

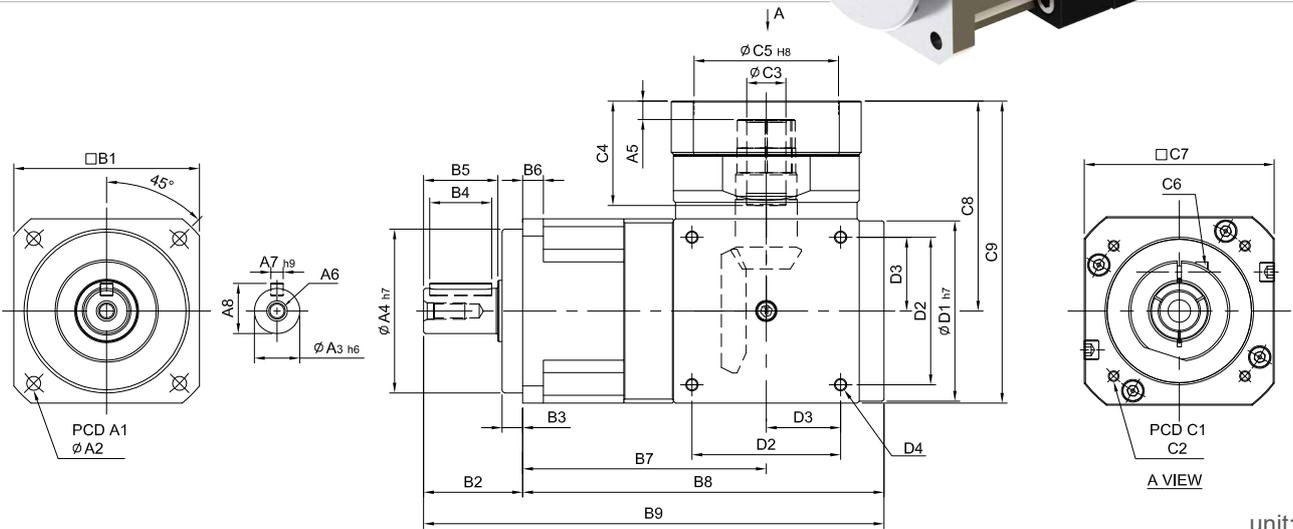
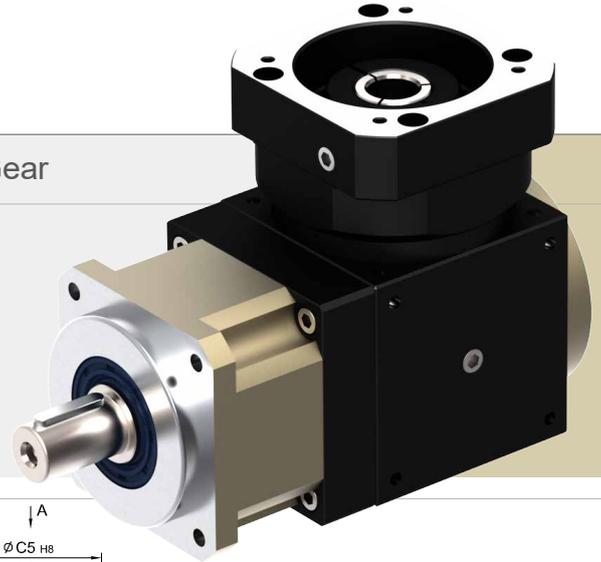
SERVOBOX Planetary Reducers

螺旋齒輪 Helical Gear & 螺旋傘齒輪 Spiral Bevel Gear

MODEL : SBT

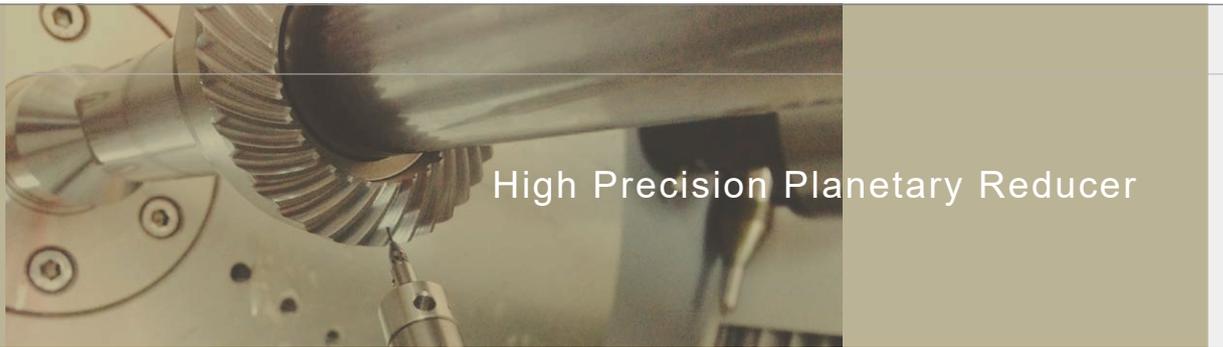
單段 1-Stage

RATIO : 3, 4, 5, 6, 7, 8, 9, 10, 15,
20, 25, 30, 35, 40, 45, 50



unit: mm

Model Code	44	62	90	120	142	180	220	
A	A1	50	70	100	130	165	215	250
	A2	4.5	5.5	6.8	9	11	13	17
	A3	13	16	22	32	40	55	75
	A4	35	50	80	110	130	160	180
	A5	5	7	9 · 23.5	9 · 23.5	10	9.5	14 · 16
	A6	M4 x P0.7	M5 x P0.8	M8 x P1.25	M10 x P1.5	M12 x P1.75	M14 x P2.0	M16xP2.0
	A7	5	5	6	10	12	16	20
	A8	15	18	24.5	35	43	59	79.5
	B	B1	44	62	90	120	142	180
B2		26	36	48	65	92	106	139
B3		5	7	10	12	15	20	30
B4		15	20	30	40	65	70	90
B5		20	28	36	50	74	82	104
B6		5	8	10	12	15	16	20
B7		67.5	87.5	118	145	175	207	237
B8		99.5	128	175	215	260	307	360
B9		125.5	164	223	280	352	413	499
C	C1	46	70 · 75 · 90	90 · 100 · 115 · 145	90 · 100 · 115 · 145	115 · 145 · 165	145 · 165 · 215	200 · 215 · 265
	C2	M4	M4 · M5 · M6	M5 · M6 · M8	M5 · M6 · M8	M6 · M8 · M10	M8 · M10 · M12	M10 · M12 · M16
	C3	8	11 · 14	19 · 24	22 · 24	28 · 32 · 35	35 · 38	42 · 48 · 55
	C4	26	36	51 · 65.5	51 · 65.5	68	84.5	117 · 119
	C5	30	50 · 60 · 70	70 · 80 · 95 · 110	70 · 80 · 95 · 110	95 · 110 · 130	110 · 130 · 180	114.3 · 180 · 230
	C6	M4 x P0.7	M5 x P0.8	M6 x P1.0	M6 x P1.0	M8 x P1.25	M10 x P1.5	M10xP1.5
	C7	42	64 · 70 · 80	92 · 110 · 130	92 · 110 · 130	122 · 130 · 150	146 · 150 · 190	182 · 200 · 250
	C8	57	77	103 · 117	122 · 136	154	189	252 · 254
	C9	82	110	148 · 162	182 · 196	225	279	362 · 364
D	D1	48	62	88	106	135	164	205
	D2	-	52	72	88	110	134	170
	D3	-	26	36	44	55	67	85
	D4	-	M5 x P0.8	M6 x P1.0	M8 x P1.25	M10 x P1.5	M12 x P1.75	M16xP2.0



High Precision Planetary Reducer

規格 Parameter	代號	單位 Unit	速比 Ratio	44	62	90	120	142	180	220
額定輸出扭矩 Rated Output Torque (Nominal output torque)	T_{2N}	Nm	3	19	59	165	335	625	1,206	2,030
			4	16	51	146	300	555	1,069	1,804
			5	16	48	160	333	618	1,189	2,010
			6	15	45	151	311	583	1,118	1,911
			7	15	45	149	309	573	1,108	1,870
			8	14	43	143	298	553	1,070	1,824
			9	13	44	145	278	516	993	1,694
			10	16	48	160	333	618	1,189	1,779
			15	16	48	160	333	618	1,189	2,030
			20	16	48	160	333	618	1,189	1,804
			25	16	48	160	333	618	1,189	2,010
			30	15	45	151	311	583	1,118	1,911
			35	15	45	149	309	573	1,108	1,870
			40	14	43	143	298	553	1,070	1,824
			45	13	44	145	278	516	993	1,694
50	14	43	141	294	549	1,059	1,779			
最大加速扭矩 Max. Acceleration Torque	T_{2B}	Nm	3 ~ 50	1.8 倍額定輸出力矩 1.8 Times of Rated Output Torque						
最大輸出扭矩 Max. Output Torque	T_{2NOT}	Nm	3 ~ 50	3 倍額定輸出力矩 3 Times of Rated Output Torque						
急停扭矩 Emergency Stop Torque										
額定輸入轉速 Rated Input Speed	n_{1N}	rpm	3 ~ 50	3,000	3,000	3,000	2,500	2,500	2,000	2,000
最大輸入轉速 Max. Input Speed	n_{1B}	rpm	3 ~ 50	6,000	6,000	5,500	4,500	3,500	3,000	3,000
背隙 Backlash Ps		arcmin	3 ~ 50	-	-	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2
背隙 Backlash P0		arcmin	3 ~ 50	≤ 4	≤ 4	≤ 4	≤ 4	≤ 4	≤ 4	≤ 4
背隙 Backlash P1		arcmin	3 ~ 50	≤ 6	≤ 6	≤ 6	≤ 6	≤ 6	≤ 6	≤ 6
背隙 Backlash P2		arcmin	3 ~ 50	≤ 8	≤ 8	≤ 8	≤ 8	≤ 8	≤ 8	≤ 8
扭轉剛性 Torsional Rigidity		Nm/arcmin	3 ~ 50	3	6	14	27	60	140	240
容許徑向力 Max. Radial Force	F_{2rB}	N	3 ~ 50	380	1,180	3,200	6,800	9,300	15,600	51,000
容許軸向力 Max. Axial Force	F_{2aB}	N	3 ~ 50	190	590	1,600	3,400	4,650	7,800	25,500
使用壽命 Service Life	L_H	hr	3 ~ 50	S5 周期運轉 : >30,000 (S1 連續運轉 : >15,000 hrs) S5 Cycle Operation: >30,000 (S1 Continuous Operation: >15,000 hrs)						
效率 Efficiency	η	%	3 ~ 50	≥ 95%						
使用溫度 Operating Temperature		°C	3 ~ 50	-25° C ~ +90° C						
潤滑 Lubrication			3 ~ 50	全合成潤滑油脂 Synthetic Grease						
防護等級 Protection Class			3 ~ 50	IP65						
安裝方向 Mounting Position			3 ~ 50	任意方向 Any						
噪音值 Noise Level		dB	3 ~ 50	≤ 65	≤ 68	≤ 70	≤ 72	≤ 74	≤ 76	≤ 76
重量 Weight ±3%		Kg	3 ~ 50	1.2	2.2	7.1	13	24	48	78

行星減速機搭配傘齒輪減速機型號及速比一覽表

The Model & Ratio Table of Precision Planetary Reducer Assembly Bevel Gear Reducer

型號 Model	減速比 Ratio	法蘭盤框號 Flange Model	傘齒輪減速機 Bevel Gear Reducer Model
44		44	-
62		62	ST65
90	3·4·5·6·7 8·9·10·15·20 25·30·35·40 45·50	90	ST90
120		90	ST110
142		120	ST140
180		142	ST170
220		180	ST210

轉動慣量 Mass Moments of Inertia (kg.cm²)

Ratio	44	62	90	120	142	180	220
3	0.09	0.36	2.28	6.85	23.5	68.2	135
4	0.09	0.36	2.28	6.85	23.5	68.2	135
5	0.09	0.36	2.28	6.85	23.5	68.2	135
6	0.09	0.36	2.28	6.85	23.5	68.2	135
7	0.09	0.36	2.28	6.85	23.5	68.2	135
8	0.09	0.36	2.28	6.85	23.5	68.2	135
9	0.09	0.36	2.28	6.85	23.5	68.2	135
10	0.09	0.36	2.28	6.85	23.5	68.2	135
15	0.06	0.22	2.05	6.21	21.2	61.3	135
20	0.06	0.22	2.05	6.21	21.2	61.3	135
25	0.06	0.22	2.05	6.21	21.2	61.3	135
30	0.06	0.22	2.05	6.21	21.2	61.3	135
35	0.06	0.22	2.05	6.21	21.2	61.3	135
40	0.06	0.22	2.05	6.21	21.2	61.3	135
45	0.06	0.22	2.05	6.21	21.2	61.3	135
50	0.06	0.22	2.05	6.21	21.2	61.3	135