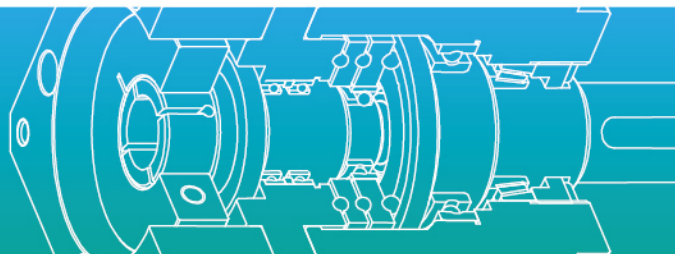


## SP系列 行星钢球减速器参数

SP SERIES PLANETARY  
BALL REDUCER



### 减速比

Reduction Ratio

SP50	i=5,6,8,10,15,16,20
SP60/70/80	i=2,3,5,6,8,10,12,15,18,20,25,30,80,100
SP90	i=2,3,5,6,8,10,12,15,18,20,25,30,80,100
SP115	i=5,6,8,10,15,18,20,25,30,35,40,50,80,100
SP142	i=5,6,8,10,15,18,20,25,30,35,40,50,80,100
SP180	i=5,6,8,10,15,18,20,25,30,35,40,50,80,100
SP220	i=5,6,8,10,15,18,20,25,30,35,40,50,80,100

### 适配电机

Matchable Motors



步进或伺服电机42,57,86,90,110,120,130,170系列。也可以配套无刷/有刷直流电机及普通电机等。

行星钢球减速器结构简单、可靠。作为精密定位的伺服电机用减速器，广泛应用于自动化设备、医疗设备、印刷机械、自动化产线，机械手关节及各种单轴机器人（光盘、注塑取出机器人）、精密电子行业中如液晶和半导体设备。

Stepper or Servo Motors:42, 57、 86、 90、 110、 120、 130、 175series. It can also be equipped with brushless/brush DC motors and ordinary motors.

The structure of planetary steel ball reducer is simple and reliable. As a reducer for high positioning servo motor, the planetary steel ball reducer is widely used in automation equipment, printing machinery, automated production lines, manipulator joints such as various single-axis robots (including CD-ROMs, injection molding robots), precision electronics industries such as LCD and semiconductor, medical and other equipments.

SP系列减速器匹配典型电机及输出扭矩典型数值

SP Series Reducer Specified Typical Model And Output Torque Typical Values

机型 Model	减速比典型值 Typical Value of Reduction Ratio	输入功率(W) Input Power (W)	转速3000 输出扭矩(NM) Speed 3000 Output Torque(NM)	转速1500 输出扭矩(NM) Speed 1500 Output Torque(NM)	转速1000 输出扭矩(NM) Speed 1000 Output Torque(NM)
50	5	10	0.12	0.25	0.38
	10	30	0.5	2	3
	15*	100	4.2	8.5	12.7
	20	50	3	6	9
70 (80) (64)	5	50	0.79	1.6	2.3
	10	100	3.1	6.3	9.5
	15*	200	9.5	19	28.6
	20	100	6.3	12.7	19
	25	50	3.9	7.9	11.9
90	5	100	1.6	3.2	4.7
	10	200	6.36	12.7	19
	20*	500	31.8	63.6	---
	25	300	23.8	47.7	---
	40	150	19.1	38.2	57.3
	50	100	15.9	31.8	47.7
115 (120)	5	200	3.2	6.3	9.5
	10	300	9.5	19	28.6
	15	400	19	38	57
	20	500	31.8	63.6	95.5
	25	750	59.6	119.3	179
	30*	1000	95.5	191	---
	40	750	95.5	191	---
	50	500	79.6	159.2	---
	80	400	102	204	---

SLM (WUXI)  
TECHNOLOGY

## SP系列减速器匹配典型电机及输出扭矩典型数值

SP Series Reducer Specified Typical Model And Output Torque Typical Values

机型 Model	减速比典型值 Typical Value of Reduction Ratio	输入功率(W) Input Power (W)	转速3000 输出扭矩(NM) Speed 3000 Output Torque(NM)	转速1500 输出扭矩(NM) Speed 1500 Output Torque(NM)	转速1000 输出扭矩(NM) Speed 1000 Output Torque(NM)
142 (140)	5	200	3.1	6.3	9.5
	10	400	12.7	25.5	38
	15	500	23.8	47.7	71.6
	20	750	47.8	95.5	143.2
	25	1000	79.5	159	238.7
	30	1500	143.2	286.5	---
	40	2000	254.6	---	---
	50	1000	159	---	---
	80	750	191	---	---
180 (160)	5	500	8	16	24
	10	750	23.8	47.8	71.6
	15	1000	47.7	95	143.2
	25	1500	143	286.5	430
	30	2000	191	382	573
	40*	2500	318.5	---	---
	SO	1000	159.1	318.2	---
	80	750	191	---	---
220 (200)	5	500	8	16	24
	10	750	19.8	39.6	59.4
	15	1000	47.7	95.4	143.1
	20	1500	95.5	191	286.5
	25	2000	159	318	477
	40	2500	318.3	636.6	---
	50*	3000	477.5	---	---

## 备注

Note

- 减速比小于5，需订制。外壳材料：铝合金及45钢等，亦可以订制。  
Consult factory for custom order for reduction ratio less than 5. Housing Material: Aluminum, AISI 1045 Steel body. Other materials available.
- 急加速最大扭矩按2倍额定输出扭矩计算；破坏力矩一般按最大承载力矩的3倍计。  
Maximum Acceleration Torque is 2 times of Rated Output Torque; Bucking torque is generally 3 times of Maximum Output Torque.

## 参数总览

## Parameter overview

参数名称 Parameter Name	SPB50 SPD50 SPL50	SPB70 SPD64 SPL70 (80)	SPB90 SPD90 SPL90	SPB115 SPD110 SPL120	SPB142 SPD140 SPL140	SPB180 SPD160 SPL160	SPB220 SPD200 SPL200
减速比 Reduction Ratio	5-20	2-100	2-100	5-100	5-100	5-100	5-100
额定输出力矩 (TN) Rated Output Torque:(NM)	9	28	55	180	280	500	700
急停扭矩 (T2Not) Emergency Stop lapact Torque:(NM)	3倍额定输出力矩 3X Allowable Axial Load						
最大加速力矩T2B Max Acceleration Torque:(NM)	1.8倍额定输出力矩 1.8X Allowable Axial Load						
额定输入转速 (rpm) Nominal Rotate Speed	3000			2500			
容许轴向力 (Fa) Allovable Axial Load: (N)	180	300	700	1600	2200	3500	4000
容许径向力 (Fr) Allowble Radial Load: (N)	350	550	1400	3000	4000	7000	8000
惯性矩 (J1) Moment of Inertia: (kg*cm <sup>2</sup> )	0.03-0.2	0.08-0.2	0.6-3.0	1.0-16	4.0-40	10-36	20-50
背隙 (P0) Backlash : (arc min)	1	1	1	1	1	1	1
背隙 (P1) Backlash : (arc min)	3	3	3	3	3	3	3
背隙 (P2) Backlash : (arc min)	6	6	6	6	6	6	6
使用寿命 (h) Service Life	≥20000	≥20000	≥20000	≥20000	≥20000	≥20000	≥20000
重量 (kg) About Weight	0.4	0.6	2.9	7.2	11	22	31
效率 (%) Efficiency: %	≥93						
温度 (°C) Use Temperature	-15-90						
润滑 Lubrication	合成油脂润滑 Synthetic Grease Lubrication						
维护 Maintenance	免维护 Life Maintenance Free						
防护等级 Protection Class	IP65						
安装方向 Installed Orientation	任意 Arbitrarily						
噪音值 (db) Noise Level	52			55			