谐波减速机性能参数
TECHNICAL DATA

SHF-2UJ型 SHF-2UJ Series

该系列柔轮为中空翻边型标准筒结构，波发生器凸轮为实心轴结构，减速机内部设计有支撑轴承，为全密封结构，安装简单，适用于需要在输入端安装伞齿轮或同步带传动的场合使用。

The strain wave reducer of SHF-2UJ Series have a hollow flanged flexspline, and a wave generator whose cam is fixed on the input shaft. The fully sealed reducer is designed with internal supported bearings which is easy to install and suitable for structures where bevel gear or timing belt drive are necessary to be installed at the input end.

参数表 Rated Parameters

型号 Model	速比 Reduction ratio	输入2000rpm时的额定转矩N/m Rated torque @ 2000 r/min (N·m)	启停容许的峰值转矩N/m Permissible peak torque of starting/stopping (N·m)	平均负载转矩的容许最大值N/m Permissible max. value of ave. load torque (N·m)	瞬间容许最大转矩N/m Instantaneous permissible max. torque (N·m)	容许最高输入转速rpm (脂润滑) Permissible max. input rotational speed (r/min)	容许平均输入转速rpm Permissible ave. input rotational speed (r/min)	转动惯量 $\times10^{-4}kgm^2$ Inertia moment ($\times10^{-4}kgm^2$)	设计寿命h LIife in design (h)
14	50	5.4	18	6.9	35	8500	3500	0.033	10000
	80	7.8	23	11	47				
	100	7.8	28	11	54				
17	50	16	34	26	70	7300	3500	0.079	10000
	80	22	43	27	87				
	100	24	54	39	108				
20	50	25	56	34	98	6500	3500	0.193	10000
	80	34	74	47	127				
	100	40	82	49	147				
	120	40	87	49	147				
25	50	39	98	55	186	5600	3500	0.413	10000
	80	63	137	87	255				
	100	67	157	108	284				
	120	67	167	108	304				
32	50	76	216	108	382	4800	3500	1.690	10000
	80	118	304	167	568				
	100	137	333	216	647				
	120	137	353	216	686				

传动精度 Transmission accuracy

单位 Unit: arc-min

速比 Reduction ratio / 型号 Model	14	17	20	25	32
50	1.8	1.8	1.5	1.5	1.5
80以上 80 or more	1.5	1.5	1.2	1.2	1.2

回程误差 Lost motion

单位 Unit: arc-min

速比 Reduction ratio / 型号 Model	14	17	20	25	32
50	2.0	2.0	2.0	2.0	2.0
80以上 80 or more	1.0	1.0	1.0	1.0	1.0

最大齿隙量 Max. backlash

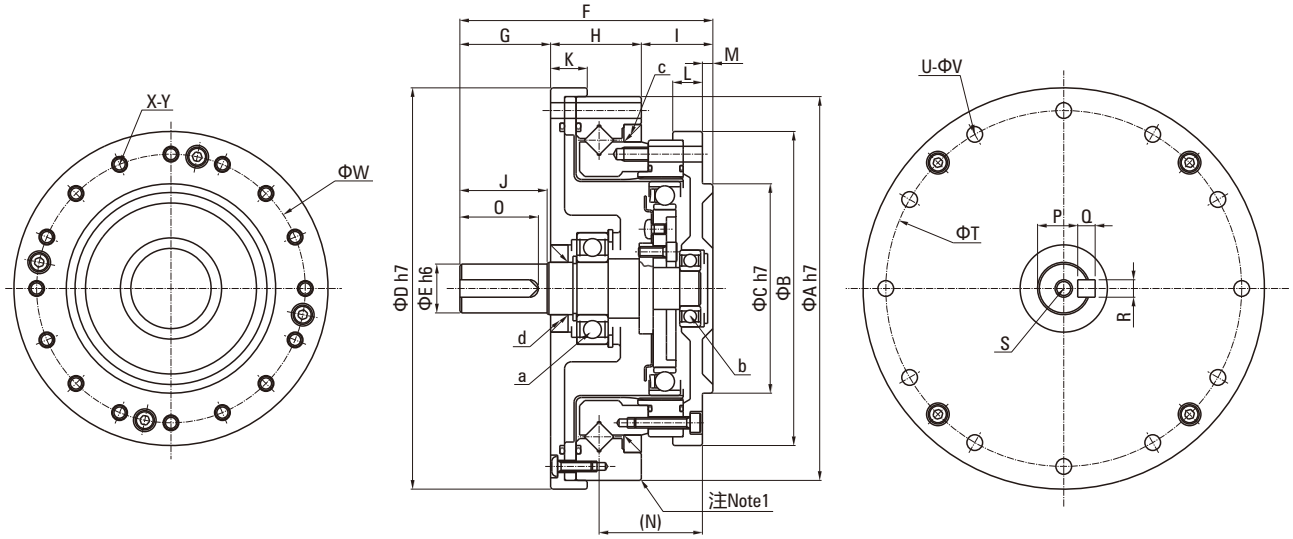
单位 Unit: arc-sec

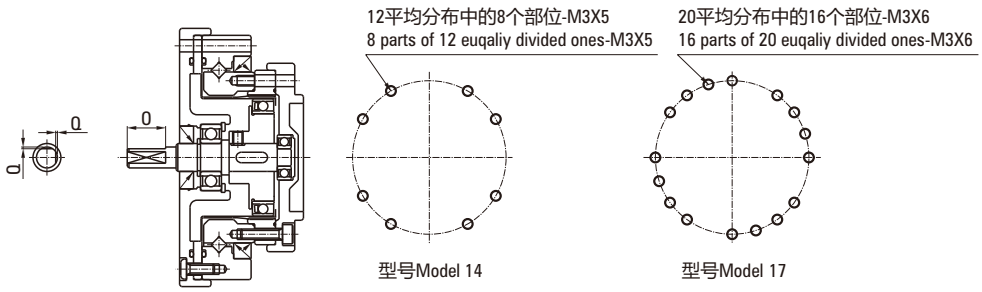
速比 Reduction ratio / 型号 Model	14	17	20	25	32
50	60	60	36	36	36
80	40	40	32	32	32
100	35	35	35	30	30
120	-	-	-	28	28

扭转刚度 Torsional rigidity

符号 Symbol / 型号 Model		14	17	20	25	32
T_1	N·m	2.00	3.90	7.00	14.0	29.0
T_2	N·m	6.90	12.0	25.0	48.0	108
速比50 Reduction ratio 50	K_1 ($\times 10^4$ N·m/rad)	0.34	0.81	1.30	2.50	5.40
	K_2 ($\times 10^4$ N·m/rad)	0.47	1.10	1.80	3.40	7.80
	K_3 ($\times 10^4$ N·m/rad)	0.57	1.30	2.30	4.40	9.80
	θ_1 (arc min)	2.00	1.70	1.80	1.90	1.90
	θ_2 (arc min)	5.60	4.20	5.30	5.40	5.40
速比80以上 Reduction ratio 80 or more	K_1 ($\times 10^4$ N·m/rad)	0.47	1.00	1.60	3.10	6.70
	K_2 ($\times 10^4$ N·m/rad)	0.61	1.40	2.50	5.00	11.0
	K_3 ($\times 10^4$ N·m/rad)	0.71	1.60	2.90	5.70	12.0
	θ_1 (arc min)	1.40	1.30	1.50	1.50	1.50
	θ_2 (arc min)	4.20	3.30	3.90	3.80	4.00

外形图 Outline drawing





型号14/17的输入部形状
Shape of Input Part for Model 14 and17

注1: 在安装凹圆上使用此位时，需做避让加工。
Note 1: It is recommended to have a housing undercut on the install concave.

尺寸表 Dimensions Table

符号 Symbol / 型号 Model	14	17	20	25	32
ΦA H7	70	80	90	110	142
ΦB	54	64	75	90	115
ΦC h7	36	45	50	60	85
ΦD h7	74	84	95	115	147
ΦE h7	6	8	10	14	14
F	50.5	56	63.5	72.5	84.5
G	15	17	21	26	26
H	20.5	23	25	26	32
I	15	16	17.5	20.5	26.5
J	14	16	20	25	25
K	9	10	10.5	10.5	12
L	8	8.5	9	8.5	9.5
M	2.5	3	3	3	5
N	21.7	23.9	25.5	29.6	36.4
O	11	12	16.5	22.5	22.5
P	-	-	$8.2^{+0}_{-0.1}$	$11^{+0}_{-0.1}$	$11^{+0}_{-0.1}$
Q	0.5	0.5	$3^{-0}_{-0.025}$	$5^{-0}_{-0.03}$	$5^{-0}_{-0.03}$
R	-	-	$3^{-0}_{-0.025}$	$5^{-0}_{-0.03}$	$5^{-0}_{-0.03}$
S	-	-	M3X6	M5X10	M5X10
ΦT	64	74	84	102	132
U	8	12	12	12	12
ΦV	3.5	3.5	3.5	4.5	5.5
ΦW	44	54	62	77	100
X	12 E. A. 8	20 E. A. 16	16	16	16
Y	M3X5	M3X6	M3X6	M4X7	M5X8
	Φ3.5X11.5	Φ3.5X12	Φ3.5X13.5	Φ4.5X15.5	Φ5.5X20.5
a	698ZZ	6900ZZ	6902ZZ	6903ZZ	6904ZZ
b	695ZZ	697ZZ	698ZZ	6900ZZ	6902ZZ
c	D49585	D59685	D69785	D84945	D1101226
d	G8184	D10205	D15255	D15255	D20355
重量 Mass（kg）	0.66	0.94	1.38	2.1	4.4

• 说明：由于制造方法不同，公差会存在差异。。
The dimension tolerances are existing according to different manufacturing methods.