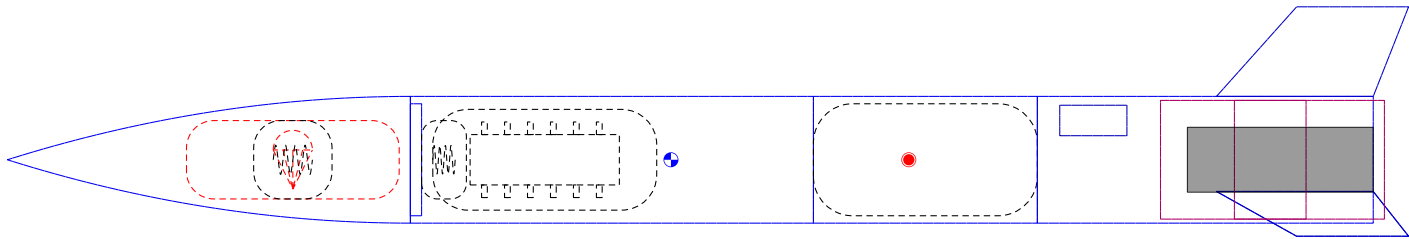


Rocket Design



Rocket
Stages: 1
Mass (with motor): 1153 g
Stability: 1.88 cal
CG: 296 mm
CP: 403 mm

G74W-6

Altitude	214 m	Motor	Avg Thrust	Burn Time	Max Thrust	Total Impulse	Thrust to Wt	Propellant Wt	Size
Flight Time	74.2 s	G74W	76.2 N	1.12 s	91.2 N	85.3 Ns	6.74:1	39.3 g	29/83 mm
Time to Apogee	7.08 s								
Optimum Delay	5.93 s								
Velocity off Pad	11.5 m/s								
Max Velocity	63.2 m/s								
Velocity at Deployment	3.02 m/s								
Landing Velocity	3.05 m/s								

F37-6














Altitude	63.5 m	Motor	Avg Thrust	Burn Time	Max Thrust	Total Impulse	Thrust to Wt	Propellant Wt	Size
Flight Time	24.4 s	F37	32.6 N	1.55 s	46.5 N	50.7 Ns	2.83:1	28.2 g	29/99 mm
Time to Apogee	4.36 s								
Optimum Delay	2.8 s								
Velocity off Pad	6.94 m/s								
Max Velocity	28.5 m/s								
Velocity at Deployment	2.57 m/s								
Landing Velocity	2.98 m/s								

E15-4

Altitude	27.6 m	Motor	Avg Thrust	Burn Time	Max Thrust	Total Impulse	Thrust to Wt	Propellant Wt	Size
Flight Time	12.7 s	E15	15.7 N	2.53 s	28.8 N	39.8 Ns	1.43:1	20.1 g	24/70
Time to Apogee	3.53 s								mm
Optimum Delay	0.95 s								
Velocity off Pad	4.74 m/s								
Max Velocity	12.7 m/s								
Velocity at Deployment	5.4 m/s								
Landing Velocity	3.41 m/s								

Parts Detail

Sustainer

	Nose cone	PLA (1.3 g/cm ³)	Parabolic series	Len: 180 mm	Mass: 49.8 g
	Parachute	Ripstop nylon (67 g/m ²)	Dia _{out} 1782 mm	Len: 95 mm	Mass: 174 g
	Shroud Lines	Elastic cord (flat 6 mm, 1/4 in) (4.3 g/m)	Lines: 8	Len: 200 mm	
	Shock cord	Tubular nylon (25 mm, 1 in) (29 g/m)		Len: 200 mm	Mass: 5.8 g
	Body tube	PLA (1.3 g/cm ³)	Dia _{in} 53 mm Dia _{out} 56.6 mm	Len: 180 mm	Mass: 72.5 g
	Shock cord	Tubular nylon (25 mm, 1 in) (29 g/m)		Len: 200 mm	Mass: 5.8 g
	Altimeter		Dia _{out} 45 mm		Mass: 500 g
	Extra tube	PLA (1.3 g/cm ³)	Dia _{in} 53 mm Dia _{out} 56.6 mm	Len: 100 mm	Mass: 40.3 g
	Tolerance		Dia _{out} 50 mm		Mass: 100 g
	Tail	PLA (1.3 g/cm ³)	Dia _{in} 53 mm Dia _{out} 56.6 mm	Len: 150 mm	Mass: 60.4 g
	Trapezoidal fin set (3)	PLA (1.3 g/cm ³)	Thick: 3.6 mm		Mass: 33.7 g
	Launch lug	PLA (1.3 g/cm ³)	Dia _{in} 10 mm Dia _{out} 13.6 mm	Len: 30 mm	Mass: 2.6 g
	Inner Tube	PLA (1.3 g/cm ³)	Dia _{in} 51 mm Dia _{out} 53 mm	Len: 100 mm	Mass: 21.2 g
	Centering ring	PLA (1.3 g/cm ³)	Dia _{in} 53 mm Dia _{out} 53 mm	Len: 32 mm	Mass: 0 g

