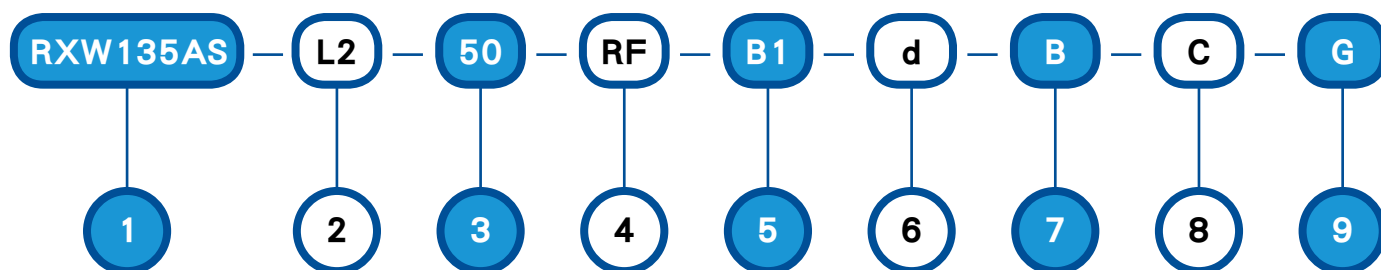


CST 90-degree Precision Reducer Screw Lift

- A wide range of output shafts with gear ratios ranging 1/1 – 1/250
- Suits servomotors/stepping motors
- Works with 100W – 15KW

RXW-AS series: Helical bevel gears (gear ratio): 1/2 – 1/5 + Planetary gear set (1/3 – 1/100)



1. Models: as Fig. 1
2. Sections of gear ratios: (L1: 1/6 – 1/50; L2: 1/24 – 1/250)
3. Gear ratio: refer to the data in Performance Table
4. Types of output shaft: as Fig. 2
5. Precision: as Fig. 3
6. Axial diameter of input flange (ϕd): as Fig. 4
7. Lead of input flange (ϕB): as Fig. 4
8. Distance of screw hole in input flange PCD (ϕC): as Fig. 4
9. Screw holes in input flange (G): as Fig. 4

RXW045AS
RXW070AS
RXW080AS
RXW110AS
RXW135AS/RXW135BS
RXW165AS/RXW165BS
RXW200AS/RXW200BS
RXW250AS

*Fig. 1

CR: Hollow shaft with keyway
HP: Single hollow shaft without key (clamping set)
HP-K: Single hollow shaft with keyway (clamping set)
2HP-K: Double hollow shafts with keyway (clamping set)
P: Single solid output shaft with keyway
2P: Double solid output shafts with keyway
RF: Hollow shaft and rotating flange
RF-K: Hollow shaft and rotating flange with keyway

P.S: RXW045AS (only available in P/2P)

*Fig. 2

Grades of backlash:

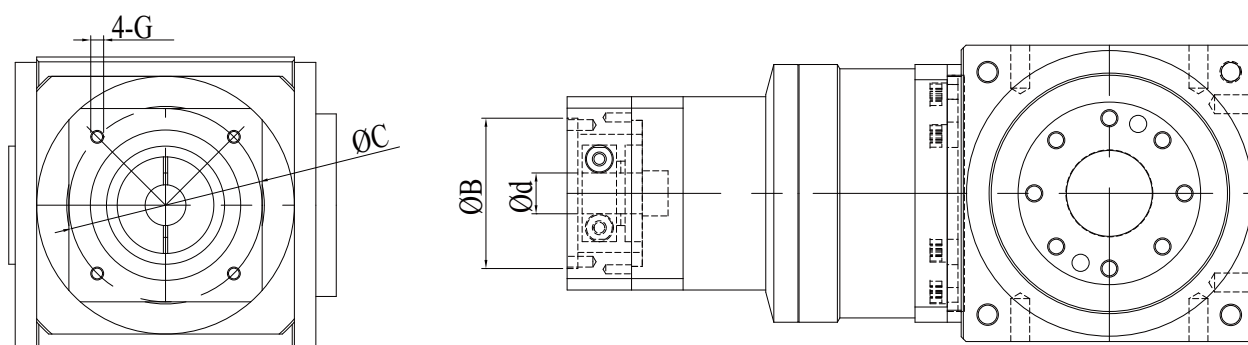
No marks: stand for standard backlash L1 \cong 6 arc; L2 \cong 9 arc

Precision backlash B1
L1 \cong 3 arc; L2 \cong 5 arc

Precision backlash B2
L1 \cong 5 arc; L2 \cong 8 arc

*Fig. 3

Dimensions of input flange:



*Fig. 4

Performance table: RXW-AS series: Helical bevel gears (1/2 - 1/5)+ Planetary gear set (1/3 – 1/100)

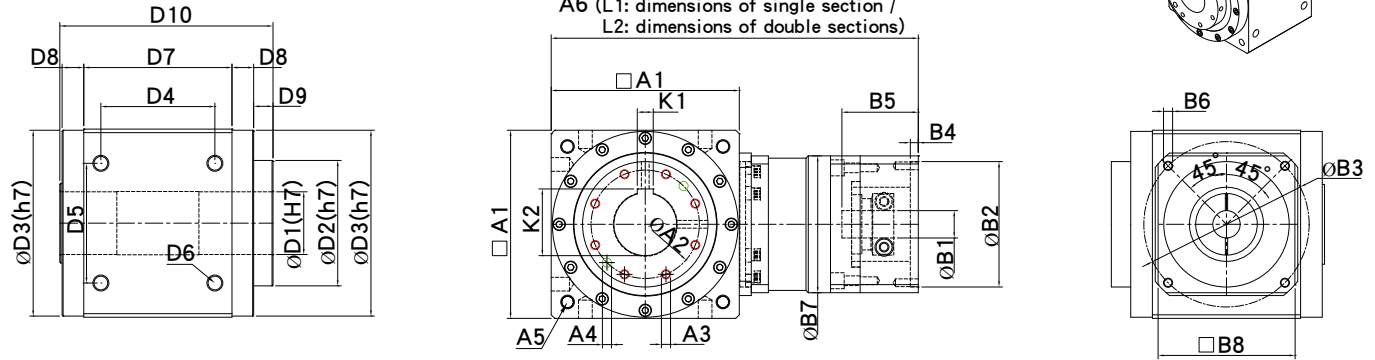
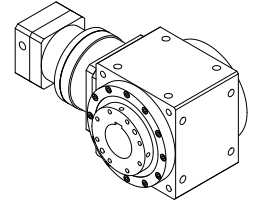
	Section	Gear ratio	RXW045AS	RXW070AS	RXW080AS	RXW110AS	RXW135AS	RXW135BS	RXW165AS	RXW165BS	RXW200AS	RXW200BS	RXW250AS
Rated output torque (Nm)	Section 1 (L1)	6	9.5	30	78.5	230	350	320	750	600	1500	1200	2150
		8,10,12	9.5	30	78.5	230	350	320	750	600	1500	1200	2150
		14,16,18	9.5	30	78.5	230	350	240	750	560	1500	1000	2150
		15,20,25,30,35,40,50	9.5	24.5	49.0	123	208	208	490	460	800	900	2150
	Section 2 (L2)	24,30,100 160,180 200,210			70	170	350	170	750	400	1500	900	2150
		32,36,40,50			78.5	230	350	320	750	660	1500	1200	2150
		56,60,70,80			78.5	230	350	260	750	560	1500	1000	2150
		48,120,140 45,75,84, 105,125,150 175,250			78.5	230	350	240	750	600	1500	1050	2150
49.0	123	208	208	490	460	800	900	1500					
Max. acc. torque (Nm)	L1,L2	6~250	1.5 x Rated output torque (Nm)										
Instantaneous output torque (Nm) (allowed within 3 sec)	L1,L2	6~250	3 x Rated output torque (Nm)										
Input speed (rpm)	L1,L2	6~250	3000	3000	3000	3000	3000	3000	3000	3000	2000	3000	2000
Max. input speed (rpm)	L1,L2	6~250	4500	4500	4500	3000	3000	3000	3000	3000	2000	3000	2000
Standard backlash (arc-min)	L1	6~50	≦ 10	≦ 6	≦ 6	≦ 6	≦ 6	≦ 6	≦ 6	≦ 6	≦ 6	≦ 6	≦ 6
	L2	24~250		≦ 9	≦ 9	≦ 9	≦ 9	≦ 9	≦ 9	≦ 9	≦ 9	≦ 9	≦ 9
Precision B2(arc-min)	L1	6~50	≦ 8	≦ 5	≦ 5	≦ 5	≦ 5	≦ 5	≦ 5	≦ 5	≦ 5	≦ 5	≦ 5
	L2	24~250		≦ 8	≦ 8	≦ 8	≦ 8	≦ 8	≦ 8	≦ 8	≦ 8	≦ 8	≦ 8
Precision B1(arc-min)	L1	6~50		≦ 3	≦ 3	≦ 3	≦ 3	≦ 3	≦ 3	≦ 3	≦ 3	≦ 3	≦ 3
	L2	24~250		≦ 5	≦ 5	≦ 5	≦ 5	≦ 5	≦ 5	≦ 5	≦ 5	≦ 5	≦ 5
Allowed radial force (N)	L1,L2	6~250	1100	2800	3900	5500	9800	9800	16500	16500	24100	24100	45000
Allowed axial force(N)	L1,L2	6~250	650	2800	3900	5500	9800	9800	16500	16500	24100	24100	45000
Efficiency (%)	L1	6~50	90%										
	L2	24~250	85%										
Weight (kg)	L1	6~50	1.8	3.5	5.5	11.0	21.0	17.0	41.0	29.0	55.3	42.5	175.0
	L2	24~250		5.0	6.0	13.0	24.5	19.0	36.5	33.0	65.5	47.5	205.0
Working temp (°C)	L1,L2	6~250	-10°C ~+70°C										
Lubricant	L1,L2	6~250	100% synthetic lubricant (TOTAL CERAN HV)										
Direction of installation	L1,L2	6~250	Any direction										
Noise level (db) /2000(rpm)	L1,L2	6~250	≦ 62	≦ 68	≦ 68	≦ 70	≦ 72	≦ 72	≦ 73	≦ 73	≦ 76	≦ 76	≦ 76

(1) Noise levels measured (at a distance of 1M to the gearbox and at 2000 RPM): (the level increases at more than 2000 RPM) (2) Backlash value measured (with 2% of rated torque) (3) Continued use for over (12 hr/day) would compromise the lifespan (according to selection on P3) Notes: Customizable: 1/300 - 1/1000 gear ratios

Moment of inertia of reducer:

Section	Inertia unit	Gear ratio	RXW045AS	RXW070AS	RXW080AS	RXW110AS	RXW135AS	RXW135BS	RXW165AS	RXW165BS	RXW200AS	RXW200BS	RXW250AS
L1	(kg-cm ²)	6,15	0.042	0.56	0.56	3.92	6.28	3.92	14.83	6.28	33.21	14.83	33.21
		8,10,12	0.032		0.47	3.75	5.64	3.75	11.85	5.64	29.25	11.85	29.25
		14,16,18,20	0.027	0.43	0.43	3.70	5.12	3.70	10.25	5.12	25.16	10.25	25.16
		25,30,35,40,50		0.4	0.4	3.65	5.06	3.65	9.66	5.06	24.02	9.66	24.02
L2	(kg-cm ²)	24,30,75			0.56	3.92	6.28	3.92	14.83	6.28	33.21	14.83	33.21
		32,40,50,60,175			0.47	3.75	5.64	3.75	11.85	5.64	29.25	11.85	29.25
		56,70,80 100,125,250			0.43	3.70	5.12	3.70	10.25	5.12	25.16	10.25	25.16
		120,140,160 180,200			0.4	3.65	5.06	3.65	9.66	5.06	24.02	9.66	24.02

RXW-AS series: RF-K Hollow turntable with keyway models (Dimensions of L1/L2: Single section/Double sections)



Spec	RXW045AS	RXW070AS	RXW080AS	RXW110AS	RXW135AS	RXW135BS	RXW165AS	RXW165BS	RXW200AS	RXW200BS	RXW250AS
D1	Not produced	16	*16/20	*25/30	*35/40	*35/40	*50/55	*50/55	*65/80	*65/80	75
D2		38	45	65	85	85	110	110	140	140	140
D3		60	78	106	133	133	163	163	195	195	245
D4		41.43	49.5	68	86	78	106	100	141	129	176.78
D5		41.43	49.5	65	83	83	105	105	130	130	176.78
D6		4-M5*P0.8	4-M6*P0.8	4-M8*P1.25	4-M10*P1.5	4-M10*P1.5	4-M14*P2.0	4-M14*P2.0	4-M14*P2.0	4-M14*P2.0	4-M20*P2.5
D7		70	67	90	120	102	142	130	182	155	227
D8		6.25	13	15	10	19	13	19	8.5	22	21
D9		8.25	7	9.5	9.5	9.5	17	17	22	22	15
D10		92.25	102	131.5	151.5	151.5	187	187	223	223	284
A1		70	80	110	138	135	168	165	200	200	250
A2		30	36	50	70	70	95	95	124	124	124
A3		6-M5*P0.8	8-M5*P0.8	8-M5*P0.8	8-M8*P1.25	8-M8*P1.25	8-M8*P1.25	8-M8*P1.25	12-M8*P1.25	12-M8*P1.25	12-M10*P1.5
A4(H7)		2-φ5	2-φ5	2-φ5	2-φ8	2-φ8	2-φ8	2-φ8	2-φ8	2-φ8	2-φ10
A5		P.C.D φ 75 4-M5*P0.8	P.C.D φ 93 4-M6*P1.0	P.C.D φ 130 4-M8*P1.25	P.C.D φ 160 4-M10*P1.5	P.C.D φ 160 4-M10*P1.5	P.C.D φ 193 4-M12*P1.75	P.C.D φ 193 4-M12*P1.75	P.C.D φ 240 4-M16*P2.0	P.C.D φ 240 4-M16*P2.0	P.C.D φ 300 4-M30*P2.5
A6 (L1: single section dimension)		159	170	227	290	251	344	312	425	378	467
A6 (L2: single section dimension)			192	254	321	289	391	343	476	425	520
K1		5	6	8	*10/12	*10/12	14	14	18	18	20
K2		18.3	22.8	*28.3/33.3	*38.3/43.3	*38.3/43.3	*53.8/58.8	*53.8/58.8	69.4	69.4	84.9
B1		6.35,8,9 11,14	6.35,8,9 11,14, 16,19	11,14,16 19,22,24	14,16,19 22,24,28 32,35	11,14,16 19,22,24	19,22,24 28,32,35 38,42	14,16,19 22,24,28 32,35	22,24,28 32,35,38 42,55	19,22,24 28,32,35 38,42	32,35,38 42,55
B2		30,38.1 40,50,60	30,36,38.1 40,50 60,70	50,60,70 80,95,110	70,80,95 110,114.3 130	50,60,70 80,95,110	95,110 114.3,130 180	70,80,95 110,114.3 130	110,114.3 130,165 180,200	95,110 114.3,130 180	110,114.3 130,165 180,200
B3		45,46,66.7 70,70.7,75	45,46,66.7 70,70.7 75,90	70,75,90 100,115 130,145	90,115,130 145,165 200	70,75,90 100,115 130,145	115,130 145,165 200,215	90,115,130 145,165 200	130,145 165,200 215,235	115,130 145,165 200,215	165,200 215,235 250
B4		4	4.5	5,7	7	5,7	7	7	10	7	10
B5		≤ 31	≤ 41	≤ 62	≤ 80	≤ 62	≤ 86	≤ 80	≤ 117	≤ 86	≤ 125
B6		M3,M4 M5	M3,M4 M5,M6	M4,M5 M6,M8	M6,M8 M10,M12	M4,M5 M6,M8	M6,M8 M10,M12	M6,M8 M10,M12	M8,M10 M12	M6,M8 M10,M12	M10,M12 M14,M16 M20
B7		60	60	90	120	90	142	120	182	142	200
B8		62,80	62,80,90	90,115,120	120,140,180	90,115,120	142,180,200	120,140,180	182,200,220	142,180,200	200,220,250

1. (*) additional bore of hollow shaft (mm) 2. Actual dimensions are according to the 2D/3D drawings.
3. Continued use for 12 hr/day and longer will decrease the lifespan by 1/2.