

AL Series

Specifications

Gearbox Performance

Model No.	Stage	Ratio ¹	AL070	AL095	AL110	AL150	AL190	AL230	AL280	
Nominal Output Torque T_{2NT}	1	2	9	36	90	195	342	588	1,140	
		3	12	48	120	260	520	1,040	1,680	
		4	15	60	150	325	650	1,200	2,000	
		5	18	55	150	310	600	1,100	1,900	
		6	19	50	140	300	550	1,100	1,800	
		7	17	45	120	260	500	1,000	1,600	
		8	14	40	100	230	450	900	1,500	
		9	14	40	100	230	450	900	1,500	
		2	10	9	36	90	195	342	588	1,140
	15		12	48	120	260	520	1,040	1,680	
	20		15	60	150	325	650	1,200	2,000	
	25		18	55	150	310	600	1,100	1,900	
	30		19	50	140	300	550	1,100	1,800	
	35		17	45	120	260	500	1,000	1,600	
	40		14	40	100	230	450	900	1,500	
	45		14	40	100	230	450	900	1,500	
	50		18	55	150	310	600	1,100	1,900	
	60	19	50	140	300	550	1,100	1,800		
70	17	45	120	260	500	1,000	1,600			
80	14	40	100	230	450	900	1,500			
90	14	40	100	230	450	900	1,500			
Emergency Stop Torque T_{2NOT} ²	Nm	1,2	2~90	3 times of Nominal Output Torque						
Nominal Input Speed n_{in}	rpm	1	2	3,000	3,000	2,600	2,600	2,000	2,000	1,350
		1,2	3~90	5,000	5,000	4,000	4,000	3,000	3,000	2,000
Max. Input Speed n_{iB}	rpm	1	2	6,000	6,000	5,200	5,200	4,000	4,000	2,700
		1,2	3~90	10,000	10,000	8,000	8,000	6,000	6,000	4,000
Continuous Input Speed s_1	rpm	1	2	2,500	2,500	2,000	2,000	1,800	1,800	1,200
		1,2	3~90	4,000	4,000	3,000	3,000	2,500	2,500	1,600
Micro Backlash P_0	arcmin	1	2~9	-	-	≤1	≤1	≤1	≤1	≤1
		2	10~90	-	-	-	≤3	≤3	≤3	≤3
Reduced Backlash P_1	arcmin	1	2~9	≤3	≤3	≤3	≤3	≤3	≤3	≤3
		2	10~90	≤5	≤5	≤5	≤5	≤5	≤5	≤5
Standard Backlash P_2	arcmin	1	2~9	≤5	≤5	≤5	≤5	≤5	≤5	≤5
		2	10~90	≤7	≤7	≤7	≤7	≤7	≤7	≤7
Torsional Stiffness	Nm/arcmin	1,2	2~90	7	13	31	82	151	440	1,006
Max. Radial Load F_{zRB} ³	N	1,2	2~90	2,120	4,450	6,500	10,950	15,700	25,000	34,200
Max. Axial Load F_{zAB} ³	N	1,2	2~90	1,060	2,225	3,250	5,475	7,850	12,500	17,100
Service Life	hr	1,2	2~90	30,000*						
Efficiency η	%	1	2~9	≥97%						
		2	10~90	≥94%						
Weight	kg	1	2~9	0.9	2.3	4.1	9	17.5	36.3	57.1
		2	10~90	1.2	2.4	4.3	10	20	36.9	63.3
Operating Temp	°C	1,2	2~90	-10°C~90°C						
Lubrication				Synthetic lubrication oils						
Degree of Gearbox Protection		1,2	2~90	IP65						
Mounting Position		1,2	2~90	all directions						
Noise Level ($n_1=3000\text{rpm}$, NoLoad)	dB(A)	1,2	2~90	≤56	≤58	≤60	≤63	≤65	≤67	≤70

1. Ratio ($i=N_{in}/N_{out}$)

2. $T_{2B} = 60\%$ of T_{2NOT}

3. Applied to the output shaft center @ 100 rpm

★ S1 service life 15,000 hrs (Consult us)