

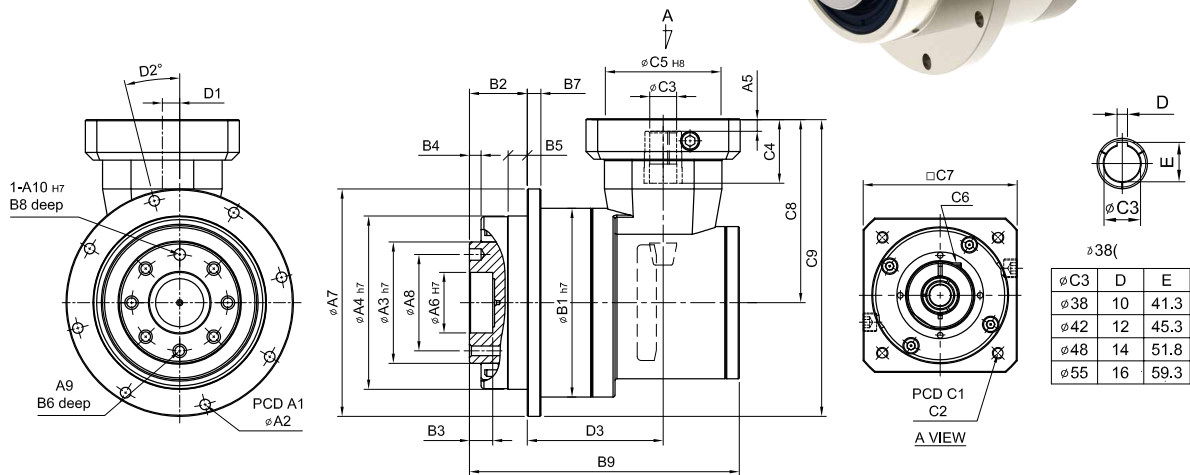
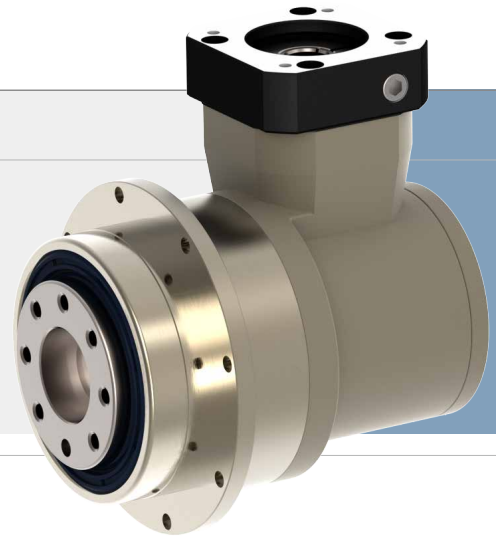
SERVOBOX Planetary Reducers

Helical Gear & Hypoid Gear

MODEL : SDH

2-Stage

RATIO : 20, 25, 35, 50, 70, 100, 150



unit: mm

Model Code	64	90	110	140	200	255
A						
A1	79	109	135	168	233	280
A2	8-4.5	8-5.5	8-5.5	12-6.6	12-9.0	16-13.5
A3	40	63	80	100	160	180
A4	64	90	110	140	200	255
A5	5	6	9	10	10	13
A6	20	31.5	40	50	80	100
A7	86	118	146	179	248	300
A8	31.5	50	63	80	125	140
A9	7 - M5 x P0.8	7 - M6 x P1.0	11 - M6 x P1.0	11 - M8 x P1.25	11 - M10 x P1.5	12 - M16 x P2.0
A10	5	6	6	8	10	12
B						
B1	70	98	125	156	212	255
B2	19.5	30	29	38	50	66
B3	7	12	12	12	16	20
B4	4	6	6	6	8	12
B5	6	10	10	15	15	20
B6	8	12	12	16	22	32
B7	5	7	8	10	12	18
B8	6	6	7	7	10	10
B9	96	140	168	202	273	303.5
C						
C1	46 · 60 · 63	70 · 75 · 90	90 · 110 · 115 · 145	115 · 145 · 165	145 · 165 · 215	200 · 215 · 265
C2	M3 · M4 · M5	M4 · M5 · M6	M5 · M6 · M8	M6 · M8 · M10	M8 · M10 · M12	M10 · M12 · M16
C3	8 · 9 · 11	14	24	32	38	42 · 48 · 55
C4	26	33	59	67	85	116
C5	30 · 40 · 50	50 · 60 · 70	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	M8 x P1.25	M10 x P1.5	M10 x P1.5
C7	46 · 55	64 · 70 · 80	92 · 110 · 130	122 · 130 · 150	146 · 150 · 190	182 · 200 · 250
C8	69	95.5	126.5	149	203	259.5
C9	112	154.5	199.5	238.5	327	409.5
C10	1/8"PT	1/8"PT	1/8"PT	1/4"PT	1/4"PT	3/8"PT
D						
D1	9	9	14	18	27	32
D2	19	14	14	0	0	18
D3	46.2	70.5	90	103.8	144	147.5

High Precision Planetary Reducer

Model No.		Unit	Ratio	64	90	110	140	200	255
Rated Output Torque (Nominal output torque)	T_{2N}	Nm	20	60	160	335	650	1,200	2,020
			25	50	155	333	618	1,189	2,010
			35	47	142	309	573	1,108	1,870
			50	50	155	333	618	1,189	2,010
			70	47	142	309	573	1,108	1,870
			100	43	136	294	549	1,059	1,779
			150	43	136	294	549	1,059	1,779
Max. Acceleration Torque	T_{2B}	Nm	20 ~ 150	1.8 Times of Rated Output Torque					
Max. Output Torque Emergency Stop Torque	T_{2NOT}	Nm	20 ~ 150	3 Times of Rated Output Torque					
Rated Input Speed	n_{1N}	rpm	20 ~ 150	3,000	3,000	3,000	3,000	2,000	2,000
Max. Input Speed	n_{1B}	rpm	20 ~ 150	6,000	6,000	5,000	5,000	4,000	4,000
Backlash P0		arcmin	20 ~ 150	≤ 4	≤ 4	≤ 4	≤ 4	≤ 4	≤ 4
Backlash P1		arcmin	20 ~ 150	≤ 7	≤ 7	≤ 7	≤ 7	≤ 7	≤ 7
Backlash P2		arcmin	20 ~ 150	≤ 10	≤ 10	≤ 10	≤ 10	≤ 10	≤ 10
Torsional Rigidity		Nm/arcmin	20 ~ 150	14	30	86	155	450	1,126
Max. Radial Force Ball Bearing	F_{2rB}	N	4 ~ 10	2,520	8,460	12,720	14,070	35,200	39,600
Max. Axial Force Ball Bearing	F_{2aB}	N	4 ~ 10	1,260	4,230	6,360	7,035	17,600	19,800
Max. Radial Force Taper Bearing	F_{2rB}	N	4 ~ 10	-	14,660	23,000	37,200	73,600	107,200
Max. Axial Force Taper Bearing	F_{2aB}	N	4 ~ 10	-	7,330	11,500	18,600	36,800	53,600
Max. Tilting Moment Ball Bearing ※	M_{2K}	Nm	4 ~ 10	98	185	320	940	2,200	4,300
Max. Tilting Moment Taper Bearing ※	M_{2K}	Nm	4 ~ 10	-	280	480	1,400	3,300	6,480
Service Life	L_H	hr	20 ~ 150	S5 Cycle Operation: >30,000 (S1 Continuous Operation: >15,000 hrs)					
Efficiency	η	%	20 ~ 150	≥ 95%					
Operating Temperature		°C	20 ~ 150	- 25° C ~ + 90° C					
Lubrication			20 ~ 150	Synthetic Grease					
Protection Class			20 ~ 150	IP65					
Mounting Position			20 ~ 150	Any					
Noise Level		dB	20 ~ 150	≤ 68	≤ 70	≤ 72	≤ 74	≤ 76	≤ 78
Weight ±3%		Kg	20 ~ 150	1.7	4.7	9.2	17.4	38.8	61.7

※Applied to the output shaft center at 100 rpm.

■ Mass Moments of Inertia (kg.cm²)

Ratio	64	90	110	140	200	255
20	0.03	0.15	0.45	2.7	7.22	23.22
25	0.22	1.37	4.11	14.1	40.8	80.8
35	0.22	1.37	4.11	14.1	40.8	80.8
50	0.18	1.14	3.43	11.7	34.0	67.4
70	0.03	0.14	0.4	2.6	7.05	23.07
100	0.03	0.14	0.4	2.6	7.01	22.67
150	0.03	0.14	0.4	2.6	7.01	22.67