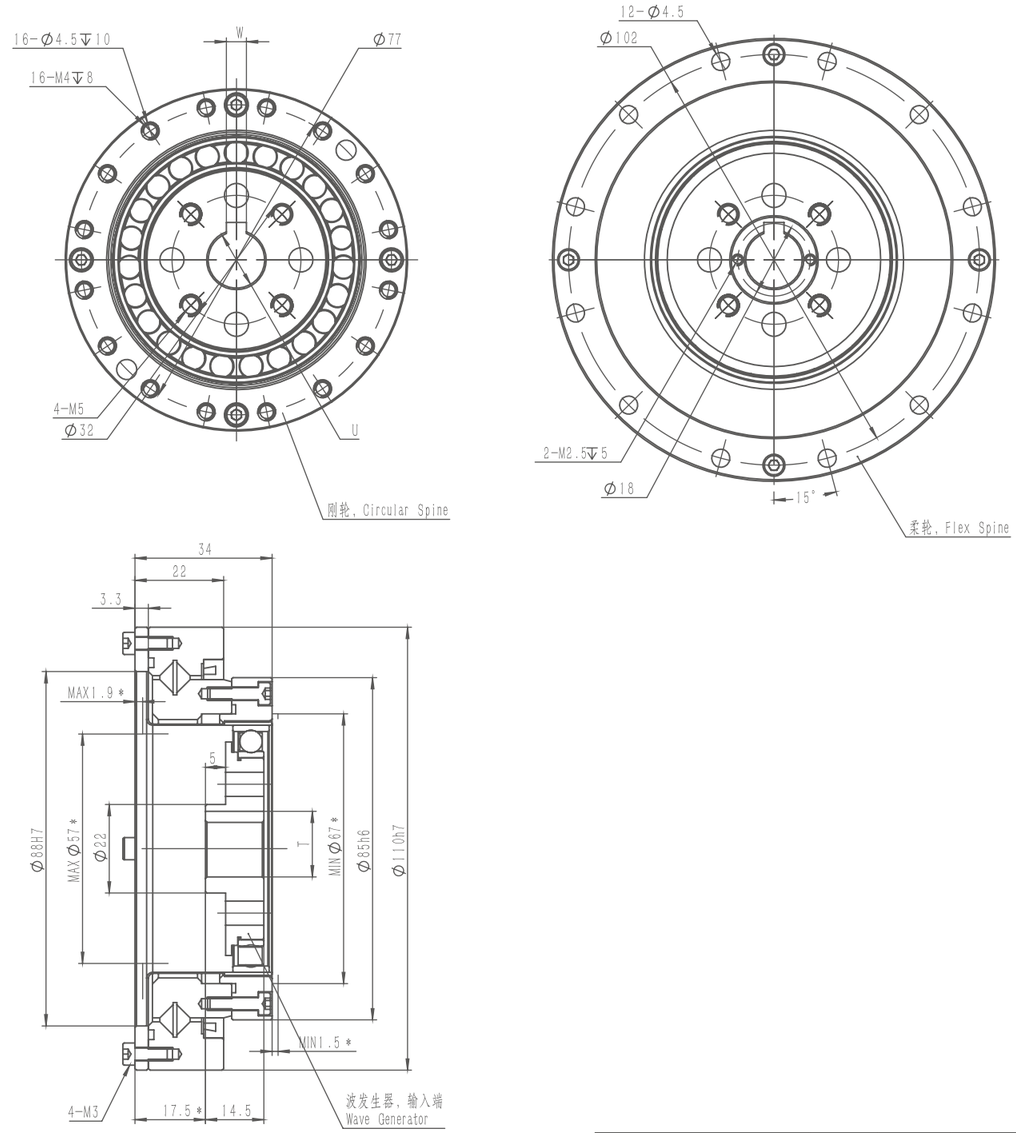



| 型号/MODEL | U | T | W |
|---|---|---|---|
| Wave Generator | Φ8H7 | 9.4$^{+0.1}_{0}$ | 3P9/JS9 |
| Wave Generator | Φ11H7 | 12.8$^{+0.1}_{0}$ | 4P9/JS9 |
| Wave Generator | Φ14H7 | 16.3$^{+0.1}_{0}$ | 5P9/JS9 |

## ST/ SN-25-XX-U-I

### 25型谐波减速器 25 harmonic reducer

结构图 STRUCTURE CHART

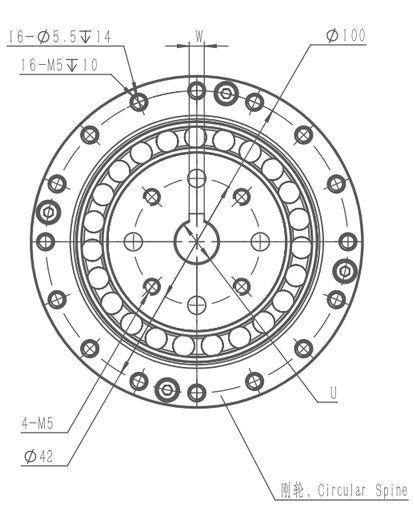


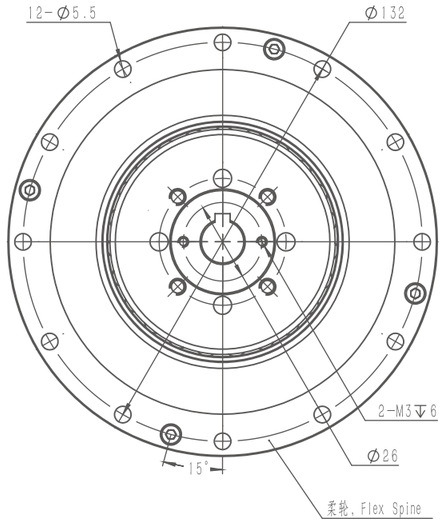

| 型号/MODEL | U | T | W |
|---|---|---|---|
| Wave Generator | Φ11H7 | 12.8$^{+0.1}_{0}$ | 4P9/JS9 |
| Wave Generator | Φ14H7 | 16.3$^{+0.1}_{0}$ | 5P9/JS9 |

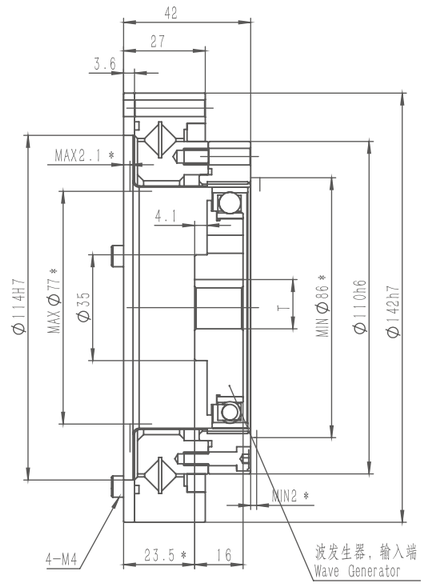
## ST/ SN-32-XX-U-I

### 32型谐波减速器 32 harmonic reducer

结构图 STRUCTURE CHART



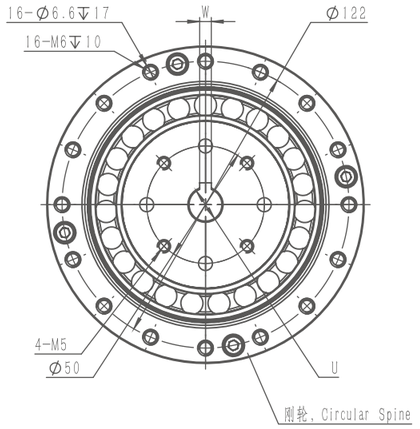




| 型号/MODEL | U | T | W |
|---|---|---|---|
| Wave Generator | Φ14H7 | 16.3 | 5P9/JS9 |
| Wave Generator | Φ19H7 | 21.8 | 6P9/JS9 |
| Wave Generator | Φ22H7 | 25.3 | 8P9/JS9 |

## ST/ SN-40-XX-U-I

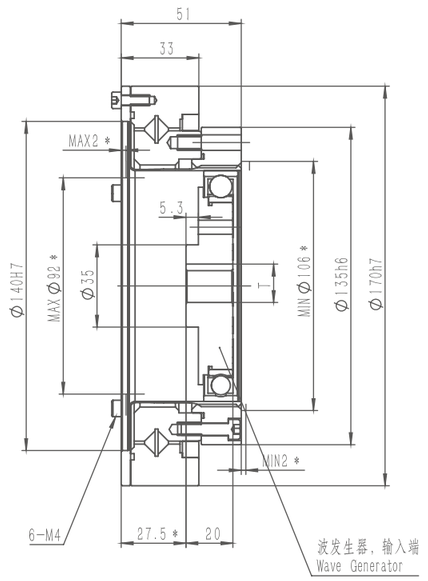
### 40型谐波减速器 40 harmonic reducer

结构图 STRUCTURE CHART










| 型号/MODEL | U | T | W |
|---|---|---|---|
| Wave Generator | Φ14H7 | 16.3 | 5P9/JS9 |
| Wave Generator | Φ19H7 | 21.8 | 6P9/JS9 |
| Wave Generator | Φ22H7 | 25.3 | 8P9/JS9 |