

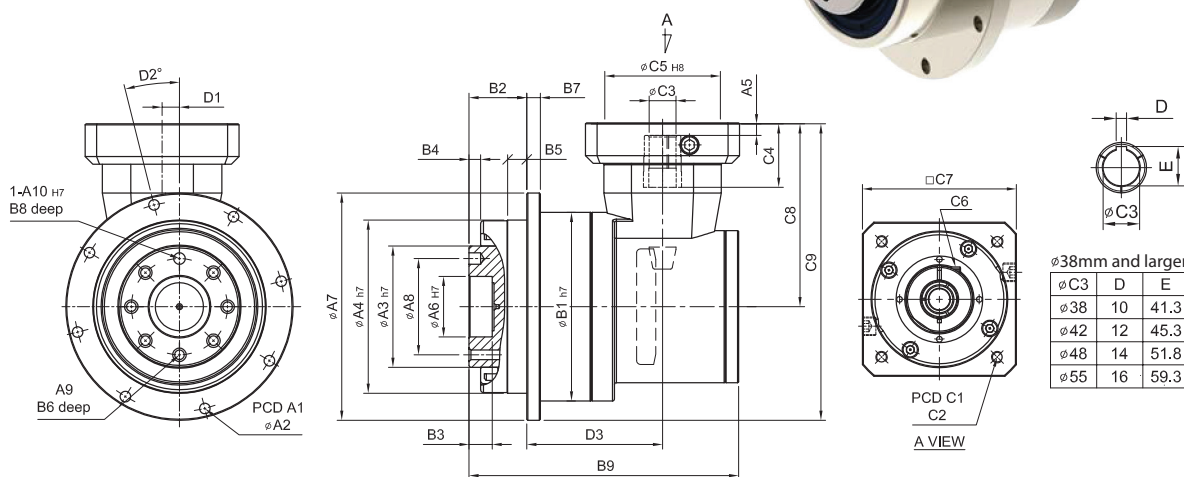
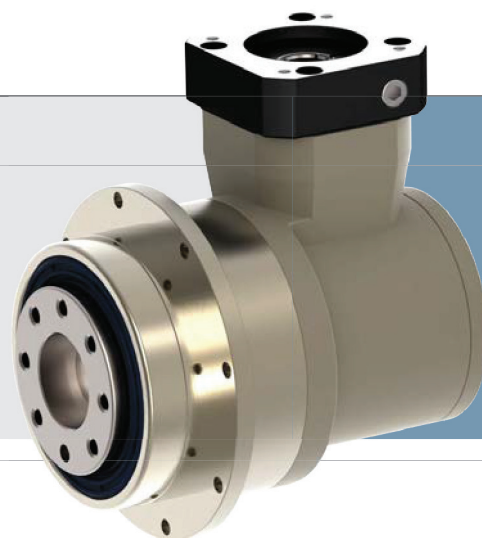
SERVOBOX Planetary Reducers

Hypoid Gear with Helical Planetary Input

SDH Series

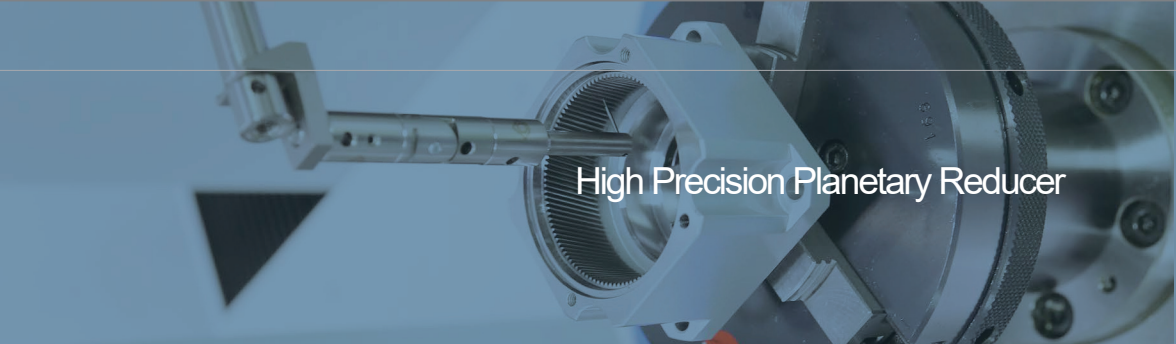
2-Stage

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



unit: mm

Model Code	64	90	110	140	200	255
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
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
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
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

SDH 2-Stage

■ Performance

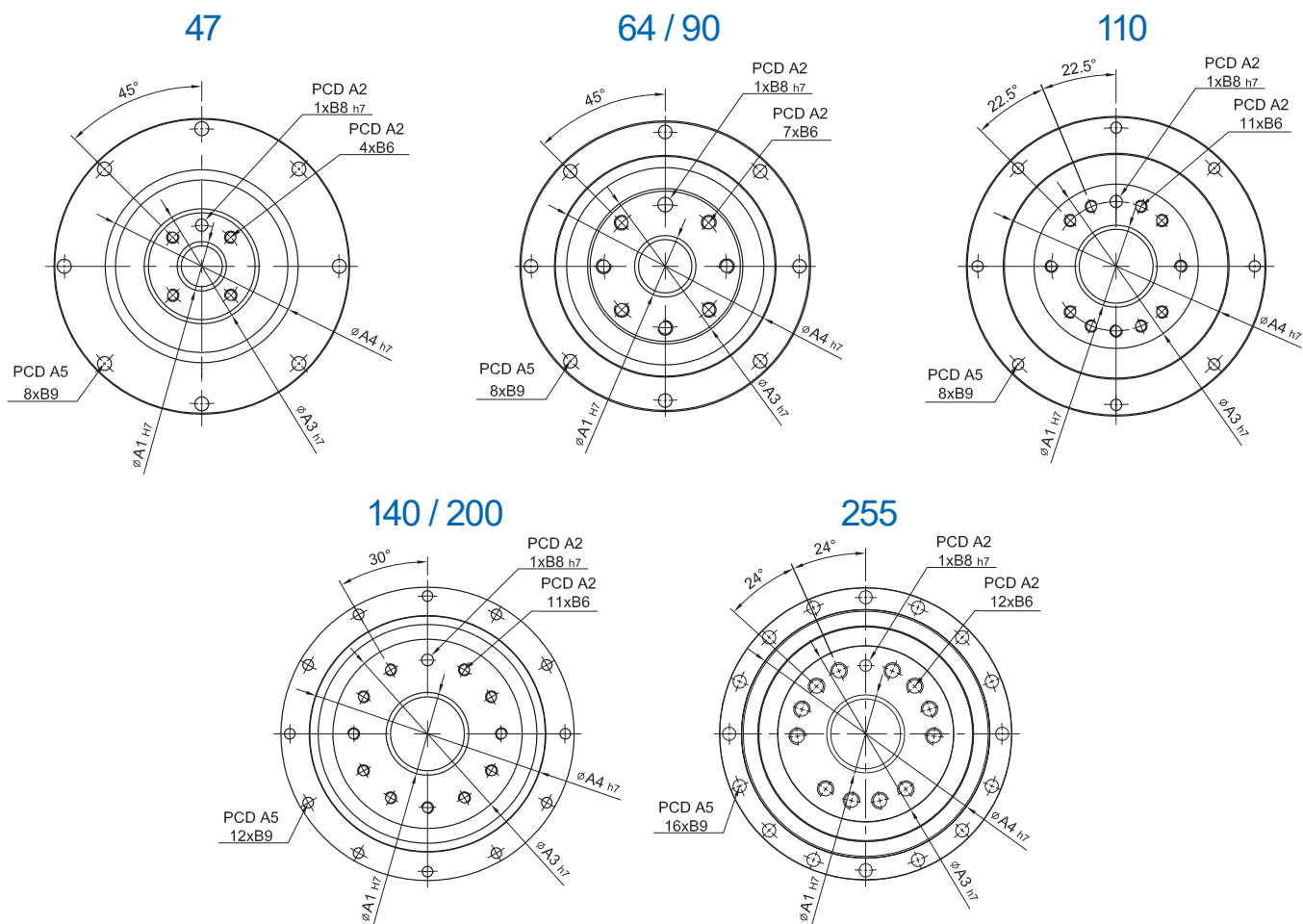
Parameter \ Model No.	Sym	Unit	Ratio	64	90	110	140	200	255
Rated Output Torque (Nominal output torque)	T_{2N}	Nm	20	60	160	335	650	1,200	2,020
			25	50	155	333	618	1,189	2,010
			35	47	142	309	573	1,108	1,870
			50	50	155	333	618	1,189	2,010
			70	47	142	309	573	1,108	1,870
			100	43	136	294	549	1,059	1,779
			150	43	136	294	549	1,059	1,779
Max. Acceleration Torque	T_{2B}	Nm	4 ~ 10	1.8 Times of Rated Output Torque					
Max. Output Torque Emergency Stop Torque	T_{2NOT}	Nm	4 ~ 10	3 Times of Rated Output Torque					
Rated Input Speed	n_{1N}	rpm	4 ~ 10	3,000	3,000	3,000	3,000	2,000	2,000
Max. Input Speed	n_{1B}	rpm	4 ~ 10	6,000	6,000	5,000	5,000	4,000	4,000
Backlash P0		arcmin	4 ~ 10	≤ 4	≤ 4	≤ 4	≤ 4	≤ 4	≤ 4
Backlash P1		arcmin	4 ~ 10	≤ 7	≤ 7	≤ 7	≤ 7	≤ 7	≤ 7
Backlash P2		arcmin	4 ~ 10	≤ 10	≤ 10	≤ 10	≤ 10	≤ 10	≤ 10
Torsional Rigidity		Nm/arcmin	4 ~ 10	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
Service Life	L_H	hr	4 ~ 10	S5 Cycle Operation: >30,000 (S1 Continuous Operation: >15,000 hrs)					
Efficiency	η	%	4 ~ 10	≥ 95					
Operating Temperature		°C	4 ~ 10	- 25° C ~ + 90° C					
Lubrication			4 ~ 10	Synthetic Grease					
Protection Class			4 ~ 10	IP65					
Mounting Position			4 ~ 10	Any					
Noise Level		dB	4 ~ 10	≤ 68	≤ 70	≤ 72	≤ 74	≤ 76	≤ 78
Weight $\pm 3\%$		Kg	4 ~ 10	1.7	4.7	9.2	17.4	38.8	61.7

■ 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



SD, SDL, SDD Series Output Frame Dimensions



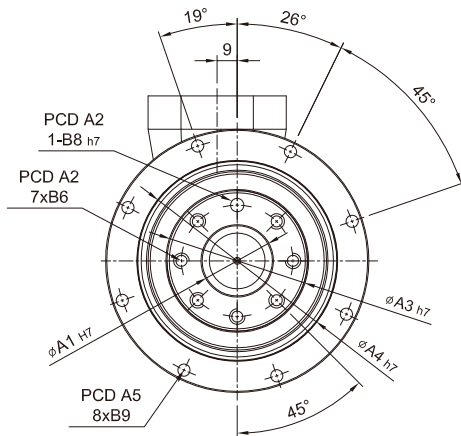
1-Stage SD, SDL, SDD 2-Stage SD, SDL, SDD

unit: mm

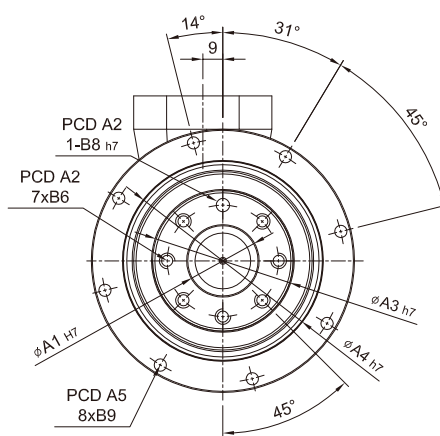
	Model Code	47	64	90	110	140	200	255
A	A1	12	20	31.5	40	50	80	100
	A2	20	31.5	50	63	80	125	140
	A3	28	40	63	80	100	160	180
	A4	47	64	90	110	140	200	255
	A5	67	79	109	135	168	233	280
B	B6	M3 x P0.5	M5 x P0.8	M6 x P1	M6 x P1	M8 x P1.25	M10 x P1.5	M16 x P2
	B8	3	5	6	6	8	10	12
	B9	3.4	4.5	5.5	5.5	6.6	9	13.5

SDH Series Output Frame Dimensions

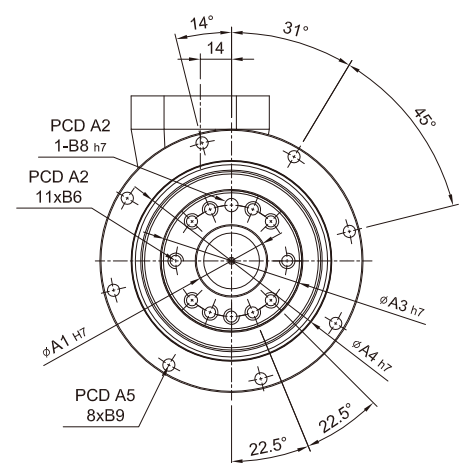
SDH64



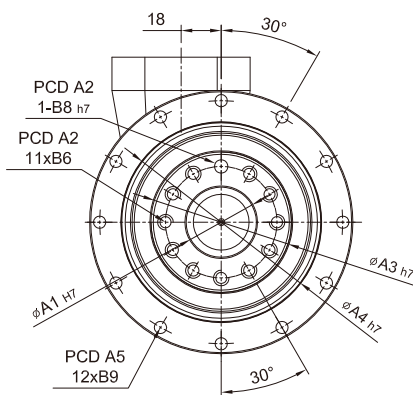
SDH90



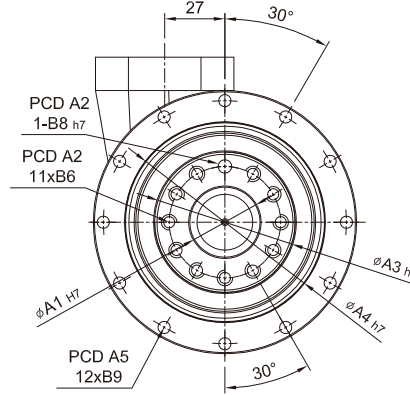
SDH110



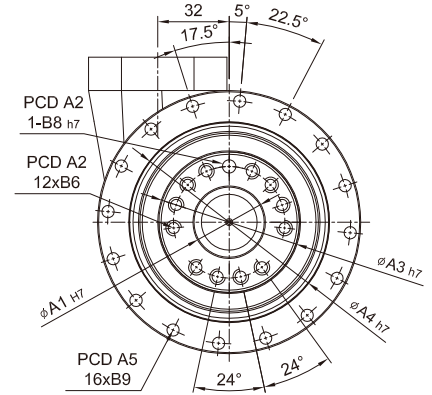
SDH140



SDH200



SDH255



2-Stage SDH

unit: mm

	Model	64	90	110	140	200	255
	Code						
A	A1	20	31.5	40	50	80	100
	A2	31.5	50	63	80	125	140
	A3	40	63	80	100	160	180
	A4	64	90	110	140	200	255
	A5	79	109	135	168	233	280
B	B6	M5 x P0.8	M6 x P1	M6 x P1	M8 x P1.25	M10 x P1.5	M16 x P2
	B8	5	6	6	8	10	12
	B9	4.5	5.5	5.5	6.6	9	13.5