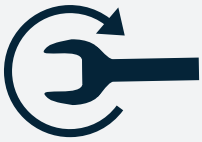
application checklist

Use this checklist as a reference tool for factors to consider when searching for the right gearmotor.

VOLTAGE
Do you need AC or DC voltage? What voltage do you need your motor to run at?

FREQUENCY
Do you need to operate at 60 Hz, 50 Hz or both 50/60 Hz?

SPEED
Does the application have high or low speeds? Are the speeds continuous or varying?



TORQUE
Do you need high start or stall torque? What are your running torque requirements?

POWER
What are your HP or watt requirements? If using a control, do you have amperage limitations?

DUTY CYCLE
Will your motor be operating continuously or in short bursts with time to cool down in between?

WEIGHT
Do you have any restrictions for weight within your application that the motor must meet?

LIFE EXPECTANCY
How long of a life does your motor need? Is it in a location/application where maintenance is feasible?

NOISE
Is noise an important factor in your application or industry?

EFFICIENCY
How important is the efficiency of your motor? This is especially important for gearmotors.

CONTROL
Will your application need to vary speeds? What type of control will you need?

MOUNTING/ORIENTATION
How does the motor need to be mounted within the application?

OVERHUNG LOADS
Does the application have additional loads (radial or axial) putting stress on the motor?

PACKAGE SIZE
Is there a size restriction within your application that the motor must meet?

LUBRICATION
Does your application require the use of either grease or oil? Do you need high or low temp lubrication?

TEMPERATURE CLASS
What is the ambient temperature of the application's environment? Do you need to touch the motor?

INGRESS PROTECTION
Will the environment of the motor be harsh and need protection from the elements—dust and water?

AGENCY APPROVALS
Are their any agency approvals your application must meet—UL, CE, RoHS, CSA or others?

GROSCHOPP®

data worksheet

Use this worksheet as a guide to help make sure you are sized with the correct gearmotor.

Motor Type	☐ PMDC ☐ Universal ☐ AC Induction ☐ Brushless DC ☐ Other _____
Life Requirements	_____ Hours
Voltage	_____ Volts ☐ AC ☐ DC _____ Phase
Control	☐ Yes Type _____ (SCR, PWM, VFD, etc.) ☐ No Input V _____ Output V _____
Rated Speed	_____ RPM
Rated Torque	_____ lb-in or _____ N-m
Rated Power	_____ Watts or _____ HP
Duty Cycle	☐ Continuous _____ Off Time ☐ Intermittent _____ On Time
Speed Reducer (Gearbox)	☐ Parallel Shaft (PS) ☐ Planetary (PL) ☐ Right Angle (RA) ☐ Right Angle Planetary (RP)
Overhung Load	☐ Yes How much? _____ ☐ No What distance from motor? _____
Brake	☐ Yes Voltage _____ ☐ No Holding Torque _____
Optical Encoder	☐ Yes Counts / Revolution _____ ☐ No
Agency Approvals	☐ UL ☐ CE ☐ Other _____ ☐ CSA ☐ RoHS

note

IP RATINGS

FIRST NUMBER - SOLIDS

0 - No protection

1 - Objects over 55 mm (hand)

2 - Objects over 12 mm (finger)

3 - Objects over 2.5 mm (tools/wires)

4 - Objects over 1 mm (small tools/wires)

5 - Dust-limited ingress (no harmful deposit)

6 - Totally protected against dust

SECOND NUMBER - LIQUIDS

0 - No protection

1 - Vertically falling drops of water

2 - Direct sprays up to 15° from vertical

3 - Direct sprays up to 60° from vertical

4 - Sprays from all directions, limited ingress

5 - Weak jets of water from all directions, limited ingress

6 - Strong jets of water from all directions, limited ingress

7 - Water immersion between 15 cm and 1 m up to 30 minutes

8 - Long periods of immersion under pressure

9 - High temp (steam) and high pressure water sprays (IP69K)

TEMP CLASS

MAX TEMP AT HOTTEST SPOT

A* - 105°C

E - 120°C (European)

B* - 130°C

F - 155°C

H* - 180°C

N - 200°C

R - 220°C

S - 240°C

*Groschopp's standard insulation class ratings (based on UL 1446 temperature classes)