

# SD series

**high precision**

**planetary reducer**



## 減速機性能資料 Reducer Performance Information

SG

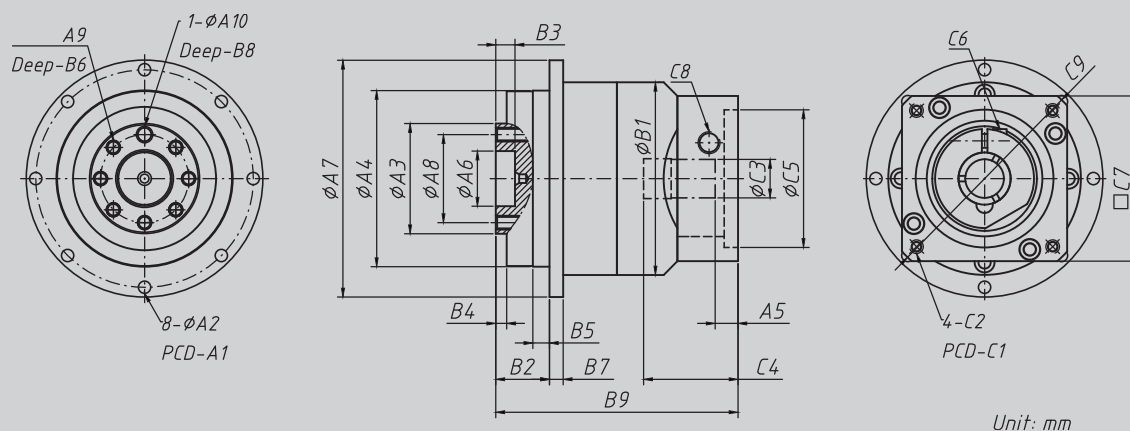
規格 Model NO.	單位 Unit	節數 Stage	減速比 Ratio	47	64	90	110	140	200
額定輸出力矩 $T_{2N}$ Rated Output Torque	Nm	L1	4	20	50	135	278	570	1115
			5	23	62	165	338	660	1215
			7	20	52	145	308	560	1115
			10	15	42	105	238	460	915
		L2	20	20	50	135	278	570	1115
			25	23	62	165	338	660	1215
			35	20	52	145	308	560	1115
			40	20	50	135	278	570	1115
			50	23	62	165	338	660	1215
			70	20	52	145	308	560	1115
100	15	42	105	238	460	915			
最大輸入轉速 $n_{1B}$ Max. Input Speed	rpm	L1/L2	4~100	10,000	10,000	8,000	8,000	6,000	6,000
額定輸入轉速 $n_{1N}$ Rated Input Speed	rpm	L1/L2	4~100	5,000	5,000	4,000	4,000	3,000	3,000
超精密背隙 PS Backlash PS	arcmin	L1	4~10	$\leq 1$					
		L2	20~100	$\leq 3$					
精密背隙 P0 Backlash P0	arcmin	L1	4~10	$\leq 3$					
		L2	20~100	$\leq 5$					
精密背隙 P1 Backlash P1	arcmin	L1	4~10	$\leq 5$					
		L2	20~100	$\leq 7$					
最大加速扭矩 $T_{2B}$ Max. Acceleration Torque	Nm	L1/L2	4~100	1.8倍額定輸出力矩 / 1.8 Times of nominal output torque					
最大輸出(急停)扭矩 $T_{2NOT}$ Max. Output(Emergency Stop) Torque	Nm	L1/L2	4~100	3倍額定輸出力矩 / 3 Times of nominal output torque					
扭轉剛性 Torsional Rigidity	Nm/arcmin	L1/L2	4~100	7	13	31	82	151	440
最大彎曲力矩 $M_{2KB}$ Max. Bending moment	Nm	L1/L2	4~100	43	125	235	430	1,300	3,064
容許軸向力 $F_{2aB}$ Max. Axial Force	N	L1/L2	4~100	990	1,050	2,850	2,990	10,590	16,660
使用壽命 Service Life	hr	L1/L2	4~100	S5週期運轉 > 20,000 ; (S1連續運轉 > 10,000 hrs ) S5 Cycle Operation ; > 20,000 (S1 Continuous Operation ; > 10,000 hrs)					
使用溫度 Operation Temperature	°C	L1/L2	4~100	-25°C ~ 90°C					
效率 $\eta$ Efficiency	%	L1	4~10	$\leq 97$					
		L2	20~100	$\leq 94$					
潤滑 Lubrication		L1/L2	4~100	合成潤滑油脂 / Synthetic Lubrication Grease					
噪音值 Noise Level	dB	L1	4~10	$\leq 56$	$\leq 58$	$\leq 60$	$\leq 63$	$\leq 65$	$\leq 67$
		L2	20~100	$\leq 56$	$\leq 58$	$\leq 60$	$\leq 63$	$\leq 65$	$\leq 67$
防護等級 Protection Class	IP	L1/L2	4~100	IP 65					
安裝方向 Mounting Position		L1/L2	4~100	任意方向 / Any direction					
重量 Weight	kg	L1	4~10	0.7	1.4	4.2	7.4	13.9	32.4
		L2	20~100	1	1.9	4.8	9.4	16.7	40.2

## 減速機轉動慣量 Reducer Moment of inertia

規格 Model NO.	單位 Unit	節數 Stage	減速比 Ratio	47	64	90	110	140	200
轉動慣量 $J_1$	kg.cm <sup>2</sup>	L1	4	0.03	0.14	0.51	2.87	7.54	25.03
			5	0.03	0.13	0.47	2.71	7.42	23.29
			7	0.03	0.13	0.45	2.62	7.14	22.48
			10	0.03	0.13	0.44	2.57	7.03	22.51
		L2	20	0.03	0.03	0.13	0.47	2.71	7.42
			25	0.03	0.03	0.13	0.47	2.71	7.42
			35	0.03	0.03	0.13	0.47	2.71	7.42
			40	0.03	0.03	0.13	0.44	2.57	7.03
			50	0.03	0.03	0.13	0.44	2.57	7.03
			70	0.03	0.03	0.13	0.44	2.57	7.03
100	0.03	0.03	0.13	0.44	2.57	7.03			

# MODEL : SD SERIES

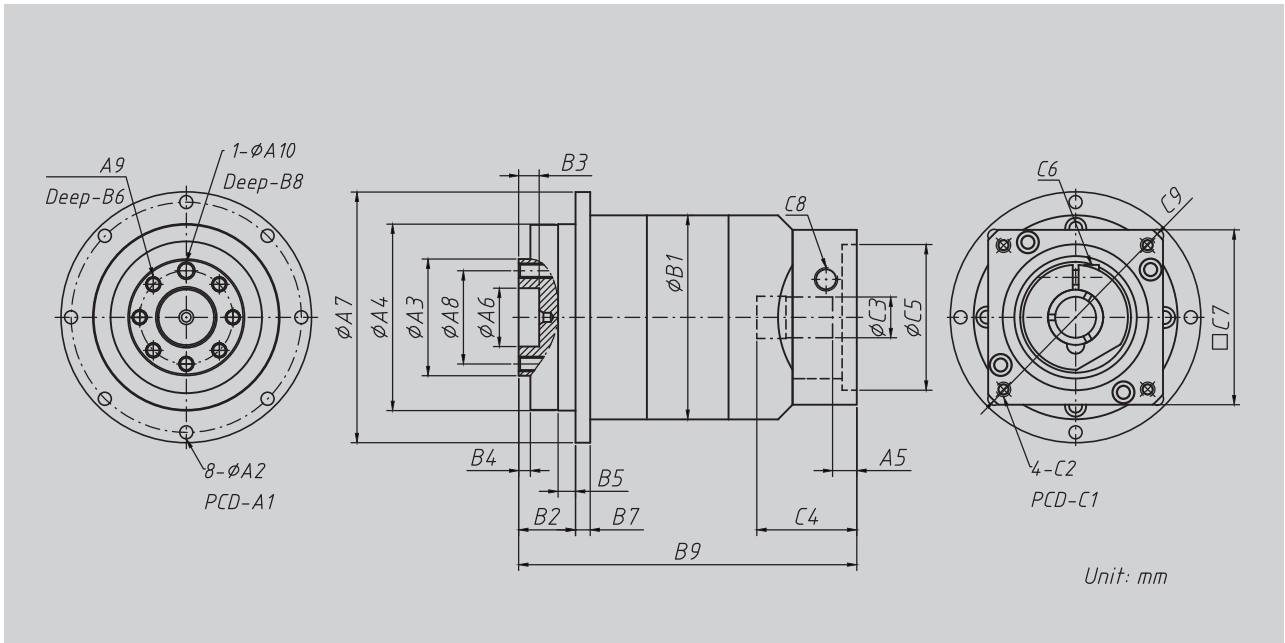
## 1-Stage (Ratio:3~10)



Model Code	47	64	90	110	140	200
A1	67	79	109	135	168	233
A2	3.4	4.5	5.5	5.5	6.6	12-9.0
A3	28	40	63	80	100	160
A4	47	64	90	110	140	200
A5	6	6	7.5	22.5	11	12
A6	12	20	31.5	40	50	80
A7	72	86	118	146	179	248
A8	20	31.5	50	63	80	125
A9	4-M3 x P0.5	7-M5 x P0.8	7-M6x P1.0	11-M6 x P1.0	11-M8 x P1.25	11-M10 x P1.5
A10	3	5	6	6	8	10
B1	59	70	98	125	156	212
B2	19.5	19.5	30	29	44	50
B3	5	7	12	12	12	16
B4	3	4	6	6	6	8
B5	5	6	10	10	15	15
B6	6.5	13	18	18	24	24
B7	4	5	7	8	10	12
B8	4	7	8	10	10	10
B9	71.3	88	106	149	175	228.5
C1	46	70	90	145	165	200
C2	M4 x P0.7	M5 x P0.8	M6 x P1.0	M8 x P1.25	M10 x P1.5	M12 x P1.75
C3	8	14, 19	19, 24	24, 28	35, 42	42
C4	26	34	43	67.5	68	72.5
C5	30	50	70	110	130	114.3
C6	M3 x P0.5	M5 x P0.8	M6 x P1.0	M8 x P1.25	M10 x P1.5	M12 x P1.75
C7	42.6	60	90	130	142	180
C8	M8 x P1.25	M8 x P1.25	M12 x P1.75	M16 x P2.0	M16 x P2.0	M16 x P2.0
C9	Ø 56	Ø 80	Ø 116	Ø 160	Ø 189	Ø 240

# MODEL : SD SERIES

## 2-Stage (Ratio:20~100)



Model Code	47	64	90	110	140	200
A1	67	79	109	135	168	233
A2	3.4	4.5	5.5	5.5	6.6	12-9.0
A3	28	40	63	80	100	160
A4	47	64	90	110	140	200
A5	6	6	7.5	22.5	11	12
A6	12	20	31.5	40	50	80
A7	72	86	118	146	179	248
A8	20	31.5	50	63	80	125
A9	4-M3 x P0.5	7-M5 x P0.8	7-M6x P1.0	11-M6 x P1.0	11-M8 x P1.25	11-M10 x P1.5
A10	3	5	6	6	8	10
B1	59	70	98	125	156	212
B2	19.5	19.5	30	29	44	50
B3	5	7	12	12	12	16
B4	3	4	6	6	6	8
B5	5	6	10	10	15	15
B6	6.5	13	18	18	24	24
B7	4	5	7	8	10	12
B8	4	7	8	10	10	10
B9	97.3	116	146	197	236	318.5
C1	46	70	90	145	165	200
C2	M4 x P0.7	M5 x P0.8	M6 x P1.0	M8 x P1.25	M10 x P1.5	M12 x P1.75
C3	8	14, 19	19, 24	24, 28	35, 42	42
C4	26	34	43	67.5	68	72.5
C5	30	50	70	110	130	114.3
C6	M3 x P0.5	M5 x P0.8	M6 x P1.0	M8 x P1.25	M10 x P1.5	M12 x P1.75
C7	42.6	60	90	130	142	180
C8	M8 x P1.25	M8 x P1.25	M12 x P1.75	M16 x P2.0	M16 x P2.0	M16 x P2.0
C9	Ø 56	Ø 80	Ø 116	Ø 160	Ø 189	Ø 240