

SD series

HIGH PRECISION

PLANETARY REDUCER



Helical Gear

Reducer Performance Information

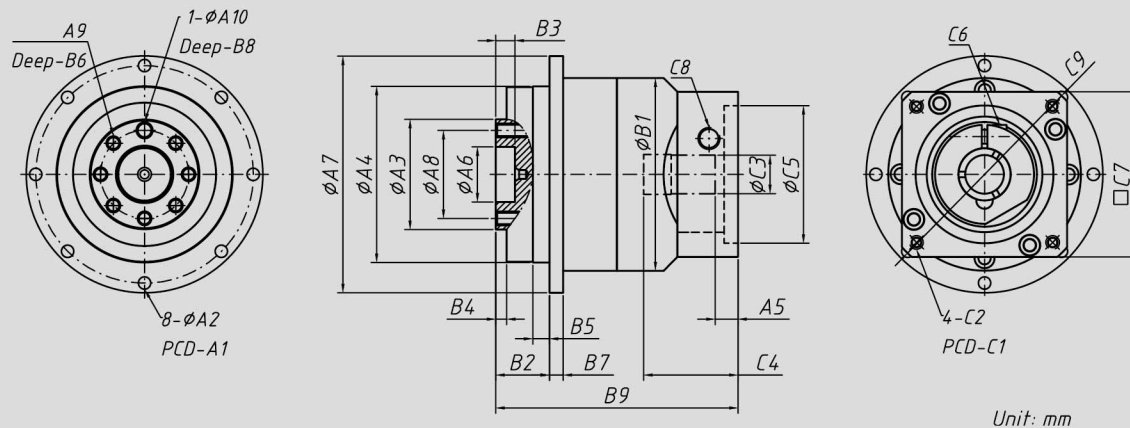
	Unit	Stage	Ratio	47	64	90	110	140	200
Rated Output Torque T_{2N}	Nm	L1	4	20	50	135	278	570	1115
			5	23	62	165	338	660	1215
			7	20	52	145	308	560	1115
			10	15	42	105	238	460	915
		L2	20	20	50	135	278	570	1115
			25	23	62	165	338	660	1215
			35	20	52	145	308	560	1115
			40	20	50	135	278	570	1115
			50	23	62	165	338	660	1215
			70	20	52	145	308	560	1115
			100	15	42	105	238	460	915
Max. Input Speed n_{1B}	rpm	L1/L2	4~100	10,000	10,000	8,000	8,000	6,000	6,000
Rated Input Speed n_{1N}	rpm	L1/L2	4~100	5,000	5,000	4,000	4,000	3,000	3,000
Backlash PS	arcmin	L1	4~10	≤ 1					
		L2	20~100	≤ 3					
Backlash P0	arcmin	L1	4~10	≤ 3					
		L2	20~100	≤ 5					
Backlash P1	arcmin	L1	4~10	≤ 5					
		L2	20~100	≤ 7					
Max. Acceleration Torque T_{2B}	Nm	L1/L2	4~100	1.8 Times of nominal output torque					
Max.Output(Emergency Stop)Torque T_{2NOT}	Nm	L1/L2	4~100	3 Times of nominal output torque					
Torsional Rigidity	Nm/arcmin	L1/L2	4~100	7	13	31	82	151	440
Max. Bending moment M_{2KB}	Nm	L1/L2	4~100	43	125	235	430	1,300	3,064
Max. Axial Force F_{2aB}	N	L1/L2	4~100	990	1,050	2,850	2,990	10,590	16,660
Service Life	hr	L1/L2	4~100	S5 Cycle Operation ; > 20,000 (S1 Continuous Operation ; > 10,000 hrs)					
Operation Temperature	°C	L1/L2	4~100	-25°C ~ 90°C					
Efficiency η	%	L1	4~10	≤ 97					
		L2	20~100	≤ 94					
Lubrication		L1/L2	4~100	Synthetic Lubrication Grease					
Noise Level	dB	L1	4~10	≤ 56	≤ 58	≤ 60	≤ 63	≤ 65	≤ 67
		L2	20~100	≤ 56	≤ 58	≤ 60	≤ 63	≤ 65	≤ 67
Protection Class	IP	L1/L2	4~100	IP 65					
Mounting Position		L1/L2	4~100	Any direction					
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

Reducer Moment of inertia

	Unit	Stage	Ratio	47	64	90	110	140	200
Moment of inertia J_1	kg.cm ²	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)

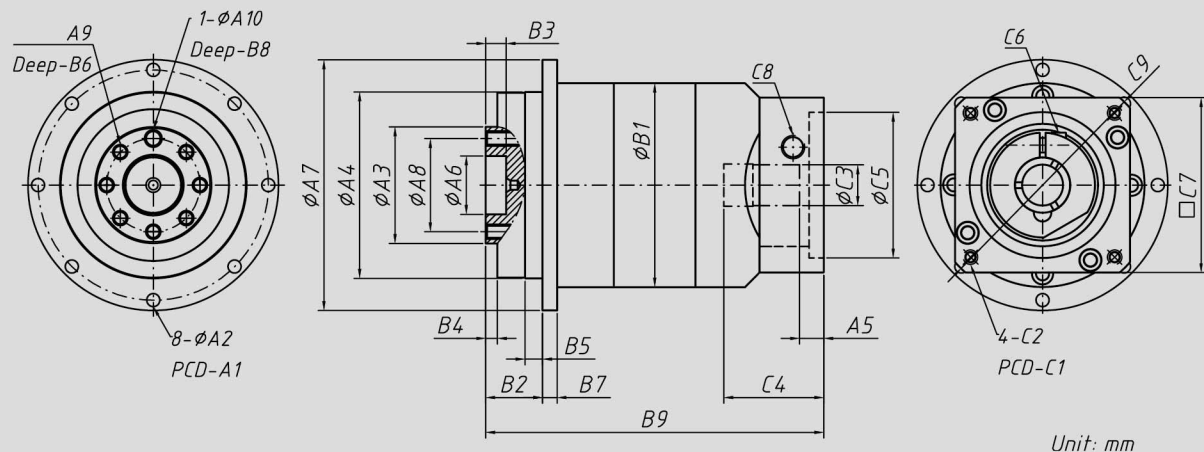


Model Code	47	64	90	110	140	200
A1	67	79	109	135	168	233
A2	3.4	4.5	5.5	5.5	6.6	12-9.0
A3	28	40	63	80	100	160
A4	47	64	90	110	140	200
A5	6	6	7.5	22.5	11	12
A6	12	20	31.5	40	50	80
A7	72	86	118	146	179	248
A8	20	31.5	50	63	80	125
A9	4-M3 x P0.5	7-M5 x P0.8	7-M6x P1.0	11-M6 x P1.0	11-M8 x P1.25	11-M10 x 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

SD

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