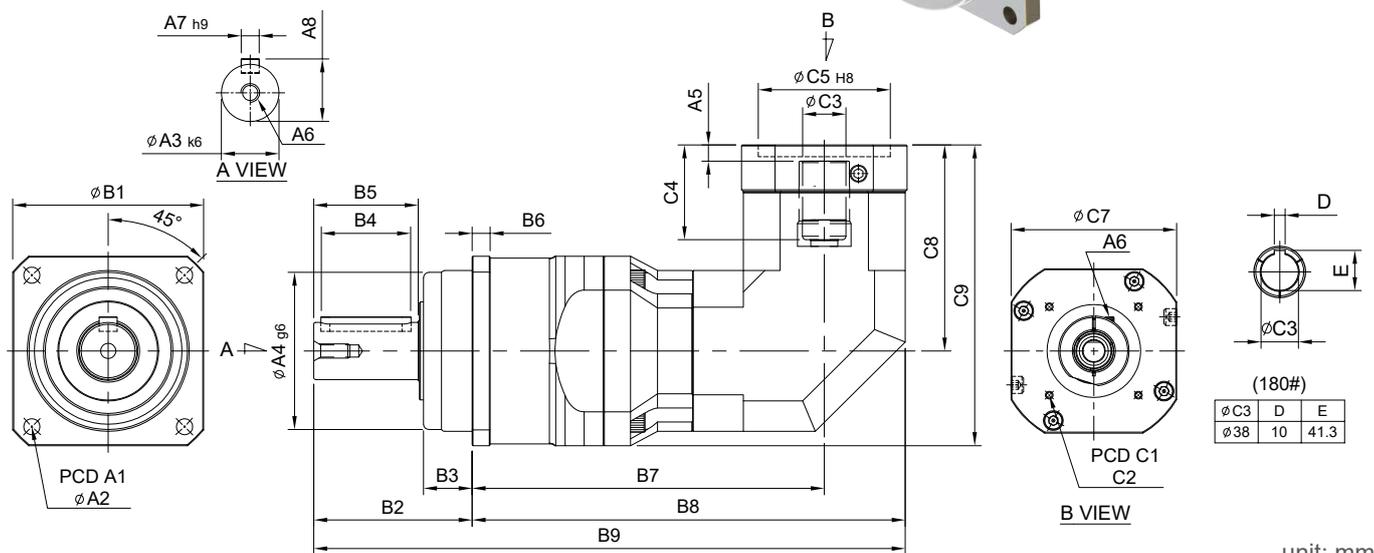
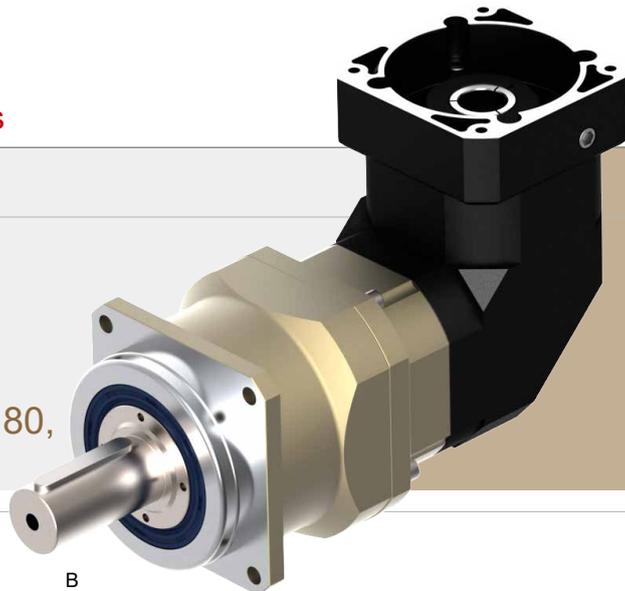


# SERVOBOX Planetary Reducers

## MODEL : SFL

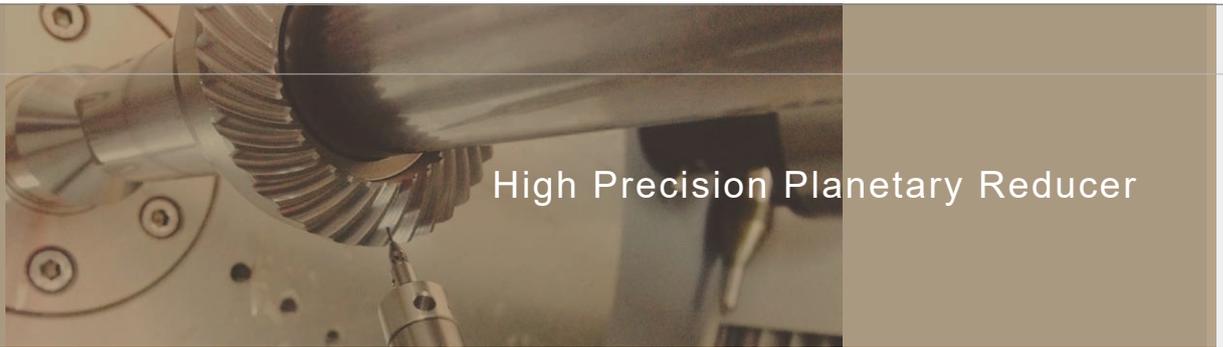
雙段 2-Stage

RATIO : 15, 20, 25, 30, 35, 40, 50, 60, 70, 80,  
90, 100, 120, 140, 160, 180, 200



unit: mm

Model Code	62	75	100	142	180	
<b>A</b>	A1	68	85	120	165	215
	A2	5.5	6.8	9	11	13
	A3	16	22	32	40	55
	A4	60	70	90	130	160
	A5	6	6	9	10	10
	A6	M5 x P0.8	M8 x P1.25	M10 x P1.5	M12 x P1.75	M14 x P2.0
	A7	5	6	10	12	16
	A8	18	24.5	35	43	59
	<b>B</b>	B1	62	76	106	142
B2		48	56	88	112	112
B3		18	18	27	27	26
B4		20	32	50	70	70
B5		28	36	58	82	82
B6		6	7	10	12	15
B7		123	148.3	195.6	240	280
B8		145	179.3	240.6	300	351
B9		193	235.3	328.6	412	463
<b>C</b>	C1	46 · 60 · 63	70 · 75 · 90	90 · 110 · 115 · 145	115 · 145 · 165	145 · 165 · 215
	C2	M3 · M4 · M5	M4 · M5 · M6	M5 · M6 · M8 · M10	M6 · M8 · M10	M8 · M10 · M12
	C3	8 · 9 · 11	11 · 14 · 16 · 19	16 · 19 · 22 · 24	24 · 28 · 32 · 35	28 · 32 · 35 · 38
	C4	27	33.5 · 41.5	53	67	85
	C5	30 · 40 · 50	50 · 60 · 70	70 · 80 · 95 · 110	95 · 110 · 130	110 · 130 · 180
	C6	M4 x P0.7	M5 x P0.8	M6 x P1.0	M8 x P1.25	M10 x P1.5
	C7	46 · 55	64 · 70 · 80	92 · 110 · 130	122 · 130 · 150	146 · 150 · 190
	C8	61	77 · 85	115.3	141	165.7
	C9	92	117 · 125	168.3	212	255.7



## High Precision Planetary Reducer

規格 Parameter	代號	單位 Unit	速比 Ratio	62	75	100	142	180
額定輸出扭矩 Rated Output Torque (Nominal output torque)	$T_{2N}$	Nm	15	59	165	216	625	1,206
			20	51	146	208	555	1,069
			25	48	155	333	618	1,189
			30	45	150	315	583	1,118
			35	45	142	309	573	1,108
			40	43	141	305	553	1,070
			50	48	155	333	618	1,189
			60	45	150	315	583	1,118
			70	45	142	309	573	1,108
			80	43	141	305	553	1,070
			90	44	140	293	516	993
			100	43	136	294	549	1,059
			120	45	150	315	583	1,118
			140	45	142	309	573	1,108
			160	43	141	305	553	1,070
180	44	140	293	516	993			
200	51	146	208	555	1,069			
最大加速扭矩 Max. Acceleration Torque	$T_{2B}$	Nm	15 ~ 200	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	15 ~ 200	3 倍額定輸出力矩 3 Times of Rated Output Torque				
急停扭矩 Emergency Stop Torque			15 ~ 200	3 倍額定輸出力矩 3 Times of Rated Output Torque				
額定輸入轉速 Rated Input Speed	$n_{1N}$	rpm	15 ~ 200	3,000	3,000	3,000	3,000	3,000
最大輸入轉速 Max. Input Speed	$n_{1B}$	rpm	15 ~ 200	6,000	6,000	5,000	5,000	4,000
背隙 Backlash Ps		arcmin	15 ~ 200	-	-	≤ 4	≤ 4	≤ 4
背隙 Backlash P0		arcmin	15 ~ 200	≤ 7	≤ 7	≤ 7	≤ 7	≤ 7
背隙 Backlash P1		arcmin	15 ~ 200	≤ 9	≤ 9	≤ 9	≤ 9	≤ 9
背隙 Backlash P2		arcmin	15 ~ 200	≤ 12	≤ 12	≤ 12	≤ 12	≤ 12
扭轉剛性 Torsional Rigidity		Nm/arcmin	15 ~ 200	8	15	27	60	150
容許徑向力 Max. Radial Force	$F_{2rB}$	N	15 ~ 200	2,240	4,150	8,760	12,750	17,860
容許軸向力 Max. Axial Force	$F_{2aB}$	N	15 ~ 200	1,920	3,780	7,500	10,840	15,180
使用壽命 Service Life	$L_H$	hr	15 ~ 200	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	$\eta$	%	15 ~ 200	≥ 92%				
使用溫度 Operating Temperature		°C	15 ~ 200	- 25° C ~ + 90° C				
潤滑 Lubrication			15 ~ 200	全合成潤滑油脂 Synthetic Grease				
防護等級 Protection Class			15 ~ 200	IP65				
安裝方向 Mounting Position			15 ~ 200	任意方向 Any				
噪音值 Noise Level		dB	15 ~ 200	≤ 68	≤ 70	≤ 72	≤ 74	≤ 76
重量 Weight ±3%		Kg	15 ~ 200	2.93	4.8	11.38	21.5	46.47

### ■ 轉動慣量 Mass Moments of Inertia (kg.cm<sup>2</sup>)

速比 Ratio	62	75	100	142	180
15	0.09	0.34	2.20	6.85	26.2
20	0.09	0.34	2.20	6.85	26.2
25	0.09	0.34	2.20	6.85	23.1
30	0.09	0.34	2.20	6.85	23.1
35	0.09	0.34	2.20	6.85	23.1
40	0.09	0.34	2.20	6.85	23.1
50	0.09	0.34	2.20	6.85	23.1
60	0.09	0.34	2.20	6.85	23.1
70	0.09	0.34	2.20	6.85	23.1
80	0.09	0.34	2.20	6.85	23.1
90	0.09	0.34	2.20	6.85	23.1
100	0.09	0.34	2.20	6.85	23.1
120	0.03	0.30	1.86	6.20	21.2
140	0.03	0.30	1.86	6.20	21.2
160	0.03	0.30	1.86	6.20	21.2
180	0.03	0.30	1.86	6.20	21.2
200	0.03	0.30	1.86	6.20	21.2