

# Specifications / ADR Series

## Gearbox Performance

Model No.		Stage	Ratio <sup>(1)</sup>	ADR047	ADR064	ADR090	ADR110	ADR140	ADR200	ADR255	
Nominal Output Torque $T_{2N}$	Nm	1	4	19	48	130	270	560	1,100	1,700	
			5	22	60	160	330	650	1,200	2,000	
			7	19	50	140	300	550	1,100	1,800	
			10	14	60	160	325	650	1,200	2,000	
			14	-	42	140	300	550	1,100	1,800	
			20	-	40	100	230	450	900	1,500	
		2	20	19	-	-	-	-	-	-	-
			25	22	60	160	330	650	1,200	2,000	
			35	19	50	140	300	550	1,100	1,800	
			40	19	48	130	270	560	1,100	1,700	
			50	22	60	160	330	650	1,200	2,000	
			70	19	50	140	300	550	1,100	1,800	
			100	14	40	100	230	450	900	1,500	
			140	-	-	140	300	550	1,100	1,800	
200	-	-	100	230	450	900	1,500				
Emergency Stop Torque $T_{2NOTB}$ <sup>(2)</sup>	Nm	1,2	4~200	3 times of Nominal Output Torque							
Nominal Input Speed $n_{1N}$	rpm	1,2	4~200	5,000	5,000	4,000	4,000	3,000	3,000	2,000	
Max. Input Speed $n_{1B}$	rpm	1,2	4~200	10,000	10,000	8,000	8,000	6,000	6,000	4,000	
Micro Backlash $P_0$	arcmin	1	4~20	-	-	≤2	≤2	≤2	≤2	≤2	
		2	25~200	-	-	≤4	≤4	≤4	≤4	≤4	
Reduced Backlash $P_1$	arcmin	1	4~20	≤4	≤4	≤4	≤4	≤4	≤4	≤4	
		2	25~200	≤7	≤7	≤7	≤7	≤7	≤7	≤7	
Standard Backlash $P_2$	arcmin	1	4~20	≤6	≤6	≤6	≤6	≤6	≤6	≤6	
		2	25~200	≤9	≤9	≤9	≤9	≤9	≤9	≤9	
Torsional Rigidity	Nm/arcmin	1,2	4~200	7	13	31	82	151	440	1,006	
Max. Tilting Moment $M_{2K}$	Nm	1,2	4~200	55	75	190	300	1,300	2,930	5,500	
Max. Axial Load $F_{2aB}$ <sup>(3)</sup>	N	1,2	4~200	990	1,050	2,850	2,990	10,590	16,660	29,430	
Efficiency $\eta$	%	1	4~20	≥95%							
		2	25~200	≥92%							
Weight	kg	1	4~20	1.1	2.1	5.9	10.5	21.9	50.9	85.4	
		2	25~200	1.4	1.9	4.5	9.8	20.1	45.4	85.9	
Operating Temp	°C	1,2	4~200	-10°C~90°C							
Lubrication				Synthetic lubrication oils							
IP Level		1,2	4~200	IP65							
Mounting Position		1,2	4~200	all directions							
Noise <sup>(4)</sup>	dB(A)	1,2	4~200	≤61	≤63	≤65	≤68	≤70	≤72	≤74	

## Gearbox Inertia

Model No.		Stage	Ratio <sup>(1)</sup>	ADR047	ADR064	ADR090	ADR110	ADR140	ADR200	ADR255
Moments of Inertia $J_i$	kg · cm <sup>2</sup>	1	4~10	0.09	0.35	2.25	6.84	23.4	68.9	135.4
			14	-	0.31	1.87	6.25	21.8	65.6	119.8
			20	-	0.31	1.87	6.25	21.8	65.6	119.8
		2	20	0.09	-	-	-	-	-	-
			25~100	0.09	0.09	0.35	2.25	6.84	23.4	68.9
			140~200	-	-	0.31	1.87	6.25	21.8	65.6

(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.