

AT Flange Type Series Specifications

Gearbox Performance

Model No.	Stage	Ratio	AT065 FL	AT075 FL	AT090 FL	AT110 FL	AT140 FL	AT170 FL	AT210 FL	AT240 FL	AT280 FL		
			AT065 FL1	AT075 FL1	AT090 FL1	AT110 FL1	AT140 FL1	AT170 FL1	AT210 FL1	AT240 FL1	AT280 FL1		
			AT065 FH	AT075 FH	AT090 FH	AT110 FH	AT140 FH	AT170 FH	AT210 FH	AT240 FH	AT280 FH		
			AT065 FC	AT075 FC	AT090 FC	AT110 FC	AT140 FC	AT170 FC	AT210 FC	AT240 FC	AT280 FC		
			AT065 FR1	AT075 FR1	AT090 FR1	AT110 FR1	AT140 FR1	AT170 FR1	AT210 FR1	AT240 FR1	AT280 FR1		
Nominal Output Torque T_{2N}	Nm	1	1	25	45	78	150	360	585	1,300	2,150	3,200	
			1.5	25	45	78	150	360	585	1,300	2,150	3,200	
			2	24	42	68	150	330	544	1,220	2,010	3,050	
			3	18	33	54	120	270	450	1,020	1,650	2,850	
			4	13	28	48	100	224	376	860	1,410	2,300	
		5	12	25	40	85	196	320	740	1,210	2,000		
		2	7	12	12	33	91	91	91	195	358	358	
			10	24	28	68	150	208	208	430	846	846	
			15	18	33	54	120	270	312	645	1,269	1,269	
			20	13	28	48	100	224	376	860	1,410	1,692	
			25	12	25	40	85	196	320	740	1,210	2,000	
			35	12	25	40	85	196	320	740	1,210	1,790	
			50	12	25	40	85	196	320	740	1,210	1,465	
		3	75	-	-	-	120	210	312	585	1,269	1,269	
			100	-	-	-	100	224	376	780	1,410	1,692	
	125		-	-	-	85	196	320	740	1,210	2,000		
	150		-	-	-	120	135	312	390	975	975		
	200		-	-	-	100	180	376	520	1,300	1,300		
	250		-	-	-	85	196	320	650	1,210	1,625		
	350		-	-	-	85	196	320	740	1,210	1,790		
	500		-	-	-	85	196	320	740	1,210	1,465		
	Max. Acceleration Torque T_{2B}	Nm	1,2,3	1~500	1.5 times of Nominal Output Torque								
	Max. Acceleration Input Speed n_{1B}	rpm	1	1~5	7,500	6,500	5,500	4,500	3,500	3,000	2,200	2,000	1,700
			2	7~50	8,000	8,000	6,000	6,000	6,000	6,000	4,800	3,600	3,600
3			75~500	-	-	-	8,000	8,000	6,000	6,000	6,000	6,000	
Standard Backlash*	arcmin	1	1~5	≤6	≤6	≤6	≤6	≤6	≤6	≤6	≤6	≤6	
		2	7~50	≤8	≤8	≤8	≤8	≤8	≤8	≤8	≤8	≤8	
		3	75~500	-	-	-	≤10	≤10	≤10	≤10	≤10	≤10	
Max. Radial Load F_{2RB} ² Output d2	N	1,2,3	1~500	900	1,100	1,700	2,700	4,800	6,600	11,500	16,000	18,000	
Max. Axial Load F_{2aB} ² Output d2	N	1,2,3	1~500	450	550	850	1,350	2,400	3,300	5,750	8,500	9,000	
Service Life	hr	1,2,3	1~500	20,000*									
Efficiency η	%	1	1~5	≥98%									
		2,3	7~500	≥94%									
Operating Temp	°C	1,2,3	1~500	-10°C ~ 90°C									
Lubrication				Synthetic lubrication oils									
Noise Level ($n_1=1500$ rpm, No Load)	dB (A)	1,2,3	1~500	≤71	≤72	≤76	≤77	≤78	≤79	≤81	≤83	≤84	

1. Ratio ($i=N_1/N_{out}$)

* S1 service life 10,000 hrs

2. Apply to the output shaft center @ n_{1B}

* Backlash is measured at 2% Nominal Output Torque T_{2N}

AT Flange Type Series Specifications

Gearbox Inertia

Model No.	Stage	Ratio	AT065 FL	AT075 FL	AT090 FL	AT110 FL	AT140 FL	AT170 FL	AT210 FL	AT240 FL	AT280 FL	
			AT065 FL1	AT075 FL1	AT090 FL1	AT110 FL1	AT140 FL1	AT170 FL1	AT210 FL1	AT240 FL1	AT280 FL1	
			AT065 FH	AT075 FH	AT090 FH	AT110 FH	AT140 FH	AT170 FH	AT210 FH	AT240 FH	AT280 FH	
			AT065 FC	AT075 FC	AT090 FC	AT110 FC	AT140 FC	AT170 FC	AT210 FC	AT240 FC	AT280 FC	
			AT065 FR1	AT075 FR1	AT090 FR1	AT110 FR1	AT140 FR1	AT170 FR1	AT210 FR1	AT240 FR1	AT280 FR1	
Mass Moments of Inertia J ₁	1	1	0.51	1.30	3.14	7.62	23.54	59.09	195.96	365.38	787.63	
		1.5	0.46	1.15	2.80	6.65	19.34	49.38	156.02	279.62	584.28	
		2	0.44	1.10	2.68	6.23	17.72	45.44	140.80	245.78	500.26	
		3	0.43	1.09	2.64	6.08	17.16	44.11	135.51	233.75	471.56	
		4	0.43	1.08	2.63	6.05	17.03	43.79	134.14	230.77	464.76	
		5	0.43	1.08	2.63	6.04	16.99	43.69	133.71	229.71	462.08	
		2	7	0.15	0.15	0.50	2.79	2.79	2.79	9.91	29.26	29.26
			10	0.15	0.15	0.50	2.80	2.80	2.80	9.96	29.43	29.43
			15	0.15	0.15	0.50	2.80	2.80	2.80	9.96	29.43	29.43
			20	0.15	0.15	0.50	2.80	2.80	2.80	9.96	29.43	29.43
			25	0.15	0.15	0.50	2.80	2.80	2.80	9.96	29.43	29.43
			35	0.15	0.15	0.50	2.79	2.79	2.79	9.91	29.26	29.26
	50		0.15	0.15	0.50	2.79	2.79	2.79	9.89	29.20	29.20	
	75		-	-	-	2.80	2.80	2.80	9.96	29.43	29.43	
	3	100	-	-	-	2.80	2.80	2.80	9.96	29.43	29.43	
		125	-	-	-	2.80	2.80	2.80	9.96	29.43	29.43	
		150	-	-	-	2.79	2.79	2.79	9.89	29.20	29.20	
		200	-	-	-	2.79	2.79	2.79	9.89	29.20	29.20	
		250	-	-	-	2.79	2.79	2.79	9.89	29.20	29.20	
		350	-	-	-	2.79	2.79	2.79	9.89	29.20	29.20	
		500	-	-	-	2.79	2.79	2.79	9.89	29.20	29.20	

Weight

Model No.	Stage	Ratio	AT065	AT075	AT090	AT110	AT140	AT170	AT210	AT240	AT280
FL Series	1	1~5	2.8	4.4	7.1	12.1	20.9	36.1	69.4	101.2	158.3
	2	7~50	3.2	4.8	8.1	14.3	24.2	38.5	74.1	112.4	171.0
	3	75~500	-	-	-	13.9	23.7	38.8	73.4	110.2	168.7
FL1 Series	1	1~5	2.7	4.3	7.1	11.9	20.3	35.5	68.3	99.6	156.0
	2	7~50	3.2	4.8	8.0	14.2	23.9	37.9	73.0	110.8	168.6
	3	75~500	-	-	-	13.8	23.4	38.2	72.3	108.6	166.4
FH Series	1	1~5	2.6	4.1	6.7	11.4	18.9	32.9	63.2	92.5	146.0
	2	7~50	3.1	4.6	7.7	13.6	22.4	35.3	67.9	103.7	158.7
	3	75~500	-	-	-	13.3	21.9	35.6	67.2	101.5	156.5
FC Series	1	1~5	2.9	4.4	7.2	11.8	20.4	35.0	66.5	96.0	151.7
	2	7~50	3.3	4.9	8.2	14.1	24.1	37.4	71.2	107.2	164.4
	3	75~500	-	-	-	13.7	23.5	37.5	70.5	105.0	162.2
FR1 Series	1	1~5	2.7	4.3	7.1	11.9	20.3	35.5	68.3	99.6	156.0
	2	7~50	3.2	4.8	8.0	14.2	23.9	37.9	73.0	110.8	168.6
	3	75~500	-	-	-	13.8	23.4	38.2	72.3	108.6	166.4