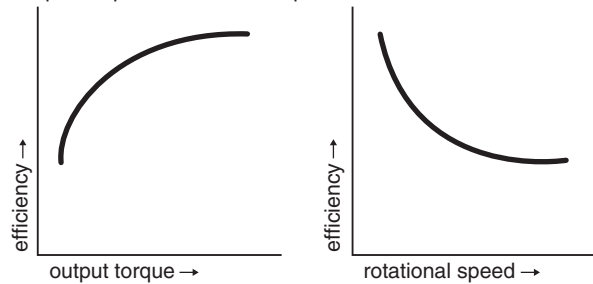


MINAS E Series Motors with Gear Reducer

● Motor types with gear reducer

Reduction ratio	Motor output (W)			Type of reducer
	100	200	400	
1/5	●	●	●	For high precision
1/9	●	●	●	
1/25	●	●	●	

Efficiency of the gear reducer shows the following inclination in relation to output torque and rotational speed.



● Model No. designation

e.g.) M U M A 0 1 1 P 3 1 N

Symbol	Type
MUMA	Low inertia (100-400W)

Motor rated output

Symbol	Rated output
01	100W
02	200W
04	400W

Voltage specifications

Symbol	Specifications
1	100V
2	200V

Rotary encoder specifications

Symbol	Format	Pulse counts	Pulse counts	Wire
P	Incremental	2500P/r	10000	5

Motor types with gear reducer

Symbol	Reduction ratio	Motor output			Type of reducer
		100	200	400	
1N	1/5	●	●	●	For High precision
2N	1/9	●	●	●	
4N	1/25	●	●	●	

Motor structure

Symbol	Shaft	Holding brake	
	Key-way	without	with
3	●	●	
4	●		●

● Specifications of motor with gear reducer

Motor type	MUMA	
Gear reducer	Backlash	3 minutes or smaller (initial value) at output shaft of the reducer
	Composition of gear	Planetary gear
	Gear efficiency	65% to 85%
	Rotational direction at output shaft (of reducer)	Same direction as the motor output shaft
	Composition of gear	Planetary gear
	Mounting method	Flange mounting
	Permissible moment of inertia of the load (conversion to the motor shaft)	10 times or smaller than rotor moment of inertia of the motor
	Protective structure	IP44 (at gear reducer)
Environment	Ambient temperature	0 to 40°C
	Ambient humidity	85%RH (free from condensation) or less
	Vibration resistance	49m/s ² or less (at motor frame)
	Impact resistance	98m/s ² or less