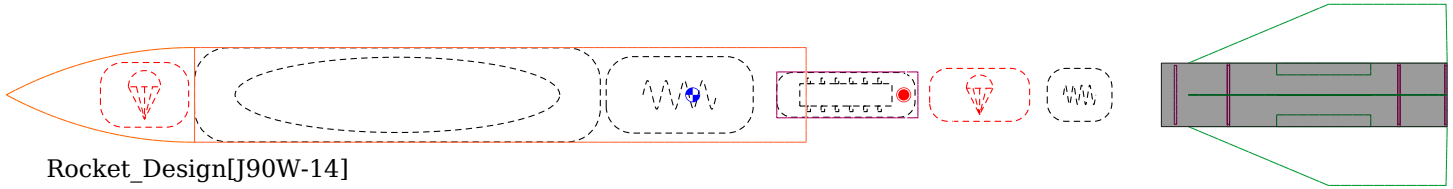


Rocket Design



Rocket_Design[J90W-14]

Stages: 1

Mass (with motor): 8246 g

Stability: 2.23 cal / 14.6 %

CG: 58.4 cm

CP: 76.3 cm

J90W-14

Altitude	8.04 m	Motor	Avg Thrust	Burn Time	Max Thrust	Total Impulse	Thrust to Wt	Motor Wt	Size
Flight Time	3.51 s	J90W	97.6 N	7.05 s	187 N	689 Ns	1.21:1	427 g	54/243 mm
Time to Apogee	2.35 s								
Optimum Delay	N/A								
Velocity off Pad	7.8 m/s								
Max Velocity	60.3 m/s								
Velocity at Deployment	N/A								
Landing Velocity	60.3 m/s								

Parts Detail

Stage: Sustainer



Nose Cone	Fiberglass (1.85 g/cm ³)	Ogive	Len: 16 cm	Mass: 99.5 g
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Body Tube	Fiberglass (1.85 g/cm ³)	Dia _{in} 7.74 cm Dia _{out} 8.05 cm	Len: 52 cm	Mass: 376 g
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Mass Component		Dia _{out} 8 cm		Mass: 3500 g
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Parachute	Ripstop nylon (67 g/m ²)	Dia _{out} 60 cm	Len: 7.5 cm	Mass: 22.2 g
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Shroud Lines	Elastic cord (round 2 mm, 1/16 in) (1.8 g/m)	Lines: 6	Len: 30 cm	
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Shock Cord	Kevlar 12- strand (14 mm, 9/16 in) (208 g/m)		Len: 100 cm	Mass: 208 g
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Transition	Fiberglass (1.85 g/cm ³)	Fore Dia: 8.05 cm Aft Dia: 5.4 cm	Len: 8.5 cm	Mass: 210 g
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Body Tube	Fiberglass (1.85 g/cm ³)	Dia _{in} 5 cm Dia _{out} 5.4 cm	Len: 46 cm	Mass: 278 g
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Trapezoidal Fin Set (4)	Fiberglass (1.85 g/cm ³)	Thick: 0.2 cm		Mass: 134 g
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Centering Ring	Cardboard (0.68 g/cm ³)	Dia _{in} 5 cm Dia _{out} 5.4 cm	Len: 0.2 cm	Mass: 0.444 g
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Centering Ring	Cardboard (0.68 g/cm ³)	Dia _{in} 5 cm Dia _{out} 5.4 cm	Len: 0.2 cm	Mass: 0.444 g
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Bulkhead	Cardboard (0.68 g/cm ³)	Dia _{out} 5 cm	Len: 0.2 cm	Mass: 2.67 g
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Centering Ring	Cardboard (0.68 g/cm ³)	Dia _{in} 5 cm Dia _{out} 5.4 cm	Len: 0.2 cm	Mass: 0.444 g
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Inner Tube	Cardboard (0.68 g/cm ³)	Dia _{in} 3.8 cm Dia _{out} 3.9 cm	Len: 12 cm	Mass: 4.93 g
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Mass Component		Dia _{out} 3.8 cm		Mass: 2500 g
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Parachute	Ripstop nylon (67 g/m ²)	Dia _{out} 100 cm	Len: 8.5 cm	Mass: 55.9 g
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Shroud Lines	Elastic cord (round 2 mm, 1/16 in) (1.8 g/m)	Lines: 6	Len: 30 cm	
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Shock Cord	Elastic cord (round 2 mm, 1/16 in) (1.8 g/m)		Len: 40 cm	Mass: 0.72 g
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