

Engineering Specifications

SS #	System Specification	Metric	Value	Test
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General 1.0

1.1	# of LVEs	Count	10	Analyze
1.1a	# of MSAs	Count	30	Analyze
1.2	Cost of Mass Production LVEs	\$	5,000	Analyze
1.3	Cost for initial prototype	\$	500	Analyze
1.4	Educational	Percentage of 5's	75%	Test
1.5	Required machinable parts	Count	>3	Demonstrate
1.6	Hand Tools Required by students	Count	<5	Demonstrate

Chassis 2.0

2.1	Weight of Chassis	lbs	<5	Observe
2.2	Weight of Payload and MSA	lbs	<3	Observe
2.3	Speed of Fully Loaded LVE	mph	>.5	Demonstrate
2.4	Turning Radius	in	<12	Demonstrate
2.5	Height Chassis	in	<8	Observe
2.6	Base Area of Chassis	in ²	<144	Observe
2.7	Ability to travel up incline	Degrees	15	Demonstrate
2.8	Drop Height	ft	3	Analyze

Power/Control 3.0

3.1	Battery Life At Full Load	Minutes	>90	Demonstrate
3.2	Recharge Time for Full Battery	Hours	<4	Demonstrate

Safety 4.0

4.1	Surface Temperature	Degrees F	<130	Observe
4.2	Number of Sharp Edges	Count	0	Demonstrate

Production 5.0

5.1	Minimize Material Waste	lbs	<1	Observe
5.2	Lead time for OTS parts	Weeks	2	Observe
5.3	Time to construct mass produced LVE	Man Hours	60	Demonstrate
5.4	Machined Parts Per LVE	Count	<20	Observe
5.5	Custom Order Components	Count	0	Observe

Boolean 5.0

6.1	Incorporates EDG Concepts	Boolean	Y	Observe
6.2	Incorporates Materials Processing Concepts	Boolean	Y	Observe
6.3	Incorporates a design aspect	Boolean	Y	Observe
6.4	Enclosed Wiring	Boolean	Y	Observe
6.5	Complies with Regulations	Boolean	Y	Observe/Analyze
6.6	Uses standardized hardware	Boolean	Y	Observe