■Other Specifications

●Permissible Overhung Load And Permissible Thrust Load Of Motor

| Motor & Gearhead Set |

Motor		Permissible Overhung Load [N]	
Frame Size [mm]	Shaft Diameter [mm]	Distance From Shaft End	
		10mm	20mm
60	6	50	110
70	6	40	60
80	8	90	140
	10	110	120
90	10	140	200
	12	240	270
100	15	320	350

- Avoid thrust loads as much as possible. If thrust load is unavoidable, keep it below half the weight of the motor.

| Gearhead Set |

Model	Gear Ratio	Max. Permissible Torque [mN•m]	Permissible Overhung Load [N]		Permissible Torque Load [N]
			Distance From Shaft End		
			10mm	20mm	
EA-GN2-☐K	3~18	3.0	50	80	30
	25~200		120	180	
EA-GN3-☐K	3~18	5.0	80	120	40
	25~200		150	250	
EA-GN4-☐K	3~18	8.0	100	150	50
	25~200		200	300	
EA-GN5-☐K	3~18	10	250	350	100
	25~200		300	450	
EA-GU5-DKB EA-GU5-☐K	3~9	20	400	500	150
	12.5~18		450	600	
	25~200		500	700	
EA-GU6-DK	3~200	40	1100	1500	300

●Permissible Load Inertia for Gearhead J

- When a high load inertia (J) is connected to a gearhead, high torque is exerted instantaneously on the gearhead when starting up in frequent, discontinuous operations (or when stopped by an electromagnetic brake, or when stopped instantaneously by a brake pack). Excessive impact loads can cause the gearhead or motor damage.
- The table below gives values for permissible load inertia on the motor shaft. Use the motor and gearhead within these parameters. The permissible inertial load value shown for three phase motors is the value when reversing after a stop.
- The permissible load inertia (J) on the gearhead output shaft is calculated with the following equation.

Gerar ratio	Formula
1/3~1/5	JG=JMxI
1/60 or high	JG=JM×2500

- JG: Permissible load inertia gearhead output shaft J (×10 kg · m2)
- JM: Permissible load inertia at the motor shaft J (×10 kg · m2)
- I: Gear ratio (Example: i=3 means the gear ratio or 1/3)

- The life of the gearhead when operating at the permissible inertial load with instantaneous stops of the motors with electromagnetic brakes, brake packs or speed control motors is at least 2 million cycles.

■Other Specifications

| Permissible Load Inertia For GearHead Output Shaft |

No. Of Phase	Motor Frame Size	Output Power	Permissible Load Inertia At The Motor Shaft	
			J [×10-4 kg•m²]	GD2 [kg•m²]
Single Phase	60	3W※, 6W	0.062	0.25
	70	6W※, 15W	0.14	0.52
	80	10W※,25W	0.31	1.2
	90	20W※, 40W	0.75	3
		60W	1.1	4.6
		90W	1.1	4.6
		120W	1.1	4.6
	100	120W	2	8
		140W	2	8
		180W	2	8
Three Phase	60	6W	0.062	0.25
	70	15W	0.14	0.52
	80	25W	0.31	1.2
	90	40W	0.75	3
		60W	1.1	4.6
		90W	1.1	4.6
		120W	1.1	4.6
	100	120W	2	8
		140W	2	8
		180W	2	8

※ Output power for torque motors

●The Calculation For The Permissible Torque Of Gearhead

- Permissible torque for some products are omitted. In that case, use the equation below to calculate the permissible torque.

Permissible torque TG = TM × i × η

TG : Permissible torque of greadhead
TM : Motor torque
i : Gear ratio of gearhead
η : Gearhead efficiency

| Gearhead Efficiency |

No	Flange Size	Gear Type	Gear Ratio																								
			3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
2	☐60	GN	81%											73%				66%								
3	☐70																									
4	☐80																									
5	☐90	GU	81%							73%				66%							59%					
6	☐104													66%												