Specifications / AB Series

Gearbox Performance

Model No.		Stage	Ratio[1]	AB042	AB060	AB060A	AB090	AB090A	AB115	AB115A	AB142	AB142A	AB180	AB220
Nominal Output Torque T_{2N}	Nm	1	3	20	55	–	130	–	208	–	342	–	588	1,140
			4	19	50	–	140	–	290	–	542	–	1,050	1,700
			5	22	60	–	160	–	330	–	650	–	1,200	2,000
			6	20	55	–	150	–	310	–	600	–	1,100	1,900
			7	19	50	–	140	–	300	–	550	–	1,100	1,800
			8	17	45	–	120	–	260	–	500	–	1,000	1,600
			9	14	40	–	100	–	230	–	450	–	900	1,500
			10	14	40	–	100	–	230	–	450	–	900	1,500
		2	12	19	50	50	140	140	290	290	542	542	1,050	1,700
			15	20	55	55	130	130	208	208	342	342	588	1,140
			16	19	50	50	140	140	290	290	542	542	1,050	1,700
			20	19	50	50	140	140	290	290	542	542	1,050	1,700
			25	22	60	60	160	160	330	330	650	650	1,200	2,000
			28	19	50	50	140	140	300	300	550	550	1,100	1,800
			30	20	55	55	150	150	310	310	600	600	1,100	1,900
			32	17	45	45	120	120	260	260	500	500	1,000	1,600
			35	19	50	50	140	140	300	300	550	550	1,100	1,800
			40	17	45	45	120	120	260	260	500	500	1,000	1,600
			45	14	40	40	100	100	230	230	450	450	900	1,500
			50	22	60	60	160	160	330	330	650	650	1,200	2,000
			60	20	55	55	150	150	310	310	600	600	1,100	1,900
			70	19	50	50	140	140	300	300	550	550	1,100	1,800
			80	17	45	45	120	120	260	260	500	500	1,000	1,600
			90	14	40	40	100	100	230	230	450	450	900	1,500
			100	14	40	40	100	100	230	230	450	450	900	1,500
Emergency Stop Torque T_{2NOT}[2]	Nm	1,2	3~100	3 times of Nominal Output Torque										
Nominal Input Speed n_{1N}	rpm	1,2	3~100	5,000	5,000	5,000	4,000	4,000	4,000	4,000	3,000	3,000	3,000	2,000
Max. Input Speed n_{1B}	rpm	1,2	3~100	10,000	10,000	10,000	8,000	8,000	8,000	8,000	6,000	6,000	6,000	4,000
Micro Backlash P0	arcmin	1	3~10	–	–	–	≤1	–	≤1	–	≤1	–	≤1	≤1
		2	12~100	–	–	–	–	–	≤3	≤3	≤3	≤3	≤3	≤3
Reduced Backlash P1	arcmin	1	3~10	≤3	≤3	–	≤3	–	≤3	–	≤3	–	≤3	≤3
		2	12~100	≤5	≤5	≤5	≤5	≤5	≤5	≤5	≤5	≤5	≤5	≤5
Standard Backlash P2	arcmin	1	3~10	≤5	≤5	–	≤5	–	≤5	–	≤5	–	≤5	≤5
		2	12~100	≤7	≤7	≤7	≤7	≤7	≤7	≤7	≤7	≤7	≤7	≤7
Torsional Rigidity	Nm/arcmin	1,2	3~100	3	7	7	14	14	25	25	50	50	145	225
Max. Radial Load F_{2rB}[3]	N	1,2	3~100	780	1,530	1,530	3,250	3,250	6,700	6,700	9,400	9,400	14,500	50,000
Max. Axial Load F_{2aB}[3]	N	1,2	3~100	390	765	765	1,625	1,625	3,350	3,350	4,700	4,700	7,250	25,000
Max. Tilting Moment M_{2K}	Nm	1,2	3~100	25	70	70	200	200	550	550	990	990	1,760	7,630
Efficiency η	%	1	3~10	≥97%										
		2	12~100	≥94%										
Weight	kg	1	3~10	0.6	1.3	–	3.7	–	7.8	–	13	–	26	45
		2	12~100	0.8	1.5	1.9	4.1	5.3	9	11.4	17.5	20.7	32	57
Operating Temp	°C	1,2	3~100	-10°C~90°C										
Lubrication		1,2	3~100	Synthetic lubrication oils										
Degree of Gearbox Protection		1,2	3~100	IP65										
Mounting Position		1,2	3~100	all directions										
Noise[4]	dB(A)	1,2	3~100	≤56	≤58	≤60	≤60	≤63	≤63	≤65	≤65	≤67	≤67	≤70

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

(2) Max. acceleration torque T_{2B} = 60% of T_{2NOT}

(3) Applied to the output shaft center at 100 rpm

(4) The dB values are measured by gearbox with ratio 10 (1-stage) or ratio 100 (2-stage), no loading at 3,000 RPM or at the respective Nominal Input Speed by bigger model size.
By lower ratio and/or higher RPM, the noise level could be 3 to 5 dB higher.