

Part	Weight (lbs)	Qty	Total (lbs)
Base	25.0	1	25.0
Battery	2.6	2	5.2
Driver	0.5	2	1.0
Motor	3.2	2	6.4
Gearbox	2.4	2	4.8
Msc. Elec	3.5	1	3.5
Msc. Mech	3.5	1	3.5
Total:			49.4 lbs

GOAL	
Drive Wheel Diameter	8 in
Drive Wheel Weight	.5 lbs
Friction Coefficient	0.35
Approx. Efficiency	80%
Max Incline	20 deg
Cutting Speed	100 ft/min
Max Speed	150 ft/min
Accell/Decell Time	1.5 s
Stopping Accuracy	2.5 in
Safety Factor	1.5

REQUIREMENTS	
RPM @ Cutting	9.55 RPM
RPM @ MAX	14.33 RPM
Torque	29.92 Nm
Stopping Accuracy	35.83 deg

MOTOR OUTPUT	
RPM MAX	376.2 RPM
Torque MAX	3.0 Nm
Step Angle	1.8 deg

EXPECTED	
Drive Wheel Diameter	8 in
Drive Wheel Weight	.5 lbs
Friction Coefficient	0.35
Approx. Efficiency	85%
Max Incline	20 deg
Cutting Speed	264 ft/min
Max Speed	710 ft/min
Accell/Decell Time	1.5s
Stopping Accuracy	1.03 in
Safety Factor	1.5

GEARBOX OUTPUT

RPM MAX 37.62 RPM

Torque MAX 30 Nm

Backlash 15 deg