

Inertia Moment of Gearmotor

Inertia Moment I { GD² } of Gearmotor (Motor + Reducer) Itself (Motor Shaft Equivalent, Common to Every Reduction Ratio)

Table-7-1

Motor Capacity	3-Phase 50W	3-Phase 50W	3-Phase 50W	3-Phase 0.1kW	3-Phase 0.2kW	3-Phase 0.4kW	3-Phase 0.75kW	3-Phase 1.5kW	3-Phase 2.2kW
Inertia Moment (kg·m ²) { GD ² (kgf·m ²) }	*1 0.00010 { 0.00040 }	*2 0.00008 { 0.00033 }	*3 0.00010 { 0.00040 }	0.00048 { 0.0019 }	0.00073 { 0.0029 }	0.0012 { 0.0046 }	0.0025 { 0.010 }	0.0065 { 0.026 }	0.0085 { 0.034 }

Table-7-2

Motor Capacity	1-Phase 100W	1-Phase 100W	1-Phase 200W	1-Phase 400W
Inertia Moment (kg·m ²) { GD ² (kgf·m ²) }	*4 0.00055 { 0.0022 }	0.00080 { 0.0032 }	0.00100 { 0.0040 }	0.0028 { 0.011 }

Note) * 1 is for F Series/ratio 1/240 and below.
 * 2 is for F Series/ratio 1/300 ~ 1/900.
 * 3 is for F Series/ratio 1/1200 and above.
 * 4 is for motor capacity type S100·S100W.

Inertia Moment I ({ GD² } of Gearmotor with Brake (Motor + Reducer) (Motor Shaft Equivalent, Common to Every Reduction Ratio)

Table-8-1

Motor Capacity	3-Phase 50W	3-Phase 50W	3-Phase 50W	3-Phase 0.1kW	3-Phase 0.2kW	3-Phase 0.4kW	3-Phase 0.75kW	3-Phase 1.5kW	3-Phase 2.2kW
Inertia Moment (kg·m ²) { GD ² (kgf·m ²) }	*1 0.00012 { 0.00048 }	*2 0.00009 { 0.00037 }	*3 0.00012 { 0.00048 }	0.00070 { 0.0028 }	0.00088 { 0.0035 }	0.0013 { 0.0052 }	0.0028 { 0.011 }	0.0070 { 0.028 }	0.0093 { 0.037 }

Table-8-2

Motor Capacity	1-Phase 100W	1-Phase 100W	1-Phase 200W	1-Phase 400W
Inertia Moment (kg·m ²) { GD ² (kgf·m ²) }	*4 0.00070 { 0.0028 }	0.00103 { 0.0041 }	0.00115 { 0.0046 }	0.0030 { 0.012 }

Note) * 1 is for F Series/ratio 1/240 and below.
 * 2 is for F Series/ratio 1/300 ~ 1/900.
 * 3 is for F Series/ratio 1/1200 and above.
 * 4 is for motor capacity type S100·S100W.

Inertia Moment I { GD² } of Gearmotor with Clutch/Brake (Clutch/Brake + Reducer) (Motor Shaft Equivalent)

Standard Type

Table-9

Motor Capacity	3-Phase 0.1kW 0.2kW	3-Phase 0.4kW	3-Phase 0.75kW
Inertia Moment (kg·m ²) { GD ² (kgf·m ²) }	0.00035 { 0.0014 }	0.00085 { 0.0034 }	0.0011 { 0.0042 }

Reinforced Type

Table-10

Motor Capacity	3-Phase 0.2kW	3-Phase 0.4kW	3-Phase 0.75kW
Inertia Moment (kg·m ²) { GD ² (kgf·m ²) }	0.00085 { 0.0034 }	0.0011 { 0.0042 }	0.0015 { 0.0059 }

Inertia Moment I { GD² } of Reducer (Parallel Shaft) (Input Shaft Equivalent)

Table-11

Equivalent Capacity of 4P motor	0.1kW	0.2kW	0.4kW	0.75kW	1.5kW	2.2kW
Inertia Moment (kg·m ²) { GD ² (kgf·m ²) }	0.000006 { 0.000023 }	0.000007 { 0.000029 }	0.000017 { 0.000068 }	0.00006 { 0.00023 }	0.00018 { 0.00070 }	0.0003 { 0.0011 }

Inertia Moment I { GD² } of S-Type Reducer (Input Shaft Equivalent)

Table-12

Equivalent Capacity of 4P motor	0.1kW	0.2kW	0.4kW	0.75kW	1.5kW	2.2kW
Inertia Moment (kg·m ²) { GD ² (kgf·m ²) }	0.000023 { 0.000093 }	0.000025 { 0.00010 }	0.00003 { 0.00012 }	0.000073 { 0.00029 }	0.00019 { 0.00077 }	0.0004 { 0.0016 }

- Parallel Shaft (Performance Table/Dimension)
- Gearmotor with Brake
- Water-resistant, Outdoor Gearmotor with Brake
- Gearmotor with Clutch/Brake
- Reducer (Double Shaft)
- S-Type Reducer
- Right Angle Shaft (Performance Table/Dimension)
- Gearmotor with Brake
- Water-resistant, Outdoor Gearmotor with Brake
- Gearmotor with Clutch/Brake
- Reduce (Double Shaft)
- S-Type Reducer
- Hollow Shaft Solid Shaft Performance Table/Dimension
- Gearmotor with Brake
- Water-resistant, Outdoor Gearmotor with Brake
- Reduce (Double Shaft)
- S-Type Reducer
- Concentric Hollow Shaft Concentric Solid Shaft Performance Table/Dimension
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